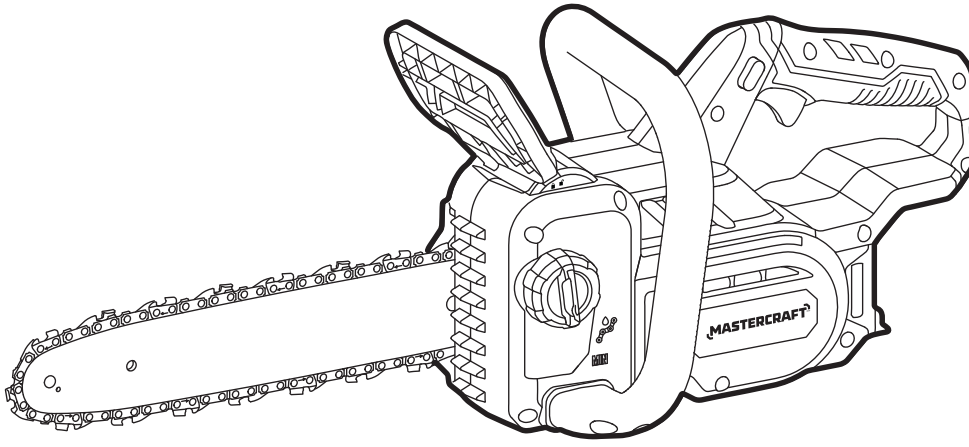
MASTERCRAFT™/MC

BRUSHLESS CHAINSAW

054-5792-6



IMPORTANT:
Read and understand this instruction manual thoroughly before using the product.

INSTRUCTION MANUAL

TABLE OF CONTENTS

NOTE:
If any parts are missing or damaged, or if you have any questions, please call our toll-free helpline at 1-800-689-9928.

SAVE THESE INSTRUCTIONS

- This manual contains important safety and operating instructions. Read all instructions and follow them with use of this product.

TECHNICAL SPECIFICATIONS

Rated Voltage	20 V d.c.max*
Guide Bar Length	12" (30.5 cm)
Chain Pitch	3/8" (9.5 mm) LP
Chain Gauge	0.043" (1.1 mm)
Chain Speed	25.9 ft/s (7.9 m/s)
Oil Tank Capacity	6.76 fl. oz (200 mL)

RECOMMENDED BARS AND CHAINS

Brand	Part Name	Model Number
TriLink® (included)	Guide Bar	M1431245-1041MC
	Saw Chain	CL 14345PB
Oregon® (sold separately)	Guide Bar	124MLEA041
	Saw Chain	R45

*Maximum battery voltage without workload; with workload nominal voltage is 18 V.

SAFETY GUIDELINES:

WARNING!

Safety symbols in this Instruction Manual are used to flag possible dangers. The safety symbols and their explanations require your full understanding. The safety warnings do not, by themselves, eliminate any danger, nor are they substitutes for proper accident prevention measures.

WARNING!

This Safety Alert Symbol indicates caution, warning, or danger. Failure to obey a safety warning can result in serious injury to yourself or others. To reduce the risk of injury, fire, or electric shock, always follow the safety precautions.

KNOW YOUR TOOL

To operate this machine, carefully read this Instruction Manual and all labels affixed to the chainsaw before using. Keep this instruction manual available for future reference.

IMPORTANT

This machine should only be serviced by a qualified service technician. For more information, call the toll free helpline at 1-800-689-9928.

READ ALL INSTRUCTIONS THOROUGHLY.

GENERAL MACHINE SAFETY WARNINGS

WARNING!

Read all safety warnings, instructions, illustrations and specifications provided with this machine. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE.

The term “machine” in the warnings refers to your mains-operated (corded) machine or battery-operated (cordless) machine.

WORK AREA SAFETY

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

ELECTRICAL SAFETY

- **Machine plugs must match the outlet. Never modify the plug in any way. Do not use any adaptor plugs with earthed (grounded) machines.** 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 machines to rain or wet conditions.** Water entering a machine will increase the risk of electric shock.
- **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the machine. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
- **When operating a machine 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 machine in a damp location is unavoidable, use a ground fault circuit interrupter (GFCI) protected supply.** Use of an GFCI reduces the risk of electric shock.

PERSONAL SAFETY

- **Stay alert, watch what you are doing and use common sense when operating a machine. Do not use a machine while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating machines may result in serious personal injury.
- **Use personal protective equipment. Always wear eye protection.** Protective equipment such as a 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 machine.** Carrying machines with your finger on the switch or energising machines that have the switch on invites accidents.
- **Remove any adjusting key or wrench before turning the machine on.** A wrench or a key left attached to a rotating part of the machine may result in personal injury.
- **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the machine in unexpected situations.
- **Dress properly. Do not wear loose clothing or jewellery. Keep your hair and clothing away from moving parts.** Loose clothes, jewellery 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.
- **Do not let familiarity gained from frequent use of machines allow you to become complacent and ignore machine safety principles.** A careless action can cause severe injury within a fraction of a second.

MACHINE USE AND CARE

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

BATTERY MACHINE 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 machines only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.
- **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.
- **Do not use a battery pack or machine that is damaged or modified.** Damaged or modified batteries may exhibit unpredictable behaviour resulting in fire, explosion or risk of injury.
- **Do not expose a battery pack or machine to fire or excessive temperature.** Exposure to fire or temperature above 265°F (130°C) may cause explosion.

- **Follow all charging instructions and do not charge the battery pack or machine outside the temperature range specified in the instructions.** Charging improperly or at temperatures outside the specified range may damage the battery and increase the risk of fire.

SERVICE

- **Have your machine serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the machine is maintained.
- **Never service damaged battery packs.** Service of battery packs should only be performed by the manufacturer or authorized service providers.

CHAINSAW SAFETY WARNINGS

- **Keep all parts of the body away from the saw chain when the chainsaw is operating. Before you start the chainsaw, make sure that the saw chain is not contacting anything.** A moment of inattention while operating chainsaws may cause entanglement of your clothing or body with the chain.
- **Always hold the chainsaw with your right hand on the rear handle and your left hand on the front handle.** Holding the chainsaw with a reversed hand configuration increases the risk of personal injury and should never be done.
- **Hold the chainsaw 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 chainsaw “live” and could give the operator an electric shock.
- **Wear eye protection. Further protective equipment for hearing, head, hands, legs and feet is recommended.** Adequate protective equipment will reduce personal injury from flying debris or accidental contact with the saw chain.
- **Do not operate a chainsaw, on a ladder, from a rooftop, or any unstable support.** Operation of a chainsaw in this manner could result in serious personal injury.
- **Always keep proper footing and operate the chainsaw only when standing on fixed, secure and level surface.** Slippery or unstable surfaces may cause a loss of balance or control of the chainsaw.
- **When cutting a limb that is under tension, be alert for spring back.** When the tension in the wood fibres is released, the spring loaded limb may strike the operator and/or throw the chainsaw 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 chainsaw by the front handle with the chainsaw switched off and away from your body. When transporting or storing the chainsaw, always fit the guide bar cover.** Proper handling of the chainsaw will reduce the likelihood of accidental contact with the moving saw chain.
- **Follow instructions for lubricating, chain tensioning and changing the bar and chain.** Improperly tensioned or lubricated chain may either break or increase the chance for kickback.
- **Cut wood only. Do not use chainsaw for purposes not intended. For example: do not**

use chainsaw for cutting metal, plastic, masonry or non-wood building materials. Use of the chainsaw for operations different than intended could result in a hazardous situation.

- **Do not attempt to fell a tree until you have an understanding of the risks and how to avoid them.** Serious injury could occur to the operator or bystanders while felling a tree.
- **Do not operate a chainsaw in a tree unless you have been specifically trained to do so.** Operation of a chainsaw in a tree without proper training could increase the risk of serious personal injury.

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 chainsaw user, you should take several steps to keep your cutting jobs free from accident or injury.

Kickback is the result of machine 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 chainsaw 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 chainsaw.
- **Do not overreach and do not cut above shoulder height.** This helps prevent unintended tip contact and enables better control of the chainsaw 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.

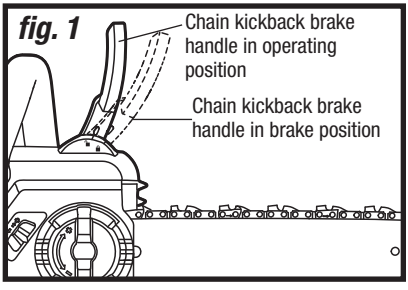
KICKBACK SAFETY DEVICE ON THIS CHAINSAW

CHAIN BRAKE

The chainsaw comes equipped with a chain brake, which stops both the motor and the motion of the chain when kickback occurs. The chain brake can be activated by the forward motion of the chain kickback brake handle as the saw rotates backward during kickback.

Make sure that the chain brake is working properly before using the chainsaw. The chain kickback brake handle should move back and forth easily.

To test the operation of the chain brake, perform the following steps ***(fig. 1)***:

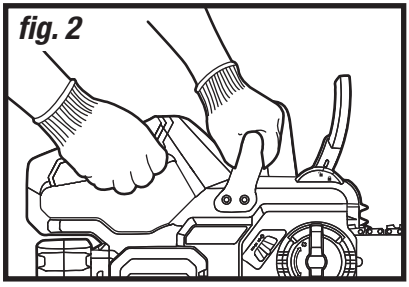


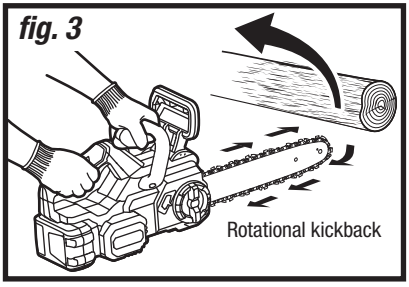
- Place the chainsaw on a flat, bare surface and make sure no objects or obstructions that could come in contact with the bar and chain are in the immediate vicinity.
- Disengage the chain brake by pulling the chain kickback brake handle towards the front handle.
- Start the chainsaw.
- Push the chain kickback brake handle towards the front of the saw. A properly functioning hand brake will stop the movement of the chain immediately. If the chain brake is not working properly, do not use the chainsaw until it has been repaired by a qualified service technician.

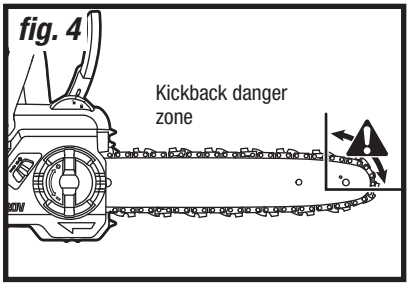
WARNING!

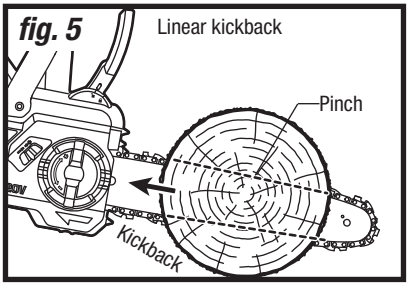
- Never modify or attempt to disable the chain brake.
- Confirm that the chain brake works properly before each use.
- If the chain brake is clogged with wood chips, the function of the chain brake may deteriorate. Always keep the device clean.

ADDITIONAL WARNINGS



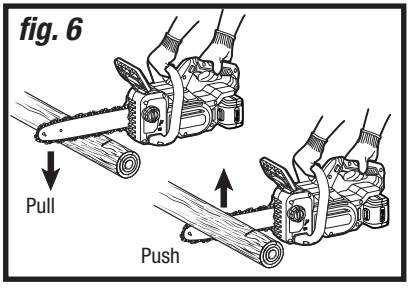






- **A chainsaw is intended for two-handed use** ***(fig. 2).*** Serious injury to the operator, helpers, and/or bystanders can result from one-handed operation.
- **Make sure that the area in which you are cutting is free from obstructions.** Do not let the nose of the guide bar contact a log, branch, fence, or any other obstruction that could be hit while you are operating the saw.
- **Always cut with the unit running at full speed.** Fully squeeze the switch trigger and maintain cutting speed.
- **With a basic understanding of kickback, you can reduce or eliminate the element of surprise** ***(fig. 3–fig. 5).*** Sudden surprise contributes to accidents.
- **Keep proper footing and balance at all times.**
- **Avoid unintentional contact with the stationary saw chain or guide bar rails.** These can be very sharp. Always wear gloves and long pants or chaps when handling the chainsaw, saw chain, or guide bar.
- **Never operate a chainsaw that is damaged or improperly adjusted or that is not completely and securely assembled.** Be sure that the saw chain stops moving when the trigger switch is released.
- **Inspect the workpiece for nails, wire, or other foreign objects prior to cutting. When bucking, secure the workpiece prior to cutting. When felling or pruning, identify and secure hazardous branches.**

- **Aggressive or abusive cutting or misuse of the chainsaw can cause premature bar, chain, and/or sprocket wear, as well as a broken chain or bar, leading to kickback, chain throw or the ejection of material.**
- **Never use the guide bar as a lever.** A bent guide bar can cause premature bar, chain, and/ or sprocket wear, as well as a broken chain or bar, leading to kickback, chain throw or the ejection of material.
- **Cut only one workpiece at a time.**
- **Push and Pull**–The 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 the PUSH when cutting along the top edge ***(fig. 6)***.



- **Plan the work, ensuring an obstacle-free work area and, in the case of felling, at least one escape path from the falling tree.**
- **When felling, keep bystanders at least two tree lengths away.**

ADDITIONAL SAFETY GUIDELINES FOR THE CHAINSAW

- The label on your machine may include the following symbols. The symbols and their definitions are as follows:

V ..... Volts

A ..... Amperes

Hz ..... Hertz

W ..... Watts

min ..... Minutes

⎓ or d.c. ..... Direct current

n_0 ..... No-load speed

…/min or …min^{-1} ..... Revolutions or reciprocations per minute

IPX4 ..... Ingress protection degree. Protection from splashing water.

c UL us ..... This symbol designates that this tool is listed by Underwriters Laboratories, to United States and Canadian Standards.

..... WARNING – To reduce the risk of injury, user must read instruction manual.

..... WARNING – To reduce the risk of injury, always wear eye protection.

 ..... WARNING – To reduce the risk of injury, always wear ear protection.

 ..... Wear head protection. Wear an approved safety hard hat to protect your head.

 ..... Wear protective gloves. Protect your hands with gloves when handling saw and saw chain. Heavy-duty, nonslip gloves improve your grip and protect your hand.

 ..... Two hands hold. Always use two hands when operating the chainsaw.

 ..... Be aware of kickback. Contact of the guide bar tip with any object should be avoided.

 ..... Guide bar tip kickback. Tip contact can cause the guide bar to move suddenly upward and backward, which can cause serious injury.

WARNING!

To reduce the risk of electric shock or damage to the charger and battery, use only the Mastercraft® and PWR POD™ batteries and chargers listed.

BATTERY PACK	CHARGER
Mastercraft®: 054-3124-0, 054-7553-4, 054-7557-6, 054-2434-8. PWR POD™: 054-7563-0, 054-7564-8, 054-7558-4.	Mastercraft®: 054-3126-6, 054-7559-2, 054-8299-4. PWR POD™: 054-3126-6, 054-7565-6, 054-7567-2.

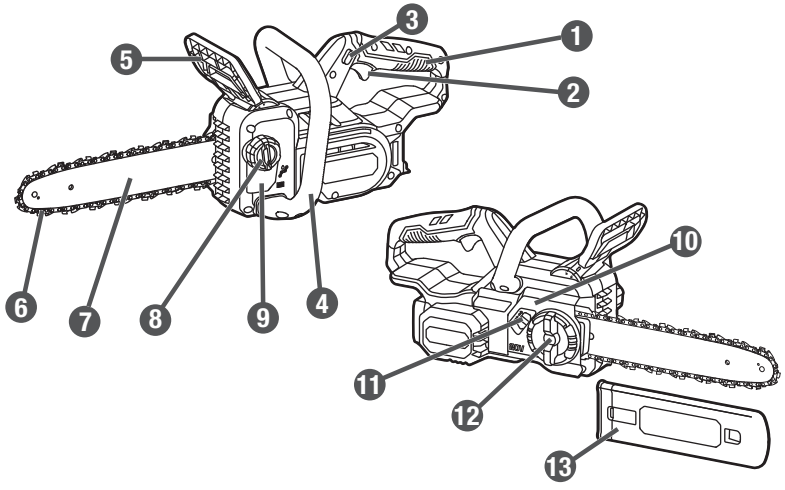
- **For best results, your battery and machine should be charged, stored and used in a location where the temperature is more than 41°F (5°C) but less than 104°F (40°C).** Do not store outside or in vehicles.

SAVE THESE INSTRUCTIONS!

PACKAGE CONTENTS:

Chainsaw

KEY PARTS DIAGRAM



KEY PARTS DIAGRAM

No.	Description
1	Rear handle
2	Trigger switch
3	Lock-off button
4	Front handle
5	Brake handle
6	Saw chain
7	Guide bar

No.	Description
8	Oil tank cap
9	Oil-inspection window
10	Side cover
11	Chain-tensioning adjusting knob
12	Side-cover knob
13	Chain sheath

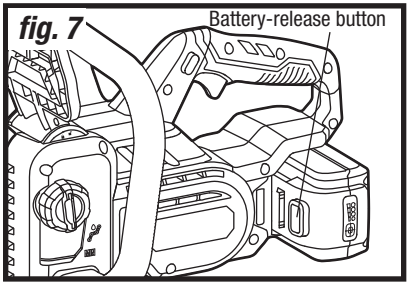
WARNING!

- Remove the chainsaw from the package and examine it carefully. Do not discard the carton or any packaging material until all parts have been examined.
- If any part of the chainsaw is missing or damaged, do not attach the machine to a power source or use the machine until the part has been repaired or replaced. Failure to heed this warning could result in serious injury.
- Do not allow familiarity with the chainsaw to cause a lack of alertness. A fraction of a second of carelessness is enough to cause severe injury.

OPERATING INSTRUCTIONS

TO ATTACH THE BATTERY PACK *(fig. 7)*

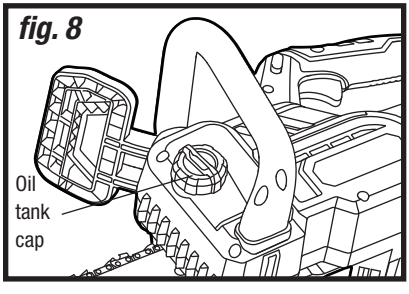
1. Make sure that the chainsaw is switched off.
2. Align the raised rib on the battery pack with the grooves on the chainsaw, and then slide the battery pack onto the chainsaw.



TO REMOVE THE BATTERY PACK *(fig. 7)*

1. Make sure that the chainsaw is switched off.
2. Depress the battery-release button located on the front of the battery pack to release the battery pack.
3. Pull the battery pack out and remove it from the chainsaw.

TO FILL THE OIL TANK *(fig. 8)*



1. Remove the battery pack from the chainsaw.
2. Clean the oil tank cap and the area around it to ensure that no dirt falls into the oil tank.
3. Position the chainsaw on its side on a firm, flat surface, so that the tank cap is facing upwards. Rotate the oil tank cap counter-clockwise to remove it ***(fig. 8)***.
4. Carefully pour the bar and chain oil into the tank. Be careful not to let the oil spill from the opening. Do not overfill and leave approximately 13/64" (5 mm) space between the oil level and the inside edge of the tank to allow for expansion. Wipe off any excess oil.
5. Replace and fasten the cap.

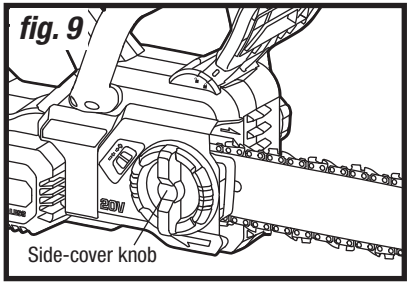
NOTICE:

- The chainsaw is not filled with oil at the time of purchase. It is essential to fill the tank with oil before use. Operating the chainsaw without chain oil or when the oil level is below the minimum mark will result in damage to the chainsaw. Chain life and cutting capacity depend on optimum lubrication. The chain is automatically lubricated with chain oil during operation.
- It is normal for oil to seep from the saw when it is not in use. To prevent seepage, empty the oil tank after each use, and then run the saw for one minute. When storing the machine for a long period of time, be sure the chain is lightly lubricated; this will prevent rust on the chain and bar sprocket.

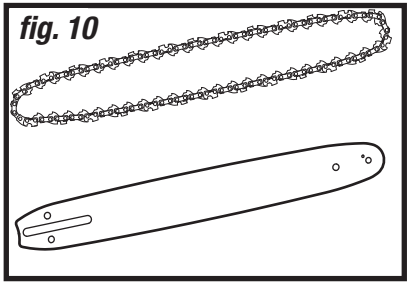
WARNING!

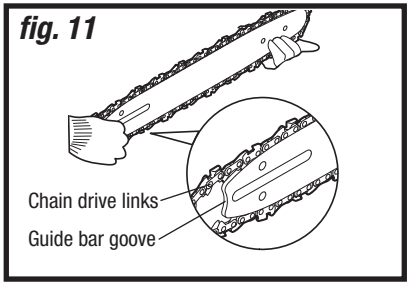
- Do not smoke or bring any fire or flame near the oil or the chainsaw. Oil may spill and cause a fire.

ASSEMBLING THE BAR AND CHAIN *(fig. 9-fig. 14)*



1. Remove the battery. Remove the side cover by turning the side-cover knob counter-clockwise. ***(fig. 9)***.
2. Lay the saw chain in a loop on a flat surface and straighten any kinks ***(fig. 10)***.
3. Place the chain drive links into the guide bar groove. Position the chain so there is a loop at the back of the guide bar ***(fig. 11)***.
4. Hold the chain in position on the guide bar and place the loop around the sprocket of the power head.
5. Place the guide bar on the mounting surface by sliding the guide-bar slot over the alignment flanges. Make sure that the guide bar is correctly positioned over the fastening bolt.
6. Attach the side cover to the housing so that the holes/pins and the fastening bolt /thread hole are aligned with each other properly ***(fig. 13)***. Lightly tighten the side-cover knob by turning it clockwise. The bar must be free to move for tension adjustment.
7. Lift up the tip of the guide bar and keep it slightly lifted as you adjust the tension. Ensure that the guide bar has some movement; loosen the side-cover knob slightly if necessary.





NOTICE:

- This is a good time to inspect the drive sprocket for excessive wear or damage.

8. Turn the chain-tension adjusting knob until all chain sections are just touching the bottom edge of the guide.
9. Check the chain tension using one hand by pulling upwards on the chain against the weight of the product. The correct chain tension is achieved when the saw chain can be lifted by approximately 1/4" (6 mm) from the guide bar in the centre ***(fig. 14)***.
10. Re-adjust the tension as described above if you find that the saw chain is too loose or tight.
11. Pull the saw chain along the upper side of the guide bar by hand from one end to the other several times. The chain should feel tight but still move freely.
12. Tighten the side-cover knob firmly to fix the guide bar.

fig. 12

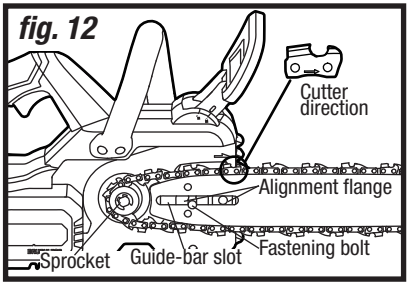


fig. 13

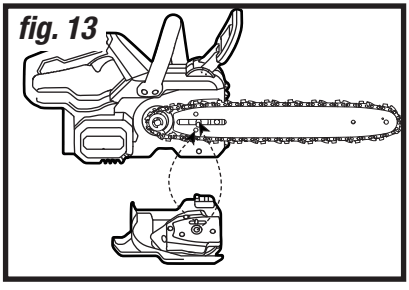
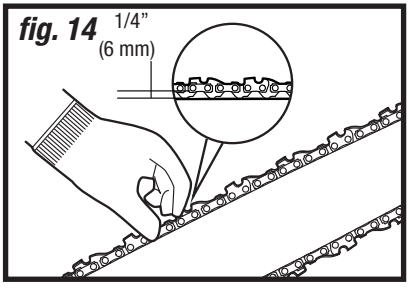


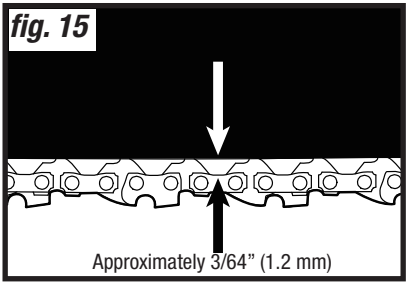
fig. 14



NOTICE:

- Small directional arrows are engraved in the saw chain ***(fig. 12)***. Another directional arrow is molded into the housing. When looping the saw chain onto the sprocket, make sure that the direction of the arrows on the saw chain will correspond to the direction of the arrow on the housing. If they face in opposite directions, turn over the saw chain and guide bar assembly.
- To extend the guide-bar life, invert the bar occasionally.

ADJUSTING THE CHAIN TENSION *(fig. 15)*



Always check the saw chain tension before use, after the first cuts, and regularly during use. Upon initial operation, new chains can lengthen considerably. This is normal during the break-in period and the interval between future adjustments will lengthen quickly.

Always maintain proper chain tension! A loose chain increases the risk of kickback! A loose chain may jump out of the guide bar groove! This may injure the operator and damage the chain! A loose chain will cause rapid wear to the chain, guide bar and sprocket!

Tensioning the chain too tightly will overload the motor and cause damage, and insufficient tension can cause chain derailing, whereas a correctly tightened chain provides the best cutting characteristics and prolonged working life! The chain life mainly depends upon sufficient lubrication and correct tensioning!

1. Stop the motor and remove the battery pack before adjusting the chain tension.
2. Loosen the side-cover knob.
3. Turn the chain-tensioning adjusting knob to adjust the chain tension.

- A cold chain is correctly tensioned when there is no slack on the underside of the guide bar and the chain is snug, but it can be turned by hand without binding. The chain must be re-tensioned whenever the flats on the drive links do not sit in 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 3/64" (1.2 mm) out of the bar groove ***(fig. 15)***.

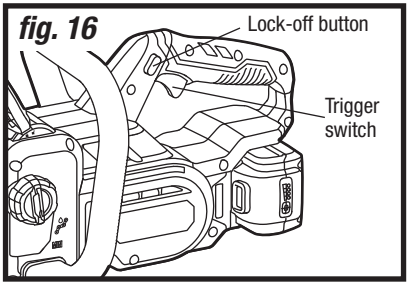
NOTICE:

- New chains tend to stretch; check chain tension frequently and tension as required.
- A chain tensioned while it is warm may be too tight upon cooling. Check the cold tension before next use.

BEFORE STARTING THE CHAINSAW

1. Remove the battery pack.
2. Make sure that the chain is properly mounted and correctly tensioned.
3. Check the side-cover knob before use. If it is loose, securely tighten the side-cover knob.
4. Check the oil level and fill the tank as needed. Make sure the chain is well lubricated.
5. Check the cutting teeth sharpness of the saw chain.
6. Make sure that the chain kickback brake handle moves easily to the brake position, then pull the chain kickback brake handle back towards the front handle to the operating position.
7. Stand upright and hold the chainsaw in a relaxed position.
8. Hold the chainsaw with both hands: with the right hand on the rear handle and the left hand on the front handle.
9. Make sure that you have a secure and balanced footing. Watch out for obstacles such as tree stumps, roots, and ditches, which could cause you to trip or stumble.
10. Make sure the saw chain is not touching the ground or any other objects.
11. Make sure that cutting object does not exceed the usable cutting length of the chainsaw. The tip of guide bar shall always be kept at least 2" (5 cm) outside the outline of the wood log.

TO START THE CHAINSAW *(fig. 16)*



1. Install the battery pack.
2. Make sure that no objects or obstructions that could come in contact with the bar and chain are in the immediate vicinity.
3. Pull the chain kickback brake handle towards the front handle to the operating position.
4. Grasp the front and rear handles firmly, using both hands.
5. Press and hold the lock-off button, then squeeze the trigger switch to start the saw. Release the lock-off button and continue to squeeze the trigger for continued operation.

TO STOP THE CHAINSAW *(fig. 16)*

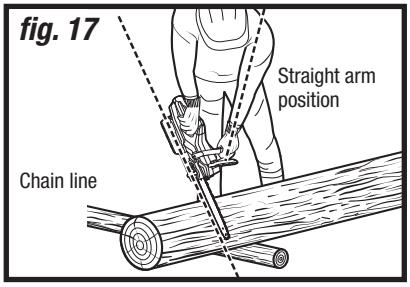
1. Move the chainsaw away from cutting area, and then release the trigger switch to stop the chainsaw.
2. Push the chain kickback brake handle forward to the brake position to engage the chain brake.

WARNING!

- Do not attempt to start the saw when the saw chain is in a cut or in contact with any surface.
- Always remove the battery pack from the chainsaw during work breaks and after finishing work.

PROPER CUTTING STANCE *(fig. 17)*

- Both feet should be on solid ground, with weight evenly spread between them.
- The left arm should be straight, with the elbow locked. This helps to withstand the forces generated by kickback.
- Your body should always be to the left of the chain line.



CUTTING

It is recommended that the first time user should have practical instruction in the use of the chainsaw and the protective equipment from an experienced operator and that the initial practice should be cutting logs on a saw horse or cradle.

1. Always hold the product firmly with both hands: front handle with the left hand and rear handle with the right hand. Fully grip both handles at all times during operation. Never operate the product using only one hand.
2. Take the proper stance in front of the wood with the saw turned off.
3. Press the lock-off button and squeeze the trigger switch to start the chainsaw. Let the chain reach the full speed before beginning the cut.
4. Begin cutting by lightly pressing the guide bar and chain against the wood. Use only light pressure, letting the saw do the work.
5. Maintain a steady speed throughout the cut, releasing pressure just before the end of the cut.
6. Be careful when reaching the end of the cut. The weight of the product may change unexpectedly as it cuts free from the wood. This can cause accidents to the legs and feet. Always remove the saw from a wood cut while the saw is running. Release the trigger switch as soon as the cut is completed, allowing the chain to stop.

WARNING!

- When the saw chain is stopped due to pinching during cutting, release the trigger switch, remove the saw chain and guide bar from the wood, and then restart the chainsaw.

FELLING A TREE

HAZARDOUS CONDITIONS

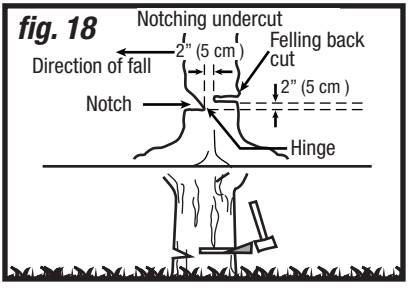
- Do not fell trees during periods of high wind or heavy precipitation. Wait until the hazardous weather has ended.
- Do not fell trees that lean at extreme angles or large trees with rotten limbs, loose bark, or hollow trunks. Instead, have these trees pushed or dragged down with heavy equipment and then cut them up.
- Do not fell 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 back cut 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!

PREPARATION FOR TREE FELLING

- The chainsaw operator should stand on the uphill side of the terrain, as the tree is likely to roll or slide downhill after it is felled.
- Before any cuts are started, pick your escape route. Clear a path of safe retreat approximately 135° from the planned line of fall.
- Before felling is started, consider the natural lean of the tree, the location of larger branches and the wind direction to judge which way the tree will fall.
- Remove dirt, stones, loose bark, nails, staples, and wire from the tree where felling cuts are to be made.

NOTCHING UNDERCUT (*fig. 18*)

Make the notch 1/3 the diameter of the tree, perpendicular to the direction of fall, as illustrated in ***fig.18***. Make the lower horizontal notching cut first. This will help to avoid pinching of either the saw chain or the guide bar when the second notch is being made.



FELLING BACK CUT (*fig. 18*)

1. Make the felling back cut at least 2" (5 cm) higher than the horizontal notching cut ***(fig.18)***. Keep the felling back cut parallel to the horizontal notching cut. Make the felling back cut so that enough wood is left to act as a hinge. The hinge wood keeps the tree from twisting and falling in the wrong direction. Do not cut through the hinge.
2. As the felling cut gets close to the hinge, the tree should begin to fall. If there is any chance that the tree may not fall in the desired direction or it may rock back and bind the saw chain, stop cutting before the felling back cut is complete and use wedges of wood, plastic or aluminum to open the cut and drop the tree along the desired line of fall.

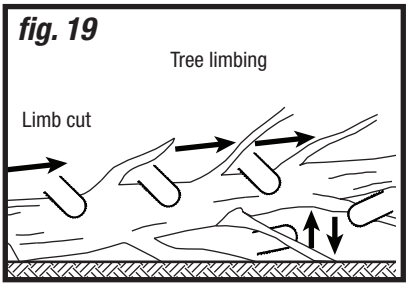
3. When the tree begins to fall, remove the chainsaw from the cut, stop the motor, put the chainsaw down, then use the retreat path planned. Be alert for overhead limbs falling and watch your footing.

LIMBING *(fig. 19)*

Limbing is removing branches from a fallen tree. When limbing, leave larger limbs to support the log off the ground.

Remove the small limbs in one cut as illustrated in ***fig.19***. Branches under tension should be cut from the bottom up to avoid binding the chainsaw.

fig. 19



BUCKING A LOG *(fig. 20-fig. 24)*

Bucking is cutting a log into lengths. It is important to make sure your footing is firm and your weight is evenly distributed on both feet. When possible, the log should be raised and supported by the use of limbs, logs or chocks. Follow the simple directions for easy cutting.

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 underside of the log with the top of the saw against the log; exert light pressure upward. During underbucking, the saw will tend to push back at you. Be prepared for this reaction and hold the saw firmly to maintain control.

fig. 20

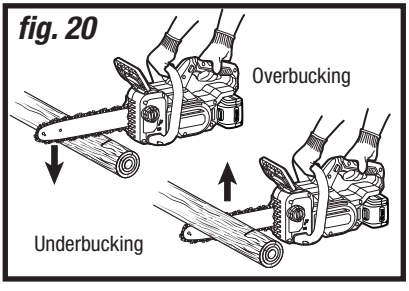
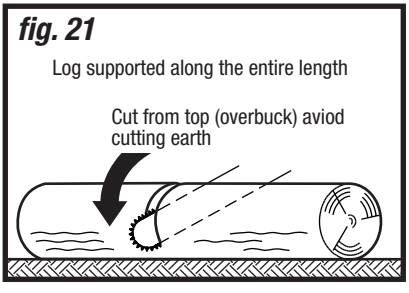


fig. 21



- When the log is supported along its entire length, it should be cut from the top (overbucking) ***(fig. 21)***.

WARNING!

- There is an extreme danger of kickback during the limbing operation. Be extremely cautious and avoid contacting the log or other limbs with the tip of the guide bar.

- When the log is supported on only one end, cut 1/3 the diameter from the underside (underbucking). Then make the finishing cut by overbucking to meet the first cut ***(fig. 22)***.
- When the log is supported on both ends, cut 1/3 of that diameter from the top overbuck. Then make the finished cut by underbucking the lower 2/3 to meet the first cut ***(fig. 23).***
- When bucking on a slope, always stand on the uphill side of the log ***(fig. 24)***.
- To maintain complete control when cutting through, release the cutting pressure near the end of the cut without relaxing the grip on the chainsaw handles. Don't allow the chain to contact the ground. After completing the cut, wait for the saw chain to stop before you move the chainsaw. Always stop the motor before moving from tree to tree.

fig. 22 Log supported one end

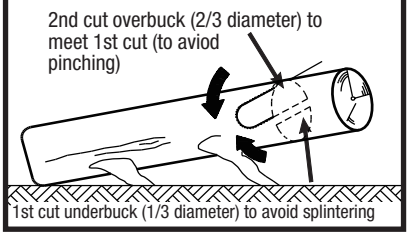


fig. 23 Log supported both ends

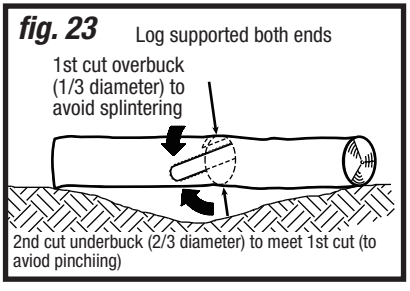
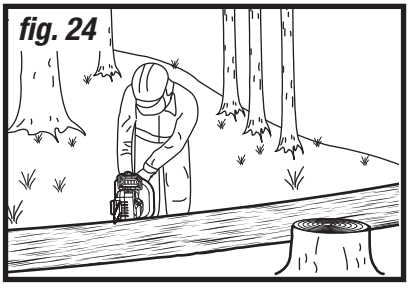


fig. 24



WARNING!

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

MAINTENANCE

DISASSEMBLING THE WORN BAR AND CHAIN

1. Remove the battery, allow the saw to cool and tighten the oil tank cap to prevent oil from spilling.
2. Position the chainsaw on its side on a firm, flat surface, so that the side cover is facing upwards.
3. Wear gloves. Remove the side cover by turning the side-cover knob counter-clockwise. . Clean the side cover with a dry cloth.
4. Remove the bar and chain from the mounting surface. Remove the worn chain from the bar.

CHAIN MAINTENANCE

HOW TO SHARPEN THE CUTTERS *(fig. 25-fig. 28)*

Be sure to file all cutters ***(fig. 25)*** to the specified angles and to the same length, as fast cutting can be obtained only when all cutters are uniform.

1. Remove the battery pack. Wear gloves for protection.
2. Properly tension the chain prior to sharpening. Refer to the section: "**ADJUSTING THE CHAIN TENSION**" earlier in this manual.
3. Use a 5/32" (4.0 mm) diameter round file and holder (available separately). Perform all of your filing at the middle position of the guide bar.
4. Keep the file level with the top plate of the tooth. Do not let the file dip or rock.
5. Keep a correct sharpening angle of 30° between the file and the saw chain; see ***fig. 26*** and ***27***. Always use a file holder (available separately) when sharpening saw chains by hand. File holders have markings for the sharpening angle.
6. Using light but firm pressure, perform a stroke towards the front corner of the tooth. Lift the file away from the steel on each return stroke.

fig. 25

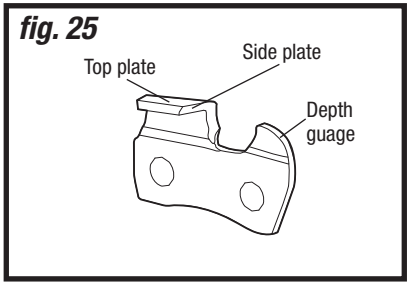


fig. 26

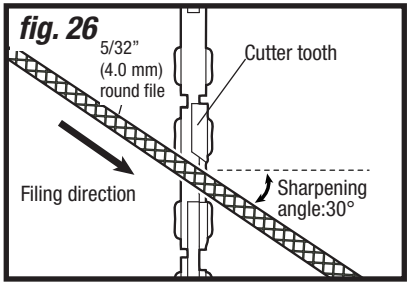
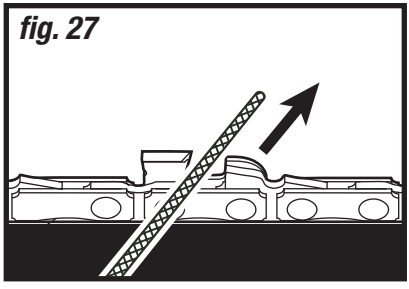


fig. 27



WARNING!

- Improper chain sharpening increases the potential of kickback.
- Failure to replace or repair a damaged chain can cause serious injury.

7. Make 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 ***(fig. 28)***.

TOP-PLATE SHARPENING ANGLES *(fig. 29)*

- CORRECT 30° – This optimal angle can be obtained only when the specified files and proper setting are used. File holders are marked with guide marks to align the file properly to produce the correct top plate angle.
- LESS THAN 30° – The tooth is too dull for cutting.
- MORE THAN 30° – The edge of the cutting tooth is feathered and dulls quickly.

SIDE-PLATE ANGLE *(fig. 30)*

- CORRECT 60° – The optimal angle can be produced automatically if the correct diameter file is used in the file holder.
- HOOK – "Grabs" and dulls quickly. Increases potential of kickback. Results from using a file with a diameter that is too small, or a 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 a file held too high.

fig. 28

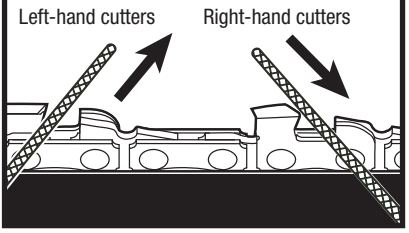


fig. 29 Top plate sharpenging angles

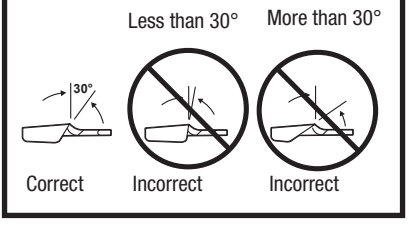
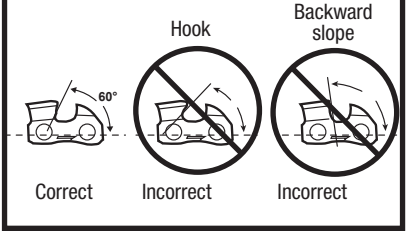


fig. 30 Side plate angle



DEPTH-GAUGE CLEARANCE *(fig. 31 - fig. 32)*

1. The depth gauge should be maintained at a clearance of 0.025" (0.6 mm), as shown in ***fig. 31.*** Use a depth-gauge power (available separately) to check the depth-gauge clearances.
2. Check the depth-gauge clearance every time the chain is filed. Use a flat file and a depth-gauge jointer (both available separately) to lower all gauges uniformly ***(fig. 32)***. Depth-gauge jointers are available in 0.020–0.035" (0.5–0.9 mm). Use a 0.025" (0.6 mm) depth-gauge jointer.

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 the cutter face with the flat file when adjusting depth-gauges.

fig. 31

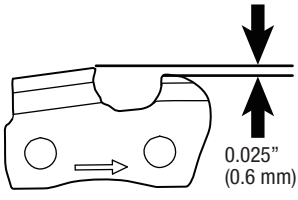
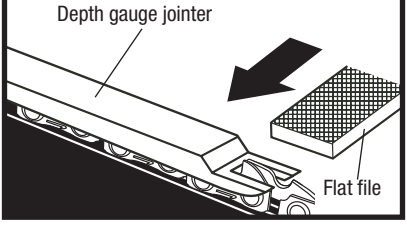


fig. 32

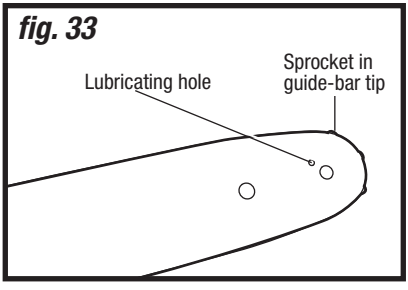


GUIDE-BAR MAINTENACE *(fig. 33)*

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.

fig. 33



The guide bar has a sprocket at its tip. The sprocket must be lubricated weekly with a grease syringe to extend the guide-bar life. Use a grease syringe to lubricate weekly with chain oil by means of the lubricating hole ***(fig. 33)***. Turn the guide bar and check that the lubrication holes and chain groove are free from impurities.

TRANSPORTING AND STORING

1. Do not store or transport the machine when it is running. Always remove the battery pack before storing or transporting.
2. Always place the chain sheath on the guide bar and chain before storing or transporting the machine. Use caution to avoid the sharp teeth of the chain.
3. Clean the machine thoroughly before storing. Store the machine indoors, in a dry place that is locked and/or inaccessible to children.
4. Keep away from corrosive agents such as garden chemicals and de-icing salts.

WARNING!

- To avoid serious personal injury, remove the battery pack from the chainsaw before inspecting, cleaning, or performing maintenance.
- 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.
- Do not let brake fluids, gasoline, petroleum-based products, penetrating oil, etc., come into contact with plastic parts. These substances contain chemicals that can damage, weaken, or destroy plastic.
- When servicing, use only identical replacement parts. The use of any other parts may create a hazard or cause damage to the product.
- Use only accessories that are recommended for this chainsaw by the manufacturer. Accessories that may be suitable for one machine may become hazardous when used with another machine.
- To ensure safety and reliability, all repairs should be performed by a qualified service technician.

TROUBLESHOOTING

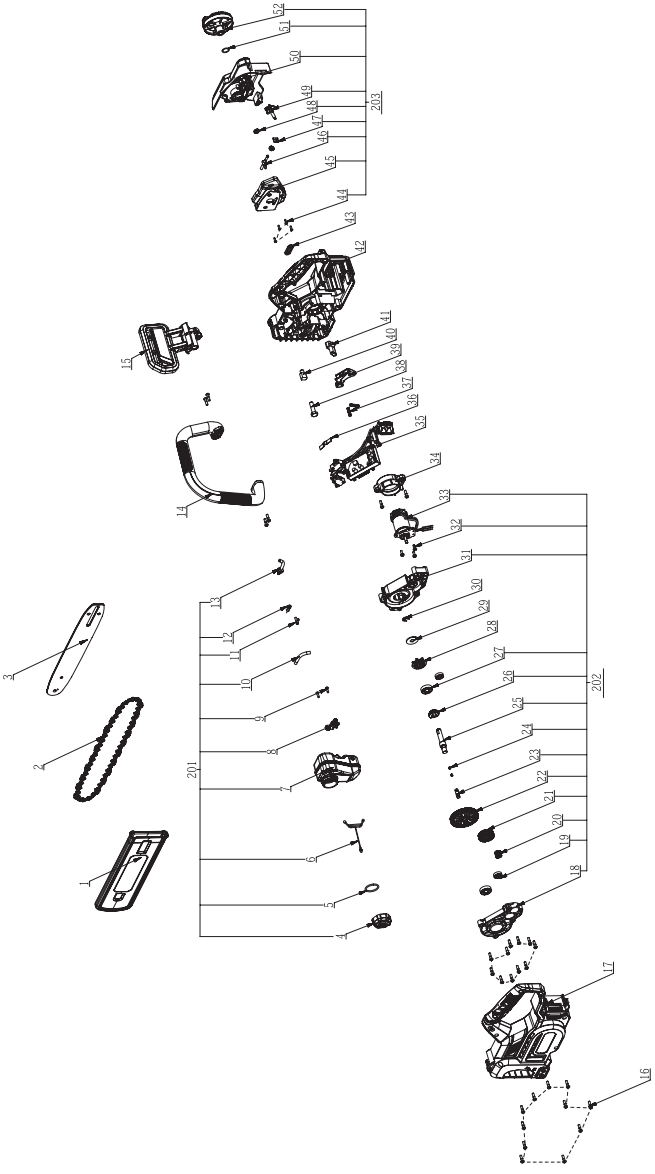
Problem	Possible Causes	Solution
Motor does not run.	The battery pack is not attached to the chainsaw.	Attach the battery pack to the chainsaw.
	The battery pack is depleted.	Charge the battery pack.
	The battery pack or chainsaw is too hot.	Allow the battery pack or chainsaw to cool.
	The lock-off button is not depressed before pressing the trigger switch.	Press down the lock-off button and hold it, and then depress the trigger switch to turn on the chainsaw.
	Chain brake is engaged.	Pull the chain kickback brake handle backward toward the front handle.
	Saw chain is bound in the wood.	Release the trigger switch, remove the saw chain and guide bar from the wood, and then restart the chainsaw.
	Debris in the bar groove.	With the saw turned OFF, press the saw chain against the wood, move the chainsaw back and forth to discharge the debris.
	Debris in the side cover.	Remove battery pack, remove side cover and then clean out debris.
Motor runs, but chain does not rotate.	Chain does not engage drive sprocket.	Reinstall the chain, making sure that the drive links on the chain are fully seated on the sprocket.
Chain brake does not engage.	Debris preventing full movement of the chain kickback brake handle.	Remove battery and clean debris from external chain brake mechanism.

Problem	Possible Causes	Solution
Chainsaw does not cut properly.	Insufficient chain tension.	Readjust the chain tension, following the section: **"ADJUSTING THE CHAIN TENSION"**.
	Dull chain.	Sharpen the chain cutters, following the section: **"HOW TO SHARPEN THE CUTTERS"**.
	Chain installed backwards.	Reinstall the saw chain.
	Worn chain.	Replace the chain.
	Dry or excessively stretched chain.	Check the oil level. Refill the oil tank if necessary.
	Chain not in bar groove.	Reinstall the saw chain.
Bar and chain running hot and smoking.	Check chain tension for over-tightened condition.	Re-tension the saw chain; see the section: **"ADJUSTING THE CHAIN TENSION"**.
	Chain oil tank is empty.	Fill the tank with bar and chain lubricant.
	Debris in guide bar groove.	Clear the debris in the groove.

If the problem remains unsolved after performing the checks described above, call the toll-free helpline at 1-800-689-9928.

PARTS LIST

EXPLODED VIEW



No.	Part No.	Description
1	3132787000	Sheath
2	3810755000	Chain
3	2827088000	Guide Plate
4	3130228000	Kettle Cover
5	5690362000	O-ring
6	3130270000	Tether
7	3131443000	Oil Kettle
8	2826726000	Pump Assembly
9	5610022000	Tapping Screw
10	4920530000	Soft Tube
11	3131092000	Nozzle
12	3660648000	Spring
13	3131091000	Inlet Tube
14	3131400000	Front Handle
15	3132788000	Brake Handle
16	5620479000	Screw
17	3323155000	Left Housing
18	3131402000	Left Gear Case
19	5700006000	Ball Bearing
20	3570127000	Pinion
21	3570128000	Gear
22	3570129000	Gear
23	3553576000	Output Shaft
24	5680176000	Key
25	3553577000	Output Shaft
26	3130336000	Worm

No.	Part No.	Description
27	5700048000	Ball Bearing
28	3421564000	Sprocket
29	5660208000	Gasket
30	5660242000	E-ring
31	3131401000	Right Gear Case
32	5620424000	Screw
33	2730339000	DC Motor
34	3131437000	Fan Baffle
35	2831082000	Electric Assembly
36	3705659000	Leaf Spring
37	3660427000	Spring
38	5640011000	Hexagon Head Bolt
39	3131467000	Switch Trigger
40	5670416000	Pin
41	3132789000	Lock off Button
42	3323156000	Right Housing
43	3130337000	Rubber Gasket
44	5610011000	Tapping Screw
45	3130131000	Cover
46	5610367000	Screw and Nut Set
47	5650486000	Square Washer
48	3521184000	Bevel Gear
49	3403081000	Hand Wheel
50	3132786000	Chain Cover Plate
51	5660289000	C-ring
52	3132790000	Knob

If any parts are missing or damaged, or if you have any questions, please call the toll-free helpline at 1-800-689-9928.

This Mastercraft product is guaranteed for a period of **3 years from the date of original retail purchase** against defects in workmanship and materials, except for the following components:

a) Component A: Batteries, chargers and carrying case, which are guaranteed for a period of 2 years from the date of original retail purchase against defects in workmanship and materials;

b) Component B: Accessories, which are guaranteed for a period of 1 year from the date of original retail purchase against defects in workmanship and materials.

Subject to the conditions and limitations described below, this product, if returned to us with proof of purchase within the stated warranty period and if covered under this warranty, will be repaired or replaced (with the same model, or one of equal value or specification), at our option. We will bear the cost of any repair or replacement and any costs of labour relating thereto.

These warranties are subject to the following conditions and limitations:

a) a bill of sale verifying the purchase and purchase date must be provided;

b) this warranty will not apply to any product or part thereof which is worn or broken or which has become inoperative due to abuse, misuse, accidental damage, neglect or lack of proper installation, operation or maintenance (as outlined in the applicable owner's manual or operating instructions) or which is being used for industrial, professional, commercial or rental purposes;

c) this warranty will not apply to normal wear and tear or to expendable parts or accessories that may be supplied with the product that are expected to become inoperative or unusable after a reasonable period of use;

d) this warranty will not apply to routine maintenance and consumable items such as, but not limited to, fuel, lubricants, vacuum bags, blades, belts, sandpaper, bits, fluids, tune-ups or adjustments;

e) this warranty will not apply where damage is caused by repairs made or attempted by others (i.e., persons not authorized by the manufacturer);

f) this warranty will not apply to any product that was sold to the original purchaser as a reconditioned or refurbished product (unless otherwise specified in writing);

g) this warranty will not apply to any product or part thereof if any part from another manufacturer is installed therein or any repairs or alterations have been made or attempted by unauthorized persons;

h) this warranty will not apply to normal deterioration of the exterior finish, such as, but not limited to, scratches, dents, paint chips, or to any corrosion or discolouring by heat, abrasive and chemical cleaners; and

i) this warranty will not apply to component parts sold by and identified as the product of another company, which shall be covered under the product manufacturer's warranty, if any.

Additional Limitations

This warranty applies only to the original purchaser and may not be transferred. Neither the retailer nor the manufacturer shall be liable for any other expense, loss or damage, including, without limitation, any indirect, incidental, consequential or exemplary damages arising in connection with the sale, use or inability to use this product.

Notice to Consumer

This warranty gives you specific legal rights, and you may have other rights, which may vary from province to province. The provisions contained in this warranty are not intended to limit, modify, take away from, disclaim or exclude any statutory warranties set forth in any applicable provincial or federal legislation.

Made in China

Imported by

Mastercraft Canada Toronto, Canada M4S 2B8