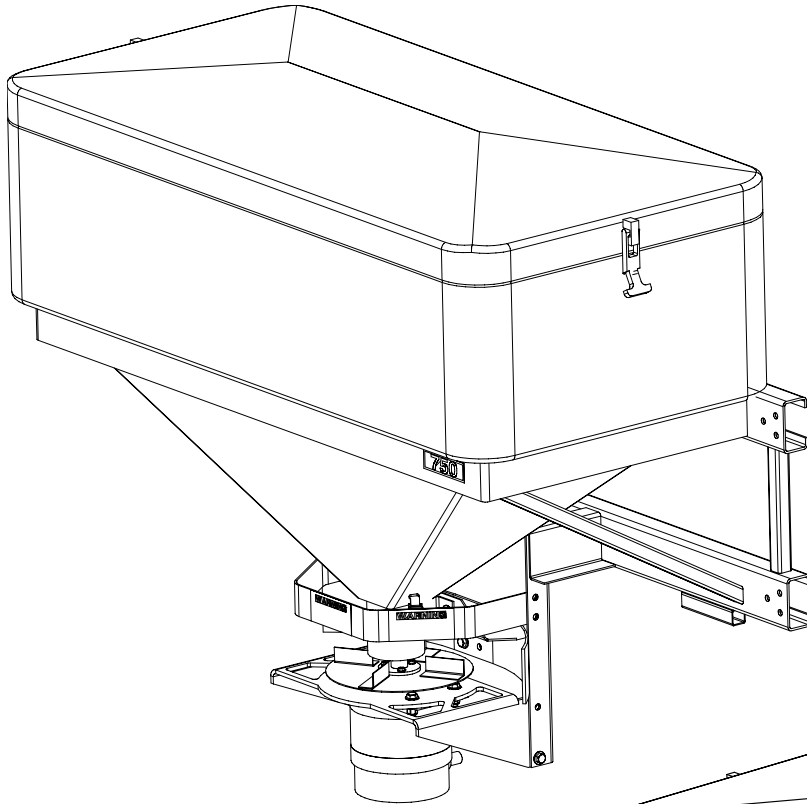
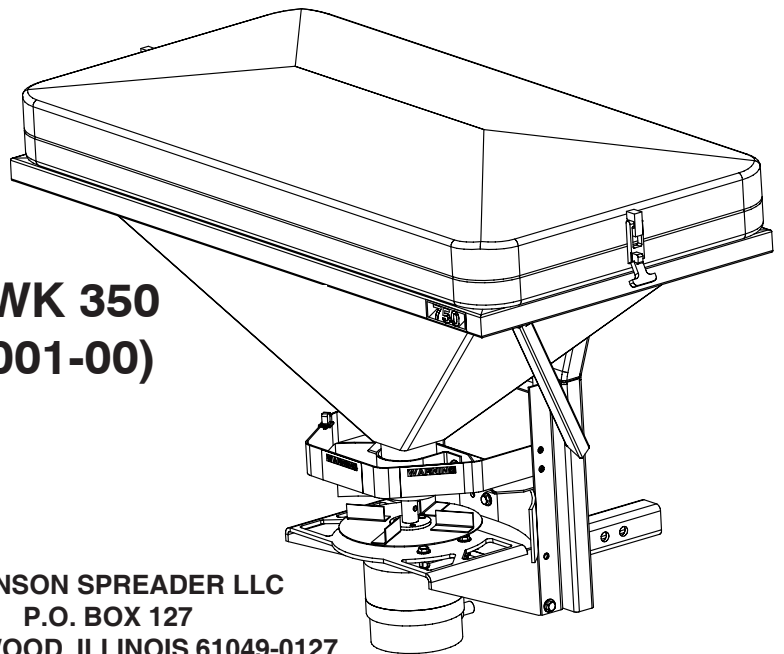


**Installation Instruction and Owners Manual
Tailhawk SALT/SAND SPREADERS
Models: 350 & 750**



**TAILHAWK 750
(00003-002-00)**



**TAILHAWK 350
(00003-001-00)**

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TABLE OF CONTENTS

INTRODUCTION	1
VEHICLE REQUIREMENTS	1
SAFETY GUIDELINES	2
S575P PARTS LIST	3
INSTALLING RECEIVER MOUNT MODEL: 350	4
750 PARTS LIST	5
ELECTRICAL INSTALLATION	6
OPERATING THE SPREADER	7
SPREADER MAINTENANCE	8
TROUBLESHOOTING	8
WARRANTY INFORMATION	9

INTRODUCTION

This manual will assist you in the proper set-up, installation, and use of the Tailhawk series spreaders.

Please read and understand the contents of the manual completely (especially all safety information) before attempting any procedure contained herein.

The Tailhawk line of spreaders may be attached to many types of vehicles to suit different spreading needs.

The modular design allows for multiple mounting variations using the same spreader.

Our heavy-duty construction uses high quality steel, stainless steel or polyethylene along with industrial grade electrostatic paint finishes so that maintenance is minimal.

Our high torque, direct drive motor powered by a state-of-the-art, variable speed, solid state electronic controller will provide reliable power and control when spreading, even at extremely low temperatures.

Swenson Spreader reserves the right to make any changes or improve the design of any parts and not be obligated to make changes on units previously sold.

VEHICLE REQUIREMENTS FOR TAILHAWK SERIES SALT/ SAND SPREADER INSTALLATION

1.) For installation Tailhawk 750 series salt spreaders:

- A.) Due to the size and capacity of these spreaders we recommend installation on full size trucks with a 3/4 Ton rating or higher.
- B.) Stock mountings ("Hinged" or "Fixed") are designed to be used only with full size pick-up trucks which have rear bumpers in good condition (top surface must be straight and relatively level with truck)
- C.) If hinged mounting is desired, the truck's bed rails must also be of good condition and stake pockets free for use.
- D.) If fixed mounting will be used, the tailgate must close and latch solidly

2.) For installation of Tailhawk 350 series salt spreaders:

- A.) This product line can be installed on any vehicle with a class 3 hitch receiver that will accept a 2" square tube and has a tongue weight rating of at least 500 lbs.
- B.) If your vehicle is not factory equipped with a hitch, we recommend taking it to a reputable trailer hitch installation shop or your vehicles dealership.
- C.) Reese and Draw-Tite offer a dual port hitch (DPS) with two round, downward angled receivers. A 5.75 cu. ft. Blaster spreader can be ordered to fit this system.

As with any vehicle accessory, please refer to you owners manual to verify that the GVWR (Gross Vehicular Weight Rating) will not be exceeded, especially if this product will be used in conjunction with other mounted equipment. If equipment is mounted to vehicle with other than stock hardware or components, we the manufacturer cannot and will not be held responsible for damages. Also, check your vehicle owner's manual to be sure that the installation of "after-market" accessories will not void the manufacturers' factory warranty.

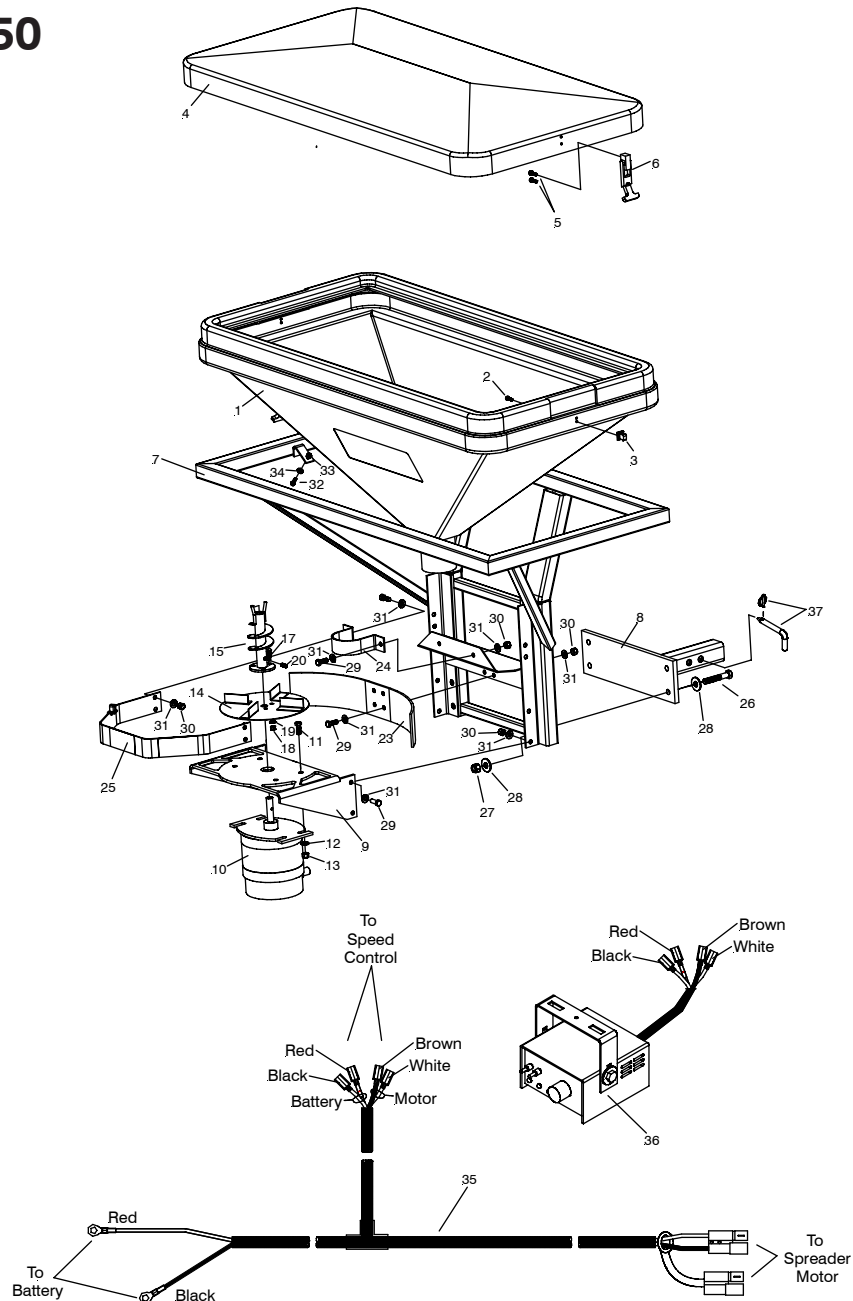
SAFETY GUIDELINES

For your safety when the word **WARNING** is used, this refers to information that if not carefully followed could result in personal injury or death.

The word **CAUTION** refers to a situation that could cause minor injury or damage to equipment.

- WARNING** – Before operating READ and UNDERSTAND this operators manual in its entirety.
- WARNING** – NEVER operate equipment while under the influence of alcohol, drugs, or medications that might impair your judgment and reaction time.
- WARNING** – NEVER allow children to operate equipment.
ALWAYS CHECK AREAS to be spread to be sure no hazardous conditions or substances are present.
ALWAYS INSPECT UNIT FOR DEFECTS: broken, bent, or worn parts, or weakened areas on spreader or mount.
- WARNING** – ALWAYS SHUT OFF vehicle power source before attaching, detaching, or servicing the equipment.
- WARNING** – ALWAYS MAKE SURE PERSONNEL ARE CLEAR of spread pattern when using equipment.
- WARNING** – NEVER EXCEED 45 M.P.H when loaded spreader is attached to vehicle. Braking distances and handling characteristics may be impaired at greater speeds.
- CAUTION** – Never use wet materials or material with foreign debris. This unit is designed to handle clean, dry, free-flowing material.
- CAUTION** - Never leave material in hopper for long periods of time. All ice melt materials will attract atmospheric moisture and may clump together.
- WARNING** – INSPECT pins and bolts whenever attaching, detaching, and before travel. All factory installed bolts utilize lock nuts however road and operational vibrations might loosen them.
- WARNING** – INSPECT unit periodically for defects. Parts that are broken, worn, or missing must be replaced immediately. The unit or any part of it should NOT be altered in any way without prior written permission from the manufacturer.
- WARNING** – When using swing mount, **NEVER** swing spreader with material in hopper!.
- WARNING** – **NEVER** attempt to clear a jammed feed screw with the power on!
- WARNING** – **NEVER** place hands into hopper or around feed screw and spinner when power is on. Also, keep loose clothing and hair away from moving parts!
- CAUTION** – De-icing materials can be damaging to plant life and concrete. Know what you are spreading and where you are spreading it.

Tailhawk 350



Parts List

Item	350 Part No.	Qty.	Description	Item	350 Part No.	Qty.	Description
	00003-001-00		Tailhawk Assembly	23	34401	1	• Deflector
1	32100	1	• Hopper Assembly	24	34402	1	• Hopper Collar
2	22729	2	• Bolt 1/4-20 x 5/8" SS	25	34400	1	• Motor Guard
3	34407	2	• Bolt Latch Hook	26	22736	4	• Bolt 1/2-13 x 3" SS
4	34200	1	• Lid Assembly	27	22732	4	• Locknut 1/2-13 SS
5	22725	4	• Bolt 1/4-20 x 3/4" SS	28	22733	8	• Flatwasher 1/2" SS
6	34408	2	• Rubber Latch	29	22737	18	• Bolt 3/8-16 x 1" SS
7	32200	1	• Frame Assembly	30	22735	18	• Locknut 3/8-16 SS
8	35001	1	• Hitch Weldment	31	22734	35	• Flatwasher 3/8" SS
	34100	1	• Power Weldment Assembly	32	22725	2	• Bolt 1/4-20 x 3/4" SS
9	34101	1	• Motor Mount	33	22727	2	• Locknut 1/4-20 SS
10	34102	1	• Motor	34	22724	2	• Flatwasher 1/4" SS
11	22730	4	• Bolt 3/8-16 x 1-1/4" SS		32218	1	• Carton Accessory Parts
12	22735	4	• Locknut 3/8-16 SS	35	34103	1	• Wire Harness
13	22734	8	• Flatwasher 3/8" SS	36	34403	1	• Controller
	34000	1	• Spinner Auger Assembly	37	22731	1	• Hinge Pin w/Clip
14	34001	1	• Spinner		32216	2	• Tie Down Hook
15	34004	1	• Auger		32217	2	• Ratchet Tie Down Strap
17	22725	3	• Bolt 1/4-20 x 3/4" SS				
18	22727	3	• Locknut 1/4-20 SS				
19	22724	3	• Flatwasher 1/4" SS				
20	22728	1	• Set Screw 5/16" SS				

Parts indented are included in the assembly under which they are indented.

INSTALLING RECEIVER MOUNT MODEL: 350

The Tailhawk 350 is a dedicated, Class 3, receiver (hitch) mount salt spreader. Prior to installation, be certain that the vehicle receiver is in good working order, is rated for at least a 500 lb. tongue load, and is fastened to the vehicle securely.

CAUTION - The spreader is a large heavy item that should be installed with an assistant. As with any new equipment installation read and understand all instructions prior to starting the job, and do not hurry through it. A correct installation now can save time and money later.

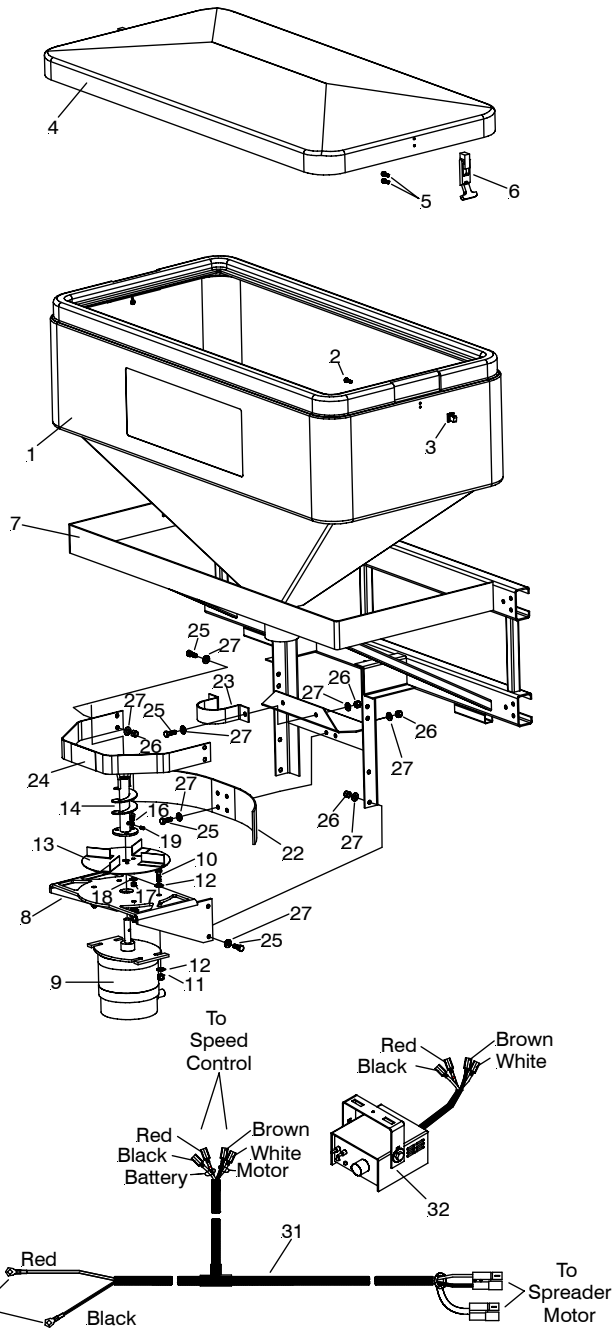
- 1.) Using an assistant remove the spreader unit and all loose components from the packaging and set cover aside until installation is complete. Retain original packaging for storage purposes.
- 2.) Locate the large hitch pin and cotter clip (37) from the hardware package. Set these items aside, as they will be used later during the installation.
- 3.) Inspect the vehicles receiver tube and check for rust, dirt, or foreign debris that may have collected in it. If there are any blockages clean with compressed air and a wire brush.
- 4.) Apply good quality grease to the inside of the receiver tube, this will prevent rusting and make the spreader easier to remove at the end of the season.
- 5.) The framework will have four 1/2-13 x 3" SS Bolts (26) already installed in the mounting holes for the stinger. Remove the 1/2-13 SS Locknuts (27) and 1/2" SS Flatwashers (28) and apply a light oil to the threads, this will make assembly easier; yet will not affect the locking properties of the safety nuts. Place the stinger over the bolts, replace the nuts and washers and fully tighten. (Note: The mounting tube may be placed in either the raised or lowered position by flipping the stinger over. This is owner preference) The DPS version is always installed with a downward angle for the two round stingers.
- 6.) Lift the spreader unit upright (hopper opening facing up) with mounting tube pointed toward the truck.
- 7.) Slowly slide spreader mounting tube into the vehicles receiver until the through holes in receiver match through holes in spreader. (See note below)
- 8.) Insert the large hitch pin through the receiver tube and spreader mounting tube. Secure with the cotter clip.
WARNING – The cotter clip must be in place for safe operation.
- 9.) Place the cover over the hopper and secure clamps on left and right sides.

NOTE: •The spreader mounting tube has 2 pre-punched hole sets to provide some adjustment when installing the unit.
•Always use the hole set that places the unit closest to the vehicle but without touching it.

WARNING – Never attempt to drill new holes in the spreader mounting tube, contact your local trailer hitch supplier about relocating or replacing you current hitch, if mounting problems occur.

- 10.) Use the Ratchet Tie Down Strap and Tie Down Hooks to tie spreader to vehicle frame to eliminate any rocking of the spreader.

Tailhawk 750



Parts List

Item	750 Part No.	Qty.	Description	Item	750 Part No.	Qty.	Description
	00003-002-00		Tailhawk Assembly	22	34401	1	• Deflector
1	33100	1	• Hopper Assembly	23	34402	1	• Hopper Collar
2	22729	2	• Bolt 1/4-20 x 5/8" SS	24	34400	1	• Motor Guard
3	34407	2	• Latch Hook	25	22737	14	• Bolt 3/8-16 x 1" SS
4	34200	1	• Lid Assembly	26	22735	16	• Locknut 3/8-16 SS
5	22725	4	• Bolt 1/4-20 x 3/4" SS	27	22734	28	• Flatwasher 3/8" SS
6	34408	2	• Rubber Latch	28	22725	2	• Bolt 1/4-20 x 3/4" SS
7	33200	1	• Frame Assembly	29	22727	2	• Locknut 1/4-20 SS
8	34100	1	• Power Weldment Assembly	30	22724	2	• Flatwasher 1/4" SS
9	34102	1	• Motor		33218	1	• Carton Accessory Parts
10	22730	4	• Bolt 3/8-16 x 1-1/4" SS	31	34103	1	• Wire Harness
11	22735	4	• Locknut 3/8-16 SS	32	34403	1	• Controller
12	22734	8	• Flawasher 3/8" SS				
13	34000	1	• Spinner Auger Assembly				
14	34001	1	••• Spinner				
16	22725	3	••• Bolt 1/4-20 x 3/4" SS				
17	22727	3	••• Locknut 1/4-20 SS				
18	22724	3	••• Flawasher 1/4" SS				
19	22728	1	••• Set Screw 5/16" SS				

Parts indented are included in the assembly under which they are indented.

ELECTRICAL INSTALLATION FOR ALL TAILHAWK SERIES SPREADERS

- 1.) Locate the wire harness and begin to route it from the rear of the vehicle to the front. The molded rubber plug indicates the rear of the harness, closest to the spreader. Use frame holes and frame supports as lashing points. Do not attach to fuel or brake lines. Avoid wire-runs along exhaust system or hot engine parts. Melting damage to the harness can occur in the proximity of extreme heat.
- 2.) Mount the rubber plug under the rear bumper. Position this plug toward the center of the vehicle.
- 3.) Place the Harness portion that connects to the battery along the firewall and fender well, but do not connect yet.
- 4.) Drill a 1" diameter hole through the firewall. This hole will be used to route the controller portion of the harness into the vehicle. Before drilling always check to see what is on the other side.
- 5.) Push the controller portion of harness through the hole in the firewall that was previously drilled. NOTE: The controller end will have 2 plugs on it, but only 1 plug can pass through the firewall at a time.
- 6.) Move to engine compartment. Connect power leads to battery: RED WIRE (+) positive, BLACK WIRE (-) negative. Coat the connections with dielectric grease to prevent corrosion and build up. Check harness marked 'battery' for voltage by temporarily removing the red tape affixed to it.
- 7.) Connect the wire harness leads to controller leads. The leads are color coded to connect to the controller only 1 way (red to red, black to black, white to white, brown to brown). They will also be labeled with either "BATTERY" or "MOTOR" to correspond with the back of the controller. ANY ATTEMPT TO JOIN THE CONNECTORS IMPROPERLY, FOR EXAMPLE MALE TO MALE, COULD SHORT OUT THE CONTROLLER.
Misconnection resulting in a damaged controller is not covered by warranty.
- 8.) Select a suitable location to mount the controller. After mounting verify that the power switch is in the off position.
- 9.) Coil excess wire and use wire ties to secure it to a safe location.
- 10.) Mate the plug coming from the spreader unit to the plug previously installed under the rear bumper.
- 11.) Make sure that feed screw/spinner area of the spreader is clear of obstructions. Turn power on at the controller and verify that the spreader is operating in all modes. Looking down on the impeller from the rear of the vehicle, determine that the impeller is turning counter-clockwise. Unit may now be operated.

OPERATING THE SPREADER

Before using the spreader read and understand all aspects of this operators manual.

PREPARATION

CAUTION – Sweep area clear of foreign objects or obstacles that could cause personal injury. Keep other persons and animals out of area to be spread.

SPREADER LOADING

Your spreader will come equipped with a cover that will protect your de-icing material from rain or snow; this can be removed simply by detaching the holding clamps on the sides of the hopper.

WARNING – Do not overload vehicle. Below is a chart to calculate weight of materials.

<u>MATERIAL</u>	<u>WEIGHT PER CUBIC FT.</u>
Rock Salt	35-40 lbs.
Coarse Sand	85-90 lbs.

WARNING – NEVER leave materials in hopper for long periods of time as de-icing materials will attract atmospheric moisture and may clump together.

Always replace cover after filling to prevent saturation of material from snow or rain.

OPERATING THE SPREADER

The controller is equipped with: on/off switch, lighted dial, rotary speed control, and a blast switch.

To start spreader, be sure vehicle is running to prevent battery from wearing down, flip the switch from off to on. The spreader will power up to full power for approx. one second then drop to wherever the dial has the speed set at. Spreader switch must be flipped to the off position when vehicle is turned off to prevent the vehicle battery from wearing down.

Adjust the speed of the unit by rotating the dial clockwise for faster and counterclockwise for slower.

The burst switch is a momentary full power override, use this if you require a heavier pass in certain areas.

If there are any problems while operating the spreader refer to the troubleshooting guide on page 8.

SPREADING HINTS

Never exceed 10 M.P.H. when spreading.

For a wider pass, increase spinner speed.

For a heavier pass, drive more slowly.

Never operate spreader around people and calculate spread pattern around vegetation.

SPREADER MAINTENANCE

WARNING – Disconnect power to spreader before servicing.

CAUTION – Do not attempt to service control unit. It is a solid-state electronic device and has no user serviceable parts; any attempt to do so will void warranty.

CAUTION - The electric motor is sealed and should not be taken apart for any reason. Disassembly of the motor will void warranty.

CAUTION – When replacing parts use only Swenson Spreader approved parts or risk voiding warranty.

Use dielectric grease on all electrical connections, before and after each season and whenever the plugs are disconnected. This will ensure long life for the contacts and prevent corrosion.

Wash unit after each use to prevent material build-up and corrosion.

Periodically inspect the motor seal located around the shaft and look for cracks or splits. If seal is damaged or missing contact the manufacturer for a replacement.

At the end of the season thoroughly clean all parts and paint or oil all bare metal surfaces (except for hopper and spinner which are stainless steel and do not require painting). Using a paste wax on the inside of the hopper will help material flow smoothly.
OIL SHAFT AT MOTOR BASE TO PREVENT RUST DURING NON-USE.

TROUBLESHOOTING

If your spreader is not operating properly, take it to your local Swenson Spreader Distributor for maintenance or service. However, that is not always possible, so below on this page you will find a troubleshooting guide, which can assist you in determining the problem.

WARNING – Before performing any service read and understand all safety guidelines stated in this manual.

BEFORE CALLING YOUR DEALER

Be sure all electrical connections are clean and tight.

Be sure vehicle power supply is working properly (battery charged)

Check the hopper for a jammed feed screw.

PROBLEM	POSSIBLE CAUSE	SOLUTION
Motor does not run.	Loose electrical connection.	Check all electrical connections.
Shut Down,	Auger or spinner jammed Jammed auger. Poor electrical connections. Electrical short.	Carefully remove jammed material. Carefully remove jammed material. Clean or replace connectors. Look for bare or loose wires.
Material will not feed.	Controller bad. No material in the hopper. Material is wet. Frozen or coarse material. Auger loose on motor shaft.	Replace controller. Fill hopper. Replace with dry material. Replace material. Tighten setscrew on side if auger. There is a flat machined into the motor shaft, this set screw must tighten onto that flat.



Dealers have the responsibility of calling to the attention of their customers the following warranty prior to acceptance of an order from that customer for any SWENSON® product.

WARRANTY

WHAT THIS WARRANTY COVERS

Swenson Spreader LLC (hereinafter "Swenson") is committed to assuring Customer satisfaction with the Spreader (hereinafter "Product"). Swenson warrants to the original owner (hereinafter "Purchaser") of the Product to be free from defects in material and workmanship for the following term: Swenson warrants ALL PARTS AND ASSEMBLIES to be free from defects in material and workmanship for a period of one year from the date of purchase. Installation of the Product must be in accordance with Swenson's instructions. This warranty extends to the Purchaser and may not be assigned without the prior written approval of Swenson; except a distributor may assign this warranty to the first titled owner of the Product.

If a Product has a defect in material or workmanship covered by the warranty, Swenson will (at our option) either replace or repair said part. Swenson's has sole discretion as to repair of defects covered by this warranty, or replacement of the Product. Swenson's responsibilities as described herein shall not exceed the amount of the purchase of the Product.

WHAT THIS WARRANTY DOES NOT COVER

Swenson's warranty does not extend to Product which have been misused, abused, improperly installed, repaired with non-genuine Swenson parts, improperly cared for, if materials such as lava rock or cinders are used, or for which payment has not been made. The warranty is void if repairs or alterations to the Product are made by unauthorized persons, or the Product serial numbers have been altered or defaced.

All gasoline engines and hydraulic pumps are warranted by their manufacturer and not by Swenson Spreader LLC. Electrical or hydraulic components are not to be disassembled without the express written permission of Swenson Spreader LLC.

THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. THERE IS NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SWENSON'S MAXIMUM OBLIGATION AND LIABILITY UNDER THIS WARRANTY SHALL BE LIMITED TO AN AMOUNT EQUAL TO THE PRESENT PURCHASE PRICE FOR THE SWENSON PRODUCT. SWENSON SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, WHETHER DIRECT OR INDIRECT, INCIDENTAL, CONSEQUENTIAL OR OTHERWISE ARISING OUT OF BREACH OF THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY. Some states do not allow limitations on how long an implied warranty will last or the exclusion or limitation of incidental or consequential damages.

Defective parts returned to Swenson Spreader LLC must be accompanied by the following information:

RGA #	_____
Spreader Model	_____
Serial Number	_____
Date Installed	_____
Where Purchased	_____

Purchaser accepts these terms and warranty limitations unless product is returned within fifteen days for full refund of purchase price.

Effective 4/15/05