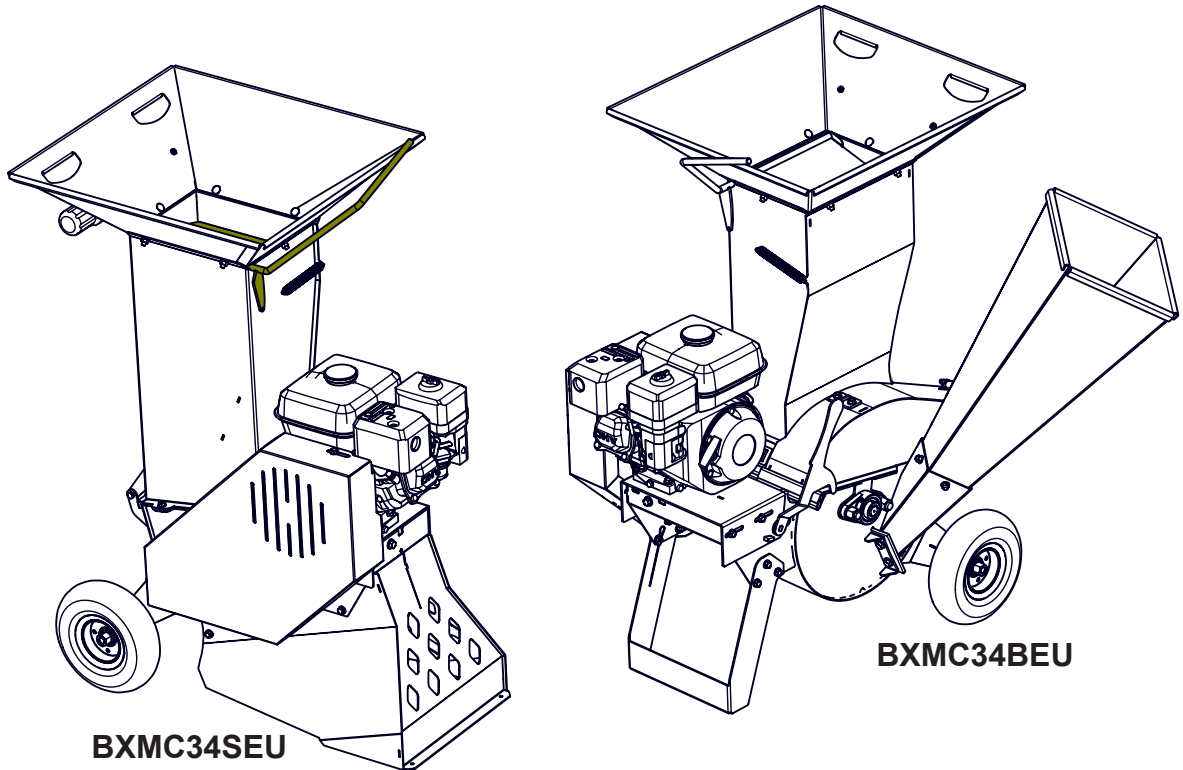




EMB Manufacturing Inc.
4144 Boomer Line · St. Clements, Ontario · N0B 2M0 · Canada
www.wallensteinequipment.com



CHIPPER-SHREDDER MODELS: BXMC34BEU & BXMC34SEU, OPERATOR'S MANUAL



Do not attempt to start or operate the equipment without thoroughly reviewing this manual for safe and proper operation.

**Keep this manual with the
machine at all times**



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WARRANTY

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

Register your product online at www.wallensteinequipment.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. Batteries – due to shipping periods associated with exporting
2. Machines or parts lost or damaged during shipment,
3. Normal maintenance or adjustments after initial pre-service and set up is completed
4. Normal replacement of service items.
5. Accessory items / parts not supplied by EMB MFG INC.
6. 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). Warranty Parts are FOB St. Clements, Canada. Freight charges from EMB to Distributors or Dealers are at the Distributors expense.

The distributor's liability under warranty is limited to freight charges for any warranty parts, 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
BXMC34 Series CART CHIPPER
DELIVERY INSPECTION REPORT
To activate warranty, register your product online at
www.wallensteinequipment.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

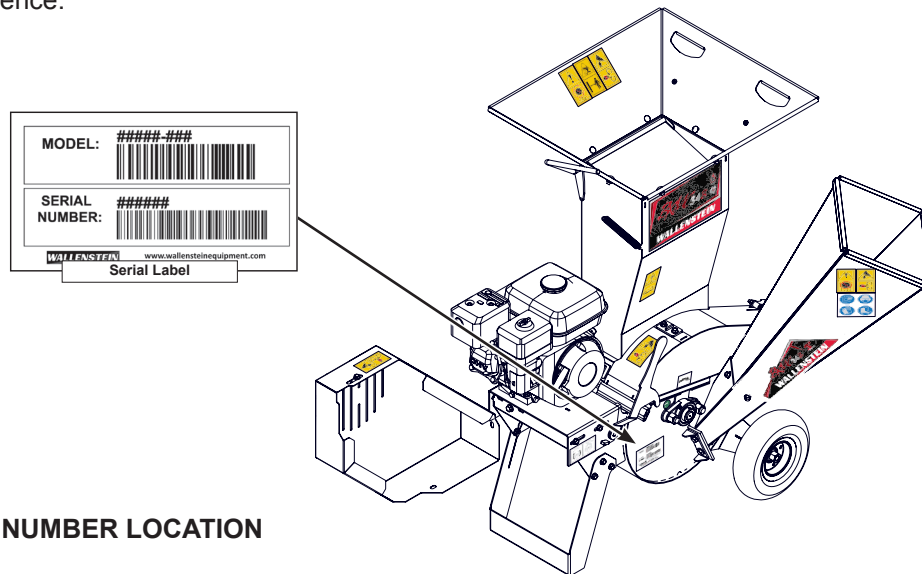
_____/_____/_____
Delivery Date

✓	Pre-Delivery Inspection
	Inspect for damage from shipping, immediately contact the shipping company if damage is found.
BXMC34 Series Cart Chipper	
	Check Blade Clearance
	Rotor Turns Freely
	Belt Tension Checked
	Pulleys Aligned
	Fasteners Tight
	Grease Zerk / Lubricate Pivot Points
	Check Wheel Nuts
	Check Cutting Blades (Shredder, Rotor & Ledger)
	Check Drive Engage Lever Engages
	Check Engine Fluid Levels
	Review Operating and Safety Instructions
Safety Checks	
	All Safety Decals Installed
	Guards and Shields Installed and Secured
	Review Operating and Safety Instructions

SERIAL NUMBER LOCATION

Always give your dealer the serial number of your Wallenstein BXMC Cart Chipper /Shredder 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).

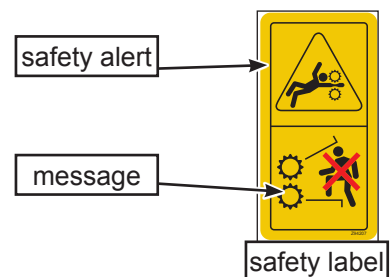
Safety Notice Labels are pictorial and always with a blue background colour and generally rectangular with single or multiple symbols. The label illustrates requirements for safe operation (safety equipment, housekeeping etc) These labels are accompanied by detailed instructions in the owners manual,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



1 INTRODUCTION

Congratulations on your choice of a BXC34 Wallenstein Chipper-Shredder to compliment your operation. This equipment has been designed and manufactured to meet the needs of a discerning timber or landscaping industry.

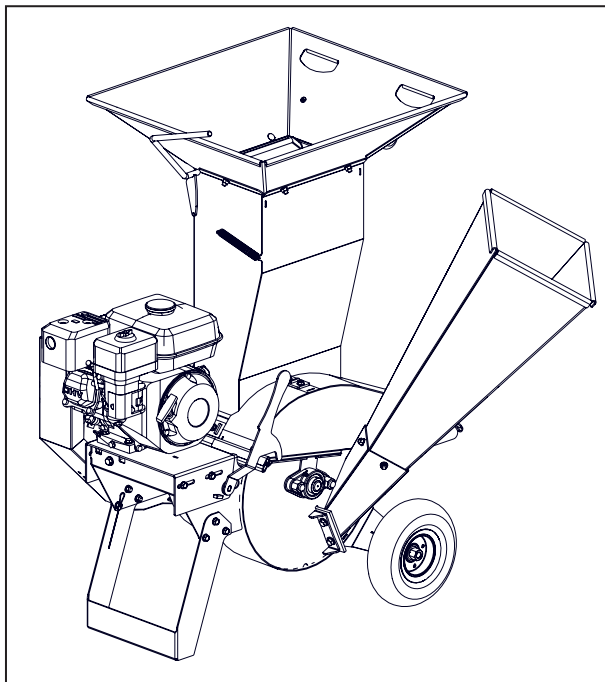
Safe, efficient and trouble free operation of your Wallenstein Chipper-Shredder requires that you and anyone else who will be using or maintaining the Chipper-Shredder, read and understand the Safety, Operation, Maintenance and Trouble Shooting information contained within the Operator's Manual.

The BXMC Series chipper / shredder features a large shredder feed hopper, that moves leaves and brush up to 19mm (3/4") in diameter to the Shredder chamber. The shredder chamber contains 3 sets of swinging knives (12 knives on the BXMC34BEU, 8 knives on the BXMC34SEU) that effectively and quickly shreds up material.

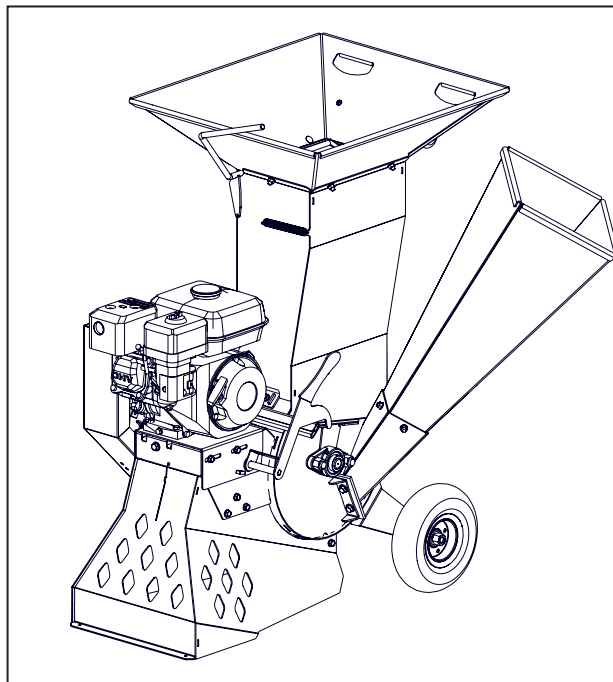
The chipper portion of the BXMC features an 9cm x 13cm (3.5" x 5") angled chipper hopper that delivers wood material (up to 75mm (3.0") diameter) into the 2 bladed rotor for chipping.

A powerful gas engine on the frame provides power to the rotor through V belt brake / clutch drive system. The BXMC brake / clutch system is designed to replace the traditional belt tensioning system and features include longer belt life, and braking clutch that quickly and safely stops the rotor when the drive is disengaged. Positive, fail safe brake, that meets current European and U.S requirements.

This manual covers the Wallenstein Chipper-Shredder models BXMC34BEU & BXMC34SEU. Use the Table of Contents or Index as a guide to locate required information.



BXMC34BEU



BXMC34SEU

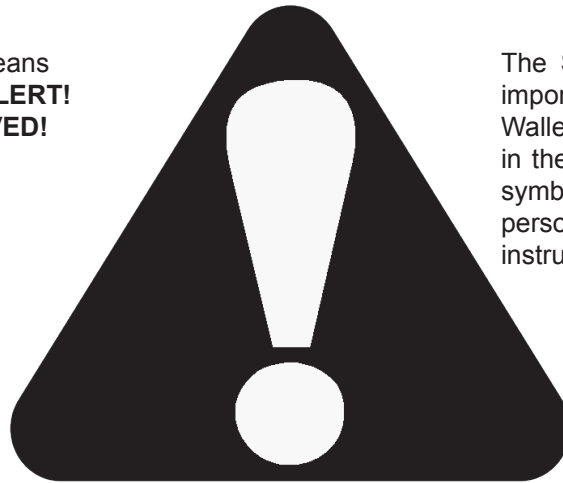
Keep this manual handy for frequent reference and to pass on to new operators or owners. Call your Wallenstein dealer or the Distributor if you need assistance, information or additional copies of the manuals.

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 Chipper / Shredder 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**, **CAUTION** and **NOTICE** 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.

NOTICE - Indicates a situation that could result in damage to the machine or other property.

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 BXMC Chipper / Shredder. **YOU** must ensure that you and anyone else who is going to use, maintain or work around the Chipper / Shredder. be familiar with the use 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 Chipper / Shredder.

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 use 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 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** wear suitable ear protection for prolonged exposure to excessive noise.



- **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.

- **DO NOT** risk injury or death by ignoring good safety practices.

- **DO** review safety related items annually with all personnel who will operating or maintaining the Chipper / Shredder.

- **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 Chipper / Shredder.

- **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. This list includes but is not limited to:

- A hard hat
- Heavy gloves
- Wet weather gear
- Hearing Protection
- Respirator or filter mask
- Protective shoes with slip resistant soles
- Protective glasses, goggles or face shield



- **DO** set Safe Condition procedure before any service, maintenance work or storage preparation.

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
- remove and pocket the ignition key
- block & chock the tractor 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** check cables, chains and pulley's, that they are clear of debris prior to starting the machine
- **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 wheels
- Safe Condition procedure should be performed before any service, maintenance work or storage preparation.



Z94203

**Use Your Personal
Protection Equipment**

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.

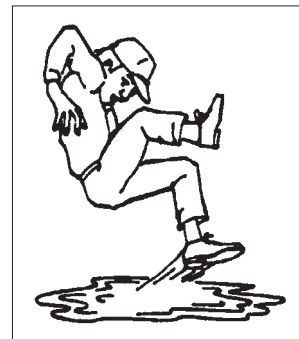


4. Clear working area of stones, branches or hidden obstacles that might be hooked or snagged, causing injury or damage.
5. Use only in daylight or good artificial light.
6. Be sure machine is properly mounted, adjusted and in good operating condition.
7. Ensure that all safety shielding and safety signs 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 Chipper / Shredder. 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 BXMC Chipper / Shredder 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.
6. DO turn off the fuel valve for transport or storage.

2.10 SIGN-OFF FORM

Wallenstein follows the general Safety Standards specified by the International Standards Organization (ISO) and the Occupational Health Administration (OSHA). **Anyone who will be using and/or maintaining the Chipper-Shredder must read and clearly understand ALL Safety, Usage and Maintenance information presented in this manual.**

Do not use or allow anyone else to use this Chipper-Shredder until such information has been reviewed. Annually review this information before the season start-up.

Make these periodic reviews of SAFETY and OPERATION a standard practice for all of your equipment. We feel that an untrained operator is unqualified to use this machine.

A sign-off sheet is provided for your record keeping to show that all personnel who will be working with the equipment have read and understand the information in the Operator's Manual and have been instructed in the operation of the equipment.

SIGN-OFF FORM

[illegible]

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 the chipper is 75 mm (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.



Caution: Do not operate machine without shields in place, failure to do so may cause serious injury or death. Replace the shield before operating equipment.



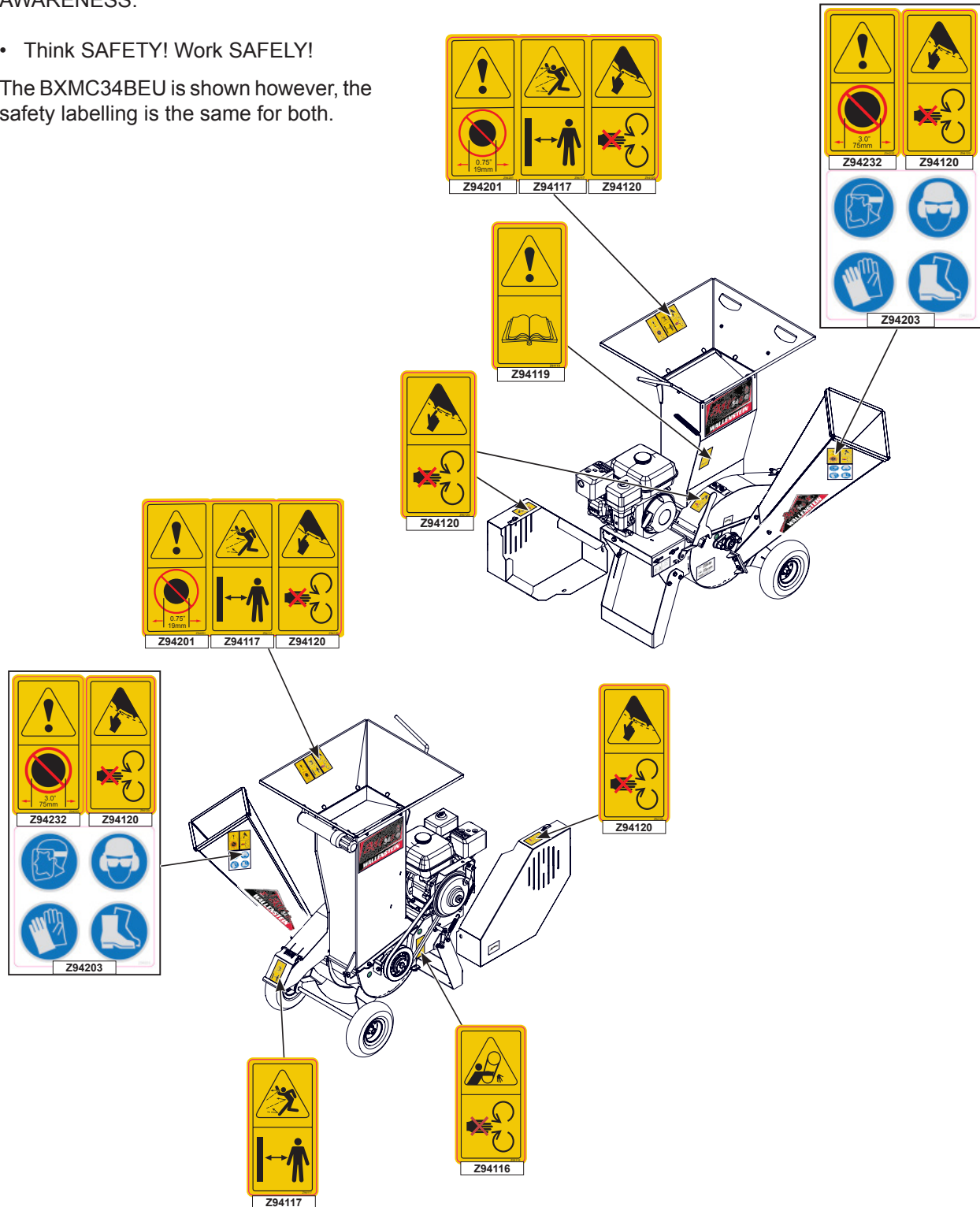
Caution: Maximum size of material for the shredder is 19 mm (0.75"). Attempting to shred anything larger could stall the engine, damage the machine or cause personal injury.

3.3 SAFETY SIGN LOCATIONS

The types of safety signs and locations on the equipment are shown in the illustrations that follow, and generally apply to both models. 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!

The BXMC34BEU is shown however, the safety labelling is the same for both.



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 BXMC Chipper / Shredder. 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 BXMC34 Chipper / Shredders are designed to chip and shred, small trees, brush, limbs and other wood debris. The chipped / shredded 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 BXMC34 Chipper / Shredder 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,**

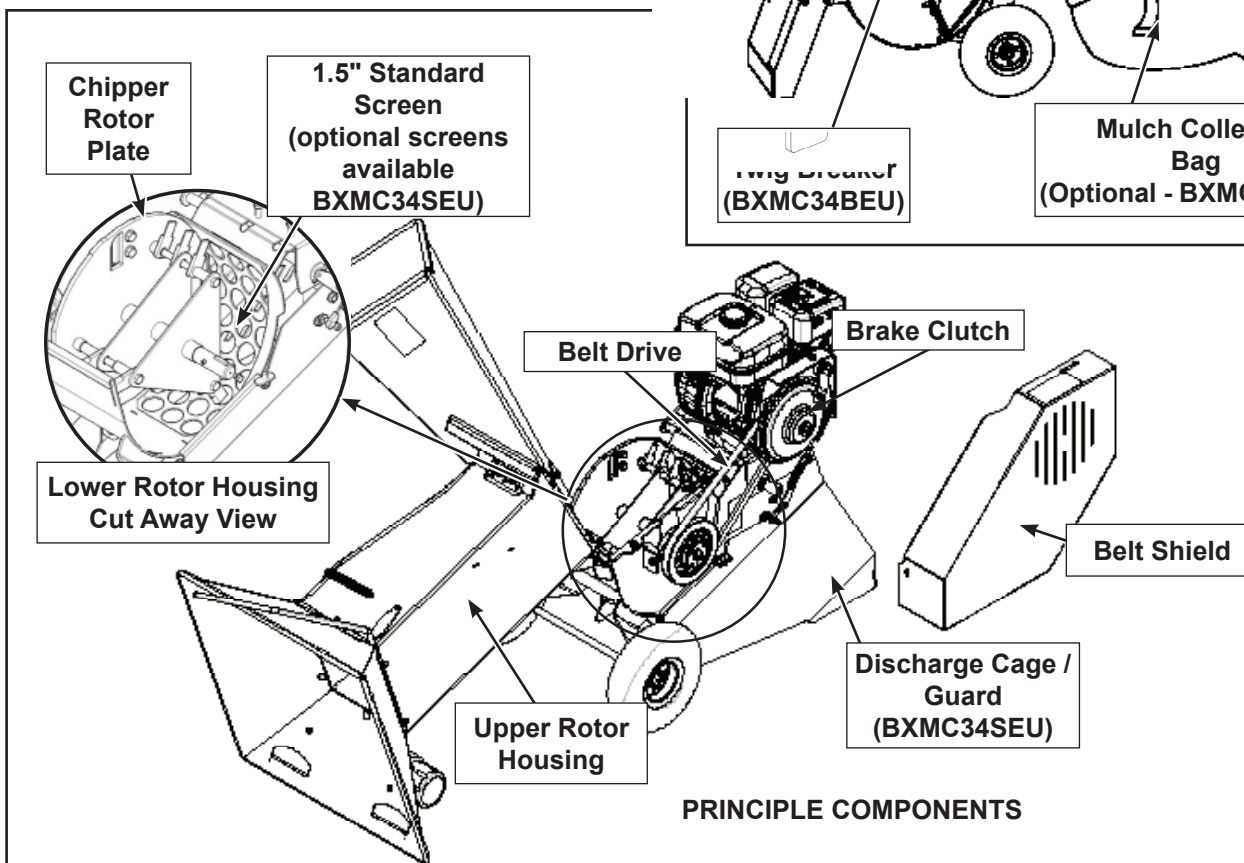
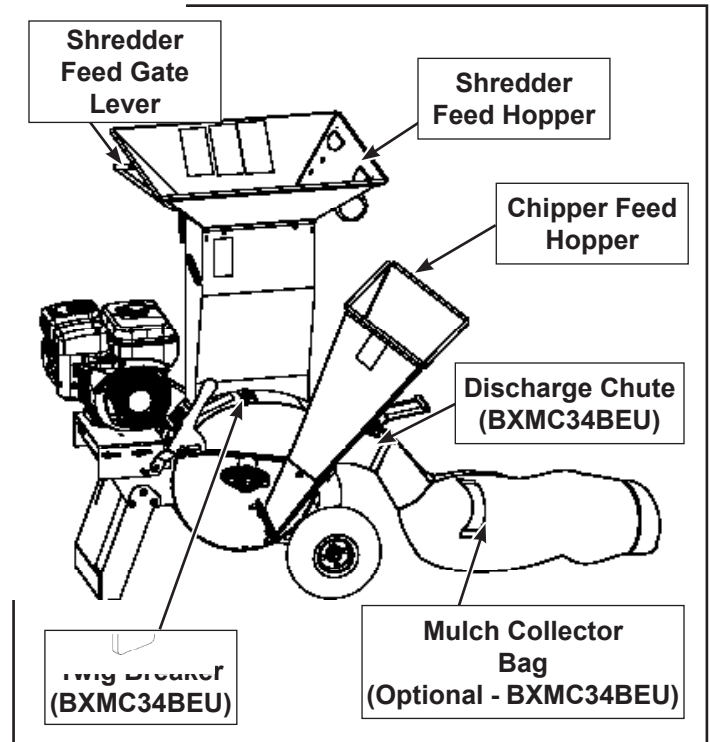
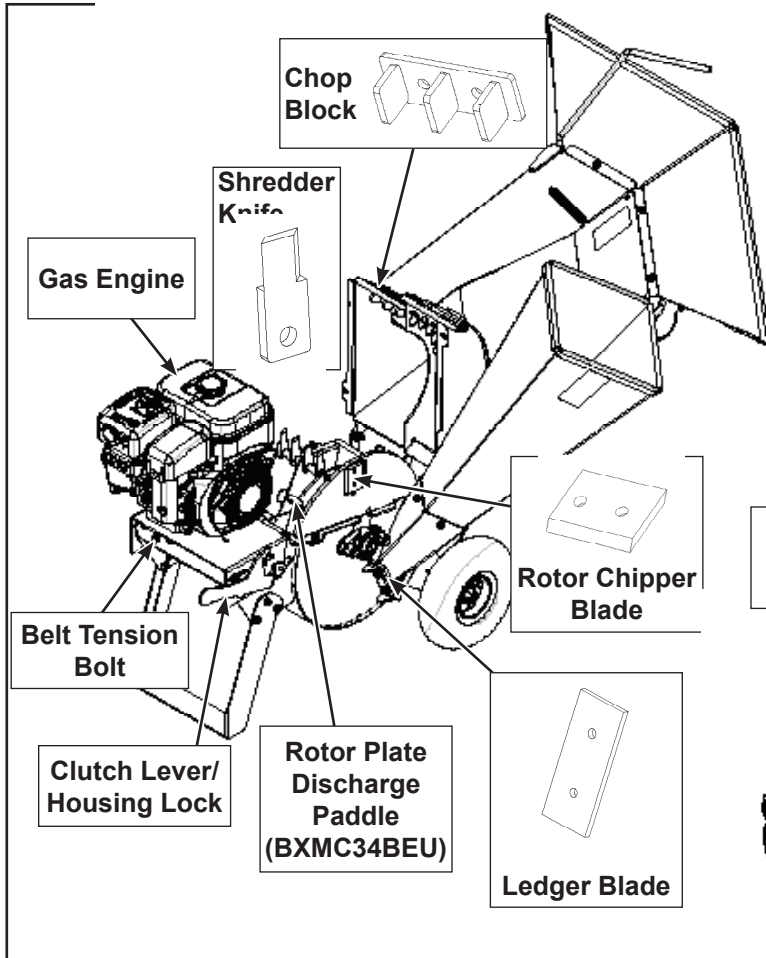
- **disengage the drive**
- **shut off the engine**
- **ensure components have stopped moving.**
- **unplug spark plug cable**
- **turn fuel valve off**
- **block & chock the wheels**

MACHINE COMPONENTS

The Allenstein Chipper-Shredder is a rotor with chipper and shredder knives for chipping and shredding wood. Feed hoppers move the material into the rotor housing and into the knives for shredding.

The chipper rotor is designed with 2 blades to provide chip size. The shredder rotor is equipped with 4 swinging knives to provide a fine mulch. A block in the shredder compartment shreds the material as it moves through the machine.

The gas engine on the frame provides power to the machine through a V belt drive system. A braking clutch on the engine stops the rotor when the drive is disengaged.



PRINCIPLE COMPONENTS

4.3 MACHINE BREAK-IN

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

A. After operating for 1 hour:

1. Torque all fasteners and hardware.
2. Check condition of rotor bearings.
3. Check the condition and clearance of the knives, chop-block and stationary blades. Adjust or replace as required.
4. Check belt drive system: Tension and pulley alignment.
5. Check the condition of the hopper gate in the shredder feed hopper. The hopper gate must move freely back into position to ensure the safety of the operator by preventing wood from flying out.
6. Check for entangled material. Remove all entangled material before resuming work.
7. Check engine fluid levels. Top up as required.
8. Lubricate all grease fittings.

B. After operating for 10 hours:

1. Repeat steps 1 through 8 listed above. (Section A)
2. Change engine oil.
3. 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 Chipper-Shredder requires that each operator reads and understands the using procedures and all related safety precautions outlined in this section. A preoperational 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 Chipper-Shredder 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 ensure 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

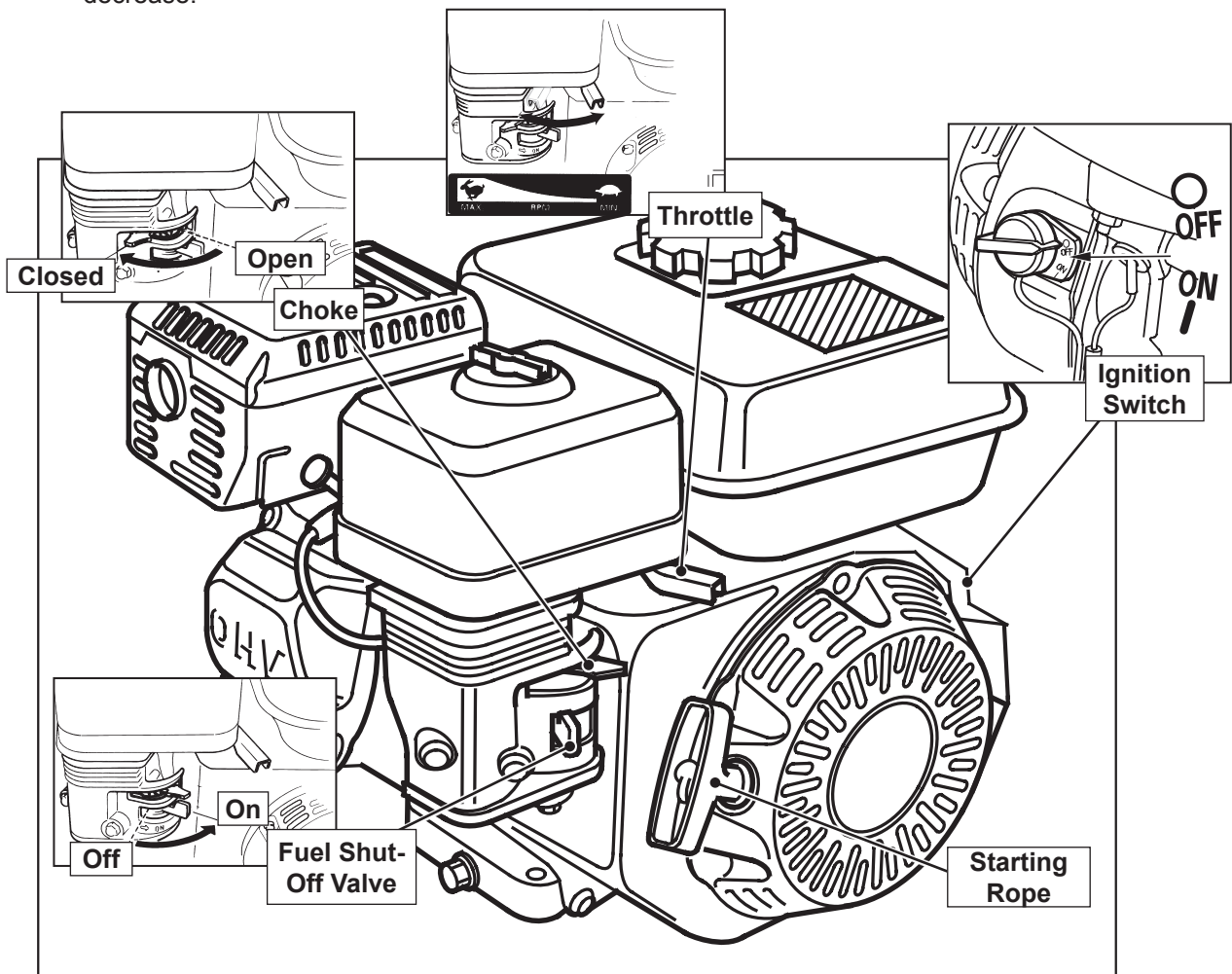
Please review this section to familiarize yourself with the location and function of each control before starting. Familiarizing yourself with the controls will enable you to take advantage of all the features available on the BXMC and apply them as conditions demand.

Before starting to work, all operators should familiarize themselves with the location and function of controls.

4.5.1 ENGINE BXMC34 SERIES:

An GX200 196cc Honda engine is used on the BXMC34 series. **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.

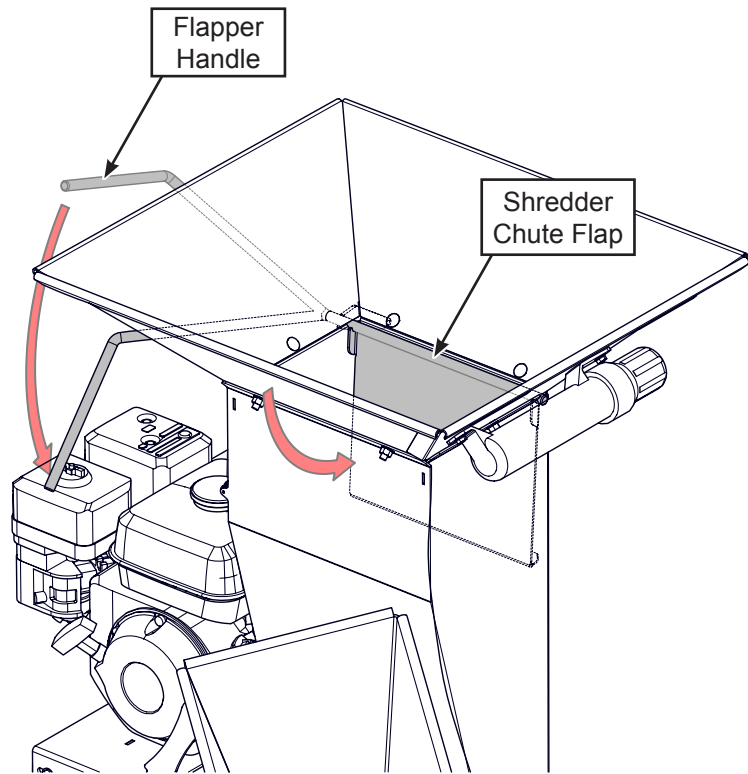


4.5.2 SHREDDER FEED:

The shredder intake is designed with a spring-loaded shredder chute flap to control the material in the hopper when feeding into the shredder rotor, and to prevent material from flying out while it is being shredded.

The flapper handle on the engine side of the shredder hopper controls the position of the shredder chute flap. You can control how much and how fast the material is delivered into the shredder by varying the flap opening.

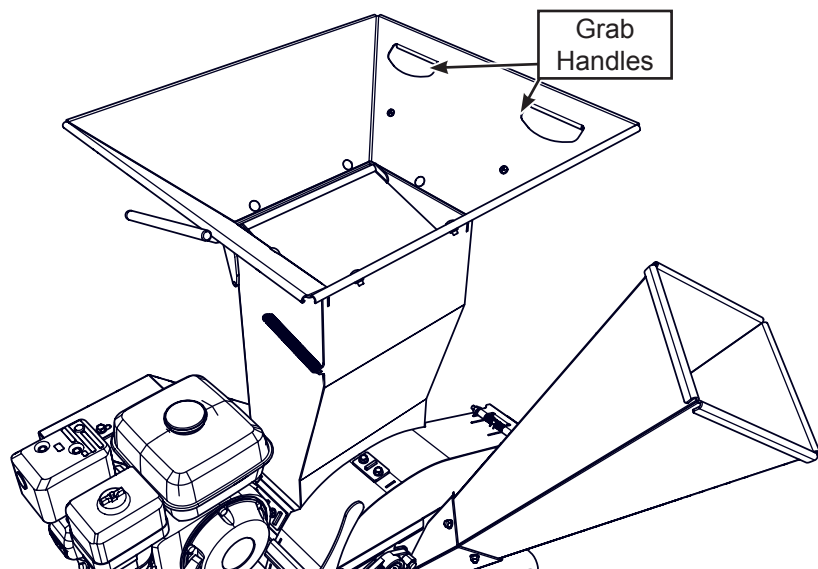
1. Move the flapper handle down to open the gate and allow the material to drop into the shredding rotor.
2. Release the flapper handle and the spring will return the gate into its closed position.



4.5.3 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 machine base lifts off the ground, and is securely resting. The machine is balanced to make it easy to move the machine this way.

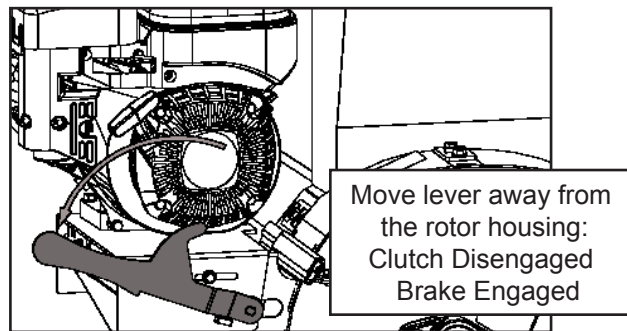
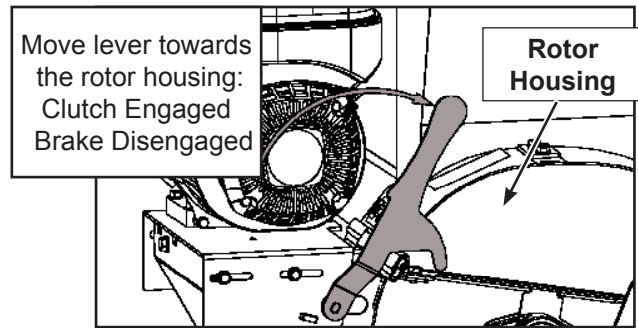
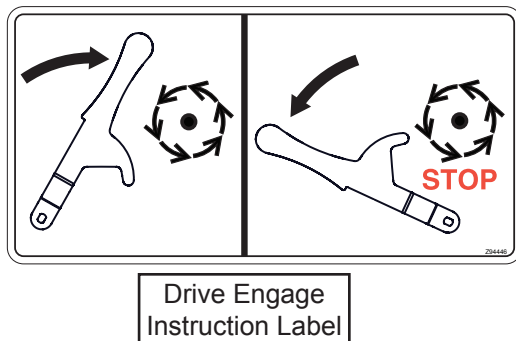
Ensure the machine is secure from movement during chipping operation.



4.5.4 DRIVE ENGAGE HANDLE:

The drive engage handle activates the drive system used to start the rotor turning for chipping / shredding. A reliable brake / clutch system controls power from the engine to the rotor.

1. **Drive Position:** move the lever fully toward the rotor housing to release the clutch brake and drive the rotor. In this position, the handle also prevents opening of the upper rotor housing while the rotor is rotating.
2. **Stop Position:** move the lever fully away from the rotor housing to apply the brake clutch and stop the rotor.



Caution: The control lever must be moved fully away from the rotor housing and the clutch brake engaged and engine shut off before the rotor housing can be opened.

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 BXMC34 is fuelled, and the operator is wearing personal protection equipment (PPE).

1. Position the chipper / shredder at the work site close to the brush pile.
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 BXMC34BEU is attached to a lawn tractor, ensure the brakes are applied and wheels are chocked.
4. Ensure the feed hoppers are free of debris.(to prevent jamming at start up)
5. BXMC34BEU: Aim the deflector as required, away from people or animals.
6. BXMC34SEU: Install the appropriate shredder screen (optional screens available) Position the machine.

Notice

The chipper /shredder must be resting on the level and stable ground during operation, using the chipper while on uneven ground is dangerous and may result in injury or 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 /shredder 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 BXMC Chipper / Shredders are 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

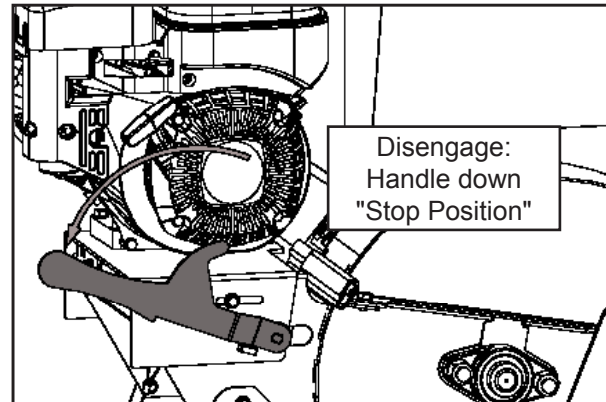
1. Stop feeding material into the hopper.
2. Move the throttle to idle position to slow the engine RPM. Allow 10-15 seconds for the rotor to slow down.
3. Disengage the drive.
4. Turn off the ignition switch, to stop the engine and wait for all moving parts to stop.

5. Shut off the fuel valve.


4.7.4 EMERGENCY STOPPING:

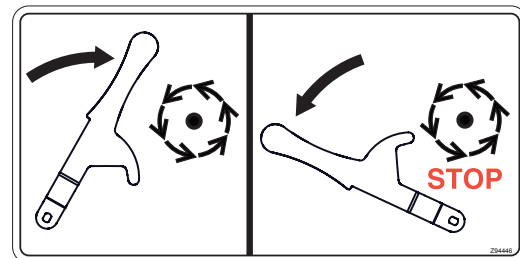
If an emergency occurs:

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



IMPORTANT: Be aware that when the rotor is been disengaged, the clutch brake automatically engages and will stop the rotor within 5 seconds.

 **Caution:** Wait for all parts to stop moving before attempting to access the machine in any way.



Drive Engage
Instruction Label

4.7.5 CHIPPING / SHREDDING

Before beginning work, it may be helpful to sort the material into separate piles for chipping and shredding. The chipper has a **3" (76 mm)** diameter maximum capacity and the shredder has a **3/4" (19 mm)** diameter maximum capacity

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.

Chipper Feed

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.
- Any remaining tree, brush or limb less than 3/4 (19 mm) in diameter or very bushy, can be fed through the shredder.

Shredder Feed

When the rotor is up to speed:

- Place the leafy/wooden material into the shredder feed hopper until the hopper is full.
- Use the shredder feed control handle on the side of the hopper to open the feed gate. You can control how much and how fast the material is delivered into the shredder by varying the gate opening.
- If the shredder begins to slow down, stop and let the shredder get back up to speed, then restart feeding.
- Do not reach into the shredder feed hopper further than the gate to avoid contact with the knives on the rotor.
- 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.
- Release the handle and the gate will close. Ensure the gate is closed between feeds to keep flying material contained in the shredder housing. **Do not prop open the gate.**



Caution: Do not reach into the feed hopper at any time, use a stick or branch to push any piece of material into the rotor 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 rotor.

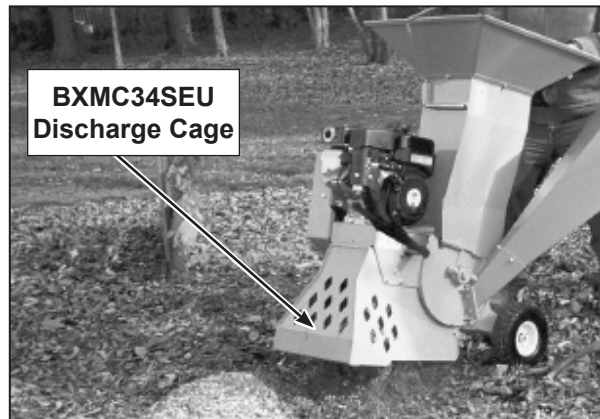
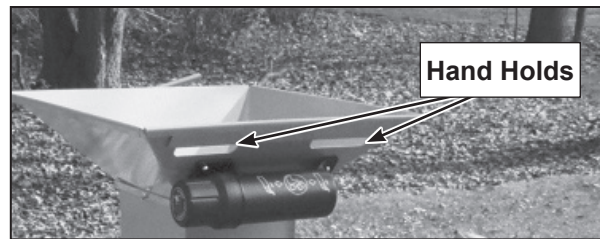
4.7.6 MOVING

The BXMC34SEU and the BXMC34BEU are designed to be moved easily by tilting the chipper back on its wheels using the hand-holds in the shredder intake chute.

Tilt the unit back, then pull the unit to the desired location. Ensure the engine is off and the clutch lock is engaged before moving.

On the BXMC34SEU model, the wood mulch is directed into the discharge cage under the motor, and the unit must be moved periodically to prevent plugging as the chips build up.

The BXMC34BEU uses a mulch collector bag and does not require periodic moving.



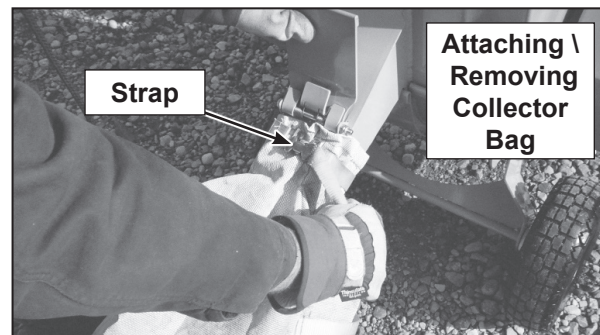
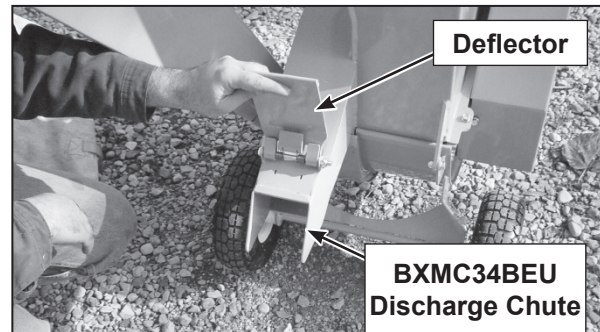
4.7.7 COLLECTOR BAG (optional)

The BXMC34BEU model 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 mulch.

- Lift the spring loaded deflector, 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.

No Bag:

The BXMC34BEU model can be used with or without its collector bag. Be sure that the deflector is down, so that the mulch will be directed to the ground. Position the chipper at the work site to allow room for the mulched material to be accessible



4.7.8 UNPLUGGING

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

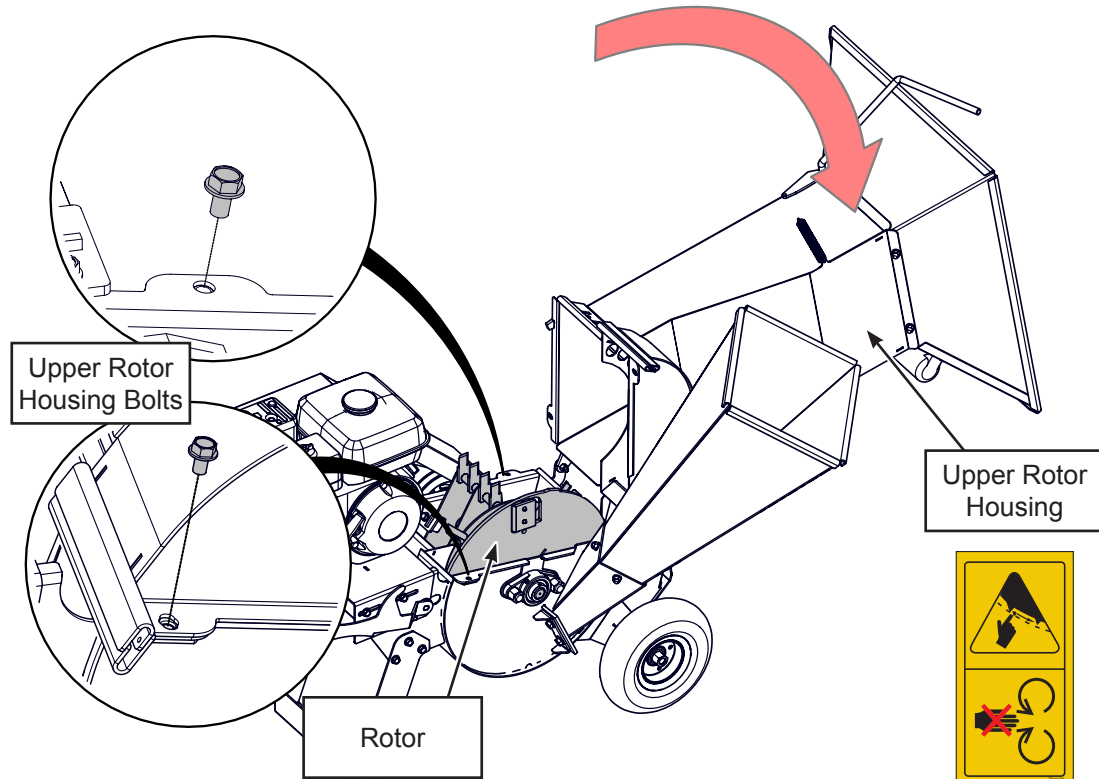
1. Clear the area of bystanders, especially small children.
2. Follow the stopping procedure and wait for all moving parts to stop before unplugging.
3. Pull the material out of the chipper and shredder feed hoppers. Be sure all the material is out and nothing is jammed or wedged between the input opening and the rotor.
4. On the BXMC34BEU model, 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.
5. On the BXMC34SEU model, carefully tilt the chipper back and remove all the material from the screen. Remove material from every hole.
6. Check that everyone is clear of machine before restarting engine.
7. Start the engine, engage the drive system and resume working.

4.7.9 SEVERE PLUG:

1. Follow the stopping procedure and wait for all moving parts to stop before proceeding.
2. Remove the 2 upper rotor housing bolts and carefully open the housing.
3. Remove material from inside the rotor compartment.
4. Clean out the discharge area/rotor and screen.
5. 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.**
6. Close and secure rotor cover. Tighten fasteners to their specified torque.
7. Check that everyone is clear of machine before restarting engine.
8. Start the engine, engage the drive system and resume working.



Caution: Be aware that the rotor has 2 chipper blades, reaching into the rotor compartment to clear a plug must be done with great care.



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-Shredder. 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, wash it and store in a dry, secure location (BXMC34BEU).
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.

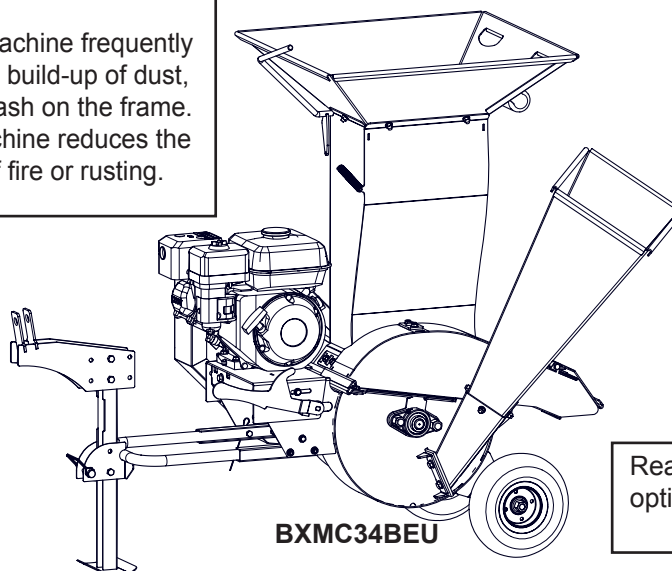
7. Discharge fuel to prevent gum in the fuel system and carburettor parts. Review the engine owners manual for the proper procedure.
8. Touch up all paint nicks and scratches to prevent rusting.
9. It is best to store the machine inside. If that is not possible, cover with a waterproof tarpaulin and 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. Bring the collector bag to machine (BXMC34BEU model).
3. Review and follow the pre-operation checklist.

Clean the machine frequently to prevent a build-up of dust, chips and trash on the frame. A clean machine reduces the chance of fire or rusting.



Ready for storage, shown with optional #1082A355 GARDEN TRACTOR HITCH

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.

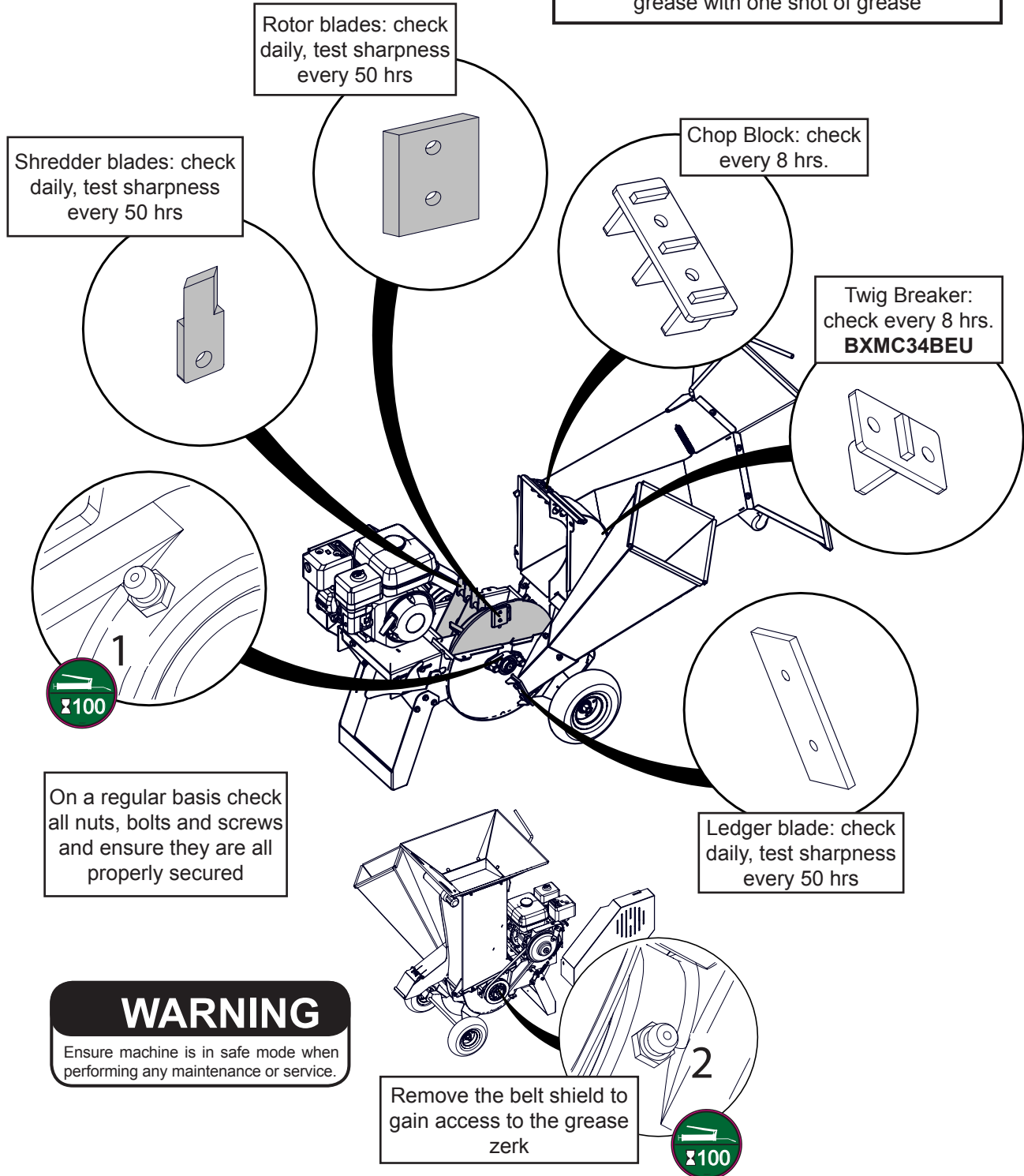
Refer to your engine instruction manual for specific maintenance instructions / requirements



Look for this label on your machine, it indicates a grease point and the number of hours between greasing.

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

grease with one shot of grease



6.1.5 SERVICE RECORD CHART

See Lubrication and Maintenance sections for details of service. Copy this page to continue record.
Refer to your engine instruction manual for specific maintenance instructions / requirements

[illegible]

6.2 MAINTENANCE

6.2.1 BELT TENSION / ROTOR BRAKE:

The machine is designed with a clutch on the engine shaft equipped with an internal brake that when engaged is used to brake the engine pulley and prevent it from turning.

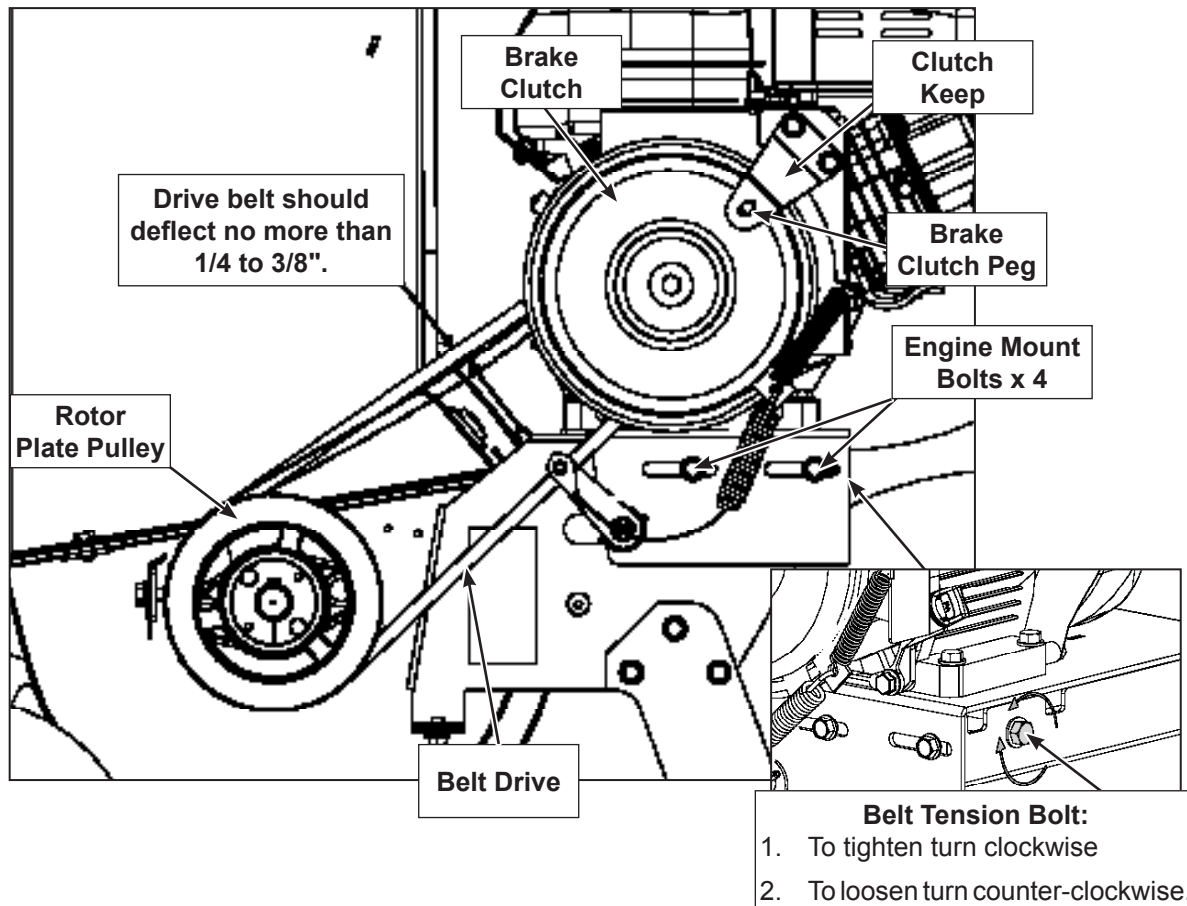
This in turn will stop the belt drive and rotor plate pulley. When the belt is in disrepair or loose, the ability to stop the rotor quickly may be affected.

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

Frayed, cracked or worn drive belts should be replaced. Drive belt should deflect no more than 1/4 to 3/8" (6 mm to 10 mm).

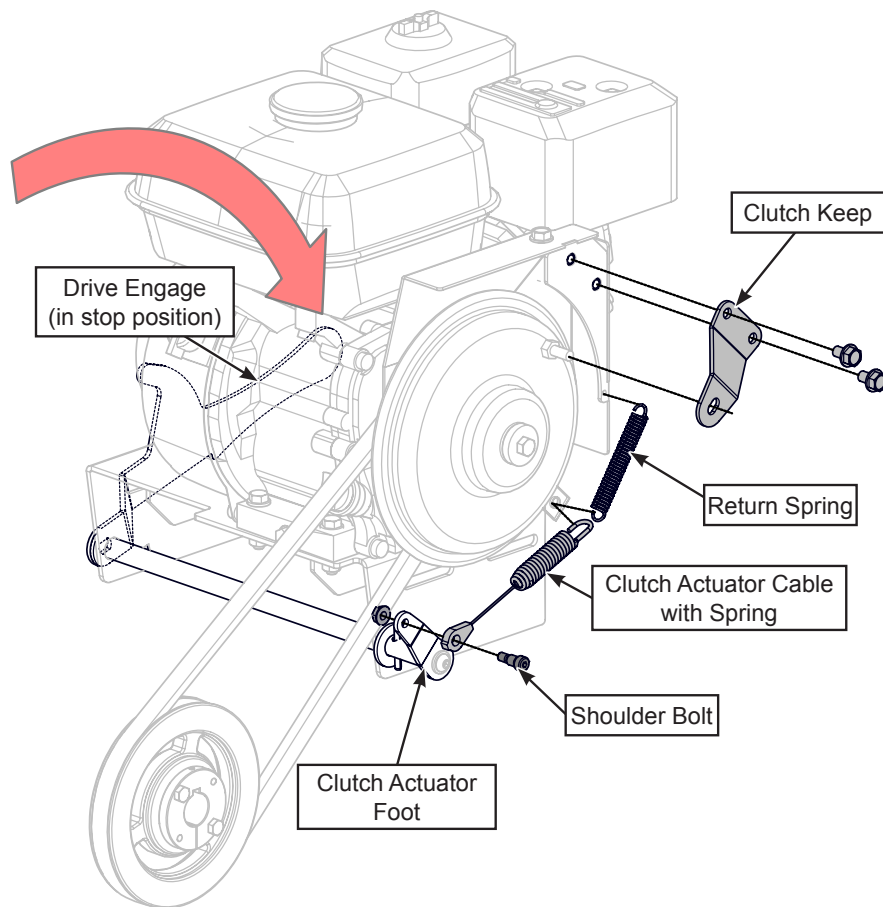
Drive Belt Tension Check and Adjustment:

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 shield to the chipper, remove the belt shield.
3. Check the tension by pushing on the belt with your fore finger and measure its defection. Drive belt should deflect no more than 1/4 to 3/8" (6 mm to 10 mm).
4. If the belt requires adjustment, loosen (do not remove) the 4 x bolts that hold the engine mount to the main frame, (2 on each side of the motor mount).
5. Turn the belt tensioning bolt clockwise, to pull the engine mount outwards to tighten the belt or turn the bolt clockwise, to loosen the belt.
6. Snug 1 bolt on each side of the engine mount.
7. Check the tension by pushing on the belt with your fore finger and measure its defection. Drive belt should deflect no more than 1/4 to 3/8" (6 mm to 10 mm).
8. If the tension is incorrect, loosen the engine mount bolts and adjust the belt tension bolt as required.
9. When tension is correct, tighten up all four engine mount bolts and replace the belt shield and bolts.



Drive Belt Replacement (B42 belt #Z41161):

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 shield to the chipper
3. Remove the 2 bolts the hold the clutch keep to the shield mount, and remove the clutch keep
4. Loosen (do not remove) the 4 x bolts that hold the engine mount to the main frame (two on each side of the motor mount)
5. Turn the belt tensioning bolt counter clockwise, until belt is loose enough to remove,
6. Remove the following parts to access the drive belt:
 - **clutch actuator cable**: remove the shoulder bolt from the actuator foot, and unhook from brake/clutch
 - **return spring**: unhook from the shield mount and brake/clutch
 - **clutch keep**: unbolt from the shield mount
7. Remove the old belt from the rotor sheave first, then the brake / clutch.
8. Replace with the new belt
9. Replace the clutch keep and its bolts (ensure the peg on the brake clutch is in the slot in the clutch keep
10. Turn the belt tensioning bolt clockwise, to pull the engine mount outwards to tighten the belt
11. Check the tension by pushing on the belt with your fore finger and measure its defection. Drive belt should deflect no more than 1/4 to 3/8" (6 mm to 10 mm).
12. When tension is correct, check pulley alignment then tighten up all four engine mount bolts, and replace the belt shield and bolts.
13. Recheck tension after 10 hrs of use.



6.2.2. BLADE, KNIFE AND BREAKER MAINTENANCE:

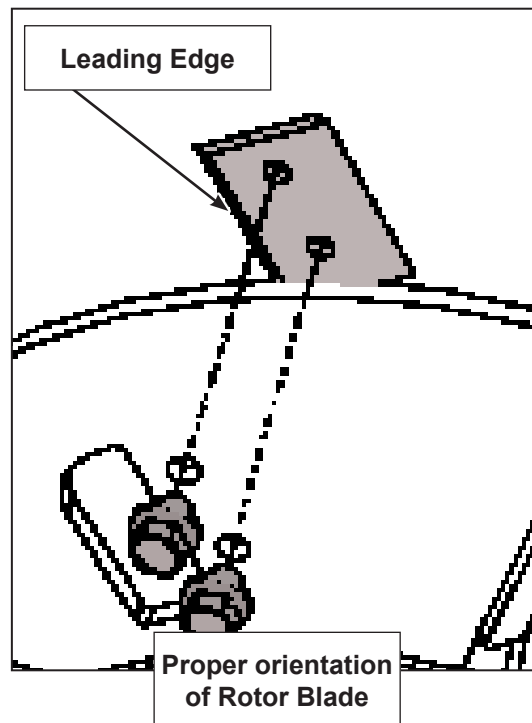
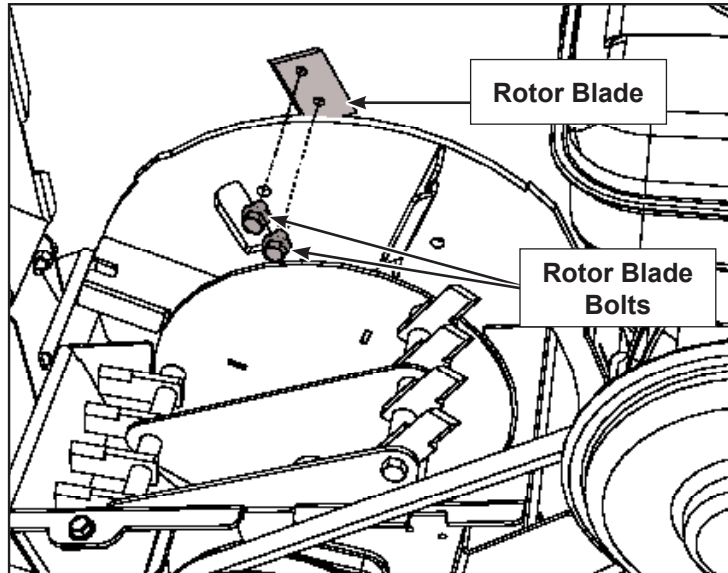
The shredder knives, rotor and ledger blades need to be sharp for the Chipper-Shredder to perform as expected. Periodic inspection is recommended. Keep the knives sharp to reduce the amount of power required during operation. Watch the sharpness of the knives when processing material with a lot of sand,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

Rotor Blades:

The rotor is equipped with 2 blades placed at 180° to each other to keep the rotor in balance. If one needs to be changed, the one opposite should 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 engine is off (ignition switch is off and the fuel valve is closed).
2. Remove the 2 bolts that hold the upper rotor housing, and carefully open the rotor housing.
3. Manually rotate chipper rotor plate so that the blade is fully exposed
4. Remove the 2 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.
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 second blade.



WARNING

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

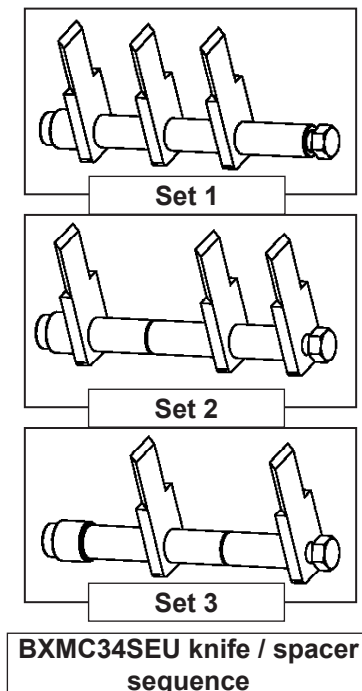
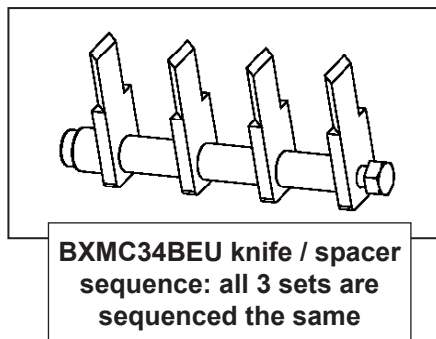
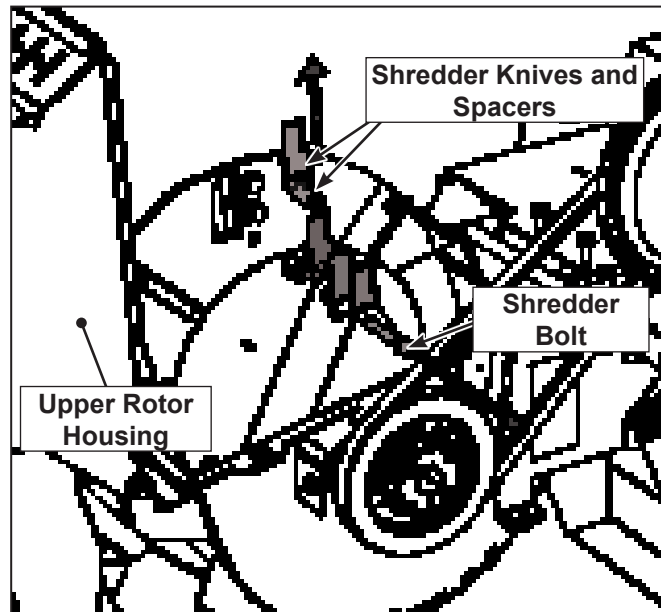
Shredder Knives:

The shredder rotor is designed with 3 sets of swinging knives (12 knives on the **BXMC34BEU**, 8 knives on the **BXMC34SEU**). Each knife has a bevelled edge that cuts, chops and mulches the material as it moves around the rotor compartment. In addition the chop block helps to break the material into smaller pieces and turn it into mulch.

Four holes in the divider at the top of the rotor on the **BXMC34BEU** keeps the material inside the rotor housing, until it becomes fine enough to move through the holes to the rotor paddles and expelled out the discharge chute.

On the **BXMC34SEU**, the material stays in the rotor housing until it is fine enough to escape through the holes in the screen at the bottom of the rotor frame.

1. Ensure the engine is off (ignition switch is off and the fuel valve is closed).
2. Remove the 2 bolts that hold the upper rotor housing, and carefully open the rotor housing.
3. Manually rotate chipper rotor plate so that one set of shredder knives is fully exposed
4. Loosen the shredder bolt that holds the set of shredder knives and spacers to the shredder plate,
5. Slowly remove the bolt while catching the knives and spacers as they become free.
6. Reverse the knife and replace, or replace with new or re-sharpened knives.
7. **Ensure that the knives and spacers are installed in the correct sequence, improper installation will decrease performance of the shredder. Refer to diagram for help.**
8. Tighten down bolts as specified in the torque chart, ensure knives rotate freely.
9. Repeat steps for second and third sets of shredder knives.

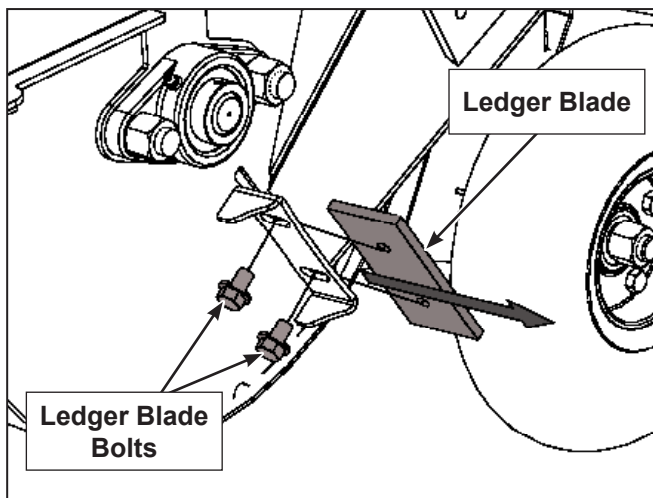


Ledger Blades:

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

The ledger blade is designed with 4 usable corners. 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.

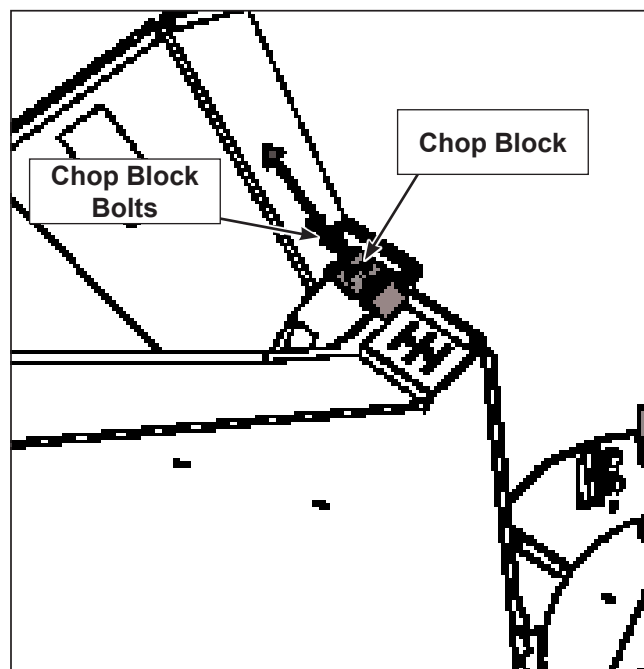
1. Ensure the engine is off (ignition switch is off and the fuel valve is closed).
2. Remove the 2 bolts that hold the ledger blade to the ledger mount, remove the blade.
3. Rotate the blade and replace or replace with new or re-sharpened blade.
4. Hand tighten the bolts and set the clearance between the ledger and rotor blades at 1/32 - 1/16" (.76 - 1.52 mm). For fast and easy setting, use our chipper clearance setting tool, available from your dealer (see accessories)
5. Tighten down bolts as specified in the torque chart



ChopBlock:

The ChopBlock is an assembly of breaker tabs bolted in at the bottom of the upper rotor housing. The shredder knives pass through the chop block, and helps to break the material into smaller pieces and turn it into mulch. Inspect the chop block for damage such as gouges, bent, or missing teeth. A damaged chop block should be replaced. If its teeth are showing wear, remove and rotate the chop block.

1. Ensure the engine is off (ignition switch is off and the fuel valve is closed).
2. Remove the 2 bolts that hold the upper rotor housing, and carefully open the rotor housing.
3. Remove the 2 bolts that hold the chop block to the housing, remove the chop block.
4. Reverse the steps to install the new chop block.



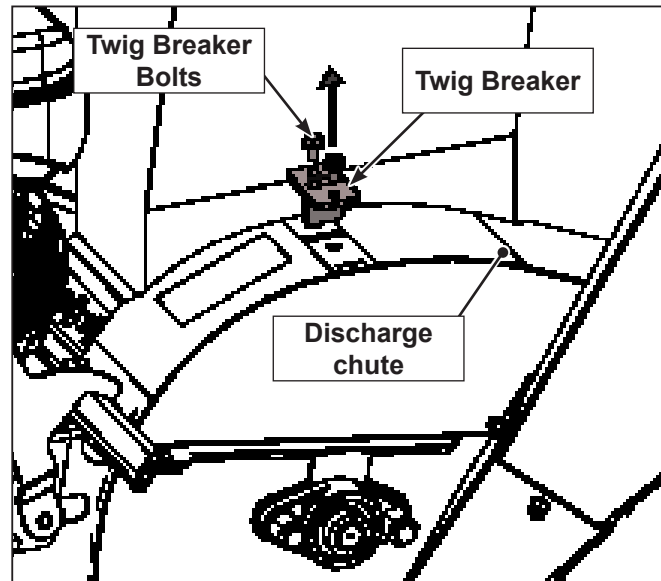
**WARNING**

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

Twig Breaker (BxMC34BEU):

The Twig Breaker is a breaker tab located on top of the discharge chute beside 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 rotate the twig breaker.

1. Ensure the engine is off (ignition switch is off and the fuel valve is closed).
2. Remove the 2 bolts that hold the twig breaker to the housing, remove the twig breaker.
3. Reverse the steps to install the new twig breaker.



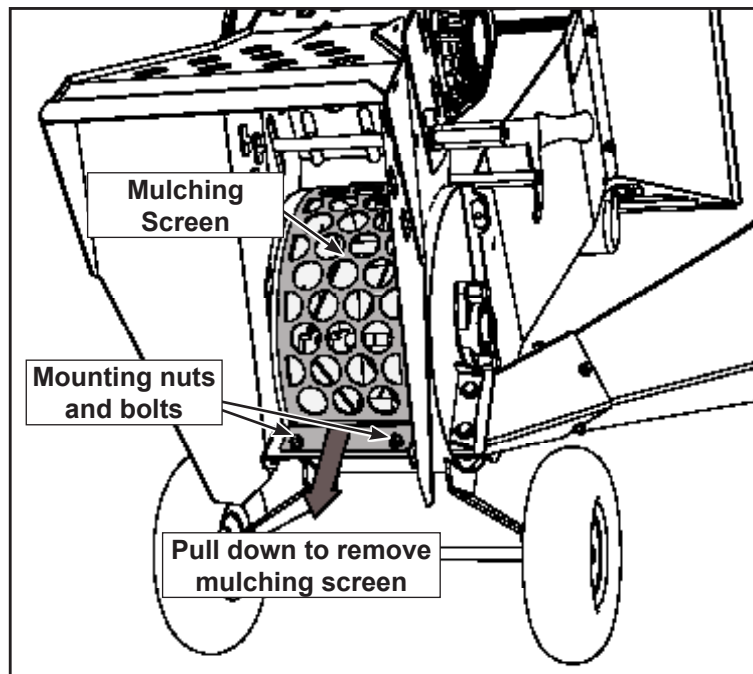
6.2.3 MULCHING SCREEN (BxMC34SEU):

The BxMC34SEU model is designed with a screen in the bottom of the rotor frame. The screen retains the wood material in the rotor chamber until it is small enough to exit through the holes and drop to the ground under the rotor.

The standard screen features 1-1/2" (38 mm) diameter round screen, for general purpose mulching. Two optional screens are available: 3/4" (19 mm) diameter round for a finer mulch and 1-1/2" x 7.0" (38 mm x 178 mm) oblong hole for wet material. See Accessories section for ordering information. There is no screen option available for the BxMC34BEU.

To remove the mulching screen:

1. Ensure the engine is off (ignition switch is off and the fuel valve is closed).
2. Carefully tilt the machine back, so the hoppers are resting on the ground and the bottom of the machine is exposed
3. Remove the two mounting nuts and bolts that hold the screen into the bottom housing.
4. Remove the screen.
5. Reverse steps to re-install the screen.



7 TROUBLE SHOOTING

The Wallenstein Chipper-Shredder is designed with blades and knives on a rotor to cut, shear and chip wooden material into chips or mulch. 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.

7.1 TROUBLE SHOOTING CHART

Always wear the appropriate safety gear when trouble shooting, performing maintenance or working around the machine. This includes but is not limited to:

- Hard hat for protection to the head.
- Heavy gloves for hand protection.
- Face mask for protection to the face and eyes.
- Safety shoes with slip resistant soles and steel toes

PROBLEM	CAUSE	SOLUTION	CAUTION	
Rotor does not turn	Obstructed discharge.	Clear debris from discharge chute (BXMC34B) or material screen (BXMC34S).		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 (BXMC34B) or material screen (BXMC34S).		Ensure machine is off
	Screen plugged discharge cage is full	Move chipper to new location and clear screen (BXMC34S).		Ensure machine is off

PROBLEM	CAUSE	SOLUTION	CAUTION	
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	ChopBlock or Twig Breaker may be damaged	Inspect ChopBlock and 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.
	Knives in shredder improperly re-installed	Check installation of knives and adjust as required, per maintenance instructions.		Ensure machine is off.
	Improper mulch screen installed	Replace with proper sized screen for material (see accessories - BXMC34S)		Ensure machine is off.
Mulch too Fine	Improper mulch screen installed	Replace with proper sized screen for material (see accessories - BXMC34S)		Ensure machine is off.
Machine requires excessive power or stalls.	Obstructed discharge.	Clear debris from discharge chute (BXMC34B) or material screen (BXMC34S).		Ensure machine is off
	Engaging clutch too quickly	Engage clutch 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 shredder 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.		
		Use wet material screen (see accessories - BXMC34S)		Ensure machine is off.
	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.	Refer to your engine instruction manual for specific trouble shooting instructions / requirements.			

8 SPECIFICATIONS

8.1 MECHANICAL

Model	BXMC34BEU	BXMC34SEU
Engine	Honda GX200 - Gas	
Engine Rpm - Continuous	3600 Rpm	
Drive System	Brake-Clutch With Belt Drive	
Number Of Rotor Blades	2 Offset	
Blade Type	Hardened Tool Steel	
Number Of Shredder Knives	12 (3 Sets Of 4)	8 (2 SETS OF 3, 1 set of 2)
Shredder Knife Type	Hardened Steel	
Rotor Specifications	40 Lbs. (18.2 kg) 16" (406mm)	28 LBS. (12.7 kG) 14" (35mm)
Feeding System	Manual Hopper Chipper & Shredder	
Shredder Capacity	3.5" X 5" Opening W/ 3.0" Max Diameter Material (89mm X 127mm Opening W/ 19mm Max Diameter Material)	
Chipper Capacity	6" X 7" Opening W/ 3.0" Max Diameter Material (152mm X 179mm Opening W/ 76mm Max Diameter Material)	
Discharge	Blower Discharge	Bottom discharge W/1.5" (38mm) Screen
Machine Type	Consumer Yard Equipment	
Tires:	4.10 X 3.5 Rubber	
Dimensions L X W X H	43" x 40" x 49" 110cm x 102cm x 125cm	43" x 38" x 47" 110cm x 97cm x 120cm
Weight	270 LBS 122.5 kg	250 LBS 114 kg
Screens	Not Available	2 Options
Accessories	Garden Trailer Hitch	
	W/2.7 Cu.Ft (28 Litres) Mesh Bag	3/4" round screen (19mm) 1 1/2" x 7.0 obround wet screen

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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.

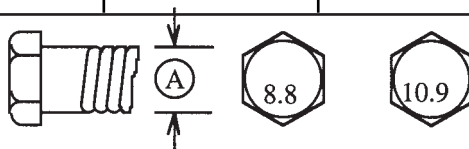
ENGLISH TORQUE SPECIFICATIONS

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


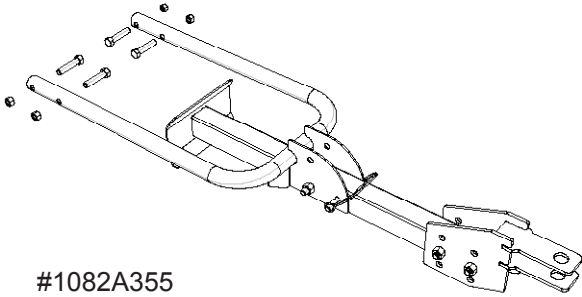
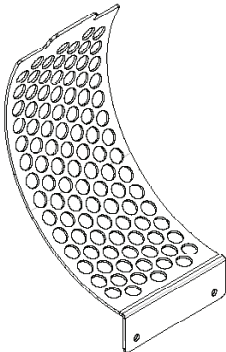
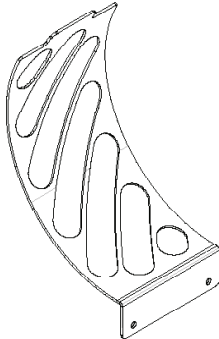
Bolt Diameter "A"	Bolt Torque*			
	8.8 (N.m) (lb-ft)		10.9 (N.m) (lb-ft)	
M3	.5	.4	1.8	1.3
M4	3	2.2	4.5	3.3
M5	6	4	9	7
M6	10	7	15	11
M8	25	18	35	26
M10	50	37	70	52
M12	90	66	125	92
M14	140	103	200	148
M16	225	166	310	229
M20	435	321	610	450
M24	750	553	1050	774
M30	1495	1103	2100	1550
M36	2600	1917	3675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



9 ACCESSORIES

Call your dealer for pricing and availability

For replacement parts, go to www.wallensteinequipment.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 models: BXMC34BEU, BXMC34SEU An easy and accurate way of setting the critical clearances between the ledger blade and the rotor chipper blade.</p>
 <p>#1082A355</p>	<p>#1082A355 GARDEN TRACTOR HITCH</p> <p>For models: BXMC34BEU, BXMC34SEU Allows for hauling your chipper / shredder with your garden tractor, great for those big properties.</p> <p>Easy to install, bolt on to your chipper / shredder and you're ready to go!</p>
 <p>#1074L</p>	<p>#1074L240 3/4" ROUND SCREEN (19MM)</p> <p>For models: BXMC34SEU Conversion kit, simple to install. Makes a finer mulch than the standard screen.</p>
 <p>#1074L</p>	<p>#1074L260 1 1/2" X 7.0 OBROUND WET SCREEN</p> <p>For models: BXMC34SEU Bolt on, easy to install conversion kit. Works well to prevent clogs when working with wet material.</p>

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