

# Clarke®



## ELECTRIC CHAINSAW

MODEL No: CECS405

Part No: 3402070

## OPERATING & MAINTENANCE INSTRUCTIONS



0708



**Clarke**<sup>®</sup>  
INTERNATIONAL

This is an important document, and should be retained

## DECLARATION OF CONFORMITY

We declare that this product complies to the following standards/directives:

- 98/37/EC (ANNEX IV)
- 2000/14/EC

CERTIFICATE No. BM 60010520 0001

REPORT No. 15008124 001

NOTIFYING BODY: TUV Product Services  
Product Service GmNH,  
Zertifizierstelle, Ridlerstrasse 65,  
D-80339 Munich

DOCUMENTATION HELD

AT: Clarke International,  
Shrubland Road, London E10 7RB

Product Description: ELECTRIC CHAINSAW

Model Number: CECS405

Serial (Batch) No: See Product Data Plate

Signed

Engineering Manager

Date: 19 December, 2007

**Clarke**<sup>®</sup> INTERNATIONAL

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Thank you for purchasing this Electric Chain Saw.

Before attempting to use the chain saw, please read this manual thoroughly and follow the instructions carefully. In doing so you will ensure the safety of yourself and that of others around you, and you can look forward to the chain saw giving you long and satisfactory service.

## GUARANTEE

- This product is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt which will be required as proof of purchase.
- This guarantee is invalid if the product is found to have been abused or tampered with in any way, or not used for the purpose for which it was intended.
- Faulty goods should be returned to their place of purchase, no product can be returned to us without prior permission.
- This guarantee does not effect your statutory rights.

## PACK CONTENTS

- 1 x Chainsaw
- 1 x Chain Bar
- 1 x Instruction Manual
- 1 x Oregon Chain
- 1 x Bottle of Chain Oil

# ELECTRICAL CONNECTIONS



This product is provided with a standard 13 amp, 230 volt (50Hz), BS 1363 plug, for connection to a standard, domestic electrical supply. Should the plug need changing at any time, ensure that a plug of identical specification is used.



**WARNING!**

*This appliance is double insulated, and the two wires in the mains lead should be wired in accordance with the following colour code:*

**BLUE - NEUTRAL**

**BROWN - LIVE**

- Connect the BLUE coloured wire to the plug terminal marked with a letter "N"
- Connect the BROWN coloured wire to the plug terminal marked with a letter "L"

If this appliance is fitted with a plug which is moulded on to the electric cable (i.e. non-rewireable) please note:

1. The plug must be thrown away if it is cut from the electric cable. There is a danger of electric shock if it is subsequently inserted into a socket outlet.
2. Never use the plug without the fuse cover fitted.
3. Should you wish to replace a detachable fuse carrier, ensure that the correct replacement is used (as indicated by marking or colour code).
4. Replacement fuse covers can be obtained from your local Clarke dealer or most electrical stockists.

## FUSE RATING

The fuse in the plug must be replaced with one of the same rating (**13 amps**) and this replacement must be ASTA approved to BS1362.

If in doubt, consult a qualified electrician. Do not attempt any electrical repairs yourself.

## CABLE EXTENSION

Always use an approved cable extension suitable for the power rating of this tool (see specifications), the conductor size should also be at least the same size as that on the machine, or larger. When using a cable reel, always unwind the cable completely. If using tool outdoors, only use extension cables intended for outdoor use.

# SAFETY INSTRUCTIONS



## **WARNING!**

When using this chain saw, basic safety precautions, including the following, should be followed to reduce the risk of fire, electric shock and personal injury. Make sure that you have read all of these instructions before using this chain saw. Keep this booklet in a safe place for future reference. Persons not familiar with this booklet should not use the tool.

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

**KEEP WORK AREA CLEAN** - Cluttered areas and benches invite injuries. Do not start cutting until you have a clear work area, secure footing, and a planned retreat path from the falling tree.

**CONSIDER WORK AREA ENVIRONMENT** - Avoid cutting small size brush and sapling, as slender material may catch the saw chain and be whipped towards you or pull you off balance. Do not operate a chain saw in a tree unless you are specifically trained to do so. When cutting a limb that is under tension, be alert for spring back, so that you will not be struck when the tension in the wood fibres is released. Do not expose power tools to rain. Do not use the chain saw in damp, or wet locations. Keep the work area well lit. Never use the chain saw where there is a risk of fire, or explosion. Do not operate the chainsaw alone - ensure someone is within calling distance

**STORE IDLE TOOLS** - When not in use, all tools should be stored in a dry, secure place, out of reach of children. Always store the tool with the chain guard fitted.

**DO NOT FORCE THE TOOL** - It will do the job better and safer at the rate for which it was intended.

**USE THE RIGHT TOOL** - Do not force small tools or attachments to do the job of a heavy duty tool. Do not use tools for purposes not intended. For example do not use the chain saw to cut plastic, or masonry.

**DRESS PROPERLY** - Do not wear loose clothing, or jewellery that can be caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Wear protective hair covering to contain long hair.

**USE SAFETY GEAR** - Use safety glasses, safety footwear, snug fitting clothing, protective gloves, and hearing and head protection when operating the chain saw. We recommend the use of proprietary chainsaw protective clothing.

## SAFETY INSTRUCTIONS

**CARRYING THE CHAIN SAW** - Carry the chain saw by the front handle with the saw stopped and disconnected from the mains supply. Keep your finger off the switch and make sure that the guide bar and saw chain are to the rear. Always fit the chain guard when transporting the chain saw.

**DO NOT ABUSE THE MAINS LEAD** - Never carry the chain saw by the mains lead, or pull it to disconnect it from the mains socket. Keep the mains lead away from heat, oil and sharp edges.

**DISCONNECT THE CHAIN SAW** - Disconnect the chain saw from the mains supply when not in use, before maintenance and when making any adjustments.

**STAY ALERT** - Watch what you are doing. Use common sense. Do not operate the chain saw when you are tired.

**CHECK DAMAGED PARTS** - Before each use of the tool, any part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for the alignment and free running of moving parts, breakage of parts, and any other conditions that may affect its operation. Any damaged part should be properly repaired or replaced by an authorised service centre unless otherwise indicated in this instruction booklet. Have defective switches replaced by authorised service personnel. Do not use the tool if the switch does not function properly.

**MAINTAIN TOOLS WITH CARE** - Keep the chain sharp and clean for better and safer performance. Follow instructions for lubricating and changing the chain. Inspect the mains lead and any extension leads periodically and if damaged have them repaired by an authorised service facility. Keep handles dry, clean and free from grease.

**WARNING** - The use of any accessory, or attachment, other than those recommended in this instruction book, may present a risk of personal injury.

**HAVE YOUR TOOL REPAIRED BY A QUALIFIED PERSON** - This electric tool is in accordance with the relevant safety requirements. Repairs must only be conducted by qualified persons using original parts.

**KEEP CHILDREN AWAY** - Never let any visitors or children touch the tools or the extension lead. All visitors should be kept away from the work area.

**USE BOTH HANDS** - Grip the chain saw with both hands. Keep your hands and fingers wrapped around the handles and do not release your hands until the saw chain has stopped running.

**USE WEDGES** - The use of wedges will help to control tree felling and prevent the chain saw binding in the cut.

**USE CORRECT PART OF THE BLADE** - Always use the underside of the chain bar saw for cutting. Never attempt to use the top of the chain bar.

**AVOID UNINTENTIONAL STARTING** - Ensure that the chain saw is disconnected from the mains supply when not in use. Never carry the chain saw by the cable, or pull the cable to disconnect it from the mains socket. Always fit the chain guard when carrying the saw.

## SAFETY INSTRUCTIONS

**KEEP YOUR CHAIN SAW CLEAN AND SHARP** - Never allow dirt or sawdust to build up on the saw chain, chain bar or the cooling vents. Keep the saw chain sharp and oiled. Make sure that the handles are clean and free from oil and grease.

**DO NOT** - Do not use the chain saw if the switches do not operate correctly.

**CHAIN BRAKE** - Always check the chain brake for correct operation before using the saw. Do not use the saw if there is malfunction of the chain brake. Refer to qualified service personnel.

**GUARD AGAINST ELECTRIC SHOCK** - Avoid body contact with earthed surfaces. (e.g pipes, radiators etc.)

**DANGEROUS LOCATIONS** - Do not use this chain saw in dangerous locations. Never use this chain saw when standing in the branches of a tree, up a ladder or on any other unstable surface. This chain saw should only be used when standing on stable, level (never sloping) ground. Never use the chainsaw over areas of water - for example, garden ponds.

**WHAT NOT TO CUT** - Avoid cutting wood from old buildings - only commence cutting when you are absolutely sure that the wood does not contain nails, screws or other foreign objects. Never cut wood covered in mud or dirt as this will dull the blade, increasing the risk of kickback. Avoid cutting wire fences, prepared timber and saplings.

**SWITCHING OFF** - Always switch off before putting the chain saw down. The saw chain will continue to run for a short time after it has been switched off. Always disconnect from the mains supply when changing the work location, cleaning the chain saw or making any adjustments.

**SECURE THE WORK** - Where possible the work should be secured using clamps. Never use your foot to support the wood you are cutting.

**CHAIN GUARD** - Always fit the chain guard when carrying, storing or resting the saw. The guard should always be fitted during cleaning, maintenance and storage, unless otherwise instructed in this instruction booklet.

**STORAGE** - Always clean the chain saw and ensure it is completely dry prior to storage. Lightly oil the chain and bar and remove any debris from the motor cooling vents. Drain the oil reservoir and store in a dry secure place out of the reach of children. Always fit the chain guard before storage.

**SERVICING AND REPAIRS** - Always have the chain saw serviced and repaired by qualified personnel.

# SAFETY INSTRUCTIONS

## KICKBACK



### **WARNING!**

Kickback may occur when the tip of the chainsaw touches an object, or when the wood closes in and pinches the chain. Tip contact in some cases may cause a fast reverse action, kicking the guide bar rapidly back towards the operator. Pinching the saw chain along the top of the guide bar may push the guide bar rapidly back towards the operator. Either of these reactions may cause you to lose control of the saw which could result in serious injury to the user.

The following precautions should be taken to avoid kickback.

- 1 Grip the chain saw firmly with both hands when the motor is running. Keep a good firm grip on the saw with both hands, the right hand on the rear handle and the left hand on the front handle.
- 2 Do not overreach. Keep proper footing and balance at all times.
- 3 Do not let the tip of the guide bar come into contact a log or branch, the ground or any other obstruction.
- 4 Do not cut above shoulder height.
- 5 Use only replacement bars and chains available from your CLARKE dealer
- 6 Avoid cutting operations whereby the wood being cut can clog the saw blade.
- 7 Check that there are no foreign objects (metal, cement or other hard material) in the cutting path.
- 8 Do not attempt to cut with a loose or blunt chain.
- 9 Take care when you insert the chain saw into a previous cut. This could cause kickback.

## WARNING SYMBOLS

The following symbols are displayed on the chain saw in order to remind you of the safety precautions you should take when operating the chain saw.



**Warning!** - When using this chain saw, basic safety precautions, including those in this user guide, should be observed to reduce the risk of fire, electric shock and personal injury.



**Warning!** - Read this user guide thoroughly before use and keep in a safe place for future reference.



**Warning!** - Wear safety goggles, ear protectors and safety helmet when using this chain saw.



**Warning!** - Do not expose this chain saw to rain, or use in damp or wet locations.



**Warning!** - Disconnect from the mains supply immediately if the cable is damaged or cut.



**Warning!** - Never cut with the tip of the blade as this may result in kickback and cause personal injury.

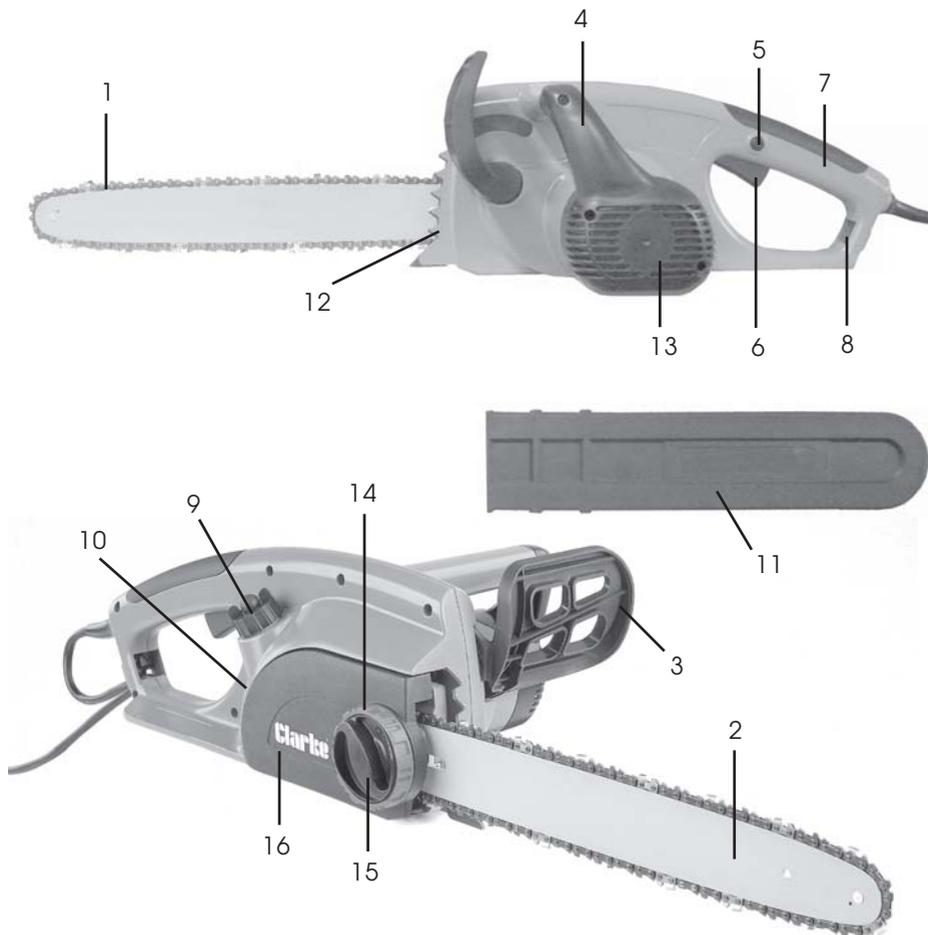


**Warning!** - Always wear gloves approved for chainsaw use.



**Warning!** - Always hold the chain saw with both hands during use.

## PARTS IDENTIFICATION



- |   |                             |    |                       |
|---|-----------------------------|----|-----------------------|
| 1 | Chain                       | 9  | Oil Filler Cap        |
| 2 | Chain Bar                   | 10 | Oil Level Window      |
| 3 | Chain Brake Lever           | 11 | Chain Guard           |
| 4 | Front Handle                | 12 | Gripping Teeth        |
| 5 | Lock Button                 | 13 | Air Intake            |
| 6 | Power On/Off Trigger Switch | 14 | Blade Tensioning Dial |
| 7 | Rear Handle                 | 15 | Housing Cover Lock    |
| 8 | Cable Restraint             | 16 | Housing Cover         |

# GETTING STARTED



## **WARNING!**

For your safety and the safety of others make sure that you have read and understood all of the safety warnings on pages 4 to 10 before continuing with this section.

## 1. CHECKING THE CHAIN SAW

Remove the chain saw from the packaging, if there are any signs of damage, please return your chain saw to the place of purchase.

**The chainsaw will need to have the chain bar fitted before use, see page 25.**

## 2. FILLING THE CHAIN SAW WITH OIL



## **WARNING!**

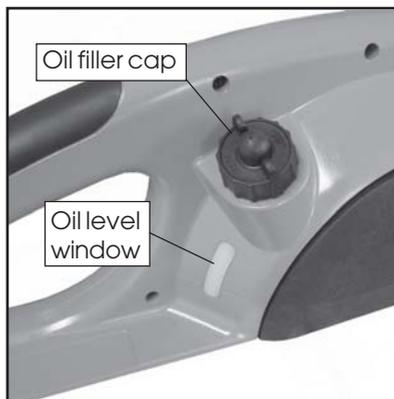
Ensure that the chainsaw is disconnected from the mains supply during all checks and adjustments in this section.

## **CAUTION!**

You must only use a chain oil with your chain saw. Using different oil may cause damage to your chain saw and invalidate your warranty.

**To fill the chain saw with oil, proceed as follows.**

- 1 Place the chain saw on a stable, level surface.
- 2 Remove the oil filler cap, by twisting in an anticlockwise direction.
- 3 Using a funnel, fill the oil tank, with chain saw oil (supplied). The oil tank will hold 135cc of chain oil, enough to lubricate the chain for 12-15 minutes of sawing.
- 4 Wipe up any spills before continuing.
- 5 Refit the oil filler cap, by twisting in a clockwise direction.



## GETTING STARTED



### **CAUTION!**

The oil tank level should be checked frequently to maintain lubrication of the bar and chain.

### **NOTE:**

*Your chain saw is equipped with an automatic oiler system and is the only necessary source of lubrication for the bar and chain during operation.*

## 3. ADJUSTING THE CHAIN TENSION



### **WARNING!**

**Ensure that the chainsaw is disconnected from the mains supply during all checks and adjustments in this section.**

Correct saw chain tension is extremely important and must always be checked before starting the chain saw.

When using the chain saw for the first time (or after replacing the saw chain) the tension should be checked regularly, as a new chain will stretch after four or five cuts.

If the chain is too loose or too tight, the sprocket, bar and chain will wear more rapidly. The tension should be sufficient to keep the chain snug on the bar, but loose enough to allow the chain to be pulled around by hand. Taking the time to adjust the chain tension correctly will result in improved cutting performance and prolonged chain life. Refer to the adjustment procedure described on the next page.



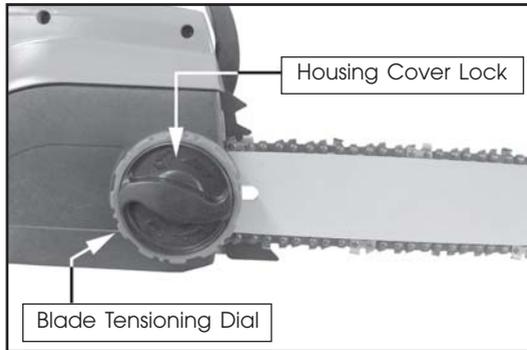
### **WARNING!**

**Always wear protective gloves when adjusting the chain tension and NEVER check the chain tension when the chain saw is connected to the mains supply.**

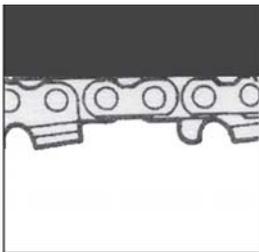
## GETTING STARTED

To adjust the chain tension, proceed as follows:

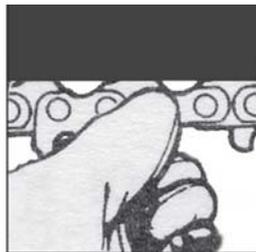
- 1 Ensure the chain brake handle is in the **disengaged** position (the chain brake handle should be pulled back towards the handle).
- 2 Loosen the housing cover by slightly rotating the housing cover lock, (do not remove). See diagram below.



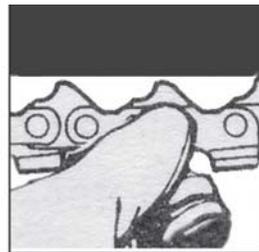
- 3 Use the blade tensioning dial to adjust the tension of the chain.  
Turn **clockwise** to decrease the chain tension and **anticlockwise** to increase it.
- 4 Pull the chain gently downwards in the centre of the bar. The chain is correctly adjusted when pulling only results in it moving 2-3 mm away from the chain bar. See centre diagram below.



Correct tension  
when fitted



Testing the chain tension  
2-3mm gap visible between  
chain and bar



Chain is too loose  
Requires tightening  
before use

## GETTING STARTED



### **WARNING!**

For your safety and the safety of others make sure that you have read and understood all of the safety warnings on pages 4 to 10 before continuing with this section.

- 5 When the chain tension is correct, whilst still supporting the tip of the bar, re-tighten the housing cover lock securely.
- 6 Finally, pull the chain around the bar by hand - it should fit snugly around the bar and move freely and smoothly.

### **NOTE:**

*If the chain binds or is difficult to rotate by hand, too much tension has been applied. Repeat steps 2 to 6, turning the blade tensioning dial clockwise slightly to reduce the tension.*

# GETTING STARTED

## 4. TESTING THE CHAIN BRAKE



### **WARNING!**

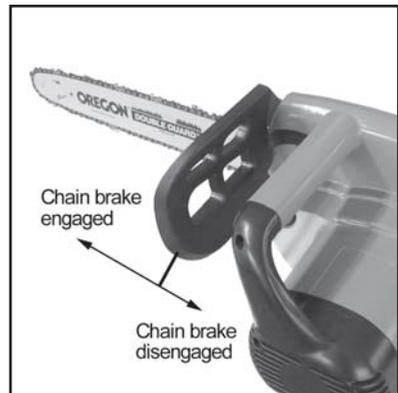
For your safety and the safety of others make sure that you have read and understood all of the safety warnings on pages 4 to 10 before continuing with this section.

Your chain saw is equipped with a chain brake that reduces the possibility of injury due to kickback.

During kickback, the chain brake lever will strike your left forearm, engaging the chain brake.

When the brake is activated, the chain will stop in a fraction of a second.

- The chain brake is **disengaged** (the chain can move) when the brake lever is pulled back towards you and locked in place.
- The brake is **engaged** (chain is stopped) when the brake lever is locked in the forward position, away from the front handle.



### **CAUTION!**

The chain brake has been designed to reduce the possibility of injury if kickback occurs. However, it can not be relied upon to protect you against injury if the chain saw is used carelessly. Take great care when cutting, and always test the brake before using the saw. See page 17.

## GETTING STARTED

### Chain brake test procedure

- 1 Make sure that the chain brake is in the disengaged position.
- 2 Place the chain saw on a firm, flat, dry surface that is clear of any debris. Do not let the saw come into contact with any objects.
- 3 Connect the chain saw to the mains supply.
- 4 Remove the chain guard.
- 5 Switch on the chain saw by depressing the safety lock button and squeezing the on/off trigger switch.
- 6 While the chain saw is running, activate the chain brake by pushing the chain brake lever forward.
- 7 The chain should stop abruptly (the motor will stop too).



#### ***WARNING!***

**If the chain fails to stop when the chain brake is engaged. DO NOT USE the chain saw. You should return your chainsaw to you CLARKE dealer for advice.**

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## USING THE CHAIN SAW



### **WARNING!**

For your own safety make sure that you have read and understood this user guide before continuing.

## OPERATING THE CHAIN SAW

To operate the chain saw, proceed as follows:

- 1) Make sure that the oil tank has been filled with oil. See page 12.
- 2) Make sure that the chain tension has been checked. See page 13.
- 3) Make sure that the chain brake has been tested. See page 17. and in the disengaged position (pulled back towards the motor).
- 4) Make sure that mains cable is correctly secured by the cable restraint.
- 5) Remove the chain guard.
- 6) Hold the chain saw correctly. Hold the front handle with your left hand, and the rear handle with your right hand.
- 7) Start the chain saw by pushing the safety lock off button and squeezing the on/off trigger switch.
- 8) Release the trigger switch to stop the chainsaw.



### **WARNING!**

Do not use the chain brake lever as a handle.

# CUTTING INSTRUCTIONS

## 1. FELLING A TREE

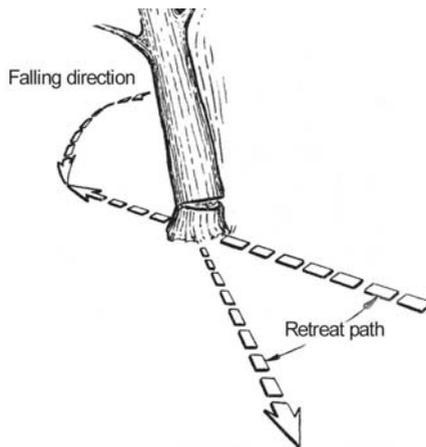
Felling is the term for cutting down a tree. Small trees with a diameter of 15-18 cm can usually be felled using a single cut. Larger trees require notch cuts, this will determine the direction at which the tree will fall. Only attempt felling operations that are within the capabilities of the saw.



### **WARNING!**

A retreat path must be planned and cleared before any cutting is started. See diagram below.

The direction of fall is controlled by the notch cut. Before any cuts are made, consider the location of larger branches and the natural lean of the tree to determine the position of the notch cut.



### **WARNING!**

Do not cut down a tree during high or changing winds or if there is a danger to property. Do not cut down a tree if there is a risk of striking phone or power wires.



### **WARNING!**

Make sure the danger zone is identified & access is restricted for onlookers.

# CUTTING INSTRUCTIONS

**NOTE:**

*Before felling a tree, make sure that there are no local by-laws that apply (e.g. restrictions)*

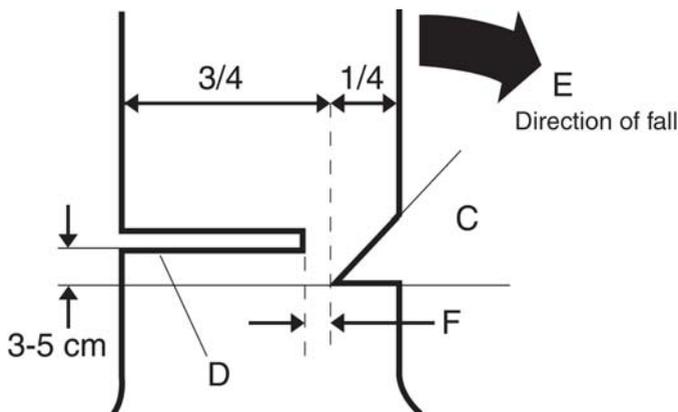
Typically, felling consists of two main cutting operations, the notching cut (C) and the felling cut (D).



**WARNING!**

**Never walk in front of a tree that has a notch cut.**

1. Start by making the diagonal part of the cut (C) on the side of the tree facing the felling direction (E).
2. Do not cut the lower part of the notch cut (C) too deep into the trunk. The notch depth should be about  $1/4$  of the diameter of the tree, deep enough to create a hinge (F). The hinge is made to direct the fall of the tree.
3. Make the felling cut (D) from the other side of the tree and 3-5 cm above the edge of the notch. See diagram below.



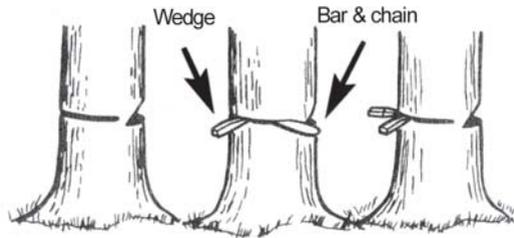
**WARNING!**

**Never saw completely through the trunk, without creating a notch. If the trunk is cut without a notch, you will not be able to control the felling direction.**

## CUTTING INSTRUCTIONS

**NOTE:**

*Before cutting completely through the trunk, use wooden or plastic wedges, to prevent binding the bar or chain in the cut. Wedges will also help the felling direction. See diagram below.*



**WARNING!**

Before making the final cut, always recheck the area is clear of bystanders, animals or obstacles.

Once the wedges have been put into place, the felling cut can continue through the remainder of the trunk.



**WARNING!**

As the final cut gets close to the hinge, the tree will begin to fall. Carefully remove the chain saw from the cut, turn off and put the chain saw down and leave the area along the planned retreat path.



**WARNING!**

Do not re-enter the area until the tree has fallen and the area is safe.

# CUTTING INSTRUCTIONS

## 2. LIMBING

Limbing is the process of removing the branches from a fallen tree.



**WARNING!**

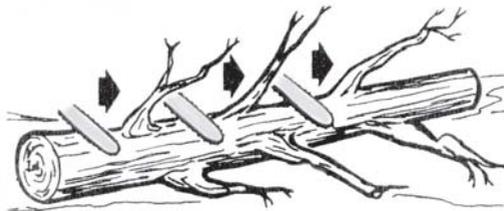
Do not stand on the tree trunk while limbing.



**WARNING!**

Make sure that the tree trunk is safely supported before limbing.

Limbing should be performed by working from one end of the trunk towards the other. See diagram below.



**WARNING!**

Do not remove any branches that are supporting the trunk. The trunk should be carefully rolled and supported before any supporting branches are removed.

# CUTTING INSTRUCTIONS

## 3. BUCKING

Bucking is the process of cutting a fallen trunk into lengths or logs. Whenever possible, the best way of bucking a fallen trunk is using a sawhorse.



### **WARNING!**

**Take great care ensuring that the trunk is safely supported by the sawhorse before bucking the trunk.**

For personal safety and ease of cutting, the following should be followed at all times:

1. Hold the saw firmly with both hands, keep the saw to the right hand side of your body while cutting.
2. Keep the left arm as straight as possible.
3. Keep both feet firmly on the floor.
4. Do not put excessive pressure on the bar chain when cutting. Let the saw to do the work.
5. If the saw stalls, lift the saw away from the workpiece and allow the saw to build up to full speed.
6. When bucking large trunks, allow the gripping teeth at the back of the bar chain to grip into the trunk and use a pivoting action, putting slight downward pressure on the front handle and pulling up slightly on the rear handle. Back off and reposition the gripping teeth lower down and repeat pivoting action to progress the chain bar through the cut.

# CUTTING INSTRUCTIONS

When it is not possible to use a sawhorse, follow the procedure below:



## ***WARNING!***

**Make sure that the area is clear of debris, people and animals before cutting.**

1. When the trunk is supported along the entire length, cut from the top taking care to avoid cutting into the ground.



2. When a fallen trunk is not evenly supported along its length, avoid cuts where, due to the trunk bowing inwards, the trunk will pinch the bar and chain.
3. Make notch cuts to prevent the trunk closing in on the bar and chain.



## ***WARNING!***

**Always take care and be aware of how the trunk and cut off pieces may fall/move when the cut is made.**

## NEW BAR AND CHAIN



### **WARNING!**

You must not attempt to sharpen your existing chain. This requires specialist tools and should only be performed by a qualified professional

Only fit recommended bar and chains. Replacement bar (part number: HTCECS40519 ) and chains (part number: HTCECS40518 ) can be obtained from your CLARKE dealer .

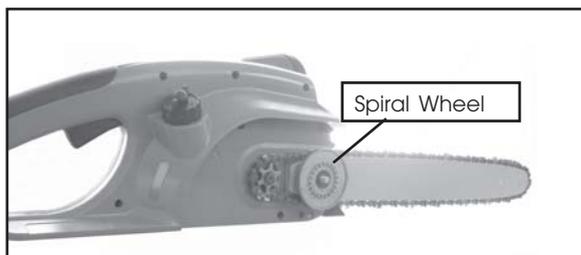
### 1. REMOVING THE EXISTING BAR AND CHAIN



### **WARNING!**

Make sure that the chain saw is disconnected from the mains supply before continuing.

- 1) Loosen the chain tension and then remove the housing cover by rotating the housing cover lock anticlockwise.



- 2) Using a pair of gloves, remove the existing bar and chain by pulling it towards you. Your local recycling centre can advise you on the best method of disposal.

### **NOTE:**

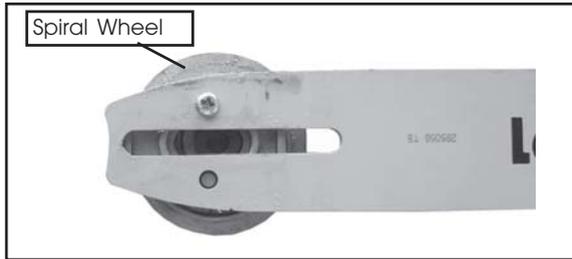
*When you remove the bar, you will need to remove the spiral wheel which is attached to it and place it onto the new bar. See the following page.*

- 4) Make sure that any debris is cleared from the mechanism and housing using a soft brush. A clean paint brush is ideal.

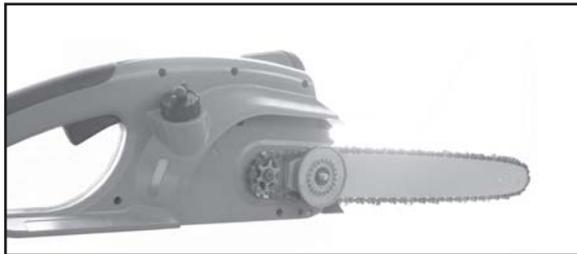
# NEW BAR AND CHAIN

## 2. FITTING A NEW BAR AND CHAIN

- 1) Fit the spiral wheel (removed from the old bar) to the new bar as shown below.



- 2) Push the spiral wheel and bar into position as shown below.



- 3) Place the chain over the sprocket, ensuring that the chain is pointing in the correct direction. The chain bar is marked with an arrow, showing the direction in which the chain will travel and a symbol to indicate what way round the chain should be fitted.
- 4) Feed the chain around the bar, the chain will droop slightly along the bottom edge.
- 5) Refit the housing cover, and secure using the housing cover lock.
- 6) Adjust the chain tension, using the instructions on page 14.

# MAINTENANCE



## **WARNING!**

**Make sure that the chain saw is disconnected from the mains supply before continuing.**

## BAR MAINTENANCE

The following maintenance procedures must be performed to keep the chain bar in good working order.

- 1) After 5 hours use, the bar should be turned, to ensure even wear on the top and bottom of the bar. See pages 25 and 26 for instructions on how to remove and refit a chain bar and chain.
- 2) The bar rails should be cleaned every time the bar is turned, or the chain is removed. Using a suitable implement, clear any debris from the bar rails. This will keep the oil passages open and provide correct lubrication to the bar and chain.

## OTHER MAINTENANCE PROCEDURES

- 1) After use, clean all excess sawdust, chippings and debris from the chain saw, chain and chain bar using a soft brush.
- 2) Keep the air intake (end of motor housing) clean to prevent the motor overheating.
- 3) Keep the main body of the chain saw clean using a soft cloth.
- 4) Check the chain tension regularly and adjust as often as necessary to keep the chain snug on the bar. A new chain will require more frequent adjustment.
- 5) Check the mains cable before each use. Do not use the chain saw if the cable is damaged in any way.
- 6) Always check the chain brake before each use, following the procedures on page 17 of this user guide.
- 7) Make sure that the automatic oiler system is working properly. Keep the oil tank filled with chain oil during use.

## STORAGE

- Always store the chainsaw with the guard in place.
- Make sure that the chainsaw is stored out of the reach of children.
- Never hang the chainsaw by the handle, always store the chainsaw on a flat stable surface.

## PRODUCT SPECIFICATION

Model number .....	CECS405
Rated voltage .....	230V AC - 50Hz
Motor power rating .....	2000W
Chain speed .....	13.5 m/s
Chain stopping time .....	0.15 seconds
Maximum cutting length .....	16" (405 mm)
Oil type .....	Chain oil (supplied).
Dimensions (L x W x H) .....	865 x 263 x 191 mm
Weight .....	6 kg
Vibration level (weighted) .....	4.89 m/s <sup>2</sup>
<u>Noise emission data</u>	
A-weighted sound pressure level .....	90 db (A)
Guaranteed sound power level .....	107 dBLwa



When disposing of this product, ensure it is disposed of according to all local ordinances. It must not be disposed of with general household waste.

## PARTS & SERVICE

For Spare Parts and Service, please contact your nearest dealer, or CLARKE International, on one of the following numbers.

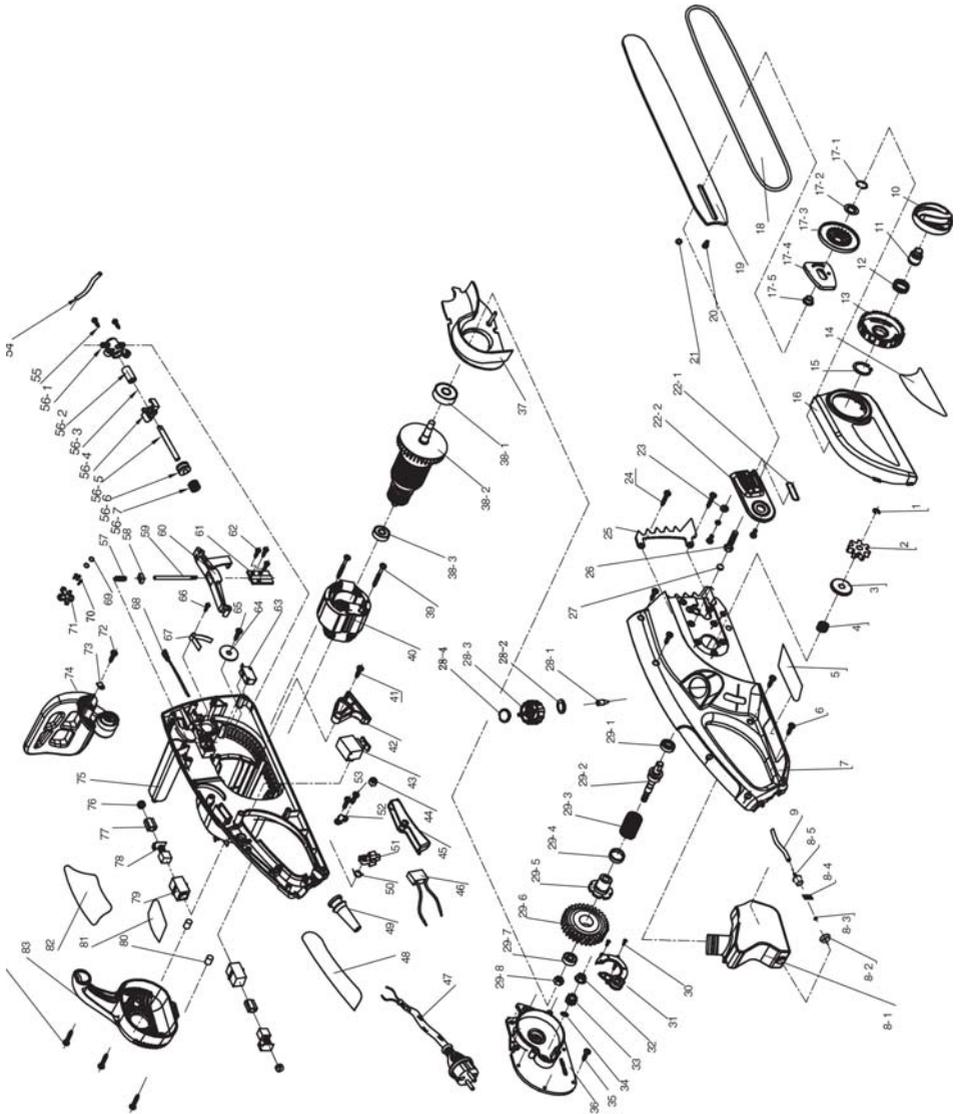
**PARTS & SERVICE TEL: 020 8988 7400**

**or e-mail as follows:**

**PARTS: [parts@clarkeinternational.com](mailto:parts@clarkeinternational.com)**

**SERVICE: [service@clarkeinternational.com](mailto:service@clarkeinternational.com)**

# EXPLODED PARTS DIAGRAM



# PARTS LIST

NO	PART	QTY	PART NUMBER	NO	PART	QTY	PART NUMBER
1	E shape retaining ring	1	HTCECS40501	22-2	Insert plate of right housing	1	HTCECS405
2	Sprocket	1	HTCECS40502	23	Bolt	1	HTCECS40523
3	Seal cover	1	HTCECS40503	24	Bolt	1	HTCECS40524
4	Tighten spring	1	HTCECS40504	25	Buffer board	1	HTCECS40525
5	Warning label	1	HTCECS40505	26	Screw	1	HTCECS40526
6	Screw	9	HTCECS40506	27	Seal Ring	1	HTCECS40527
7	Right housing	1	HTCECS40507	28	Oil Cap Assembly	1	HTCECS40528
8	Oil tank assembly	1	HTCECS40508	28-1	Valve	1	
8-1	Oil tank	1		28-2	Internal Seal Ring	1	
8-2	Oil out adaptor	1		28-3	Oil Cap	1	
8-3	Sponge	1		28-4	Oil Cap Cover	1	
8-4	Spring	1		29	Output shaft assembly	1	HTCECS40529
8-5	Fixed adaptor	1		29-1	Bearing	1	
9	Oil-in tube	1	HTCECS40509	29-2	Output shaft	1	
10	Tight Knob	1	HTCECS40510	29-3	Braking Spring	1	
11	Knob Insert	1	HTCECS40511	29-4	Shaft Sleeve	1	
12	Spring retaining ring	1	HTCECS40512	29-5	Insert for Shaft Gear	1	
13	Blade tensioning dial	1	HTCECS40513	29-6	Shaft Gear	1	
14	Brand Label	1	HTCECS40514	29-7	Bearing	1	
15	Spring retaining ring	1	HTCECS40515	29-8	Nut	1	
16	Right housing cover	1	HTCECS40516	30	Screw	4	HTCECS40530
17	Driving assembly	1	HTCECS40517	31	Dust cover	1	HTCECS40531
17-1	Snap ring	1		32	Flange Nut	1	HTCECS40532
17-2	Pressure board	1		33	Motor Gear	1	HTCECS40533
17-3	Spiral wheel	1		34	Motor Gear Bushing	1	HTCECS40534
17-4	Push board	1		35	Screw	5	HTCECS40535
17-5	Connect sleeve	1		36	Supporting Board	1	HTCECS40536
18	Chain,16"	1	HTCECS40518	37	Wind Board	1	HTCECS40537
19	Chain bar,16"	1	HTCECS40519	38	Rotor Assembly	1	HTCECS40538
20	Screw	1	HTCECS40520	38-1	Front bearing	1	
21	Seal Ring	1	HTCECS40521	38-2	Rotor	1	
22	Insert plate assembly of right housing	1	HTCECS40522	38-3	Rear bearing	1	
22-1	Seal Ring	1		39	Screw	2	HTCECS40539

# PARTS LIST

NO	PART	QTY	PART NUMBER	NO	PART	QTY	PART NUMBER
40	Stator	1	HTCECS40540	62	Screw	3	HTCECS40562
41	Screw	1	HTCECS40541	63	Micro Switch	1	HTCECS40563
42	Switch Connecting Rod	1	HTCECS40542	64	Washer	1	HTCECS40564
43	Switch	1	HTCECS40543	65	Screw	1	HTCECS40565
44	Glide Wheel	1	HTCECS40544	66	Screw	1	HTCECS40566
45	Switch Button	1	HTCECS40545	67	Brake pad	1	HTCECS40567
46	Capacitor	1	HTCECS40546	68	Wire	1	HTCECS40568
47	Power Cord	1	HTCECS40547	69	O Rubber Ring	2	HTCECS40569
48	Grip	1	HTCECS40548	70	Screw	4	HTCECS40570
49	Cable Sleeve	1	HTCECS40549	71	Oil Adaptor	1	HTCECS40571
50	Spring	1	HTCECS40550	72	Screw	1	HTCECS40572
51	Cable Clamp	1	HTCECS40551	73	Shim	1	HTCECS40573
52	Cable Clip	1	HTCECS40552	74	Guard Board	1	HTCECS40574
53	Screw	2	HTCECS40553	75	Left Housing	1	HTCECS40575
54	Oil Outlet Tube	1	HTCECS40554	76	Carbon Brush Cover	2	HTCECS40576
55	Screw	2	HTCECS40555	77	Carbon Brush Sleeve	2	HTCECS40577
56	Oil Pump Assembly	1	HTCECS40556	78	Carbon Brush	2	HTCECS40578
56-1	Oil Pump	1		79	Brush Holder	2	HTCECS40579
56-2	Oil Plug Cover	1		80	Rubber Coloum	2	HTCECS40580
56-3	O Ring	1		81	Spec Label	1	HTCECS40581
56-4	Piston Stand	1		82	Brand Label	1	HTCECS40582
56-5	Oil Piston	1		83	Motor Cover	1	HTCECS40583
56-6	Worm Wheel	1		84	Screw	3	HTCECS40584
56-7	Worm Wheel Gear	1					
57	Spring	1	HTCECS40557				
58	Insert for Braking Rod	1	HTCECS40558				
59	Braking Rod	1	HTCECS40559				
60	Connecting Rod	1	HTCECS40560				
61	Fixed Board	1	HTCECS40561				

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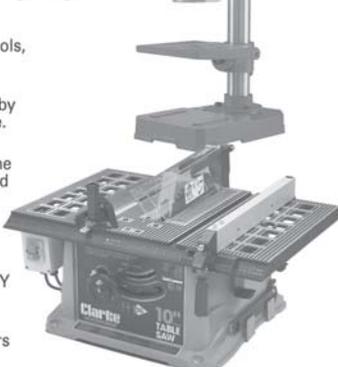
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For spare parts and servicing, please contact your nearest dealer, or Clarke International on

**020 8988 7400**

e-mail: [Parts@clarkeinternational.com](mailto:Parts@clarkeinternational.com) e-mail: [Service@clarkeinternational.com](mailto:Service@clarkeinternational.com)

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