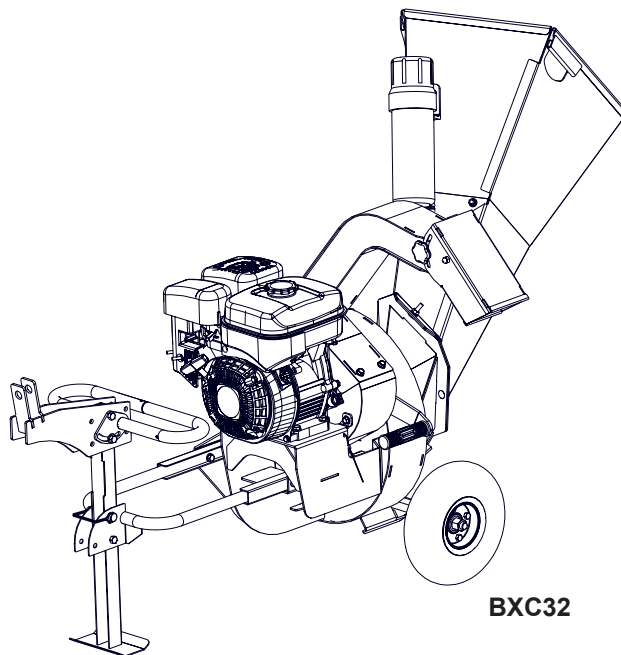


WALLENSTEIN

BY EMB MFG INC.

EMB Manufacturing Inc.
4144 Boomer Line · St. Clements, On · N0B 2M0 · Canada
Ph: (519) 699-9283 · Fax: (519) 699-4146
www.embmfg.com



BXC32

BXC32 & BXC32H Cart Chipper

OPERATOR'S MANUAL



Before putting the Cart Chipper into service:
Do not attempt to start or operate the Wood Processor without receiving full safety training and instruction in its features, operation and maintenance. See page 4 for Pre-Delivery Procedure.

**Keep this manual with the
Cart Chipper at all times**



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WARRANTY

Effective on products retailed on or after January 1, 2015.

**Register your product online at www.embmfg.com
within 30 days of purchase to activate warranty.**

This product is warranted to be free of defects in materials and workmanship under normal use and service, for a period of

**Five (5) Years for Consumer
Two (2) Year for Commercial/Rental**

from the date of purchase, when operated and maintained in accordance with the Operating and Maintenance Instructions supplied with this unit. Warranty is limited to the repair of the product and/or replacement of parts.

This warranty does not cover the following items:

- 1) Machines or parts lost or damaged during shipment,
- 2) Normal maintenance or adjustments after initial pre-service and set up is completed
- 3) Normal replacement of service items.
- 4) Accessory items / parts not supplied by EMB MFG INC.
- 5) Damages resulting from:
 - misuse, negligence, accident, theft or fire
 - use of improper or insufficient fuel, fluids or lubricants
 - use of parts or after market accessories other than genuine EMB MFG INC. parts
 - modifications, alteration, tampering or improper repair performed by parties other than an authorized dealer
 - any device or accessories installed by parties other than an authorized EMB dealer or distributor

Engines are covered by the manufacturer of the engine and covered by the warranty period specified by that manufacturer.

Engine warranty must be registered at the engine manufactures website. For service contact your local engine dealer.

Under no circumstances will the manufacturer be liable for any consequential damage or expense of any kind, including loss of profits. The manufacturer is under no circumstances liable for tow vehicle of any kind. The manufacturer is not liable for the maintenance of the product.

This warranty is extended only to the original purchaser and is not transferable. Warranty is void if repairs are attempted by anyone other than a Wallenstein Authorized Service Centre.

If a difficulty develops with the product, contact the local dealer from which you purchased the unit. Only Wallenstein authorized dealers are authorized to make repairs to the product or affect the replacement of defective parts, which will be done at no charge within a reasonable time after the receipt of the product. Unit or parts shall be returned at the customer's expense to the Authorized Service Centre. Damage in transit is not covered by warranty. Include the original purchase receipt with any claim (keep a copy of the receipt for your files).

The distributor's liability under warranty is limited to the repair of the product and/or replacement of parts and is given to the purchaser in lieu of all other remedies including incidental and consequential charges. There are no warranties, expressed or implied, other than those specified herein.

EMB MFG Inc
4144 Boomer Line, St Clements, ON N0B 2M0 Canada
Phone: 519-699-9283 Fax: 519-699-4146 : attention to Warranty Dept
Email: warranty@embmfg.com

WALLENSTEIN
BXC32 & BXC32H CART CHIPPER
DELIVERY INSPECTION REPORT
 To activate warranty, register your product online at
www.embmfg.com

This form must be filled out by the dealer and signed by both the dealer and the customer at the time of delivery.

 Customer's Name

 Contact Name

 Dealer Name

(_____) _____
 Phone Number

 Serial Number

_____/_____/_____
 Delivery Date

I have thoroughly instructed the buyer on the equipment care, adjustments, safe operation and applicable warranty policy and reviewed the manuals.

 Dealer's Rep. Signature

_____/_____/_____
 Delivery Date

The product manuals have been received by me and I have been thoroughly instructed as to care, adjustments, safe operation and applicable warranty policy.

 Owner's Signature

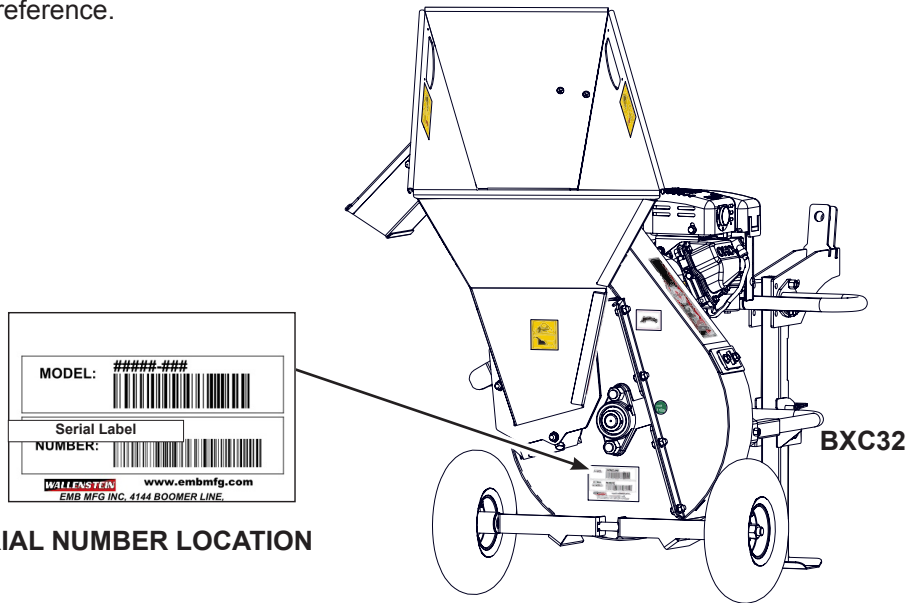
_____/_____/_____
 Delivery Date

✓	Pre-Delivery Inspection
	Inspect for damage from shipping, immediately contact the shipping company if damage is found.
BXC32 Cart Chipper	
	Check Blade Clearance
	Rotor Turns Freely
	Belt Tension Checked
	Pulleys Aligned
	Fasteners Tight
	Grease Zerks / Lubricate Pivot Points
	Check Wheel Nuts
	Check Cutting Blades (Rotor & Ledger)
	Check Safety Flap Moves Freely
	Check Belt Tensioner Arm Engages
	Check Engine Fluid Levels
	Review Operating and Safety Instructions
Safety Checks	
	All Safety Decals Installed
	Guards and Shields Installed and Secured
	Lock Pin on Hitch Tongue
	Review Operating and Safety Instructions

SERIAL NUMBER LOCATION

Always give your dealer the serial number of your Wallenstein BXC Cart Chipper when ordering parts or requesting service or other information.

The serial number plates are located where indicated. Please mark the numbers in the spaces provided for easy reference.



SERIAL NUMBER LOCATION

Model Number _____
Chipper Serial Number _____

LABELLING INFORMATION

As you begin to get familiar with your Wallenstein product, you will notice that there are numerous labels located on the machine. Here is a brief explanation of what they are for and how to read them.

There are three different types of labelling: safety, informative and product labels.

Safety Labels are pictorial and always with a yellow background colour and generally 2 panel. The top panel shows the safety alert (the potential hazard) and the bottom panel shows the message (how to avoid the hazard).

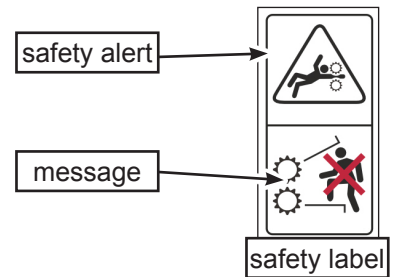
Safety Notice Labels are pictorial and always with a blue background colour and generally rectangular with single or multiple symbols. The label illustrates requirements for safe operation (safety equipment, housekeeping etc) These labels are accompanied by detailed instructions in the owners manual, with the label illustrated along side.

Informative Labels are generally pictorial, have a white background colour and can vary to the number of panels. The label will illustrate the function of a feature and is accompanied by detailed instructions in the owners manual, with the label illustrated along side.

Product Labels are associated with the product and carry various messages. (model, serial, etc)

Maintenance Labels are associated with the product and carry various messages. They are generally pictorial, they may be round or rectangular, have a green background colour and can vary to the number of panels. The label may illustrate the type maintenance and frequency in time between services. Labels are accompanied by detailed instructions in the owners manual, with the label illustrated along side.

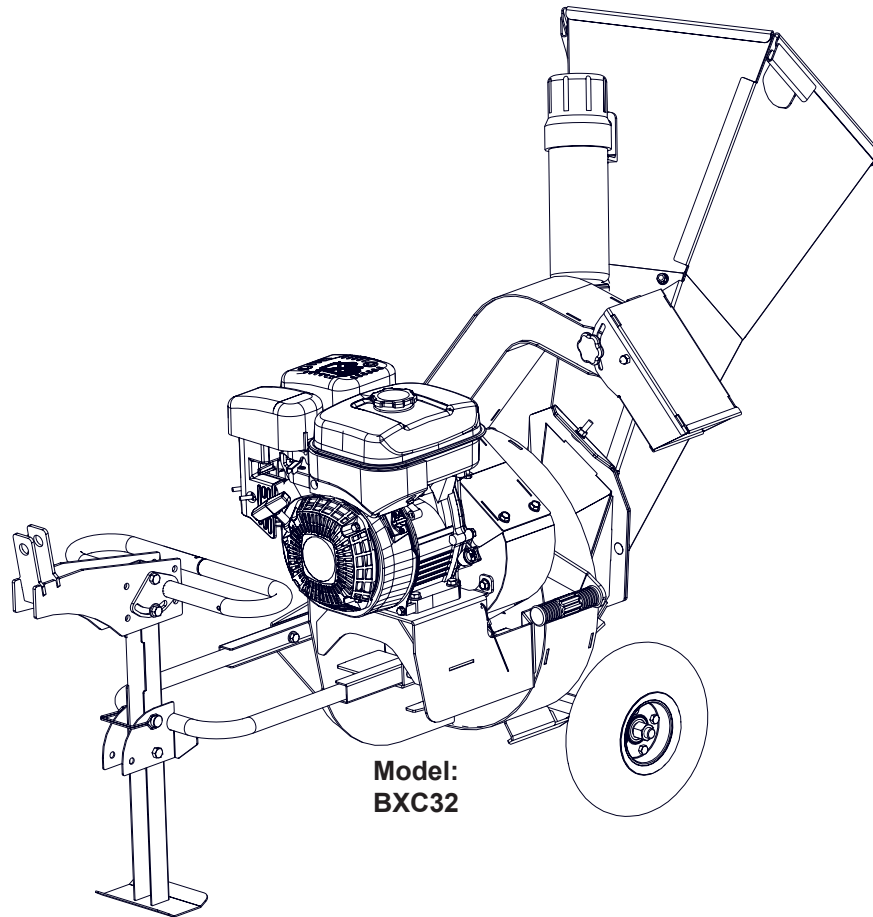
See the section on safety signs for safety label definitions. For a complete illustration of labels and label locations, download the parts manual for your model product at www.embmfg.com.



1 INTRODUCTION

Congratulations on your choice of a Wallenstein BXC Cart Chipper. This equipment has been designed and manufactured to meet the needs of a discerning consumer.

Safe, efficient and trouble free operation of your Wallenstein Cart Chipper requires that you and anyone else who will be using or maintaining the chipper, read and understand the Safety, Operation, Maintenance and Trouble Shooting information contained within the Operator's Manual.



This manual covers the Wallenstein Cart Chipper Model BXC32 & BXC32H. Most illustrations feature the BXC32, but operation for both models is the same unless otherwise stated. Use the Table of Contents or Index as a guide to locate required information.

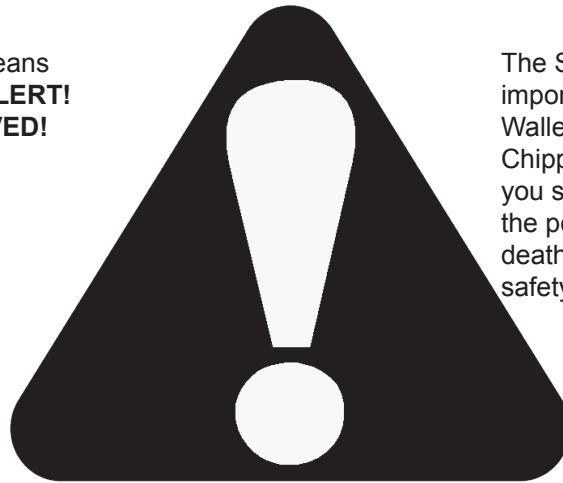
Keep this manual handy for frequent reference and to pass on to new operators or owners. Call your Wallenstein dealer or the Distributor if you need assistance, information or additional copies of the manuals.

OPERATOR ORIENTATION - The directions left, right, front and rear, as mentioned throughout this manual, are determined when sitting in the tractor driver's seat and facing in the direction of travel.

2 SAFETY

SAFETY ALERT SYMBOL

This Safety Alert symbol means **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**



The Safety Alert symbol identifies important safety messages on the Wallenstein 3 Point Hitch Wood Chipper and in the manual. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instructions in the safety message.

Why is SAFETY important to you?

3 Big Reasons

Accidents Disable and Kill
Accidents Cost
Accidents Can Be Avoided

SIGNAL WORDS:

Note the use of the signal words **DANGER**, **WARNING** and **CAUTION** with the safety messages. The appropriate signal word for each message has been selected using the following guide-lines:

DANGER - Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations typically for machine components which, for functional purposes, cannot be guarded.

WARNING - Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

CAUTION - Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

If you have any questions not answered in this manual or require additional copies or the manual is damaged, please contact your dealer or Wallenstein, 4144 Boomer Line, St. Clements, ON, N0B 2M0. Phone (519) 699-9283 or Fax (519) 699-4146.

SAFETY

YOU are responsible for the SAFE operation and maintenance of your Wallenstein BXC Cart Chipper. **YOU** must ensure that you and anyone else who is going to use, maintain or work around the Cart Chipper be familiar with the using and maintenance procedures and related **SAFETY** information contained in this manual. This manual will take you step-by-step through your working day and alerts you to all good safety practices that should be used while using the Cart Chipper.

Remember, **YOU** are the key to safety. Good safety practices not only protect you but also the people around you. Make these practices a working part of your safety program. Be certain that **EVERYONE** using this equipment is familiar with the recommended using and maintenance procedures and follows all the safety precautions. Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

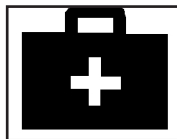
2.1 SAFETY DO'S & DON'TS

- **DO** give operating instructions to operators or employees before allowing them to operate the machine, and REVIEW annually thereafter.
- **DO** read and understand ALL Safety and Operating instructions in the manual and follow them. Most accidents can be avoided. The most important safety device on this equipment is a SAFE operator.



- **DO** review safety related items annually with all personnel who will operating or maintaining the chipper

- **DO** have a first-aid kit available for use should the need arise and know how to use it.



- **DO** read and understand all safety signs located on the machine before using, maintaining, adjusting or cleaning the wood chipper

- **DO** have a fire extinguisher available for use should the need arise and know how to use it.



- **DO** inspect and secure all guards before starting.

- **DO** wear appropriate protective gear (PPE). This list includes but is not limited to:



- Hard hat
- Heavy gloves
- Hearing protection
- Protective shoes with slip resistant soles
- Protective glasses, goggles or face shield

- **DO** prepare before servicing, adjusting, repairing or unplugging:
 - disengage the drive
 - shut off the engine
 - ensure components have stopped moving.
 - remove spark plug cable from the spark plug
 - turn fuel valve off.
 - block & chock the wheels
- **DO NOT** touch hot engine parts, muffler cover, engine body, engine oil, etc. during operation and after the engine has been shut off. Contact may cause burns.
- **DO NOT** expect a person who has not read and understood all use and safety instructions to operate the machine. An untrained operator is not qualified and exposes himself and bystanders to possible serious injury or death. It is the owners responsibility to the operator to ensure familiarity and understanding of the machine.
- **DO NOT** modify the equipment in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the equipment.
- **DO NOT** allow riders while towing.
- **DO NOT** risk injury or death by ignoring good safety practices.
- **DO** think SAFETY! Work SAFELY!

2.2 EQUIPMENT SAFETY GUIDELINES

1. Safety of the operator and bystanders is one of the main concerns in designing and developing equipment. However, every year many accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling equipment. You, the operator, can avoid many accidents by observing the following precautions in this section. To avoid personal injury or death, study the following precautions and insist those working with you, or for you to follow them.
2. In order to provide a better view, certain photographs or illustrations in this manual may show an assembly with a safety shield removed. However, equipment should never be used in this condition. Keep all shields in place. If shield removal becomes necessary for repairs, replace the shield prior to use.
3. Replace any safety sign or instruction sign that is not readable or is missing. Location of such safety signs is indicated in this manual.
4. Never use alcoholic beverages or drugs which can hinder alertness or coordination while using this equipment. Consult your doctor about using this machine while taking prescription medications.
5. **Under no circumstances should young children be allowed to work with this equipment. Do not allow persons to use or assemble this unit until they have read this manual and have developed a thorough understanding of the safety precautions and of how it works.** Review the safety instructions with all users annually.
6. This equipment is dangerous to children and persons unfamiliar with its operation. The operator should be a responsible, properly trained and physically able person familiar with machinery and trained in this equipment's operations. If the elderly are assisting with work, their physical limitations need to be recognized and accommodated.
7. Never exceed the limits of a piece of machinery. If its ability to do a job, or to do so safely, is in question - **DON'T TRY IT.**
8. Do not modify the equipment in any way. Unauthorized modification may result in serious injury or death and may impair the function and life of the equipment.
9. In addition to the design and configuration of this implement, including Safety Signs and Safety Equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of the machine. Refer also to Safety Messages and operation instruction in each of the appropriate sections of the machine manuals. Pay close attention to the Safety Signs affixed to the machine.
10. **Safe condition** involves the following procedure:
 - disengage the drive
 - shut off the engine
 - ensure all components have stopped moving.
 - remove spark plug cable from the spark plug
 - turn fuel valve off.
 - block & chock the wheelsSafe Condition procedure should be performed before any service, maintenance work or storage preparation.

2.3 SAFETY TRAINING

1. Safety is a primary concern in the design and manufacture of our products. Unfortunately, our efforts to provide safe equipment can be wiped out by a single careless act of an operator or bystander.
2. In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of this equipment.

3. It has been said, "The best safety feature is an informed, careful operator." We ask you to be that kind of an operator. It is the operator's responsibility to read and understand ALL Safety and Using instructions in the manual and to follow these. Accidents can be avoided.



4. **Working with unfamiliar equipment can lead to preventable injuries. Read this manual before assembly or using, to acquaint yourself with the machine. If this machine is used by any person other than yourself, or is loaned or rented, it is the machine owner's responsibility to make certain that the operator, prior to using:**

- **Reads and understands the operator's manuals.**
- **Is instructed in safe and proper use of the equipment.**
- **Understands and knows how to perform the "safe condition" procedure:**
 - disengage the drive
 - shut off the engine
 - ensure components have stopped moving.
 - remove spark plug cable
 - turn fuel valve off.
 - block & chock the wheels

5. Know your controls and how to stop the machine quickly in an emergency. Read this manual and the one provided with the engine.

6. Train all new personnel and review instructions frequently with existing workers. Be certain only a properly trained and physically able person will use the machinery. A person who has not read and understood all using and safety instructions is not qualified to use the machine. An untrained operator exposes himself and bystanders to possible serious injury or death. If the elderly are assisting with the work, their physical limitations need to be recognized and accommodated.

2.4 STORAGE SAFETY

1. Store the unit in an area away from human activity.
2. Do not children to play on or around the stored machine.
3. Store the unit in a dry, level area. Support the frame with planks if required.

2.5 TRANSPORT SAFETY

1. Comply with state and local laws governing safety and transporting of machinery on public roads.
2. Check that all the lights, reflectors and other lighting requirements are installed and in good working condition.
3. Do not exceed a safe travel speed. Slow down for rough terrain and cornering.
4. Be sure the machine is hitched positively to the tractor and a retainer is used through the mounting pins.
5. Do not drink and drive.
6. Be a safe and courteous driver. Always yield to oncoming traffic in all situations, including narrow bridges, intersections, etc. Watch for traffic when operating near or crossing roadways.
7. Never allow riders on the machine.

2.6 PREPARATION

1. Never use the machine until you have read and completely understand this manual, the tractor Operator's Manual and each of the Safety Messages found on the safety signs on the tractor and machine.

2. Personal protection equipment (PPE) including hard hat, safety glasses, safety shoes, and gloves are recommended



during assembly, installation, operation, adjustment, maintaining, repairing, removal, cleaning, or moving the unit. Do not allow long hair, loose fitting clothing or jewellery to be around equipment.

3. **PROLONGED EXPOSURE TO LOUD NOISE MAY CAUSE PERMANENT HEARING LOSS!**

Power equipment with or without equipment attached can often be noisy enough to cause permanent, partial hearing loss. We recommend that you wear hearing protection on a full-time basis if the noise in the Operator's position exceeds 80db. Noise over 85db on a long-term basis can cause severe hearing loss. Noise over 90db adjacent to the Operator over a long-term basis may cause permanent, total hearing loss. **NOTE:** Hearing loss from loud noise (from tractors, chain saws, radios, and other such sources close to the ear) is cumulative over a lifetime without hope of natural recovery.



4. Clear working area of stones, branches or hidden obstacles that might be hooked or snagged, causing injury or damage.
5. Use only in daylight or good artificial light.
6. Be sure machine is properly mounted, adjusted and in good operating condition.
7. Ensure that all safety shielding and safety signs are properly installed and in good condition.

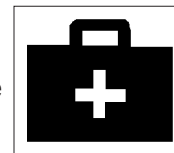
2.7 MAINTENANCE SAFETY

1. Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.
2. Follow good shop practices.

- Keep service area clean and dry.
- Be sure electrical outlets and tools are properly grounded.
- Use adequate light for the job at hand.



3. Make sure there is plenty of ventilation. Never operate the engine in a closed building. The exhaust fumes may cause asphyxiation.
4. Before working on this machine, place the machine in "Safe Condition" (pg 10)
5. Never work under equipment unless it is blocked securely.
6. Always use personal protection devices such as eye, hand and hearing protectors, when performing any service or maintenance work. Use heavy or leather gloves when handling blades.
7. Where replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts must be used to restore your equipment to original specifications. The manufacturer will not be responsible for injuries or damages caused by use of unapproved parts and/or accessories.
8. A fire extinguisher and first aid kit should be kept readily accessible while performing maintenance on this equipment.



9. Periodically tighten all bolts, nuts and screws and check that all electrical and fuel connections are properly secured to ensure unit is in a safe condition.
10. When completing a maintenance or service function, make sure all safety shields and devices are installed before placing unit in service.

2.8 OPERATING SAFETY

1. Please remember it is important that you read and heed the safety signs on the BXC Cart Chipper. Clean or replace all safety signs if they cannot be clearly read and understood. They are there for your safety, as well as the safety of others. The safe use of this machine is strictly up to you, the operator.
2. All things with moving parts are potentially hazardous. There is no substitute for a cautious, safe-minded operator who recognizes potential hazards and follows reasonable safety practices. The manufacturer has designed the BXC Cart Chipper to be used with all its safety equipment properly attached, to minimize the chance of accidents. Study this manual to make sure you have all safety equipment attached.
3. Close and secure rotor cover before operating.
4. Close and secure all guards, deflectors and shields before starting and operating.
5. Read and understand operator's manual before starting. Review safety instructions annually.
6. Personal protection equipment including hearing protection, hard hat, safety glasses, safety shoes, and gloves are recommended during assembly, installation, operation, adjustment, maintaining, repairing, removal, or moving. Do not allow long hair, loose-fitting clothing, or jewellery to be around moving parts.
7. Never place any part of your body where it would be in danger if movement should occur during assembly, installation, operation, maintenance, repairing, unplugging or moving.
8. Before servicing, adjusting, repairing or unplugging: **perform the "safe condition" procedure:**
 - **disengage the drive**
 - **shut off the engine**
 - **ensure components have stopped moving.**
 - **remove spark plug cable**
 - **turn fuel valve off.**
 - **block & chock the wheels**
9. Do not run machine inside a closed building to prevent asphyxiation from engine exhaust.
10. Use care when feeding material into chipper. Do not send metal, bottles, cans, rocks, glass or other foreign material into wood chipper. If foreign material enters chipper, stop using the machine, **perform the "safe condition" procedure.** Inspect machine for damaged or loose parts before resuming work.
11. Never use alcoholic beverages or drugs which can hinder alertness or coordination while operating this equipment. Consult your doctor about operating this machine while taking prescription medications.
12. During transport, do not allow riders on this machine at any time. There is no safe place for any riders.
13. Never allow children or unauthorized people to operate or be around this machine.
14. Do not reach into rotor or feed hopper openings when the engine is running. Install and secure access covers before starting engine.
15. Keep the working area clean and free of debris to prevent tripping. Operate only on level ground.
16. Do not point discharge at people, animals or buildings. Rotor can expel wood chips fast enough to cause injury.
17. Do not move or transport chipper when the rotor is turning.
18. Do not exceed a safe travel speed when transporting.

2.9 GAS MOTOR SAFETY

BEFORE STARTING ENGINE, READ AND UNDERSTAND THE OPERATING AND MAINTENANCE INSTRUCTIONS THAT CAME WITH YOUR ENGINE.

WARNING: DO NOT

1. DO NOT run engine in an enclosed area. Exhaust gases contain carbon monoxide, an odourless and deadly poison.
2. DO NOT place hands or feet near moving or rotating parts.
3. DO NOT store, spill, or use gasoline near an open flame, or devices such as a stove, furnace, or water heater which use a pilot light or devices which can create a spark.
4. DO NOT refuel indoors where area is not well ventilated. Outdoor refuelling is preferred.
5. DO NOT refuel while engine is running. Allow engine to cool for 5 minutes before refuelling. Store fuel in approved safety containers.
6. DO NOT remove fuel tank cap while engine is running.
7. DO NOT operate engine if gasoline is spilled. Move machine away from the spill and avoid creating any ignition until gasoline has evaporated.
8. DO NOT smoke while filling fuel tank.
9. DO NOT choke carburettor to stop engine. Whenever possible, gradually reduce engine speed before stopping.
10. DO NOT run engine above rated speeds. This may result in injury.
11. DO NOT tamper with governor springs, governor links or other parts which may increase the governed speed.
12. DO NOT tamper with the engine speed selected by the original equipment manufacturer.
13. DO NOT check for spark with spark plug or spark plug wire removed.
14. DO NOT crank engine with spark plug removed. If engine is flooded, crank until engine starts.
15. DO NOT strike flywheel with a hard object or metal tool as this may cause flywheel to shatter in operation. Use proper tools to service engine.
16. DO NOT operate engine without a muffler. Inspect periodically and replace, if necessary. If engine is equipped with a muffler deflector, inspect periodically and replace, if necessary with correct deflector.
17. DO NOT operate engine with an accumulation of grass, leaves, dirt or other combustible materials in the muffler area.
18. DO NOT use this engine on any forest covered, brush covered, or grass covered unimproved land unless a spark arrester is installed on the muffler. The arrester must be maintained in effective working order by the operator. In the state of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal land.
19. DO NOT touch hot muffler, cylinder or fins because contact may cause burns.
20. DO NOT run engine with air cleaner or air cleaner cover removed.

WARNING: DO

1. ALWAYS DO remove the wire from the spark plug when servicing the engine or equipment to prevent accidental starting.
2. DO keep cylinder fins and governor parts free of grass and other debris which can affect engine speed.
3. DO examine muffler periodically to be sure it is functioning effectively. A worn or leaking muffler should be repaired or replaced as necessary.
4. DO use fresh gasoline. Stale fuel can gum carburettor and cause leakage.
5. DO check fuel lines and fittings frequently for cracks or leaks. Replace if necessary.

3 SAFETY SIGNS

1. Keep safety signs clean and legible at all times,
2. Replace safety signs that are missing or have become illegible.
3. Replaced parts that displayed a safety sign should also display the current sign.
4. Safety signs in Section 3 each have a part number displayed with it. Use this part number when ordering replacement parts.
5. Safety signs are available from your authorized Distributor or Dealer Parts Department or the factory.

3.1 HOW TO INSTALL SAFETY SIGNS:

- Be sure that the installation area is clean and dry.
- Be sure temperature is above 50°F (10°C).
- Determine exact position before you remove the backing paper.
- Remove the smallest portion of the split backing paper.
- Align the sign over the specified area and carefully press the small portion with the exposed sticky backing in place.
- Slowly peel back the remaining paper and carefully smooth the remaining portion of the sign in place.
- Small air pockets can be pierced with a pin and smoothed out using the piece of sign backing paper

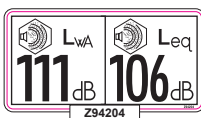
3.2 SAFETY SIGN EXPLANATIONS:



Caution: keep hands and feet out of inlet and discharge openings while machine is operating to avoid serious personal injury. Wait for all moving parts to come to a complete stop before clearing obstructions .



Caution: flying objects, be aware of and Stay clear of material discharge chute, machine can expel wood chips fast enough to cause injury. Do not point discharge at people, animals or buildings.



Caution: machine is extremely loud in operation. Hearing protection is required or permanent damage will occur. Lwa is sound power level, Leq is the average sound level.



Caution: Personal Protection Equipment (PPE) is required when operating this machine. Failure to wear PPE will result in personal injury



Caution: read and understand ALL safety and operating instructions in the manual, read and understand ALL safety labels located on the machine. The most important safety device on this equipment is an informed SAFE operator.



Caution: Maximum size of material for this chipper is 75mm (3.0"). Attempting to chip anything larger could stall the engine, damage the chipper or cause personal injury.

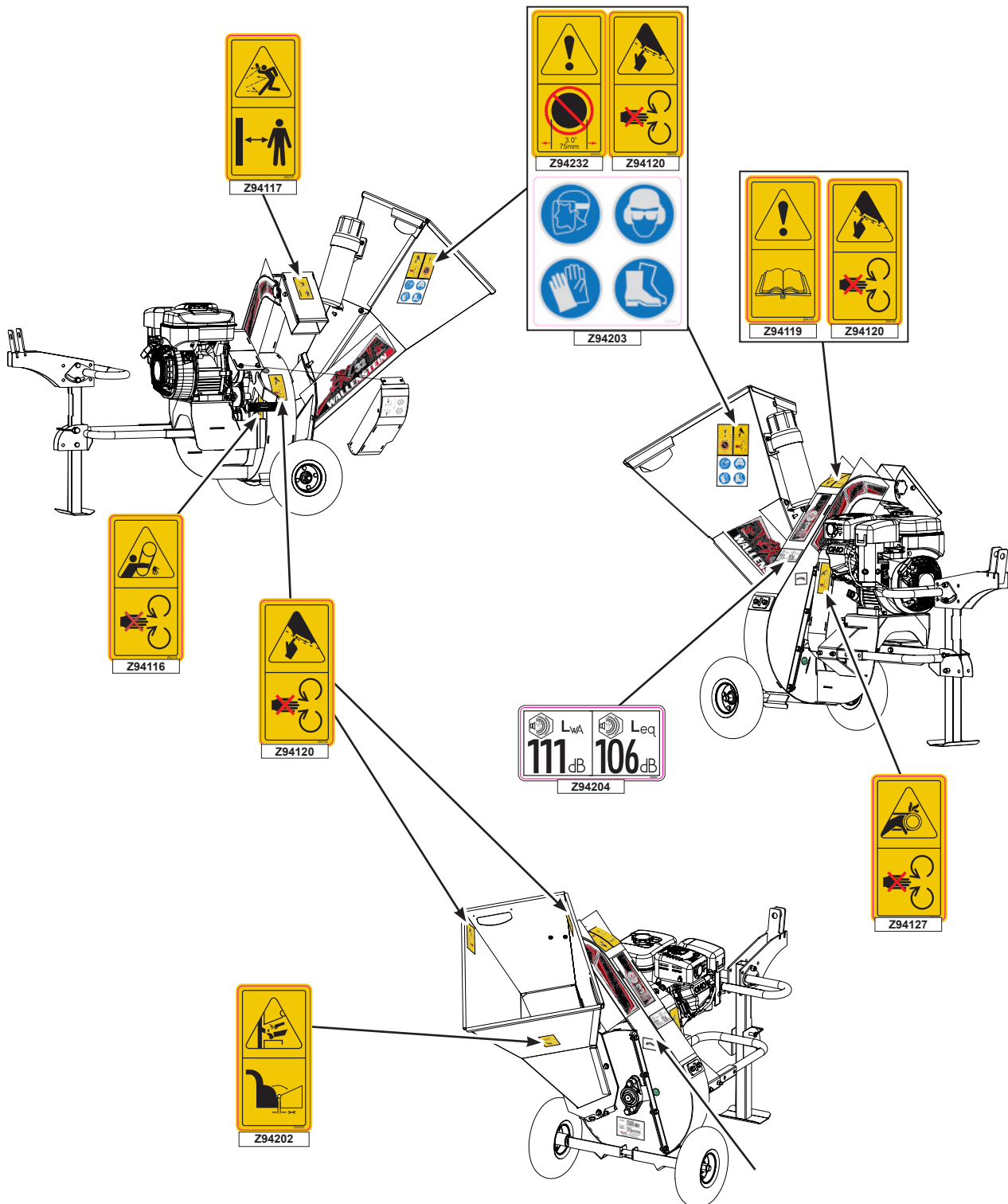


Caution: rotating parts are exposed or under a guard, do not attempt to reach in while parts are turning. Keep hands, loose clothing, and long hair away. Serious injury will result.

3.3 SAFETY SIGN LOCATIONS

The types of safety signs and locations on the equipment are shown in the illustrations that follow. Good safety requires that you familiarize yourself with the various safety signs, the type of warning and the area, or particular function related to that area, that requires your SAFETY AWARENESS.

- Think SAFETY! Work SAFELY!



REMEMBER - If safety signs have been damaged, removed, become illegible or parts replaced without safety signs, new signs must be applied. New safety signs are available from your authorized dealer.

4 OPERATION



OPERATING SAFETY

- Please remember it is important that you read the operator's manual and heed the safety signs on the BXC Chipper. They are there for your safety, as well as the safety of others. The safe use of this machine is strictly up to you, the operator.
- Personal protection equipment including hearing protection, hard hat, safety glasses, safety shoes, and gloves are recommended during assembly, installation, operation, adjustment, maintaining, repairing, or plugging. Do not allow long hair, loose-fitting clothing, or jewellery to be around moving parts.
- Before servicing, adjusting, repairing or unplugging, put the machine in **safe mode**.
- Do not run machine inside a closed building to prevent asphyxiation from engine exhaust.
- Use care when feeding material into chipper. Do not send metal, bottles, cans, rocks, glass or other foreign material into wood chipper. If foreign material enters chipper, stop machine, turn engine off and place ignition key in your pocket and wait for all moving parts to stop before removing material and/or unplugging. Inspect machine for damaged or loose parts before resuming work.
- Never use alcoholic beverages or drugs which can hinder alertness or coordination while operating this equipment. Consult your doctor about operating this machine while taking prescription medications.
- Do not allow riders on this machine at any time. There is no safe place for any riders.
- Never allow children or unauthorized people to operate or be around this machine.
- Do not reach into rotor or feed hopper openings when the engine is running. Install and secure access covers before starting engine.
- Do not move or transport chipper when the rotor is turning.
- Do not exceed a safe travel speed when transporting.
- Keep the working area clean and free of debris to prevent tripping. Operate only on level ground.
- Do not point discharge at people, animals or buildings. Rotor can expel wood chips fast enough to cause injury.

4.1 TO THE NEW OPERATOR OR OWNER

The Wallenstein BXC32 Chippers are designed to chip and chop scrap lumber, small trees, brush, limbs and other wood debris. The chipped material is fine enough to be composted or used in a variety of ways.

It is the responsibility of the owner or operator to read this manual and to train all other operators before they start working with the machine. Follow all safety instructions exactly. Safety is everyone's business. By following recommended procedures, a safe working environment is provided for the operator, bystanders and the area around the work site. Untrained operators are not qualified to use the machine.

Many features incorporated into this machine are the result of suggestions made by customers like you. Read this manual carefully to learn how to

use the chipper safely and how to set it to provide maximum field efficiency. By following these instructions in conjunction with a good maintenance program, your BXC32 Chipper will provide many years of trouble-free service.

4.1.1 IMPORTANT

Ensure all operators understand how to put the machine in **safe condition** before working with this machine,

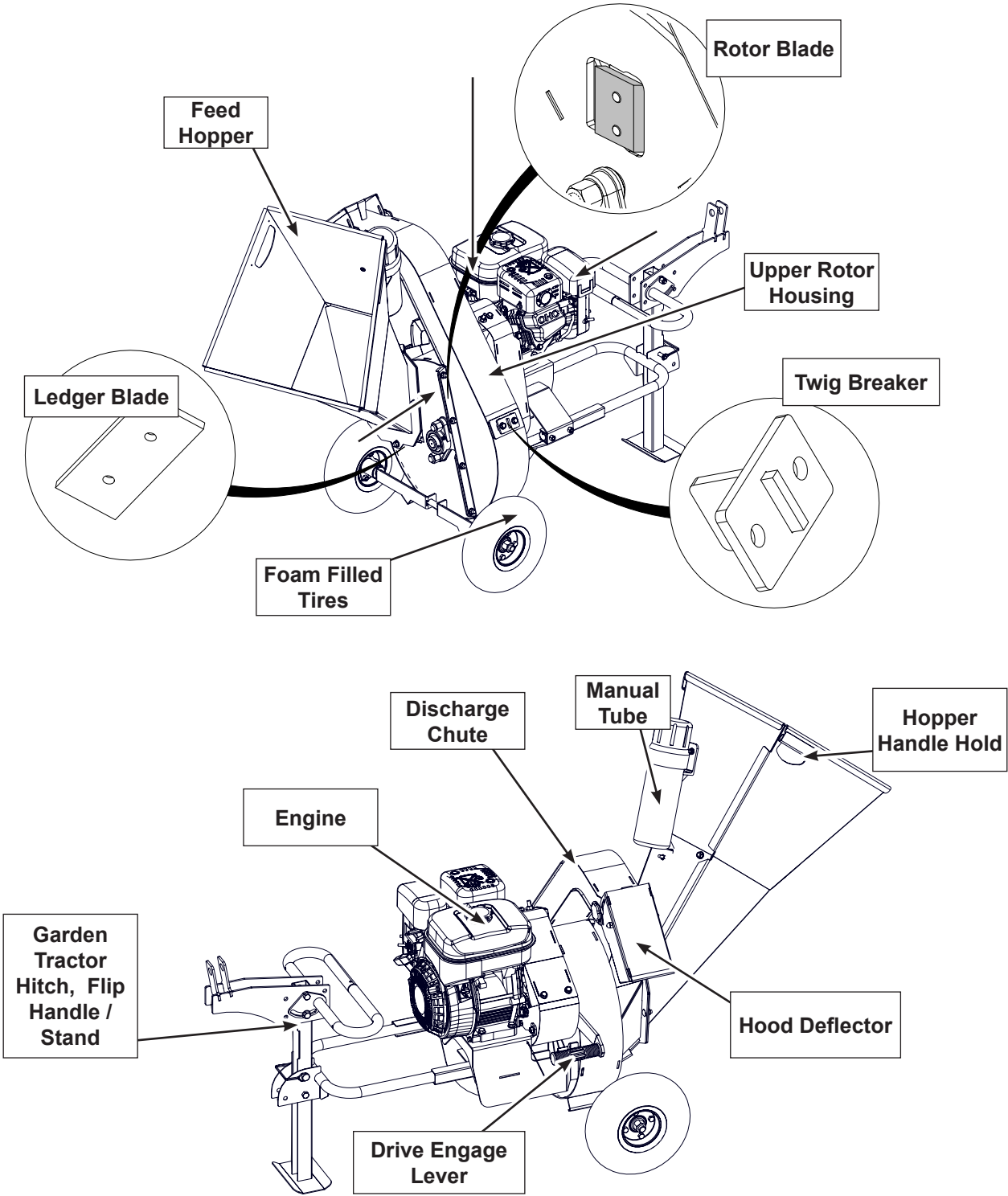
- **disengage the drive**
- **shut off the engine**
- **ensure components have stopped moving.**
- **unplug spark plug cable**
- **turn fuel valve off**
- **block & chock the wheels**

4.2 MACHINE COMPONENTS

The Wallenstein BXC cart chipper is designed for chipping in a fast and efficient manner.

Major components of the BXC chippers are illustrated here. Please review this section, many of the component descriptions here are used throughout the manual to explain function and safety.

For a detailed parts breakdown, see your dealer or visit the Wallenstein website to download the **BXC Parts Manual** for your model.



4.3 MACHINE BREAK-IN

Although there are no operational restrictions on the Wood Chipper when used for the first time, it is recommended that the following mechanical items be checked:

A. After operating for 1 hour:

1. Ensure the machine is in **safe condition** before checking any components
2. Torque all fasteners and hardware.
3. Check condition of rotor bearings.
4. Check the condition and clearance of the twig-breaker, rotor and stationary blades. Adjust or replace as required.
5. Check for entangled material. Remove all entangled material before resuming work.
6. Lubricate all grease fittings if required.

B. After operating for 10 hours:

1. Repeat steps 1 through 6 listed above.
2. Go to the normal servicing and maintenance schedule as defined in the Maintenance Section.

4.4 PRE-OPERATION CHECKLIST

Efficient and safe operation of the Wallenstein BXC32 Wood Chipper requires that each operator reads and understands the procedures and all related safety precautions outlined in this section. A pre-operation checklist is provided for the operator. It is important for both the personal safety and maintaining good mechanical condition that this checklist is followed.

Before operating the Wood Chipper and each time thereafter, the following areas should be checked off:

Pre-Operation Checklist	✓
Check and lubricate the machine per the schedule outline in the Maintenance Section.	
Check the rotor housing and discharge chute,. Remove any blockages, twine, wire or other material that has become entangled .	
Check the condition and clearance of the twig-breaker, rotor and stationary blades. Adjust or replace as required.	
Check that all bearings turn freely. Replace any that are rough or seized.	
Check and ensure that all covers, guards and shields are in place, secured and functioning as designed	
Check all fasteners and tighten, and esure your equipment is working and in good repair.	
Check that personal protection equipment including hard hat, safety glasses, safety shoes, safety vest, hearing protection and gloves are used and in good repair.	
Check that all loose fitting clothing or jewellery is not worn and loose long hair is tied back.	

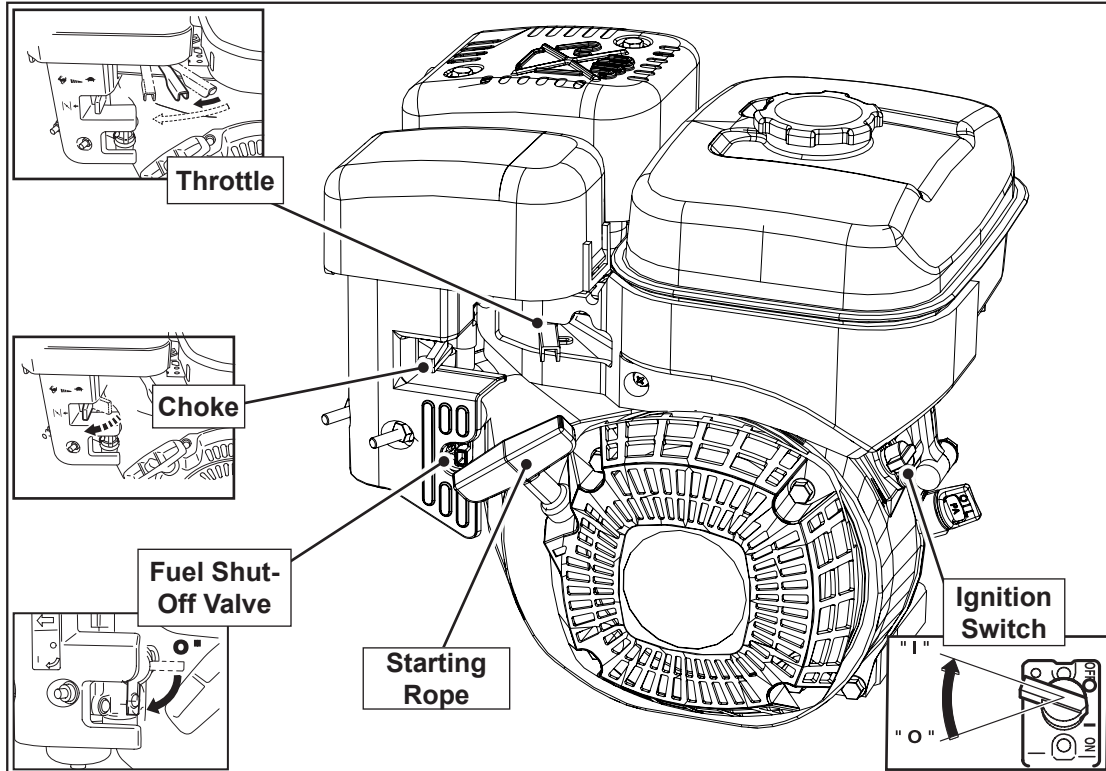
4.5 CONTROLS

Please review this section to familiarize yourself with the location and function of each control before starting. Familiarizing yourself with the controls will enable you to take advantage of all the features available on the BXC and apply them as conditions demand. Before starting to work, all operators should familiarize themselves with the location and function of controls.

4.5.1 ENGINE BXC32:

An SP210 211cc Subaru engine is used on the BXC32. **Always read the engine manufacturers operator's manual before starting for more detailed instructions.**

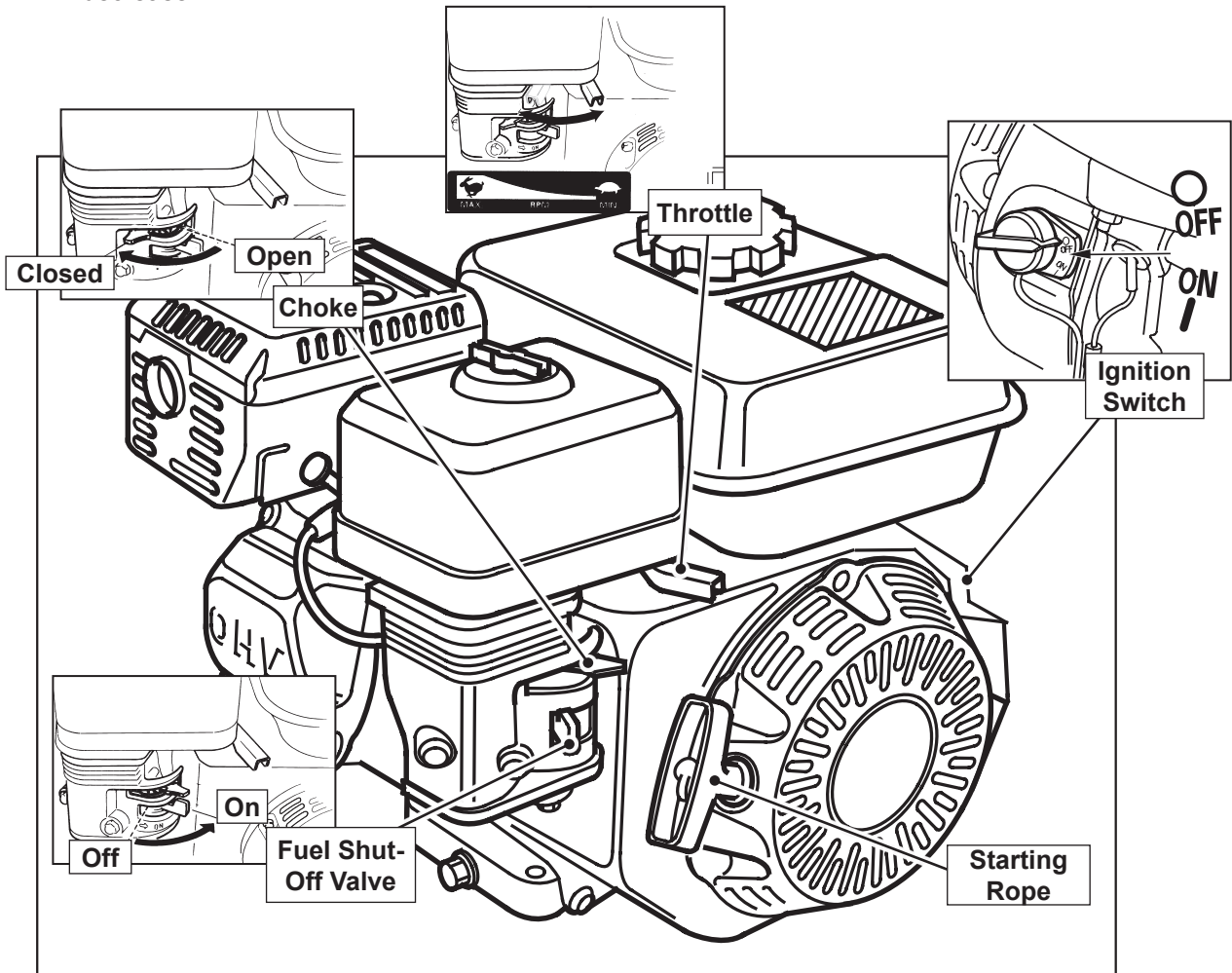
- **Ignition Switch:**
This switch controls the electrical power to the engine electrical system. Turn the switch clockwise to turn the electrical system ON and the engine will run. Turn the switch counterclockwise to stop the engine.
- **Fuel Shut-Off Valve:**
This valve controls the flow of fuel to the engine. Turn the valve at right angles to the fuel line to turn the fuel off and parallel to turn the fuel on.
- **Throttle:**
This lever controls the engine RPM. Turn the lever clockwise to increase engine speed and counter-clockwise to decrease.
- **Choke:**
This lever controls the position of the choke. Pull the knob out to close the choke for starting when the engine is cold. Push the knob in to open the choke as the engine warms. Always push the knob fully in when operating the machine.
- **Starting Rope:**
This retracting rope and T bar is used to turn the engine over for starting. Grasp the T bar firmly and pull the rope sharply to start the engine.



4.5.2 ENGINE BXC32H:

An GX200 196cc Honda engine is used on the BXC32H. **Always read the engine manufacturers operator's manual before starting for more detailed instructions.**

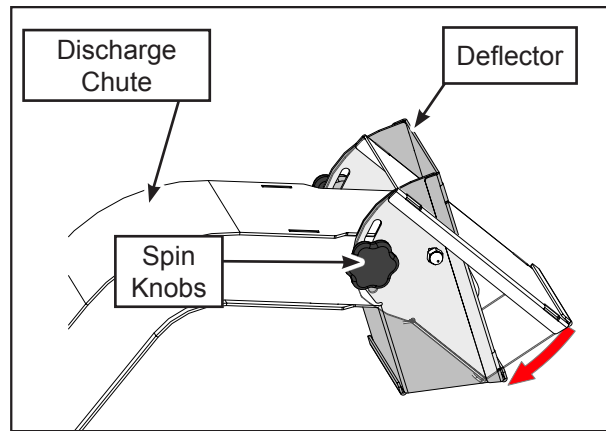
- **Ignition Switch:**
This switch controls the electrical power to the engine electrical system. Turn the switch clockwise to turn the electrical system ON and the engine will run. Turn the switch counterclockwise to stop the engine.
- **Fuel Shut-Off Valve:**
This valve controls the flow of fuel to the engine. Slide the lever to the right to turn the fuel off and left to turn the fuel on.
- **Throttle:**
This lever controls the engine RPM. Slide the lever to the left to increase engine speed and Slide the lever to the right to decrease.
- **Choke:**
This lever controls the position of the choke. Slide the lever to the left to close the choke for starting when the engine is cold. Slide the lever to the right to open the choke as the engine warms. Always Slide the lever fully to the right when operating the machine.
- **Starting Rope:**
This retracting rope and T bar is used to turn the engine over for starting. Grasp the T bar firmly and pull the rope sharply to start the engine.



4.5.3 HOOD DEFLECTOR:

The discharge chute is equipped with a hood deflector on the end of the chute to direct the chips exactly where desired. The deflector is held in position by two spin knobs.

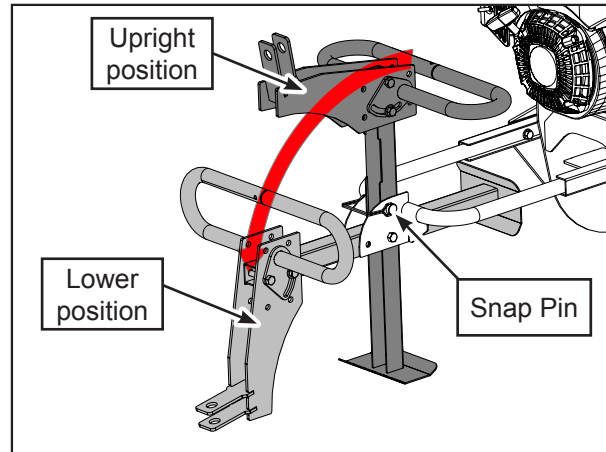
1. Loosen the 2 spin knobs, move the deflector into position as required.
2. Lock the deflector into position by tightening up the spin knobs.



4.5.4 HITCH / HANDLE STAND:

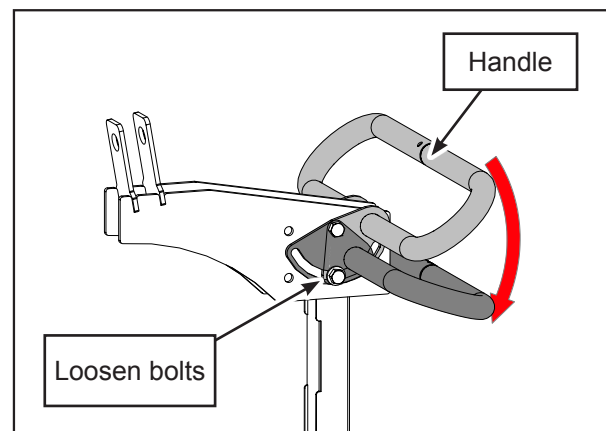
The BXC is equipped with a Combination Garden Trailer Hitch, Flip Handle/Stand. When in upright position, the stand becomes a pull handle support stand, in the lower position, the stand becomes a garden tractor hitch. Lock the stand in either position with the snap lock pin.

Ensure the machine is secure from movement during chipping operation.



4.5.5 ADJUSTABLE HANDLE:

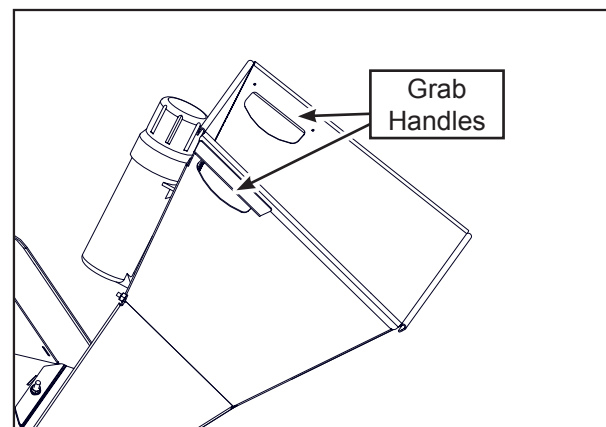
The Combination Garden Trailer Hitch, Flip Handle/Stand features an adjustable pull handle. Loosen off the two bolts and adjust the handle up or down as required. Use the handle to lift the hitch and move your machine to a new work zone.



4.5.6 FEED CHUTE GRAB HANDLES:

The feed chute features grab handles. To move the chipper to a new work zone, use the grab handles and carefully tilt the machine back until the hitch tongue lifts off the ground. The machine is balanced to make it easy to move the machine this way.

Ensure the machine is secure from movement during chipping operation.

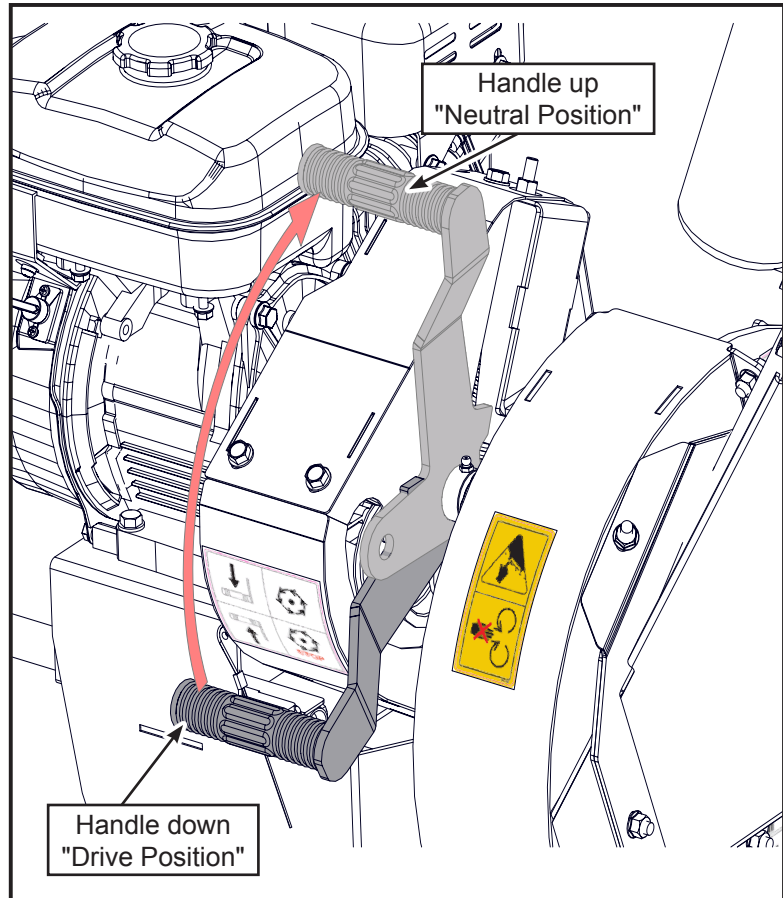
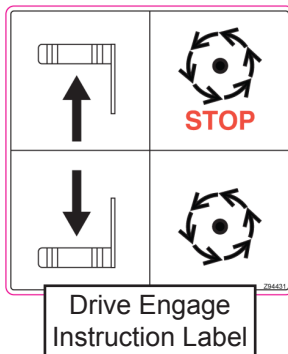


4.5.7 DRIVE ENGAGE HANDLE:

The drive engage handle controls the pulley used to tension the v belt and start the rotor turning for chipping. The handle features a spring loaded positive engage and disengage position.

1. **Drive Position:** To tension the drive belt and engage the rotor, pull the handle down, the positive spring tension will lock the handle into drive position. The rotor will spin up to speed.
2. **Neutral Position:** To stop the rotor from turning, pull the handle up, the positive spring tension will lock the handle into neutral position. The rotor will gradually slow down then stop turning.

Caution: Be aware that the rotor will continue to turn for a few minutes after the rotor has been disengaged. Wait for all parts to stop moving before attempting to access the machine in any way.



4.6 MACHINE SET-UP

Follow this procedure to prepare and set-up the machine at the work site: the pre-operation checklist has been completed, the chipper is fuelled, and the operator is wearing personal protection equipment (PPE).

1. Position the chipper at the work site.
2. Ensure that the machine is resting on the ground and is level and stable, and the work area is free of debris.
3. If the chipper is attached to a lawn tractor, ensure the brakes are applied and wheels are chocked.
4. Ensure the feed hopper is free of debris
5. Aim the deflector as required.

IMPORTANT
The chipper must be resting on the level and stable ground during operation, using the chipper while on uneven ground is dangerous and may result in damage to the machine.

IMPORTANT
Position the machine so the prevailing wind/breeze blows the exhaust gases/fumes away from the operator's station.

4.7 FIELD OPERATION



OPERATING SAFETY

- Please remember it is important that you read the operator's manual and heed the safety signs on the Chipper. They are there for your safety, as well as the safety of others. The safe use of this machine is strictly up to you, the operator.
- Personal protection equipment is recommended. Do not allow long hair, loose-fitting clothing, or jewellery to be around moving parts.
- Before servicing, adjusting, repairing or unplugging, put the machine in **safe mode**.
- Do not run machine inside a closed building to prevent asphyxiation from engine exhaust.
- Use care when feeding material into chipper. Do not send metal, bottles, cans, rocks, glass or other foreign material into wood chipper. If foreign material enters chipper, inspect machine for damaged or loose parts before resuming work.
- Never use alcoholic beverages or drugs which can hinder alertness or coordination while operating this equipment. Consult your doctor about operating this machine while taking prescription medications.
- Never allow children or unauthorized people to operate or be around this machine.
- Do not reach into rotor or feed hopper openings when the engine is running. Install and secure access covers before starting engine.
- Do not move or transport chipper when the rotor is turning.
- Keep the working area clean and free of debris to prevent tripping. Operate only on level ground.
- Do not point discharge at people, animals or buildings. Rotor can expel wood chips fast enough to cause injury.
- Be aware of the size and shape of the material, crotchety branches and logs can move in unpredictable ways as they pass through the chipper and could cause injuries. Large curved pieces should be cut to smaller straighter sections.
- Do not work alone, it is safer to work in pairs in case an emergency arises.
- Never stand, sit or climb onto any part of the chipper while it is running.
- Disengage the chipper and shut off the engine when it is unattended.

The operator has the responsibility of being familiar with all operating and safety procedures and following them.

Although the BXC Chipper is easy to use, each operator should review this section to familiarize himself with the detailed safety and operating procedures. When preparing this machine for use, follow this procedure:

4.7.1. PREPARE

- Clear the area of bystanders, especially small children.
- Each operator must be trained and familiar with the set up and operation of the Chipper and its components.
- Review the machine components (see Section 4.2)
- Review and follow the Pre-operation Checklist (see Section 4.4).
- Review operation and function of the controls (see section 4.5)
- Survey the work site, move to a clear, level work area and position at the work site. Do not start the chipper until it is in position.
- Set up the machine (see section 4.7).
- Each person must wear appropriate **Personal Protective Equipment (PPE)** whenever operating the Wood Processor or working in the vicinity. This equipment is designed to prevent injury to any personnel in the area. This list includes but is not limited to:
 - Safety shoes with slip resistant soles.
 - Safety goggles or face shield.
 - Hearing protection.
 - Heavy or leather gloves

4.7.2. STARTING PROCEDURE

After following operating safety and preparation procedure the chipper should be set up and ready to run.

1. Turn the ignition switch clockwise to the "ON" position.
2. Open the fuel valve and move the throttle to its mid idle position.
3. Close the choke if the engine is cold.
4. Using the starting rope, start the engine.
5. Run engine for a few minutes to allow it to warm up.
6. Open the choke.
7. To get the rotor spinning, slowly move the drive engage handle downwards, to engage the drive and start the rotor.

Caution:
Engaging the drive too quickly may cause the engine to stall.

8. Move the throttle to the high position, to allow the engine to get to full speed.
9. Start feeding material into the hopper for chipping.

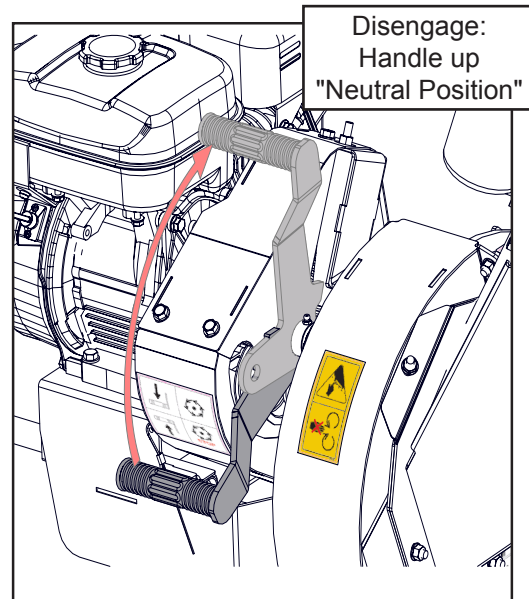
4.7.3. STOPPING PROCEDURE

1. Stop feeding material into the hopper.
2. Move the throttle to idle position to slow the engine RPM. Allow 10-15 seconds for the rotor to slow down.
3. Disengage the drive.
4. Turn off the ignition switch, to stop the engine and wait for all moving parts to stop.
5. Shut off the fuel valve.

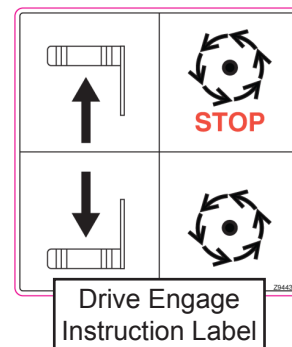
4.7.4. EMERGENCY STOPPING:

If an emergency occurs:

- **disengage the drive**
- **shut off the engine,**
- Correct emergency situation before restarting engine and resuming work.



Caution: Be aware that the rotor will continue to turn for a few minutes after the rotor has been disengaged. Wait for all parts to stop moving before attempting to access the machine in any way.



4.7.5 CHIPPING OPERATION

The BXC Wood Chipper is a strong, rugged machine that is built to a straight-forward design which provides consistent chipping of logs up to **3" (75mm)** in diameter

Always wear personal protective equipment (PPE) whenever operating the machine. This includes but is not limited to a hard hat, protective shoes with slip resistant soles, protective goggles or face shield, heavy gloves, hearing protection and protective clothing.

Do not place metal, bottles, cans, rocks, glass or other solid material into the wood chipper. If something like this gets into the machine, stop the machine immediately for a detailed inspection.

If opening up any guards for inspection, always put the machine in **safe condition**:

- **disengage the drive**
- **shut off the engine**
- **ensure components have stopped moving.**
- **unplug spark plug cable**
- **turn fuel valve off**
- **block & chock the wheels**

Inspect machine for damaged or loosened parts, repair or replace parts as required before resuming work.

When the rotor is up to speed:

- Carefully slide the wooden material into the chipper feed hopper and move it into the rotor. As you begin to feed, the rotor will tend to draw the material through.
- Do not force the material with into the hopper and rotor, slow steady pressure is best.
- If the rotor begins to slow down, stop and let the rotor get back up to speed, then restart feeding.
- Do not reach into the feed hopper further than the hopper opening, to avoid contact the blades on the rotor.
- Use a stick or branch to push any piece of material into the rotor that does not move on its own and stops in the hopper.

4.7.6 OPERATING HINTS:

1. Delimb branches that are greater than 1" (2.5cm) before you feed them into the hopper. This will prevent the tree from jamming in the feed hopper and prevent feeding.
2. Line up the chipper to the material to feed straight in to the feed table, loading will be easier and limit the amount of material handling time
3. Keep the working area clean and free of debris to prevent slipping or tripping. Operate only on level ground.
4. Use a stick or branch to push any piece of material into the knives that does not move on its own and stops in the chipper housing.



Caution: Do not reach into the feed hopper at any time, use a stick or branch to push any piece of material into the rollers that does not move on its own. If the jam persists then stop the engine and wait for the rotor to stop and then clear the jam.
Do not chance getting your hand caught in the rollers.

Collector Bag:

The BXC is designed with a discharge chute that can be used with the optional mulch collector bag (#Z99006). The mulch bag holds 2.7 cu.ft (28 litres) and is a mildew resistant synthetic material. It is a porous material, allowing air from the rotor to pass through without restricting collection of the chips.

- Adjust the deflector up, and slip the collector bag over the end of the discharge chute.
- Use the strap on the end of the bag to attach and secure it to the chute.
- When full, loosen the strap, remove the bag from the chute and take it to the mulch area.
- Unzip the bottom of the bag and spread the chips and mulch over the desired area.
- Zip up the end of the bag and re-attach it to the discharge chute.

4.7.7 UNPLUGGING:

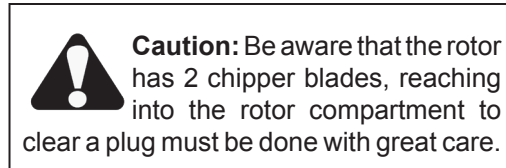
Although the machine is designed to handle a wide variety of material without any problem, occasionally it may plug. If the machine plugs, follow this procedure to unplug:

1. Ensure the machine is in **safe condition** before beginning to unplug (see 4.9.5)
2. Clear the area of bystanders, especially small children.
3. Pull the material out of the chipper hopper. Be sure all the material is out and nothing is jammed or wedged between the input opening and the rotor.
4. Pull the material out of the discharge chute. Use a stick to poke loose any material jammed into the discharge chute. Do not allow anything to remain in this area.
- e. Check that everyone is clear of machine before restarting engine.
- f. Start the engine and resume working.

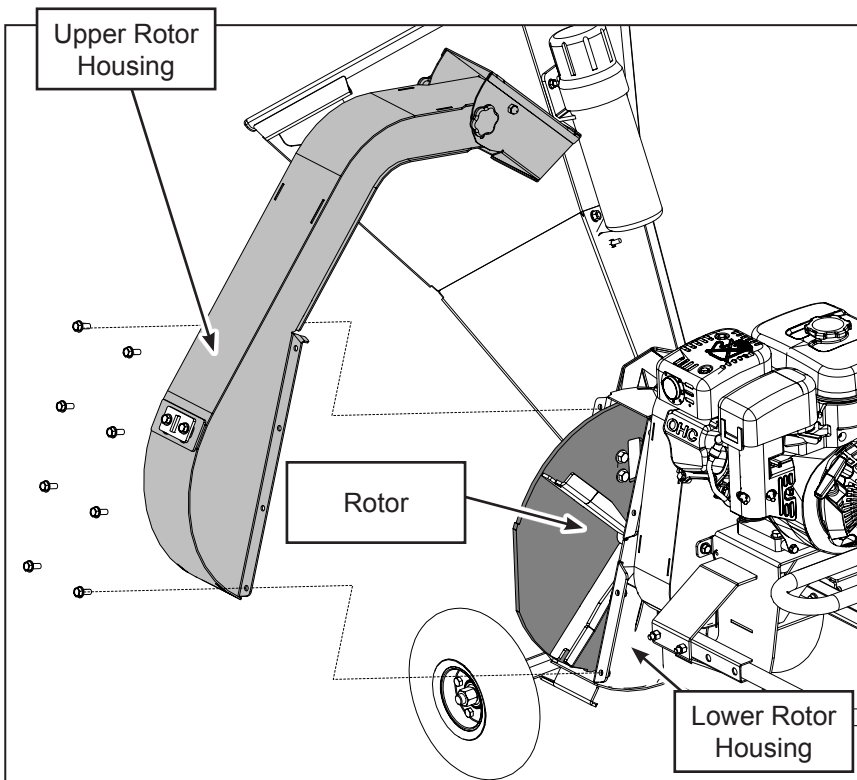


4.7.8 SEVERE PLUG:

- a. Ensure the machine is in **safe condition** before beginning to unplug (see 4.9.5)
- b. Clear the area of bystanders, especially small children.
- c. Open the upper rotor housing: remove 8 x bolts.
- d. Remove jammed material from inside the rotor compartment.
- e. Clean out the discharge chute
- f. Inspect the lower rotor housing and clean out any debris.
- g. If required, rotate the rotor, **very carefully** and slowly turn the rotor by hand to be sure there is nothing jammed between the rotor and stationary blades. **Do not reach into the rotor housing while the rotor is moving.**



- h. Assemble the upper rotor housing to the chipper.
- i. Check that everyone is clear of machine before restarting engine.
- j. Start the engine and resume working.



5 STORAGE



OPERATING SAFETY

- Store the unit in an area away from human activity.
- Do not permit children to play on or around the stored machine.
- Store the unit in a dry, level area. Support the frame with planks if required.

5.1 PLACING IN STORAGE

After the season's use or when the machine will not be used for a period of time, completely inspect all major systems of the Chipper. Replace or repair any worn or damaged components to prevent any unnecessary down time at the beginning of the next season.

Follow this procedure before storing:

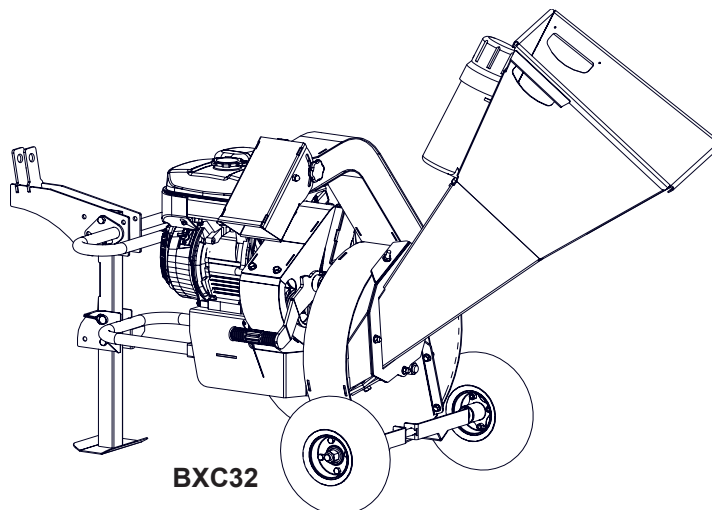
1. Remove all material from the machine.
2. Remove collector bag, if you purchased it as an option, wash it and store in a dry, secure location.
3. Thoroughly wash the machine with a pressure washer or water hose to remove all dirt, mud or debris.
4. Lubricate all grease points to remove any water residue from washing.
5. Inspect all rotating parts for entangled material. Remove all entangled material.
6. Run the machine a few minutes to dry the moisture from inside the machine.

7. To reduce the chance of condensation and contamination, store the chipper with a full fuel tank and treat the fuel. Run the engine for a few minutes to make sure the treatment gets throughout the fuel system. Review the engine owners manual for the proper procedure.
8. Touch up all paint nicks and scratches to prevent rusting.
9. It is best to store the machine inside. If that is not possible, cover with a waterproof tarpaulin and tie down securely.
10. Store in an area away from human activity.
11. Do not allow children to play around the stored unit.

5.2 REMOVING FROM STORAGE

When removing this machine from storage, follow this procedure:

1. Remove the tarpaulin if covered.
2. Review and follow the pre-operation checklist.



6 SERVICE AND MAINTENANCE



MAINTENANCE SAFETY

- Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.
- Follow good shop practices.
 - Keep service area clean and dry.
 - Be sure electrical outlets and tools are properly grounded.
 - Use adequate light for the job at hand.
- Make sure there is plenty of ventilation. Never operate the engine in a closed building. The exhaust fumes may cause asphyxiation.
- Before working on this machine, place the machine in safe mode:
 - **disengage the drive**
 - **shut off the engine**
 - **ensure components have stopped moving.**
 - **unplug spark plug cable**
 - **turn fuel valve off**
 - **block & chock the wheels**
- Never work under equipment unless it is blocked securely.
- Always use personal protection devices such as eye, hand and hearing protectors, when performing any service or maintenance work. Use heavy gloves when handling sharp components.
- Where replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts must be used to restore your equipment to original specifications. The manufacturer will not be responsible for injuries or damages caused by use of unapproved parts and/or accessories.
- A fire extinguisher and first aid kit should be kept readily accessible while performing maintenance on this equipment.
- Periodically tighten all bolts, nuts and screws and check that all electrical and fuel connections are properly secured to ensure unit is in a safe condition.
- When completing a maintenance or service function, make sure all safety shields and devices are installed before placing unit in service.

6.1 SERVICE

By following a careful service and maintenance program for your machine, you will enjoy many years or trouble-free operation.

6.1.1 FLUIDS AND LUBRICANTS

1. Engine Oil:

Refer to the engine manufacturer's manual for maintenance and service information

2. Grease:

Use an SAE multi-purpose high temperature grease with extreme pressure (EP) performance. Also acceptable is an SAE multipurpose lithium base grease.

3. Engine Gasoline:

Use a standard automotive unleaded gasoline for all operating conditions. Refer to the engine manufacturer's manual for more information.

4. Storing Lubricants:

Your machine can operate at top efficiency only if clean lubricants are used. Use clean containers to handle all lubricants. Store them in an area protected from dust, moisture and other contaminants.

6.1.2 GREASING

Use the Maintenance Checklist provided to keep a record of all scheduled maintenance.

1. Use a hand-held grease gun for all greasing.
2. Wipe grease fitting with a clean cloth before greasing, to avoid injecting dirt and grit.
3. Replace and repair broken fittings immediately.
4. If fittings will not take grease, remove and clean thoroughly. Also clean lubricant passageway. Replace fittings if necessary.

6.1.3 SERVICING INTERVALS

See service record and service illustration for service interval information. The period recommended is based on normal operating conditions. Severe or unusual conditions may require more frequent lubrication or oil changes.

IMPORTANT Do Not over grease.



WARNING

Machine is shown with guard removed for illustrative purposes only. Do not operate machine with guard removed.

6.1.4 SERVICE ILLUSTRATION

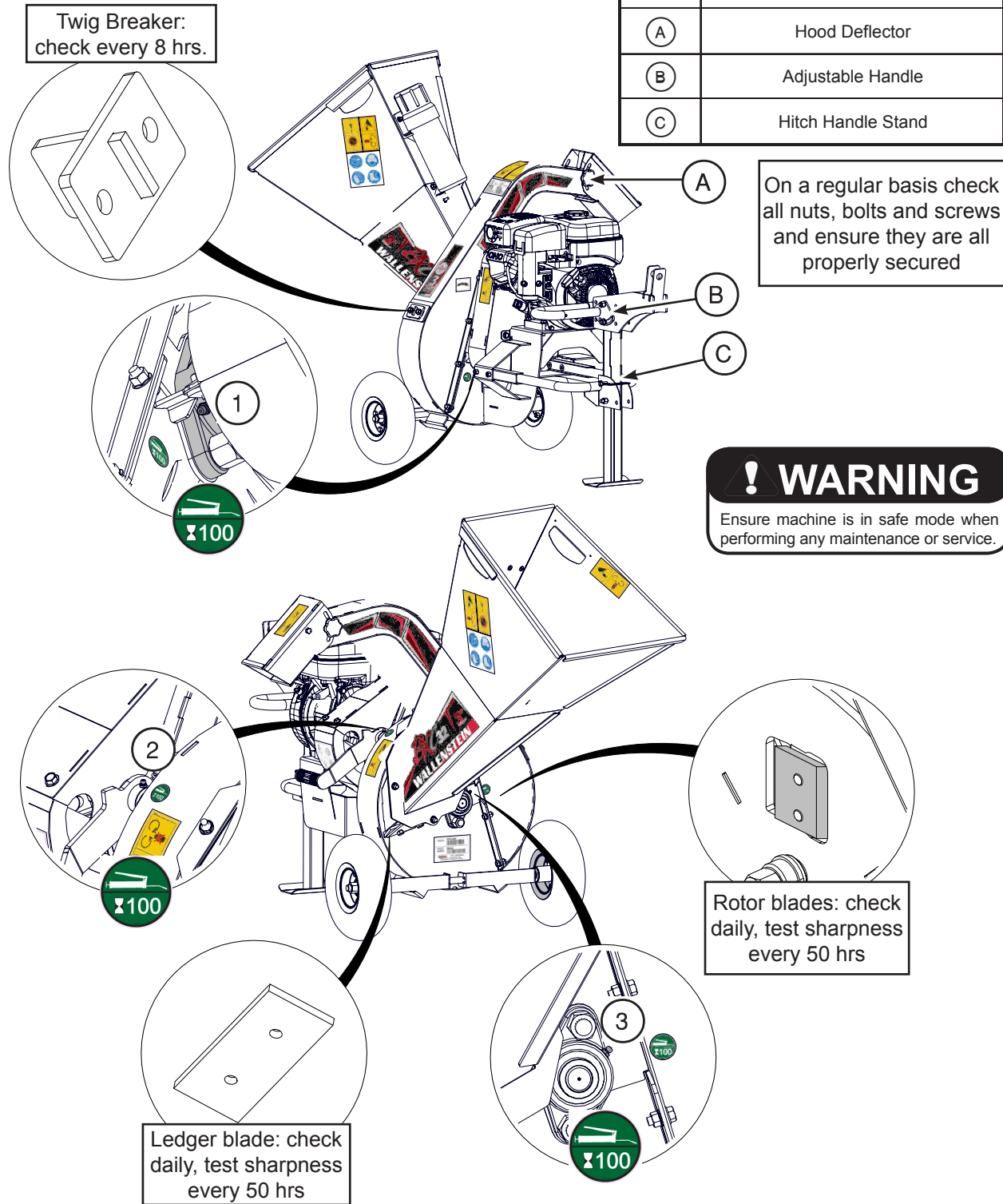
This illustration shows the general location of service points for all models in this manual. Refer to your engine instruction manual for specific maintenance instructions / requirements



Location	Grease Points - 100 hrs or Annually
①	Rotor Main Shaft Front Flange Bearing
②	Rotor Main Shaft Rear Flange Bearing
③	Drive Engage Pivot Bearing

grease with one shot of grease

Location	Lubricate Hinges & Pivot Points
(A)	Hood Deflector
(B)	Adjustable Handle
(C)	Hitch Handle Stand



! WARNING
Ensure machine is in safe mode when performing any maintenance or service.

6.2 MAINTENANCE

By following a careful service and maintenance program for your machine, you will enjoy many years of trouble-free operation.

Ensure all operators understand how to put the machine in safe condition before working with this machine,

- **disengage the drive**
- **shut off the engine**
- **ensure components have stopped moving.**
- **unplug spark plug cable**
- **turn fuel valve off**
- **block & chock the wheels**

6.2.1 DRIVE BELT

The machine is designed with a spring loaded belt tensioning pulley system, controlled by a over centre positive engage drive lever. The pulley applies tension to the v belt and starts the rotor turning for chipping.

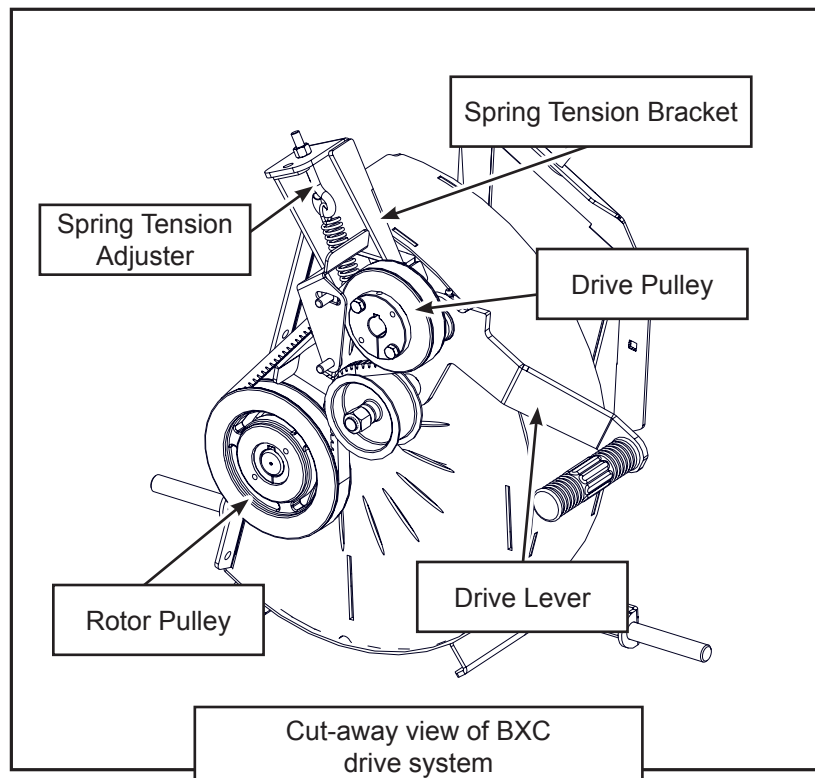
When the belt is stretched or worn, the ability to efficiently start and maintain rotor speed may be affected.

Therefore it is important to periodically check the condition and tension of the belt.

Frayed, cracked or worn drive belts should be replaced. If you notice excessive belt slipping, or the drive lever occasionally kicking out, then adjustment or replacement of the belt may be required.

Drive Belt Tension Check and Adjustment:

1. Ensure the engine is off (ignition switch is off and the fuel valve is closed).
2. Remove the 4 bolts that hold the belt guard to the chipper, remove the belt guard.
3. Check tension: with the drive lever engaged, the belt should be taught, with no slack. If not, it will require adjustment.
4. Examine the belt and estimate how much adjustment may be required.
5. Move the drive engage handle to the neutral position.
6. Find the spring tension bracket and adjuster.
7. Loosen the jam nut of the adjuster on the underside of the spring tension bracket, about 5-6 turns.
8. Turn the nut on the top side bracket clockwise, make the adjustment per your estimate.
9. Engage the drive lever and check tension of the belt, repeat step 8 if required.
10. Tighten the lock nut on the underside of the spring tension bracket.
11. Replace the belt guard and secure with 4 bolts.



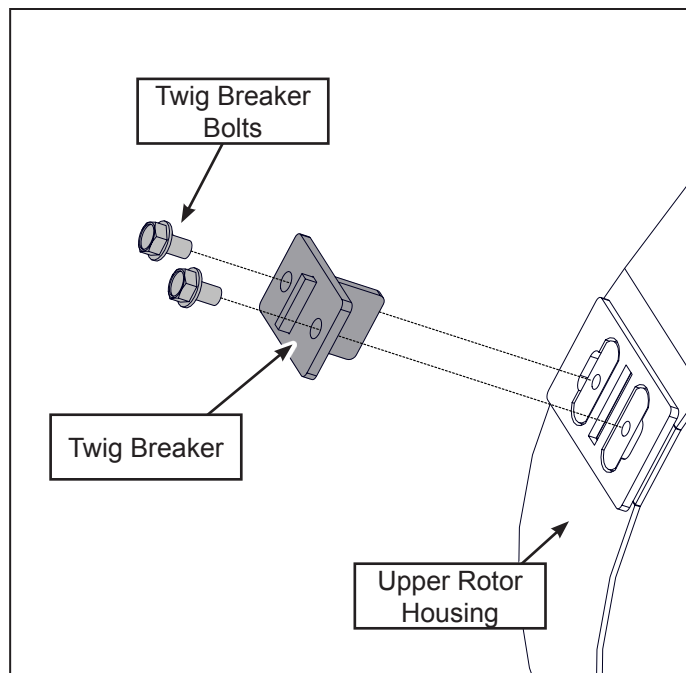
Drive Belt Replacement: (BXC Cogged V Belt #Z41164)

1. Ensure the engine is off (ignition switch is off and the fuel valve is closed).
2. Remove the 4 bolts that hold the belt guard to the chipper, remove the belt guard.
3. Move the drive engage handle to the neutral position.
4. Roll the drive belt off of the drive (top) pulley.
5. Pull the drive belt slightly out, then off of the rotor (bottom) pulley
6. Install the new belt reversing steps 4 & 5.
7. Engage the drive handle, adjust tension if required.

6.2.2 TWIG BREAKER:

The Twig Breaker is a breaker tab located on side of the upper rotor housing. The discharge paddle passes around the twig breaker and helps to break the material into smaller pieces and turn it into mulch. Inspect the twig breaker for damage such as gouges, a bent, or missing tooth. A damaged twig breaker should be replaced. If the tooth is showing wear, remove and replace the twig breaker.

1. Ensure the machine is set in **safe condition** (see 6.2)
2. Remove the 2 bolts and nuts that hold the twig breaker to the housing, remove the twig breaker.
3. Reverse the steps to install the new twig breaker.



6.2.3 ROTOR BLADES:

The rotor and ledger blades need to be sharp for the Chipper to perform as expected. Periodic inspection is recommended. Keep the blades sharp to reduce the amount of power required during operation. Watch the sharpness of the blades when processing material with a lot of sand, soil or dirt mixed with it. Reverse or sharpen the blades if the cutting edge becomes dull.

The rotor is equipped with 2 blades spaced evenly to keep the rotor in balance. If one needs to be changed, the one opposite should also be changed.

It is recommended that the rotor blades be removed from the rotor when sharpening. Always sharpen the blades at a 45° angle to provide the best cutting effect as it meets the stationary blade. Be sure to tighten the blade mounting bolts to their specified torque when re-installing the blades to the rotor.

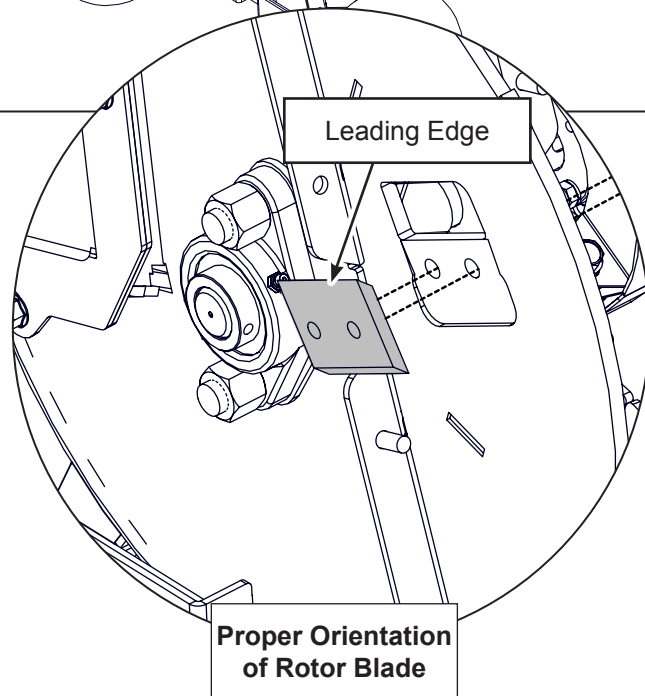
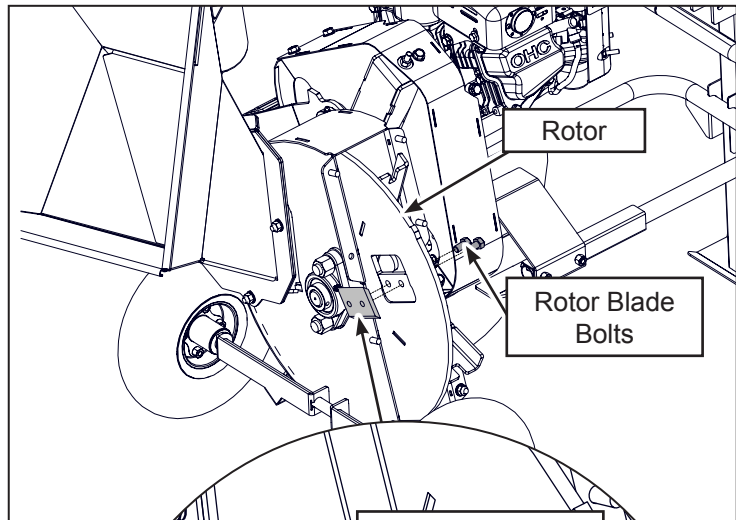
1. Ensure the machine is set in **safe condition** (see 6.2)
2. Remove the bolts that secure the upper rotor housing, and carefully open the rotor housing.
3. With care, slowly rotate chipper rotor plate until the rotor blade is out of the lower housing
4. Remove the bolts that hold the rotor blade to the rotor, remove the blade.
5. Rotate the blade and reinstall or replace with new or re-sharpened blade.



Caution: Avoid Serious Injury

The rotor is very heavy, turn rotor slowly and be aware of hand positioning: avoid getting pinched or wedged between the lower rotor housing and rotor.

6. Ensure the blade is properly oriented, with the leading edge out. The blade is designed to fit into the rotor one way only. See diagram for proper installation.
7. Tighten down bolts as specified in the torque chart
8. Repeat steps for remaining blade.



WARNING

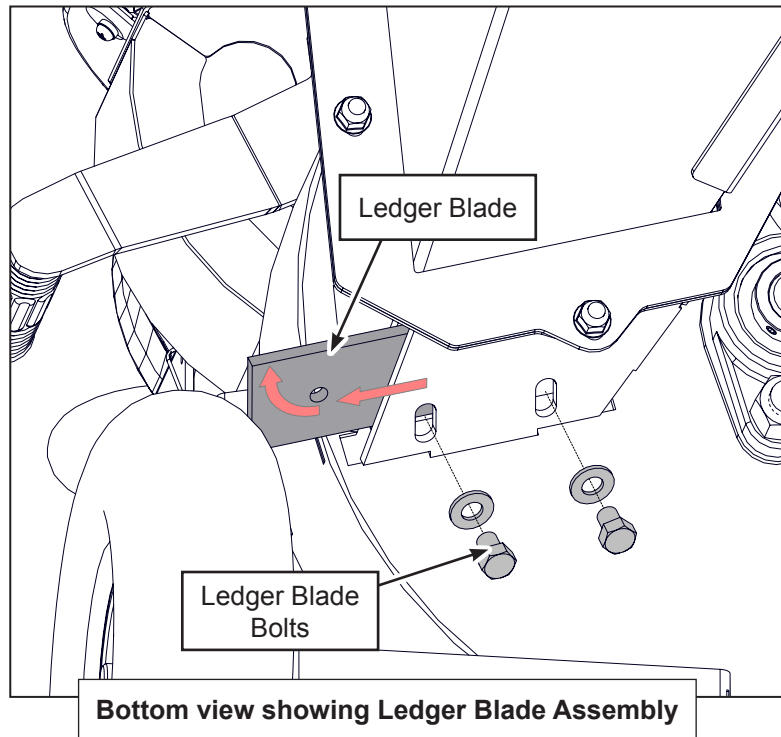
Machine is shown with guard removed or rotor cover opened for illustrative purposes only. Do not operate machine with guard removed or cover opened.

6.2.4 LEDGER BLADES:

Each machine is equipped with a ledger (stationary) blade that acts as a shear for the moving rotor blades.

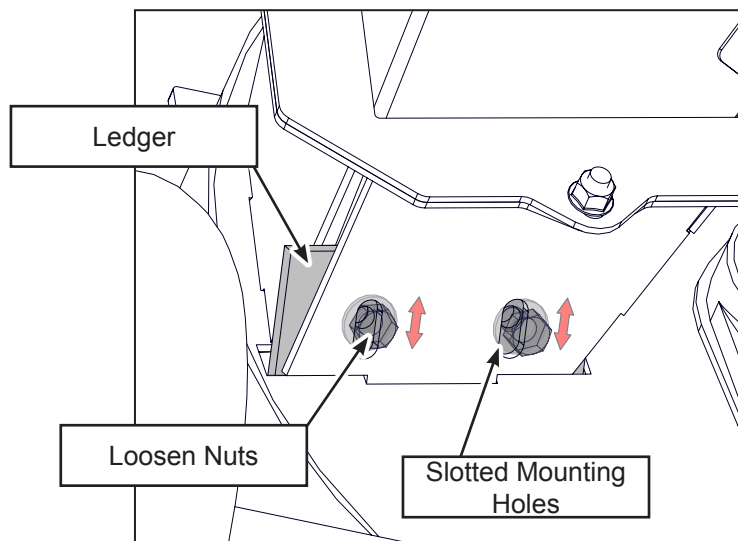
The ledger blade is located on the lower rotor housing, mounted on slotted holes for adjustment. There are 4 usable corners on the blade, when the corner facing the rotor blade rounds over, remove the blade and re-install with a different corner facing the rotor blade. It is recommended that the clearance between the rotor and stationary blades be set and maintained at 1/32 to 1/16" (.76 - 1.52 mm) to obtain the best performance.

1. Ensure the machine is set in **safe condition** (see 6.2)
2. Remove the 2 bolts that hold the ledger blade to the ledger mount.
3. Carefully remove the blade, pull it out and up slightly to the side to clear the tire.
4. Rotate the blade and replace, or replace with new or re-sharpened blade.
5. Hand tighten the bolts.
6. Set the clearance between the ledger and rotor blades using the ledger adjuster: loosen the nuts on the adjuster and move the ledger to the correct clearance.
7. Clearance settings should be set at clearance 1/32 - 1/16" (.76 - 1.52 mm).



For fast and easy setting, use our chipper clearance setting gauge, available from your dealer (see accessories).

8. Ensure you move ledger evenly.
9. Tighten ledger blade bolts as specified in the torque chart.
10. Recheck clearance setting.





















7 TROUBLE SHOOTING

The Wallenstein BXC Chipper is designed with blades on a rotor to cut, shear and chip wooden material. It is a simple and reliable system that requires minimal maintenance.

In the following section, we have listed many of the problems, causes and solutions to the problems that you may encounter.

If you encounter a problem that is difficult to solve, even after having read through this trouble shooting section, please call your local distributor or dealer. Before you call, please have this Operator's Manual from your unit and serial number ready.

PROBLEM	CAUSE	SOLUTION		CAUTION
Rotor does not turn	Obstructed discharge.	Clear debris from discharge chute.		Ensure machine is off
	Rotor plugged.	Inspect and clear chipper hopper lower rotor housing and rotor.		Ensure machine is off
	Loose belt.	Follow tension adjustment procedure and tighten belt.		Ensure machine is off
	Brake Clutch spring broken.	Remove belt shield and inspect clutch spring.		Ensure machine is off, call technician for repair
	Broken belt.	Follow belt replacement procedure and replace belt.		Ensure machine is off
Slow feeding.	Low engine speed.	Check that choke is off, and throttle is set to maximum.		
	Blades and/or knives are dull.	Rotate, sharpen or replace blade and/or knives.		Ensure machine is off
	Rotor blade angle wrong, improper angle.	Re-sharpen knives to specified angle and check that blade is installed properly.		Ensure machine is off
	Collector bag full.	Detach and empty bag.		Ensure machine is off
	Obstructed discharge.	Clear debris from discharge chute.		Ensure machine is off
Unusual vibration while running.	Broken or missing blade or knife.	Replace broken/missing blade or knife.		Ensure machine is off.
	Rotor may be bent	Check rotor to see if it wobbles. Replace rotor		Ensure machine is off, call technician for repair
Mulch too Course	Twig Breaker may be damaged	Inspect Twig Breaker, replace if damaged.		Ensure machine is off.
	Broken or missing blade or knife.	Replace broken/missing blade or knife.		Ensure machine is off.

PROBLEM	CAUSE	SOLUTION		CAUTION
Machine requires excessive power or stalls.	Obstructed discharge.	Clear debris from discharge chute.		Ensure machine is off
	Engaging drive too quickly	Engage drive slowly, ensure hoppers and rotor housing are empty.		
	Collector bag full.	Detach and empty bag.		Ensure machine is off
	Feeding in too much material	Feed smaller amounts into hopper.		
	Feeding material too quickly	Feed larger material slowly into chipper hopper.		
	Rotor plugged.	Inspect and clear chipper hopper lower rotor housing and rotor.		Ensure machine is off
	Green material will not discharge.	Allow material to dry or alternate dry/wet material.		
	Chipper blade clearance too large.	Set clearance to 1/32 to 1/16 " (.76 - 1.52 mm). Use chipper clearance tool (see accessories)		Ensure machine is off.
	Dull blades and/or knives.	Rotate, sharpen or replace blade and/or knives		Ensure machine is off.
Engine related issues.	<i>Refer to your engine instruction manual for specific trouble shooting instructions / requirements.</i>			

8 SPECIFICATIONS

8.1 MECHANICAL

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

MODEL	BXC32
ENGINE	211cc Subaru SP210 - Gasoline
ENGINE RPM - CONTINUOUS	3600 RPM
DRIVE SYSTEM	Belt Drive Tensioner - Over center drive engage system
NUMBER OF ROTOR BLADES	2 x Offset Rotor Position
BLADE TYPE	Reversable, Hardened Tool Steel
ROTOR SIZE	432mm diameter, balanced steel rotor 17.0"
ROTOR WEIGHT	12.7 KG 28.0 LBS
FEEDING SYSTEM	Manual Feed, Hopper System
CHIPPER CAPACITY	76 mm Maximum Diameter 3.0"
HOPPER SPECIFICATIONS	102 mm X 108 mm Feed Opening, 457MM X 457MM Hopper Opening 4" X 4.25" Feed Opening, 18" X 18" Hopper Opening
DISCHARGE TYPE	Blower Discharge with Positionable Deflector
DISCHARGE HOOD HEIGHT	660 mm 26.0"
MACHINE TYPE	Consumer Yard Equipment, Cart Chipper

8.2 BOLT TORQUE

CHECKING BOLT TORQUE

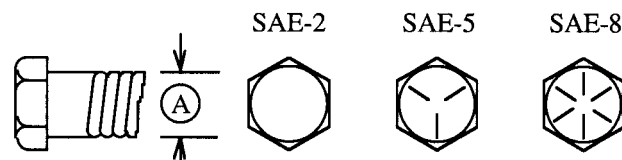
The tables shown below give correct torque values for various bolts and capscrews. Tighten all bolts to the torques specified in chart unless otherwise noted. Check tightness of bolts periodically, using bolt torque chart as a guide. Replace hardware with the same strength bolt.

Torque figures indicated above are valid for non-greased or non-oiled threads and heads unless otherwise specified. Therefore, do not grease or oil bolts or capscrews unless otherwise specified in this manual. When using locking elements, increase torque values by 5%.

* Torque value for bolts and capscrews are identified by their head markings.

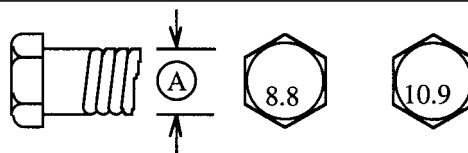
ENGLISH TORQUE SPECIFICATIONS

Bolt Diameter "A"	Bolt Torque*					
	SAE 2 (N.m) (lb-ft)		SAE 5 (N.m) (lb-ft)		SAE 8 (N.m) (lb-ft)	
1/4"	8	6	12	9	17	12
5/16"	13	10	25	19	36	27
3/8"	27	20	45	33	63	45
7/16"	41	30	72	53	100	75
1/2"	61	45	110	80	155	115
9/16"	95	60	155	115	220	165
5/8"	128	95	215	160	305	220
3/4"	225	165	390	290	540	400
7/8"	230	170	570	420	880	650
1"	345	225	850	630	1320	970



METRIC TORQUE SPECIFICATIONS


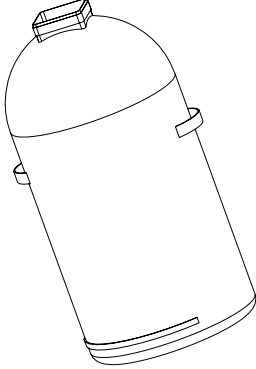
Bolt Diameter "A"	Bolt Torque*			
	8.8 (N.m) (lb-ft)		10.9 (N.m) (lb-ft)	
M3	.5	.4	1.8	1.3
M4	3	2.2	4.5	3.3
M5	6	4	9	7
M6	10	7	15	11
M8	25	18	35	26
M10	50	37	70	52
M12	90	66	125	92
M14	140	103	200	148
M16	225	166	310	229
M20	435	321	610	450
M24	750	553	1050	774
M30	1495	1103	2100	1550
M36	2600	1917	3675	2710



9 ACCESSORIES

Call your dealer for pricing and availability

For replacement parts, go to www.embmfg.com and click on "Parts and Manuals" to download the latest parts manual for you model chipper, then call your dealer to order.

 <p>#1012L269</p>	<p>#1012L269 LEDGER CLEARANCE SETTING GAUGE</p> <p>For BXC Cart Chipper An easy and accurate way of setting the critical clearances between the ledger blade and the rotor chipper blade.</p>
 <p>#Z99006 MULCH COLLECTOR BAG</p>	<p>#Z99006 MULCH COLLECTOR BAG</p> <p>For BXC Cart Chipper An easy way to collect your mulch and distribute it where its needed. The mulch bag holds 2.7 cu.ft (28 litres) and is a mildew resistant synthetic material. It is a porous material, allowing air from the rotor to pass through without restricting collection of the chips.</p>

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