

Dear Customer,

thank you for choosing one of our products. We hope that you will be completely satisfied with this machine and that it fully meets your expectations. This manual has been compiled in order to provide you with all the information you need to get acquainted with the machine and use it safely and efficiently. Don't forget that it is an integral part of the machine, so keep it handy so that it can be consulted when necessary, and pass it on to a further user if you resell or loan the machine.

Your new machine has been designed and manufactured in pursuance with current regulations, and is safe and reliable if used in compliance with the instructions provided in this manual (proper use). Using the machine in any other way, or non-compliance with the safety specifications relative to use, maintenance and repair is considered "improper use" which will invalidate the warranty, relieve the manufacturer from all liabilities, and the user will consequently be liable for all and any damage or injury to himself or others.

Since improvements are periodically made to our products, you may find slight differences between your machine and the descriptions contained in this manual. Certain modifications can be made to the machine without prior warning and without the obligation to update the manual, although the essential safety and function characteristics will remain unaltered. In case of any doubts, please contact your dealer. And now enjoy your work!

⚠ WARNING!

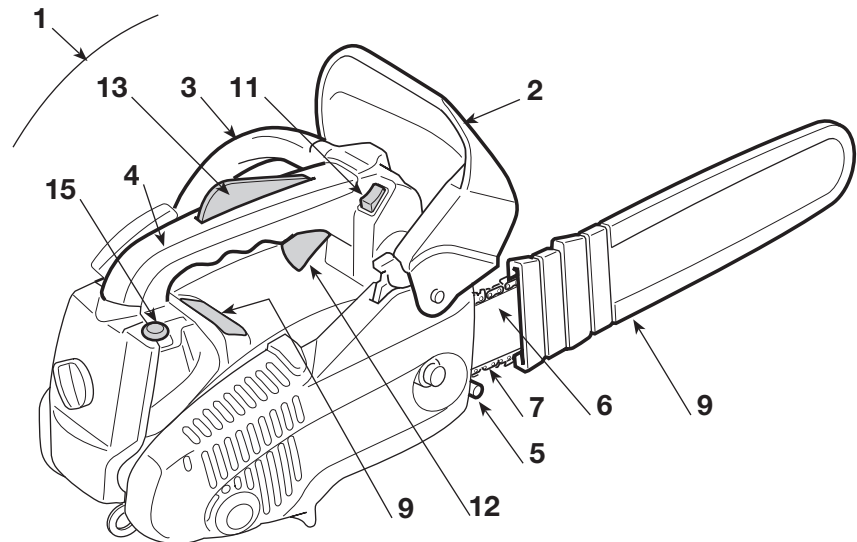
This chainsaw has been especially designed for tree maintenance and should therefore only be used by trained operators when working on trees.

CONTENTS

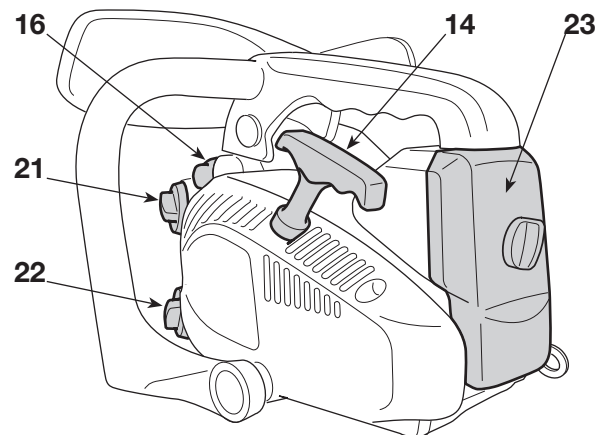
1.	Identification of the main components	2
2.	Symbols	3
3.	Safety requirements	4
4.	Machine assembly	8
5.	Preparing to work	9
6.	How to start - Use - Stop the engine	10
7.	Using the machine	12
8.	Maintenance and storage	15
9.	Identification of faults	18
10.	Accessories	18

1. IDENTIFICATION OF MAIN COMPONENTS**MAIN COMPONENTS**

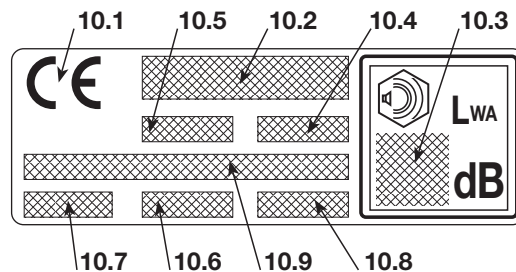
1. Power unit
2. Front hand guard
3. Front handgrip
4. Rear handgrip
5. Chain catcher
6. Bar
7. Chain
8. Bar cover
9. Identification plate

**CONTROLS AND REFUELLING**

11. Engine stop switch
12. Throttle trigger
13. Throttle trigger lockout
14. Starter
15. Choke (if present)
16. Primer (if present)
21. Fuel tank cap
22. Chain oil tank cap
23. Air cleaner cover

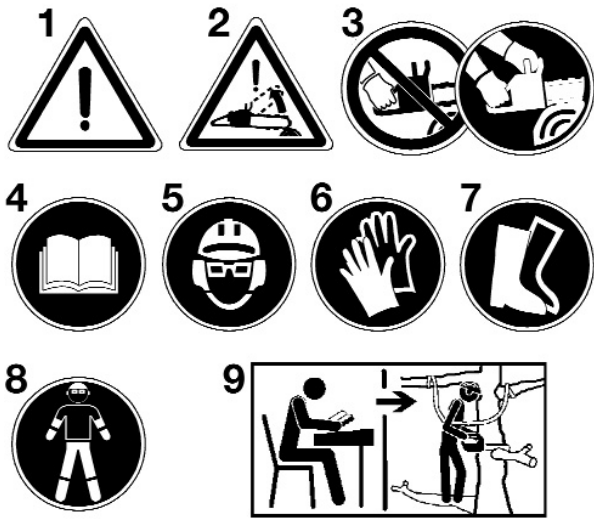
**IDENTIFICATION PLATE**

- 10.1) Conformity marking in accordance with Directive 2006/42/EC
- 10.2) Name and address of the manufacturer
- 10.3) Acoustic output level LWA in accordance with directive 2000/14/EC
- 10.4) Manufacturer's model of reference
- 10.5) Machine model
- 10.6) Serial number
- 10.7) Year of manufacture
- 10.8) Article Code
- 10.9) Emission number

**Maximum noise and vibration levels**

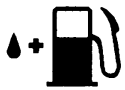
For model	CJ 300	
Operator ear noise pressure level (ISO 22868).....	db(A)	94
- Measurement uncertainty (2006/42/EC - EN 27574) .	db(A)	3,0
Measured acoustic output level (ISO 22868).....	db(A)	106
- Measurement uncertainty (2006/42/EC - EN 27574) .	db(A)	3,0
Vibration level (ISO 22867)	m/s ²	12,1
- Measurement uncertainty (2006/42/EC - EN 12096) ...	m/s ²	1,5

2. SYMBOLS



- 1) Read, understand and follow all warnings.
- 2) Warning! Danger of kickback.
- 3) Use the chain saw with two hands.
- 4) Read operator's instruction book before operating this machine.
- 5) Wear head, eye and ear protection.
- 6) Wear strong working gloves.
- 7) Wear boots or protective shoes with grippy soles and steel toecaps.
- 8) Use appropriate protections for foot-leg and hand-arm.
- 9) This saw is for trained tree service operators only.

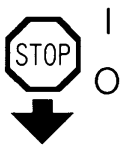
EXPLANATORY SYMBOLS ON THE MACHINE (if present)



11) Fuel tank



12) Chain oil tank



13) Engine stop switch

- Setting the switch to the «I» position, the engine starts
- Setting the switch to the «O» position, the engine stops immediately

H

14) Carburettor adjustments

L

L = low speed mixture adjuster

H = high speed mixture adjuster

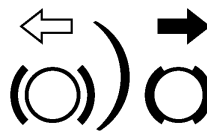
T

T - IDLE - MIN = idle speed adjuster



15) Choke

- First-stage position – starting mode when the engine is warm
- Second-stage position – starting mode when the engine is cold



16) Chain brake
(the (O) symbol shows the position in which the brake is released)



17) Oil flow adjuster

- If you turn the rod by screwdriver follow the arrow to the «MAX» position, the chain oil flow more
- if you turn to the «MIN» position, less

3. SAFETY REQUIREMENTS

A) TRAINING

1) **Read the instructions carefully.** Become acquainted with the controls and the proper use of the machine. Learn how to stop the engine quickly.

2) Only use the machine for the purpose for which it was designed, that is for **“felling, bucking and delimiting trees with dimensions suitable for the length of the bar”** or wooden objects with the same characteristics. Any other use may be dangerous and damage the machine. Examples of improper use may include, but are not limited to:

- trimming hedges;
- intaglio carving;
- sectioning pallets, crates and various packing materials;
- sectioning furniture or other materials with nails, screws or other metal components;
- butchering meat;
- using the machine to lift, move or split objects;
- using the machine while fastened to fixed supports.

3) Never allow children or persons unfamiliar with these instructions to use the machine. Local regulations may restrict the age of the operator.

4) The machine must never be used by more than one person.

5) **Never use the machine:**

- when people, especially children or pets are in the vicinity;
- if the user is tired or unwell, or has taken medicine, drugs, alcohol or any substances which may slow his reflexes and compromise his judgement;
- if the user is not capable of holding the machine firmly with two hands and / or remaining standing on the ground whilst working.

6) Remember that the operator or user is responsible for accidents or hazards occurring to other people or their property.

B) PREPARATION

1) **Always wear adequate clothing which does not hamper movements when using the machine.**

- Always wear slim-fitting protective clothing, fitted with shear-proof protection devices.
- Always wear a helmet, protective gloves, eye-goggles, a half-mask respirator and safety anti-shear boots with non-slip soles.
- Always wear ear and hearing protection devices.
- Never wear scarves, shirts, necklaces, or any hanging or flapping accessory that could catch in the machine or in any objects or materials in the work area
- Tie your hair back if it is long.

2) **WARNING: DANGER! Fuel is highly flammable:**

- keep the fuel in containers which have been specifically manufactured and homologated for such use;
- never smoke when handling fuel;
- slowly open the fuel tank to allow the pressure inside to decrease gradually;
- top up the tank with fuel in the open air, using a funnel;
- add fuel before starting the engine. **Never remove the fuel tank cap or add fuel while the engine is running or when the engine is hot;**
- if you have spilt some fuel, do not attempt to start the engine but move the machine away from the area of spillage and avoid creating any source of ignition until the fuel has evaporated and fuel vapours have dissipated;
- immediately clean up all traces of fuel spilt on the machine or on the ground;
- never start the machine in the same place you refilled it with fuel;
- make sure your clothing does not come into contact with the fuel, on the contrary, change your clothes before starting the engine;
- always put the tank and fuel container caps back on and tighten well.

3) Replace faulty or damaged silencers.

4) **Before using the machine,** check its general condition and in particular:

- the throttle trigger and the safety lever must move freely, they must not need forcing and should return automatically and rapidly back to the neutral position;
- the throttle trigger must remain locked until the safety lever is pressed;
- the engine stop switch must easily move from one position to the other;
- the electric cables and in particular the spark plug cable must be in perfect condition to avoid the generation of any sparks, and the cap must be correctly fitted on the spark plug;
- the machine handgrips and protection devices must be clean and dry and well fastened to the machine;
- the chain brake must be in perfect working order;
- the bar and the chain must be fitted correctly;
- the chain must be tensioned correctly.

5) Before starting your work, make sure that all the protection devices are correctly fitted.

C) OPERATION

1) Do not operate the engine in a confined space where dangerous carbon monoxide fumes can collect.

2) Work only in daylight or good artificial light.

3) **Take on a firm and well-balanced position:**

- where possible, avoid working on wet, slippery ground or in any case on uneven or steep ground that does not guarantee stability for the operator;
 - avoid using unstable ladders or platforms;
 - do not work with the machine above your shoulders;
 - never run, but walk carefully paying attention to the lay of the land and any eventual obstacles.
 - avoid working alone or in an isolated place, in case you have to find help after an accident.
- 4) Make sure the machine is securely locked when you start the engine:
- start the motor in an area at least 3 metres from where you refuelled;
 - check that there are no persons in the vicinity of the machine;
 - do not direct the silencer and therefore the exhaust fumes towards inflammable materials.
 - watch out for flying debris caused by the movement of the chain, especially when it hits obstacles or foreign objects.
- 5) **Do not change the engine tuning** and do not rev the engine excessively at maximum speed.
- 6) Do not strain the machine too much and do not use a small chain-saw for heavy-duty sawing. If you use the right machine, you will reduce the risk of hazards and improve the quality of your work.
- 7) Check that when the machine is running idle, there is no movement of the chain and, after pressing the throttle trigger, the engine quickly returns to minimum speed.
- 8) Take care not to hit the bar hard against foreign objects or flying debris caused by the movement of the chain.
- 9) **Stop the engine:**
- whenever you leave the machine unattended;
 - before refuelling.
- 10) **Stop the engine and disconnect the spark plug cable:**
- before cleaning, checking or working on the machine;
 - after striking a foreign object. Inspect the machine for any damage and make repairs before restarting it again;
 - if the machine begins to abnormally vibrate (Immediate look for the cause of the vibrations and take for necessary controls at a Specialised Centre).
 - when the machine is not in use.

D) MAINTENANCE AND STORAGE

- 1) Keep all nuts, bolts and screws tightly fastened to be sure the equipment is in safe working condition. **Routine maintenance is essential for safety and for maintaining a high performance level.**
- 2) Do not store the machine with fuel in the tank in an area where the fuel vapours could reach an open flame, a spark or a strong heat source.
- 3) Allow the engine to cool before storing in any

enclosure.

4) To reduce fire hazards, keep the engine, exhaust silencer and fuel storage area free from sawdust, branches, leaves, or excessive grease; never leave containers with the cut debris inside the storage area.

5) **If the fuel tank has to be emptied, this should be done outdoors once the engine has cooled down.**

6) Always wear protective gloves when handling the cutting device.

7) **Make sure the chain is well sharpened.** Any work on the chain and bar require specific experience and special tools. For safety purposes, we recommend you contact your dealer to ensure work is done correctly.

8) **For safety reasons, never use the machine with worn or damaged parts. Damaged parts are to be replaced and never repaired. Only use original spare parts.** Parts that are not of the same quality can seriously damage the equipment and compromise safety.

9) Before putting the machine away, check you have removed wrenches or tools used for maintenance.

10) Store the machine out of the reach of children!

E) TRANSPORTATION AND HANDLING

1) Whenever the machine is to be handled or transported you must:

- turn off the engine, wait for the chain to stop and disconnect the spark plug cap;
- mount the bar cover;
- only hold the machine using the handgrips and position the bar in the opposite direction to that used during operation.

2) When using a vehicle to transport the machine, position it so that it can cause no danger to persons and fasten it firmly in place to avoid it from tipping over, which may cause damage or fuel spillage.

F) HOW TO READ THE MANUAL

Certain paragraphs in the manual contain particularly significant information and are marked with various levels of highlighting with the following meaning:

NOTE

or

IMPORTANT

These give details or further information on what has already been indicated, and aim to prevent both damage to the machine, and the machine from causing damage..

⚠ WARNING!

Non-observance will result in the risk of injury to oneself or others.

⚠ DANGER!

Non-observance will result in the risk of serious injury or death to oneself or others.

3.1 WORKING WITH TREE SERVICE CHAINSAWS FROM A ROPE AND HARNESS

This chapter sets out working practices to reduce the risk of injury from tree service chainsaws when working at height from a rope and harness.

While it may form the basis of guidance and training literature, it should not be regarded as a substitute for formal training.

General requirements working at height

Operators of tree service chainsaws working at height from a rope and harness should never work alone.

A competent ground worker trained in appropriate emergency procedures should assist them.

Operators of tree service chainsaws for this work should be trained in general safe climbing and work positioning techniques and shall properly equipped with harnesses, ropes, strops, karabiners and other equipment for maintaining secure and safe working positions for both themselves and the saw.

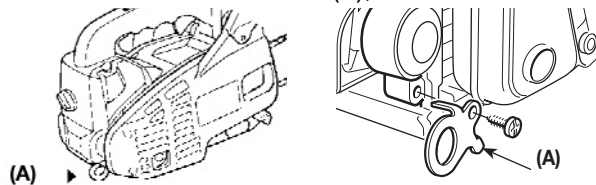
Preparing to use the saw in the tree



The chainsaw should be checked, fuelled, started and warmed up by the ground worker before it is sent up to the operator in the tree.

The chainsaw should be fitted with a suitable strop for attaching to the operator's harness:

- a) choke the strop around the attachment point on the rear of the saw (A);

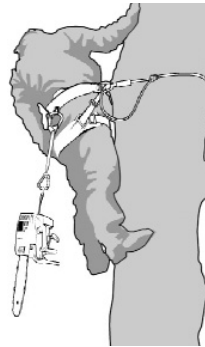


- b) provide suitable karabiners to allow indirect

(i.e. via the strop) and direct attachment (i.e. at the attachment point on the saw) of saw to the operators harness;

- c) ensure the saw is securely attached when it is being sent up to the operator;
- d) ensure the saw is secured to the harness before it is disconnected from the means of ascent.

The saw should only be attached to the recommended attachment points on the harness. These may be at mid-point (front or rear) or at the sides.



Where possible attaching the saw to centre rear mid-point will keep it clear of climbing lines and support its weight centrally down the operator's spine.

When moving the saw from any attachment point to another, operators should ensure it is secured in the new position before releasing it from the previous attachment point.

Using the chainsaw in the tree

An analysis of accidents with these saws during tree service operations shows the primary cause as being inappropriate one-handed use of the saw. In the vast majority of accidents, operators fail to adopt a secure work position which allows them to hold both handles of the saw.

This results in an increased risk of injury due to:

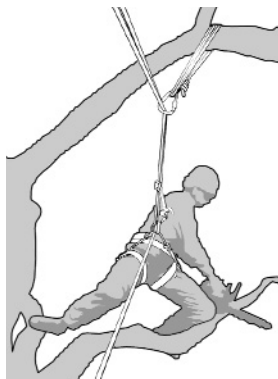
- not having a firm grip on the saw if it kicks back;
- a lack of control of the saw such that it is more liable to contact climbing lines and operators body (particularly the left hand and arm)
- losing control from insecure work position resulting in contact with the saw (unexpected movement during operation of the saw).

Securing the work position for two-handed use

To allow the operator to hold the saw with both hands, they should as general rule, aim for secure work position where they are operating the saw at:

- hip level when cutting horizontal sections;
- solar plexus level when cutting vertical sections.

Where the operator is working close into vertical stems with a low lateral forces on their work position, then a good footing may be all that is needed to maintain a secure work position.



However as operators move away from the stem, they will need to take steps to remove or counteract the increasing lateral forces by, for example, a re-direct of the main line via a supplementary anchor point or using an adjustable strop direct from the harness to a supplementary anchor point.



Gaining a good footing at the working position can be assisted by use of a temporary foot stirrup created from an endless sling.

Starting the saw in the tree

When starting the saw in the tree, the operator should:

- a) apply the chain brake before starting;
- b) hold saw on either the left or right of the body when starting:
 - 1) on the left side hold the saw with either the left hand on the front handle or the right hand on the rear handle and thrust the saw away from the body while holding the pull starter cord in the other hand;
 - 2) on the right side, hold the saw with the right hand on either handle and thrust the saw away from the body while holding the pull starter cord in the left hand.

The chain brake should always be engaged before lowering a running saw onto its strop. Operators should always check the saw has sufficient fuel before undertaking critical cuts.

One-hand use of the chainsaw

Operators should not use tree service chainsaws onehanded in place of unstable work positioning or in preference to a handsaw when cutting small diameter wood at the branch tips.

Tree service chainsaws should only be used one-handed where:

- the operator cannot gain a work position enabling two-handed use; and
- they need to support their working position with one hand; and the saw is being used at full stretch, at right angles to and out of line with the operator's body.



Operators should never:

- cut with the kickback zone at the tip of the chainsaw guide bar
- “hold and cut” sections
- attempt to catch falling sections.

Freeing a trapped saw

If the saw should become trapped during cutting, operators should:

- switch off the saw and attach it securely to the tree inboard (i.e. towards the truck side) of the cut or to a separate tool line;
- pull the saw from the kerf whilst lifting the branch as necessary;
- if necessary, use a handsaw or second chain saw to release the trapped saw by cutting a minimum of 30 cm away from the trapped saw.

Whether a handsaw or a chainsaw is used to free a stuck saw, the release cuts should always be outboard (toward the tips of the branch), in order to prevent the saw being taken with the section and further complicating the situation.

4. MACHINE ASSEMBLY

IMPORTANT

The machine is supplied with the bar and chain dismantled and the oil and fuel tanks empty.

⚠ WARNING!

Unpacking and completing the assembly should be done on a flat and stable surface, with enough space for moving the machine and its packaging, always making use of suitable equipment. Disposal of the packaging should be done in accordance with the local regulations in force.

⚠ WARNING!

Always wear heavy-duty gloves when handling the bar and chain. Mount the bar and chain very carefully so as not to impair the safety and efficiency of the machine. If in doubt, contact your dealer.

Before fitting the bar, make sure the chain brake is not engaged; this is done by pulling the front hand guard right back towards the body of the machine.

A standard saw unit package contains the items as illustrated (Fig. 1).

- (1) Power unit
- (2) Bar protector
- (3) Guide bar
- (4) Saw chain
- (5) Plug wrench
- (6) Screwdriver for carburetor adjustment

1. INSTALLING GUIDE BAR AND SAW CHAIN

Open the box and install the guide bar and the saw chain on the power unit as follows (Fig. 2):

- Loosen the nuts and remove the chain cover (1).
- Fix the support (2) on the rear of power unit by screw.
- Mount the guide bar then fit the saw chain around the bar and sprocket.

NOTE

Pay attention to the correct direction (3) of the saw chain.

- Fit the chain tensioner nut (4) into the lower hole (5) of the guide bar, then install the chain cover, and fasten the mounting nut (6) to finger tightness.

⚠ WARNING!

When installing the chain cover, be sure to fit the hook completely at the rear end of the cover.

- While holding up the tip of the bar, adjust the chain tension (7) by turning the tensioner screw until the tie straps just touch the bottom side of the bar rail.
- Tighten the nuts (6) securely with the bar tip held up (12 ~ 15 Nm). Then check the chain for smooth rotation and proper tension while moving it by hand. If necessary, readjust with the chain cover loose.
- Tighten the tensioner screw (7).

2. CHECKS AFTER MOUNTING THE BAR AND THE CHAIN

- Check the chain tension. The tension is correct when the drive links do not slip out of the chain guides if you hold the chain in the middle of the bar (Fig. 3).
- Using a screwdriver, make the chain run along the guides to check it moves smoothly without resistance.

5. PREPARING TO WORK

CHECKING THE MACHINE

Before starting work please:

- check that all the screws on the machine and the bar are tightly fastened;
- check that the chain is sharp and there are no signs of any damage;
- check that the air filter is clean;
- check that the protection devices are well fastened and working efficiently;
- check that the handgrips are well fastened;
- check that the chain brake is working efficiently.

PREPARING THE FUEL

This machine is fitted with a two-stroke engine which requires a mixture of petrol and lubricating oil.

IMPORTANT *Using petrol alone will damage the motor and will cause for invalidation of the warranty.*

IMPORTANT *Only use quality fuels and oils to maintain high performance and guarantee the duration of the mechanical parts over time.*

• Petrol characteristics

Only use unleaded petrol with a fuel grade of at least 90 N.O.

IMPORTANT *If you use a gasoline of a lower octane value than prescribed, there is a danger that the engine temperature may rise and an engine problem such as piston seizing may consequently occur.*

IMPORTANT *Unleaded petrol tends to create deposits in the container if preserved for more than 2 months. Always use fresh petrol!*

• Oil characteristics

Only use top quality synthetic oil specifically for two-stroke engines.

Your dealer can provide you with oils which have been specifically developed for this type of engine, and which are capable of guaranteeing a high level of protection.

The use of these oils makes it possible to prepare a 2.5% mixture, consisting in 1 part oil to 40 parts petrol.

- Preparation and preservation of the fuel mixture

⚠ DANGER!

Petrol and the fuel mixture are highly inflammable!

- ***Keep the petrol and fuel mixture in homologated fuel containers, in safe place, away from any flames or heat sources.***
- ***Never leave the containers within the reach of children.***
- ***Never smoke whilst preparing the mixture and avoid inhaling the petrol fumes.***

The chart indicates the amount of petrol and oil to use to prepare the fuel mixture according to the type of oil used.

Petrol	Synthetic oil 2-stroke	
	liters	cm ³
1	0,025	25
2	0,05	50
3	0,075	75
5	0,125	125
10	0,25	250

To prepare the fuel mixture:

- Place about half the amount of petrol in a homologated tank.
- Add all the oil, according to the chart.
- Add the rest of the petrol.
- Close the top and shake well.

IMPORTANT *Be careful that, if the agitation is insufficient, there is an increased danger of early piston seizing due to abnormally lean mixture.*

IMPORTANT *The fuel mixture tends to age. Do not prepare excessive amounts of the fuel mixture to avoid deposits from forming.*

IMPORTANT *Keep the petrol and fuel mixture containers separate and easily identifiable to avoid the mistake of using one in place of the other.*

IMPORTANT *Periodically clean the petrol and fuel mixture containers to remove any eventual deposits.*

IMPORTANT

Moreover, normal wear and change in product with no functional influence are not covered by the warranty. Also, be careful that, if the usage in the instruction manual is not observed as to the mixed gasoline, etc. described therein, it may not be covered by the warranty.

REFUELLING**⚠ DANGER!**

Never smoke whilst refuelling and avoid inhaling the petrol fumes.

⚠ WARNING!

Carefully open the tank top as pressure could have formed inside.

Before refuelling:

- Shake the fuel mixture container well.
- Place the machine on a flat stable surface, with the fuel tank cap facing upwards.
- Clean the fuel tank cap and the surrounding area to avoid any dirt from entering the tank during refilling.
- Carefully open the fuel tank cap to allow the pressure inside to decrease gradually. Use a funnel to refill and avoid filling the tank to the brim.

⚠ WARNING!

Always close the fuel tank cap firmly.

⚠ WARNING!

Immediately clean all traces of fuel which may have dripped on the machine or the ground and do not start the engine until the petrol fumes have dissipated.

CHAIN LUBRICANT**IMPORTANT**

Only use special oil for chain saws or adhesive oil for chain saws. Do not use oil containing impurities so as not to block the oil filter and to prevent irreparable damage to the oil pump.

IMPORTANT

The special oil for lubricating the chain is biodegradable. Use of a mineral oil or engine oil causes serious damage to the environment.

It is essential that you use good quality oil to lubricate the cutting parts effectively. Used or poor quality oil does not guarantee good lubrication and reduces the duration of the chain and bar.

It is always worth topping up the oil tank completely (using a funnel) every time you refuel. Since the oil tank capacity is enough to guarantee that the fuel runs out first, you will avoid the risk of operating the machine without lubricant.

6. HOW TO START - USE - STOP THE ENGINE

STARTING THE ENGINE**⚠ WARNING!**

The engine must be started in an area at least 3 metres from where you refilled the fuel tank.

Before starting the engine:

- Take off the bar cover.
- Make sure the bar is not touching the ground or any other object.
- Fill fuel and chain oil tanks respectively, and tighten the caps securely.

- **To start the engine (Fig. 4):**

- Continuously push the priming bulb (1) until fuel comes in the bulb.
- Set the switch (2) to «I» position.
- Pull out the choke knob (3) to the second-stage position. The choke will close and the throttle lever will then be set in the starting position.

NOTE

When restarting immediately after stopping the engine, set the Choke knob in the first-stage position (choke open and throttle lever in the starting position).

NOTE

Once the choke knob has been pulled out, it will not return to the operating position even if you press down on it with your finger. When you wish to return the choke knob to the operating position, pull out the throttle lever instead.

⚠ WARNING!

Before you start the engine, make sure the saw chain is not contacting anything.

- Starting the engine on the ground

⚠ WARNING!

Keep clear of the saw chain as it will start rotating upon starting of engine.

⚠ WARNING!

Do not start the engine while the chain saw hangs in one hand. The saw chain may touch your body. This is very dangerous.

- While holding the saw unit securely on the ground, pull the starter rope vigorously (Fig. 5).
- When engine has ignited, first push in the choke knob to the first-stage position and then pull the starter again to start the engine.
- Allow the engine to warm up with the throttle lever pulled slightly.

- Starting the engine on a tree

⚠ WARNING!

Carefully follow the instructions under “For your safety” (3.1).

USE OF THE ENGINE (Fig. 6)

The chain speed is regulated by the throttle trigger (1) on the rear handgrip.

The throttle trigger only works if the lockout (2) is pressed at the same time.

The movement is transmitted from the engine to the chain by a centrifugal mass clutch that prevents the chain from moving when the engine is running at minimum speed.

⚠ WARNING!

Do not use the machine if the chain moves when the engine is running idle; in this case, contact your dealer.

The correct running speed will be achieved by pressing the throttle trigger (1) as far as possible.

IMPORTANT

Avoid using the engine at full power for the first 6-8 working hours.

STOPPING THE ENGINE (Fig. 6)

To stop the engine:

- Release the throttle trigger (1) and allow the engine to run idle for a few seconds.
- Set the switch (3) to «STOP».

⚠ WARNING!

When you have reduced speed to a minimum, it will take a few seconds for the chain to stop.

7. USING THE MACHINE

To respect people and the environment:

- Try not to cause any disturbance.
- Scrupulously comply with local regulations and provisions for the disposal of waste materials after sawing.
- Scrupulously comply with local regulations and provisions for the disposal of oils, petrol, damaged parts or any elements which have a strong impact on the environment.

⚠ WARNING! *Always wear suitable clothing when using the machine. Your dealer can provide you with all the information on the most suitable accident-prevention devices to guarantee your safety. Use the vibration-proof glove. All the above mentioned precautions do not guarantee that you will not sustain whitefinger disease or carpal tunnel syndrome. Therefore, continual and regular users should monitor closely the condition of their hands and fingers. If any of the above symptoms appear, seek medical advice immediately.*

⚠ WARNING! *It takes specific training to use the machine for felling and delimiting.*

⚠ WARNING! *Keep all parts of your body away from the saw chain when the engine is running.*

⚠ WARNING! *Never cut in high wind, bad weather, when visibility is poor or in very high or low temperatures. Always check the tree for dead branches which could fall during the felling operation.*

⚠ WARNING! *Do not operate the chain saw in a tree unless specially trained to do so.*

CHAIN BRAKE (Fig. 7)

This machine comes with an automatic brake that stops the chain when kickback occurs during cutting.

This brake can be operated manually by pushing the front guard forward. To release the brake, pull the front guard towards the handgrip until you hear a click.

⚠ WARNING! *Do not use the machine if the chain brake does not function correctly and have it inspected by your dealer.*

The chain brake is a device which stops the chain instantaneously if the chain saw recoils due to kickback.

Normally, the brake is activated automatically by inertial force. It can also be activated manually by pushing the brake lever (left-hand guard) down toward the front.

When the brake operates, a yellow cone pops up from the base of the brake lever.

• Releasing the Brake

Pull the brake lever up toward the left-hand handle until it clicks into place (1).

⚠ WARNING! *When the brake operates, release the throttle lever to slow down the engine speed. Continuous operation with the brake engaged will generate heat from the clutch and may cause trouble. At machine inspection prior to each job, check the operating condition of the brake following the steps.*

- Start the engine and grasp the handle securely with both hands.
- Pulling the throttle lever to maintain the chain operation, push the brake lever (left-hand guard) down toward the front using the back of your left hand.
- When the brake operates and the chain is stopped, release the throttle lever.
- Release the brake (2).

CHECKING THE CHAIN TENSION

The chain tends to stretch gradually as you work, so you need to check its tension frequently.

⚠ WARNING! *Never work with the chain loose, as it can be hazardous if the chain slips out of its guides.*

CHECKING THE OIL DELIVERY

IMPORTANT *Never use the machine without lubrication! The oil tank may get almost empty every time the fuel runs out. Make sure you top up the oil tank every time you refuel the chain-saw.*

⚠ WARNING! *Make sure the bar and the chain are in place when you check the oil delivery.*

Start the engine, keep it running at medium power and check if the chain oil is delivered as shown in the figure (Fig. 8).

The chain oil flow can be changed by inserting a screwdriver in the hole on bottom of the clutch side. Adjust according to your work conditions. (Fig. 8).

DIRECTIONS FOR USE AND CUTTING TECHNIQUES

Before felling or delimiting for the first time, practise sawing logs on the ground or on trestles, so that you can get familiar with the machine and the most suitable sawing techniques.

⚠ WARNING! *Stop the engine immediately if the chain stops during sawing. Beware of kickback, which can occur if the bar contacts an obstacle.*

Kickback occurs when the tip of the chain comes in contact with an object or when the wood contracts and jams the chain during sawing.

This contact with the tip of the chain can cause a rapid backward motion, pushing the guide bar up and towards the operator. This also happens when the chain is jammed along the upper part of the bar. In both cases, kickback can cause the operator to lose control of the chain-saw, leading to serious consequences.

⚠ WARNING!

- *Before proceeding to your job, read the section "For Safe Operation". It is recommended to first practice sawing easy logs. This also helps you get accustomed to your unit.*
- *Always follow the safety regulations. The chain saw must only be used for cutting wood. It is forbidden to cut other types of material. Vibrations and kickback vary with different materials and the requirements of the safety regulations would not be respected. Do not use the chain saw as a lever for lifting, moving or splitting objects. Do not lock it over fixed stands. It is forbidden to hitch tools or applications to the PTO other than those specified by the manufacturer.*
- *It is not necessary to force the saw into the cut. Apply only light pressure while running the engine at full throttle.*
- *When the saw chain is caught in the cut, do not attempt to pull it out by force, but use a wedge or a lever to open the way.*

- **Delimiting (Fig. 9)**

⚠ WARNING! *Make sure there is nothing or nobody in the area where the branches will fall.*

⚠ WARNING! *For pruning high up using a rope and a belt slings, carefully follow the instructions under "For your safety" (3.1).*

⚠ WARNING!

- *Do not work standing on unstable bases or rung ladders.*
- *Do not overreach.*
- *Do not cut above shoulder height.*
- Stand opposite the branch you want to cut.
- Start cutting lower branches followed by the higher ones.
- Cut downwards to prevent the bar from getting jammed.

- **Felling (Fig. 10)**

⚠ WARNING! *When felling on slopes, always stand uphill from the tree and check that the felled trunk cannot cause damage if it rolls down the hill.*

- Decide where the tree should fall - you should consider the wind, the natural lean of the tree, the position of the heaviest branches and how easy the work is after felling, etc.
- Clear the area around the tree and find a stable place to stand.
- Plan obstacle-free escape routes at a 45° angle back and away from the direction of fall. These routes must allow you reach a safe area at a distance of about 2.5 times the length of the tree to be felled
- On the side of the fall, mark a felling notch around a third of the trunk's diameter.
- Cut the tree on the other side, slightly above the bottom of the notch, leaving the uncut wood to act as a "hinge" (1) of approx. 5-10 cm.
- Reduce the thickness of this hinge without pulling out the bar, until the tree falls.
- In particular or unstable conditions, you can complete felling by inserting wedges (2) on the opposite side of the fall, and hitting them with a hammer until the tree falls.

- **Bucking (Fig. 11)**

⚠ WARNING! *Be careful of where the branches are lying on the ground, the risk of them being under tension, the direction the branch may go during cutting and the risk of the tree being unstable after the branch has been cut.*

- Check the direction in which the branch is attached to the tree
- First cut on the side where the branch bends and then finish cutting on the opposite side.

- **Sawing a log on the ground (Fig. 12)**

Cut up to half the diameter, roll the log over and finishing sawing on the other side.

- **Sawing a raised log (Fig. 13)**

- If you are sawing the overhanging end of a supported log (A), first cut a third of the diameter from the bottom upwards, then finish from the top.
- If you are sawing between two supports (B), cut a third of the diameter from the top downwards, then finish from the bottom.

END OF OPERATIONS

When you have finished your work:

- Switch off the engine as indicated above (Chap. 6).
- Wait for the chain to stop and then mount the bar cover.

8. MAINTENANCE AND STORAGE

Correct maintenance is essential to maintain the original efficiency and safety of the machine over time.

⚠ WARNING! *During maintenance operations:*

- **Remove the spark plug cap.**
- **Wait until the engine is sufficiently cold.**
- **Use protective gloves when handling the bar and chain.**
- **Keep the bar protection devices on, except when intervening directly on the bar or the chain.**
- **Never dispose of oils, fuel or other polluting materials in unauthorised places.**

CYLINDER AND SILENCER

To reduce fire risks, periodically clean the cylinder flaps with compressed air and clear the silencer area to get rid of sawdust, branches, leaves or other debris.

STARTING SYSTEM

To avoid overheating and damage to the engine, always keep the cooling air vents clean and free of sawdust and debris.

The starter rope must be replaced as soon as it shows signs of wear.

CHAIN BRAKE

Regularly check the efficiency of the chain brake and the condition of the metal band around the clutch bell.

Replace this band when the points in contact with the clutch bell wear down to about half the thickness of the two ends not subject to rubbing.

CHAIN SPROCKET (Fig. 14)

Regularly check the condition of the sprocket and replace it when wear exceeds 0.5 mm.

Do not mount a new chain with a worn sprocket or vice-versa.

CHAIN CATCHER

This is an important safety device that restrains the chain if it breaks or degrooves.

Regularly check the condition of the chain catcher and replace it if it gets damaged.

NUTS AND SCREWS

Periodically check that all the nuts and screws are securely tightened and the handgrips are tightly fastened.

CLEANING THE AIR FILTER (Fig. 15)

IMPORTANT *Cleaning the air filter is essential to guarantee the efficiency and duration of the machine. Do not work with a damaged filter or without a filter, as this could permanently damage the engine.*

It must be cleaned after every 8-10 working hours.

Clean the filter as follows:

- Remove the cover (1) and filter element (2).
- Gently tap the filter element (2) to remove the dirt and, if necessary, clean it with low pressure compressed air.

IMPORTANT *The filter element (2) must never be washed and must be replaced if it is too dirty or damaged.*

- Fit the filter element (2) and the cover (1) back on.

• Oiling port (Fig. 16)

Dismount the guide bar and check the oiling port (1) for clogging.

• Fuel filter (Fig. 17)

- Using a wire hook, take out the filter (1) from the filler port.
- Wash the filter with gasoline. Replace with new one if clogged with dirt completely.

⚠ WARNING! *When returning the filter, use a pinch not to be folded the suction pipe.*

- **Oil filter (Fig. 18)**

- With a wire hook, take out the oil filter (1) from the feeding port.
- Wash the filter with gasoline.

⚠ WARNING! *When returning the filter, use a pinch not to be folded the suction pipe.*

CHECKING THE SPARK PLUG (Fig. 19)

Periodically remove and clean the spark plug using a metal brush to get rid of any deposits. Check and reset the correct distance between the electrodes.

Replace the spark plug and fasten it firmly using the supplied wrench.

The spark plug must be replaced with one with the same characteristics whenever the electrodes have burnt or the insulation has worn, and in any case every 100 working hours.

TUNING THE CARBURETTOR

The carburettor is tuned by the manufacturer to achieve maximum performance in all situations, with a minimum emission of toxic gas in compliance with the regulations in force.

When performance is poor, first check that the chain runs smoothly and the bar rails are not distorted, then contact your dealer to check the carburetion and the engine.

- **Tuning minimum speed**

⚠ WARNING! *The chain must not move when the engine is running idle. If the chain moves when the engine is running idle, contact your dealer to correctly regulate the engine.*

SHARPENING THE CHAIN (Fig. 20)

⚠ WARNING! *To ensure that the chainsaw works safely and efficiently, it is essential that the cutting components are well-sharpened.*

Sharpening is necessary when:

- The sawdust looks like dust.
- Cutting becomes more difficult.
- The cut is not straight.
- Vibrations increase.
- Fuel consumption increases.

⚠ WARNING! *If the chain is not sufficiently sharpened, the kick-back's risk increases.*

A specialized centre will sharpen the chain using the right tools to ensure minimum removal of material and even sharpness on all the cutting edges.

If you sharpen the chain yourself, use special round-section files with the right diameter depending on the type of chain (see "Chain Maintenance Table"). You need a certain amount of skill and experience to avoid damaging the cutting edges.

Sharpen the chain as follows (Fig. 20):

- Switch off the engine, release the chain brake and secure the bar with the chain in a vice so that the chain can run smoothly.
- Tighten the chain if it is loose.
- Mount the file in the guide and then insert it in the tooth at a constant angle from the cutting edge.
- Sharpen in a forward motion a few times and repeat this on all the cutting edges facing the same way (right or left).
- Turn the bar over in the vice and repeat on all the other cutting edges.
- Check that the limiter tooth does not stick out further than the inspection instrument and file any projecting parts with a flat file, rounding off the edge.
- After sharpening, remove all traces of filing and dust and lubricate the chain in an oil bath.

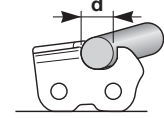
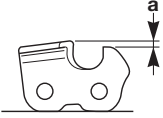
Replace the chain whenever:

- The length of the cutting edges reduces to 5 mm or less;
- There is too much play between the links and the rivets.

Chain maintenance table

⚠ WARNING! *The specifications of the chain and the bar homologated for this machine are shown in the “EC Conformity Statement” provided. Do not use other types of chains or bars for safety reasons. The table gives the sharpening data for different types of chains, but this does not mean you can use different chains from the homologated one.*

Chain pitch	Limiter tooth level (a)		File diameter (d)	
	inches	mm	inches	mm
3/8	0,025	0,64	5/32	4,0
1/4	0,025	0,64	5/32	4,0



BAR MAINTENANCE (Fig. 21)

To avoid asymmetrical wear on the bar, make sure it is turned over periodically.

To keep the bar in perfect working order, proceed as follows:

- grease the bearings on the nose sprocket (if present) with the syringe;
- clean the bar groove with the scraper;
- clean the lubrication holes;
- with a flat file, remove burr from the edges and level off the guides.

Replace the bar whenever:

- the groove is not as deep as the height of the drive links (which must never touch the bottom);
- the inside of the guide is worn enough to make the chain lean to one side.

EXTRAORDINARY MAINTENANCE

All maintenance operations not foreseen in this manual must be performed exclusively by your dealer. All and any operations performed in unauthorised centres or by unqualified persons will totally invalidate the warranty.

STORAGE

After every work stint, clean the machine thoroughly to remove all dust and debris, and repair or replace any faulty parts. The machine must be stored in a dry place away from the elements and with the bar cover correctly fitted.

LONG PERIODS OF DISUSE

IMPORTANT *If you are not going to use the machine for a period of more than 2-3 months, we recommend you do a few things before putting it away. This will make it easier when you want to use the machine again and will also prevent permanent damage to the engine.*

• **Storage**

Before putting the machine away:

- Empty the fuel tank.
- Start the engine and run it idle until it comes to a halt, so that it uses up all the fuel that is left in the carburettor.
- Wait for the engine to cool down and remove the spark plug.
- Pour a teaspoon of (new) 2-stroke engine oil into the spark plug slot.
- Pull the starter rope several times to deliver oil to the cylinder.
- Replace the spark plug with the piston in the dead end upper position (visible from the spark plug slot when the piston is at maximum stroke).

• **Restarting work**

When you wish to start using the machine again:

- Remove the spark plug.
- Pull the starter rope a few times to eliminate excess oil.
- Check the spark plug as described in chapter “Checking the spark plug”.
- Prepare the machine as indicated in the paragraph entitled “Preparing for work”.

9. TROUBLESHOOTING

PROBLEM	LIKELY CAUSE	SOLUTION
1) The engine will not start or will not keep running	- Incorrect starting procedure	- Follow the instructions (see chapter 6)
	- Dirty spark plug or incorrect distance between the electrodes	- Check the spark plug (see chapter 8)
	- Air filter clogged	- Clean and/or replace the filter (see chapter 8)
	- Carburetion problems	- Contact your dealer
2) The engine starts but is lacking in power	- Air filter clogged	- Clean and/or replace the filter (see chapter 8)
	- Carburetion problems	- Contact your dealer
3) The engine runs irregularly and lacks in power when revved	- Dirty spark plug or incorrect distance between the electrodes	- Check the spark plug (see chapter 8)
	- Carburetion problems	- Contact your dealer
4) The engine gives off an excessive amount of smoke	- Incorrect composition of the fuel mixture	- Prepare the fuel mixture according to the instructions (see chap. 5)
	- Carburetion problems	- Contact your dealer

10. ACCESSORIES

The table contains a list of all possible combinations between bar and chain, indicating those which may be used on each machine, marked with the symbol “*”.

⚠ WARNING!

In consideration that the

selection, application and usage of bar and chain are actions made solely by the user, the latter assumes responsibility for damages of any kind due to such actions. When in doubt or if lacking knowledge of the specificity of each bar or chain, contact your retailer or specialised gardening centre.

Bar and chain combinations

Pitch Inches	BAR			CHAIN Code	Model	
	Length Inches / cm	Groove width Inches / mm	Code		CJ 300	CJ 300 C
3/8" Mini	12 / 30	0,050 / 1,3	23900362/0	23920362/0	*	
3/8" Mini	10 / 25	0,050 / 1,3	23900360/0	23920360/0	*	
1/4" Mini	10 / 25 carving	0,050 / 1,3	23900361/0	23920361/0		*