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## NorthStar 99906

# NorthStar High Flow ATV Boomless Broadcast and Spot Sprayer

MODEL: 99906

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## 1. Introduction

This manual provides instructions for the safe and effective use of your NorthStar High Flow ATV Boomless Broadcast and Spot Sprayer, Model 99906. This sprayer is designed for applying various liquids, including pesticides, herbicides, and fertilizers, across lawns, farms, and acreage. It features a 26-gallon tank, a 5.5 GPM NSQ Series on-demand pump, and a 40-foot boomless spray swath, along with a handheld spot spray gun.

## 2. Safety Information

**WARNING: Read and understand all safety instructions before operating this equipment. Failure to follow these instructions can result in serious injury or property damage.**

- **Chemical Handling:** Always handle chemicals with extreme care. Wear appropriate personal protective equipment (PPE) including gloves, eye protection, and protective clothing as recommended by the chemical manufacturer. Refer to the chemical product's Material Safety Data Sheet (MSDS) for specific handling instructions.
- **Electrical Safety:** Be cautious around electrical components. Ensure all electrical connections are secure and properly insulated. Do not operate the sprayer with damaged wiring or connectors. Connect to a 12V power source capable of supplying at least 25 Amps, using a minimum of 14 GA wiring.
- **ATV Operation:** Ensure the sprayer is securely mounted to your ATV before operation. Operate the ATV safely, especially on uneven terrain, to prevent tipping or loss of control.
- **Pressure Safety:** Do not exceed the maximum operating pressure of 60 PSI. Regularly inspect hoses and connections for wear or damage.
- **Storage:** Store chemicals and the sprayer in a secure location, away from children and pets.

## 3. Package Contents

Verify that all components are present before beginning assembly:

- 26-Gallon Sprayer Tank with Integrated Pump

- Boomless Nozzle Assembly
- Handheld Spray Gun with 15 ft. Hose
- Mounting Brackets and Hardware
- Wiring Harness with In-Line Switch and Alligator Clamps
- Pressure Gauge and Regulator Assembly
- Hoses and Fittings

## 4. Setup and Assembly

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While assembly instructions may not be explicitly provided, careful observation and attention to detail will guide the process. Refer to the product images for visual assistance.

1. **Mounting the Sprayer:** Securely attach the sprayer tank to your ATV using the provided mounting brackets and hardware. Ensure the sprayer is stable and balanced.
2. **Connecting Hoses:** Connect all hoses to their respective ports on the tank, pump, boomless nozzle assembly, and handheld spray gun. Use Teflon tape on all threaded connections and tighten them firmly, but do not overtighten. After initial tightening, give connections an additional quarter turn with a wrench to ensure a leak-free seal.
3. **Drain Plug:** Ensure the drain plug is fully tightened. If leakage occurs, apply plumber's tape to the threads and re-tighten.
4. **Pressure Regulator:** Attach the pressure regulator and gauge. Verify that any O-rings are correctly seated to prevent leaks.
5. **Electrical Connection:** Connect the wiring harness to the pump and to a 12V power source on your ATV. Ensure the alligator clamps are securely attached. Verify that the DC motor connectors within the housing are firmly inserted, as they may loosen during shipping.
6. **Internal Suction Tube:** Reach into the tank and ensure the internal suction tube is positioned correctly, touching the bottom of the tank, to allow for complete emptying.

# EASY ATTACHMENT

FITS ON ATV



Figure 4.1: The sprayer securely mounted to an ATV, demonstrating the easy attachment system.

## 5. Operating Instructions

1. **Fill the Tank:** Open the 7.5-inch diameter tank lid and fill the 26-gallon tank with the desired liquid. Do not overfill.
2. **Connect Power:** Ensure the sprayer is connected to a 12V power source. The in-line switch allows you to control the pump from the driver's seat.
3. **Prime the Pump:** Turn on the pump. It is an on-demand pump that will automatically shut off when maximum pressure is reached. Allow it to run briefly to prime the system.
4. **Adjust Pressure:** Use the pressure regulator to set the desired operating pressure. Monitor the pressure gauge to ensure it stays within the recommended range (up to 60 PSI).
5. **Boomless Broadcast Spraying:** For wide area coverage, activate the boomless nozzle assembly. The two broadcast nozzles deliver a 40-foot spray swath.



Figure 5.1: The boomless nozzles in operation, demonstrating the wide 40-foot spray swath.

6. **Spot Spraying:** For targeted applications, use the handheld spray gun. The 15-foot clear reinforced PVC hose allows for convenient spot spraying.
7. **Monitor Flow:** The clear hose for the handheld spray gun allows you to monitor chemical flow visually.
8. **After Use:** After each use, thoroughly rinse the tank, pump, and hoses with clean water to prevent chemical buildup and corrosion.



Figure 5.2: The pressure gauge and regulator, used for adjusting and monitoring spray pressure.

## 6. Maintenance

Regular maintenance ensures optimal performance and extends the life of your sprayer.

- **Cleaning:** After each use, drain any remaining chemicals and flush the tank, pump, and all hoses with clean water. Operate the pump with clean water for a few minutes to ensure all internal components are rinsed.
- **Strainer:** Periodically inspect and clean the strainer to prevent blockages and ensure consistent flow.



Figure 6.1: The transparent strainer, which should be regularly inspected and cleaned.

- **Connections:** Regularly check all hose connections, clamps, and fittings for tightness and signs of wear or leakage. Replace any damaged components immediately.
- **Winterization:** Before storing for extended periods or in freezing temperatures, completely drain all liquids from the tank, pump, and hoses. Run RV antifreeze through the system to protect internal components from freezing.
- **Pump Inspection:** Inspect the pump's DXS-3 Viton valves and Santoprene diaphragm for any signs of wear or chemical degradation. These components are designed for chemical resistance but should be checked periodically.

## 7. Troubleshooting

Problem	Possible Cause	Solution
Pump not running or weak output	Loose electrical connections; insufficient power; clogged strainer; air in system; loose DC motor connectors.	Check all electrical connections, including the DC motor connectors inside the housing. Ensure the 12V power source is adequate (25 Amps, 14 GA wiring). Clean the strainer. Prime the pump.
Leaks from tank or connections	Loose fittings; damaged O-rings; drain plug not sealed; faulty hose clamps.	Tighten all connections. Apply Teflon tape to threaded fittings, especially the drain plug. Inspect and replace damaged O-rings or hose clamps.
Tank not emptying completely	Internal suction tube is not touching the bottom of the tank.	Reach into the tank and push the internal suction tube down until it touches the bottom.
No spray from boomless nozzles when handheld gun is removed	No shut-off valve for boom water flow when boom is removed.	This model may not include a dedicated shut-off for the boom when the handheld gun is disconnected. Ensure all connections are secure to prevent unintended flow.
Inconsistent pressure or spray pattern	Clogged nozzles; air in system; pump issues; pressure regulator malfunction.	Clean nozzles. Check for air leaks in suction lines. Inspect pump and pressure regulator.

## 8. Specifications

Feature	Detail
Brand	NorthStar
Model Number	99906
Tank Volume	26 Gallons
Pump Type	NSQ Series On-Demand
Flow Rate	5.5 GPM
Maximum Pressure	60 PSI (Pump rated up to 70 PSI)
Power Source	12V Electric
Spray Swath	40 Feet (Boomless)
Hose Length	15 ft. (Handheld Spray Gun)
Diaphragm Material	Santoprene
Valve Material	Viton
Item Weight	42.8 Pounds
Color	White

## 9. Warranty and Support

For warranty information, technical support, or to order replacement parts, please contact NorthStar customer service directly. It is recommended to retain your proof of purchase for warranty claims. Be aware that warranty support may vary if the product was purchased through a third-party seller.

Contact information for NorthStar can typically be found on their official website or on the product packaging.