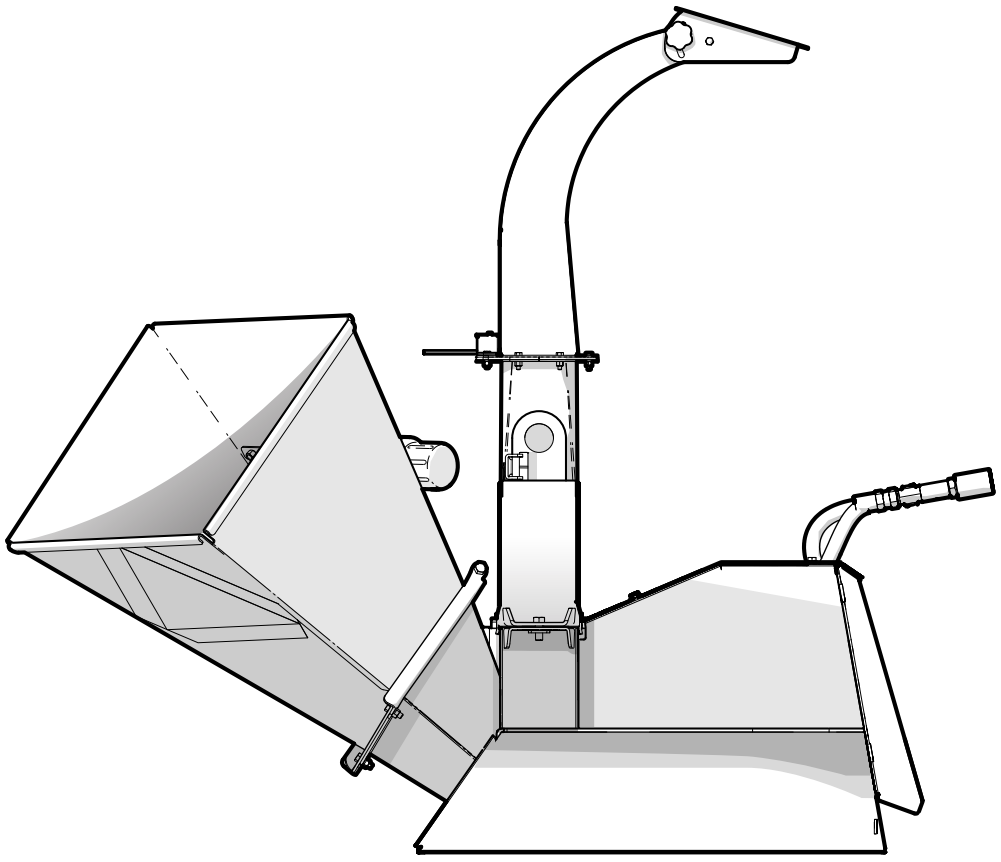
OPERATOR'S MANUAL

Serial Number A0881030 & Up

BXH42

Skid Steer Wood Chipper



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WALLENSTEIN

1. Foreword

1.1 Introduction

Congratulations on your choice of a Wallenstein BXH42 Skid Steer Mounted Wood Chipper!

Safe, efficient and trouble-free operation of this Wallenstein product requires that anyone using or maintaining the machine reads and understands the Safety, Operation, Maintenance information contained within the Operator's Manual.

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.

Units of measurement in Wallenstein Equipment technical manuals are written as:
US Customary (SI metric)

WARNING!

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

Always keep this manual with the machine.

W034

Model Configuration

BXH42

Skid Steer Mounted Series	Chipper Capacity (inches)	Design Iteration

WARNING
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

ADVERTENCIA
Cáncer y Daño Reproductivo
www.P65Warnings.ca.gov

www.wallensteinequipment.com

Table of Contents

1.2 Delivery Inspection Report

Wallenstein BXH42 Skid Steer Mounted Wood Chipper

To activate warranty, register your product at: *www.wallensteinequipment.com*

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

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

Customer

Address

City, State/Province, ZIP/Postal Code

( )
Phone Number

Contact Name

Model

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

Address

City, State/Province, ZIP/Postal Code

( )
Phone Number

1.2.1 Dealer Inspection Report

_____ Check Blade Clearance and Rotor Turns Freely
_____ Discharge and Deflector Move Freely
_____ All Fasteners are Tight
_____ Rotor Bearings and Pivot Points Lubricated
_____ Check that lock pins align and move freely
_____ Operating and Safety Instructions Reviewed

Safety Checks

_____ All Safety Decals Installed
_____ Guards and Shields Installed and Secured
_____ Lock Pins Engaged in Face Plate if Installed on Skid Steer

1.3 Serial Number Location

Always provide the model and serial number of your Wallenstein product when ordering parts or requesting service or other information. The product information plate location is shown in the illustration.

Record your product Serial Number in the space provided below for future reference.

Record Product Information Here	
Model:	**BXH42**
Serial Number:	

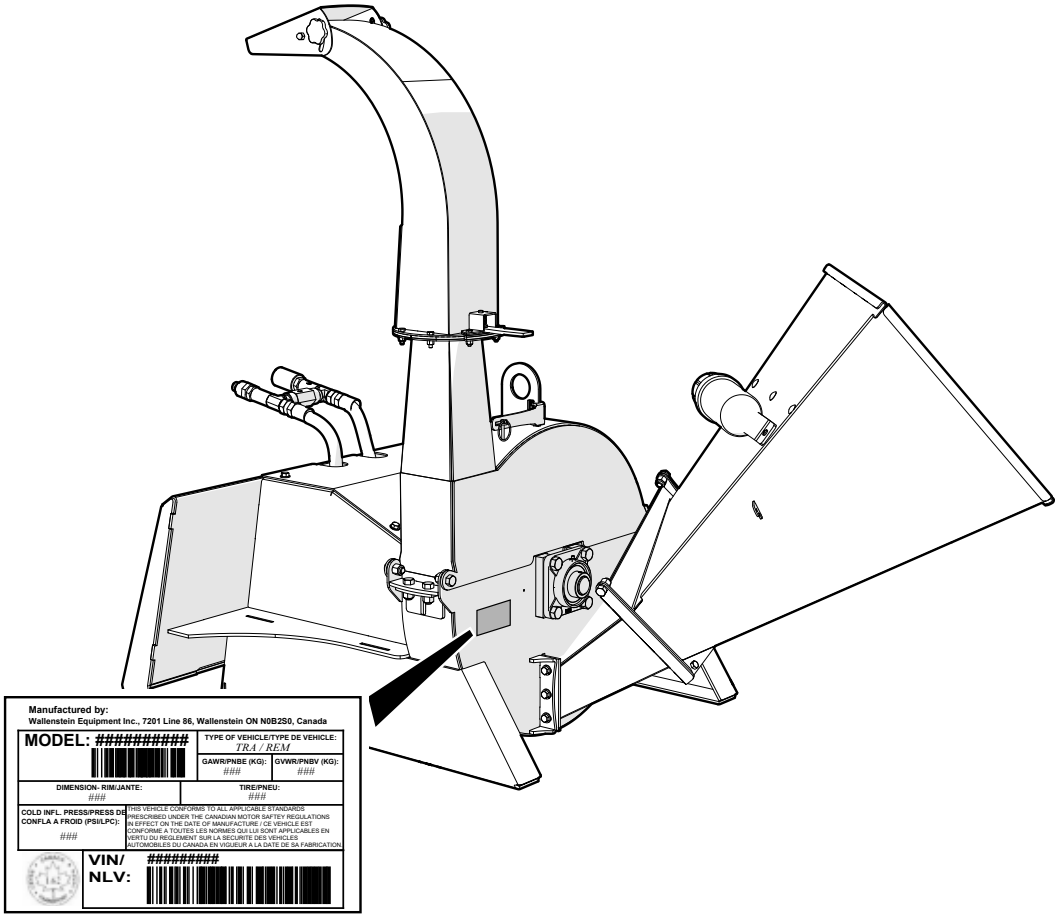
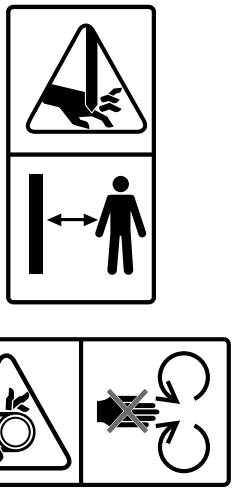


Fig. 1 – Serial Number Plate Location

1.4 Types of Decals on the Machine

When getting familiar with the Wallenstein product, notice that there are numerous decals located on the machine. There are different types of decals for safety, information, and product identification. The following section explains what they are for and how to read them.

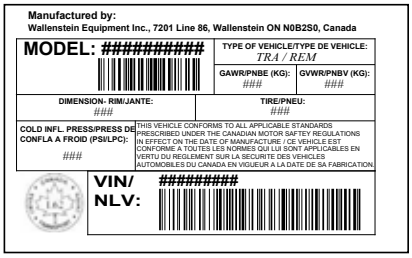
Safety Decals are pictorial with a yellow background and generally two panel. They can be either vertical or horizontal.



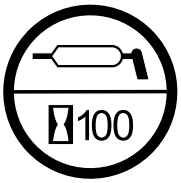
Safety Notice Decals are pictorial with a blue background and generally rectangular with single or multiple symbols. This decal informs what Personal Protective Equipment is required for safe operation.

Informative Decals are generally pictorial with a white background and can vary in the number of panels. This type of decal provides additional information to the operator or explains the operation of a control.

Product Decals indicate machine model and serial number, and other important information.



Maintenance Decals have a green background and can vary to the number of panels. This decal shows the type maintenance required and frequency interval.



See the section on safety signs for safety decal definitions. For a complete illustration of decals and decal locations, download the parts manual for your model product at [www.wallensteinequipment.com.](http://www.wallensteinequipment.com)

2. Safety

2.1 Safety Alert Symbol

This Safety Alert Symbol means:

ATTENTION! BE ALERT!

YOUR SAFETY IS INVOLVED!

The Safety Alert Symbol identifies important safety messages on the Wallenstein 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.

2.2 Signal Words

The signal words **DANGER**, **WARNING** and **CAUTION** determine the seriousness level of the warning messages in this manual. The appropriate signal word for each message in this manual has been selected using the following guidelines:

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.

IMPORTANT – To avoid confusing equipment protection with personal safety messages, a signal word IMPORTANT indicates a situation that if not avoided, could result in damage to the machine.

2.3 Why SAFETY is Important

- **Accidents Disable and Kill**
- **Accidents Cost**
- **Accidents Can Be Avoided**

YOU are responsible for the SAFE operation and maintenance of your Wallenstein product. **YOU** must make sure that anyone who is going to use, maintain or work around the machine is familiar with the operating and maintenance procedures and related **SAFETY** information contained in this manual. This manual alerts you to all good safety practices that should be used while using your Wallenstein equipment.

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 operating and maintenance procedures and follows all the safety precautions.

2.4 Safety Rules

Do not risk injury or death by ignoring good safety practices.

Safety 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.

Avoid hazards by observing the following precautions. Insist anyone working with you follow them as well.

- Provide operating instructions for this machine to all employees who are going to use it. An untrained operator is not qualified and can create the risk of possible serious injury or death.

- Read and follow ALL safety and operating instructions in this manual. The most important safety device on this equipment is a SAFE operator.
- Review safety related items annually with all personnel operating or performing maintenance.
- Always wear PPE when operating or servicing the machine. Hard hats, protective glasses, protective shoes, gloves, reflector type vests and ear protection are types of equipment that may be required.
- Avoid loose fitting clothing, loose or uncovered long hair, jewelry, and loose personal articles. These can get caught in moving parts. Jewelry may also ground a live circuit.
- 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.

- Wear hearing protection on a full-time basis if the noise in the operator's cab exceeds 80 dB. Noise over 85 dB on a long-term basis can cause severe hearing loss. Noise over 90 dB adjacent to the operator over a long-term basis may cause permanent, total hearing loss.

⚠ WARNING!

Hearing loss from loud noise (from engines, chain saws, radios, and other such sources close to the ear) is cumulative over a lifetime, without hope of natural recovery.

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

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

- Do not allow riders during transport.
- Keep all shields in place. If shield removal becomes necessary for repairs, replace the shield prior to use. In some cases, certain photographs or illustrations in this manual may show an assembly with a safety shield removed for clarity. However, equipment should never be used in this condition.
- Replace any safety sign or instruction sign that is not readable or is missing. **Location and explanation of safety signs starts on page 11**.
- Never consume alcohol or drugs while using this equipment. Alertness or coordination can be affected. Consult your doctor about using this machine while taking prescription medications.
- This equipment is dangerous to children and anyone unfamiliar with its operation. 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.
- The operator must 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.
- 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. Unapproved modifications void warranty.
- Never exceed the limits of a piece of machinery. If its ability to do a job, or to do so safely is in question – **DO NOT TRY IT**.
- An employer has the responsibility to train employees on equipment operation. When someone does not understand the basic operation of a piece of equipment, they can create dangerous situations very quickly. Operators must completely understand:
  - Safety section of this manual
  - Safety decals on the machine
  - Skid Steer operator's manual
- If this machine is loaned or rented, it is the owner's responsibility to make certain that prior to using, every operator is fully trained.
- Learn the controls and how to stop skid steer and machine quickly in an emergency.
- Clear working area of stones, branches or hidden obstacles that might be hooked or snagged, causing injury or damage.
- Determine where chips will be piled and ensure it does not interfere with safe operation of the machine.
- Be aware of overhead hazards: branches, cables, electrical wires.
- Use this machine only in daylight or good artificial light.
- Be sure machine is properly mounted, adjusted and in good operating condition.
- Perform the **Pre-operation Checks** before starting work (see *Pre-Operation Checklist on page 21)*.

2.5 Safe Condition

Throughout this manual, we talk about a '*Safe Condition*'. What this means is setting the machine in a state that makes it safe to service or repair.

Place the machine in a Safe Condition before performing any service, maintenance work or storage preparation by performing the following:

- Lower chipper to the ground.
- Disengage hydraulic power to chipper.
- Set parking brake and turn off skid steer engine. Remove ignition key.
- Ensure all components have stopped moving.

2.6.1 Sign-Off Form

Anyone using this machine must read and thoroughly understand all Safety, Operation and Maintenance information in this manual. An untrained operator should never use this machine.

To help document this training, the sign-off sheet provided below can be used.

Make periodic reviews of Safety and Operation a standard practice for all operators. Review again at the startup of every season.

The design and manufacture of this product conforms to relative provisions in the following standards:

ISO 4254-1 Agricultural machinery – Safety

ASABE S318 Safety for Agricultural Field Equipment

ISO 3600 Operator's Manual – Machinery for Agriculture, Forestry & Lawn Equipment

Sign-off Form		
Date	**Owner**	**Employee**

2.7 Safety Sign Explanations

The top (or left-hand) panel shows the safety alert (the potential hazard), and the bottom (or right-hand) panel shows the message (how to avoid the hazard).

Practicing good safety means becoming familiar with safety signs and warnings and being aware of the situations that require alertness.

Think SAFETY! Work SAFELY!

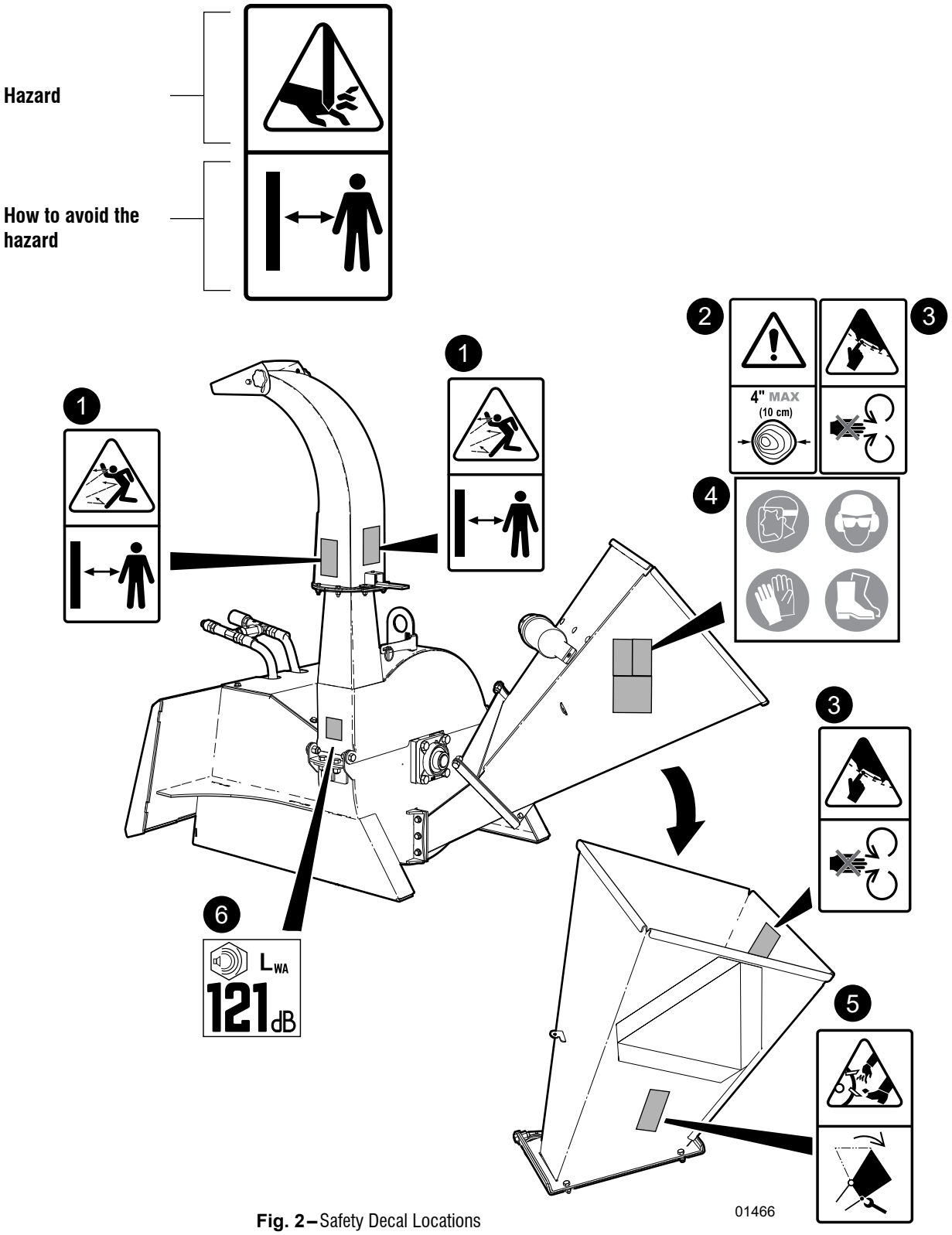


Fig. 2– Safety Decal Locations

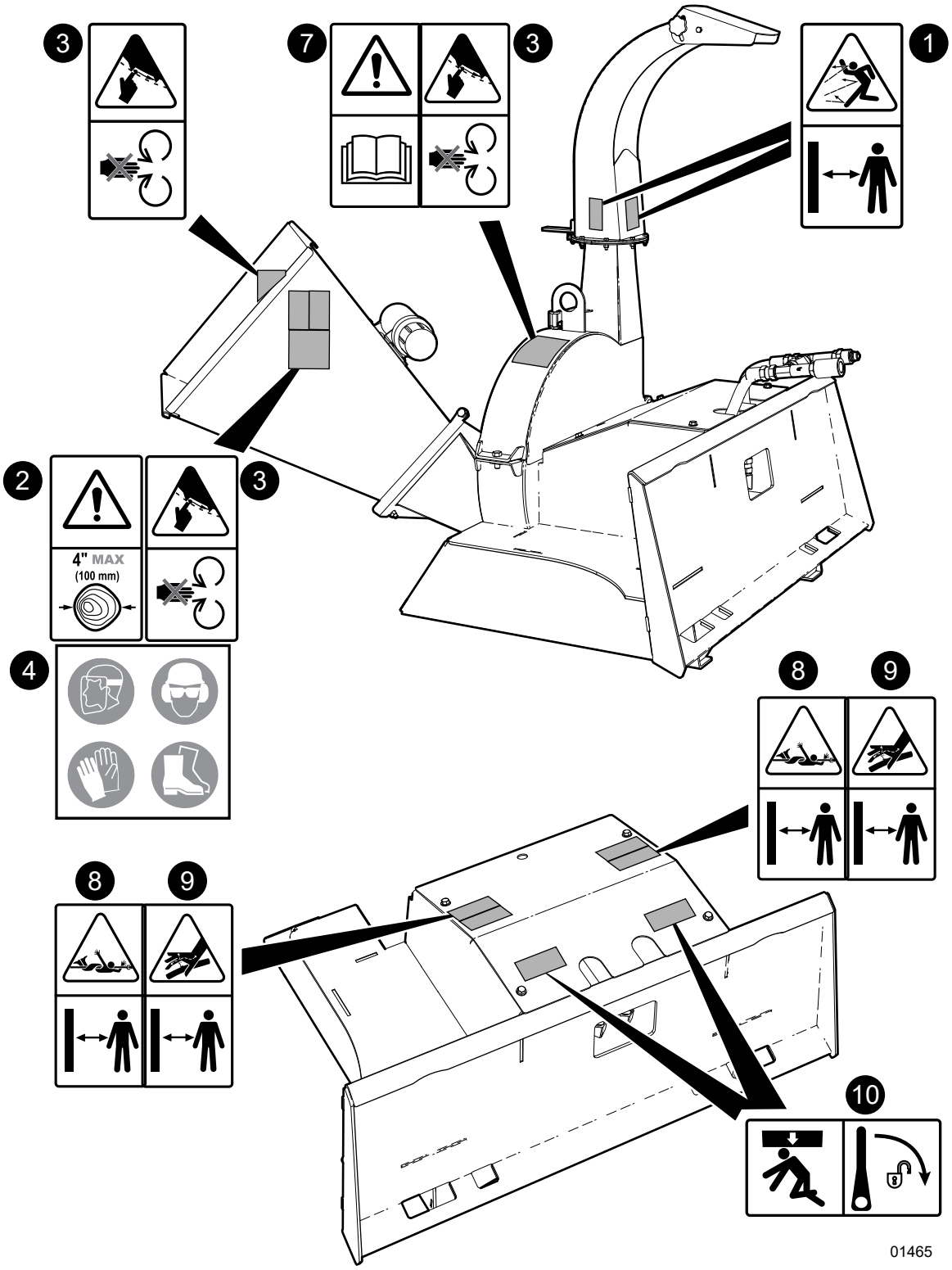
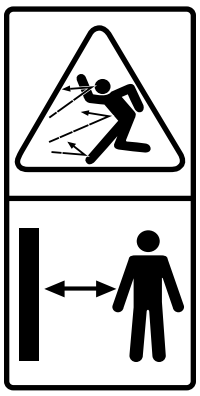


Fig. 3– Safety Decal Locations

1. WARNING!

Risk of injury from flying debris!



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. Point chipper discharge away from work area and bystanders. Keep a safe distance from discharge.

2. CAUTION!

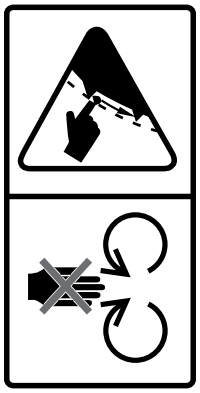
Risk of personal injury!

Do not overload the chipper by placing material into the feed hopper larger than the size stated on the decal.

Machine damage could result.

3. WARNING!

Risk of fingers being severed or serious injury to hands in this area!



Keep hands and feet out of inlet and discharge openings while machine is operating.

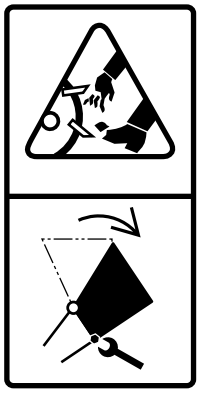
4. CAUTION!

Always wear appropriate PPE during operation.

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

5. WARNING!

Risk of hands or feet being severed or seriously injured in this area!



Never operate the chipper with the feed hopper raised in the transport position. Chipper feed hopper must be lowered and bolted in place for operation.

6. CAUTION!

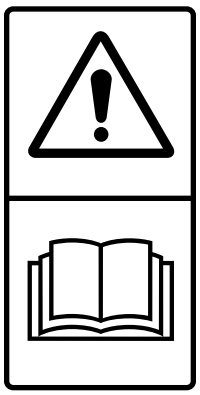
A noise declaration decal indicates the sound power (LWA) emitted by the machine when operating. For this chipper, it can be up to 121 decibels at close distances.

Always wear hearing protection when near the operating machine. Noise exposure over 85 dB on a long-term basis can cause severe hearing loss. Exposure over 90 dB over a long-term basis may cause permanent, total hearing loss.

7. WARNING!

Refer to the operator's manual. Read ALL operating instructions in the manual. Learn the meaning of ALL safety signs on the machine before operating it!

The best safety feature is an informed operator.



8. WARNING!

Risk of entanglement in rotating drive line!

Stay clear of the PTO shaft when the chipper is operating. Do not operate chipper with PTO shaft cover removed. Keep hands, loose clothing, and long hair away from drive line while it is rotating.

9. WARNING!

Hydraulic fluid under pressure! Risk of high-pressure fluid being injected under the skin!

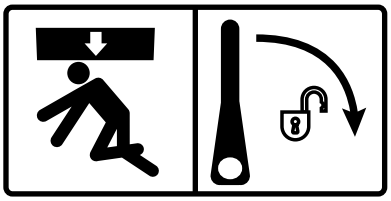
Never check for leaks with your hand. Use a piece of wood or cardboard instead. Keep clear of oil leaks that are under pressure.

10. WARNING!

Risk of injury or death if chipper and falls off skid steer.

Make sure latch levers and latch pins are engaged on the hitch to prevent chipper from falling off and potentially causing injury or death.

Read the skid steer owner's manual on mounting attachments.



IMPORTANT! If parts are replaced that have safety signs on them, new signs must be applied. Safety signs must always be replaced if they become damaged, are removed, or become illegible.

Safety signs are included in the product decal kit available from your authorized dealer. Decals are not available separately.

2.8 Replacing Damaged Safety Signs

- Always replace safety signs that are missing or have become illegible. Replacement safety signs are available from your authorized distributor, dealer parts department, or Wallenstein Equipment.
- Always keep safety signs clean and legible.
- Parts replaced that had a safety decal on them must also have the safety sign replaced.

Procedure

Installation area must be clean and dry. Make sure the surface is free of grease or oil. Ambient temperature must be above 50 °F (10 °C).

NOTE: Determine exact position before removing the backing paper on the decal.

1. Peel the decal off the backing sheet.
2. Align the decal with an edge on the machine if possible.
3. Starting on one edge, carefully press the center of the exposed sticky backing in place, smoothing it out as you work from one side to the other.
4. Use a squeegee, credit card or similar to smooth it out. Work from one end of the decal to the other end.

Small air pockets can be pierced with a pin and smoothed out using the piece of sign backing paper.

3. Familiarization

3.1 To the New Operator

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 responsibility.

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 provide maximum efficiency. By following these instructions in conjunction with a good maintenance program, your BXH42 Wood Chipper can provide many years of trouble-free service.

3.2 Operator Orientation

IMPORTANT! The directions for left-hand, right-hand, backward and forward mentioned throughout this manual are determined when sitting in the skid steer seat, facing the direction of forward travel.

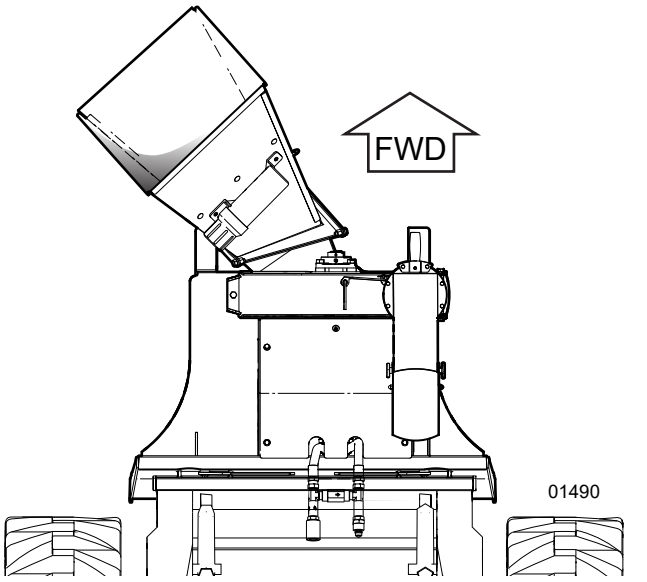


Fig. 4–Direction of Forward travel

3.3 BXH42 Major Components

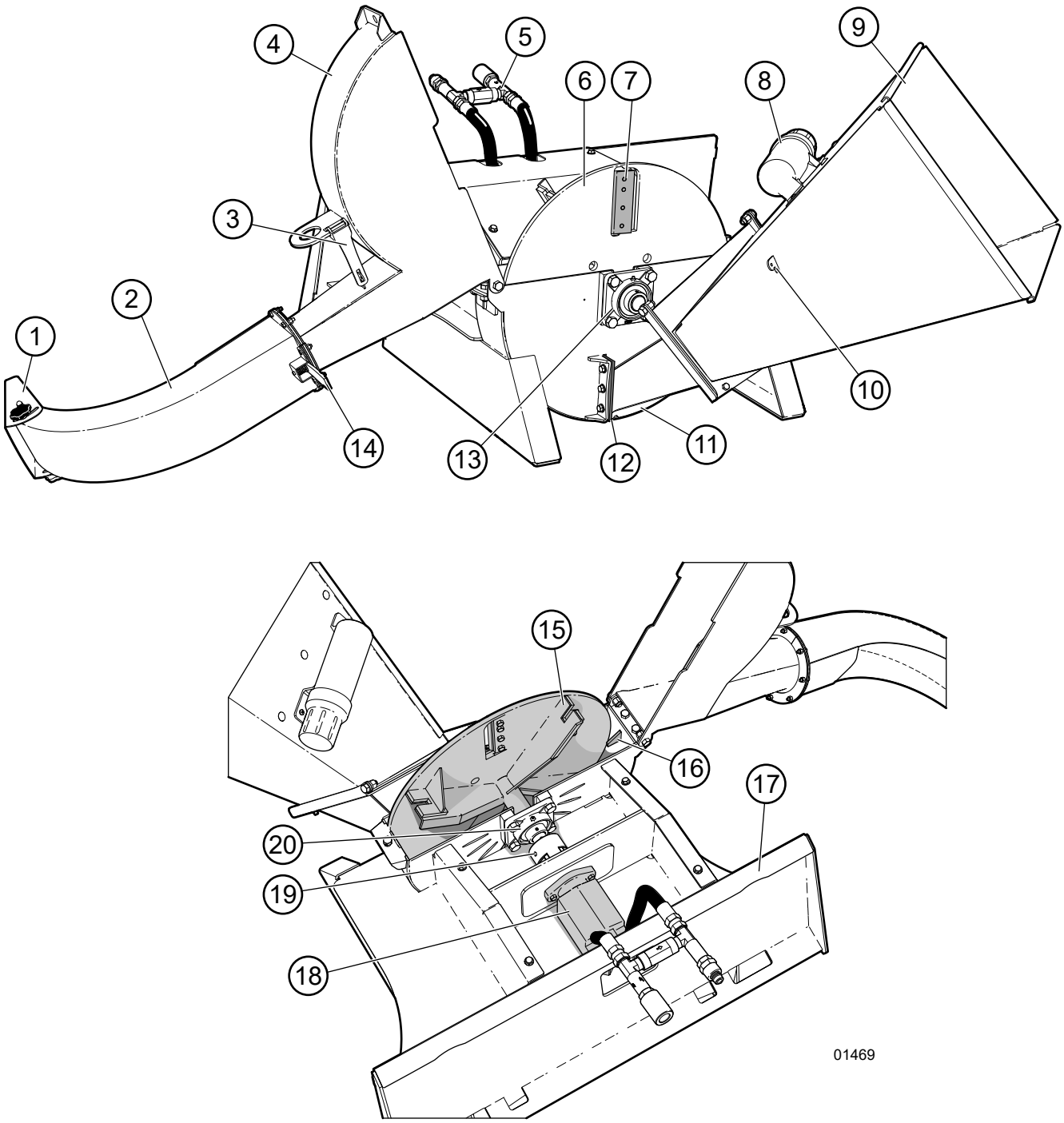


Fig. 5–Major Components of the Chipper

1. Hood Deflector
2. Discharge Chute
3. Hopper Transport Latch
4. Upper Rotor Housing
5. Hydraulic Pressure and Return Connections
6. Rotor
7. Rotor Blade
8. Operators Manual Tube
9. Feed Hopper
10. Transport Latch Point
11. Lower Rotor Housing
12. Ledger Blade
13. Rear Rotor Bearing
14. Discharge Chute Latch
15. Rotor Paddle
16. Twig Breaker
17. Skid Steer Mount Plate
18. Hydraulic Motor
19. Drive Coupling
20. Front Rotor Bearing

4. Attaching to Skid Steer

The chipper is equipped with a universal mounting plate. The skid steer must be equipped with remote hydraulic connections on the front of the cab frame. The pressure and return connections are flat face 3/4" couplers. Whip hoses are not supplied with the wood chipper.

IMPORTANT! Customer-supplied hydraulic hoses must meet SAE J517 or DIN 20066 standards for high-pressure hydraulic hoses and hose ends.

4.1 Hook Up

The wood chipper should be positioned on a level, dry, clear area.

1. Safely drive the skid steer up to the wood chipper, aligning the mount with the chipper mount plate.
2. Tip the skid steer loader face plate forward and align it with the mounting plate on the chipper. Lift the face plate up into the top of the mounting plate.

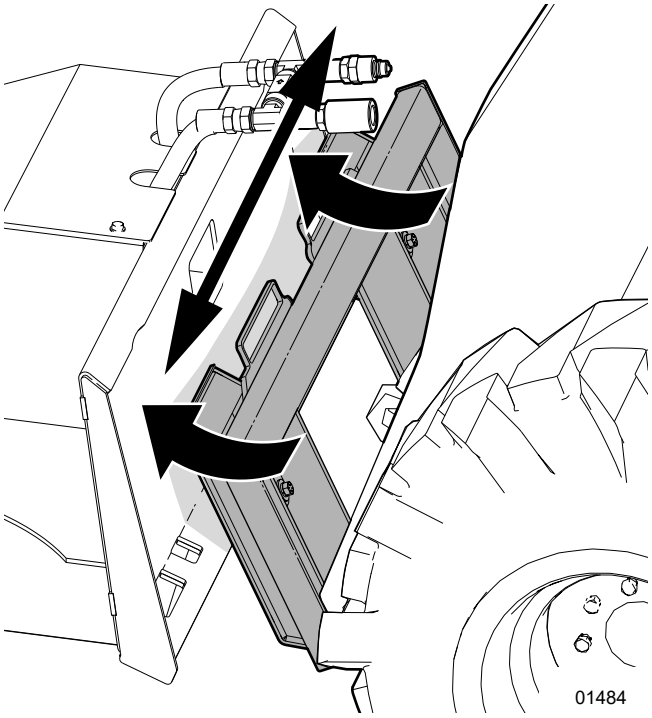


Fig. 6– Align Skid Steer with Mounting Plate

3. Raise the loader slightly and tilt the face plate until it is fully mated.
4. Engage the quick attach lock pins to secure the wood chipper to the loader.

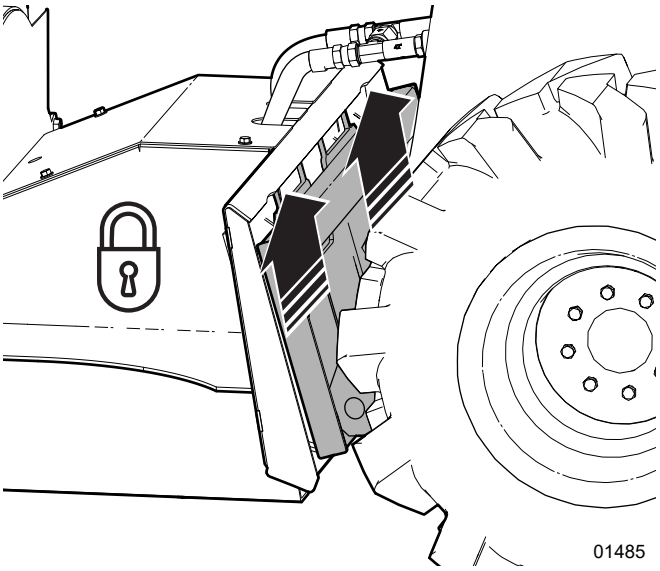


Fig. 7– Insert Skid Steer Face Plate into Chipper Mount

5. Connect the hydraulic supply and return lines. The pressure and return connections are 3/4" quick disconnect couplers. Wipe off any dirt before connecting. Make sure the couplers are securely seated.

IMPORTANT! When facing the chipper, the pressure connection is on the left-hand side. Return is on the right-hand side. Chipper does not function properly if connected incorrectly.

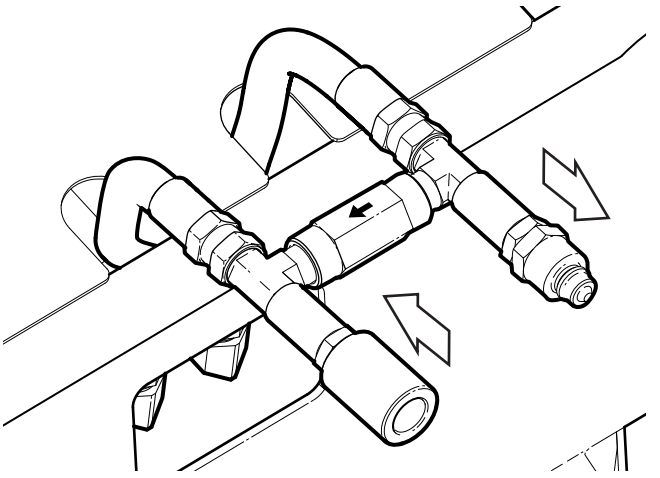


Fig. 8– Hydraulic Connections—3/4" Flat Face Couplers

The check valve between the pressure and return lines protects the chipper by allowing the rotor to slow to a gradual stop (freewheel) when the hydraulic control is shut off.

6. Route hoses along the skid steer frame. Tie wrap them to prevent pinching or binding. Make sure there is enough slack in the hoses when tilting.
7. Raise the chipper off the ground. Make sure chipper is correctly attached, all hoses are connected and not leaking.

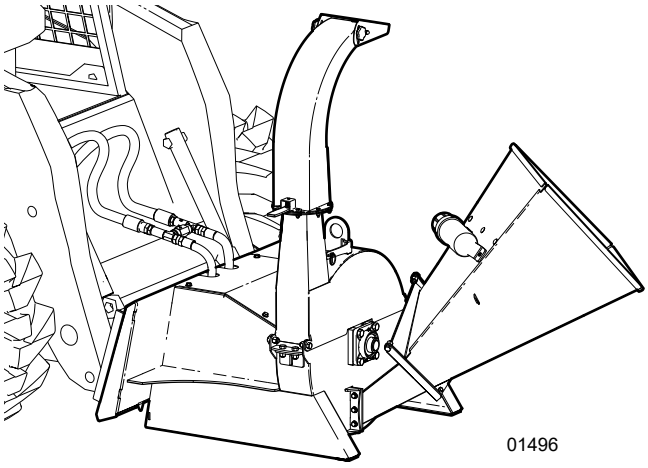


Fig. 9–Chipper Mounted

IMPORTANT! After start up, check skid steer hydraulic oil level. Top up if required.

4.2 Machine Setup

1. Use the skid steer to position the chipper at your work site.

CAUTION!

Park the machine so prevailing winds blow exhaust gases / fumes away from the operator.

W006

2. Remove the nuts on the hopper anchor bolts.
3. Unpin the feeder hopper latch. Lower the feed hopper down into its working configuration.

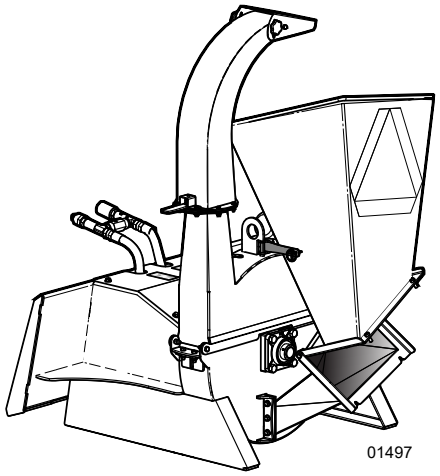


Fig. 10–Stowed Position

4. Secure the hopper with the nuts and anchor bolts.

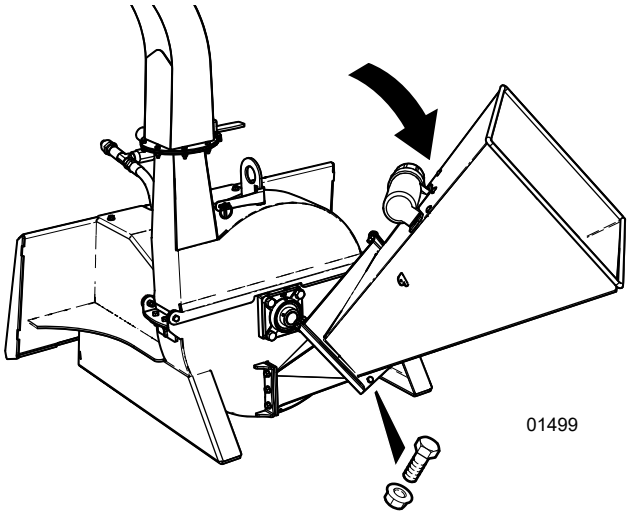


Fig. 11–Feed Hopper Lowered

5. Stow the feed hopper latch with the latch pin.

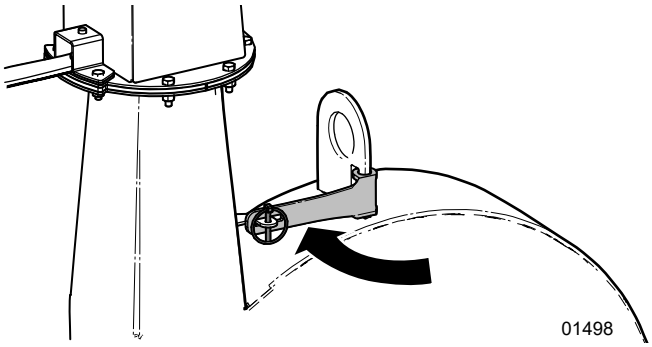


Fig. 12–Feed Hopper Latch

5. Operating Instructions

The operator is responsible to be familiar with and follow all operating and safety procedures.

5.1 Operating Safety

- **Do not reach into rotor or feed hopper openings when the machine is running. Install and secure access covers before starting engine.**
- **Do not move or transport chipper when the rotor is turning.**
- **Keep hydraulic lines and fittings tight, in good condition and free of leaks.**
- **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 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.**
- **Place chipper in a Safe Condition before servicing, adjusting, repairing or unplugging.**
- **Do not run machine inside a closed building to prevent asphyxiation from engine exhaust.**

⚠ WARNING!

Never reach into the feed hopper. Doing so risks hands getting caught. Use a stick or branch to push in any material that does not move on its own.

If jammed, stop the engine, wait for the rotor to stop, then clear the jam.

W004

⚠ CAUTION!

Hearing loss hazard. Prolonged exposure to loud noise may cause permanent hearing loss. Use suitable protection while operating the machine.

W016

⚠ CAUTION!

Do not risk injury by working in an unsafe situation. Take steps to make the machine safe to work on before performing any maintenance or service procedure.

Follow steps listed to put the machine in a Safe Condition.

W049

Safe Condition

- Ensure chipper is resting on the ground.
- Set parking brake and shut skid steer engine off. Remove ignition key.
- Ensure all components have stopped moving.

IMPORTANT! Do not put metal, rocks, glass or other foreign material into wood chipper. If such items happen to get into the chipper, stop machine and turn engine off. Wait for all moving parts to stop before removing material. Inspect machine for damaged or loose parts before resuming work.

5.2 Pre-operation Checks

Area to Check	✓
Check the machine has been lubricated following the schedule outlined 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 for hydraulic leaks. Tighten connections or replace components to stop leaks.	
Check and ensure that all covers, guards and shields are in place, secured, and can function as designed.	
Check that all bearings turn freely. Replace if they do not.	
Check skid steer hydraulic fluid level. Top level up if required.	
Check and tighten all fasteners. Make sure the equipment is in good condition.	
Check the condition of the safety curtain in the feed hopper. It must be in good condition to prevent chips from flying out.	

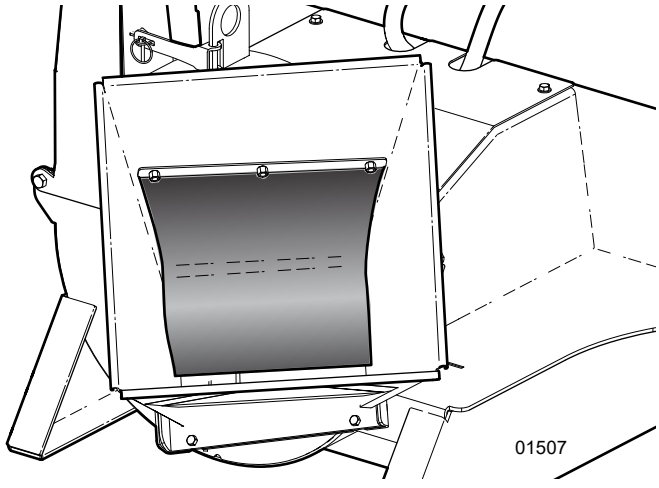


Fig. 13– Feed Hopper Safety Curtain

5.3 Machine Break-In

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

After 1–5 hours of operation:

1. Check all nuts, bolts and other fasteners. Tighten to their specified torque.
2. Check hydraulic system for leaks. Tighten all leaking fittings and replace any leaking components.
3. Check skid steer hydraulic oil level. Top up as required.
4. Check for entangled material. Remove all entangled material before resuming work.
5. Lubricate rotor bearings. One pump per bearing from a hand-held grease gun.

After 20 hours of operation:

6. Repeat steps 1 through 5 listed above.
7. Go to the normal servicing and maintenance schedule as defined in the Maintenance Section. See page 27.

5.4 Chipping Material

The BXH42 Wood Chipper is a strong, rugged machine that is built to provide consistent chipping of logs or branches up to **4" (102 mm)** in diameter.

Make sure the chipper is installed correctly and setup to operate.

⚠ WARNING!

Risk of injury from flying debris! 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. Point chipper discharge away from work area and bystanders. Keep a safe distance from discharge.

W062

1. Park the machine on solid level ground. Set park brake.
2. Turn on the remote hydraulic circuit to power the chipper.
3. Slowly increase engine rpm to 1000 rpm.
4. Set control to allow you to leave the seat.
5. Point the discharge head to its desired position—away from yourself and the machine.

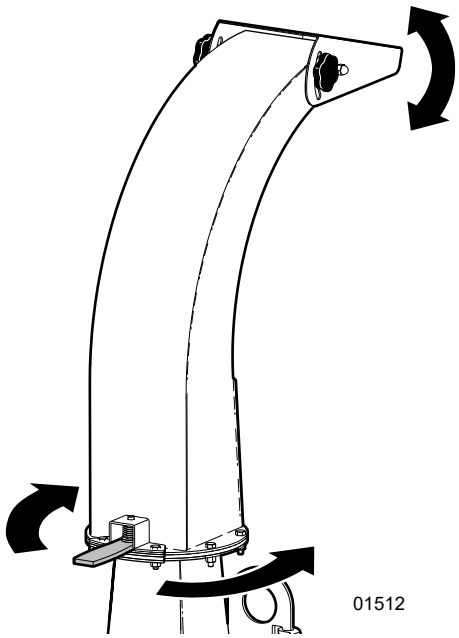


Fig. 14– Adjust Discharge Chute.

6. With the rotor up to speed, stand to the side of the feed hopper and start feeding material in.

⚠ CAUTION!

Risk of personal injury! Do not overload the machine by placing material into the feed hopper larger than the size stated on the decal.

Machine damage could also result.

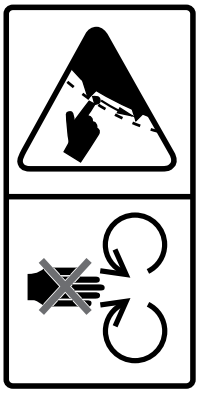
W063

⚠ WARNING!

Never reach into the feed hopper. Doing so risks hands getting caught. Use a stick or branch to push in any material that does not move on its own.

If jammed, stop the engine, wait for the rotor to stop, then clear the jam.

W004



7. Slowly slide the wood material into the feed hopper and into the rotor. Do not force the material. It is drawn in as it engages the rotor. Use continuous light pressure to guide in the material.

- Be aware of how much material you feed in. Slow down or stop if the rotor begins to slow.
- Keep work area clear of debris to prevent slipping or tripping. Keep your wood chip pile contained so it does not affect the immediate work area.
- Move skid steer if repositioning is required instead of carrying material.
- Be aware of the direction of the discharge.
- Use a stick or branch to push any piece of material into the rotor that does not move in on its own. If the material jams, stop the engine and wait for the rotor to stop before clearing the jam. **Never take a chance of your hand getting caught in the rotor.**

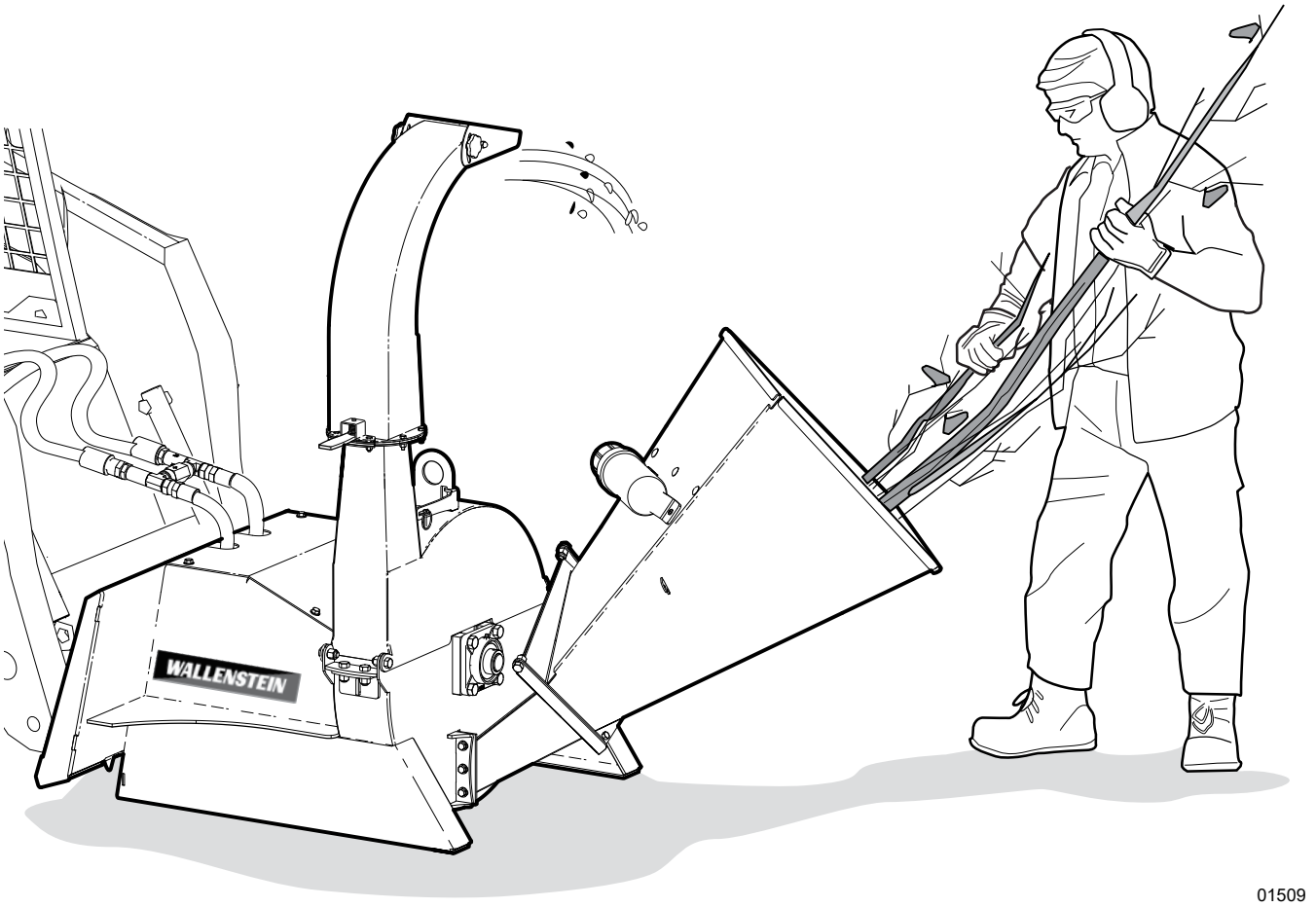


Fig. 19– Chipper Setup to Operate

5.5 Stopping

- Stop feeding material into the chipper.
- Slow the skid steer engine to an idle.
- Turn off the hydraulic control.
- Stop the engine and remove the ignition key.

5.6 Stopping in an Emergency

- In an emergency, turn the engine off.
- Turn the hydraulic control off.
- Correct situation before resuming work.

5.7 Unplugging the Chipper

Although the chipper is designed to handle a wide variety of material without any problem, occasionally can plug. If the chipper plugs up, follow this procedure to clear the jam:

1. Turn off the hydraulics, stop the engine and remove the ignition key. Wait for all moving parts to stop before beginning.
2. Pull the material out of the feed hopper first. Be sure all the material is out and nothing is jammed or wedged between the input opening and the rotor.
3. Check inside the discharge chute. Pull out any material stuck inside. Use a stick to poke any material loose. Try to remove all the material out of the discharge hood.
4. Check that everyone is clear of machine before restarting engine.
5. Start the engine turn on the hydraulics, and resume working.

If the chipper is still plugged, the jammed material must be removed by hand.

5.8 Clearing a Severe Plug

In the event the above steps do not clear the jam, try the following:

⚠ CAUTION!

The chipper blades are very sharp. Use caution when reaching into the rotor compartment to clear stuck material.

W026

1. Turn off the hydraulics, stop the engine and remove the ignition key. Wait for all moving parts to stop before beginning.
2. Loosen the feed hopper anchor nuts and raise the feed hopper.

⚠ WARNING!

Machine shown with shields removed for illustrative purposes only. Never operate machine with shields removed.

W001

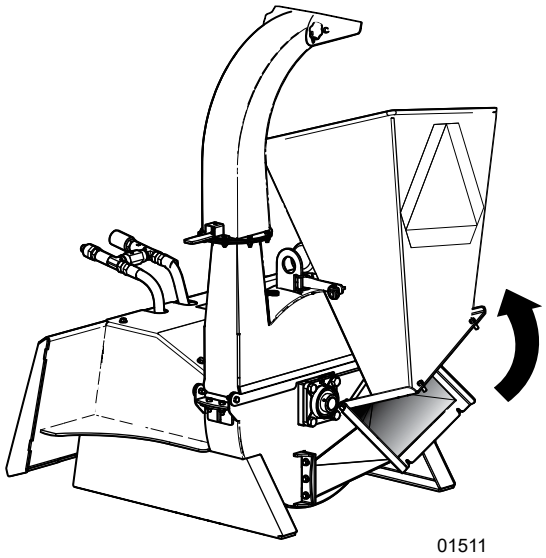


Fig. 15– Open Lower Feed Hopper

3. Remove jammed material from inside the rotor compartment.
4. Clean out the discharge area and rotor.
5. Remove the rotor housing flange bolt and open the housing. Clear out any jammed material inside.

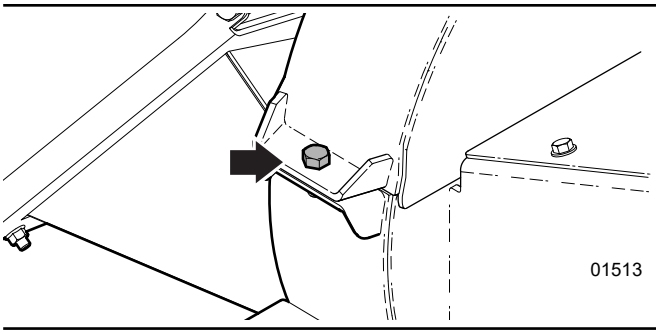


Fig. 16– Rotor Housing Flange Bolt

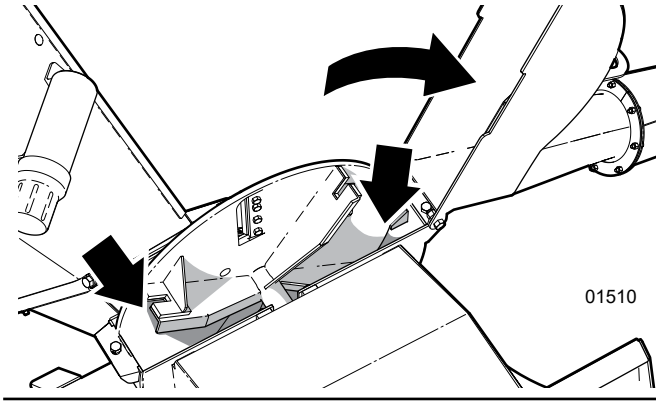


Fig. 17– Open Upper Rotor Housing

6. Carefully turn the rotor by hand to make sure nothing is jammed between the rotor and stationary blades.
7. Close the upper housing and lower the hopper. Tighten fasteners.
8. Check that everyone is clear of machine before restarting engine.
9. Start the engine turn on the hydraulics and verify jam is cleared.

5.9 Transporting

- **Do not exceed a safe travel speed. Slow down for rough terrain and cornering.**
- **Fold up and secure feed hopper before moving or transporting.**
- **Be sure the chipper is attached positively to the skid steer with the lock pins fully engaged.**
- **Never allow riders on the machine.**

1. Clean all dirt and debris off the chipper.
2. To reduce the width during transport, remove the hopper bolts and raise it up. Secure it there with the latch pin. Turn the discharge inward.

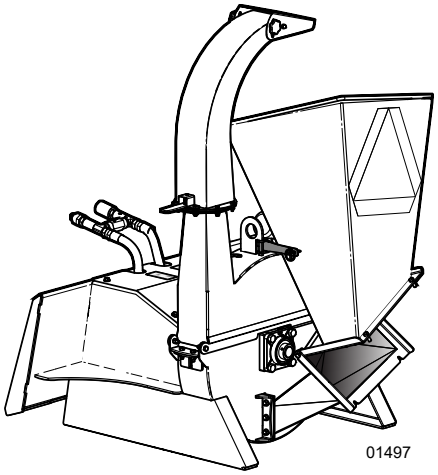


Fig. 18– Travel Position

5.10 Storage

After the season's use or when the machine is not going to be used for a period, store the chipper away. Completely inspect all major systems of the chipper. Replace or repair any worn or damaged components to prevent any unnecessary down time the next time it is used.

1. Inspect all rotating parts. Remove any entangled material.
2. Thoroughly wash the machine to remove all dirt, mud or debris. Do not use a pressure washer on the rotor bearings. Water pressure can push dirt inside the bearings causing premature failure.
3. Operate the chipper a few minutes to dry the moisture from inside the machine.
4. To reduce the width of the machine, turn the discharge hood inward and raise up the feed hopper.
5. Touch up all paint nicks and scratches to prevent rusting.
6. It is best to store the machine inside. If that is not possible, cover with a waterproof tarp.
7. Store in an area away from human activity.

5.10.1 Removing from Storage

Perform the Pre-start Checks. See page 21.

6. Service and Maintenance

⚠ WARNING!

Risk of serious personal injury. Stop engine before performing ANY service or maintenance procedure. Reinstall all covers and shields removed before putting machine back into service.

W033

⚠ WARNING!

Shut down the machine and allow it to cool before performing any service, maintenance, or inspection procedure. Engine components and oil may be hot enough to cause injury.

Make sure the machine is in a Safe Condition to work on. Review Maintenance Safety beforehand.

W041

6.1 Maintenance Safety

- **Always place the machine in a safe service position before performing any service work, maintenance procedures, or storage preparation. The Safe Condition is as follows:**

⚠ SAFE CONDITION

- Make sure chipper is resting on the ground.
- Disengage hydraulic power.
- Set parking brake on skid steer and turn off engine. Remove ignition key.
- Ensure all components have stopped moving.

- **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.**

- **Never operate the machine inside a closed building. The exhaust fumes may cause asphyxiation.**
- **Never work under equipment unless it is properly supported.**
- **When performing any service or maintenance work always use personal protective equipment.**
- **Where replacement parts are necessary, use only OEM parts to restore your equipment to original specifications. The manufacturer is not responsible for injuries or damages caused by use of unapproved parts or accessories.**
- **Inspect and tighten all bolts, nuts, and screws.**
- **When completing a maintenance or service function, make sure all safety shields and devices are installed before placing chipper in service.**
- **A When cleaning any parts, do not use gasoline. Use a cleanser designed for that purpose.**
- **Always use proper tools in good condition. Make sure you understand how to use them before performing any service work.**

6.2 Grease Type

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

IMPORTANT! Grease rotor bearings with one shot from a hand-held grease gun every 50 hours of operation.

6.3 Maintenance Schedule

Perform maintenance procedures at time shown or hour interval, whichever comes first.

As Required
Clean machine. Remove debris and entangled material.
Check that all fasteners are tight. Refer to *page 34* for common bolt torque values.

Every 8 hours or Daily	
Check skid steer hydraulic oil level.	—
Perform Pre-operation checks	See *page 21*

Every 50 hours or Annually	
Check rotor blade sharpness.	See *page 28*
Inspect hydraulic oil quality	—
Check ledger knife sharpness	See *page 29*
Check twig breaker	See *page 30*
Grease front and rear rotor bearings. One shot per bearing.	See below
Grease discharge chute rotation.	*See page 30*

Every 100 hours	
Inspect the drive coupling. Replace if damaged or worn	—

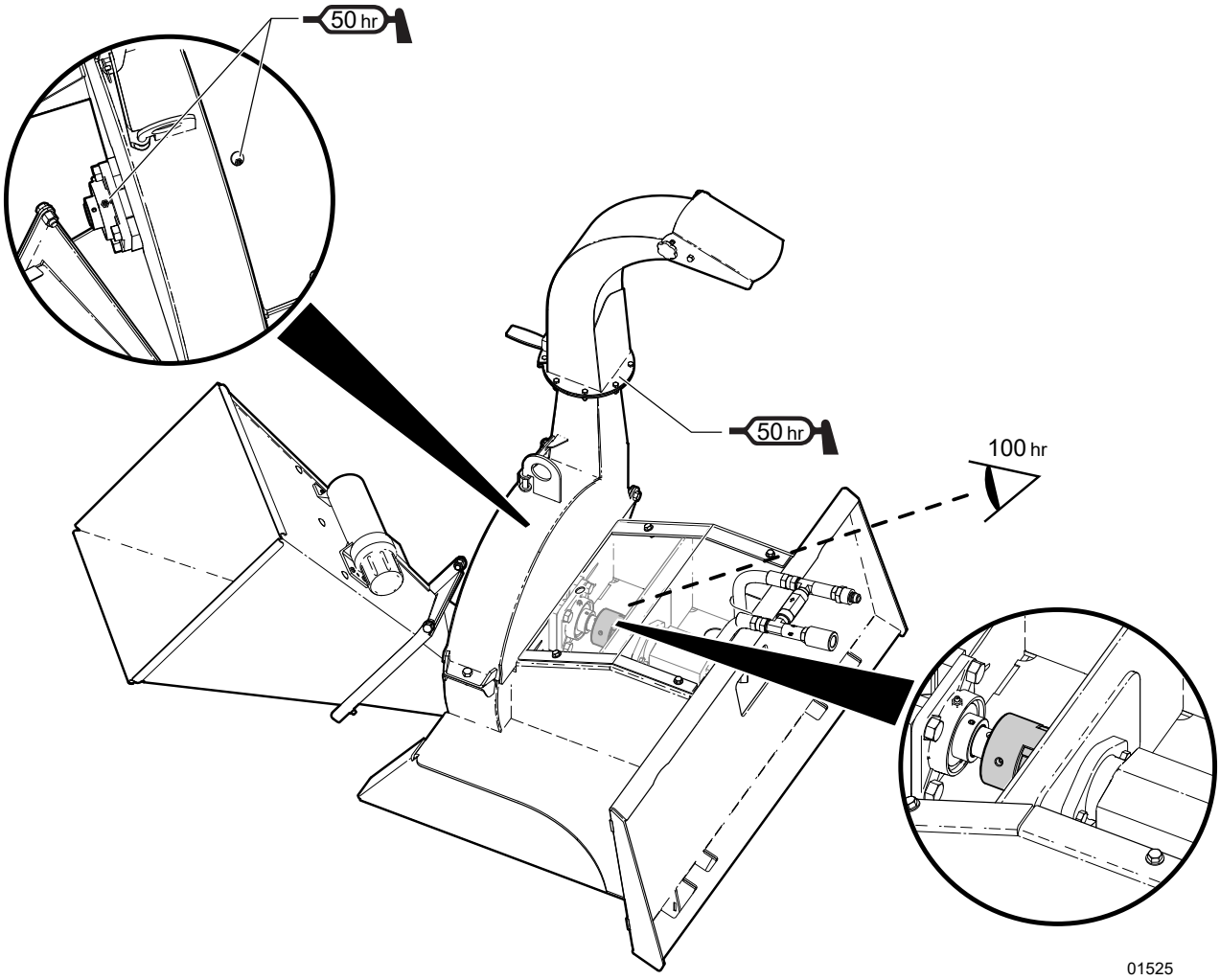


Fig. 20 – Service Points

6.4 Rotor Blades – Changing or Sharpening

Check rotor blade sharpness daily.

Check blade sharpness more frequently if processing material with a lot of sand, soil or dirt in it. **If the chipper is not pulling in the material or material must be pushed into the chipper, the rotor blades are probably dull.** Reverse or sharpen the blades if the cutting edge becomes dull.

Keeping the blades sharp reduces the amount of power required during operation.

Remove the blade and install it the other way around to make use of both sharpened edges.

- When both edges are dull, remove the blades from the rotor to sharpen. Sharpen at a 45° angle to provide the best cutting effect. Check Ledger Knife clearance after installing.

IMPORTANT! Make sure equal amount of material is removed from EACH rotor blade when sharpening to maintain proper rotor balance.

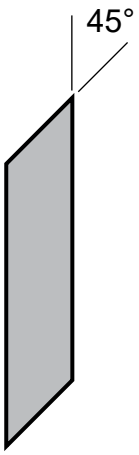


Fig. 21 – Sharpen at 45°

CAUTION!

Risk of getting hands pinched or wedged between lower rotor housing and rotor. Turn rotor slowly and be aware of hand positioning.

W032

- Install rotor blades with leading edge out, towards the ledger blade. Tighten the blade mounting bolts to **45 lbf•ft (63 N•m)**.

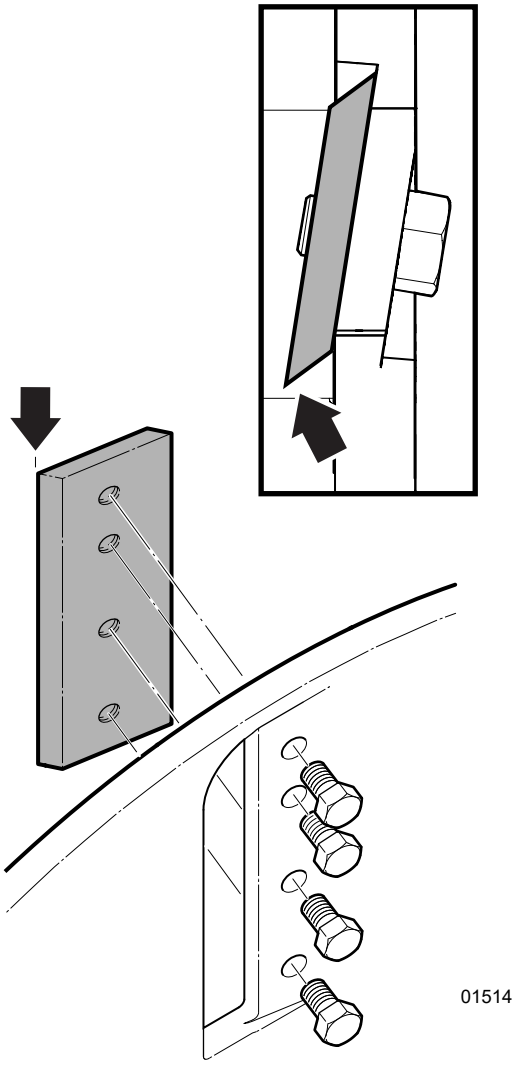


Fig. 22 – Rotor Blade Leading Edge

IMPORTANT! If replacing or sharpening a blade, do BOTH blades to maintain rotor balance. The clearance between the both blades and the ledger knife must be equal.

6.5 Ledger Knife – Sharpening

Observe ledger knife performance daily. Check the ledger knife sharpness every 50 hours of operation. Check knife sharpness more frequently if processing material with a lot of sand, soil or dirt in it.

The ledger knife is bolted inside the lower rotor housing assembly. As the rotor turns, material fed into the chipper is sheared off at the ledger knife by the rotor blades.

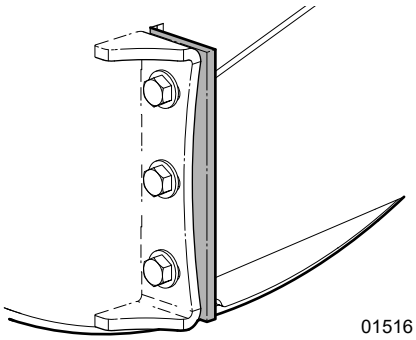


Fig. 23–Ledger Knife inside Lower Rotor Housing

When the corner of the ledger knife facing the rotor blade rounds over, the blade can be removed and re-installed with a different corner facing the rotor blade. Once all four corners have been rounded, remove the knife to sharpen or replace it.

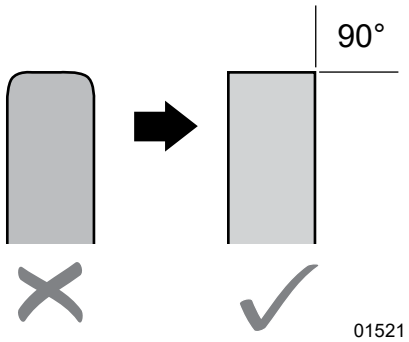


Fig. 24–Ledger Knife Sharpness

To obtain the best chipper performance, check the clearance between the rotor blade and stationary ledger blade every 50 hours.

6.5.1 Ledger Knife Clearance

Clearance between the rotor blades and the ledger knife must be 1/32"–1/16" (.76–1.52 mm).

Use the Ledger Setting Gauge (available from your dealer or distributor) to check knife clearance**. The thickness of the gauge is the correct ledger blade clearance.** If spacing is in excess of the measurement shown below, adjust the clearance.

Checking

1. Open the upper rotor housing.

⚠ CAUTION!

Risk of getting hands pinched or wedged between lower rotor housing and rotor. Turn rotor slowly and be aware of hand positioning.

W032

2. Turn the rotor by hand so that one rotor blade edge is next to the ledger knife.
3. Slide the end of the ledger gauge down between the rotor blade and the ledger knife.

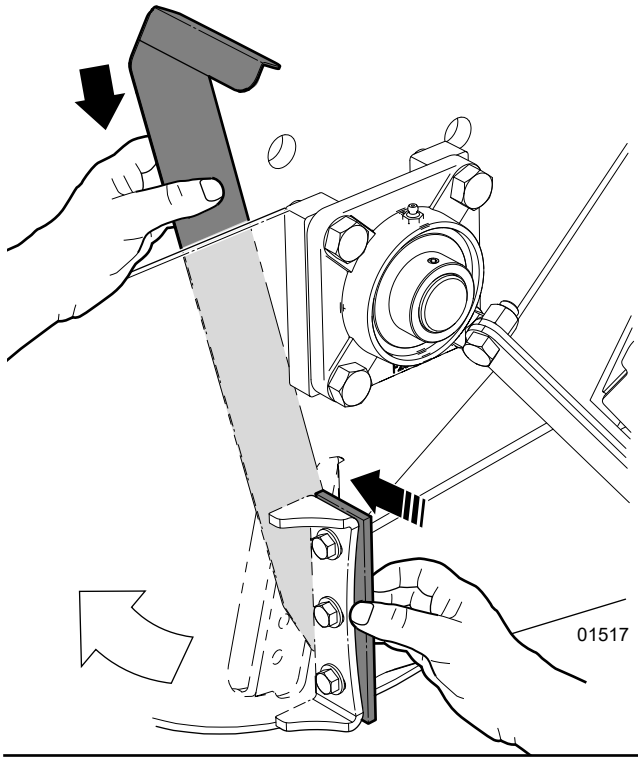


Fig. 25–Checking Ledger Knife Clearance with Ledger Setting Gauge

4. Turn the rotor past the ledger knife with the gauge inserted between them to check clearance. Check both knives.

Adjusting

5. Loosen the bolts on the outside of the ledger knife support. Rotate the ledger knife, sharpen or replace it.
6. Push the ledger knife inward by hand up to the gauge and tighten the bolts. If a gauge is not available, verify the clearance is 1/32"–1/16" (.76–1.52 mm).
7. Verify clearance before tightening the bolts.

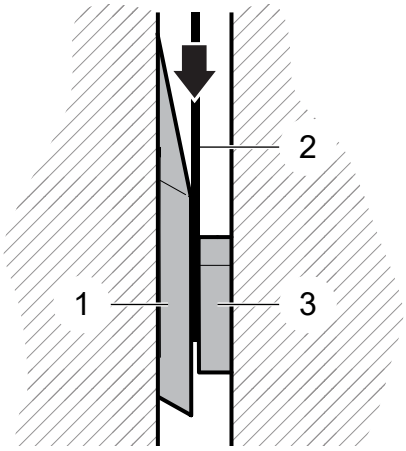


Fig. 26– Checking ledger knife clearance

1. Rotor Blades
2. Gauge
3. Ledger Knife

6.6 Discharge Chute

Disassemble the discharge chute every 50 hours or annually and lubricate the spacer rings.

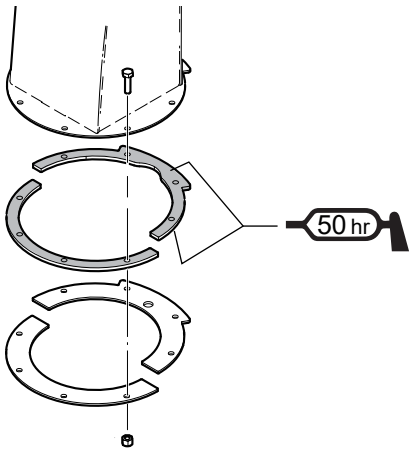


Fig. 27– Discharge Chute

6.7 Twig Breaker

Inspect the twig breaker for damage, bent or missing tooth every 50 hours. A damaged or worn twig breaker should be replaced.

The twig breaker is located inside the lower rotor housing. Material in the chipper is broken up into smaller pieces as the discharge paddles rotate past it.

The mounting bolts are on the outside of the rotor housing.

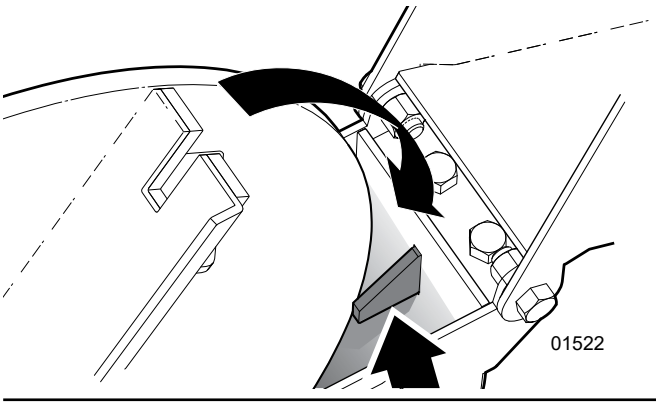


Fig. 28– Lower Rotor Housing

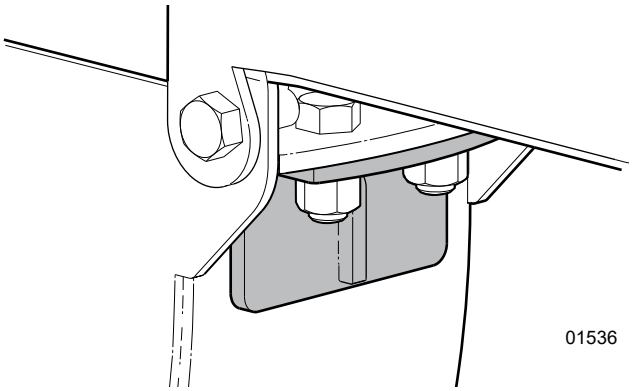


Fig. 29– Twig Breaker

6.8 Troubleshooting

In the event a problem occurs with the chipper, the following table lists some probable causes and solutions.

If a problem exists that is difficult to solve, call your local dealer, distributor, or Wallenstein Equipment. Have the serial number handy.

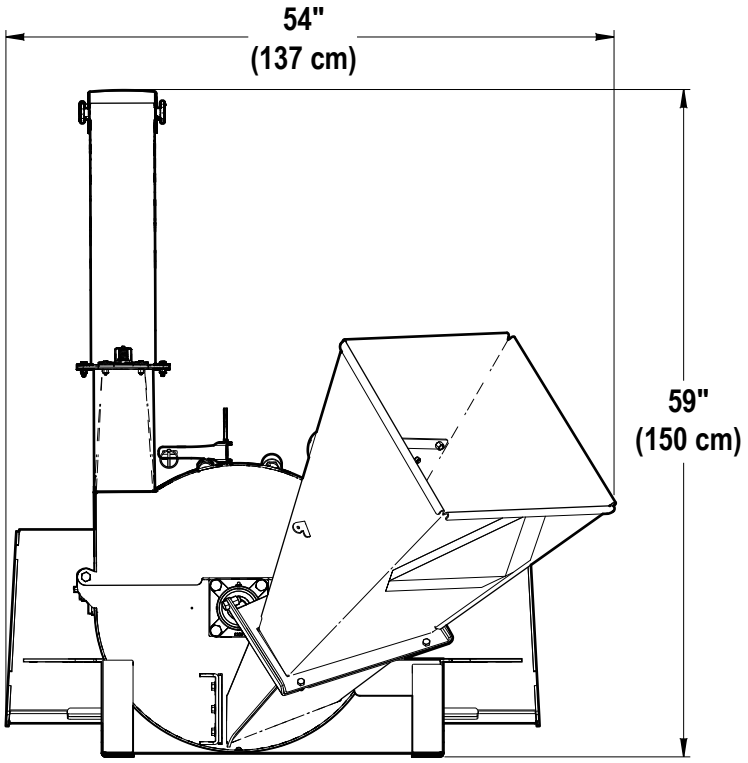
Problem	Possible Cause	Solution
Rotor does not turn.	Obstructed discharge.	Clear debris from discharge chute.
	Rotor plugged.	Inspect and clear chipper hopper, lower rotor housing, and rotor.
Slow feeding.	Low engine speed.	Set throttle to 1000 rpm.
	Rotor blades or ledger knife are dull.	Rotate, sharpen or replace blade or knives.
	Rotor blade angle wrong, improper angle.	Re-sharpen knives to specified angle and check that blade is installed properly.
	Obstructed discharge.	Clear debris from discharge chute
Unusual vibration while running.	Broken or missing blade.	Replace broken/missing blade.
	Rotor may be bent.	Check rotor to see if it wobbles. Replace rotor.
Machine requires excessive power or stalls.	Obstructed discharge.	Clear debris from discharge chute .
	Feeding in too much material.	Feed smaller amounts into chipper hopper.
	Feeding material too quickly	Feed larger material slowly into chipper hopper.
	Rotor plugged.	Inspect and clear chipper hopper lower rotor housing and rotor.
	Green material does not discharge.	Allow material to dry or alternate dry/wet material.
	Chipper blade clearance too large.	Set clearance between rotor blade and ledger knife.
	Dull blades.	Rotate, sharpen or replace blades.

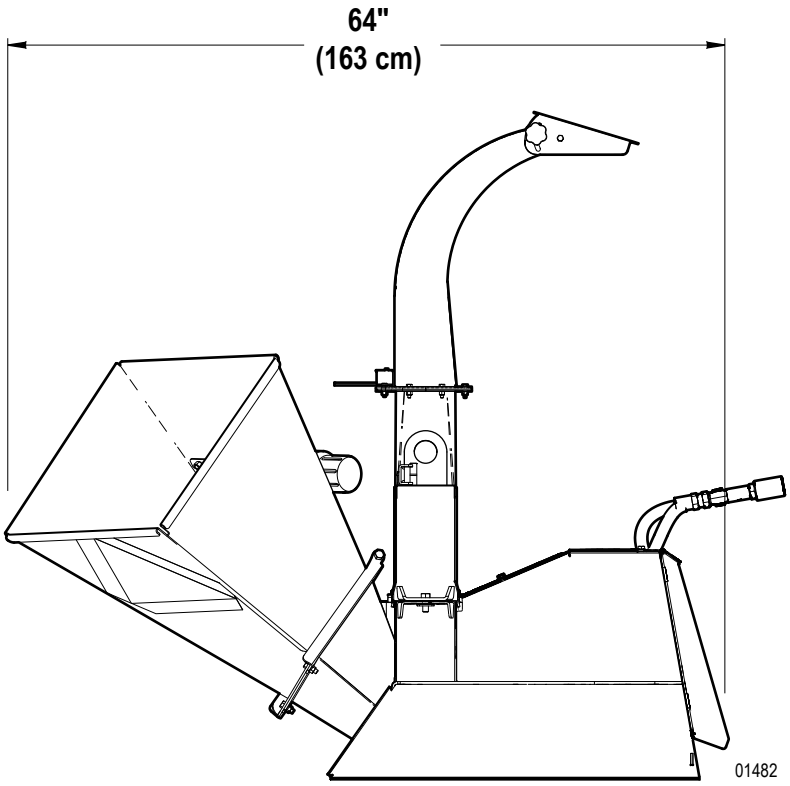
7. Specifications[1]

BXH42 Skid Steer-mounted Wood Chipper	
Chipping Material Capacity (diameter)	4" (10 cm)
Chipper Type	Disc
Feed System	Gravity
Recommended Hydraulic Flow	25 US gpm (95 Lpm)
Chipper Hopper Opening	20" x 20" (51 cm x 51 cm)
Chipper Rotor Opening	4" x 10" (10 cm x 25 cm)
Number of Chipper Knives	2
Rotor Diameter	25" (64 cm)
Rotor Weight	74 lb (34 kg)
Discharge Chute Height	72" (183 cm)
Discharge Chute Rotation	360°
Drive System	Hydraulic
Rated Speed	1000 rpm
Total Weight	740 lb (336 kg)
Dimensions (L x W x H)	80" x 57" x 72" (203 cm x 145 cm x 183 cm)
Mounting System	Universal Skid Steer Mounting Plate (Mounting bracket not supplied)

1 Specifications subject to change without notice.

7.1 Overall Machine Dimensions





7.2 Common Bolt Torque Values

Checking Bolt Torque

The tables shown give correct torque values for various bolts and capscrews. Tighten all bolts to the torque values specified in the table, unless indicated otherwise. Check tightness of bolts periodically.

IMPORTANT! If replacing hardware, use fasteners of the same grade.

IMPORTANT! Torque figures indicated in the table are for non-greased or non-oiled threads. Do not grease or oil threads unless indicated otherwise. When using a thread locker, increase torque values by 5%.

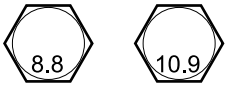
NOTE: Bolt grades are identified by their head markings.

Imperial Bolt Torque Specifications

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

Metric Bolt Torque Specifications

Bolt Diameter	Torque Value			
	Gr. 8.8		Gr. 10.9	
	lbf•ft	N•m	lbf•ft	N•m
M3	0.4	0.5	1.3	1.8
M4	2.2	3	3.3	4.5
M6	7	10	11	15
M8	18	25	26	35
M10	37	50	52	70
M12	66	90	92	125
M14	83	112	116	158
M16	166	225	229	310
M20	321	435	450	610
M30	1,103	1 495	1,550	2 100



7.3 Hydraulic Fitting Torque

Tightening Flare Type Tube Fittings

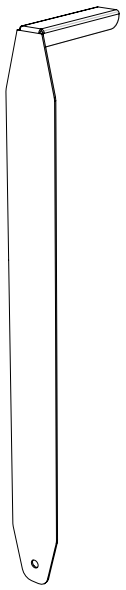
1. Check flare and flare seat for defects that might cause leakage.
2. Align tube with fitting before tightening.
3. Hand-tighten swivel nut until snug.
4. To prevent twisting the tube, use two wrenches. Place one wrench on the connector body and tighten the swivel nut with the second. Torque to values shown.

If a torque wrench is not available, use the FFFT (Flats From Finger Tight) method.

Hydraulic Fitting Torque					
Tube Size OD	**Hex Size Across Flats**	**Torque value**		**Flats From Finger Tight**	
Inches	Inches	lbf•ft	N•m	Flats	Turns
3/16	7/16	6	8	2	1/6
1/4	9/16	11–12	15–17	2	1/6
5/16	5/8	14–16	19–22	2	1/6
3/8	11/16	20–22	27–30	1-1/4	1/6
1/2	7/8	44–48	59–65	1	1/6
5/8	1	50–58	68–79	1	1/6
3/4	1-1/4	79–88	107–119	1	1/8
1	1-5/8	117–125	158–170	1	1/8

Values shown are for non-lubricated connections.

8. Accessories



Ledger clearance setting gauge

Part Number 1012L269

Used to set the critical clearances between the ledger blade and the rotor blade.

Contact your dealer or distributor for more information.

9. Product Warranty

LIMITED WARRANTY

Wallenstein products are warranted to be free of defects in materials and workmanship under normal use and service, for a period of

Five Years for Consumer Use

Two Years for Commercial/Rental Use

from the date of purchase, when operated and maintained in accordance with the operating and maintenance instructions supplied with the unit. Warranty is limited to the repair of the product and/or replacement of parts.

This warranty is extended only to the original purchaser and is not transferable.

Repairs must be done by an authorized dealer. Products will be returned to the dealer at the customer's expense. Include the original purchase receipt with any claim.

This warranty does not cover the following:

1) Normal maintenance or adjustments
2) Normal replacement of wearable and service parts
3) Consequential damage, indirect damage, or loss of profits
4) Damages resulting from:
   - Misuse, negligence, accident, theft or fire
   - Use of improper or insufficient fuel, fluids or lubricants
   - Use of parts or aftermarket accessories other than genuine Wallenstein 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 dealer
5) Engines. Engines are covered by the manufacturer of the engine for the warranty period they specify. For the details of your engine warranty, see your engine owner's manual. Information about engine warranty and service is also available in the FAQ section at www.wallensteinequipment.com

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10. Alphabetical Index

WALLENSTEIN

www.wallensteinequipment.com