



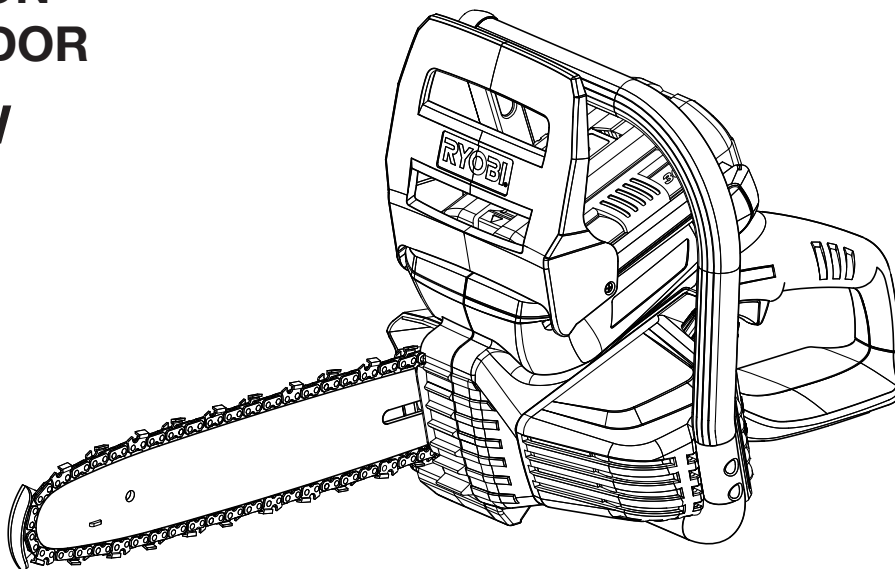
OPERATOR'S MANUAL

MANUEL D'UTILISATION
MANUAL DEL OPERADOR

40 VOLT CHAIN SAW

SCIE À CHAÎNE 40 V
MOTOSIERRA DE 40 V

RY40500



Your chain saw has been engineered and manufactured to our high standard for dependability, ease of operation, and operator safety. When 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 operator's manual before using this product.

Thank you for your purchase.

SAVE THIS MANUAL FOR FUTURE REFERENCE

Cette scie à chaîne a été conçue et fabriquée conformément aux strictes normes de fiabilité, simplicité d'emploi et sécurité d'utilisation. Correctement entretenue, elle vous donnera des années de fonctionnement robuste et sans problème.

AVERTISSEMENT : Pour réduire les risques de blessures, l'utilisateur doit lire et veiller à bien comprendre le manuel d'utilisation avant d'employer ce produit.

Merci de votre achat.

Su motosierra inalámbrica ha sido diseñada y fabricada de conformidad con nuestras estrictas normas para brindar fiabilidad, facilidad de uso y seguridad para el operador. Con el debido cuidado, le brindará muchos años de sólido y eficiente funcionamiento.

ADVERTENCIA: Para reducir el riesgo de lesiones, el usuario debe leer y comprender el manual del operador antes de usar este producto.

Le agradecemos su compra.

CONSERVER CE MANUEL POUR
FUTURE RÉFÉRENCE

GUARDE ESTE MANUAL PARA
FUTURAS CONSULTAS

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INTRODUCTION

INTRODUCTION / INTRODUCCIÓN

This product has many features for making its use more pleasant and enjoyable. Safety, performance, and dependability have been given top priority in the design of this product making it easy to maintain and operate.

* * *

Ce produit offre de nombreuses fonctions destinées à rendre son utilisation plus plaisante et satisfaisante. Lors de la conception de ce produit, l'accent a été mis sur la sécurité, les performances et la fiabilité, afin d'en faire un outil facile à utiliser et à entretenir.

* * *

Este producto ofrece numerosas características para hacer más agradable y placentero su uso. En el diseño de este producto se ha conferido prioridad a la seguridad, el desempeño y la fiabilidad, por lo cual se facilita su manejo y mantenimiento.

GENERAL SAFETY RULES

WARNING:

Read and understand all instructions. Failure to follow all instructions listed below may result in electric shock, fire, and/or serious personal injury.

READ ALL INSTRUCTIONS

BASIC SAFETY PRECAUTIONS

- Do not operate a chain saw with one hand! Use a firm grip with thumbs and fingers encircling the chain saw handles. Serious injury to the operator, helpers, bystanders, or any combination of these persons may result from one-handed operation. A chain saw is intended for two-handed use.
- Always be aware of what you are doing when using the chain saw. Use common sense. Do not operate the chain saw when you are tired, ill, or under the influence of alcohol, drugs, or medication.
- Stay alert and pay attention to what you are doing. Use common sense when using this unit.
- Keep all parts of your body away from the saw chain when the unit is running.
- Always carry the chain saw by the front handle with the unit stopped and the guide bar and saw chain positioned to the rear. When transporting your chain saw, use the appropriate guide bar scabbard.
- Never let anyone use your chain saw who has not received adequate instructions in its proper use. This applies to rentals as well as privately owned saws.
- Before you start the unit, make sure the saw chain is not contacting any object.
- Stop the chain saw before setting it down. Do not leave the unit running unattended.
- To avoid accidental starting, never carry the unit with your finger on the switch trigger.
- Maintain the unit with care. Keep the cutting edge sharp and clean for best performance and to reduce the risk of injury. Follow instructions for lubricating and changing accessories. Inspect the battery charger cord periodically, and if damaged, have it replaced or repaired by an authorized service dealer.

- Keep handles dry, clean, and free of oil and grease.
- Do not operate a chain saw that is damaged, improperly adjusted, or not completely and securely assembled. Chain should stop turning when the switch trigger is released. If the chain turns after the switch trigger has been released, have the unit serviced by your nearest Ryobi service dealer.
- Check for damaged parts. Any part or guard that has been damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorized service dealer unless otherwise indicated elsewhere in this manual.
- All chain saw service, other than the items listed in the operation and maintenance sections, should be performed by your nearest Ryobi service dealer.
- Do not use in the rain, snow or wet conditions.
- Always maintain a proper stance. Do not over-reach.
- Do not adapt your powerhead to a bow guide or use it to power any attachments or devices not listed for the saw.
- Do not cut vines and/or small underbrush.

SAFETY APPAREL

- Wear snug fitting clothing. Always wear heavy, long pants, long sleeves, overalls, jeans or chaps made of cut resistant material or ones that contain cut resistant inserts. Wear non-slip safety footwear. Wear non-slip heavy duty gloves to improve your grip and to protect your hands. Do not wear jewelry, short pants, sandals, or go barefoot. Do not wear loose fitting clothing, which could be drawn into the motor or catch the chain or underbrush. Secure hair so it is above shoulder level.
- Always wear eye protection with side shields marked to comply with ANSI Z87.1, along with head protection.

GENERAL SAFETY RULES

KICKBACK

See Figures 1 - 4.

■ **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 saw chain 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 saw chain 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. Hold the saw firmly with both hands when the motor 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 switch trigger and maintain a steady cutting speed.
4. Use replacement parts such as low kickback chain, SAFE-T-TIP® anti-kickback nose guards and special guide bars that reduce the risks associated with rotational kickback.
Use only the replacement guide bars and low kickback chains specified by the manufacturer for the saw.

■ With a basic understanding of kickback, you can reduce or eliminate the element of surprise. Sudden surprise contributes to accidents.

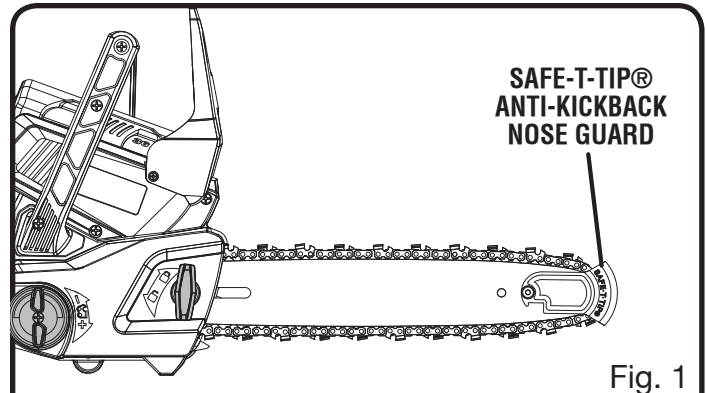


Fig. 1

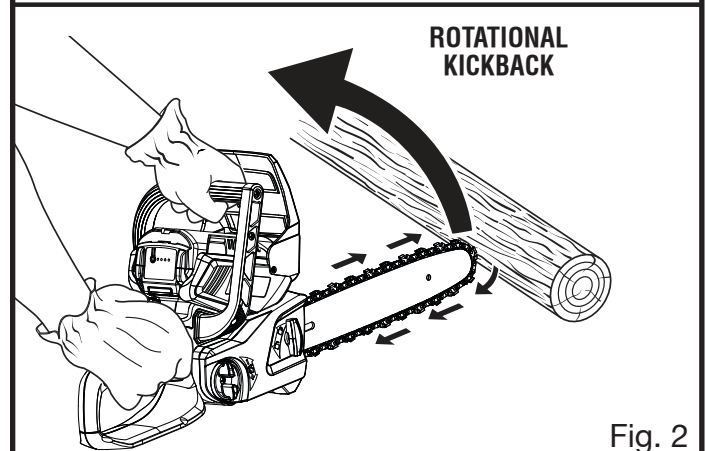


Fig. 2

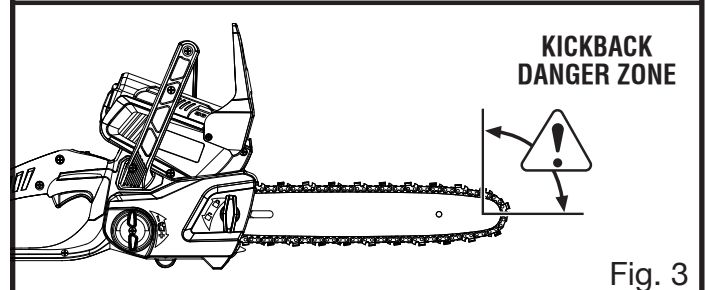


Fig. 3

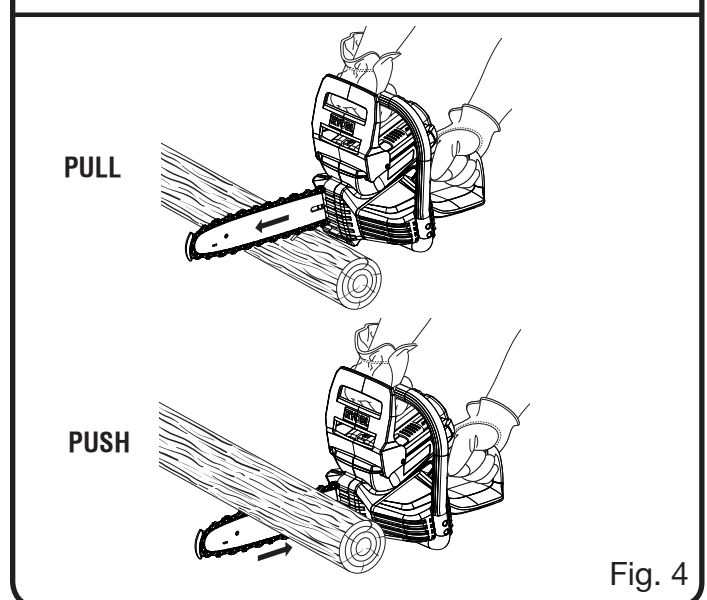


Fig. 4

GENERAL SAFETY RULES

- Keep proper footing and balance at all times.
- Do not cut above shoulder height or overreach when cutting.
- Keep the SAFE-T-TIP® anti-kickback nose guard properly mounted on the guide bar to prevent rotational kickback.
- Follow the sharpening and maintenance instructions for the saw chain.
- 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. See Figure 4.

IN THE CUTTING/WORK AREA

- Do not operate a chain saw in a tree, on a ladder, rooftop or scaffold; this is extremely dangerous.
- Keep ALL children, bystanders, visitors, and animals out of the work area while starting or cutting with the chain saw.

NOTE: The size of the work area depends on the job being performed as well as the size tree or work piece involved. For example, felling a tree requires a larger work area than making bucking cuts.

- Never start cutting until you have a clear work area, secure footing, and a planned retreat path from the falling tree. Cluttered area invite injuries.
- Do not expose the chain saw to rain.
- Do not use the chain saw in damp or wet locations.
- Do not use the chain saw near flammable liquids, gases, or in any type of explosive atmosphere.
- Use extreme caution when cutting small size brush and saplings, because slender material may catch the saw chain and be whipped toward you or pull you off balance.
- When cutting a limb that is under tension, be alert for spring back so that you will not be struck when the tension in the wood fibers is released.
- Do not force the chain saw. The job can be performed better and safer at the rate for which it was intended.

- Always use the right product for your application. The chain saw should be used for cutting wood only. Never use the chain saw to cut plastic, masonry or non-wood building materials.
- Do not use the chain saw for purposes not intended.
- Store idle chain saw when not in use. Chain saw should be stored in a dry and high or locked area out of the reach of children. When storing chain saw, remove battery and place the scabbard on the bar and chain or store the chain saw in a carry case.
- Remove the battery pack from the chain saw before cleaning, servicing, storing, removing material from the unit, changing accessories such as the bar and chain, or when not in use.

UNDERSTANDING YOUR CHAIN SAW SAFETY DEVICES

SAFE-T-TIP® ANTI-KICKBACK NOSE GUARD

See Figure 1.

The SAFE-T-TIP® prevents kickback from happening, because it covers the tip of the bar where kickback is generated. Never attempt any kind of cutting where the SAFE-T-TIP® would have to be removed from the bar tip.

LOW KICKBACK SAW CHAIN

The rakers (depth gauges) ahead of each cutter can minimize the force of a kickback reaction by preventing the cutters from digging in too deeply at the kickback zone. Only use replacement chain that is equivalent to original chain or has been certified as low kickback chain per ANSI B175.1. Low kickback saw chain is chain that has met the kickback performance requirements of ANSI B175.1 - 1991 (American National Standard for Power Tools - Gasoline-Powered Chain Saws-Safety Requirements) when tested on the representative sample of chain saws below 3.8 c.i.d. specified in ANSI B175.1 - 1991.

As saw chains are sharpened during their useful life, they lose some of the low kickback qualities and extra caution should be used.

GENERAL SAFETY RULES

GUIDE BARS

Generally, guide bars with small radius tips have somewhat lower kickback potentials.

When making a replacement, be sure to order one of the Ryobi bars listed for the saw in this operator's manual.

The proper size SAFE-T-TIP® nose guard comes installed on the bar. Use only guide bars that have a provision for mounting the SAFE-T-TIP®.




SPECIFIC SAFETY RULES

- Battery operated units do not have to be plugged into an electrical outlet; therefore, they are always in operating condition. Be aware of possible hazards even when unit is not operating.
- Remove the battery pack from the chain saw before cleaning, servicing, storing, removing material from the unit, changing accessories such as the bar and chain, or when not in use.
- Use only with charger listed. For use with 40V lithium-ion battery packs, see tool/appliance/battery pack/charger correlation supplement 988000-842.
- Save these instructions. Refer to them frequently and use them to instruct others who may use this tool. If you loan someone this tool, loan them these instructions also.








SAVE THESE INSTRUCTIONS

SYMBOLS

The following signal words and meanings are intended to explain the levels of risk associated with this product.








SYMBOL	SIGNAL	MEANING
	DANGER:	Indicates an imminently hazardous situation, which, if not avoided, will result in death or serious injury.
	WARNING:	Indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.
	CAUTION:	Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.
	NOTICE:	(Without Safety Alert Symbol) Indicates important information not related to an injury hazard, such as a situation that may result in property damage.

Some of the following symbols may be used on this product. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to operate the product better and safer.

SYMBOL	NAME	DESIGNATION/EXPLANATION
	Safety Alert	Indicates a potential personal injury hazard.
	Read Operator's Manual	To reduce the risk of injury, user must read and understand operator's manual before using this product.
	Eye and Head Protection	Always wear eye protection with side shields marked to comply with ANSI Z87.1, along with head protection
	SAFE-T-TIP® Nose Guard	The SAFE-T-TIP® nose guard on the guide bar helps prevent rotational kickback.
	Wet Conditions Alert	Do not expose to rain or use in damp locations.
	Operate With Two Hands	Hold and operate the saw properly with both hands.
	One Handed	Do not operate the saw using only one hand.

SYMBOLS

Some of the following symbols may be used on this product. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to operate the product better and safer.

SYMBOL	NAME	DESIGNATION/EXPLANATION
	Kickback	DANGER! Beware of kickback.
	Bar Nose Contact	Avoid bar nose contact.
	Wear Gloves	Wear non-slip, heavy-duty protective gloves when handling the chain saw.
	Wear Safety Footwear	Wear non-slip safety footwear when using this equipment.
	Keep Bystanders Away	Keep all bystanders and animals at least 50 ft. away.
	Oil Indicator	Pour bar and chain lubricant into oil tank where indicated. Do not use any other fluids.
	Recycle Symbol	This product uses lithium-ion batteries. Local, state or federal laws may prohibit disposal of batteries in ordinary trash. Consult your local waste authority for information regarding available recycling and/or disposal options.
V	Volts	Voltage
==	Direct Current	Type or a characteristic of current

GLOSSARY OF TERMS

Bucking

The process of cross cutting a felled tree or log into lengths.

Chain Saw Powerhead

A chain saw without the saw chain and guide bar.

Drive Sprocket or Sprocket

The toothed part that drives the saw chain.

Felling

The process of cutting down a tree.

Felling Back Cut

The final cut in a tree felling operation made on the opposite side of the tree from the notching undercut.

Front Hand Guard

A structural barrier between the front handle of a chain saw and the guide bar, typically located close to the hand position on the front handle.

Front Handle

The support handle located at or toward the front of the chain saw. This handle is for the left hand.

Guide Bar

A solid railed structure that supports and guides the saw chain.

Kickback

The backward or upward motion, or both, of the guide bar occurring when the saw chain near the nose of the top area of the guide bar contacts any object such as a log or branch, or when the wood closes in and pinches the saw chain in the cut.

Kickback (Pinch)

The rapid pushback of the saw which can occur when the wood closes in and pinches the moving saw chain in the cut along the top of the guide bar.

Kickback (Rotational)

The rapid upward and backward motion of the saw which can occur when the moving saw chain near the upper portion of the tip of the guide bar contacts an object, such as a log or branch.

Lock-out button

A movable stop that prevents the unintentional operation of the switch until manually actuated.

Low-Kickback Chain

A chain that complies with the kickback performance requirements of ANSI B175.1 when tested on a representative sample of chain saws.

Normal Cutting Position

Those positions assumed in performing the bucking and felling cuts.

Notching Undercut

A notch cut in a tree that directs the tree's fall.

Rear Handle

The support handle located at or toward the rear of the saw. It normally contains the switch trigger. This handle is for the right hand.

Reduced Kickback Guide Bar

A guide bar which has been demonstrated to reduce kickback significantly.

Replacement Saw Chain

A chain that complies with the kickback performance requirements of ANSI B175.1 when tested with specific chain saws. It may not meet the ANSI performance requirements when used with other saws.

SAFE-T-TIP® Nose Guard

An attachment that may be provided on the end of the guide bar to prevent the chain at the end of the guide bar from contacting the wood.

Saw Chain

A loop of chain having cutting teeth that cut the wood, and that is driven by the motor and is supported by the guide bar.

Springpole

A small tree (sapling) or limb that is bent or trapped under tension. It may "spring back" rapidly when cut, causing a dangerous situation.

Switch Trigger

A device that when operated will complete or interrupt an electrical power circuit to the motor of the chain saw.

FEATURES

PRODUCT SPECIFICATIONS

Motor	40 Volt DC
Bar Length	12 in.
Cutting Capacity	9 in.
Felling Capacity	7 in.
Chain oil tank capacity	5 oz.
Weight - No bar, chain, or lubricant	5.3 lbs.

NOTE: This saw was designed for occasional light duty use and has some limitations as to what it can cut.

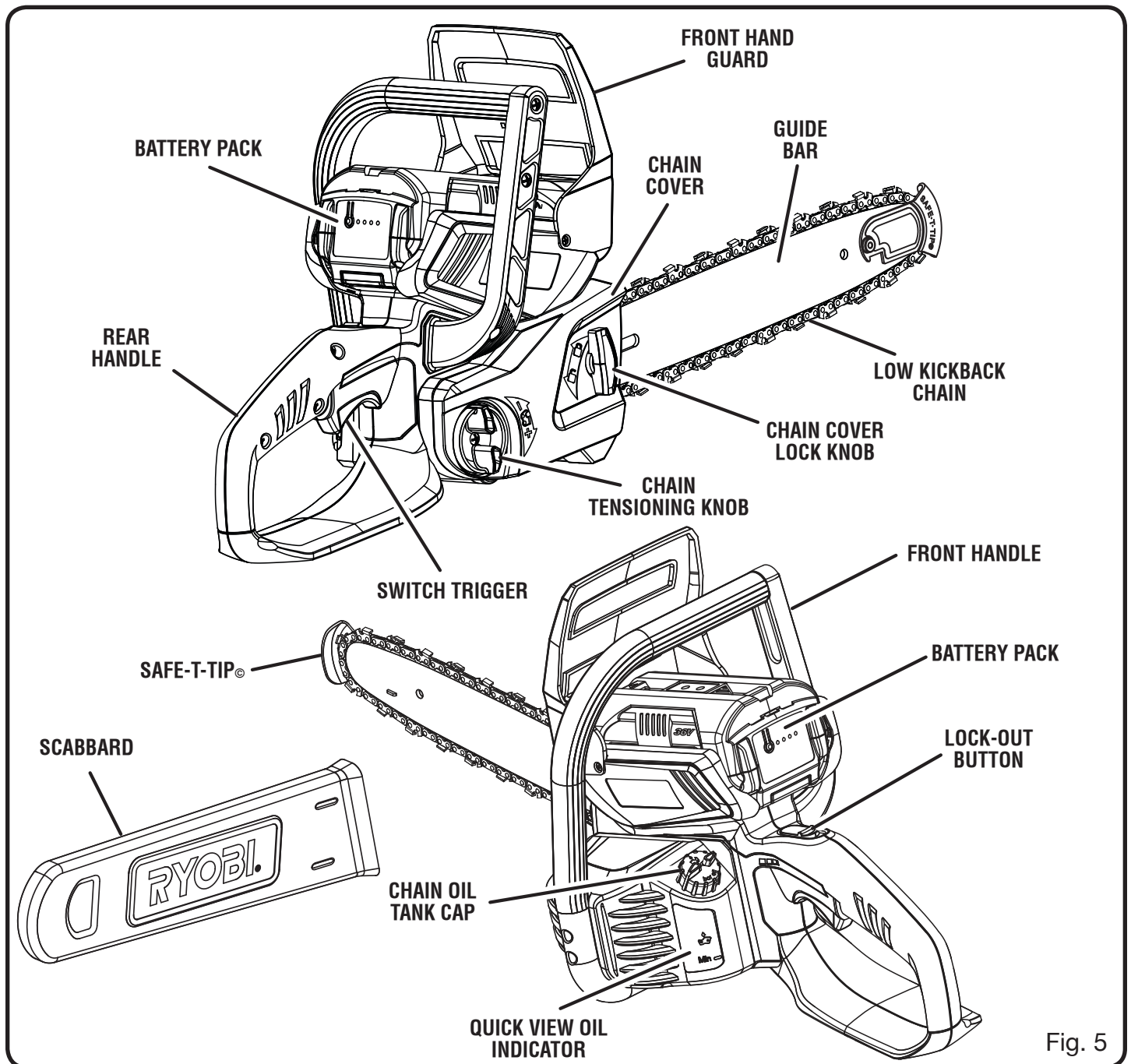


Fig. 5

FEATURES

KNOW YOUR CHAIN SAW

See Figure 5.

The safe use of this product requires an understanding of the information on the tool and in this operator's manual as well as a knowledge of the project you are attempting. Before use of this product, familiarize yourself with all operating features and safety rules.

CHN TENSIONING KNOB

This feature allows user to adjust the tension of the chain.

GUIDE BAR

The factory-equipped guide bar has a small radius tip that offers a somewhat lower kickback potential.

LOW KICKBACK CHAIN

The low kickback chain helps minimize the force of a kickback reaction by preventing the cutters from digging in too deeply at the kickback zone.

QUICK VIEW OIL INDICATOR

Semi-transparent oil reservoir that allows user to see when to add oil.

SAFE-T-TIP® ANTI-KICKBACK NOSE GUARD

The SAFE-T-TIP® Anti-Kickback Nose Guard is an attachment provided on the end of the guide bar to prevent the chain on the end of the guide bar from contacting the wood.

LOCK-OUT BUTTON

A control feature designed to prevent the motor from being accidentally started.

SWITCH TRIGGER

Squeeze the switch trigger to operate the unit after switch lock-out has been pushed in. Release the switch trigger to stop the unit.

ASSEMBLY

UNPACKING

This product has been shipped completely assembled.

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



WARNING:

Do not use this product if any parts on the Packing List are already assembled to your product when you unpack it. Parts on this list are not assembled to the product by the manufacturer and require customer installation. Use of a product that may have been improperly assembled could result in serious personal injury.

- 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.
- If any parts are damaged or missing, please call 1-800-860-4050 for assistance.

PACKING LIST

Chain Saw with Scabbard
Bar and Chain Lubricant
Operator's Manual

ASSEMBLY

WARNING:

If any parts are damaged or missing do not operate this product until the parts are replaced. Use of this product with damaged or missing parts could result in serious personal injury.

WARNING:

Do not attempt to modify this product or create accessories not recommended for use with this product. Any such alteration or modification is misuse and could result in a hazardous condition leading to possible serious personal injury.

WARNING:

To prevent accidental starting that could cause serious personal injury, always remove the battery pack from the product when assembling parts.

OPERATION

WARNING:

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

WARNING:

Always wear eye protection with side shields marked to comply with ANSI Z87.1, along with head protection. Failure to do so could result in objects being thrown into your eyes and other possible serious injuries.

WARNING:

Do not use any attachments or accessories not recommended by the manufacturer of this product. The use of attachments or accessories not recommended can result in serious personal injury.

Before each use, inspect the entire product for damaged, missing, or loose parts such as screws, nuts, bolts, caps, etc. Tighten securely all fasteners and caps and do not operate this product until all missing or damaged parts are replaced. Please call 1-800-860-4050 or contact an authorized service center for assistance.

APPLICATIONS

You may use this product for the following purposes:

- Limbing and pruning branches from trees
- Felling small trees up to 7 in. diameter
- Bucking the fallen tree into shorter lengths

This product will accept Ryobi 40 V lithium-ion battery packs.

For complete charging instructions, refer to the Operator's Manual for your Ryobi 40 V battery pack and charger model.

TO INSTALL / REMOVE BATTERY PACK

See Figure 6.

WARNING:

Always remove battery pack from your tool when you are assembling parts, making adjustments, cleaning, carrying, transporting or when not in use. Removing battery pack will prevent accidental starting that could cause serious personal injury.

NOTE: To avoid serious personal injury, always remove the battery pack and keep hands clear of the look-out button when carrying or transporting the tool.

OPERATION

To install:

- Place the battery pack in your chain saw. Align raised rib on battery pack with groove in chain saw's battery port.
- Make sure the latch on bottom side of the battery pack snaps in place and that battery pack is secured in chain saw before beginning operation.

⚠ WARNING:

Make sure the latch on the bottom of the battery pack snaps in place and the battery pack is fully seated and secure in the chain saw battery port before beginning operation. Failure to securely seat the battery pack could cause the battery pack to fall out, resulting in serious personal injury.

To remove:

Locate latch on bottom of battery pack and depress both sides to release the battery pack from the chain saw.

NOTICE:

When placing battery pack in your chain saw, be sure raised rib on battery pack aligns with groove in chain saw's battery port and latches snap in place properly. Improper assembly of battery pack can cause damage to internal components.

NOTICE:

Remove battery pack from unit. Fill oil tank with Ryobi Bar and Chain Lubricant before starting the chain saw. Failure to lubricate the chain will cause damage to the bar and chain.

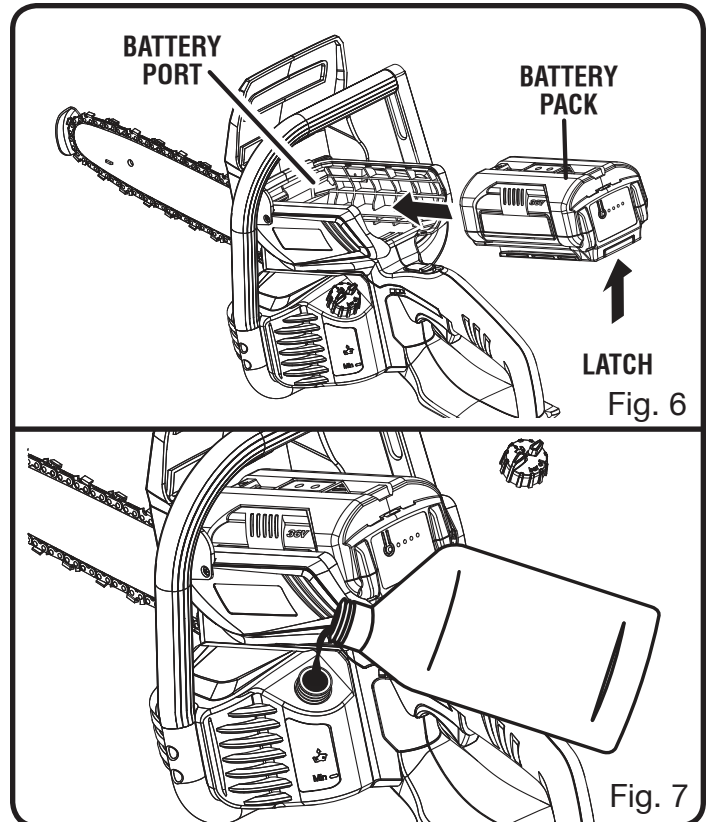
CHAIN OIL SYSTEM

See Figure 7.

- Use Ryobi Bar and Chain Lubricant. It is formulated to perform over a wide temperature range with no dilution required.

NOTE: Do not use dirty, used or otherwise contaminated oils. Damage may occur to the bar or chain.

- Carefully pour the bar and chain oil into the tank.
- Check and fill the oil tank when battery is recharged, or as needed.



NOTE: It is normal for lubricant 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 (three months or longer) be sure the chain is lightly lubricated; this will prevent rust on the chain and bar sprocket.

STARTING AND STOPPING THE CHAIN SAW

See Figure 8.

⚠ WARNING:

Keep body to the left of the chain line. Never straddle the saw or chain, or lean over past the chain line.

Starting the chain saw:

- Place the chain saw on a flat bare surface and make sure no objects or obstructions are in immediate vicinity which could come in contact with the bar and chain.
- Press and hold the lock-out button. This makes the switch trigger operational.

OPERATION

- Press and hold the switch trigger, release the lock-out button and continue to squeeze the switch trigger for continued operation.

Stopping the chain saw:

- Release the switch trigger to stop the chain saw.
- Upon release of the switch trigger, the lock-out button will be automatically reset to the lock position.

This cordless chain saw is not designed for cutting trees larger than 9 in. in diameter.

This cordless chain saw is designed for limbing and pruning type cutting, as well as cutting trees up to 9 in. in diameter only.

Do not attempt to make any cut that would require removal of the SAFE-T-TIP®.

PREPARATION FOR CUTTING

PROPER GRIP ON HANDLES

See Figures 9 -11.

Refer to **GENERAL SAFETY RULES** earlier in this manual for appropriate safety equipment.

- Wear non-slip gloves for maximum grip and protection.
- 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.

WARNING:

Never use a left-handed (cross-handed) grip, or any stance which would place your body or arm across the chain line.

- Maintain a proper grip on the saw whenever the unit is running. The fingers should encircle the handle and the thumb is wrapped under the handlebar. This grip is least likely to be broken (by a kickback or other sudden reaction of the saw). Any grip in which the thumb and fingers are on the same side of the handle, is dangerous because a slight kick of the saw can cause loss of control.

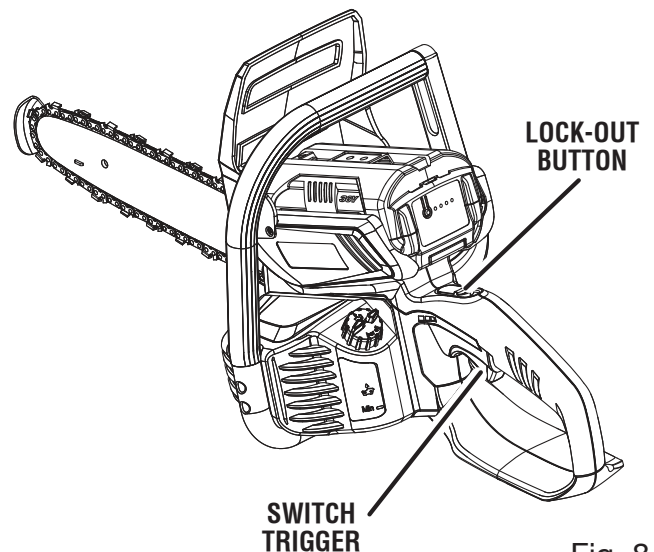
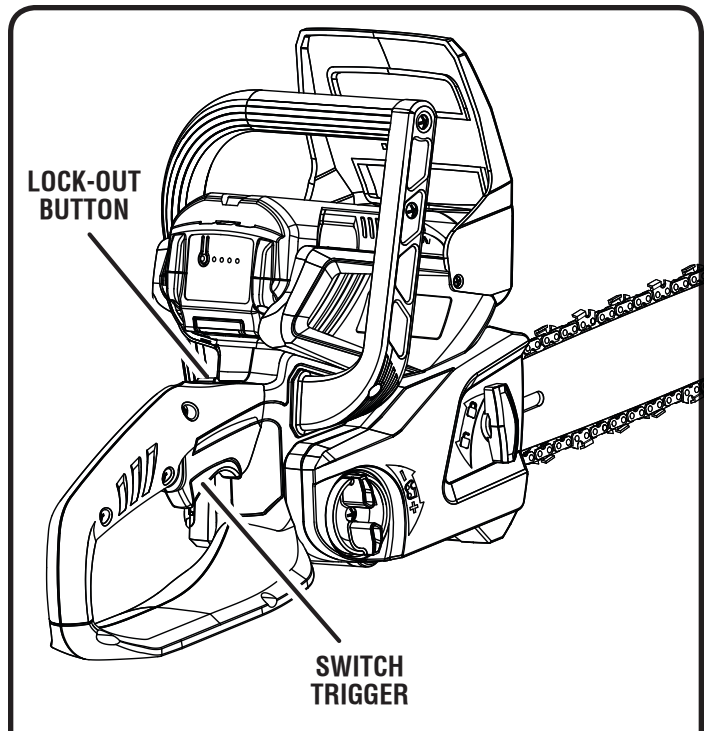


Fig. 8

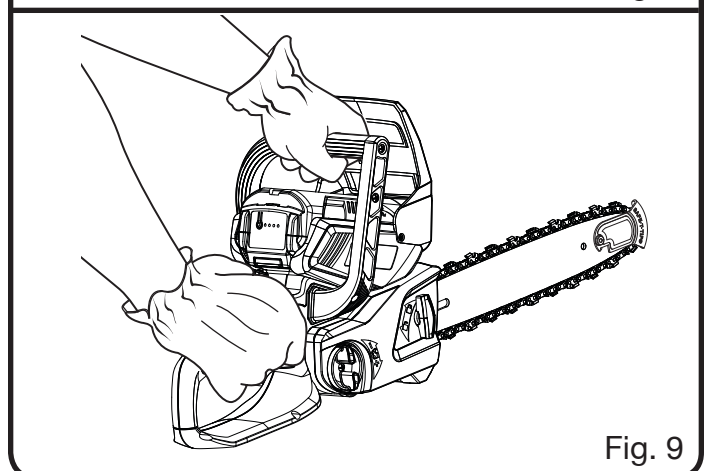


Fig. 9

OPERATION

⚠ WARNING:

Do not operate the switch trigger with your left hand and hold the front handle with your right hand. Never allow any part of your body to be in the chain line while operating a saw.

PROPER CUTTING STANCE

See Figures 12 - 13.

⚠ WARNING:

Always use the proper cutting stance described in this section. Never kneel when using the chain saw, except when felling a tree as illustrated in *Figure 13*. Kneeling could result in loss of stability and control of the chain saw, resulting in serious personal injury.

- 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.
- Thumb should be on underside of handlebar.

BASIC CUTTING PROCEDURE

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 switch trigger and let the chain accelerate to full speed before entering the cut.
- Begin cutting with the saw against the log.
- 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.
- Release the switch trigger as soon as the cut is completed, allowing the chain to stop. If you run the saw without a cutting load, unnecessary wear can occur to the chain, bar, and unit.
- Do not put pressure on the saw at the end of cut.

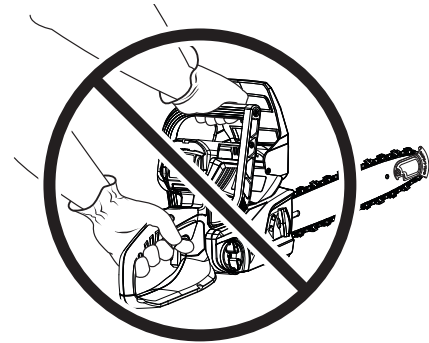


Fig. 10

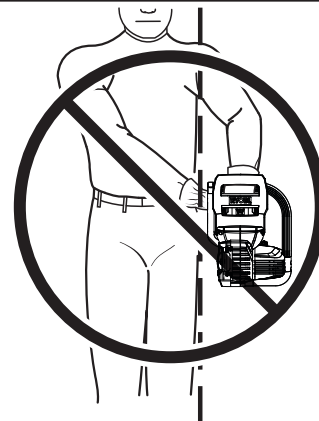


Fig. 11

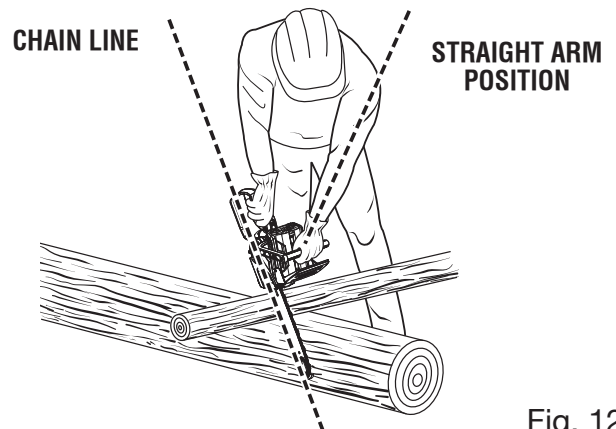


Fig. 12



Fig. 13

OPERATION

WORK AREA PRECAUTIONS

See Figure 14.

- Cut only wood or materials made from wood, no sheet metal, no plastics, no masonry, no non-wood building materials.
- Never allow children to operate the saw. Allow no person to use this chain saw who has not read this Operator's Manual or received adequate instructions for the safe and proper use of this chain saw.
- When felling a tree, keep everyone - helpers, bystanders, children, and animals - 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. During bucking operations, keep a minimum distance of 15 feet between workers. 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.
- 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.
- Do not fell trees near electrical wires or buildings. Leave this operation for professionals.
- Cut only when visibility and light are adequate for you to see clearly.

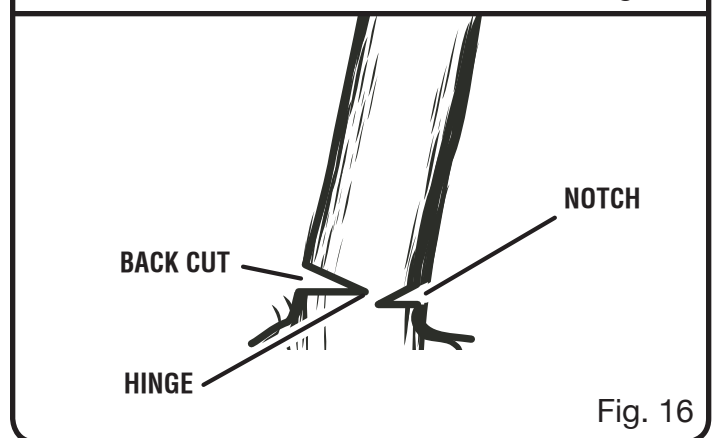
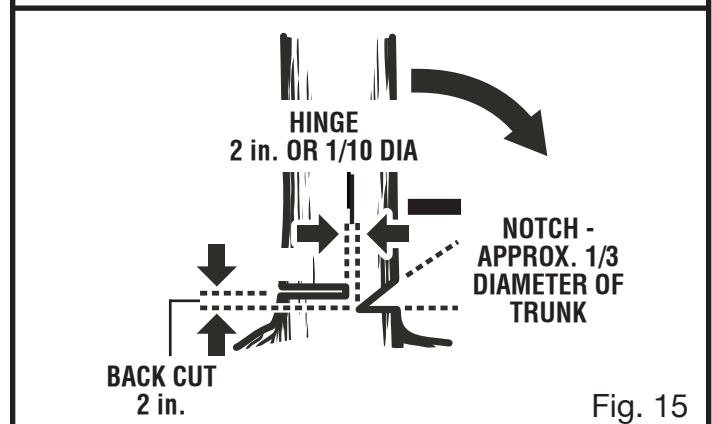
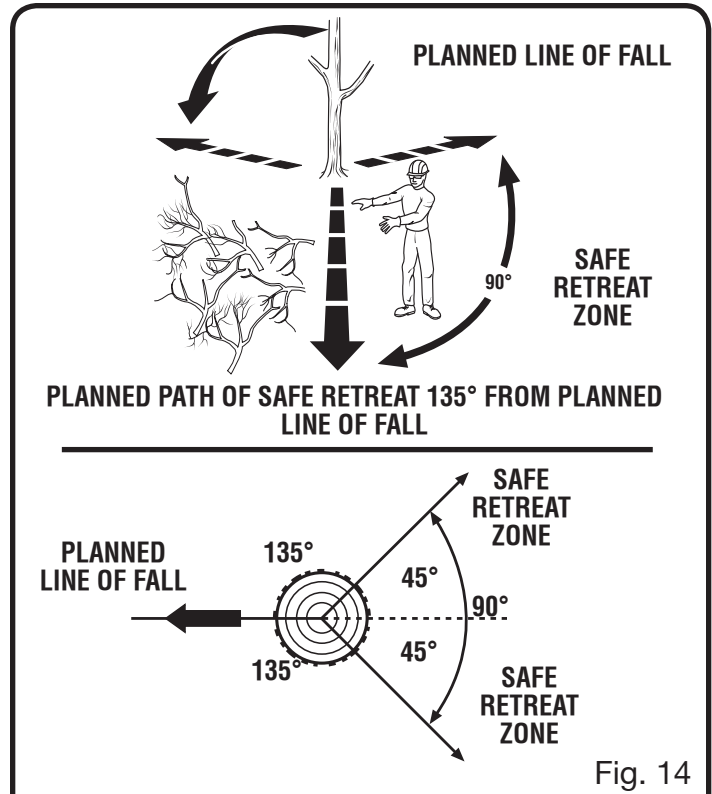
FELLING TREES

See Figures 14 - 17.

HAZARDOUS CONDITIONS

⚠ WARNING:

Do not fell trees during periods of high wind or heavy precipitation. Wait until the hazardous weather has ended.



OPERATION

⚠ WARNING:

Closely check for broken or dead branches, which could fall while cutting and do not cut near buildings or electrical wires if you do not know the direction of tree fall. Do not cut at night or during bad weather conditions, such as rain, snow, or strong winds, which can reduce visibility and control of the chain saw. If the tree you are felling makes contact with any utility line, you should discontinue use of the chain saw and immediately notify the utility company. Failure to follow these instructions could result in death or serious personal injury.

When felling a tree, it is important that you follow these warnings and instructions to prevent possible serious injury.

- Do not cut down trees having an extreme lean or large trees with rotten limbs, loose bark, or hollow trunks. Have these trees pushed or dragged down with heavy equipment, then cut them up.
- Do not cut trees near electrical wires or buildings.
- Check the tree for damaged or dead branches that could fall and hit you during felling.
- Periodically glance at the top of the tree during the backcut to assure the tree is going to fall in the desired direction.
- 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!
- 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.
- 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. Clear path of safe retreat approximately 135° from planned

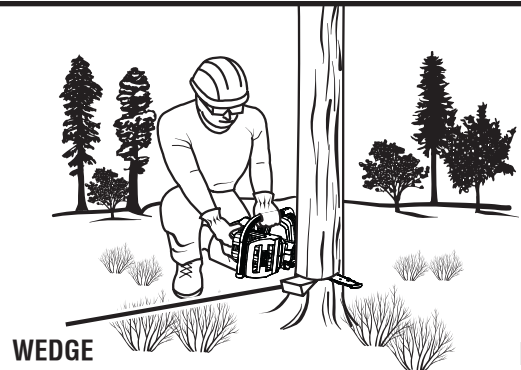


Fig. 17

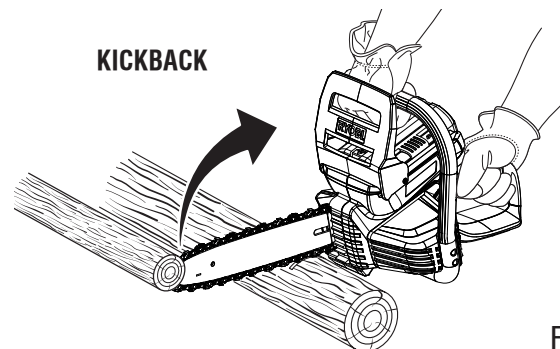


Fig. 18



Fig. 19

line of fall. The retreat path should extend back and diagonally to the rear of the expected line of fall. *See Figure 14.*

- 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.

OPERATION

- **Notched Undercut.** Cut a notch about $\frac{1}{3}$ the diameter of the tree, perpendicular to the direction of 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. See Figure 15.
 - **Felling Backcut.** The backcut is always made level and horizontal, and at a minimum of 2 in. above the horizontal cut of the notch. See Figures 15 - 16.
 - Never cut through to the notch. Always leave a band of wood between the notch and backcut (approximately 2 in. or $\frac{1}{10}$ the diameter of the tree). This is called “hinge” or “hingewood.” It controls the fall of the tree and prevents slipping or twisting or shoot-back of the tree off the stump. See Figures 15 - 16.
 - 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. See Figure 17.
- NOTE:** When bucking or felling with a wedge, it may be necessary to remove the SAFE-T-TIP® anti-kickback nose guard to allow the bar to be drawn through the cut. After the cut is complete, the tip should be reinstalled immediately.
- As 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:

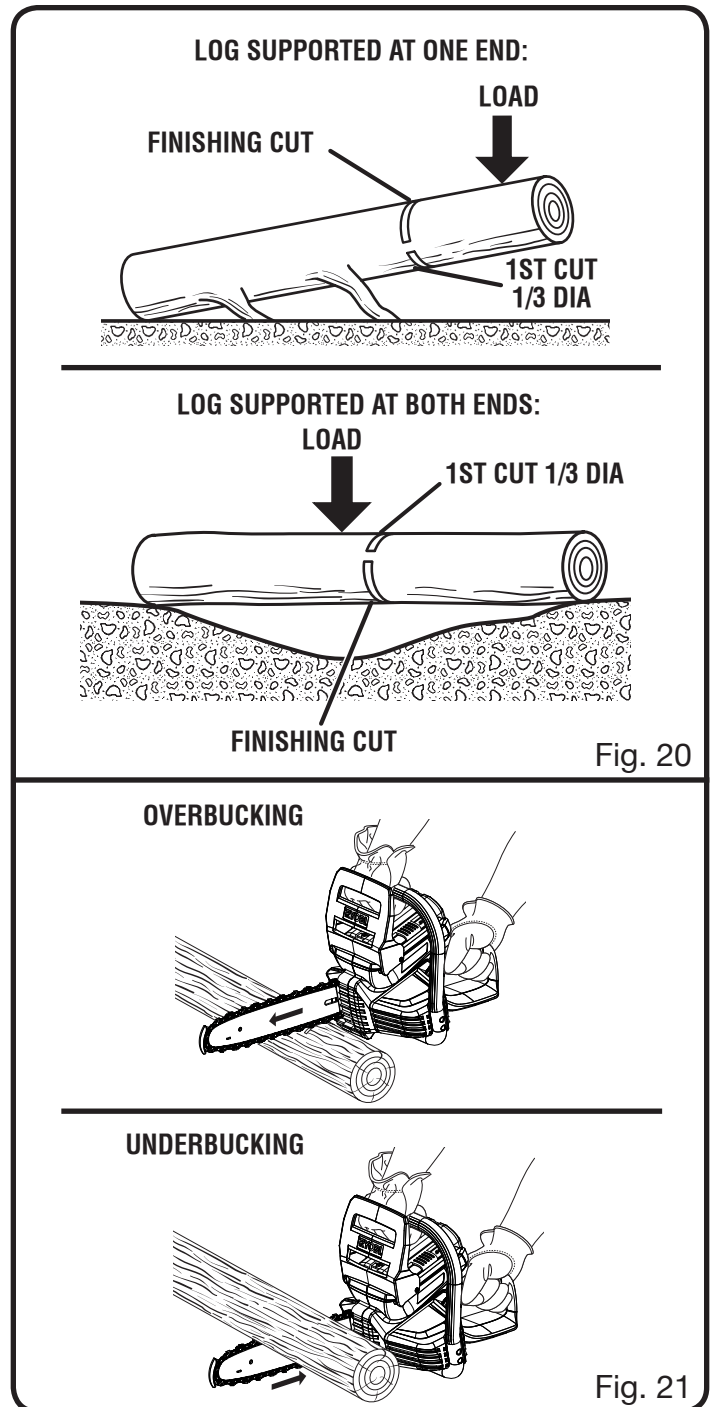
Never cut through to the notch when making a backcut. The hinge controls the fall of the tree, this is the section of wood between the notch and backcut.

BUCKING

See Figures 18 - 21.

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. To avoid the danger, keep the SAFE-T-TIP® anti-kickback nose guard attached while cutting. Refer to **Precautions Against Kickback** earlier in this manual.

OPERATION

- 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.
- Sometimes it is impossible to avoid pinching (with just standard cutting techniques) or difficult to predict which way a log will settle when cut. To avoid pinching while cutting, rotate or move the log so that the pinch is eliminated.

BUCKING LOGS UNDER STRESS

See Figures 20 - 21.

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

When the log is supported on one end, cut 1/3 the diameter from the underside or underbucking. Then make the finishing cut by overbucking 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.

When bucking on a slope, always stand on the uphill side of the log as shown in figure 18. When “cutting through,” to maintain complete control of the chain saw, 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.

TYPES OF CUTTING USED

See Figure 21.

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.

UNDERBUCKING

Begin on the under side of the log with the top of the saw against the log; exert light pressure upward. During underbucking, the saw will tend

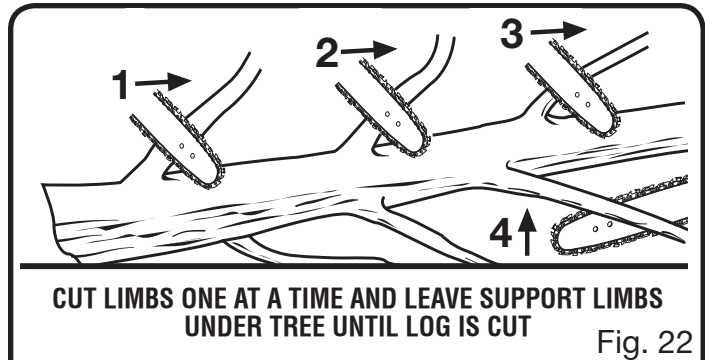


Fig. 22

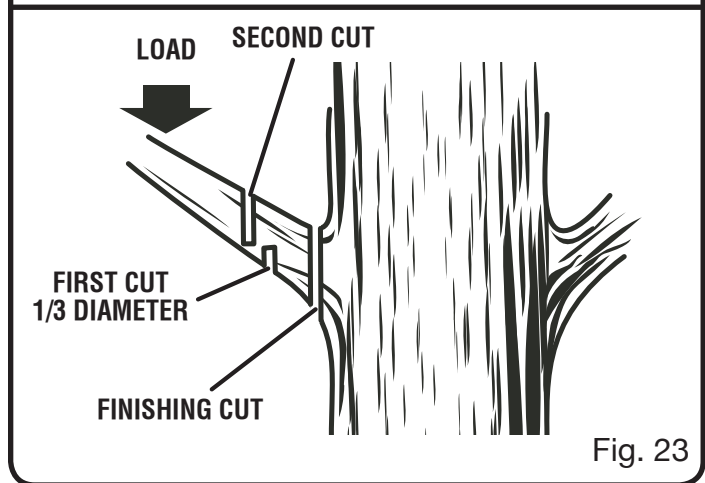


Fig. 23

to push back at you. Be prepared for this reaction and hold the saw firmly to maintain control.

⚠ 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.

LIMBING

See Figure 22.

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.

OPERATION

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

PRUNING

See Figure 23.

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.
- Do not cut from a ladder, this is extremely dangerous. Leave this operation for professionals.
- Do not cut above chest height as a saw held higher is difficult to control against kickback.
- 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.
- Underbuck the branch 1/3 through for your first cut.
- Your second cut should overbuck 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.

WARNING:

If the limbs to be pruned are above chest height, hire a professional to perform the pruning. Failure to do so could result in serious personal injury.

SPRINGPOLE



Fig. 24

SPRINGPOLES

See Figure 24.

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.

WARNING:

Springpoles are dangerous and could strike the operator, causing the operator to lose control of the chain saw. This could result in severe or fatal injury to the operator.

MAINTENANCE

WARNING:

When servicing, use only identical replacement parts. Use of any other parts may create a hazard or cause product damage.

WARNING:

Always wear eye protection with side shields marked to comply with ANSI Z87.1, along with head protection. Failure to do so could result in objects being thrown into your eyes and other possible serious injuries.

WARNING:

To avoid serious personal injury, always remove the battery pack from the product when cleaning or performing any maintenance.

GENERAL MAINTENANCE

Before each use, inspect the entire product for damaged, missing, or loose parts such as screws, nuts, bolts, caps, etc. Tighten securely all fasteners and caps and do not operate this product until all missing or damaged parts are replaced. Please call 1-800-860-4050 or contact an authorized service center for assistance.

Avoid using solvents when cleaning plastic parts. Most plastics are susceptible to damage from various types of commercial solvents and may be damaged by their use. Use clean cloths to remove dirt, dust, oil, grease, etc.

WARNING:

Do not at any time let brake fluids, gasoline, petroleum-based products, penetrating oils, etc., come in contact with plastic parts. Chemicals can damage, weaken or destroy plastic which may result in serious personal injury.

Only the parts shown on the parts list are intended to be repaired or replaced by the customer. All other parts should be replaced at an Authorized Service Center.

BATTERY PACK REMOVAL AND PREPARATION FOR RECYCLING

WARNING:

Upon removal, cover the battery pack's terminals with heavy-duty adhesive tape. Do not attempt to destroy or disassemble battery pack or remove any of its components. Lithium-ion and nickel-cadmium batteries must be recycled or disposed of properly. Also, never touch both terminals with metal objects and/or body parts as short circuit may result. Keep away from children. Failure to comply with these warnings could result in fire and/or serious injury.

REPLACING BAR AND CHAIN

See Figures 25 - 31.

WARNING:

Remove the battery pack from the chain saw and make sure the chain has stopped before you do any work on the saw. Failure to do so may result in accidental starting and possible serious injury.

WARNING:

The safety instructions in this section are to protect the user from 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.

MAINTENANCE

NOTE: When replacing the guide bar and chain, always use the specified bar and chain listed in the **Bar and Chain Combinations** section later in this manual.

- Remove the battery pack before you do any work on the chain saw.
- Rotate the chain cover lock knob counterclockwise and remove knob.
- Remove the chain cover.
- Remove the bar and chain from the mounting surface.
- Remove the old chain from the bar.
- Lay out the new saw chain in a loop and straighten any kinks. The cutters should face in the direction of chain rotation. If they face backwards, turn the loop over.

- Place the chain drive links into the bar groove as shown.

NOTE: Make certain of direction of 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.

⚠ WARNING:

When placing the bar on the bar studs, ensure that the chain tensioning pin is in the chain tension pin hole. Failure to properly place the chain tensioning pin in the chain tensioning pin hole could cause the chain to come loose, resulting in serious personal injury.

- Replace the chain cover.
- Replace the chain cover lock knob; rotate knob clockwise to tighten. The bar should still be free to move for tension adjustment.
- Remove all slack from the chain by turning the chain tensioning knob clockwise until the chain seats snugly against the bar with the drive links in the bar groove.
- Lift the tip of the guide bar up to check for sag.
- Release the tip of the guide bar and turn the chain tensioning knob 1/2 turn clockwise. Repeat this process until sag does not exist.

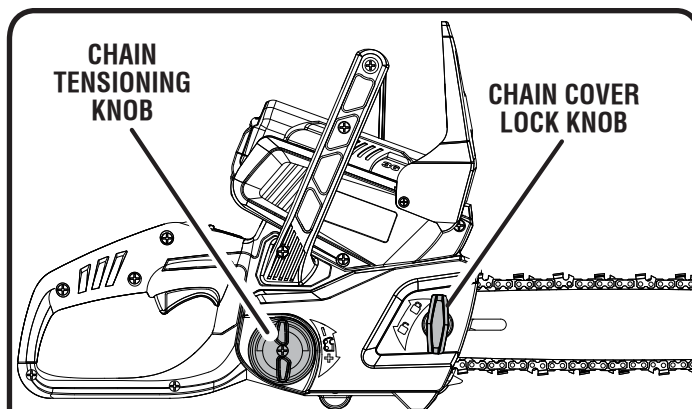


Fig. 25

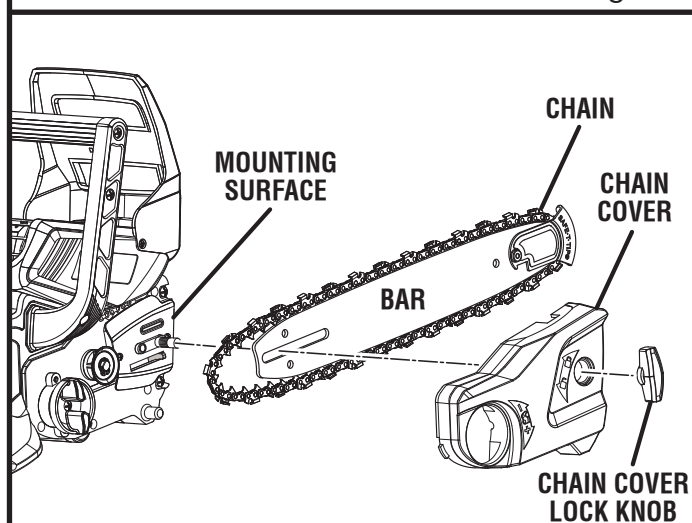


Fig. 26

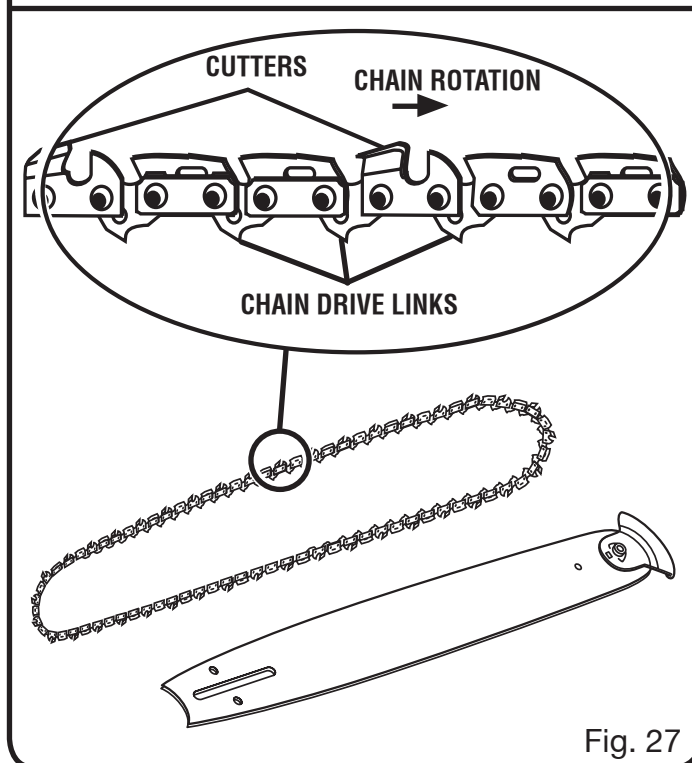


Fig. 27

MAINTENANCE

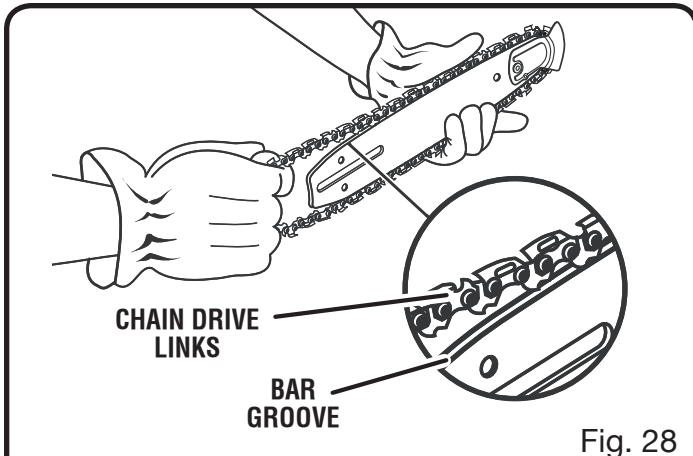


Fig. 28

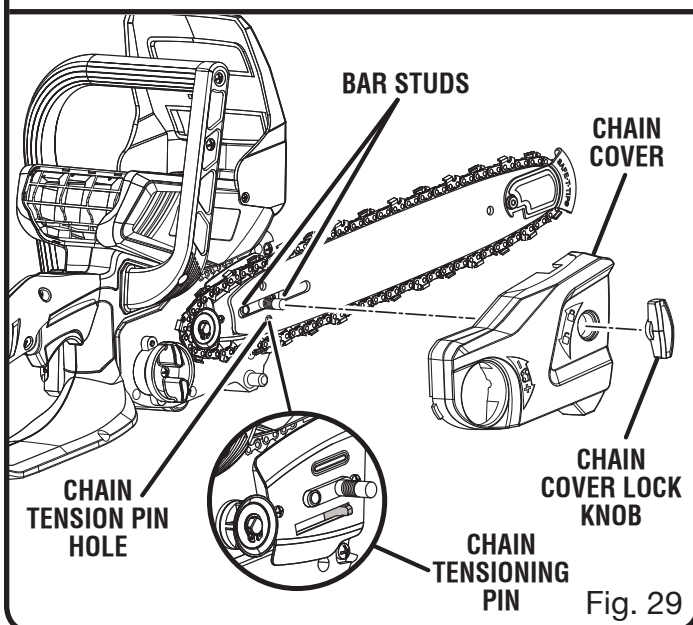


Fig. 29

- Hold the tip of the guide bar up and tighten the chain cover lock 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 chain cover lock knob slightly and turn the chain tensioning knob 1/4 turn counterclockwise. Lift the tip of the guide bar up and retighten the chain cover lock knob. Ensure that the chain will rotate without binding.

LIFT THE TIP OF
THE GUIDE BAR
UP TO CHECK FOR
SAG

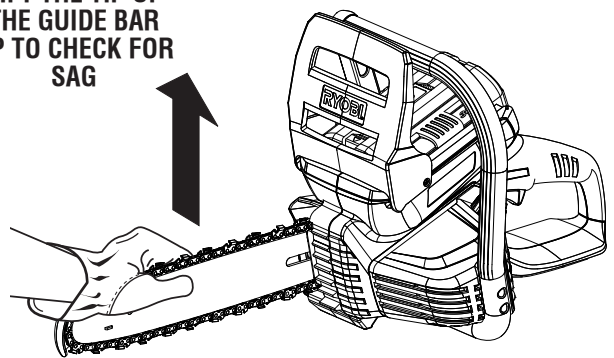


Fig. 30

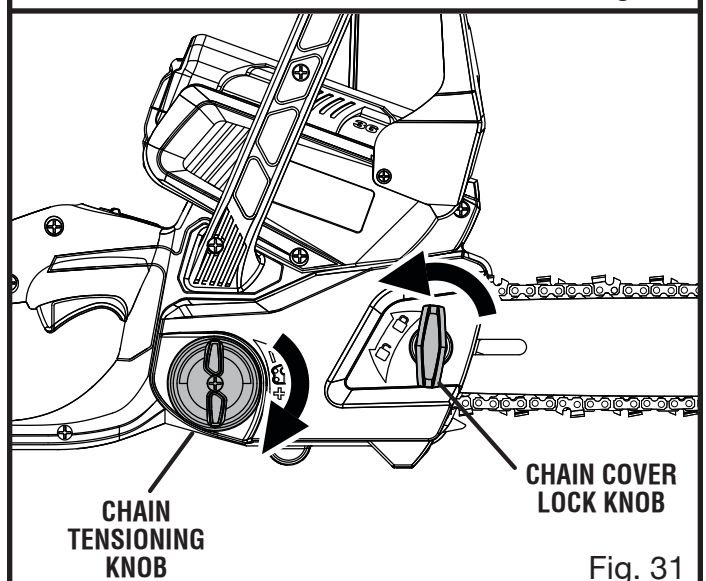


Fig. 31

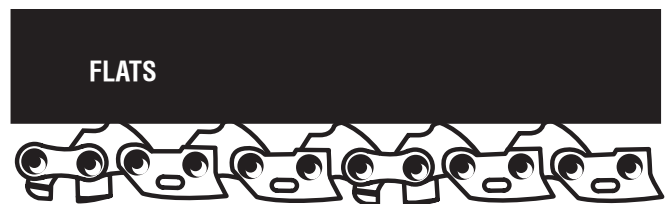
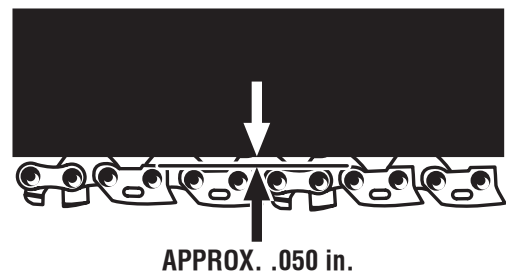


Fig. 32

MAINTENANCE

ADJUSTING THE CHAIN TENSION

See Figures 31 - 32.

⚠ 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 on the chain.

- Remove the battery pack before you do any work on the chain saw.
- Slightly loosen the chain cover lock knob.
- Turn the chain tensioning knob clockwise to tension the chain.

NOTE: A cold chain is correctly tensioned when there is no slack on the underside of the guide bar, the chain is snug, and it can be turned by hand without binding.

- Rotate the chain cover lock knob clockwise to secure.

Retension the chain whenever the flats on the drive links hang out of the bar groove.

NOTE: During normal saw operation, the temperature of the chain increases. The drive links of a correctly tensioned warm chain will hang approximately .050 in. out of the bar groove.

NOTE: New chains tend to stretch; check the chain tension frequently and tension as required.

NOTICE:

A chain tensioned while warm may be too tight upon cooling. Check the “cold tension” before next use.

CHAIN MAINTENANCE

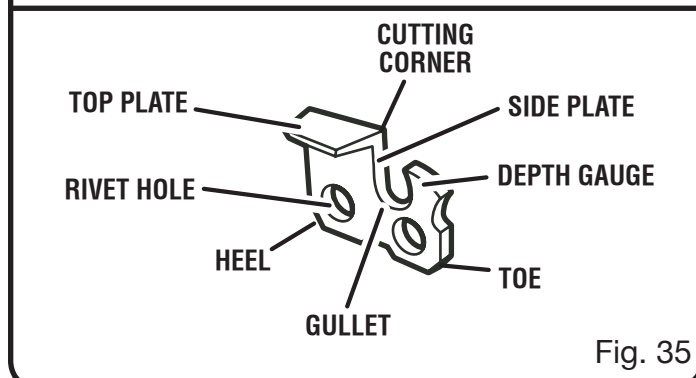
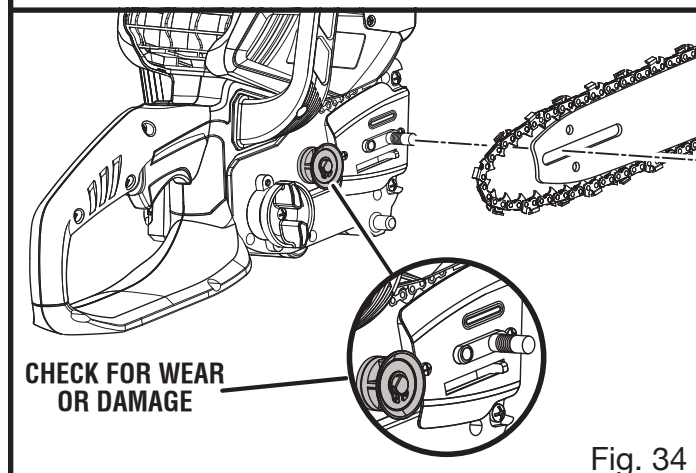
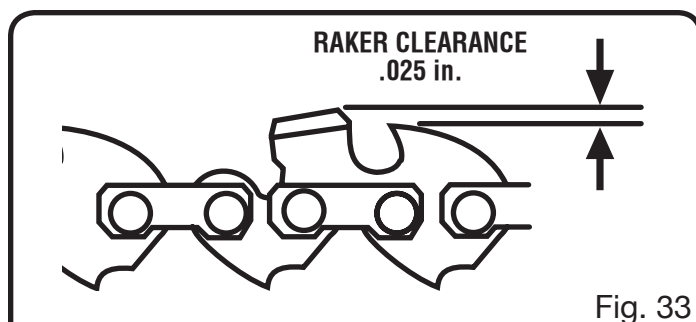
See Figures 33 - 35.

⚠ WARNING:

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

Use only low-kickback chain on this saw. This fast-cutting chain will provide kickback reduction when properly maintained.

For smooth and fast cutting, chain needs to be maintained properly. The chain requires sharpen-



ing 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, consider the following:

- Improper filing angle of the side plate can increase the risk of a 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 by a Ryobi Service dealer.

MAINTENANCE

HOW TO SHARPEN THE CUTTERS

See Figures 36 - 37.

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 mid-point 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 filings 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

See Figure 38.

- **CORRECT 30°** - File holders are marked with guide marks to align file properly to produce correct top plate angle.
- **LESS THAN 30°** - For Cross Cutting.
- **MORE THAN 30°** - Feathered Edge Dulls Quickly.

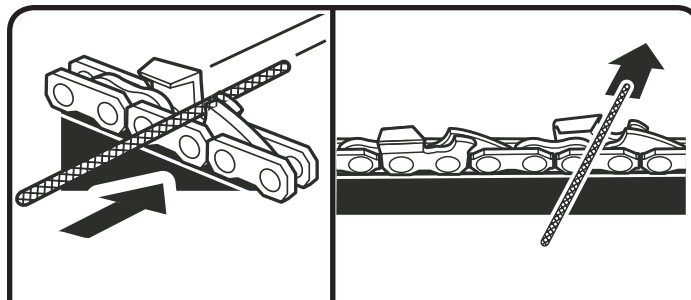


Fig. 36

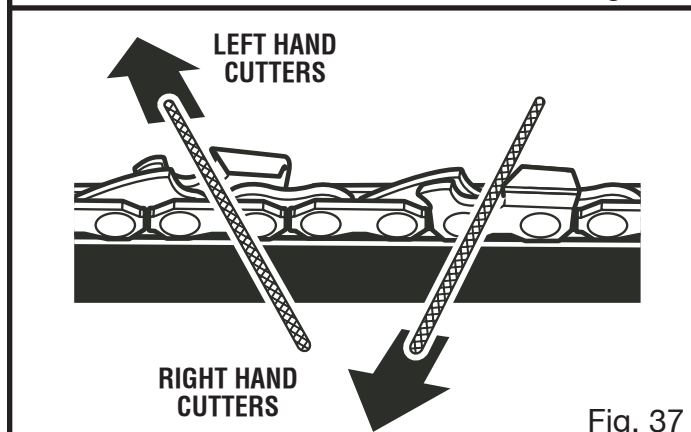
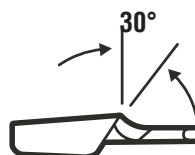


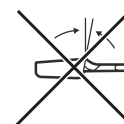
Fig. 37

CORRECT TOP PLATE FILING ANGLE



INCORRECT TOP PLATE FILING ANGLE

LESS THAN 30°



MORE THAN 30°

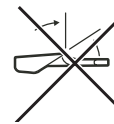


Fig. 38

MAINTENANCE

SIDE PLATE ANGLE

See Figure 39.

- **CORRECT** - 80° 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 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 diameter too large, or file held too high.

DEPTH GAUGE CLEARANCE

See Figures 40 - 41.

- The depth gauge should be maintained at a clearance of .025 in. 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. Use a .025 in. 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.

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.

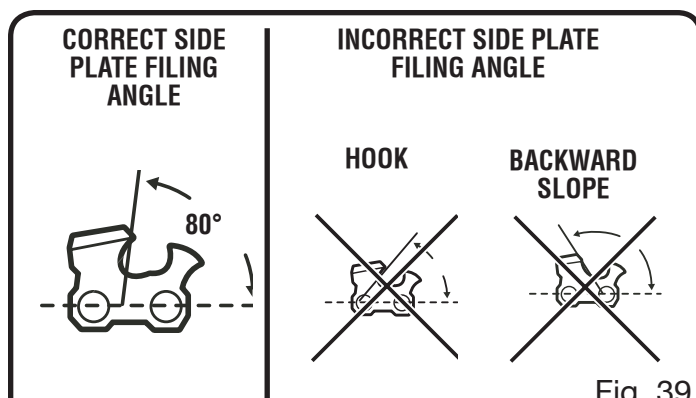


Fig. 39

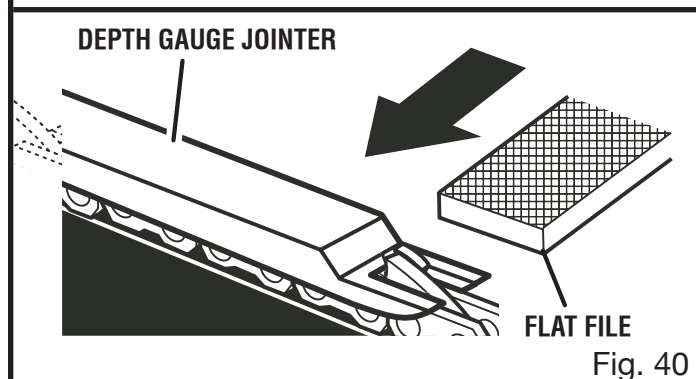


Fig. 40

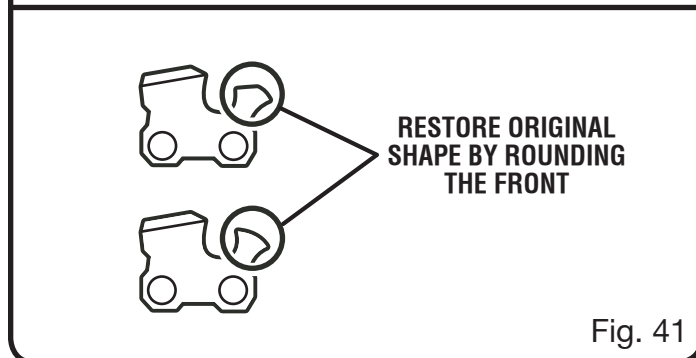


Fig. 41

- Bent guide bar.
- Cracked or broken rails.
- Spread rails.

Lubricate guide bars with a sprocket at their tip weekly. 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 impurities.

MOUNTING THE SAFE-T-TIP® NOSE GUARD

See Figures 42 - 43.

- Remove the battery pack from the chain saw.
- Mount the SAFE-T-TIP® on the bar nose.

MAINTENANCE

- Fit the locking rivet or tab in the recessed hole in the guide bar.
- Tighten the screw with wrench until snug.
- From the snug position, tighten the screw an additional $3/4$ of a turn using a wrench.

MAINTAINING THE SAFE-T-TIP® NOSE GUARD

See Figures 42 - 43.

⚠ WARNING:

Although the guide bar comes with a SAFE-T-TIP® anti-kickback nose guard already installed, check the tightness of the mounting screw before each use to avoid possible serious personal injury.

Use the following instructions to tighten the mounting screw of the nose guard. These are specially hardened screws. If you cannot install the screw tightly, replace both the screw and the SAFE-T-TIP® before further operation.

NOTE: Do not replace the screw with an ordinary screw. Use only identical replacement parts from the manufacturer when replacing parts.

In addition to preventing chain contact with solid objects at the nose of the bar, the SAFE-T-TIP® also helps keep the chain away from abrasive surfaces, such as the ground. Keep it on the right hand side of the bar where it will be between the chain and the ground during flush with ground cutting.

The mounting screw requires a $5/16$ in. wrench (or adjustable wrench) to achieve the recommended torque of 35 to 45 in.lb. A torque within this range can be achieved by using the following method.

- Tighten the screw with wrench until snug.
- From the snug position, tighten the screw an additional $3/4$ of a turn using a wrench.

TRANSPORTING AND STORING

See Figure 44.

- Do not store or transport the chain saw when it is running. The chain saw should always be idle before storing or transporting.

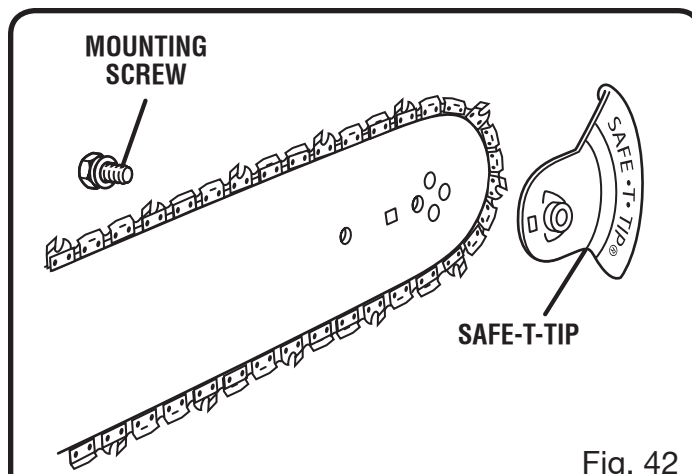


Fig. 42

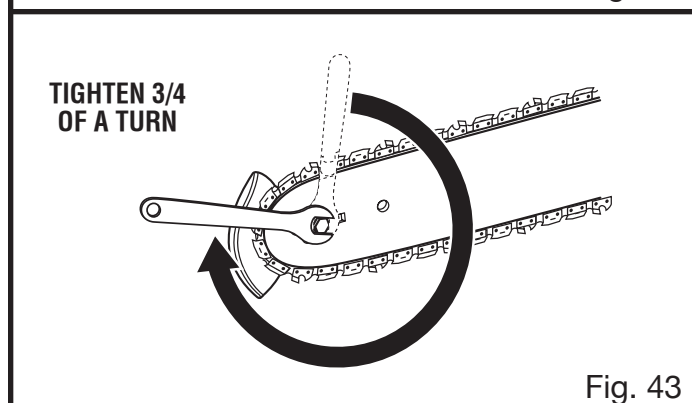


Fig. 43

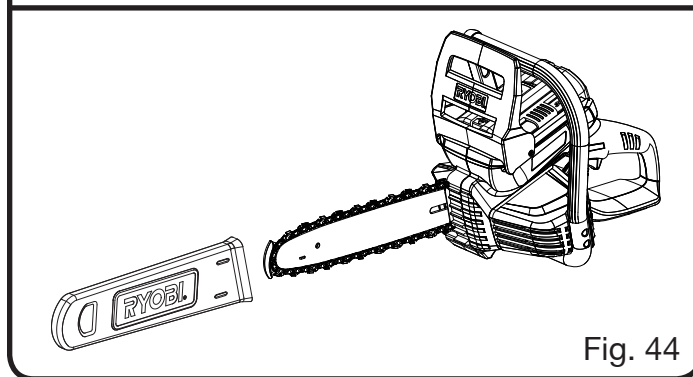


Fig. 44

- Always place the guide bar scabbard on the bar and chain before storing or transporting the chain saw. Use caution to avoid the sharp teeth of the chain.
- Clean the chain saw thoroughly before storing. Store the chain saw indoors, in a dry place that is locked and/or inaccessible to children.
- Keep away from corrosive agents such as garden chemicals and de-icing salts.

BAR AND CHAIN SPECIFICATIONS

Chain specifications: .375 in. pitch, low profile narrow kerf, .043 in. chain gauge, 5-tooth drive sprocket.

Length of Bar
12 in.

Guide Bar Part Number
099966002001

Chain Part Number
099966002002

Drive Links
52

TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
Bar and chain running hot and smoking.	<ol style="list-style-type: none"> 1. Check chain tension for over tight condition 2. Chain oil tank empty. 	<ol style="list-style-type: none"> 1. Tension chain. Refer to Chain Tension earlier in this manual. 2. Check oil tank.
Motor runs, but chain is not rotating.	<ol style="list-style-type: none"> 1. Chain tension too tight. 2. Check guide bar and chain assembly. 3. Check guide bar and chain for damage. 	<ol style="list-style-type: none"> 1. Retension chain, Refer to Chain Tension earlier in this manual. 2. Refer to Assembling the Bar and Chain earlier in this manual. 3. Inspect guide bar and chain for damage.



CALL US FIRST

For any questions about operating or maintaining your product, call the Ryobi® Help Line!

Your product has been fully tested prior to shipment to ensure your complete satisfaction.

WARRANTY

LIMITED WARRANTY STATEMENT

Techtronic Industries North America, Inc., warrants to the original retail purchaser that this RYOBI® brand outdoor product is free from defect in material and workmanship and agrees to repair or replace, at Techtronic Industries North America, Inc.'s, discretion, any defective product free of charge within these time periods from the date of purchase.

- Three years if the product is used for personal, family or household use;
- 90 days, if used for any other purpose, such as commercial or rental.

This warranty extends to the original retail purchaser only and commences on the date of the original retail purchase.

Any part of this product found in the reasonable judgment of Techtronic Industries North America, Inc. to be defective in material or workmanship will be repaired or replaced without charge for parts and labor by an authorized service center for RYOBI® brand outdoor products (Authorized Ryobi Service Center).

The product, including any defective part, must be returned to an authorized Ryobi service center within the warranty period. The expense of delivering the product to the service center for warranty work and the expense of returning it back to the owner after repair or replacement will be paid by the owner. Techtronic Industries North America, Inc.'s, responsibility in respect to claims is limited to making the required repairs or replacements and no claim of breach of warranty shall be cause for cancellation or rescission of the contract of sale of any RYOBI® brand outdoor product. Proof of purchase will be required by the dealer to substantiate any warranty claim. All warranty work must be performed by an authorized service dealer.

This warranty is limited to ninety (90) days from the date of original retail purchase for any RYOBI® brand outdoor product that is used for rental or commercial purposes, or any other income-producing purpose.

This warranty does not cover any product that has been subject to misuse, neglect, negligence, or accident, or that has been operated in any way contrary to the operating instructions as specified in this operator's manual. This warranty does not apply to any damage to the product that is the result of improper maintenance or to any product that has been altered or modified. The warranty does not extend to repairs made necessary by normal wear or by the use of parts or accessories which are either incompatible with the RYOBI® brand outdoor product or adversely affect its operation, performance, or durability. In addition, this warranty does not cover:

- A. Tune-ups – Spark Plugs, Carburetor, Carburetor Adjustments, Ignition, Filters
- B. Wear items – Bump Knobs, Outer Spools, Cutting Lines, Inner Reels, Starter Pulleys, Starter Ropes, Drive Belts, Tines, Felt Washers, Hitch Pins, Mulching Blades, Blower Fans, Blower and Vacuum Tubes, Vacuum Bag and Straps, Guide Bars, Saw Chains

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This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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To locate your nearest Authorized Ryobi Service Center, dial 1-800-860-4050.