T.I.P.

- INC.

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GS-48 3-POINT 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.

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# =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, especially on linkage between machine and tow vehicle. 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.

### **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. 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

### CONNECTION TO TOW VEHICLE

Connect the Spiker/Seeder to your tow vehicle's 2-point arms using two Category 1 pins (not included). Be sure that connection is proper and secure. Attach one end of the 3/8" long link chain (provided) to the top link on the spiker. Attach the other end of the chain to the clevis on the lower tool bar on the spiker. Attach the center of the chain to a location on the tow vehicle. The top length of chain should be adjusted to lift the spiker effectively off the ground when the 2-point hitch is raised.

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.

#### LEVELING MACHINE

With the Spiker/Seeder attached to tow vehicle, park in a flat, grassy area. Lower the Spiker/Seeder until it rests on 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 arms on the tractor, raising or lowering it accordingly.

#### 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.

GS48 3pt

- 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 parking stands.
- 2. Turn the spike drum by hand the proper amount of revolutions to dispense test material. 1000 square feet of spiked area equals 52 ½ revolutions of the drum. 1/100<sup>th</sup> of an acre equals 22 ¾ 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 connections are made with the tow vehicle (where applicable) and that the linkage connections are 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/seeder is to be used, lower the unit until the spike drum is completely on 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/seeder. 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/seeder, 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/seeder at the end of a pass.

#### **CAUTION**

Be sure to have the spiker/seeder 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 parking stands lowered to keep the drum off of the ground. This should be done whether the spiker will remain attached to the tow vehicle or will be stored by itself. Empty remaining material from the seeder box, and clean any residue that may cause corrosion.

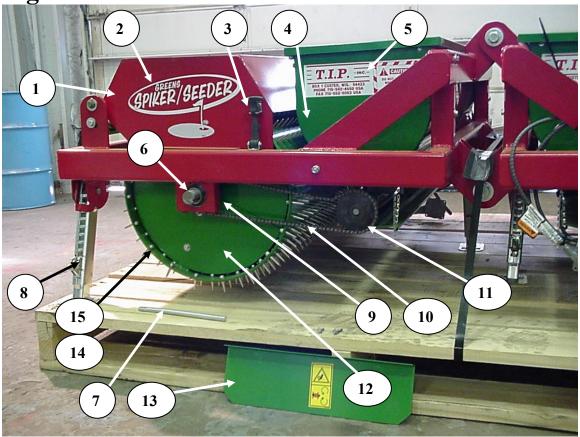
### **MAINTENANCE**

Grease bearings on spike drum every 50 hours.

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.

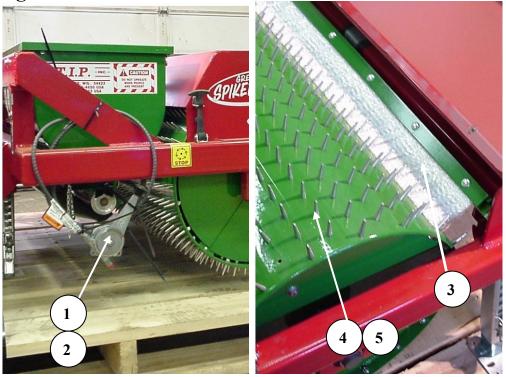
Check operation of seeder box control cable weekly. Replace cable if operation becomes difficult.

Figure 1:



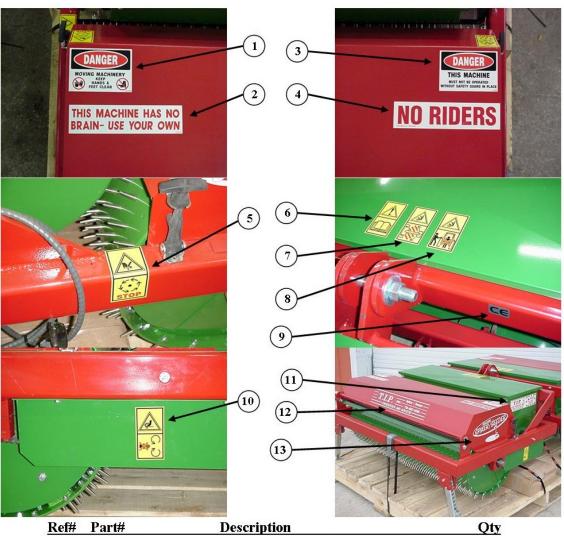
Ref	Part#	Description	Qty
1	WS-03-05-00	Guard for Spike Drum	1
2	SP101	Greens Spiker/Seeder Decal	1
3	LL013077	Rubber Latch Assy.	2
4	GA42-A-TIP	Seeder Box Assy.	1
5	GPDNO	"Do Not Operate" Decal	2
6	IPUC206-20G	Bearing Insert, Greasable	2
7	GW3491-0150	Jack Lever	1
8	GW3491-0142	Quick Set Jack	3
9	TO35B32H-1-1/4	Chain Sprocket, Drum	1
10	BUMRC35-100	Roller Chain, Sold Per Inch	43
11	TO35B32H-5/8	Chain Sprocket, Seeder	1
12	WS-03-05-00-00	End Cap for Spike Drum	4
13	WSG908	Chain Guard	1
14	FN37016	Nylock Nut for Spike	1208
15	DM116SPIKE	Spike, Stainless 1-1/16" Standard	1208
15a*	DM100SPIKE	Spike, Stainless ¾" Optional	1208

Figure 2:



Ref	Part#	Description	Qty
1	TEUDL-111-2-120X	Cable, Seeder Box Controller	1
2	TE175-601-204	Clevis and Pin for Cable	1
3	IBA-4457	Brush, White Drum Cleaning	1
4	DM116SPIKE	Spike, Stainless 1-1/16" Standard	1208
4*	DM100SPIKE	Spike, Stainless <sup>3</sup> / <sub>4</sub> " Optional	1208
5	FN37016	Nylock Nut for Spike	1208

# **GS-48 3 Point Spiker/Seeder Decal Placement and Parts List**



Ref#	Part#	Description	Qt
1	QS3245	Decal-Danger, Moving Machinery	1
2	QS3013	Decal-This Machine Has No Brain	1
3	QS145	Decal-Danger, Without Guards In Place	1
4	QS66	Decal-No Riders	1
5	IM449-396	Decal-Do Not Place Hands Into Moving	1
6	IM452-315	Decal-Read Instruction Manual	1
7	IM449-287	Decal-Do Not Walk Between	1
8	IM444-218	Decal-Do Not Stand In Front Of	1
9	IMCE	Decal-CE	1
10	IM449-307	Decal-Do not Place Hand Into Chain	1
11	GPDNO	Decal-Do Not Operate Without Guards	2
12	GP2081	Decal-T.I.P. Spiker/Seeder Rear Cover	1
13	SP101	Decal-Spiker/Seeder Side Cover	2

# 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 WARRANY REGISTRATION AND RETURN IMMEDIATELY.

CUT HERE

T.I.P. INC. 1619 COUNTY K CUSTER, WI 54423 PHONE 715-592-4650 • FAX 715-592-5063

### WARRANY REGISTRATION

AME:
DDRESS:
CITY/STATE/ZIP CODE:
DEALER'S NAME:
DEALERS ADDRESS:
CITY/STATE/ZIP CODE:
ATE OF PURCHASE:
/N
IODEL#
I HAVE READ AND FULLY UNDERSTAND ALL
SAFETY DIRECTIONS AND AGREE TO TRAIN ALL PERSONNEL
OPERATING THIS MACHINE.
IGNATURE:
ATE:



1619 County K Custer, WI 54423

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