



1619 COUNTY K  
CUSTER, WI 54423  
PHONE 715-592-4650 · FAX 715-592-5063  
E-Mail · tip@tipinc.net  
www.tipinc.net



## ***GS-48 PULL-TYPE SPIKER***

**OPERATOR'S INSTRUCTIONS  
AND PARTS MANUAL**

**=T.I.P. Inc.=**  
**GS-48 Greens Spiker/Seeder**

Congratulations on your purchase of the T.I.P. GS-48 Greens Spiker/Seeder! You can rest assured that you have one of the highest quality turf care systems on the market today. With proper care and maintenance, your Spiker/Seeder will provide you with years of reliable service. If you have any questions about the GS-48 Spiker/Seeder, or any of our other turf care products, feel free to call us or drop us a line. We would be delighted to serve you in the future. Thank you for your patronage.

**CONTENTS**

Section	Page
Table of Contents	1
Limited Warranty	2
Safety	3
Set-Up	5
Operation	8
Storage	8
Maintenance	9
*Parts:	
Figure 1	10
Figure 2	11
Figure 3	12
Miscellaneous	13
Warranty Registration Card	14

**=T.I.P. Inc.=**  
**Limited Warranty**

T.I.P. Inc. warrants that the equipment it manufactures will be free from defects in materials and workmanship for a period of one year from delivery date. This warranty is extended to the Original Purchaser only, and is non-transferrable.

Should a defect in materials or workmanship be experienced within the warranty period, T.I.P. Inc. shall, at its discretion, furnish F.O.B Custer, WI, new or remanufactured parts to replace the non-conforming parts. T.I.P. Inc. shall not cover any labor costs incurred by the purchaser to replace said parts.

This warranty is limited to new equipment, parts or accessories that are manufactured by T.I.P. Inc., provided that the equipment is used and maintained according to the instructions in the manual, and the Original Purchaser has completed, signed and returned the enclosed Warranty Registration form to T.I.P. Inc. within 30 days after the delivery of said equipment. This warranty does not apply to damage or deterioration to the equipment resulting from, but not limited to; natural wear and tear, abuse of goods, presence of abrasives, chemical action, improper installation, misuse, vandalism, or acts of God. This warranty does not apply to goods manufactured by others, beyond the warranties stated by the manufacturers for those goods.

The limited warranty expressed hereunder, is exclusive, and T.I.P. Inc. makes no other representations, warranties, or guarantees, neither expressed nor implied, as to merchantability or the fitness of said equipment for any particular use or purpose, or that the equipment or installation of equipment when placed into operation will comply with applicable national, state, and local health and safety laws. T.I.P. Inc. shall not be liable for any consequential or indirect damages including, but not limited to, loss of anticipated profits or production, increase of cost of operation, loss due to spoilage of material, damage caused directly or indirectly to other property or goods, or penalties or fines arising from non-compliance.

# **SAFETY**

## **GS-48 Greens Spiker/Seeder**

### **UNDERSTAND AND FOLLOW SAFETY INFORMATION**

ALL OPERATORS should read and understand all safety information and operating instructions for the Spiker/Seeder, and learn how to use the controls properly. Be aware of safety words such as CAUTION, WARNING and DANGER. These words alert you to important safety information. Do Not let anyone operate without proper instruction.

Make sure that ALL OPERATORS can recognize and understand all safety warning labels on the machine. Keep all safety labels in good condition, and replace those that are missing or damaged. Replacement safety labels are available from your dealer.

### **DURING OPERATION**

Operate the Spiker/Seeder only when all safety guards are in place. Before moving machine, check to make sure that no one is in the immediate vicinity. Keep hands and feet clear of the drum at all times. Never allow anyone to ride machine at any time.

Be aware of pinch points on the machine. Keep away from transport wheels during operation. Wear close fitting clothing and safety gear appropriate for the operating conditions. Be aware that rocks or other debris could fly out from under the machine.

The operation of the machine requires the full attention of the operator. Do not wear radio or other music headphones while operating this machine.

### **HYDRAULICS**

Hydraulic oil is under pressure as great as 2500psi. Escaping oil under pressure can penetrate the skin and cause serious injury. Avoid this hazard by relieving pressure before disconnecting hydraulic lines. Protect hands and body from high pressure oil. Use a piece of cardboard to check for leaks. Replace all worn or cracked hoses before continued operation. If an accident occurs, seek medical attention immediately. Any injected fluid under the skin must be surgically removed in a few hours.

## **ELECTRICAL**

GS-48 models that include a 12 volt hydraulic power unit require an electrical connection to the tow vehicle. Be aware that the hydraulic power unit is a high current draw device. Be sure connections are correct and secure. Contact with exposed electrical wires can result in severe shock and serious injury.

## **SAFE MAINTENANCE**

Never lubricate, service or adjust machine while it is running. Keep hands, feet and clothing from power driven components. Disengage all power from machine before servicing. If machine is still connected to tow vehicle, be sure tow vehicle is turned off and secured against rolling.

Securely support all parts of machine that must be raised for service work. Keep machine in good working order by replacing worn or broken parts. Be sure to remove all excess grease, oil and dirt. Properly dispose of all waste materials.

## **TRANSPORTATION**

The Spiker/Seeder is designed for off road use only, and should not be towed on public roadways. Maximum tow speed for machine is 15mph. If it becomes necessary to tow machine on roadways, do so only on a highway approved trailer.

# **SET-UP**

## **GS-48 Greens Spiker/Seeder**

### **ASSEMBLY**

If your GS-48 Spiker/Seeder came delivered on a pallet, first remove machine and all parts from the pallet. Support the front of the machine and remove the jack from the frame. Align the Draw Bar assembly with the center of the frame and attach with the four U-bolts provided. Fasten the jack to the center of the draw bar assembly. The Spiker/Seeder comes with two optional hitch assemblies; one clevis-type hitch, and one 1-7/8" ball-type hitch. Select the hitch that best fits your application, and attach it to the front of the draw bar with the bolts and lock nuts provided. Select the holes that will place the hitch at the correct height to keep the machine level. (see Leveling Machine)

### **CONNECTION TO TOW VEHICLE**

Connect the Spiker/Seeder to your tow vehicle using either the ball hitch or the clevis hitch provided. Be sure that connection is proper and secure. Be sure to rotate the parking jack to it's horizontal position.

If your Spiker/Seeder will utilize the hydraulics on the tow vehicle, connect the hose ends to the hydraulic ports on the vehicle. The quick connect ends on the hoses may need to be changed to the correct size, depending on the hydraulic system on the vehicle.

### **CAUTION!**

**Make sure that hose ends are completely clean and free of all contaminants before connecting to tow vehicle. Contaminants will cause damage to the hydraulic system.**

If your Spiker/Seeder is equipped with the 12 volt hydraulic power unit, connect the two power leads from the power unit to the battery on the tow vehicle. The power lead marked with red tape goes to the positive side of the battery, and the black to the negative. Be sure that the leads are properly secured so they will not vibrate loose or lose contact during operation.

### **CAUTION!**

**Avoid direct contact with the battery terminals or the un-insulated portion of the leads. Electrical shock could result.**

Unroll the Seeder Box Control Cable and locate the handle on the tow vehicle where it will be accessible to the operator. Clamp or fasten the handle in place. If your Spiker/Seeder has the 12 volt power unit option, locate the remote control pendant within easy access of the operator.

## LEVELING MACHINE

With the Spiker/Seeder attached to tow vehicle, park in a flat, grassy area. Raise the transport wheels until they are off the ground. With the machine resting fully on the spike drum, the frame should be sitting parallel to the ground. If it is not parallel, adjust the height of the hitch assembly by locating it in a different set of holes, raising or lowering it accordingly. When the transport wheels are down and the spike drum is off the ground, the frame will NOT be parallel to the ground. This is normal operation.

## ADJUSTING SEEDER BOX

The seeder box on the Spiker/Seeder must be calibrated before use to ensure proper application rates. Be sure to re-calibrate before each use. Atmospheric conditions can change flow rates of some materials. To calibrate, use the following procedure:

### CAUTION!

**Catching material from the outlets on the seeder box is recommended, so that no material is applied to the soil until calibration is completed. Doing otherwise is at the operator's own risk.**

1. Suspend a calibration pan below the seeder box to catch falling material.
2. Set gauge to proper setting. If the proper setting is unknown, set at an approximate range.
3. Place a sufficient amount of material in the hopper for a practice area.
4. Cover a known area, such as 1000 sq ft.
5. Weigh the contents in the calibration pan.
6. Divide the weight by the known area to determine the rate. If necessary, adjust the gauge up or down and repeat.
7. When proper calibration is achieved, log gauge setting for future reference.

To convert pounds per 1000 sq ft to pounds per acre, multiply your rate by 43.6.

If it is impractical to mark off and cover a known area for calibration, use this alternative method to calibrate:

1. With gauge set and sufficient material in hopper, raise spike drum completely off of the ground using the transport wheels.
2. Turn the spike drum by hand the proper amount of revolutions to dispense test material. 1000 square feet of spiked area equals  $52 \frac{1}{4}$  revolutions of the drum.  $1/100^{\text{th}}$  of an acre equals  $22 \frac{3}{4}$  revolutions of the drum. These numbers assume no overlap in spiked area.
3. Determine the rate of material using the previous procedure. Adjust and repeat if necessary.

After the rate calibration is completed, re-position spread plate at the desired angle by adjusting the chain length on the front corners of the plate.

# **OPERATOR'S INSTRUCTIONS**

## **GS 48 Spiker/Seeder**

Review and follow all safety information before operating the GS 48 Spiker/Seeder. Be sure all Set-Up procedures have been completed.

### **OPERATION**

Verify that electrical or hydraulic connections are made with the tow vehicle and that the hitch pin is secured in place

Fill the seeder box with the appropriate material and make sure cover is secure and metering slide is closed.

After you reach the location where the spiker/seeders is to be used, lower the unit until the wheels are completely off the ground. This should be done while the vehicle is at a standstill. After the drum is completely in contact with the ground, then proceed forward in a straight line only. Turning with the spike drum in contact with the ground can cause turf damage or damage to the spiker/seeders. When you reach the end of the pass, raise spike drum completely off the ground before turning around.

Be aware that the seeder box is driven from the spike drum, so the drum must be turning to operate the seeder box. When starting a pass with the spiker/seeders, be sure to start with enough extra space to allow the seeder box to deliver material to the desired area. Also, be aware that you may need to close the supply of material from the seeder box before you raise the spiker/seeders at the end of a pass.

### **CAUTION**

**Be sure to have the spiker/seeders drum completely raised when transporting machine from one location to another. NEVER have spike drum in contact with gravel or hard clay paths, concrete, asphalt, or any other hard packed surfaces. This will cause damage to the spikes.**

### **STORAGE**

Always store the GS 48 Spiker/Seeder with the transport wheels completely lowered and the drum off of the ground. Use the adjustable jack on the hitch to keep machine level and to aid in moving the machine when not connected to a tow vehicle.

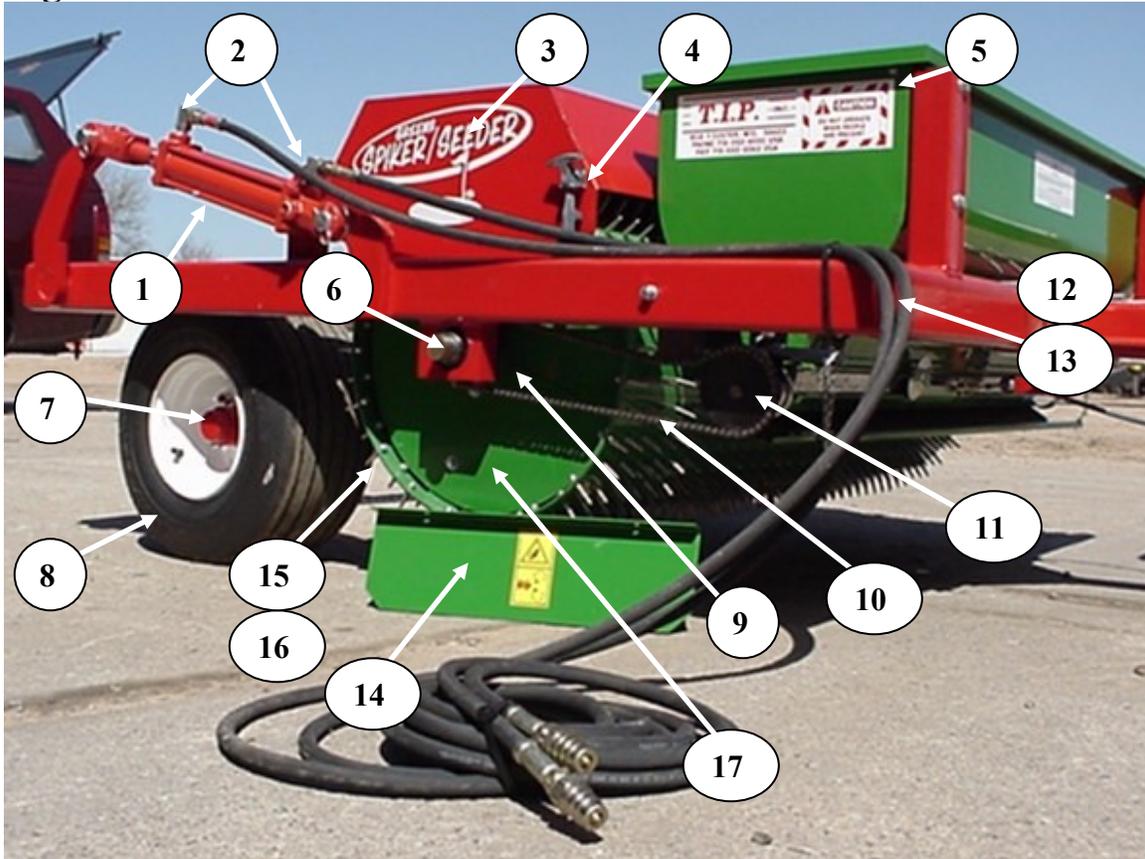
## **MAINTENANCE**

Grease wheel bearings and bearings on spike drum every 50 hours. Check tires for wear or damage Grease pivot points on lift axle before each use. Sand and other contaminants can cause damage if pivot points are not greased. Wipe off excess.

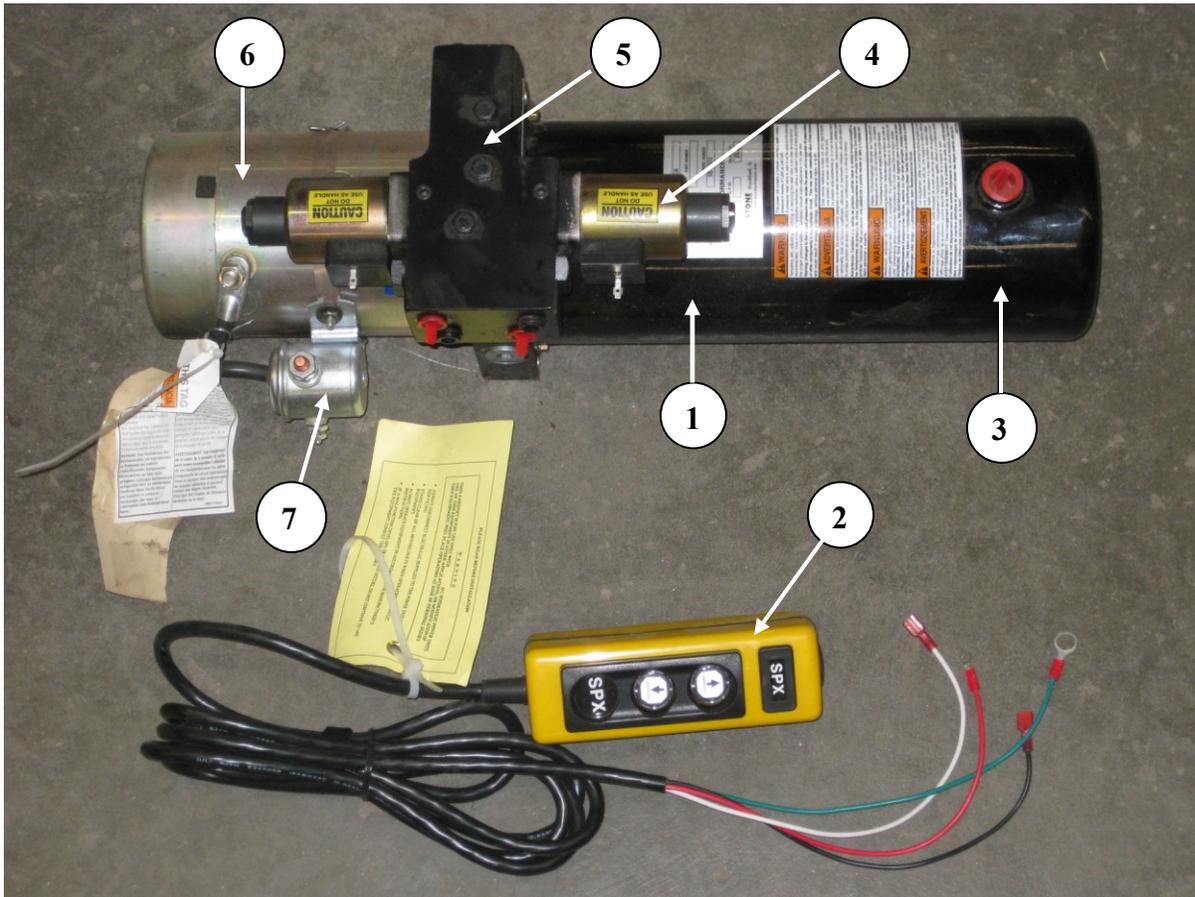
Inspect hydraulic lines every 50 hours for wear or breakage. Check system for signs of leaks. Replace hoses if necessary. If system is equipped with 12v pump kit, check fluid level in the reservoir tank every 25 hours. The tank should be  $\frac{1}{2}$  to  $\frac{2}{3}$  full. Fill if necessary. Use only Hydroclear hydraulic pivot oil or equivalent.

Inspect entire spike drum for loose or broken/missing spikes weekly. Replace if necessary. Check tension on the seeder box drive chain. Lube chain weekly.

Check operation of seeder box control cable weekly. Replace cable if operation becomes difficult.

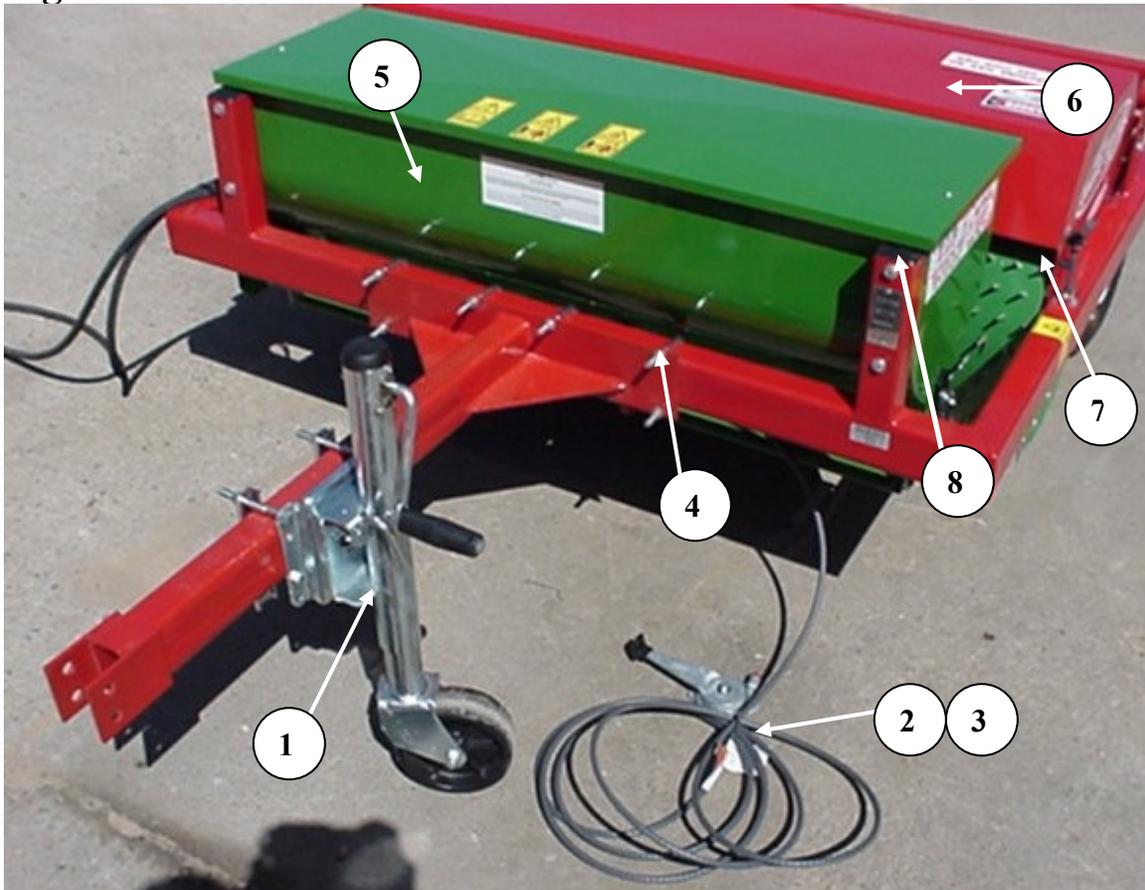
**Figure 1:**

Ref	Part#	Description	Qty
1	BUCYR2008AR-ASA	Wheel Lift Cylinder	1
2	BU60UA-06x06	Swivel Adaptor, Hyd.	2
3	SP101	Greens Spiker/Seeder Decal	2
4	LL013077	Rubber Latch Assy.	2
5	GPDNO	"Do Not Operate" Decal	2
6	IPUC206-20G	Bearing Insert, Greasable	2
7	TP1002	Hub Assembly, 4 Bolt	2
8	BS142-519	Tire/Wheel Assy.	2
9	TO35B32H-1-1/4	Chain Sprocket, Drum	1
10	BUMRC35-100	Roller Chain, Sold Per Inch	43
11	TO35B32H-5/8	Chain Sprocket, Seeder	1
12	MS14X180HOSE	Hose Assy., 180"	1
13	MS14X192HOSE	Hose Assy., 192"	1
14	WSG908	Chain Guard	1
15	FN37016	Nylock Nut for Spike	1208
16	DM116SPIKE	Spike, Stainless 1-1/16" Standard	1208
16a*	DM100SPIKE	Spike, Stainless 3/4" Optional	1208
17	WS-03-05-00-00	End Cap for Spike Drum	4

**Figure 2: GS-48 Hydraulic Power Unit**

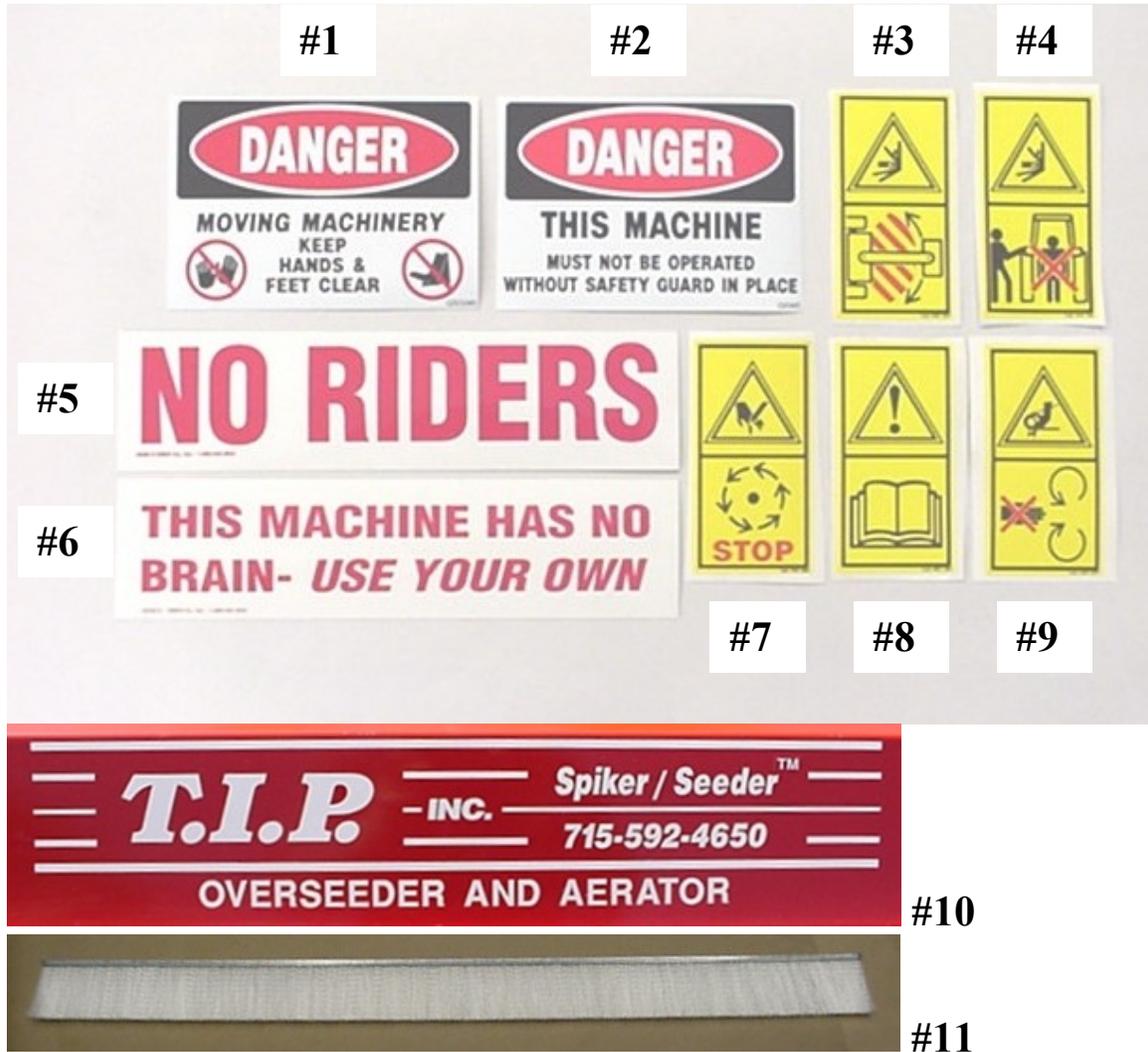
Ref	Part#	Description	Qty
1	FADC60/KR14	12V Hydraulic Power Unit/Pump	1
2	FAKG13	Hydraulic Control Remote w/ Cord	1
3	FAKR14	Tank for DC 60 12 V Power Unit	1
4	FAE1-4005-12	Solenoid Assembly	2
5	FAKDV4	U-Valve	1
6	FAKMD1	DC Motor 12V	1
7	FAKS1	Solenoid Starter Assembly 12V	1

**Figure 3:**



<b>Ref</b>	<b>Part#</b>	<b>Description</b>	<b>Qty</b>
1	GP147391	Jack, 750# Swivel Side Crank	1
2	TEUDL-111-2-196X	Cable, Seeder Box Controller	1
3	TE175-601-204	Clevis and Pin for Cable	1
4	TP1001	U-Bolt, 3/8x3x3	4
5	GA42-A-TIP	Seeder Box Assy.	1
6	WS-03-05-00	Spike Drum Guard Assy.	1
7	IBA-4457	Brush, White Drum Cleaning	1
8	TP100	Plug, Square End Plastic	2

**Miscellaneous:**



Ref#	Part#	Description	Qty
1	QS3245	Decal-Danger, Moving Machinery	1
2	QS145	Decal-Danger, Without Guards In Place	1
3	IM449-287	Decal-Do Not Walk Between...	1
4	IM444-218	Decal-Do Not Stand In Front Of...	1
5	QS66	Decal-No Riders	1
6	QS3013	Decal-This Machine Has No Brain	1
7	IM449-396	Decal-Do Not Place Hands Into Moving...	1
8	IM452-315	Decal-Read Instruction Manual	1
9	IM449-307	Decal-Do Not Place Hand Into Chain...	1
10	GP2081	Decal-T.I.P. Spiker/Seeder Rear Cover	1
11	IBA-4457	48" Brush – White (High Stiffness)	1

**MAIL THIS WARRANTY CARD TODAY**

IF IT IS NOT REGISTERED IN THE HOME OFFICE OF  
T.I.P. INC.

CUSTER, WI 54423

ANY CLAIM YOU HAVE UNDER THE WARRANTY  
WILL NOT BE HONORED....

**DON'T DELAY**

PLEASE COMPLETE THE WARRANTY REGISTRATION  
AND  
RETURN IMMEDIATELY.

CUT HERE

T.I.P. INC.

1619 COUNTY K

CUSTER, WI 54423

PHONE 715-592-4650 • FAX 715-592-5063

**WARRANTY REGISTRATION**

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY/STATE/ZIP CODE: \_\_\_\_\_

DEALER'S NAME: \_\_\_\_\_

DEALERS ADDRESS: \_\_\_\_\_

CITY/STATE/ZIP CODE: \_\_\_\_\_

DATE OF PURCHASE: \_\_\_\_\_

S/N \_\_\_\_\_

MODEL# \_\_\_\_\_

I HAVE READ AND FULLY UNDERSTAND ALL  
SAFETY DIRECTIONS AND AGREE TO TRAIN ALL PERSONNEL  
OPERATING THIS MACHINE.

SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_



1619 County K  
Custer, WI 54423

e-mail [tip@tipinc.net](mailto:tip@tipinc.net) · [www.tipinc.net](http://www.tipinc.net)  
Phone 715-592-4650 · Fax 715-592-5063