



OPERATOR'S MANUAL



MADE IN THE USA

SGXL– Operators manual initial release, full version coming soon at www.steelgreenmfg.com.

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GENERAL INFORMATION

Thank you for your purchasing a Steel Green machine! Please read and understand this manual before operating this piece of equipment. This manual will assist you in areas of operation, safety, and maintenance. Any unresolved question can be directed to Steel Green Mfg. We at Steel Green are excited to hear feedback from our customer base so we can continue to provide you with the most productive and efficient equipment possible.

NOTE: *This manual and all information and illustrations were accurate at the time of publication. Steel Green Mfg. reserves the right to make changes without notice.*

IMPORTANT: READ SAFETY RULES AND INSTRUCTIONS CAREFULLY.

WARNING!

Steel Green units are equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any). If a spark arrester is used, it should be maintained in effective working order by the operator. In the State of California, the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands. A spark arrester for the muffler is available through your nearest engine authorized service dealer or contact the service department

Serial Number: _____

Date Purchased: _____

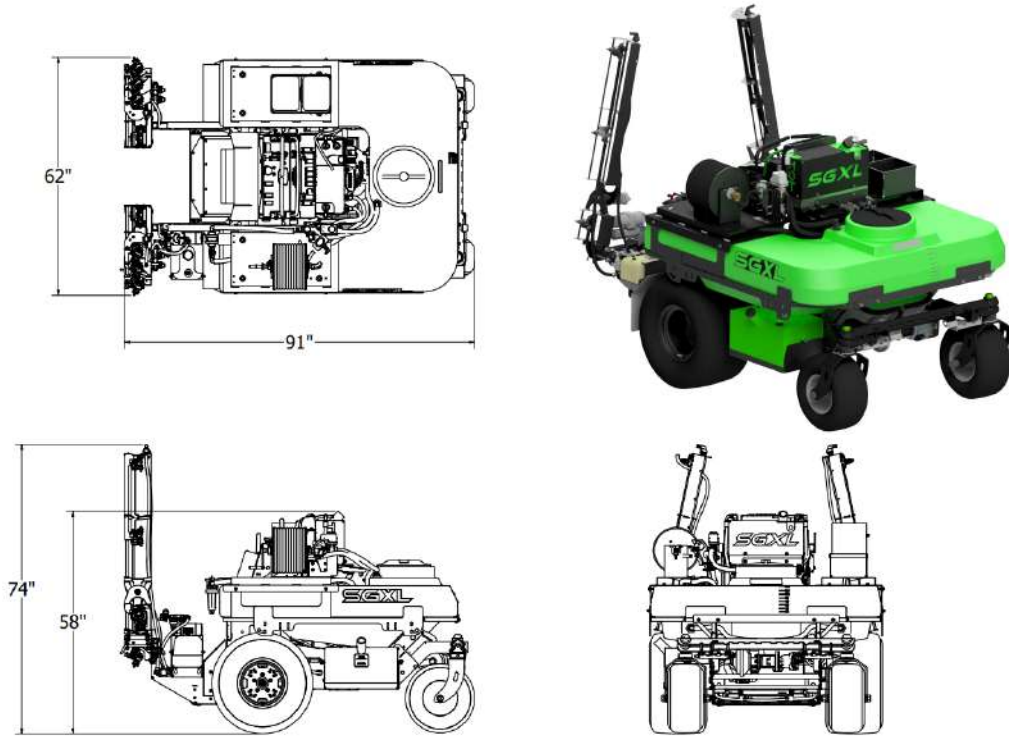
Dealer Name: _____

Dealer Phone Number: _____

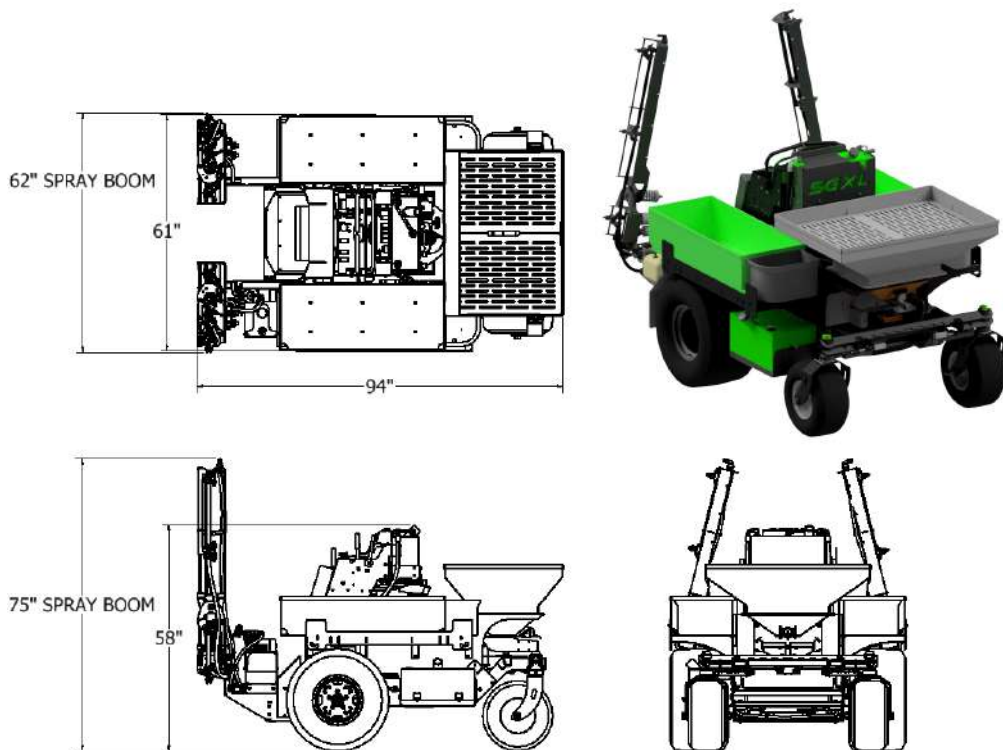
SPECIFICATIONS

Dimensions:

SGXL SPRAY SYSTEM



SGXL FERT SYSTEM



SPECIFICATIONS

DESCRIPTION	SGXL SPRAY SYSTEM	SGXL FERT SYSTEM
Weight	1750	1580
Front tire	18X9.5X8	
Rear tire	26X14X12	
Spray Capacity	120 gal.	N/A
Spray Width	15'	N/A
Hopper Capacity	N/A	350 lbs.
Variable Spread Width	N/A	Up to 25'
Fuel Capacity	8 gal.	
Transport Speed	Up to 12 mph	
Rate Production	120,000 sq. ft. per fill based on 1 gal. spray nozzles	N/A

SAFE OPERATION

CAUTION!

THE FOLLOWING IMPORTANT SAFETY INSTRUCTIONS WHICH, IF NOT FOLLOWED, COULD ENDANGER THE PERSONAL SAFETY AND/OR PROPERTY OF YOURSELF AND OTHERS. READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL BEFORE ATTEMPTING TO OPERATE YOUR UNIT. FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY RESULT IN PERSONAL INJURY.

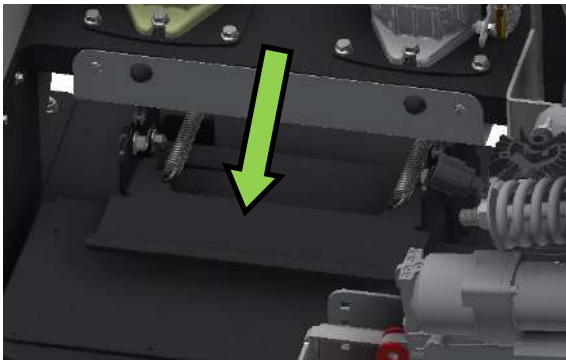


GENERAL OPERATION

- Do not operate the machine while under the influence of alcohol or drugs.
- Only allow responsible adults, who have practiced driving a zero radius SG unit and are familiar with the instructions to operate the machine. Local restrictions may restrict the age of the operator.

PARKING BRAKE OPERATION

- To engage the parking brake, push the peddle down.



BRAKE ENGAGED

- To release the parking brake, pull the peddle up.



BRAKE DISENGAGED



RE-FUELING

- **ALWAYS STOP THE ENGINE** and allow it to cool before refueling. **NEVER** remove the gas cap to add fuel while the engine is running, and never fill the gas tank on an engine that has been running and is still hot – gas spilled on a hot engine can ignite.
- Never smoke while refueling.
- Do not overfill fuel tank.
- Follow warning label on fuel tank.

SLOPE OPERATION



- Cease operation if stability is questionable, or if you are unsure of the ability to continue safely.
- Keep alert for hidden hazards on the terrain.
- Stay away from drop-offs, ditches and embankments.
- Never operate on slope angles greater than 13° with the SG in its basic configuration. The basic configuration is the SG with hopper and no other attachments. (A 13° slope is a slope that rises 1.4 m (4.6 ft) over a horizontal distance of 6.1 m (20 ft).)
- When using attachments, never operate the SG on slope angles greater than 10°. The addition of an extra tank, or other attachments will increase the risk of a rollover. (A 10° slope is a slope that rises 1 m (3.5 ft) over a horizontal distance of 6.1 m (20 ft).)

CONTROLS AND OPERATION

SPEED / VOLTAGE
STRIKER



USER'S MANUAL



Setup Mode

Overview:

Description: Setup mode is crucial for Striker to operate correctly.

SETTINGS ORDER	VALUE	DEFAULT
A. Distance Units	KM/H or M/H	M/H
B. Tire Size	Millimeters	2109mm
C. Clock	12Hr or 24Hr	12Hr
	Time-of-Day	12:00:00
D. Temperature	°F or °C	°F
E. LED Alerts	Temperature High Alert	000°
	Temperature Danger Alert	000°
	Voltage Low Alert	0V
	Voltage Danger Alert	0V
F. Maintenance	Oil Countdown	0000 M/H
	Care Countdown	0000 M/H
G. AVG SPD	Screen 2 or 3	Screen 3
H. Distance	Resolution	Res 2

Enter Setup Mode:

HOLD DOWN ALL THREE
BUTTONS FOR 3 SECONDS.



All segments on the screen will turn black. Release to continue.

Setup Mode

Setup Distance Units:

Striker defaults
to M/H.



TO CYCLE BETWEEN M/H AND KM/H,
PRESS THE LEFT BUTTON.



TO CONFIRM, PRESS THE CENTER BUTTON.



Striker will move on to the next setting.

Setup Wheel Size:

See "Measure Wheel Size" on
page 16 for more information.

SG52, 48, 42 with 22x11x10 tire
Enter 1755

SG36 with 21x7x10 tire enter 1705



MODIFY DIGIT: LEFT BUTTON



or



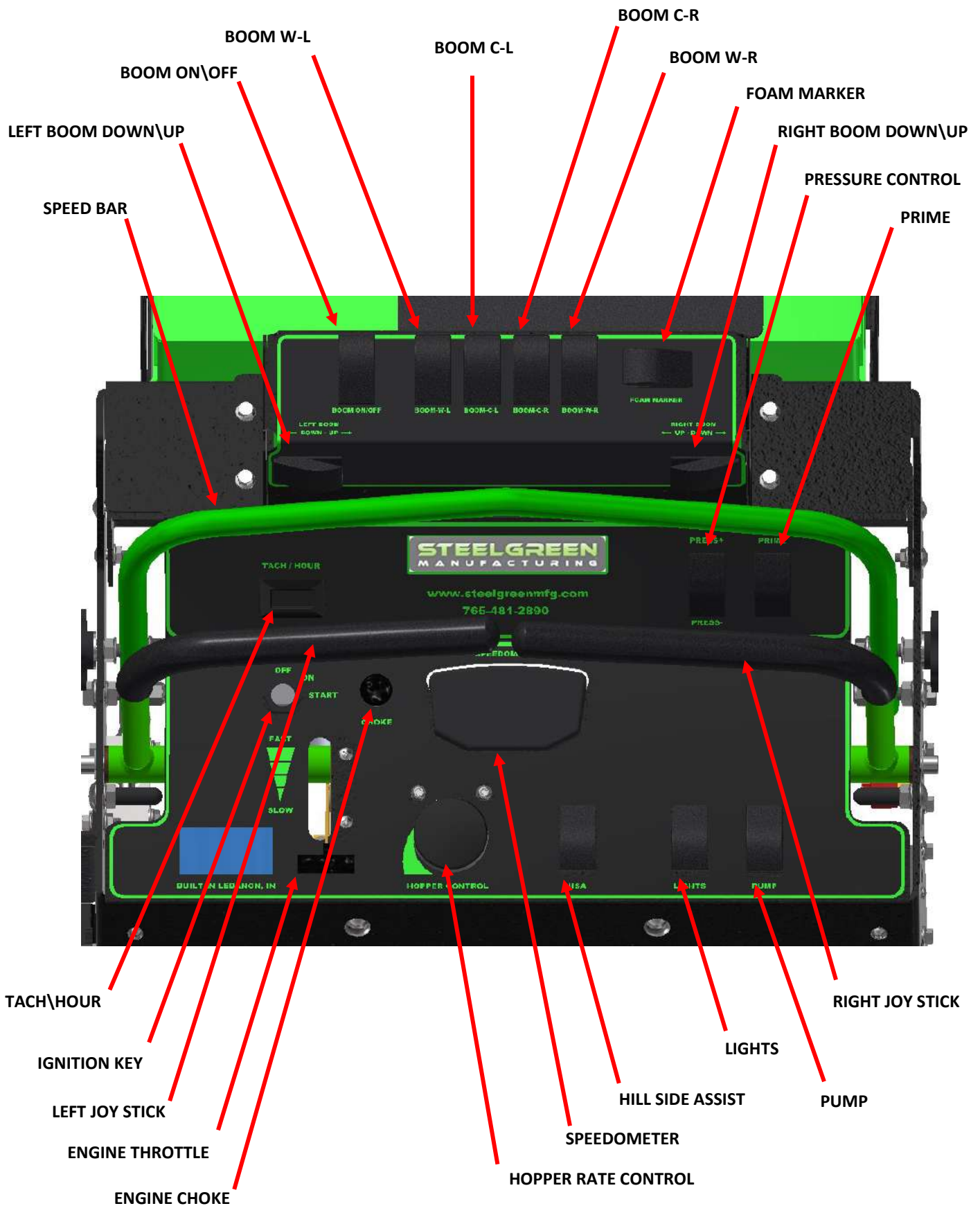
NEXT DIGIT: RIGHT BUTTON

TO CONFIRM, PRESS THE CENTER BUTTON.



Striker will move on to the next setting.

CONTROLS AND OPERATION



CONTROLS AND OPERATION

MACHINE OPERATION:

- To drive the machine, step up on the foot board and rest against the chest pad.

CHEST PAD

FOOT BOARD



- Move the throttle lever about half throttle.
- Pull the choke out.
- Turn the key to start the machine.
- Push the choke back in once the machine is running.



CONTROLS AND OPERATION

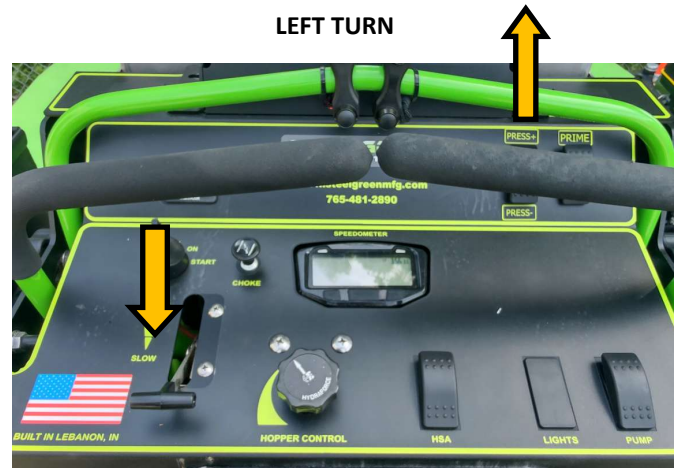
JOY STICKS:

- The left joy stick maneuvers the left tire forward and reverse.
- The right joy stick maneuvers the right tire forward and reverse.

DRIVING THE MACHINE:

- Move both joy sticks forward to drive forward.
- Move both joy sticks back to drive in reverse.
- To maneuver a left turn move the right joy stick forward and pull the left one back.
- To maneuver a right turn move the left joy stick forward and pull the right one back.

LEFT TURN



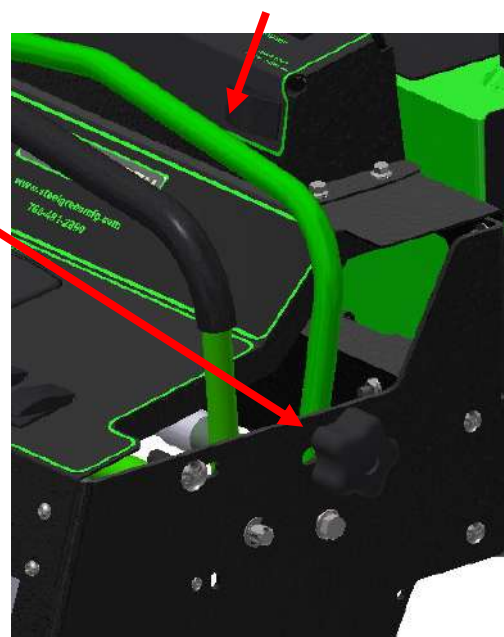
RIGHT TURN



SPEED BAR:

- The speed bar is used to set the maximum speed for spray applications.
- Adjust the speed bar by loosening the black knobs on both sides.
- Move both the joy sticks and speed bar together to set the desired max. speed and tighten the knobs.

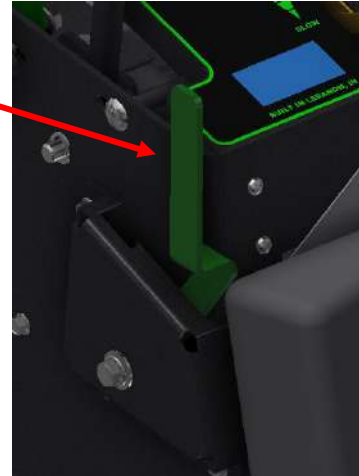
SPEED BAR



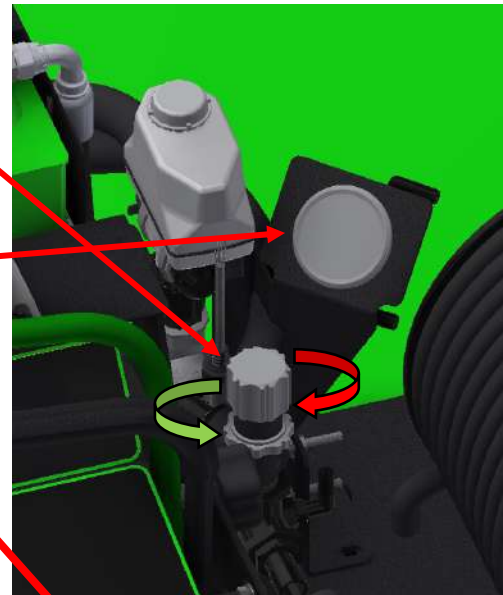
CONTROLS AND OPERATION (PUMP)

SPRAY PUMP CONTROL

- To engage the spray pump on, push the lever forward to the “lock” position.
- To disengage the spray pump, move the lever to the right to unlock it and pull it back.



- Set the Sparger tube pressure by turning the throttle valve.
- Pressure is **increased** by turning the throttle valve clockwise (right) and **decreased** by turning it counter-clockwise (left).
- measured by the pressure gauge.
- Set the spray pressure - Increase or decrease the spray pressure by pressing the pressure switch “press +” or “press -”



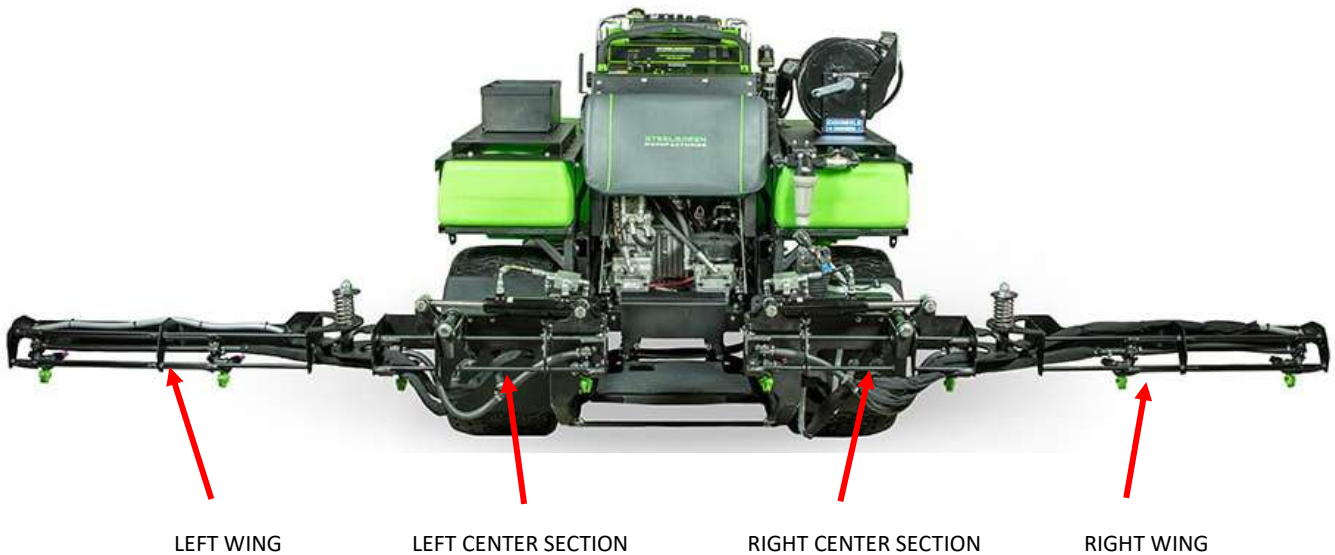
NOTE: You can increase or decrease the spray pressure one psi at a time by bumping the switch or press and hold the switch + or - to increase or decrease spray pressure.

- Use the **Spray Calibration Chart** to determine the desired spray pressure.
- If the tank is out of liquid press the prime switch to hold the system wide open to prime. Once the prime switch is off it will return to desired spray pressure.



CONTROLS AND OPERATION (SPRAYER)

The spray boom consists of 4-sections: *Left Wing, Center Left Section, Center Right Section, & Right Wing* (see below).



SPRAYER CONTROLS



- Each boom section\wing holds 2 nozzles.
- The spray boom can be raised or lowered individually by pressing the up\down buttons. You can stop the booms at level or they can be positioned -15° for hill side spray (see Fig. 1).
- Each section of the boom is controlled by an electronic spray valves. To power the boom, press the boom on\off button to the “ON” position, then press the desired section or sections button you wish to spray with.



Fig. 1

CONTROLS AND OPERATION (LIQUID)

HOSE REEL OPERATION

- The SGXL model is equipped with a 100' Hose Reel. This is meant to assist with spot spraying and or areas that are not able to be reached by the Machine.
- To operate, engage the spray pump, make sure the boom switches are turned off.
- Use the proper pressure dictated in the *Spray Calibration chart*.
- To activate the hose reel, open the chrome valve.
- To apply press the handle together and mimic the spray pattern from the boom.



NOTE: Make sure the Hose Reel Valve is turned off while not in use. Otherwise back pressure may be created and will cause the nozzle tips to drip.

SPRAY CHART

STANDARD VOLUME SPRAY CHART												
NOZZLE	PSI	DROP SIZE	CAPACITY ONE NOZZLE IN GPM	CAPACITY ONE NOZZLE IN OZ\MIN.	20"							
					GPA		GALLONS PER 1000 SQ FT IN MPH					
					4 MPH	5 MPH	3	4	5	6	7	8
AVI-11015 (100)	30	C	0.13	17	9.7	7.7	0.29	0.22	0.18	0.15	0.13	0.11
	40	C	0.15	19	11.1	8.9	0.34	0.26	0.2	0.17	0.15	0.13
	50	C	0.17	22	12.6	10.1	0.39	0.29	0.23	0.19	0.17	0.14
	60	M	0.18	23	13.4	10.7	0.41	0.31	0.24	0.20	0.17	0.15
AVI-11002 (50)	30	VC	0.17	22	12.6	10.1	0.39	0.29	0.23	0.19	0.17	0.14
	40	C	0.2	26	14.9	11.9	0.45	0.34	0.27	0.23	0.19	0.17
	50	C	0.22	28	16.3	13.1	0.5	0.37	0.3	0.25	0.21	0.19
	60	C	0.24	31	17.8	14.3	0.54	0.41	0.33	0.27	0.23	0.20
AVI-1110025 (50)	30	XC	0.22	28	16.3	13.1	0.5	0.37	0.3	0.25	0.21	0.19
	40	VC	0.25	32	18.6	14.9	0.57	0.43	0.34	0.28	0.24	0.21
	50	C	0.28	36	21	16.6	0.63	0.48	0.38	0.32	0.27	0.24
	60	C	0.31	40	23	18.4	0.7	0.53	0.42	0.35	0.30	0.26
AVI-111003 (50)	30	XC	0.26	33	19.3	15.4	0.59	0.44	0.35	0.29	0.25	0.22
	40	VC	0.3	38	22	17.8	0.68	0.51	0.41	0.34	0.29	0.26
	50	C	0.34	44	25	20	0.77	0.58	0.46	0.39	0.33	0.29
AVI-111004 (50)	30	XC	0.35	45	26	21	0.79	0.6	0.48	0.40	0.34	0.30
	40	XC	0.4	51	30	24	0.91	0.68	0.54	0.45	0.39	0.34
	50	VC	0.45	58	33	27	1	0.77	0.61	0.51	0.44	0.38
AVI-111005 (50)	30	XC	0.43	55	32	26	0.97	0.73	0.58	0.49	0.42	0.37
	40	XC	0.5	64	37	30	1.1	0.85	0.68	0.57	0.49	0.43
	50	VC	0.56	72	62	33	1.3	0.95	0.76	0.63	0.54	0.48
AVI-111006 (50)	30	XC	0.52	67	39	31	1.2	0.68	0.71	0.59	0.51	0.44
	40	XC	0.66	77	45	36	1.4	1	0.82	0.75	0.64	0.56
	50	VC	0.67	86	50	40	1.5	1.1	0.91	0.76	0.65	0.57
HIGH VOLUME SPRAY CHART (XRC TIPS)												
XRC11010	15	VC	0.61	78	45	36	1.4	1	0.83	0.69	0.59	0.52
	20	C	0.71	91	53	42	1.6	1.2	0.97	0.80	0.69	0.60
	30	C	0.87	111	65	52	2	1.5	1.2	0.99	0.85	0.74
	40	M	1	128	74	59	2.3	1.7	1.4	1.13	0.97	0.85
XRC11015	15	VC	0.92	118	68	55	2.1	1.6	1.3	1.04	0.89	0.78
	20	VC	1.06	136	79	63	2.4	1.8	1.4	1.20	1.03	0.90
	30	VC	1.3	166	97	77	2.9	2.2	1.8	1.47	1.26	1.11
	40	C	1.5	192	111	89	3.4	2.6	2	1.70	1.46	1.28
XRC11020	15	XC	1.22	156	91		2.8	2.1				
	20	XC	1.41	180	105		3.2	2.4				
	30	VC	1.73	221	128		3.9	2.9				
	40	VC	2	256	149		4.5	3.4				

GPM = $\frac{\text{GPA} \times \text{MPH} \times \text{W}}{5,940}$
(per nozzle)

1/min = $\frac{1}{\text{ha} \times \text{km/hr} \times \text{W}}$
(per nozzle)

GPM = Gallons per minute

GPA = Gallons per acre

GAL/1000FT² = Gallons per 1000 square feet

MPH = Miles per hour

W = Nozzle spacing (in or cm) for broadcast spraying

GPM = $\frac{\text{GAL}/1000\text{FT}^2 \times \text{MPH} \times \text{W}}{136}$
(per nozzle)

GAL/1000FT² = $\frac{136 \times \text{GPM (per nozzle)}}{\text{MPH} \times \text{W}}$

CARE & MAINTENANCE

WARNING!

- *Do not operate the engine in a confined space where carbon monoxide and other fumes can accumulate.*
- *Never lubricate, service, or adjust the machine or spreader while it is moving or running.*
- *Keep hands, feet, clothing, hair, and loose items away from any moving parts.*

CAUTION!

- *Understand service and maintenance procedure before performing any work on this machine or spreader.*
- *Disconnect the battery before making any repairs.*
- *Keep all parts in good condition & operating properly.*
- *Fix damages immediately. Replace all worn or damaged parts.*
- *Check all hardware at frequent intervals to ensure they are tight.*

WINTERIZATION

- Proper winterization of the spray system helps to prevent damage to the system due to wintertime freezing. Follow these easy steps:

- 1 Drain all of the remaining liquid from the tank and spray system.
- 2 Fill the tank with enough RV antifreeze to fill the entire system.
- 3 Turn on the liquid pump and open all boom valves until solution is visible out of spray nozzles. Close boom valves.
- 4 Open valve for hose reel and begin spraying solution thru the nozzle.
- 5 Put the recommended amount of fuel stabilizer and (follow label for instructions).

MAINTENANCE TIPS

- Always avoid letting product sit in the tank and pump for an extended period of time.
- Blowing off unit is preferred over washing. But if washing unit dry it off as best as possible.
- Refer to engine owner's manual for all other specs.

CARE & MAINTENANCE

SUGGESTED SERVICE	ACTION	DAILY	WEEKLY	BI-WEEKLY	MONTHLY	YEARLY	HOURS
Front Caster Wheels	Grease (see next page)				X		
Front Caster Yoke	Grease (see next page)				X		
Front Tire Pressure	24PSI		X				
Front Tire Bearing	Preload				X		
Rear Tire Pressure	26PSI		X				
Rear Lug Nut	Torque 75Lbs				X		
Rear Hub Castle Nut	Check the cotter pin				X		
Frame Hardware	Check all bolts & fasteners				X		
Idler Pully Arm	Grease (see next page)				X		
Belt Wear	Cracks, Tears, Missing Material				X		
Engine Carburetor	Lube Cable Linkages			X			
Engine Oil	Check	X					
	Change						
Engine Air Filter	Check/Change if needed		X			Replace	100 Hrs.
Engine Air Pre-Filter							
Engine Fuel Filter					Replace		
Engine Spark Plugs							
Hydraulic Oil	Change						500 Hrs.
Hydraulic Oil Filter							
Hydraulic Oil Level	Check	X					
Hydro System Fittings	Check for leaks		X				
Chemical Leaks	Check	X					
Spray Nozzle Tips							
Spray Nozzle Tip Screens							
Spray Gun Tip							
Spray Nozzle Gasket							
Spray System Hoses			X				
In-Line Filter			X				
In-Line Filter Gasket			X				
Spray Gun Hose Reel				X			
<p><i>The suggested maintenance schedule above is recommended for normal use, maintenance will vary for heavier use. Steel Green Mfg. reserves the right to determine usage.</i></p>							

CARE & MAINTENANCE

GREASE POINTS

There are 5 grease points on the SGXL.

1 on each front tire.

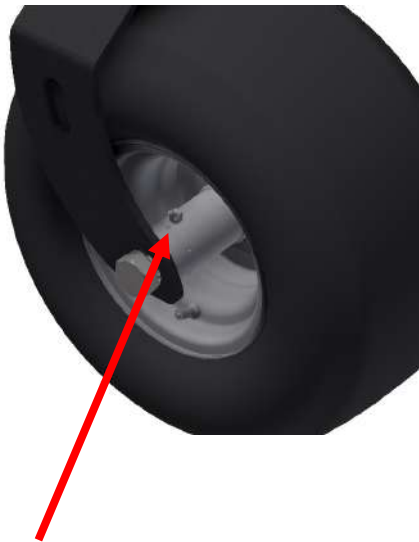
1 on each of the castor tubes

1 on the idler arm



Idler Arm grease point

Castor Tube Grease Point
(BOTH SIDES)



Tire Grease point
(BOTH FRONT TIRES)

Steel Green Manufacturing, LLC

1-Year Limited Warranty

A. WHAT IS COVERED – This Warranty applies to equipment having model numbers SG52, SG46, SG42, and SG36 (“Equipment”) manufactured by Steel Green Manufacturing, LLC, an Indiana limited liability company (“Steel Green”). This Warranty only applies to Equipment purchased directly from Steel Green or an authorized dealer or distributor of the Equipment (“Authorized Dealers”) in the United States. Except for Excluded Parts (as hereinafter defined), Steel Green agrees to repair or replace, at its option, any original component of the Equipment that is defective in material or workmanship (collectively “Warranty Service”). This Warranty begins on the date the product is delivered to the original purchaser and continues for a period of twelve (12) months thereafter (the “Warranty Term”).

B. WHAT IS NOT COVERED – This Warranty does not apply to the following categories of equipment: (1) used Equipment, unless there has been an Approved Transfer (as hereinafter defined); or (2) Equipment that has been altered or modified in ways not approved by Steel Green, including, but not limited to, setting injection pump fuel delivery above specifications stated in the owner’s manual. Furthermore, this Warranty does not apply to damage due to any of the following: (1) normal wear and tear; (2) the failure to perform reasonable and proper maintenance; (3) the failure to follow instructions and recommendations in the owner’s manual; (4) negligent or intentional misuse; (5) failure to properly store the Equipment; (6) vandalism; (7) the elements and inclement weather; or (8) collision or accident. “Excluded Parts” means the following parts, which are not covered by and are expressly excluded from this Warranty: (1) consumable parts, such as oil, filters, belts, brakes, and spark plugs; (2) tires; (3) batteries; and (4) the engine. The manufacturers of the Excluded Parts may provide a separate warranty. See manufacturers’ manuals for details.

C. WHO IS COVERED – This Warranty extends to the original purchaser of the Equipment who completes and returns the warranty registration card included with the Equipment to Steel Green and to any subsequent owner (collectively “you”), provided the subsequent owner notifies Steel Green of the change in ownership and Steel Green approves the transfer of this Warranty (“Approved Transfer”). An Approved Transfer does not extend the Warranty Term.

D. HOW IS WARRANTY SERVICE OBTAINED – To obtain Warranty Service, you must: (1) report the Equipment defect to Steel Green within the Warranty Term; and (2) deliver the Equipment for Warranty Service within a reasonable time thereafter. All Warranty Service must use new or remanufactured parts or components furnished or approved by Steel Green and must be performed by Steel Green, an Authorized Dealer, or a service center approved by Steel Green (“Authorized Service Center”), as directed by Steel Green. This Warranty only covers the costs of parts and labor associated with Warranty Service. You are responsible for delivering the Equipment for Warranty Service, at your sole cost and expense. Steel Green is not responsible for any costs or liability associated with any pickup, delivery, or other transportation required to obtain Warranty Service.

E. ADDITIONAL LIMITATIONS AND EXCLUSIONS – Except as expressly provided herein, Steel Green makes no warranties, representations, conditions or promises, express or implied, as to the quality, performance or freedom from defect of the Equipment covered by this Warranty. STEEL GREEN DOES NOT MAKE ANY STATUTORY OR IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND SUCH WARRANTIES ARE EXPRESSLY DISCLAIMED. TO THE EXTENT THEY ARE LEGALLY REQUIRED, ANY IMPLIED WARRANTIES OR CONDITIONS SHALL BE LIMITED IN DURATION TO THE WARRANTY TERM.

STEEL GREEN'S ONLY LIABILITY WITH RESPECT TO THIS WARRANTY AND YOUR EXCLUSIVE REMEDY SHALL BE FOR THE REPAIR OR REPLACEMENT OF PARTS AS SET FORTH HEREIN. NO CLAIM FOR BREACH OF WARRANTY SHALL ENTITLE YOU TO CANCELLATION OR RESCISSION OF THE PURCHASE OF THE EQUIPMENT.

IN NO EVENT WILL ANY AUTHORIZED DEALER, ANY AUTHORIZED SERVICE CENTER, STEEL GREEN OR ANY COMPANY AFFILIATED WITH STEEL GREEN BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. Examples of such damages include, but are not limited to: (1) the loss or damage to person or property other than that covered by this Warranty; (2) attorneys' fees; (3) claims for lost revenue or lost profits; and (4) rental costs of similar equipment to the Equipment.

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, OR LIMITATIONS ON THE DURATION OF AN IMPLIED WARRANTY, SO THE ABOVE LIMITATIONS AND EXCLUSIONS MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, BUT YOU MAY ALSO HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE.

F. NO OTHER WARRANTIES – NO OTHER PERSON OR ENTITY, INCLUDING ANY AUTHORIZED DEALER, HAS AUTHORITY TO MAKE ANY WARRANTY, REPRESENTATION, CONDITION OR PROMISE ON BEHALF OF STEEL GREEN, OR TO MODIFY THE TERMS OR LIMITATIONS OF THIS WARRANTY IN ANY WAY, WHETHER ORALLY OR IN WRITING. STEEL GREEN MAKES NO OTHER WARRANTY RELATED TO THE EQUIPMENT OR ANY OTHER ITEM UNLESS IT DELIVERS TO YOU A SEPARATE WRITTEN WARRANTY.

G. CONTACT – To obtain a replacement warranty registration card or report a defect in any Equipment, to find the nearest Authorized Dealer or Authorized Service Center or report your dissatisfaction with their assistance, or to otherwise obtain information regarding this Warranty, please contact Steel Green.

Steel Green Manufacturing LLC
Attn: Customer Service
824 S State Road 39
Lebanon, Indiana 46025
(765) 481-2890
sales@steelgreenmfg.com
Steelgreenmfg.com



WARRANTY REGISTRATION FORM

Fill out form completely and return to **Steel Green Manufacturing**
Email: sales@steelgreenmfg.com
Mail: 824 S State Road 39, Lebanon, IN 46052

CONTACT INFORMATION

Company Name: _____
Contact Name: _____
Street: _____
City: _____ State: _____ ZIP Code: _____
Phone: _____ Email: _____

MACHINE INFORMATION

Serial Number: _____ Date of Purchase: _____
Dealer Name: _____
Street: _____
City: _____ State: _____ ZIP Code: _____
Phone: _____ Salesperson: _____



steelgreenmfg.com

(765) 481-2890



@SteelGreenMFG

OPERATORS MANUAL		
PART NO.	REV.	DESCRIPTION
SGOM-002	B	OPERATORS MANUAL, SGXL SERIES TEMP



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