TIDD TECH
Snow Grooming Equipment

4’ or 6’ TRAIL TENDERIZER
Assembly and Operation Manual

4’ Trail Tenderizer shown with optional Tracksetter

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Packing List

4’ or 6’ Trail Tenderizer

- ☐ **(1) Compactor**
- ☐ (1) Toothbar with teeth attached
- ☐ (1) Comb and UHMW panel bolted to Front Angle A, Front Angle B, Rear Angle A, Rear Angle B attached to comb
- ☐ (1) Tracking Fin - (1) for 4’ or (2) for 6’
- ☐ (2) Sharp Teeth Labels over toothbar
- ☐ (1) Tidd Tech label on back of Front Angle B

- ☐ **(1) Jack** - manual hand crank with jack tab and holes drilled in bottom of tube to match alignment with jack ears on Front Angle B

- ☐ **(1) Rubber Tie Down Strap**

- ☐ **(1) Loop Hitch**

- ☐ **(1) Parts Bag,** PN 012189-01
- ☐ (3) 3/8” x 2-3/4” HB
- ☐ (4) 3/8” LN
- ☐ (1) 3/8” x 1-1/4” HB
- ☐ (4) 5/16” x 3/4” BHCS
- ☐ (4) 5/16” LN
- ☐ (12) 8 penny nails

- ☐ **(2) Skid Plates**

- ☐ **(2) Anti-Berm Flaps (Left & Right)** PN 012260-01
- ☐ (2) 5/16” x 1-1/4” BHCS
- ☐ (2) 5/16” x 1-1/2” BHCS
- ☐ (6) 5/16” washers
- ☐ (4) 5/16” lock nuts

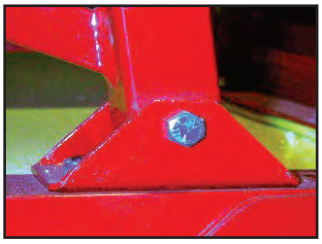
- ☐ **(1) Crate for 4’ or 6’**
- ☐ 4’ TT (2) 1” x 8” x 42” (2) 1” x 8” x 49” (8) 1” x 3” x 42”
- ☐ (1) Drawbar banded to top of closed crate
- ☐ (1) Tidd Tech label on inside right face of drawbar tongue
- ☐ (1-1/2) squares of 42” x 42” cardboard per crate top and bottom

- ☐ 6’ TT (2) 1” x 8” x 42” (2) 1” x 8” x 73” (8) 1” x 2” x 42”
- ☐ (1) Drawbar banded to top of closed crate
- ☐ (1) Tidd Tech label on inside right face of drawbar tongue
- ☐ (2) squares of 42” x 42” cardboard per crate top and bottom

- ☐ **(1) 040100 Manual**

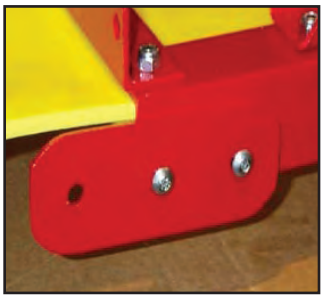
UNPACKING AND ASSEMBLY

Carefully remove all items from the packing crate. You will have to unscrew the bolts in the ends of the crate. Unwrap the drawbar. Open the carton containing the Lift Lever and Tracksetter if applicable.

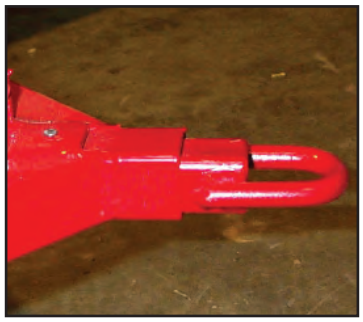


STEP 1: Attach the drawbar to the compactor using 3/8” x 2-3/4” hex bolts and locknuts.

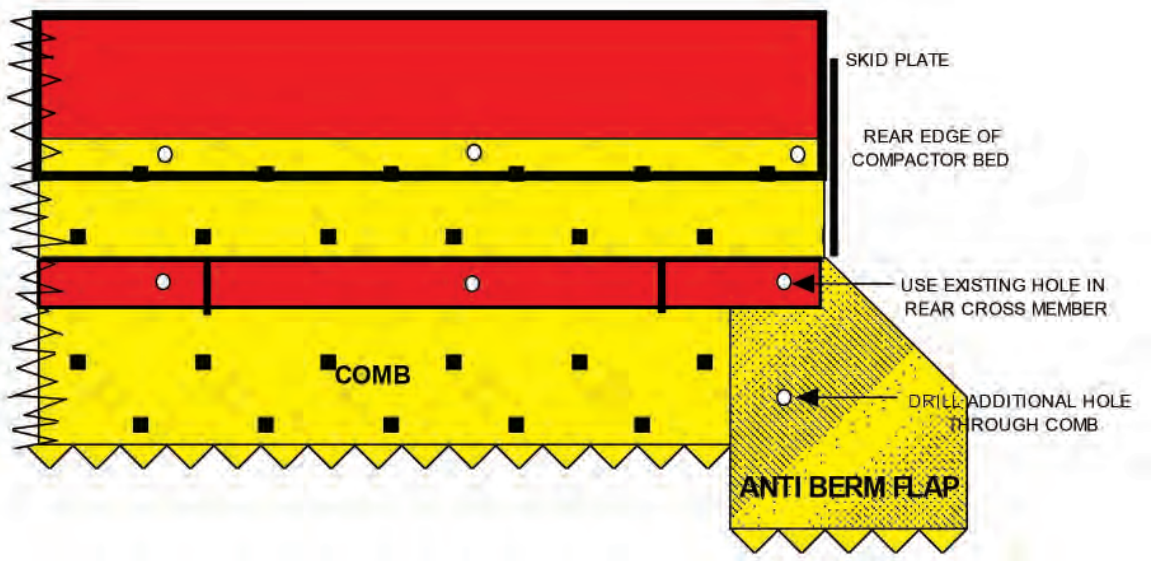
STEP 2: Attach the raise/lower JACK to the tabs at the front of the compactor (3/8” x 2-3/4” hex bolt and locknut), and on the cross piece of the drawbar (3/8” x 1-1/4” hex bolt and locknut).



STEP 3: Attach the two steel skid plates to the rear corners of the compactor bed with two 5/16” x 3/4” button head socket screws on each. NOTE: that the plates can be rotated in four positions after they have worn down due to dragging the machine on dirt or pavement. Make sure to call us and order replacement skid plates before you wear into the bolt holes.



STEP 4: Insert the hitch in the drawbar and fix with an 8 penny nail. Bend the nail over on the underside of the drawbar to prevent any injury when handling. See the operation section of this manual for more information on shear pins.



ANTI-BERM FLAPS

The anti-berm flaps will help smooth the seam from one grooming pass to the next. The sidewalls and skid plates kick up a small ridge of snow, which is smoothed out by the anti-berm flap.

Use of the anti-berm flaps is entirely optional. Some owners prefer not to use them because they have clearance issues on their trail. Other owners who also buy Extension Wings may choose to install them on the Extension Wings (it is not very practical to use Extension Wings on a Trail Tenderizer with anti-berm flaps installed). Many owners like them! You decide. They can easily be removed if you don’t like them.

To install the flaps, remove the corner bolt from the rear cross member (to which the track setter attaches). Slide the flap under the bracket, but on top of the yellow comb material. Insert one of the 5/16” x 1” button head bolts with a washer up from the bottom (discard the existing bolt) and secure with a nut (no washer needed under the nut). Turn the anti-berm flap until it is exactly perpendicular to the comb and drill a 3/8” hole through the rear flap hole and on through the comb. Push a 5/16” x 1-1/2” button head bolt (no washer this time) up from the bottom. Add a washer and nut on top, then tighten. Do not squash the head very far into the comb (it is ok if the bolt head ends up on an angled part of the comb AND it is normal if the bolt looks too long).

If you have not purchased a TrackSetter with your Trail Tenderizer, then you are finished with assembly and may now continue with the operation section of this manual. If you have purchased a Tracksetter, please open that box now and follow the Tracksetter Assembly Instructions. Once you have assembled your Tracksetter, please continue with the operation section in this manual.

SAFETY

Normal and prudent care should be taken when operating the Trail Tenderizer. The Trail Tenderizer Teeth are VERY SHARP and should be treated with respect. Never reach under the front edge to move the groomer.

Be careful lifting the groomer. Its weight is often increased by snow piled on top. Deep or icy snow makes moving the groomer even more hazardous. Be sure you have secure footing, bend your knees, and keep your back straight. By pivoting the unit on one and then the other rear corners (tracking fins) you should be able to zig zag the machine to the location you want.

Do not run over skiers on the trail. It’s very bad for repeat business. Seriously, if you groom during the day, stop and make sure that skiers are completely out of your way before passing them. NOTE: The six foot wide groomer sticks out rather far on each side. Take this into account, especially near skiers and trees.

The hitch of the groomer is supplied with a shear pin mechanism. You should use eight penny coated or galvanized nails for the shear pins. The pin should break upon serious impact with rocks, stumps or trees. It is far better to go back and get the groomer than to go over or through the windshield. If the pin breaks constantly in rough terrain, you can increase the size of the nail slightly.

ALWAYS CARRY A SUPPLY OF SHEAR PINS IN THE SNOWMOBILE. A good idea is to duct tape several nails near the hitch. Use them only when you’ve forgotten to put some in the snow machine. It is actually fairly rare that you break the shear pin, except during low snow times, like at the beginning of the season, or by hitting trees.

OPERATION

Use of Lift Lever

The lift lever is designed to allow you to raise the TrackSetter without getting off the snowmobile. Set up the lever system as described in the assembly instructions.

There is a trick to getting the slotted hook to engage and disengage without touching it. If you pull the lever up and slightly toward the center of the machine, the slotted hook will drop down on the bolt and remain in the hooked position. To release the hook, pull the lever back and slightly to the side, away from the center of the machine. When you release it, the bolt should slide back in the long end of the slot, thus lowering the track setter. You might need to tighten or loosen the bolt just a little. A bit of practice helps. Once you see how this works, the action is very quick and efficient. You may need to adjust the tightness of the bolt that slides through the slotted plate. Flip the track setter up onto the compactor bed for long distances where you aren’t setting tracks.

PACKING NEW SNOW

The easiest way to pack new snow is to keep the angle of the compactor bed as low as possible so that the snow doesn't build up under and in front of the compactor. Use the hand crank to raise the front edge of the compactor bed about half way up to the drawbar. Drive a few yards at grooming speed (5 to 8 mph) and see if the snow is rolling easily under the bed. If it is billowing up over the front edge, raise the front a bit more. If snow is being dragged along by the back edge, lower the front. Remember that as you gain speed, the compactor will tend to plane up to the surface.

If you raise the track setter with the Lift Lever (for skate lane packing with no tracks), the track setter will hang out in a cantilevered position. This puts a lot of downward pressure on the flexible yellow comb, pushing it hard into the snow. The result is an excellent combing action in firm snow conditions. In soft powder, the comb may be pushed so hard downward that snow is carried along and a significant drag is put on the snowmobile. To avoid this situation, flip the track setter up onto the compactor bed. The weight is now off the yellow comb and drag is reduced.

BACKING UP

It is difficult to back up very far with the groomer attached. It tends to jack-knife at the hitch. Some backing is possible provided that you raise the yellow comb off the snow surface. This is done by flipping the track setter up onto the compactor bed and pulling it forward toward the raise/lowering crank. You can secure the track setter in this forward position with the rubber tie-down strap provided. Stretch it between the crank handle and the TrackSetter's plastic base (between the hinges). You will notice the comb bending upward as you slide the TrackSetter forward. NOTE: It is a good idea to leave the rubber tie-down strap connected between the crank handle and some other part of the compactor bed to prevent the crank from spinning as a result of vibration. In this way, the height of the cutting teeth from the snow will remain constant.

SPECIAL SITUATIONS

Deep new snow (over 10-12") may require two passes to get sufficient air out of the powder to make a skiable surface. If the snow is very deep, you will probably have to run the snowmobile alone first without dragging the Trail Tenderizer (this is also the perfect application for a Tidd Tech Roller). You can usually set good tracks on the second pass. If the groomer bogs down, remove the TrackSetter(s) and put it/them on the back of the snow machine or leave them off at the base lodge. This gives you less drag from the groomer and more traction on the machine.

Grading uneven surfaces is done in one of two ways. With soft, powder snow, you can raise the compactor to the highest angle so that you drag snow along, filling in the low spots automatically. With settled, or crusty snow, drop the teeth to a fairly low angle, and cut off the high spots. Snow will be dragged into low spots to level the surface. Don't be concerned if some snow piles up on top of the compactor, you can pull it along until you find a deep hole, then dump or shovel it into the hole.

FIRM OR CRUSTY SNOW

The Trail Tenderizer Teeth do a lot of surface renovation as long as the snow is reasonably workable, i.e. you can kick your heel into it. Adjust the depth of the teeth so that snow is just rolling under the front edge of the compactor. A couple of turns of the crank make a big difference in how successful your renovation works. Generally you should keep the compactor bed horizontal, so that the weight of the whole unit is on the teeth. If the teeth are too low, they will create a lot of drag on the snowmobile and may bounce, creating a washboard effect. Raise them up enough to not overwork or overheat your snow machine. On steep uphills, it is sometimes advisable to raise the teeth a bit to make pulling easier, then groom that trail in the opposite direction on the next pass with the teeth fully down on the downhills.

The Trail Tenderizer has difficulty grooming extremely hard-frozen granular or solid ice. Nothing you put behind a snowmobile short of plastic explosives will affect rock solid ice. However, the teeth will texture the top surface and make it smoother and flatter so that skis slide easily (and quickly!) over it.

Keep this mantra in mind: IF IT'S WHITE, IT'S ALL RIGHT; IF IT'S GRAY, IT'S O.K.; IF IT'S BLUE, SO ARE YOU; AND IF IT'S BROWN, IT'S TIME TO SHUT THE PLACE DOWN.

Setting track in hard snow sometimes requires one or two concrete blocks in the compartments of the TrackSetter (see below). Another way to set better tracks in hard snow is to remove the sidewall tracking fins on the track setter, or move them up using the extra pair of bolt holes. By doing this, only the track cutters are hitting the snow. With the sidewall fins off or in the higher position, you must raise the track setter(s) to cross roads. Otherwise, you will scuff the molding blocks and dull the cutters.

WEIGHTING THE TRACK SETTER

Buy two 4" solid concrete blocks (4 x 8 x 16) available at most building supply stores. The blocks fit into the hinged cage of the track setter. You can set tracks in powder with no weight on the track setter. One block in the rear compartment will create more pressure on the track molds. One block in the front compartment will put more pressure on the track cutting teeth for harder snow. With both blocks on the track setter, you will have increased the weight of the track setter to at least 112 pounds. This should set a good track in very hard conditions. However, it is a lot of weight to pull up hills. After some experimentation, you will discover the best arrangements of weight to set ideal tracks in various snow situations.

OBSTACLES

Hitting rocks, roots, trees and other obstacles is not recommended. But, of course, you will do this, so just slow down when you do. The groomer is designed to ride over rocks etc. even with the teeth down. However, high speed impacts may dull, bend and/or break the teeth, and distort other parts of the groomer. Be nice to the machine and it will serve you for a long time.

CROSSING ROADS OR BARE SPOTS

You must raise the cutting teeth and flip the track setter(s) up onto the compactor bed before crossing plowed roads or snowless sections. The groomer will ride on the skid plates at the back corners of the compactor and not harm the urethane comb. These skid plates will eventually wear down. They can be repositioned in four directions, and eventually replaced.

OFF SEASON STORAGE

Clean your Trail Tenderizer at the end of the season. A good wash with a garden hose will do. Inspect the tooth bar for worn or missing teeth and replace them. Straighten any bent components. Paint any exposed steel parts of the groomer. A spray can of rust resistant paint is adequate. Use a piece of cardboard to mask the plastic parts. NOTE: Store the groomer on a couple of boards up off the ground and cover it with a tarp. UV sunlight can degrade the plastic and make it more brittle.

With proper maintenance and care in its use, the Trail Tenderizer will serve you well for many years and miles to come.

LIMITED WARRANTY FOR TIDD TECH PRODUCTS BY TIDD TECH

Products from Tidd Tech carry a one year warranty. If the equipment fails due to a defect in materials or workmanship within one year from the date of purchase, Tidd Tech will repair or replace the part free of charge.

This warranty is not transferable and does not cover damage resulting from anything other than defects in material or workmanship. This warranty does not cover damage caused by unreasonable use, nor replacement of non-defective parts that may wear and need to be replaced within the warranty period.

For warranty service you must, at your own expense, arrange to deliver or ship the product or part(s) for warranty repairs to Tidd Tech at the address below.

This limited warranty is in lieu of all other express warranties. Tidd Tech shall not be liable for any special, incidental or consequential damages.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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