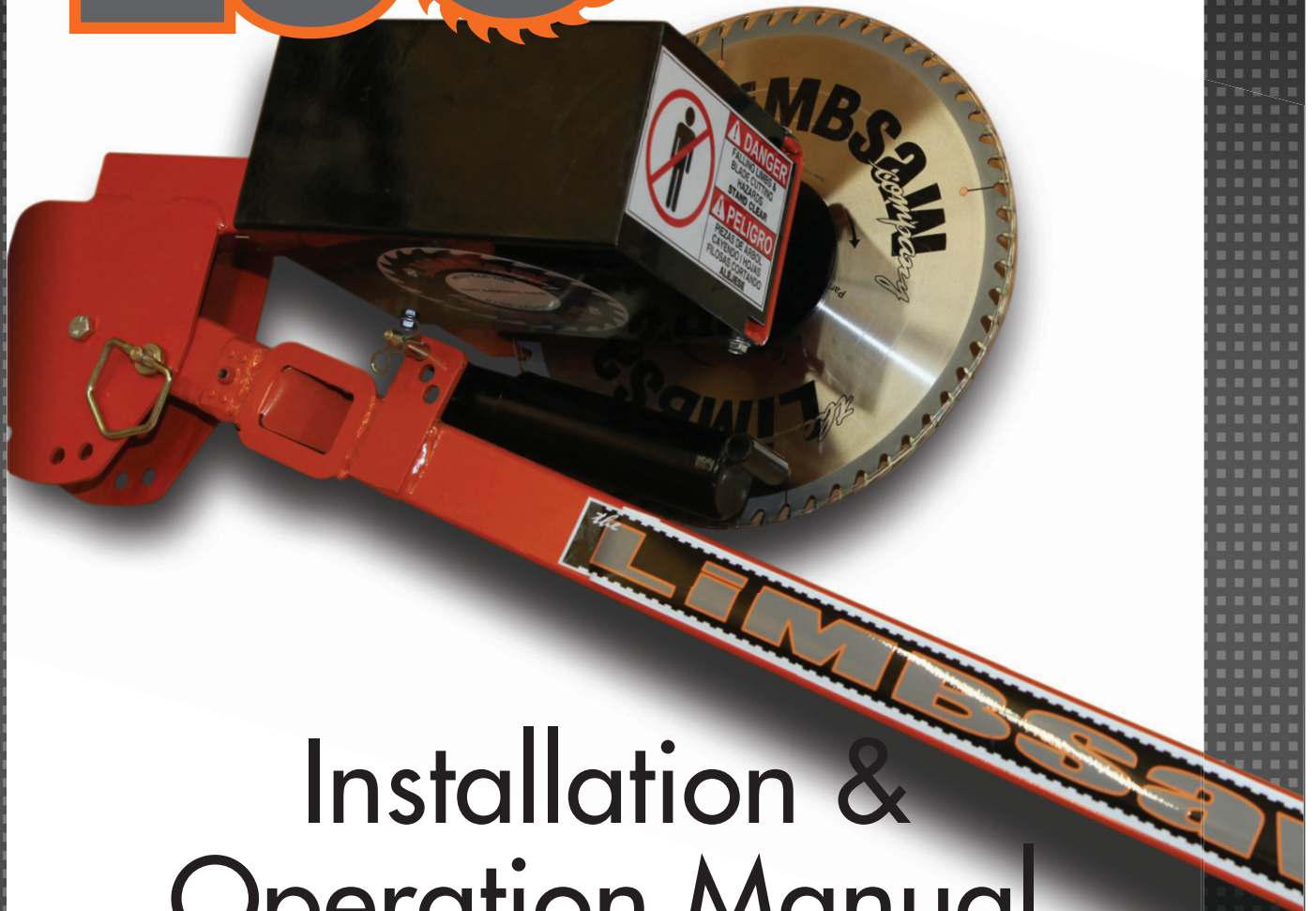
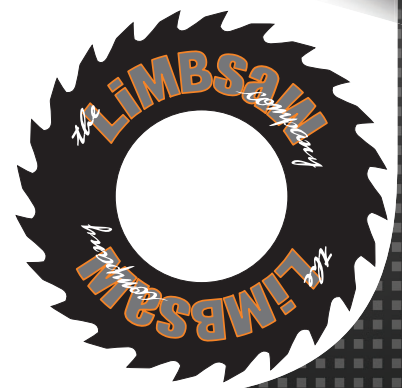


LSC Circular Saw



Installation & Operation Manual

2014 Edition for
The LSC Circular Saw
www.limbsaw.com



CUSTOMER PREPARATION CHECKLIST

- Verify packaging for all contents.
- Follow assembly and installation carefully, do not proceed if you have any questions.
- Contact The LIMBSAW Company with any questions you have regarding assembly or installation.
- Ensure that any and all fasteners are secured.
- Operators have read all **Safety & Operation** sections of this manual and understand the safe and proper use of the equipment.
- I understand that unauthorized alteration voids the warranty.

Model Number: _____

Serial Number: _____

Do not remove this checklist from the Operator's Manual.

It is the responsibility of the owner to complete the procedures listed above.



WARNING

OSHA, ASABE, SAE and ANSI standards require the use of protective guards at all times for non-agricultural use. The LIMBSAW Company strongly recommends that such guards should be used to minimize risk of property damage, serious bodily injury or even death from object hazards or by contacting rotating parts, i.e. driveline, tires, etc.

OSHA STD 1928.57: GUARDING OF FARM FIELD EQUIPMENT. CSA Z432-04 (R2009): SAFEGUARDING OF MACHINERY.
BS EN 953:1997+A1:2009: SAFETY OF MACHINERY; GUARDS. General requirements for the design and construction of fixed and movable guards



Table of Contents

Customer Preparation Checklist 2

Welcome 4

Using This Manual 4

 Owner Assistance 4

 Customer Service 4

Safety 5

 Safety Alert Symbols 5

 Signal Words 5

 High Pressure Fluids Hazard 7

 Circular Saw Safety 7

 Safety Labels 8

Shipped Container Contents 9

Assembling The Saw 9

 Installing Circular Blade 9

Installing The Receiver 10

Mounting The Saw 11

Operational Guidelines 11

Optional Rotating Receiver Installation 12

Using Your LSC CIRCULAR SAW 13


 Removal of LSC Circular Saw during Transportation 13

Replacement Parts Information 14

Warranty Information 15

References 16

This manual contains the recommended installation instructions and operational safety guidelines. Please completely familiarize yourself with these instructions and safety guidelines to minimize chances of injury and to increase professional results regarding your LSC Circular Saw and its use.

 **WARNING:**

If you do not understand any part of the instructions and precautions in this manual, please contact your local LIMBSAW dealer or representative, CONTACT US thru the www.Limbsaw.com website, or call 1-580-272-3194 **BEFORE** beginning installation or operation.

WELCOME

LIMBSAW was invented by Wendell McCracken of Pauls Valley, Oklahoma. A retiree with a Master's degree in Electrical Engineering, Wendell and his wife Donna raised eight children on their 250 acre pecan and cattle farm where tree trimming was an ongoing family chore.

Having invented and patented items his whole life, Wendell came up with the LIMBSAW after his children moved away and left pruning to him and his wife. Far from his first invention, Wendell has worked on radar systems for the B-52 Hustler project and several other patents relating to phone systems and "down hole" measuring devices. He has even worked on armored bullet-proof cars and, most recently, built his own airplane.

The Limbsaw Company, LLC has developed a new attachment! The **LSC Circular**, developed for trimming under fencelines and cutting branches that are too small for chainsaws. Using the same concept of trimming from the comfort and safety of your tractor seat, regain areas of your property and fence lines that are unusable due to brushy overgrowth.

When used with our rotating actuator, you can pivot this tool 22, 30, 45 and 90 degrees to allow trimming at angles and under fence lines. The cutting head is also interchangeable onto the 8 foot mast of our original tool (Limbinator Saw, LS08). The total weight of the new **LSC Circular** with mast is 105 lbs. The interchangeable head weighs 49 lbs.

Application

Manufactured with unsurpassed durability, every detail has been tailored for optimum safety and function. A flow control valve has been installed to handle pressure up to 3000 PSI. The hydraulic system has a built in bypass control feature to prevent the saw from turning in reverse. Blade guards maintain the security of the saw blade under the most stressful operation.

- Mounts directly to front end loader
- Trims limbs to 20+ feet
- 21 horse power
- 10 GPM flow rate @ up to 2600 RPM
- 16 5/16" carbide tip blade easily replaced
- Cuts branches up to 4.5" in diameter

Still changing the way you *trim trees.*

REMEMBER SAFETY FIRST!

Be Alert - Eliminate unsafe habits and risky behavior, recognize hazards as they exist and read and follow the Installation & Operator's Manual for your LSC Circular Saw and your tractor!



USING THIS MANUAL

This Operation Manual is designed to help familiarize you with safety, operation and adjustments. Read this manual and follow the recommendations to help ensure safe and efficient operation.

The information contained within this manual was as current as possible at the time of publication. Your model may vary in design and configuration from those shown in this manual. Some information contained within may conflict with actual product, usage and procedures. Please contact the manufacturer about any information that you do not understand or is unclear, PRIOR to operation of this equipment.

Some parts may change slightly to assure you of the best performance.

To order a new Manual or Parts contact The LIMBSAW Company.

Your LSC Circular Saw has an instructional video available online as well as this Operation Manual in PDF format. Both have been designed to assist you in achieving optimal results with your LSC Circular Saw.

The Operation Manual is a compilation of engineering data and field experience, and contains general information for adjustments and operation as every situation varies to usage, and location specifics; with experience using the LSC Circular Saw and this manual, you should be able to find the right procedures that is perfectly suitable to your needs.

Terminology

"Right" or "Left" as used in this manual is determined by facing forward in the direction the machine will operate while in use unless otherwise stated.

Owner Assistance

If customer service, parts or repair is required, contact The LIMBSAW Company to reach our trained personnel who will assist you with repair parts and equipment needed to service your LSC Circular Saw. The parts on your LSC Circular Saw have been specifically designed and should only be replaced with genuine LSC Circular Saw parts. Therefore, should your LSC Circular Saw require replacement parts contact our support personnel.

Customer Service

The LIMBSAW Company wants you to be satisfied with your new LSC Circular Saw. If for any reason you do not understand any part of this manual or are not satisfied with the service required, the following actions are suggested:

Contact our Customer Service Department. We will respond within 24 hours; usually much more quickly. You may contact our Customer Service by calling 1-580-272-3194 during our normal business hours (Monday thru Friday 8am to 5pm CST). After hours or weekend support, simply leave a voice message for a specialist. He or she will be automatically notified to call you back promptly.

For further assistance: contact us via the web:

<http://www.limbsaw.com/>

Or you may contact us in writing at:

The LIMBSAW Company
2701 36th Ave. SE
Norman, OK 73026



Safety Alert Symbols

The **SAFETY ALERT SYMBOL** indicates there is a potential hazard to personal safety involved and extra safety precaution must be taken. When you see this symbol, be alert and carefully read the message that follows it. In addition to 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 equipment.

Owner/operator can prevent and is responsible for accidents or injuries occurring to other people, themselves, and/or property and equipment.

Thoroughly read and understand the operator's manual, references and other material supplied with the LSC Circular Saw and tractor. If the operator cannot read English, it is the owner's responsibility to explain this material to them. This publication is available as a special request in other languages.

Refer to the "Safety Label" section, read all instructions noted on them.

We strongly recommend that children are not allowed to operate machinery. Do not allow untrained people to operate or service equipment.

Operator Safety

- Operator must be familiar with these instructions and functions of the LSC Circular Saw and tractor before use.
- Operate only with tractor, skid-loader or backhoe equipped with ROPS and seat belts.
- Operate implement from the Driver's seat only.
- Disengage the hydraulic pump, stop the engine and be sure all equipment is stopped before dismounting from tractor. Dismounting from a moving tractor could cause serious injury or death.

Machinery Safety

- **Do not leave tractor and/or LSC Circular Saw unattended while it is running.**
- Inspect both the tractor and the LSC Circular Saw before you operate. Be sure hardware is tight. Repair or replace damaged, badly worn, or missing parts.
- Be sure guards and shields are in good condition and secured before operating the implement. Make any necessary adjustments before operation.
- Do not allow anyone to stand in front of the tractor or under the implement during operation.
- Make sure all persons are clear of the working area. Stop machine if anyone enters the area. Never carry passengers and keep pets, livestock and bystanders away.
- Inspect the area where the equipment is to be used and remove all objects prior to operating the LSC Circular Saw and tractor.
- Disengage hydraulic pump, fold and secure boom during travel, remove from vehicle when transporting vehicle or not in use.
- Only operate during daylight or with good artificial light.



DANGER:
AVOID OPERATING EQUIPMENT NEAR OVERHEAD POWER LINES! *The required minimum safe distances (clearance) from overhead power lines is 10 ft. Contact with electrical connections could result in injury or death and equipment damage. Never touch downed power lines.*

- Watch out for wires and other obstacles when raising implement. Have a qualified electrician de-energize powerlines within your work area prior to operation. Contact with electrical connections could result in injury or death and equipment damage.



WARNING:
AVOID INJURY FROM FALLING OBJECTS! *Recognize the hazards associated with working near overhead obstructions. Your vehicle should be fitted with an overhead guard to offer protection from the impact of falling limbs and branches.*

- Slow down and use care when approaching blind corners or other objects that obscure vision. Remember that the LSC Circular Saw extends beyond the front of the loader and requires additional clearance in front of the loader. Do not turn sharply. Use additional CAUTION when turning or operating under adverse surface conditions.
- Use care when reversing. Look behind and down before backing up to be sure of a clear path.
- If you hit an unexpected object or if abnormal vibration occurs, stop the machine and inspect it. Make repairs before resuming operation of equipment. Keep LSC Circular Saw properly maintained and in good working order.

Practice Safe Maintenance

Understand procedures before starting any work. Use proper tools, and equipment, refer to this Operation Manual for additional information.

- Work in a clean dry level area.
- Check all fluid levels on the tractor before operation.
- If you need to refill fuel or oils wait approximately one hour for these fluids to cool.
- Lower the implement to the ground, put the tractor into park, turn off engine and remove key before performing any maintenance.
- Allow implement to cool completely.
- Even with the engine turned off, hydraulic systems and mechanical systems can fail or movement of levers can cause equipment to drop unexpectedly causing severe injury or death.
- Do not grease or oil implement while it is in operation.
- Inspect all parts. Make sure parts are in good condition and installed properly.
- Remove build-up of grease, oil or debris.
- Remove all tools and unused parts from implement before operation.
- Never tamper with safety devices. Check their proper operation regularly.

BE AWARE OF SIGNAL WORDS: A signal word designates a degree of level of hazard seriousness.

NOTE: Provides helpful information to the operator.

IMPORTANT: Indicates failure to observe may cause damage to equipment.

WARNING: Indicates a potentially hazardous situation which, 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.¹

CAUTION: Indicates an imminently hazardous situation, which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.¹

DANGER: Indicates an imminently hazardous situation, which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations, typically for machine components that, for functional purposes cannot be guarded.¹

1. Sentry Insurance, FEMA, *Owner's and Operators Manuals for Farm Equipment*, Sentry Insurance, Stevens Point, WI, revised Management Bulletin No. 112, 90-42; March 2007, pp S-2.

Emergency Preparedness

- Keep a fire extinguisher on your tractor and check the expiration date periodically!
- Keep a well stocked first aid kit on your tractor.
- Save In Case of Emergency (I.C.E) numbers on your cell phone (including doctors, hospital and 911 services).
- Keep I.C.E. numbers next to a home or office phone.



Keep Riders off Machinery

- Only allow the operator on the machine. Keep riders off!
- Riders may obstruct the operator's view resulting in the tractor being operated in an unsafe manner.
- Riders on the tractor or LSC Circular Saw may be struck by foreign objects or thrown off the machine causing serious injury.
- Never allow children to operate equipment.



Wear Protective Equipment

- Protective clothing and equipment should be worn.
- Wear clothing and equipment appropriate for the job. Avoid loose fitting clothing to avoid entanglement with moving parts.
- Keep hands, feet, clothing, and long hair or anything worn that can be caught away from power-driven parts.
- Prolonged exposure to loud noise can cause hearing impairment or loss. Wear suitable hearing protection such as earmuffs or earplugs.
- Operating equipment requires the full attention of the operator.
- Avoid wearing radio headphones, MP3 players or using cell phones while operating equipment.



Transporting & Towing Loads Safely

- Comply with state and local laws.
- Maximum Travel speed for implement is 20 mph. DO NOT EXCEED!
- Never travel at a speed which does not allow adequate control of steering and stopping.
- Sudden braking can cause a towed load to swerve and upset.
- Reduce speed if towed load is not equipped with brakes.
- IMPORTANT! Do not tow any load that is more than double the weight of the tractor.
- Stopping distance increases with speed and weight of the towed load. Travel slowly and allow extra time and distance to stop.
- Transport only with clean reflectors, SMV signage and working lights.
- Ensure that the implement components are in "up" or "Travel" position before moving. Always remove LSC Circular Saw from vehicle before transport.
- Lower the implement to "field position" when ready to use. This keeps the load pulling below the center of gravity.

Avoid Tipping

- Danger of tipping is increased greatly with tires are set in narrow tread setting and driving at a high rate of speed.
- LSC Circular Saw weight (based on model) plus 2505 pounds of water weight (8.35 x 300 gallons) must not exceed combined weight of tractor and operator. If the LSC Circular Saw + water exceeds this weight then refer to the tractor's manufacturer's recommendations for wheel weights or counterweights for added stability when operating with LSC Circular Saw.



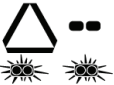
Use Caution Around Hydraulic Systems

- Worn, lose or malfunctioning hydraulic hoses can cause highly pressurized oil to escape, potentially causing great harm to humans or equipment. Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.
- Keep Hydraulic hoses out of direct sunlight and in a controlled climate during storage periods to prevent deterioration and increase hose life.
- Avoid High-Pressure Fluids. Escaping fluid under pressure can penetrate the skin causing serious injury. Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.



Use Safety Lights and Devices

- Slow moving tractors, self-propelled equipment, and towed implements can create a hazard when driven on public roads. They are difficult to see, especially at night.
- Flashing WARNING lights and turn signals are recommended.
- Use lights and devices provided with the machinery.



Tire & Wheel Safety

- Read and understand any manufacturer's warning contained in literature or molded into the tire sidewall before servicing tires.
- Only use specialized tools as recommended by tire suppliers for mounting or dismounting tires.
- Explosive separation of a tire and rim parts can cause serious injury or death.
- Do not attempt to remove a tire from the rim without removing air pressure as this may cause serious injury or death.
- Check tires for low pressure, bulges (bubbles), cuts, damaged rims or missing lug bolts and nuts.
- Do not re-inflate a tire that has been operated in a run-flat or under inflated condition (80% or less than recommended pressure). Demount and inspect tire and rim parts before re-inflating.



Periodically, inspect the equipment's tires:

- Inspect inside of tire for loose cords, cuts, penetrating objects or other casing damage.
- Inspect valve cores. Replace valve cores if damaged or leaking.
- Lubricate with only approved tire mounting lubricant or mild vegetable oil soap solution. Do not use anti-freeze, silicones or petroleum base lubricants as these will damage tires.
- Un-repairable tires should be destroyed and replaced with tire having the same rim diameter designation and suffix letters.
- Do not mount or use damaged tires or rims.
- Check wheel hardware for tightness. Loose wheel nuts may cause instability resulting in an accident that may result in serious injury. Perform this check often during the first 100 hours of operation.
- Do not attempt to mount a tire without proper equipment or experience in performing this operation.
- Always maintain proper tire pressure. Do not over inflate above the recommended pressure. Low pressure may cause loss of control during operation while on slopes or wet/slick surfaces.

Tire & Wheel Safety (cont.)

- Never attempt to weld or heat a wheel and tire assembly. Heat increases air pressure resulting in tire explosion causing serious injury or death. Welding can impair the structural integrity by weakening or deforming the wheel.
- To safely inflate tires use a clip-on chuck and extension hose long enough to allow you to stand to one side. DO NOT STAND or SIT IN FRONT OF or OVER the tire assembly.
- Never use a tire as a step as the tire may roll and cause serious injury.
- Most agricultural tire, wheel, hub and spindles have a maximum speed of 25 mph.

Avoid High Pressure Fluids Hazard

It is impossible to overemphasize the importance of implementing and adhering to safe practices when working with pressurized fluids, and components in hydraulic & pneumatic systems. A fluid system failure can result in equipment damage, production losses, personal injury, or even death.

CAUTION:
Avoid injury! Escaping fluid under high pressure can penetrate the skin and cause serious injury. A pinhole leak in any portion of the hydraulic system while pressurized can puncture clothing such as gloves, coveralls and penetrate skin from a distance of as much as four inches.



Avoid the hazard by relieving the pressure before connecting hydraulic or other lines otherwise the connectors will not lock safely.

Wear protective equipment such as gloves, long sleeves and safety glasses or goggles.

The LIMBSAW Company highly recommends that a skilled mechanic familiar with hydraulic safety should check hydraulic hoses for leaks while pressurized when leaks cannot be detected while not under pressure.

Run a piece of cardboard along the hose – NOT BODY PARTS! If the hydraulics need to be activated for any reason during the work, the mechanic should step back a safe distance, then signal the operator to start the machine.

Major areas for maintaining safe conditions and efficient operations with regard to fluid systems:

- Inspecting hoses and components before starting machinery and draining pressure from the hydraulic lines before inspecting them for leaks. Most hydraulic leaks can be detected without the need to pressurize the lines. Even if the machine has been shut off, operators need to ensure that the pressure has been relieved from the hoses.
- Replace worn hoses, any connectors or components with the recommended manufacturer's replacement parts that meet required specifications for safe operation.
- Tighten all connectors before applying pressure. Follow proper hose assembly and routing guidelines to prevent premature failures and promote hose safety.
- Keep Hydraulic hoses out of direct sunlight and in a controlled climate during storage periods to prevent deterioration and increase hose life.

If an accident occurs seek immediate medical treatment! Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. If your Doctor is unfamiliar with this type of injury, reference a knowledgeable medical source.

Your Tractor, Skidloader, Backhoe (vehicle)

- It is important that you completely understand and follow all safety precautions listed in your tractor, skidloader, backhoe or other vehicle manual. Check with your LIMBSAW dealer to be sure that the LSC Circular Saw will be compatible with your vehicle. Your ability to drive and maneuver this vehicle and its front end loader in a safe, familiar, and professional manner is directly related to your safety and the professional results you will obtain with your saw.
- Cuts are made by lowering the loader and/or rotating the bucket in a skilled manner. Uneducated driving of your vehicle and use of its loader may cause serious or fatal injury to the operator and bystanders, damage your LSC Circular Saw beyond immediate, simple repairs, or damage your vehicle.
- **Placing too much down pressure on the branch while you are making a cut could result in damage to the saw. Remember, the mechanics and the weight of your saw are what make the cut.**
- Re-read and familiarize yourself with all of the safety and operation instructions in your vehicle manual before installing and operating the LSC Circular Saw on your loader.

IMPORTANT:
Read the entire LSC Circular Saw Installation and Operation Manual and review the information on the limbsaw.com website before installing and operating your unit. Also re-read both your vehicle manual and your LSC Circular Saw Installation and Operation Manual at the beginning of each season to maintain your knowledge of this equipment. Periodically check the website of both your vehicle manufacturer and LSC Circular Saw for recent updates, engineering changes, improvements on equipment, and new videos. Parts and their usage, and the operation of your equipment may change over time. Serious or fatal injury can occur without maintaining proper familiarity with all your equipment.

The Operator

To minimize the chance of injury the operator of this cutting device must be physically capable, mentally aware and not under the influence of any mind influencing substance (drugs, alcohol, etc.) which could alter operator's vision, dexterity or judgment, this includes the influence of fatigue.

- Do not operate your vehicle or saw if you are tired. Operators that are tired or fatigued should immediately discontinue the use of this unit. Lack of concentration due to fatigue may cause loss of control of device leading to possible injury to operator and damage to equipment.
- If you think you have any condition that might impair your physical or mental ability to operate this machine please check with your doctor before beginning use.

Circular Saw Safety

- Look for nails, spikes or other metal in the tree before cutting.
- Disengage the saw when Traveling on rough or uneven terrain.
- Proper personal protective equipment must be worn when operating the saw, which includes hand, foot, leg, eye, face, hearing and head protection.
- Do not wear loose-fitting clothing.
- Be careful that the trunk or tree limbs will not bind against the saw.
- Watch for branches under tension, they may spring out when cut.
- Potential injuries can be minimized by using proper personal protective equipment and safe operating procedures.

SAFETY

Safety Labels

Your LSC Circular Saw comes equipped with all safety labels in place. They were designed to help you safely operate your implement.

Read and follow their directions:

- Keep all safety labels clean and legible.
- Replace all worn, damaged or missing labels. To order new labels contact customer service.
- Some new equipment installed during repairs may require new safety labels to be affixed to the replacement component. When ordering new components make sure the correct safety labels are included in the request.

To install new labels:

- a) Spray water on the surface where the label is to be placed and wipe dry.
- b) Peel backing from the label.
- c) Press firmly onto the surface.
- d) Squeeze out air bubbles with the edge of a credit card.

Standard Safety Labels:

WARNING - Hydraulic Fluid - High Pressure Hazard
DANGER - Falling Limbs & Blade Cutting Hazards
WARNING - Read Manual Before Operation



<h3>WARNING</h3>	<p>Allow saw to reach full speed before cutting. Move slowly into cut. Placing too much down pressure on the branch while you are making the cut or moving too fast will result in stalling the blade. Damage to the saw could also occur.</p> <p>This unit is only designed for trimming trees and branches up to 4.5 inches in diameter and may result in personal injury, damage to your vehicle or saw if used for other purposes. Do not use for cutting metal or masonry.</p> <p>CAUTION: Spinning blade could throw debris. If branches or debris becomes lodged in saw, turn off tractor and secure brake before approaching blade to remove objects. Be sure that all bystanders remain 100 ft from saw when in operation.</p> <p>When used in the horizontal position, avoid cutting into rocks, wire, steel posts, etc as this could damage your blade. When cutting trees taller than 12 ft, be aware</p>	<p>of height of tree. Section tree to prevent tree from falling onto or near driver.</p> <p>Never park or leave your vehicle unattended with the saw in a low position where unauthorized people can have contact with the blade.</p> <p>When burn marks appear on the wood that you are cutting, or soft, easy to cut wood is hard to cut, it's time to sharpen or replace your blade. Never use blade that will exceed 5000 RPM. Always ensure blade is mounted in proper rotating direction.</p> <p>Always wear protective eye and apparel when operating unit to comply with current CSA Standard Z94.1 or ANSI Standard Z87.1.</p> <p>For questions regarding the operation of your saw or to order replacement parts, go to www.limbsaw.com. All rights reserved. Copyright 2014. Patent Pending.</p>
------------------	--	--

<h3>ADVERTENCIA</h3>	<p>Deje que la sierra alcance la velocidad máxima antes de cortar. Mueva lentamente en el corte. Poniendo demasiada presión hacia abajo en la rama, mientras que usted está haciendo el corte, o se mueve demasiado rápido, resultará que se estanque la hoja. También podría producirse daños en la sierra.</p> <p>Esta unidad sólo está diseñada para cortar árboles y ramas de hasta 4.5 pulgadas de diámetro y puede resultar en lesiones personales, daños a su vehículo o vío a si se utiliza para otros fines. No lo utilice para cortar metal o mampostería.</p> <p>PRECAUCIÓN: Girando la cuchilla podría arrojar escombros. Si las ramas o escombros se alojan en la sierra, apague el tractor y el freno de estacionamiento seguro antes de acercarse a la cuchilla para eliminar los objetos presentados. Asegúrese de que todos los espectadores permanezcan 100 pies de la sierra cuando está en funcionamiento.</p> <p>Cuando se utiliza en la posición horizontal, no corte piedras, alambres, postes de acero, etcétera ya que esto podría dañar la cuchilla. Al cortar los árboles más altos de</p>	<p>12 pies, esté consciente de la altura del árbol. Seccione el árbol para evitar que el árbol que cae sobre o cerca de conductor.</p> <p>Nunca estacione o deje su vehículo desatendido con la sierra en una posición baja, donde las personas no autorizadas pueden tener contacto con la hoja.</p> <p>Cuando aparecen marcas de quemaduras en la madera que se está cortando, o suave, fácil de cortar madera es difícil de cortar, es hora de afilar o reemplazar su hoja. Nunca utilice la cuchilla que superará más de 5.000 RPM. Asegúrese siempre de que la hoja se monta en la dirección de rotación apropiada.</p> <p>Siempre use gafas de protección y vestuario al operar la unidad para cumplir con la norma CSA Z94.1 actual o ANSI Estándar Z87.1.</p> <p>Si tienes preguntas sobre el funcionamiento de la sierra o para pedir piezas de repuesto, visita a www.limbsaw.com. Todos los derechos reservados. Derechos de Autor 2014. Patente en trámite.</p>
----------------------	--	--



Handling Waste Product and Chemicals

- Waste products, such as used transmission oil, fuel, coolants, etc. can harm the environment or people.
- Do not use beverage containers for waste fluids – someone may drink from them!
- Contact your local Recycling Center to learn how to recycle or dispose of waste products. Material Safety Data Sheet (MSDS) provides specific details on the chemicals, physical and health hazards, safety procedures for using the chemical and emergency response techniques. The retailer of the chemical products used with your machine is responsible for providing the MSDS for that product.

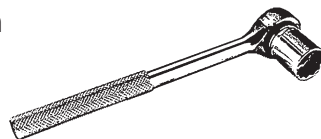
TOOLS REQUIRED



2 9/16" wrenches



1 1/2" wrench

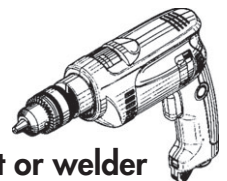


1 1/4" socket wrench

Needle nose pliers

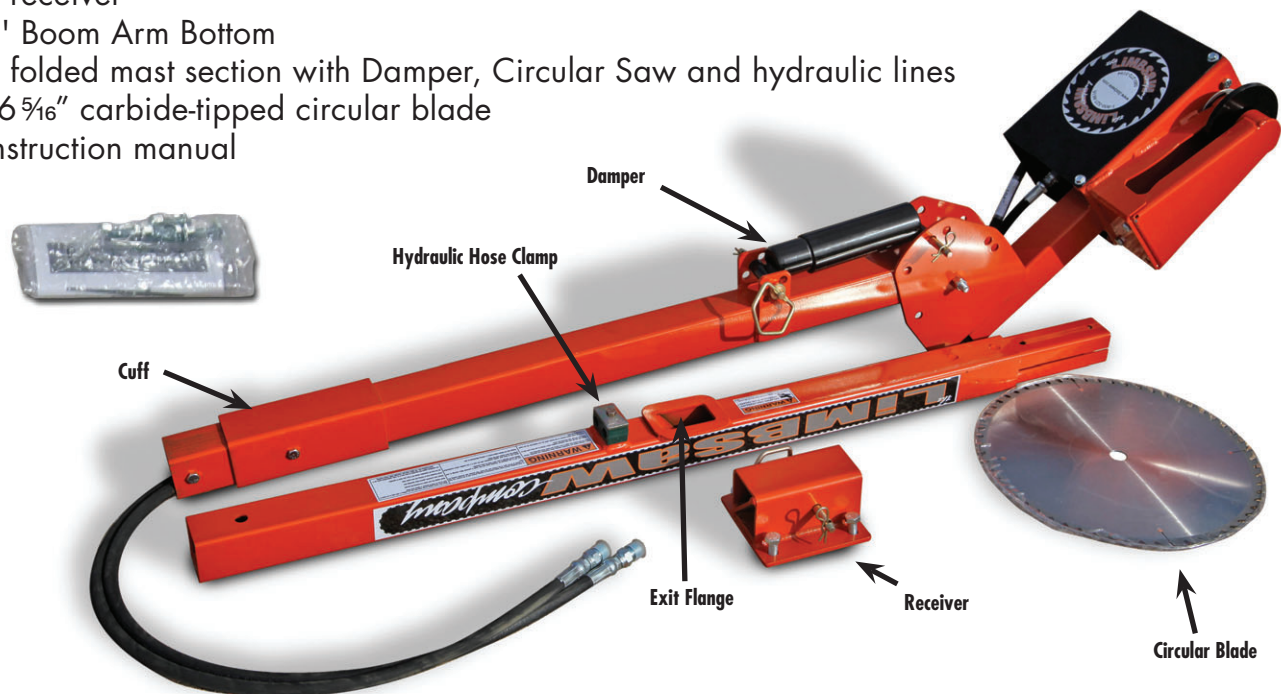


1/2" drill bit or welder (to Mount Receiver)



YOUR SHIPPED CONTAINER SHOULD INCLUDE

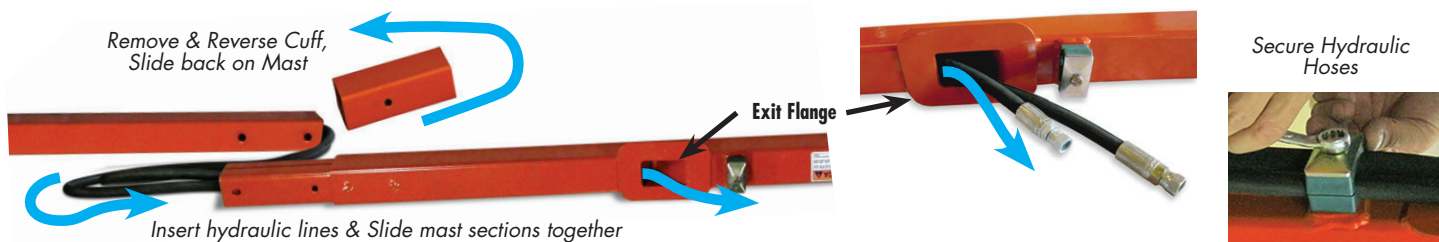
- a receiver
- 4' Boom Arm Bottom
- a folded mast section with Damper, Circular Saw and hydraulic lines
- 16 5/16" carbide-tipped circular blade
- Instruction manual



ASSEMBLING THE SAW

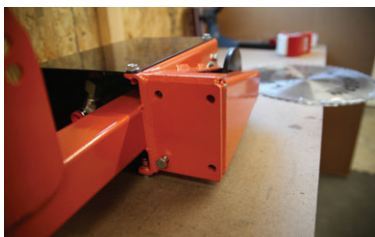
The Mast sections must be joined before mounting LSC Circular Saw to your vehicle.

Mast assembly. Notice that there is a "cuff" bolted to the top piece of the mast. Unbolt the cuff, slide it off the mast, reverse position and slide back on without bolting. Align mast sections and insert hydraulic lines from top mast section into bottom mast section and out exit flange as shown.



Slide sections together firmly ensuring that the holes line up for the bolts. Using the 9/16" wrench, insert 3" bolt through hole on bottom half of mast. Align cuff over seam and attach using 3 1/2" bolt.

Firmly tighten both bolts. Secure hydraulic hoses through hose clamps at bottom of mast using 1/2" wrench.



Mounting Blade. Remove 4 bolts at end of blade guard cover with 9/16" wrench. Remove guard and set aside. Remove cotter pin from castle nut with needle nose pliers. Using 1 1/4" wrench, remove castle nut and black flange washer.



CONTINUED NEXT PAGE

ASSEMBLING THE SAW (continued)

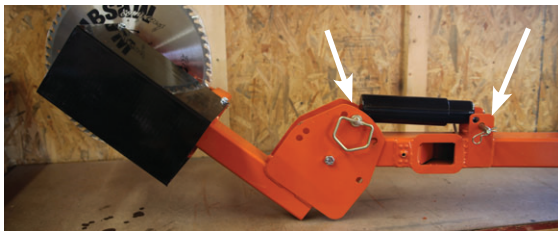
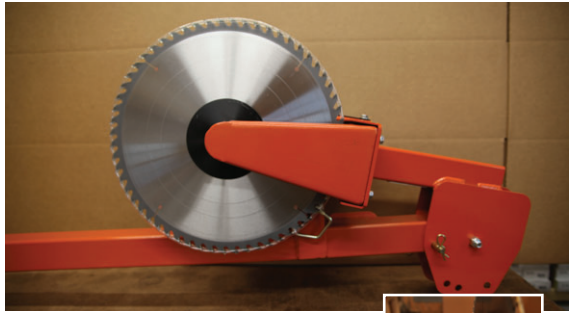
CAUTION: Circular saw blade teeth are sharp.
Use gloves and extreme caution when handling blade.



Flange washer has marking on inside edge
Be sure this edge faces blade during installation.

Mount saw blade with printed side facing motor shown.
— **not showing on guard side of saw.**

This insures that the blade is mounted in the correct position for cutting. Remount black flange washer and castle nut. Tighten castle nut very firmly and reinsert cotter pin in available hole. As you tighten castle nut you can place a screw driver between teeth of blade to keep blade from spinning. Reattach orange blade guard with 4 bolts.



Location of the Damper. For proper operation, the Damper **MUST** be located with the large end facing the motor and using the holes shown.

Review the image carefully and locate the Damper correctly.

(NOTE: Hydraulic hoses in this image have been removed for clarity)



INSTALLING THE RECEIVER

Mounting the Receiver. When using the saw for vertical cuts, always mount the receiver on the back of the loader bucket near the top.

When using the receiver for horizontal cuts, mount the receiver inside the bucket.

Using the provided bolts, drill $\frac{1}{2}$ " holes and securely tighten bolts. Receiver can also be welded in place.



**Mounting location of Receiver for
VERTICAL CUTS**



**Mounting location of Receiver for
HORIZONTAL CUTS**

MOUNTING THE SAW

Before mounting the LSC CIRCULAR SAW into the receiver, **rotate your bucket so the receiver is positioned as shown.** Your saw weighs about 105 lbs. Use caution and/or get help during installation. Lift the saw and insert the end into the receiver until it hits the stop.



Pin and clip to secure. The saw can be removed & stored when not in use.

NOTE: Because every tractor has its hydraulic hookups in a different location, your LSC CIRCULAR SAW **does not** include the hydraulic lines that attach to the vehicle. You will need to purchase these lines with a minimum of $\frac{3}{8}$ " hydraulic hose.

Measure from the auxiliary hookups of your vehicle to the hydraulic hookups on your saw. Allow enough slack in your lines for the full rotation of your bucket.

CAUTION: *Inspect work area thoroughly prior to operation of equipment. Contact with objects other than brush and small trees can cause excessive wear to blade, damage to equipment and personal injury. Be aware of overhead powerlines and other electrical equipment to prevent possible electrocution hazards. Failure to do so can cause injury or death.*

OPERATIONAL GUIDELINES

CAUTION: *Thoroughly read and understand the operation manual, references and other material supplied with the LSC Circular Saw and tractor prior to operating this equipment. Failure to do so can cause injury or death.*

CAUTION: Never drive your vehicle while the Circular Saw is in the open position or is spinning. Always disengage the hydraulics, and fold the saw into the Travel position. Driving your vehicle with the saw in the open position can result in bending the mast and pins. Always operate your LSC CIRCULAR SAW from the safety of your vehicle seat. Always turn off your vehicle engine, fold and pin your LSC CIRCULAR SAW into the Travel position, before parking your vehicle for the day. Remove LSC Circular Saw from vehicle when transporting the vehicle.

DANGER: *Always turn off your vehicle engine before mounting or removing unit from loader.*

NOTE: REVIEW THE INSTRUCTIONS ON THE FOLLOWING PAGE FOR USE OF THE ADJUSTABLE RECEIVER AND ITS OPERATION PROCEDURES. Correct usage and procedure is essential for safe and correct operation of your LSC CIRCULAR SAW.

NOTE: If you are unsure or have concerns about installing and using your LSC CIRCULAR SAW, have your LIMBSAW dealer or representative demonstrate the proper installation and use before you attempt it yourself.

WARNING: *Never use your LSC CIRCULAR SAW indoors or without all safety guards and cables properly attached.*

CAUTION: *Do not use saw mast to lift or move tree limbs. Using the mast for lifting will damage the equipment and void warranty.*

Always make sure all nuts for the guard cover are tightened securely before operating.

WARNING: *Never make adjustments to any part of your LSC CIRCULAR SAW while your vehicle engine is running. Attempting to make adjustments during operation can cause serious injury or death.*

OPTIONAL ROTATING RECEIVER INSTALLATION

Installing Rotating Receiver. Rotating receiver mounts only on the right side of your bucket. Bracing on the side of the receiver prevents any lateral movement or slipping.

NOTICE: There is a bolt on the back end of the receiver. Once the receiver is in the correct position, tighten bolt firmly to maintain position.

The rotating receiver provides an additional 24" of mast reach



VERTICAL CUTTING



To use the saw in the vertical cutting position for tree limbs, branches, etc., receiver must be rotated with handle pointing up.



HORIZONTAL CUTTING



To use saw in the horizontal cutting position for use under fence lines and trimming along the ground, receiver handle must be turned to the horizontal position.



USING YOUR LSC CIRCULAR SAW

WARNING:

Never use your LSC CIRCULAR SAW if it is damaged, not assembled correctly, not maintained properly, or not adjusted properly. For correct assembly of the saw and blade please follow the instructions in this Installation and Operation Manual.

When driving tractor or loader across pastures and uneven terrain, pin the boom closed into the Travel position. Driving with the saw open in the operating position may damage pins

Use caution when driving under power lines and low hanging branches. Adjust the height of your saw by raising and lowering your loader, or adjusting the tilt angle of the bucket, to clear obstacles that could potentially get caught on your saw during Travel.

Use caution when cutting along fence lines and brush at ground level to prevent catching wire, T-Posts, pipe or other obstructions. Area should be inspected thoroughly prior to cutting to remove hidden obstacles. Move into the cut area slowly. On larger trunks or limbs, it may be necessary to make multiple cuts to fell the brush or tree. Avoid blade contact with the ground. This can cause the blade to dull rapidly, reducing blade life.



Travel Position



Horizontal Operating Position



When cutting large or heavy limbs, make several cuts to remove weight from the limb before making the final cut at the base. This will minimize the chance of the bark from peeling and also decrease the chance of the limb rolling and pinching the saw. As you gain experience with your saw, you will become more perceptive at judging how many cuts it will take to remove the amount of weight needed for a clean, easy final cut. When in doubt, make an extra cut.

NOTE: Always keep the blade and housing clean. Replace worn out parts as needed. Always operate with a sharp blade.

Cutting with a dull blade will increase the time it takes to cut and will cause vibration of your unit and excessive wear. Loose hardware on your unit will also cause vibration.

IF burn marks appear on the wood that you are cutting, or soft, easy to cut wood is hard to cut, it's time to replace or sharpen your blade.

Avoid cutting into dirt or excessive contact with the ground. This will dull the blade rapidly and cause excessive wear to the blade.

Follow manufacturer's maintenance, sharpening and/or replacement instructions for the blade. Check all nuts, bolts and screws before each use and tighten as necessary.

WARNING:

Using the LSC CIRCULAR SAW for any purpose other than cutting brush and tree branches may result in personal injury or death, damage to the unit, damage to vehicle, and can void the warranty.

CAUTION:

Do not transport vehicle with LSC Circular Saw attached. Be sure to remove from receiver and secure to prevent movement during transportation. Transportation of vehicle with LSC Circular Saw attached can cause injury or death, and may damage vehicle and equipment





REPLACEMENT PARTS

All of the components on your LSC Circular Saw are replaceable. Should you need a part, please don't hesitate to call us.

You can contact us through our website at www.limbsaw.com or by phone at (580) 272-3194.

Limited Warranties:

The LIMBSAW Company, (LIMBSAW) 2701 36th Ave. SE, Norman, OK 73026, warrants for one (1) year from the purchase date to the original non-commercial, governmental, or municipal purchaser ("Purchaser") and warrants for six (6) months to the original commercial or industrial purchaser ("Purchaser") that the product purchased are free from defects in material or workmanship. LIMBSAW will replace or repair, free of charge to the original purchaser any part(s) found, upon examination at our factory, to be defective under normal use and service due to defects in material or workmanship, provided that the original purchaser:

- Notifies LIMBSAW in writing of any defect in material or workmanship within the above specified warranty period.
- Returns must be routed through an authorized LIMBSAW dealer or distributor from whom the purchase was made.
- Purchaser is responsible for cost of shipping.

In no event will LIMBSAW be held liable under this warranty unless written notice is received and failure must have occurred within the warranty period. Genuine LIMBSAW replacement parts and components will be warranted for 90 days from date of purchase, or the remainder of the original equipment warranty period, whichever is longer.

This limited warranty does not apply to any part of the product which has been subjected to improper or misintended use, negligence, alteration, modification, or accident, damaged due to lack of maintenance or use of wrong oil or lubricants, or repairs that have been made with parts other than those obtainable through LIMBSAW, or which has served its usual life. This limited warranty does not apply to any expendable item such as blades, shields, guards, or pneumatic tires, or other trade accessories since these items are warranted separately by their respective manufacturers, except as specifically noted in your Operator's Manual.

Except as provided herein, no employee, agent, Dealer, or other person is authorized to give any warranties of any nature on behalf of LIMBSAW. Only LIMBSAW is authorized to make any representation to the purchaser concerning "normal" use and service for its product as described in the Operator's Manual, or in authorized printed materials or stickers affixed to the product.

If after examination of the product and/or part(s) in question; LIMBSAW finds them to be defective under standard use and service due to defects in material or workmanship,

The LIMBSAW Company will:

Repair or replace the defective product or part(s); if LIMBSAW has made several reasonable number of attempts in repairing the product and/or part(s) to conform to the warranty; then

- LIMBSAW will replace part(s) or product.
- Purchaser is responsible for any labor charges exceeding a reasonable amount as determined by LIMBSAW and for returning product and/or part(s) to the Dealer, whether or not the claim is approved. Purchaser is responsible for the transportation cost for the product or part(s) from the Dealer to the factory.
- The choice of remedy shall belong to LIMBSAW. Repair or replacement are the only remedies against LIMBSAW under this limited warranty.

Limitation of Liability:

LIMBSAW disclaims any express (except as set forth herein) and implied warranties with respect to the product including, but not limited to, merchantability and fitness for a particular purpose.

LIMBSAW makes no warranty as to the design, capability, capacity, or suitability for use of the product.

This warranty shall not be interpreted to render us liable for injury or damages of any kind or nature to person or property. LIMBSAW will not be liable for any special, incidental or consequential damages based upon breach of warranty, breach of contract, negligence, strict tort liability, or any other legal theory. Such damages include but are not limited to loss of crops, loss of savings or revenue, cost of capital, loss of use of equipment, facilities or services, down time, expense or loss incurred for labor, supplies, substitute machinery, rental, and claims of third parties including customers, and injury to property.

Supplementary:

Proper venue for any lawsuits arising from or related to this limited warranty shall be only in Cleveland County, OK.

LIMBSAW may waive compliance with any of the terms of this limited warranty, but no waiver of any terms shall be deemed to be a waiver of any other term.

If any provision of this limited warranty violates any applicable law and is held unenforceable, then the invalidity of such provision shall not invalidate any other provisions.

Applicable law may provide rights and benefits to purchaser in addition to those herein.

References

1. Sentry Insurance, FEMA, *Owner's and Operators Manuals for Farm Equipment*, Sentry Insurance, Stevens Point, WI, revised Management Bulletin No. 112, 90-42; March 2007, pp S-2.
2. Occupational Safety and Health Administration (OSHA), *Safety for Agricultural Equipment*, 29 CFR 1928.57, http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10958.
4. Fluid Power Safety Institute (FPSI), *Avoid High-Pressure Fluids*, Ref. No. SA-033, http://www.fluidpowersafety.com/fpsi_alert-33.html

Suggested References

The LIMBSAW Company assumes no liability for the use or misuse of information provided in the following references:

FEMA, Farm Equipment Manufacturers Association, *Safety 4 Just Kids*, 2008, <http://www.farmequip.org/safety>

Includes AG Safety Links for additional information and materials.

Farm Safety Association, Guelph, Ontario, *The Safe Movement of Agricultural Equipment on the Roadway*, <http://www.farmsafety.ca/pages/manuals-dwnld.html>

Farm Safety Association, Guelph, Ontario, *Preventing Farm Incidents Caused by Moving Parts*, <http://www.farmsafety.ca/pages/pages/manuals-dwnld.html>

Occupational Safety and Health Administration (OSHA), *General Respiratory Protection*, OSHA Bulletin 2011, http://www.osha.gov/dts/shib/respiratory_protection_bulletin_2011.html

Occupational Safety and Health Administration (OSHA), STD# 1926.955, *Overhead lines*, https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10826

REGISTRATION/WARRANTY CARD

First Name Initial Last Name

Address (Number & Street) Apt.

City State Zip

Phone # Email

Date of Purchase / / Place of Purchase
Month Day Year

Serial Number Located on the underside of Arm assembly

Would you be interested in receiving information on special offers, discounts and new products from The LIMBSAW Company? Yes _____ No _____

You can also register your LIMBSAW online at www.limbsaw.com. Thank you for registering with The LIMBSAW Company.

Return address:

Place first class
stamp here.
Post Office will
not deliver
without proper
postage

The LIMBSAW Company

LIMBSAW Registration

2701 36th Ave. SE

Norman, OK 73026