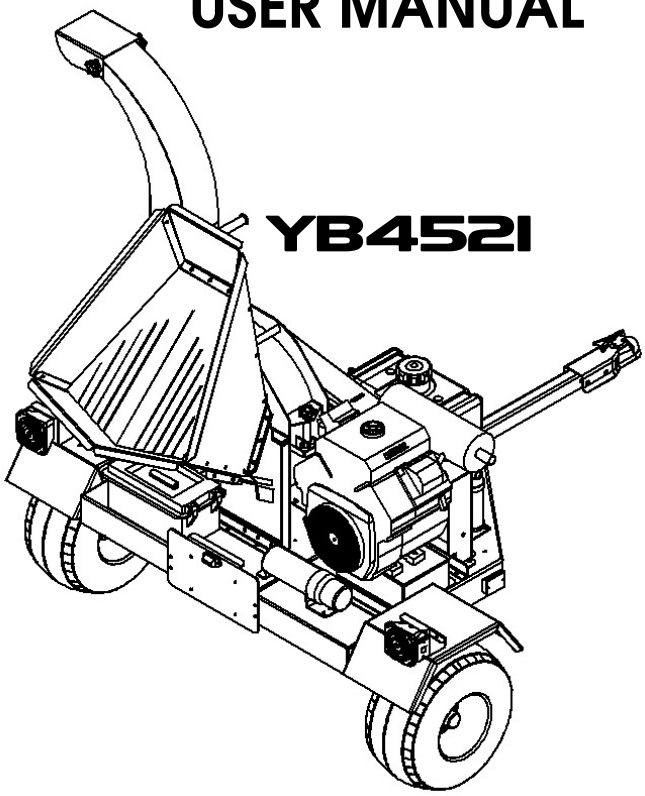
YARDBEAST®

USER MANUAL



Commercial Grade Wood Chipper

4.5” (114mm)

WARNING

Read and follow all instructions in this manual before attempting to operate this machine. Please keep this manual available for consultation at any time. Read it thoroughly and become familiar with the operating instructions, maintenance and security indications. Failure to follow these instructions can result in serious injury to yourself and others.

Rederick Metal Industries Corp.
1925 NW21st Terrace
Miami, FL 33142

www.yardbeast.com | 305.396.3396

V1.0

We greatly appreciate that you have purchased a wood chipper manufactured by us. The same has been designed and carefully fabricated to give you excellent performance and reliability. We truly hope it exceeds your expectations.

Please read carefully and follow all the instructions in this manual before operating this wood chipper. This document tells you how to set up, operate and maintain this machine safely and easily. Make sure to follow all recommended safety measures, and instruct any other person that will be operating this chipper. Failure to comply, could result in personal serious injury to the operators and others. Allinformation contained in this manual refers to the latest product information available at the time of printing. It is recommended that you review the manual frequently to familiarize yourself with the unit, operation and its features.

We are developing and improving our equipment continuously through our Kaizen philosophy. If you have a problem, doubt, or if any information in this manual that does not match what is on your woodchipper, don't hesitate to contact your dealer or authorized service representative, or in any case please contact us directly. The phone numbers, web site and mailing address of Rederick Metal Industries Corp. are located on the next page. In the case that your wood chipper is equipped with an engine; the engine manufacturer is responsible for all matters related to the performance, power output, specifications, warranty and maintenance of it. For more information see the Owner's Manual/ Operator delivered by the engine manufacturer. This is shipped in a separate packaging, together with this unit.

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PRODUCT REGISTRATION

Before you assemble and use your new wood chipper, please locate the information plate on the unit and record the information in the boxes located at the bottom of this page. The plate is located in the lower left part of the trailer base facing the tow tongue. If you have to request technical support via our web site, phone customer support, or a dealer/servicing dealer, you will need this information.

VIN NUMBER:

_____

COMPLIANCE WITH STATE LAWS

This chipper complies with all FMVSS requirements for highway towing and local registration at your state DMV. Depending on which state you are located, please make sure if you are required to register the trailer and have license plates for it before you tow it out on the streets.

This chipper is manufactured in Nicaragua, Central America. A certificate of origin is provided with the chipper for trailer registration purposes.

CUSTOMER SERVICE

In case you have problems to assemble this wood chipper or have questions regarding the controls, operation or maintenance of the same; you may request assistance to us writing to us, email or phone call.

1925 NW 21st Terrace. Miami, Fl 33142
Phone: (305)-396-3396
Website contact form available at
www.yardbeast.com
email: sales@yardbeast.com

For faster service we prefer you give us call or drop us an email, that way we can also share media such as pictures, videos, etc.

CHIPPER SAFETY MEASURES

This machine is designed to be in compliance with safety regulations contained in this manual. As with any type of powered equipment, an error or negligence on the part of the operator can cause serious injury.

This machine is capable of amputating fingers and hands; it also expels foreign objects with great force, that can cause damage to a person by facial and body exposure. Never look directly into the discharge area of the chipper while the rotor is in motion.

In case of any emergency, attempt to shut down engine and seek immediate help.

TRAILER SAFETY MEASURES

The chipper has been designed to comply with all required FMVSS safety regulations.

If towing for the first time,please get in contact with your local DMV about trailer towing courses.

Make sure if you are required to register and title your trailer with your local DMV.
Never exceed road and highway speed limits. Although this trailer has been designed for high speed towing; we recommend not to exceed 50MPH towing speeds. Always drive on the right lane when towing.

Always make sure you have working trailer lights. This is required by law. When coupling the trailer to your truck, make sure to always secure the coupler towing pin and secure the towing safety chain.

The tires are the only components between the machine and the ground. It is very important you always check lube on the bearings, tire pressure, tread condition etc.

ALWAYS USE COMMON SENSE AND EXERCISE EXTRA CAUTION WHEN TOWING.

The presence of this symbol indicates that these are important
safety instructions that must be followed in order to avoid putting at risk your personal safety and other's. Read and follow all the instructions in this manual before operating this equipment.

SYMBOL IDENTIFICATION

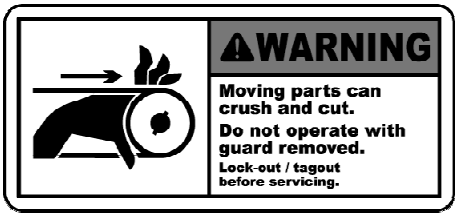
Wear safety Gloves

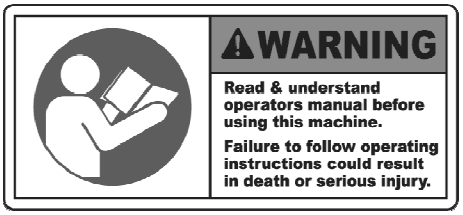
wear safety Goggles

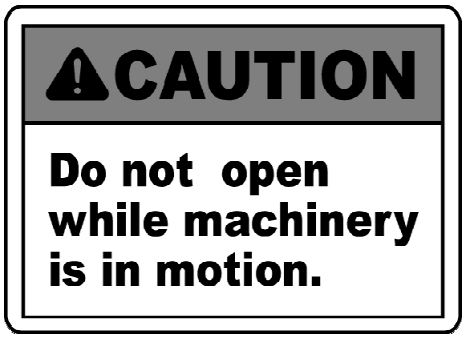
wear safety Ear muffs

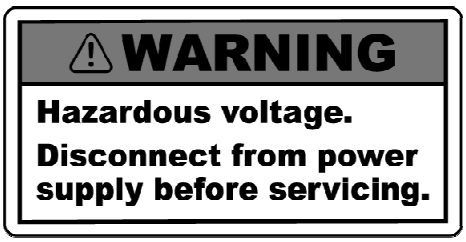
Do not place Your hand Beyond this Point.

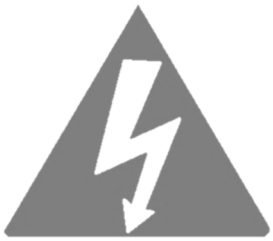
Warning











Risk of Electrical Shock

KEEP WARNINGS IN MIND

Protective equipment required for the operation of this equipment..

Safety goggles
Safety gloves
Ear Protection (muffs or plugs) Appropriate outwear(preferably long- sleeved shirts and jeans for work)
Helmet (not supplied).

If you will be working in the streets, it is also recommended you use high visibility clothing and safety vest (not supplied).

TRAIN YOURSELF ON THE CHIPPER

1. Read, understand and comply with all instructions included in this manual and in the machine before assembling and putting it into operation. Keep this manual in a safe place for future reference, as well as for ordering spare parts or performing service.
2. Familiarize yourself with all of the controls. Please know how to stop the chipper when it is operating and how to manipulate the controls quickly.
3. Persons older than 16 years of age, must read and understand the operating instructions as well as the safety rules contained in this manual. We suggest no persons below 16 years of age should operate this equipment.
4. **Without receiving appropriate instructions, do not allow anyone to operate this machine.**
5. Do not turn ON the chipper in closed spaces or in an area with poor ventilation. Exhaust gases from the engine contain carbon monoxide, a lethal gas which is odorless.
6. Use appropriate protective equipment on each operation.
7. Don't put your hands close to the parts that are in motion or inside the feed hopper -as indicated in the prints - when in operation. Be careful not to touch any surface which is heated during the operation and remains as such for a long time after the wood chipper is shut down.
8. Stay away from the discharge, wood debris is expelled with great speed that can produce facial or body damage.
9. Do not operate the chipper if its belt guard is removed.
10. Keep the bystanders away from the chipper while it is running. Do not allow the presence of minors in the work area. Stop the machine if anyone enters the area.
11. Turn off the engine and disconnect the spark plug before servicing the equipment.
12. Always operate the chipper coupled to the vehicle. DO NOT operate the chipper on its trailer jack as it is not safe; there is no way to lock the jack in position.
13. Never stop paying attention to the chipper while in operation. If you need to check for something on the chipper or outside the chipping area, throttle down engine until clutch is disengaged, allow rotor to come to a full stop and turn off the chipper.

TRAIN YOURSELF ON THE TRAILER

1. Always comply with the law regarding towing, lightning and stowing of the equipment before going on the road.
2. All trailer nuts are safety hex nut, that is, they are fitted with a nylon seal that prevents the nut from getting loose on time. If for any reason you must loosen one of these nuts, please make sure you replace with a new safety hex nut (commonly available) as the old nylon seal is no longer reliable to hold the nut in place.
3. Make sure to check lightning, all side marker lights, license plate light, tail and stop/turn lights.
4. Always maintain a good tire pressure per manufacturer specifications.
5. Always make sure the trailer jack is properly stowed before moving.
6. Always check coupler setup and make sure the safety tow chain is properly secured on the trailer and the truck before moving.
7. Always make sure that the trailer is riding in level with the road. Never tow at extreme angles.
8. Avoid towing in inclement weather unless really necessary.
9. Always plan your trip beforehand. Make sure that the trailer will go through tight access ways.
10. Check periodically the wheel inner bearing lubrication, particularly on long travel services. Pay attention if the wheels are getting abnormally hot.
11. When driving always maintain a proper speed; and save your distance from the car upfront. Sudden and hard braking may make your trailer skid sideways.

Preparations checklist before chipping

1. Carefully inspect the area where the equipment will be used.
2. Protect your eyes, always use safety glasses while operating this machine. Otherwise, objects thrown that bounce can seriously injure your sight.
3. Use ear protection. This will protect you from the engine noise and noise produced by the chipper when you feed the material into the hopper.
4. Use work gloves with palm of leather or industrial grade cotton/rubber when you feed the material into the hopper. Before you turn on the machine, check all bolts and accessories to ensure that the machine is in safe operating condition.
5. Perform a visual inspection of the machine in frequent intervals to check whether the chipper has suffered any important damage resulting from operation.
6. Maintain and replace the safety labels and instructions as necessary.
7. Make sure the discharge is directed at a safe discharge zone such as truck bed, or forest greens, or any other appropiate area away from bystanders.

Safe Handling of Fuel

To avoid personal injury or property damage, be very careful when handling fuel. The fuel that is used, - gasoline- is highly flammable and the vapors are explosive. You can be seriously injured if fuel is spilled on yourself or your clothes which can ignite. Wash your skin and change clothes immediately.

1.Use only containers approved for Gasoline or Diesel .
2. Never fill containers inside a vehicle or truck. Always place containers on the ground away from your vehicle before refilling.
3 . Keep the nozzle in contact with the lip of the inlet to the engine's fuel tank or container at all times until it is full at recommended fuel tank or engine manufacturer specifications.
4 . No smoking should take place close to the chipper. Turn off all cigarettes, cigars, pipes and other sources of ignition.
5. Never refuel the machine indoors or just after operation. Please wait 2 minutes before refueling.
6. Never remove gas cap or add fuel while the engine is hot or running . Allow engine to cool at least two minutes before re- fueling .
7. Never overfill the fuel tank . Fill tank to no more than 1/ 2 inch below the base of the neck of the thread to allow room for fuel expansion.
8. Place the fuel cap back on and tighten securely .
9. Clean up spilled fuel on the engine and equipment. Move machine to another area. Wait 5 minutes before starting the engine.
10. The carbon vapor filter located besides the tank contains the fuel vapor from going into the atmosphere. This is required per CARB regulations. This component is sealed and does not need any maintenance.

Operating your Wood Chipper

1.Check the oil and fuel level before starting the engine.
2 . Do not put hands near rotating parts or power inputs . Contact with the chipper and rotating parts –while in operation- can seriously damage fingers, hands .
3. Before operating the machine , open it. Check and clean the rotor of foreign debris objects , make sure the cutting chamber is empty and free of any foreign material.
4 . Thoroughly inspect all material to to be chipped and remove any foreign objects - such as nails, glass, steel wire, etc- that could cause injury to you or damage the machine.
5 . Do not attempt to chop material larger than specified in this manual. Puts you at risk of injury or damaging the chipper.
6. Keep all guards and safety elements in place and in good condition.
7. Do not operate this machine while under the influence of alcohol or drugs.
8. Never operate this machine without good visibility or light .
9. If the engine is hot, do not touch as it may cause severe burns.
10. Do not attempt to move the chipper while the engine is running .
11. never overreach over the hopper to clear a branch with your hands. User another branch stick instead. NEVER reach your hands past the guard point.
12. When chipping, if for some reason the branch gets stuck in the feed chute and rotor is held in position, quickly throttle down the engine to disengage the clutch.
13. To clear the branch, make sure to shut engine off and that rotor is at a completely still. Open the top half and attempt to clear the branch from the feed opening.
14. Never feed the chipper anything else other than wood. This chipper is designed to withstand impact frequency of dry and green wood material including leaves.
15. Always check on your blade sharpness, this is crucial to an optimum performance.

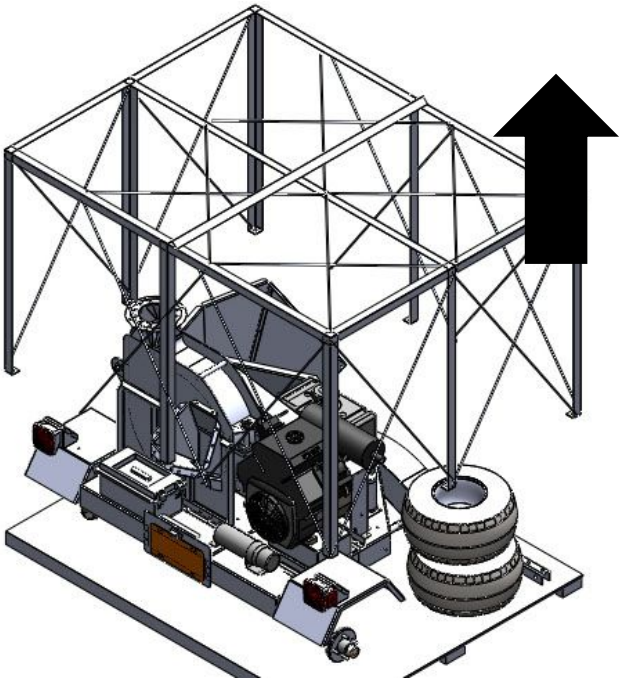
Maintenance and Storage

1.Never tamper with the safety components. Check periodically that they are functioning properly.
2 . Make sure all screws, bolts , pins and cotter pins are in good condition to make sure the machine is in safe operating condition . Also , visually inspect the chipper to check for damages and determine if repair is necessary.
3. Lubricate bearings as often as maintenance chart indicates(found below) to avoid wear ; it also protects from corrosion and reduces heat stress thus extending their operating life.
4. Before cleaning, repairing or inspecting the chipper, stop the engine and check that all moving parts have stopped.
5 . Do not change the engine governor settings or overspeed the same. The governor controls the maximum safe operating speed of the engine.
6. Maintain or replace safety and instruction labels as necessary.
7. Follow the instructions in this manual for safely storing this machine during off season.
8. Never store the chipper or fuel container in an enclosed space where there is presence of flame, spark or pilot light such as water heaters, furnaces, clothes dryers, etc.
9. Allow machine to cool at least 10 minutes before storing after shutting it down.
10. Always refer to the engine manual for proper instructions for off-season engine storage.
11. If you need to empty the fuel tank, do it outdoors and away from possible spark sources.
12. Observe the local rules for proper disposal laws for oil, fuel and greased towels.

ASSEMBLY OF THE UNIT

Tools needed for the assembly of this unit:

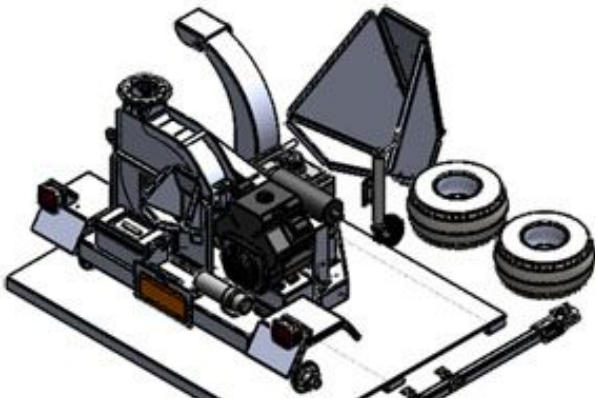
- 1- Rubber mallet
- 1- Hammer with nail remover
- 2- 7/16" hex wrench
- 2- ½" hex wrench
- 2- 9/16" hex wrench
- 1- 11/16" hex socket
- 1- 3/8" hex socket
- 1- pliers
- 1- ratchet drive
- 1- ratchet extension
- 1- small scissor jack & small wood blocks



Step 1 Lifting cage out

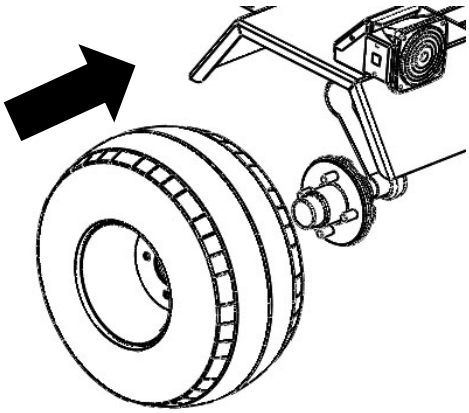
With the 3/8" hex socket loosen the 4 screws attaching the cage to the pallet. You can also do this with a 3/8" hex wrench.

Make sure you have another person to help you lift the cage up as it is too big for one person only.

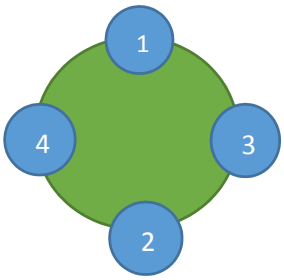


Step 2 Take apart components from the pallet.

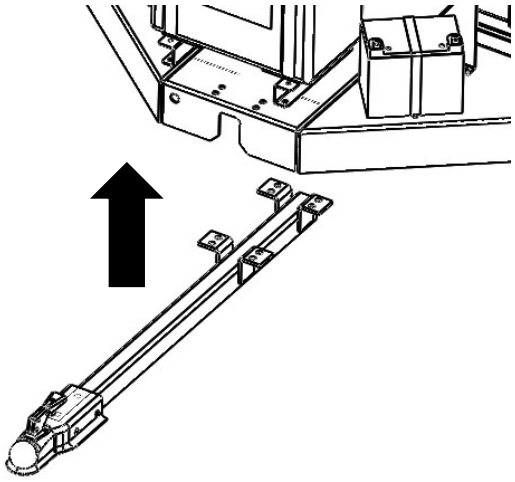
Please take out of the packaging all components strapped with stretch wrap such as wheels, trailer tongue, feed hopper, etc. Make sure to remove step blocks that hold the axle in place with a hammer (use the nail remover side).



Tigthening Sequence:

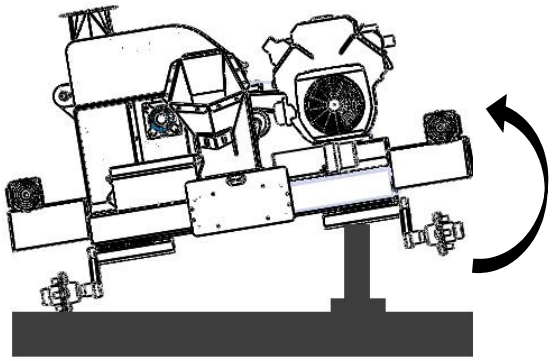


Step 4 Tongue assembly



Step 3 Wheel assembly

With the help of scissor jack, place the jack underneath the trailer close to one of the wheel hubs. Raise the trailer high enough fo the wheel to fit. If needed, you may increase lifting height by adding a small wood block below the jack first. Below is a guiding illustration. Chock the assembled wheel when inserting the other wheel.

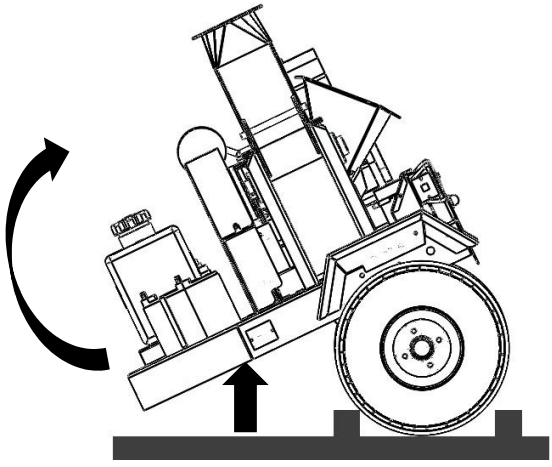


Remove first the front step block that secures the front of the chipper with a hammer (use the nail remover side).
With the help of a another person attempt to lift the fron of the chipper high enough to place some wood blocks underneath. Attempt to position the jack and lift. Make sure the jack is not blocking the area where the tongue will be assembled. See pic below.

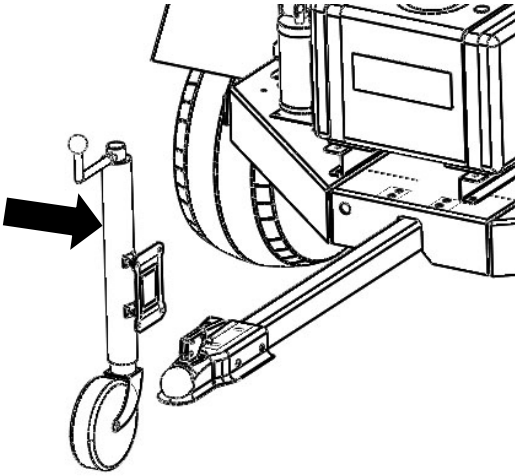
Do not attempt to lift the unit by yourself or someone else, please bear in mind most of the chipper weight, more than 700lbs, is placed over the wheel shafts.

Once height has been reached insert wheel into the wheel hub. Attach the wheel with the wheel lugs. Do not tighten with drive until the unit has both wheels fitted and the trailer is resting on the floor.

Wheel nuts must be tightened in stages. Begin tightening by hand to prevent cross threading. Then torque each lug nut to 20-25 ft-lbs, and then torque to 50-60 lbs-ft. Finally, torque the lug nuts to 90-120ft-lbs.

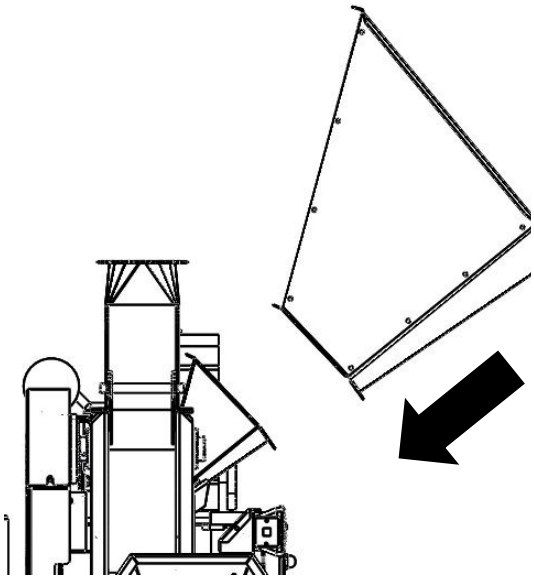


With the help of another person, position the tongue and insert fasteners (from the top down). Insert flat washer and then safety hex nut. Tighten.



Step 5 Trailer Jack assembly

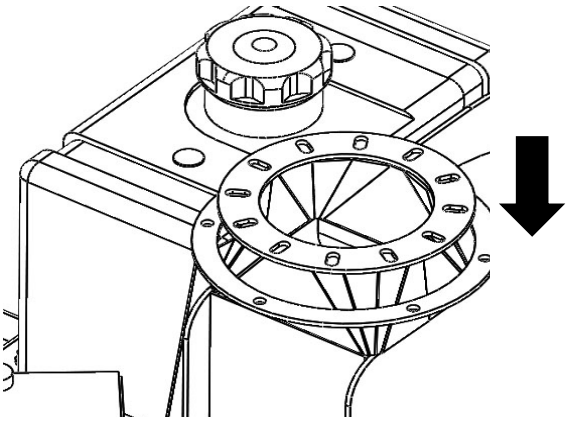
With the help of another person, position the tongue and insert fasteners (from the top down). Insert flat washer and the safety hex nut. Tighten.



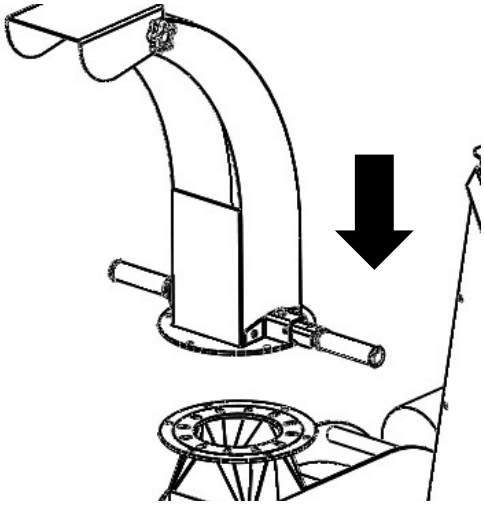
Step 6 Feed Hopper Assembly

Hopper is already pre-assembled.

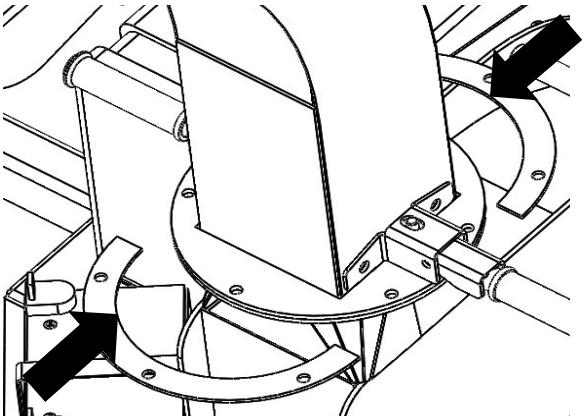
With the help of another person, position the feed hopper into its transition-feed chute. Tighten.



Step 7 Discharge Chute Assembly
Please slide flange ring over the top neck of the chipper. See pic above



With the help of another person, make sure to position the discharge chute over the top neck of the chipper correctly. Each position holding pin must enter a hole on the top neck ring. Once this is ready, you need to brace the chute with the brackets below. Shown pic below.



You must tighten the brackets with the safety hex nuts equally around the neck. You need to tighten just enough to allow the neck to rotate while reaching minimum play.

Tip: Grease the upper surface of the chipper neck and the bottom ring of the discharge chute so the discharge can rotate easier. These parts are powder coated, they have good slipping between surfaces, but they can get stuck under pressure.

Step 8 Connecting the battery

The only cable you need to connect to the battery is the (+) positive one. It is generally a thick cable (1/0 AWG) that runs from the positive terminal of the battery to the starter motor of your engine.

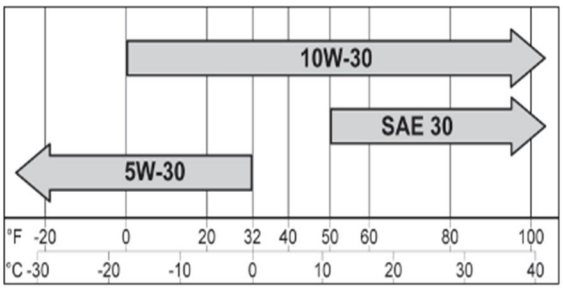
To connect simply unscrew the bolt on the positive end of the battery and place the connect as shown on the picture below.

Slide the bolt and screw again. This connection need to be made tight enough to ensure good current transfer.

Step 9 Filling the engine with Oil.

In this section we give you general instructions for for preparing your engine for starting. However it is your responsibility to read the engine manual and follow the instructions for preparing, starting, operating and maintaining your engine.

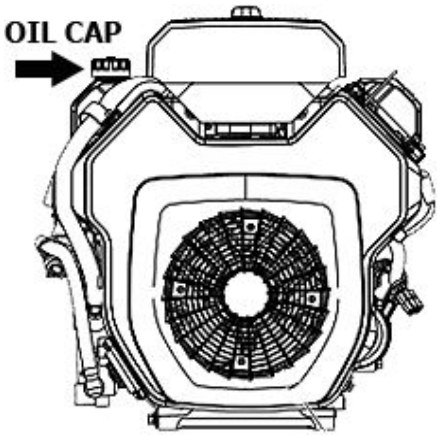
Choosing the right oil in your engine depends much on the type of climate you will be operating. For better reference below is a detail of the oil type required for the working temperature range that the engine will endure.



Therefore, we recommend using synthetic 10W-30 oil as it will be the most versatile in different types of climate.

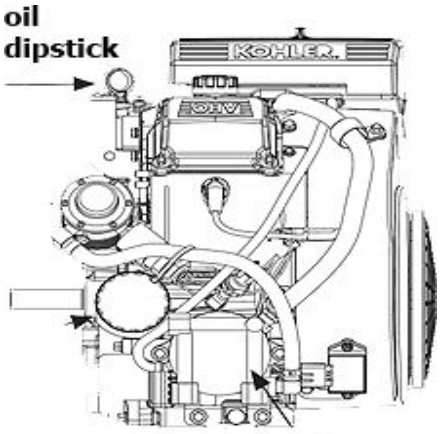
- Please refer to your engine manual for the amount of oil required to fill up the engine. (if chipper is fitted with a CH640 Kohler, this engine tipically utilizes approx. 1.9 U.S quarts on refills. When engine is new, you may need to add more as the oil fills up the crankcase.

To fill the engine with oil please open the top cap of the overhead cylinder



Add oil through a funnel at a slow pace not to spill over. Check frequently the oil level in the dipstick. Do not overfill.

It is important you fill the engine with proper oil level. A low oil level will prevent engine from starting.



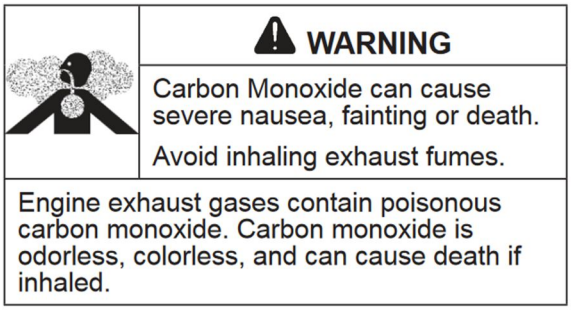
Step 10 Starting the engine

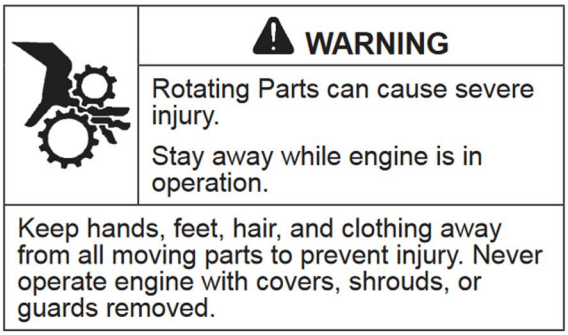
CAUTION: **Do not crank engine continuously for more than 10 seconds. Allow a 60 second cool down period between starting attempts.** Failure to follow these guidelines can burn out starter engine.

WARNING: Upon start-up, a metallic ticking may occur. Run engine for 5 minutes. If noise continues, run engine at mid-

throttle for 20 minutes. If noise persists, take engine to your local Kohler authorized dealer.

NOTE: If starter is engaged while fl ywheel is rotating, starter pinion and fl ywheel ring gear may clash resulting in damage to starter.





Starting Procedure:

Place throttle control (if equipped) into idle position. Place choke control (if equipped) into ON position.

Turn key switch to START position. Release switch as soon as engine starts. If starter does not turn engine over, shut off key switch immediately. Do not make further attempts to start engine until condition is corrected. Do not jump start. See your Kohler authorized dealer for trouble analysis.

Once engine starts, we recommend allowing 5-7 minutes engine warmup. There is virtually no external load on the engine, as the engine clutch is disengaged at idle speed.

Step 11 Operating your wood chipper.

Once you have started the engine, at idle speed, allow 5-7 minutes for warmup before increasing the throttle.

Check everything is in place and that you have completed your preparation checklist before increasing throttle. Make sure you are utilizing proper safety equipment.

Belt Break in
Break in of the belts to aim for maximum life and avoid premature wear on the belts. The goal of belt break-in is to allow some time for the belts to properly wear and accommodate themselves to the sheaves before applying maximum torque.

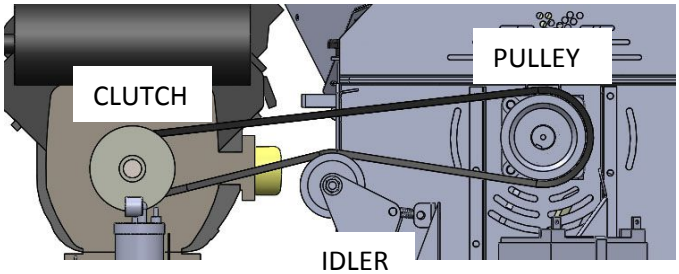
To do the belt break in, increase throttle slowly to allow time for clutch enagement and belt break-in. Once the rotor is gyrating and the clutch is engaged (not slipping) keep increasing throttle up to ¾ of the way. Please allow running the chipper at this speed for two cycles of 20 mins each with a cooling interval of 30 mins in between. When slowing down the chipper, do so at a slow pace as well.

Chipping
If chipping for the first time, it is important you start knowing the chipper and increase your learning on the equipment. We recommend you begin chipping small branches and twigs and take it from there to bigger sizes when you feel comfortable.

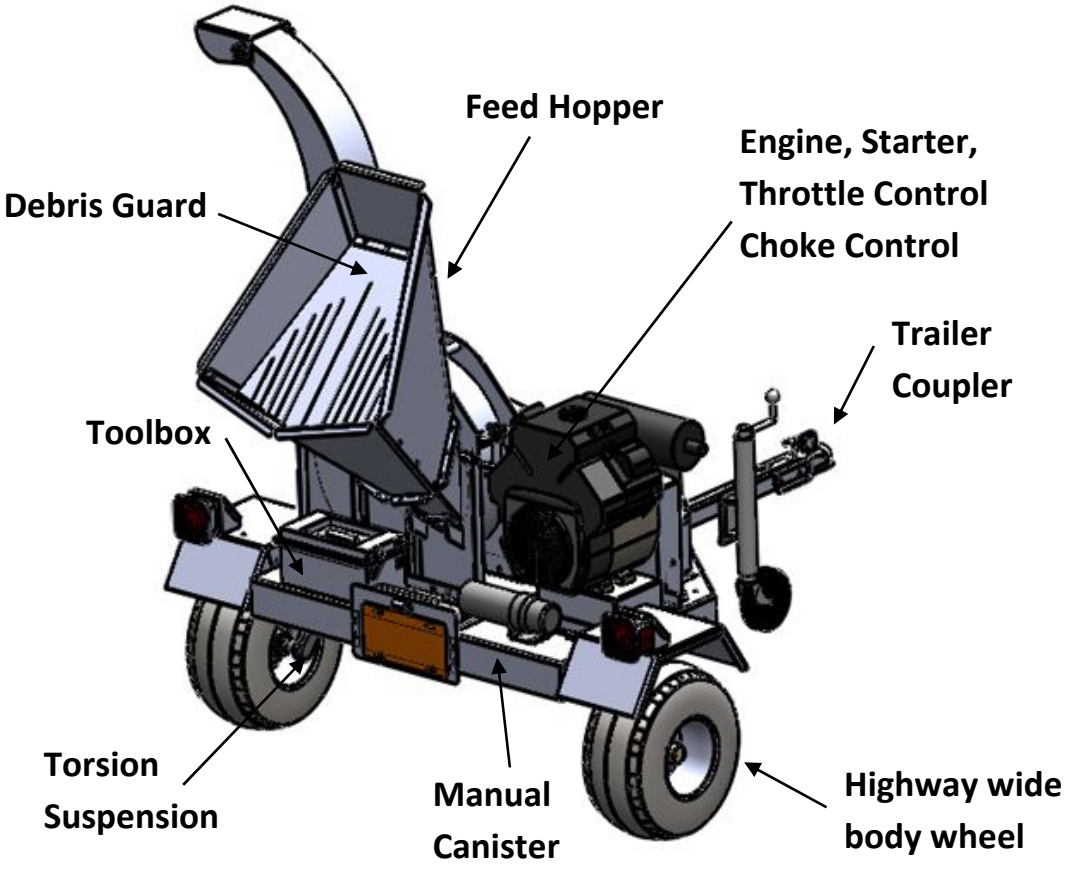
The chipper is able to cut branches up to 4.5" inches in diameter. However chipping at 4.5" requires that you feed the machine in smaller branch pieces. This will depend on the wood density, type of wood (softwood/hardwood) and if green or dry.

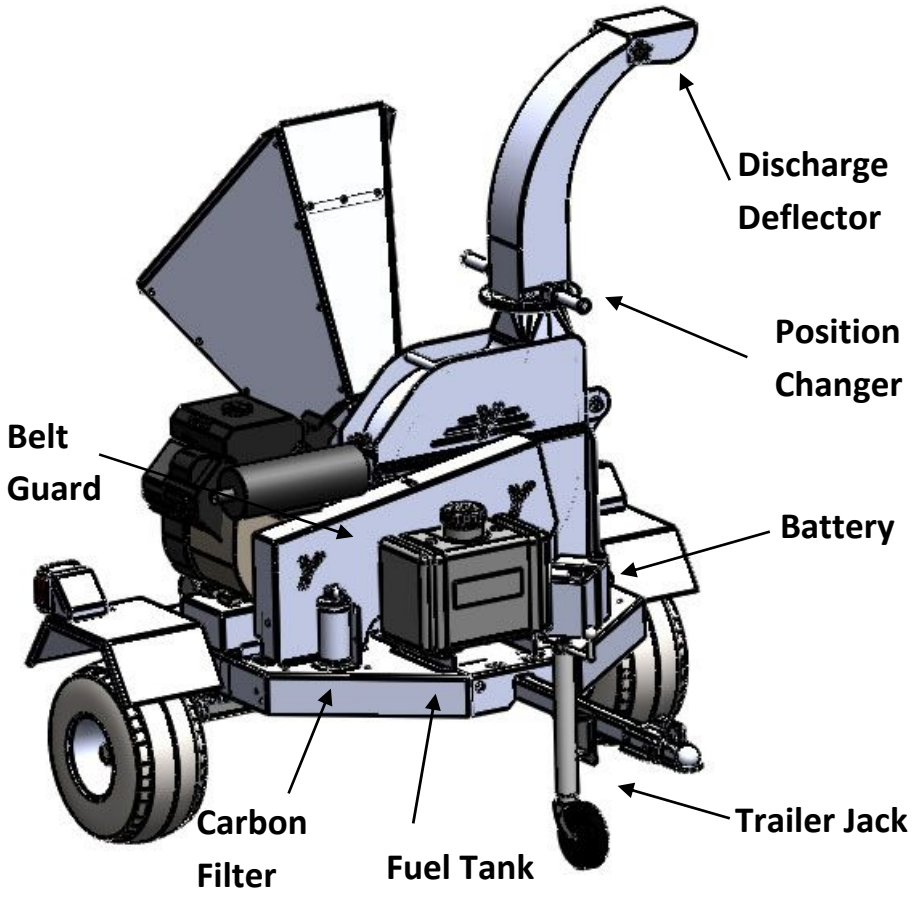
Clutch/Engine stall
When chipping bigger or longer branches, these will momentarily slow down the engine as the rotor regains inertia. Sometimes, the branches will exceed the chipper continuos chipping capacity and take the engine RPM below the clutch engagement speed. When this happens the rotor will stop and the engine will get stuck at a particular RPM (between 1800-2000RPM) where the clutch begins to slip.

When this happens please move quickly the engine throttle to idle position and then turn off the engine. Open the chipper top, and try to dislodge the branch from the blade or the opening until the rotor is able to rotate freely.



CONTROLS AND FEATURES





MAINTENANCE

Maintenance of your trailer

It is always good practice to check your trailer before taking each trip down the road. A round visual inspection is a good starter to detect anomalies such as punctured tires, foreign debris on the trailer, open casings, tools any other material not braced to the frame and/or prepared for transport.

We have compiled a short list of things to check for in the following intervals.

Before each trip:

- Check for tire pressure, tire treads for punctures and bulges.
- Check that lightning accessories and trailer cable connection are working properly.
- Ensure that the coupler is working properly and the safety pin (not provided) is in working order.

Every 3 months or 1,000 miles:

- When trailer is new please check lug bolt torque every 10 miles, 25 miles, 50 miles and 250 miles. Then you can check every 3 months or 3,000 miles.

- Check the lug bolts (wheel) and nuts. Always tighten to recommended torque. It is important to check for lug bolt torque to prevent broken bolts, bearing failure, loose wheels, and possible wheel separation.

Every 6 months or 6,000 miles:

- Check the wheels for cracks or dents.
- Check the hub assembly for abnormal wear, heat load, regrease if necessary.
- Check wheel bearings for wear
- Check hub seals; inspect for leakages. Replace if worn.
- Check spindle nut torque values.

Maintenance of your chipper

A proper maintenance of your chipper will ensure a good reliability of the equipment and for the chipper to deliver its maximum performance at the job site.

Recommendations:

- Always use protective equipment such as goggles and gloves when performing maintenance service on the equipment.
- Disconnect positive terminal of the battery before attempting any work on the chipper.
- All settings (blade, anvil, etc.) should be checked at least once before each use.
- The warranty on this wood chipper, does not cover items that have been subjected to wear. The warranty on this chipper will be void if there is evidence of misuse or negligence from the operator.
- Periodically check all bolts, pins, etc.

Lubrication

Lubricate the bearings on the main rotor every 50 hours of operation.

The are two small deep groove ball bearings inside the idler pulley that are sealed and don't need re-greasing. To replace when old, please call us to reorder the items.

Fuel and exhaust gases control

Coupled to the fuel system, is a fuel vapor filter that collects vapors and prevents them from harming the environment (CARB requirement). This filter is sealed and does not need maintenance. To replace, please call us.

Please check fuel hose connections and replace the fuel filter every 200 hours.

General Chipper Maintenance List

Lubricate rotor bearings……..……50 hrs
Replace fuel filter……..200 hrs
Replace engine oil filter……..200 hrs
Change engine oil….Annually or every 100 hrs
Replace engine air filter……100 hrs
Replace spark plugs and set gap…….500 hrs
Resharpen knives…….when dull or every 30 hrs
Check torque on fasteners……every 3 months

Resharpening of the blade

The blade is fabricated from super durable and wear resistant A8 steel. They are reversible blades, meaning both sides are available for work.

We recommend you resharpen the blades when the edge goes dull, you will see the machine will have a harder time chipping material and the engine will stall quicker.

Check the edge of the blades regularly. The edge

of the blades are critical for optimum performance of the chipper. It is recommended you resharpen the blades with a precision angle grinder. You must always follow the same edge angle and make sure when resharpening, not to overheat the surface as it will affect the hardness.

When reinstalling the blade we recommend you adjust the gap between the blade and the anvil at a minimum of 3/16". You may adjust the anvil for better cutting experience (shorter gao for hardwoods, and larger gaps for softwoods or green branches with leaves).

When reinstalling the blade make sure to tighten the bolts to 57ft-lbs of torque.

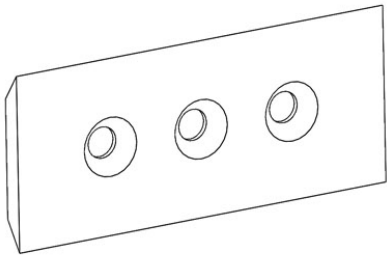
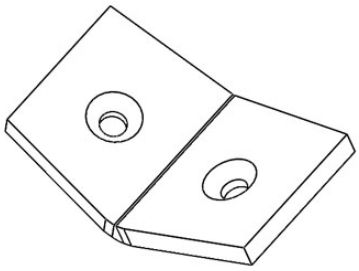
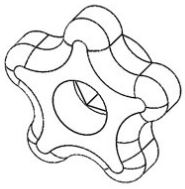
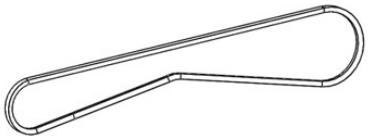
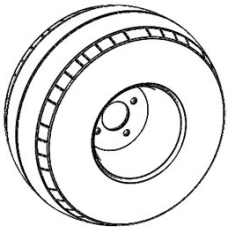
When reinstalling the anvil make sure to tighten the bolts to 25 ft-lbs of torque.

TROUBLESHOOTING

Problem	Cause	Solution
Engine does not start	1. Spark plug is disconnected 2. the fuel tank is empty 3. Shut-off fuel valve is closed 4. Dirty air filter 5. The carburetor is dirty 6. Low-voltage battery 7. Faulty Cable connection 8. Faulty engine starter	1. Connect the cable spark plug 2. Refill fuel tank 3. Turn the fuel valve to ON 4. Clean or Replace air filter. 5. Contact your nearest engine authorized workshop. 6. Recharge or replace battery. 7. Check cable continuity for broken cables 8. Contact your nearest engine authorized workshop.
Low blade performance	1. The blade is dull	1. Resharpen or reverse edge
Low engine performance	1. Blade is dull 2. Air filter is dirty 3. Worn clutch 4. Worn belts 5. Chipper operating above 3,000 ft. elevation.	1. Resharpen blade 2. Clean air filter / Replace 3. Inspect clutch shoes. Replace if clutch is slipping excessively. 4. Check for wear, belt tension. Replace if belts are burnt or they wore out. 5. Reset carburetor jet (Authorized workshop recommended).
.Engine Overheats	1. Engine is dirty 2. Low oil	1. Clean outer debris from the engine. 2. Check and add oil if necessary.
Engine is erratical	1. Low fuel 2. Water or dirt in the fuel system. 3. Valve tolerance out of specification.	1. Check spark plug and connection. 2. Refill tank with fresh fuel. Drain fuel system if water is present in fuel. 3. Take engine to authorized engine workshop.

SPARE PARTS LIST

These are some of the most common re-order parts. You may order parts from our website or feel free to call us and place your order.

Component	Description
	# PART 452101 | CHIPPER BLADE
	# PART 452102 | CHIPPER ANVIL
	# PART 452103 | KNOB
	# PART 452104 | BELT
	# PART 452105 | WHEEL ASSEMBLY