

Assembly Installation Operating and Maintenance Instructions



Bluestreakequipment MAGNETICS
APPLICATION DRIVEN DESIGN

Bluestreak Equipment
1645 Hwy #3, Delhi, Ontario, Canada N4B 2W6



Table of Contents

Safety	3
Assembly Instructions	4
Installation Instructions	8
Operating Instructions	9
Maintenance Instructions	12

Safety

Accidents can be very costly to human life and property. The operator is the #1 safety device on all types of vehicles or equipment, it is important that the operator read, learn, and know all safety recommendations for this product. The user is responsible to their family, friends, and co-workers to operate in a safe manner. Ensure that everyone who operates or assists in the operation or maintenance of this product read and understand all the elements required to safely operate this piece of equipment. This attachment has moving parts that include additional dangers.

It is the responsibility of the operator using this equipment to be acquainted with the safe operation.

Before lifting or lowering the magnet or sweeper, make sure the area is clear of bystanders or objects.

Machinery parts sometimes have sharp edges. Wear work gloves when moving parts. Always use caution around trailer parts as they often are very sharp.

Never use drugs or alcoholic drinks when operating or servicing this piece of equipment.

Always wear the proper personal protection equipment when servicing or operating this piece of equipment. Never service or operate this attachment with bare feet, sandals, or other light footwear.

The sweeper is NOT rated for highway use and should only be towed at low speeds. Only travel with the magnet in the down (flags lowered) position.

Keep limbs clear of the sweeper while raising and lowering the trailer or magnet.

If working on public roadway, display a Slow-Moving Vehicle emblem per your local regulations. Turn your flashers on.

Operate only during daylight or well-lit artificial light.

Store this sweeper with the magnet in the down (flags lowered) position and in an area not frequented by children.

Allow no riders on this trailer. Keep all bystanders clear of attachment during operation.

Always replace worn, torn or missing safety decals before operating.

Before each operation of this trailer, check all hardware (bolts, nuts, pins, etc.) for their proper location and tightness.

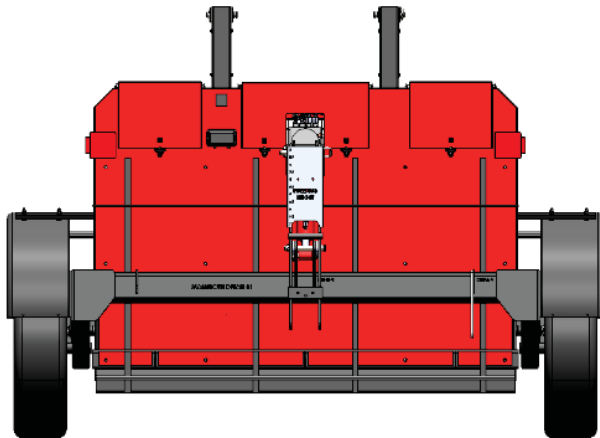
Speed Kills! Operate this trailer at a safe working speed. When transporting the trailer, keep a safe speed to avoid losing control of the trailer or prime mover.

Keep proper clearance between the trailer and objects (utilities, tree stumps, large rocks, buildings, etc.). Contacting these objects with the trailer or prime mover could cause a loss of control or damage to the trailer or property.

Unpacking your Shipment



Seeker as shipped on pallet
with wrap and banding
removed



Sweeper Assembly (1pc)



Tongue (1pc) with jack and chains
installed

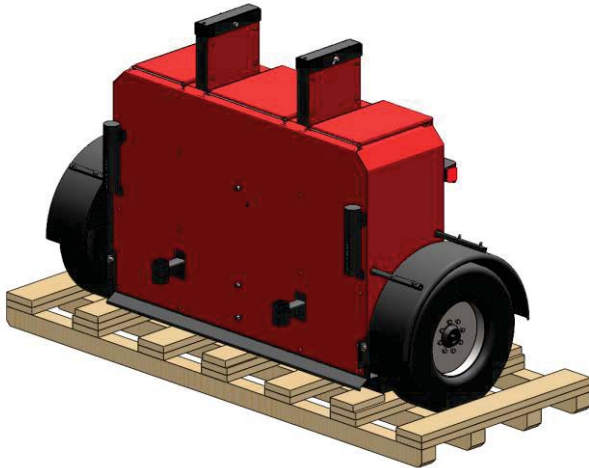


Tongue Struts (2pcs)

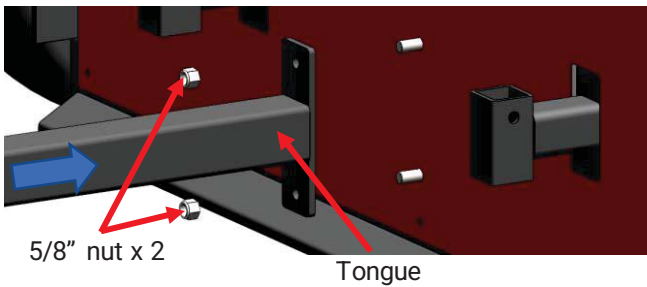


Upper Brace (1pc)

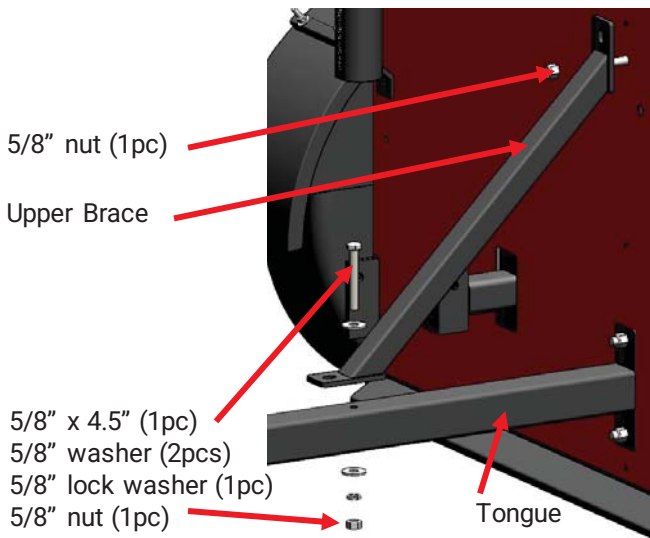
Assembling the Sweeper



1. Remove the cage and keep the sweeper on the pallet



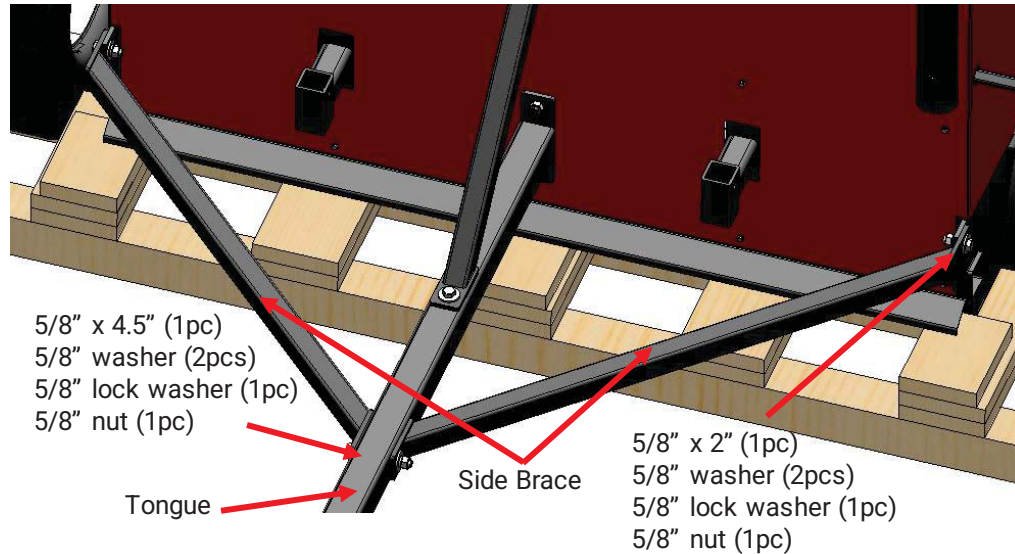
2. Connect the Tongue to the Sweeper using the 2x 5/8" nuts (2pcs) that were installed on the sweeper.



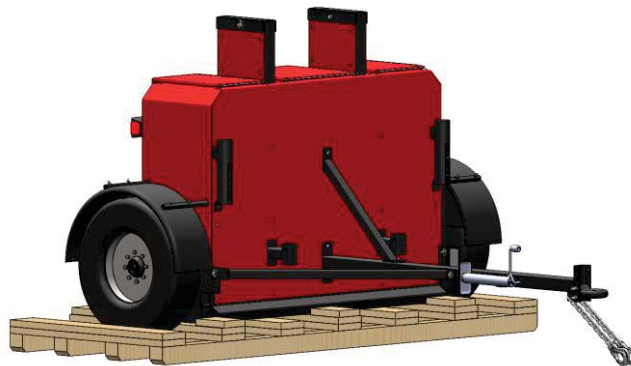
3. Connect the Upper Brace (1pc) to the Tongue and the Magnetic Sweeper using a 5/8" nut at the top.
4. Attach the lower end of the Brace to the Tongue with a 4.5" bolt as shown.

Do not tighten yet

Assembling the Sweeper



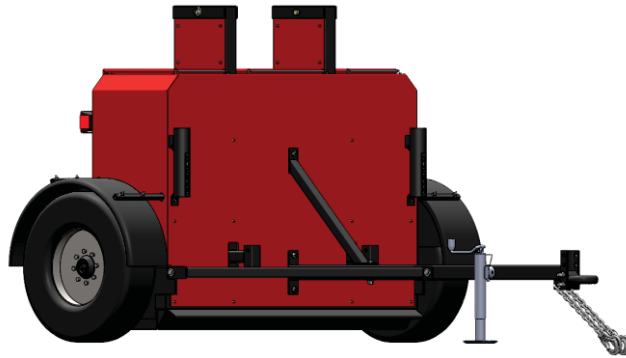
4. Connect the Side Braces (2pc) to the Tongue using 5/8" x 4.5" bolt (1pc) installed through a washer, through the Brace, through the Tongue, through the other strut, through a washer, through a lock washer and install the nut. Do not tighten yet
5. Connect each Side Braces to the Sweeper using a 5/8" x 2" bolt (1pc) installed through a washer, through the Brace, through the sweeper, through a washer, through a lock washer and install the nut. Do not tighten yet.



6. With the Tongue and Braces in place, fully tighten all bolts

Removing from Pallet

1. Rotate jack stand to vertical position and install spring pin
2. Using a forklift, lift sweeper off pallet from rear
3. Place sweeper on ground and extend jack stand until the tongue is level



Installing the Trailer Wiring

The trailer wiring should be zip tied to the tongue to ensure it doesn't wear from contacting the ground. Once the tongue and struts are installed use the included zip ties to fix the wiring in place. The white ground wire should be screwed into the tongue near the pintle ring using a self tapping screw.

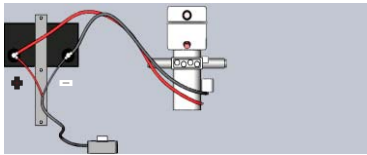
**** NOTE – the wireless receiver is powered by the tow vehicle. The receiver will not function if the tow vehicle is not connected ****



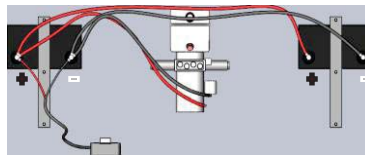
Connecting the Batteries

The Mammoth magnetic sweeper has space for up to four Group 31 deep cycle marine batteries. For stability of the sweeper and ease of adding batteries, position single and double batteries towards the front of the sweeper. To increase capacity, add 12V batteries in parallel, connecting positive terminals together and negative terminals together.

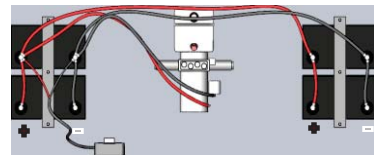
Single Battery



Double Battery



Quadruple Battery



Connecting to Tow Vehicle

While the sweeper is supported by the jack stand



1. Reverse the vehicle to line up the pintle hook and the pintle ring
2. Once the pintle ring is over the hook, lower the ring using the jack stand
3. Clip on the safety chains and connect the trailer lights
4. Raise the jack stand and move it to the horizontal position by removing and reinstalling the spring pin

**** NOTE – the wireless receiver is powered by the tow vehicle. The receiver will not function if the tow vehicle is not connected ****

Connecting to Tow Vehicle



Ensure that the tongue is as level as possible. This can be adjusted by changing the mounting position of the pintle ring on the tongue.



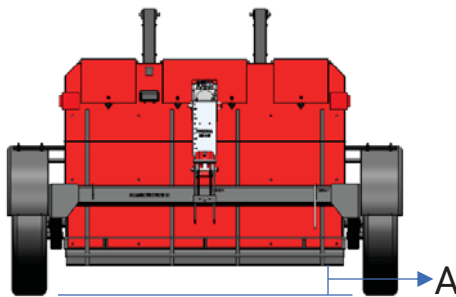
Operating the Mammoth Sweeper

The Mammoth magnetic sweeper is most effective when the magnet is as close to the ground as possible. If you are sweeping in a large flat area, set the sweeping height low. Set the sweeping height high if there are bumps or short obstructions.

The size and quantity of debris that is being collected will also impact the sweeping height (more or larger debris should be collected at a higher sweeping height).

In areas with more debris it is recommended to clean off the sweeper more often to ensure all debris is collected

The magnet effectiveness is also impacted by the sweeping speed. This magnet has been designed to be effective at a maximum 25km/h (15MPH), however, the sweeper will better collect debris at lower speeds.



Distance A	Gauss (G)
2"	1078
3"	929
4"	798
5"	675
6"	575
7"	500

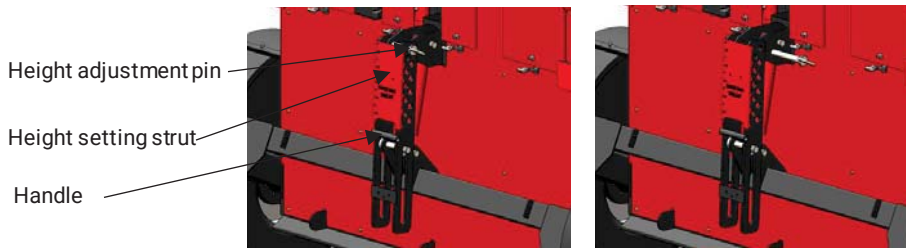
Adjusting Sweeping Height

The height adjustment setting for the Mammoth is located on the back of the trailer. The height setting strut displays approximate sweeping heights however the actual heights are affected by the sweeper tire pressure. To set the sweeping height:

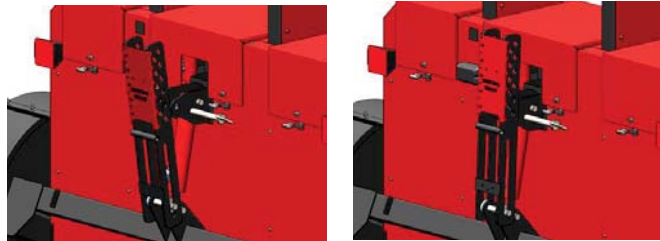
Press trailer raise button to raise trailer to maximum sweeping height



While holding the handle on the height setting strut, remove height adjustment pin



Pull up height adjustment strut and align with desired sweeping height and insert pin

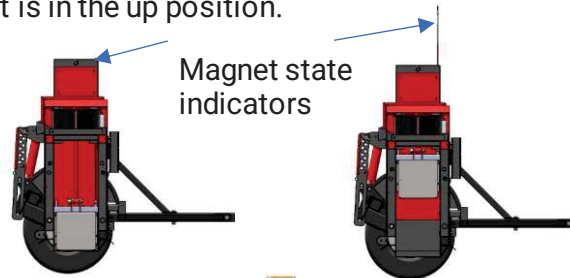


Press trailer lower button until the trailer reaches the selected sweeping height



Operating the Mammoth Sweeper

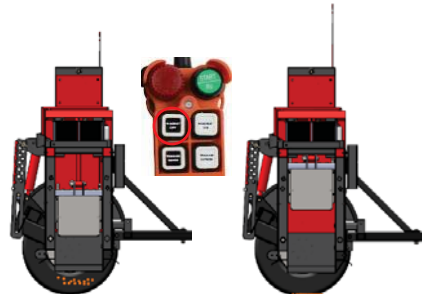
Before towing the sweeper, check that the trailer lights function properly, cycle the magnet and trailer up and down. Ensure that the magnet is in the ON (down) position before moving. The magnet has markers which extend out of the top of the sweeper to indicate when the magnet is in the up position.



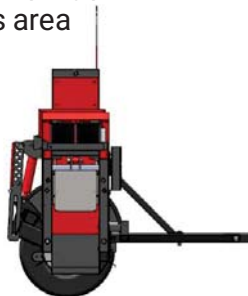
Cleaning Off Collected Debris



•After sweeping position sweeper over the debris area



•Press the magnet off button until the magnet is fully lifted



•Drive forward slowly at least 3 feet to remove the magnet from the debris



•Press the magnet on button until the magnet is fully lowered

Travelling with the Sweeper

To travel with the Mammoth magnetic sweeper, raise the sweeper and pin the height setting to the maximum. If the optional DDR and grader blade are installed ensure that they are well clear of the ground. The maximum travel speed on smooth terrain is 50km/h (30MPH). The Mammoth magnetic sweeper does not feature suspension and should be towed at lower speeds over rough terrain.

- * **Ensure that the magnet is in the down (flags lowered) position before travelling.**
- * **The sweeper is NOT rated for highway use and should only be towed at low speeds.**

Maintenance

The Mammoth magnetic sweeper has space for four group 31 deep cycle marine batteries and is equipped with a built-in battery charger and voltmeter. To optimize the life of the batteries it is recommended that the depth of discharge is kept below 25% or 12.4V. We recommend that you charge the batteries daily or when the voltage drops below 12.4V.

* Note: using the hydraulic power pack results in a large temporary drop in battery voltage. Wait a few minutes for the voltage to stabilize to get a true reading.

Battery Capacity (Ah)	Allowable DOD (%)	Number of Cycles
105	25%	35
210	25%	70
315	25%	105
420	25%	140



Maintenance

Hydraulics

- Check hydraulic fluid level (reservoir size – 1 gal)
- Check for oil leaks
- Ensure fittings are tight
- Clean reservoir breather assembly
- Clean strainer
- Test and replace oil if necessary
- Bleeding the hydraulics
 1. Fill the reservoir to 80%
 2. Cycle the magnet and trailer up and down three times
 3. Top up reservoir to 80%

* Note: in most cases, due to the configuration of the hydraulics, the top of cylinders and their attached hoses will be filled with air

Electrical

- Charge batteries daily
- Check battery connections
- Check remote control batteries

Fasteners

- Check that fasteners are tight
- Wheel lug torque – 180 ft-lb

Tires

- Cold tire inflation pressure – 70psi
- Tire size – 235-80R16

Hydraulic Schematic

