



OWNER'S MANUAL

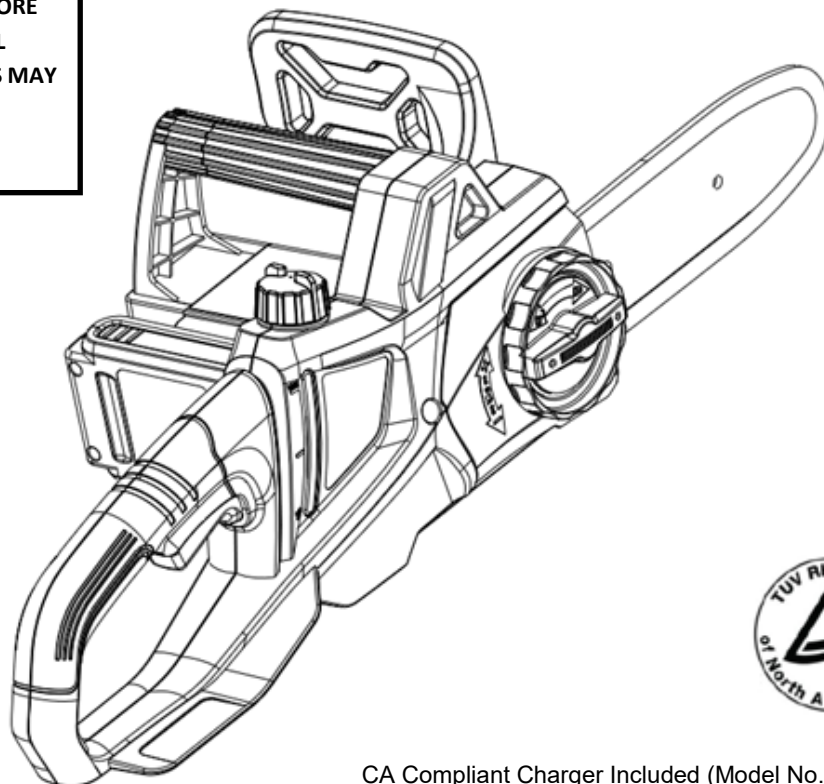
10-Inch 20V Lithium-ion Chainsaw

With (1) 20V 2.0Ah Lithium-ion Battery

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Model LCS31020-1

BATTERY MUST BE CHARGED BEFORE FIRST USE. TWO TO THREE INITIAL CHARGING/DISCHARGING CYCLES MAY BE REQUIRED TO ACHIEVE MAXIMUM RUN TIME/CAPACITY.



CA Compliant Charger Included (Model No. CHL82000-1)

Your chain saw has been engineered and manufactured to our high standard for dependability, ease of operation, and operator safety. Properly cared for, it will give you years of rugged, trouble-free performance.



WARNING: To reduce the risk of injury, the user must read and understand the owner's manual before using this product.

ADD OIL TO OIL RESERVOIR BEFORE FIRST USE. SEE MAINTENANCE SECTION FOR COMPLETE INSTRUCTIONS.

Thank you for your purchase.


DO NOT RETURN THIS PRODUCT TO THE STORE. OPERATING, ASSEMBLY, PART, SERVICE QUESTIONS? GO TO AMERICANLAWNMOWER.COM OR CALL 1-800-633-1501 BETWEEN 8:00AM-5:00PM EST FOR ASSISTANCE.

SAVE THIS MANUAL FOR FUTURE REFERENCE


IMPORTANT SAFETY WARNINGS

TO REDUCE RISK OF INJURY:

Before any use, be sure everyone using this tool reads and understands all safety instructions and other information contained in this manual.


 **CAUTION:** Wear appropriate personal hearing protection during use. Under some conditions and duration of use, noise from this product may contribute to hearing loss.

Save these instructions and review frequently prior to use and in instructing others.

 **WARNING:** When using electric gardening appliances, basic safety precautions should always be followed to reduce risk of fire, electric shock, and personal injury, including the following:

READ ALL INSTRUCTIONS

GENERAL POWER TOOL SAFETY WARNINGS

 **WARNING:** Read all safety warnings and instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.
Save all warnings and instructions for future reference. The term “power tool” in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

Work area safety

- **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
- **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
- **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

Electrical safety

- **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
- **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
- **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
- **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
- **If operating a power tool in a damp location is unavoidable, use a ground fault circuit interrupter (GFCI) protected supply.** Use of a GFCI reduces the risk of electric shock.

Personal safety

- **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- **Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energizing power tools that have the switch on invites accidents.

- **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- **Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewelry or long hair can be caught in moving parts.
- **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.

Power tool use and care

- **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.
- **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
- **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
- **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.
- **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

Battery tool use and care

- **Recharge only with the charger specified by the manufacturer.** A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
- **Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.

GENERAL POWER TOOL SAFETY WARNINGS

- When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects, that can make a connection from one terminal to another. Shorting the battery terminals together may cause burns or a fire.
- Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.

Service

- Have your power tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.
- When servicing a power tool, use only identical replacement parts. Follow instructions in the Maintenance section of this manual. Use of unauthorized parts or failure to follow Maintenance instructions may create a risk of shock or injury.

CHAIN SAW SAFETY WARNINGS

- Keep all parts of the body away from the saw chain when the chain saw is operating. Before you start the chain saw, make sure the saw chain is not contacting anything. A moment of inattention while operating chain saws may cause entanglement of your clothing or body with the saw chain.
- Always hold the chain saw with your right hand on the rear handle and your left hand on the front handle. Holding the chain saw with a reversed hand configuration increases the risk of personal injury and should never be done.
- Hold the power tool by insulated gripping surfaces only, because the saw chain may contact hidden wiring. Saw chains contacting a live wire may make exposed metal parts of the power tool live and could give the operator an electric shock.
- Wear safety glasses and hearing protection. Further protective equipment for head, hands, legs and feet is recommended. Adequate protective clothing will reduce personal injury by flying debris or accidental contact with the saw chain.
- Do not operate a chain saw in a tree. Operation of a chain saw while up in a tree may result in personal injury.
- Always keep proper footing and operate the chain saw only when standing on fixed, secure and level surface. Slippery or unstable surfaces such as ladders may cause a loss of balance or control of the chain saw.
- When cutting a limb that is under tension be alert for spring back. When the tension in the wood fibers is released the spring loaded limb may strike the operator and/or throw the chain saw out of control.
- Use extreme caution when cutting brush and saplings. The slender material may catch the saw chain and be whipped toward you or pull you off balance.
- Carry the chain saw by the front handle with the chain saw switched off and away from your body. When transporting or storing the chain saw always use the guide bar cover. Proper handling of the chain saw will reduce the likelihood of accidental contact with the moving saw chain.
- Follow instructions for lubricating, chain tensioning and changing accessories. Improperly tensioned or lubricated chain may either break or increase the chance for kickback.

- Keep handles dry, clean, and free from oil and grease. Greasy, oily handles are slippery causing loss of control.
- Cut wood only. Do not use chain saw for purposes not intended. For example: do not use chain saw for cutting plastic, masonry or non-wood building materials. Use of the chain saw for operations different than intended could result in a hazardous situation.

Causes and operator prevention of kickback:

Kickback may occur when the nose or tip of the guide bar touches an object, or when the wood closes in and pinches the saw chain in the cut.


Tip contact in some cases may cause a sudden reverse reaction, kicking the guide bar up and back towards the operator.


Pinching the saw chain along the top of the guide bar may push the guide bar rapidly back towards the operator.


Either of these reactions may cause you to lose control of the saw which could result in serious personal injury. Do not rely exclusively upon the safety devices built into your saw. As a chain saw user, you should take several steps to keep your cutting jobs free from accident or injury.

Kickback is the result of tool misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below:

- Maintain a firm grip, with thumbs and fingers encircling the chain saw handles, with both hands on the saw and position your body and arm to allow you to resist kickback forces. Kickback forces can be controlled by the operator, if proper precautions are taken. Do not let go of the chain saw.
- Do not overreach and do not cut above shoulder height. This helps prevent unintended tip contact and enables better control of the chain saw in unexpected situations.
- Only use replacement bars and chains specified by the manufacturer. Incorrect replacement bars and chains may cause chain breakage and/or kickback.
- Follow the manufacturer's sharpening and maintenance instructions for the saw chain. Decreasing the depth gauge height can lead to increased kickback.

 **CAUTION:** Use only the following type and size battery(ies): BL82120-1.

 **WARNING: California Proposition 65:** This product contains chemicals known to the State of California to cause cancer, birth defect or other reproductive harm.


 **WARNING:** Some dust and debris created by the use of this tool could contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Some examples of these chemicals are:

- * Chemicals in fertilizers

- * Compounds in insecticides, herbicides and pesticides

- * Arsenic and chromium from chemically treated lumber

Your risk from exposure to these chemicals varies, depending on how often you do this type of work. To reduce your exposure, work in a well-ventilated area and with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.

 **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

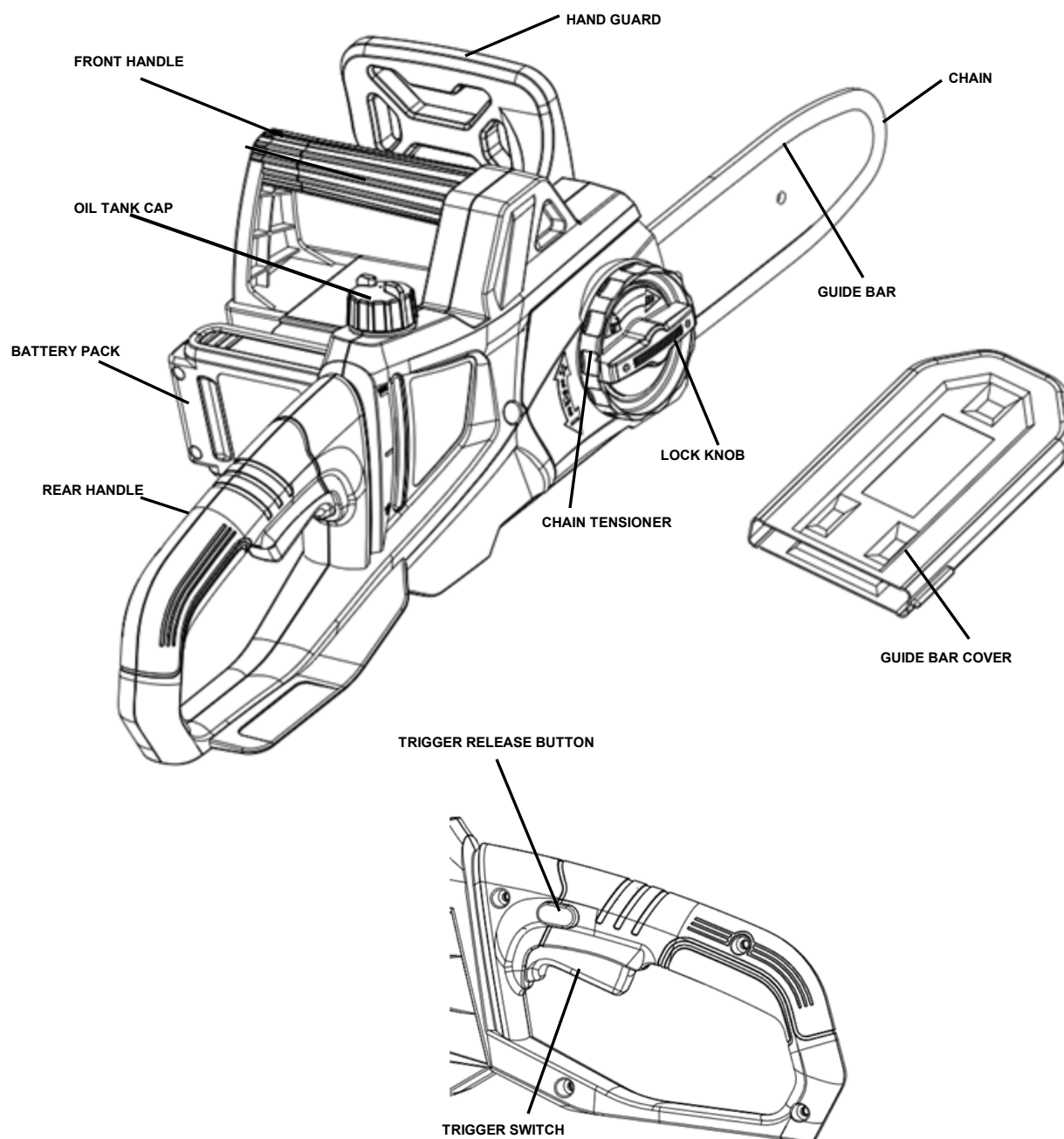
FEATURES

PRODUCT SPECIFICATIONS

LCS3102-1

Input.....20 V / 2.0 Ah, DC Only
Bar Length.....10" Bar (M1501040-1041TL)
Chain.....CL15040 (Oregon 91PJ040X)
Weight..... 6.1 lbs.

- Automatic oiling system—Protective bar cover -



ASSEMBLY

UNPACKING

This product requires no assembly.

Carefully remove the product and any accessories from the box. Make sure that all items listed in the packing list are included.

Inspect the product carefully to make sure no breakage or damage occurred during shipping.

Do not discard the packing material until you have carefully inspected and satisfactorily operated the product.

WARNING: If any parts are damaged or missing, do not operate this product until the parts are replaced. Failure to heed this warning could result in serious personal injury.

If any parts are damaged or missing, please call 1-800-633-1501 for assistance.

PACKING LIST

- Chain Saw with Blade Cover
- Charger and Battery Pack
- Owner's Manual

INSTALLING/REPLACING THE GUIDE BAR AND CHAIN

DANGER: Never start the motor before installing the guide bar, chain, chain cover and chain cover lock knob. Without all these parts in place, the clutch can fly off or explode, exposing the user to possible serious injury.

WARNING: To avoid serious personal injury, read and understand all the safety instructions provided.

WARNING: Before performing any maintenance, remove the battery pack from the saw. Failure to heed this warning could result in serious personal injury.

CAUTION: Always wear gloves when handling the bar and chain; these components are sharp and may contain burrs.

WARNING: Never touch or adjust the chain while the motor is running. The saw chain is very sharp; always wear protective gloves when performing maintenance to the chain to avoid possible serious lacerations.

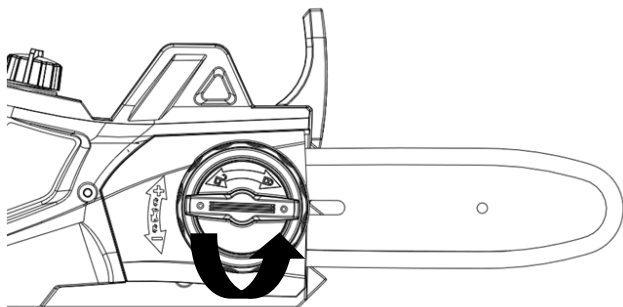
NOTE: When replacing the guide bar and chain, use only identical replacement parts.

- Remove the battery from saw.
- Loosen the chain saw lock knob counterclockwise.

- Remove the chain cover.

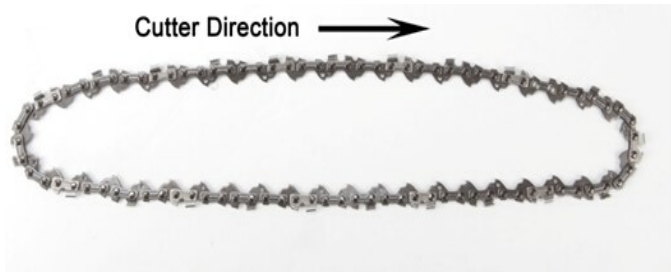


- Remove the bar and chain from the mounting surface.



INSTALLING/REPLACING THE GUIDE BAR AND CHAIN

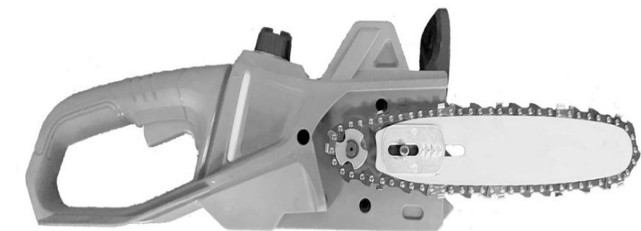
- Remove the old chain from the bar.
- Lay out the new saw chain in a loop and straighten any links. The cutters should face in the direction of the chain rotation. If they face backwards, turn the loop over.



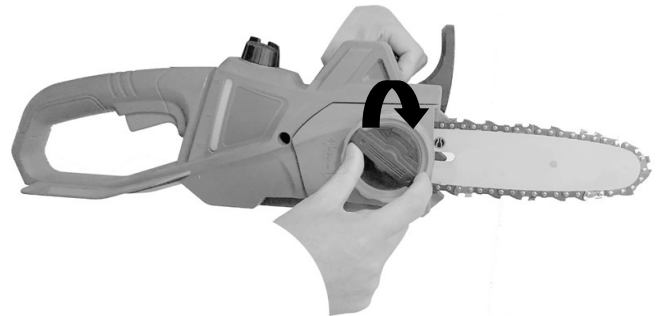
- Place the chain drive links into the bar groove.
NOTE: Make certain of the direction of the chain.



- Position the chain so there is a loop at the back of the bar.
- Hold the chain in position on the bar and place the loop around the sprocket.
- Fit the bar flush against the mounting surface so that the bar studs are in the long slot of the bar.
NOTE: When placing the bar on the bar studs, ensure that the adjusting pin is in the chain tension pin hole.

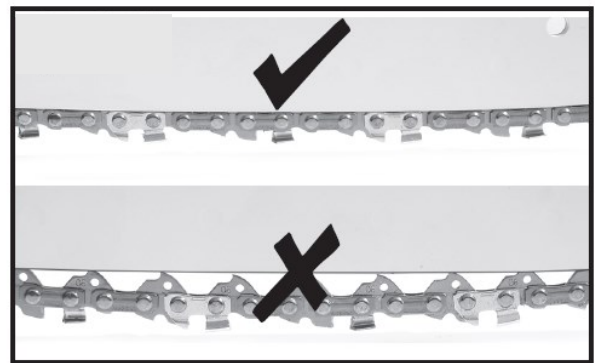


- Replace the chain cover and secure with the lock knob, but leave the bar free to move for tension adjustment.
- Remove all slack from the chain by turning the chain tensioner clockwise until the chain seats snugly against the bar with the drive links in the bar groove.



- Tighten the knob.

The chain is correctly tensioned when there is no sag on the underside of the guide bar, the chain is snug, but it can be turned by hand without binding.



NOTE: If chain is too tight, it will not rotate. Loosen the knob slightly and turn the chain tensioner 1/4 turn counterclockwise. Lift the tip of the guide bar up and retighten the knob. Ensure that the chain will rotate without binding.

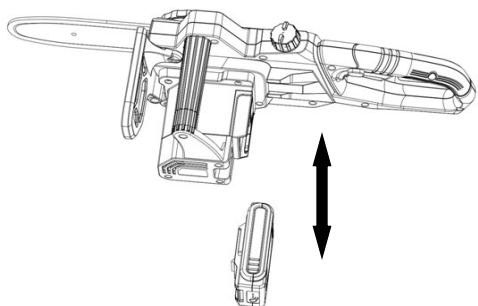
NOTE: A new chain tends to stretch, check chain tension frequently and tension as required.

OPERATING

TO INSTALL / REMOVE BATTERY PACK

WARNING: Always remove the battery pack from the product when you are assembling parts, making adjustments, cleaning, or when not in use. Removing the battery pack will prevent accidental starting that could cause serious personal injury.

Slide the battery pack into the chain saw. Ensure the battery is securely connected. To remove the battery, depress the release button and slide battery pack out of tool.



TO TURN THE TOOL ON

Push the trigger release button in with your thumb and then squeeze the trigger with your fingers. (Once the tool is running, you can release the trigger release button). To turn the tool OFF, release the trigger.

WARNING: To guard against injury, observe the following:
Read owner's manual before using,
Save owner's manual.
Keep hands away from chain.
Keep hands on handles. Don't overreach.

A good, firm grip on the saw with both hands will help you maintain control. Don't let go. Grip the rear handle with your right hand whether you are right or left handed. Wrap the fingers of your left hand over and around the front handlebar, and your left thumb under the front handlebar.

Make sure you follow the instructions in maintenance for putting oil in the chain saw.

CAUTION: Chain oil reservoir must be filled before operation. Failure to lubricate the chain will cause damage to the bar and chain. Use only a good quality bar and chain oil or, if not available, unused SAE 30 weight motor oil may be substituted. One minute of use will consume approx 0.1 fl. Oz. (3ml) of oil.

NOTE: It is normal for oil to seep from the saw when not in use. To prevent seepage, empty the oil tank after each use. When storing the unit for a long period of time (3 months or longer) be sure the chain is lightly lubricated; this will prevent rust on the chain and bar sprocket.

WARNING: Do Not use the chain saw with any type of accessory or attachment. Such usage might be hazardous.

CUTTING INSTRUCTIONS

WARNING: Do not operate chain saw in a tree, on a ladder, or on a scaffold; this is extremely dangerous.

CAUTION: Chain coasts after turned off.
Do not use under wet conditions.

Use extreme caution when cutting small size brush, saplings or limbs under tension, because slender and tense material may catch the saw and be whipped toward you, pull you off balance or spring back.

Do not cut vines and/or small underbrush.

WARNING: Do not allow familiarity with this type of tool to make you careless. Remember that a careless fraction of a second is sufficient to inflict serious injury.

Before you start the unit, make sure the chain saw is not contacting any object.

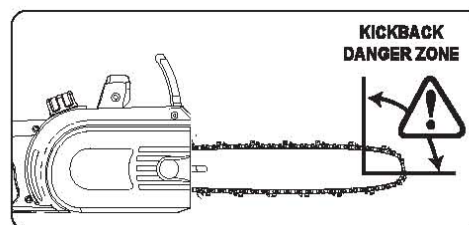
WARNING: Kickback may occur when the moving chain contacts an object at the upper portion of the tip of the guide bar or when the wood closes in and pinches the chain saw in the cut. Contact at the upper portion of the tip of the guide bar can cause the chain to dig into the object and stop the chain for an instant. The result is a lightning fast, reverse reaction which kicks the guide bar up and back toward the operator. If the chain saw is pinched along the top of the guide bar, the guide bar can be driven rapidly back toward the operator. Either of these reactions can cause loss of saw control which can result in serious injury. Do not rely exclusively upon the safety devices built into the saw. As a chain saw user, you should take several steps to keep your cutting jobs free from accident or injury.

The following precautions should be followed to minimize kickback:

1. Always grip the saw firmly with both hands. Hold the saw firmly with both hands when the unit is running. Place your right hand on the rear handle and your left hand on the front handle with your thumbs and fingers encircling the chain saw handles. A firm grip together with a stiff left arm will help you maintain control of the saw if kickback occurs.
2. Make sure that the area in which you are cutting is free from obstructions. Do not let the nose of the guide bar contact a log, branch, fence or any other obstruction that could be hit while you are operating the saw.
3. Always cut with the unit running at full speed. Fully squeeze the throttle trigger and maintain a steady cutting speed.

Push and Pull – This reaction force is always opposite to the direction the chain is moving where wood contact is made. Thus, the operator must be ready to control the PULL when cutting on the bottom edge of the bar, and PUSH when cutting along the top edge.

Wear non-slip gloves for maximum grip and protection.



OPERATING

Proper Cutting Stance

Weight should be balanced with both feet on solid ground.

Keep left arm with elbow locked in a "straight arm" position to withstand any kickback force.

Your body should always be to the left of the chain line.

Basic Cutting Procedure

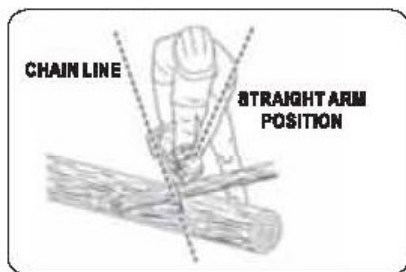
Small trees up to 6-7 inches in diameter are usually cut in a single cut. Large trees require notch cuts. Notch cuts determine the direction the tree will fall.

WARNING: If the tree starts to fall in the wrong direction, or if the saw gets caught or hung up during the fall, leave the saw and save yourself.

WARNING: Periodically glance at the top of the tree during the back-cut to assure the tree is going to fall in the desired direction.

Practice cutting a few small logs using the following technique to get the "feel" of using the saw before you begin a major sawing operation.

Take the proper stance in front of the wood with the saw off.



Squeeze the trigger and let the chain accelerate to full speed before entering the cut.

Hold the saw firmly with both hands. Always keep your left hand on the front handle and your right hand on the rear handle so that your body is to the left of the chain line.

Keep the unit running the entire time you are cutting, maintain a steady speed.

Allow the chain to cut for you; exert only light downward pressure. If you force the cut, damage to the bar, chain, or unit can result.

Do not put pressure on the saw at the end of the cut.

When felling a tree, keep everyone a safe distance from the cutting area. During felling operations, the safe distance should be at least twice the height of the largest trees in the felling area. If the tree makes contact with any utility line, the utility company should be notified immediately.

Always cut with both feet on solid ground to prevent being pulled off balance.

Do not cut above chest height, as a saw held higher is difficult to control against kickback forces.

WARNING: Check the tree for damaged or dead branches that could fall and hit you during felling.

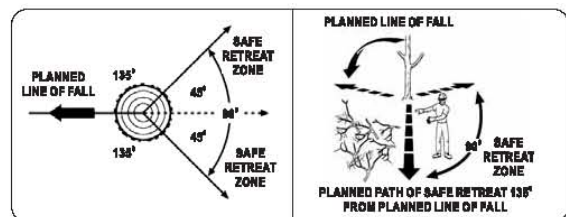
WARNING: Do not cut trees near electrical wires or buildings.

FELLING A TREE

When bucking and felling operations are being performed by two or more persons, at the same time, the felling operation should be separated from the bucking operation by a distance of at least twice the height of the tree being felled. Trees should not be felled in a manner that would endanger any person, strike any utility line or cause any property damage. If the tree does make contact with any utility line, the utility company should be notified immediately.

WARNING: Check the tree for damaged or dead branches that could fall and hit you during felling.

Before any cuts are started, pick your escape route (or routes in case the intended route is blocked); clear the immediate area around the tree and make sure there are no obstructions in your planned path of retreat. A clear path of safe retreat is approximately 135 degrees from planned line of fall. The retreat path should extend back and diagonally to the rear of the expected line of fall.



Before felling is started, consider the force and direction of the wind, the lean and balance of the tree, and the location of large limbs. These things influence the direction in which the tree will fall. Do not try to fell a tree along a line different from its natural line of fall.

The chain saw operator should keep on the uphill side of the terrain as the tree is likely to roll or slide downhill after it is felled. Remove dirt, stones, loose bark, nails, staples, and wire from the tree where felling cuts are to be made.

NOTCHED UNDERCUT – Cut a notch about 1/3 diameter of the tree, perpendicular to the direction of the fall. Make the cuts of the notch so they intersect at a right angle to the line of fall. This notch should be cleaned out to leave a straight line. To keep the weight of the wood off the saw, always make the lower cut of the notch before the upper cut.

WARNING: Do not fell trees during periods of high wind or heavy precipitation. Wait to do your cutting until the hazard has ended.

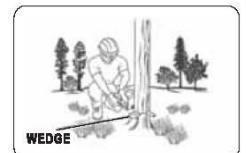
WARNING: Do not cut down trees having an extreme lean or large trees that have rotten limbs, loose bark, or hollow trunks. Have these trees pushed or dragged down with heavy equipment, then cut them up.

FELLING BACK-CUT

The back-cut is always made level and horizontal, and at a minimum of 2 inches (5cm) above the horizontal cut of the notch.

Never cut through to the notch. Always leave a band of wood between the notch and back-cut (approximately 2 inches (5cm) or 1/10 the diameter of the tree). This is called "hinge" or "hinge wood." It controls the fall of the tree and prevents slipping or twisting or shoot-back of the tree off the stump.

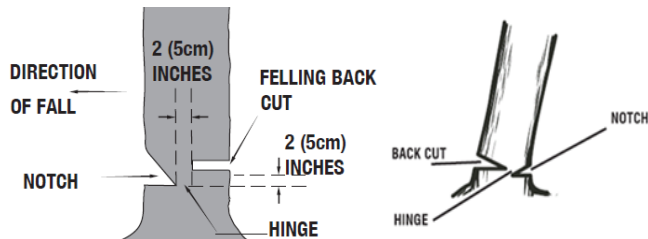
On large diameter trees, stop the back cut before it is deep enough for the tree to either fall or settle back on the stump. Then insert soft wooden or plastic wedges into the cut so they do not touch the chain. The wedges can be driven in, little by little, to help jack the tree over.



OPERATING

As the tree starts to fall, stop the chain saw and put it down immediately. Retreat along the cleared path, but watch the action in case something falls your way. Be alert for overhead limbs or branches that may fall and watch your footing.

WARNING: Never cut through to the notch when making a back-cut. The hinge controls the fall of the tree, this is a section of wood between the notch and back-cut.



BUCKING

Bucking is the term used for cutting a fallen tree to the desired log length.

Always make sure your footing is secure and your weight is distributed evenly on both feet.

Cut only one log at a time. Support small logs on a saw horse or another log while bucking.

Keep a clear cutting area. Make sure that no objects can contact the guide bar nose and chain during cutting, this can cause kickback.

When bucking on a slope, always stand on the uphill side of the log. To maintain complete control of the chain saw when cutting through the log, release the cutting pressure near the end of the cut without relaxing your grip on the chain saw handles. Do not let the chain contact the ground. After completing the cut, wait for the saw chain to stop before you move the chain saw. Always stop the motor before moving from tree to tree.

BUCKING LOGS UNDER STRESS

When the log is supported along its entire length, it should be cut from the top or over-bucking.

When the log is supported on one end, cut 1/3 diameter from the underside or under-bucking. Then make the finishing cut by over-bucking to meet the first cut.

As the log is being cut, it will tend to bend. The saw can become pinched or hung in the log if you make the first cut deeper than 1/3 of the diameter of the log.

Give special attention to logs under stress to prevent the bar and chain from pinching.

OVERBUCKING – Begin on the top side of the log with the bottom of the saw against the log; exert light pressure downward. Note that the saw will tend to pull away from you.

UNDER-BUCKING – Begin on the under side of the log with the top of the saw against the log; exert light pressure upward. During under-bucking, the saw will tend to push back at you. Be prepared for this reaction and hold the saw firmly to maintain control.

LIMBING

Limbing is removing branches from a fallen tree.

Work slowly, keeping both hands on the chain saw with a firm grip. Always make sure your footing is secure and your weight is distributed evenly on both feet.

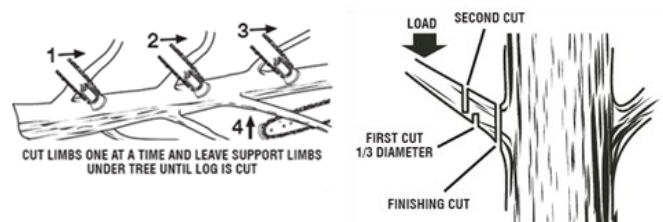
Leave the larger support limbs under the tree to keep the tree off the ground while cutting.

Limbs should be cut one at a time. Remove the cut limbs from the work area often to help keep the work area clean and safe.

Branches under tension should be cut from the bottom up to avoid binding the chain saw.

Keep the tree between you and the chain saw while limbing. Cut from the side of the tree opposite the branch you are cutting.

WARNING: Never climb into a tree to limb or prune. Do not stand on ladders, platforms, a log, or in any position which can cause you to lose your balance or control of the saw.



PRUNING

Pruning is trimming limbs from a live tree.

Work slowly, keeping both hands on the chain saw with a firm grip. Always make sure your footing is secure and your weight is distributed evenly on both feet.

When pruning trees it is important not to make the finishing cut next to the main limb or trunk until you have cut off the limb further out to reduce the weight. This prevents stripping the bark from the main member.

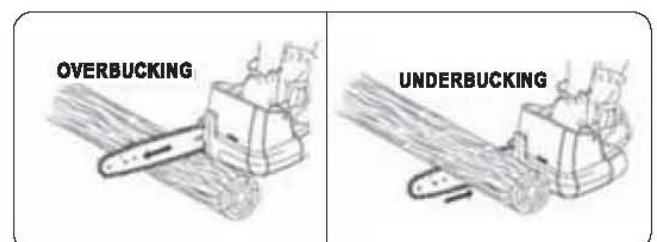
Under-buck the branch 1/3 through for your first cut.

Your second cut should over-buck to drop the branch off.

Now make your finishing cut smoothly and neatly against the main member so the bark will grow back to seal the wound.

SPRINGPOLES

A springpole is any log, branch, rooted stump, or sapling which is bent under tension by other wood so that it springs back if the wood holding it is cut or removed. On a fallen tree, a rooted stump has a high potential of springing back to the upright position during the bucking cut to separate the log from the stump. Watch out for springpoles, they are dangerous. They could result in severe or fatal injury.



CHAIN TENSION AND MAINTENANCE

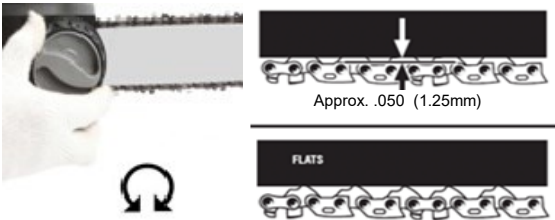
CHAIN TENSION

Remove the battery before setting the chain tension. Make sure the guide bar screw is loosened to finger tight, turn the chain tensioner clockwise to tension the chain. A cold chain will be correctly tensioned when there is no slack on the underside of the guide bar, the chain is snug, but it can be turned by hand without binding.

Chain must be re-tensioned whenever the flats on the drive links hang out of the bar groove.

During normal saw operation, the temperature of the chain will increase. The drive links of a correctly tensioned warm chain will hang approximately .050 in. (1.25mm) out of the bar groove. Be aware that chain tensioned while warm, may be too tight upon cooling. Check the "cold tension" before next use.

NOTE: A new chain tends to stretch, check chain tension frequently and tension as required.



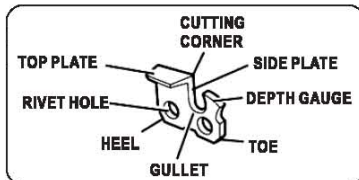
CHAIN MAINTENANCE

CAUTION: Remove the battery pack and make sure the chain has stopped before you do any work on the saw.

For smooth and fast cutting, chain needs to be maintained properly. The chain requires sharpening when the wood chips are small and powdery, the chain must be forced through the wood during cutting, or the chain cuts to one side. During maintenance of your chain remember:

- Improper filing angle of the side plate can increase the risk of severe kickback.
- Raker (depth gauge) clearance.
 - Too low increases the potential for kickback.
 - Not low enough decreases cutting ability.
- If cutter teeth have hit hard objects such as nails and stones, or have been abraded by mud or sand on the wood, have service dealer sharpen chain.

NOTE: Inspect the drive sprocket for wear or damage when replacing the chain. If signs of wear or damage are present in the areas indicated, have the drive sprocket replaced. Call our customer service help line at 1-800-633-1501 for assistance.



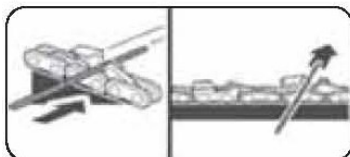
HOW TO SHARPEN THE CUTTERS

Be careful to file all cutters to the specified angles and to the same length, as fast cutting can be obtained only when all cutters are uniform.

Wear gloves for protection. Properly tension the chain prior to sharpening. Refer to "Chain Tension Section" earlier in this manual. Do all of your filing at the midpoint of the bar.

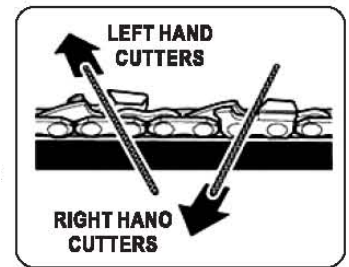
Use a 5/32 in. diameter round file and holder.

Keep the file level with the top plate of the tooth. Do not let the file dip or rock. Using light but firm pressure, stroke towards the front corner of the tooth.



Lift file away from the steel on each return stroke.

Put a few firm strokes on every tooth. File all left hand cutters in one direction. Then move to the other side and file the right hand cutters in the opposite direction. Occasionally remove filing from the file with a wire brush.



WARNING: Improper chain sharpening increases the potential of kickback.

WARNING: Failure to replace or repair damaged chain can cause serious injury.

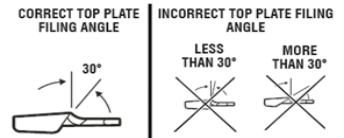
WARNING: The saw chain is very sharp, always wear protective gloves when performing maintenance to the chain.

TOP PLATE FILING ANGLE

Correct 30 degrees – File holders are marked with guide marks to align file properly to produce top plate angle.

Less than 30 degrees – for cross cutting.

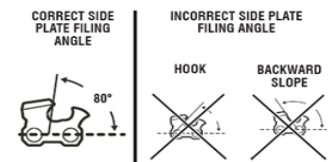
More than 30 degrees – feathered edge dulls quickly.



SIDE PLATE ANGLE

Correct – 80 degrees produced automatically if correct diameter file is used in file holder.

Hook – "Grabs" and dulls quickly. Increases potential of kickback. Results from using a file with a diameter too small, or file held too low.



Backward Slope – Needs too much feed pressure, causes excessive wear to bar and chain. Results from using a file with a diameter too large, or file held too high.

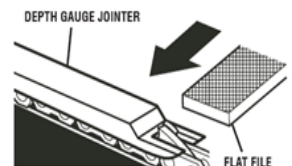
DEPTH GAUGE CLEARANCE

The depth gauge should be maintained at a clearance of .025 in. (0.6 mm). Use a depth gauge tool for checking the depth gauge clearances.



Every time the chain is filed, check the depth gauge clearance

Use a flat file and a depth gauge jointer to lower all gauges uniformly. Depth gauge jointers are available in .020 in. to .035 in. (0.5 mm to 0.9 mm). Use a .025 in. (0.6 mm) depth gauge jointer. After lowering each depth gauge, restore original shape by rounding the front. Be careful not to damage adjoining drive links with the edge of the file.



Depth gauges must be adjusted with the flat file in the same direction the adjoining cutter was filed with the round file. Use care not to contact cutter face with flat file when adjusting depth gauges.

CHARGING THE BATTERY PACK

Charge the battery pack only with Yardworks 20V Chargers.

Allow at least 80 minutes of charge time before initial use of the chain saw.

Make sure the power supply is normal household voltage, 120volts, 60Hz, AC only.

The battery charger should be operated in temperatures between 39 and 104 degrees F.

The battery should be charged in a cool, dry place.

Two to three initial charging/discharging cycles may be required to achieve maximum run time/capacity.

Do not attempt to open the charger or the unit. There are no customer serviceable parts inside. Call the customer service help line at 1-800-633-1501 for assistance.

DO NOT incinerate battery packs even if they are severely damaged or completely worn out. They can explode in a fire causing injury.

Use the battery charger indoors only.

Disconnect charger from the power supply when not in use to prevent damage to the charger during a power surge.

When fully charged, the battery can be safely stored in temperatures down to -4° degrees F for a period of up to four weeks, before requiring charging. Fully charge battery pack every 90 days.

If over a period of time the battery pack quickly runs down after a full 80 minute charging period, a replacement battery pack is needed.

To prevent permanent damage to the battery, never store in a discharged condition.

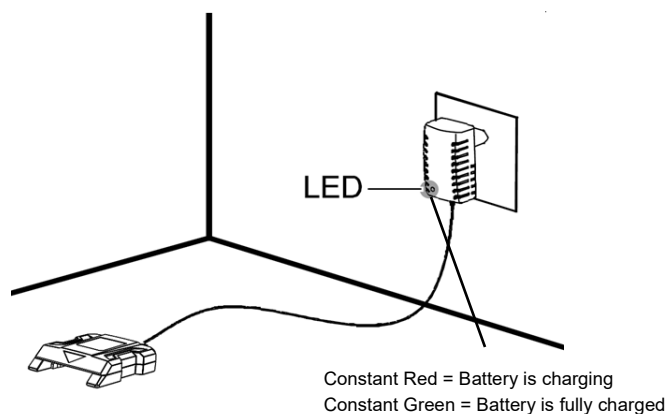
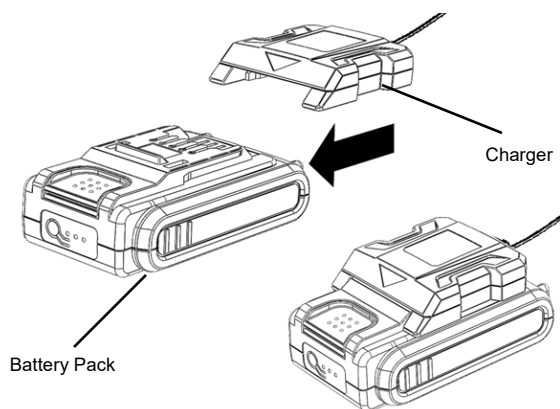
WINTER STORAGE—Fully recharge before storage and then again every 90 days.

Since the battery will not develop a memory, it does not have to be fully discharged before recharging.

A small leakage of liquid from the battery cells may occur under extreme usage, charging or temperature conditions. This does not indicate a failure. However, if the outer seal is broken and this leakage gets on your skin.

- Wash quickly with soap and water.
- Neutralize with a mild acid such as lemon juice or vinegar.
- If the battery liquid gets in your eyes, flush them with clean water for a minimum of 10 minutes and seek immediate medical attention.

TO CHARGE—SEE CHARGER MANUAL FOR COMPLETE INSTRUCTIONS



BATTERY DISPOSAL

Remove the battery pack from the chain saw. Cover the terminals with heavy duty adhesive tape. Do not attempt to destroy or disassemble battery pack or remove any components. This product contains lithium-ion batteries which must be recycled or disposed of properly. Local, state or federal laws may prohibit disposal of these batteries in ordinary trash.



The RBRC seal on the li-ion battery pack indicates that the costs to recycle the battery pack at the end of its useful life has already been paid by The Great States Corporation American Lawn Mower Company. It is illegal to place spent li-ion batteries in the local municipal solid waste or in the trash. RBRC in cooperation with The Great States Corporation American Lawn Mower Company has provided an environmentally friendly and easy way to recycle spent li-ion batteries. Just contact your local recycling center or call 1-800-8BATTERY for information on where to drop off the spent battery.

MAINTENANCE

BEFORE USING : Fill oil well with new quality bar and chain oil, or if unavailable, unused SAE 30 weight motor oil may be substituted.

If you drop the chain saw, carefully inspect it for damage. If the blade is bent, housing cracked, or handles broken or if you see any other condition that may affect the saw's operation, call our customer service line at 1-800-633-1501 for assistance.

Make sure the battery is detached from the unit, then use only mild soap and a damp cloth to clean the tool. Never let any liquid get inside the tool; never immerse any part of the tool into a liquid.

⚠ IMPORTANT: To assure product SAFETY and RELIABILITY, repairs, maintenance and adjustment should be performed by a qualified individual always using identical replacement parts.

⚠ CAUTION: Do not at any time let brake fluids, gasoline, petroleum based products, penetrating oils, etc., come in contact with plastic parts. They contain chemicals that can damage, weaken or destroy plastic.

Ensure that the plastic bar cover is in place when storing.

Fertilizers and other garden chemicals contain agents which greatly accelerate the corrosion of metals. Do not store the tool on or adjacent to fertilizers or chemicals.

For smooth and fast cutting, chain needs to be maintained properly. The chain requires sharpening when the wood chips are small and powdery, the chain must be forced through the wood during cutting, or the chain cuts to one side. Refer to instructions earlier in this manual for instructions on properly sharpening the chain.

LUBRICATION SYSTEM

The chain is automatically lubricated.

Use only new bar and chain oil or unused SAE 30 weight motor oil may be substituted. Never use wasted oil, low quality oil, or insufficient oil. This could damage the bar and the chain, which may result in serious personal injury. Check oil level before each work session, refill if oil level is below the minimum shown on the side of the oil level window.

If the lubrication system does not work properly, check if all oil-ways are clean and free from obstructions. If it is still not working, call our customer service help line at 1-800-633-1501 for assistance.

GUIDE BAR MAINTENANCE

When the guide bar shows signs of wear, reverse it on the saw to distribute the wear for maximum bar life. The bar should be cleaned every day of use and checked for wear and damage.

Feathering or burring of the bar rails is a normal process of bar wear. Such faults should be smoothed with a file as soon as they occur.

A bar with any of the following faults should be replaced.

- Wear inside the bar rails which permits the chain to lay over sideways.
- Bent guide bar
- Cracked or broken rails
- Spread rails

In addition, guide bars with a sprocket at their tip must be lubricated weekly with a grease syringe to extend the guide bar life. Using a grease syringe, lubricate weekly in the lubricating hole.

Turn the guide bar and check that the lubrication holes and chain groove are free from obstructions.

TROUBLESHOOTING

Problem	Possible Cause	Possible Solution
- Unit does not run	<ul style="list-style-type: none"> - Battery not making contact - Lock off button not fully operated - Battery not installed properly - Battery not charged 	<ul style="list-style-type: none"> -Check battery is fully inserted -Check that lock off button is fully forward prior to moving trigger -Check battery installation -Check battery charging requirements
- Bar and chain running hot and smoking	<ul style="list-style-type: none"> - Check tension for over-tight condition - Chain oil tank empty - Chain installed backwards 	<ul style="list-style-type: none"> - Adjust chain tension - Fill tank with chain oil - Reverse chain so that cutters face the right direction
- Motor runs but chain is not rotating	<ul style="list-style-type: none"> - Chain tension too tight - Check guide bar and chain for damage 	<ul style="list-style-type: none"> - Adjust chain tension - Replace damaged bar and chain with identical replacement parts.

CALL US FIRST !!

Call us first with questions about operating or maintaining your chain saw at 1.800.618.7474 between 8:00 a.m. – 5:00 p.m. Eastern Standard Time, or get assistance on americanlawnmower.com

PARTS AND SERVICE

For parts or service, please call 1-800-633-1501 or visit us online at AMERICANLAWNMOWER.COM. Be sure to provide all relevant information when you call or visit.

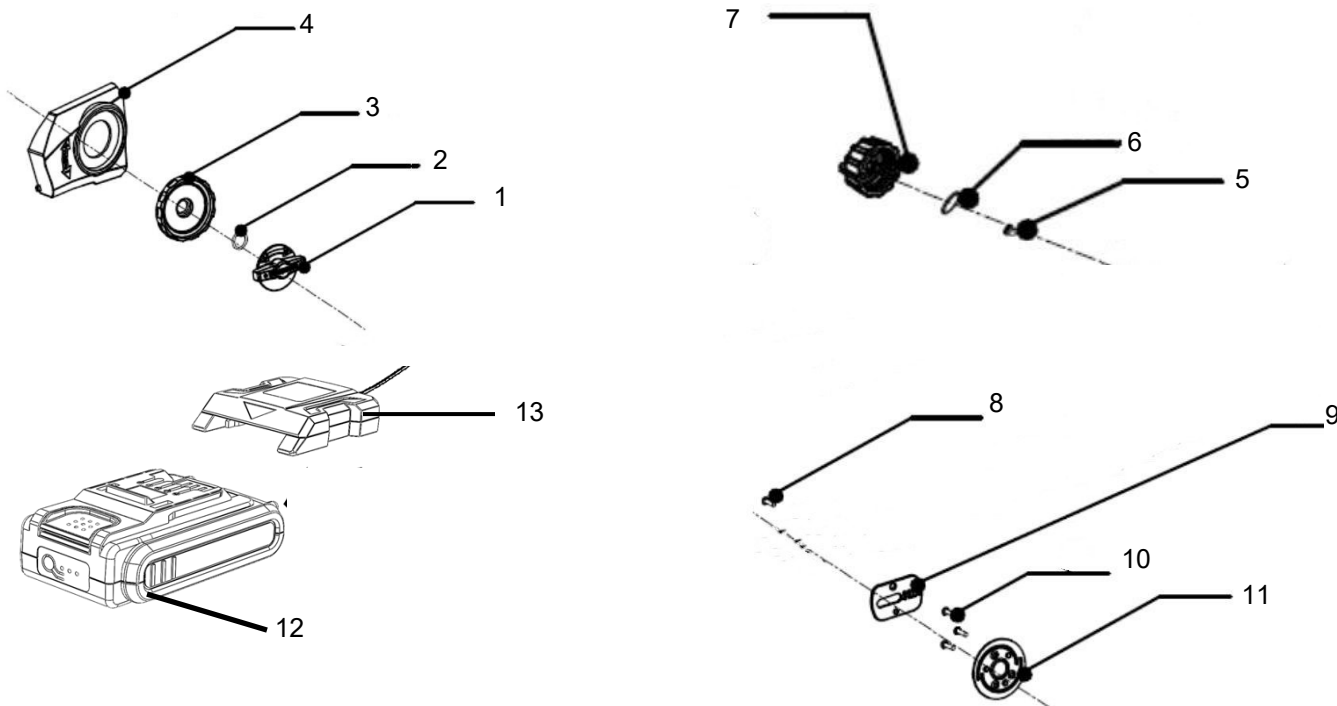
REPAIR PARTS (KITS/ ITEMS)

The model/serial number of this tool is found on a plate or label attached to the housing. Please record the serial number in the space provided below.

MODEL NUMBER **LCS31020-1**

SERIAL NUMBER

Always mention the model number when ordering kits/items for this tool.



No.	Kit/Item Number	Description	QTY
1, 2, 3 & 4	LCS20-SCA-1	Sprocket cover assembly kit	1
5, 6 & 7	LCS20-OTC-1	Oil cap assembly kit	1
8, 9, 10 & 11	LCS20-BCK-1	10" Bar and chain assembly kit	1
12	BL82120-1	20V battery	1
13	CHL82000-1	20V charger	1
	LCS20-BCK-1	10"/8" Bar Assembly Kit	1

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OWNER'S MANUAL

10-Inch 20V Lithium-ion Chainsaw

With (1) 20V 2.0Ah Lithium-ion Battery

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LCS31020-1

YARDWORKS WARRANTY POLICY

- **2 Year limited warranty** on all Yardworks 20V lithium ion power tools from date of purchase when used for personal, household, or family use.
- **2 Year limited warranty** on all Yardworks 20V lithium ion batteries and chargers from date of purchase when used for personal, household, or family use.

The Great States Corp. (GSC) warrants to the original owner that this Yardworks product and service part is free from defects in materials and workmanship and agrees to repair or replace any defective product or part for the warranty period as stated above.

- Warranty voided if used for commercial or industrial purposes or any other improper use as determined by GSC.
- Warranty does not include repairs necessary due to operator's abuse or negligence (including overloading the product beyond capacity or immersion in water), or the failure to assemble, operate, maintain or store the product according to the instructions in the owner's manual.
- This warranty does not cover
 - ◇ Wear items, including but not limited to - drive belts & gears, tines, cutting blades, mower blades, saw chains, mulching blades, blower fans, spool covers, trimmer line, blower and vacuum tubes, guide bars, high pressure hoses, wheels, handles, augers, worn bags, power cables, and other items subject to wear over time.
 - ◇ Wear on batteries, including but not limited to - drops, wear and breakage on charger, exposure to extreme temperature swings (hot or cold), battery left on charger too long, battery left uncharged for too long, and misuse or abuse of the battery.
- This warranty does not cover damage caused by cold, heat, rain, excessive humidity or other environmental extremes.
- This warranty does not cover normal deterioration of the exterior finish or normal wear and tear on the products including, but not limited to scratches, cracks, dents, or damage caused by outside chemicals.
- This warranty is not transferable and only applies to new products sold directly from an authorized retailer. This warranty does not apply to any product, new or used, purchased through unauthorized third-party channels. For information on authorized dealers, contact our customer support hotline at 1-800-633-1501 (Mon-Fri 8am-5pm Est)
- Any incidental, indirect or consequential loss, damage, or expense that may result from any defect or malfunction of the products is not covered by the warranty.
- The warranty does not include installation, assembly or normal adjustments explained in the operator's manual. The expense of delivering the product to the vendor and the expense of returning the product or replacement parts to the owner is not covered by the warranty.

Additional Warranty Limitations

Some states do not allow the exclusion or limitation on how long an implied warranty lasts, so the above limitation may not apply to you. Products sold damaged or incomplete, sold —as is, or sold as reconditioned are not covered under the warranty.

Damage or liability caused by shipping, improper handling, improper assembly, incorrect voltage, improper wiring, improper maintenance, improper modification or the use of accessories and/or attachments not specifically recommended is not covered by this warranty.

Proof of purchase, original dated sales receipt, must accompany all warranty claims.

**For claims go to americanlawnmower.com or call our customer support hotline from 8am-5pm EST,
Mon-Fri at 1-800-633-1501**



American Lawn Mower Company
The Great States Corporation
7444 Shadeland Station Way
Indianapolis, IN 46256 USA
Phone 1-800-633-1501
americanlawnmower.com