



# Operator's Manual

## Ride-On Ultra SE Spreader Sprayer

DOCUMENT ID: U001T



### MODEL

**Model# ULTRA SE A1A**

**Serial #** \_\_\_\_\_

### FOR TECHNICAL SUPPORT

**Direct all inquiries to:**

**Perma Green Supreme, Inc.  
5609 Murvihill Rd  
Valparaiso, IN 46383-8324  
info@ride-onspreader.com**

**For additional instructions please call 800.346.2001, or your local distributor (below)**

## TABLE OF CONTENTS

<b>Introduction / Warnings.....</b>	<b>2</b>
<b>Getting Started.....</b>	<b>3</b>
<b>Riding Instructions.....</b>	<b>4</b>
<b>Spreader &amp; Sprayer Calibration.....</b>	<b>5-7</b>
<b>Sprayer Overview.....</b>	<b>8</b>
<b>Sprayer Calibration &amp; Mix Chart.....</b>	<b>9</b>
<b>Warranty.....</b>	<b>10</b>

## INTRODUCTION

This manual contains information on how to operate the Ride-On® Ultra Spreader Sprayer safely. Please read it carefully before beginning operation. If a problem should occur, or questions arise, please consult Perma Green Supreme, Inc.

All information in this publication is based on the latest product information available at the time of printing. Perma Green Supreme, Inc. reserves the right to make changes without notice and without obligation.

This manual should be considered a permanent part of the machine. Record the serial number for ordering parts and when making technical or warranty inquiries.

## IMPORTANT!

*BEFORE* attempting to operate the machine, refer to the STARTING INSTRUCTIONS, located on the handle-bars, and the yellow CAUTION label located on the spray tank (and below). Additional instructions are located on page 3 of this manual.

### CAUTION

- Read these instructions and operators manual before operating this machine.
- Clear lawn area of debris and inspect for holes and obstacles before treating.
- Do not remove or disable any guards or safety devices.
- Do not allow operation of machine by children or untrained personnel.
- Do not operate machine close to a drop-off or other hazard.
- Use caution on slopes.
  - Operate in LOW (L) gear.
  - Do not make sudden starts, stops, or turns.
  - Operate machine across the grade beginning at the bottom.
  - Operate machine as a walk-behind on slopes over 15 degrees.
- Wear non-slip safety shoes
- Do not add fuel while engine is running or warm.
- Stop engine and disconnect spark plug before adjusting or servicing.
- Do not run engine in an enclosed area. Exhaust fumes can kill.
- When leaving the operating position, shift transmission into neutral. Turn engine off, and set the parking brake.
- Keep hand, feet, and loose clothing away from moving belts and components.
- Do not shift gears while moving.

### WARNING

**A WARNING MESSAGE ALERTS YOU TO POTENTIAL HAZARDS THAT CAN HURT YOU OR OTHERS. EACH WARNING MESSAGE APPEARS WITHIN YELLOW LIKE THIS.**

## BEFORE BEGINNING

1. Read this manual and familiarize yourself with all the controls.
2. Practice getting on and off the machine and operating the handle release, throttle, gear shift, and brake.
3. Before starting the engine, refer to the Briggs and Stratton owner's manual for proper safety and operating instructions.
4. Always inspect the lawn first. Mark any ridges, ruts, holes, etc. and remove any debris or objects that may interfere with the operation of the Ride-On.
5. Plan your strategy for treating the lawn prior to beginning.

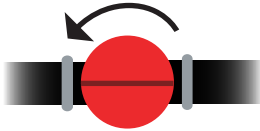
## BEFORE OPERATING

1. Read and understand all the safety instructions prior to attempting to operate the machine.
2. Check for loose hardware and tighten as needed.
3. Grease rear wheel bearings (2)
4. Grease the articulating rod ends (3) between the sulky and spreader.
5. Check for even tire inflation (approx. 12 psi). NOTE: All tires are filled with diluted RV antifreeze for ballast. Dispose of in sanitary sewer or septic tank or according to local regulations.

## START THE MACHINE

1

OPEN



OPEN FUEL SHUT-OFF VALVE  
ON BACK OF ENGINE

2



TURN KILL SWITCH TO 'ON'

3



PUT MACHINE IN NEUTRAL

4

CHOKE ENGINE AS NECESSARY

5



PUSH STARTER BUTTON UNTIL  
ENGINE STARTS, THEN RELEASE

### ⚠ WARNING

PULL STARTER IS FOR EMERGENCY STARTING ONLY AND IS NOT PROTECTED BY A NEUTRAL SAFETY SWITCH. TO AVOID PERSONAL INJURY, VERIFY THAT THE TRANSMISSION IS IN NEUTRAL PRIOR TO PULL STARTING THE ENGINE.

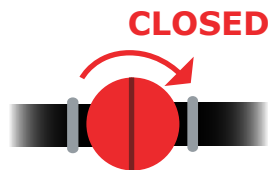
### ⚠ WARNING

TO AVOID SERIOUS BODILY INJURY AND TRANSMISSION DAMAGE, THE MACHINE MUST BE AT A COMPLETE STOP BEFORE SHIFTING FROM REVERSE TO FORWARD OR FROM FORWARD TO REVERSE.

## STOP THE ENGINE



TURN KILL SWITCH TO 'OFF'  
CLOSE FUEL SHUT-OFF VALVE

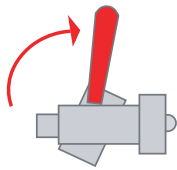


### ⚠ WARNING

TO AVOID FLOODING THE CYLINDER, CLOSE FUEL SHUT-OFF VALVE WHILE TRANSPORTING AND TIPPING THE MACHINE.

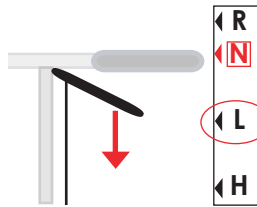
## TO RIDE

1



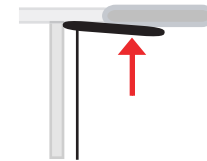
RELEASE PARKING BRAKE

2



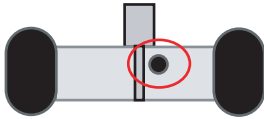
WITH THROTTLE LEVER RELEASED, SHIFT INTO GEAR AND STEP ON SULKY

3



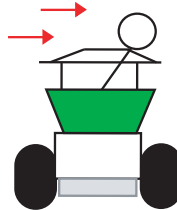
PULL THROTTLE LEVER TO ENGAGE CENTRIFUGAL CLUTCH

4



TO STOP, RELEASE THROTTLE LEVER AND STEP ON BRAKE PEDAL

5



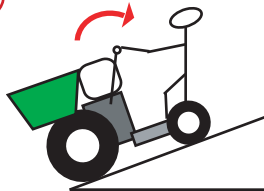
TO TURN, POINT FRONT OF MACHINE IN DIRECTION OF TURN, SIMULTANEOUSLY SHIFT BODY WEIGHT TO THE SAME SIDE

6



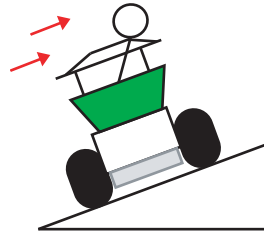
TO CLIMB SLOPE, STOP AND SHIFT INTO LOW (L) GEAR. LEAN FORWARD WHILE CLIMBING

7



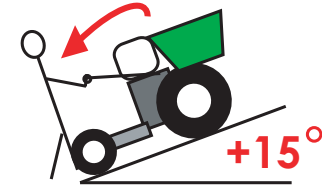
TO DESCEND SLOPE, STOP, SHIFT INTO LOW (L) GEAR. LEAN REARWARD WHILE DESCENDING

8



TO TRAVERSE ACROSS SLOPE, STOP, SHIFT INTO LOW (L) GEAR. LEAN UPHILL WHILE TRAVERSING

9

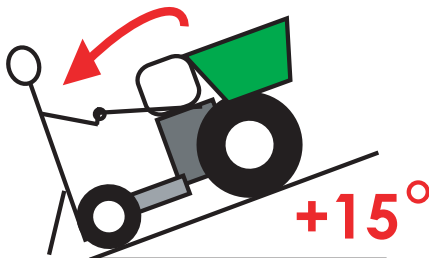


WALK HILLS OVER 15 DEGREES! STOP AND SHIFT INTO LOW (L) GEAR. RELEASE HANDLE, STEP OFF SULKY ALLOWING HANDLE TO LOWER. NOTICE! HANDLE BAR DOES NOT LOCK IN DOWN POSITION!

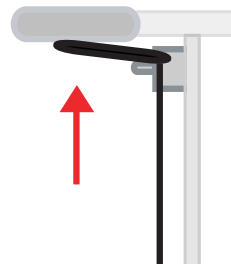
## ⚠ WARNING

**TO AVOID SERIOUS BODILY INJURY AND TRANSMISSION DAMAGE, THE MACHINE MUST BE AT A COMPLETE STOP BEFORE SHIFTTING FROM REVERSE TO FORWARD OR FROM FORWARD TO REVERSE.**

## TO WALK



WALK HILLS OVER 15 DEGREES! STOP AND SHIFT INTO LOW (L) GEAR.



PULLING LEVER ALLOWS HANDLE TO LOWER. NOTICE! BAR DOES NOT LOCK IN DOWN POSITION!



TO RETURN TO RIDING POSITION, STEP UP ONTO SULKY WHILE PUSHING HANDLES FORWARD UNTIL THEY LOCK IN UPRIGHT POSITION.

## HOPPER CALIBRATION

Two things must be considered when calibrating a spreader. The first is the distribution pattern of the spreader. That is, the pattern the product makes as it strikes the ground after being thrown out by the spreader's impeller. There are many factors which affect the distribution pattern of a rotary spreader and some of them relate directly to the product. For this reason, we recommend that the spreader be calibrated separately for every product to be applied. Spreader calibration should be checked at least once a month, or more often when the spreader is used frequently. Furthermore, a daily quick check should be done using the calibration gauge provided (See Fig.5-1).



The second item is the product application rate, that is the amount of product applied per thousand square feet. This is important because over-application can be costly and may cause plant injury, while under-application will reduce the effectiveness of the product.

## CALIBRATE SPREADER DISTRIBUTION PATTERN

**1.** Check the spreader discharge holes with the operating lever in the closed position. If the discharge holes are not fully closed, go down to the lower linkage assembly, loosen both 1/4"-20 nuts on side of coupler. Then remove 1/4" shoulder bolt from back of linkage assembly. Adjust closed position by adjusting hangar bolts. When corrected, reconnect shoulder bolt and tighten nuts.

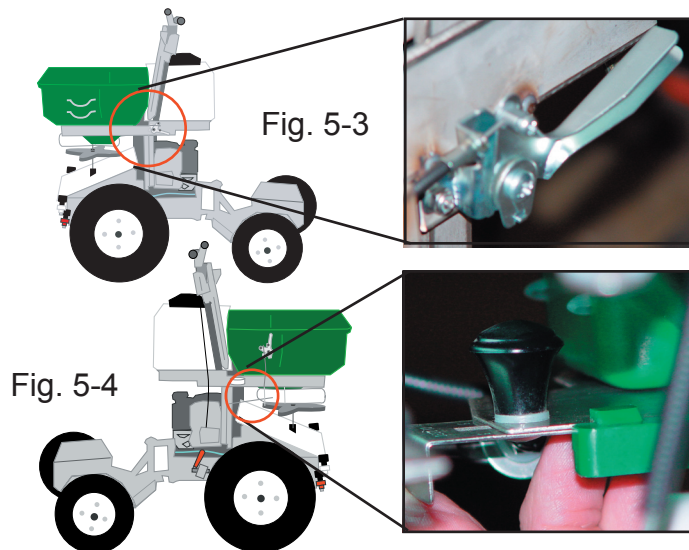
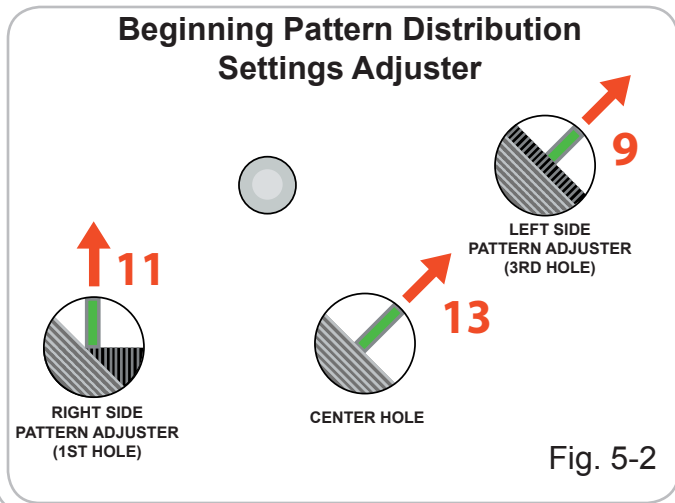
**2.** The accurate method for checking pattern uniformity is to lay out shallow boxes or pans in a row on a line perpendicular to the direction of spreader travel. Eleven pans (included in the optional calibration kit), two inches high, placed on two-foot centers will provide accurate calibration to conduct the test. Insert the #13 step of the provided calibration gauge (See Fig. 5-1) into the Center Hole as shown (See Fig.5-3). Pull the fertilizer lever on the handle back until the slide plate touches the gauge. Lock in the setting by adjusting the rate dial (See Fig. 6-1).

Make several tests, opening, closing, measuring, and adjusting to verify the setting. Next, move the Right side pattern adjusting lever (See Fig. 5-3) to set the opening of the right side pattern adjuster hole to #11. **IMPORTANT!** With a Phillips screwdriver, tighten the Right side patter adjusting lever's pivot screw to lock in the setting (See Fig.5-3). Finally, loosen the black knob on the Left side pattern adjusting plate (See Fig. 5-4) and set the opening of the Left side pattern adjuster hole to #9.

**3.** Make 3 passes over the boxes, driving the spreader in the same direction each time. The product caught in each box is then evaluated to determine the distribution pattern. The simplest method is to use a graduated cylinder (included in optional calibration kit) to measure the material collected in each pan and record the results in a photo copy of the Calibration Log in the Maintenance Manual.

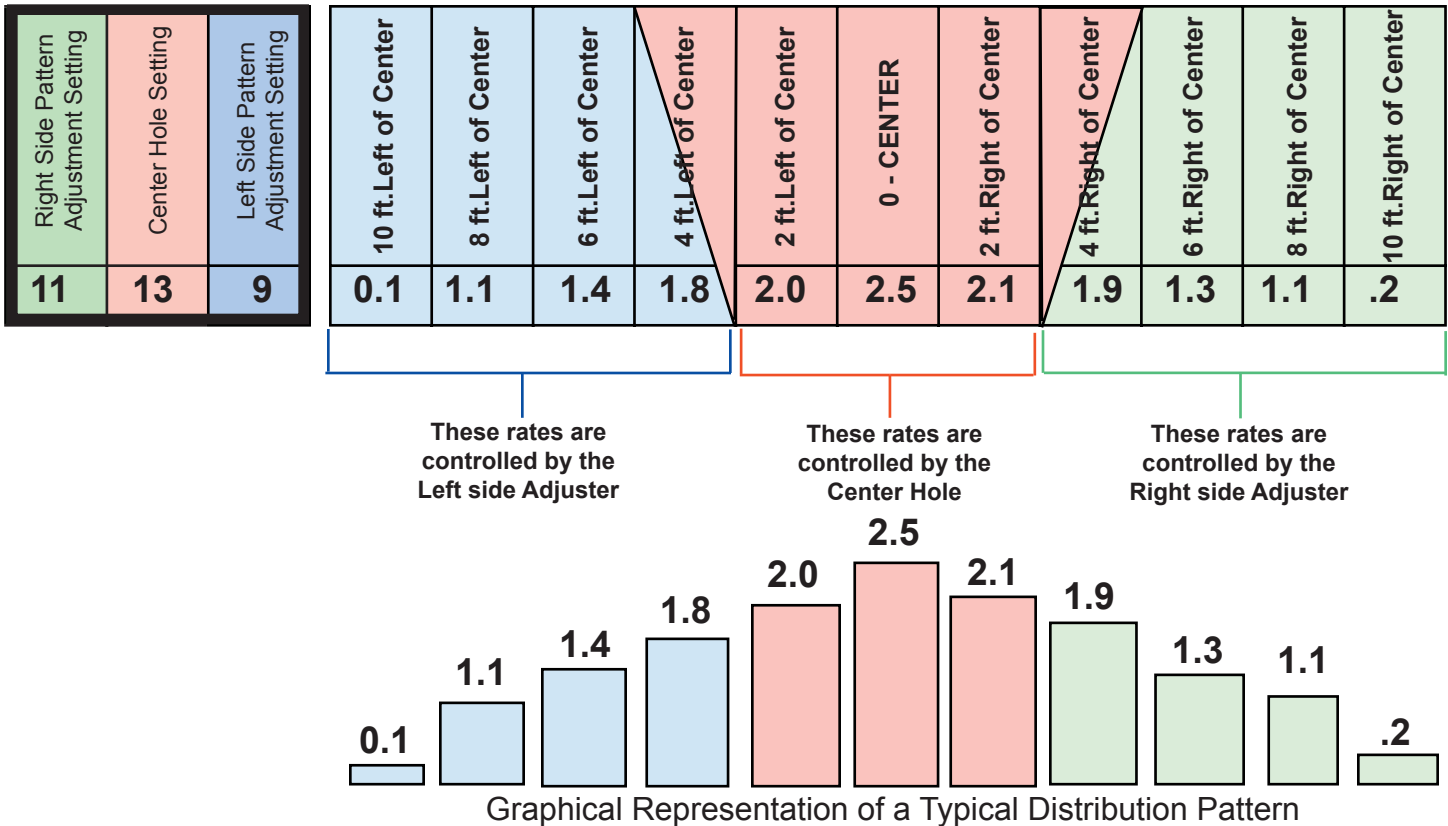
**4.** To reduce the amount of discharge to the right side (operator's right), partially close the Right side pattern adjuster plate, and test until the distribution pattern is uniform.

**5.** To reduce the amount of discharge to the left side (operator's left), partially close the Left side pattern adjuster plate, and test until the distribution patter is uniform.



# CALIBRATION (HOPPER)

A Typical Distribution Pattern May Look Like This



## CALIBRATING THE SPREADER PRODUCT APPLICATION RATE

The Ride-On uses a double overlap spread. For most products, turn every 7 feet so that on the next pass the fertilizer reaches approximately back to the center of your last wheel marks. This method prevents striping the lawn, and allows the 11'- wide spray pattern to overlap at the edges for complete coverage. The fertilizer is applied at one half rate with each pass.

- 1 While in neutral, increase engine speed to maximum. Verify that high RPM's are between 3,500-3,700. Adjust if necessary.
- 2 Mark off a test course of 143 feet. This represents 1000 sq. ft. of turf as you are effectively covering 7 feet with each pass.
- 3 Shift into High (H) gear, and time yourself over the course. Do the test several times to get an average **elapsed time**.
- 4 At 3,600 RPM's, the **elapsed time** should be approximately 20 seconds. In that time you want 1000 sq. ft. of granular product to fall through the hopper.
- 5 Using a postal scale, weigh 1,000 sq.ft. of product and add it to the hopper.
- 6 With the **machine running**, record the time it takes to empty the hopper. **NOTE:** the 1st test is not accurate because some of the fertilizer will be left in the bottom. Start recording with the second test.
- 7 If that time is less than your elapsed time, rotate the spreader rate dial (FIG. 6-1) to a lower number. If that time is longer than the elapsed time, select a higher number. Retest and adjust as needed.
- 8 After rate adjustment is complete, record your 1st, 2nd, and 3rd hole settings as measured with your calibration guage. Repeat the pattern distribution test and adjust if necessary.
- 9 Repeat the entire process for Low (L) gear.

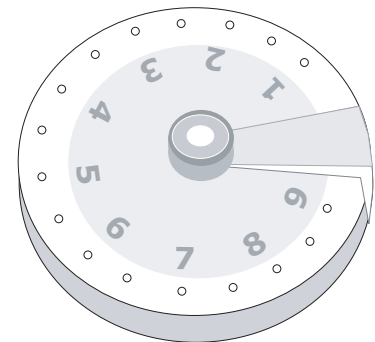


Fig. 6-1



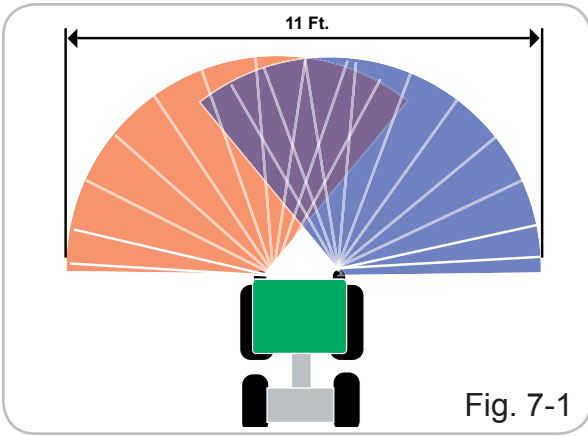


Fig. 7-1

## SPRAYER OVERVIEW

The 8 gallon tank supplies product to the 12 volt pump, which is located under and to the right of the engine. A generator and battery supplies the electricity to the pump. The pump is momentarily turned on with a toggle switch on the left handle to spray and off to stop spraying. A pressure unloader valve on top of the tank automatically maintains a constant 10 psi, therefore a constant flow. The grey pair of nozzles spray 11 feet wide and apply approximately 30 ounces per thousand square feet in High (H) gear. The red pair of nozzles apply the same 30 ounces per thousand in Low (L) gear.

## SPRAYER OPERATION

- 1 Fill tank with water. To spray up to 11 feet wide while in High (H) gear, point the handles of the spray control valves (See Fig.7-2) away from each other. Pull the spray switch toggle switch (See Fig.7-3) toward the hand grip to momentarily spray or push the toggle forward to spray continuously. Both grey nozzles with white caps should be spraying.
- 2 To spray up to 11 ft wide while in Low (L) gear, point the handle of the spray control valves (See Fig.7-2) towards each other.
- 3 To have the spray pattern match the fertilizer spread pattern with the deflector down, turn the handle of the right spray control valve 90 degrees to the off position.

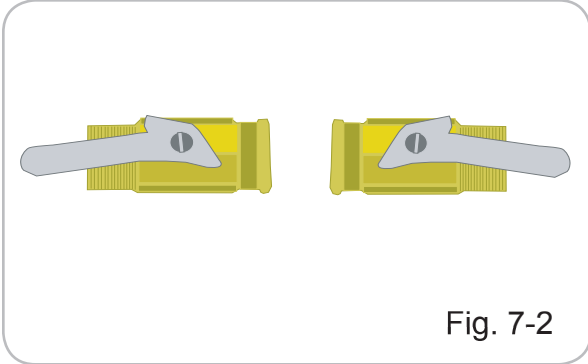


Fig. 7-2

## ADJUSTING THE SPRAY PATTERN

- 1 With a screwdriver, rotate the 2 floodjet nozzles within the nozzle caps (See Fig.7-5) on the black nozzle bodies until the spray pattern is generally forward with a slight angle to the outside, so there is less overlap in the center.
- 2 Rotate the entire nozzle body (See Fig.7-4) upon the pipe nipple until the spray comes out slightly less than parallel to the ground and delivers the spray width desired. (Up to a maximum of 11 feet).

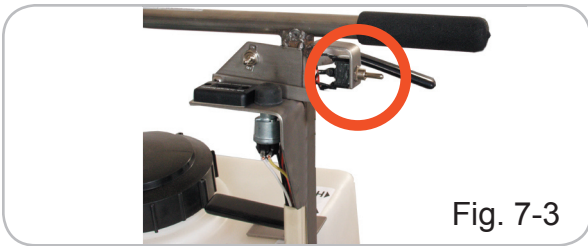


Fig. 7-3

## USING THE SQUEEZE 'N' SPRAY

### Mixing

Fill the bottle with the same material that is in the tank, or add enough chemical to treat 500 sq. ft. and fill the bottle with water (or refill from the Ride-On).

### Application

Apply the contents evenly to 500 sq. ft. of turf.

### To Spray

Invert the bottle and gently squeeze. To spray wider squeeze harder.

### To stop spraying

Stop squeezing and right the bottle.

### To clean the strainer

Remove the cap, and hold the inner fitting with a pair of pliers. Remove the nozzle cap and strainer. Reassemble.

### To Refill

Turn both spray control valves to the off position, switch the pump on, and turn the handle of the drain valve under the tank.

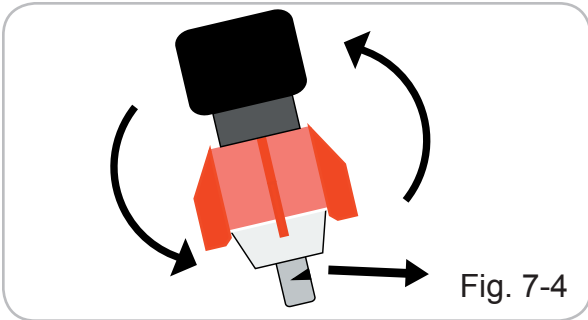


Fig. 7-4

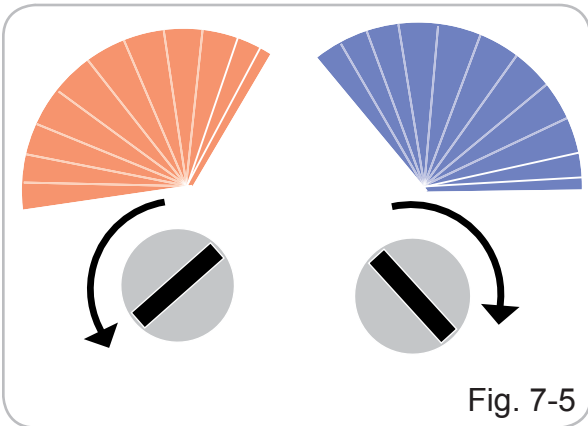


Fig. 7-5



# SPRAYER CALIBRATION

## LIQUID CALIBRATION

- 1 Rev the engine and measure the amount of liquid sprayed through one of the Gray nozzles, for 1 minute. It should be approximately 45 ounces. (Contact the factory if there is a significant variance.)
- 2 Refer to the mix chart below. Locate your "High gear elapsed time" in the left hand column.
- 3 Read across the row till it intersects the column that lists the desired chemical rate from your product label. That number is the amount of chemical necessary to mix 1 gallon of spray.

**It is not necessary to recalibrate when you shift to Low (L) gear. Simply move the valves over to the Low (L) gear nozzles (red).**

Product Label Rate in Ounces per 1,000 Square Feet

	0.5	0.75	0.8	0.9	1	.1	1.2	1.25	1.3	1.4	1.5	Ounces of Product to Mix 1 Gallon of Spray
18	2.37	3.56	3.79	4.27	4.74	5.21	5.69	5.93	6.16	6.64	7.11	
19	2.25	3.37	3.59	4.04	4.49	4.94	5.39	5.61	5.84	6.29	6.74	
20	2.13	3.20	3.41	3.84	4.27	4.69	5.12	5.33	5.55	5.97	6.40	
21	2.03	3.05	3.25	3.66	4.06	4.47	4.88	5.08	5.28	5.69	6.10	
22	1.94	2.91	3.10	3.49	3.88	4.27	4.65	4.85	5.04	5.43	5.82	
23	1.86	2.78	2.97	3.34	3.71	4.08	4.45	4.64	4.82	5.19	5.57	
24	1.78	2.67	2.84	3.20	3.56	3.91	4.27	4.44	4.62	4.98	5.33	
25	1.71	2.56	2.73	3.07	3.41	3.75	4.10	4.27	4.44	4.78	5.12	
26	1.64	2.46	2.63	2.95	3.28	3.61	3.94	4.10	4.27	4.59	4.92	
27	1.58	2.37	2.53	2.84	3.16	3.48	3.79	3.95	4.11	4.42	4.74	
28	1.52	2.29	2.44	2.74	3.05	3.35	3.66	3.81	3.96	4.27	4.57	
29	1.47	2.21	2.35	2.65	2.94	3.24	3.53	3.68	3.83	4.12	4.41	
30	1.42	2.13	2.28	2.56	2.84	3.13	3.41	3.56	3.70	3.98	4.27	
31	1.38	2.06	2.20	2.48	2.75	3.03	3.30	3.44	3.58	3.85	4.13	

# WARRANTY

**Perma-Green Supreme Inc** hereby warrants to the original purchaser that the Ride-On ULTRA manufactured by Perma-Green Supreme Inc. will be free from defects in material and workmanship FOR A PERIOD OF (1) ONE YEAR, OR THE FIRST (500) FIVE HUNDRED OPERATING HOURS,WHICHEVER COMES FIRST, FROM THE DATE OF DELIVERY, EXCEPT AS NOTED BELOW.

## PROTECTION PLAN

The Company will provide the replacement parts found to be defective. Such replacement will be free of charge to the purchaser for (1) one-year, or the first (500) five-hundred operating hours whichever comes first, from the date of delivery.

***This Warranty is subject to the following exceptions and limitations:***

## PURCHASER RESPONSIBILITIES

Timely maintenance, adjustments, and record keeping per the Warranty Maintenance Log and Engine Manuals.

Prior notification of Perma-Green Supreme Inc. of the need for warranty service.

Transportation to and from the place of warranty repair.

Return of a Warranty Claim Form, the parts in question, and copies of Warranty Maintenance Logs within 30 days of warranty repair to Perma-Green Supreme Inc. for examination and warranty approval as described in Warranty Instructions/Policy.

## EXCLUSIONS

No warranty is extended to any equipment, or parts, which have been altered, misused, improperly adjusted, neglected or damaged by accident, disasters, or normal wear and tear.

No warranty is extended on any parts that are not manufactured by Perma-Green Supreme Inc. such as the engine which is covered by the manufacturers warranty.

Perma-Green Supreme, Inc. reserves the right to incorporate any changes in design into its products without obligation to make such changes on products previously manufactured.

## LIMITATION OF REMIDIES

UNDER NO CIRCUMSTANCES, EXEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, SHALL PERMA-GREEN SUPREME, INC. BE LIABLE FOR ANY LOSS OR DAMAGE, DIRECT OR INDIRECT, SPECIAL OR CONSEQUENTIAL ARRISING OUT OF THE USE OF OR INABILITY TO USE THIS EQUIPMENT INCLUDING BUT NOT LIMITED TO ANY CLAIM FOR LOSS OF PROFITS, LOSS OF SAVINGS OR REVINUE, LOSS OF USE OF EQUIPMENT OR ANY ASSOCIATED EQUIPMENT, FACILITIES OR SERVICE, DOWNTIME, THE CLAIMS OR COSTS OF THIRD PARTIES INCLUDING CUSTOMERS, AND INJURY TO PROPERTY. Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the limitations or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have rights which vary from state to state.