

# DRAPER®

## INSTRUCTIONS FOR 230V Chainsaw

1800W  
1600W

Stock No.81564  
Stock No.81565

Part No.CS1800A  
Part No.CS1600A

**IMPORTANT:** PLEASE READ THESE INSTRUCTIONS CAREFULLY TO ENSURE THE SAFE AND EFFECTIVE USE OF THIS PRODUCT.

### WARNING!

Chainsaws are potentially fatal!  
Read this instruction manual thoroughly and familiarise yourself with the functions, in particular how to stop the machine in an emergency, before using the chainsaw.

CE



CS1800A shown.

DRAPER®

## GENERAL INFORMATION

This manual has been compiled by Draper Tools and is an integrated part of the product with which it is enclosed and should be kept with it for future references.

This manual describes the purpose for which the product has been designed and contains all the necessary information to ensure its correct and safe use. We recommend that this manual is read before any operation or, before performing any kind of adjustment to the product and prior to any maintenance tasks. By following all the general safety instructions contained in this manual, it will ensure both product and operator safety, together with longer life of the product itself.

All photographs and drawings in this manual are supplied by Draper Tools to help illustrate the operation of the product.

Whilst every effort has been made to ensure accuracy of information contained in this manual, the Draper Tools policy of continuous improvement determines the right to make modifications without prior warning.

# 1. TITLE PAGE

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## **1.1 INTRODUCTION:**

USER MANUAL FOR:

### **230V CHAINSAW**

Stock no's. 81564, 81565

Part no's. CS1800A, CS1600A.

## **1.2 REVISIONS:**

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Date first published May 2015

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As our user manuals are continually updated, users should make sure that they use the very latest version.

Downloads are available from: <http://www.drapertools.com/b2c/b2cmanuals.pgm>

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## **1.3 UNDERSTANDING THIS MANUALS SAFETY CONTENT:**

**WARNING!** Information that draws attention to the risk of injury or death.

**CAUTION!** Information that draws attention to the risk of damage to the product or surroundings.

## **1.4 COPYRIGHT © NOTICE:**

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## 3. GUARANTEE

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### 3.1 GUARANTEE

Draper tools have been carefully tested and inspected before shipment and are guaranteed to be free from defective materials and workmanship.

Should the tool develop a fault, please return the complete tool to your nearest distributor or contact Draper Tools Limited, Chandler's Ford, Eastleigh, Hampshire, SO53 1YF. England.

Telephone Sales Desk: (023) 8049 4333 or Product Helpline (023) 8049 4344.

A proof of purchase must be provided with the tool.

If upon inspection it is found that the fault occurring is due to defective materials or workmanship, repairs will be carried out free of charge. This guarantee period covering parts/labour is 12 months from the date of purchase except where tools are hired out when the guarantee period is ninety days from the date of purchase. The guarantee is extended to 24 months for parts only. This guarantee does not apply to normal wear and tear, nor does it cover any damage caused by misuse, careless or unsafe handling, alterations, accidents, or repairs attempted or made by any personnel other than the authorised Draper warranty repair agent.

Note: If the tool is found not to be within the terms of warranty, repairs and carriage charges will be quoted and made accordingly.

This guarantee applies in lieu of any other guarantee expressed or implied and variations of its terms are not authorised.

Your Draper guarantee is not effective unless you can produce upon request a dated receipt or invoice to verify your proof of purchase within the guarantee period.

Please note that this guarantee is an additional benefit and does not affect your statutory rights.

Draper Tools Limited.

## 4. INTRODUCTION

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### 4.1 SCOPE

Electric chainsaw, which is intended for cutting timber by means of the saw chain supported by a guide bar.

### 4.2 SPECIFICATION

Stock no .....	81564 .....	81565
Part no .....	CS1800A .....	CS1600A
Rated voltage .....	230V/50Hz .....	230V/50Hz
Rated input .....	1800W .....	1600W
Guide bar length:.....	405mm.....	356mm
Guide bar specification:.....	Oregon Double Guard 91.....	Oregon Double Guard 91
Saw chain:		
Specified pitch:.....	9.5mm( $\frac{3}{8}$ " ) .....	9.5mm( $\frac{3}{8}$ " )
Specified gauge (thickness of drive links): .....	1.3mm(0.050" ) .....	1.3mm(0.050" )
Type of saw chain .....	Oregon 91PJ057X.....	Oregon 91PJ052X
Drive sprocket:		
Specified no. of teeth: .....	6.....	6
Specified pitch:.....	9.5mm( $\frac{3}{8}$ " ) .....	9.5mm( $\frac{3}{8}$ " )
Chain speed: .....	13.5m/sec.....	13.5m/sec
Measured sound power level: .....	104.7dB(A).....	104.3(A)
Guaranteed sound power level <sup>†</sup> :.....	106dB(A) .....	105dB(A)
Vibration level: .....	5.147m/s <sup>2</sup> .....	5.092m/s <sup>2</sup>
saw chain lubrication oil tank capacity:.....	90ml.....	90ml
Weight:		
(without guide bar and saw chain) <sup>††</sup> : .....	5kg.....	5kg

<sup>†</sup>A-weighted sound power level in accordance to 2000/14/EC.

<sup>††</sup>With empty tanks.

### 4.3 HANDLING & STORAGE

The environment will have a negative result on its operation if you are not careful. If the air is damp, components will rust. If the machine is unprotected from dust and debris; components will become clogged: And if not cleaned and maintained correctly or regularly the machine will not perform at its best.

#### WARNING:

**IT IS RECOMMENDED THAT THE FIRST TIME USER SHOULD HAVE PRACTICAL INSTRUCTION IN THE USE OF THE CHAINSAW AND THE PROTECTIVE EQUIPMENT, FROM AN EXPERIENCED OPERATOR. THE INITIAL PRACTICE SHOULD BE CUTTING LOGS ON A SAW HORSE OR CRADLE.**

# 5. HEALTH & SAFETY INFORMATION

## 5.1 GENERAL CHAINSAW SAFETY INFORMATION

Chainsaws pose a very significant health and safety risk, even to careful and informed operators, for example, the use of a chainsaw in the workplace requires extensive training and certification. The dangers of using and applying a chainsaw should not be taken lightly. Seek guidance, training or employ a professional to carry out the task if uncertain or nervous of the potential risks and dangers involved.

### Personal Protective Equipment (PPE)

- Due to the nature of a chainsaw, no PPE equipment can provide 100% protection against chainsaw cuts.
- Equipment specifically designed for use with a chainsaw shall be worn, consisting of;
  - Safety helmet (EN 397).
  - Mesh visor (EN 1731).
  - Hearing protection (EN 352)
  - Gloves (EN 381-7) with protective guard on back of left hand.
  - Leg protection (EN 381-5).
  - Non-slip boots (EN 345-2).
  - High visibility jacket.

Leg protection is achieved with a chain clogging material designed to stop the saw chain before it penetrates fully through and into flesh. The gloves, boots and leg protection should be marked with the symbol below and indicate the chain speed to which they have been tested.



### Preparation

- Before use inspect the guide bar grooves for distortion, the guide bar rail for cracks, the nose sprocket teeth condition, saw chain tension and condition, drive sprocket condition and operation and operation of the chain brake.
- Never operate the chainsaw alone in case of emergency. Have an assistant in visual/communicative range.
- Ensure the site is assessed for risk potential and a safe working distance is marked to prevent bystanders entering.
- In case of accident, ensure means of contact with emergency services are possible and adequate information is available to facilitate an urgent recovery.
- Always carry a basic first aid kit containing large wound dressings.
- Identify all services (e.g. gas, water, electric, phone etc.), Particularly overhead before felling commences.
- Ensure a distance of at least twice the tree height is observed from all obstacles and dangers.
- Keep bystanders a minimum of 10M away and all access points into the work area marked accordingly.
- Tree felling must only be carried out by a single individual and only after the danger zones and escape routes have been identified and cleared.
- Do not fell when wind conditions may influence/control the direction.
- Close observation and inspection for dead or diseased wood and insecure limbs or branches must be carried out prior to any cutting. Dead wood can cause unexpected reactions during a routine felling.

## 5. HEALTH & SAFETY INFORMATION

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- Remove any scrub or other obstructions from the area to enable a quick escape route and ensure visibility of the chain is not impeded during cutting.
- Plan work to reduce manual lifting, i.e. lightest off cuts move furthest.
- If work is a result of wind blow, ensure no unstable trees or limbs pose any further danger.
- Never stand on anything other than the ground.
- When preparing to work on the ground, e.g. cross cutting or limbing, ensure no obstacles are hidden or obscured from view. Contact with such an object can result in loss of footing or kickback from the chain saw.

### 5.2 CHAINSAW OPERATIONAL SAFETY INFORMATION

- Do not operate the chainsaw without being completely familiar on all safety aspects, functions and most importantly how to stop the chainsaw in an emergency.
- Do not operate the chainsaw above shoulder height.
- Regularly clear cut material as build up will create a hazard under foot.
- Never use the chainsaw if the (stopping) switch is **FAULTY** or not functional.
- Prior to each use inspect the chainsaw for damage. Ensure all safety features and mechanisms function correctly and that the cutting means is of the type and design as specified by the manufacturer.
- Adopt a secure and balanced stance, bend knees instead of back. Hold the saw close into your body for balance.
- Maintain a good grip with both hands on the saw. The chainsaw is solely designed for operation of the rear handle by the right hand and the left handle on the front handle. Grip the front handle with left thumb underneath to allow resistance in case of kickback.
- Stop the chainsaw before setting it aside.
- Only begin cutting with saw chain speed at maximum.
- Kickback occurs when the saw saw chain is stopped suddenly resulting in the tip or the guide bar being violently thrown up towards the operator's head/face. Correct stance and knowledge of the operating procedure can greatly reduce that risk.
- Operate the chain brake before moving with the saw. If moving more than a short distance, stop the saw and refit the bar guard.
- Do not attempt to use the chainsaw if tired, ill or under the influence of alcohol or other drugs.

#### Felling

- Remove lower branches/limbs from the tree up to shoulder height.
- When removing the lower branches ensure the operator is protected from kickback by using the tree stem for protection and keeping the guide bar out of line with the body (off set).
- Ensure the felling cut is completed in one cut for safety.
- Never leave a partially felled tree.
- When the tree begins to fall move back and away at 45° as quickly as possible. Branches on the underside of the tree can cause the stem to move sideways or backwards dangerously.
- In the event of a tree becoming hung in another tree or obstacle seek assistance from a professional. A hung tree poses many dangers and creates more potential risks than felling a normal tree. Do not abandon a hung tree, walk under or attempt to climb one.

## 5. HEALTH & SAFETY INFORMATION

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- Always perform a notch cut followed by a felling cut to create a felling hinge. Felling wedges or levers may be necessary to prevent the chainsaw from becoming pinched in the felling cut.

### Limbing

- Ensure the tree is stable before any limbing commences.
- The ideal working height for performing limbing is between waist and knee height.
- Stand on the left side of the stem, working from the root upwards, then return down the other side.
- Use the top (pushing chain) and bottom (pulling chain) to make the cuts, constantly taking note of the bar tip in conjunction with limbs further round the stem which may be less visible or obscured.
- Ensure the tip of the bar does not come into contact with the ground.
- If the felled tree is on a slope always remain above the tree in case the removal of a limb were to cause potentially dangerous movement.
- Rest the weight of the saw on the tree where possible.
- Take care of limbs and undergrowth under tension as there is a danger of spring back once the cut has been performed.
- At regular intervals, stop the chainsaw and clear the cut debris to maintain a firm footing.

### Cross cutting

- The timber must be raised off the ground with supports to perform a safe cut.
- When working on slopes, always work above the timber in case of movement.
- Always adopt a good firm footing.
- Observe the timber to assess the surfaces for tension.
- Tension and compression in supported timber can result in the timber splitting or pinching the guide bar if incorrectly cut.
- Alleviate tension in the timber by making an initial cut ( $1/3$ ) into the compressed surface before finishing the cut ( $2/3$ ) into the tension surface.
- Stand off to the side of the saw in case of kickback.
- If the chainsaw becomes trapped, switch off (and disconnect from the mains supply) immediately before attempting to free the guide bar. Use the correct tools when attempting to free a trapped saw.
- Be ready to step back quickly in case of the timber rolling.
- Ensure no debris is present in the work area.

### Maintenance

- Never modify the chainsaw in anyway.
- Always maintain the chainsaw in good working order regularly serviced by an authorised service agent.
- Ensure the handles remain clean and free from oil & moisture.
- Only use replacement parts supplied by the manufacturer.
- All safety devices must remain fitted, functioning and where possible serviced, especially the chain brake.
- Regularly inspect the saw chain lubricant level, regularly topping up. When the chainsaw is running at high speed the saw chain oil will dispel quicker and require checking/adjusting more frequently.
- Never operate the chainsaw without saw chain oil.



## 5. HEALTH & SAFETY INFORMATION

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- Never operate the chainsaw with a mal adjusted or blunt chain as this is highly dangerous.
- When the saw chain has warmed up, stop the chain & disconnect the main supply before checking/adjusting the tension.
- Prior to use check for chain oil distribution on a piece of paper or cut timber. Observe spatter before continuing.
- After each use clean the chainsaw thoroughly.
- Regularly check external nuts and fixings to ensure vibration caused by normal use has not begun to loosen them.
- Periodically remove all shavings and sawdust from the visible parts of the chain brake mechanisms.


### **Storage**

- Thoroughly clean/service the chainsaw and refit the bar guard.
- Locate the machine out the reach of children, in a dry locked unit.

### **5.3 CONNECTION TO THE POWER SUPPLY**

Make sure the power supply information on the machine's rating plate are compatible with the power supply you intend to connect it to.

This chainsaw has been fitted with a BS approved, non rewirable moulded plug and cable. It is designed for connection to a domestic power supply rated at 230V AC.

It is a Class 2 machine (double insulated ); is designed for connection to a power supply matching that detailed on the rating label and compatible with the plug fitted.

If an extension lead is required, use an approved and compatible lead rated for this appliance.

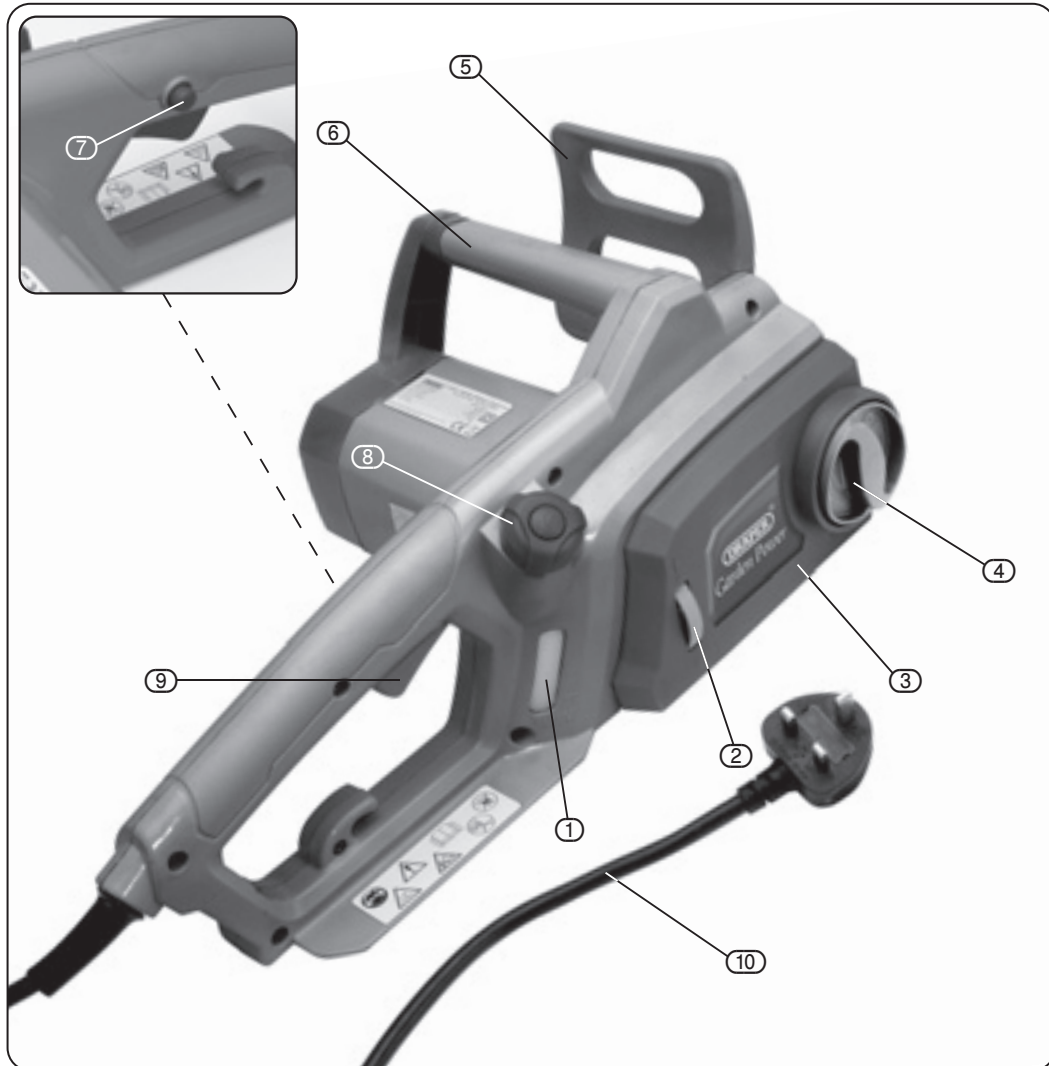
Follow all the instruction supplied with the extension lead.

This product requires no earth connection as supplementary insulation is applied to the basic insulation to protect against electric shock in the event of failure of the basic insulation.

No other electrical work is recommended on this chainsaw.

## 6. GETTING TO KNOW YOUR CHAINSAW

### 6.1 IDENTIFICATION



- ① Oil inspection window.
- ② Knurling wheel for quick saw chain tension adjustment.
- ③ Gear cover.
- ④ T-screw.
- ⑤ Brake.
- ⑥ Front handle.

- ⑦ Locking button.
- ⑧ Chain lubrication filler cap.
- ⑨ Operating switch
- ⑩ Mains connection with approved moulded plug.

## 7. UNPACKING & CHECKING

### 7.1 PACKAGING

Carefully remove the chainsaw from the packaging and examine it for any sign of damage that may have happened during shipping. Lay the contents out and check them against the parts shown below. If any part is damaged or missing; please contact the Draper Helpline (the telephone number appears on the Title page) and do not attempt to use the chainsaw.

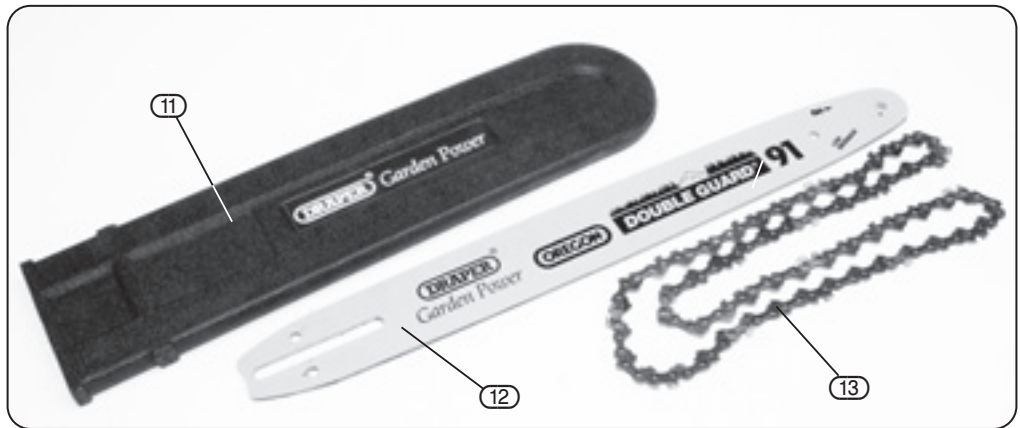
The packaging material should be retained at least during the guarantee period: in case the machine needs to be returned for repair.

Warning! Some of the packaging materials used may be harmful to children. Do not leave any of these materials in the reach of children.

If any of the packaging is to be thrown away, make sure they are disposed of correctly; according to local regulations.

### 7.2 WHAT'S IN THE BOX?

As well as the chainsaw motor; there are several other parts not fitted or attached to it.



- ⑪ Guide bar sheath.
- ⑫ Guide bar.
- ⑬ Saw chain.

## 8. ASSEMBLY

### Warning:

Do not start the chainsaw before mounting and correctly adjusting the guide bar and saw chain.

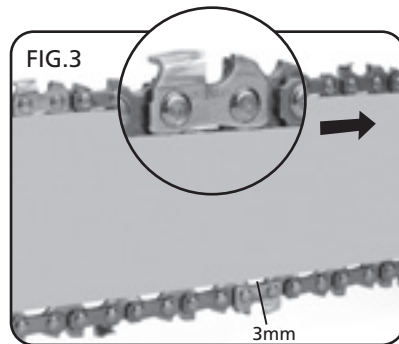
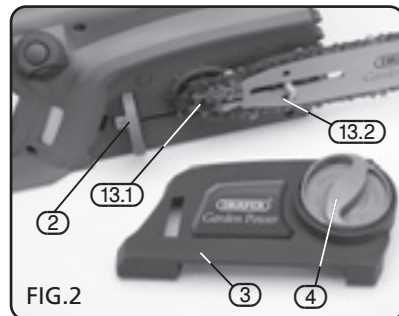
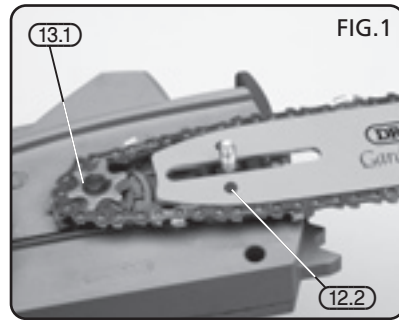
### Attention:

Saw chain is extremely sharp - wear gloves when handling saw chain.

### 8.1 ATTACHING/ADJUSTING GUIDE BAR AND CHAIN (FIGS.1 - 4):

Put the chainsaw on a stable rest.

- Loosen the T-screw (4) turning it anti-clockwise.
- Remove the gear cover (3).
- Put the saw chain (13) on the bar (12) considering the running direction of the saw chain. The cutting teeth on the upper side of the bar must point in forward direction (see Fig.3.).
- Put the free end of the saw chain over the chain driving wheel (13.1).
- Place the bar such as that the long hole in the bar is placed exactly on the guiding element in the bar seat.
- Take care that the saw chain tensioning bolt (13.2) is seated exactly in the small opening in the bar (Fig 2). It must be visible through the opening. If necessary, adjust the knurling wheel of the saw chain tensioning device (2) in both directions until the saw chain tensioning bolt is seated in the opening in the bar.
- Check whether all chain links are seated exactly in the bar's groove and the chain is lead around the saw chain driving wheel correctly.
- Put the gear cover (3) back on and push it in place.
- Moderately tighten the T-screw (4) by turning it clock-wise.
- Tension the saw chain. To do so turn the knurling wheel upwards (+ direction of arrow). The saw chain should be tensioned such that it can be lifted by about 3mm in the middle of the bar (Fig.3). To decrease the saw chain tension turn the knurling wheel downwards (- direction of arrow).
- Finally, tighten the T-screw (4) hand tight.
- The tension in the chain has a major effect on the service life of the cutting fittings, and must therefore be checked regularly. When the chain warms up to operating temperature it will expand and must be re-tightened. A new saw chain will have to be tightened more frequently until it has reached its full length.



## 8. ASSEMBLY

### Caution:

During the running-in period, the saw chain must be more frequently tightened. The saw chain must be immediately re-tightened if it shakes or leaves the groove!

- To tension the saw chain, slightly loosen the T-screw (4). Then turn the knurling wheel (2) upwards (+ direction of arrow). Tension the saw chain such that it can be lifted by about 3mm in the middle of the bar, as shown in Fig. 3.
- Elevate the tip of the guide bar, keeping light pressure down on the front of the power head while tightening the T-Screw (4) fully.
- When operating a new saw chain, stop and check the tension after a few minutes work (with the motor stopped, disconnected and blade brake applied). This is necessary due to initial stretch being taken up in the saw chain links.

### Warning:

A loose saw chain is dangerous and may result in a serious accident.

## 8.2 LUBRICATION (FIG.5)

### Filling the oil tank

The chainsaw must never be operated without sufficient oil on the saw chain as this could cause damage to the saw chain, guide bar or motor. No claims for guarantee can be accepted if damage occurs when the device is being operated without saw chain oil.

**Please use only biologically-based chainsaw oil, i.e. oil which is 100% biologically decomposable.**

Biological chainsaw oil should be available at your local specialist dealer.

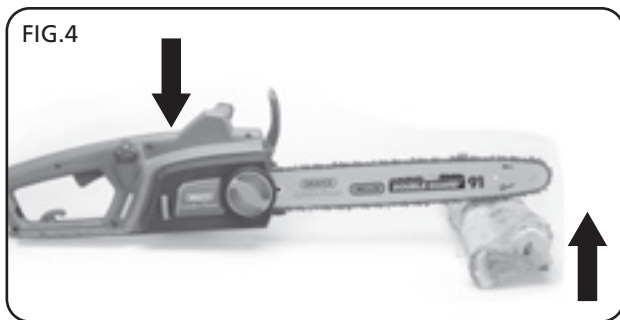
Do not use old oil. This will damage the chainsaw and will also lead to loss of the guarantee.

Before filling the oil tank, pull out the mains plug. Open the filler cap (8) fill approx. 90ml oil into the tank using a funnel and screw on the tank cap tightly once more.

The oil level can be seen in the inspection window. If you plan not to use the machine for a longer period, you should remove the saw chain oil from the oil tank.

The oil tank should also be emptied before the chainsaw is transported or dispatched.

Check correct functioning of the chainsaw before commencing work. Switch on the saw with cutting fittings assembled and hold over a bright background at a safe distance (be careful not to come in contact with the ground!). A track of oil will show you that the saw chain is sufficiently lubricated.



# 9. OPERATION AND USE

## WARNING:

**DO NOT START THE CHAINSAW UNTIL IT IS FULLY ASSEMBLED, CORRECTLY ADJUSTED AND ALL FUNCTIONS AND CONTROLS ARE FAMILIAR.**

## Note:

For first time users of this type of equipment, it is essential that introductory training is undertaken from an experienced and authorised person. Initial cuts should be on logs secured on a saw horse or cradle.

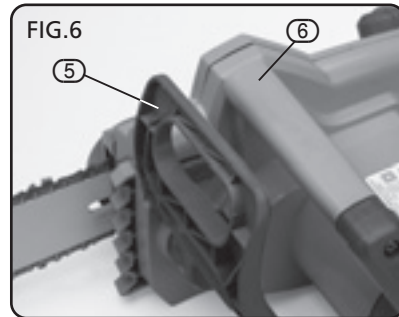
### 9.1 CHAIN BRAKE (FIG.6):

This chainsaw is equipped with a mechanical brake for the saw chain. In the case of uncontrolled movements, when the tip of the saw blade gets in contact with the wood or a solid object, the drive of the saw chain is immediately stopped by activation of the chain brake (5), the motor will not be stopped. This brake function is initiated by the back of your hand on the front handle (6) pushing the brake. The proper function of the saw chain brake shall be checked before each use of the saw.

#### Caution:

**No buttons should be pressed when the chain brake is released (hand protection pulled back in the direction of the handle and locked) .**

Always ensure before starting the chainsaw that the chain brake (5) is locked in the operating position. To do this, pull back the chain brake towards the handle and release.

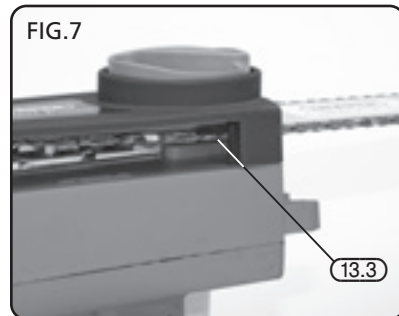


### 9.2 RUNDOWN BRAKE:

In accordance with the latest regulations, this chainsaw is equipped with a mechanical rundown brake. This brake is connected to the chain brake and stops the running chain after the chainsaw has been switched off. It is activated by releasing the ON/OFF switch. The rundown brake avoids injuries through the coasting of the chain.

### 9.3 CHAIN CATCH BOLT (FIG.7):

This chainsaw is fitted with a chain catch bolt (13.3). If the chain breaks when the saw is in operation, the chain bolt will catch the loose saw chain end and thus prevent injury to the operators hand.



## 9. OPERATION AND USE

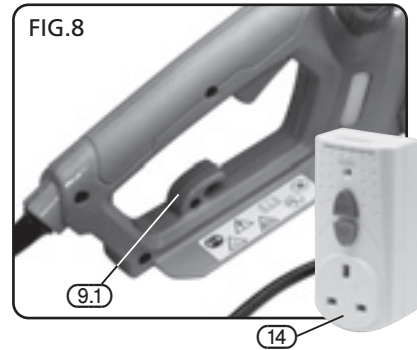
### WARNING:

**DO NOT START THE CHAINSAW UNTIL IT IS FULLY ASSEMBLED, CORRECTLY ADJUSTED AND ALL FUNCTIONS AND CONTROLS ARE FAMILIAR.**

### 9.4 CONNECTING THE CHAINSAW (FIG.8):

We recommend to operate the chainsaw in connection with a residual current operated device (14) with a maximum breaking current of 30mA.

To protect the connection cable from strains this chainsaw is equipped with a strain relief. Form a tight loop through the opening on the rear side of the handle. Put the loop over the strain relief hook (9.1).



### 9.5 SWITCHING ON (FIG.9):

Use your thumb to push the locking button (7) located on the upper side of the rear handle, then squeeze the operating switch (9).

The locking button is a safety mechanism and does not need to be pressed again after the device is running.

To switch off the device, release switch (9).



### ATTENTION:

**THE SAWING CHAIN WILL START RUNNING AT HIGH SPEED IMMEDIATELY. WHEN PUTTING THE SAW DOWN, MAKE SURE THAT THE CHAIN NEVER GETS IN TOUCH WITH STONES OR METAL OBJECTS.**

### Note:

The motor will not run with the chain brake engaged. To stop the chainsaw release the trigger or activate the chain brake.

If pausing for more than a few seconds, engage chain brake. Do not move more than three paces without engaging the chain brake. Transport the chainsaw with the guide bar sheath in place.

With the chainsaw disconnected from the power supply occasionally check the tension to avoid using the chainsaw with a loose chain. During use always positively engage the bumper spikes into the bark to safely perform the cut.

At regular intervals, and more regularly if cutting along the grain, (with the machine unplugged and switched off) check and clear the area behind the blade cover.

Saw dust and oil residue will cause a build up which will reduce the machines efficiency.

### Note:

Check before cutting that nothing will impede the cut, for example wire fence.

## 9. OPERATION AND USE

**WARNING: CHAINSAWS POSE A SIGNIFICANT HEALTH AND SAFETY RISK EVEN TO CAREFUL AND TRAINED OPERATORS.**

### 9.6 PERSONAL PROTECTIVE EQUIPMENT (PPE) (FIG. 10)

Due to the nature of chainsaw, no PPE equipment can provide 100% protection against chainsaw cuts.

Equipment specifically designed for use with a chainsaw shall be worn, consisting of;

- A safety helmet with mesh visor and ear defender to protect against falling/thrown debris and the high levels of noise generated.
- Gloves with additional protective guard material on the back of the left hand to defend against chain whip in the event of breakage.
- Trousers or chaps with leg protection incorporated into the front/side. In case of contact with a moving saw chain the clogging material is designed to stop the saw chain before it penetrates fully through and into flesh.
- Safety boots with a good non-slip tread incorporating protection to toes and shins.
- High visibility jacket. Some jackets incorporate the clogging material like the trouser, but in any event, should be close fitting.

All this equipment should be tested to relevant international and European standards, and marked accordingly. The gloves, boots and trousers should be additionally marked with symbol, also indicating the chain speed to which they have been tested.

#### **Attention!**

Fully read and understand the general safety instruction section of this manual before proceeding.

### 9.7 HOLDING THE CHAINSAW (FIGS. 11 AND 12)

Do not be afraid to hold the chainsaw power head close in to the body. In this position the weight of the saw will be easy to bear and in the event of a kickback will be more controllable. Firmly grip the rear handle with the right hand pulling it tight in to the hip/thigh.

With the left hand grip the front handle with thumb on the under side. In this position with the body turned slightly toward the saw, should a kickback occur. The left arm will be stronger to brace against the force of the kickback or if unable to withstand, the saw chain should avoid the face/head.

Try to work at hip height, or if unable to do so, bend the knees instead of the back. This will be more comfortable and a safer stance to adopt.

FIG. 10



FIG. 11



FIG. 12





# 9. OPERATION AND USE

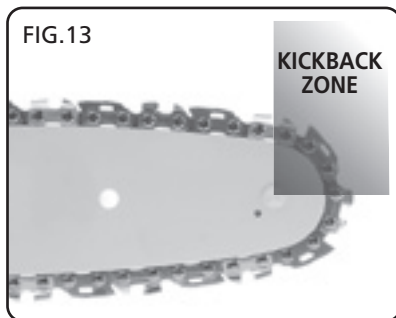
## 9.8 KICKBACK (FIG.13)

### Definition: Kickback –

**Rapid upward and/or backward motion of the chainsaw which can occur when the moving saw chain near the tip of the guide bar contacts an object such as a log or branch.**

Kickback is the most common hazard associated with chainsaws and can result in serious injuries even fatality. This chainsaw features an Inertia activated chain brake and a manually triggered chain brake. In the event of a particularly strong kickback, the brake lever will trigger the chain brake. If the kickback is less the chain brake lever will activate on the operator's left hand (hence the necessity to always operate the saw two handed). There are different types of kickback and a couple of other associated risks.

- Because the chainsaw is driven along the top of the guide bar away from the power head contact with the kickback zone can translate the saw chain movement in the opposing direction on the guide bar. This is particularly the case if the saw chain becomes pinched or snags in the kickback zone of the guide bar.
- Another kickback danger can result in the chainsaw being forced horizontally back toward the user. Kick back of this nature is the result of the saw chain along the top of the guide bar being pinched, translating the force backward through the guide bar.
- The opposite to kickback is having the chainsaw pulled away. Pull-in can be a result of the saw chain pinching along the bottom of the guide bar. As the saw chain along the bottom of the guide bar is returning to the power head, the transiting force pulls the chainsaw from the operators hands.
- In addition to these risks are skatting and bouncing which can lead to a loss of control of the chainsaw.
- If the saw chain fails to make an initial incision it can move sideways along the timber 'skatting' and 'bouncing'. This sideways movement can result in off balancing or overstretch and further loss of control or contact with the guide bar tip on another limb causing a 'kickback'.
- To avoid kickback occurring, do not use the tip of the guide bar. Take note of foreign objects and other branches/limbs close to the area being cut. Note: They may not be in your line of sight. Always make the initial cut on the tension surface of the timber and use non-metal spreading wedges to avoid the timber pinching the saw chain. Always begin cutting at full speed and ensure the body of the saw, in particular, the spiked bumper is against the timber. Cut only one piece of timber at any time and observe the timber while making the cut to ensure the tension was assessed correctly. Hold the chainsaw firmly as described. Maintain a good firm stance and do not over reach.
- Do not cut over head height.
- The use of low kickback saw chain is also advised. These are designed specifically to help reduce the factors leading to kickback.
- Do not solely rely on the chain brake to stop an accident occurring or chainsaw PPE to avoid injury.



## 9. OPERATION AND USE

- If unable to safely and satisfactorily resolve these issues, have a certified trained professional carry out the tree felling.
- The direction can be changed from that intended by factors such as wind, sloping terrain, tree growth (leaning, heavy limb structure one side and decay) etc. Failure to observe these factors or account for them can result in severe injury or fatality.
- Plan an escape route and ensure all scrub, debris and undergrowth is cleared so an unimpeded escape can quickly be made to safety if the felling direction unexpectedly changes.
- Delimb the tree up to shoulder height of all branches. If the tree has large buttress roots (15) also remove these to enable the direction notch to be cut as close to the ground as possible.

FIG.14

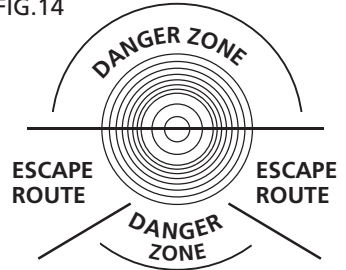
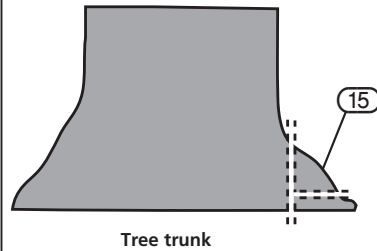
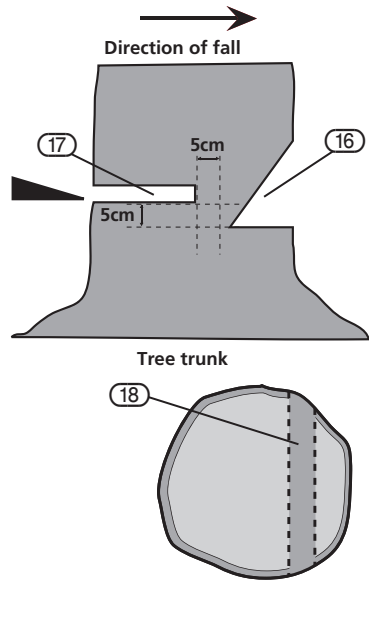


FIG.15



- The direction notch (16) should be started at 45° down into approximately one third the trees diameter. Cut the bottom of the notch at 90° and remove the wedge. On the opposite side of the tree and 5cm higher than the bottom of the notch, the felling cut (17) should be made at 90°. This cut must be made in one go and stop 5cm from the back of the notch. This creates the hinge which is very important as it helps control the felling. The hinge (18) must be parallel. Use the spiked bumper to obtain a firm grip and leverage while performing these cuts.
- The use of wedges should be employed to prevent the saw becoming pinched and to complete the fell safely.

FIG.16

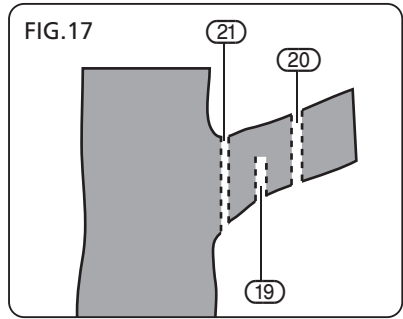


# 9. OPERATION AND USE

## 9.9 DELIMBING (FIG.17)

Refer to general safety instructions for preparatory and specific warnings.

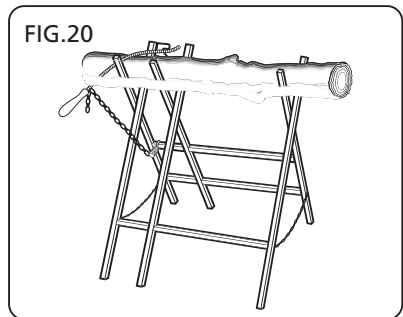
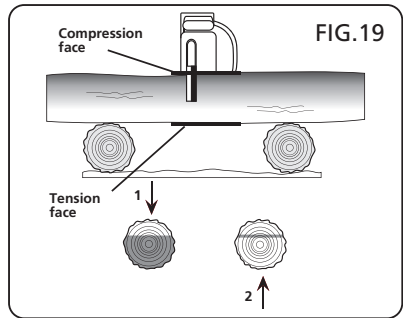
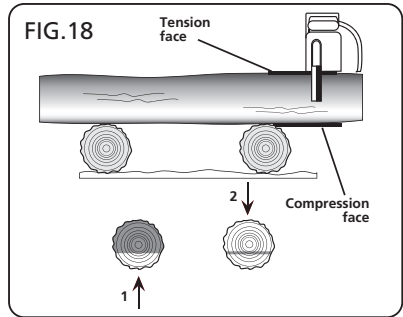
- When removing smaller branches with a single cut, keep the tree between you and saw chain.
- For larger limbs make three cuts. The initial cut (19) in the tensioned underside of the limb one third of the way through. Use a pushing chain (the top of the guide bar) for this.
- The second cut (20) will be made all the way through with the underside of the guide bar.
- The third cut (21) is only necessary if the tree is not being felled, to leave a neat collar.
- On a felled tree always work from butt to tip with the tree on your right side. Always work with the trunk between you and the guide bar.



## 9.10 CROSS CUTTING/BUCKING (FIG.18-20)

Refer to general safety instructions for preparatory and specific warnings.

- Regardless of the supporting method, when cross cutting the compression face of the timber must be initially cut followed by a secondary cut from the other side to meet completing the cut. The initial cut should be one third the diameter and the secondary cut two thirds.
- Incorrectly assessing the tension can result in the saw chain pinching or the timber splintering.
- For smaller logs always employ the use of a log saw stand/horse. Smaller logs must be secured before cutting commences as the saw chain speed can cause the log to move and possible kick up.
- Use the spiked bumper to obtain a firm grip and leverage while performing all cuts.



## 9. OPERATION AND USE

### 9.11 SAW CHAIN

- The chainsaw is designed for cutting timber only. Do not allow the saw chain to come into contact with the ground as dirt and soil will dull the saw chain almost immediately. Hard wood will also rapidly dull the saw chain.
- When the saw chain is properly sharpened, work will not be tiring, the cutting yield is high, and there is no abnormal wear on the mechanical parts or the bar.

### 9.12 SHARPENING (FIG.21)

- Sawdust instead of chips is an indication that the saw chain needs sharpening or replacing.
- Before sharpening, the saw chain must be made taut by means of the saw chain tensioner.
- After sharpening, slacken and adjust the saw chain as per the mounting instructions.
- During sharpening, lock the chain using the brake.
- Use a round file specific for the chain fitted. Observe the sharpening angle (Fig.21 parts 2, 3, 5, 7, 8).
- Sharpen by filing from the inside outwards (Fig.24 part 9) all the teeth on one side and then all the teeth on the other.
- Position the file to project 20% of its diameter above the cutter (Fig.21 part 6).
- Make sure every cutter is filed to the same length and angle, and that all depth gauge links are the same height (Fig.21 part 1).
- Inconsistent angles can result in a poor cut or endanger the user. Seek advice from a professional if unsure.

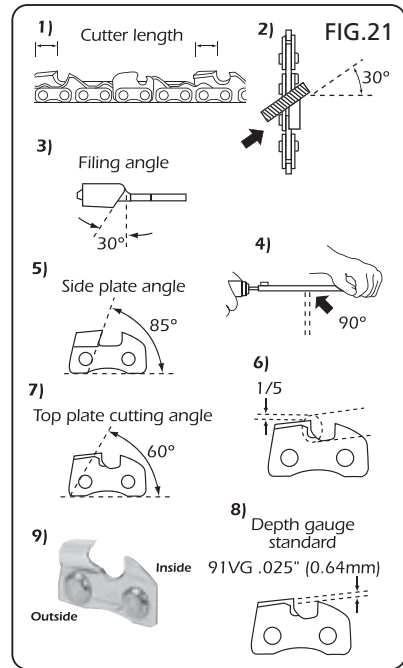
### 9.13 BAR MAINTENANCE (FIG.22)

- Periodically clean the chain run groove and oil passages.
- Lubricate the sprocket wheel with bearing grease.
- Reverse the guide bar on a regular basis to ensure uniform bar wear.
- Burring of the guide bar rails is normal. Remove these burrs as appropriate with a flat file.
- The guide bar should be replaced when the saw chain run groove is worn, the bar is damaged or if excessive burring or heating occurs.

**Note:** Do not carry out repairs on the machine if you are not qualified to do so with the exemption of the items listed in this maintenance section.

**Danger:** In order to maintain the original safety features, do not make any changes to the machine. In case of repairs, use only genuine spare parts.

- Before each use check that there are no loose or damaged parts, cracks and signs of wear.
- Have damaged parts replaced by an authorised service agent before using the machine.



# 10. MAINTENANCE & PARTS REPLACEMENT

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## ***10.1 CLEANING & STORAGE***

- Clean the unit after each use. Only use a mild detergent and sponge on plastic surfaces. Do not use aggressive cleaning agents.
- Store in a safe area out of the reach of children.
- Always store or transport the chainsaw with the bar guard fitted.
- Regular inspection and cleaning reduces the necessity for maintenance operations and will keep your tool in good working condition.
- The motor must be correctly ventilated during tool operation. For this reason avoid blocking the air inlets.
- If replacement of the supply cord is necessary this has to be done by the manufacturer or his agent in order to avoid a safety hazard.
- Remove the plug from the socket before carrying out adjustment, servicing or maintenance.

# 11. TROUBLESHOOTING

<b>Problem</b>	<b>Probable Cause</b>	<b>Remedy Suggested</b>
Motor fails to start.	<ol style="list-style-type: none"><li>1. Fuse blown.</li><li>2. RCD tripped.</li><li>3. Chain brake engaged.</li></ol>	<ol style="list-style-type: none"><li>1. Replace/reset time delay fuse or circuit breaker.</li><li>2. Reset residual current device (RCD).</li><li>3. Disengage chain brake.</li></ol>
Saw chain does not move or is tight.	<ol style="list-style-type: none"><li>1. Chain brake engaged.</li><li>2. Saw chain tension excessive.</li><li>3. Insufficient saw chain lubrication.</li></ol>	<ol style="list-style-type: none"><li>1. Disengage chain brake.</li><li>2. Correctly adjust saw chain tension.</li><li>3. Fill oil tank to capacity and regularly monitor level.</li></ol>
Cut time increase and saw dust produced.	<ol style="list-style-type: none"><li>1. Saw chain dull.</li></ol>	<ol style="list-style-type: none"><li>1. Sharpen or replace saw chain.</li></ol>

# 12. EXPLANATION OF SYMBOLS/PICTOGRAMS



Wear ear protection.



Do not use in the rain or leave outdoors while it is raining.



Single value noise marking. (maximum declared A-Weighted sound power level in decibels).



Wear eye protection.



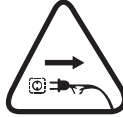
Warning!



Do not use tip of the saw chain to start cut.



Wear personal protective equipment (PPE).



Remove plug immediately if the power flex is damaged or cut.



Attention, kick back.



Hold tool with both hands.



Wear gloves.



Keep bystanders clear of work space.



Pull back to activate chain.



Read instructions before use.



Risk of electric shock.



Push forward to stop chain.



Read instructions before operating.



Class II construction (double insulated).



Do not dispose of WEEE\* as unsorted municipal waste.

\* Waste Electrical & Electronic Equipment.

# 13. DISPOSAL

- At the end of the machine's working life, or when it can no longer be repaired, ensure that it is disposed of according to national regulations.
- Contact your local authority for details of collection schemes in your area.

In all circumstances:

- Do not dispose of power tools with domestic waste.
- Do not incinerate.
- Do not abandon in the environment.
- Do not dispose of WEEE\* as unsorted municipal waste.



\* Waste Electrical & Electronic Equipment.

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