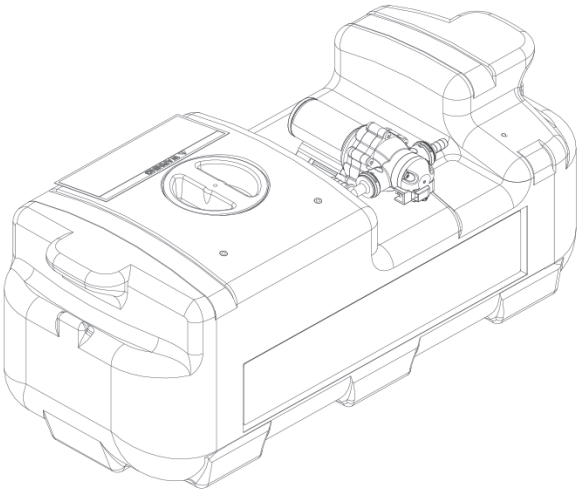
ANNOVI REVERBERI®
The Power of Experience

SPRAYER 12V 30L



EN

Owner's Manual
Original instructions for Assembly, Testing, Operation, Servicing, and Storage
For outdoor use with non-potable liquids such as agricultural pesticides and other water based liquids**

EN

Please read these instructions carefully before use. Please retain these instructions for future reference. In case of problems or difficulties, please contact the consumer helpline: ***supporth@annovireverberi.it***

cod. 95xxx Rev00_15062020 - FK

⚠ WARNING

READ and the **Owner's Manual** completely before using this sprayer. Assemble, test, **UNDERSTAND** 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.

K**EEP 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.

Only use the cable clamps provided with the sprayer to connect it with the vehicle battery.

** This sprayer is recommended for use in spraying non-flammable liquids such as pesticides, water for plants/trees or dust control, ice control chemicals, or water-based non-flammable sealants or stains for outdoor wood surfaces. The pump should not be used to transfer any product intended for human consumption. However, 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.



SAFETY AND HAZARD SIGNAL WORD DEFINITIONS

Comply with the instructions provided by the safety signs and symbols fitted to the appliance and in this manual.
The appliance and manual only feature the symbols relevant to the model purchased. Check that the symbols and signs affixed to the appliance are always present and legible; otherwise, fit replacements in the original positions.

⚠ 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.

⚠ DANGER DANGER (red) indicates an immediately hazardous situation which, if not avoided, will in death or serious injury.

⚠ WARNING WARNING (orange) indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION CAUTION (yellow) indicates a potentially hazardous situation which, if not avoided, will in death or serious injury.

CAUTION CAUTION (yellow) used without the safety alert symbol indicates a potentially hazardous situation witch, if not avoided, may result in propery damage.

CE The product complies with the relevant European directives.

E1 symbol - Indicates that the appliance **must not be disposed of** as municipal waste; it may be handed in to the dealer on purchase of a new appliance. The appliance's electrical and electronic parts must not be reused for improper uses since they contain substances which constitute health hazards.



TABLE OF CONTENTS

Intended Use **5**
Summary of Important Safety Information **6**
During Assembly
During Use
• General Chemical Safety
• Chemical Application Safety
• Chemical Accident Procedures
Warning Label Location **9**
Component Inventory
Unpacking 10
Unpacking the Manual Bag 10
Assembly
Step One: Attach lance clips to tank 11
Step Two: Attach drain cap to tank 11
Step Three: Attach gun hose to pump 12
Step Four: Attach hose guide to tank 12
Step Five: Attach gun hose to spray gun 13
Step Six: Connect remote switch to the battery 14
Step Seven: Check and test completed assembly 15
Machine Components **16**
Operation
Important Safety Information - Operation **17**
• General Chemical Safety
• Chemical Application Safety
• Chemical Accident Procedures
Preparing the Sprayer for Each Use **21**
Using the Sprayer
Step One: Assess wind conditions and clear work area 22
Step Two: Fill the sprayer 22
Step Three: Operate the sprayer 24
Step Four: Clean sprayer and decontaminate after use 25
Storage **26**
Preparing for storage
Removing from storage
Troubleshooting **27**
Specifications **28**
Limited Warranty **29**
CE Conformity Declaration **30**

INTENDED USE

The sprayer is intended for use in spraying agricultural pesticides and other non-flammable liquids.

SPRAYING PESTICIDES:
Pesticides are hazardous chemicals that must be handled with caution as directed throughout this manual and on the pesticide label.

The sprayer is intended for use in spraying pesticides in liquid form only. The sprayer is NOT intended for use in spraying pesticides in dry or aerosolized form, or for use with fumigants.

Some formulations of liquid pesticides do not remain in solution and should be agitated to maintain a uniform mix. An optional pressure **regulator/agitator** is available for use with this sprayer. This should be used when spraying pesticides classified as "flowable" ("F" or "L"), "wettable powder" ("WP" or "W"), "emulsion" ("EC" or "E"), "microencapsulated" ("M"), or water dispersible granules ("WDG" or "DF"). (See pesticide label to determine its classification.

SPRAYING OTHER LIQUIDS:
In addition to spraying pesticides, this sprayer may be used to spray other **non-flammable** liquids. Example uses include: watering plants/trees or spraying water for dust control, applying ice control chemicals, or applying water-based, non-flammable sealant or stain to outdoor wood surfaces.
However, **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.

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.

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.
- **DO NOT SPRAY when wind speed exceeds 6 Km/h** 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 materials 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 OVER-APPLY 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.**
- **Exercise extra caution when spraying near areas accessible to children and pets.**
- **CLEAN up spills immediately** per instructions on the chemical label.
- **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 d**one 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.**

Chemical Accident Procedures

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

Sprayer leak	**If the sprayer develops a leak, immediately stop spraying.** 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.** 1. Immediately follow First Aid instructions on chemical label. General procedures can include: 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.
Poisoning by ingestion or inhalation	**In case of poisoning from ingestion or inhalation:** 1. If you are the victim, immediately seek assistance from nearby personnel because you may become incapacitated. 2. Immediately follow first aid instructions on chemical label.
Chemical spills	**Chemical spills must be quickly contained and properly cleaned up.** Refer to the chemical label for any specific cleanup instructions. General procedures include: 1. **Controlling** the spill by stopping the source of the spill. 2. **Controlling** the spill so that it does not spread and get into water sources. 3. **Cleaning up** the spill immediately. 4. **Seeking additional advice** from: - Chemical manufacturer. See chemical label for contact information.

WARNING LABEL LOCATION

⚠ 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.

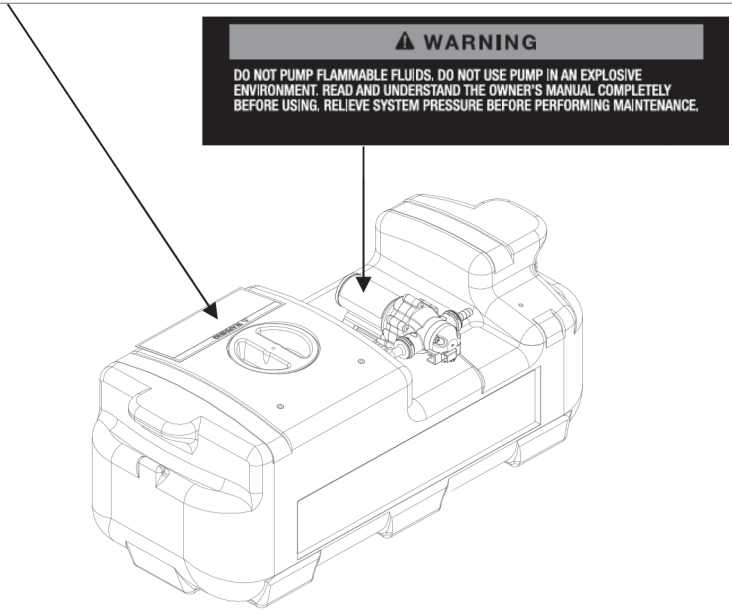
Read and follow chemical label instructions. Pesticides are hazardous chemicals, which must be handled carefully.

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.

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.



Chemical Label

Pump Label

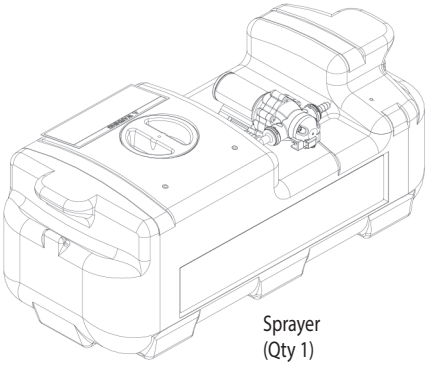
Always make sure safety labels are in place and in good condition. If a safety label is missing or not legible, order new labels or unsafe operation could result.

UNPACKING

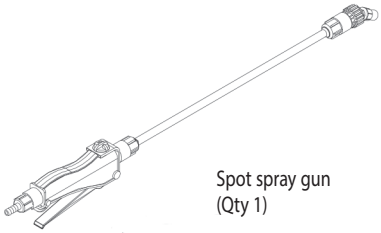
Closely inspect all contents in the shipping carton.

Note that some parts are shipped inside the tank.

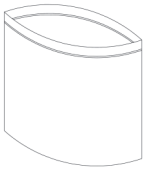
- **If you have damaged components:** Contact the freight company that delivered the unit and file a claim.



Sprayer
(Qty 1)



Spot spray gun
(Qty 1)



Manual bag
(Qty 1)



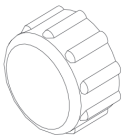
Gun hose
(Qty 1)

UNPACKING THE MANUAL BAG

The following items are found in the manual bag.



Gun clip
(Qty 2)



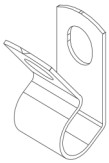
Drain cap
(Qty 1)



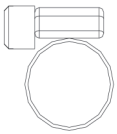
Rubber washer
(Qty 1)



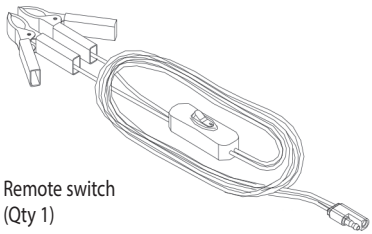
Screw
(Qty 3)



Hose guide
(Qty 1)



Hose clamp
(Qty 2)

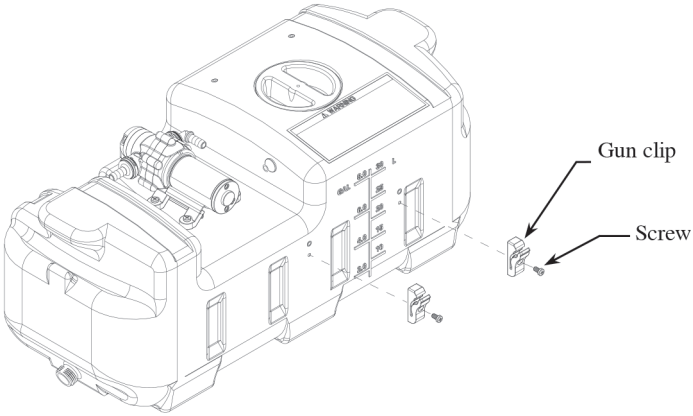


Remote switch
(Qty 1)

ASSEMBLY

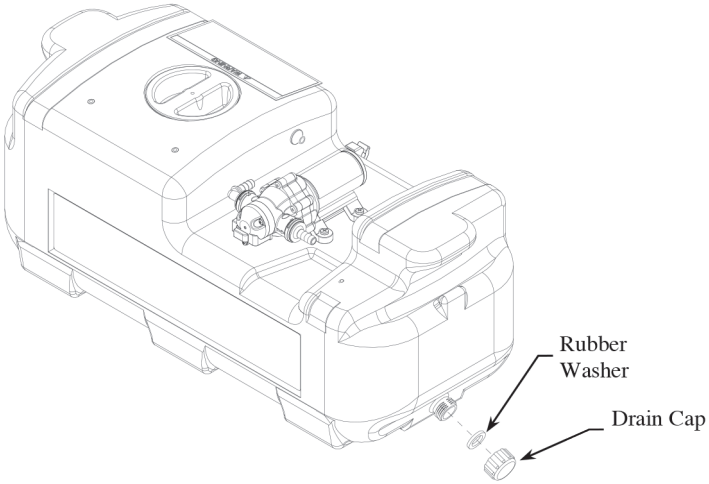
Step One: Attach gun clips to tank

Fasten the two gun clips to the sprayer tank with screws.



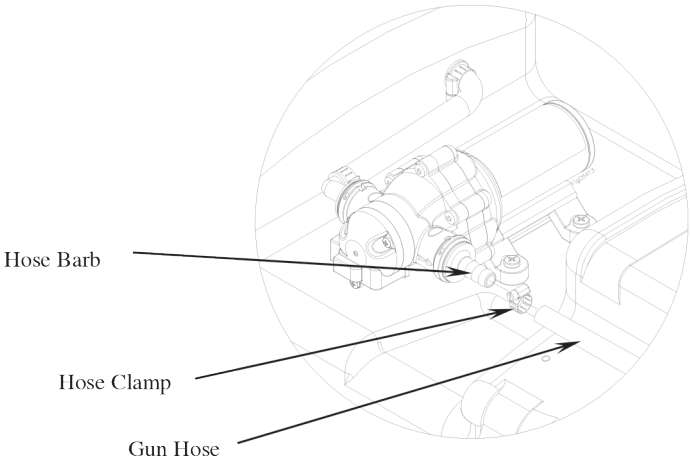
Step Two: Attach drain cap to tank

1. Press the rubber washer into the drain cap with your finger.
2. Thread the drain cap onto the tank.



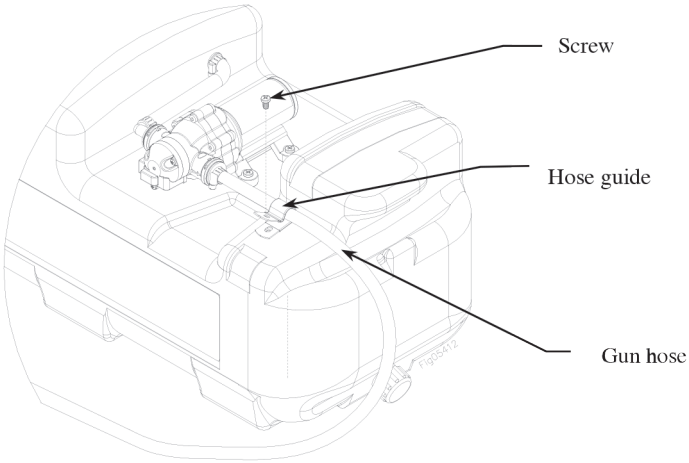
Step Three: Attach gun hose to pump

1. Slide hose clamp over one end of the gun hose.
2. Push the hose onto the pump hose barb.
3. Slide the hose clamp over the hose barb.
4. Tighten the hose clamp.



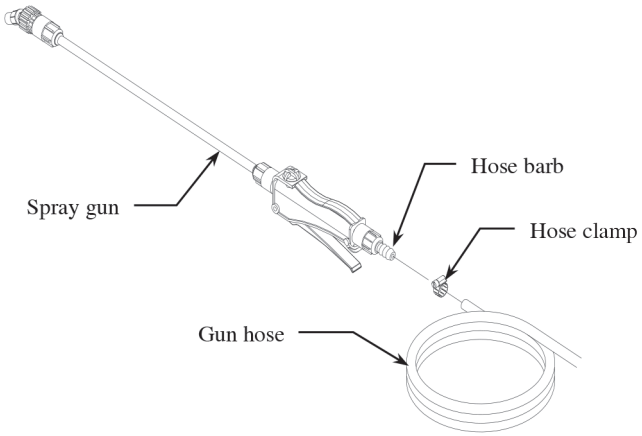
Step Four: Attach hose guide to tank

1. Route gun hose through hose guide.
2. Attach hose guide to tank with screw.



<u>Step Five:</u> Attach gun hose to spray gun

1. Slide hose clamp over the end of the gun hose.
2. Push the hose onto the gun hose barb.
3. Slide the hose clamp over the hose barb.
4. Tighten the hose clamp.



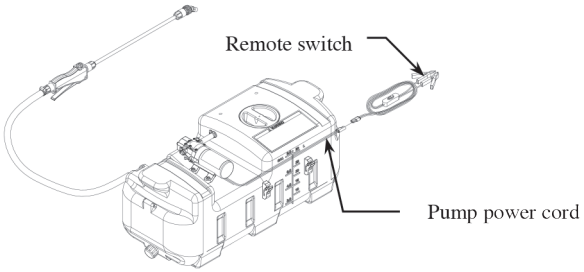
Step Six: Connect remote switch to the battery

⚠ 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	**Preparatory safety steps:** • 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	**Connect the sprayer's remote switch to the battery using the following procedure:** a) Disconnect the battery ground wire. b) Connect the remote switch's ***red*** battery clamp to the ***positive*** **(+)** terminal of the battery. c) Connect the remote switch's ***black*** battery clamp to the ***negative*** **(-)** terminal of the battery. d) Reconnect the battery ground wire. **WARNING:** Always connect in this sequence to avoid possible shock.
3. Connect remote switch to pump power cord	**Connect the remote switch to the pump power cord:** Note: Make sure the power switch is in the OFF position on the remote switch 
4. Verify connection	**Verify a complete connection has been made** by checking with a DC voltmeter, or by briefly turning the remote switch to the ON position and listening for pump activation.

5. Disconnect after use	**AFTER EACH USE, disconnect power to the sprayer** by disconnecting the sprayer's pump cord from the remote switch – *the remote switch may remain connected to the battery.* *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.*
6. To disconnect permanently	**When it is necessary to disconnect the sprayer's remote switch from the battery, use the following procedure:** 1. Disconnect sprayer's pump cord from the remote switch. 2. Disconnect the remote switch from the battery as follows: a) Disconnect battery ground wire. b) Disconnect the remote switch's ***black*** battery clamp to the ***negative*** (-) terminal of the battery. c) Disconnect the remote switch's ***red*** battery clamp to the ***positive*** (+) terminal of the battery. d) Reconnect the battery ground wire. **WARNING:** Always disconnect in this sequence to avoid possible shock.

Step Seven: Check and test completed assembly.

⚠ WARNING

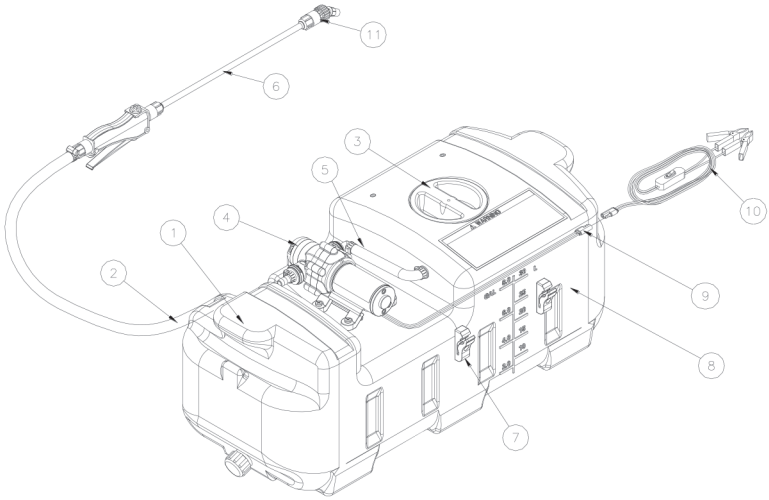
Check and test completed assembly

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 tank straps are properly fastened. 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) Connect the remote switch to the pump power cord and 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. **Hose Wrap.** The hose wrap is built into the tank and provides a storage location for the gun hose
2. **Gun Hose.** The gun hose transfers chemical from the pump to the spray gun.
3. **Fill Cap.** The fill cap has a vent to allow air to enter the tank as the chemical is dispensed.
4. **Sprayer Pump.** The sprayer pump makes the chemical flow to the spray gun and out the nozzle.
5. **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.
6. **Spot Spray Gun.** Use the spot spray gun to apply chemical to specific areas. The spray pattern is adjustable from stream to cone by twisting the spray nozzle (see Operation Instructions). When the remote switch is in the ON position, the spray gun trigger is the pump ON/OFF control. Squeeze the trigger and the pump turns on, let go and the pump turns off.
7. **Gun Clips.** Use the gun clips to store the spot spray gun.
8. **Sprayer Tank.** The sprayer tank holds the chemical.
9. **Pump Power Cord.** The cord connects the sprayer pump to the remote switch. It should be disconnected when the sprayer is not in use.
10. **Remote Switch.** The remote switch connects the battery to the pump power cord and allows the operator to turn the sprayer pump on and off. The remote switch may be left connected to the battery when the sprayer is not in use.
11. **Spray Nozzle.** Spraying pattern adjusts from stream to cone.

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.

⚠ 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.

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.
- **Wind speed.** NEVER spray when wind speed exceeds 6 Km/h 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.
- **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.

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	**In the event that the sprayer develops a leak while spraying chemicals,** *you must immediately stop spraying.* Turn off power to the sprayer and follow the directions below, as applicable.
Bodily chemical contact	**Personal contamination can occur when chemicals splash, spill, or spray directly onto a person.** 1. Follow the emergency first aid instructions on the chemical label listed in the "First Aid" or "Statements of Practical Treatment" section. General procedures include: 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. 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.

Poisoning by ingestion or inhalation	**In case of poisoning from ingestion or inhalation:** 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.
Chemical spills	**Chemical spills must be quickly contained and properly cleaned up.** Refer to the chemical label for any specific cleanup instructions with regard to the chemical spilled. General procedures include: **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 t**he 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: - Chemical manufacturer. The chemical label provides contact information for the chemical manufacturer.

OPERATION - PREPARING THE SPRAYER FOR EACH USE

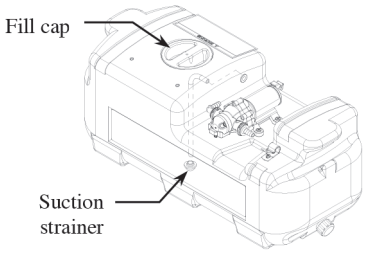
If the sprayer has been used previously, it must be prepared BEFORE EACH SUBSEQUENT USE.

⚠ 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 equipment.**
2. Ensure tank empty	**Ensure the sprayer has been thoroughly flushed and drained of all residual chemical from prior uses.**
3. Clean suction strainer	**Clean the suction strainer of any chemical residue.** 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. **IMPORTANT:** The strainer must be accessed by reaching into the tank, so the tank must be empty to avoid immersing your hand in chemicals. 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. 
4. Inspect & repair	**Inspect and test the sprayer thoroughly:** 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 ANNOVI REVERBERI 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.) Partially fill tank with plain water and spray to test for leaks. Repair as needed. ***IMPORTANT: After any repair work has been done, ALWAYS test for leaks with water one final time before using.***

OPERATION - USING THE SPRAYER

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 6 Km/h or if there are bystanders in the intended spray area.

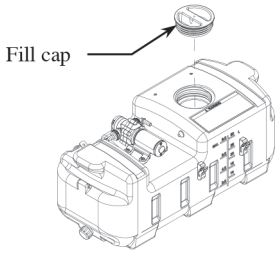
1. Assess wind speed	**Assess weather conditions to ensure that it is not too windy to spray.** **DO NOT SPRAY if wind speeds are greater than 6 Km/h.** Visible indication of wind speed: If leaves are in constant motion or there is any branch movement, DO NOT spray because the wind is too strong.
2. Clear work area	**Clear the work area of all bystanders and pets.** Restrict access by the public for the period recommended on chemical label.

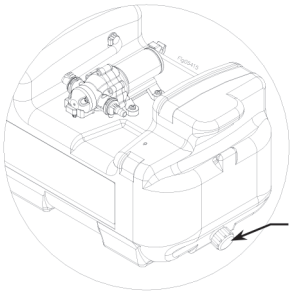
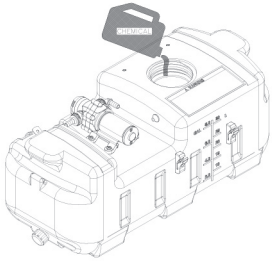
Step Two: Fill the sprayer.

⚠ 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.

1. Review safety information	**Review the "Operation – Important Safety Information"** related to General Chemical Safety and Chemical Accident Procedures 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	**Turn OFF power to the sprayer before filling.**
5. Remove fill cap	**Remove the fill cap located on top of the sprayer.** 

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.
7. Check drain cap	**Before filling tank, ensure drain cap is securely tightened.** 
8. Fill tank	**Add pesticide to tank through fill cap:** 1.Confirm the chemical/water dilution ratios specified on the chemical label. 2.Determine chemical and water volumes needed for the planned application, taking into consideration that maximum tank capacity is 8 gallons/30 Litres. *Note: For filling gauge accuracy at the 8 gal. (30L) mark, both sides of the tank (above the cutout for the pump) should be filled to the same height.* 3.Add chemical to the tank through the fill cap. *If the chemical is not pre-mixed, add water and pesticide concentrate in the order prescribed on the label.* *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.* 
9. Ensure chemical mixed	**Ensure chemical is thoroughly mixed in tank.** - Stirring device should be made of metal or plastic, non-chemical absorbing material, and then properly cleaned and stored after use.
10. Replace fill cap	**Replace fill cap and tighten securely.**

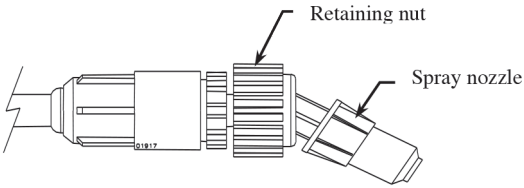
Step 3: Operate the sprayer.

⚠ 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.

The motor surface temperature can reach temperatures over 70° C. In order to avoid scalding, wear gloves during operation of the sprayer.

1. Review safety information	**Review the "Operation – Important Safety Information"** related to Chemical Application Safety provided in this manual.
2. Wear personal protective equipment	**Wear personal protective equipment as directed on the chemical label.**
3. Turn on power	Turn on the power to the sprayer. 1. Verify the remote switch is connected to the pump power cord. 2. Turn the remote switch to the "ON" position. 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.
4. Squeeze trigger & adjust nozzle	**To spray, squeeze the gun trigger.** **- Twist the spray nozzle to adjust from a straight stream to hollow cone spray pattern,** as recommended on the chemical label for proper delivery rate. *Note: It is not unusual for the operator to be exposed to chemical drips while adjusting the nozzle – gloves should be chemical resistant.* 
5. Leaving unattended	**If the sprayer must be left unattended at any time:** a) Disconnect power to the sprayer. b) Relieve system pressure by depressing the gun trigger.
6. Discontinue use if clogged or inoperative	**If the sprayer becomes clogged or inoperative during use, *discontinue use immediately.*** - 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.

Note: A reserve, clean container capable of holding at least 30 Litres 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 for use in these circumstances. The container should be properly labeled as to its contents if it is used.

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

Cleanup and decontamination procedures must be followed after each use.

Improper equipment cleanup 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	**If there is excess pesticide left in the tank, drain the tank:** 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	**Properly store or dispose of unused chemical:** a) If the unused pesticide is to be stored for future use: Store all unused pesticide in its original, or a suitably marked, container in a secure location out of the reach of children & animals. b) If remaining pesticide is to be disposed: 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	**Flush the sprayer per the chemical manufacturer's recommendations.** A general procedure is as follows: 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 20 Litres 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	**Decontaminate yourself after you are finished handling chemicals:** 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

Prepare the sprayer for end-of-season storage 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 2 Litres of RV antifreeze into the tank. *Note: RV antifreeze is non-toxic and biodegradable and generally safer for the environment than automotive antifreeze.*
2. Spray briefly	Turn on the pump motor and squeeze the gun trigger briefly until fluid sprays. Store gun in lance clips. If equipped, store broadcast lance in stored position to prevent damage.

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 30 Litres 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 for use in these circumstances. The container should be properly labeled as to its contents if it is used.*

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	**Empty the tank and flush the sprayer with water as directed in the section, "Operation – Step Four."** *- In order to avoid accidental exposure to chemicals, never attempt to service the sprayer until the tank has been emptied and the sprayer flushed with water.*
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.** NOTE: Never try to unclog the sprayer nozzle by blowing through it.
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
	Short in wires	Check condition of wires
	Low voltage	Check voltage
Low pressure	Worn spray gun nozzle	Replace spray gun
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	4.0 Amps (max)

Sprayer Specifications

Maximum GPM	1.0 GPM (3.8 Litres/min.)
Maximum Pressure	40 PSI (2.76 Bar) (276 kPa)

Tank Maximum Capacity	8 Gallons (30 Litres)
Overall Dimensions	25.5" x 11.0" x 10.2" (65cm x 28cm x 26cm)
Dry Weight / Weight full of water	8 lbs./ 75 lbs. (3.6kg / 34kg)

Component Materials*

Tank	Polyethylene, EPDM
Suction Tube.	Polypropylene, PVC, Stainless Steel
Hose	PVC (Max. Pressure 6.9Bar/100 psi)
Pump	Polypropylene, Viton, Santoprene , Stainless Steel
Valves	PVC, Buna_N
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.

LIMITED WARRANTY

The validity of the warranty is in accordance with the relevant legislation in the country where the product is sold (unless otherwise stated by the producer).

The warranty covers materials, construction and conformity defects during the warranty period, during which time the manufacturer will replace defective parts and repair the product if not excessively worn, or replace it.

The warranty does not cover components subject to normal wear and tear (valve, piston, water gasket, oil gasket, springs, O-rings, accessories such as the hose, gun, brushes, wheels, etc.);

The warranty does not cover defects caused by or arising from:

- improper use, misuse, negligence,
- hire or professional use if the product has been sold for domestic use,
- failure to comply with the maintenance instructions provided in this manual,
- repair by unauthorised staff or centres,
- use of non-genuine parts or accessories,
- damage caused by transport, by dirt or foreign bodies, accidents,
- storage or warehousing problems.

Proof of purchase must be submitted to obtain warranty cover.

For assistance, contact the point of sale where your appliance was purchased.

CE CONFORMITY DECLARATION

Modena, 13/03/2020 **TO WHOM IT MAY CONCERN**

Declaration of Conformity

We, Annovi Reverberi S.p.A, declare that the following ANNOVI REVERBERI Machine(s):
Designation of machine: Broadcast/Spot Sprayers

Item #	Supplier #	Model
52155	2682051	30 L Sprayer

conform to the following European Directives:
DIRECTIVE 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on machinery
DIRECTIVE 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility (recast)
DIRECTIVE 2015/863/EU of the European Parliament and of the Council of 31 March 2015 on the restriction of the use of certain hazardous substances in electrical and electronic equipment
and are manufactured in accordance with the following standards or standardised documents:
EN ISO 4254-1 Agricultural Machinery – Safety – Part 1: General Requirements
EN ISO 4254-6 Agricultural Machinery – Safety – Part 6: Sprayers And Liquid Fertilizer Distributors
ISO 14982 Agricultural And Forestry Machinery – Electromagnetic Compatibility – Test Methods And Acceptance Criteria
EN ISO 12100 Safety Of Machinery – General Principles For Design – Risk Assessment And Risk Reduction
Name and address of the person appointed to issue the technical file: Stefano Reverberi / AR Managing Director Via ML King, 3 - 41122 Modena, Italy
name and title of legal representative
Stefano Reverberi



……..
Managing Director
ANNOVI REVERBERI S.p.A.

Manufactured and distributed by: Annovi Reverberi S.p.A.
Via M.L. King 3
41122 Modena (Italy)
www.annovireverberi.it