



**BLUEBIRD
INDUSTRIES**



Carrier Operator's Manual

MODEL NUMBER: CARRIER 310-SHL 1200

SERIAL NUMBER: _____

Both the model number and the serial number can be found on the main label.

You should keep both in a safe place for future use.

FOR YOUR SAFETY

READ AND UNDERSTAND THE ENTIRE MANUAL BEFORE USING THE
MACHINE

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TECHNICAL DATA SHEET

Chipper engine		9.0kw
Dumper engine		4.1kw
Chipping capacity		120mm
Disc size		240 mm
Disc speed		3600r/min
Blades		300 X 55 mm
Feed throat opening		295 X 155 mm
Hopper opening of power		380 X 440 mm
Track width		180 mm
Sound pressure level		96 db(A) k=3db(A)
Sound power level		116 db(A) k=3db(A)
Vibration level on the handlebar grips	Left	10.1 m/s ² k=1.5 m/s ²
	Right	11.3 m/s ² k=1.5 m/s ²
Weight		366 kg

INTRODUCTION

The chipper is a motorized device for cutting wood into chips.

Your new chipper will more than meet your expectations. It has been manufactured according to strict quality standards to meet superior performance criteria. You will find your new product easy and safe to use, and with proper maintenance, it will provide you with many years of reliable service.



Carefully read the entire operator's manual before using the device. Pay particular attention to precautions and warnings.

The engine manufacturer is responsible for all engine-related issues regarding performance, power, specifications, warranty and service. For further information, please refer to the operator/user manual of the engine manufacturer, packed separately with the device.

RECYCLING AND DISPOSAL



This mark indicates that this product must not be disposed of with other household waste. To avoid possible damage to the environment or human health due to uncontrolled disposal of waste, recycle them responsibly to promote the sustainable reuse of material resources. To return the used device, please use the return and collection systems or check with local authorities or local stores for advice on safe recycling for the environment.

SYMBOLS

The label on your machine may display symbols. These represent important product information or instructions for its use.



Wear eye protection. Wear ear protection.



Read these operating instructions carefully.



Wear safety footwear.



Wear safety gloves.



It is forbidden to remove or tamper with protective and safety devices.



Stay away from the hot parts of the machine.



Do not smoke and do not allow open flames.



Do not touch rotating parts.



Never start the machine inside an enclosed space.



Do not operate on slopes with an angle greater than 20°.



Do not point your head downhill on slopes with a full load.



Do not chip material with a diameter greater than 100 mm



Do not refuel while working.



Objects projected into the surrounding area



Keep hands and feet away from moving parts.



Risk of crushing and cuts.



Warning! Keep hands away from the space between the body and the frame.



Risk of objects being thrown.



Risk of overturning!



The maximum horizontal lifting angle should not exceed 10 degrees.



The maximum longitudinal lifting angle must not exceed 20 degrees.



Exhaust fumes are dangerous, they contain carbon monoxide. Staying in the work area can cause loss of consciousness and death.



Always turn off the engine before starting maintenance.



Do not allow anyone to sit or stand in the body during driving.



Keep children and bystanders away.

SAFETY

General safety standards

Understand your equipment

Read this manual and the labels affixed to the machine to understand its limits and potential hazards.

Thoroughly know the controls and the correct use of the equipment. Know how to stop the equipment and quickly disengage the controls.

Be sure to read and understand all instructions and safety precautions as indicated in the engine manufacturer's manual packaged separately with the equipment. Do not attempt to operate the equipment until you have fully understood how to properly operate and maintain the engine and how to avoid accidental injuries and/or damage to property.

If the machine is to be used by someone other than the original purchaser or is lent, rented, or sold, always provide this manual and any necessary training on safety before use. The user can prevent and is responsible for accidents or injuries that may occur to themselves, to other people and to property.

Do not force the equipment. Use the device that is correct for your application. The device that is correct will do the job more efficiently and safely at the rate for which it was designed.

Personal safety

Never allow children to use this machine.

Keep children, pets, and other people not using the device away from the work area. Be careful and turn off the device if someone enters the work area. Keep children under the supervision of a responsible adult.

Do not use the device under the influence of drugs, alcohol, or any other medication that may affect your ability to use it properly.

Dress appropriately. Wear heavy long pants, boots, and gloves. Do not wear loose clothing, shorts, or jewelry of any kind. Tie back long hair so that it is above shoulder level. Keep hair, clothing, and gloves away from moving parts. Loose clothing, jewelry, or long hair can get caught in moving parts.

Protect your eyes, face, and head from objects that may be thrown by the device. Always wear safety glasses with side shields during operation.

Wear appropriate hearing protection.

Always keep hands and feet away from all blades during operation. The parts in motion can cut or crush body parts.

Always keep hands and feet away from all points of attachment.

Do not touch parts that may be hot due to operation. Allow the parts to cool before attempting maintenance, adjustment or repair.

Pay attention to what you are doing and use common sense when using the equipment.

Do not exceed limits. Do not use the equipment barefoot or when wearing sandals or similar light footwear. Wear footwear that is protective, that protects the feet and improves footing on slippery surfaces. Always keep the correct support and balance. This allows better control of the device in situations unexpected.

Inspect the machine

Check your machine before starting it. Keep the guards in place and in working order. Make sure that all nuts, bolts, etc., are well tightened.

Never use the device when it has needs repairs or is in poor mechanical condition.

Replace damaged, missing, or faulty parts before using it. Check for leaks. Keep the device in safe working condition.

Do not use the device if the engine switch does not turn it on or off. Any gasoline-powered device that cannot be controlled with the engine switch is dangerous and must be replaced.

Regularly check that wrenches and keys for adjustments are removed from the device area before starting it. A wrench or key left attached to a rotating part of the device can cause personal injury.

Avoid accidental starting. Make sure that the engine switch is off before transporting the device or performing any maintenance or service on the device. The transport or performing maintenance or servicing a device with the switch on increases the risk of accidents.

If the device starts to vibrate abnormally, stop the engine and immediately check the cause. Vibrations are generally a sign of danger.

Engine safety

This machine is equipped with an internal combustion engine. Do not use on or near unimproved land, forested areas, or areas covered with brush unless the exhaust system is equipped with a spark arrestor device compliant with applicable local, state, or federal laws.

In the state of California, a spark arrestor is required by law. Other states have similar laws. A spark arrestor device, if used, must be maintained in good working order by the operator.

Never start or operate the engine inside an enclosed area. Exhaust fumes are dangerous; they contain carbon monoxide, an odorless and deadly gas. Use this device only in a well-ventilated outdoor area.

Do not tamper with the engine to make it run at excessive speeds. The maximum engine speed is preset by the manufacturer and is within safety limits. Refer to the engine manual.

Keep a class B fire extinguisher handy when using the chipper in dry areas as a precautionary measure.

Fuel safety

Fuel is highly flammable and its vapors may explode if ignited. Take precautions when using to reduce the possibility of serious personal injury.

When filling or emptying the fuel tank, use an approved fuel storage container in a clean, well-ventilated outdoor environment. Do not smoke or allow the presence of sparks, open flames or other sources of ignition near the area while adding fuel or operating the equipment. Never fill the fuel tank indoors.

Keep grounded conductive objects, such as tools, away from exposed and live electrical parts and connections to avoid sparks or electrical arcs. These events could ignite fumes or vapors.

Always stop the engine and let it cool before filling the fuel tank. Do not remove the fuel tank cap or add fuel when the engine is running or when it is hot. Do not operate the equipment with known leaks in the fuel system.

Slowly loosen the tank cap of the fuel tank to release any pressure in the tank.

Do not overfill the fuel tank. Fill the tank no more than 1.27 cm (1/2") below the bottom of the filler neck to provide space for expansion since engine heat can cause fuel expansion.

Securely replace all fuel tank and reservoir caps and clean up any spilled fuel. Never operate the device without the fuel cap securely in place.

Avoid creating a source of ignition for the spilled fuel. If fuel has been spilled, do not attempt to start the engine but move the machine away from the spill area and avoid creating any source of ignition until the fuel vapors have dissipated.

When fuel is spilled on yourself or your clothing, wash your skin and change immediately.

Store fuel in containers specifically designed and approved for this purpose.

Store fuel in a cool and well ventilated area, away from sparks, open flames, or other sources of ignition.

Never store fuel or a device with fuel in the tank inside a building where fumes may reach a spark, open flame, or any other sources of ignition, such as a water heater, a furnace, a dryer. Allow the engine to cool before storing in any enclosed area.

Specific safety standards

Identify hazards and take preventive measures to avoid accidents and minimize risks. Possible hazards include, by way of example but not limited to, moving parts, objects being thrown, weight of the equipment and components and operating environment.

Before starting

Carefully inspect the area where you are working, keeping it clean and free of debris to avoid tripping. Operate on level ground. Before starting the chipper: make sure that the feed hopper and the cutting housing are empty and free of all debris, check the oil level, make sure all nuts and bolts are tight, and check the air pressure in the tires.

Safe operation

Never place any part of your body where it would be in danger if movement occurred during assembly, installation, operation, maintenance, repair, or moving.

Keep all bystanders and pets at least 75 feet away. If they approach, immediately stop the equipment.

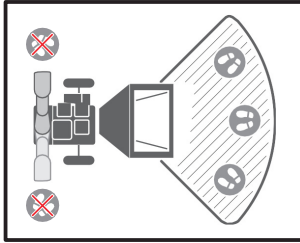
Never place hands, feet, or any part of the body in the chipper hopper, discharge opening, or near or under any moving part while the equipment is operating. Keep the discharge area away from people, animals, buildings, glass, or anything else that could obstruct the discharge, causing injury or damage. The wind can also change the discharge direction, so be careful. If it is necessary to push materials into the hopper, use a small-diameter stick, not your hands.

Keep your face and body away from the hopper of the chipper and from the discharge chute to avoid injury from accidental material rebound.

Never insert your hands inside the feed hopper beyond the rubber flap while the device is operating. Keep combustible substances away from the engine when it is hot. Do not tilt the machine while the engine is running.

Never use this machine without the feed hopper or the discharge chute properly attached.

Operating area



Feed materials

Insert only clean materials into the appliance. Foreign materials such as soil, sand, gravel, stones, pieces of metal, etc. can damage the cutting edge of the blades. Root balls and dead wood will also quickly dull the blades.

Avoid inserting pine needles, flax, and cabbage leaves into the machine; these stringy materials can wrap around the rotor shaft and penetrate the bearing.

Avoid inserting short and stubby pieces of wood into the machine; they tend to bounce and spin in the feed hopper. Feed these short pieces together with longer pieces. After becoming familiar with the machine, prune to match its capabilities.

This machine is self-feeding; do not force branches into the blades. Allow the machine to self-feed. Let the machine reach its highest rotational speed before feeding the next load of branches.

Unclogging

Never allow processed material to accumulate in the discharge area. This can prevent proper discharge and cause kickback from the chipper hopper.

Never attempt to clear the feed hopper or discharge chute while the engine is running. Immediately turn off the engine, allow the cutting disc to come to a complete stop, and then remove the obstructing material. Check for damage and loose parts for repair or replacement.

Whenever leaving the operating position or if you need to remove processed material, leaves, or debris from the machine, always turn off the engine and ensure the engine is off to prevent accidental starting and wait until all moving parts have come to a complete stop.

Before opening the cutting disc housing, always make sure the engine is off, the cutting disc is completely stopped, and the belt drive is disengaged.

Displacement

Move the machine at least 10 feet away from the refueling point before starting the engine.

This chipper is for hand movement only. Never attempt to use the machine on public roads, streets, or highways.

Always stop the engine before moving the machine and pay attention to sharp objects that could puncture the tires.

Use and maintenance of the machine

Position the machine so that it cannot move during maintenance, cleaning, adjustment, assembly of accessories or spare parts, and while in storage.

Do not force the equipment. Use the correct device for your application. The correct device will work better and more safely at the pace for which it was designed.

Do not modify the engine settings or over-rev the engine. The governor controls the maximum safe operating speed of the engine.

Do not run the engine at high speed when not working.

Do not put hands or feet near rotating parts.

This device has two rotating blades that could amputate hands and feet and throw objects. Keep hands and feet out of the openings while the device is operating. Failure to follow safety instructions can cause serious injury or death.

Avoid contact with hot fuel, oil, exhaust fumes, and hot surfaces. Do not touch the engine or the muffler. These parts become extremely hot due to operation. They remain hot for a short period after turning off the device. Allow the engine to cool before performing maintenance or adjustments.

If the device starts to make an unusual noise or vibration, immediately turn off the engine, disconnect the spark plug wire, and check the cause. Unusual noise or vibration is generally a warning of problems.

Use only accessories and attachments approved by the manufacturer. Failure to follow this rule could result in personal injury.

Keep the engine and muffler free from grass, leaves, excess grease, or carbon buildup to reduce the risk of fire.

Never wet or spray the device with water or any other liquid. Keep the handles dry, clean, and free of debris. Clean after each use.

Observe appropriate disposal laws and regulations for gas, oil, etc. to protect the environment.

When storing the machine, keep it out of reach of children and do not allow use by persons unfamiliar with the machine or these instructions. This machine can be dangerous if used by an untrained operator.

Maintaining your machine

Some parts of this machine are made of plastic or rubber and must be kept away from chemicals.

Never cover the machine while the muffler is still hot.

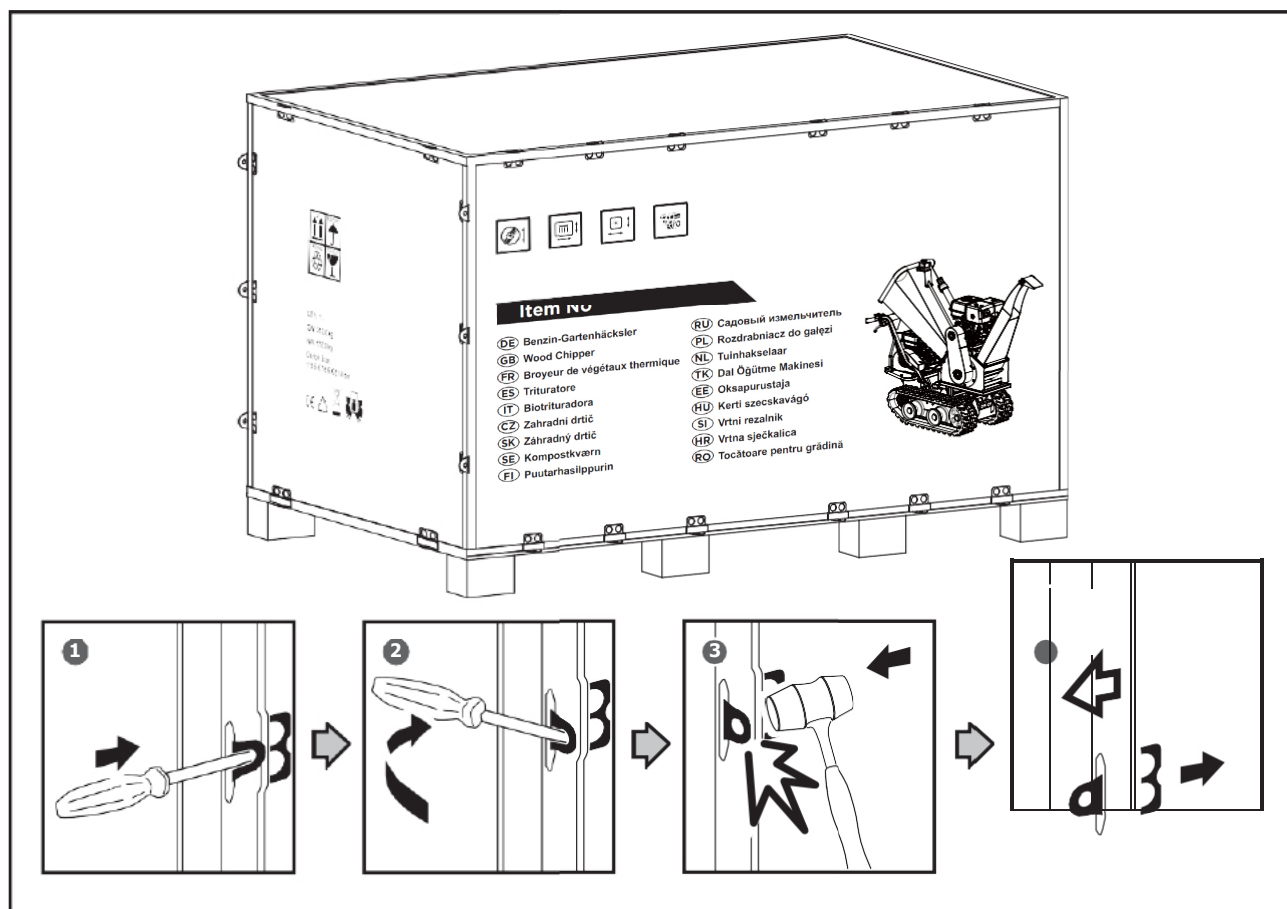
Do not alter or adjust any part of the chipper or its engine that is sealed by the manufacturer or distributor. Only a qualified service technician can adjust the parts that increase or decrease the regulated engine speed.

To maintain the machine, check for any misalignments or binding of moving parts. Broken or worn parts that may affect the operation of the machine. If damage or worn parts are identified, they must be repaired before use. Many accidents are caused by poorly maintained equipment.

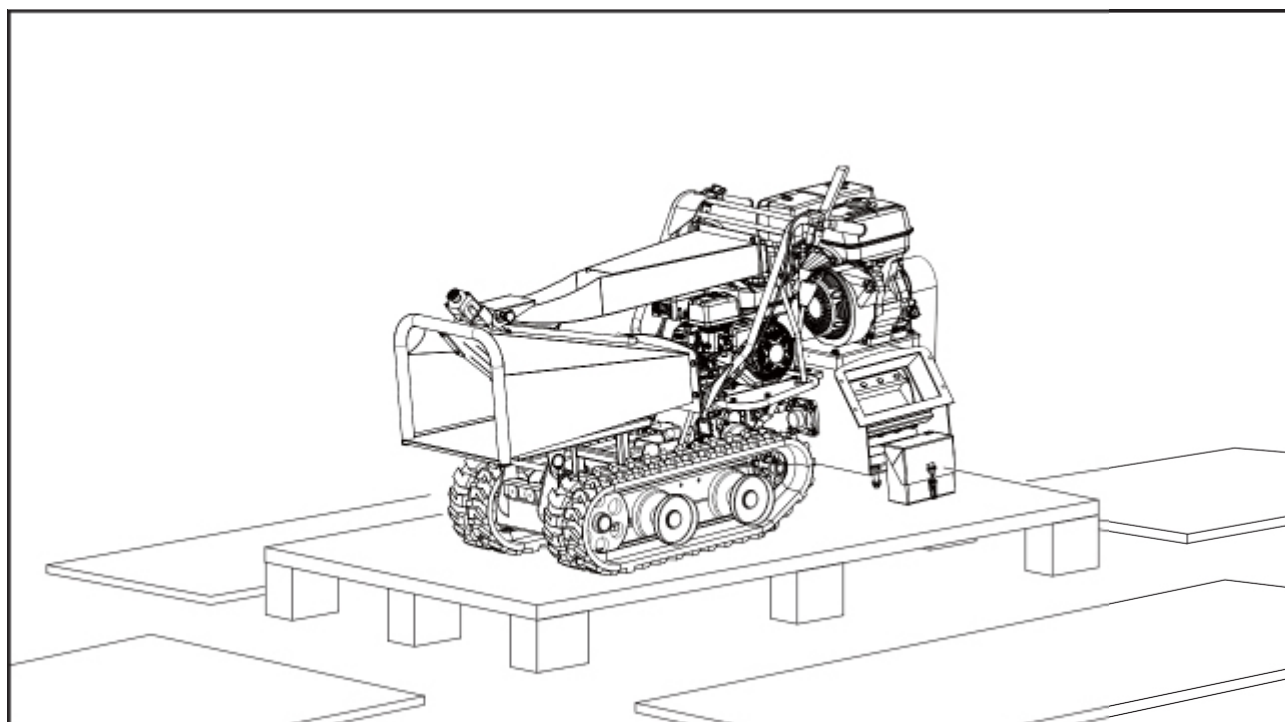


UNPACKING THE CONTAINER

Use the screwdriver and hammer to open all the side locks.

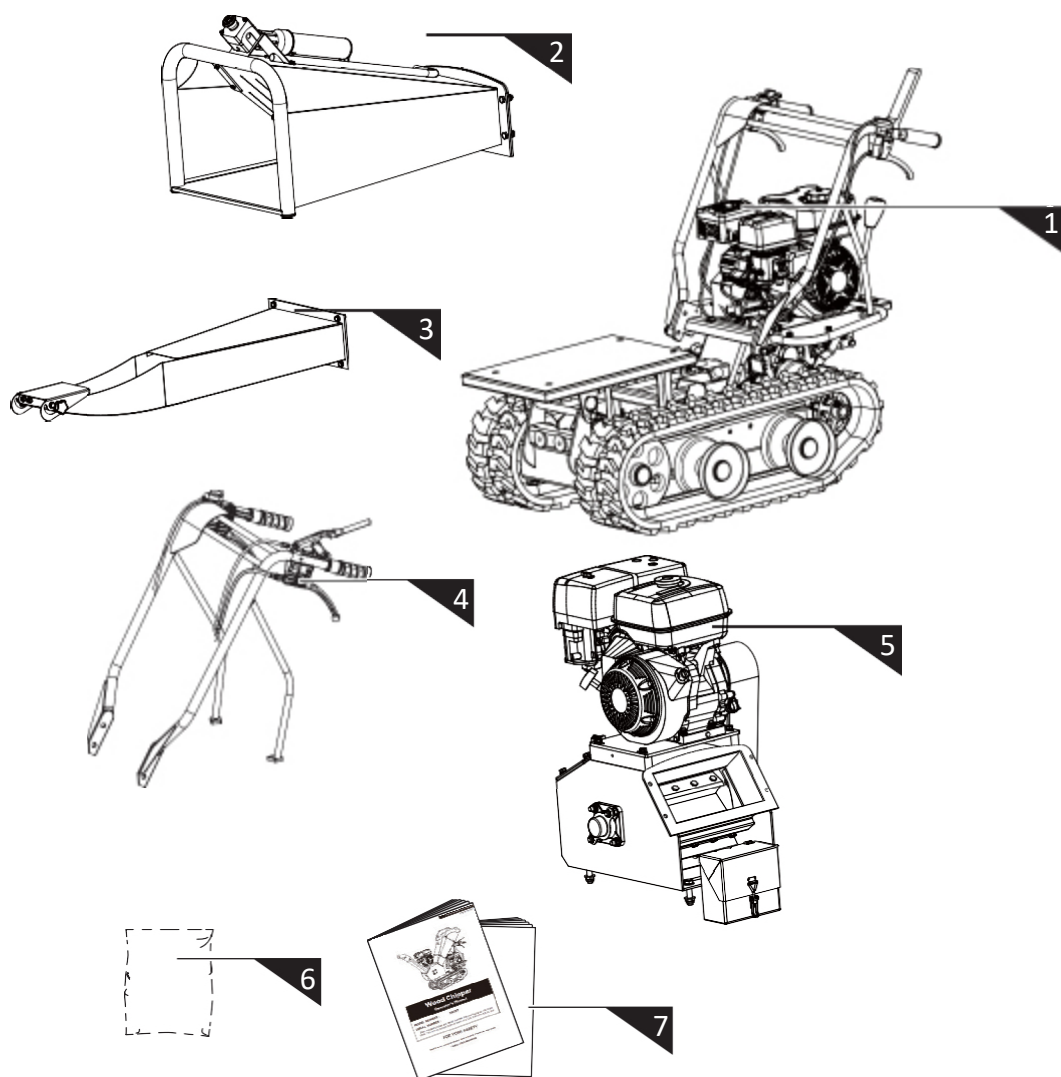


Remove all plywood plates and remove all loose parts from the lower pallets.



PROVIDED CONTENTS

The chipper is supplied partially assembled and is shipped in carefully packed packaging. After all parts have been removed from the packaging, you should have:



1. Main machine
2. Feed hopper - upper
3. Deflector
4. Handlebar assembly
5. Engine
6. Hardware bag
7. Operator's manual and engine manual

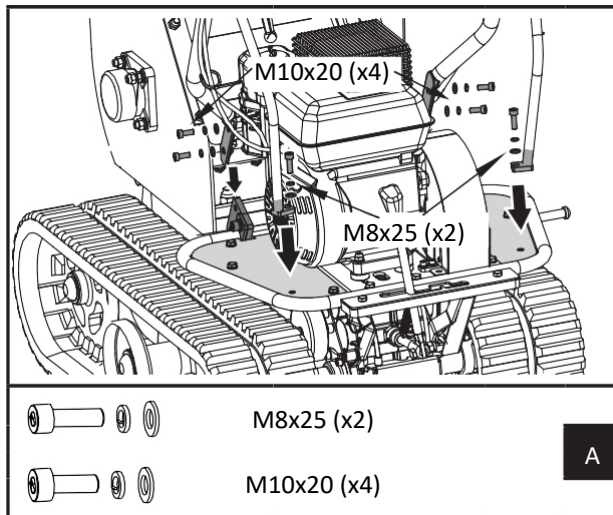
	M8 x 25	x 2	A
	M10 x 20	x 4	
	M10 x 30	x 4	B
	M14 x 65	x 4	C
	M10 x 30	x 4	D

ASSEMBLY

Following the assembly instructions given below, the machine will be assembled in a few minutes.

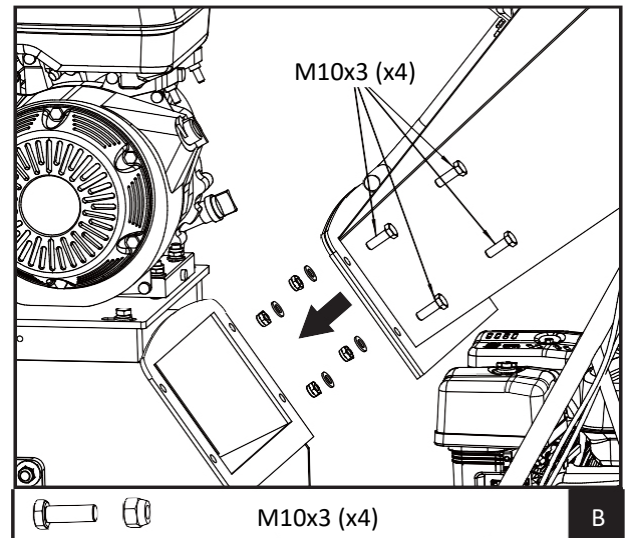
Handlebar assembly

Align the handlebar holes with the mounting bracket and secure each with a washer spring washer, a flat washer, and an M10x20 bolt. Secure each handlebar support to the engine plate with a spring washer, a flat washer, and an M8x25 hex bolt.

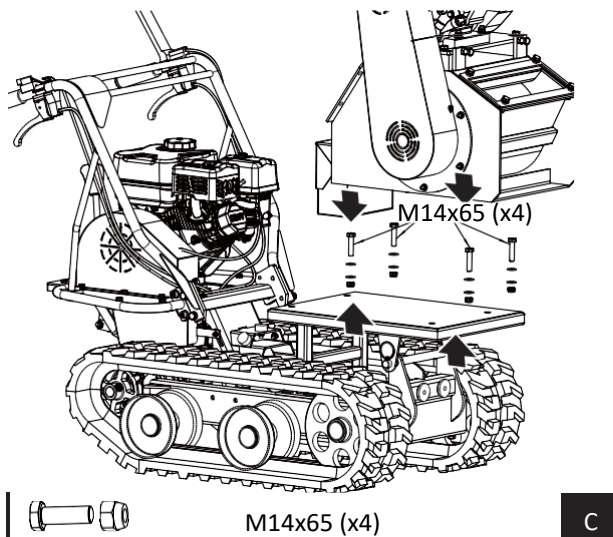


Feed hopper

1. Place the lower feed hopper on the machine and secure it with bolts, washers, and nuts.



Unscrew the four M16x40 bolts, washers, and nuts that connect the chipper to the base of the dumper. Move the chipper backward, then secure it with the bolts, washers, and nuts just removed at the beginning.

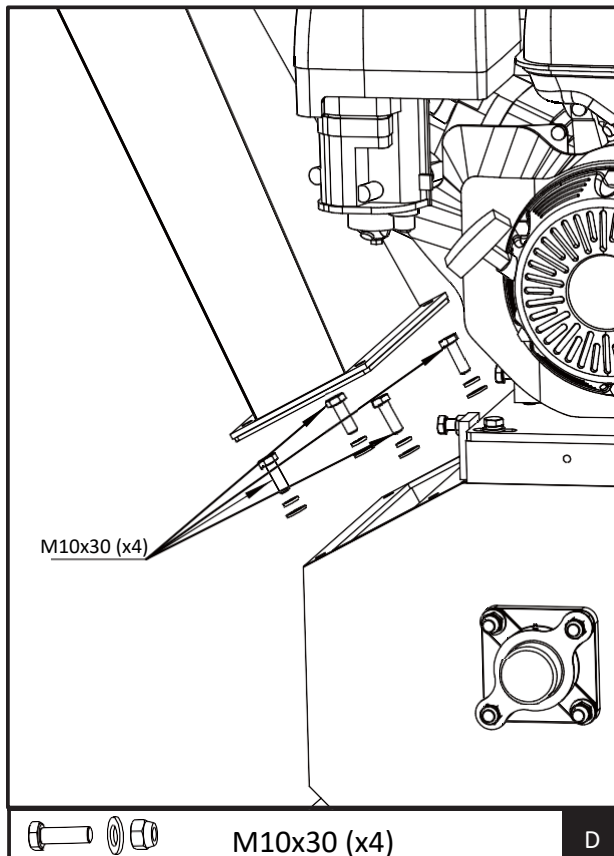




It is recommended to ask someone for help to lift the hopper into position and hold it until it is secured to the chipper.

Discharge chute

Fully slide the hinge pins into the discharge chute bushings in the unit housing weld, then close the discharge chute on the machine and secure it with M10x30 bolts, washers, and nuts.

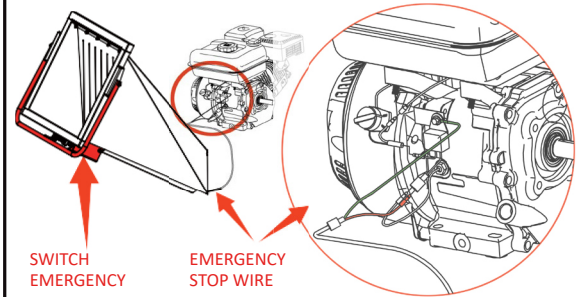


Wired connection for emergency stop



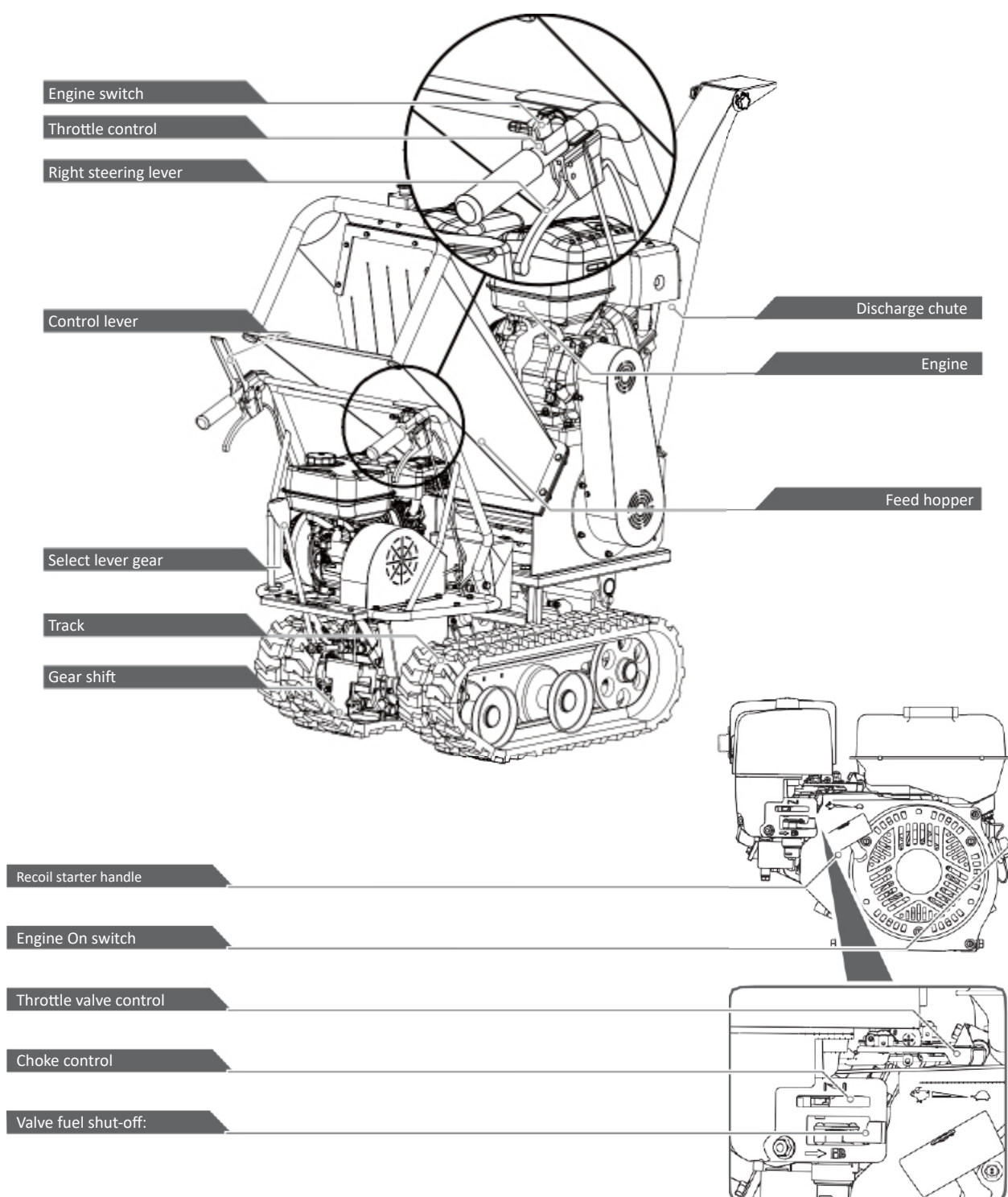
WARNING: EMERGENCY STOP

Make sure the emergency stop cable is connected correctly. Failure to follow this rule could result in serious injury or death



KNOW THE MACHINE

Features and controls



Gear shift lever

The gear selector lever has 4 positions: 3 forward speeds and 1 reverse. To change the speed, move the gear lever to the desired speed position. The lever locks into a notch at each speed selection.



Always release the control lever of the clutch before changing speed. Failure to follow this rule will cause damage to the electric track cart.

Lower speeds are for heavier loads, while higher speeds are for transporting light loads or an empty hopper. It is recommended to use a lower speed until you are familiar with the operation of the track cart.

If the engine slows down under a load or the tracks slip, engage a lower gear.

If the front of the machine lifts up, shift the machine into a lower gear. If the front continues to rise, lift the handles.

Left/right steering lever

Operate the lever to turn left/right.



Operate the steering levers only at reduced speed.

Engine On / Off switch

The engine switch has two positions. OFF: the engine will not start. ON: the engine will start.

Recoil starter handle

The starter crank is used to start the engine.

Fuel shut-off valve

The fuel shutoff has two positions:

CLOSED () - Use this position to repair, transport or store the device.

OPEN () - Use this position to operate the device.

Throttle valve control

The throttle control regulates the speed of the engine and moves between the FAST positions , SLOW  and STOP.

Choke control

The choke control is used to open the carburetor choke and facilitate engine starting. The choke control slides between the positions **CHOKE CLOSED**  and **CHOKE OPEN** .



Never use the choke to stop the engine.

Clutch control lever

Press the control lever, clutch engaged.

Release the lever, clutch disengaged.

Feed hopper

The feed hopper is where the materials to be chipped are inserted.

Discharge chute

The chipped materials are discharged through this opening. The deflector can be fixed to the chute.

Engine On / Off switch

The engine switch has two positions. OFF: the engine will not start. ON: the engine will start.

Recoil starter handle

The handle is used to start the engine.

Fuel shut-off valve

The fuel shut-off has two positions.

CLOSED () - Use this position to repair, transport or store the device.

OPEN () - Use this position to operate the device.

Choke control

The air control is used to prevent air from entering the carburetor and to assist in starting the engine.

The choke control slides between the positions of **STARTER CLOSED**  and **STARTER OPEN** .

Throttle valve control

The throttle control regulates the speed of the engine and shuts off the engine when moved to the STOP position. The throttle control moves between the FAST , SLOW  and STOP.

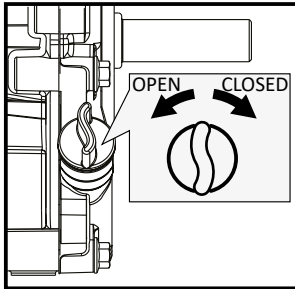
Operation

Refilling engine oil



The engine is shipped without oil. Do not start the engine before adding oil. for the correct grade of oil to add.

1. Make sure the track cart is on a flat and level surface.
2. Remove the oil fill cap/dipstick to add oil.



3. Using a funnel, add oil up to the FULL mark on the dipstick.
(Refer to the engine manual for oil capacity, oil recommendation, and fill cap location.)



DO NOT OVERFILL.
Check the engine oil level daily and add more if necessary.

Add gasoline to the engine



Gasoline is highly flammable and explosive. When handling fuel, burns or serious injuries may occur. Use extreme caution when handling gasoline.



Fill the fuel tank outdoors, never indoors. Gasoline vapors can ignite if they accumulate inside an enclosed area. An explosion may occur.

1. The engine must be turned off and allowed to cool for at least two minutes before adding fuel.
2. Remove the fuel tank cap and fill the tank.
(Refer to the engine manual for fuel capacity, fuel recommendation, and fuel cap location.)

IMPORTANT: DO NOT OVERFILL EXCESSIVELY!

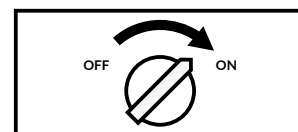
This equipment and/or its engine may include components of the evaporative emission control system, required to meet EPA and/or CARB regulations, which will only function properly when the fuel tank is filled to the recommended level. Overfilling can cause permanent damage to the components of the evaporative emission control system. Filling to the recommended level ensures a vapor space necessary to allow for fuel expansion. Pay close attention when filling the fuel tank to ensure that the recommended fuel level inside the tank is not exceeded. When filling the tank, use a portable gasoline container with a properly sized dispensing spout. Do not use a funnel or other device that obstructs the view of the tank filling process.



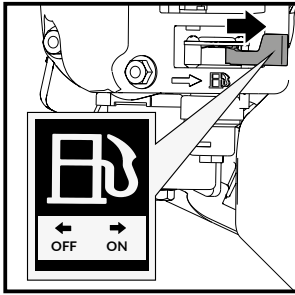
3. Reinstall the tank cap and tighten.
Always clean up spilled fuel.

Engine starting

1. Move the engine switch to ON.

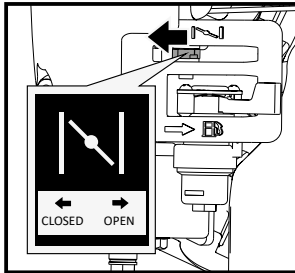


2. Open the fuel shutoff valve.

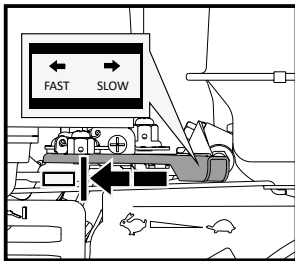


3. Move the choke lever switch to CLOSED.

If the engine is warm, it is not necessary to close the choke.



4. Slightly move the throttle lever to the FAST position.



5. Pull the starter motor until the engine starts. Return the recoil to the initial position after each pull. Repeat the steps as needed. Once the engine has started, set the throttle to the FAST position before operating the machine.



The rapid retraction of the starter rope (kickback) will pull your hand and arm toward the engine faster than you can let go. Fractures, bruises, or sprains may occur.

Operation

After the engine has warmed up, move the throttle lever to increase the engine speed.

Engage the required gear and slowly press the clutch control lever.

If the gear does not engage immediately, slowly release the clutch lever and try again.

This way the track carrier will begin to move.

The track cart has steering levers on the handlebar, which makes steering very easy. To turn right or left, simply pull the corresponding right or left steering lever.

The sensitivity of the steering increases in proportion to the speed of the machine and the load. With an empty machine, a light pressure on the lever is enough to turn. When the machine is fully loaded, greater pressure is required.

The track carrier has a load capacity maximum of 300 kg. However, it is advisable to assess the load and adjust it according to the terrain on which the machine will be used.

It is therefore recommended to cover uneven or rough terrain with a low gear, and to take further precautions. In such situations, the machine must be kept in low gear for the entire section.

Avoid sharp turns and frequent changes of direction when driving on rough and hard terrain, full of sharp and irregular points with a high degree of friction.

Even though the machine is equipped with rubber tracks, remember to pay attention when working in adverse weather conditions (ice, heavy rain, and snow) or on types of terrain that could make the track carrier unstable.

Please note that this is a tracked vehicle, it is subject to considerable tilting when passing over bumps, holes, and steps.

When the clutch control lever is released, the machine will stop and brake automatically.

If the machine is stopped on a steep slope, it is necessary to place a wedge against one of the tracks.

Idle speed

Set the throttle control lever to the "SLOW" position to reduce stress on the engine when the operation is not being performed. Lowering the engine speed will help prolong engine life, as well as save fuel and reduce noise levels.

Engine shutdown

To stop the engine in an emergency, simply turn the engine switch to the OFF position. In under normal conditions, use the following procedure:

1. Move the throttle lever to the "SLOW" position (slow) (🚗).
2. Let the engine idle for one or two minutes.
3. Set the switch to OFF.
4. Move the fuel lever to the OFF position (🛢️).



Sudden stop at high speed under heavy load is not recommended. Fractures, bruises, or sprains engine damage.



Do not move the choke control to the CLOSED position to stop the engine. Backfires or engine damage may occur.

Chipper operation



The engine is shipped without oil. Do not start the engine before adding oil.

Start the engine

Using the same method as the dumper engine to start the chipper engine.

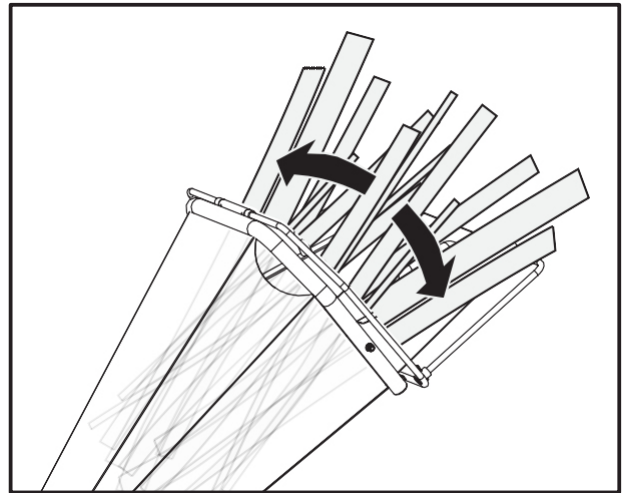
Operation

After the engine has warmed up, pull the lever of the throttle to increase the speed of the engine.

As the engine is slowly increased to maximum speed, gradually and slowly pull the belt tension lever until it engages the belt drive. This must be done slowly to allow the cutting disc to gain speed, otherwise the engine will stall because there is high inertia in the cutting disc.

The chipper can process a wide variety of dry or green organic materials such as branches, stems, vines, leaves, roots, and plant matter.

The maximum capacity is branches of 3 inches in diameter, this may vary depending on the type and the hardness of the wood. By rotating the branch while inserting it into the machine, you will improve the performance.



First pass the branches through the end, leaving the bushy head. This helps to guide the branch down into the feed hopper and reduces spinning and bouncing of small pieces in the feed hopper. Some side branches may require pre-cutting so that the branch self-feeds more efficiently.

It is always advisable to process freshly cut materials, as wood branches become very hard, become springy when they dry out and can make the blades duller.

During use of the machine, keep within reach a wooden stick, about 1 inch in diameter and 2 feet long. This stick will be useful for pushing in short, brushy, and very leafy materials and keeping the feed hopper clear.

Do not force material into the machine. If it does not chip well, the chipper blades may need sharpening or replacement, or the gap between the blades and the sliding plate must be adjusted.

Do not overload the machine by feeding too much material into the feed hopper at one time. If you hear the speed of the engine decrease, immediately stop feeding material into the machine. Do not resume feeding material into the machine until the engine has returned to normal speed.

The chipper can become clogged with soft, wet, or fibrous materials. However, if you feed soft materials intermittently with branches, there should be no problems, as the chipper tends to clear out the residues.

If stringy material wraps around the rotor shaft, remove it before it makes its way into the bearing.

If the chipper jams due to overload or clogging, turn off the engine power switch and wait until the cutting disc has come to a complete stop and the belt drive is disengaged. Allow the engine to cool down completely and turn it off. Open the housing cover to remove all materials from the housing. Lock the housing cover, start the engine, and restart the device to resume operation.

As the discharge material rises, move the shredder away from the pile. This will prevent the material from supporting the discharge chute. Do not position the deflector vertically, as this would reduce the airflow, preventing discharge and causing blockage.



Make sure that the device is on a flat and stable surface to avoid unnecessary vibrations.



Do not operate on concrete or other hard surface.



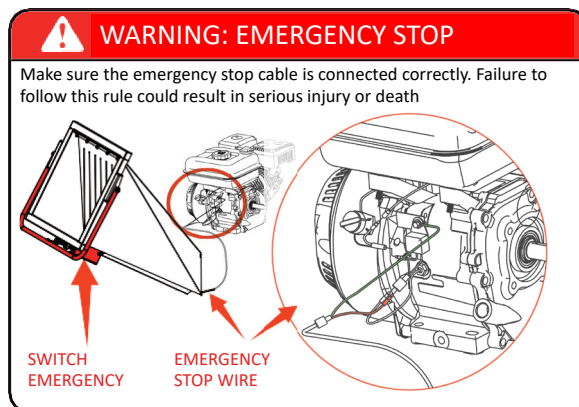
The engine is equipped with an oil alert and will not start if the oil level in the sump is too low. It may also stop if used on a steep slope.



To turn off the device, move the throttle lever to minimum, turn the engine switch to OFF position, and gradually stop.

Emergency stop

Make sure the emergency stop switch works before each use. Otherwise, otherwise, serious injury or death may occur. Note that the emergency stop wire must be routed around the left side of the hopper as you look at it.



Idle speed

Set the throttle control lever to SLOW position to reduce stress on the engine when chipping is not being performed. Lowering the engine speed will help to extend the life of the engine, as well as save fuel and reduce noise levels.

Stop the engine

To stop the engine in an emergency, simply turn the engine switch to the OFF position. In under normal conditions, use the following procedure:

1. Move the throttle valve lever to SLOW position ().
2. Let the engine idle for one or two minutes.
3. Turn off the engine switch.
4. Turn the fuel valve lever to OFF position ().



Sudden stop at high speed under a heavy load is not recommended. Fractures, bruises, or sprains engine damage.



Do not move the choke control to the CLOSED position to stop the engine. Backfires or engine damage may occur.

Wait until the device comes to a complete stop. Allow the engine to cool completely. Remove the spark plug from the engine. Then clean the inside of the device and its discharge chute.

MAINTENANCE

Tracked carrier maintenance

Maintenance of the tracked mini-dumper will ensure a long lifespan of the device and its components.

Preventive maintenance

1. Turn off the engine and disengage all control levers. The engine must be cold.
2. Keep the engine throttle lever in its SLOW position and remove the spark plug wire from the spark plug and secure it.
3. Check the general condition of the heelbarrow. Check that there are no loose screws, misalignment or obstructions of moving parts, cracked or broken parts, and any other condition that may affect its safe operation.
4. Use a soft brush, a vacuum cleaner, or compressed air to remove all contaminants from the machine. You can use high-quality light oil to lubricate all moving parts.
5. Regularly check the spark plug wire for signs of wear and replace it when necessary.

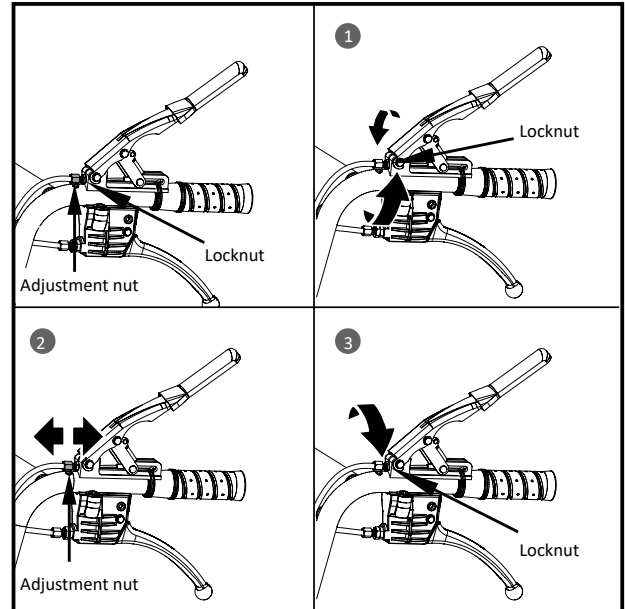


Never use a “pressure washer” to clean the appliance. Water can penetrate into tight areas of the machine and its transmission box and cause damage to spindles, gears, bearings or to the engine. The use of pressure washers will reduce the lifespan and functionality.

Clutch adjustment

When the clutch begins to show wear, the range of the handle will become wider, making it harder to reach. Follow these steps to return the clutch lever to its original position.

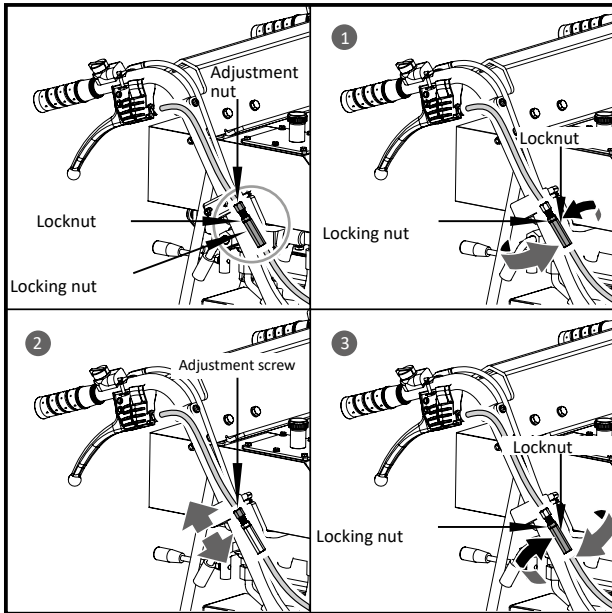
1. Loosen the locknut by turning it counterclockwise with a 10 mm wrench.
2. Tighten or loosen the cable by turning the cable adjustment nut clockwise or counterclockwise with a 10 mm wrench until the desired tension is reached.
3. Once the tension is set, return the nut of the lock against the handle to hold the cable in place.



Steering adjustment

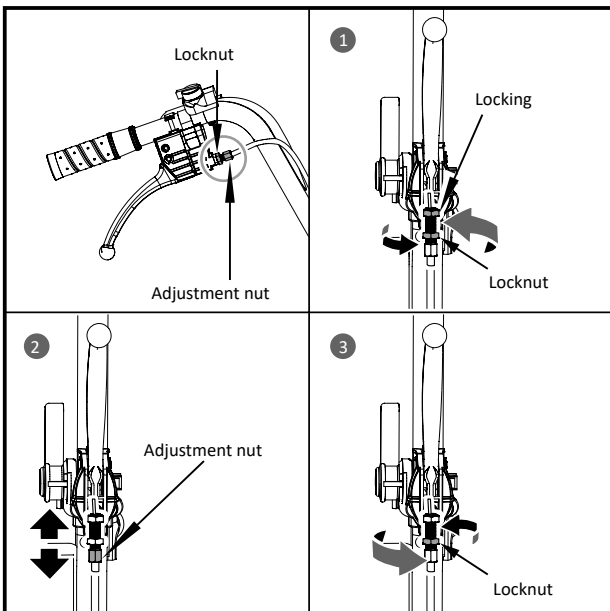
If steering becomes difficult to engage, follow the following procedures to adjust the tension of the cable.

1. Loosen the locknut by turning it counterclockwise with the 10 mm wrench.
2. Tighten or loosen the cable by turning the adjustment nut clockwise or counterclockwise with the 10 mm wrench until the required tension is reached.
3. Once the tension is set, reposition the locknut against the handle to hold the cable in place.



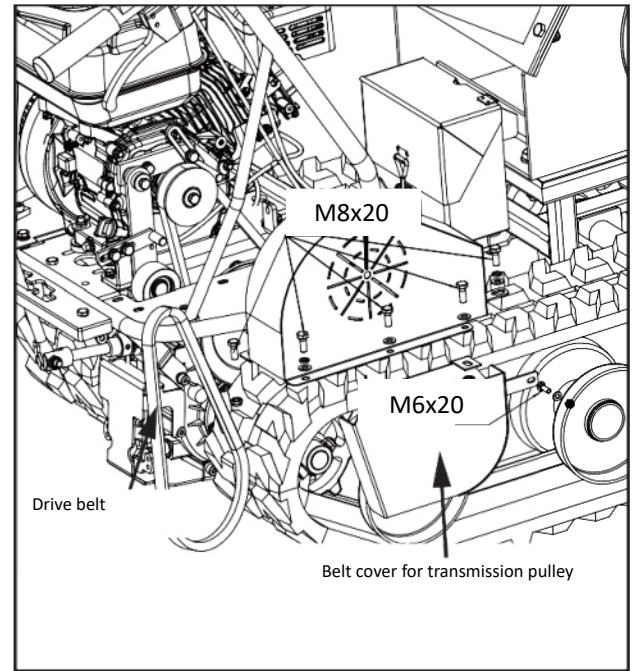
If the above adjustment does not create sufficient cable tension, follow the procedure below:

1. Loosen the locknut by turning it counterclockwise with a 12 mm wrench.
2. Tighten or loosen the cable by turning the cable adjustment clockwise or counterclockwise with a 10 mm wrench until the desired tension is reached.
3. Once the tension is set, return the nut of the lock against the handle to hold the cable in place.



Replacing the drive belt

Remove the belt covers as shown and remove the belt.



It may be necessary to loosen the belt guide bracket and slide it back before removing

Lubrication

General lubrication

Lightly lubricate all moving parts of the machine at the end of the season or every 25 hours of operation.

Transmission lubrication

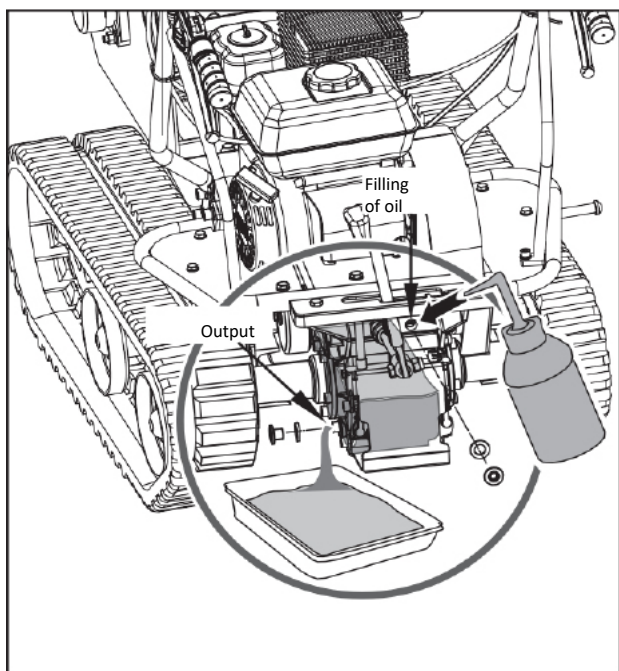
The transmission is pre-lubricated and sealed at the factory. Unless there is evidence of leaks or maintenance has been performed on the transmission, no additional lubrication should be required until 50 hours of use.

After the first 50 hours of use, replace all the transmission oil. The capacity is 1.5 liters. For future use, check the oil level every 50 hours of use. If you remove the level cap of the oil and the oil does not leak out, add oil and then screw in the oil level cap.

GL-5 or GL-6 gear oil is recommended, SAE 80W-90. Do not use synthetic oil.

When replacing the transmission oil, the engine must be turned off and still warm. Unscrew the cap of the filter and the drain plug. When the oil is drained, replace the drain plug, fill with fresh oil, then replace the filter cap.

remove the belt cover

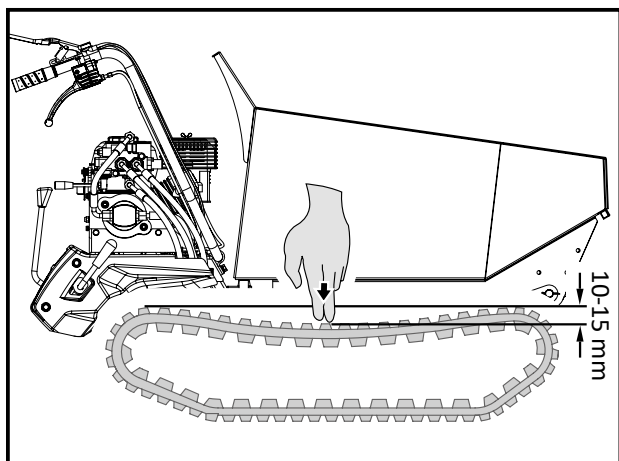


Clamping rails

With use, the rails tend to loosen. When operate with loose rails, they tend to slip on the drive wheel causing it to jump, thus damaging the housing wear.

To check the track tension, proceed as follows.

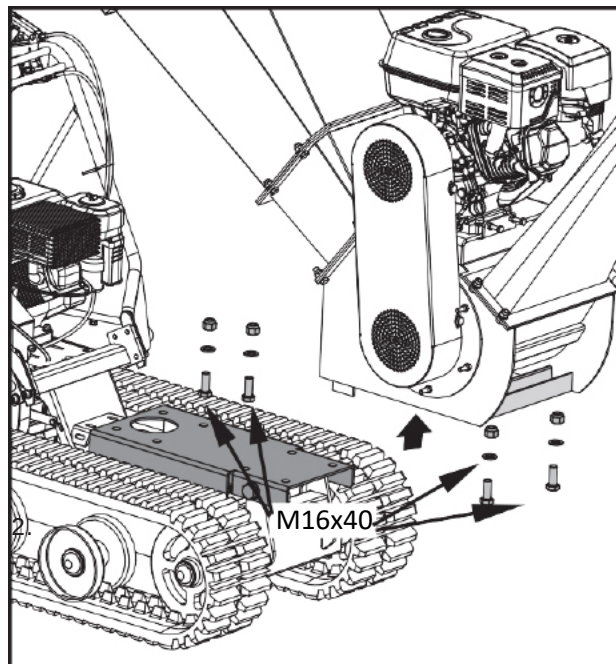
1. Place the machine on a flat surface with compact ground, or on asphalt or pavement.
2. Lift the machine and place it on blocks or supports suitable for the weight of the machine so that the tracks are about 4" from the ground.
3. Measure the centerline of the track with respect to the horizontal line. The reading must not be greater than 10 cm~15 cm.



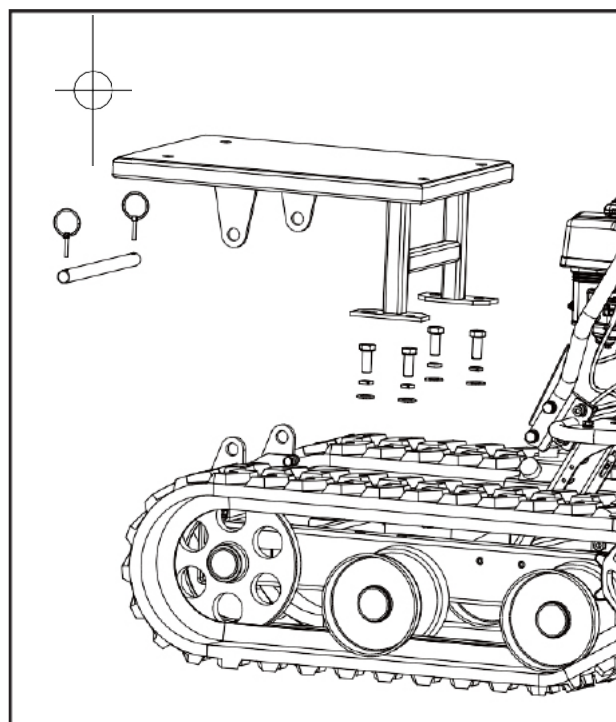
Track replacement

Check the condition of the tracks periodically. If any track is cracked or frayed, it should be replaced as soon as possible.

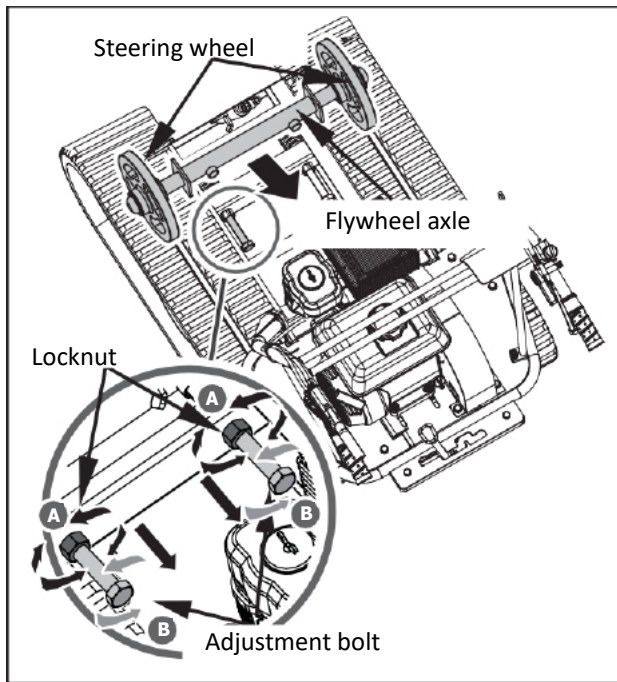
1. Remove the entire chipper.



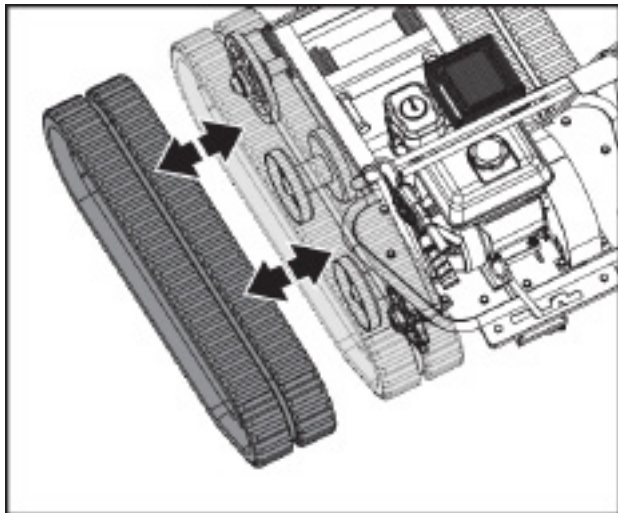
2. Remove the mounting seat.



3. Loosen the adjustment bolts and pull the axle of the flywheel toward the engine, then the track will be loosened.



4. Remove the entire track.



When removing or installing the tracks, be careful not to trap your fingers between the track and the pulley.

5. After replacing the track, reassemble the machine in reverse order

Engine maintenance

Refer to the attached engine manual to the device for information on engine maintenance. The engine manual provides detailed information and a schedule of maintenance for performing the tasks.

Chipper maintenance

Chipper maintenance will ensure a long life of the device and its components.

Preventive maintenance

1. Turn off the engine. The engine must be cold.
2. Keep the engine throttle lever in its SLOW position and remove the spark plug wire from the spark plug and secure it.
3. Check the general condition of the shredder. Check that there are no loose screws, misalignment or obstructions of moving parts, cracked or broken parts, and any other condition that may affect its safe operation.
4. Remove all debris from the chipper with a soft brush, a vacuum cleaner or compressed air. Then use a high-quality light machine oil to lubricate all moving parts.
5. Replace the spark plug wire.



Never use a pressure washer to clean the shredder. Water can penetrate into the narrow areas of the device and cause damage to the spindles, pulleys, bearings, or the motor.



Turn off the engine, wait for all moving parts to stop completely, remove the spark plug wire and then wait five minutes before performing maintenance on the chipper shredder.

Routine maintenance checklist

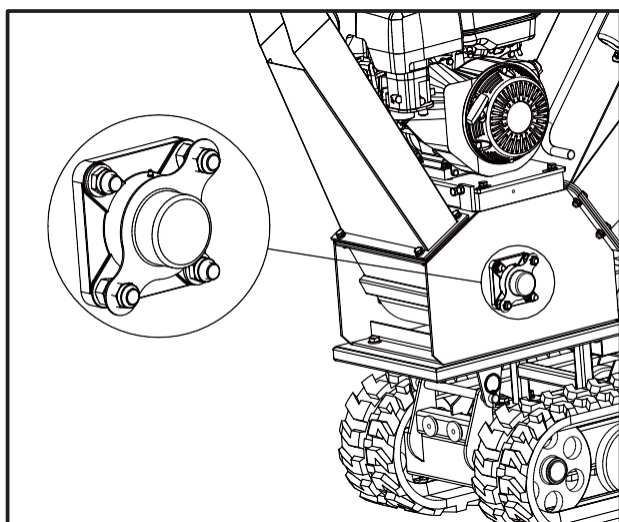
The indicated maintenance intervals are the maximum under normal operating conditions. Increase the frequency in extremely dirty or dusty conditions.

Procedure	Before each use	After the first 15 minutes	Every 25 hours	Every 100 hours
Check the engine oil level	X	X		
Check the general condition of the equipment	X	X		
Check the blades	X	X		
Check the belts	X	X		
Check the emergency stop switch			X	
Check the tire pressure			X	
Clean the outside of the engine and cool			X	
Change the engine oil			X	
Replace the air filter			X	
Replace the spark plug				X

There are two bearings, one on the outside and the other inside the housing. The bearings are greased when new, but it is recommended to grease them after a couple of hours of use. One or two pumps are sufficient. Be careful not to over-oil. Excessive lubrication can damage the bearings.

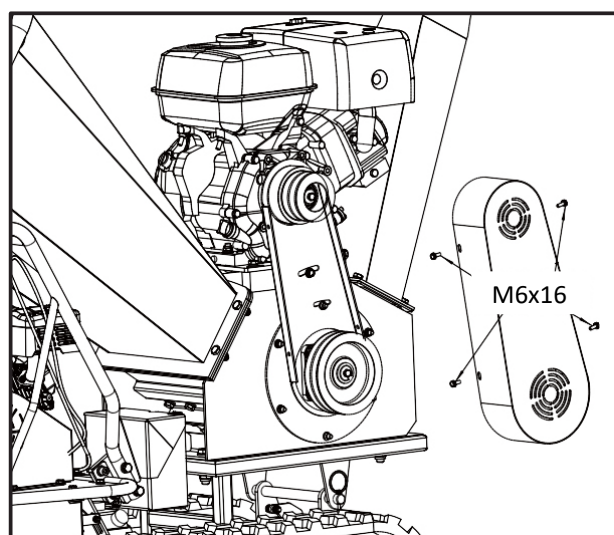
Grease the external bearing

1. Open the plastic oil cap.
2. Grease the outer bearing through the filling hole.
3. Close the plastic oil cap.

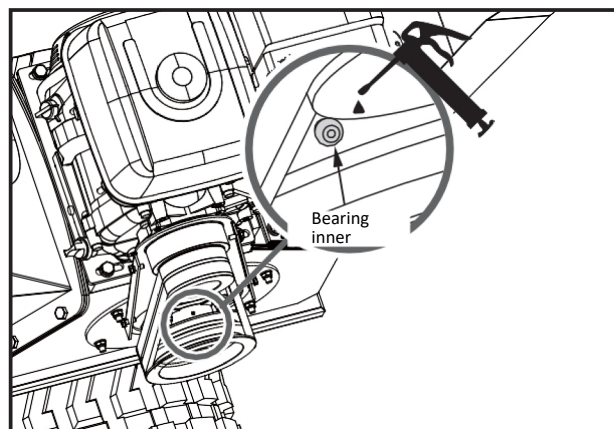


Grease the internal bearing

1. Unscrew the four M6x2 bolts, open the belt cover.

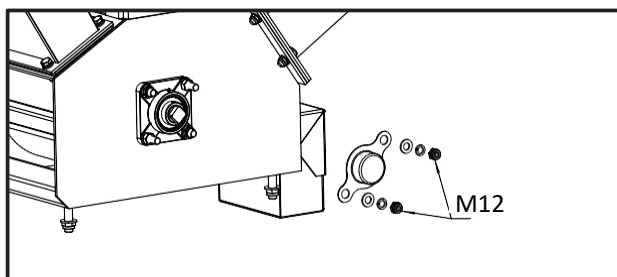


2. Grease the inner bearing.



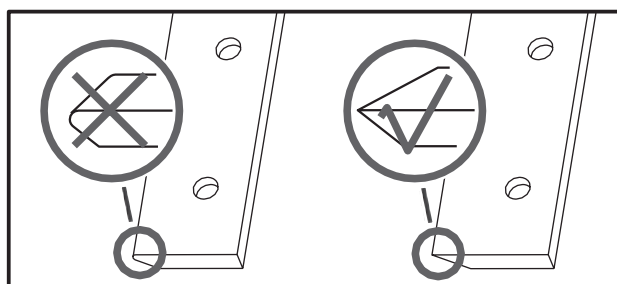
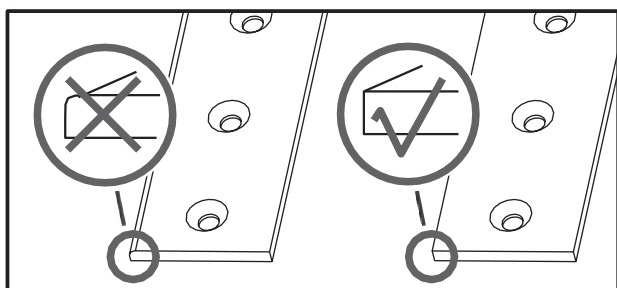
If the cutting disc of the device hits a foreign object, or if the device starts making an unusual noise or vibrates excessively, turn off the engine immediately. Allow the cutting disc to come to a complete stop. Set the engine to "OFF" to prevent any accidental start-up. Then proceed as follows:

- Check for damage.
- Repair or replace damaged parts.
- Check for loose parts and tighten to ensure continuous and safe operation.
- If the cutting disc gets stuck due to branches, open the bearing cover, then rotate the disc shaft using a wrench to turn the disc.



Inspection of the blade and sliding plate

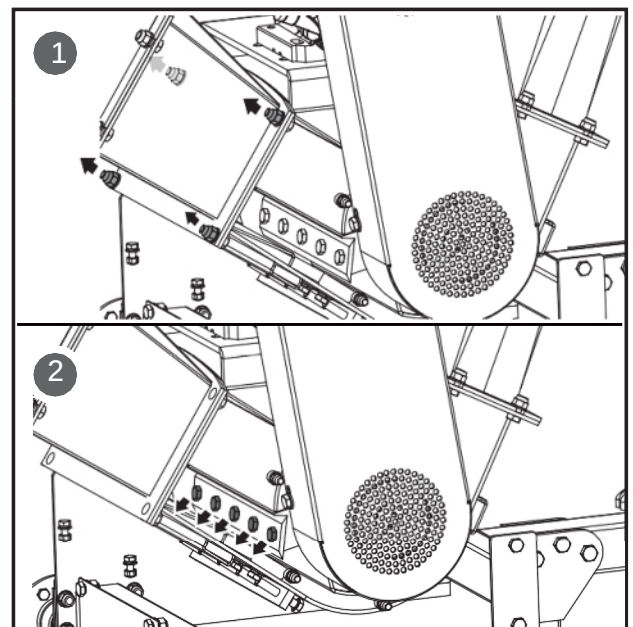
Routine inspection of the blades for sharpness and the sliding plate for a sharp edge will ensure that the chipper shredder operates at maximum efficiency. The use of dull blades or a rounded sliding plate reduces performance and causes excessive vibrations that damage the machine and make chipping difficult for the operator.



Blade removal and replacement

This chipper is equipped with two special blades mounted on the cutting disc. When the blades become dull or show visible nicks, the machine will lose its self-feeding action and the material must be pushed in. It often comes out in long strips. The blade is cemented and reversible. Normally the edges will last a long time. When the edge is rounded, it can be reversed. When both edges are worn, the blades must be replaced. Replace the knives by following the steps.

1. Remove the two M8 nuts, then open the feed hopper.
2. Remove the bolts securing the blade.



Be careful and wear gloves when working near the blades.

3. Remove the blunt or damaged blades and visually inspect the slot of the cutting disc and the blade mounting area. Make sure they are clean and that the positioning blades can be mounted flush with the cutting disc. Reinstall the new or sharpened blades with their edges facing upwards.

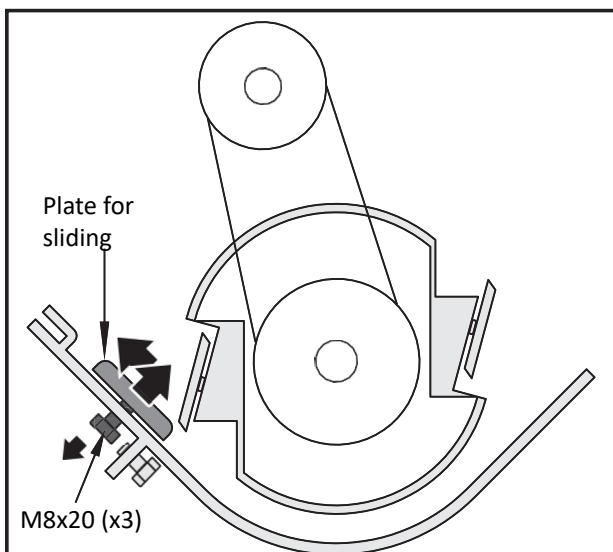
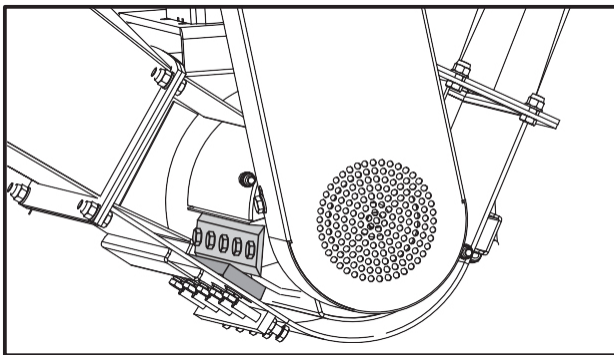


If the surface of the cutting disc is not properly cleaned and the blades are not mounted flush on the cutting disc, they may break when the components are tightened.

Removal and replacement of the sliding plate

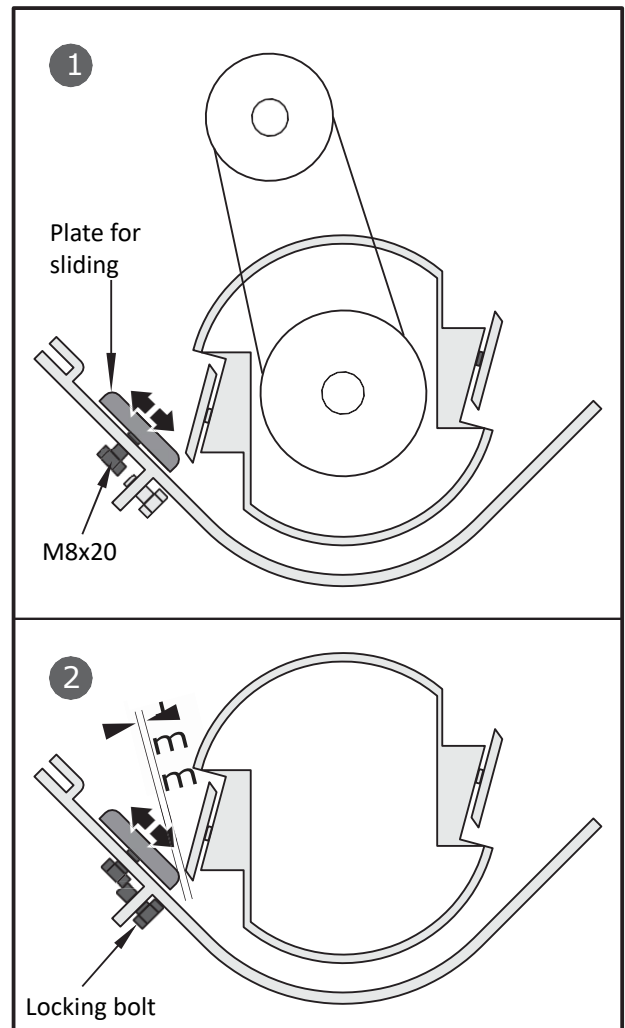
The sliding plate is hardened and reversible. Normally the edges will last a long time. When the edge is rounded, it can be reversed. The sliding plate cannot be resharpened; it will lose its hard edge due to the hardening of the casing. When both edges are worn, the sliding plate must be replaced.

1. Remove the feed hopper.
2. Remove the locknuts and bolts that secure the sliding plate to the chipper assembly and then remove the sliding plate.



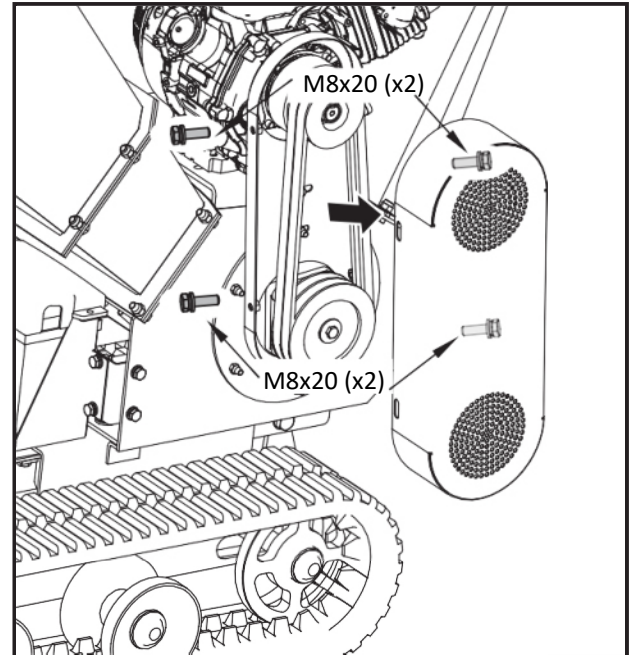
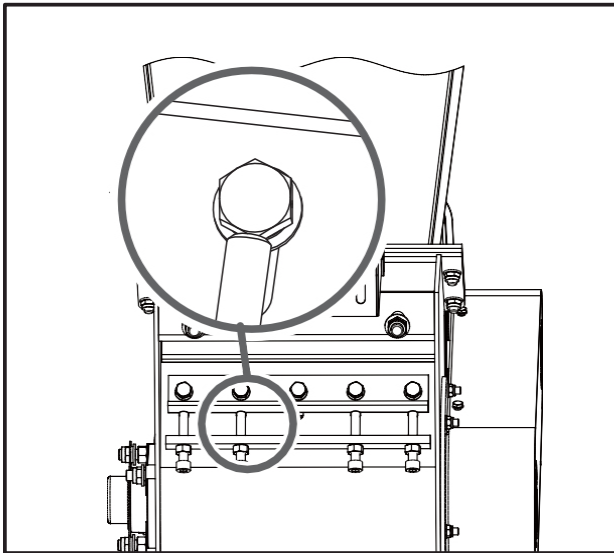
3. Install the new sliding plate and secure it with the bolts and locknuts.

The distance between the blade and the sliding plate must be adjusted every time the sliding plate is removed.



The slide plate can be adjusted through the mounting slots. Loosen the bolts securing the sliding plate and move the sliding plate in the elongated holes, then tighten the bolts when the correct distance is reached.

Tighten the sliding plate bolts.



If the sliding plate is not set correctly, excessive vibrations will occur during chipping and the blade will appear dull. If there is not enough clearance, the blade edges may touch the slide plate due to deformation when cutting heavy branches and damage the cutting edge. Too much clearance will allow small twigs and fibrous materials to be dragged through without being cut.



When adjusting the belts, make sure that the engine pulley is aligned with the cutting disc pulley.

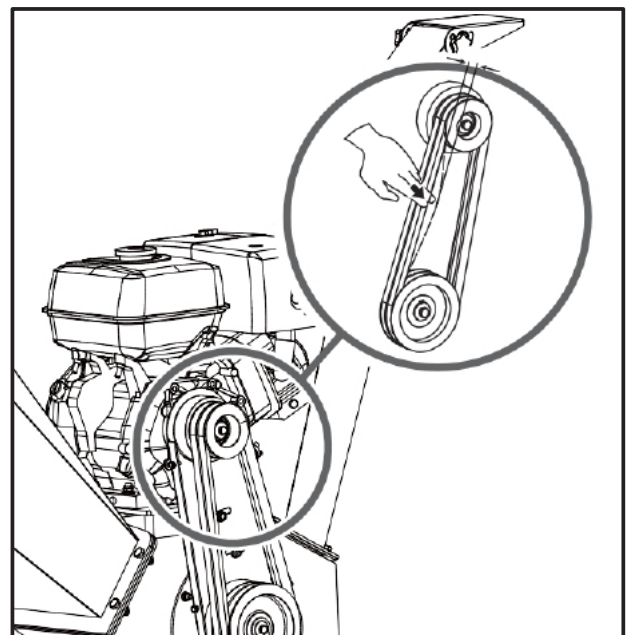
2. Check the condition of the V-belts. If a V-belt is broken, frayed, or glazed, it must be replaced.
3. Check the tension of the V-belt by squeezing it in the center. The normal deflection on each side should be about 1 cm (3/8") with moderate pressure from the thumb or finger.



After maintenance or adjustment, rotate the cutting disc with a stick and watch and listen carefully for any unusual noises, clicks, or vibrations. If any of these are detected, inspect the device for damage or loose parts and repair, replace, or tighten before starting the device.

V-belt inspection

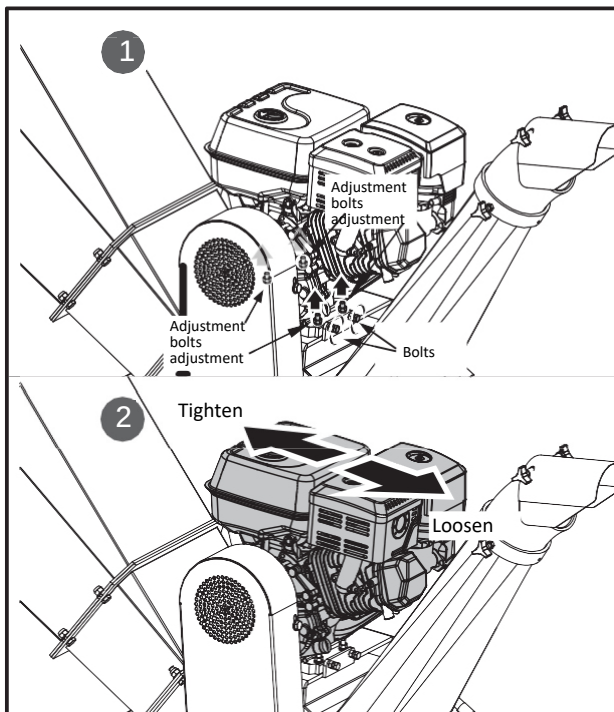
1. Unscrew the four M8x20 bolts, open the belt cover.



V-belt tension

Proper belt tension is essential for good performance. Proper adjustment will ensure a long belt life. Too much or too little belt tension will cause premature belt failure.

1. Turn off the engine. The engine must be cold.
2. Remove the belt cover.
3. Loosen the four bolts securing the engine. Loosen the two end stop bolts on the front of the engine base. Therefore, move the engine in the direction of loosening the belt or in the direction of tightening the belt. Then move the engine in the direction of loosening the belt or in the direction of tightening the belt.



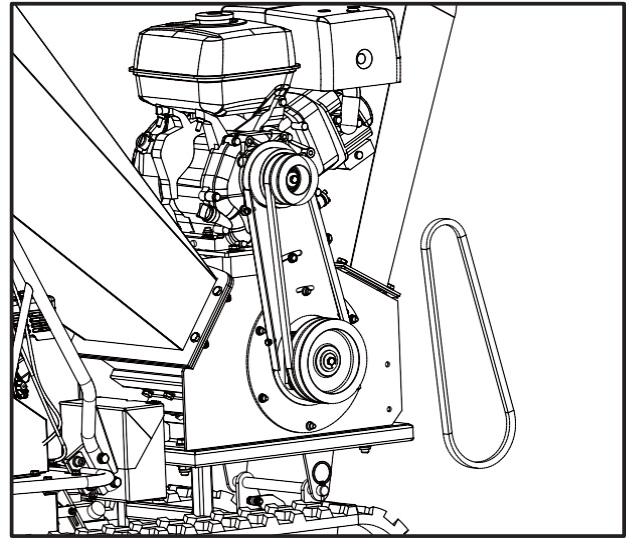
4. When the V-belt tension is correct, tighten the four adjustment bolts and two limit bolts. If the V-belt tension is too tight, loosen it in the opposite direction by moving the two M12 adjustment nuts upward and adjusting the sleeve between them.
5. Check the V-belt tension by squeezing it in the center. The normal deflection on each side should be about 1 cm (3/8") with moderate pressure from the thumb or finger.

V-belt replacement



Both V-belts must be replaced at the same time because they wear evenly during normal use.

1. Unscrew the four M8x20 bolts, open the belt cover.
2. Loosen the engine, then move the engine in the direction of loosening the belt.
3. Remove the damaged belt and install the new one.



4. Check the tension of the V-belt by squeezing it in the center. The normal indentation on each side should be about 1 cm (3/8") with moderate pressure from the thumb or finger.
5. After adjusting the belt tension, secure the engine.



When removing or installing the drive belts, be careful not to trap your fingers between the belt and the pulley.

Lubrication

Grease the bearings every 40 hours of operation. Be careful not to over-grease. There are two bearings, one outside and one inside the housing.

Use #0 lithium grease for portable tools such as Lubricant 6300AA, Lubricant GR-132 or Multifak, for example EP-O.

Engine oil / fuel

Refer to the engine manual packed separately with the device for information on how to check or add oil/fuel and for recommendations.

Engine maintenance

For detailed information and a maintenance schedule, refer to the engine manual packed separately with the device.

STORAGE

If the chipper will not be used for more than 30 days, follow the procedure below to prepare the device for storage:

1. Completely empty the fuel tank. Stale fuel has a high gum content and can clog the carburetor and restrict fuel flow.

2. Start the engine and let it run until it stops. This ensures that no fuel remains in the carburetor and helps prevent the formation of deposits inside, which can damage the engine.

3. Drain the oil from the engine while it is still warm. Refill with new oil of the category recommended in the engine manual.

4. Let the engine cool down. Remove the spark plug and pour 60 ml of high-quality SAE-30 engine oil into the cylinder. Slowly pull the starter to distribute the oil. Replace the spark plug.



Remove the spark plug and drain all oil from the cylinder before attempting to start the device after storage.

5. Use clean clothes to clean the outside of the chipper and to keep the air vents free from obstructions.



Do not use harsh cleaners or petroleum-based cleaning products when cleaning plastic parts. Chemicals can damage plastic.

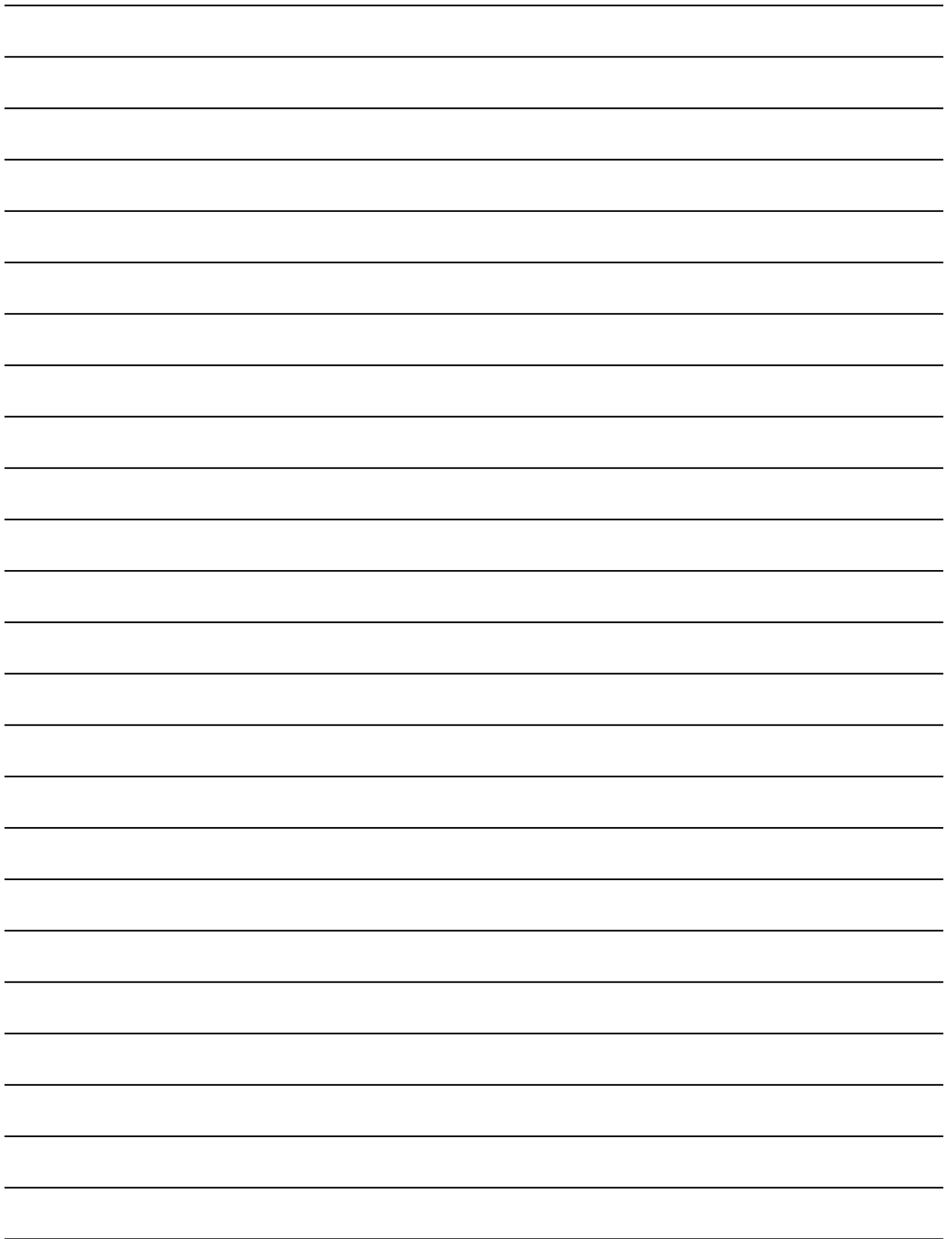
6. Store the shredder in an upright position in a clean, dry environment with good ventilation.



Do not store the chipper with fuel in an unventilated area where fuel vapors could reach flames, sparks, pilot lights, or any source of combustion.

TROUBLESHOOTING

Problem	Cause	Solution
The engine does not start	1. The spark plug wire is disconnected 2. Out of fuel or stale fuel 3. The engine and/or fuel valve are not in the ON position 4. Choke lever not in the CLOSED position 5. Fuel line blocked 6. Dirty spark plug 7. Engine flooding 8. The belt tension lever is engaged	1. Securely attach the spark plug wire to the spark plug 2. Fill with fresh, clean gasoline 3. The engine and fuel valve must be in the ON position 4. The choke lever must be in the CLOSED position for a cold start 5. Clean the fuel line 6. Clean, adjust the gap, or replace 7. Wait a few minutes before restarting, but do not prime 8. Disengage the belt tension lever
The engine runs irregularly	1. The spark plug wire is loose 2. Device operating with the choke lever in the CLOSED position 3. Fuel line blocked or stale fuel 4. Air intake engaged 5. Water or dirt in the fuel system 6. Dirty air filter 7. Incorrect carburetor adjustment	1. Connect and tighten the spark plug wire 2. Move the choke lever to the OPEN position 3. Clean the fuel line. Fill the tank with fresh, clean gasoline 4. Clear the ventilation 5. Drain the fuel tank. Fill with new fuel 6. Clean or replace the air filter 7. Refer to the engine manual
The engine overheats	1. Low engine oil level 2. Dirty air filter 3. Restricted airflow 4. Carburetor not properly adjusted	1. Fill the sump with appropriate oil 2. Clean the air filter 3. Remove the housing and clean it 4. Refer to the engine manual
The belt frays or rolls over the pulley	1. The groove of the rotor drive pulley may be damaged 2. The drive belts may be stretched 3. The pulleys may be misaligned	1. Check the drive belts for wear and hard spots. Remove all marks from the pulley 2. Replace the drive belts 3. Adjust the pulleys
During chipping, the branch seems to vibrate and move excessively with unusual noise	1. Blunt or damaged blades 2. The blades are not correctly positioned on the cutting disc 3. The distance between the blades and the sliding plate is too large 4. The rotor is overloaded with material	1. Sharpen or replace the blades 2. Loosen the blade mounting screws, reset them, and tighten the screws 3. Adjust the distance 4. Allow the device to clear before adding more material to the hopper
The shredder blades are hitting the sliding plate	The space between the blades and the sliding plate is not set correctly	Adjust the distance



EC DECLARATION OF CONFORMITY - HERSTELLERERKLÄRUNG - DECLARATION 'CE' DE CONFORMITE - DECLARACION DE CONFORMIDAD - DICHIARAZIONE DI CONFORMITA' EUROPEA - GELIJKVORMIGHEIDSVERKLARING - EC DEKLARATION I OVERENSSTEMMELSE - DECLARAÇÃO CE DE CONFORMIDADE - EY ILMOITUS - FORSAKRAN OM OVERENSSTAMMELSE - BEKREFTENDE EU ERKLÆRING - ΔΗΛΩΣΗ ΕΚ ΣΥΜΜΟΡΦΩΣΗΣ - EUROPEJSKA DEKLARACJA ZGODNOSCI

1) MANUFACTURER - HERSTELLER - FABRICANT - FABRICANTE - ~~STRUTTORE~~ - CONSTRUCTEUR - PRODUCENT - FABRICANTE - VALMISTAJA - TILLVERKARE - FABRIKANT - Κατασκευαστής - PRODUCENT:
Blue Bird Industries Fabbrica Motori s.r.l.
Via Due Camini 19, 36010 Zanè (VI) Italia

2) DESCRIPTION OF THE MACHINERY - BESCHREIBUNG DER MASCHINE - DESCRIPTION DE LA MACHINE - DESCRIPCION DE LA MAQUINARIA - DESCRIZIONE DELLA MACCHINA - BESCHRIJVING VAN DE MACHINE - BESKRIVELSE AF MASKINEN - DESCRIÇÃO DA MAQUINA - KONEEN NIMITYS - MATERIELSLAG - BESKRIVELSE AV MASKINERI ET - ΠΕΡΙΓΡΑΦΗ ΤΩΝ ΜΗΧΑΝΩΝ - OPIS MASZYN:
DUMPER & WOOD CHIPPER

a) MAKE - FABRIKAT - MARQUE - MARCA - MARCA - MERK - MÆRKE - MARCA - MERKKI - FABRIKAT - FABRIKANT - MAPKA - MARKA:
BLUE BIRD

a) TYPE / TYP / TYPE / TIPO / TIPO / TYPE / TYPE / TIPO / MALLI / TYPBE / TYPE / ΤΥΠΟΣ / TYP:
TGS1500 / CARRIER 310-SHL 1200 = (D30MB / CARRIER 310 + GS1500 / SHL 1200)

b) Il prodotto è conforme alle direttive - The product complies with the directives - Das Produkt entspricht den Richtlinien - Le produit est conforme aux directives - El producto cumple con las directivas :

- 2006/42/EC - 2014/30/EU - 2000/14/EC (2005/88/EC) - 2011/65/EU

c) REFERENCE TO STANDARDS/HARMONIZED STANDARDS - VERWEIS AUF NORMEN/ARMONISIERTE NORMEN - REFERENCE AUX NORMES/NORMES HARMONISEES - REFERENCIA A ESTANDARES/ESTANDARES ARMONIZADOS - RIFERIMENTO ALLE NORME/NORME ARMONIZZATE - REFERENTIE NAAR STANDAARDEN/GEHARMONISEERDE STANDAARDEN - REFERENCE TIL STANDARDER/HARMONISEREDE STANDARDER - REFERENCIA AS NORMAS/NORMAS HARMONIZADAS - VITTAUS STANDARDEIHIN/YHTEISIIN STANDARDEIHIN - REFERERANDE TILL STANDARDER/HARMONISERADE STANDARDER - HENVISNING TIL STANDARD/FELLES STANDARD - ΑΝΑΦΟΡΑ ΣΤΑ ΠΡΟΤΥΠΑ/ΕΝΑΡΜΟΝΙΣΜΕΝΑ ΠΡΟΤΥΠΑ - ODNIESIENIE DO NORM/NORM ZHARMONIZOWANYCH:

EN ISO 12100:2010

2000/14/EC (2005/88/EC) - Livelli di potenza sonora come da allegato V - Sound Power Levels performed per annex V	
TIPO	Livelli di Potenza Sonora Misurata / Livelli di Potenza Sonora Garantita LWA Sound Power Levels Measured / Sound Power Level Guaranteed LWA (dB)
CARRIER 310	80 / 99
SHL 1200	96/119

Importato da - Imported by - Eingeführt von - Importé par - Importado por:



BLUE BIRD INDUSTRIES - FABBRICA MOTORI s.r.l.

ZANÈ (VI) - ITALIA

20-01-2021

The chairman - Der vorsitzender - Le président - El presidente - Il presidente - De voorzitter - Daglig leder - O presidente - Toimitusjohtaja - Verkställande direktör - Administrerende direktør - Ο ΠΡΟΕΔΡΟΣ - Prezes

VANDA VITELLA

(GB) Technical documentation maintained by
(F) Documentation technique maintenue par
(I) Documentazione tecnica conservata da
(DK) Teknisk dokumentation tilhandhællen av
(FI) Teknisten asiakirjojen ylläpitäjä
(NO) Teknisk dokumentasjon vedlikeholdt av

(D) Technische Dokumentation aktualisiert durch
(E) Documentación técnica mantenida por
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