## **OWNER'S MANUAL**



#### BEFORE RETURNING THIS PRODUCT FOR ANY REASON, PLEASE CALL MONDAY-FRIDAY, 8:00 AM to 5:00 PM CST

## **1-888-433-6631**



WARNING: Cancer and Reproductive Harm. www.P65Warnings.ca.gov



**WARNING:** To reduce the risk of injury, the user must read and understand the operator's manual before using this product.



www.workhorsesprayers.com Toll Free Phone: 888-433-6631 [G23-700096 (04/25)]

### Table of Contents

Warnings2	Maintenance, Tank Care and Winter Storage5
Technical Specifications3	Pump Information
Safety3	Exploded View/Parts List8 - 9
Assembly & Battery Charging4	7-Nozzle Boom Assembly & Parts List10 - 11
Testing-Operation4	Warranty12

Thank you for purchasing this product. The purpose of this manual is to assist in operating and maintaining this spot sprayer.

~~~~~~IMPORTANT~~~~~~

Remove tank lid and be sure the tank is clean and free of any foreign material. Rinse tank out of any tank residue before filling with water to test.

~~~~~~IMPORTANT~~~~~

It is <u>VERY</u> important to test this sprayer with plain water before actual spraying is attempted. This will enable you to familiarize yourself with the sprayer and check for leaks without the possibility of losing any expensive chemicals.



<u>Read and Understand the Owner's Manual</u> before using this sprayer. Test and use in accordance to instructions. **Read and Follow** chemical label instructions and wear protective gear when filling, using, cleaning and servicing the sprayer.

**Exercise Caution** in vehicle handling when towing/hauling a filled sprayer to avoid loss of control or overturning. **Keep Sprayer and Spray materials** away from other people, children and pets.

**Do Not Turn on Power** to the sprayer, until ready to spray in order to avoid unintentional spray release.

Do Not Use on steep slopes. A full sprayer could cause loss of control or overturn sprayer and vehicle.

Always operate up and down a slope, never across the face of a slope.

Keep all movement on slopes slow and gradual. Do not make sudden changes in speed, directions or turning. Do not start or stop suddenly when going uphill or downhill.

Stop on level ground, set the parking brake and shut off engine before leaving the operator's position for any reason.

Keep all parts in good condition and properly installed. Fix damaged or worn parts immediately.

**Caution should be taken** when towing and/or using any sprayer. This sprayer combined with the weight distribution, turning radius and speed of vehicle can result in damage to vehicle and/or sprayer or severe injury or death, if not used properly.

Improper use of this sprayer or handling of chemicals could result in serious injury or illness, or could cause damage to the environment.

**BEFORE RETURNING THIS PRODUCT** FOR ANY REASON, PLEASE CALL 1-888-433-6631 MONDAY-FRIDAY, 8:00 AM TO 5:00 PM CST If you should have a question or experience a problem with your Workhorse Sprayers Product: Visit our website @ www.workhorsesprayers.com or call the Toll free number above. Our technical support representatives will be happy to help you. In most cases a customer service rep. can resolve the problem over the phone. To obtain prompt, efficient service, always remember to give the following information....

· Correct Part Description and/or part number • Model number and Serial Number Part descriptions and numbers can be obtained from the illustrated parts list section(s) of this manual.

#### Retain a copy of your receipt for your unit, as it will be required to validate any warranty service.

Warranted against manufacturer or workmanship defects from date of purchase with copy of receipt:

Homeowner Usage: One Year.

**Commercial Usage:** 90 Days.

Record your purchase information and attach a copy of your receipt to this manual.

Date of Purchase:

Purchased From:

## Model:\_\_\_\_\_\_G23-LG05SSG2

## **Technical Specifications**



## Model: G23-LG05SSG2

(5-Gallon Rechargeable Spot Sprayer)

#### **Technical Specifications**

- 5-Gallon Corrosion-Resistant Polyethylene Tank
- 12 Volt Diaphragm Pump, 1.0 GPM 40 PSI
- Econo Spray Wand w/6 Ft. Hose (3/8" I.D.)

CAUTION: When fully filled with water, this sprayer will weigh approx. 60 Lbs. Always check the vehicle load rating before using this sprayer. Do not exceed the recommended rating.

### Safety

- Use for intended purposes only.
- Wear protective clothing, eye protection and chemical resistant gloves when filling, using or cleaning this sprayer.
- Do not allow adults to operate without proper instruction or without having read the owner's manual.
- Always be aware of your surroundings when using. Do not let anyone near while operating any sprayer. .
- Clear the spray area of people and pets. Restrict access for a period recommended on chemical label.
- Clean up spills immediately per instructions on chemical label. ٠
- Turn off sprayer and relieve any pressure before leaving sprayer unattended.
- Exercise special caution in handling. Sprayer is less stable and will perform differently with a filled sprayer. Exercise extreme caution on sloped or rough surfaces.

**IMPORTANT:** <u>Remove tank lid and be sure the tank is clean and free of any foreign material. Rinse tank out of any tank residue before filling with water to test.</u>

Assembly: This sprayer comes fully assembled.

**Note:** Battery plugs directly into the lead exiting the rear of the pump.

• Make sure all hose clamps are tight before testing or spraying for the first time.

#### **Battery Charging**

It is recommended to charge the battery for 8-10 hours before using, or if the battery has been stored for 6 or more months without usage. Once fully charged, you should be able to spray 30 gallons of fluid or 6 consecutive tanks

#### To Charge the Battery:

- 1) Plug the charger into a 110 volt AC electrical receptacle.
- 2) Disconnect the battery from the pump.
- 3) Connect the charger to the battery lead. The charger will display a red light while charging.
- 4) When the battery is fully charged, the red light will turn green.
- 5) Unplug the charger and reconnect the battery to the pump to use sprayer.

\* Charge the battery every 6 months if not regularly used. If the battery is fully drained and no longer runs the pump, charge it promptly to avoid leaving it discharged for a long period.

CAUTION: Never leave the charger connected to the battery for more than 20 hours, as this may damage the battery.

## \*\*The Sprayer should be TESTED w/plain water before actual use\*\*

#### **Testing the Sprayer**

#### NOTE:

It is VERY important to test this sprayer with plain water before actual spraying is attempted. This will enable you to check the sprayer for leaks without the possibility of losing any expensive chemicals.

Important: After any repair work has been done, ALWAYS test for leaks with water before using.

Fill the tank about 1/2 full with plain water and go to the starting place for spraying.

After testing, add the desired chemicals to the mixture and water combination and start your spraying operation.

Conditions of weather and terrain must be considered when setting the sprayer. Do not spray on windy days. Protective clothing must be worn in some cases. **Be sure to read the chemical label(s) before application!** 

#### Operation

This sprayer is designed to be pulled or pushed by hand.

Fill the tank part way with water and then add the desired amount of chemical to be sprayed. Finish filling tank to proper level. Only fill the tank with what you're going to spray in a day, never leave chemicals sit in tank.

Turn the switch on the pump to the "ON" position and spray by squeezing the lever on the handgun. The unit is supplied with a demand pump that will only operate while the lever on the handgun is depressed.

#### Maintenance During/After Spraying

Periodically check the strainer and clean the screen on your intake line. If sprayer becomes clogged during use, discontinue use immediately. DO NOT attempt to service while chemicals are in the sprayer and power is connected.

Proper care and maintenance will prolong the life of your sprayer.

After use, drain the tank and store or dispose of chemical properly. Fill the sprayer half way with clean water. Start the pump and allow the water to pump through the entire plumbing system and nozzles. Drain and then refill half full, add the recommended amount of a good quality tank cleaner. (If no tank cleaner is available, you may substitute dish soap for this step, about 1-2 oz. per gallon). But a neutralizer/cleaner should be used to thoroughly clean the system. Turn pump on and circulate through system for 15 minutes and then spray out through the handgun nozzle. Refill sprayer half way with clean water and repeat. Follow the chemical manufacturer's disposal instructions of all wash or rinsing water.

If handgun nozzle needs cleaning, remove from the sprayer and soak in warm soapy water. Clean with a soft bristled brush or toothpick if necessary. Never use a metal object. Even the slightest damage can change the flow rate and spray distribution. Water rinse and dry before storing.

**WARNING:** Some chemicals will damage the pump valves if allowed to soak untreated for any length of time! ALWAYS flush the pump as instructed after each use. DO NOT allow chemicals to sit in the pump for extended times of idleness. Follow the chemical manufacturer's instructions on disposal of all waste water from the sprayer.

#### Tank Care & Maintenance

**Warning:** Do not use the tank as a container for fuel oils, kerosene, gasoline or any other petroleum distillate product. All poly olefins are softened and permeated by such products. In an enclosed area the vaporization of these materials from the outside surface of the tank could create a dangerous condition.

The tank should not be used as a pressure vessel nor used with chemicals or solutions having a weight of more than 12 pounds per gallon.

Store the tank in a dry dark place when not in use. Storage out of sunlight will prolong the life of the tank.

Do not drop, strike or kick the tank, especially at low temperatures. Tanks become brittle and are subject to cracking at temperatures below 20° Fahrenheit.

Always flush the tank with water and a neutralizing agent at the end of each use, to prevent contamination of solutions.

#### Winter 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. *Note: RV antifreeze is non-toxic and biodegradable and generally* safer for the environment than automotive antifreeze.

Before storing your sprayer for winter or long term storage, thoroughly clean and drain it as much as possible. Then pour enough pink RV antifreeze into the tank so that when the pump is turned on you can pump the antifreeze throughout the entire plumbing system. Make sure to operate the handgun until you see pink fluid spraying from the nozzle. Leave any remaining antifreeze in the tank. Before your next usage, rinse the antifreeze from the sprayer with clean water.

It is nearly impossible to drain all of the water from the sprayer and any trapped water can freeze in cold weather and damage parts of the sprayer. Pumping the antifreeze through the system will displace the water and help prevent this damage. <u>FREEZE DAMAGE IS NOT COVERED BY PRODUCT WARRANTY</u>

Removing from storage: drain the antifreeze. Fill the tank with fresh water and run through the system. Dispose of antifreeze and flush water properly.

2200 Series: 1.0 GPM Pump Information: Type - 12VDC, permanent magnet, splashproof. Pressure Control - Demand. Liquid Temperature - 110°F (43°C) Max. Priming Capabilities - 4 feet (1.2 m). Max Pressure - 40 PSI (2.8 bar). Inlet/Outlet Ports - 3/8" Hose Barb.

#### Motor Information:

Leads - 18 AWG, 4.5" long w/2-pin connector. Temperature Limits - Motor is not equipped with thermal protection. For user safety, optimal performance and maximum motor life, the motor surface temperature should not exceed 180°F (82°C).



#### **Installation & Operation Precautions**

- Pump is equipped with a pressure sensing demand switch that controls the maximum operating pressure.
- Never subject the pump to pressures above factory set/max pressure rating.
- As long as there is inlet water pressure, the pump will not stop forward flow of water, even if the motor is turned off. Be sure the system has positive means of shutting off water supply.
- Do not operate pump in an explosive environment. Arcing from the motor brushes, switch or excessive heat from an improperly cycled motor may cause an explosion.
- Do not locate the pump motor near low temperature plastics or combustible material. The surface temperature of the motor may exceed 180°F (82°C).
- Do not pump gasoline or other flammable liquids. Pump head materials are designed for use with water only. Do not use with petroleum products.
- Do not assume fluid compatibility. If the fluid is improperly matched to the pumps' elastomers, a leak may occur.
- To prevent electrical shock, disconnect power before initiating any work. In the case of pump failure, the motor housing and/or pump fluid may carry high voltage to components normally considered safe. Therefore, always consider electrical shock hazard when working with and handling electrical equipment. If uncertain, consult an electrician. Electrical wiring should only be done by a qualified electrician per local and state electrical codes.



- Clean and rinse your pump after each use with a Tank Neutralizer/Cleaner.
- Winterize your pump or sprayer by rinsing, draining and running RV Antifreeze through it before storing for the winter.
- Use clean water for your spray mixture.
- Store inside a building when not in use.



# REMCO



#### Servicing -

• Every Year: Check system against operating standards. Flush with clean water and store in warm dry place.

#### **Recommendations** -

#### Electrical:

- The pumps are designed for intermittent duty. Make sure the "OFF" periods are sufficient.
- Pump and motor specifications are based on an alternator charged battery (12 VDC).
- Rapid On/Off cycling must be limited to no more than 6 times per minute, even if the pump is operating in the Continuous Duty zone. Cycling could cause the motor to heat beyond the recommended maximum temperature and reduce the operational life of the pump and pressure-sensing switch.

#### 2200 Series (3/8" Hose Barb) 1.0 GPM Pump

|                  | Mfg. Number    | Fimco Part # |
|------------------|----------------|--------------|
| Replacement Pump | 2240-1B1-10I-R | G23-610046   |



- Use to pump bleach.
- Use to pump petroleum products such as diesel fuel, gasoline or kerosene.
- Use to pump chemicals w/petroleum distillates or surfactants.
- Use to store flammable or combustible liquids.
- Leave your pump sit with spray mixture in it for extended periods.
- Use dirty or unfiltered water for spraying.

|                               | Troubleshooting                              |  |  |  |  |  |
|-------------------------------|--|--|--|--|--|--|
| Pump<br>will not<br>run:      | Check for loose wiring                       | Surge<br>(Puls<br>Pump<br>contir<br>to rur<br>disch<br>close | Pump<br>Surges:<br>(Pulsating)                               | Low flow may cause pump to surge                           |  |  |
|                               | Make sure pump ON/OFF switch is on           |  |  | Spray Wand is adjusted to small or fine of a spray pattern |  |  |
|                               | Check the fuse                               |  |  | Check for leaks in the discharge line                      |  |  |
| Pump<br>Does<br>Not<br>Prime: | Check for clogged strainer/filter            |  |  | Check for restriction in the discharge line                |  |  |
|                               | Check for empty product supply               |  |  | Check for debris in nozzle orifice                         |  |  |
|                               | Check for cracks in the pump housing         |  |  | Discharge hose may be too long                             |  |  |
|                               | Check for air leaks in supply line           |  |  | Check for clogged strainer/filter                          |  |  |
| Low<br>Pressure/<br>Low Flow: | Check for a clogged strainer                 |  | Pump<br>continues<br>to run after<br>discharge is<br>closed: | Check for empty product supply                             |  |  |
|                               | Check for leaks in the discharge line        |  |  | Check for leaks in the discharge line                      |  |  |
|                               | Check for restrictions in the discharge line |  |  | System has leaks   |  |  |
|                               | Check for debris in intake                   |  | Fuse blows:  | Damaged or defective wiring harness                        |  |  |
|                               | Check for debris in nozzle orifice           |  |  | Seized Motor   |  |  |

## Pump FAQs

#### Sprayer and Pump FAQs:

#### • Why does the pump not run all the time?

This is an on-demand pump and only runs when a discharge is open (spray gun, bypass, boom (if applicable) or a leak in system.

#### • Why does the pump surge while using the spray gun?

Low flow/high pressure may cause the pump to surge (or cycle). Typically the spray wand is adjusted at too fine of a mist, to overcome, adjust the nozzle for a higher flow.

#### • How do I adjust the pressure?

Pressure can only be adjusted by opening the pressure adjust (bypass) valve to allow some of your water or solution to return to the tank (if equipped).

#### • Pump quit and will not run, what do I need to do?

Squeeze trigger on spray gun to ensure that the system isn't just pressurized up with discharges closed.

Check electrical connections, ensure switch is on. Check fuses. Check for proper voltage. Check pressure switch.

#### • Low flow or no flow at all, what do I need to check for?

Check for a clogged or kinked intake hose and/or clogged intake strainer. Check for proper voltage.

You will need to occasionally check your intake strainer to ensure that it is clean of any debris.

#### • What is causing the fuse to blow each time I turn the pump on?

Check for excessive voltage. Improper adjustment of the pressure switch. Damaged or defective wire harness or defective pressure switch.

#### Warning:

Ensure the wiring harness does not become pinched or damaged in any way. This may damage the pump or cause the wiring harness to overheat, resulting in a melt down or fire.

The pump is intended to be used spraying agricultural pesticides, herbicides, and other non-flammable liquids.

#### Spraying Pesticides:

Pesticides are hazardous chemicals that must be handled with caution as directed 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, <u>the term pesticides is a comprehensive term that applies to insecticides</u>, <u>herbicides</u>, <u>fungicides</u>, and various other substances used to control pests.

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

In addition to spraying pesticides, this pump may be used to spray other **non-flammable** liquids. Example uses include herbicides, watering plants/trees or spraying water for dust control, or applying water-based, **non-flammable** sealant or stain to outdoor wood surfaces.

## WE RECOMMEND THAT THE PUMP NOT BE USED FOR OTHER PURPOSES ONCE IT HAS ALREADY BEEN USED FOR SPRAYING PESTICIDES.

Any chemical will leave some residual in the pump components, even after the pump 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 pump will be damaged, and warranty voided if used to apply bleach, chlorine, ice control chemicals, or any petroleumbased product (gasoline, diesel, kerosene, oil).

| Ref. # | Part #     | Description                        | Qty |
|--------|------------|------------------------------------|-----|
| 1      | G23-610000 | 5-Gallon Tank                      |     |
| 2      | G23-610001 | 5-Gallon Tank Tank Lid Assembly    | 1   |
| 3      | G23-600213 | Relief Hose Assembly               | 1   |
| 3.1    | 5116242    | Strainer, 1" Filter Washer         | 1   |
| 3.2    | 5149034    | Poly Swivel, 3/8" Hose Barb        | 1   |
| 3.3    | 5006209    | Poly Knurled Swivel Nut, 3/4" FGHT | 1   |
| 3.4    | 5051144    | Hose Clamp (3/8")                  | 1   |
| 3.5    | 5020585    | Hose, 3/8" EPDM x 8"               | 1   |
| 4      | 5051144    | Hose Clamp (3/8")                  | 3   |
| 5      | G23-610046 | 1.0 GPM Pump, 40 PSI               | 1   |
| 6      | 5020127    | Hose, 3/8" EPDM x 6'               | 1   |
| 7      | G23-610047 | Econo Spray Gun, 10"               | 1   |
| 8      | G23-600151 | Wand Clip                          | 2   |
| 9      | 5117293    | #10-24 x 0.375 PH Round Head Screw | 2   |
| 10     | G23-610050 | Back Panel                         | 1   |
| 11     | 5117285    | 1/4-20 x 0.50 PH Truss Head Screw  | 6   |
| 12     | G23-610003 | Storage Door                       | 1   |
| 13     | G23-610006 | Retractable Handle                 | 1   |
| 14     | 5034885    | #8-32 X 0.75 PH Pan Head Screw     | 2   |
| 15     | 5034745    | 3/8-16 x 5.00 FIng Hex Bolt        | 2   |
| 16     | G23-610004 | Wheel                              | 2   |
| 17     | 5006092    | 3/8-16 Top-Lock Hex Nut            | 2   |
| 18     | G23-610039 | Lithium Ion Battery 2.0AH          | 1   |
| 19     | G23-610048 | Lithium Ion Charger, 12V DC 500MA  | 1   |

#### Exploded View/Parts List: G23-LG05SSG2

## Exploded View/Parts List: G23-LG05SSG2





## Approx. Dimensions:





## Notes:

## Warranty

#### LIMITED WARRANTY FOR NEW WORKHORSE SPRAYERS EQUIPMENT

WHO MAY USE THIS LIMITED WARRANTY. This limited warranty (the "Limited Warranty") is provided by Workhorse Sprayers to the original purchaser ("you") of the Equipment (as defined below) from Workhorse Sprayers or one of Workhorse Sprayers' authorized dealers. This Limited Warranty does not apply to any subsequent owner or other transferee of the Equipment. THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

WHAT THIS LIMITED WARRANTY COVERS AND FOR HOW LONG. Workhorse Sprayers warrants that any new Equipment will be free from defects in material and workmanship for a period of **one (1) year** for homeowner and **90 days** commercial user, after delivery of the Equipment to you (the "Warranty Period"). The Warranty Period is not extended if Workhorse Sprayers repairs or replaces the Equipment.

WHAT IS NOT COVERED BY THIS LIMITED WARRANTY. This Limited Warranty does not apply to: (1) used Equipment; (2) any Equipment that has been altered, changed, repaired or treated since its delivery to you, other than by Workhorse Sprayers or its authorized dealers; (3) damage or depreciation due to normal wear and tear; (4) defects or damage due to failure to follow Workhorse Sprayers' operator's manual, specifications or other written instructions, or improper storage, operation, maintenance, application or installation of parts; (5) defects or damage due to misuse, accident or neglect, "acts of God" or other events beyond Workhorse Sprayers' reasonable control; (6) accessories, attachments, tools or parts that were not manufactured by Workhorse Sprayers, whether or not sold or operated with the Equipment; or (7) rubber parts, such as tires, hoses and grommets.

HOW TO OBTAIN WARRANTY SERVICE. To obtain warranty service under this Limited Warranty, you must (1) provide written notice to Workhorse Sprayers of the defect during the Warranty Period and within **thirty (30)** days after the defect becomes apparent or the repair becomes necessary, at the following address: Workhorse Sprayers, PO Box 1700, North Sioux City, SD 57049; and (2) make the Equipment available to Workhorse Sprayers or an authorized dealer within a reasonable period of time. For more information about this Limited Warranty, please call: **888-433-6631**.

WHAT REMEDIES ARE AVAILABLE UNDER THIS LIMITED WARRANTY. If the conditions set forth above are fulfilled and the Equipment or any part thereof is found to be defective, Workhorse Sprayers shall, at its own cost, and at its option, either repair or replace the defective Equipment or part. Workhorse Sprayers will pay for shipping and handling fees to return the repaired or replacement Equipment or part to you.

LIMITATION OF IMPLIED WARRANTIES AND OTHER REMEDIES. THE REMEDIES DESCRIBED ABOVE ARE YOUR SOLE AND EXCLUSIVE REMEDIES, AND WORKHORSE SPRAYERS' SOLE LIABILITY, FOR ANY BREACH OF THIS LIMITED WARRANTY. TO THE EXTENT APPLICABLE, ANY IMPLIED WAR-RANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL BE LIMITED IN DURATION TO THE WARRANTY PERIOD, AND THE REMEDIES AVAILABLE FOR BREACH THEREOF SHALL BE LIMITED TO THE REMEDIES AVAILABLE UNDER THIS EXPRESS LIMITED WARRANTY. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WAR-RANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. IN NO EVENT SHALL WORKHORSE SPRAYERS' LIABILITY UNDER THIS LIMITED WARRANTY EXCEED THE ACTUAL AMOUNT PAID BY YOU FOR THE DEFECTIVE EQUIPMENT, NOR SHALL WORKHORSE SPRAYERS BE LIABLE, UNDER ANY CIRCUMSTANCES, FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL OR PUNITIVE DAMAGES OR LOSSES, WHETHER DIRECT OR INDIRECT. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.