



Power Rake Attachment

Model 290-263-081 / OEM-290-263

THANK YOU!

Thank you for ordering this attachment for your Tiller/Cultivator. We know that it will perform to your complete satisfaction if installed and used properly. Refer to the information below that applies to the attachment you ordered and check the parts shipped to you. If you have any questions concerning the use of your POWER RAKE, be sure to contact us for assistance.

Introduction

Please check the contents of the shipping carton against the Parts List below. If any parts are missing or damaged, be sure to contact your TROY-BILT Dealer or the Factory.

To help ensure proper installation and safe operation of this attachment, read and carefully follow these instructions.

Parts List - see Figure 1

Ref. #	Part #	Description	Qty.
1	—	Rake Assembly – left side.....	1
2	—	Rake Assembly – right side	1
3	1915063	Debris Shield	1
4	GW-H214187	Mounting Strap.....	1
5	GW-H214186	"S" Hook.....	2
6	1983648	1-1/4"long Spacer.....	2

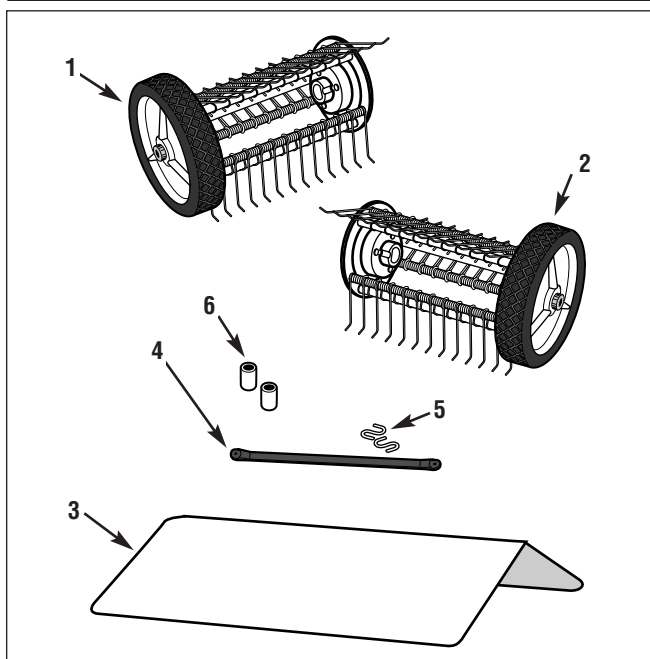
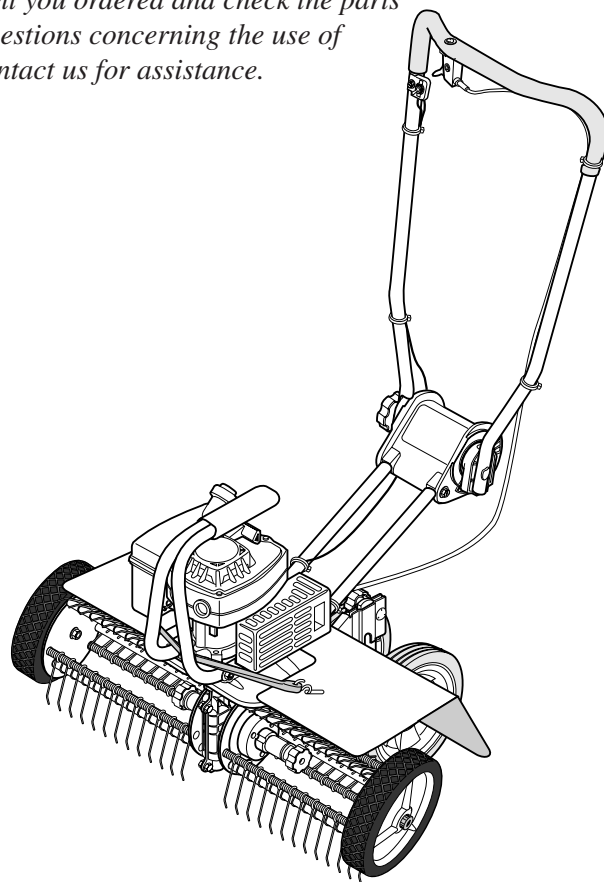


Figure 1

Tools/Supplies Needed for Installation

- No tools are required.
- Fine-grade sandpaper (to remove rust from tine shaft).
- General purpose oil (to lubricate tine shaft).



Safety

Before installing or using this attachment, carefully review the "Safety Rules" and "Operation" instructions in your Tiller/Cultivator Owner/Operator Manual. Doing so will refresh your memory concerning safe operating practices that must be followed at all times.



CAUTION

TO AVOID INJURY:

- Read the Owner/Operator Manual.
- Know the location and function of all controls.
- Keep all safety devices and shields in place.
- Never allow children or uninstructed adults to operate the machine.
- Shut off engine and disconnect spark plug wire before unclogging tines or making repairs.
- Keep bystanders away from machine.
- Keep away from rotating parts.



CAUTION

TO AVOID INJURY:

- Before installing or removing the attachment, shut the engine off, allow it to cool, disconnect the spark plug wire and prevent it from touching the spark plug.
- The tines may have sharp edges— wear heavy work gloves when handling the tines.

Installation Instructions

NOTE: References to LEFT and RIGHT sides are from the operator's position standing behind the handlebar.

- Shut the engine off, allow it to cool, then disconnect the spark plug wire and prevent it from touching the spark plug.
- Place the machine on a hard, level surface.
- Tilt the machine forward until it rests on the two carrying handle tubes at the front of the engine.
- Remove and save the two knobs, two flat washers and two external teeth lockwashers that secure the left-side and right-side tine sections to the tine shafts.
- Remove and save the four tines. For easier reinstallation, keep the left-side and right-side tine sections separated from each other and mark them LEFT and RIGHT.
- Clean the tine shafts and then remove any rust or burrs using a fine-grade sandpaper. Apply a thin coating of general purpose oil to the tine shafts.
- The rake assemblies are labeled LEFT and RIGHT. Find the LEFT rake assembly and slide it over the left-side tine shaft. Position the rake assembly flush against the transmission housing.
- Return machine to its normal, upright operating position.
- Slide a 1-1/4" long spacer (A, Figure 2) over the tine shaft.
- Reinstall flat washer (B), external tooth lockwasher (J) and knob (C) removed previously. Tighten the knob securely.
- Repeat this procedure for the RIGHT rake assembly.
- Loosen the wheel bracket knob (D, Figure 3) and remove the wheel/axle assembly from the bracket by sliding the assembly downward.
- Install the two "S" hooks (E, Figure 4) on the ends of the mounting strap (F).
- From the rear of the machine, slide the metal debris shield (G, Figure 5) over the top of the plastic tine shield.
- Insert the "S" hook on one end of the mounting strap into one of the slots in the debris shield (H, Figure 5). Stretch the mounting strap between the front of the engine and the carrying handle tubes and attach the other "S" hook into the remaining slot (I) in the debris shield.
- Reinstall the wheel/axle assembly (Figure 3) and securely tighten the wheel bracket knob (D).

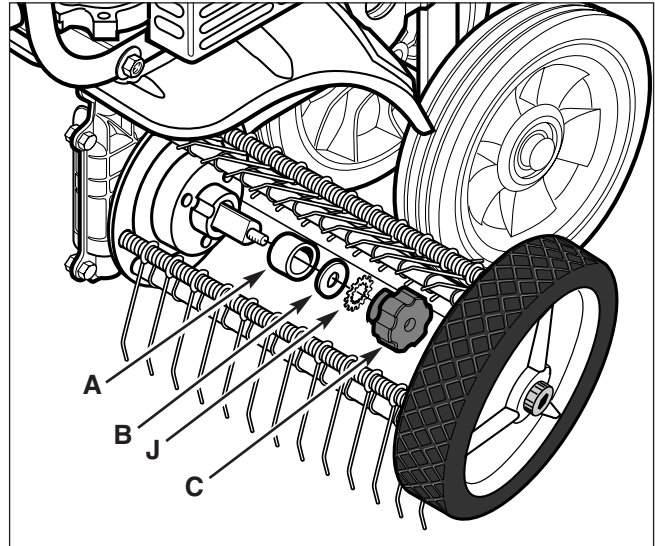


Figure 2

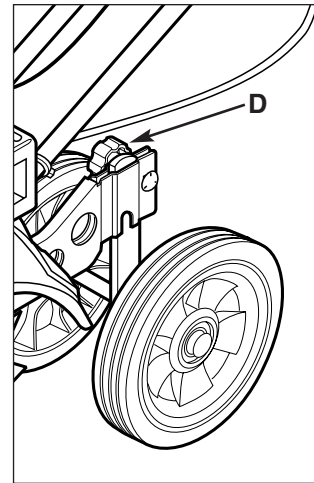


Figure 3

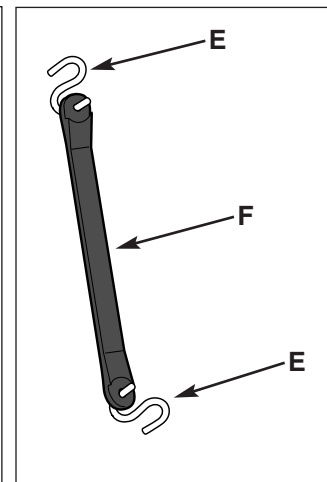


Figure 4

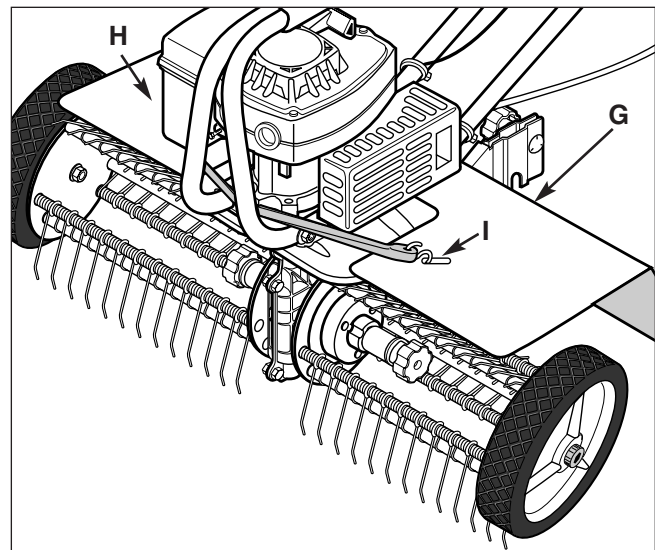


Figure 5



CAUTION

TO AVOID INJURY:

- Do not operate machine when you are barefoot or wearing sandals, sneakers, or similar lightweight footwear. Wear footwear that will protect your feet and improve footing on all surfaces.
- Do not carry the machine when the engine is running. Always stop the engine before transporting the machine.
- Do not operate the Power Rake without the debris shield installed and properly secured with its mounting strap.
- Stop engine, allow it to cool, and disconnect the spark plug wire before untangling the tines or performing any repairs or maintenance.

Operation Tips

- Thatch is a slowly decomposing layer of organic material that develops on top of the soil, beneath the visible layer of grass. A heavy layer of thatch can prevent the movement of water, air and fertilizers to the lawn's shallow root system. It can also increase the susceptibility of grass to disease. The Power Rake attachment will loosen some of the matted grass and other lawn debris—it can then be easily collected for disposal.
- For best results:
 - To help prevent bending or binding of the spring tines, inspect the area before using the Power Rake and remove any sticks, stones or other debris.
 - Mow the lawn before using the Power Rake.
 - The soil should be somewhat moist, but not wet.
- The penetrating depth of the spring tines is determined by a number of factors, including soil conditions, the wheel bracket height setting, the ground travel speed, the engine speed, and the amount of pressure applied to the handlebar. Be patient while learning to use your Power Rake attachment – you may have to experiment a little to find that “just right” combination for your particular lawn.

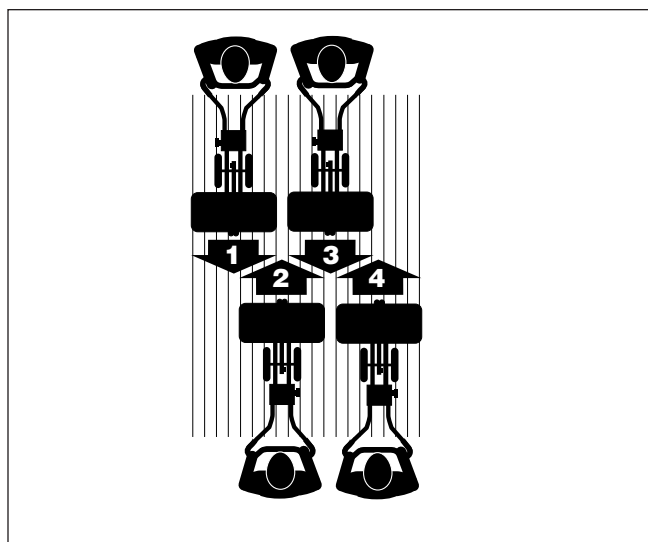


Figure 6

Operation

- Move the machine outdoors and start the engine (see the “OPERATION” section in your Tiller/Cultivator Owner’s Manual for specific starting instructions).

IMPORTANT: Use slower engine speeds and a shallower raking depth when first learning to use the Power Rake attachment.

- The penetrating depth of the spring tines is primarily controlled by the amount of upward or downward pressure applied to the handlebar. Upward pressure will result in a deeper tine penetration; downward pressure will result in a more shallow tine penetration.

NOTE: The height setting of the wheel bracket also helps to determine tine penetration depth. Adjust the wheel bracket up or down as necessary.

- Hold the handlebar firmly with both hands, press down on the handlebar to raise the rake tines off the ground, and squeeze the engine throttle lever. When the rake tines begin turning, **slowly** lift up on the handlebar until the spinning tines contact the lawn.

IMPORTANT: Do not pull the machine backward while using the Power Rake attachment.

- For more thorough thatch removal, let the machine move forward slowly. For lighter thatch removal, let the machine move forward more quickly. In areas containing very heavy thatch build-up, momentarily hold the machine in that area.
- For uniform results, make side-by-side passes lengthwise across the lawn, overlaying each pass by approximately one-half the width of the machine (see Figure 6). For more thorough thatch removal, make a second series of passes at a right angle to the first series of passes (Figure 7).
- When you have finished, collect the thatch and other grass residue for disposal.

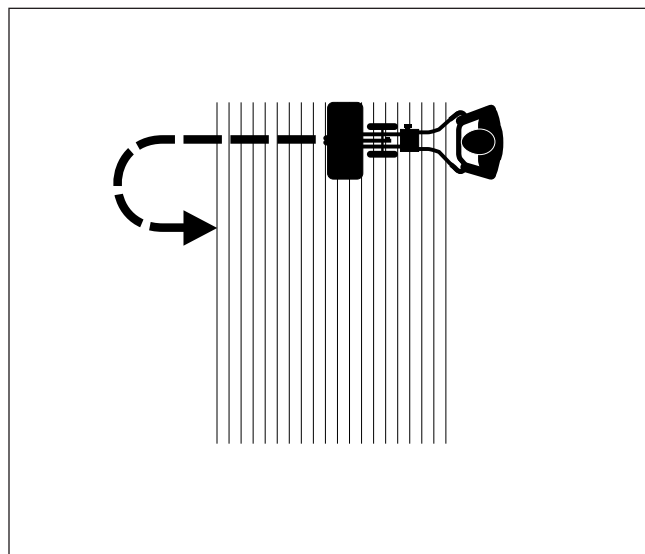


Figure 7



CAUTION

Stop engine, allow it to cool, then disconnect spark plug wire and move it away from spark plug before performing any repairs or maintenance.

How to Replace Individual Spring Tines

Use the following steps to replace spring tines that are broken or excessively bent. Refer to pages 6 and 7 for part number information.

Tools Needed: (One) 1/4" Hex Key (Allen) Wrench;
(One) 1/2" Box End Wrench; (One) 9/16" Box End Wrench.

- Shut the engine off, allow it to cool, and disconnect the spark plug wire and prevent it from touching the spark plug.
- Remove the rake assembly from the machine.
- Use a 1/4" hex key (Allen) wrench and 9/16" box end wrench to remove the bolt, lockwasher and nut that secure the wheel to the rake assembly. See Photo 8. Remove the wheel.
- Use a 1/2" boxed end wrench to remove the four bolts (two on each side) that hold the spring tine attachment bar and the spring tine retainer bar to the circular end caps. See Photo 9. If the bolts are difficult to remove, insert a piece of wood through the rake assembly to prevent it from turning as you loosen the bolts.

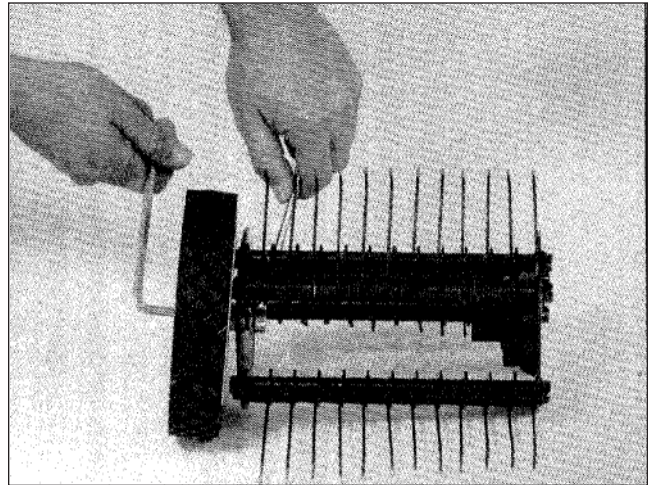


Photo 8

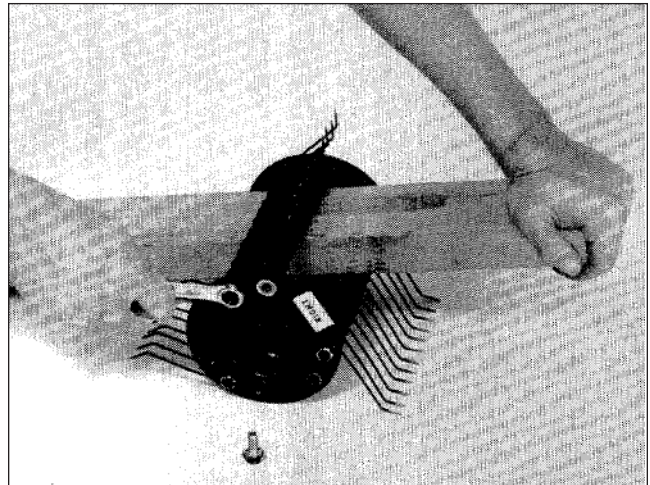


Photo 9

- Slowly and carefully pull the attachment bar and the retaining bar from the rake assembly. See Photo 10.

NOTE: Before removing the spring tines in the next step, it is recommended that you temporarily leave one or two old spring tines on the bars for reference. This lets you see how the new spring tines should be installed. After installing the new spring tines, you can then replace (if necessary) the old spring tines.

- Slide the spring tines and washers off the bars until you get to the damaged spring tine(s).
- Install the spring tines and washers on the spring tine attachment bar. Hook the U-shaped ends of the spring tines over the spring tine retaining bar. See Photo 11.

NOTE: The eleven washers are installed on the spring tine attachment bar between the spring tines. No washers are used between the outer spring tines and the circular end caps.

- Insert the tine assembly between the two circular end caps (see Photo 10) and align the bolt holes in the bars with the holes in the circular end caps. Loosely install the four mounting bolts. Then securely tighten the four bolts.
- Insert the wheel bolt through the wheel and install the wheel on the rake assembly. Add the lockwasher and nut and securely tighten the hardware.

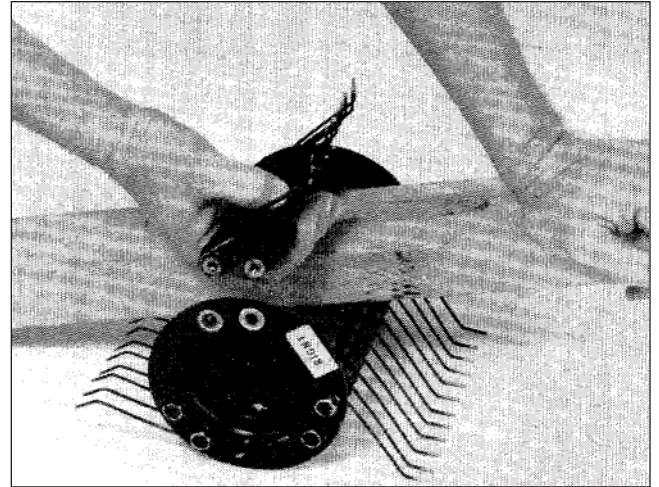


Photo 10

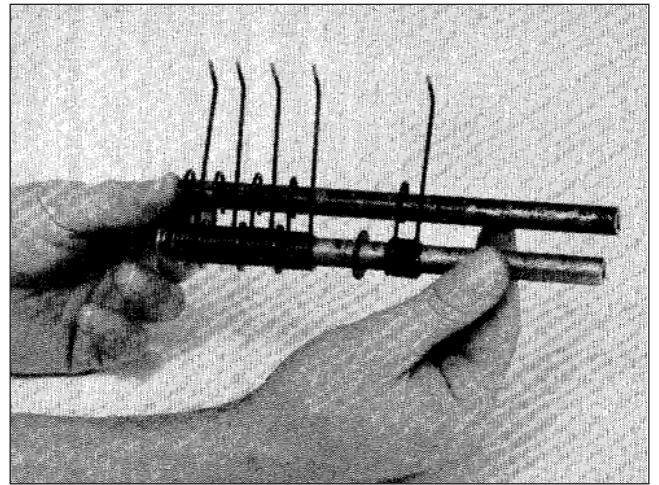
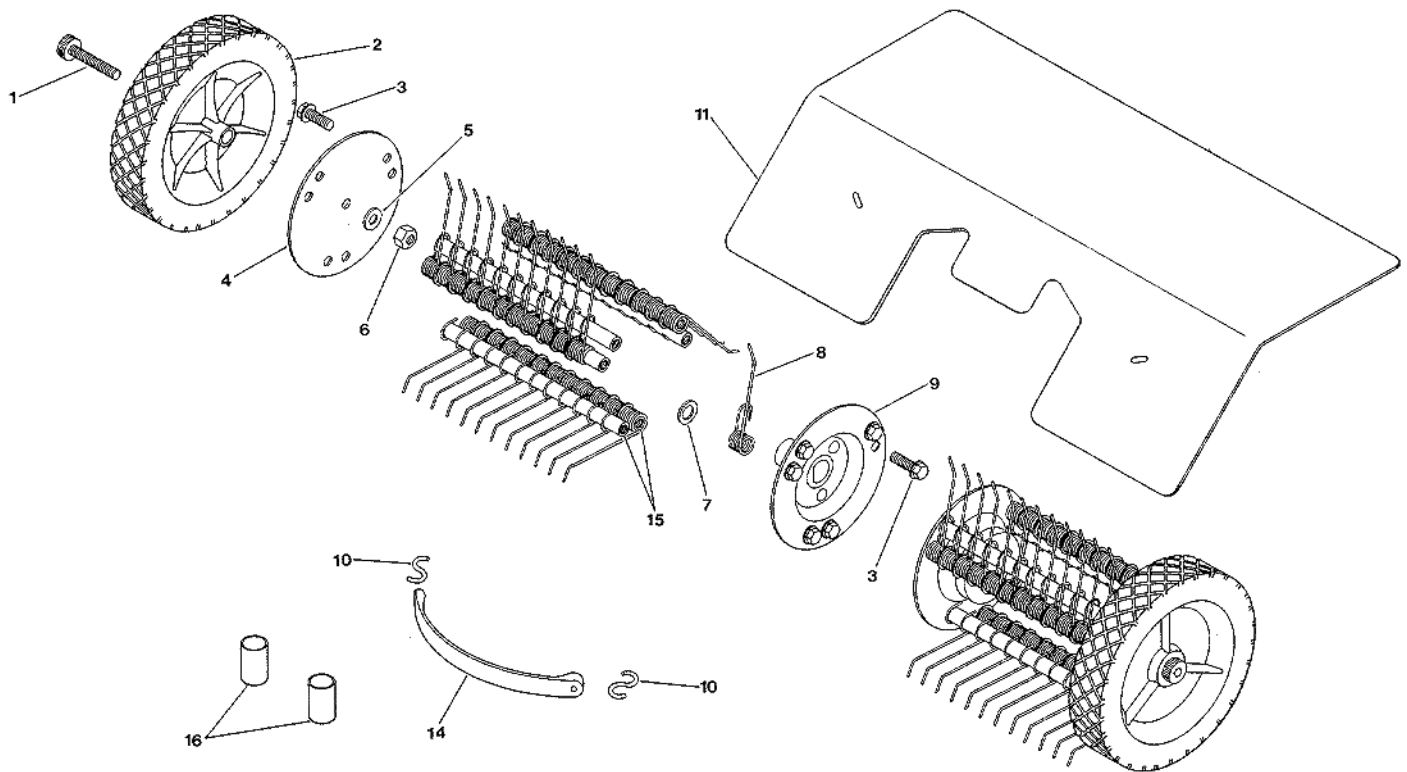


Photo 11

POWER RAKE ATTACHMENT

REPAIR PARTS



POWER RAKE ATTACHMENT**REPAIR PARTS**

IMPORTANT: SEE THE REPAIR PARTS PAGES IN YOUR TILLER/CULTIVATOR OWNER/OPERATOR MANUAL FOR PARTS ORDERING INFORMATION.

REF No.	PART No.	DESCRIPTION	QTY.	REF No.	PART No.	DESCRIPTION	QTY.
1	GW-H213909	Bolt, Socket Hd., 3/8-16 x 1-1/2..	2	9	GW-H213908	End Cap – inner.....	2
2	GW-H213911	Wheel/Tire Assembly.....	2	10	GW-H214186	“S” Hook	2
3	GW-H213910	Whiz Bolt, 5/16-18 x 3/4	24	11	1915063	Debris Shield.....	1
4	GW-H213907	End Cap – outer	2	—	1983094	Decal – Caution	1
5	736-0169	Lockwasher, 3/8.....	2	—	1983095	Decal – Warning.....	1
6	712-3017	Hex Nut, 3/8-16.....	2	14	GW-H214187	Strap, Debris Shield	1
7	GW-H200830	Washer, Flat, 1/2.....	66	15	GW-H213904	Bar, tine retaining/tine attachment	12
8	GW-H213906S	Tine Kit (contains 5 spring tines)	—	18	1983648	Spacer.....	2

For Discount Troy Bilt Parts Call 606-678-9623 or 606-561-4983

For customer assistance, visit www.troybilt.com, contact your nearest authorized dealer or:

TROY-BILT LLC, P.O. BOX 361131, CLEVELAND, OHIO 44136-0019, 1-866-840-6483

Printed in U.S.A.

Form 769-00070 (01/02)

www.mymowerparts.com