



Dozer/Snow Blade Attachment

Model 290-259-081 / OEM-290-259

INTRODUCTION

Thank you for buying the Horse Tiller Dozer/Snow Blade. This blade is a versatile tool that helps to make your tiller an "all-season" machine. To ensure safe and proper installation of the blade, please read and carefully follow all instructions.

UNPACK AND CHECK PARTS

Check the contents of the shipping carton against the Parts List below.

ASSEMBLY STEPS

NOTE: Your unit must have the Bumper/Guard attachment (OEM-290-255/290-255-081) installed before installing the Dozer/Snow Blade. Refer to the separate Bumper/Guard Attachment kit for installation instructions.

WARNING

To prevent personal injury or property damage, do not start the engine until all assembly steps are complete and you have read and understand the safety and operating instructions in this Instruction and in the tiller Owner's Manual.

Ref.	Part No.	Description	Qty.
1	GW-1157	Dozer/Snow Blade.....	1
2	1909773	Swivel Bracket, (A-Frame)	1
3	736-0921	Lockwasher, 1/2".....	1
4	710-3181	Hex Head Bolt, 1/2--13 x 1-1/2,	1
5	1909774	Blade Mounting Brack.....	1
6	712-0267	Hex Head Nut, 5/16-18	5
7	736-0119	Lockwasher, 5/16	5
8	736-0275	Washer, Plain, 5/16.....	2

Ref.	Part No.	Description	Qty.
9	1100779	Hex Head Screw, 5/16-18 x 1-3/4.....	4
10	1186233	Hex Nut, 1/2".....	1
11	GW-1416	Bushing	1
12	1100257	Flat Washer, 1/2".....	1
13	710-0874	Hex Head Screw, 5/16-18 x 1-1/4.....	1
14	1100057	Hex Head Screw, 1/2-13 x 3	1
15	712-0384	Hex Locknut, 1/2 x 13.....	1
16	GW-1158	Index Pin.....	1

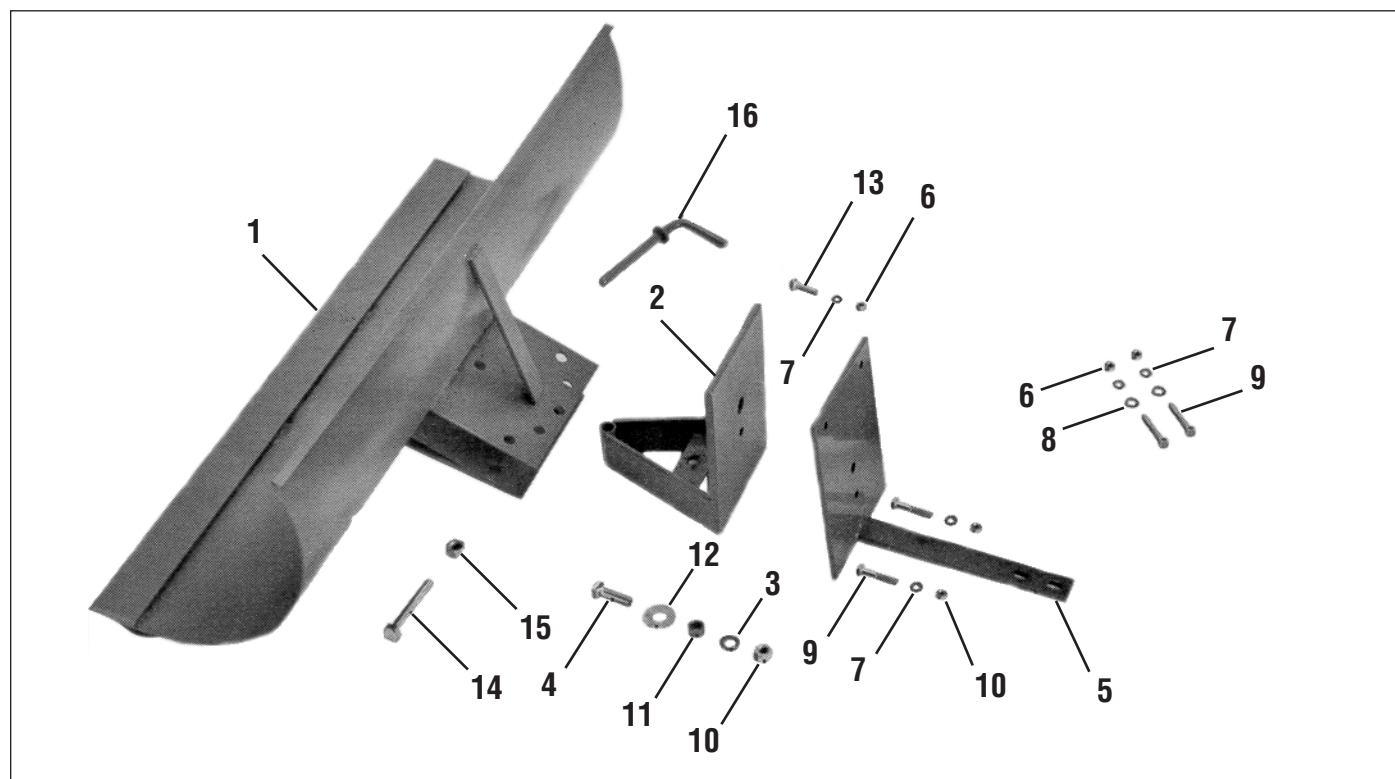


Figure 1: PARTS LIST

⚠ WARNING

To help avoid serious personal injury, disconnect the spark plug wire and move the wire away from the spark plug. Remove ignition key on units so equipped.

Step 1: Block the Tiller

Move the tiller to a level, hard surface. Place a block under the engine (A, Figure 2) to prevent the tiller from tipping forward.

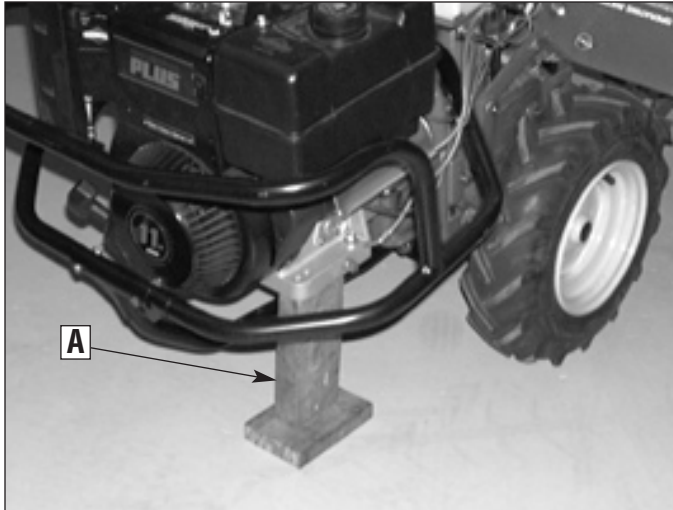


Figure 2: TILLER BLOCKED (ELECTRIC-START MODEL SHOWN)

Step 2: Remove the Tines

Removing the tines has a functional purpose as well as a safety purpose. Tine removal makes it possible to bank snow and dirt because the rear of the tiller sets down further and the blade can be raised higher off the ground. **Leave the tine holders on.** Their weight helps maintain tiller balance. Also, leave the drag bar on—it prevents the bottom of the transmission from scraping the ground. Please refer to your Horse Tiller Operator's Manual for tine removal instructions.

Step 3: Install Blade Mounting Bracket

1. Remove and discard the two nuts, lock washers and 5/16"-18 x 1-1/2" screws which secure the bumper brace to the lower bumper (B, Figure 3).

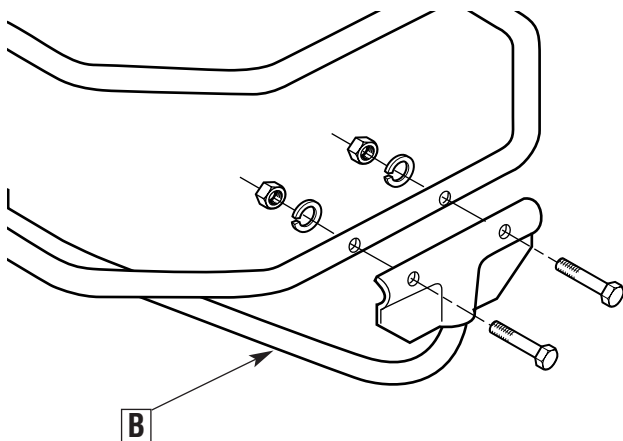


Figure 3: REMOVE BOTTOM BRACE HARDWARE

2. Using the hardware included in this attachment, install the Blade Mounting Bracket (5, Figure 1) to the lower bumper with two nuts (6, Figure 1), two lock washers (7, Figure 1), two flat washers (8, Figure 1) and two 5/16"-18 x 1-3/4" screws (9, Figure 1) included with this attachment.

NOTE: Place the flat washers between the Blade Mounting Bracket and the Bottom Brace.

3. Secure the bottom portion of Blade Mounting Bracket to the Bottom Brace with with two nuts (6, Figure 1), two lock washers (7, Figure 1) and two 5/16"-18 x 1-3/4" screws (9, Figure 1) included with this attachment (C, Figure 4).

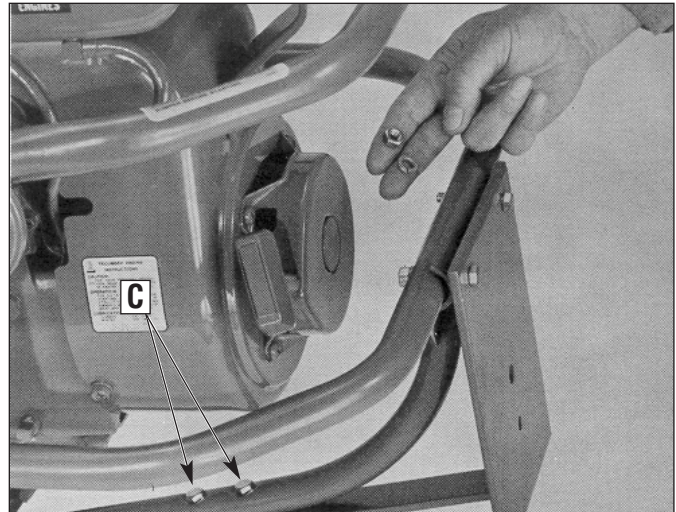


Figure 4: ATTACHING THE BLADE MOUNTING BRACKET

Step 4: Install Swivel Bracket (A-Frame)

1. Position the Swivel Bracket (2, Figure 1) in front of the Blade Mounting Bracket and align the two large holes in each.
2. Secure the brackets together by inserting a 1/2"-13 x 1-1/2" screw (4, Figure 1) with flat washer (12, Figure 1) and bushing (11, Figure 1) through both large holes and fastening with a lock washer (3, Figure 1) and a **plain** 1/2" hex nut (10, Figure 1), and tighten securely. See Figure 5.

NOTE: Two different 1/2" nuts are included with this attachment (10 & 15, Figure 1). One is a lock nut (with a punch mark) and the other is a plain hex nut. See inset of Figure 5.

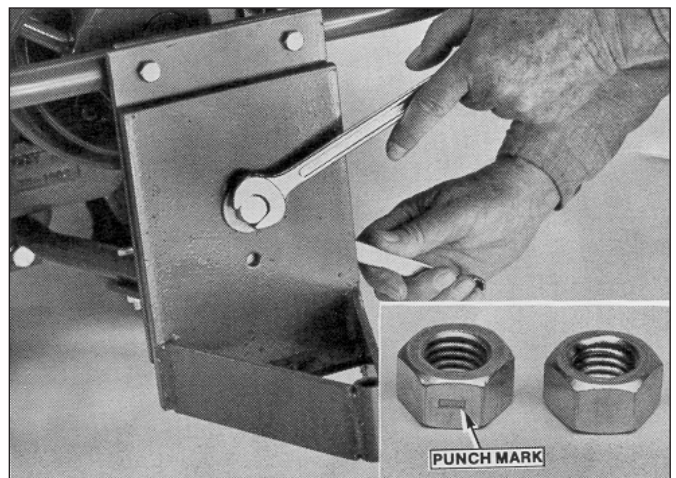


Figure 5: ATTACHING THE SWIVEL BRACKET (A-FRAME)

3. Insert a 1-1/4" screw (13, Figure 1) through the lower, smaller hole in the swivel bracket. Add a lock washer (7, Figure 1) and hex nut (6, Figure 1) and tighten securely. See Figure 6.

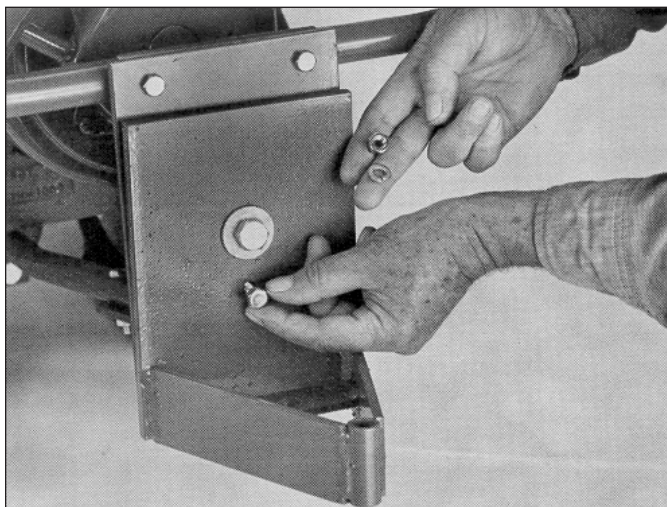


Figure 6: ATTACHING THE SWIVEL BRACKET (A-FRAME)

Step 7: Attach Blade to Swivel Bracket

Lift the blade onto the swivel bracket, and position the blade to align the hole in the blade mounting bracket (D, Figure 7) with the hole in the swivel bracket. Insert a 3" screw (14, Figure 1) down through the holes then add a 1/2" **lock nut**. Tighten securely.

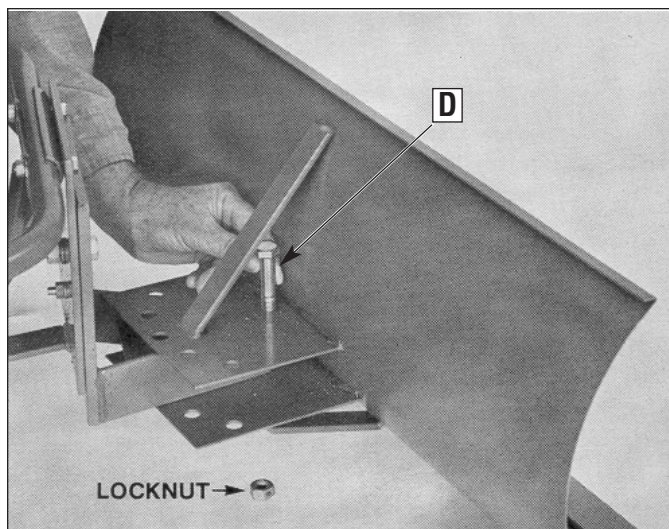


Figure 7: ATTACHING THE BLADE TO THE SWIVEL BRACKET

Step 8: Set Blade Angle

Move the blade to the desired angle, then align the holes in the two blade mounting plates (E, Figure 8) with the hole in the swivel bracket. Insert the index pin (16, Figure 1) down through the three holes.

BEFORE USING THE DOZER/SNOW BLADE

Adjust Handlebars

When plowing or dozing, your handlebars should be set slightly less than waist high. This enables more leverage when raising the blade for banking, clearing obstacles and backing up.

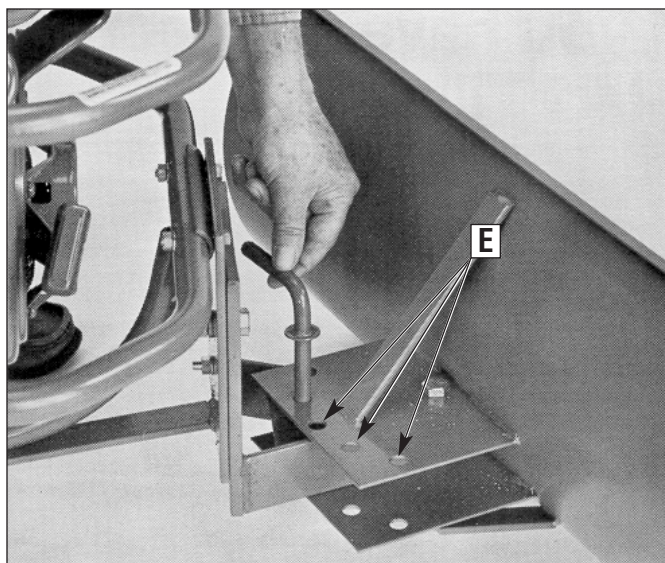


Figure 8: SETTING THE BLADE ANGLE

Please refer to the Horse Tiller Owner's Manual for handlebar height setting instructions.

Wheel Traction

Good traction is essential when dozing dirt—and especially snow plowing. Bar Tread tires are a tremendous help for moving dirt. If you have standard tread tires, we highly recommend using tire chains (Model OEM-390-991 / 390-991-081). Chains are also very helpful for winter snowplowing jobs. They can be left on year-round (for muddy or sandy conditions), or they can be removed and replaced in minutes, as needed.

Winterize Before cold weather Use

When using your tiller during temperatures below 32° F, you must drain the #30 weight motor oil and change to a lighter weight oil. Consult the separate Engine Owner's Manual for the specific weight motor oil recommended by the engine manufacturer for lower temperatures. You should also change from #140 to #90 weight gear oil in the tiller transmission before operating your tiller in below freezing temperatures.

⚠ CAUTION

Never run the engine indoors or in enclosed, poorly ventilated areas. Engine exhaust contains carbon monoxide, an odorless and deadly gas.

USING THE DOZER/SNOW BLADE

Snowplowing Tips

Your Dozer/Snow Blade can move large amounts for snow quickly. Here are some snowplowing techniques to speed up the job with a minimum of reverse maneuvering and blade angle changing. Use the patterns described below and shown in Figure 9 as a guide.

IMPORTANT: Winterize your tiller before using it in cold weather. See *Before Using the Dozer/Snow Blade*, above.

- **Warmup** - In cold weather, always allow the engine five or 10 minutes to warmup before plowing (See the Horse Tiller Operator's Manual for starting and operating instructions.). Running the engine before use heats the oil so that it flows for proper engine lubrication. While warming up the engine, leave the Wheel Speed Shift Lever in Free Wheeling position and put the Forward/Reverse Lever in Forward position for five minutes or more. This rotates the tine shaft and warms the transmission gear oil. Before doing this, make sure that the tines have been removed and that the Depth Regulator Lever is pushed all the way down to the travel setting (top notch engaged on lever). Later, when removing snow, pull the drag bar all the way up to allow you to raise the blade as high as possible for banking.
- **Plowing Deep Snow** - It is best to remove a top layer several inches thick in the first passes before attempting to remove all the snow. Start near the end of the drive and gradually work back up.
- **Plowing Light Snow** - Make the first pass in the center of the area being plowed, with the blade angled right (A, Figure 9). The blade can remain in this position, until the last pass, when the blade is angled away from the center for this portion of the plowing operation. When you reach the end of the last pass down the center, begin to follow the pattern for light snow (A).
- **Wheel Speed When Banking Snow** - Use the Slow Wheel Speed and High Belt Range, throttle back the engine about 25 percent when banking snow. The slower throttle speed enables better control and protect the wheel shaft and gears from damage if the tiller should strike a hidden immovable object.

NOTE: When using the High Speed Belt Range and Fast Wheel Speed, throttle back the engine to approximately 70%.

IMPORTANT: Throttling back is very important! The resulting slow down prevents too much build-up of momentum. If the blade strikes an immovable object, the resulting shock could damage the wheel shaft or transmission gears.

Dirt Dozing Tips

Your Dozer/Snow Blade is also handy during spring, summer and fall for various dirt moving jobs. You can fill ditches, spread mulch and manure over the garden, do light grading, prepare land for a small swimming pool to name a few applications. Again, you'll get the most work from your Blade if you use these hints... then carefully experiment.

- **Hard Packed Soil** - The Blade should be used for moving loose dirt... it can't dig into unbroken soil or hard-packed piles like a bulldozer. Thoroughly loosen the soil with the tines (before you take them off for safety) or use hand tools to break-up hard-packed piles.
- **Soil Condition** - The soil (or mulch, or manure) is best moved when it's dry. If it's very wet, it can stick to the blade, and the moisture's extra weight means you'll move less per pass. Also, when the material is nearly dry, you can spread the material more evenly—it doesn't clump up.
- **Dozing Dirt Piles** - Avoid trying to take too big a bite from a pile at once. Angle the blade away from the pile and start at one side. Then, spread the load evenly, with the blade straight ahead. In this manner, when you "cut away" at a pile, the pile breaks itself up for you.

IMPORTANT: Check engine oil level frequently during snow-plowing or earth dozing.

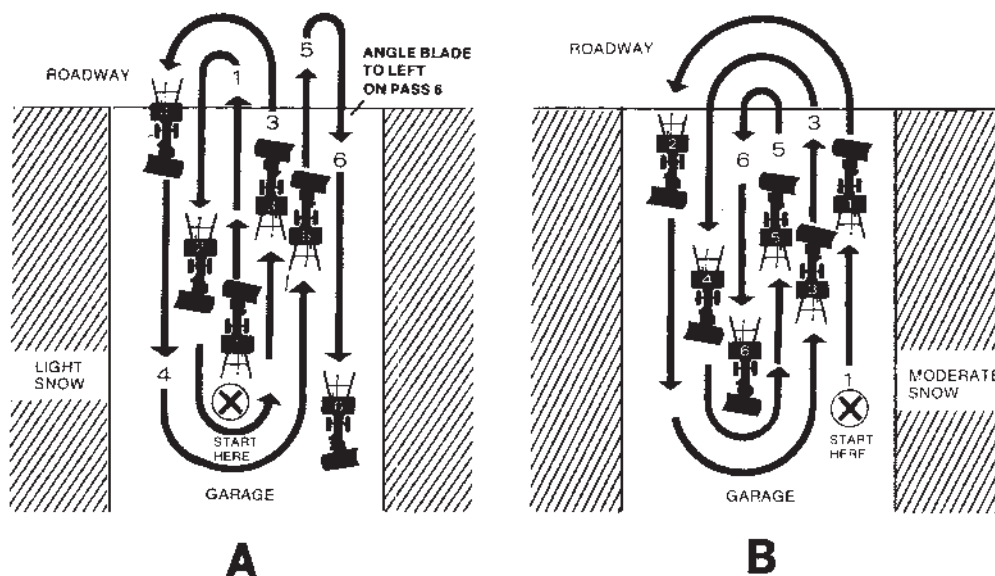


Figure 1

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

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