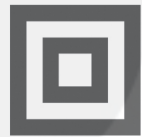
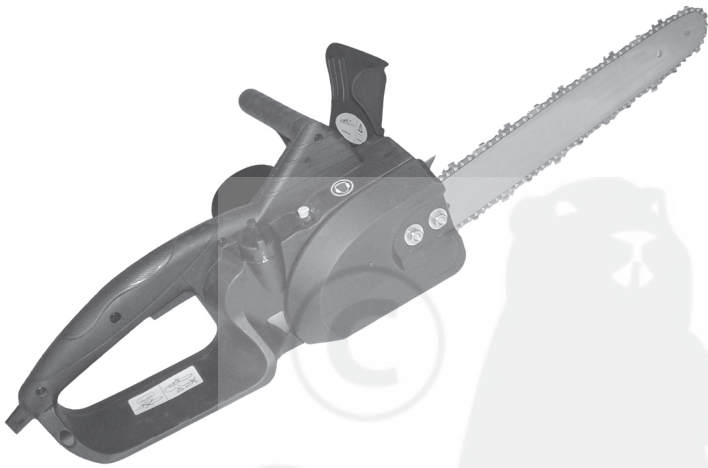


CHAIN SAW

TRC1840



Chain Saw

Use for intended purpose

The chain saw is intended for

- cutting logs, branches, sawn timber and similar material.
- trimming trees and for
- felling trees and cutting branches off felled or fallen trees.

The user bears sole responsibility for any damage or injury that may result from use of the tool for any purpose other than that for which it is intended.

Generally accepted accident-prevention regulations and the enclosed »Safety Instructions« for the avoidance of accidents when working with electric tools must be complied with.

Operating Instructions

Operating voltage

Before putting the chain saw into operation, make sure that the voltage stated on the rating plate is the same as that of your electricity supply.

Fixing name-plates

The saw is double insulated.

If you want to fix a name-plate to the tool, only adhesive labels should be used. You should under no circumstances drill through the motor housing of the saw as this could nullify the double-insulation safety feature.

Signification of the pictograms

The pictograms on the chain saw stand for:

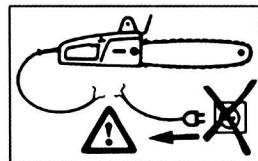


Warning:
Risk of injury
when working
with the tool.

Read these



Use ear protectors when working with the saw.



If the extension cord becomes damaged or is cut by the saw chain, **pull the**

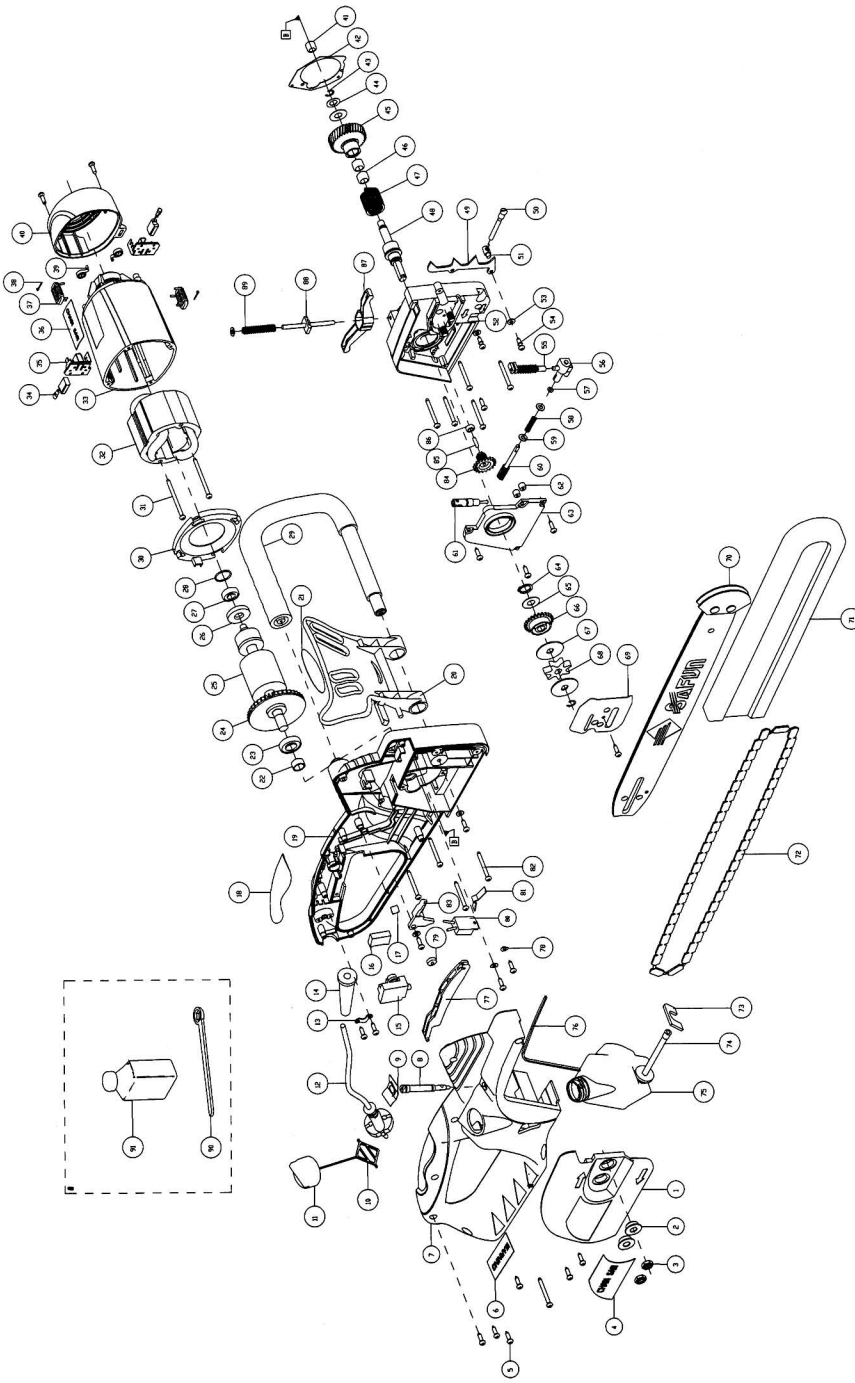
plug immediately from the socket outlet.



The chain saw should **not be used during rain, neither** should it

be left outside by rainy weather.

- 1 oil pipe link
- 2 iron washer
- 3 hexagonal nut
- 4 name plate
- 5 screw
- 6 waring plate
- 7 right handle
- 8 indicator
- 9 oil level mark
- 10 flying ring
- 11 bottle cover
- 12 not dismantle plug
- 13 anchorage(iron)
- 14 cable cover
- 15 switch
- 16 0.33 inductor
- 17 cord lock
- 18 soft skin
- 19 left handle
- 20 brake guard
- 21 waring plate 2
- 22 plastic ring
- 23 bearing
- 24 fan
- 25 armature
- 26 shield ring
- 27 bearing
- 28 "o" ring
- 29 front handle
- 30 wind shield
- 31 screws
- 32 stator
- 33 housing
- 34 carbon brush
- 35 brushes holder
- 36 name plate
- 37 inductor
- 38 inductor block
- 39 cup spring
- 40 rear cover
- 41 needle bearing
- 42 torsion
- 43 shield ring
- 44 washer
- 45 helical gear
- 46 needle bearing
- 47 torsion
- 48 spindle system
- 49 retaining block
- 50 screw
- 51 adjust pin
- 52 gear box
- 53 flat washer
- 54 spring washer
- 55 injection pipe
- 56 oil pipe link
- 57 O ring
- 58 clyinder spring
- 59 flat washer
- 60 worm gear
- 61 adjust link rod
- 62 elastomer
- 63 gear box cover
- 64 shield ring
- 65 washer
- 66 gear
- 67 washer
- 68 sprocket
- 69 oil resistance plate
- 70 guide plate
- 71 guide plate sheath
- 72 chain
- 73 sponge block
- 74 oil output pipe
- 75 oil bottle
- 76 normal retaining plate stampingsteel ribbon
- 77 switch button
- 78 washer
- 79 roll wheel
- 80 soft start
- 81 sping
- 82 screws
- 83 link block
- 84 plastic gear
- 85 cylinder pin
- 86 bearing 694
- 87 brake link rod
- 88 brake rod
- 89 cylinder spring
- 90 hexagonal wrench
- 91 spare oil



Fitting the guide bar and saw chain

If the chain saw is already connected to the power supply: **Pull the plug from the socket outlet.**

Wear protective gloves whenever doing any work on the saw chain.

Unscrew the nuts (2) and remove the drive-sprocket cover (1) (see the picture on the front page).

Bring the chain tensioning pin (12) into its extreme left-hand position (when viewing the tool as in Fig. 1) by turning the tensioning screw (9) anticlockwise as far as it will go.

The direction of rotation of the saw chain is indicated by two arrows on the drive-sprocket cover.

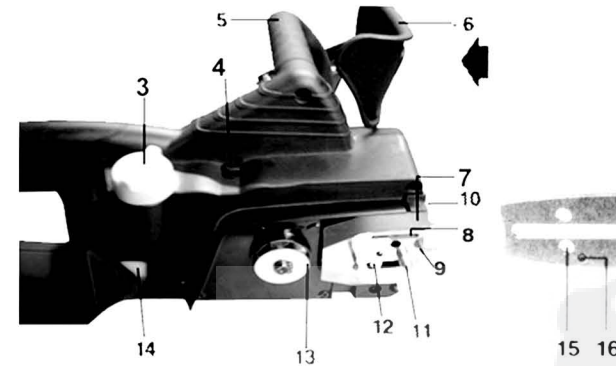


Fig. 1

The chain must be so fitted over the guide bar that the cutting edges of the cutters (a) face in the direction that the chain runs.

the bar that the teeth (b) on the nose sprocket of the guide bar engage into the chain links and the bottom sections of the drive links are situated in the groove of the bar.

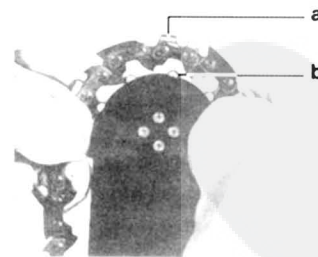


Fig. 2

Then put the saw chain round the drive sprocket (13) and place the guide bar with its slot so onto the threaded studs (11) that the chain tensioning pin (12) engages in the hole (15) in the bar.

Replace the drive-sprocket cover (1) and screw on the nuts (2) but do not yet tighten them.

With the nose of the guide bar turned upwards turn the tensioning screw (12) clockwise to take up any slack in the saw chain.

Hold the guide bar with the nose upwards and place the saw chain so on

The chain is correctly tensioned when it is still possible to raise it by 3–4 mm in the middle of the guide bar (Fig. 3).



Fig 3

After tensioning the saw chain turn the nose of the bar upwards and tighten the nuts (2) firmly.

Lubricating oil for the saw chain

When the chain saw is supplied new, there is **no oil in the oil container** and so the container **must be filled with chain-saw oil** before starting up.

Use for the first filling the chain-saw oil supplied with the tool. This oil is biologically degradable. It allows operating the chain saw at ambient temperatures down to as low as –15 °C.

Never use waste oil for lubricating the saw chain.

To top the saw up with lubricating oil unscrew the filler cap (3). Make sure that no dirt gets into the oil container while filling up. The oil level can be checked through the gauge glass (14).

By means of the set screw (4) it is possible to vary the quantity of oil delivered. When sawing hard and dry timber and when using the entire useful length of the guide bar, set the screw to »+«. For sawing soft and wet timber (or when the guide bar is only partially in action) the oil-flow rate may be re-

duced by turning the screw in the direction of the »-« sign.

Depending on the ambient temperature and the set rate of oil flow, it is possible to work for 15 to 40 minutes with one filling of the oil container. (The capacity of the container is 0.2 litres.)

Power-supply connection

The chain saw has purposely been fitted with a comparatively short power lead to reduce the risk of the lead being cut by the saw chain while working with the tool.

It is best to fit the strain-relief strap supplied between the plug on the saw's power lead and the coupler socket on the extension cord, to prevent the plug from being unintentionally pulled out of the coupler socket.

Before plugging the extension cord into the supply socket check the cord for damage and deterioration. **Never operate the chain saw if the supply lead is not in perfect order.**

The electricity supply the chain saw is connected to should be provided with an earth leakage or residual current device with a tripping current of not more than 30 mA.

Switching on and off

When switching the chain saw on, the hand-protection guard (6) must be in its normal position, i.e. be pressed in the direction of the arrow in Fig. 1 against the handle (5).

The saw is provided with a safety device to prevent it being switched on accidentally. To switch on

- grasp the handle (5) with the left hand,
- with the thumb of the right hand push the locking button at the left side of the switch handle, then

the chain breaking and so it is **important that the saw chain be sharpened in good time.**

It is advisable to have the chain be resharpener by a **competent workshop.**

The relevant angles on the saw-chain cutters are:

side-plate filing angle	85°
top-plate cutting angle	60°
top-plate angle	30°

A 4 mm dia. round file should be used for sharpening the chain.

Guide bar

A small amount of ball-bearing grease should be fed occasionally with a grease gun through the grease holes situated near the four rivets holding the nose sprocket on the guide bar.

The bottom edge of the bar is exposed to relatively heavy wear and so the bar should be turned top to bottom whenever the chain is sharpened and at the same time the groove in the bar and the oil holes (16) should be cleaned.

Drive sprocket

If the teeth of the drive sprocket (13) show any signs of wear, the sprocket should be replaced.

The drive sprocket should be changed with every second replacement of the chain.

Carbon brushes

When the chain saw's brushes are worn beyond a certain limit, a tripping device in the brushes automatically stops the motor.

The brushes should be replaced by a specialist who has the right equipment. The saw can then be given a thorough inspection at the same time and the motor be cleaned

Repairs to electric tools

should always be effected by a trained electrician.

First an **undercut notch** ¹ has to be cut in the trunk of the tree to determine the direction in which the tree is to fall. The undercut, which should have a depth equal to about a quarter of the

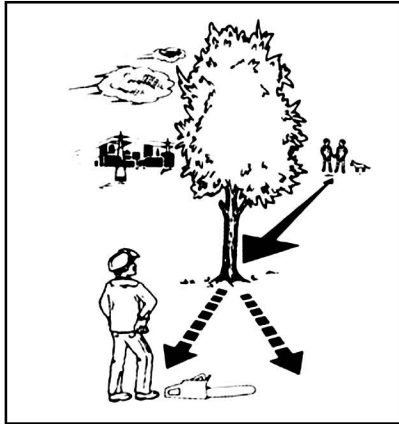


Fig 9

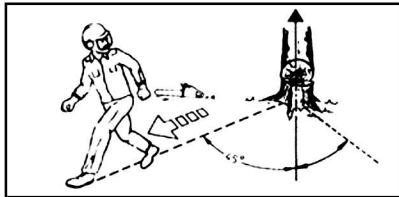


Fig 10

diameter of the trunk, should first be sawn downwards at an angle and then horizontally across to meet the top cut (Fig. 11).

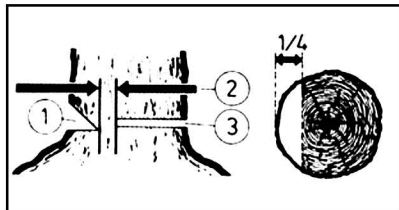


Fig. 11

The **felling cut** ³ should be made

slightly above the level of the bottom of the undercut. This cut should not extend right through but should leave an uncut breakage strip ². Otherwise the tree could fall out of control. The breakage strip should have a width of about one tenth the diameter of the trunk.

Wedges should be driven into the felling cut in good time. Only wedges of wood, aluminium or plastic should be used, **never wedges of iron or steel.**

Re-tensioning the saw chain

When working with the chain saw, the chain expands as a result of the warming. It then becomes slack and may slip off the guide bar.

If the saw chain is tensioned in this condition, *it is very important to release the tension* once the saw work is finished, as otherwise the chain may contract so much on cooling that it will be excessively tight.

Insufficient chain lubrication

If after running the chain saw for about 20 minutes only a little lubricating oil has left the container, the cause may be blockage of the oil duct (8) in the saw and/or the oil hole (16) in the guide bar. If so, they should be cleaned.

To clean the oil duct (8) the cover plate (7) can be removed, if necessary, after unscrewing its fastening screw.

To carry the chain saw

after use, the guide bar and chain should be covered with the chain guard that is supplied with the tool.

Saw chains

Working with a blunt saw chain causes the chain, guide bar and drive sprocket to wear rapidly and may even lead to

- with the locking button still depressed, squeeze the trigger and
- release the locking button.

To switch off release the trigger. (The locking button returns into the locked position.)

The noise that the chain saw *not being fitted with the guide bar and chain* makes while the tool is running down, is quite natural and has no ill effect on the function or service life of the saw.

Running the saw chain in

Before starting to saw, a new saw chain should be run in for 2-3 minutes and then its tension should be checked as detailed under »Fitting the guide bar and saw chain« and the chain be re-tensioned if necessary.

Checking the chain lubrication

Running the saw chain without chain lubrication will quickly damage the chain and the guide bar beyond repair and so you should **always check the oil level before starting up.**

Never run the saw without chain lubrication.

To check the lubricating system switch on the chain saw and hold it with the guide bar and chain above some light-coloured area (an open newspaper will do). A steadily increasing stain caused by oil spray shows that the lubricating system is working properly.

Chain brake

The saw is fitted with a chain brake that brings the saw chain to a stop within a tenth of a second

- if the hand-protection guard (6) is brought into the tripping position
- either manually or,

- while operating the chain saw, as a result of a kickback, by the back of the operator's hand or
- if the chain saw is switched off by releasing the trigger.

When the chain brake has been tripped by actuating the hand-protection guard (6), **do not run the motor of the saw unnecessarily long.** Set the guard immediately back to its normal position.

Before starting any work with the chain saw, be sure to check the proper functioning of the chain brake (by actuating the hand-protection guard and by releasing the trigger).

Particular safety precautions when working with the chain saw

When working with the chain saw, **protective gloves, suitable shoes, leg protectors, eye protectors and ear protectors** should be used.

If the work involves any risk of head injury, a **safety helmet** must be worn. When cutting down trees and cutting off branches of felled or fallen trees, in addition a **face protector** should be worn.

Always pull the plug from the socket outlet before attempting to check or adjust the chain tension, to fit a new saw chain or to correct some fault and whenever moving from one workplace to another.

Never switch on the chain saw unless you have a **firm hold** of the tool, a **secure footing** and are sure that the **guide bar** and saw chain are **not touching anything.**

Always hold the saw with both hands (right hand on rear handle, left hand on handle 5).

Never saw above shoulder height,

while standing on a ladder or in a tree or in any other insecure position.

When sawing timber that has split, take particular care that no small pieces of wood are broken off and thrown by the saw chain.

During breaks, the saw should be laid down in such a way that there is no risk of injury to anyone from the saw chain.

The chain saw should never be lent to or be allowed to come into the hands of persons who are not familiar with the use of such a tool. The operating instructions should also go with the saw.

Kickback

If the upper part of the guide-bar nose should inadvertently be allowed to touch against some rigid object, such as the bole of the tree when sawing off branches, or some immediately adjacent object, a trunk lying close to the one that is to be cut through, for instance, the saw with the guide bar may kick back and upwards against the operator in the direction of the arrow in Fig. 4.

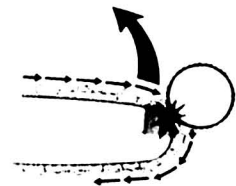


Fig 4

Such dangerous kickbacks can largely be avoided by working quietly and with forethought in the following manner:

- While sawing, always watch the guide-bar nose
- Never attempt to cut with the nose of the guide bar.
- Take care when cutting thin and

springy branches. The saw chain can easily catch against them.

Particular care must be taken when inserting the saw with the guide bar to complete an already started cut.

Push-back

Push-back will occur if an attempt is made to saw with the saw chain at the top of the guide bar, if this part of the saw chain touches against some rigid object or if it jams in the cut.

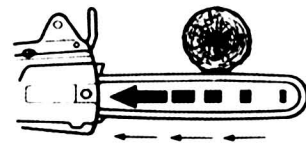


Fig 5

Pull-forward

If the spiked stop is not set against the timber that is to be sawn, the chain at the bottom of the guide bar will pull the saw forward if the chain jams or comes against some solid object in the timber.

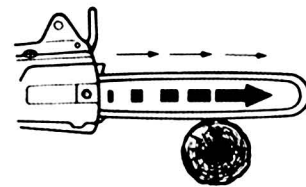


Fig 6

It is thus important to saw with the spiked stop against the timber whenever possible.

How to work with the chain saw

Each time you are about to start work, check that the saw is in perfect condition. It is particularly important to ensure that the guide bar is properly fitted, that the chain is correctly ten-

sioned and that the chain brake is functioning correctly.

Before using the saw for the first time it is advisable to practise cutting logs on a saw-horse or the like.

When working with the chain saw, care should be taken to keep the extension cord away from the saw chain.

Cutting logs, branches, etc.

When cutting timber with the chain saw, the left arm should be kept almost straight. Guide the saw so that no part of your body extends beyond the imaginary line »X« drawn through the guide bar.



Fig 7

Press the spiked stop (10) on the saw against the timber and only then start cutting holding the tool by the handle (5) and raising the switch handle.



Fig. 8

If you cannot cut the timber right through with a single stroke:

- Apply light pressure to the handle (5) and continue sawing and
- draw the chain saw back a little; then

- apply the spiked stop a little lower and
- finish the cut by raising the switch handle.

Withdraw the saw from the cut while the chain is still running.

When cutting timber resting on the ground, never allow the saw chain to cut into soil under the timber; this would dull the chain immediately.

When cutting trunks resting on a slope, the operator should always stand uphill of the trunk.

Trimming trees

When trimming trees, always cut from above to allow the branch to drop away downwards. It may however be useful to cut into the branch from below first.

When cutting off a branch the chain saw should be supported against the bole of the tree if at all possible.

Never attempt to cut off branches with the nose of the guide bar.

Particular care should be taken when sawing through a branch that is under tension and that might spring up and hit you.

To fell a tree

Before commencing to cut down a tree you must be clear where you want it to fall and be sure that there is nothing in the way, such as power lines or a building that could be damaged when the tree falls. No person or animal must be within 2 1/2 tree lengths of the base of the tree concerned.

You should clear two escape routes, each opening out at an angle of about 45° in the direction opposite to that in which you plan that the tree should fall (Fig. 10). These escape routes must be clear and free of obstruction.

TRC1840 Chain saw parts list

Item	Spare parts name	Item	Spare parts name
1	Sprocket cover	46	Spindle
2	Iron washer	47	Retaining block
3	Hexagonal nut	48	Adjust screw
4	Name plate	49	Adjust pint
5	Screw	50	Gear box
6	Warning plate	51	Flat washer
7	Right Handle	52	Spring washer
8	Indicator	53	Injection pipe
9	Oil level mark	54	Oil pipe link
10	Flying ring	55	"O" ring
11	Bottle cover	56	Spring
12	wire	57	Washer
13	Anchorage (iron)	58	Worm gear
14	Cable holder	59	Adjust link rod
15	Switch	60	Elastomer
16	capacitor	61	Gear box cover
17	Cord lock	62	Shield ring
18	Soft skin	63	Washer
19	Left Handle	64	Gear
20	Brake guard	65	Washer
21	Warning plate 2	66	Sprocket
22	Plastic ring	67	Oil resistance plate
23	Bearing	68	Guide plate
24	Fan	69	Guide plate sheath
25	Armature	70	Chain
26	Shield ring	71	Sponge block
27	Bearing 608	72	Oil output pipe
28	"O" ring	73	Oil bottle
29	Front handle	74	Sponge plate
30	Wind shield	75	Switch button
31	Screws	76	Washer
32	Stator	77	Roll wheel
33	Housing	78	Brake spring
34	Carbon brushes	79	Screws
35	Brush holder	80	Link block
36	Name plate	81	Plastic gear
37	Spring	82	Cylinder pin
38	Rear cover	83	Bearing
39	Needle bearing	84	Brake link rod
40	Red paper washer	85	Brake rod
41	Shield ring	86	Blake spring
42	Washer	87	Wrench
43	Helical gear	88	Spare oil
44	Needle bearing		
45	Torsion		