



BOSS SET-UP & OPERATION

For Warranty, Safety, Maintenance, Part Breakdowns, and Recipes plug in the USB Flash Drive that was included with your A1 Mist Sprayer

Fax 402-755-4143
Toll Free 877-924-2474
Email info@mistsprayers.com
Website www.mistsprayers.com

A1 Mist Sprayers
PO Box 517
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Ponca, NE 68770

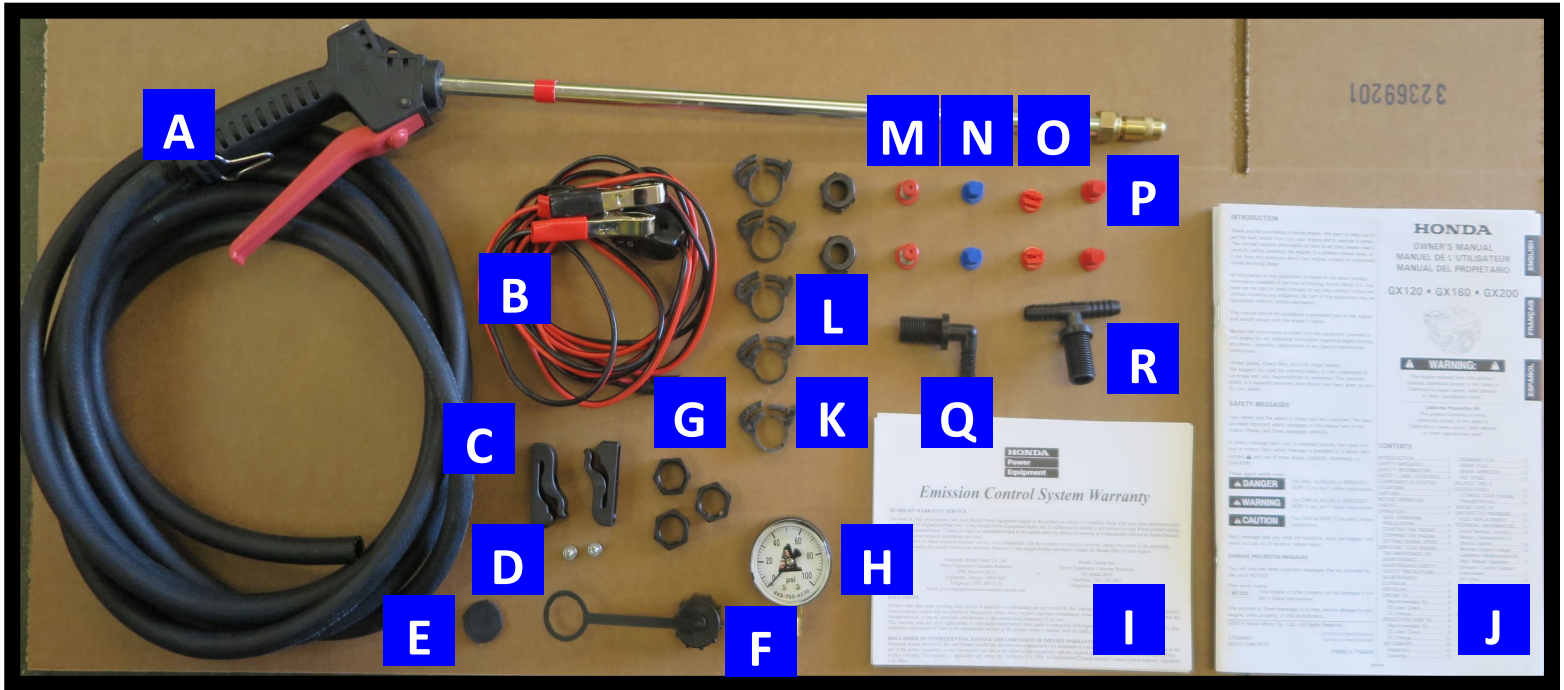
INSPECTION CHECK LIST FOR DISTRIBUTOR, DEALER, and/or OPERATOR

This inspection checklist must be made on all new A1 mist sprayers prior to any operation. Please check each item listed. Some adjustment may be necessary before application.

- ☐ Check and make sure all guards and shields are in their proper place and secure.
- ☐ Check all mist sprayer belts for cracks and alignments.
- ☐ Check all hydraulic connections for any loose connections or missing parts.
- ☐ Check all nuts and bolts and tighten if necessary.
- ☐ Check volute and blower wheel for any loose connections or foreign material.
- ☐ Check all sheaves, sprockets, and setscrews for proper tightness and for loose or missing parts.
- ☐ Check hydraulic cylinder, hydraulic cylinder hoses, and electric actuator (if applicable) for proper alignment or loose connections.
- ☐ Check your poly tank for foreign material.
- ☐ Check your gasoline engine to make sure it is bolted down and secured in proper working order.
(See gasoline operator's manual)
- ☐ Check blower fan for proper timing.

A1 MIST SPRAYERS are engineered and designed for easy serviceability and maintenance. During the break-in period, always check the PTO, nuts, bolts, belts, and all shields for looseness and proper alignment. Some additional adjustments could be necessary during the break-in period. All nozzles, belts and strainer screens should be checked and cleaned daily.

WHAT YOU GET WITH YOUR BOSS SPRAYER



A. HAND GUN WITH 15FT. HOSE

B. WIRING HARNESS

C. 2-HAND GUN CLIPS

D. 2-SCREWS FOR HAND GUN CLIPS

E. TANK DRAIN CAP SEAL

F. TANK DRAIN CAP

G. 3-NOZZLE BODY RETAINERS (2 ALREADY INSTALLED)

H. PRESSURE GAUGE

I. EMISSIONS INFORMATION

J. HONDA ENGINE INSTRUCTION MANUAL

K. 5-HOSE CLAMPS

L. 2-NOZZLE RETAINERS (ALREADY INSTALLED)

M. 2-RED NOZZLE FILTERS (ALREADY INSTALLED)

N. 2-BLUE 1.5 TIPS (ALREADY INSTALLED)

O. 2-RED 8004 TIPS

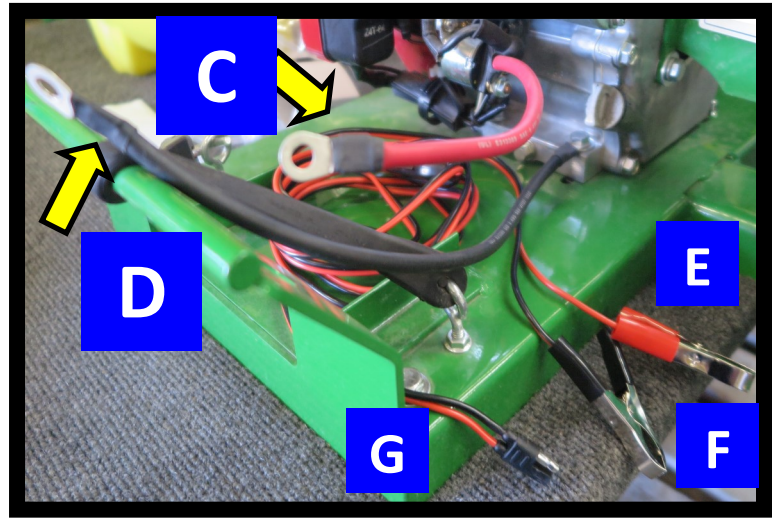
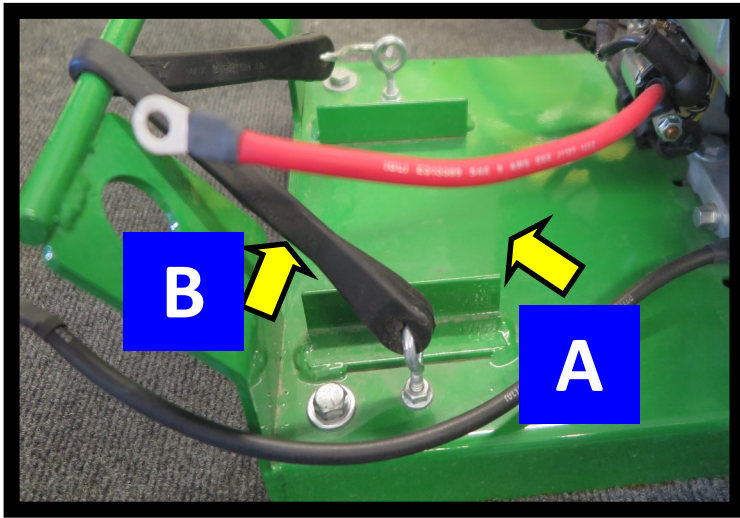
P. 2-RED 2.0 TIPS

Q. ELBOW NOZZLE BODY

R. T NOZZLE BODY RETAINER

SET-UP INSTRUCTIONS

1. Install Sprayer onto Desired ATV, UTV, or other Appropriate Vehicle
2. Obtain a 12 Volt Marine or Automotive Battery (Below) - **NOT INCLUDED**
 - a. Install the battery in the Battery Box provided—**A**
 - b. Strap the battery into place using provided strap—**B**
 - c. Attach the battery cables (Red=Positive—**C** / Black=Negative—**D**)

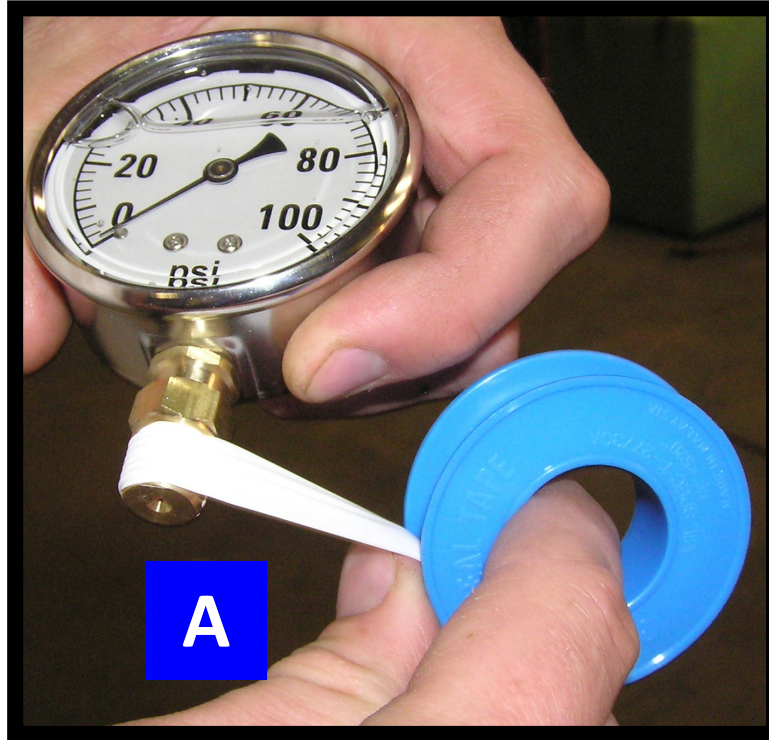


3. Connect the Wiring Harness to the Battery
 - a. Attach the Red Cable—**E** to the positive post
 - b. Attach the Black Cable—**F** to the negative post
4. Attach Wiring Harness Male/Female Plug—**G** to Pump—**H**



SET-UP INSTRUCTIONS

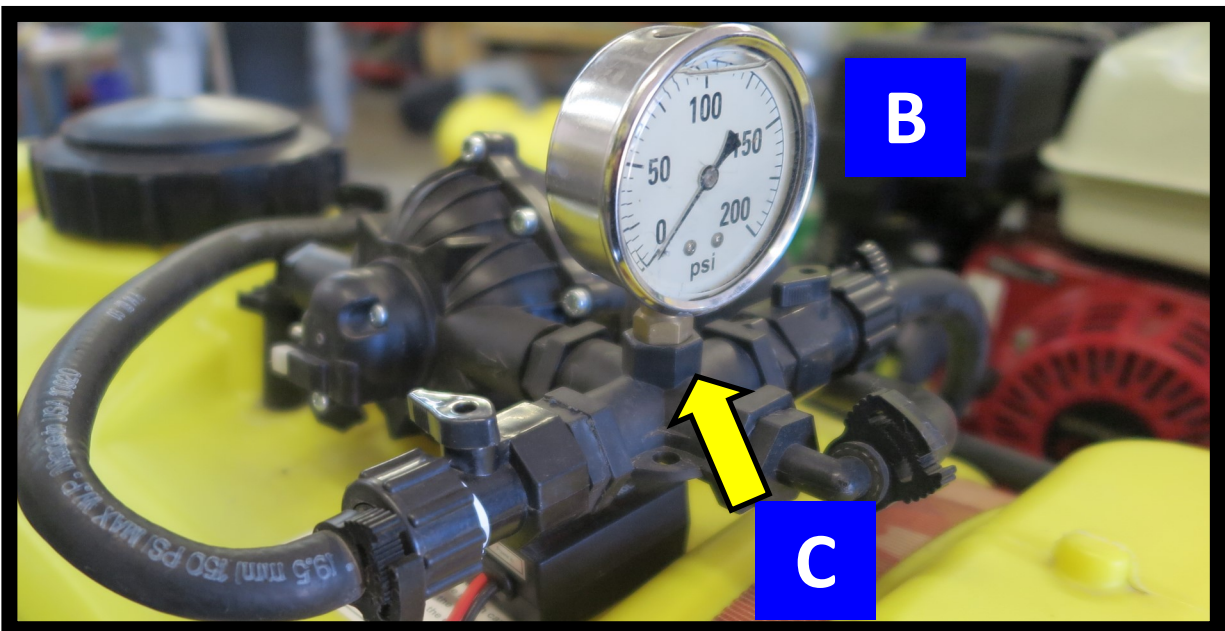
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5. Wrap Teflon Tape—**A** around Threads of Pressure Gauge (Above)

This will ensure a proper read from your pressure gauge.

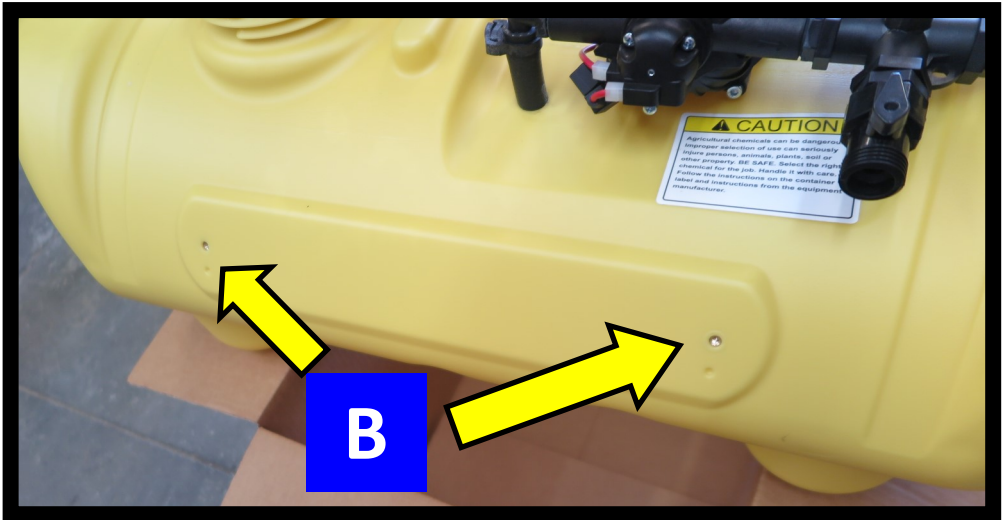
6. Install Pressure Gauge—**B** to the fitting on top of the tank—**C** (Bottom)



7. Mount Tank to Front of ATV or other Vehicle in Use
(STRAPS NOT PROVIDED)

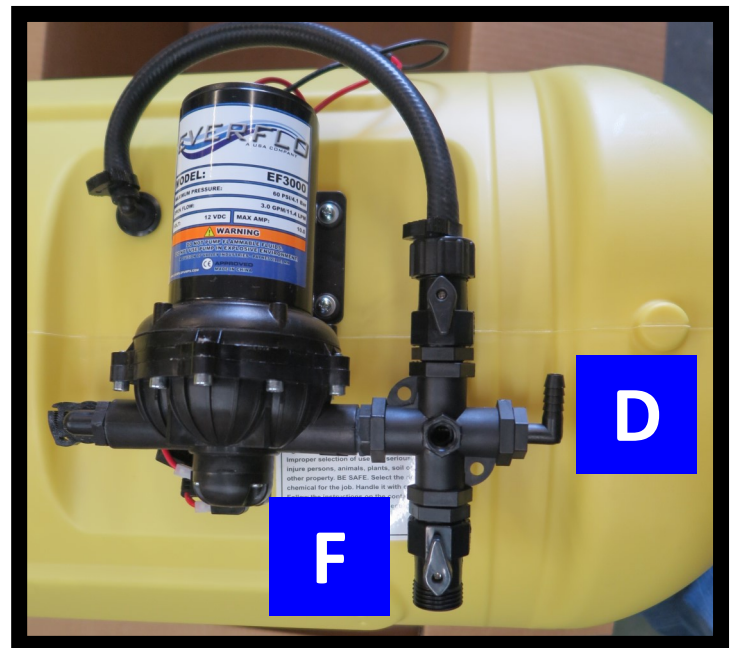
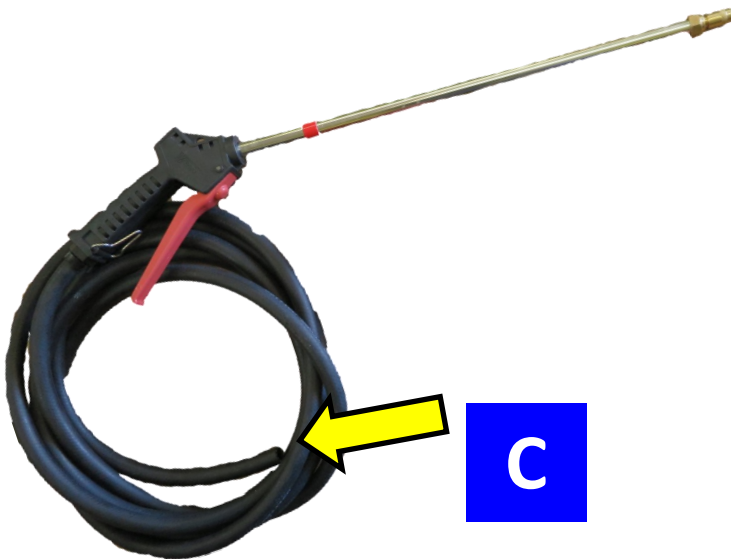
SET-UP INSTRUCTIONS

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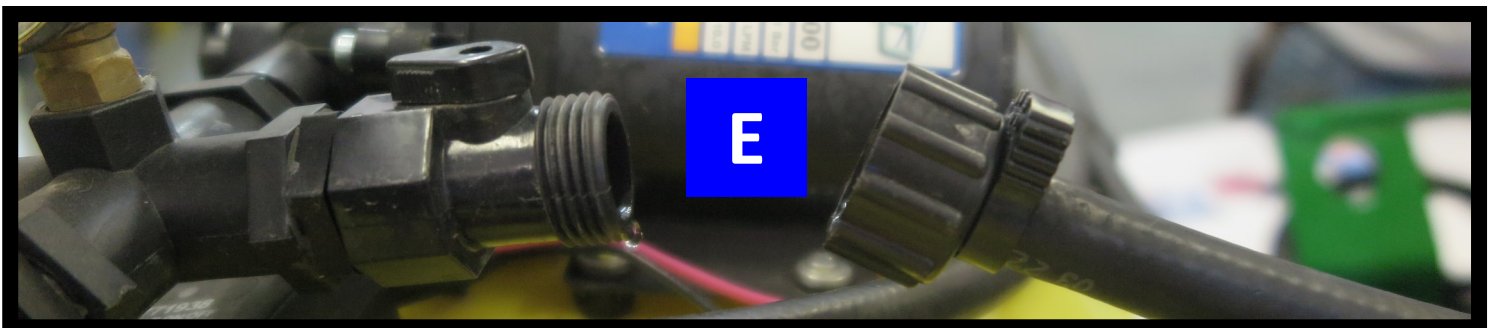


8. Attach Hand Gun to the Tank

- Attach Hand Gun Clips—A to the side of the Tank—B
- Attach open end of hose from the Hand Gun—C to the open Elbow Body—D using a Hose Clamp (provided)



9. Connect Hose from the Volute—E to the open Hose Connection—F on the Top of the Tank

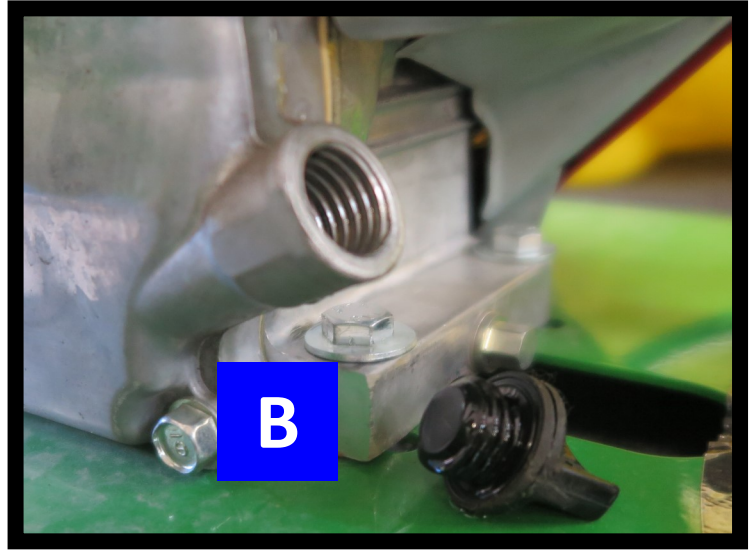
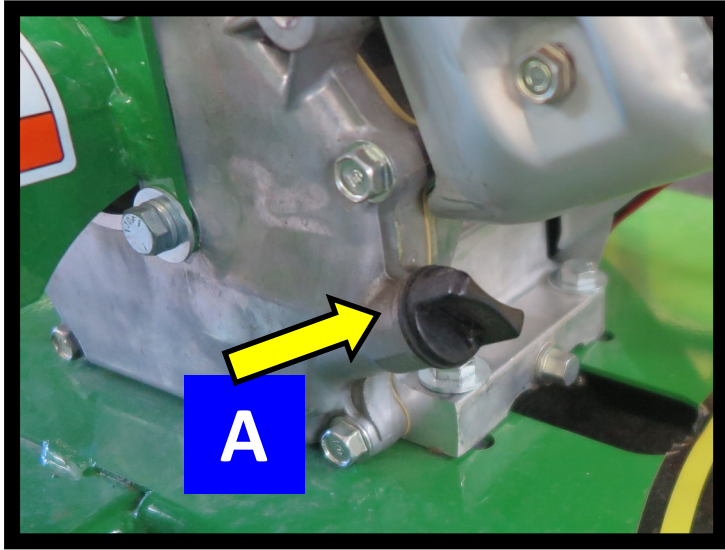


SET-UP INSTRUCTIONS

(CONTINUED)

10. Add Gas to the Engine

11. Check Engine Oil Levels—A + B



12. Check Inside of the Tank for ANY Loose Material

13. Remove Blue 1.5 Tips, Red Nozzle Filters, and Nozzle Retainers (Below)



1.5 Tip



Nozzle Filter



Nozzle Retainer

14. Flush Water Through the Lines

This ensures that there is no debris within the system.

- Fill tank approximately 1/2 full of water
- Turn Pump ON using the Wiring Harness
- Start Engine
- Allow water to flush through the system for at least 5 minutes or until the tank is empty
- Shut down the entire system in reverse order

8. Reinstall the Spraying Tips. (Below)

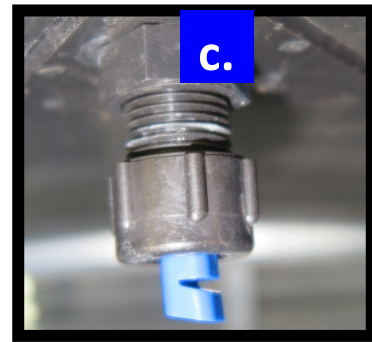
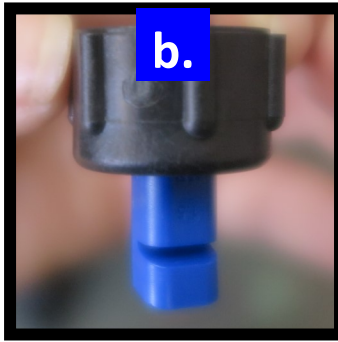
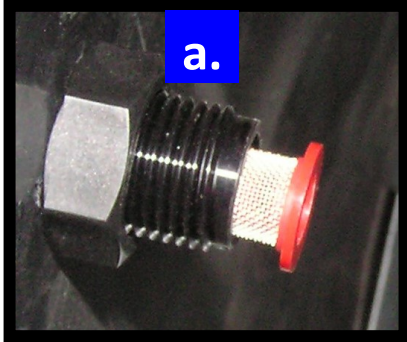
- Insert nozzle screen.
- Insert tip into nozzle retainer.
- Place nozzle retainer with tip over the nozzle filter and screw on moderately tight.
- Repeat steps a-c for remaining tips.

SET-UP INSTRUCTIONS

(CONTINUED)

15. Reinstall the Spraying Tips. (Below)

- Insert nozzle screen.
- Insert tip into nozzle retainer.
- Place nozzle retainer with tip over the nozzle filter and screw on moderately tight.
- Repeat steps a-c for remaining tips.



16. Test Your Sprayer

After checking that everything is operational (Steps 1-9) we recommend testing your sprayer (with water only) to fully understand the spray patterns and distance of spray in different wind conditions. Try to pick a good sunny day so that you can adequately see the mist.

Spraying with a Mist Sprayer is an art, not a science!

- Fill tank with water
- Check Gas and Oil levels
- Start Engine
- Increase Engine Throttle to Full Throttle
- Set pressure to desired PSI using Pressure Gauge (Between 40-50 Psi is desired)
- Turn Solenoid ON and start spraying water (DO NOT LET PUMP RUN DRY)
- Start spraying the water to get a feel for the unit and how it operates.
- While the Sprayer is running check all belts and pulleys to ensure that everything is operating properly
- Decrease Engine Throttle to Idle and Shut off Engine and Pump

17. You Are Now Ready to Test your Sprayer!!! (SEE OPERATION SECTION)

18. Drain the Tank After Test Spray

NOTE: After 5 hours of use, check all bolts, nuts, plumbing, and pulleys. This is your Break-In period. Belts will break in and seat into pulleys and may need to be retightened.

****Closing the Ball Valve on the return line will increase or decrease pressure**



OPERATION

For Warranty, Safety, Maintenance, Part Breakdowns, and Recipes plug in the USB Flash Drive that was included with your A1 Mist Sprayer

OPERATION INSTRUCTIONS

1. You Are Now Ready to Start the Application Process

- a. Add your active product to the tank
- b. Add additional water to fill the tank
- c. START SPRAYING!!

2. Give the Sprayer a Check-UP

After a few hours of spraying, we recommend checking all nuts, bolts, and set screws. This ensures that everything is working properly and that no future issues will arise. We also recommend a check-up after each application. It is also important to make sure everything is properly greased. The bearings and PTO could also use a check-up/extra shot of grease after each use.

3. Drain the Tank

You should drain the water and/or the chemical and clean your tank after each chemical use. **HOWEVER** It is advised to back flush the system after each use to ensure that no chemicals remain within the pump or lines of the system, this prevents damage or

If you are having any difficulties refer back to the Set-Up Section

OR

For any questions on spraying techniques, advice, or additional information or questions please do not hesitate to call A1 Mist Sprayers at our Main Office. We have people on hand specializing in every aspect of the spraying business that would love to help you with your new sprayer.

Toll-Free Number—(877)-924-2474

PROPER HOOK-UP & INSTALLATION

Skid units

Make sure your skid unit is centered on your pick-up or truck and properly bolted down before operations.

Trailer units

ALL **A1 Mist Sprayer** trailer units are engineered to connect to all SAE-ASAE standard tractor drawbars. Always adjust the drawbar so that the horizontal distance for the end of the tractor PTO shaft to the center of the hitch pinhole is approximately 14" for 540RPM PTO. All drawbars in the crossbar need to be parallel with tractor centerline. Place either the proper bolts or locking pins on both sides of drawbar for proper trailing and stabilization.

NOTICE!!

An incorrectly located trailer hitch (drawbar) point may cause damage to the trailer tongue and/or power take-off shaft which may lead to personal injury.

When attaching an 8" stroke cylinder to a 3 point unit, make sure the air is out of the hoses.

OPERATION

FILLING THE SPRAYER

Determine the chemical concentration required according to chemical label directions. Generally these directions give a range of low to high concentrations for a specific use. **A1 Mist Sprayers** perform well using the light to medium concentrations.

Wettable powders should be strained with water to eliminate lumps. This premixed solution should be strained through no larger than a 40 mesh screen when adding to the tank.

When filling the spray tank, be sure to have the tank half full of water then add the required chemical and finish filling the tank to the desired capacity. Use only clean water and fresh chemicals for best results.

Most chemicals deteriorate rapidly after mixing; therefore mix only the amount you intend to use immediately. Never leave unused chemicals in the tank or lines of the sprayer. Drain and flush after each use.

FLY WHEELS AND BELT PULLEYS

Check and tighten all bolts on Fly Wheel and Belt Pulleys 2-4 times a year. They can work loose during regular use.

OPERATING HINTS

- Keep the **A1 Mist Sprayer** as level as possible.
- Make sure fan rotation is correct. Be sure volute does not hit frame.
- Keep nozzles, strainers, filters and hoses CLEAN!
- Always flush sprayer after each use. This will add to the life of the pump and is in accordance with Local, State and Federal regulations.
- Never let concentrate and water freeze in the **A1 Mist Sprayer** during cold weather.
- Never let any pump run dry.
- Keep children and all personnel away from fan discharge area!
- Not recommended for use with STRONG WINDS.

FLAT NOZZLES

A1 Mist Sprayers have nozzle strainers installed at the factory. Additional orifices, cores, nozzles and strainers can be provided to obtain various calibration rates.

Orifices, cores, nozzles and strainers should be removed and thoroughly cleaned at regular intervals to insure accuracy and prevent blockages. Once daily is recommended.

Other Available Tips

Tip Color	Tip No.	Microns
Orange	8001E	100+
Green	80015E	150+
Yellow	8002E	200+
Blue	8003E	300+
Red	8004E	400+
Brown	8005E	500+
Gray	8006E	600+
White	8008E	800+

CALIBRATING SPRAY TIPS

To effectively determine the application rate, use the following procedure:

- 1) Select the GPA (gallons per acre) of spray mixture required by referring to chemical mfg. Label directions and recommendations.

Example: 1.5 GPA

- 2) Select suitable sprayer speed. For tractors, decide which gear will be used: then determine the exact speed for that gear when traveling at an engine speed that turns the PTO 540 RPM. It may be necessary to drive the tractor in a straight line for one minute at 540 PTO speed and measure the feet traveled. The number of feet traveled in one minute divided by 88 equals MPH (miles per hour).

Example $\frac{440 \text{ ft.}}{88} = 5 \text{ MPH}$

For truck mounted or trailered gas-engine powered sprayers, decide on a gear and read the speedometer or check (refer to above) if in doubt of the accuracy of the speedometer.

- 3) Select the swath width to be used.

Example: 60 ft.

- 4) Calculate the total flow rate on GPM required using the following formula.

GPA x MPH x SWATH WIDTH
 $\frac{495}{495} = \text{total flow rate in GPM}$

Example: $\frac{1.5 \text{ GPA} \times 5 \text{ MPG} \times 60}{495} = .91 \text{ GPM}$

- 5) Calculate flow rate of each nozzle using the following formula:

Total flow rate in GPM
 $\frac{\text{Number of nozzles}}{3} = \text{Flow rate of each nozzle}$

Example: $\frac{.91 \text{ GPM}}{3 \text{ nozzles}} = .30 \text{ GPM per nozzle}$

DIAMETER IN MICRONS	DROPLETS PER SQUARE INCH
20	143,000
50	9,224
100	1,164
200	142
300	43
500	9

The nozzle size, number of nozzles, chemical concentration and pressure determine the amount of chemical to be delivered.

COMMON ITEMS & THEIR RESPECTIVE PARTICLE SIZES	
Postage Stamp	25,400 Microns
Beach Sand	100-2000 Microns
Eye of a Needle	1,230 Microns
Fertilizer	10-1000 Microns
Pollens	10-1000 Microns
Human Hair	40-300 Microns
Coal Dust	1-100 Microns
Mold Spores	10-30 Microns
Atmospheric Dust	0.001-30 Microns
Oil Smoke	0.03-1 Microns
Tobacco Smoke	0.01-1 Microns

We Are Here For You!

Please feel free to contact us Monday thru Friday 8am-5pm.

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Thank You & Congratulations

on your purchase of an America's #1 low volume mist sprayer from A1 Mist Sprayers.

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