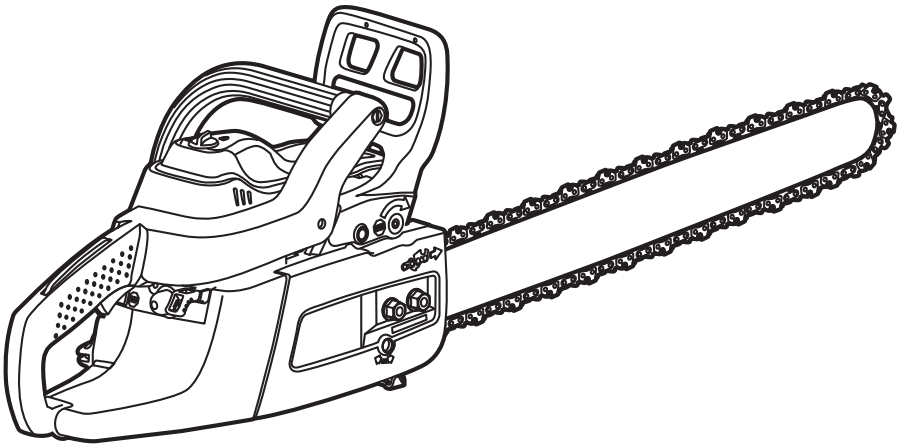
RYOBI

RCS5145N

PETROL CHAINSAW



Important! It is essential that you read the instructions in this manual before assembling, maintaining and operating this machine.

English (Original Instructions)

Thank you for buying a Ryobi chainsaw.

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

Some regions have regulations that restrict the use of the product to some operations. Check with your local authority for advice.

READ ALL INSTRUCTIONS

Intended use

This chainsaw is designed for cutting branches, trunks, logs and beams of a diameter determined by the cutting length of the guide bar. It is only designed to cut wood. It is only to be used outdoors, by adults.

Do not use the chainsaw for any purpose not listed above. This chainsaw is not to be used for professional tree services. It is not to be used by children or by persons not wearing adequate personal protective equipment and clothing.

Residual risks

Even when using the chainsaw as intended, there remains a residual risk of harm which cannot be fully prevented. The following list of potential hazards should be read and understood. You should pay extra attention and care to these items to reduce the risk of occurrence or injury.

- Contact with exposed cutting teeth and saw chain.
- Access to rotating parts (the saw chain).
- Unexpected, abrupt movement (kick back) of the guide bar.
- Flying chain parts (thrown off or broken).
- Flying material (cut from the work piece).
- Inhalation of saw dust and particles or emissions from the petrol engine.
- Skin contact with petrol/oil.
- Loss of hearing if no hearing protective equipment worn during use.

GENERAL SAFETY RULES

⚠ WARNING

The warnings, labels, and instructions found in this section of the operator's manual are for your safety. Failure to follow all instructions may result in serious personal injury. Safe operation of this tool requires that you read and understand this operator's manual and all labels affixed to the tool. Safety is a combination of using common sense, staying alert, and knowing how your saw works.

- Do not operate a chainsaw that is damaged, improperly adjusted, or not completely and securely assembled. Be sure that the saw chain stops moving when the throttle control trigger is released.

GENERAL PRECAUTIONS

- Know your tool. Read the operator's manual carefully. Learn the saw's applications and limitations as well as the specific potential hazards related to this tool.
- Do not operate a chainsaw with one hand. Serious injury to the operator, helpers, and/or bystanders may result from one-handed operation. A chainsaw is intended for two-handed use.
- Do not operate a chainsaw when you are fatigued. Never operate a chainsaw when you are tired or under the influence of medication, drugs, or alcohol.
- Keep all parts of your body away from the saw chain when the engine is running.
- Always carry the chainsaw with the engine stopped and the brake engaged, the guide bar and saw chain to the rear, and the silencer away from your body. When transporting the chainsaw, use the appropriate guide bar scabbard.
- Turn off the engine before putting the chainsaw down. Do not leave the engine running unattended. As an additional safety precaution, apply the chain brake before putting down the saw.
- Do not cut vines and/or small undergrowth (less than 76 mm (3 inch) in diameter).
- Silencer surfaces are very hot during and after operation of the chainsaw; keep all body parts away from the silencer. Serious burns may occur if contact is made with the silencer.
- Always hold the chainsaw with both hands when the engine is running. Use a firm grip with thumbs and fingers encircling the chainsaw handles.
- Never let anyone use your chainsaw who has not received adequate instructions in its proper use. This applies to rentals as well as privately owned saws.
- Before you start the engine, make sure the saw chain is not contacting any object.
- Operate the chainsaw only in well ventilated areas.
- Always have a fire extinguisher available when using chainsaw.
- Use guide bar cover during transport and storage.
- The chainsaw should always be used with correctly mounted spiked bumper.
- Do not adapt your powerhead to a bow guide or use it to power any attachments or devices not listed for your saw.

PROPER CLOTHING FOR SAFETY

- Clothing must be sturdy and snug-fitting but allow complete freedom of movement. Always wear long pants made of heavy material to help protect your legs from contact with branches and brush. To reduce the risk of cut injuries,wear pants or chaps that contain pads of cut retardant material. Never wear scarves,ties,jewellery or other items of clothing,which might get caught in the equipment, in brush or on branches. Secure hair so it is above shoulder.
- Wear safety boots with a good tread (with non-slip soles).
- Wear non-slip, heavy-duty protective gloves.
- Wear eye protection with side shields marked to comply with EN 166 as well as hearing and head protection when operating the product.

REFUELLING (DO NOT SMOKE!)

- To reduce the risk of fire and burn injury, handle fuel with care. It is highly flammable.
- Mix and store fuel in a container approved for petrol.
- Mix fuel outdoors where there are no sparks or flames.
- Select bare ground, stop the engine, and allow it to cool before refuelling.
- Loosen the fuel cap slowly to release pressure and to keep fuel from escaping around the cap.
- Tighten the fuel cap securely after refuelling.
- Wipe spilled fuel from the unit. Move 9 m away from refuelling site before starting engine.
- Never attempt to burn off spilled fuel under any circumstances.

BASIC PRECAUTIONS IN THE CUTTING/WORK AREA

- Do not stand on any unstable surface while using your chainsaw, that includes ladders, scaffolds, trees, etc.
- Do not start cutting until you have a clear work area, secure footing, and a planned retreat path from the falling tree.
- Do not cut from a ladder, this is extremely dangerous.
- 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 under tension, be alert for spring-back so that you will not be struck when the tension in the wood fibres is released.
- Do not operate a chainsaw in a tree unless you have been specifically trained to do so.
- Beware of the emission of exhaust gases, lubricant mist and saw dust.
- This product is very noisy when operating, to prevent long term hearing damage, wear hearing protection and keep other persons 15 m away from the work area. Operating similar tools nearby increases risk of injury. Take frequent breaks.
- Use of hearing protection reduces the ability to hear warnings (shouts or alarms). The operator must pay extra attention to what is going on in the work area.
- Keep bystanders and animals out of the work area. Do not allow other persons to be nearby during starting or cutting with the chainsaw.

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

PUSH AND PULL

The reaction force is always opposite to the direction the chain is moving. 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.

NOTE: Your chainsaw has been fully factory tested. It is normal to find some slight lubricant residue on the saw.

MAINTENANCE PRECAUTIONS

- Never operate a chainsaw that is damaged, improperly adjusted, or is not completely and securely assembled.
- Be sure that the saw chain stops moving when the throttle control trigger is released. If the saw chain moves at idling speed, the carburettor may need adjusting. Refer to “Operation-adjusting idling speed” later in this manual. If the saw chain still moves at idling speed after adjustment has been made, contact a service dealer for adjustment and discontinue use until the repair is made.
- Keep the handles dry, clean, and free of lubricant or fuel mixture.
- Follow the sharpening and maintenance instructions for the saw chain.
- Use only the replacement guide bars and low kickback chains specified for your saw. You must never modify or remove parts from this product or use parts not recommended by Ryobi. This will increase the risk of injury.

⚠ WARNING

The risk of kickback may increase if non-approved guide bar and chain combinations are used. Refer to specifications table for qualified replacement guide bar and chain combinations.

⚠ WARNING

All chainsaw service, other than the items in the operator's manual maintenance instructions, should be performed by competent chainsaw service personnel. If improper tools are used to remove the flywheel or clutch, or if an improper tool is used to hold the flywheel in order to remove the clutch, structural damage to the flywheel could occur which could subsequently cause the flywheel to burst and serious injury could result.

KICK-BACK

- Kick-back may occur when the nose of the guide bar touches an object or when the wood closes in and pinches the saw chain in the cut. The nose of guide bar contact in some cases may cause a lightning-fast reverse reaction kicking the guide bar up and back toward the operator. Pinching the saw chain along the top of the guide bar may push the guide bar rapidly back toward 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.

1. With a basic understanding of kick-back, you can reduce or eliminate the element of surprise. Sudden surprise contributes to accidents.
2. Keep a good firm grip on the saw with both hands when the engine 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 chainsaw handles. A firm grip together with a stiff left arm will help you maintain control of the saw if kick-back occurs.
3. 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.
4. Cut at high engine speeds. Always cut with the engine running at full speed. Fully squeeze the throttle trigger and maintain a steady cutting speed.
5. Do not overreach or cut above chest height.
6. Follow the manufacturer's sharpening and maintenance instructions for the saw chain.
7. Use only replacement bars and chains specified by the manufacturer or the equivalent.

NOTE: Refer to "Operation" in this manual for information on kick-back and how to avoid serious personal injury.

WHITE FINGER RISKS

Prolonged use of chainsaws expose operators to harmful vibration that may lead to white finger risks. Symptoms include episodic blanching of fingers in response to cold, numbness and tingling. In extreme cases, it will cause loss of touch sensation.

Anti-vibration system does not guarantee that you will not suffer white finger risks. Operators should observe their hands and fingers. If the above symptoms occur, operators should seek medical advice immediately.

It has been reported that vibrations from hand-held tools may contribute to a condition called Raynaud's Syndrome in certain individuals. Symptoms may include tingling, numbness and blanching of the Fingers, usually apparent upon exposure to cold.

Hereditary factors, exposure to cold and dampness, diet, smoking and work practices are all thought to contribute to the development of these symptoms. There are measures that can be taken by the operator to possibly reduce the effects of vibration:

a. Keep your body warm in cold weather. When operating the unit wear gloves to keep the hands and wrists warm. It is reported that cold weather is a major factor contributing to Raynaud's Syndrome.
b. After each period of operation, exercise to increase blood circulation.
c. Take frequent work breaks. Limit the amount of exposure per day.
d. Injuries may be caused, or aggravated by prolonged use of a tool. When using any tool for prolonged periods, ensure you take regular breaks.

If you experience any of the symptoms of this condition, immediately discontinue use and see your doctor about these symptoms.

SYMBOL

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.

	Indicates a potential personal injury hazard.
	To reduce the risk of injury, user must read and understand operator's manual before using this product.
	Wear eye, hearing and head protection when operating this equipment.
	Beware of chain saw kickback and avoid contact with bar tip.
	Hold and operate the saw properly with both hands.

	Do not operate the saw using only one hand.
	Engines produce carbon monoxide which is an odorless, deadly poison. Do not operate in an enclosed area.
	Wear non-slip, heavy-duty protective gloves when handling the chainsaw.
	Always wear safety boots with non-slip sole.
	Use unleaded petrol intended for motor vehicle use with an octane rating of 91 [(R + M)/2] or higher. This product is powered by 2-stroke cycle engine and requires pre-mixing petrol and 2-stroke lubricant.
	Bar and chain lubricant
	Use 2-stroke oil for air cooled engines.
	Regulatory Compliance Mark (RCM). This product meets applicable regulatory requirements.
	Guaranteed sound pressure and sound power lever
	Set ignition switch to RUN (I) position.
	Make sure chain brake is disengaged.
	Fully press and release primer bulb 10 times.
	Pull choke lever all the way out. This also sets the throttle to fast idle.
	Pull starter until engine attempts to start (no more than 5 pulls).
	Push choke lever all the way in.
	Pull starter until engine runs (6x Max).
	Chain brake ON.
	Squeeze and release throttle.
	Mix the fuel mix thoroughly and also each time before refueling.

	Add bar and chain oil (to the bar and chain reservoir) every time that fuel is added to the chainsaw's fuel tank.
	Mix fuel outdoors where there are no sparkles or flames.
	Do not smoke when mixing fuel or filling fuel tank.
	Fuel and oil
	Rotate to adjust chain tension "+" = Tighten the chain "-" = Loosen the chain
	Moving direction of the chain
	H = High speed adjustment needle L = Low speed adjustment needle T = Idle adjustment screw
	Lock the filter access cover.
	Unlock the filter access cover.
	Ignition switch: I = ON, O = Stop
	Set the brake lever to Brake (Stop) position

SERVICE

Servicing requires extreme care and knowledge and should be performed only by a qualified service technician. For service we suggest you return the product to your nearest authorised service center for repair. When servicing, use only identical replacement parts.

⚠ WARNING

To avoid serious personal injury, do not attempt to use this product until you read thoroughly and understand completely the operator's manual. If you do not understand the warnings and instructions in the operator's manual, do not use this product. Call Ryobi customer service for assistance.

English (Original Instructions)

⚠ WARNING

The operation of any power tool can result in foreign objects being thrown into your eyes, which can result in severe eye damage. Before beginning power tool operation, always wear safety goggles or safety glasses with side shields and, when needed, a full face shield. We recommend Wide Vision Safety Mask for use over eyeglasses or standard safety glasses with side shields. Always use eye protection which is marked to comply with EN 166.

⚠ WARNING

Long term inhalation of the engine's exhaust fumes, chain oil mist and sawdust can result in serious personal injury.

Save these instructions and pass them on if the saw is to be used by another person.

SPECIFICATIONS

Model name	RCS5145N
Description	51cc 45 cm (18") gasoline chain saw
Weight - no bar, chain, fuel	5.3 kg
Fuel tank capacity	575 cm^3
Lubricant tank capacity	350 cm^3
Maximum chain speed at the recommended maximum engine speed	22.2 m/s
Bar length	45 cm
Usable cutting length	425 mm
Chain pitch	8.26 mm (0.325")
Chain gauge	1.27 mm (0.05")
Chain type	0.325" low profile full complement
Drive sprocket	7 teeth x 0.325"
Engine displacement	51 cm^3
Maximum engine power (ISO 7293)	2.0 kW
Recommended maximum engine speed with cutting attachment	11,500 min^{-1}
Recommended engine speed at idling	2,600-3,600 min^{-1}
Specific fuel consumption at maximum engine power	490 g/kWh
Sound pressure level (ISO 22868)	LpAav: 100 dB(A), KpA=3 dB(A)
Sound power level (ISO 22868)	114 dB(A)
Vibration (ISO 22867):	Oregon
– Front handle	8.12 m/s^2, K=1.5
– Rear handle	8.0 m/s^2, K=1.5
Bar & Chain	
Guide bar (no silkscreen)	
– Oregon part number	180 PXB K041
– Colour	Black
Chain	
– Oregon part number	20BPX-72
File size (to sharpen chain)	5/32" (4 mm)

DESCRIPTION

1. Front hand guard/Chain brake
2. Front handle
3. Engine cover
4. Primer bulb
5. Choke lever
6. Chain
7. Starter grip
8. Guide bar
9. Chain catcher
10. Trigger release
11. Chain lubricant cap
12. Silencer
13. Idle adjustment screw
14. Rear handle
15. Throttle trigger
16. Fuel mix cap
17. On/Off switch
18. Starter/Fan housing
19. Spiked bumper
20. Air filter access cover assembly
21. Screw
22. Air filter

OPERATION

For your safety, study this entire manual before operating the saw. Pay particular attention to the precautions and instructions listed in the operator's manual.

⚠ WARNING

The warnings and instructions in this section of the operator's manual are for your safety and to prevent serious personal injury.

UNDERSTANDING YOUR CHAINSAW SAFETY DEVICES

Low kick-back saw chain

A low-kick-back saw chain is a chain which has met the kickback performance requirements.

The rakers (depth gauges) ahead of each cutter can minimise the force of a kick-back reaction by preventing the cutters from digging in too deeply at the kick-back zone. Only use replacement chain that is equivalent to the original chain or has been certified as a low kick-back chain.

As saw chains are sharpened, they lose some of the low kickback qualities and extra caution is required.

Spiked bumper

See figure 1.

The integral bumper spike may be used as a pivot when making a cut.

Guide bars

Generally, guide bars with small radius tips have somewhat lower kick-back potentials.

Chain brake

See figure 3.

Chain brakes are designed to quickly stop the chain from rotating. When the chain brake lever/hand guard is pushed towards the bar, the chain should stop immediately. A chain brake does not prevent kick-back. The chain brake should be cleaned and tested daily. Refer to "operation" later in this manual for additional information.

(A) Run position

(B) Brake position

⚠ WARNING

Even with daily cleaning of the mechanism, the dependability of a chain brake to perform under field conditions cannot be certified.

⚠ WARNING

Kick-back occurs 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 may 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 towards the operator. If the saw chain is pinched along the top of the guide bar, the guide bar can be driven rapidly back towards the operator. Either of these reactions may cause you to lose control of the saw, which could result in serious 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.

KICK-BACK PRECAUTIONS

See figure 4 - 5.

Rotational kick-back occurs when the moving chain contacts an object at the kick-back danger zone of the guide bar. The result is a lightning-fast, reverse reaction which kicks the guide bar up and back towards the operator. This reaction can cause loss of control which may result in serious injury.

⚠ WARNING

Skating - when the chainsaw fails to dig in during a cut, the guide bar can begin hopping or dangerously skidding along the surface of the log or branch, possibly resulting in the loss of control of the chainsaw. To prevent or reduce the skating, hold the chainsaw with two hands and make sure the saw chain establishes a groove for cutting.

⚠ WARNING

Bouncing - never cut small, flexible branches or brushes with your chainsaw. Their size and flexibility can easily cause the saw to bounce towards you or bind up with enough force to cause a kickback. The best tool for that kind of work is a hand saw, pruning shears, an axe or other hand tools.

FUEL AND REFUELLING

Handling the fuel safely

⚠ WARNING

Always turn off engine before refuelling. Never add fuel to a machine with a running or hot engine. Move at least 9 m (30 ft) from refuelling site before starting the engine. Do not smoke! Failure to heed this warning can result in possible personal injury.

⚠ WARNING

Check for fuel leaks. If any are found, correct them before using the saw to prevent fire or burn injury.

- Always handle fuel with care. It is highly flammable.
- Always refuel outdoors where there are no sparks and flames. Do not inhale fuel vapour.
- Do not let petrol or lubricant come in contact with your skin.
- Keep petrol and lubricant away from the eyes. If petrol or lubricant comes in contact with the eyes, wash them immediately with clean water. If irritation is still present, see a doctor immediately.
- Clean up spilled fuel immediately.

Mixing the fuel

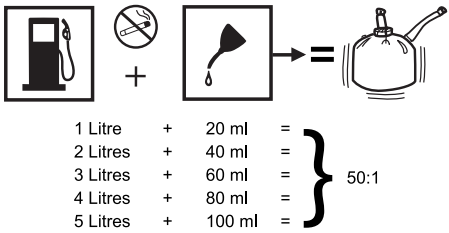
- This product is powered by a 2-stroke engine and requires pre-mixing petrol and 2-stroke lubricant. Premix unleaded petrol and 2-stroke engine lubricant in a clean container approved for petrol.
- This engine is certified to operate on unleaded petrol intended for motor vehicle use with an octane rating of 91 ([R + M]/2) or higher.
- Do not use any type of pre-mixed petrol/lubricant from fuel service stations. This includes the premixed petrol/lubricant intended for use in mopeds, motorcycles etc.
- Use synthetic 2-stroke lubricant only.
- Mix 2% lubricant into the petrol. This is a 50:1 ratio.
- Mix the fuel thoroughly and also each time before refuelling.
- Mix in small quantities. Do not mix quantities larger than usable in a 30-day period. A synthetic 2-stroke lubricant containing a fuel stabiliser is recommended.

Filling the tank

See figure 6.

Refer to “Safety Rules - Refuelling” earlier in this manual for additional safety information.

1. Clean surface around fuel cap to prevent contamination.
2. Loosen fuel cap slowly to release pressure and to keep fuel from escaping around the cap.
3. Carefully pour fuel mixture into the tank. Avoid spillage.
4. Prior to replacing the fuel cap, clean and inspect the gasket.
5. Immediately replace fuel cap and hand tighten. Wipe up any fuel spillage. Move 9 m (30 ft) away from refuelling site before starting engine.
   NOTE: It is normal for smoke to be emitted from a new engine during and after first use.



CHAIN LUBRICANT SYSTEM

See figure 7.

Use Ryobi bar and chain lubricant. It is designed for chains and chain lubricating, and is formulated to perform over a wide temperature range with no dilution required. Chainsaw should use approximately one tank of lubricant per tank of fuel.

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

1. Carefully pour the bar and chain lubricant into the tank.
2. Fill the lubricant tank every time you fuel the engine.

STARTING THE ENGINE

See figure 8.

⚠ WARNING

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

1. Place the chainsaw on level ground and ensure that no objects or obstructions which could come in contact with the bar and chain are in the immediate vicinity.
2. Hold the front handle firmly with the left hand and put your right foot onto the base of the rear handle.

NOTE: In the following starting instruction, when the choke lever is pulled all the way out to the **START** position, the throttle is set for starting. To reset the throttle to the **RUN** position, squeeze and then release the throttle trigger.

STARTING A COLD ENGINE

See figure 3. See figure 8 - 14.

1. Make sure the chain brake is in the brake position (Fig.3, B) by pushing forwards on the lever/hand guard.
2. Set the ignition switch to the run (I) position.
3. Fully press and release the primer bulb 10 times.
4. Pull choke lever (Fig.11, 5) all the way out to full position. The partial throttle position is automatically set when the choke lever is set at full choke.
5. Pull starter (Fig.12, 7) until engine attempts to start. Slowly pull the starter grip out for a short distance until you feel the starter engage, then briskly pull straight up. Do not pull to the end of the rope; this may damage the starter. Hold onto the grip during rewinding. Pull the starter rope until the first firing of the engine is heard (no more than five pulls).
   NOTE: A new unit may require additional pulls.
6. Push choke lever (Fig.13, 5) all the way in.
7. Pull starter until engine runs.
8. Depress the trigger release. Squeeze and then release the throttle trigger (Fig.14) to return the engine to idle speed. Then you MUST release the brake lever to **RUN** position by pulling back on the brake lever/hand guard before accelerating the engine or cutting wood.

⚠ CAUTION

Failure to release partial throttle when chain brake lever is in the brake position will result in serious damage to the unit. Never squeeze and hold the throttle trigger while the chain brake is in the brake position.

Now you are ready to pick up the saw. Use the proper grip for both handles. Refer to “Operation-proper grip on handles” later in this manual for additional information.

STARTING A WARM ENGINE

Follow the instructions for starting a cold engine (steps 1-8), but do not attempt to start in the full choke position (skip step 5). Push and release primer bulb 10 times. Pull the choke out and push it back to the original run position.

STOPPING THE ENGINE

See figure 15.

Release the throttle trigger and let the engine return to idle. To stop the engine, move the ignition switch to the “O” stop position (17). Do not put the chainsaw on the ground when the chain is still moving. For additional safety, set the chain brake when the saw is not in use.

In the event that the ignition switch will not stop the saw, pull the choke lever out to the fully extended position (Full Choke) and engage chain brake to stop the engine. If the ignition switch will not stop the saw when set to the “O” stop position, have the ignition switch repaired before using the chainsaw again to prevent unsafe conditions or serious injury.

IMPORTANT: When you have finished using the saw, relieve tank pressures by loosening the chain lubricant and fuel mix caps. Then retighten the caps. Cover the sharp chain and bar with the appropriate scabbard. Allow the engine to cool before storing.

PREPARING FOR CUTTING

Proper clothing for safety

See figure 16.

- Wear safety working clothes (A). Always wear heavy, long trousers (B), boots (C), and gloves (D). Do not wear jewellery, shorts, sandals, or go barefoot. Do not wear loose fitting clothing, which could be drawn into the engine or catch the chain or undergrowth. Wear overalls, jeans, or leggings made of cut-resistant material or ones that contain cut-resistant inserts. Secure hair so that it is above shoulder level.
- Wear non-slip safety footwear and heavy-duty gloves to improve your grip and to protect your hands.
- Wear eye (E), hearing (F), and head (G) protection when operating this equipment.

Proper grip on handles

See figure 17 - 18.

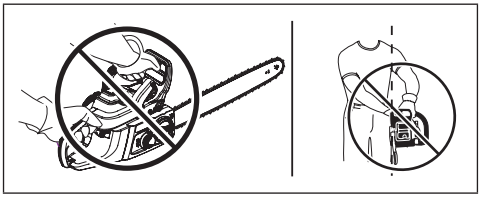
Refer to “Specific Safety Rules – proper clothing for safety” earlier in this manual for appropriate safety equipment.

- 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 that would place your body or arm across the chain line.

- Maintain a proper grip on the saw whenever the engine is running. The fingers should encircle the handle and the thumb be wrapped under the handlebar. This grip is least likely to be broken (by a kick-back 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.



⚠ WARNING

Do not operate the throttle 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.

PUSH AND PULL

See figure 19.

The reaction force is always opposite to the direction the chain is moving. Thus, the operator must be ready to control the pull (A) when cutting on the bottom edge of the bar and the push (B) when cutting along the top edge.

NOTE: Your chainsaw has been fully factory tested. It is normal to find some slight lubricant residue on the saw.

PROPER CUTTING STANCE

See figure 20.

- Balance your weight with both feet on solid ground.
- Keep left arm with elbow locked in a “straight arm” position (B) to withstand any kick-back force.
- Keep your body to the left of the chain line (A).
- Keep your thumb on underside of handlebar (C).

BASIC OPERATING/CUTTING PROCEDURES

Practise cutting a few small logs using the following technique to get the “feel” of using your saw before you begin a major sawing operation.

1. Take the proper stance in front of the wood with the saw idling.
2. Accelerate the engine to full throttle just before entering the cut by squeezing the throttle trigger.
3. Begin cutting with the saw against the log.
4. Keep the engine at full throttle the entire time you are cutting.
5. Allow the chain to cut for you; exert only light downward pressure. Forcing the cut could result in damage to the bar, chain, or engine.
6. Release the throttle trigger as soon as the cut is completed, allowing the engine to idle. Running the saw at full throttle without a cutting load may result in unnecessary wear to the chain, bar, and engine.
7. Do not put pressure on the saw at the end of the cut.

WORK AREA PRECAUTIONS

See figure 21. See figure 27 - 28.

- 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 your saw. Allow no person to use this chainsaw who has not read this operator’s manual or received adequate instructions for the safe and proper use of this chainsaw.
- 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 (4.5 m) 15 ft between workers.
- 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 kick-back 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.

ADJUSTING THE CARBURETTOR

See figure 22 - 24.

Before adjusting the carburettor, clean the air filter (A) and the starter cover vents (B). Allow the engine to warm up prior to carburettor adjustment. Refer to “Maintenance” later in this manual.

The carburettor is factory set and should not require adjusting. The carburettor will permit only limited adjustment of the “L” (Low Jet) and “H” (High Jet) needles. Any adjustment should be done by a service dealer.

Under no circumstances should the “L” (Low Jet) and “H” (High Jet) needles be forced outside the range of adjustment.

⚠ CAUTION

Serious damage may occur to the engine if improper adjustments are made to the “L” and “H” needles. Do not force the “L” and “H” needles outside the adjustment range!

ADJUSTING IDLING SPEED

See figure 24.

- If the engine starts, runs, and accelerates but will not idle, turn the idling speed screw “T” clockwise to increase idling speed.
- If the chain turns at idle, turn the idling speed screw “T” anticlockwise to reduce the idle RPM and stop the chain movement. If the saw chain still moves at idling speed, contact a service dealer for adjustment and discontinue use until the repair is made.

⚠ WARNING

The saw chain should never turn at idle. Turn the idling speed screw “T” anticlockwise to reduce the idle RPM and stop the chain, or contact a service dealer for adjustment and discontinue use until the repair is made. Serious personal injury may result from the saw chain turning at idle.

OPERATING THE CHAIN BRAKE

See figure 25 - 26.

Refer to “Safety” earlier in this manual for additional information. Check the operating condition of the chain brake prior to each use.

1. Start the engine and grasp the front and rear handles securely with both hands.
2. Pull the throttle trigger to bring the chainsaw up to full speed. Using the back of your left hand, engage the chain brake (A) by pushing the chain brake lever/hand guard toward the bar while the chain is rotating rapidly. **NOTE:** The chain brake should engage and stop the chain immediately. If not, stop the saw by placing the ignition switch in the “O” stop position. Take the saw to service dealer for repair and discontinue use until the repair is made.
3. Reset the chain brake back into the run position (B) by grasping the right-hand side (from operator’s position) of the chain brake lever/hand guard and pull towards the front handle until you hear a click.

FELLING TREES – HAZARDOUS CONDITIONS

See figure 27.

⚠ WARNING

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

When felling a tree, it is important that you heed the following warnings to prevent possible serious injury.

- Wear eye, hearing, and head protection (A) when operating this equipment.
- Do not cut down trees having an extreme lean or large trees with rotten or dead limbs, loose bark, or hollow trunks. Have these trees pushed or dragged down with heavy equipment, then cut them up.
- Consider the distribution and weight of heavy limbs (B).
- Clear out the undergrowth around the tree to be felled (C).
- Do not cut trees near electrical wires or buildings (D).
- Consider the direction in which the tree leans (E).
- Check the tree for damaged or dead branches which could fall and hit you during felling (F).
- Periodically glance at the top of the tree during the back-cut to assure the tree is going to fall in the desired direction.
- Keep all bystanders at a safe distance (G) (at least twice the height of the tree).
- Prepare a path of safe retreat (H).
- 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!
- Consider the wind direction before felling a tree.
- Do not fell trees near power lines or near buildings which could be struck by falling limbs or the tree itself.
- The chainsaw 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.

⚠ WARNING

Do not fell trees near power lines or near buildings which could be struck by falling limbs or the tree itself.

PROPER PROCEDURE FOR TREE FELLING

See figure 28 - 31.

1. 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 the path of safe retreat approximately 135° from the planned line of fall (A).
2. 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 (B).
3. Cut a notch about 1/3 the diameter of the trunk in the side of the tree (C). Make the notch cuts so they intersect at right angles 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.
4. Make the back-cut (D) level and horizontal, and at a minimum of 2 inches (5 cm) above the horizontal cut of the notch.
   NOTE: Never cut through to the notch. Always leave a band of wood between the notch and back cut (approximately 2 inches (5 cm) or 1/10 the diameter of the tree). This is called a “hinge” or “hingewood” (E). It controls the fall of the tree and prevents slipping or twisting or shooting-back of the tree off the stump.

   On large diameter trees, stop the back cut before it is deep enough for the tree to either fall or settle back on the stump. Then insert soft wooden or plastic wedges (F) into the cut so they do not touch the chain. Drive wedges in, little by little, to help jack the tree over.
5. As tree starts to fall, stop the chainsaw and put it down immediately. Retreat along the cleared path, but watch the action in case something falls your way.

⚠ WARNING

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

REMOVING BUTTRESS ROOTS

See figure 32.

A buttress root is a large root extending from the trunk of the tree above the ground. Remove large buttress roots prior to felling. Make the horizontal cut (A) into the buttress first, followed by the vertical cut (B). Remove the resulting loose section (C) from the work area. Follow the correct tree felling procedure after you have removed the large buttress roots. Refer to “Operation – Proper Procedure for Tree Felling” earlier in this manual.

BUCKING

See figure 33.

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

- Cut only one log at a time.
- Support small logs on a sawing stand 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 kick-back (A).
- During bucking operations, stand on the uphill side so that the cut-off section of the log cannot roll over you.
- Sometimes it is impossible to avoid pinching (with just standard cutting techniques) or difficult to predict which way a log will settle when cut.

BUCKING WITH A WEDGE

See figure 34.

If the wood diameter is large enough for you to insert a soft bucking wedge (B) without touching the chain, you should use the wedge to hold the cut open to prevent pinching.

BUCKING LOGS UNDER STRESS

See figure 35.

(D) Log supported at one end.

(C) Log supported at both ends.

Make the first bucking cut (E) 1/3 of the way through the log and finish with a 2/3 cut (F) on the opposite side. As you cut the log, 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 (G) to prevent the bar and chain from pinching.

OVERBUCKING

See figure 19.

Begin from 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 (A).

UNDERBUCKING

Begin from 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 to push back at you (B). Be prepared for this reaction and hold the saw firmly to maintain control.

LIMBING AND PRUNING

See figure 36.

- Work slowly, keeping both hands on the saw with a

firm grip. Maintain secure footing and balance.

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

⚠ WARNING

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

- When pruning trees it is important not to make the flush 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.

1. Underbuck the branch 1/3 through for your first cut (A).
2. Overbuck the branch to drop it (B).
3. Finish by cutting smoothly and neatly against the main member (C) 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.

CUTTING SPRING POLES

See figure 37.

A spring pole (A) 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 spring-poles; they are dangerous.

⚠ WARNING

Spring poles are dangerous and could strike the operator causing the operator to lose control of the chainsaw. This could result in severe or fatal injury to the operator.

MAINTENANCE

REPLACING THE BAR AND CHAIN

See figure 3. See figure 38 - 47.

⚠ DANGER

Never start the engine before installing the guide bar, chain, drivecase cover, and clutch drum. Without all these parts in place, the clutch can fly off or explode, exposing the user to possible serious injury.

⚠ WARNING

To avoid serious personal injury, read and understand all the safety instructions in this section.

1. Always place the switch in the stop “O” position before you work on the saw.
2. Make sure the chain brake is not set by pulling the chain brake lever/hand guard towards the front handle to the run position.
3. Wear gloves when handling the chain and bar. These components are sharp and may contain burrs.
4. Remove the bar mounting nuts (B) using a combination wrench (C) or a 13mm socket wrench spanner.
5. Remove the clutch cover (D).
6. 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.
7. Place the chain drive links into the bar groove.
8. Position the chain so there is a loop at the back of the bar.
9. Hold the chain in position on the bar and place the loop around the sprocket (J).
10. Fit the bar flush against the mounting surface so that the bar studs (P) in the chassis are in the long slot of the bar.
11. Replace the clutch cover ensuring that the adjusting pin (L) in the clutch cover is in the bar tensioning pin hole and that both bar studs (P) are in their respective holes (K) in the clutch cover.
    NOTE: The adjusting pin (L) may need to be slightly repositioned with the chain tensioning screw so that it is aligned with the position of the bar chain tensioning pin hole.
12. Replace and finger tighten the bar mounting nuts. The bar must be free to move for tension adjustment.
13. Remove all slack from the chain by turning the chain tensioning screw (M) clockwise until the chain seats snugly against the bar with the drive links in the bar groove.
14. Lift the tip of the guide bar up to check for sagging (N).

15. Release the tip of the guide bar and turn the chain tensioning screw (M) 1/2 turn clockwise. Repeat this process until sagging does not exist.
16. Hold the tip of the guide bar up and tighten the bar mounting nuts (B) securely.

The chain is correctly tensioned when there is no sagging on the underside of the guide bar, the chain is snug, but can be turned by hand without binding. Ensure that the chain brake is not set.

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

ADJUSTING THE CHAIN TENSION

See figure 48 - 50.

⚠ 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.

1. Stop the engine before setting the chain tension.
2. Make sure the guide bar mounting nuts are loosened to finger tight and turn the chain tensioning screw (M) 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.
3. Re-tension 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 1.25 mm (0.05 inch) out of the bar groove. To help determine the correct warm chain tension, the tip of the combination wrench (C) can be used as a guide.
   NOTE: New chain tends to stretch. Check the chain tension frequently and tension as required.

⚠ CAUTION

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

CHAIN MAINTENANCE

See figure 51 - 52.

⚠ WARNING

Check that the switch is in the STOP “O” position before you work on the saw.

Use only a low-kick-back chain on this saw. This fastcutting chain provides kick-back reduction when properly maintained.

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

1. Improper filing angle of the side plate can increase the risk of a severe kick-back.
2. Raker (depth gauge) clearance (A).
   – Too low increases the potential for kick-back.
   – Not low enough decreases cutting ability.
   If the cutter teeth hit hard objects such as nails and stones, or are abraded by mud or sand on the wood, have a service dealer sharpen the chain.
   NOTE: Inspect the drive sprocket for wear or damage when replacing the chain (B). If signs of wear or damage are present in the areas indicated, have the drive sprocket replaced by a service dealer.

SHARPENING THE CUTTERS

See figure 53 - 56.

Parts of a cutter	
(A) Cutting corner	(E) Gullet
(B) Side plate	(F) Heel
(C) Depth gauge	(G) Rivet hole
(D) Toe	(H) Top plate

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

1. Wear gloves for protection.
2. Tension the chain prior to sharpening.
   NOTE: Refer to “Maintenance – adjusting the chain tension” earlier in this manual.
3. Use a 4 mm (5/32 inch) diameter round file and holder. Do all your filing at the midpoint of the bar.
4. Keep the file level with the top plate of the tooth. Do not let the file dip or rock.
5. Using light but firm pressure, stroke towards the front corner of the tooth.

6. Lift the file away from the steel on each return stroke.
7. Put a few firm strokes on every tooth. File all left-hand cutters (A) in one direction. Then move to the other side and file the right-hand cutters (B) in the opposite direction.
8. Remove filings from the file with a wire brush.

⚠ CAUTION

A dull or improperly sharpened chain can cause excessive engine speed during cutting which may result in severe engine damage.

⚠ WARNING

Improper chain sharpening increases the potential of kick-back.

⚠ WARNING

Failure to replace or repair a 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 57.

(A) Correct 30° – file holders are marked with guide marks to align file properly to produce correct top plate angle.

(B) Less than 30° – for cross cutting.

(C) More than 30° – feathered edge dulls quickly.

SIDE PLATE ANGLE

See figure 58.

(D) Correct 80° – produced automatically if you use the correct diameter file in the file holder.

(E) Hook – "Grabs" and dulls quickly, increases the potential of kick-back. Results from using a file with a diameter too small or a file held too low.

(F) Backward slope – needs too much feed pressure, causes excessive wear to the bar and chain. Results from using a file with a diameter too large or file held too high.

MAINTAINING DEPTH GAUGE CLEARANCE

See figure 51. See figure 59 - 60.

- Maintain the depth gauge (A) at a clearance of 0.6 mm (0.025 inch). 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 (B) (not provided) and a depth gauge jointer (C) (not provided) to lower all gauges uniformly. Use a 0.6 mm (0.025 inch) depth gauge jointer. After lowering each depth gauge, restore original shape by rounding the front (D). 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.

MAINTAINING THE GUIDE BAR

See figure 61.

⚠ WARNING

Make sure the chain has stopped before you do any work on the saw.

Every week of use, reverse the guide bar 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 lie over sideways;
- Bent guide bar;
- Cracked or broken rails;
- Spread rails.

In addition, 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 (A) and chain groove are free from impurities.

CLEANING THE AIR FILTER

See figure 62 - 64.

NOTE: Always clean the air filter before making any mixture adjustments of the carburettor.

1. Push down on the knob on the top of the air filter access cover assembly (20) and rotate counterclockwise to unlock. Lift the cover straight up to remove; set aside.
2. Before removing the air filter from the carburettor, blow or brush as much loose dirt and sawdust from around

the carburettor and chamber as possible.
NOTE: Be sure to pull the choke rod out to keep the carburettor from being contaminated.

3. Using the combination wrench provided or a flat blade screwdriver, remove the screw securing the air filter.
4. Position a flat screw driver between the tabs and twist as shown in the illustration.
5. Lift the air filter off the air filter base.
   Choose one of the following cleaning options:
   - To lightly clean, tap the filter against a smooth, flat surface to dislodge most of the saw dust and dirt particles.
   - For a more thorough cleaning, clean in warm soapy water, rinse, and let dry completely.
   - Replace with a new air filter after every 25 hours of use.

   NOTE: An alternative method is to clean the filter with compressed air (always wear eye protection to avoid eye injury).
6. Reinstall the air filter, making sure that the tabs on the air filter are located in channels on the air filter bottom.
7. Reinstall air filter cover assembly. Push down on knob and rotate clockwise to secure.
8. Clean the pre-filter (D) every 25 tanks of fuel or sooner, if required. Remove the engine cover (3), starter assembly (E) and the fan housing baffle (F) for access to the pre-filter in the engine housing.
   NOTE: If you use an air hose for drying, blow through both sides of filter.

⚠ WARNING

Never run the engine without the air filter, serious damage could result. Make sure the air filter is correctly placed in the air filter cover before reassembly.

CLEANING THE STARTER UNIT

See figure 64 - 65.

Use a brush or compressed air to keep the cooling vents of the starter assembly free and clean of debris.

CLEANING THE ENGINE

See figure 66 - 67.

Clean the engine fins and flywheel fins with compressed air or a brush periodically. Dangerous overheating of the engine may occur due to impurities on the engine.

⚠ WARNING

Never run the saw without all the parts, including the drivecase cover and starter housing, securely in place. Because parts can fracture and pose a danger of thrown objects, leave repairs of the flywheel and clutch to trained service dealer personnel.

NOTE: Depending on the type of fuel used, the type and amount of lubricant used, and/or your operating conditions, the exhaust port and silencer may become blocked with carbon deposits. If you notice a power loss with your petrol-powered tool, you may need to remove these deposits to restore performance. We highly recommend that only qualified service technicians perform this service.

CHECKING THE FUEL FILTER

See figure 68.

Check the fuel filter (A) periodically. Replace it if contaminated or damaged.

REPLACING THE SPARK PLUG

See figure 69 - 70.

This engine uses a Champion RCJ4 spark plug with 0.63 mm (0.025 inch) electrode gap. Use an exact replacement and replace every six months, or more frequently if necessary.

1. Loosen the spark plug by turning it anticlockwise with a spanner.
2. Remove the spark plug.
3. Hand thread the new spark plug, turning it clockwise.

NOTE: Be careful not to cross-thread the spark plug. Cross-threading will seriously damage the engine.

⚠ WARNING

Silencer surfaces are very hot during and after operation of the chainsaw. Keep all body parts away from the silencer. Serious burns may occur if contact is made with the silencer.

SPARK ARRESTOR

This product is fitted with a spark arrestor screen (inside the muffler / silencer). If loss of engine power is experienced the muffler may need to be replaced. Take the tool to a service dealer to have this maintenance performed.

CHAIN BRAKE

See figure 71 - 72.

- Remove the clutch cover and clean the chain brake components. Check wear on the brake band (A). If brake band is worn or deformed, have it serviced at your nearest authorised service dealer. The band thickness should not be less than 0.60 mm (0.024 inch), or worn halfway through.
- Always keep the chain brake mechanism clean (B) and lightly lubricate the linkage (C).
- Always test the chain brake performance after servicing or cleaning. Refer to “Operation – Operating Chain Brake” earlier in this manual for additional information.
- Check and, if damaged, replace the chain catcher.

TRANSPORTING THE PRODUCT

- When carrying the product for short distance (from one working area to the next), always apply the chain brake so that the product is blocked with the engine off.
- Never carry or transport the product while the it is running.
- To prevent the leakage of fuel or oil and damage in general, secure the product when it is transported.
- Check the fuel and chain lubricant tanks for leaks.

Drain the tanks prior to transport.

STORING THE CHAINSAW (1 MONTH OR LONGER)

1. Drain all fuel from tank into a container approved for petrol.
2. Run the engine until it stops. This will remove all fuel-lubricant mix that could become stale and leave varnish and gum in the fuel system.
3. Drain all bar and chain lubricant from tank into a container approved for lubricant.
4. Clean all foreign material from the saw.
5. Store it in a well-ventilated place that is inaccessible to children.

NOTE: Keep away from corrosive agents such as garden chemicals and de-icing salts.

Abide by all government and local regulations for the safe storage and handling of petrol. Excess fuel should be used in other 2-cycle engine powered equipment.

MAINTENANCE SCHEDULE

Daily check before use
Fuel mixture level . . . . . .Before each use
Bar lubrication. . . . . .Before each use
Chain tension . . . . . .Before each use
Chain engagement
(no chain movement at idling speed) . . .Before each use
Chain sharpness. . . . . .Before each use
For damaged parts . . . . . .Before each use
For loose fasteners. . . . . .Before each use
For loose parts . . . . . .Before each use
Chain brake function. . . . . .Before each use
For fuel leaks . . . . . .Before each use

INSPECT AND CLEAN:

Bar . . . . . .Before each use
Complete saw. . . . . After each use
Air filter . . . . . Every 5 hours*
Chain brake . . . . . Every 5 hours*
Replace spark plug. . . . . .Yearly
Replace fuel filter . . . . . .Yearly
* Hours of Operation

INSPECTION AFTER DROPPING OR OTHER IMPACTS

Thoroughly inspect the unit and identify any affections or damage with the unit. Any damage must be replaced by an authorised service center prior to use.

- For fuel or chain lubrication leaks
- Chain brake function
- Chain tension
- For damaged, loose or broken parts
- For loose or damaged fasteners
- Handles and hand guards

TROUBLESHOOTING

Problem	Possible cause	Solution
Engine will not start (Make sure ignition switch is in start position “I”).	No spark.	The spark plug could be cracked or damaged. Replace the old spark plug with a new one and try to start again. If engine will still not start, return the product to a service dealer for further checking.
	Flooded engine.	With the ignition switch off, remove spark plug from the engine and the spark plug boot. Move choke lever to run position (pushed in completely) and pull starter cord 15 to 20 times. This will clear excess fuel from engine. Clean and reinstall spark plug. Set ignition switch to run (I) position. Push and fully release primer bulb 10 times. Pull starter three times with choke lever at run. If engine does not start, move choke lever to choke and repeat normal starting procedure. If engine still fails to start, repeat procedure with a new spark plug.
Engine starts but will not accelerate properly.	Carburettor requires “L” (Low jet) adjustment.	Contact a service dealer for carburettor adjustment.
Engine starts but will not run properly at high speed.	Carburettor requires “H” (High jet) adjustment.	Contact a service dealer for carburettor adjustment.
Engine does not reach full speed and/or emits excessive smoke.	Check lubricant fuel mixture.	Use fresh fuel and the correct 2-stroke lubricant mix ratio.
	Air filter dirty.	Clean air filter. Refer to "Maintenance – cleaning the air filter” earlier in this manual.
	Spark arrester screen dirty.	Clean spark arrester screen. Refer to “Maintenance – cleaning the spark arresting silencer” earlier in this manual.
	Carburettor requires “H” (High jet) adjustment.	Contact a service dealer for carburettor adjustment.
Engine starts, runs, and accelerates but will not idle.	Carburettor requires adjustment.	Turn idling speed screw “T” clockwise to increase idling speed. If chain turns at idle, turn idling speed screw “T” anticlockwise to decrease speed. Wear protective equipment and observe all safety instructions.
Engine starts and runs, but chain is not rotating.	Chain lubricant tank empty. That fuel tank is filled.	Lubricant tank should be filled every time.
	Check chain tension for overtight condition.	Tension chain per instructions in “Maintenance – adjusting the chain tension” earlier in this manual.

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Engine starts but will not accelerate properly.	Check for lubricating function.	Run at half throttle 30 to 45 seconds. Stop saw and check for lubricant dripping from guide bar. If lubricant is present, the chain may be dull or bar may be damaged. If no lubricant is on the guide bar, contact a service dealer.
Bar and chain running hot and smoking.	Chain brake engaged.	Release chain brake, refer to “Operation – operating chain brake” earlier in this manual.
	Chain tension too tight.	Tension chain per instructions in “Maintenance – adjusting the chain tension” earlier in this manual.
	Check guide bar and chain assembly.	Refer to “Maintenance – assembling the bar and chain” earlier in this manual.
	Check guide bar and chain for damage.	Inspect guide bar and chain for damage.

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