

# Operating Manual

## CharBoss<sup>®</sup> T26

### Trailer Mounted Refractory Walled Biochar Processor Equipped With HATZ 3H50T Diesel Engine



***“Better Economically - Better Environmentally”***  
**MADE IN THE USA**

*Factory and Main Office*

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**CharBoss T26 Air Curtain Burner for Biochar Processing (HATZ 3H50T Engine)**  
**OPERATING MANUAL**

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## **Caution**

**The T26 CharBoss as  
“Trailer-Mounted Machinery” is  
“Non-Self-Propelled  
Agricultural/Forestry Equipment”**

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The triple axle T26 CharBoss Biochar Processor is street legal. Its GVWR is 17,500 LBS (7940 kg). A Class 5 Commercial Duty Hitch on the towing vehicle is required (Ball Size 2-5/16 in. or 58.75 mm). Familiarity with all state and local trailer towing regulations and ordinances is advised.

Before traveling on public roadways, check functionality of towing vehicle's brake controller and hitch and on T26 CharBoss trailer check coupler, safety chains, break-away system, self-adjusting electric brakes, wheels and trailer lighting. Ensure the T26 CharBoss Travel Safety Pins are properly in place and secured.

After a burn event, make sure there is no burning debris trapped anywhere in the T26 CharBoss, especially no hot embers, before moving the machine away from the burn site.

The firebox (burn chamber) of the T26 CharBoss radiates considerable heat downwards and may drop hot embers. The firebox must be lowered onto level earthen ground (dirt) and never onto combustibles like dry grass or peat moss and the machine must also not be operated on a surface like a concrete pad, gravel, crushed stone or asphalt (See Page 6 for more details).

## **Caution**

**Please, read and understand all Caution and Warning Notices  
before operating the T26 CharBoss and always wear  
Protective Personal Equipment (PPE).**

**Contact Air Burners, Inc. should you require any assistance. Send Email to [support@airburners.com](mailto:support@airburners.com), call 772-220-7303 or 888-566-3900 and ask for Customer Service.**

**WARNING:**

Should any repairs become necessary that require welding on your Char-Boss, you **MUST** first physically remove the Electronic Control Module (ECM) from the computer controlled Diesel engine. Follow the instructions below. If you need help, call Customer Support at 772-220-7303.

**HATZ 3H50**  
**ECM Removal Steps**

1. Unsnap Latches 1 and 2
2. Remove Bolts A1 and A2
3. Unplug both connectors
4. Remove Bolts B1, B2, B3 and B4
5. Remove the two brackets
6. The ECM can now be removed and stored away
7. Re-install all in reverse order.

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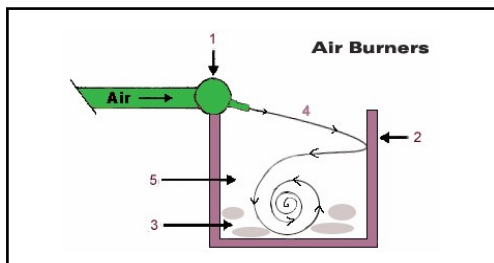


CharBoss T26

## PRINCIPLE OF AIR CURTAIN INCINERATION OPERATION

Air curtain burners are designed primarily as a pollution control device to make open pile burning cleanest. Using a diesel engine driven fan, these machines generate a curtain of air with a very particular mass flow and velocity. This curtain of air acts as a trap over the top of a thermal ceramic lined firebox like the CharBoss. The wood debris is dumped into the firebox (burn chamber) and then ignited (usually with a propane torch and with a small amount of diesel) just as you would light any other pile of wood you intended to burn. Once the fire has gained strength, the air curtain is turned on. The air curtain traps most of the smoke particles and causes them to re-burn directly under the air curtain where the temperatures exceed 1800° F. These machines do not inject any fuels into the fire, the fire is sustained only by adding more wood debris. The air from the air curtain is not heated. The only fuel used in the continuous operation is that of the diesel engine driven fan.

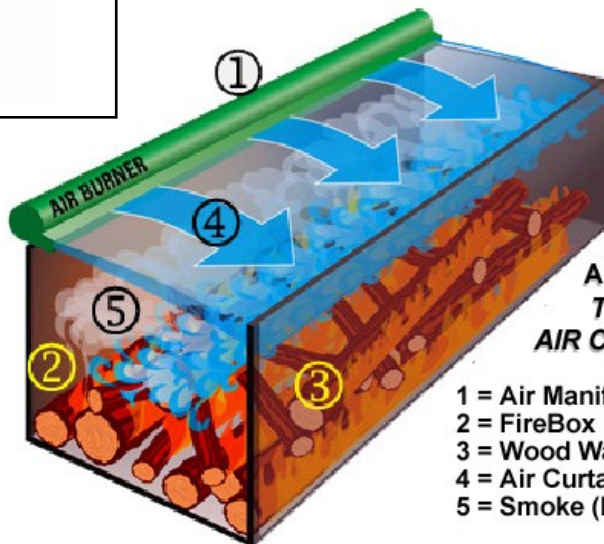
The same air curtain pollution control principle is also built into the CharBoss, however, it has been designed with special features to process the wood waste into biochar rather than completely eliminating it by burning it into residual ashes. Biochar is a byproduct in the residuals of all our air curtain burners and it has become a very desirable natural product. The simple to operate trailer-mounted CharBoss processes forest slash or other clean wood waste into commercially viable quantities of biochar. It is ideally suited for on-site operation in forests i.e., for fuels management.



***“The Wood Waste is the Fuel”***



Scan for video  
 “Open Pile Burning  
 vs FireBox Burning”



**AIR BURNERS, INC.  
 THE PRINCIPLE OF  
 AIR CURTAIN BURNING**

- 1 = Air Manifold
- 2 = FireBox Refractory Wall
- 3 = Wood Waste or Wood Fuel
- 4 = Air Curtain (left to right)
- 5 = Smoke (PM or Black Carbon)

## CharBoss T26 Air Curtain Burner for Biochar Processing (HATZ 3H50T Engine) OPERATING MANUAL

### GENERAL DESCRIPTION OF THE CharBoss

The CharBoss design is intended to allow for the use of our self-contained refractory walled air curtain system design, but mounted on a trailer frame for ease of mobility and biochar processing instead of total wood waste elimination. The standard S-Series machines are offered in several sizes as indicated below. Most of the functions and principles for the CharBoss are the same as the standard FireBox, except for the design features that process wood waste into biochar. The T24 BurnBoss is similar to the T26 CharBoss, except it has been designed strictly for the efficient reduction of wood waste and not for enhanced biochar processing. The self-propelled T28 TrackBoss is similar to the T24 BurnBoss, however, with the trailer frame replaced by a remotely controlled track system.

Above-Ground Air Curtain Burner Dimensions					
Model	Overall Size L x W x H	Firebox L x W x H	Weight lbs.	Fuel gal/hr.	Average Thru-put* tons/hr.
<b>S330</b>	40' 4" x 11' 10" x 9' 6"	30' 2" x 8' 5" x 8' 1"	59,000	3.0	11-13
<b>S327</b>	37' 4" x 11' 10" x 9' 6"	27' 2" x 8' 5" x 8' 1"	54,600	3.0	9-11
<b>S223</b>	33' 3" x 8' 6" x 8' 6"	22' 11" x 6' 2" x 7' 1"	40,250	2.0	7-9
<b>S220</b>	30' 1" x 8' 6" x 8' 6"	19' 8" x 6' 2" x 7' 1"	36,650	2.0	5-7
<b>S119</b>	27' 3" x 7' 2" x 7' 4"	19 x 5' x 6'	30,100	1.9	3-5
<b>S119R**</b>	27' 6" x 7' 2" x 8' 3"	19 x 5' x 6'	39,900	1.9	3-5
<b>S116</b>	24' 7" x 7' 2" x 7' 4"	16' x 5' x 6'	27,500	1.9	2-4
<b>S116R**</b>	24' 11" x 7' 2" x 8' 3"	16' x 5' x 6'	36,300	1.9	2-4
<b>T28</b>	20' 8" x 8' 5" x 5' 8"	12' x 4' x 4'	16,200	1.1	½-1
<b>T26</b>	21' 8" x 7' 8" x 6' 8"	12' x 4' x 4'	17,500	1.1	½-1
<b>T24</b>	19' 8" x 7' 8" x 5' 8"	12' x 4' x 4'	9,980	0.56	½-1

\* Approximate values. Achievable through-put depends on nature of waste stream and other factors.

\*\* Cable-hoist version; Hook-lift version is 5" shorter



Standard FireBox S220



BurnBoss T24

## GENERAL DESCRIPTION OF CharBoss

The CharBoss is a design that adds not only mobility but biochar processing to the Air Burners Fire-Box line of machines, in particular to the popular T24 BurnBoss. When delivered to a job site, the machine is ready for use as soon as it is off-loaded. The firebox system is built on a patented trailer frame that allows the firebox to be raised and lowered for easy movement over the ground. The firebox is lined with proprietary thermal-ceramic refractory panels. The panels are cured prior to installation at the factory to drive out any moisture to ensure they are stable at first use in the field. The forward equipment deck under the cowl supports a three-cylinder diesel engine, a 20-gallon fuel tank, the direct drive system and the air fan. In addition the battery and firebox hydraulic controls are located here. When viewed from the rear of the unit, the patented air disbursement manifold is mounted on the right top side of the combustion chamber of the firebox.

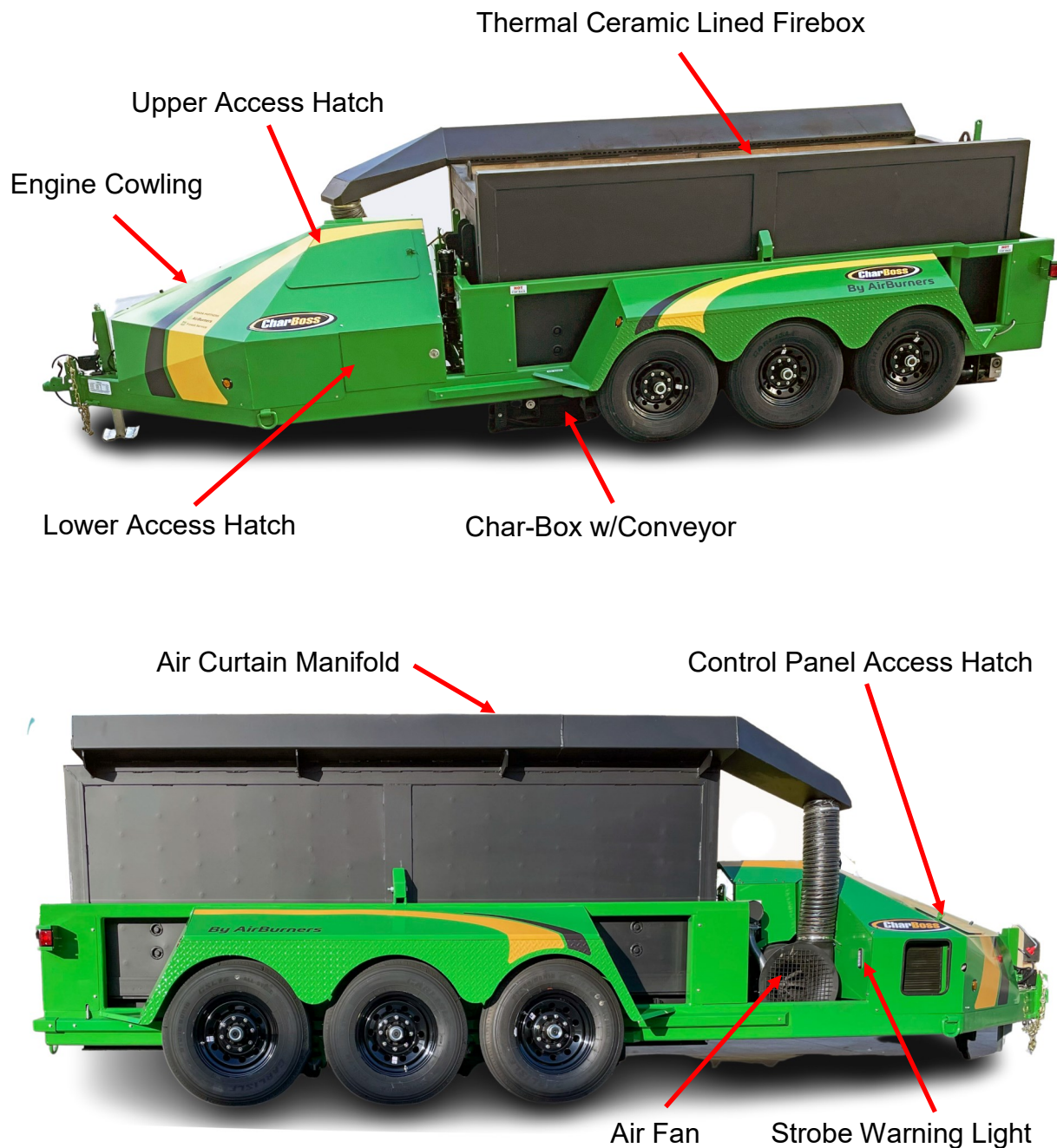
The diesel engine is directly coupled to the main air fan. The high velocity air is sent down the manifold through the vanes and directed to the outlet nozzles. A balanced and distributed air flow is directed across the top of the firebox and then reflected down into the combustion zone.

The curtain of air acts as a top over the firebox, trapping a large percentage of the escaping particulate matter (smoke) and causing it to burn down even further under the curtain before finally escaping through the air curtain as a hot gas. The air from the nozzles travels across the firebox creating the air curtain effect, then it reflects off the far side thermal ceramic wall adding oxygen to the combustion zone helping to generate a hotter more complete fire. This additional agitation helps prevent the fire from starving for oxygen as the ash builds up during burning operations.

The CharBoss incorporates most of the same design features as the BurnBoss. The CharBoss, however, includes a hydraulically driven mechanical grid and transport design to facilitate biochar processing as opposed to optimizing the rapid reduction of woody debris featured by the BurnBoss. That is accomplished by limiting the residence time of the burning char in the firebox. A shaking panel agitates the woody waste material as it is being combusted. This forces small chunks of hot embers to fall onto a continuously moving belt system, which in turn transports the hot glowing particle chunks to the rear of the machine. They are then released into a collection tray filled with quenching water.

The biochar as a finished product is periodically collected from the quenching tray. This is a manual operation on the current T26 model. To conserve water which is a precious commodity in the forest and agricultural fields, the CharBoss design features a system that conserves water with minor water loss from evaporation.

## MAIN COMPONENTS OF THE CharBoss



**T26 CharBoss in Travel Mode with Firebox in Up Position.**



CharBoss T26 in Operation



## CharBoss T26 Air Curtain Burner for Biochar Processing (HATZ 3H50T Engine) OPERATING MANUAL

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### SAFETY CONSIDERATIONS

**READ ALL SECTIONS OF THIS MANUAL BEFORE YOU BEGIN BURNING OPERATIONS**

The BurnBoss operator is dealing with fire on a daily basis; it is very important that each and every individual involved with the machine be alert and practice very rigid safety precautions.

When you are running the BurnBoss you are responsible for ensuring that it is operated in the safest possible manner at all times. If you notice something wrong, correct it immediately, and if you cannot correct it, find someone who can and/or shut down the machine.

#### Basic Safety Points:

1. The CharBoss must be placed onto cleared, level ground.  
The BurnBoss should be driven onto level ground to facilitate loading, dumping and moving of the unit. When lowered, the firebox must touch the ground on all four sides or smoke and embers will escape.
2. The unit should be positioned such that no combustible material is stored within a minimum 100 ft. clearance in any direction.  
The firebox (burn chamber) of the T26 CharBoss radiates considerable heat downwards and may drop hot embers. The firebox must be lowered onto level earthen ground (dirt) and never onto combustibles like dry grass or peat moss and the machine must also not be operated on a surface like a concrete pad, gravel, crushed stone or asphalt. There is a good reason for this warning. Concrete or gravel can contain water which the heat in an operating CharBoss could vaporize quicker than it can be drawn out. This could result in increased vapor pressure that can cause the concrete or stones to explode. Fragments could possibly fly out of the firebox and cause injury or death to persons nearby.  
  
In addition *hot embers* will escape from the unit and, depending on the wind, will land on the ground around the unit. The machine should not be located within 100 ft. of any stored combustible materials. The waste material to be burned during the day's operation can be staged within the 100 ft. perimeter to facilitate loading. The operator must monitor the loading pile to ensure embers do not ignite the loading pile. The combustible materials to be stored for burning at a later date must be stored outside the 100 ft. perimeter or in accordance with the chart on Page 6 of this manual which suggests adjustments for wind speed.
3. The unit should not be operated when the wind speeds reach 20 mph, as the potential to carry hot embers is significantly increased.  
As an operator you should always be aware of wind speed and direction. Increased wind speed will affect the integrity of the "air curtain" and will cause hot embers to travel farther. See the wind speed chart regarding suggested set-back on Page 7.

**WARNING:**  
**Watch for and read the DANGER NOTICES throughout this manual.**

## CharBoss T26 Air Curtain Burner for Biochar Processing (HATZ 3H50T Engine) OPERATING MANUAL

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4. NEVER use highly combustible materials to light the wood waste.  
Highly combustible materials such as gasoline, refined spirits, etc. ignite at an explosive rate which may cause serious injury or death. The safest method to start the fire in the firebox is to use materials such as kindling wood. In the absence of these materials or when starting materials with a high moisture content, use diesel fuel as an acceptable option.
5. NEVER climb onto the BurnBoss or lean over to view or light the fire.  
Always load and operate the machine from the MANIFOLD side.  
  
Hot embers will escape at a low height opposite the manifold. The left side of the machine (opposite the manifold) must be restricted access to prevent injury to persons.
6. Shut the BurnBoss down in an emergency.  
Stop loading the unit, stop the air flow by shutting down the engine. Dump dirt or sand onto the fire. Water should only be used as a last resort as it will likely damage the refractory panels.

**DANGER:** Falling into the firebox will cause serious injury or death.  
**DO NOT** stand within 20 feet of the firebox on the side opposite the manifold.

WIND SPEED VS. SAFE DISTANCE			
Wind Speed mph	Approximate Safe Distance for:		
	Structures (Houses, etc.) ft.	Woods/Trees ft.	Stored Brush Piles ft.
10	300	150	100
12	300	150	100
14	300	200	150
16	400	250	150
18	400	250	200
20	500	250	200

**DANGER:** The above distances serve as a **GUIDELINE ONLY!** You **MUST ALWAYS** observe the down range area regardless of the wind speed. You must always observe local fire ordinances and directives from the local fire department or other competent authorities.

## **CharBoss T26 Air Curtain Burner for Biochar Processing (HATZ 3H50T Engine)**

### **OPERATING MANUAL**

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#### **7. Personal Safety (Personal Protective Equipment – PPE)**

Operators need to be aware of the following potential hazards:

- a. Flying hot embers being released from the fire. Operators or anyone within the 100 ft. radius of the fire should wear appropriate fire resistant clothing. The ideal outerwear for an operator would include a Nomex jacket, leather gloves, eye protection, hard hat, cotton work jeans and steel toe boots. Operators should never wear synthetic material (i.e., polyester) around the fire as this type of material can melt and cause injury. Additionally, some synthetic materials will support combustion and could be very dangerous around fire. One hundred percent cotton materials would be the minimum, cotton treated with a fire retardant would be better and fire proof materials like Nomex would be best.
- b. Noise: Ear protection is recommended around the BurnBoss. It is a good practice to wear approved ear protection when working in close proximity to the fan and engine.
- c. Hot Panels: The backs of the thermo-ceramic panels and parts of the steel structure can each temperatures as high as 500°F. Caution should be taken to ensure operator and visitors do not come in contact with these hot areas.
- d. Ash and dust can be released during the operation and during cleaning. Operators should wear appropriate breathing masks (PPE, such as respirators) to protect themselves from inhaling the dust and ash.



**DANGER:** You must ensure combustible debris does not build up on the equipment. It must be kept clean at all times during operation to prevent a possible fire that would damage or destroy the engine and accessories.

## HOW TO TRANSPORT THE CharBoss

### A. Towing CharBoss T26 (Triple Axle Version)

The T26 CharBoss as street-legal “Trailer-Mounted Machinery” is “Non-self-propelled Agricultural/ Forestry/Construction Equipment”. The CharBoss is equipped with self-adjusting electric brakes. They are properly adjusted at the Factory, but it is the operator’s responsibility to keep them adjusted by periodically backing up the CharBoss while applying the brakes hard.



Frame Rails

Towing the T26 model is like towing any other “heavy” trailer. It is important that the frame rails are as level as possible when hooked to the truck. The T26 comes equipped with electric brakes on all six wheels. Be sure your truck has an appropriate “brake controller” that can handle a maximum current draw for the brakes of approximately 25 amps. The T26 is also fitted with a break-away system. Make sure the battery is charged, the breakaway safety cable and the pigtail with 7-blade RC receptacle are properly connected to the towing vehicle, so that the brakes and lights will function and the breakaway battery be charged. Be sure your hitch assembly is rated for the towing weight of 17,500 lb. (7940 kg) and a tongue weight of 1,450 lb. (658 kg). Always maintain correct tire pressure to prevent premature wear and blow outs (see tire decal). Familiarize yourself with all state and local ordinances that apply to hauling a trailer of the weight of the CharBoss on public roadways.

### TOWING and TRUCK CONNECTION

1. The CharBoss lower trailer frame rail **MUST** be level to the ground front to rear when connected to the towing vehicle.
2. The electrical “pigtail” connection must be correctly made. Check the electric brakes and break-away system to make sure they operate properly.
3. The front jack stand must be up and secure.
4. Make sure the firebox travel safety pins in front and rear are properly in place and secured with their hitch pins for towing (see Page 11).
5. The safety chains and breakaway cable must be properly connected to the towing vehicle.
6. Test the brakes before you drive away.

**DANGER: Do not transport CharBoss from burn site until all fire and embers are extinguished. Trapped embers may not be easily visible.**

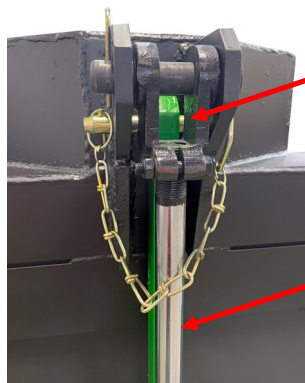
## HOW TO TRANSPORT THE MACHINE

### B. LOWERING THE FIREBOX FOR USE (SET-UP)

1. The firebox must be on level ground.
2. The machine must be disconnected from the tow vehicle.
3. The front jack stand must be down and secure.
4. START ENGINE (See Page 14 for details)
5. Operate with engine at IDLE – 900 RPM
6. Switch SYSTEM POWER to FIREBOX
7. Remove front and rear travel pins; if Firebox is resting on travel pins, briefly press FIREBOX switch to UP to release
8. Hold FIREBOX switch in DOWN position until firebox is lowered (See Page 14 for details)
9. Release FIREBOX switch
10. Switch SYSTEM POWER to OFF
11. Turn Engine Off
12. Perform Daily Maintenance (See Page 13)
13. Shovel dirt around the outside edges where the firebox contacts the ground to prevent heat and smoke from leaking out, especially behind the tires.
14. Locate Catch Basin for Biochar output
15. Fill Catch Basin with water



Jack Stand & Break-Away



Travel Pin Installed

Travel  
Safety Pin

Hitch Pin

Actuator



Hitch Pin Attached  
to Chain

### Hydraulic Oil

If you are operating in cold weather you may need to warm the hydraulic oil before use. In most cases running the engine briefly will generate enough heat. If you still have difficulties operating the hydraulic system you will need to change the oil to a colder spec oil (lower viscosity).

The hydraulic system comes standard from the factory with Amsoil Synthetic Hydraulic Oil ISO32 (Amsoil P/N HVH05-EA). If your machine will operate in cold temperatures or remain outside for long periods in cold temperatures you may need to use a synthetic hydraulic oil such as Amsoil P/N HVG05-EA, ISO22

## CharBoss T26 Air Curtain Burner for Biochar Processing (HATZ 3H50T Engine) OPERATING MANUAL

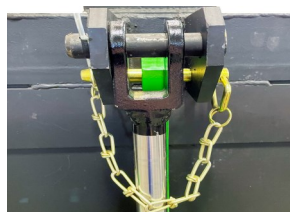
### C. RAISING THE FIREBOX FOR TRANSPORT

**DANGER:** Do not transport CharBoss from burn site until all fire and embers are extinguished. Trapped embers may not be easily visible.

1. Connect machine to tow vehicle.
2. Raise jack stand.
3. Raise the firebox until it stops following these steps:
  - a. START ENGINE (See Page 14 for details).
  - b. Operate with Engine at MED – 2100 RPM.
  - c. Press Button 1 – RABBIT.
  - d. Repeat until Engine is Running at MED – 2100 RPM.
  - e. Switch SYSTEM POWER to FIREBOX.
  - f. Hold FIREBOX Switch in UP position until Firebox is Raised.
  - g. Release FIREBOX Switch.
  - h. Raise or Lower to Align Travel Lock Holes for Travel Pins.
  - i. Install and Secure Front and Rear Travel Pins.
  - j. Switch SYSTEM POWER to OFF.
  - k. Press Button 2 – TURTLE to Decrease Fan Speed.
4. Turn Engine Off.
5. **Immediately** move the machine forward to prevent tire damage by hot embers.
6. Make all safety chain and truck to machine electrical connections (as applicable).
7. Ensure you have read the section on “TOWING” (Page 9) prior to moving the machine.



Jack Stand & Break-Away



Safety Pin Installed



Safety Pin Lock

**DANGER:** Do not tow the machine without the safety pins installed as the hydraulic actuators may bleed down dropping the firebox on the road surface which may cause injury or death.



The T26 Ball Hitch Trailer Coupler is auto-latching (“Demco eZ-Latch” Mechanism Coupler). The height of the Channel Mount Receiver shown to the left is adjustable and the ball receiver can be replaced with an optional Pintle Hitch (MIL Hitch) available from our Parts Department.

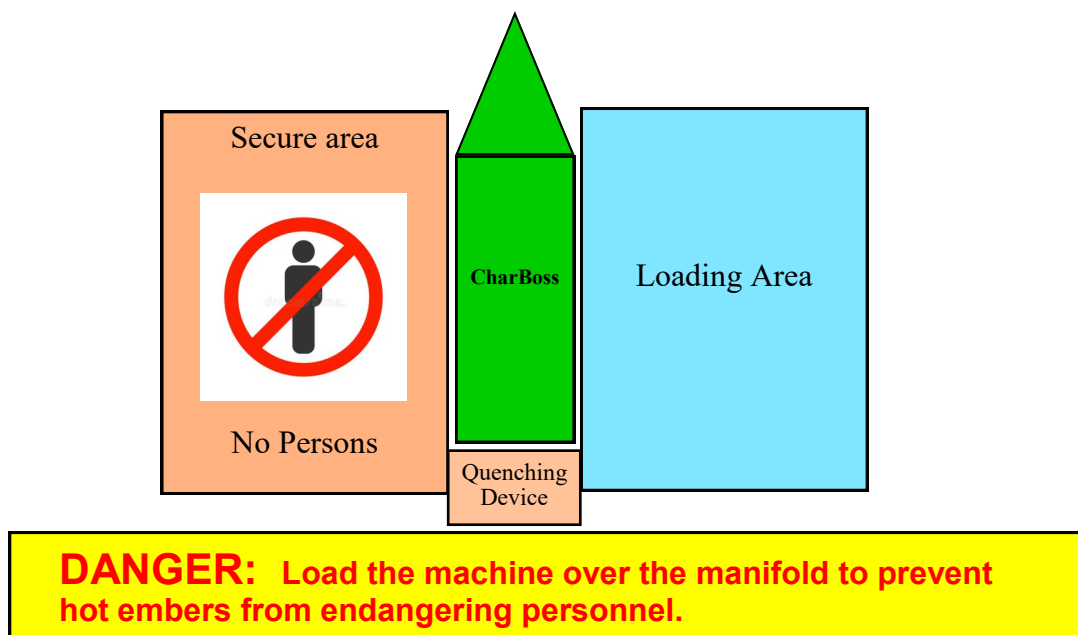
Safety Pin w/Cotter Pin for Hitch

## HOW TO SET UP THE MACHINE

### A. POSITIONING THE UNIT

The CharBoss unit is self-contained and ready to use upon delivery to the job site.

1. The CharBoss must be setup on level ground.
2. The firebox is lowered to the ground using the hydraulic controls (see Page 13).
3. The bottom edges of the firebox must touch the ground to ensure smoke and embers will not escape underneath the firebox walls. If necessary shovel some dirt against the walls from outside the firebox to seal the edges. This must be done prior to loading the firebox with feedstock. Add dirt around the bottom behind the tires to help prevent any heat from damaging the tires.
4. With respect to the prevailing wind direction, the unit should be positioned such that the wind comes over the back of the manifold. This is the preferred position. It is also acceptable to have the wind blow into the manifold. It is discouraged, however, to have the wind come from either end of the machine, as this will tend to disrupt the air curtain.
5. The firebox will be loaded either by hand or by machine, like a Bobcat, always **OVER THE MANIFOLD**. The firebox should not be loaded opposite the manifold as there are many hot embers in this area making it dangerous for personnel.
6. Secure the area (use orange safety cones, signs, fencing, etc.) opposite the manifold (20' x 20' - see diagram below) and along the side of the machine to ensure persons do not get near the hot fire or embers or the rear biochar chute and quenching Device.



## CharBoss T26 Air Curtain Burner for Biochar Processing (HATZ 3H50T Engine) OPERATING MANUAL

### B. PRE-OPERATION CHECK LIST:

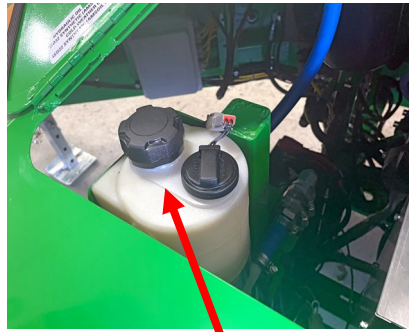
1. Air filter for cleanliness (VERY IMPORTANT).
2. Engine oil level and hydraulic oil levels.
3. Engine coolant level and antifreeze rating.
4. Diesel fuel level.
5. Battery cable.
6. Check hydraulic lines.

#### Left-Side Lower and Upper Service Access Hatches

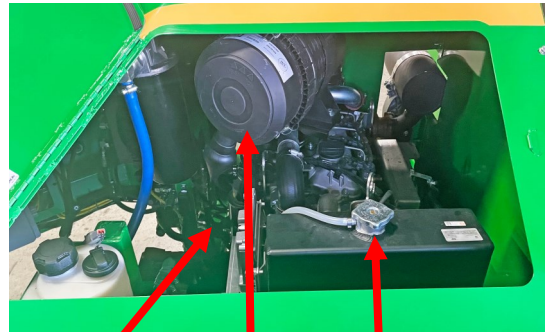
Lower: Diesel Fuel Filler & Upper: Air Filter, Dip Stick, Hydraulic Oil & Coolant Reservoirs



Diesel Fuel Tank Filler



Hydraulic Oil Reservoir for Firebox Lift, Shaker & Con-



Dip Stick

Air Filter, Coolant Filler



Detailed View of Main Control Panel with Legible Instrument and Switch Captions

## CharBoss T26 Air Curtain Burner for Biochar Processing (HATZ 3H50T Engine) OPERATING MANUAL

### HOW TO SET UP THE MACHINE

#### C. STARTING ENGINE

(HATZ 3H50T Diesel Engine)

1. Set all switches to OFF position.
2. Press any button on Engine Controller to power up.
3. Press "ENGINE START – STOP" Button for ENTER PIN to appear.
4. Use Buttons 1, 2, and 3 to enter your PIN.
5. The Engine Controller will read READY TO START.
6. Press "ENGINE START – STOP" Button to start engine.
7. Wait for engine to level off at IDLE - 900 RPM.

Once running, the engine speed may be varied as required by pressing Buttons 1 or 2, respectively on the Engine Controller.



Engine Controller



Control Panel Hatch & Operating Instructions



Control Panel with Toggle Switches  
& Gauges  
(See Page 13 for Enlarged Image)

The maximum engine speed is governed to assure the correct amount of air flow.

## CharBoss T26 Air Curtain Burner for Biochar Processing (HATZ 3H50T Engine) OPERATING MANUAL

### HOW TO SET UP THE MACHINE

#### D) SHUTTING DOWN ENGINE (HATZ 3H50T Diesel Engine)

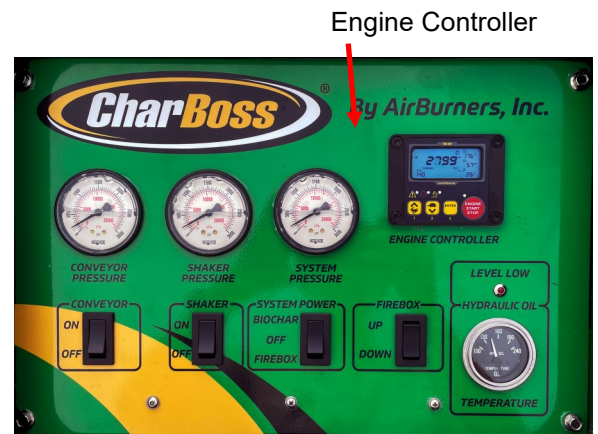
1. Set all switches to OFF position.
2. Press Button 2 – TURTLE to Decrease Engine Speed
3. Repeat until Engine is Running at IDLE – 900 RPM
4. Press “ENGINE START – STOP” Button to Stop Engine



Control Panel Hatch & Operating Instructions



Engine Controller



Control Panel with Toggle Switches & Gauges  
(See Page 13 for Enlarged Image)

## **SITE PREPARATION**

### **THE GOALS TO GOOD SITE PREPARATION ARE:**

**To place the CharBoss for easy access.**

**To sort the waste wood pile.**

**To organize the inflow of new wood waste.**

When positioning the CharBoss:

1. Consider access for your delivery truck and trailer to load and unload the CharBoss, if not pulled by a pickup truck to the location. Ensure there is enough room to maneuver your truck and trailer.
2. Consider where the waste piles will be located. We generally recommend two waste piles (explained in next section).
3. Consider the predominate wind direction. Hot embers will be escaping from the firebox during all biochar processing operations.
4. Consider clearances for unit to be raised and towed **forward** until all the ash remains behind. When emptying, the tires must not come in contact with the hot embers or they will be damaged.
5. Consider clearances to collect and temporarily store biochar collected from the quenching tray and to clean the machine at the end of the workday
6. Once the firebox is in position, it is important to place dirt around the outside bottom of the firebox where the ceramic panels meet the ground to “seal” the bottom. This will prevent heat from escaping. Pay particular attention to the seal between the tires and firebox and between the front wall and engine bay.

**DANGER:** Make sure you do not load foreign objects like metal rods or stakes. They may get lodged into the firebox panels and conveyor system and cause damage to the machine.

**DANGER:** This machine DOES NOT prevent hot embers from escaping.

## SITE PREPARATION

### Faster operation through staging the wood piles

Air Burners air curtain burners were designed primarily as a pollution control device but operated correctly they will burn clean wood two or three times faster than open burning. Additionally, the CharBoss has been designed to process wood waste like forest slash to biochar. To achieve the best throughput and maximum biochar output the fire must remain at the highest temperature possible. You achieve this by remembering three rules:

1. Don't smother the fire with a huge load or a load of very dense material (like palm fronds), material that does not yield good hot coals as woody feedstock would.
2. Load "less more often" that is, smaller bucket loads more often.
3. Sort out a pile of your best burnable wood ("Good Wood Pile"), use it to create a hot fire.

The basic principle of operation is not too different from a campfire. You use your best wood to get it started and if the fire dies down you add some more "Good Wood" to bring it back up.

The temperature drops (smoke increases) and your burn rate slows down, if you overload the machine with materials that have high moisture content such as tree branches with leaves and needles, or green branches such as palm fronds. While these are certainly ok to burn in the CharBoss if you must get rid of them add them to a hot fire, so they dry out and ignite quickly. Use your "Good Wood" to increase the temperature if necessary.

To keep the temperature up and to maintain the highest throughput of waste, you should mix the very burnable wood with the less burnable materials throughout the course of the burning operation. The most common way to accomplish this is to stage a pile of the most burnable materials or what we call the "two pile system."



***"If it's burning clean, it's burning hot. If there is smoke, you're losing money."***

## **SITE PREPARATION**

### **The “Two Pile System”**

For an efficient operation you would have two piles:

The **first pile** or “Main Debris” pile, is the material being generated from the land clearing or forest clearing operation and is located away from the ember path but with good access for loading.

The **second pile** or “Good Wood” pile is your best and most burnable wood. When you first setup the site the operator should spend some time sorting through the main debris pile pulling out what appears to be your best and most burnable materials. This is the material with which you will start the fire. This is the material that will give you a good hot burning base fire. You will also draw from the “Good Wood” pile throughout the day if you should need to stoke up the fire (more on this in the following sections).

As the CharBoss operator is drawing from the main debris pile throughout the day the operator should continue to replenish the “Good Wood” pile as necessary. The “Good Wood” pile only needs to be enough material to stoke-up the fire if needed and enough material to get you started the next day.

### **IMPORTANT WARNING ABOUT BURNING OF PALLETS**

Wooden Pallets contain steel nails and other fasteners that can jam the conveyor mechanism and must therefore not be used as feedstock for the CharBoss. Damage to the machine from introducing metal components and other foreign objects is not covered under your Limited Factory Warranty.

**DANGER:** You must ensure debris does not build up on the machine. It must be kept clean at all times during operation to prevent a fire that would damage or destroy the engine and accessories.

**DANGER:** You must ensure ash and other debris does not build up under the conveyor. It is necessary to move the machine every two days to prevent excessive buildup. If that is not possible, raise the firebox and remove the ash from beneath the conveyor. Please note the earlier cautions regarding raising the firebox with hot ashes present.



## CharBoss T26 Air Curtain Burner for Biochar Processing (HATZ 3H50T Engine) OPERATING MANUAL

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### LOADING AND STARTING THE CharBoss

#### THE GOALS IN STARTING A CharBoss FIRE ARE:

To achieve an even fire across the length of the firebox.  
To start the fire from the bottom of the initial pile.  
To build a hot base fire.

1. Unit must be on level ground.
2. The Engine should be off, (but as described on Page 14 the engine should have been brought up to operating temperature).
3. Shovel dirt along the outside bottom edges of the panels to “seal” them. It will only need a couple inches to prevent the smoke from escaping underneath the unit.
4. Load the firebox from the side of the air manifold. This is safer as there is less chance of the operator coming in contact with hot embers.
5. Load your most burnable material (materials from the “Good Wood” pile as discussed in the previous section) which is the smaller, dryer and cleaner wood (also called “fines”), into the firebox to a level of about half way up. Ensure the entire bottom area of the firebox is covered.
6. If you are using diesel fuel to assist in the lighting, spray it (approximately 3 gallons) across the top of this first load of wood.

**LOAD AND STARTING continued on next Page**

**DANGER:** If you are using a suitable accelerant (where permitted), first ensure there are NO HOT COALS in the firebox from an aborted startup or previous burn event.

**DANGER:** DO NOT use highly volatile accelerants, such as gasoline or kerosene, to light the fire. These fluids ignite almost explosively and may cause injury or death.

## LOADING AND STARTING THE CharBoss (continued)

**CAUTION:** Do not 'pack' the feedstock into the firebox by pushing it down with the bucket or rake of a loader like an excavator, as this will damage the shaker panels and conveyor belt assembly.

7. Once you have this smaller material loaded and your accelerant added (if used) load some larger heavier material on top, such as logs or big branches. Load these heavier materials, also from your "Good Wood" pile, to a height just below the manifold nozzles. This heavier material will help compress the smaller material which will give you a better light-off. If there are large air spaces between the materials in the firebox, the heat will not build up as quickly and the fire may be more difficult to light.
8. This material, once burning, will become your hot base fire to support continued burning. Use your best and driest materials ("Good Wood") for startup, as this will form a strong base for continued burning plus it will start quicker and burn hotter. If you will be burning stumps then it is best to load them after the first hour of burning when the fire is up to full temperature.
9. The level of material in the fire box for light-off should be kept just below the manifold nozzles.
10. Using an appropriate method such as a propane torch (like a weed burner) or oil soaked rags on poles to light the fire.
11. Once the fire is burning, start the engine (See Page 14) then follow these steps:
  - a. Change Engine RPM to adjust Fan Speed for Fire Conditions.
  - b. Controller has 4 RPM Setpoints.
  - c. Press Button 1 – RABBIT to Increase Fan Speed.
  - d. Press Button 2 – TURTLE to Decrease Fan Speed.
  - e. IDLE – 900 RPM.
  - f. LOW – 1400 RPM.
  - g. MED – 2100 RPM.
  - h. RUN – 2800 RPM.

NOTE: Do not increase the engine speed too fast as the air from the manifold could "blow-out" your fire.

***"Less material more often will give you the fastest processing rate."***

## **LOADING AND STARTING THE CharBoss (continued)**

12. There is always smoke on start-up, as all of the material in the box contains moisture, compared to later in the burn operation when only the new material you are loading contains moisture. Plus, the air curtain cannot be fully engaged, until the fire has strengthened or you run the risk of blowing out the fire.
13. Do not load new material into the CharBoss too fast during the first hour of burning operations until a good hot base has been achieved.
14. Once a good hot fire base is achieved load new material at a rate that causes good ignition and does not “smother” the fire.

**CAUTION:** Do not ‘pack’ the feedstock into the firebox by pushing it down with the bucket or rake of a loader like an excavator, as this will damage the shaker panels and conveyor belt assembly.

***“Less material more often will give you the fastest processing rate.”***

## CharBoss T26 Air Curtain Burner for Biochar Processing (HATZ 3H50T Engine) OPERATING MANUAL

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### RUNNING THE CharBoss

While the fire is being lit, fill the Quenching/Collection Bin with water, if not done already.

Once the fire is established usually within 30 minutes and the engine and air fan are running at the rated speed, the production of biochar can commence.

### CharBoss OPERATION

The following steps are performed from the main CharBoss control panel.

1. Wait to operate Biochar System until Fire is burning well and Fan Speed is at RUN – 2800 RPM.
2. Speed is at RUN – 2800 RPM.
3. Switch SYSTEM POWER to BIOCHAR.
4. Ensure SYSTEM PRESSURE is 1800 PSI.
5. Switch CONVEYOR and SHAKER to ON.
6. CONVEYOR and SHAKER will automatically cycle OFF and ON.
7. Charcoal should start exiting the machine at the rear of the conveyor and dropping into the Quenching/Collection Bin.
8. Collect Biochar in Catch Basin.
9. Quench Biochar completely.
10. Remove Biochar from Catch Basin.
11. The Quenching/Collection Bin requires emptying every 10 to 15 minutes, depending on the rate that material is being introduced into the firebox. Emptying the basket is a two-person operation. Turn the conveyor off at the control panel. With one person on each side, grasp the handles and lift the basket from the quenching bath, allowing the excess water to drain. Carry the basket to the designated collection location and empty it then return the basket to the quenching bin.



Quenching - Biochar Collection Bin



Strobe Warning Light

**DANGER:** Conveyor and shaker are automatically controlled by timer and start without warning during normal operation.

**ATTENTION:** White strobe light indicates stalling of conveyor and/or shaker. See troubleshooting section for details.

## CharBoss T26 Air Curtain Burner for Biochar Processing (HATZ 3H50T Engine) OPERATING MANUAL

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### CharBoss OPERATION (Continued)

12. The first basket or partial basket of char may contain a measurable amount of merely partially burned material and may be kept separate from the rest of the day's production, if desirable.



Quenching Bin (Upper Left) and Biochar Collection Tray



Char Exiting Conveyor Before Quenching

**DANGER:** Two authorized persons must lift up and empty the biochar collection tray wearing PPE, especially gloves and face/eye protection. Each person must be able to lift 50 lbs.

**DANGER:** Persons working in close proximity of the char exiting conveyor must be mindful of the possibility that a sudden wind gust may force excessive hot air from the opening.

## HOW TO FEED A FIRE

It will generally take 30 minutes for the fire to build to a point where the temperatures are sufficient for the unit to be operating with minimal smoke.

1. Add material from your “Good Wood” pile slowly for the first hour. It takes about an hour for the fire to reach minimum temperature. Your goal is to achieve an even and hot fire across the unit.
2. For continuous operation the engine RPM is run at full throttle (preset at the factory).
3. Take caution when loading the unit that the material to be burned is not “dumped” in the box too quickly causing hot embers to be thrown from the unit. If you have an area in the box that is smoking, this indicates the temperature is low in that area. Add material from the “Good Wood” pile to get the fire temperature up. Once that area is burning add some of the heavier material.
4. The rate at which you load the unit varies depending on moisture content of the materials and the temperature of the fire. If you overload the firebox you will notice an increase in white smoke. White smoke is an indication that the temperature is dropping. If the smoke increases stop loading until the fire has caught-up. You can also bring the temperature up by adding materials from the “Good Wood” pile.
5. For the highest throughput load **“LESS MORE OFTEN.”** Smaller bucket loads more often will give the materials a better chance to ignite and will result in your highest throughput of material. Oversized bucket loads may smother the fire for a short period before it ignites this will slow the burning down and reduce your daily throughput.
6. The load in the box should not go higher than the bottom of the manifold. If the material is piled higher, it will begin to break the air curtain and more smoke will escape.

The fire should be loaded continuously throughout the day, in order to maintain operating temperatures. If the fire is not loaded continuously, the temperature will drop, the through-put will go down and more smoke will escape.

***“If it’s burning clean, it’s burning hot. If there is smoke, you’re losing money.”***

## SHUTDOWN

### HOW TO BURN THE FIRE DOWN FOR SHUTDOWN

All loading should stop one hour before you intend shut down.

As the fire burns down, maintain the engine and fan speed. This is imperative to maintain the correct hydraulic flow for the shaker and conveyor. Do NOT stop the conveyor whenever there is a significant amount of heat in the machine.

The air in the manifold must continue to flow to control smoke (PM) emissions, to keep accelerating the burn-down, and to protect the manifold from warping from excessive heat. **DO NOT shut off the air flow while there is still flames within 12 inches of the manifold.** Doing so may cause elevated temperatures to warp the manifold, nozzle assembly, etc. Your warranty does NOT cover damage due to excessive heat.

Once the fire has burned down to ash it will be safe to prepare system shutdown following this shutdown sequence:

1. Ensure there is no fire in firebox.
2. Switch Conveyor and Shaker to Off.
3. Switch System Power to Off.
4. Press Button 2 – TURTLE to decrease fan speed (See Page 14).
5. Repeat until engine is running at IDLE – 900 RPM.
6. Press “ENGINE START – STOP” Button to stop engine.

Verify the fire inside is completely out. If it is still burning or smoldering you can raise the firebox and pull the trailer forward allowing the embers to stay behind, then water down any remaining embers. Ensure the fire is out and that there are no hot embers or biochar coals present and that the jobsite is secure before you leave.

**DANGER: Do Not transport CharBoss from burn site until all fire and embers are extinguished. Trapped embers may not be easily visible.**

## ASH REMOVAL

### HOW TO EMPTY THE CharBoss

We recommend moving the unit every morning before burning operations begin. This will minimize the likelihood of fouling the conveyor operation and the ash will be easier to handle and there should be no hot coals or embers.

The ash is emptied by raising the firebox and towing the machine forward. If hot coals or embers are present in the ash bed, it is important to tow the machine away from the embers as soon as the firebox is raised to prevent the hot embers from damaging wheels, tires and axles. The machine should be towed forwards as the tires cannot be driven through the hot embers.

**DANGER:** When removing ash from the firebox, be aware of the wind direction and ensure all operators wear appropriate personal protective equipment (PPE), including face masks to prevent inhaling any ash.

### Ash Removal

1. Engine off.
2. Connect tow vehicle.
3. Raise jack stand.
4. Raise firebox into full up position and IMMEDIATELY pull forward leaving the hot embers and ash behind.
5. Ensure the ash pile is not left HOT, use water to ensure all fire is out.
6. Any residual ash can usually be land applied.

**DANGER:** When removing ash from the firebox, move the machine forward swiftly as soon as the firebox is raised to prevent any hot embers from damaging the wheels, tires and axles.

## TROUBLESHOOTING

### 1. Fire will not start

Material in firebox has too much air space. To correct, load heavy material to make the lower material pack down. **Do not pack the feedstock into the firebox or push down on it with machinery. The force may cause damage to the shaker panel and conveyor components.** Use torches and light from the bottom, so the fire burns up.

### 2. Fire burning at one end

Load “Good Wood” at end not burning and once “Good Wood” is burning, load heavier wood. Once that is burning continue normal operations.

### 3. Fire smoking too much

The most common reason for a smoking fire is loading it too fast, too much dirt or dense materials going into the fire box and reducing the heat. You must make sure the wood waste material is free from large amounts of dirt. Load from your “good wood” pile to bring the temperature back up. Loading new material too fast will smother the fire. Stop loading and let the fire catch up.

The material you are loading may have a very high moisture content. You can either load at a slower rate or mix the wetter material with dryer material.

### 4. Smoke from one area of the firebox

The area is probably not burning well. Add smaller material from your “good wood” pile to this area to help build the fire. As the smoke clears add heavier material.

### 5. Smoke from under the base rails or bottom of panels

Loose dirt was not properly shoveled around outside of firebox to seal between panel bottoms and the ground. To fix, shovel dirt around the outside where the smoke is escaping. Once the ash inside builds up this will stop.

## CharBoss TROUBLESHOOTING

**DANGER:** Before troubleshooting the shaker or conveyor belt, wear personal protective equipment (PPE), especially gloves and eye protection. Keep hands clear of hot and moving parts.

### 6. Shaker Stalls - White Strobe Light Flashing

This can happen periodically under normal operations due to overloading or odd-shaped material causing the shaker table to bind up. Try shutting the SHAKER Switch off and waiting several minutes before turning it back on. Most times, once the material has burned down slightly and/or settled, the shaker will restart.

### 7. Conveyor Stalls - White Strobe Light Flashing

Conveyor stalls are potentially more problematic as it is not desirable to have the conveyor stationary with a significant amount of heat in the machine. The CharBoss has been fitted with a 1-1/8 inch drive shaft extension accepting a same size socket for manual operation with a standard hand ratchet. The extension is located on the right rear of the firebox as shown below.

- Turn off the CONVEYOR switch.
- First ensure the hand ratchet direction is set correctly (drive counter clockwise / CCW or “loosening”).
- Take a couple of partial turns on the driveshaft to ensure the shaft is being turned in the correct counter clockwise direction (CCW). Turn the CONVEYOR switch back on. If the conveyor does not restart, resume the manual assist at the driveshaft.



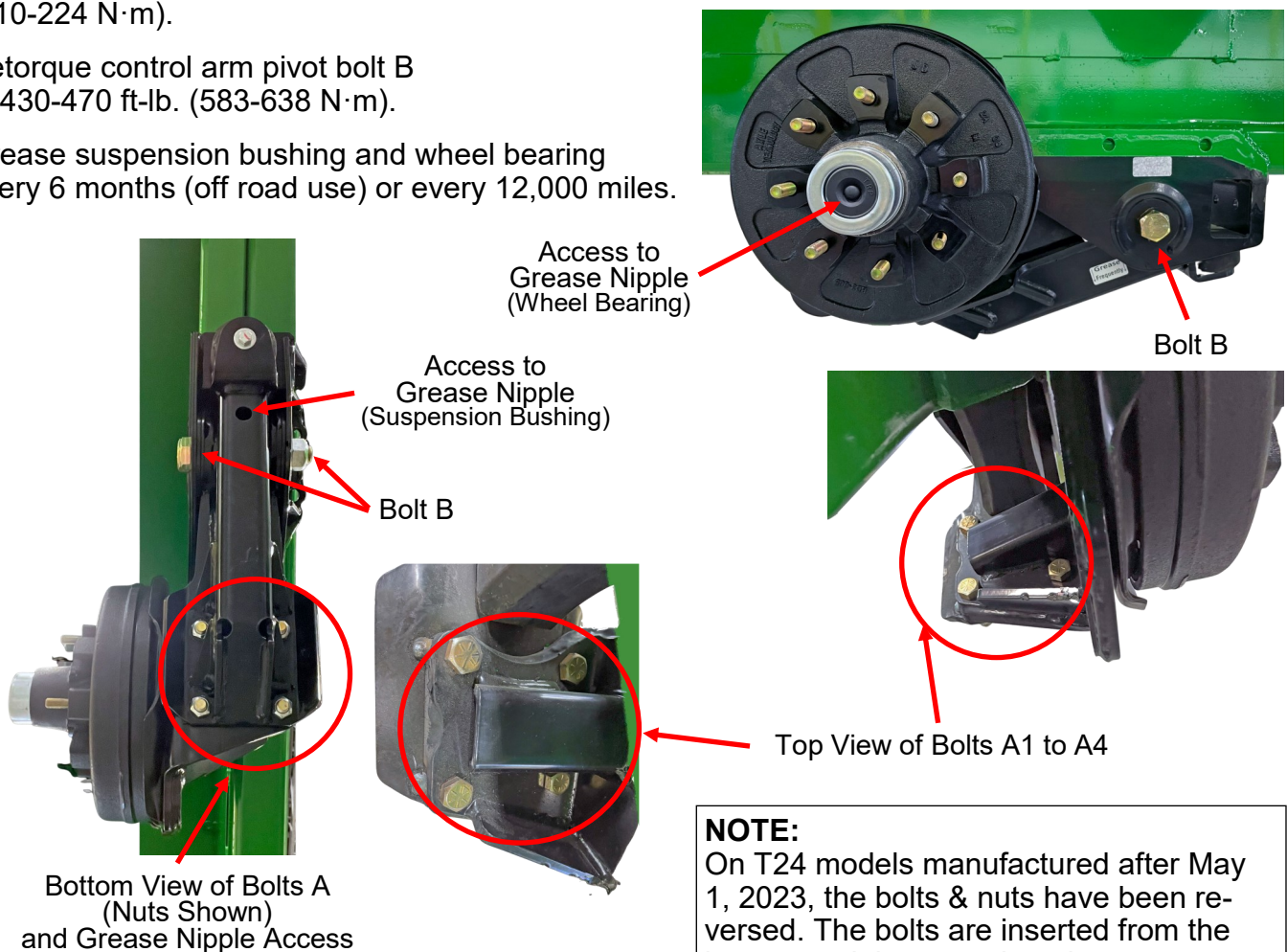
**DANGER:** Conveyor and Shaker are automatically controlled by timer and starts without warning during normal operation.

## MAINTENANCE, CARE AND SAFETY CHECKS

### 1. First Week of Operation Check List: Axle Maintenance

This maintenance work requires that the trailer be chocked for safety, raised and supported by suitable jacks placed under the frame to a height that will relax the torsion springs and removal of each wheel. The firebox must be raised and the safety pins properly in place. This will allow access to the four (4) Bolts A and the large Bolt B. Hold the Bolts A topside with a wrench and tighten the bottom nut by torque wrench. See also NOTE below. Upon reinstallation of the wheels, torque the lug nuts to 80 ft-lb (109 N·m).

- Retorque the four (4) outboard arm (spindle) Bolts A to 155-165 ft-lb. (210-224 N·m).
- Retorque control arm pivot bolt B to 430-470 ft-lb. (583-638 N·m).
- Grease suspension bushing and wheel bearing every 6 months (off road use) or every 12,000 miles.



Check the proper torque of the Bolts A (1-4) and B and the wheel lugs periodically, especially before longer roadway travels. Grease the suspension bushing and wheel bearings with grease gun at the location indicated above. Rotate wheel by hand as grease is applied to bearing until old grease is visible. See Page 33 for lubricant grade.



## CharBoss T26 Air Curtain Burner for Biochar Processing (HATZ 3H50T Engine) OPERATING MANUAL

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### MAINTENANCE, CARE AND SAFETY CHECKS

#### 2. Daily Preoperational Check list:

- a. Oil level (top off as needed).
- b. Engine coolant level (top off as needed).
- c. Diesel fuel level in fuel tank.
- d. Tap dirt out of air intake housing and check for excessive dirt.
- e. Clean out any debris under engine cowling and wheel fenders.
- f. Ensure the hydraulic system is in proper condition, no leaks.

**DANGER: Ensure there is no build-up of debris under the engine cowling or wheel fenders as this will create a fire hazard that could destroy your machine and cause bodily injury.**

#### 3. Periodic Maintenance and Check List

- a. Change engine oil and oil filter as needed.
- b. Clean/replace fuel filter as needed.
- c. Clean and inspect air filter and replace as needed.
- d. Check lug nuts and torque to 80 ft-lb (109 N·m) to ensure they are tight.
- e. Clean debris off radiator.
- f. Check alternator V-belt and adjust as needed.
- g. Check tires for condition and set pressure at 105 psi (cold).
- h. Check break-away switch battery and steel cable.
- i. Check trailer hitch and safety chains.
- j. Check trailer brakes and all lights (adjust brakes by backing up CharBoss and braking hard)
- k. Check lug nuts and torque to 80 ft-lb (109 N·m) to ensure they are tight.
- l. Grease axle suspension bushings until fresh grease exits both ends of control arm as described on Page 29.
- m. Grease wheel bearings until old grease is visible as described on Page 29.
- n. Check torque of axle bolts A (1-4) and B as described on Page 29.

**Contact Air Burners, Inc., should you require assistance with any of these necessary maintenance tasks. Send Email to [support@airburners.com](mailto:support@airburners.com), call 772-220-7303 or 888-566-3900 (Customer Service)**

**Consult the supplied HATZ Engine Service Manual.**

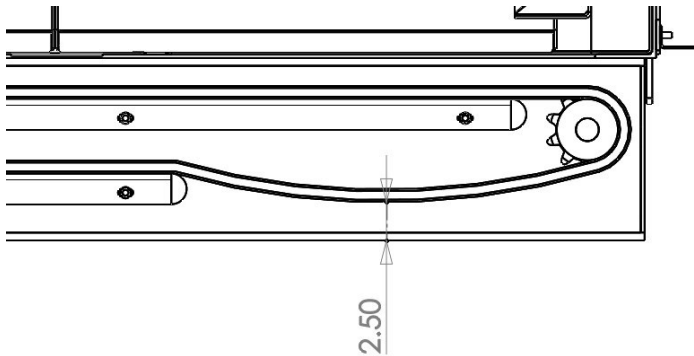
## ADJUSTING CONVEYOR BELT STATIC TENSION

**DANGER:** Ensure that the firebox is secured in the full UP Position with all safety pins in place before attempting to perform this procedure.

### Procedure:

The “sag” or catenary at the rear of the conveyor belt provides the static tension for proper operation. **Do not attempt to tighten the belt to eliminate this sag.** The sag (and corresponding belt tension) MUST be adjusted correctly or damage to the machine will result.

1. With the firebox pinned in the full UP position, clamp a straight edge (piece of angle or similar) across the bottom of the Char Box at the approximate center point of the catenary (about 12” forward of the driveshaft centerline).
2. Measure the sag from the bottom of the belt to the bottom of the firebox and adjust it to 2½” as depicted in this drawing:



3. There is a belt tensioner on each side of the front of the char box where the idler shaft pillow block bearings are located. Loosen the locknut and adjust the belt tension up or down so that the chain just barely contacts the gauge block. Tighten the locknut. Repeat for the other side.



## CharBoss T26 Air Curtain Burner for Biochar Processing (HATZ 3H50T Engine) OPERATING MANUAL

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### THERMAL- CERAMIC PATCHING COMPOUND

#### THERMAL- CERAMIC WET PRE-MIX PART # 6900-1003

*For minor repair of Air Burners T26 CharBoss refractory panels.*

#### Directions:

1. Cracking of the panels is normal as they flex in the heat. Filling the cracks every 6 months or as needed will extend the life of your Thermo-ceramic Panels.
2. Air Burners patching compound is pre-mixed and ready to use (may require some stirring).
3. Storage: Compound should be stored indoors in a frost free location.
4. Preparation: The area in and around the damaged area to be patched must be cleaned and brushed to provide the best surface for the compound to adhere. Remove all loose refractory and debris from the area to be patched.
5. Wet the cleaned surface with a light spray or damp cloth.
6. Installation: Using a trowel or similar tool, pack the refractory compound material into cracks and into areas where the refractory is missing. To achieve proper thickness trim off the excess material using a sharp flat blade or the side of the trowel.
7. Allow the material to harden overnight before placing the FireBox back into service. After the compound has hardened operate the CharBoss under normal conditions.

#### NOTE:

*This is an air cured product. Reseal unused portion immediately.  
Once opened the shelf life is one (1) year.*



## CharBoss T26 Air Curtain Burner for Biochar Processing (HATZ 3H50T Engine) OPERATING MANUAL

### SERVICING SPECIFICATIONS

#### Parts List for Routine Service of HATZ Industrial Diesel Engine 3H50T

Also Refer to Engine Manufacturer's Service Manual for Engine Service Details  
(Engine should be serviced after first 50 hours)

Description	Air Burners P/N	Manufacturer's P/N	Service Interval
Air Filter (Main Element H50)	5000-2338	HATZ 50638200	500 Hours
Air Filter (Secondary Element H50)	5000-2339	HATZ 50638300	500 Hours
Oil Filter H50	5000-2340	HATZ 50638800	500 Hours
Oil Separator H50 (Crank Case Vent)	5000-2341	HATZ 50640500	500 Hours
Fuel Filter H50	5000-2342	HATZ 50638100	500 Hours
Pre-Fuel Filter	5000-2343	HATZ 50638000	500 Hours
Poly-V-Belt (Engine) H50	5000-2344	HATZ 50629401	500 Hours
Battery, 12V, Max 120 Ah; Max. CCA 800; Min. CCA 750; RC 130	5000-2472	Interstate Batteries 24M-XHD	As Needed

Tire Pressure	105 psi (724 kpa) Cold
Tire Size	ST235/80R16
Rim	16 x 6 (8 Lugs)
Fuel	Ultra-low Sulfur Diesel Fuel
Engine Oil	15W40 or 10W40 Diesel Grade
Engine Oil Capacity	5.2 qt. (4.9 L)
Bearing Lubricant	NLGI Grade 2
Hi-Temp Anti-Seize	Electrically Conductive Anti-Seize Lubricant, -65°F to 2000°F
Engine Coolant	Low Silicon Anti-Freeze (Green). Units are shipped from factory with 50-50 mixture green antifreeze/water.
Hydraulic Oil	ISO32 Synthetic Hydraulic oil, factory installed is Amsoil HVH05-EA. (cold weather option is ISO22 synthetic, i.e. Amsoil HVG05EA). Change Hydraulic Oil every 1 to 2 years, depending on environment.
Break-Away Switch	12V Battery - See owner's manual
Fuel Tank Capacity	Minimum 20 Gallons (75.7 Liters)



## **CharBoss T26 Air Curtain Burner for Biochar Processing (HATZ 3H50T Engine) OPERATING MANUAL**

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### **APPENDIX A (Diagram Rev 2.1)**

## **CharBoss® T26 Trailer Lighting & Brake Wiring Schematic**

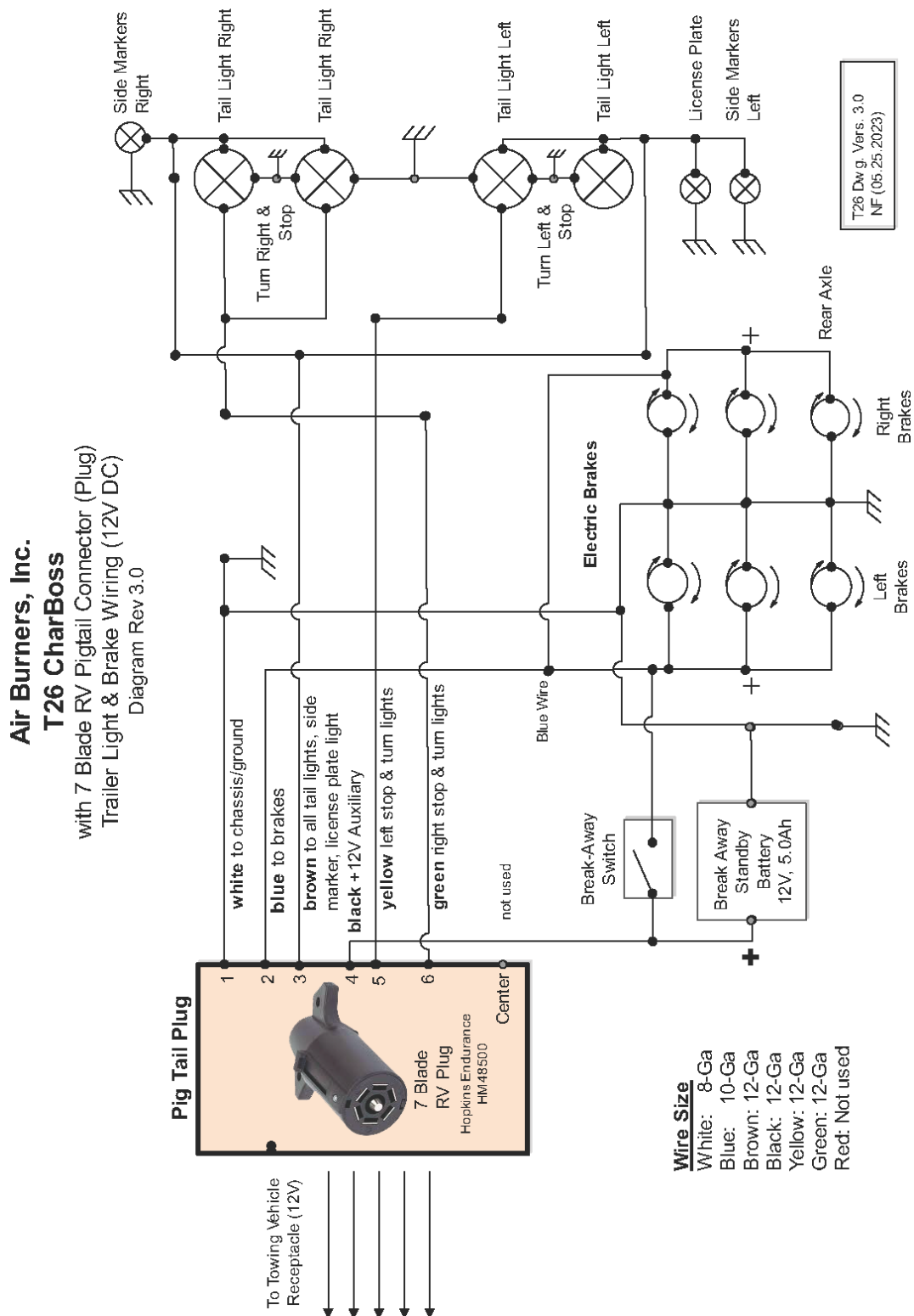
The CharBoss® T26 is equipped with electric brakes on all six wheels. The brakes will adjust automatically each time the CharBoss is backed up.

The brakes have been properly adjusted at the Factory, but it is the operator's responsibility to keep them adjusted by periodically backing up the CharBoss while applying the brakes hard.

**Contact Air Burners, Inc., should you require assistance with the axle maintenance tasks. Send Email to [support@airburners.com](mailto:support@airburners.com), call 772-220-7303 or 888-566-3900 (Customer Service)**



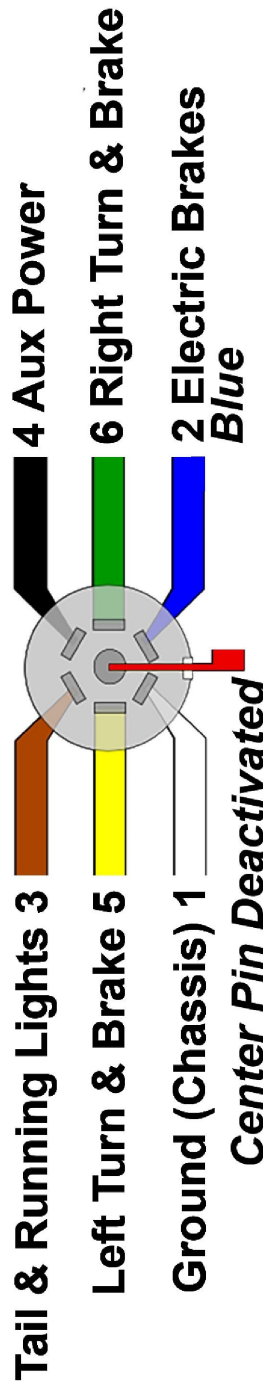
## CharBoss T26 Air Curtain Burner for Biochar Processing (HATZ 3H50T Engine) OPERATING MANUAL





## 7-Blade RV Type Trailer Wiring Connector

(Looking from Screw Connector Side - Back of Plug)



Blade #4 Connects to Break-Away Switch to Supply +Power from Towing Vehicle

*Applies to Air Burners Models T26*

Rev. 2.2 (30 May 2023)