



M282795F

ITEM NUMBER: 282795

SERIAL NUMBER: _____

Owner's Manual

Instructions for Assembly, Testing, Operation, Servicing, and Storage

Tree Sprayer: For outdoor use with non-potable liquids such as agricultural pesticides and other water-based liquids**

⚠ WARNING

READ and UNDERSTAND the Owner's Manual completely before using this sprayer. Assemble, test, and use only in accordance with the Owner's Manual instructions.

READ and FOLLOW chemical label instructions. Pesticides are hazardous chemicals.

KNOW emergency procedures BEFORE handling chemicals. Sprayer leaks, bodily chemical contact, poisoning, and spills require immediate response.

AVOID inhaling, ingesting, or coming into contact with any chemicals.

WEAR personal protective gear when filling, using, cleaning, and servicing the sprayer.

KEEP sprayer and spray materials away from children and pets. Pesticides are especially toxic to them.

EXERCISE CAUTION in vehicle handling when towing/hauling a filled sprayer to avoid loss of control or sprayer overturning.

DO NOT TURN ON POWER to sprayer until ready to spray in order to avoid unintentional spray release.

ALWAYS keep a fire extinguisher rated "ABC" nearby.

Improper use of the sprayer or handling of chemicals could result in serious injury or illness to the operator or nearby persons/animals, or could cause damage to the environment.

** This sprayer is recommended for use in spraying non-flammable liquids such as pesticides and water for plants/trees. The sprayer will be damaged and warranty voided if used to apply bleach, chlorine, ice control chemicals, or any petroleum based product (gasoline, diesel, kerosene, oil). The sprayer should not be used to transfer any product intended for human consumption. WE RECOMMEND THAT THE SPRAYER NOT BE USED FOR OTHER PURPOSES ONCE IT HAS BEEN USED FOR SPRAYING PESTICIDES. Any chemical will leave some residual in the tank liner or sprayer components, even after the sprayer has been properly cleaned. These residual chemicals can have unexpected effects on future uses. For example, spraying water or other liquids that are contaminated with residual pesticide may result in unforeseen hazards to plant or animal life. This sprayer should not be used by people with reduced physical, sensory or mental capabilities or lack of experience and knowledge.

Any Questions, Comments, Problems, or Parts Orders

Call NorthStar Product Support 1-800-270-0810

Hazard Signal Word Definitions






	<p>This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.</p>
	<p>DANGER (red) indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.</p>
	<p>WARNING (orange) indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.</p>
	<p>CAUTION (yellow) indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.</p>
	<p>CAUTION (yellow) used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.</p>

fig01453

Table of Contents

Intended Use	4
Summary of Important Safety Information.....	5
Unpacking.....	9
Assembly.....	10
Machine Components	19
Operation – Important Safety Information	20
WARNING	22
Operation – Important Safety Information	23
Operation – Preparing the Sprayer for Each Use.....	24
Operation – Using the Sprayer.....	26
Storage	32
Troubleshooting	33
Specifications	34
Exploded View & Parts List – 282795 – Rev F.....	35
Pump Exploded View	37
Limited Warranty	38

Intended Use

The sprayer is intended for use in spraying agricultural pesticides.

SPRAYING PESTICIDES:

Pesticides are hazardous chemicals that must be handled with caution as directed throughout this manual and on the pesticide label. Pesticides are regulated by the United States Environmental Protection Agency (EPA) and defined as:

Any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest. Though often misunderstood to refer only to insecticides, the term pesticide is a comprehensive term that applies to insecticides, herbicides, fungicides, and various other substances used to control pests.

Sprayer 282795 comes equipped with a high pressure spray gun. Use the high pressure spray gun if you desire to apply pesticide only on selected plants or trees.

SPRAYING OTHER LIQUIDS:

In addition to spraying pesticides, this sprayer may be used for watering plants and trees. **WE RECOMMEND THAT THE SPRAYER NOT BE USED FOR OTHER PURPOSES ONCE IT HAS ALREADY BEEN USED FOR SPRAYING PESTICIDES.** Any chemical will leave some residual in the tank liner or sprayer components, even after the sprayer has been properly cleaned. These residual chemicals can have unexpected effects on future uses. For example, spraying water or other liquids that are contaminated with residual pesticide may result in unforeseen hazards to plant or animal life.

NOTE: The sprayer will be damaged and warranty voided if used to apply bleach, chlorine, ice control chemicals, or any petroleum based product (gasoline, diesel, kerosene, oil).

Contact NorthStar Product Support at 1-800-270-0810 for any questions about the appropriate use of the sprayer and/or optional accessories.

Summary of Important Safety Information

WARNING

Read and understand **this owner's manual** completely before using the sprayer. Read each **chemical label's instructions** before handling the chemical.

Improper use of the sprayer or handling of chemicals could result in serious injury or illness for the operator or nearby persons/animals, or cause damage to the environment.

LISTED BELOW is a summary of safety information of particular importance. See individual sections of this owner's manual for more details.

----- DURING ASSEMBLY -----

- **EXERCISE CAUTION** when attaching remote switch to battery terminals. Follow the steps listed in the Assembly section of this manual *in exact sequence* when connecting the sprayer's remote switch battery clamps to the battery terminals. *Caution must be exercised to avoid contact with battery acid and to prevent sparking.*
- **CHECK and TEST completed assembly** as directed in this manual. Serious injury could result from chemical leaks if sprayer is improperly assembled.
- **DO NOT MODIFY sprayer design.**

----- DURING OPERATION -----

General Chemical Safety

- **READ and FOLLOW** each chemical label's instructions and warnings.
- **AVOID** inhaling, ingesting, or coming into contact with any chemicals.
- **KNOW** applicable licensing and regulatory requirements for the chemical you plan to use.
- **KNOW** emergency procedures before handling chemicals. Carefully review "Chemical Accident Procedures" listed below and later in this manual. Also see First Aid instructions on the chemical label.
- **WEAR** protective clothing, eye protection, and chemical resistant gloves when filling, using and cleaning the sprayer. Wear additional protective gear, such as facemask or apron, as recommended on the chemical label.
- **EXERCISE EXTRA CAUTION** around children and pets. Pesticides are especially toxic to them. Keep sprayer and spray materials away from them at all times.
- **DO NOT MIX OR POUR** chemicals in an enclosed, unventilated area
- **DO NOT USE** flammable or corrosive chemicals in the sprayer.
- **FLUSH** the sprayer before switching chemicals in order to prevent dangerous chemical interactions.
- **STORE** pesticides in a correctly labeled container and in a secure location.
- **MONITOR** the health of operators frequently exposed to pesticides, as recommended by the chemical label or local/federal regulations.

Chemical Application Safety

Before Spraying

- **INSPECT and PREPARE** sprayer before each use as directed in this manual.
- **DO NOT TURN ON POWER** to sprayer until ready to spray in order to avoid unintentional spray release.
- **MAKE SURE BROADCAST NOZZLES ARE ORIENTED** to spray straight down before starting the sprayer. An incorrectly positioned broadcast nozzle may spray chemicals on you or others.
- **DO NOT SPRAY** when wind speed exceeds 4 MPH in order to minimize spray drift.
- **CLEAR** work area of people/ pets and **POST** warning notices to restrict access for the period recommended on chemical label.
- **KEEP** sprayer and spray away from children/pets. Pesticides can be especially toxic to children and animals.
- **DO NOT ALLOW** anyone younger than 16 to operate sprayer since pesticides are especially toxic to children.

During Spraying

- **DO NOT OVERAPPLY** pesticide. Apply at rate recommended by chemical manufacturer. Excess pesticide can be dangerous to humans/animals, damage desirable plants, and contaminate soil and water sources.
- **DO NOT EAT, DRINK, SMOKE, RUB YOUR EYES, or TOUCH YOUR BARE SKIN** while handling chemicals and spraying.
- **NEVER POINT THE SPRAY GUN** at people or animals.

Summary of Important Safety Information (continued)

- **EXERCISE EXTRA CAUTION** when spraying near areas accessible to children and pets.
- **CLEAN up spills immediately** per instructions on the chemical label.
- **TURN OFF vehicle and set brake or block wheels, TURN OFF power to sprayer, and RELIEVE system pressure** before leaving sprayer unattended.
- **SEE Troubleshooting section of this manual before attempting any repairs.** Wear personal protective equipment and follow safety instructions.

After Spraying

- **CLEAN sprayer immediately after use** according to the directions provided in this manual.
- **DECONTAMINATE yourself after you are done spraying** and have cleaned the sprayer. Wash all exposed areas of the body with soap and water, and remove and launder clothing.
- **DISPOSE OF or STORE remaining chemicals in secure storage with correctly marked container.**

Towing/Hauling Safety

- **READ towing/hauling safety instructions** in your towing/hauling vehicle manual.
- **DO NOT ALLOW drivers younger than 16** to operate the towing/hauling vehicle with the filled sprayer attached.
- **MAKE SURE SPRAYER IS SECURELY ATTACHED to vehicle.**
- **EXERCISE CAUTION in vehicle handling when towing/hauling filled sprayer** to avoid loss of control or overturning.
 - **Keep speed to a minimum** so you can maintain control. Reduce speed prior to turns.
 - **Allow for wider turns** and for **more distance to stop.**
 - **Avoid any sudden** steering maneuvers, starts, or stops that could create sway.
- **SLOW DOWN AND EXERCISE EXTRA CAUTION ON SLOPED OR UNEVEN TERRAIN.** Pick the most level route possible. Drive up and down slopes when necessary, rather than across. Use a vehicle equipped with a roll over protection system (ROPS) if you will be working on non-level terrain.
- **BE AWARE** of the added length of the sprayer and that visibility may be reduced when making turns or backing up.
- **DO NOT RIDE or TRANSPORT cargo on the sprayer.**
- **COMPLY WITH** all local, state, and federal towing requirements if you will be towing on public roads.
- **TURN OFF** both sprayer and vehicle, and **SET BRAKES or BLOCK WHEELS** before leaving unattended.

Chemical accident procedures

Immediate response is necessary in the event of sprayer leaks, bodily chemical contact, poisoning, or spills.

Sprayer leak	If the sprayer develops a leak, <i>immediately stop spraying.</i> Turn off power to the sprayer and follow directions below, as applicable.
Bodily chemical contact	Personal contamination can occur when chemicals splash, spill, or spray directly onto a person. <ol style="list-style-type: none"> 1. Immediately follow First Aid instructions on <u>chemical label</u>. <p style="margin-left: 20px;"><u>General procedures can include:</u></p> <ol style="list-style-type: none"> a) Eyes – immediately flush with water. b) Skin – wash all contaminated skin surfaces with soap and water. c) Clothing – remove contaminated clothing. Dispose of heavily contaminated clothing per chemical label instructions. 2. Seek medical advice if instructed on the label or the victim experiences symptoms of harmful effects. Bring the chemical label for reference.

Summary of Important Safety Information (continued)

Poisoning by ingestion or inhalation	In case of poisoning from ingestion or inhalation: <i>If the victim has collapsed or is not breathing, call 911.</i> Otherwise: <ol style="list-style-type: none">1. If you are the victim, immediately seek assistance from nearby personnel because you may become incapacitated.2. Immediately follow first aid instructions on <u>chemical label</u>.3. Call a poison control center for further advice. In the U.S., call 1-800-222-1222. Have the chemical label available for reference.
Chemical spills	Chemical spills must be quickly contained and properly cleaned up. Refer to the chemical label for any specific clean-up instructions. <u>General procedures include:</u> <ol style="list-style-type: none">1. Controlling the spill by stopping the source of the spill.2. Containing the spill so that it does not spread and get into water sources.3. Cleaning up the spill immediately.4. Seeking additional advice from:<ul style="list-style-type: none">- <u>Chemical manufacturer</u>. See chemical label for contact information.- <u>State pesticide regulatory agency</u>. In the U.S., call the National Pesticide Info. Ctr. at 800-858-7378 for assistance in contacting your state's agency.

Summary of Important Safety Information (continued)

⚠ WARNING

READ and UNDERSTAND the Owner's Manual completely before using this sprayer.
Assemble, test, and use only in accordance with the Owner's Manual instructions.

READ and FOLLOW chemical label instructions. Pesticides are hazardous chemicals which must be handled carefully.

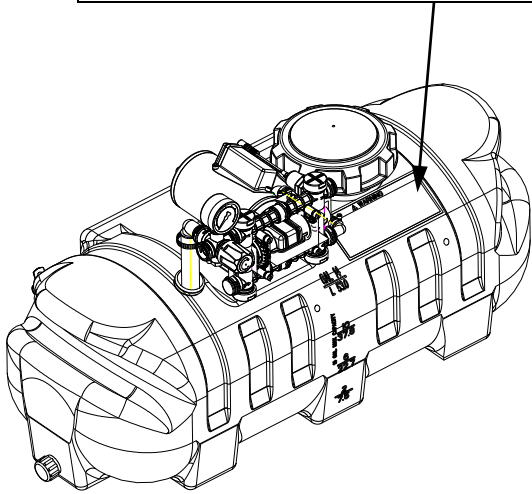
KNOW emergency procedures BEFORE handling chemicals. Sprayer leaks, bodily chemical contact, poisoning, and spills require immediate response.

AVOID inhaling, ingesting, or coming into contact with any chemicals.

EXERCISE CAUTION in vehicle handling. Vehicle will be less stable and handle very differently with filled sprayer attached.

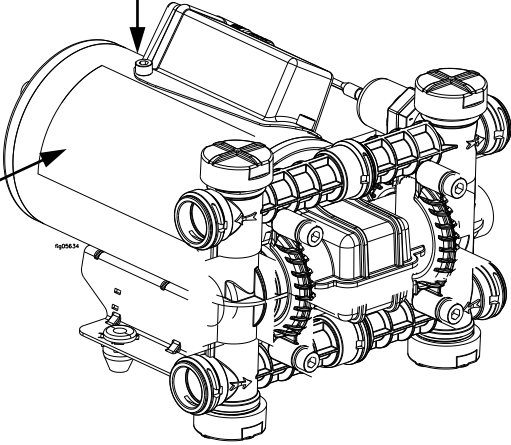
DO NOT TURN ON POWER to sprayer until ready to spray in order to avoid unintentional spray release.

Improper use of the sprayer or handling of chemicals could result in serious injury or illness to the operator or nearby persons/animals, or could cause damage to the environment.



⚠ WARNING

DO NOT PUMP FLAMMABLE FLUIDS. DO NOT USE PUMP IN AN EXPLOSIVE ENVIRONMENT. READ AND UNDERSTAND THE OWNER'S MANUAL COMPLETELY BEFORE USING. RELIEVE SYSTEM PRESSURE BEFORE PERFORMING MAINTENANCE.



NORTH STAR
Proven Performance

NSQ SERIES™ 20200Q

Max Pressure: 200 PSI/13.8 Bar	Volt: 12 VDC
Open Flow: 2.0 GPM/7.57 LPM	Max Amp: 20.0

Part#	Description
777499	Chemical Label
792952	NSQ Series 20200Q Pump Label
793288	Pump Warning Label

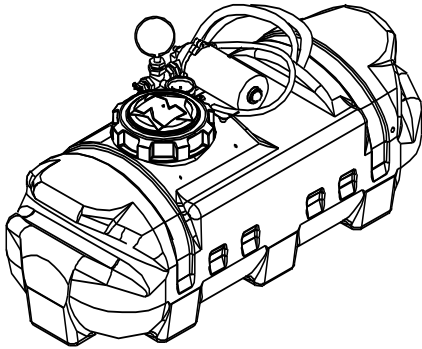
Always make sure safety labels are in place and in good condition. If a safety label is missing or not legible, order new labels or unsafe operation could result.
To order replacement safety labels, call NorthStar Product Support at 1-800-270-0810.

Unpacking

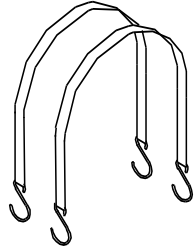
Closely inspect all contents in the shipping carton.

Note that some parts are shipped inside the tank.

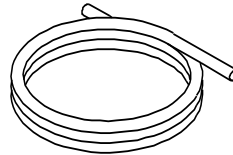
- If you have missing or damaged components, please contact NorthStar Product Support at 1-800-270-0810.



Sprayer
Qty 1



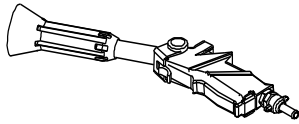
Tie Down Straps
Qty 2
5262



Spray Gun Hose
Qty 1
792827

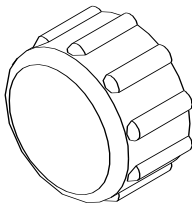


Manual
Qty 1

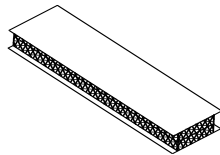


Spray Gun
Qty 1
781088

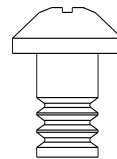
Note: Items below are found in the manual bag.



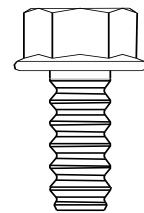
Drain Cap & Washer
Qty 1
37680, 5232



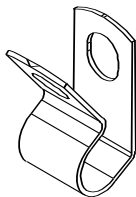
Hook and Loop Set
Qty 1
35363



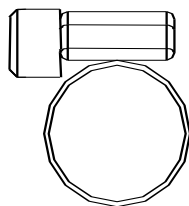
#10 Screw
Qty 2
791504



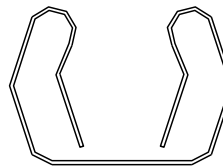
5/16" x 1/2" Bolt
Qty 1
82014



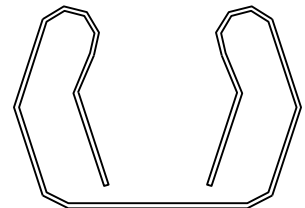
Hose Clip
Qty 1
777110



Hose Clamp
Qty 4
777119



Small Gun Clip
Qty 1
793093



Large Gun Clip
Qty 1
777358

Assembly

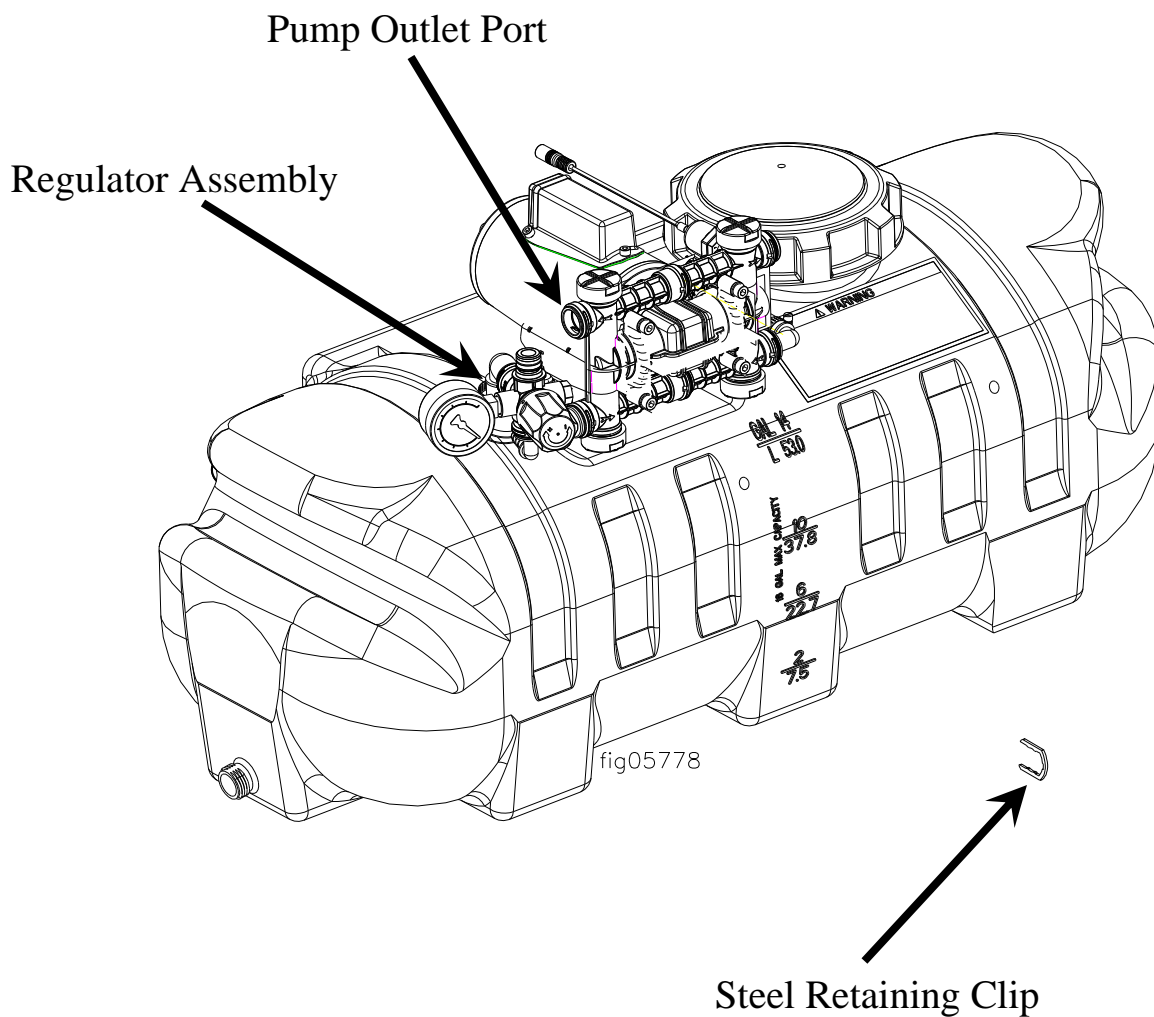
Step 1 – Regulator Installation

- Remove shipping plugs from pump ports.
- Remove steel retaining clip from *Outlet* port of pump and insert regulator assembly into *Outlet* port of pump. Insert steel retaining clip to secure regulator assembly.

NOTE: To insert quick connect fittings, lubricate O-ring with water and twist fitting while inserting into

Tools Needed

- N/A



Assembly

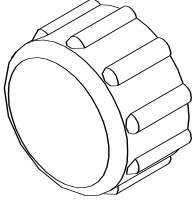
Step 2 – Drain Plug Installation

- Thread drain cap onto tank until hand tight.

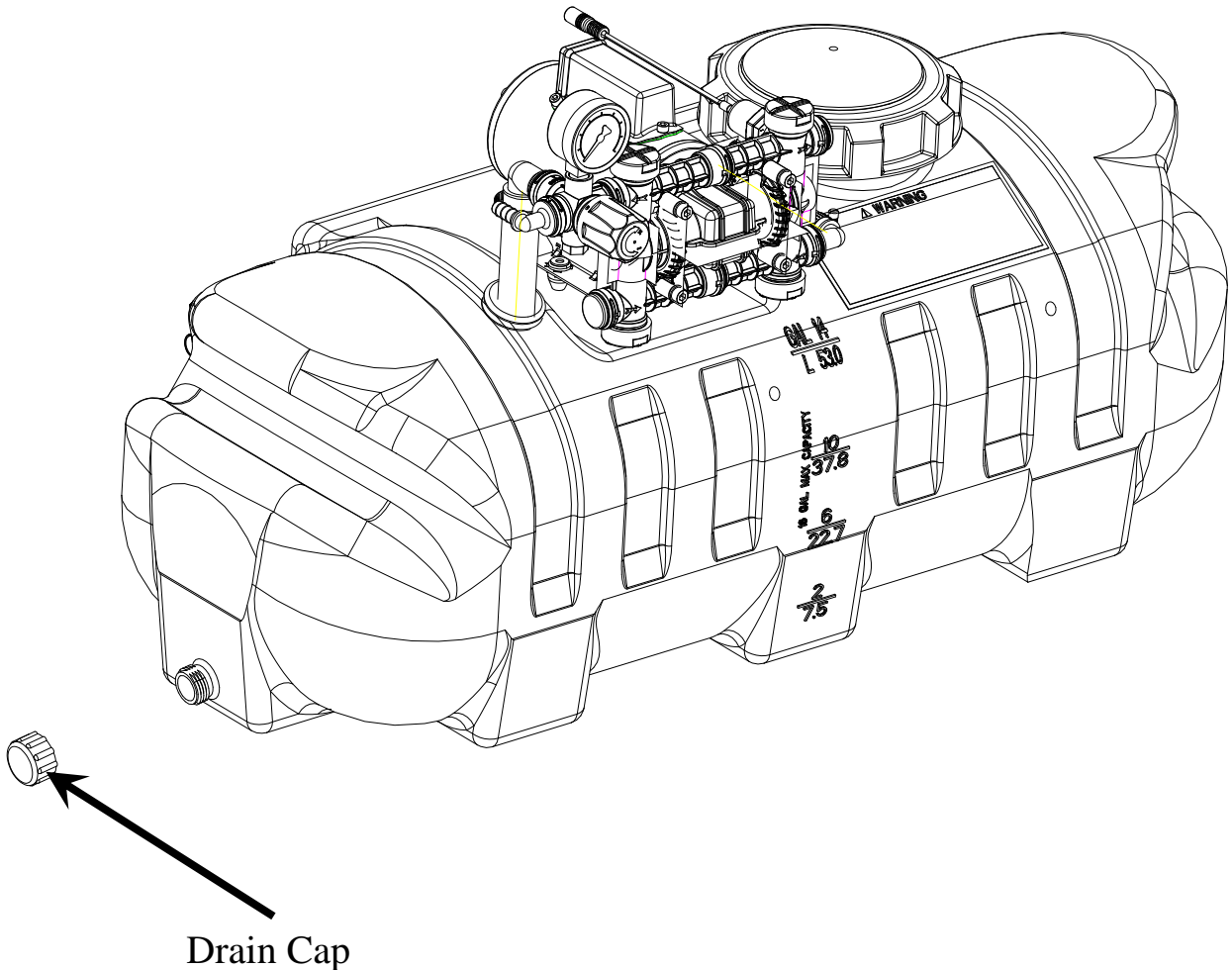
Tools Needed

- N/A

Components Needed from Owner's Manual Bag:



Drain Cap
Qty 1
37680



Assembly

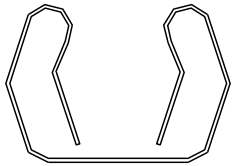
Step 3 – Gun Clip Installation

- Fasten gun clips to side of sprayer tank.
- Secure with #10 x 1/4" screws.

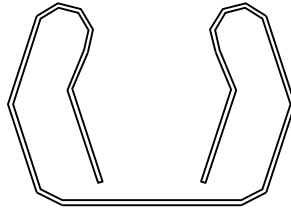
Tools Needed

- Phillips head screw driver

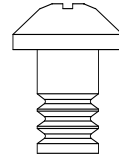
Components Needed from Owner's Manual Bag:



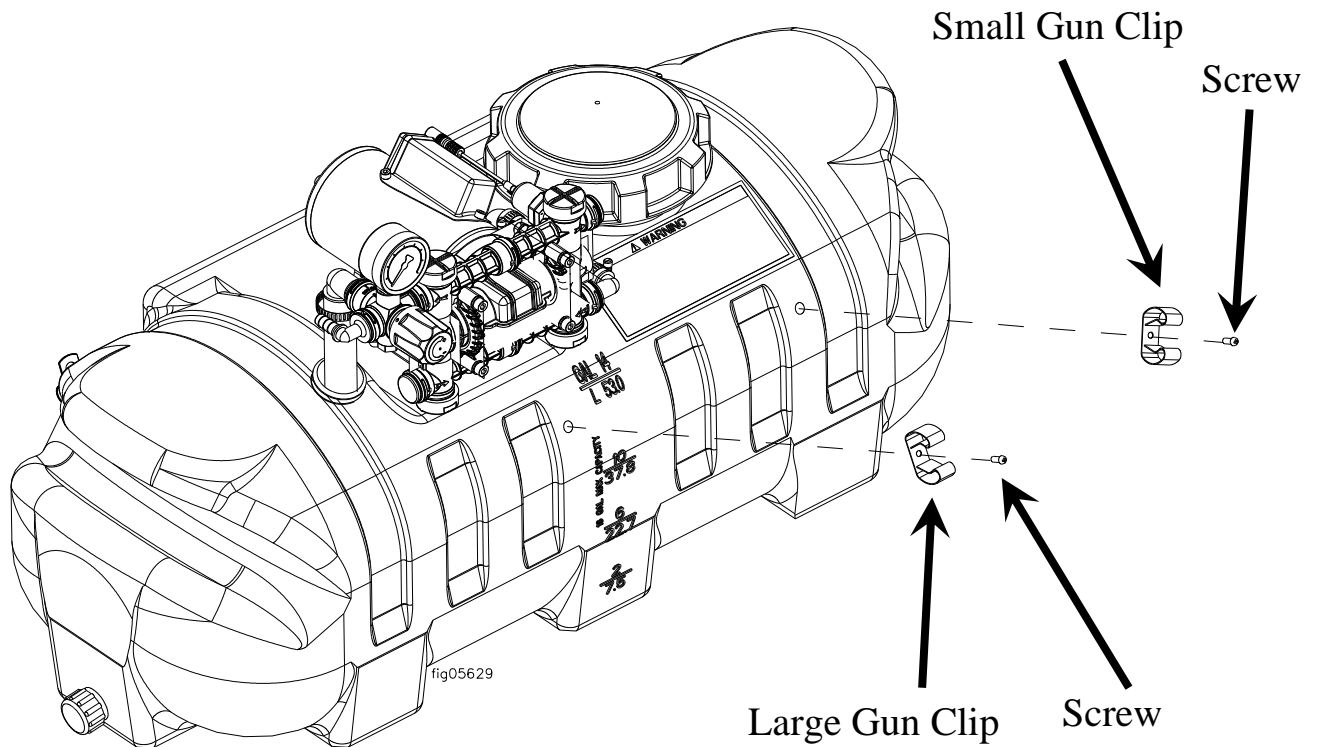
Small Gun Clip
Qty 1
793093



Large Gun Clip
Qty 1
777358



#10 Screw
Qty 2
791504



Assembly

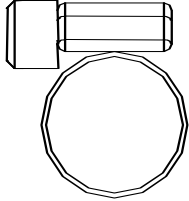
Step 4 – Gun Hose to Regulator Assembly

- Install hose clamps on hose.
- Push the hose onto the hose barb attached to the regulator.
- Slide the hose clamps over the hose barb.
- Tighten the hose clamps.

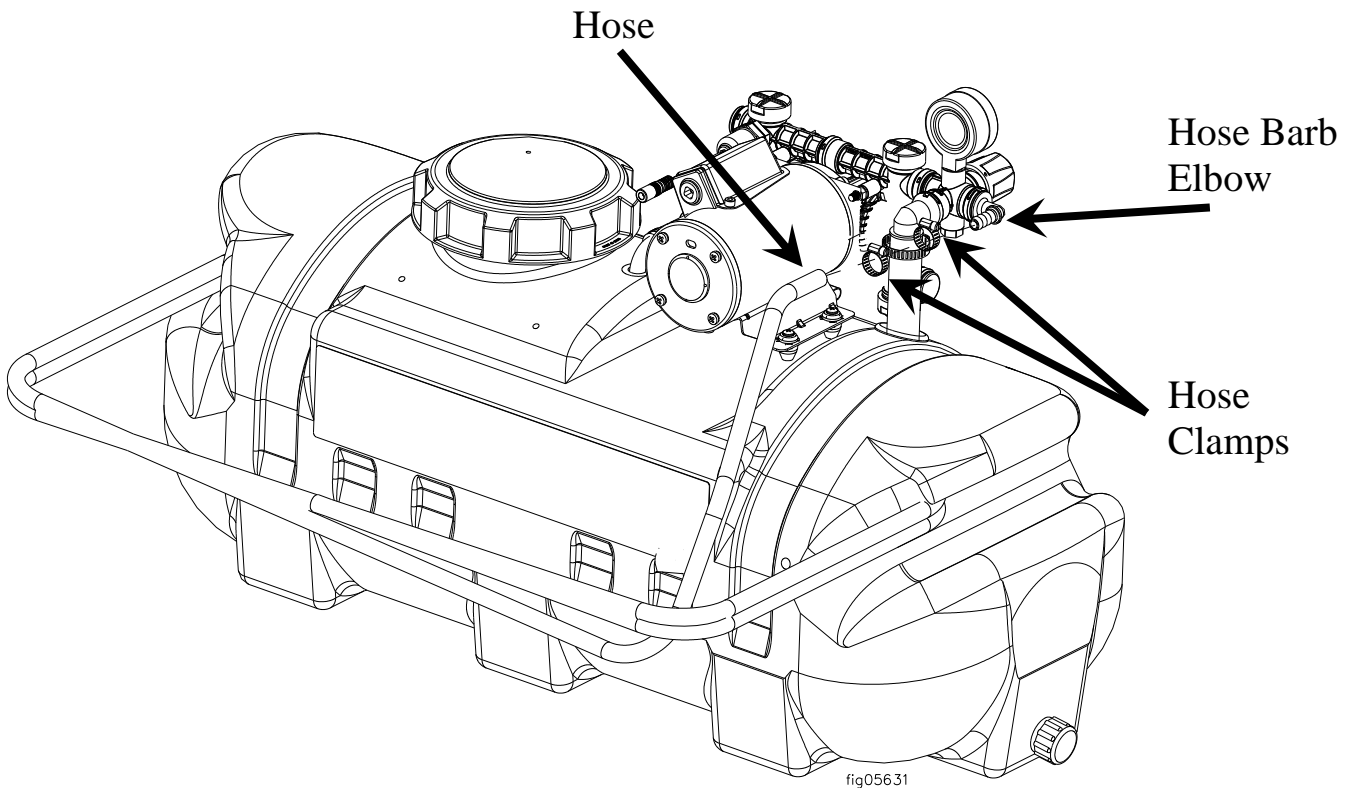
Tools Needed

- Flat head screw driver

Fasteners Needed from Owner's Manual Bag:



Hose Clamp
Qty 2
777119



Assembly

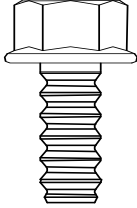
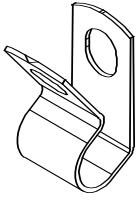
Step 5 – Hose Guide to Tank Assembly

- Route gun hose through hose guide.
- Attach hose guide to tank with 5/16" x 1/2" bolt.

Tools Needed

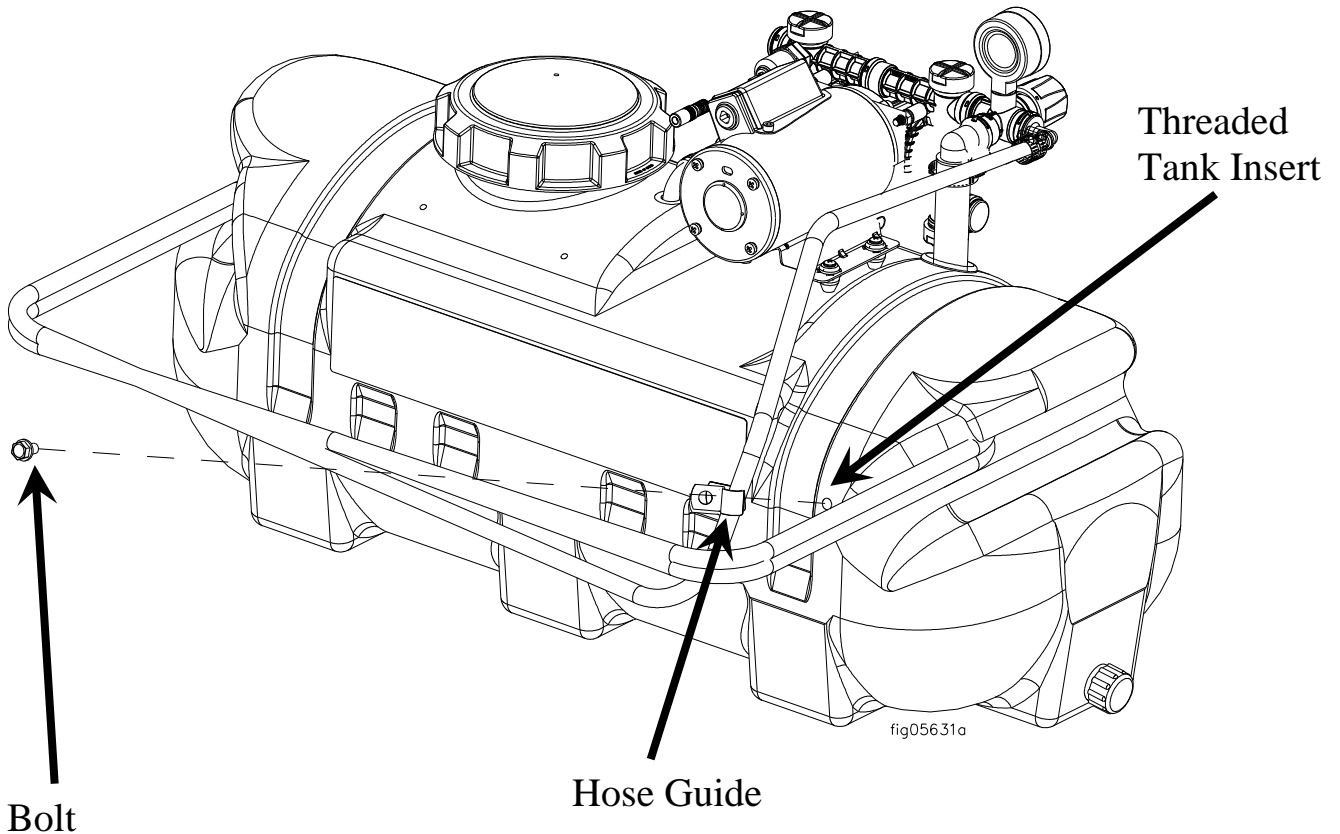
- 1/2" wrench

Fasteners Needed from Owner's Manual Bag:



Hose Clip
Qty 1
784561

5/16" x 1/2" Bolt
Qty 1
82014



Threaded
Tank Insert

Hose Guide

Bolt

Assembly

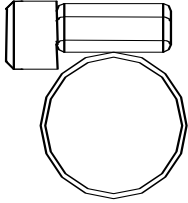
Step 6 – Gun Hose to Gun Assembly

- Install hose clamps on hose.
- Push the hose onto the hose barb on the end of the spray gun.
- Slide the hose clamps over the hose barb.
- Tighten the hose clamps.

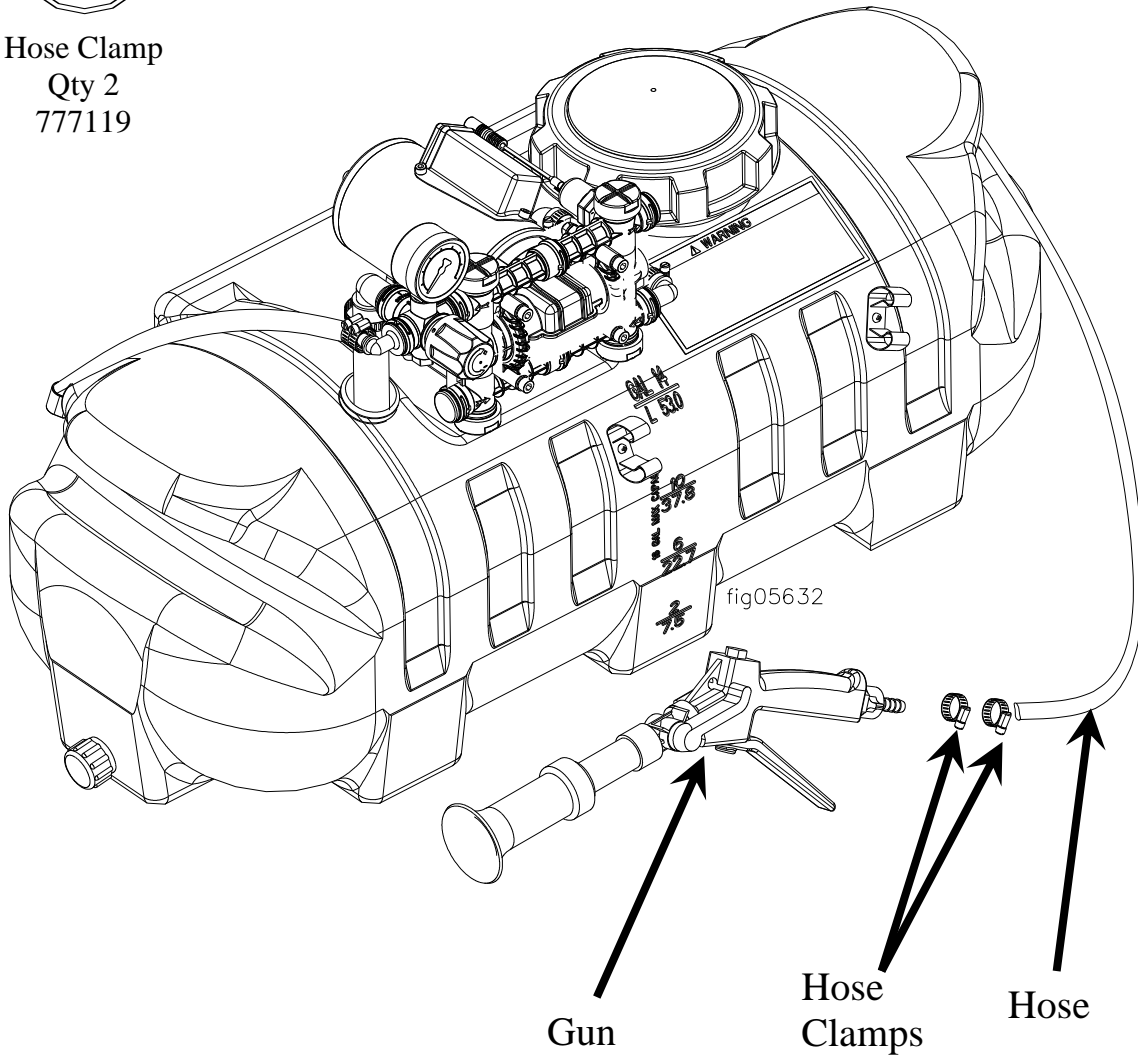
Tools Needed

- Flat head screw driver

Fasteners Needed from Owner's Manual Bag:



Hose Clamp
Qty 2
777119



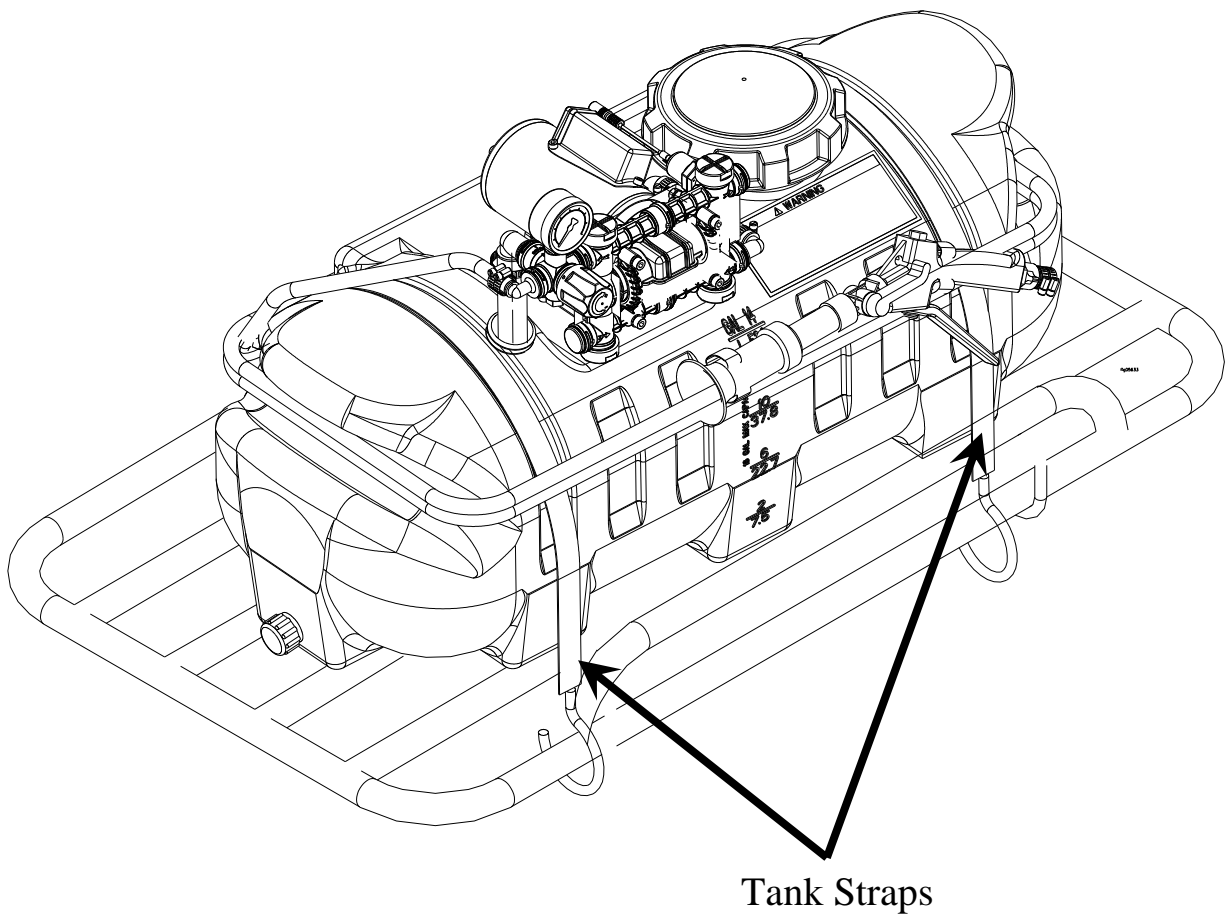
Assembly

Step 7 – Sprayer to Vehicle Attachment

- Note: If your vehicle battery will be inaccessible after the sprayer is attached, you will need to proceed to "Step 8: Connect remote switch to ATV battery" prior to performing this step.
- Secure the sprayer tank to ATV rack with the provided tank straps.

Tools Needed

- N/A



Assembly

Step Eight: Connect remote switch to vehicle battery

⚠ WARNING

Batteries are hazardous because they contain caustic acid, can emit explosive gases, and can cause electric shock.

Caution must be exercised when making connections to a battery to avoid shock and contact with the acid, and to prevent any sparking that could lead to an explosion.

ALWAYS follow the safety instructions and steps listed below *in exact sequence* when connecting the sprayer's remote switch to the battery terminals.

1. Preparatory safety	<p>Preparatory safety steps:</p> <ul style="list-style-type: none"> • ALWAYS use eye protection • NEVER smoke or work near sparks or other sources of ignition. • NEVER touch both battery terminals at the same time or with any non-insulated tools. • If battery acid contacts skin or clothing, flush immediately with water and neutralize with baking soda.
2. Connect remote switch to battery	<p>Connect the sprayer's <u>remote switch</u> to the vehicle battery using the following procedure:</p> <ol style="list-style-type: none"> a) Ensure remote switch in the OFF position b) Disconnect the vehicle battery ground wire. b) Connect the <u>remote switch's red</u> battery clamp to the positive (+) terminal of the battery. c) Connect the <u>remote switch's black</u> battery clamp to the negative (-) terminal of the battery. d) Reconnect the vehicle battery ground wire. <p>WARNING: Always connect in this sequence to avoid possible shock.</p>
3. Verify connection	<p>Verify a complete connection has been made by checking with a DC voltmeter, or by <i>briefly</i> turning the <u>remote switch</u> to the ON position and listening for pump activation.</p>
4. Attach remote switch to vehicle	<p>Using supplied Hook & Loop pad, affix remote switch to vehicle in a position that is easily reached from the driver's seat.</p>
5. Disconnect after use	<p>AFTER EACH USE, disconnect power to the sprayer by disconnecting the sprayer's remote switch cord from the vehicle's battery.</p> <p><i>NOTE: It is important to disconnect power to the sprayer when not in use for safety reasons. ALWAYS verify that the power has been disconnected or the remote switch is in the OFF position before adding chemicals or servicing.</i></p>

Assembly

6. To disconnect permanently

When it is necessary to disconnect the sprayer's remote switch from the battery, use the following procedure:

- a) Disconnect vehicle battery ground wire.
- b) Disconnect the remote switch's *black* battery clamp from the *negative (-)* terminal of the vehicle battery.
- c) Disconnect the remote switch's *red* battery clamp from the *positive (+)* terminal of the vehicle battery.
- d) Reconnect the vehicle battery ground wire.

WARNING: Always disconnect in this sequence to avoid possible shock.
(Remember that on some vehicle models, you may need to remove the sprayer to access the battery)

Step Nine: Check and test completed assembly.

WARNING

Check and test completed assembly

Serious injury could result from chemical leaks if sprayer is improperly assembled or the design of the sprayer is modified.
Follow the steps below to ensure the sprayer is properly assembled. Never modify the sprayer design.

1. Check assembly

Check assembly to assure the sprayer is properly assembled and in safe working condition:

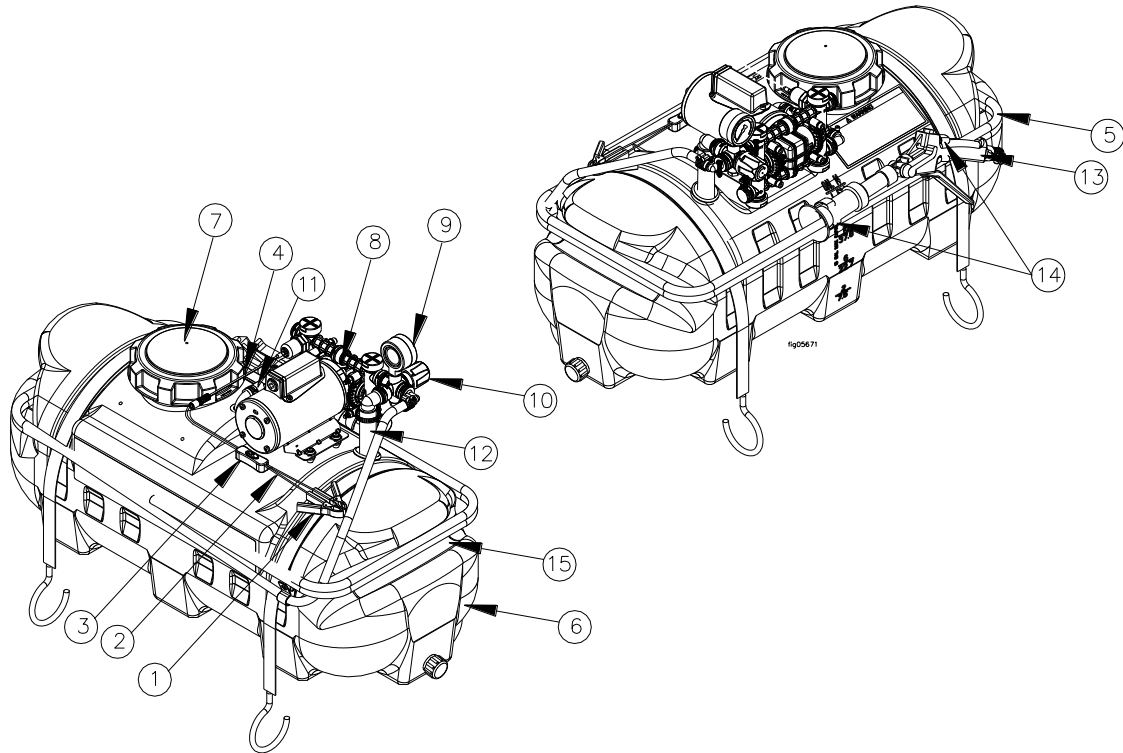
- a) Check that the gun clip screws are tight, hose clamps are secure and screws are tight.
- b) While it is unlikely that factory assembled components become loose, they should also be checked to make sure they are tight.

2. Test with water

Test the system for leaks with water:

- a) Fill the tank with water.
- b) Turn the remote switch ON. The pump is an "on demand" pump. When turned on, the pump will prime itself, then turn off. When the gun trigger is squeezed, the pump will automatically start.
- c) Operate the spray gun by squeezing the gun trigger.
- d) Check for leaks throughout the system. If a leak is detected, fix the leak and re-test the system with water until no leaks are detected.

Machine Components



- 1.) **Battery Clamps.** Use the battery clamps to connect the battery power cord to the battery.
- 2.) **Battery Power Cord.** The battery power cord connects the vehicle battery to the remote switch. This cord remains connected to the battery when the sprayer is not in use.
- 3.) **Remote Switch.** The remote switch allows the operator to safely turn ON/OFF the sprayer.
- 4.) **Pump Power Cord.** The pump power cord connects the remote switch to the pump.
- 5.) **Gun Hose.** The 35' gun hose transfers chemical from the pump to the spray gun.
- 6.) **Sprayer Tank.** The sprayer tank holds the chemical.
- 7.) **Fill Cap.** The fill cap has a ball check to allow air to enter the tank as the chemical is dispensed, but does not allow chemical to escape the tank.
- 8.) **Sprayer Pump.** The sprayer pump makes the chemical flow to the spray gun and the nozzle.
- 9.) **Pressure Gauge.** The pressure gauge is an indicator of the pressure in the system.
- 10.) **Pressure Adjustment Knob.** Turn the pressure adjustment knob until the sprayer is running at the desired pressure.
- 11.) **Suction Tube.** The suction tube is the inlet line for the pump. The suction tube has a suction strainer to prevent debris from entering the pump.
- 12.) **Bypass/Agitation Hose.** The bypass hose transfers liquid from the pump to the tank when the system is up to pressure.
- 13.) **Spray Gun.** The spray gun has three spraying modes; stream, cone, fog (see operation instructions).
- 14.) **Gun Clips.** Use the gun clips to store the spray gun.
- 15.) **Hose Wrap.** The hose wrap is built into the tank, and provides a storage location for the gun hose.

Operation – Important Safety Information

Now that you have completed and tested your assembly, there is some important safety and health information you need to know with regard to handling and spraying chemicals, as well as vehicle handling with the sprayer attached.

WARNING

Carefully read and make sure you understand the following safety information before using the sprayer.

General Chemical Safety:

WARNING

Pesticides are hazardous chemicals.
Heed the warnings below and follow all instructions carefully.
Improper handling of chemicals can result in serious injury or illness, or cause damage to the environment.

- **Chemical label.** ALWAYS READ and FOLLOW all chemical label instructions.
- **Licensing/regulation.** Refer to any applicable licensing restrictions or state/federal regulations with regard to the application of the particular chemical you plan to use.
- **Emergency procedures.** Before handling chemicals, carefully review the "Chemical Accident Procedures" listed later in this section, as well as the "Statement of Practical Treatment" on the chemical label.
- **Inhalation/contact.** ALWAYS take precautions to avoid inhaling or coming into contact with the chemical.
- **Personal protective equipment.** ALWAYS wear protective clothing, eye protection, and chemical-resistant gloves when filling, using and cleaning the sprayer. Wear additional protective gear (such as facemask or apron) as recommended on the chemical label.
- **Children/pets.** Pesticides can be especially toxic to children and animals. ALWAYS exercise extra caution around children. Keep sprayer and all spray materials away from children and animals.
- **Ventilation.** ALWAYS ensure there is adequate ventilation when mixing, pouring, or spraying.
- **Flammables.** NEVER use any flammable chemicals in the sprayer.
- **Corrosives.** DO NOT use corrosive chemicals in the sprayer. They can weaken the sprayer and its parts, resulting in leaks. Check with the chemical manufacturer to ensure chemical is compatible with all components of the sprayer.
- **Chemical interaction.** ALWAYS flush the sprayer before switching chemicals. Different chemicals may interact dangerously with each other.
- **Chemical storage.** ALWAYS store pesticides in a properly labeled container and in a secure location per the manufacturer's recommendations.
- **Health monitoring.** Monitor the health of operators who are frequently exposed to pesticides, as recommended by the chemical label or local/federal regulations.

Operation – Important Safety Information

Chemical Application Safety:

WARNING

Caution must be used when spraying chemicals to avoid unsafe exposure to humans and the environment.

Heed the warnings below and follow all instructions carefully.

Before Spraying

- **Sprayer prep.** ALWAYS inspect and prepare the sprayer before use according to the directions provided in this manual.
- **Keep sprayer off.** Do not turn on power to the sprayer until ready to spray in order to avoid unintentional spray release.
- **Broadcast nozzle down.** Make sure broadcast nozzle is oriented to spray straight down before starting the sprayer. An incorrectly positioned broadcast nozzle may spray chemicals on you or others
- **Wind speed.** NEVER spray when wind speed exceeds 4 MPH in order to minimize spray drift.
- **Clear area/post.** ALWAYS keep the work area clear of people and pets. POST warning notices to restrict access by the public for the period recommended on chemical label.
- **Operator age.** You must be 16 years of age or older to operate this sprayer. Pesticides are especially toxic to children.

During Spraying

- **Over application.** DO NOT over apply pesticide. Apply at a rate recommended by chemical manufacturer. Excess pesticide can be dangerous to humans, damage desirable plants, and contaminate soil and water sources.
- **Never point gun.** NEVER point the spray gun at people or animals.
- **Children/pets.** ALWAYS exercise extra caution when spraying near areas accessible to children and pets.
- **Eating/smoking.** DO NOT eat, drink, smoke, rub your eyes, or touch any part of your bare skin while handling chemicals and spraying.
- **Heat/flames.** DO NOT spray near open flames or sources of heat.
- **Spills.** ALWAYS clean up spills immediately per instructions on the chemical label.
- **Unattended.** ALWAYS turn off vehicle and set brake or block wheels, turn off power to sprayer, and relieve system pressure before leaving sprayer unattended.
- **Troubleshooting.** ALWAYS refer to the safety instructions in the Troubleshooting Section before attempting any repairs.

After Spraying

- **Clean sprayer.** ALWAYS clean the sprayer immediately after use according to the directions provided in this manual.
- **Decontaminate.** ALWAYS decontaminate yourself immediately after you are finished spraying and handling chemicals. Wash all exposed areas of the body with soap and water and remove and launder clothing.
- **Chemical disposal/storage.** ALWAYS dispose of or store remaining chemicals properly as recommended on the chemical label.

Operation – Important Safety Information

ATV Vehicle Handling Safety:

WARNING

Serious injury can occur if the ATV on which the sprayer is mounted is driven unsafely.

- **Driver age.** You must be 16 years of age or older to operate the ATV with the sprayer attached.
- **Less stable.** Be aware that all vehicle handling will be affected with the filled sprayer attached. See your ATV's warning label for the hazards associated with driving:
 - Too fast
 - On paved surfaces
 - On inclines or rough terrain.

These hazards will be increased drastically as a result of the additional weight and location of the filled sprayer. The center of gravity will be higher and weight distribution different, causing the ATV to be less stable when braking, turning, and driving. Exercise extra caution in vehicle handling. Use particular caution on sloped or rough surfaces in order to prevent rollover. A vehicle equipped with Roll Over Protection System (ROPS) is recommended if you will be operating on non-level terrain.

- **Speed limit.** DO NOT exceed 5 mph with sprayer mounted on ATV.
- **Ride/transport.** NEVER ride or transport cargo on the sprayer.

Chemical accident procedures:

WARNING

Before you fill the sprayer, review the following information with regard to handling accidents.

Chemical spills, sprayer leaks, personal contamination, and poisoning are accident situations which you may encounter. **All require an immediate response – See instructions below.**

Sprayer leak	<p>In the event that the sprayer develops a leak while spraying chemicals, you must <i>immediately stop spraying.</i></p> <p>Turn off power to the sprayer and follow the directions below, as applicable.</p>
Bodily chemical contact	<p>Personal contamination can occur when chemicals splash, spill, or spray directly onto a person.</p> <p>1. Follow the emergency first aid instructions on the chemical label listed in the "First Aid" or "Statements of Practical Treatment" section.</p> <p><u>General procedures include:</u></p> <ul style="list-style-type: none"> a) Eyes – immediately flush with water or follow other directions as specified on the chemical label. b) Skin – immediately wash all contaminated skin surfaces with soap and water, or follow directions as specified on the chemical label. c) Clothing – remove contaminated clothing immediately. Dispose of heavily contaminated clothing per the instructions on the chemical label for safe chemical/container disposal.

Operation – Important Safety Information

	<p>2. Seek medical advice if instructed on the label, or if the victim experiences symptoms of harmful effects such as burning, swelling, nausea, chest pain, difficulty breathing, dizziness or confusion. When seeking medical advice, be sure to bring the chemical product label.</p>
<p>Poisoning by ingestion or inhalation</p>	<p>In case of poisoning from ingestion or inhalation:</p> <p>IF THE VICTIM HAS COLLAPSED OR IS NOT BREATHING, <i>CALL 911</i>.</p> <p>Otherwise:</p> <ol style="list-style-type: none"> 1. If you are the victim, immediately seek assistance from nearby personnel because you may become incapacitated. 2. Follow the emergency first aid instructions on the chemical label in the "First Aid" or "Statement of Practical Treatment" section. 3. Call a poison control center for further advice. In the U.S., call 1-800-222-1222 to be automatically linked to the nearest certified poison control center. Have the chemical label available for reference.
<p>Chemical spills</p>	<p>Chemical spills must be quickly contained and properly cleaned up.</p> <p>Refer to the chemical label for any specific clean-up instructions with regard to the chemical spilled.</p> <p><u>General procedures include:</u></p> <ol style="list-style-type: none"> 1. Control the spill by stopping the source of the spill. If the source of the spill is a container leak, place the leaking container in a larger, watertight container. Keep unprotected people away from the spill site. 2. Contain the spill so that it does not spread and get into water sources. Use a shovel or other tool to make a dike around the spill with soil, sod, or absorbent material. 3. Clean up the spill immediately -- Absorbent materials like ground corncobs or pet litter should be spread on the spill area to soak up the pesticide. The contaminated material should then be shoveled into a leak proof container. Do not flush the spill area with water until you receive advice as directed below. 4. Seek additional advice from the chemical manufacturer and your state's pesticide regulatory agency regarding decontamination of the spill site: <ul style="list-style-type: none"> - <i>Chemical manufacturer.</i> The chemical label provides contact information for the chemical manufacturer. - <i>State pesticide regulatory agency.</i> In the U.S., call the National Pesticide Information Center at 1-800-858-7378 for assistance in determining how to contact your state's pesticide regulatory agency.

Operation – Preparing the Sprayer for Each Use

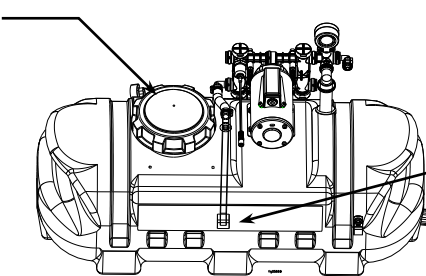
If the sprayer has been used previously, it must be prepared BEFORE EACH SUBSEQUENT USE.

⚠ WARNING

Read instructions below carefully for inspecting and preparing the sprayer. Damaged or clogged equipment could result in leaks or uncontrolled spray. Leaks could result in injury to the operator or bystanders from chemical exposure, or cause damage to the environment.

Important safety rules:

- **Power off.** Make sure all power is OFF before cleaning, inspecting, or servicing the sprayer.
- **Guards / shields.** Make sure all guards and shields are replaced after servicing the sprayer.
- **Replacement parts.** If a part needs replacement, only use parts that meet the manufacturer's specifications. Replacement parts that do not meet specifications may result in a safety hazard or poor operation of the sprayer.

1. Ensure sprayer attached	Ensure the sprayer is securely attached to the vehicle.
2. Ensure tank empty	Ensure the sprayer has been thoroughly flushed and drained of all residual chemical from prior uses.
3. Clean suction strainer	<p>Clean the suction strainer of any chemical residue.</p> <p>It is important to clean the suction strainer before each use to ensure it is not clogged and to prevent residual chemical from contaminating sprayer contents.</p> <p>IMPORTANT: The strainer must be accessed by reaching into the tank, so the <i>tank must be empty</i> to avoid immersing your hand in chemicals.</p> <ol style="list-style-type: none"> a) Open fill cap on top of tank. b) USING RUBBER GLOVES, reach into the tank and pull the suction strainer off the end of the suction tube. (See figure below.) c) Run the suction strainer under fresh water to remove debris. d) Replace the suction strainer onto the end of the suction tube. <div style="text-align: center; margin-top: 20px;">  <p style="margin-left: 100px;">Fill cap</p> <p style="margin-right: 100px;">Suction strainer (Inside tank)</p> </div>
4. Inspect & repair	<p>Inspect and test the sprayer thoroughly:</p> <ol style="list-style-type: none"> a) Inspect hoses for exposed mesh and holes. Replace all worn or damaged hoses. b) Inspect tank and fittings for cracks and leaks. Replace all damaged fittings with original NorthStar parts. c) Check to be sure retaining nut on gun nozzle is tight. d) Check to be sure all other nuts, bolts, and screws are tight. e) Check wheels and tires, if equipped. Make sure wheel lugs are tight and tires are inflated. f) <i>Partially fill tank with plain water and spray to test for leaks.</i> Repair as needed. <p>IMPORTANT: <i>After any repair work has been done, ALWAYS test for leaks with water one final time before using.</i></p>

Operation – Preparing the Sprayer for Each Use

Step One: Assess wind conditions and clear work area.

Before you decide to spray, you must determine whether wind conditions are suitable. You must also restrict access to the work area to ensure the safety of bystanders.

⚠ WARNING

Do not spray if wind speeds are greater than 4 MPH or if there are bystanders in the intended spray area.

1. Assess wind speed	Assess weather conditions to ensure that it is not too windy to spray. DO NOT SPRAY if wind speeds are greater than 4 MPH. <i>Visible indication of wind speed:</i> If leaves are in constant motion or there is any branch movement, DO NOT spray because the wind is too strong.
2. Clear work area	Clear the work area of all bystanders and pets. Restrict access by the public for the period recommended on chemical label.

Operation – Using the Sprayer

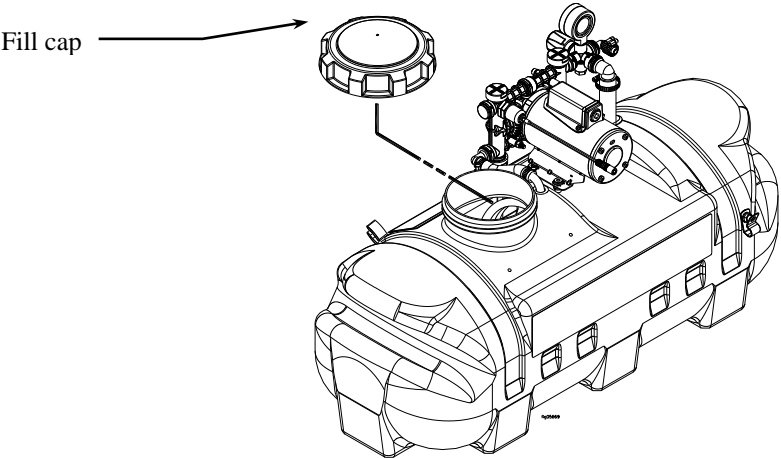
Step Two: Fill the sprayer.

⚠ WARNING

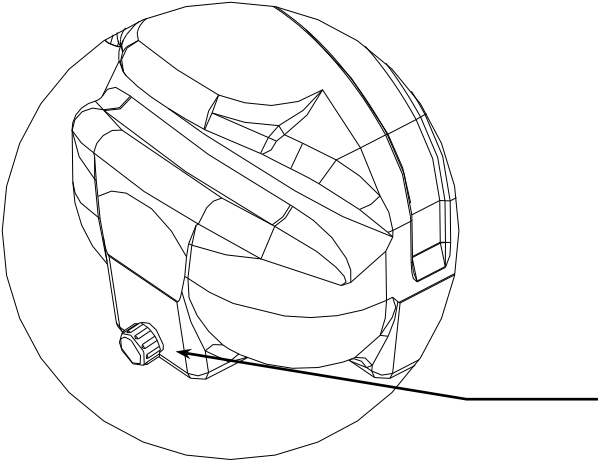
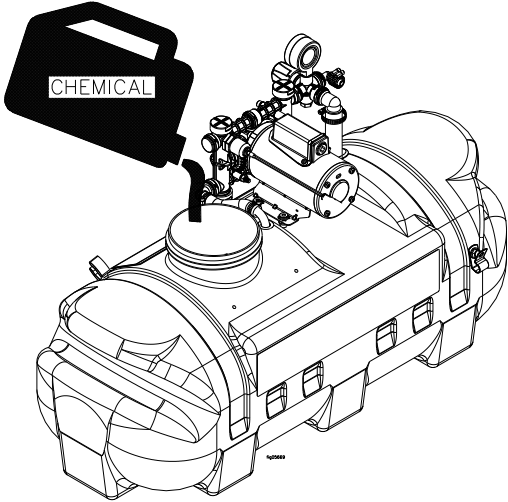
ALWAYS wear personal protective equipment as directed on the chemical label when handling pesticides.

Long pants and sleeves, chemical resistant gloves, and eye protection are strongly recommended. Additional protective gear may be required depending on the particular pesticide.

Fill the sprayer using the following steps:

1. Review safety information	Review the "Operation – Important Safety Information" related to <u>General Chemical Safety</u> and <u>Chemical Accident Procedures</u> provided in this manual.
2. Choose safe mixing/loading area	Choose a safe pesticide mixing and loading area. - Choose an outdoor, well-ventilated area away from unprotected people, animals, food, and other items that might become contaminated.
3. Wear personal protective equipment	Wear personal protective equipment as directed on the chemical label. - Note that additional equipment may be specified for mixing and loading activities.
4. Turn off sprayer and vehicle	Turn OFF power to the sprayer before filling. - The vehicle should also be off, with brake set or wheels blocked to prevent unintended movement.
5. Remove fill cap	<p>Remove the fill cap located on top of the sprayer.</p> <div style="text-align: center;">  </div>
6. Ensure tank flushed	Ensure tank is flushed of all chemicals from prior uses. - Chemicals can interact dangerously when mixed, and residue chemicals are also a health hazard.

Operation – Using the Sprayer

7. Check drain cap	<p>Before filling tank, ensure drain cap is securely tightened.</p> <div style="text-align: center; margin: 10px 0;">  <p style="margin-left: 150px;">Drain cap</p> </div>
8. Fill tank	<p>Add pesticide to tank through fill cap:</p> <ol style="list-style-type: none"> a) Confirm the chemical/water dilution ratios specified on the chemical label. b) Determine chemical and water volumes needed for the planned application, taking into consideration that maximum tank capacity is 16 gallons for Model # 282795. <i>Note: Only purchase and mix as much chemical as you need for the planned application in order to minimize chemical over application and the need for storing unused chemicals.</i> c) Add chemical to the tank through the fill cap. <i>If the chemical is not pre-mixed, add water and pesticide concentrate in the order prescribed on the label.</i> <div style="text-align: center; margin: 10px 0;">  </div>
9. Ensure chemical mixed	<p>Ensure chemical is thoroughly mixed in tank.</p> <p>- Stirring device should be made of metal or plastic, non-chemical absorbing material, and then properly cleaned and stored after use.</p>
10. Replace fill cap	<p>Replace fill cap and tighten securely.</p>

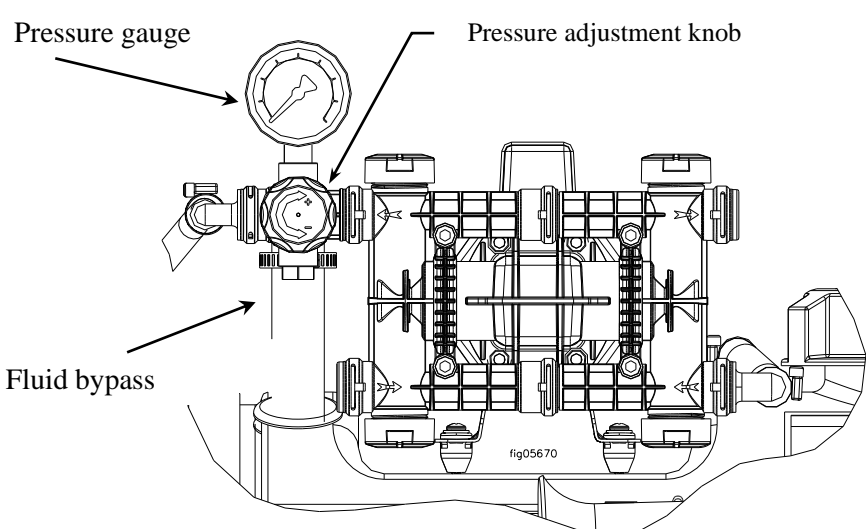
Operation – Using the Sprayer

Step 3: Operate the sprayer.

⚠ WARNING

ALWAYS wear personal protective equipment as directed on the chemical label when spraying.

Long pants and sleeves, chemical-resistant gloves, and eye protection are strongly recommended. Additional protective gear may be required depending on the particular pesticide.

1. Review safety information	Review the "Operation – Important Safety Information" related to <u>Chemical Application Safety</u> and <u>ATV Vehicle Handling Safety</u> provided in this manual.
2. Wear personal protective equipment	Wear personal protective equipment as directed on the chemical label. Warning: Wear additional personal protective equipment if you will be spraying overhead or fogging. You will be exposed to much more pesticide fallout in these applications. Wear chemical resistant head and neck protection, full facemask or half facemask with sealed goggles, and consider using a dust/mist respirator.
3. Turn on power	Turn on the power to the sprayer. 1. Turn the remote switch to the "ON" position. <i>Note: The pump will start automatically when power is turned on. The pump will cycle on and off as needed to retain pressure in the hose.</i>
4. Adjust pressure and agitation as needed	<p>-Rotate the pressure adjustment knob until the sprayer is running at the desired pressure.</p> <div style="text-align: center;">  </div> <p><i>Note: If the pressure adjustment knob is completely tightened, the pressure setting will be higher than the pressure switch on the pump. This allows the pump to operate as a demand pump and turn on only when spraying</i></p>

Operation – Using the Sprayer

5. Begin agitation if needed

Some formulations of liquid pesticides do not remain in solution and should be agitated to maintain a uniform mix.

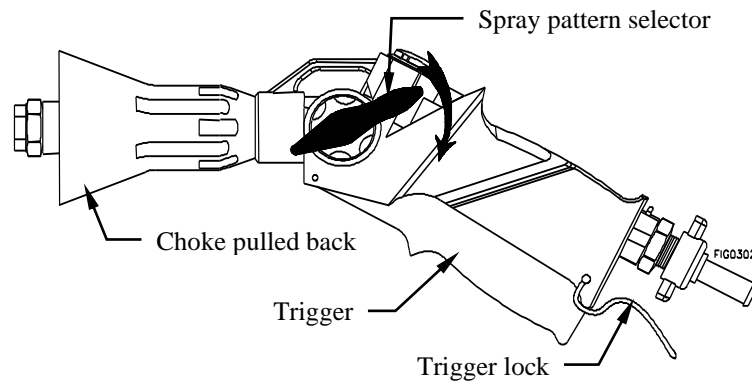
The pressure regulator equipped on this sprayer can be used as an agitator. If the pressure is set below the pump's pressure switch setting (200 psi), the pump will continue to run even when not spraying. Fluid will be diverted through the pressure regulator back to the tank. This bypass fluid will keep the contents of the tank well-mixed, and allow the sprayer to be used with pesticides classified as "flowable" ("F" or "L"), "wetable powder" ("WP" or "W"), "emulsion" ("EC" or "E"), microencapsulated ("M"), or "water dispersible granules" ("WDG" or "DF").

6. Operate spray gun (as needed for application)

Proper Operation of the spray gun

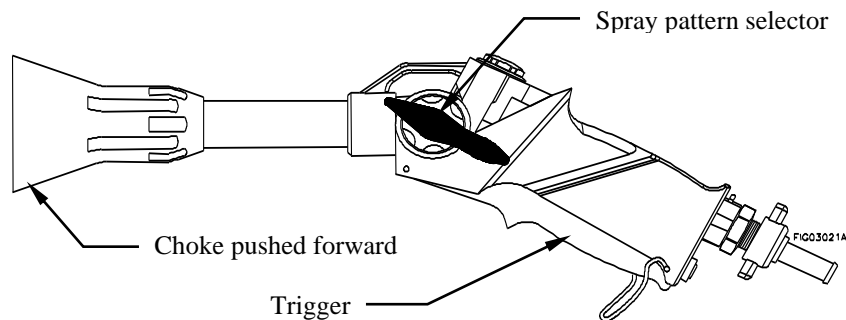
Cone and Stream spray pattern instructions

1. Squeeze the trigger to begin spraying.
2. With choke pulled back, rotate spray pattern selector knob to change between cone and stream.



Fog and Stream spray pattern instructions

1. Squeeze the trigger to begin spraying.
2. With the choke pushed forward, rotate the spray pattern selector knob to change between fog and stream.



IMPORTANT: ALWAYS hold the spray gun with a firm grip when spraying at higher pressures in order to prevent gun from whipping. Keep good footing and balance at all times.

Note: It is not unusual for the operator to be exposed to chemical drips while adjusting the spray pattern – gloves should be chemical resistant

Operation – Using the Sprayer

7. Leaving unattended	<p>If the sprayer must be left unattended at any time:</p> <ul style="list-style-type: none"> a) Disconnect power to the sprayer. b) Relieve system pressure by depressing the gun trigger. c) Turn off the vehicle. Set brake or block the wheels.
8. Discontinue use if clogged or inoperative	<p>If the sprayer becomes clogged or inoperative during use, <i>discontinue use immediately.</i></p> <ul style="list-style-type: none"> - DO NOT attempt to service while chemicals are in the sprayer and power is connected. - Return to service area to review instructions for troubleshooting before attempting to service.
12. Pump Overheating	<p>This pump is equipped with a <i>thermal protector.</i> This feature helps to protect the pump from overheating and causing damage. If the pump shell reaches 180°F, the pump will turn off. When the temperature of the pump shell drops below 145°F, the pump will turn back on.</p>

Operation – Using the Sprayer

Step Four: Clean sprayer and decontaminate after use.

When done using the sprayer, it is important to clean the sprayer and decontaminate yourself. Do not store the sprayer with chemicals in the tank, as it is unsafe and could also result in damage to the equipment.

⚠ WARNING

Clean-up and decontamination procedures must be followed after each use.
 Improper equipment clean-up and disposal of chemicals can result in dangerous chemical exposure to humans and the environment, as well as equipment damage.
 Personal decontamination is required after spraying to minimize unsafe exposure to chemicals and potential illness.

1. Drain tank	<p>If there is excess pesticide left in the tank, drain the tank:</p> <ul style="list-style-type: none"> a) Disconnect power to the sprayer and relieve system pressure by depressing the gun trigger. b) Find a suitable container in which to drain the unused pesticide. Place it under the tank drain hole. c) While wearing rubber gloves, eye protection, and all other required personal protective equipment, remove the drain cap and allow pesticide to drain into container. d) When tank stops draining, replace drain cap. Tighten securely.
2. Unused chemical	<p>Properly store or dispose of unused chemical:</p> <ul style="list-style-type: none"> a) <u>If the unused pesticide is to be stored for future use:</u> Store all unused pesticide in its original, or a suitably marked, container in a secure location out of the reach of children & animals. b) <u>If remaining pesticide is to be disposed:</u> Properly dispose of the remaining chemical and its container per the chemical manufacturer's recommendation and according to local hazardous waste disposal regulations.
3. Flush sprayer	<p>Flush the sprayer per the chemical manufacturer's recommendations. A general procedure is as follows:</p> <ul style="list-style-type: none"> a) Add fresh water to the tank. b) Reconnect power to the sprayer. c) Operate the spray gun and discharge all rinse water onto an area that can accept dilute pesticide application. d) Add 5 gallons of the chemical manufacturer's recommended cleaning solution. Operate the spray gun, collecting the discharged solution if recommended by the manufacturer. e) After flushing, disconnect power to the sprayer and be sure all system pressure is relieved by squeezing the gun trigger. f) Dispose of cleaning solution discharge as recommended by the manufacturer of the solution.
4. Decontaminate & launder	<p>Decontaminate yourself after you are finished handling chemicals:</p> <ul style="list-style-type: none"> a) Remove all clothing worn during spraying and chemical handling. b) Wash all exposed parts of the body with soap and water. c) Launder clothing separately from other wash.

Storage

When not in use, store the sprayer indoors. For long term or winter storage, prepare the sprayer by running RV antifreeze through the system. This will keep internal parts lubricated, protect against corrosion, and keep the unit from freezing.

CAUTION

The sprayer will be damaged if it freezes.

Protect the sprayer from freezing during storage by following the instructions below.

Preparing for storage:

1. Add antifreeze	Pour 1 gallon of RV antifreeze into the tank. <i>Note: RV antifreeze is non-toxic and biodegradable and generally safer for the environment than automotive antifreeze.</i>
2. Spray briefly	Turn on the pump motor and squeeze the gun trigger briefly until fluid sprays. Store gun in lance clips.

Removing from storage:

1. Drain	Drain the antifreeze left in the tank through the tank drain hole into a suitable container.
2. Flush with water	Fill the tank with fresh water and run through the system. Operate the spray gun until the system is completely flushed. Be sure to set up containers to capture the antifreeze flush water.
3. Disposal	Dispose of the antifreeze and flush water properly.

Troubleshooting

⚠ WARNING

Before troubleshooting or attempting to service, read the following safety rules to avoid accidental exposure to chemical and also risk of electric shock.

Note: A reserve, clean container capable of holding at least 16 gallons should be kept for use when the sprayer tank needs to be emptied temporarily for repairs. It is advisable to purchase a reserve tank suitable for pesticide storage from Northern Tool and Equipment for use in these circumstances. The container should be properly labeled as to its contents if it is used. In addition, it may be advisable to empty the tank contents using a transfer pump if the tank drain hole is inaccessible while the sprayer is mounted on the ATV.

Before attempting to service the sprayer:

1. Personal protective equipment	Wear personal protective equipment as directed on the chemical label while servicing your sprayer.
2. Review troubleshooting table	Review the Troubleshooting Table below for the type of problem you are experiencing. However, DO NOT attempt to repair until the steps listed below are followed.
3. Empty and flush	If the cause listed for your problem is Clogged intake tube, Clogged suction strainer, or Worn spray gun nozzle: empty the tank and flush the sprayer with water as directed in the section, "Operation – Step Four". <i>- In order to avoid accidental exposure to chemicals, never attempt to unclog the intake tube or suction strainer, or service the spray gun nozzle, until the tank has been emptied and the sprayer flushed with water.</i>
4. Disconnect power/relieve pressure	Disconnect power to the sprayer and be sure all system pressure is relieved by squeezing the gun trigger.
5. Perform repairs	Follow the directions provided in the troubleshooting table to repair the sprayer. <i>NOTE: Never try to unclog the sprayer nozzle by blowing through it.</i>
6. Test after servicing	After servicing, ALWAYS test the sprayer for leaks with plain water before using.

PROBLEM	CAUSE	SOLUTION
Pump will not turn on	Bad electrical connection	Check battery connections
	Fuse blown	Replace fuse
	Short in wires	Check condition of wires
	Low voltage	Check voltage
	Overheating(motor shell over 180°F)	Pump will turn back on when motor shell temperature drops below 145°F
Low pressure	Worn spray gun nozzle	Replace spray gun
	Worn boom nozzle	Replace boom nozzle
Low flow	Clogged intake tube	Remove obstruction
	Clogged suction strainer	Clean suction strainer
	Low voltage	Check voltage
Poor spray distribution	Clogged intake tube	Remove obstruction
	Suction strainer clogged	Clean suction strainer
	Worn spray gun nozzle	Replace spray gun
Pump cycles while not spraying	Leak in the system	Tighten leaking hose clamps or fittings, replace spray gun

Specifications

Electrical System Requirements

Electrical connection	12 VDC
Amp draw from pump	20 Amps

Sprayer Specifications

Maximum GPM	2.0 GPM (7.57 Liters/min.)
Maximum Pressure	200 PSI (13.8 Bar)

Tank Maximum Capacity

Model #282795	16 Gallons (60.6 Liters)
---------------	--------------------------

Overall Dimensions

Model #282795	34" x 14.5" x 23" (86cm x 37cm x 58.5cm)
---------------	--

Dry Weight / Weight full of water

Model #282795	35 lb. / 163 lb. (15.9 kg. / 74 kg.)
---------------	--------------------------------------

Component Materials*

Tank.....	Polyethylene, EPDM
Suction Tube.....	Polypropylene, PVC, Stainless Steel
Hose.....	PVC, EPDM
Pump.....	Polypropylene, Viton [®] , Santoprene, Stainless Steel
Valves.....	Polypropylene, Polyacetal, Viton [®] , Nylon
Gun and Nozzle.....	Nylon, Polyacetal, Aluminum

*Before using any chemical, check to ensure the chemical is compatible with all materials in the system.

The noise emissions from this product do not exceed 70 dB(A).

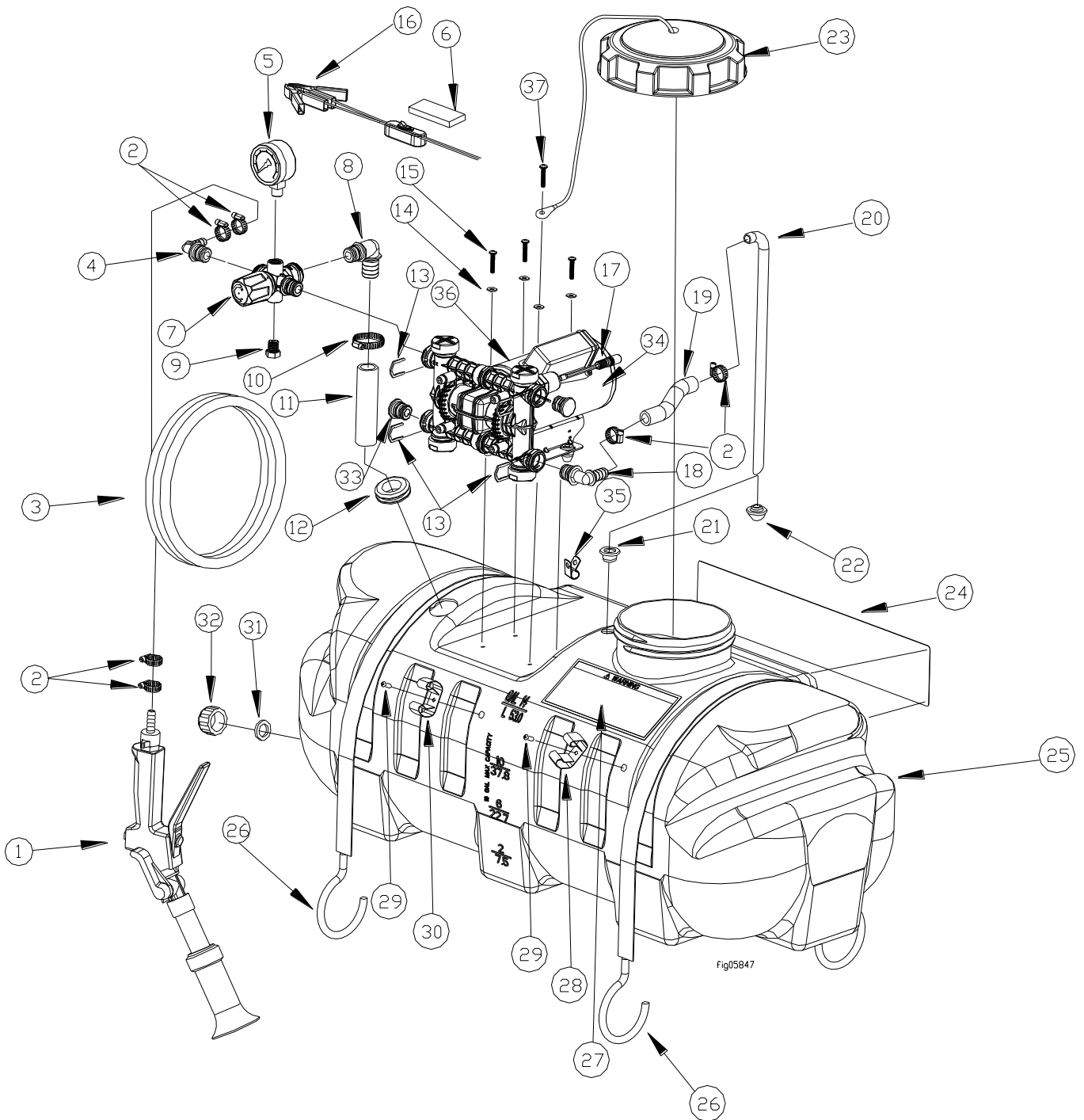
Note: The sprayer is not compatible with bleach or chlorine products. Also, pumping any petroleum based fluid (gasoline, diesel, kerosene, oil) will severely damage the pump.

The manufacturer reserves the right to make improvements in design and/or changes in specifications at any time without incurring any obligation to install them on units previously sold.

Any Questions, Comments, Problems or Parts Orders

Call NorthStar Product Support 1-800-270-0810

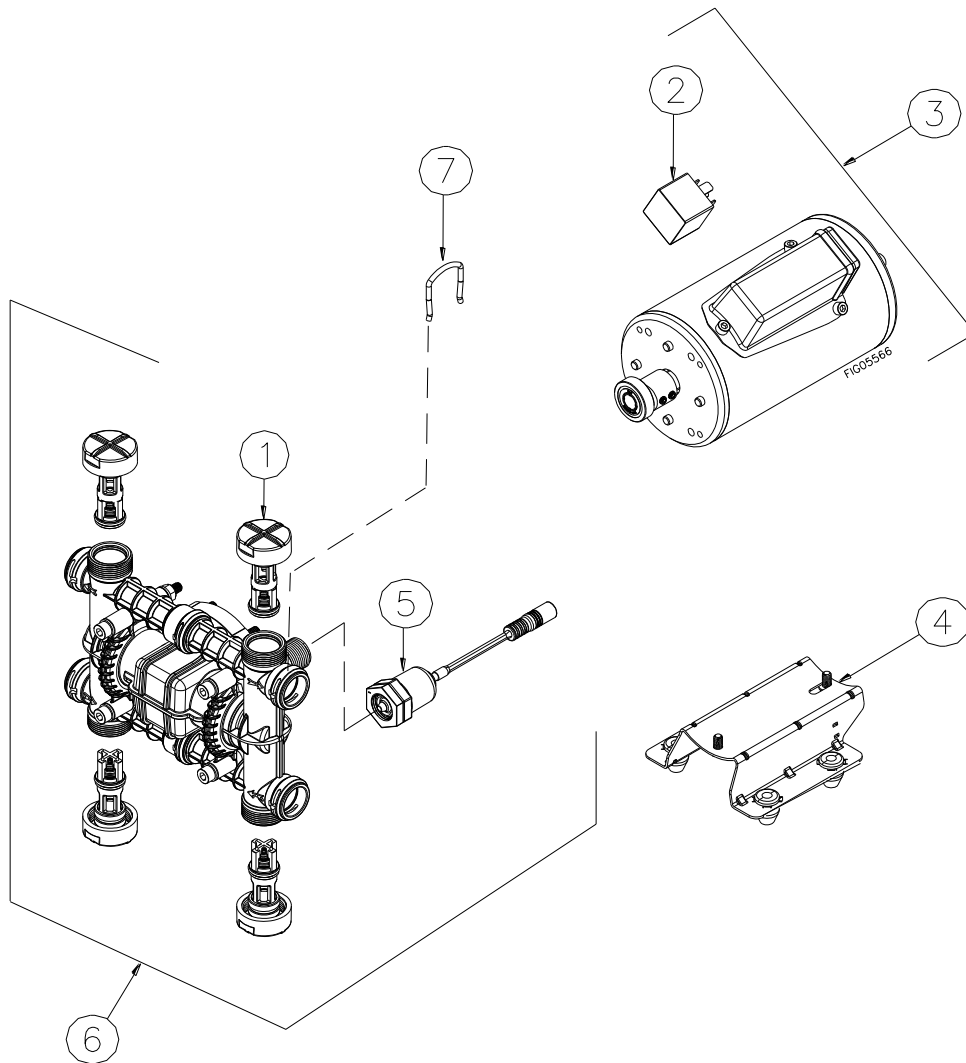
Exploded View & Parts List – 282795 – Rev F



Exploded View & Parts List – 282795 – Rev F

Ref#	Part#	Description	Qty
1	781088	HP Spray Gun	1
2	777119	Hose Clamp	6
3	792827	3/8" Hose	1
4	787212	QC x 3/8" HB Elbow	1
5	793016	Pressure Gauge	1
6	35363	Hook and Loop Set	1
7	792943	Regulator	1
8	787214	QC x 3/4" HB	1
9	779859	Plug	1
10	793231	Hose Clamp	1
11	792953	3/4" Hose	1
12	792997	Grommet	1
13	792140	QC Clip	6
14	82068	#10 Flat Washer	4
15	82061	Screw, #10-24 x 1 1/8"	3
16	793295	Wire Harness w/Switch Assembly	1
17	793289	NorthStar Pump	1
18	787213	1/2" HB Elbow, QC Fitting	1
19	792649	1/2" Hose	1
20	779389	16 Gallon Suction Tube	1
21	791998	Grommet	1
22	35203	Suction Strainer	1
23	792701	Sprayer Cap	1
24	779319	North Star Decal	1
25	793296	16 Gallon Tank Assembly	1
26	5262	Tie Down Straps	2
27	777499	Sprayer Warning Label	1
28	793093	Small Gun Clip	1
29	791504	#10-24 x 1/2" Philips Head Screw	2
30	777358	Large Gun Clip	1
31	5232	Drain Cap Washer	1
32	37680	Drain Cap	1
33	789160	QC Plug	2
34	792952	NorthStar Pump Decal	1
35	784561	Strain Relief Clip	1
36	793288	Pump Warning Label	1
37	82617	Screw, #10-24 x 1 1/4"	1

Pump Exploded View



Ref#	Part#	Description	Qty
1	792954	Valve Assembly (4 Valves)	1
2	801642	Relay	1
3	792956	Motor Assembly	1
4	789194	Base Plate Assembly	1
5	793313	Pressure Switch Assembly	1
6	792955	Pump Head Assembly	1
7	792140	QC Clip	4

Any Questions, Comments, Problems or Parts Orders
Call NorthStar Product Support 1-800-270-0810

Limited Warranty

Dear Valued Customer:

Use this product properly and enjoy the benefits from its high performance. By purchasing a NorthStar product, you show a desire for quality and durability. Like all mechanical equipment this unit requires a due amount of care. Treat this unit like the high quality piece of machinery it is. Neglect and improper handling may impair its performance. Please thoroughly read the instructions and understand the operation before using your product. Always contact NorthStar Product Support at 1-800-270-0810 prior to having any service or warranty work performed, as some services performed by parties other than NorthStar approved service centers may void this warranty. This warranty is in lieu of any other warranty expressed or implied and NorthStar assumes no other responsibility or liability outside that expressed within this warranty.

Limited Warranty

NorthStar shall warranty any piece of equipment manufactured, or parts of equipment manufactured, to be free from defects in material or workmanship for a period of:

NorthStar Warranty		
Item #	Consumer Warranty Period	Commercial Warranty Period
282795	2 years from date of purchase by user	90 days from date of purchase by user

"Consumer use" means personal residential household use by a consumer. "Commercial use" means all other uses, including use for commercial, income producing or rental purposes or when purchased by a business. There is no commercial warranty on this product.

This warranty applies to the original purchaser of the equipment (verification of purchase, in the form of a receipt, is the responsibility of the buyer), is non-transferable, and covers some parts and no labor. Parts will be replaced or repaired at no charge, except when the equipment has failed due to lack of proper maintenance. If a part is no longer available, the part may be replaced with a similar part of equal function. Any misuse, abuse, alteration or improper installation or operations will void warranty. Determining whether a part is to be replaced or repaired is the sole decision of NorthStar. NorthStar will not provide for replacement of complete products due to defective parts. Any costs incurred due to replacement or repair of items outside of a NorthStar approved facility is the responsibility of the buyer and not covered under warranty. Transportation costs to and from service center is the responsibility of the customer.

In addition to the normal warranty, NorthStar shall warrant any normal wear item from defects in material or workmanship for a period of 90 days from the date of purchase by user. Normal wear items include, but are not limited to, pump, hoses, couplers/fittings, tank drain cap, gun, nozzle, on/off switch, decals, wiring, strainer, barbs, tees, fittings, hardware.

This warranty specifically excludes the following; failure of parts due to damage caused by accident, fire, flood, windstorm, acts of God, applications not approved by NorthStar in writing, corrosion caused by chemicals, use of replacement parts which do not conform to manufacturer's specifications, damage related to rodent and/or insect infestation and damage caused by vandalism. Additional exclusions: loss of running time, inconvenience, loss of income, or loss of use, including any implied warranty of merchantability of fitness for a specific use. Also, outdoor equipment needs periodic parts and service to perform well, and this warranty does not cover instances when normal use has exhausted the life of a component.

This warranty does not cover any personal injury or damage to surrounding property caused by failure of any part. Repair or replacement of parts does not extend the warranty period.

Please fill in the following information and have it on hand when you call in on a warranty claim.

Customer Number: _____

Date of Purchase: _____

NorthStar Serial Number: _____

Item Number: _____

This page left intentionally blank.



Northern Tool + Equipment Co., Inc.
Burnsville, MN 55306
NorthernTool.com
Assembled in Mexico with foreign components