

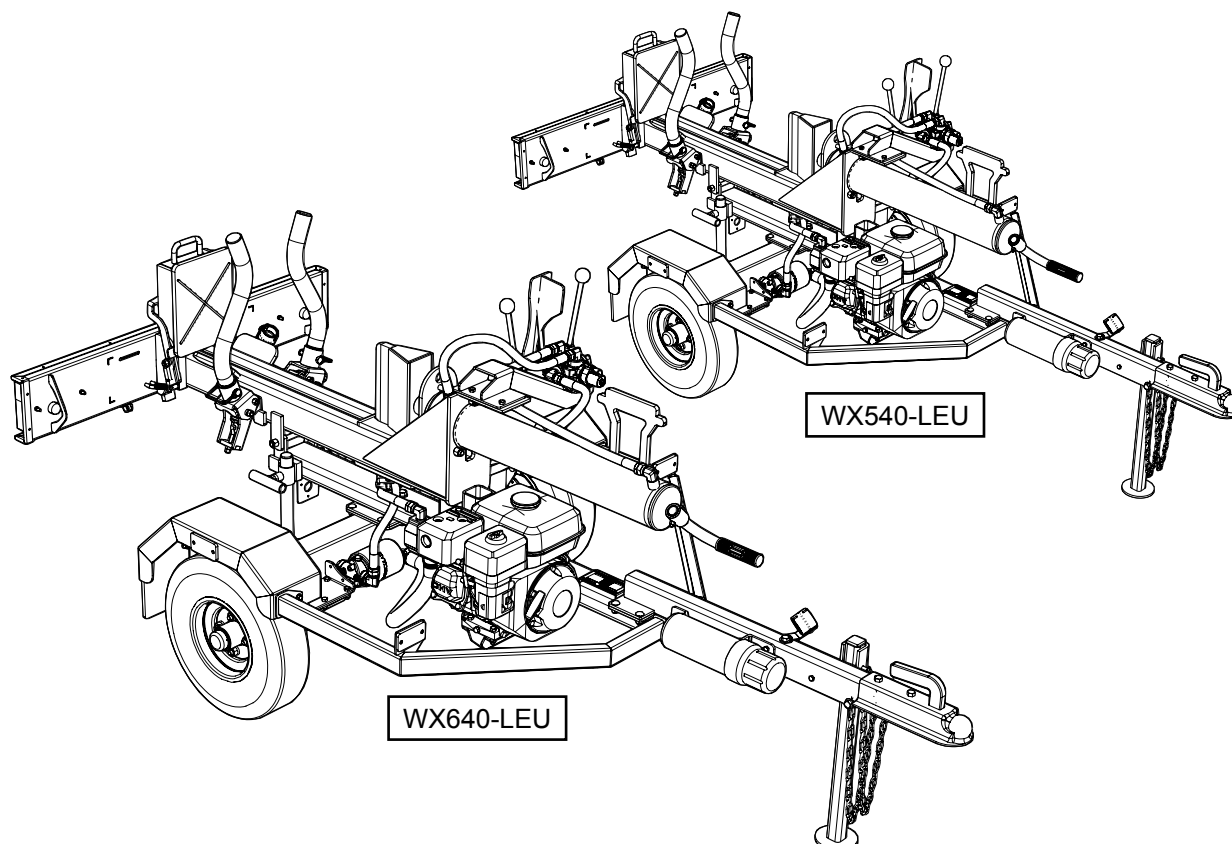
WALLENSTEIN

BY EMB MFG INC.

EMB Manufacturing Inc.

4144 Boomer Line • St. Clements, Ontario • N0B 2M0 • Canada

www.embmfg.com



WX540-LEU / WX640-LEU TRAILER WOODSPLITTER OPERATOR'S MANUAL



Before putting the WX Splitter into service:

Do not attempt to start or operate the wood splitter 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, 2011.

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

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

Three (3) Years for Consumer One (1) 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
WX540-LEU / WX640-LEU TRAILER WOOD SPLITTER

DELIVERY INSPECTION REPORT

To activate warranty, register your product online at

www.embmfg.com

Customer's Name _____

Contact Name _____

Dealer Name _____

(_____) _____
Phone Number

Serial Number _____

_____/_____/_____
Delivery Date

| | |
|----------------|--|
| ✓ | Pre-Delivery Inspection |
| | Inspect for damage from shipping, immediately contact the shipping company if damage is found. |
| Wood Processor | |
| | Hydraulic Splitter Controls Function |
| | Hydraulic Cylinder Functions |
| | Hydraulic Reservoir Level |
| | Engine Fluid Level |
| | Horizontal / Vertical Pivot Moves Freely |
| | Front and Rear Stands Moves Freely |
| | Fasteners Tight |
| | Grease Zerks / Lubricate Pivot Points |
| | Hydraulic Connections |
| | Review Operating and Safety Instructions |
| Safety Checks | |
| | All Safety Decals Installed |
| | Guards and Shields Installed and Secured |
| | All Jacks Function |
| | Retainer Installed Through Hitch Points |
| | Review Operating and Safety Instructions |
| | Check Tire Pressure |
| | Ensure Safety Chain is Secure |

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

Dealer's Rep. Signature

_____/_____/_____
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.

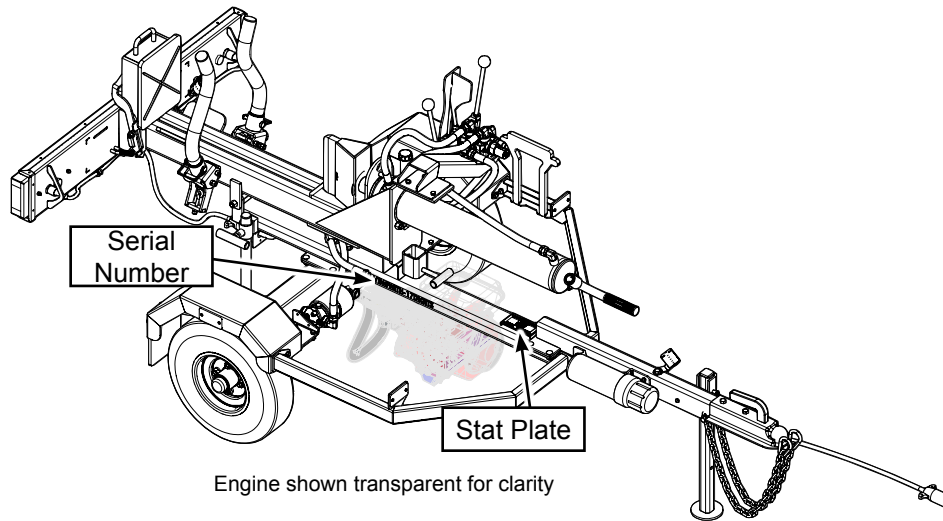
Owner's Signature

_____/_____/_____
Date

SERIAL NUMBER LOCATION

Always give your dealer the serial number of your Wallenstein Trailer Woodsplitter when ordering parts or requesting service or other information.

The serial number for the WX540-LEU & WX640-LEU splitter, is engraved on the main frame. The CE stat plate is located on the top of the frame riveted in place.



Please mark the numbers in the spaces provided for easy reference.

Splitter Model Number _____

Splitter 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.

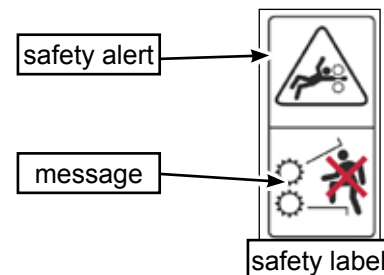
There are three different types of labelling: safety, informative and product labels.

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).

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)

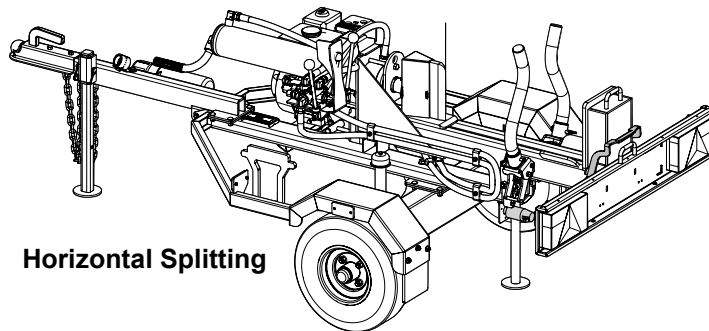
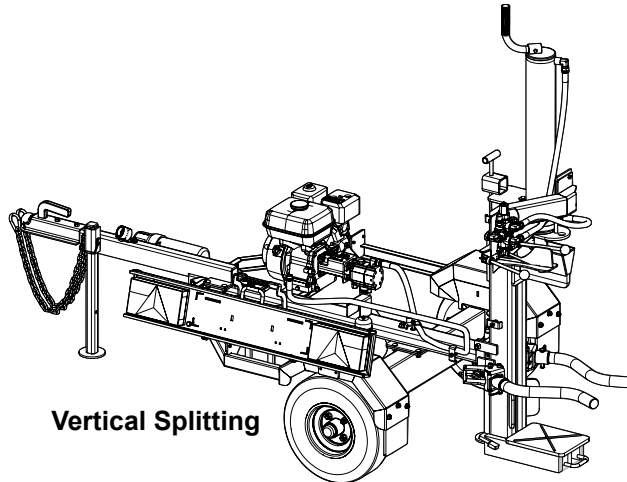
See the section on safety signs for safety label definitions. For a complete illustration of labels and label locations, download the parts manual for your model product at www.embmfg.com.



1 INTRODUCTION

Congratulations on your choice of a Wallenstein Trailer Woodsplitter to complement your log splitting operation. This equipment has been designed and manufactured to meet the needs of a discriminating buyer for the efficient splitting of logs.

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



This manual covers the Wallenstein WX540-LEU & WX640-LEU Trailer Woodsplitter. The WX540-LEU and WX640-LEU woodsplitters options and features operate in a similar fashion, so all operating and safety instructions in this manual will apply equally to both models, unless specified otherwise. Features include, removable trailer lighting, horizontal and vertical splitting, spring loaded log holders and dual handled hydraulic control. The WX540-LEU ram has a 24" (60cm) stroke with 20 ton splitting force, all powered by a 160cc GX160 Honda engine, while the WX640-LEU ram has a 24" (60cm) stroke with 25 ton splitting force, all powered by a 196cc GX200 Honda engine

Some illustrations may show the offroad model (WX540eu) but operation will be the same for the WX540-LEU & WX640-LEU

Use the Table of Contents and Index as a guide to locate required information.

Keep this manual handy for frequent reference and to pass on to new operators or owners. Call your Wallenstein dealer, distributor or the factory 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 as seen from the 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 Woodsplitter and in the manual. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instructions in the safety message.

Why is SAFETY important to you?

3 Big Reasons

Accidents Disable and Kill
Accidents Cost
Accidents Can Be Avoided

SIGNAL WORDS:

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

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

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

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


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



SAFETY

YOU are responsible for the SAFE operation and maintenance of your Wallenstein Trailer Wood Splitter. **YOU** must ensure that you and anyone else who is going to use, maintain or work around the Trailer Wood Splitter 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 Trailer Wood Splitter.


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'

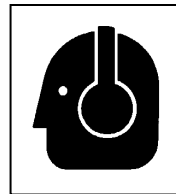
- **DO** give operating instructions to operators or employees before allowing them to operate the machine, and REVIEW annually thereafter.
- **DO** read and understand ALL Safety and Operating instructions in the manual and follow them. Most accidents can be avoided. The most important safety device 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 NOT** modify the equipment in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the equipment.
- **DO NOT** allow riders while towing the machine.
- **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 Trailer Wood Splitter.

- **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 Trailer Wood Splitter.
- **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** wear suitable ear protection for prolonged exposure to excessive noise.
- **DO** prepare before servicing, adjusting, repairing or unplugging:



- stop the machine,
- shut off the engine,
- remove ignition key and place in your pocket,
- wait for all moving parts to stop
- clear the area of people, especially small children.
- set tow vehicle brake


- **DO** check splitting bed, air vents, intakes and exhausts, that they are clear of debris prior to starting the machine
- **DO NOT** touch hot engine parts, muffler, muffler cover, engine body, engine oil, etc. during operation and after the engine has been shut off. Contact may cause burns.
- **DO NOT** modify, disable or change in any way the safety controls.
- **DO** think SAFETY! Work SAFELY!

2.2 EQUIPMENT SAFETY GUIDELINES

Safety of the operator and bystanders is one of the main concerns in designing and developing a machine. 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, follow them.

1. When 2 or more workers are present, only one worker should be designated as the machine operator and loader. **A potentially dangerous condition arises when the worker loading the machine does not control the hydraulic ram.** A worker's hand may be pinched or crushed if the ram has been activated during loading.
2. In order to provide a better view, certain photographs or illustrations in this manual show an assembly with a safety shield removed. However, equipment should never be operated 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 operating this equipment. Consult your doctor about operating 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 operate 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 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 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.
10. Refer also to Safety Messages and operation instruction in each of the appropriate sections of the Tractor and machine Manuals. Pay close attention to the Safety Signs affixed to the tractor and the machine.
11. **Safe condition** involves the following procedure:
 - shut off the engine
 - ensure all components have stopped moving.
 - remove and pocket the ignition key (if applicable)
 - disconnect the battery (if applicable)
 - block & chock the wheelsSafe Condition procedure should be performed before any service, maintenance work or storage preparation.

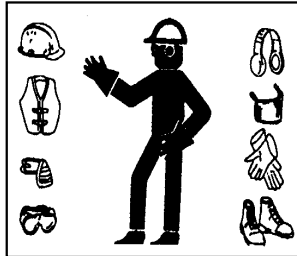
2.3 SAFETY TRAINING

1. Safety is a primary concern in the design and manufacture of our products. Unfortunately, our efforts to provide safe equipment can be wiped out by a single careless act of an operator or bystander.
2. In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of this equipment.
3. It has been said, "The best safety feature is an informed, careful operator." We ask you to be that kind of an operator. It is the operator's responsibility to read and understand ALL Safety and Operating instructions in the manual and to follow these. Accidents can be avoided.
4. **Working with unfamiliar equipment can lead to careless injuries. Read this manual, before assembly or operating, 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 operating:**
 - **Reads and understands the operator's manuals.**
 - **Is instructed in safe and proper use.**
 - **Understands and knows how to perform the "safe condition" procedure:**
 - shut off the engine
 - ensure all components have stopped moving.
 - remove and pocket the ignition key
 - disconnect the battery
 - block & chock the wheels
5. Know your controls and how to stop the machine quickly in an emergency. Read this manual thoroughly
6. Be certain only a properly trained and physically able person will operate the machinery. A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator exposes himself and bystanders to possible serious injury or death. If the elderly are assisting, their physical limitations need to be recognized and accommodated.

2.4 PREPARATION

1. Never use the engine and machine until the operators have been adequately trained in the safe operation of the machine and have read and completely understand:
 - Safety, Operation and Feature sections of this manual,
 - Engine Operator's Manual
 - Each of the Safety Messages found on the safety signs on the engine and machine.
2. Personal protection equipment including:

- hard hat
- safety glasses
- safety shoes
- gloves
- hearing protection
- safety vest

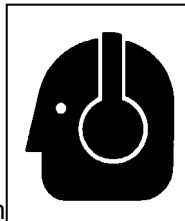


are recommended during assembly, installation, operation, adjustment, maintaining, repairing, removal, cleaning, or moving the splitter. Do not allow long hair, loose fitting clothing or jewellery to be around equipment.

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

Power equipment can be noisy enough to cause permanent, partial hearing loss. We recommend that you wear hearing protection on a full-time basis. 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.





Caution: 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. Determine where the split logs will be piled and ensure it does not interfere with safe loading of material into the machine
6. Precut material so that it is ready to load into the machine. Do not run a chainsaw and the machine at the same time.
7. Use only in daylight or good artificial light.
8. Be sure machine is properly mounted, adjusted and in good operating condition.
9. Ensure that all safety shielding and safety signs are properly installed and in good condition.
10. If fuel is on site, store it well away from the chip pile and feed material.
11. Do not operate gas powered machinery indoors, **even if** doors and windows are open. Carbon monoxide produced by the engine is a poison that you cannot see or smell and can kill in minutes.
12. When operating this equipment , always let someone know where you are and what you are doing. In case of accident or injury some one will be aware of your location.
13. Perform the "PreOperation Checklist" procedure before starting work.

2.5 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. Do not operate gas powered machinery indoors without direct venting out doors. Carbon monoxide produced by the engine is a poison that you cannot see or smell and can kill in minutes.
4. Put the machine in **safe condition** before working on this machine:
 - shut off the engine
 - ensure all components have stopped moving.
 - remove and pocket the ignition key (if applicable)
 - disconnect the battery (if applicable)
 - block & chock the wheels
5. Allow the engine to cool before performing maintenance, engine components and oil may be hot enough to cause injury.
6. Never work under equipment unless it is blocked securely.
7. When performing any service or maintenance work always use personal protection devices such as
 - safety glasses,
 - hand protection - gloves
 - hearing protectors
 - safety shoesUse tight fitting gloves when handling parts.
8. 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.
9. A fire extinguisher and first aid kit should be kept readily accessible while performing maintenance on this equipment.  
10. Inspect and tighten all bolts, nuts and screws and check that all electrical and fuel connections are properly secured to ensure splitter is in a safe working condition.
11. When completing a maintenance or service function, make sure all safety shields and devices are installed before placing splitter in service.
12. When cleaning any parts, do not use gasoline, use regular cleanser.
13. Always use two people to handle heavy, unwieldy components during assembly, installation, removal or moving.
14. Never place any part of your body, fingers, hands, feet, etc. where it would be in danger if movement should occur during assembly, installation, operation, maintaining, repairing, removal or moving. Keep others away.
15. Always use proper tools, that are in good condition. Make sure you understand how to use them, before performing any service work.

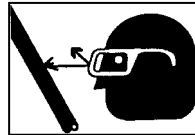
2.6 OPERATING SAFETY

Please remember it is important that you read and heed the safety signs on the Woodsplitter. 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.

1. 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 this Trailer Wood Splitter to be used with all its safety equipment properly attached, to minimize the chance of accidents. Read and understand operator's manual before starting, to make sure you have all safety equipment attached and operational.
2. Close and secure all covers, guards, deflectioners and shields before starting and operating.
3. 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.
4. Keep hydraulic lines and fittings tight, in good condition and free of leaks.
5. Do not allow bystanders within 20 feet of machine during operation. Wood chips can fly out and injure others.
6. When 2 or more workers are present, only one worker should be designated as the machine operator and loader. **A potentially dangerous condition arises when the worker loading the machine does not control the hydraulic ram.** A worker's hand may be pinched or crushed if the ram has been activated during loading.
7. Always use one hand on each control lever when operating the splitter to keep hands out of splitting area.
8. Do not step over or straddle splitter during operation.
9. Do not try to split more than one log at a time. The logs can fly out and cause injury.
10. Keep your fingers and hands away from cracks in the log that can open while splitting.
11. Always load logs by holding on the bark sides, not the cut top and bottom.
12. Do not reach into or load the splitter when the wedge is in motion.
13. Do not try to split logs across the grain. Some kinds can burst or splinter and fly out of machine causing injury.
14. For uneven cut logs, always place the wide end down and the most square end against the splitting wedge.
15. Inspect electrical harness, sensors and controller to ensure they are in good condition before operating to maintain control.
16. Never place any part of your body where it would be in danger if movement should occur during operation, maintenance, repairing, or moving.
17. Do not operate gas powered machinery indoors, **even if** doors and windows are open. Carbon monoxide produced by the engine is a poison that you cannot see or smell and can kill in minutes.
18. Use care when loading material into splitter. Do not load metal, bottles, cans, rocks, glass or other foreign material into wood splitter.
19. 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.
20. Do not climb or sit on machine when operating. Keep proper balance and footing at all times.
21. Never allow children or unauthorized people to operate or be around this machine.
22. Keep the working area clean and free of debris to prevent tripping. Operate only on level ground.

2.7 HYDRAULIC SAFETY

1. Make sure that all the components in the hydraulic system are kept in good condition and are clean.
2. Before applying pressure to the system, make sure all components are tight, and that lines, hoses and couplings are not damaged.
3. Do not attempt any makeshift repairs to the hydraulic lines, fittings or hoses by using tapes, clamps or cements. The hydraulic system operates under extremely high pressure. Such repairs will fail suddenly and create a hazardous and unsafe condition.
4. Wear proper hand and eye protection when searching for a high pressure hydraulic leak. Use a piece of wood or cardboard as a backstop instead of hands to isolate and identify a leak.
5. If injured by a concentrated high-pressure stream of hydraulic fluid, seek medical attention immediately. Serious infection or toxic reaction can develop from hydraulic fluid piercing the skin surface.
6. Replace any worn, cut, abraded, flattened or crimped hoses and metal lines.
7. Relieve pressure on hydraulic system before maintaining or working on system.



2.8 TIRE SAFETY

1. Have a qualified tire dealer or repair service perform required tire maintenance, never attempt to mount a tire on your own.
2. Inflate tires to manufacturer's specifications as stated on the tire sidewall.
3. Do not exceed the maximum towing speed indicated on tire sidewall.
4. When replacing worn tires, make sure they meet the original tire specifications. Never undersize.

2.9 STORAGE SAFETY

1. Store the splitter in an area away from human activity.
2. Do not allow children to play on or around the stored machine.
3. Store the splitter in a dry, level area. Support the frame with planks if required.
4. If storing for long periods consult your engine owners manual for safe storage.

2.10 TRANSPORT SAFETY

1. Comply with state and local laws governing safety and transporting of machinery on public roads.
2. Do not exceed a safe travel speed. Slow down for rough terrain and cornering.
3. Secure the splitter bed and support stands before moving or transporting.
4. Do not transport or move the splitter with the engine running.
5. Be sure the trailer is hitched positively to the towing vehicle. Always attach safety chain between the hitch and the towing vehicle.
6. Inspect rims for dents or damage, check wheel lugs and tighten if required.
7. Inspect tires for cuts or damage, check tire pressure and top up if required.
8. Inspect all access panels and guards to ensure they are secured.
9. Inspect fuel and hydraulic tank caps are on tight to prevent spills while transporting.
10. Clean off all debris from the splitter.
11. Check that all the lights, reflectors and other lighting requirements are connected and in good working condition.
12. Never allow riders on the machine.
13. Be a safe and courteous driver. Always yield to oncoming traffic in all situations, including narrow bridges, intersections, etc.
14. Watch for traffic when near or crossing roadways.
15. Do not drink and drive.
16. Just before transport, perform a circle check to ensure everything is safe, secure and in working condition.

2.11 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 start the engine without checking fluid levels
2. DO NOT operate gas powered machinery indoors, **even if** doors and windows are open. Carbon monoxide produced by the engine is a poison that you cannot see or smell and can kill in minutes.
3. DO NOT choke carburettor to stop engine. Whenever possible, gradually reduce engine speed before stopping.
4. DO NOT run engine above rated speeds. This may result in injury or engine failure.
5. DO NOT tamper with governor springs, governor links or other parts which may increase the governed speed.
6. DO NOT tamper with the engine speed selected by the original equipment manufacturer.
7. DO NOT check for spark with spark plug or spark plug wire removed.
8. DO NOT crank engine with spark plug removed. If engine is flooded, place throttle in "FAST" position and crank until engine starts.
9. DO NOT operate engine without a muffler.
10. DO NOT remove fuel tank cap while engine is running.
11. DO NOT operate engine with an accumulation of grass, leaves, dirt or other combustible materials in the muffler area.
12. DO NOT touch hot muffler, cylinder or fins because contact may cause burns.
13. DO NOT run engine without air cleaner or air cleaner cover removed.
14. 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.

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.

2.12 REFUELLING SAFETY

1. Handle fuel with care. It is highly flammable.
2. Allow engine to cool for 5 minutes before refuelling. Clean up spilled fuel before restarting engine.
3. Do not refuel the machine while smoking or when near open flame or sparks.
4. Fill fuel tank outdoors.
5. Prevent fires by keeping machine clean of accumulated trash, grease and debris.



Caution: Fire Hazard - No Smoking
To Prevent serious injury or death:

- Do not smoke while refueling
- Keep sparks, flames, and hot material away
- Ensure the engine is off and cooled
- Ensure muffler is cooled

2.13 SIGN-OFF FORM

Wallenstein follows the general Safety Standards specified by the American Society of Agricultural Engineers (ASAE) and the Occupational Safety and Health Administration (OSHA). Anyone who will be operating and/or maintaining the Woodsplitter must read and clearly understand ALL Safety, Operating and Maintenance information presented in this manual.

Do not operate or allow anyone else to operate this equipment 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 operate 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 feet away from falling log splits, always wear steel toed foot wear while machine is operating to avoid serious personal injury.



Caution: Pinch point / crushing danger! Keep your hands away from all moving parts during and after split operation! Never try to clear a jammed log with your hands! Wait for all moving parts to come to a complete stop before loading or clearing obstructions.

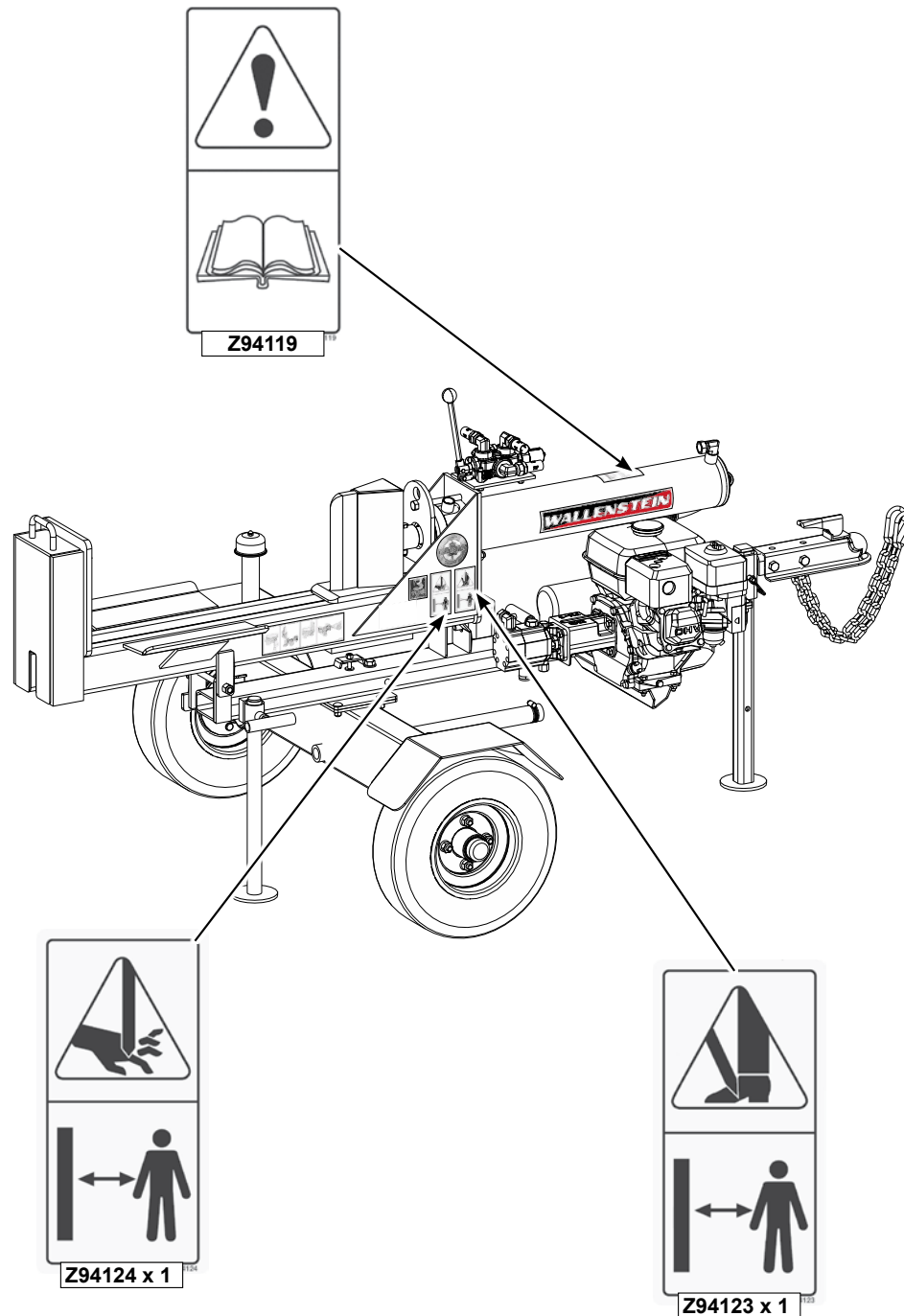


Caution: read and understand ALL **safety and operating instructions** in the manual, read and understand ALL **safety labels** located on the machine. The most important safety device on this equipment is an informed SAFE operator.

3.3 SAFETY SIGN LOCATIONS

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

- Think SAFETY! Work SAFELY!



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

4 OPERATION & FEATURES



OPERATING SAFETY

- Read and understand the Operator's Manual and all safety signs before operating, servicing, adjusting, repairing or unplugging.
- When 2 or more workers are present, only one worker should be designated as the machine operator and loader. **A potentially dangerous condition arises when the worker loading the machine does not control the hydraulic ram.** A worker's hand may be pinched or crushed if the ram has been activated during loading.
- Install and secure all guards and shields before starting or operating.
- Keep hands, feet, hair and clothing away from moving parts.
- Do Not operate gas powered machinery indoors, **even if** doors and windows are open. Carbon monoxide produced by the engine is a poison that you cannot see or smell and can kill in minutes.
- Always wear the appropriate personal safety equipment when operating splitter including but not limited to hard hat, safety shoes, face shield and heavy gloves.
- Clear the area of bystanders, especially small children, before starting.
- Always use one hand on each control lever when operating the splitter to keep hands out of splitting area.
- Do not operate on slopes or side hills.
- Keep working area clean, neat and dry to prevent slipping and tripping.
- Keep all mechanical and hydraulic components in good condition. Do not operate with leaks or damaged components.
- Load splitter by holding logs on the side rather than the top and bottom.
- Do not split wood across the grain.
- Review safety instructions with all operators annually.

4.1 TO THE NEW OPERATOR OR OWNER

The Wallenstein Trailer Woodsplitter is designed to split any kind of wood or log. Be familiar with the machine before starting.

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 operate 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 operate the machine safely and how to set it to provide maximum field efficiency. By following the operating instructions in conjunction with a good maintenance program, your Woodsplitter will provide many years of trouble-free service.

4.1.1 IMPORTANT

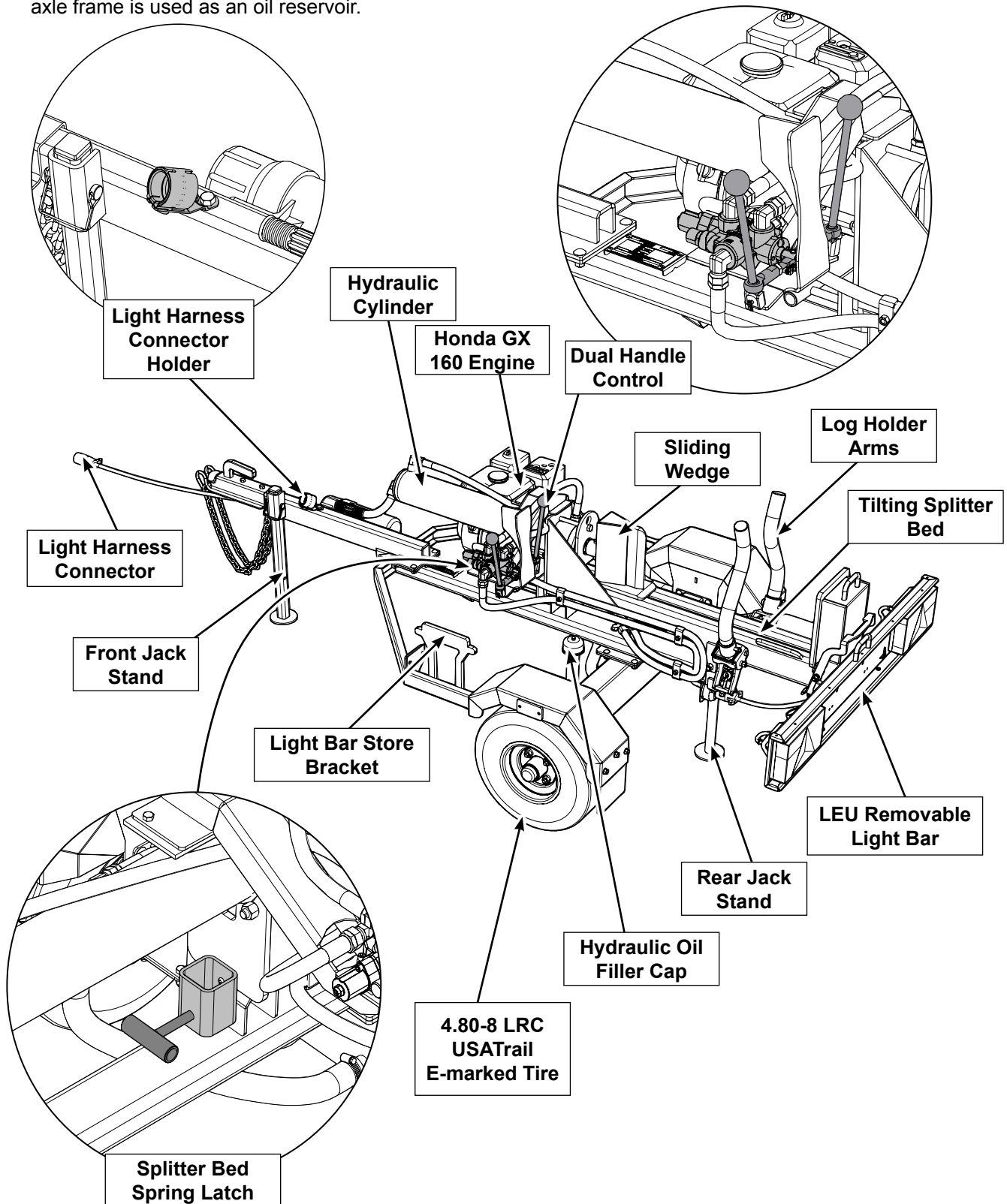
Ensure all operators understand how to put the machine in safe condition before working with this machine,

- shut off the engine.
- ensure all components have stopped moving.
- remove and pocket the ignition key. (if applicable)
- disconnect the battery. (if applicable)
- block & chock the wheels.

4.2 MACHINE COMPONENTS

The Wallenstein Trailer Woodsplitter consists of a wedge on the end of a hydraulic cylinder for splitting wood or logs. A gas engine mounted on the front of the frame provides power to a hydraulic pump. The axle frame is used as an oil reservoir.

Pressurized oil from the pump is routed through a double handled valve to control the sliding wedge. The light bar is removable allowing for vertical or horizontal splitting configurations.



4.3 MACHINE BREAK-IN

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

A. After operating for 1 hour:

1. Ensure the machine is in **safe condition** before checking any components. (see 4.1.1)
2. **Review the engine operators manual** for break-in.
3. Check the sliding wedge is adequately lubricated
4. Check all nuts, bolts and other fasteners. Tighten to their specified torque level.
5. Check hydraulic system for leaks. Tighten all leaking fittings and replace any leaking components.
6. Check machine fluid levels: Fuel, engine oil, and hydraulic oil reservoir. Top up as required.
7. Check for entangled material. Remove all entangled material before resuming work.
8. Check tire pressure. Inflate as required.

B. After Operating For 8 Hours:

1. Repeat steps 1 through 5 listed above.
2. Review the engine operators manual for break-in.
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 Trailer Woodsplitter requires that each operator reads and understands the operating procedures and all related safety precautions outlined in this section. A pre-operation checklist is provided for the operator. It is important for both the personal safety and maintaining the good mechanical condition of the Woodsplitter that this checklist is followed.

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

| Pre-Operation Checklist | ✓ |
|--|---|
| Lubricate the machine per the schedule outlined in the Maintenance Section.. | |
| Check the wedge and block. Be sure they are not damaged or broken and is not badly worn. Repair or replace as required. | |
| Check for entangled material. Remove this material. | |
| Check condition of all hydraulic components. Keep all components in good condition. (see "Hydraulic Fitting Torque" specification chart) | |
| 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. | |
| Check engine and machine fluid levels. Top up as required. | |

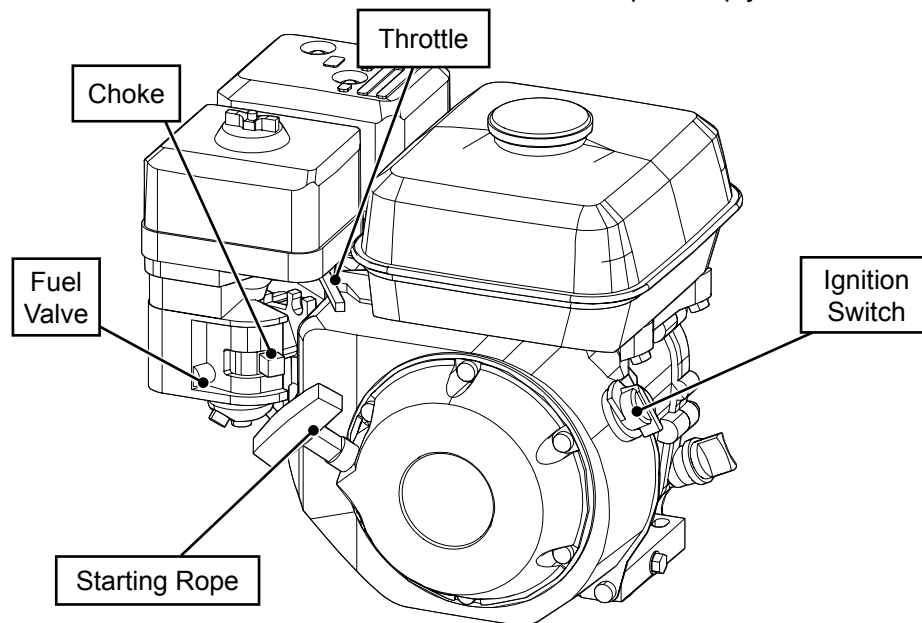
4.5 FUNCTION & CONTROLS

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

4.5.1 HONDA GX GAS ENGINE:

A Honda engine is used with the unit. **Always read the engine Operator's manual** supplied with the machine for the detailed operating procedures.

- **Ignition Switch:** This rotary 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 counter-clockwise to stop the engine
- **Fuel Shut-Off Valve:** Each engine is equipped with a valve between the fuel tank and the carburettor. Slide the fuel valve toward the block to turn ON and away to turn OFF. Turn the fuel OFF when not in use or when transporting.
- **Throttle:** This lever controls the engine RPM. Move the lever side to side to increase or decrease the RPM. Always run at maximum throttle while operating.
- **Choke:** The choke controls the fuel/air mixture to the engine. Close the choke when starting if the engine is cold. Open the choke as the engine warms. Always open the choke fully during start-up.
- **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.

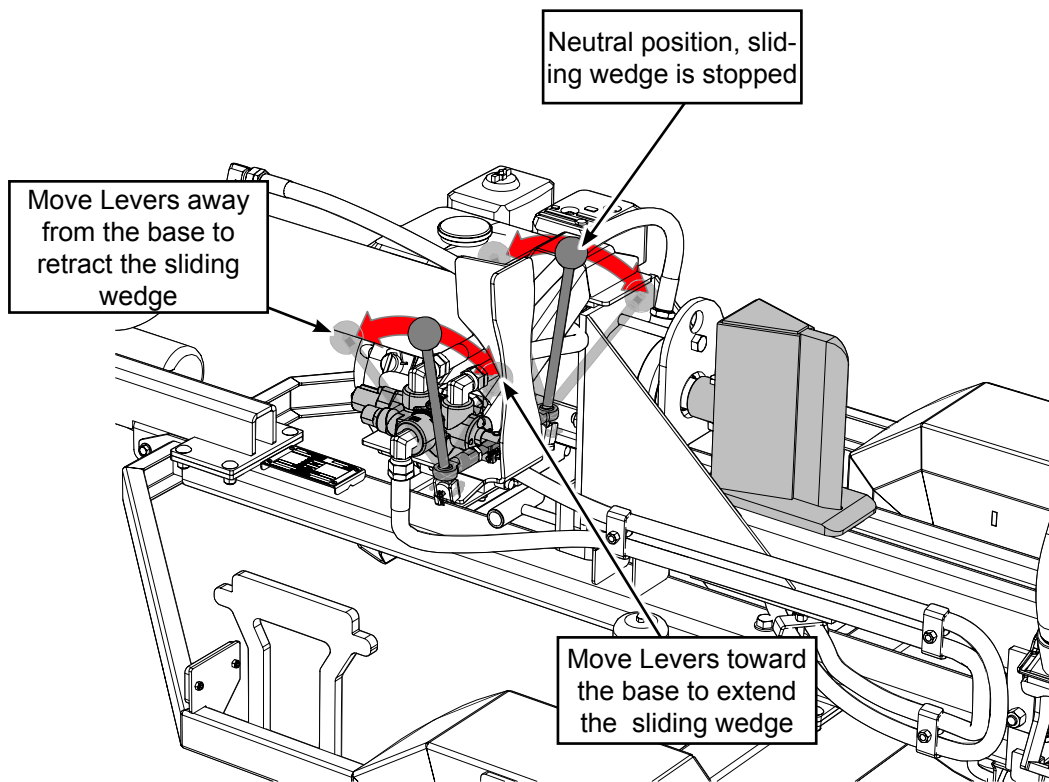


! ATTENTION !
Always read the engine Operator's manual supplied with the machine for the detailed operating procedures.

4.5.2 HYDRAULIC CONTROLS:

WX woodsplitters are designed with a dual handled spring-loaded-to-center-neutral hydraulic valve. Both handles must be operated at the same time to operate the hydraulic cylinder.

1. Move both levers (back) toward the base and hold to extend the sliding wedge and split the wood.
2. Move both levers (forward) away from the base and to retract the sliding wedge.
3. Release the levers and they will return to their centred, neutral positions and the sliding wedge will stop moving.

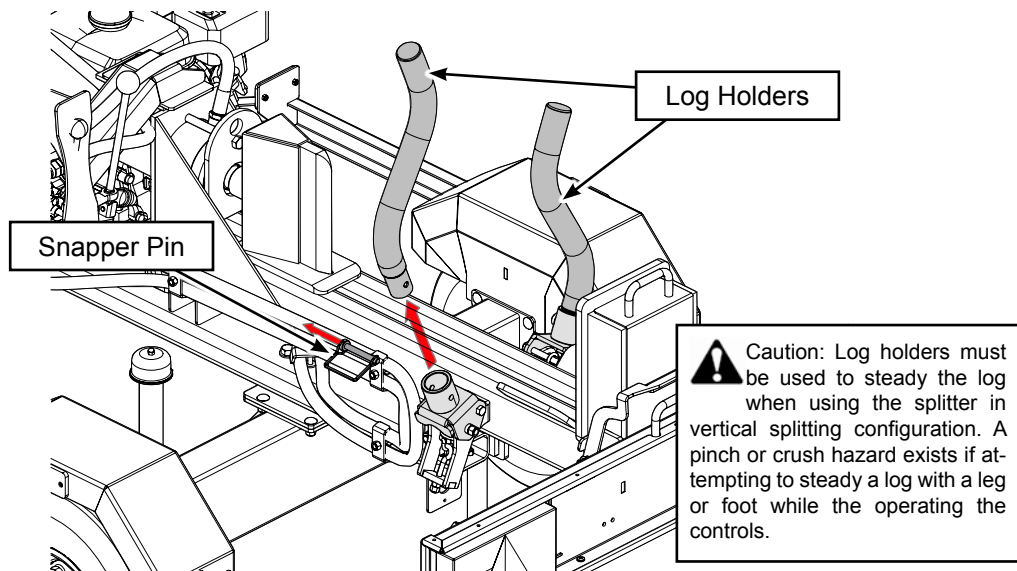


4.5.3 LOG HOLDERS:

WX woodsplitters are designed with left and right, spring loaded log holders. The log holders are required primarily for vertical splitting, and they may be used for horizontal splitting as well, but are not required. To remove one or both log holders for horizontal splitting, follow these steps:

1. The log holder is held in place with a snapper pin, remove the pin.
2. The log holder is now free to remove, remove it and set it in a safe place.
3. Replace the snapper pin.

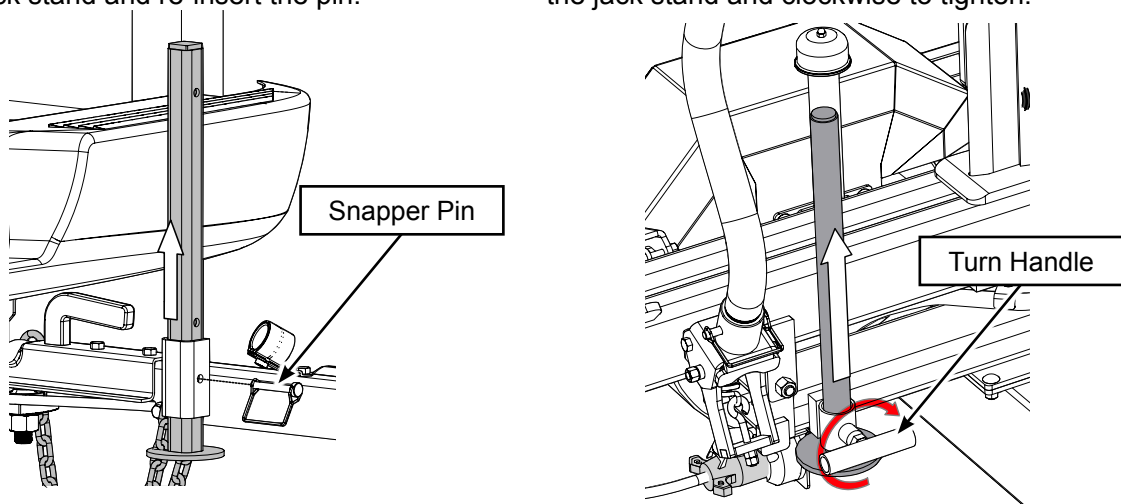
Repeat these steps for the remaining holder if desired. Reverse these steps to replace the holders.



4.5.4 JACK STANDS:

WX woodsplitters are designed with front and rear jack stands.

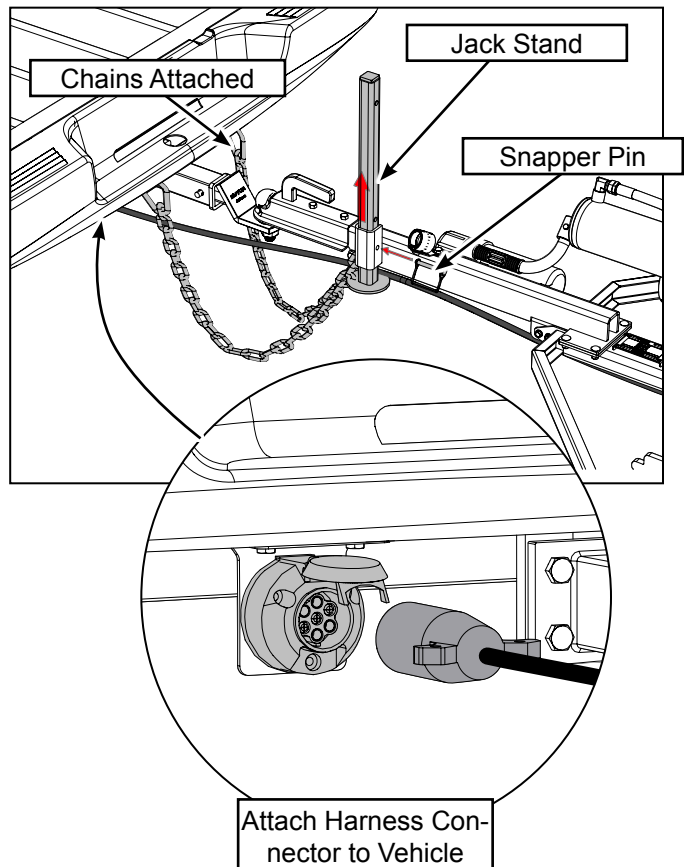
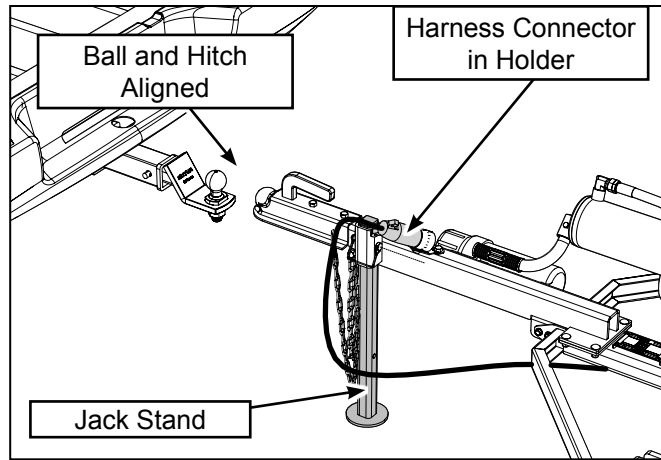
- | | |
|---|---|
| 1. The front jack stand is held in with a snapper pin. | 1. The rear stand is held in place with a screw turn lock. |
| 2. Unlatch and remove the pin, lower or raise the jack stand and re-insert the pin. | 2. Turn the lock handle counterclockwise to loosen the jack stand and clockwise to tighten. |



4.5.5 BALL & COUPLER

The Trailer Woodsplitter should always be located on a level, dry area that is free of debris and other foreign objects. When attaching the machine to a tow vehicle, follow this procedure:

1. Make sure that all bystanders, especially small children, are clear of the working area.
2. Make sure there is enough room and clearance to safely back up to the machine.
3. Slowly back the tow vehicle until the coupler on the hitch and ball are aligned.
4. For the ball hitch:
 - Lift the hitch and place the coupler over the ball on the hitch.
 - Flip the latch to lock the coupler around the ball.
5. Pull out the jack stand snapper pin, and pull up the jack stand in its stowed position. Install snapper pin to secure the stand.
6. Attach the safety chain securely to the tow frame to prevent unexpected separation.
7. Connect the wiring harness for the lights.
8. Route the harness and cables across the hitch to prevent snagging. Be sure to provide slack for turning.
9. Reverse the above procedure when unhooking.

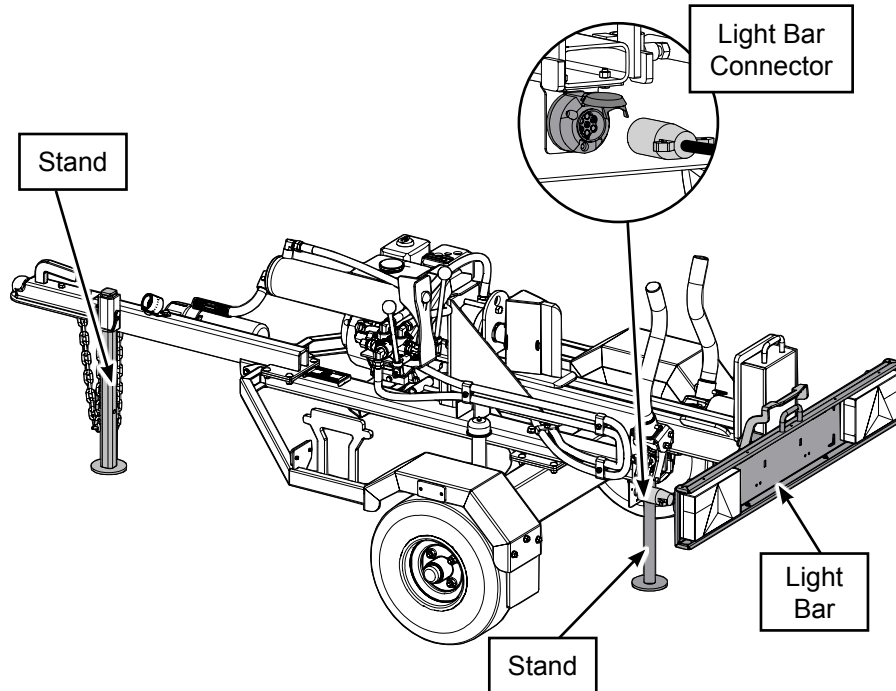


4.6 MACHINE SET-UP

Follow this procedure to prepare and set-up the machine at the work site:

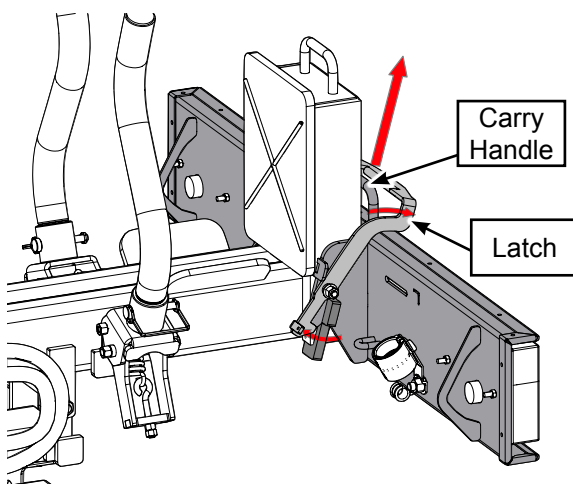
1. Clear working area of stones, branches or hidden obstacles
2. Precut material so that it is ready to load into the machine.
3. Determine where the split logs will be piled and ensure it does not interfere with safe loading of material into the machine

4. Move the machine into its working position next to the wood to be split.
5. Set park brake if connected to tow unit.
6. Lower the front and rear stands to stabilize the splitter.
7. Disconnect the light bar 7 pin harness connector and stow the end in the plug holder.
8. Grasp both the light bar latch and carry handle, squeeze the latch to release the light bar.

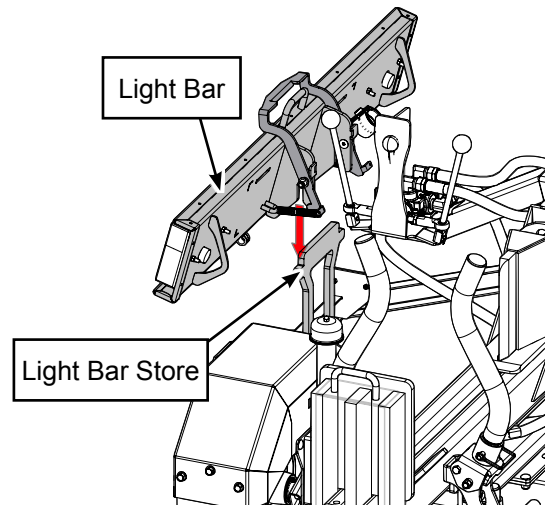


IMPORTANT

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



9. Carefully lift the light bar assembly up and away from the splitter, ensure the wire harness clears the splitter base.



10. Carry the light bar assembly to the left side of the splitter and carefully slide the assembly onto the light bar store bracket, ensure the latch has sprung into place.

4.7 FIELD OPERATION



OPERATING SAFETY

- Read and understand the Operator's Manual and all safety signs before operating, servicing, adjusting, repairing or unplugging.
- Do not allow riders.
- Install and secure all guards and shields before starting or operating.
- Keep hands, feet, hair and clothing away from moving parts.
- Place all controls in neutral, stop tractor engine, set park brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
- Place all tractor and machine controls in neutral before starting.
- Always wear the appropriate personal safety equipment when operating splitter including but not limited to hard hat, safety shoes, face shield and heavy gloves.
- Clear the area of bystanders, especially small children, before starting.
- Always use one hand on each control lever when operating the splitter to keep hands out of splitting area.
- Do not operate on slopes or side hills.
- Keep working area clean, neat and dry to prevent slipping and tripping.
- Keep all mechanical and hydraulic components in good condition. Do not operate with leaks or damaged components.
- Load splitter by holding logs on the side rather than the top and bottom.
- Do not split wood across the grain.
- Review safety instructions with all operators annually.

Wallenstein WX Trailer Woodsplitters are a self-contained machine designed to move a wedge through wood to split it. The WX splitters can be used in the vertical as well as horizontal configuration. **The operator has the responsibility of being familiar with all operating and safety procedures and following them.**

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 Woodpitter and its components.
- Review the machine components. (see Section 4.2)
- Review and follow the PreOperation 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 splitter until it is in position.
- Set up the machine. (see section 4.6).
- Each person must wear appropriate **Personal Protective Equipment (PPE)** whenever operating the splitter 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.

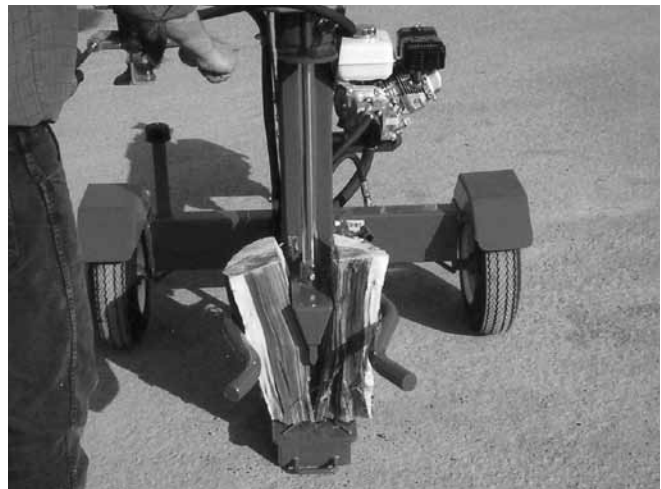
4.7.2. STARTING PROCEDURE

Please review the engine controls section (4.5.1) and the **engine owners manual** for starting and stopping the engine.

- a. Turn master ON/OFF switch to the ON position.
- b. Close choke if engine is cold.
- c. Move the throttle to its 1/4 to 1/2 throttle position.
- d. Open the fuel supply valve.
- e. Pull sharply on the starting rope to start the engine.
- f. Run the engine for a few minutes to allow it to warm.
- g. Gradually open the choke.
- h. Slowly increase engine speed to maximum RPM.
- i. Place wood or log on the splitting frame.
- j. Move both control levers toward the splitting base and hold to slide the wedge into the wood or log.
- k. Release the lever when the log splits into 2 pieces or the wedge reaches the base and the wedge will stop.
- l. Move the lever in the fully up retracting direction and hold for it will retract fully.



Horizontal



Vertical

4.7.3 STOPPING:

- a. Stop loading material onto the splitter bed.
- b. Slow engine RPM.
- c. Stop engine using ignition switch.

4.7.4 EMERGENCY STOPPING

If an emergency occurs:

shut off the engine.

Correct emergency situation before restarting engine and resuming work.

4.7.5 HORIZONTAL TO VERTICAL:

The WX splitters are designed with a pivoting latching main frame that allows it to be used in the horizontal or vertical configuration. To convert from horizontal to vertical configuration, follow this procedure:

1. Clear the area of bystanders, especially small children.
2. Stop engine, set park brake on tow vehicle (if attached) and wait for all moving parts to stop.
3. Ensure the back leg stand is lowered and secured, to support the back of the frame when the splitter is used.



Warning: Only one worker should operate and load the splitter. **A potentially dangerous pinching or crushing hazard arises when the worker loading the machine does not control the hydraulic ram.**

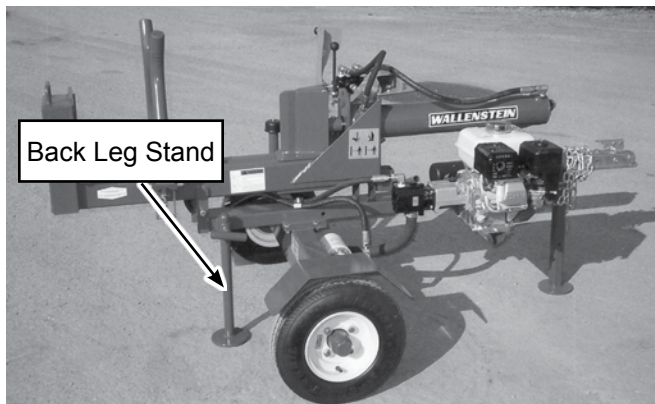
4. Release splitter bed spring latch.
 5. Lift frame using the handle on the end of the cylinder.
-
6. Reverse the above procedure when converting from vertical to horizontal configuration.



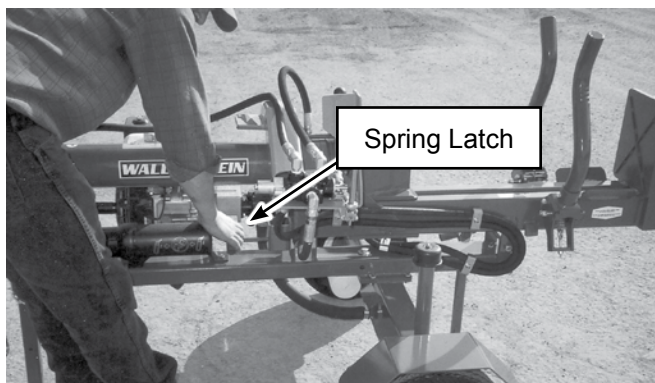
Caution: Log holders must be used to steady the log when using the splitter in vertical splitting configuration. A pinch or crush hazard exists if attempting to steady a log with a leg or foot while the operating the controls.



Horizontal



Lower Back Leg Stand



Release Spring Latch



Vertical

4.7.6 VERTICAL SPLITTING:

WX woodsplitters are designed with left and right, spring loaded log holders. The log holders are required to be used for vertical splitting. Ensure the log holders are installed and not removed when in vertical splitting configuration.

Both hands are required to activate the hydraulic controls and the log holders will steady and hold the log in place while splitting. This prevents using your leg or foot to steady an unevenly cut log. Follow this procedure when operating in vertical configuration:

- a. Position Splitter at work site.
- b. Clear the area of bystanders, especially small children.
- c. Start engine and set to the MAX-RPM range.
- d. Spread the log holder arms.



On Base - Arms Spread

- e. Place log on base and close log holder arms.



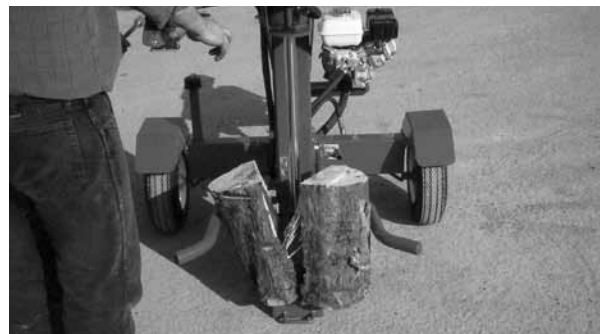
Arms Closed

- f. Move both control levers down and hold to split the log.
- g. Move both control levers up and hold to retract the splitting wedge.



Wedge Descending

Warning: Only one worker should operate and load the splitter. A potentially dangerous pinching or crushing hazard arises when the worker loading the machine does not control the hydraulic ram.



Split

- h. Spread the log holder arms and remove the split log pieces.



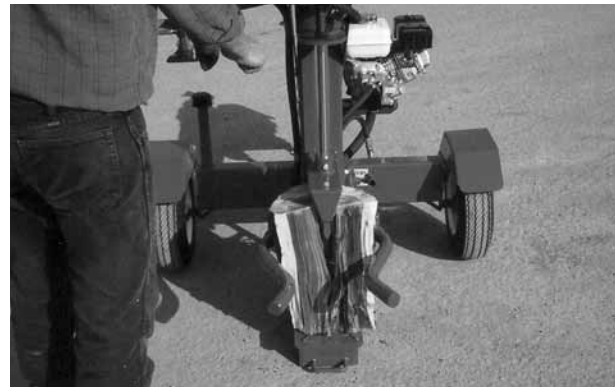
Arms Opened

- i. If the log is large enough to require another split, place one of the half-logs on the base.
- j. Close the log holder arms.



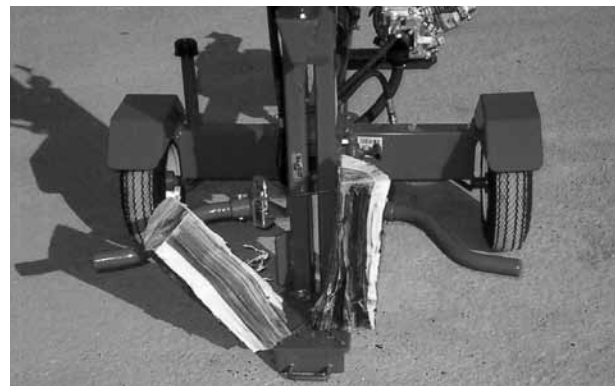
Arms Closed

- k. Pull the two control levers down and hold to lower the wedge through the wood.
- l. When the half-log is split, move both controls up to retract the wedge.



Splitting

- m. Spread the log holder arms and remove the pieces of wood.
- n. Repeat with the next block of wood.



Split



Caution: Log holders must be used to steady the log when using the splitter in vertical splitting configuration. A pinch or crush hazard exists if attempting to steady a log with a leg or foot while the operating the controls.

4.7.7 HORIZONTAL SPLITTING:

When splitting in the horizontal configuration, use the following procedure:

- a. Position Splitter at work site.
- b. Clear the area of bystanders, especially small children.
- c. Place rear stand in its extended position and secure.



Rear Stand

- d. Remove left log holding arm or both of them.



Holding Arm (1 Removed)

- e. Place log into the splitting bed.

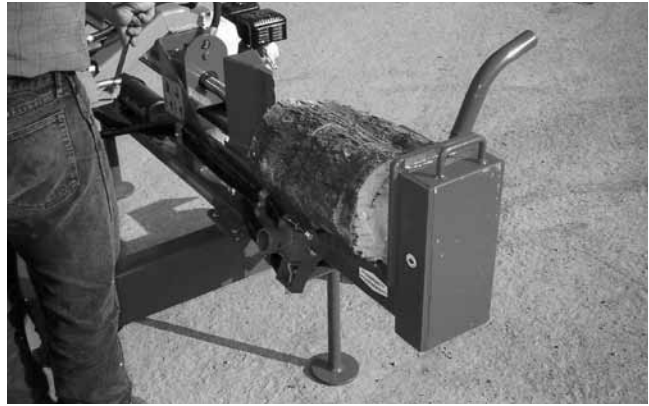


Splitting Bed



Warning: Only one worker should operate and load the splitter. **A potentially dangerous pinching or crushing hazard arises when the worker loading the machine does not control the hydraulic ram.**

- f. Pull both control levers toward the base and hold to move the splitting wedge into and through the log.



Starting

- g. Move the control levers away from the base and hold to retract the splitting wedge.



Split

- h. If the log is large enough to require another split, move half log into the splitting bed.
- i. Repeat the previous steps to split the log.



Half Log

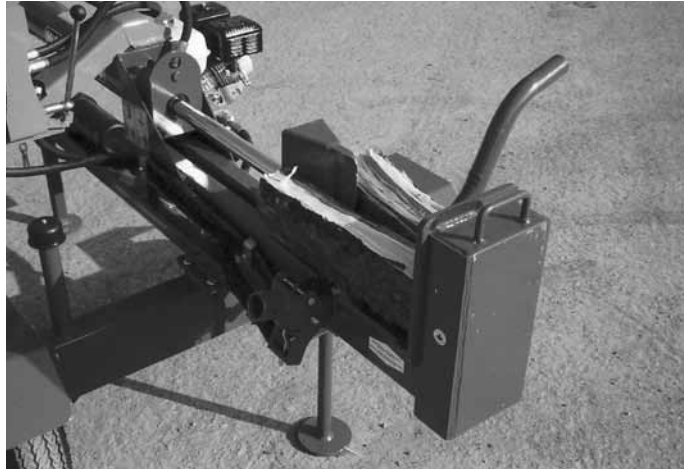
Warning: Only one worker should operate and load the splitter. A potentially dangerous pinching or crushing hazard arises when the worker loading the machine does not control the hydraulic ram.



Half Log Split

4.7.8 LOG PLACEMENT:

1. **Always grasp the log by the sides** when placing in the splitter. This will minimize the chance of the operator getting their fingers or arm between the wedge and the log.
2. Always wear the appropriate safety gear when working around the machine. This includes but is not limited to:
 - Hard hat for protection to the head.
 - Face mask for protection to the face and eyes from flying chips.
 - Heavy gloves for protection from slivers, chips and pinching.
 - Safety shoes with slip resistant soles for protection to the feet and toes from dropped logs and pieces of wood.
 - Slip resistant soles reduce the chance of slipping.
3. Always close the log holding arms when using in the vertical configuration to hold the log in place while splitting.



Horizontal



Vertical

4.7.9 OPERATING HINTS:

1. Hold the hydraulic lever in the wedge extend direction until the log/wood splits. There is no need to complete the cycle once the log is split.
2. Always keep the working area neat and clean to prevent tripping. Pile the split and unsplit wood in piles close to the working area. Do not allow pieces to pile up and clutter the area. A cluttered working area can lead to tripping and an accident. **Do not take chances with safety.**
3. Do not place the splitter on muddy, icy, wet or cluttered surfaces. Each can lead to slipping or tripping and cause accidents.
4. When the machine is new lubricate the plate under the wedge slider with graphite, each time the machine is used to improve wear and reduce friction and/or binding. When the paint is eventually worn off, it will polish itself.
5. Lower the back leg stand before converting the frame into the vertical configuration.



4.7.10 WEDGE CONFIGURATION:

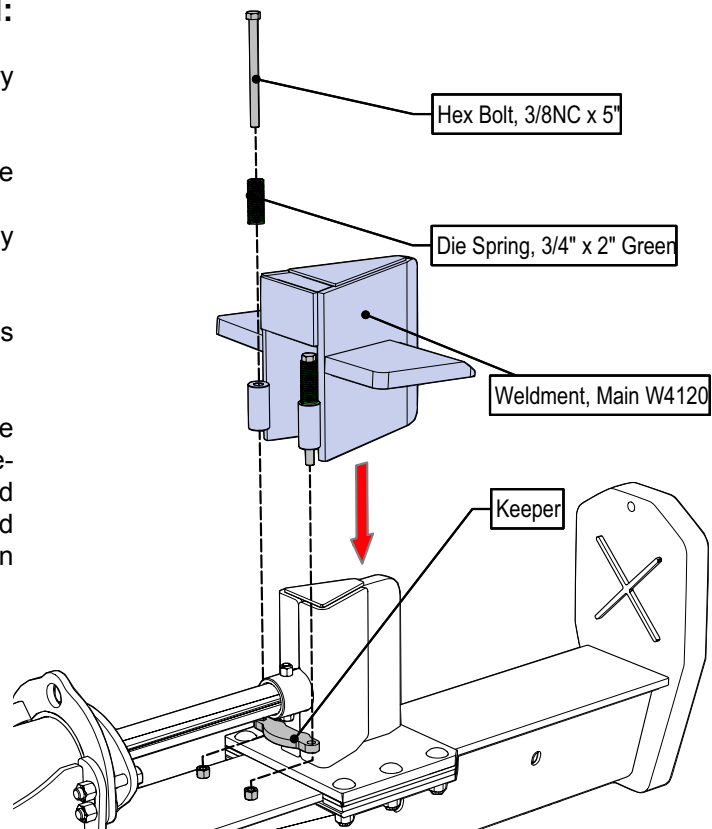
All Woodsplitters come from the factory equipped with a single blade wedge.

An optional 4 segment wedge is available for the WX woodsplitters.

The 4 segment wedges can be used at any time with smaller logs or pieces of wood.

A detailed installation instruction sheet is included with each 4 way splitter kit.

See accessories page at the end of the manual for ordering details or for replacement parts, go to www.embmfg.com and click on "Parts and Manuals" to download the latest parts manual for your model, then call your dealer to order parts.



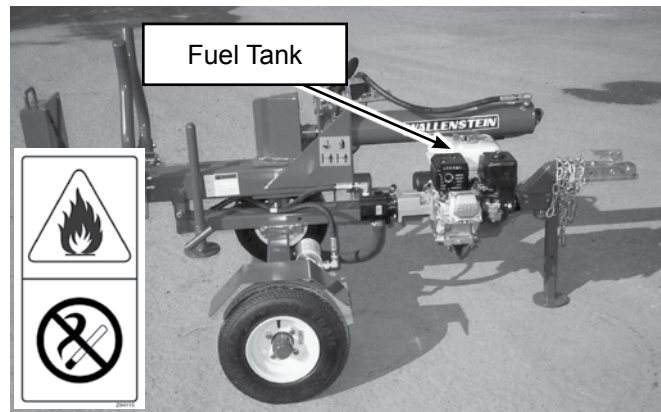
4.7.11 REFUELLING:

WX splitters fuel tank is located on the engine. Avoid running the tank dry. Use the appropriate grade of fuel, and use caution to prevent spilling. **Do not smoke while refuelling.**

Consult the engine owners manual for complete filling information

To add fuel:

1. Ensure the machine is in **safe condition** before beginning to fuel.
2. Allow the engine and muffler to cool.
3. Clean area around fuel fill cap.
4. Carefully remove cap.
5. Using a clean funnel, fill fuel tank to 1/2" (1.25cm) below bottom of filler neck to provide space for any fuel expansion. Do not overfill.
6. Install fuel fill cap securely and wipe up any spilled fuel.



Caution: Fire Hazard - No Smoking
To Prevent serious injury or death:

- Do not smoke while refueling
- Keep sparks, flames, and hot material away
- Ensure the engine is off and cooled
- Ensure muffler is cooled

Safe condition

- involves the following procedure:
- shut off the engine
- ensure all components have stopped moving.
- remove and pocket the ignition key (if applicable)
- disconnect the battery (if applicable)
- block & chock the wheels

5 TRANSPORTING



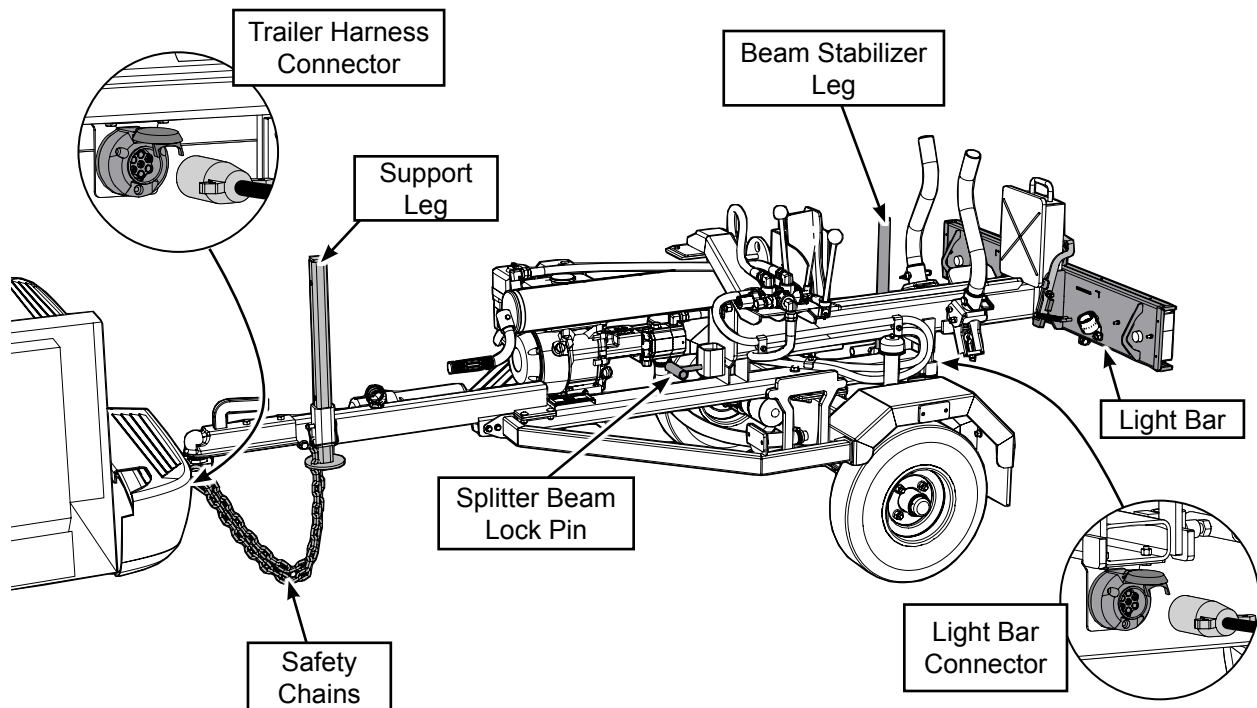
TRANSPORT SAFETY

- Comply with laws governing highway safety and movement of machinery on public roads.
- Plan your route to avoid heavy traffic.
- Always install transport locks, pins or brackets before transporting.
- Do not drink and drive.
- 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.
- Never allow riders on the machine.

5.1 PREPARE FOR TRANSPORT:

When transporting the machine, review sections ball & coupler & machine setup and follow these instructions:

- Be sure all bystanders are clear of the machine.
- Ensure the lock pin is fully engaged on the pivoting splitter beam.
- Raise and secure the front support leg and the splitter beam stabilizer leg before moving or transporting.
- Remove the light bar from the store position and move to the transport position and ensure it is securely latched. Connect the 7 pin plug. (reverse steps in "Machine Setup")
- Connect the trailer harness cable to the tow vehicle.
- Clean the lights and reflectors and be sure they are working.
- Be sure you are in compliance with all applicable lighting and marking regulations when transporting.
- Be sure that the machine is securely attached to the tow vehicle.
- Attach the safety chain securely to the tow vehicle to prevent unexpected separation. Cross the chains when attaching to the tow vehicle.
- Check tires for correct pressure, inspect for cuts or damaged rims.
- Check lug nuts and torque if necessary. Inspect after 20-25 miles (32-40 Km) and regularly check at least weekly.
- Inspect and replace any axle dust caps that are missing, damaged or leaking.



6 STORAGE



STORAGE 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.

6.1 PLACING IN STORAGE

After the season's use, the machine should be thoroughly inspected and prepared for storage. Repair or replace any worn or damaged components to prevent any unnecessary down time at the start of next season. To insure a long, trouble free life, this procedure should be followed when preparing the unit for storage:

1. Clear the area of bystanders, especially small children.
2. Fully retract the cylinder ram.
3. Thoroughly wash the machine using a pressure washer to remove all dirt, mud, debris and residue.
4. Inspect the wedge, cylinder ram and wear plates for damage or entangled material. Repair or replace damaged parts. Remove all entangled material.
5. Touch up all paint nicks and scratches to prevent rusting.
6. Turn fuel valve OFF.
7. Select an area that is dry, level and free of debris.
8. Unhook from tractor or tow unit.
9. If the machine cannot be placed inside, cover with a waterproof tarpaulin and tie securely in place.
10. Store the machine in an area away from human activity.
11. Do not allow children to play on or around the stored machine.



Stored

6.2 REMOVING FROM STORAGE

When removing this machine from storage, follow this procedure:

1. Review and follow the pre-operation checklist.
2. Review safety and operation procedures.
3. Remove the tarpaulin if covered.
4. Install and connect the battery.

IMPORTANT

Review the Engine owners manual concerning storage when preparing the splitter for storage or retrieving from storage.

7 SERVICE AND MAINTENANCE



MAINTENANCE SAFETY

- Follow ALL the operating, maintenance and safety information in the manual.
- Support the machine with blocks or safety stands when working beneath it.
- 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 of the towing vehicle in a closed building. The exhaust fumes may cause asphyxiation.
- Use only tools, jacks and hoists of sufficient capacity for the job.
- Make sure all guards are in place and properly secured when maintenance work is completed.
- Keep hands, feet, hair and clothing away from moving or rotating parts.
- Clear the area of bystanders, especially small children, when carrying out any maintenance and repairs or making any adjustments.

7.1 SERVICE

7.1.1 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 Fuel Type:**

Refer to the engine manufacturer's manual for fuel type / fuel capacity information.

Unleaded Fuel, Fuel tank capacity:

Honda GX160 / GX200 3.6 L

4. **Hydraulic Fluid Capacities:**

Use a Dexron 3 Automatic Transmission Fluid.

| Model | Capacity |
|---------------|-----------|
| WX540 / WX640 | 13 litres |

5. **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.

7.1.2 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 passage. Replace fitting if necessary.

! ATTENTION !

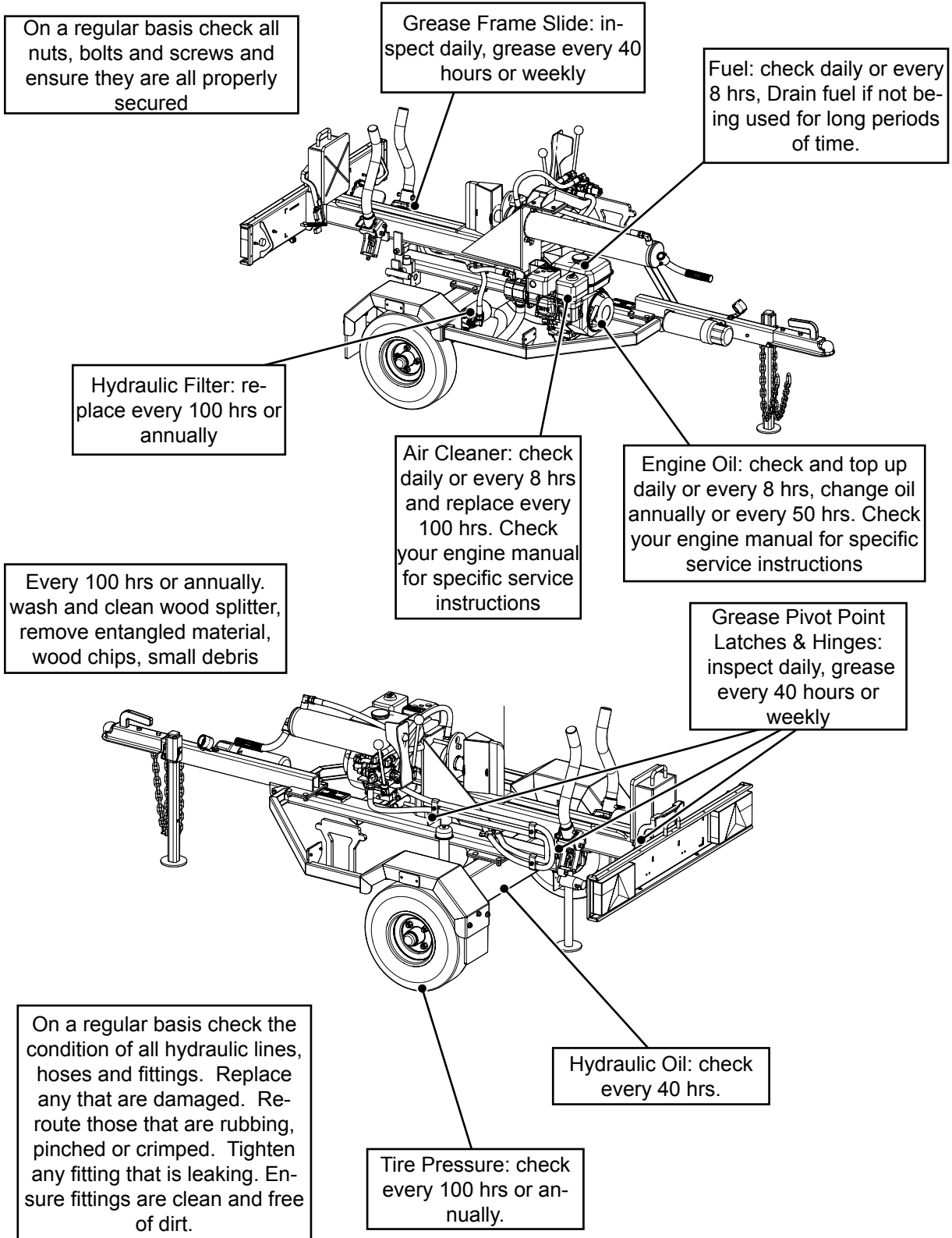
Always read the engine Operator's Manual supplied with the machine for the detailed service, maintenance and operating procedures.

7.2 SERVICE ILLUSTRATION

See Service Record Chart

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



7.3 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]

7.4 HYDRAULIC SYSTEM OIL FILTER

1. Review the Operator's Manual for the splitter.
2. Place all controls in neutral, stop and disable engine before maintaining.
3. Allow the machine to cool before changing the filter. Hot oil can cause burns if it contacts exposed skin.
4. Place a pan under the filter head.
5. Remove the oil filter, grasp the filter firmly and turn counter-clockwise. An oil filter wrench may be used if required.
6. Find and inspect the "O" ring, replace if damaged or worn. Apply a light coat of oil to the "O" ring.
7. Install the replacement filter, turn clockwise. Snug up by hand and then tighten 1/2 turn.
8. Run the machine for 1-2 minutes while operating cylinder and check filter head for oil leaks.
9. If leaks are found around the filter, tighten slightly. If leaks persist repeat steps 6-9.
10. Check hydraulic reservoir oil level. Top up as required with Dexron III Transmission Fluid.
11. Place the spilled oil in an approved container and dispose of in an environmentally safe manner.

8 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 | |
|---|--|---|---------|--|
| Cylinder rod moves slowly or doesn't move, may hear squeeling or hissing noise. | No pressurized hydraulic oil. | Oil filter plugged. Change filter. | | Ensure machine is off and cooled down. |
| | No pressurized hydraulic oil | Low hydraulic oil level, top up | | Ensure machine is off and cooled down |
| | Wood jammed around wedge. | Shut machine off and safely remove wood. | | Ensure machine is off |
| | Not enough pressure. | Call technician, system relief setting may be low (below 2750 psi). | | Ensure machine is off and call hydraulic technician. |
| | Low engine speed. | Check that choke is off, check throttle is set to maximum. | | |
| Control handle doesn't go to neutral after rod is fully retracted. | Detent set too tight. | Call technician, adjustment required with detent on valve. | | Ensure machine is off and call hydraulic technician. |
| | Hydraulic fluid too cold. | Allow machine to warm up. | | |
| | Hydraulic fluid is too old or contaminated. | Change hydraulic fluid and filter | | Ensure machine is off and cooled down. |
| Control handle goes to neutral before rod is fully retracted. | Detent set too loose. | Call technician, adjustment required with detent on valve. | | Ensure machine is off and call hydraulic technician. |
| Control handle doesn't go to neutral when released. | Control may be damaged. | Call technician, control may need service or be replaced. | | Ensure machine is off and call hydraulic technician. |
| Cylinder stops on contact with wood. | Second stage on pump not functioning. | Call technician, pump may need service or be replaced. | | Ensure machine is off and call hydraulic technician. |
| Wedge jumps. | Wedge frame jamming. | Lubricate wedge frame wear plates. | | Ensure machine is off. |
| Leaking hydraulic hose. | Hose worn or damaged. | Replace hose. | | Ensure machine is off and cooled down. |
| Leaking cylinder. | Seals worn. | Call technician, seal replacement may be required. | | Ensure machine is off and call hydraulic technician. |
| Engine related issues. | Refer to your engine instruction manual for specific trouble shooting instructions / requirements. | | | |

9 SPECIFICATIONS

9.1 MECHANICAL

| | WX540-LEU | WX640-LEU |
|--------------------------------|-------------------------------|----------------------|
| Mounting | Trailer Mounted | |
| Engine Model | Honda GX160 | Honda GX200 |
| Engine CC | 160 CC | 196 CC |
| Cylinder Diameter | 4" / 102mm | 4.5" / 114mm |
| Cylinder Stroke | 24" / 609mm | |
| Splitting Force | 20 Ton / Tonne | 25 Ton / Tonne |
| Cycle Time | 14 Sec | |
| Standard Valve Type | 3-Pos. Sprng Loaded To Center | |
| Hydraulic Pump Type | 2 Stage | |
| Hydraulic Pump Flow | 11 gpm / 42 lpm | |
| Bed Height | 24" / 61cm | 27" / 69cm |
| Wedge Height | 9" / 23cm | 10" / 25.5 Cm |
| Tire Size | 4.80-8 LRC USATrail E-marked | |
| Tire Type | Highway | |
| Safety Chains | Standard | |
| Ball Hitch Size | 50mm | |
| Trailer Light Package | Highway | |
| Splitter Orientation | Horizontal / Vertical | |
| Optional 4-Way Splitting Wedge | #4120 | #4130 |
| Shipping Weight | 470 lbs / 214 kg | 530 lbs / 241kg |
| DIMENSIONS (L x W x H) Inches | 104.75 X 49.6 X 41.25 | 105.5 X 49.5 X 44.25 |
| Centimetres | 266 X 126 X 105 | 268 X 125.75 X 112.5 |

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

9.2 BOLT TORQUE

CHECKING BOLT TORQUE

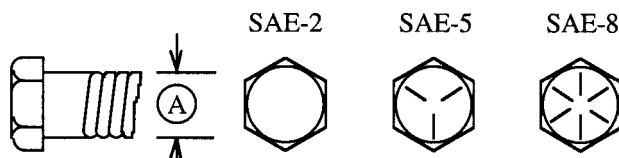
The tables shown below give correct torque values for various bolts and capscrews. Tighten all bolts to the torques specified in chart unless otherwise noted. Check tightness of bolts periodically, using bolt torque chart as a guide. Replace hardware with the same strength bolt.

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.

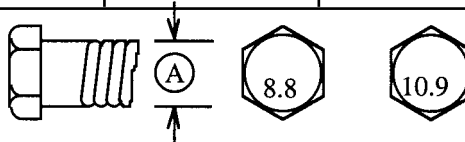
ENGLISH TORQUE SPECIFICATIONS

| 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 |



9.3 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. Lubricate connection and hand tighten swivel nut until snug.
4. To prevent twisting the tube(s), use two wrenches. Place one wrench on the connector body and with the second tighten the swivel nut to the torque shown.

| Tube Size OD | Nut Size Across Flats | Torque Value* | | Recommended Turns To Tighten (After Finger Tightening) | |
|-----------------|-----------------------------|------------------|-----------|---|------------|
| | | (N.m) | (lb-ft) | (Flats) | (Turn) |
| 3/16 | 7/16 | 8 | 6 | 1 | 1/6 |
| 1/4 | 9/16 | 12 | 9 | 1 | 1/6 |
| 5/16 | 5/8 | 16 | 12 | 1 | 1/6 |
| 3/8 | 11/16 | 24 | 18 | 1 | 1/6 |
| 1/2 | 7/8 | 46 | 34 | 1 | 1/6 |
| 5/8 | 1 | 62 | 46 | 1 | 1/6 |
| 3/4 | 1-1/4 | 102 | 75 | 3/4 | 1/8 |
| 7/8 | 1-3/8 | 122 | 90 | 3/4 | 1/8 |

The torque values shown are based on lubricated connections as in reassembly.

9.4 HYDRAULIC FITTING TORQUE

It is extremely important safety procedure to apply and maintain proper wheel mounting torque on your trailer axle.

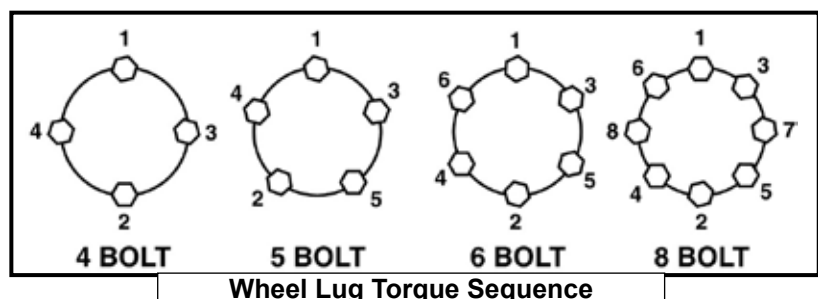
Torque wrenches are the best method to assure the proper amount of torque is being applied to a fastener.

Wheel lugs should be torqued before first road use and after each wheel removal. Check and re torque after the first 16Km (10 miles), 40Km (25 miles), and again at 80Km (50 miles). Check periodically thereafter.

Note: Wheel lugs must be applied and maintained at the proper torque levels to prevent loose wheels, broken studs, and possible dangerous separation of wheels from your axle.

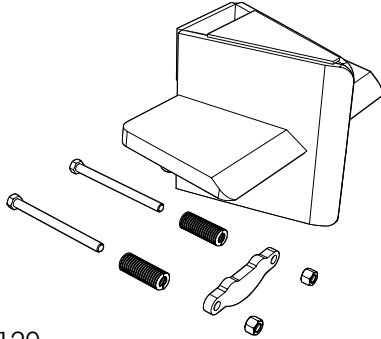
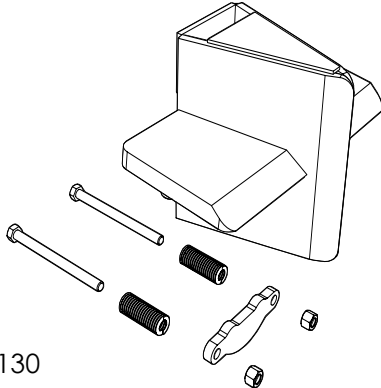
- Start all lugs by hand to prevent cross threading.
- Tighten lugs in sequence, per wheel lug torque sequence chart.
- The tightening of the fasteners should be done in stages. Following the recommended sequence, tighten fasteners per wheel torque requirements chart.

| Wheel Torque Requirements | | | | |
|---------------------------|-------------|-----------|-----------|-------------|
| Wheel Size | Torque Unit | 1st Stage | 2nd Stage | 3rd Stage |
| 8" | ft-lbs | 12 - 20 | 30 - 35 | 45 - 55 |
| | Nm | 16 - 26 | 39 - 45.5 | 58.5 - 71.5 |
| 12" | ft-lbs | 20 - 25 | 35 - 40 | 50 - 60 |
| | Nm | 26 - 32.5 | 45.5 - 52 | 65 - 78 |
| 13" | ft-lbs | 20 - 25 | 35 - 40 | 50 - 60 |
| | Nm | 26 - 32.5 | 45.5 - 52 | 65 - 78 |
| 14" | ft-lbs | 20 - 25 | 50 - 60 | 90 - 120 |
| | Nm | 26 - 32.5 | 65 - 78 | 117 - 156 |
| 15" | ft-lbs | 20 - 25 | 50 - 60 | 90 - 120 |
| | Nm | 26 - 32.5 | 65 - 78 | 117 - 156 |
| 16" | ft-lbs | 20 - 25 | 50 - 60 | 90 - 120 |
| | Nm | 26 - 32.5 | 65 - 78 | 117 - 156 |



8 ACCESSORIES

Call your dealer for pricing and availability

| | |
|---|---|
|  <p>#4120</p> | <p>#4120 - 4 WAY WEDGE</p> <p>For WX540-LEU</p> <p>Boost your productivity and make quick work out of logs by splitting four pieces at once. This is an ideal way to save time.</p> |
|  <p>#4130</p> | <p>#4130 - 4 WAY WEDGE</p> <p>For WX640-LEU</p> <p>Boost your productivity and make quick work out of logs by splitting four pieces at once. This is an ideal way to save time.</p> |

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