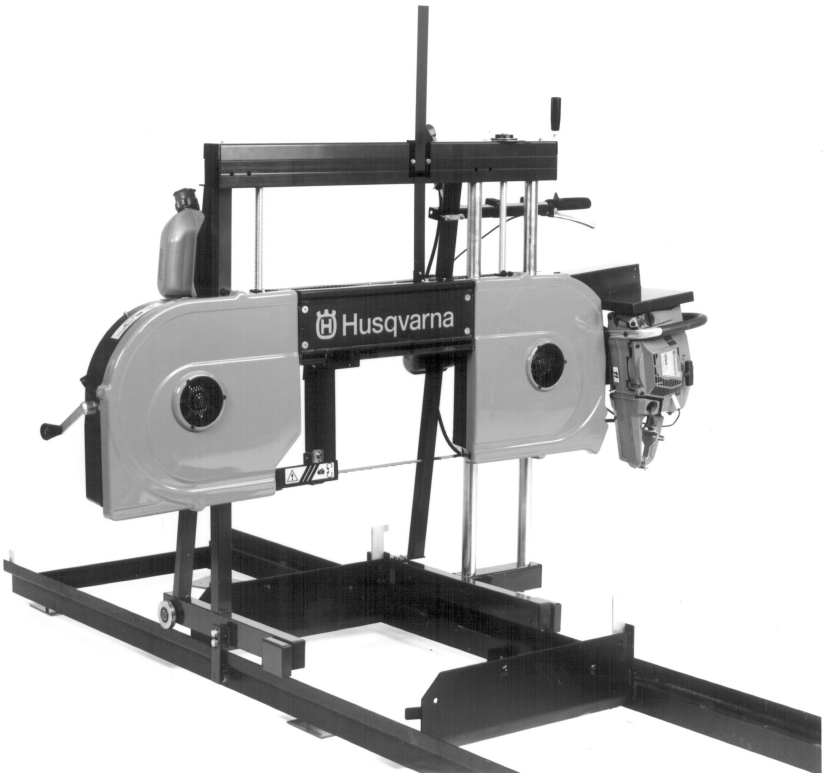

Horizont

Operator's manual

Read through this manual carefully and make sure that you have understood the contents before you use the one-man sawmill.

101 89 08-26

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Introduction

This instruction manual describes in detail how to use and service the one-man sawmill and how periodic checks are to be carried out. It also describes what measures should be taken to ensure maximum safety, how the safety devices are de-signed, how they function, how to check and examine them, and carry out repairs, if required.

CAUTION! The section concerning safety must be read and understood by everyone who installs, uses and repairs the sawmill.

The instruction manual covers the installation, the general use and the various maintenance meas-ures to be carried out by the user. If more thorough service or fault tracing is required, this must be carried out by qualified service personnel. For particulars, get in touch with your local dealer.

The instruction manual contains a description of all the necessary safety devices. This description must be read and understood by the user before assembling the sawmill. In other words, the first measure to be taken after the unit is delivered, is to find and read the instruction manual.

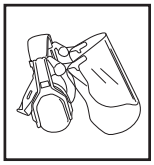
The symbols and warning markings on the one-man sawmill are illustrated on the next page of this instruction manual. If any warning decal has become disfigured or worn, a new one must be ordered at once and fitted to the unit as soon as possible. This will ensure best possible safety when using the one-man sawmill.

The one-man sawmill should only be used for sawing boards and planks from logs.

SYMBOLS USED

Symbols

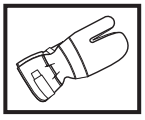
The symbols illustrated below appear in this user's manual. These symbols indicate the appropriate equipment that must be used for each application, and are as follows:



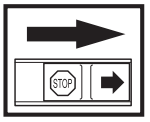
Eye and ear protection must be used.

Boots or work shoes with steel toe cap and non-slip soles must be used.

Protective eye glasses must be used.



Protective gloves must be used.



Checks and/or maintenance must be carried out with the motor de-energised, i.e. with the shut-down switch in the "STOP" position.

Warning markings

The one-man sawmill has decals with the symbols illustrated below. The first three symbols indicate the equipment that must be worn when sawing, and are as follows:

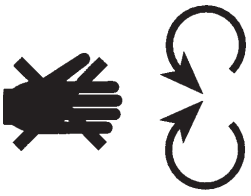
Eye and ear protection must be used.

Protective gloves must be used.

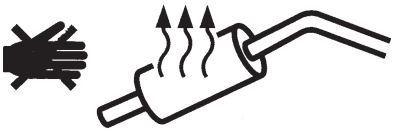
Boots or work shoes with steel toe caps and non-slip soles must be used.

Read through this instruc-tion manual carefully and make sure that you have understood the contents before you use the one-man sawmill.

Exercise the greatest caution!



Do not run the unit unless the safety guards are intact and you are wearing saftety gear.



Hot sur-face.

Safety instructions

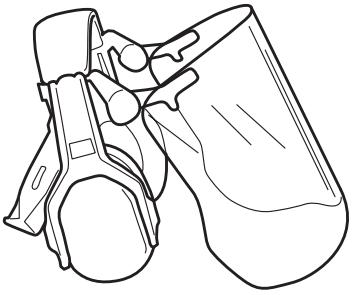
WARNING!
If the one-man sawmill is used improperly or in a careless manner, it may become a dangerous tool, which can cause serious, even grave, injury. It is therefore vital, that the persons, who will be using the one-man sawmill, read and understand the contents of this manual.

WARNING!
Provide sufficient ventilation. Exhaust gases and sawdust can be harmful and cause allergies.

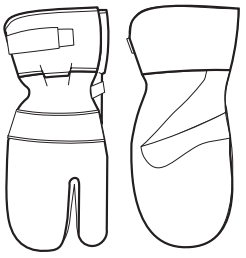
Personal protective equipment

The user(s) of the one-man sawmill or those spending time in the immediate viscinity of the sawmill must wear safety equipment of the type illustrated below:

1. Ear protection.
2. Eye protection.

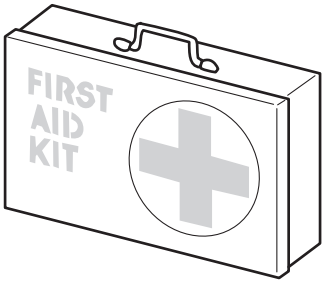


3. Approved gloves with protection against saw cuts.



4. Boots or work shoes with steel toe cap and non-slip soles.

5. First aid kit.



The safety equipment of the one-man sawmill

WARNING!
The one-man sawmill must never be used if any of the safety devices or guards are missing, damaged or out of function.

The sawmill is equipped with a number of safety devices and guards designed to prevent accidents from occurring when using the sawmill. These are described under the general description of the sawmill. See pages 14-15.

The safety devices and guards also require regular checks and maintenance. These measures and the intervalls at which they are to be carried out are given under "Maintenance". See pages 30-44.

Safety when handling fuel

WARNING!
The fuel used in the one-man sawmill has the following harzardous properties:

1. Liquid fuel emits poisonous gas fumes and exhaust gases.

2. Can cause skin irritation.

3. Is extremely flammable.

Special safety regulations apply to handling the fuel used for running the one-man sawmill. These are specified under "Fuelling" on pages 23-24.

Users

The following applies to persons who use one-man sawmill:

1. The user must have read and understood the content of this user's manual.

2. The user must not be under the influence of alcohol, medicin or be affected by fatigue.

3. Must be an adult.

Risk zone

The risk zone is shown in the figure to the right.
No unauthorised persons may be present within the risk zone.
The risk zone must also be kept free of foreign objects and the ground within the risk zone must be even to prevent stumbling.

Safety during operation

The safety instructions that apply when running the one-man sawmill are given where appropriate in the section.

Before and while using the sawmill, the operator must observe the following safety precautions:

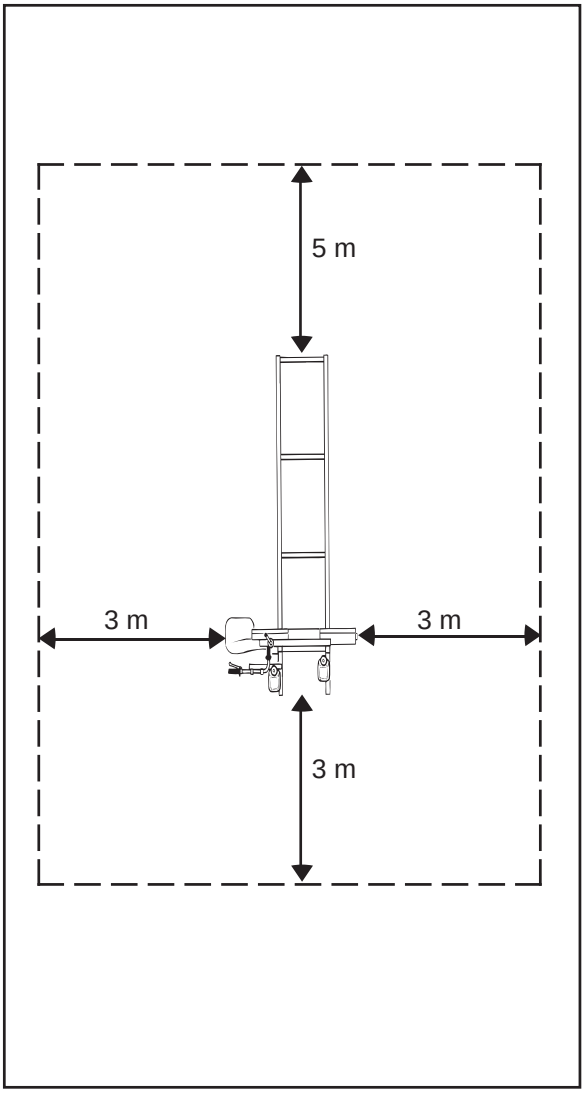
1. Check that all of the safety devices and guards are in place and are faultless.

2. Check that no fuel has been spilled outside the tank or on the ground.

3. See to it that no unauthorised persons enter the risk zone of the one-man sawmill.

4. The stops and the locking devices required for securing the log must be used in the intended manner. See pages 27-29.

5. Adjust the blade guide so that it will be as near to the log as possible. See page 27.



Grinding device

The following safety instructions are applicable to the grinding device:

- Never store petrol in the viscinity of the griding device. Sparks from the grinding disc or the mains electrical connection can ignite petrol fumes.
- The saw blade has sharp cutting surfaces. Be careful to avoid injury. Always wear protective gloves while handling the saw blade!
- The grinding disc must not be running while adjustments are being made on the grinding device.
- If the grinding disc rotates in the wrong direction, it may come off and cause personal injury.
- Check that the grinding disc does not have any cracks and that it is secured on the shaft. Stop the grinding disc immediately if abnormal vibrations arise.
- Use protective eye glasses while grinding!

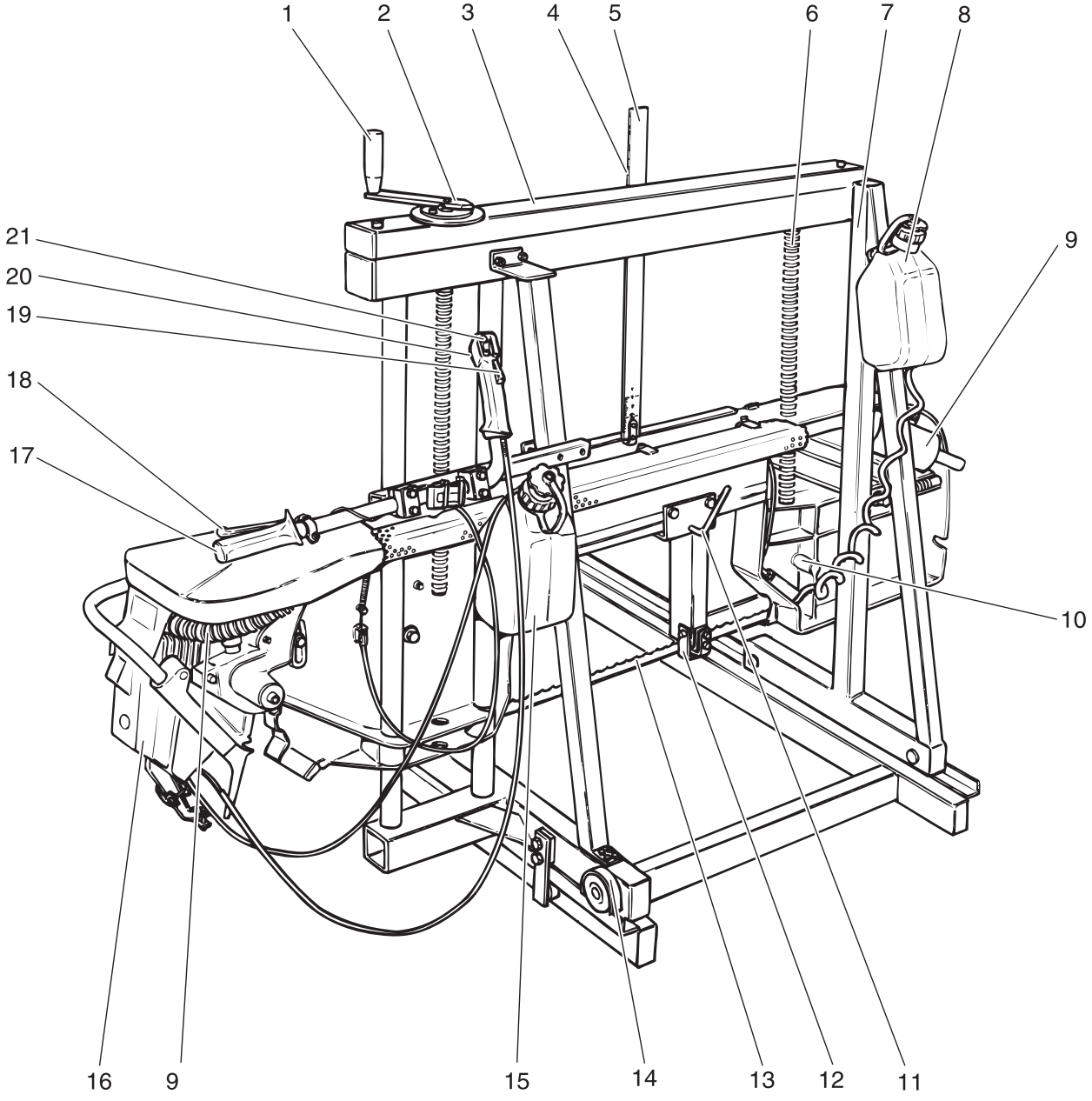
DESCRIPTION

The one-man sawmill consists of two main sections:

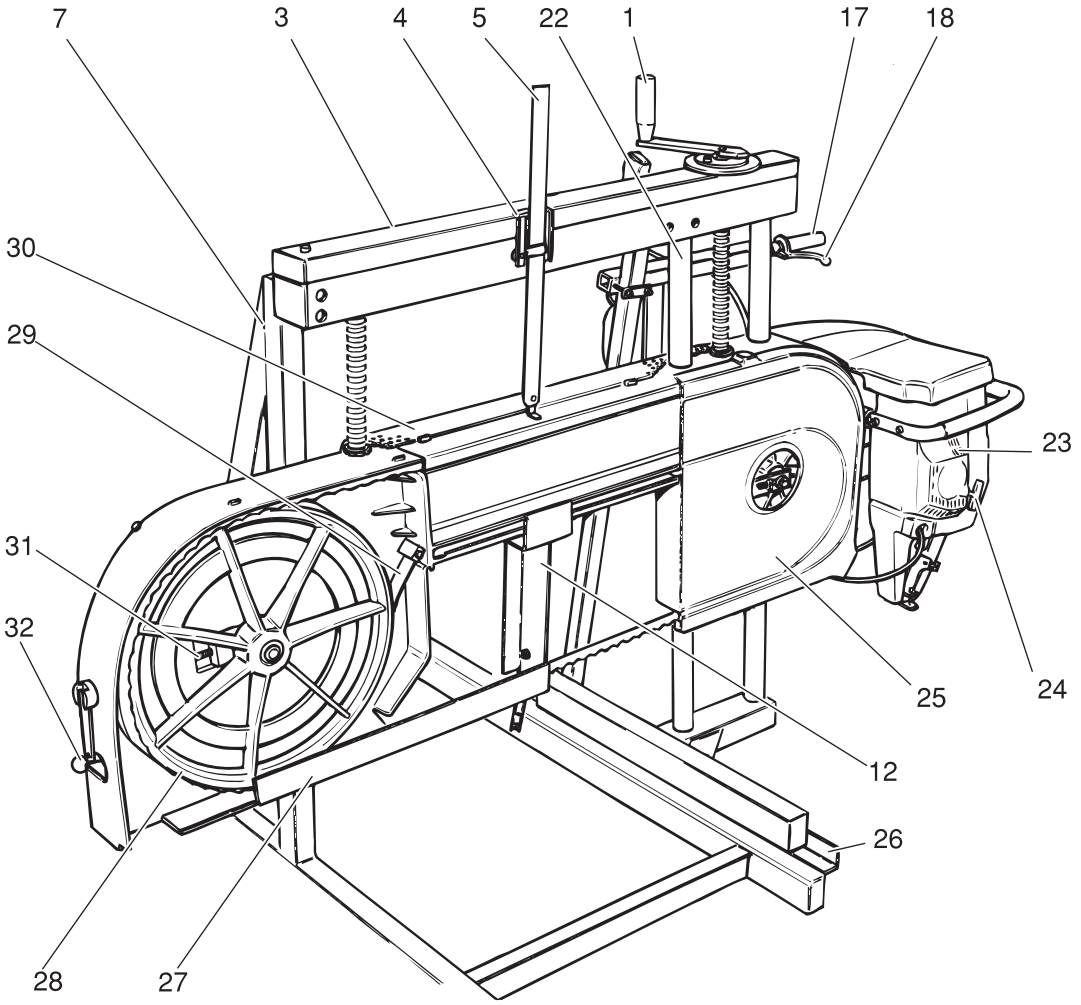
- Carriage with motor and saw
- Rails

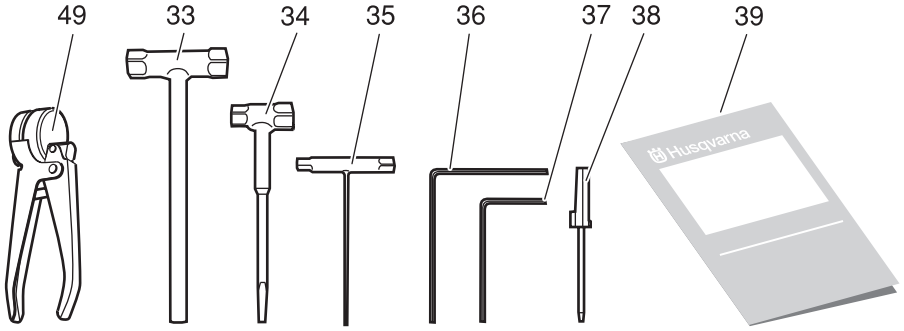
In addition, the band saw is equipped with the necessary safety devices.

1. Crank for height adjustment
2. Pitch disc
3. Chain guard
4. Pointer
5. Scale
6. Height adjustment rod
7. Stand
8. Cleaning liquid tank (saw blade cleaning)
9. Exhaust systemwith muffler
10. Blade lubrication valve
11. Locking device for moveable blade guide
12. Moveable blade guide
13. Saw blade
14. Rail guard
15. Fueltank
16. Motor
17. Steering handle
18. Brake handle
19. Throttle stop
20. Throttle control
21. Stop control (emergency stop)
22. Guide rod
23. Decompression valve
24. Starter handle
25. Blade wheel guard
26. Rail
27. Saw blade guard
28. Blade wheel
29. Scraper
30. Exhaust pipe guard
31. Adjusting of the blade wheel
32. Crank for band tensioning

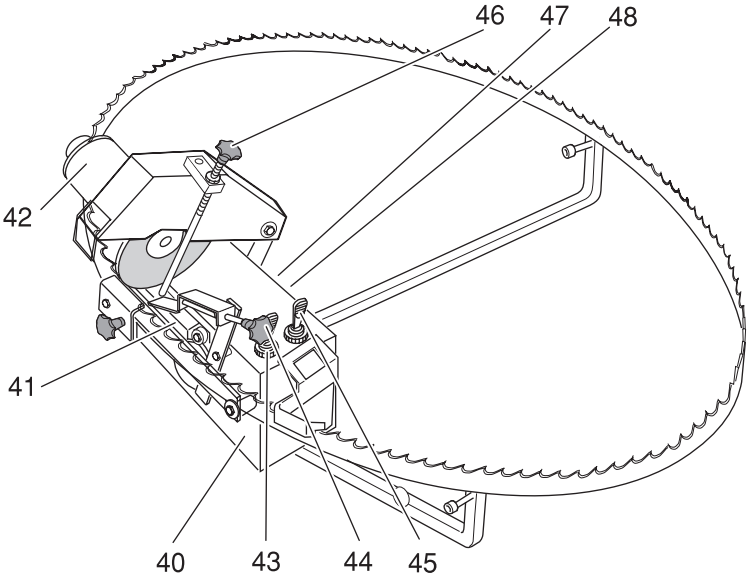


DESCRIPTION



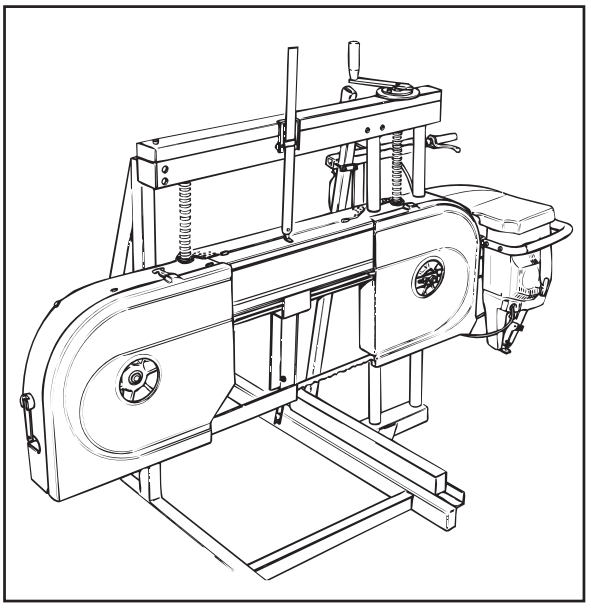


33. Socket spanner
34. Spark plug spanner
35. Combination spanner
36. Allen key 4 mm
37. Allen key 5 mm
38. Screw driver
39. This operator´s manual
40. Fixed section
41. Forward feed device
42. Grinding motor
43. Adjusting knob for forward feed position
44. Starting switch for forward feed device
45. Starting switch for grinding disc
46. Adjusting knob (grinding depth)
47. Locking knob (side plate angle)
48. Pin for locking the side plate angle
49. Setting tongs



Carriage

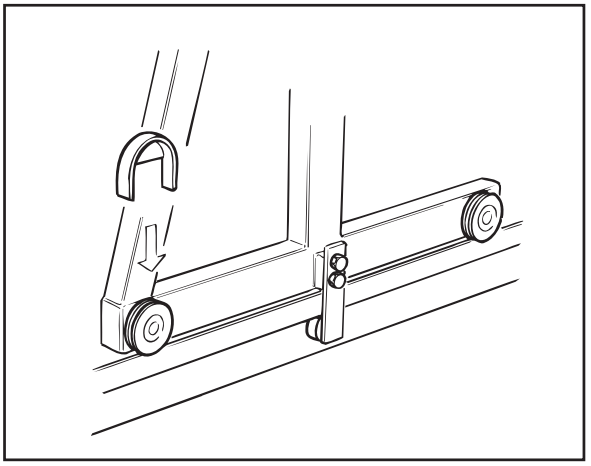
The carriage consists of the following parts:
- Steel construction on wheels running on rails and guide bars for raising and lowering the saw.
- Two threaded rods for adjusting the height of the saw. The rods are united by a chain and are controlled by a crank equipped with a pitch disc.
- Handle with controls
- Saw unit with the following components:
  - Motor.
  - Adjustable saw blade wheel.
  - Saw blade.
  - Moveable blade guide for optimal blade control.
  - Petrol tank for petrol mixed with oil. See "Handling fuel".
  - Tank for cleaning liquid for the saw blade.
  - Muffler.



Stand (7)

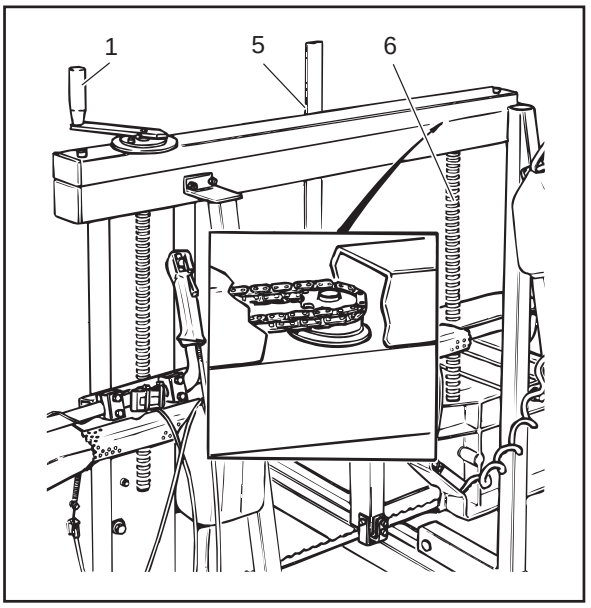
The carriage stand consists of square tubes welded together and equipped with necessary corner reinforcements which ensure stability while sawing.
The stand is equipped with two round guide rods for the upward and downward movement of the saw. The guides transfer the transverse forces of the saw to the stand.

The lower section of the stand has four groove-rimmed wheels journalled in bearings for stability and even movement along the rail.
To prevent the carriage from lifting off the rails, it is equipped with two adjustable guide wheels (bearings), which run along the underside of the rails.



Height adjustment

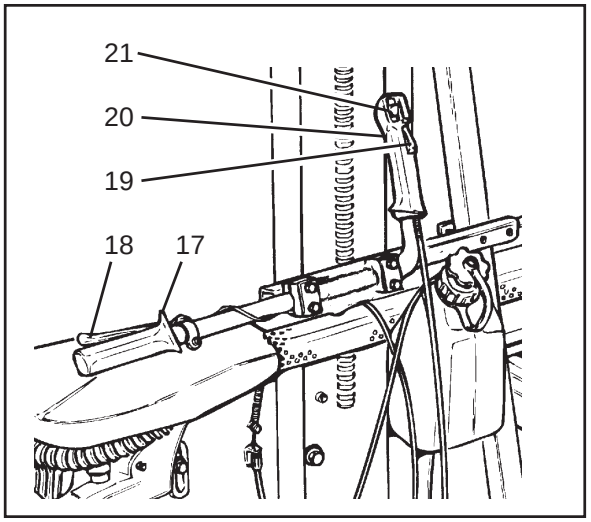
The saw unit is stabilised vertically by two interacting threaded rods (6). The threaded rods are united by a chain for exact and simultaneous movement.
A crank (1) is located on the top end of one of the rods, and is used to set the exact lumber thickness.
One turn of the crank moves the saw blade 5 mm. The saw blade height over the rail cross beams can be read on the scale (5).



Steering handle (17)

The saw carriage can be controlled and steered forward by means of the steering handle located on the left-hand section of the carriage.
The steering handle is equipped with the following controls:

18 Brake handle
19 Throttle stop
20 Throttle control
21 Stop control (emergency stop)

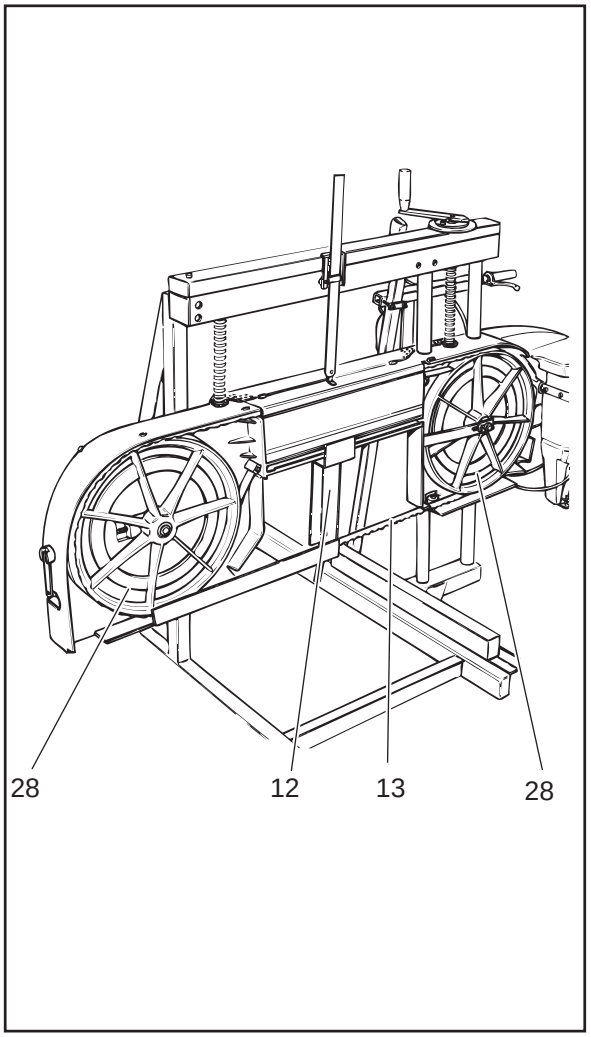


Saw blade wheel (28)

The saw blade runs across blade wheels, made of cast aluminium and balanced for smooth running. The saw blade wheels have bearings, and are adjustable for tensioning and aligning the saw blade.
The saw blade wheels are equipped with scrapers, which prevent sawdust and the like from collecting between the saw blade and the blade wheels.
One of the saw blade wheels is driven across an adjustable drive belt by the motor.

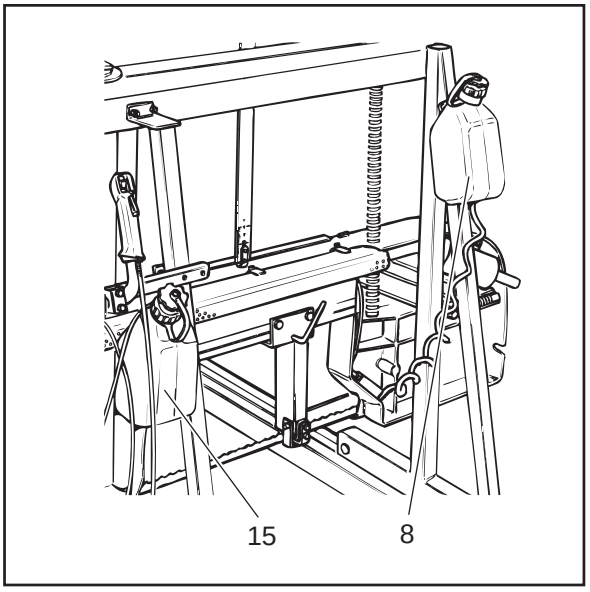
Saw blade (13) and blade guide (12)

Two saw blade guides keep the saw blade correctly positioned on the saw blade wheels while the saw is in operation.
One of the saw blade guides is located in front of the belt-driven saw blade wheel and ensures correct blade entry onto the wheel.
The other saw blade guide is moveable and is located above the the blade before it enters the log. This guide absorbs the forces from the log and prevents the blade from twisting.



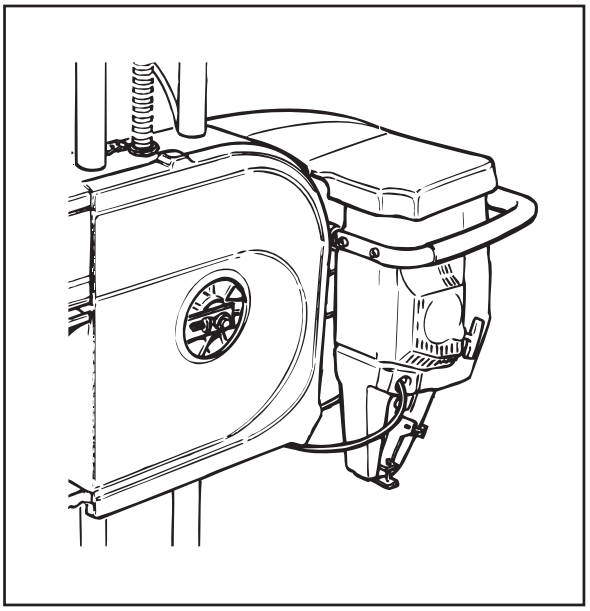
Tanks (8, 15)

The saw carriage is equipped with two tanks. The fuel tank (15) is located beneath the right-hand steering handle
The cleaning liquid tank (8) is located on the right-hand side of the saw carriage and supplies cleaning liquid to the saw blade everytime the brake handle is activated.



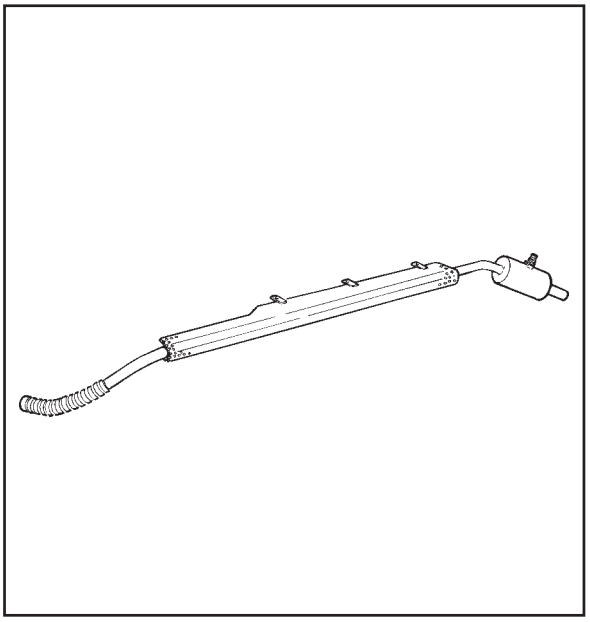
Motor (16)

The one-man sawmill is driven by an air-cooled, two-stroke motor of the type previously and also currently used in our larger chain saws. The motor is equipped with a centrifugal coupling, which causes the saw blade to stop when the motor is idling.
Whenever sawing is in progress, the motor should be run at full capacity (with the throttle fully open).
The carburetor of the motor is adjustable for operation either under normal weather conditions or under cold weather conditions, see under "Winter operation" on page 33.



Exhaust system (9)

The exhaust gases from the motor are discharged away from the operator through the exhaust pipe and muffler.



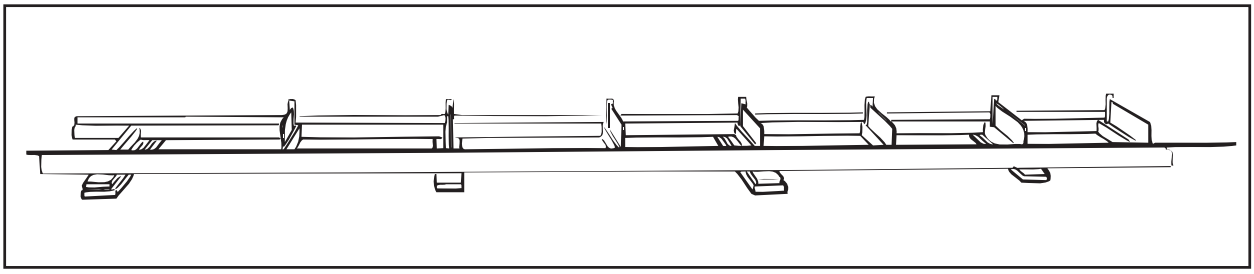
Rail assembly

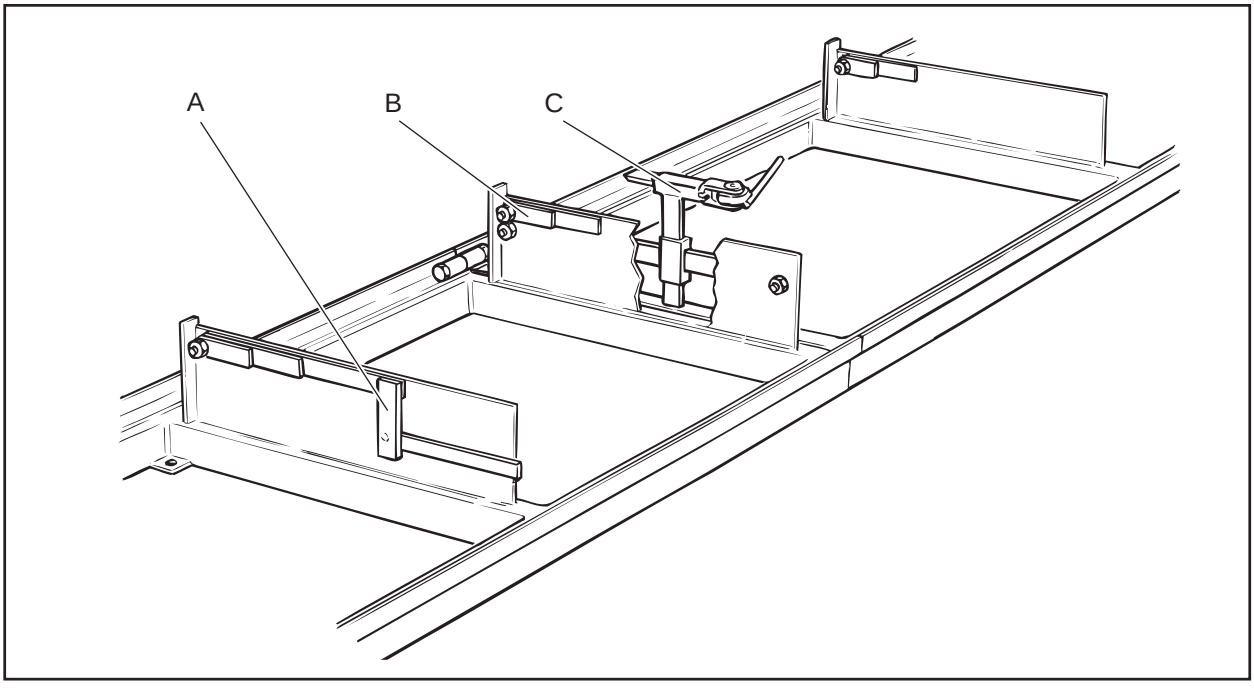
The rail assembly consists of two sections (standard supply). Each section is 3 m long. The sections are to be arranged in-line and screwed together to form a track for the carriage. The rail sections are screwed together and anchored by M 12-screws with nuts. Thish ensures stable and linear carriage movement.

The rails also have a number of supporting cross-beams, which are designed to provide stable support for the log, which is to be sawn into planks or for planks, which are to be trimmed.

The rail cross-beams are equipped with:
- folding stops for the log
- Log locking device
- Log lifter for one end of the log

The rail assembly is also equipped with stops at both ends for the saw carriage and specially adjusted transition pieces at its joints.





Log lifter (A)

The log lifter is designed for raising the smaller end of the log, so that the heartwood will be horizontal.

Folding stop (B)

On the left side of the rails, there are a number of folding stops for holding the log in place. For enhanced versatility, the stops of two lengths are provided.

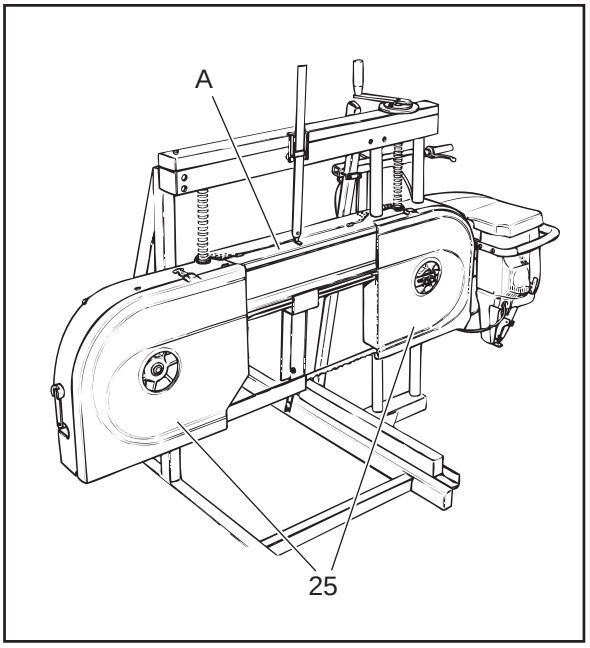
Log locking device (C)

The log locking device consists of an eccentric link with handle, journalled in a moveable unit. The locking device is used for securing the log against the folding stops.

Safety devices

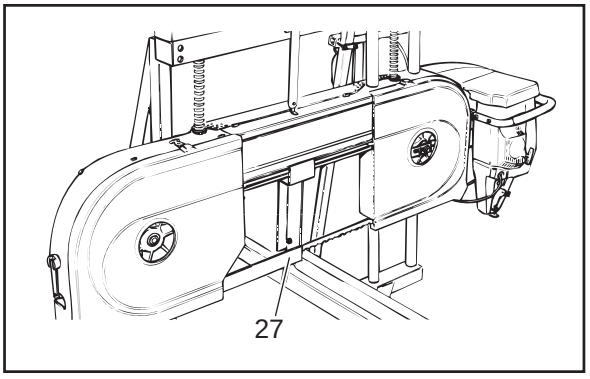
The one-man sawmill is equipped with a number of safety devices, which are described under the coming headings.

WARNING!
The one-man sawmill must not be started up if any safety device has been removed, is defective or is out of function.



Saw blade wheel guard (25)

The saw blade wheels are fitted with a guard (a plastic cowl), one fitted at each wheel. Each plastic cowl is secured by 3 rubber staps which facilitate removal and refitting whenever the saw blade has to be replaced.

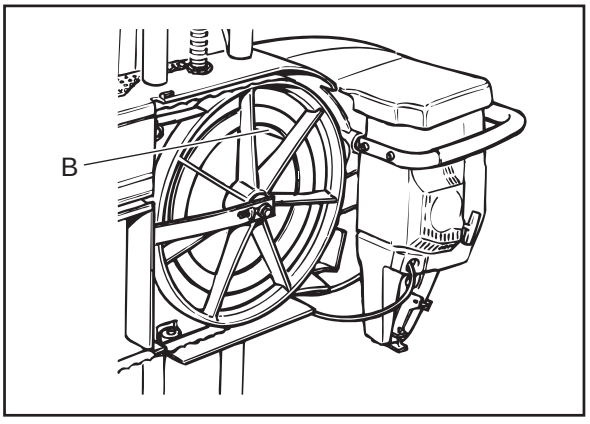


Saw blade guard (upper) (A)

The upper section of the saw blade runs in a slot. The slot is permanently secured to the saw unit.

Saw blade guard (lower) (27)

The section of the saw blade that is not covered by the log during the sawing operation is equipped with a guard, which is mounted on the saw blade guide and is moveable on it.

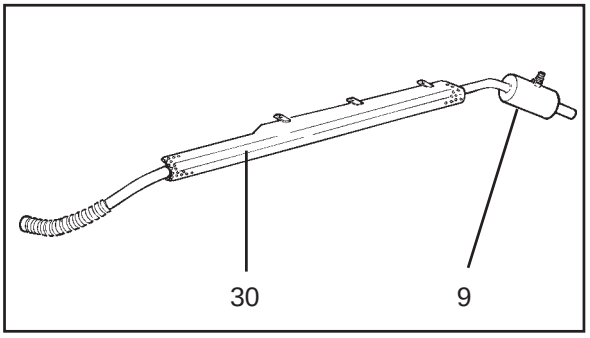


Brake (B)

To enable the saw blade to quickly come to a stop when the brake handle and the throttle are released, the unit has an automatic brake which influences the left-hand saw blade wheel.

Muffler (9)

The saw is equipped with an exhaust pipe and a muffler which reduce noise emitted from the motor and discharge exhaust gases away from the oper-ator.

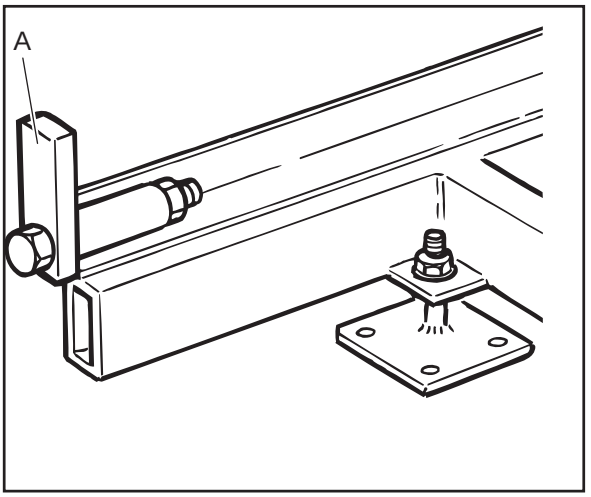


Exhaust pipe guard (30)

The exhaust pipe is equipped with a guard which prevents the operator from coming in contact with its hot surface.

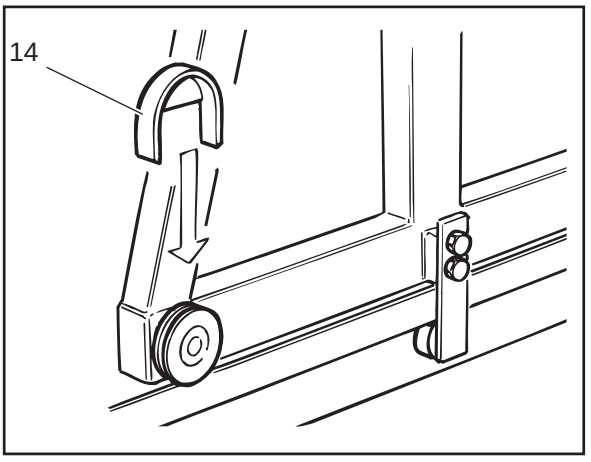
Rail stops

The rails have two rail stops (A) at each end. The stops consist of bolts secured in the rails.



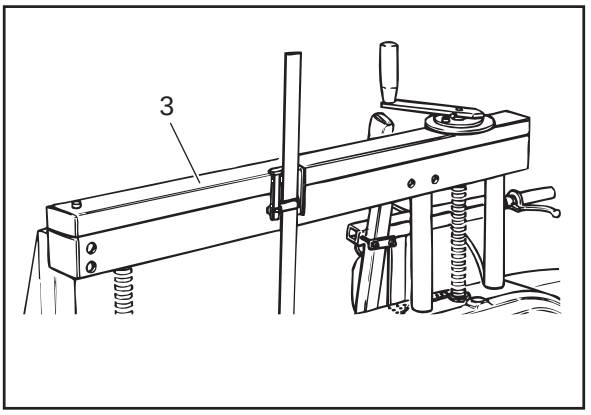
Rail guards (14)

The saw carriage is equipped with four rail guards which run over the rail. The rail guards are de-signed to keep the rail clean and prevent squeeze injuries between wheel and rail.



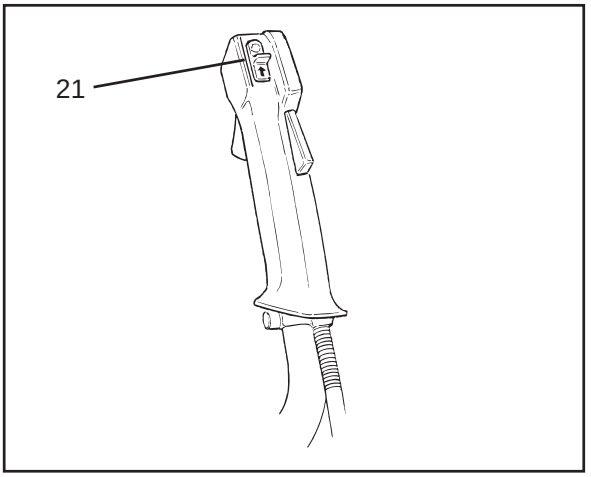
Chain guard (3)

The chain which unites the two threaded height-adjustment rods is equipped with a guard in the form of a plastic cowl, which is secured by two screws.

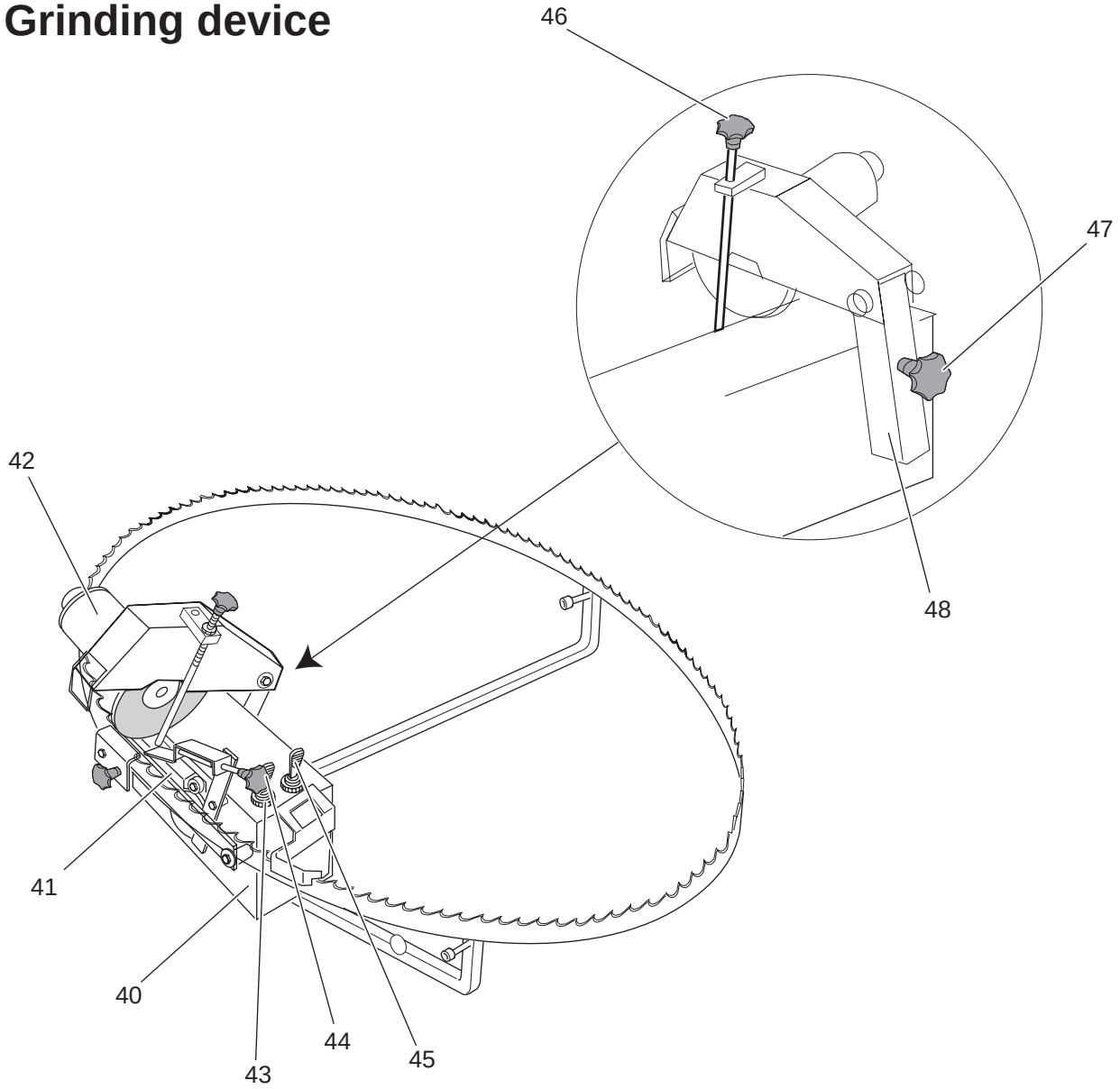


Stop control (21)

A stop control is fitted on the right-hand handle. This control also functions as an emergency stopping device.



Grinding device



The grinding device consists of the following components:

- A fixed section.
- Grinding motor.
- Forward feed device.

The fixed section contains a motor for forward feed of the saw blade and three foldable support arms which form a stable platform for setting up the grinding device. The support arms also guide the saw blade while grinding is carried out.

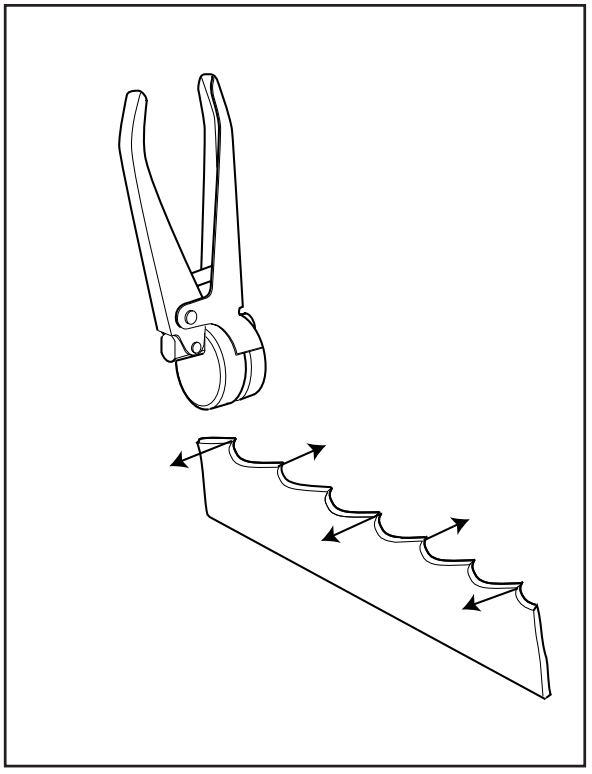
The section with moving parts consists of a motor, grinding disc and arms that secure its position. The section withmoving parts can be adjusted for grinding three different side plate angles: 11°, 15° and 19°.

The forward feed device consists of a cam and levers. The cam is driven by the forward feed motor in the fixed section. The cam influences two levers which both feed the saw blade forward and lower and raise the grinding disc during the grinding operation.

40. Fixed section.
41. Forward feed device.
42. Grinding motor.
43. Adjusting knob for forward feed position.
44. Starting switch for forward feed device.
45. Starting switch for grinding disc.
46. Adjusting knob (grinding depth).
47. Locking knob (side plate angle).
48. Pin for locking the side plate angle.

Setting tongs

The setting tongs are factory-adjusted to set the saw blade teeth at 0,4-0,5 mm.



Unpacking

Unpack the one-man sawmill and check that all of the parts have been delivered.
Check also that none of the parts are damaged. If any parts are damaged, report this to the shipper.
Find the instructions and read them thoroughly before doing anything with the parts supplied.
The instructions provide thorough information about safety, assembly, general use and maintenance of the one-man saw mill.
The parts supplied are illustrated under "Description" on pages 6 and 7.
The supply is divided upp into the following units:

1. Rail sections (quantity as ordered).
2. Split saw carriage with motor.
3. Rail guard, 4 guards
4. Saw blade.
5. Tanks with hoses.
6. Fasteners.

Installation

Installation location

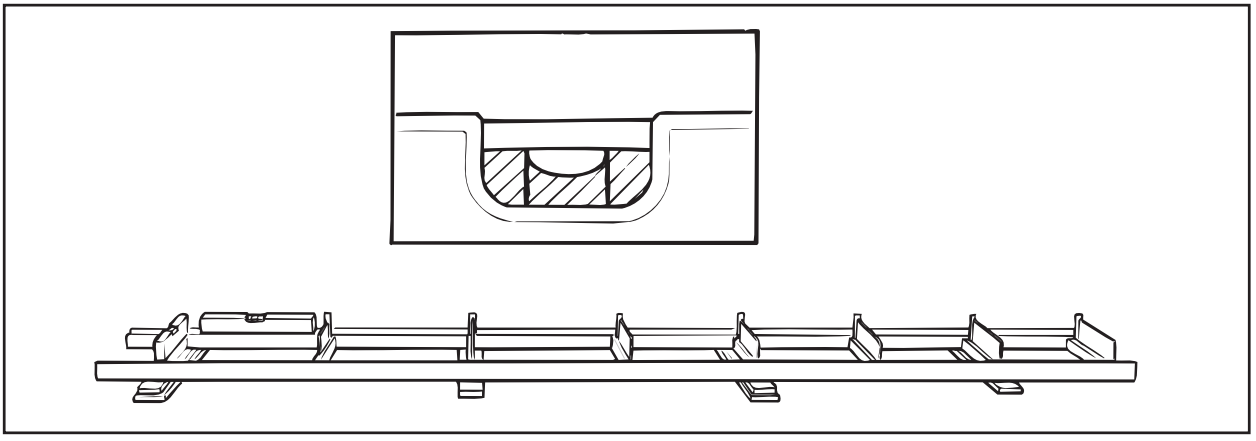
The outdoor site you choose for setting up the oneman sawmill should have a firm, level surface. Make sure that there will be sufficient space for logs and sawn timber.

Rails

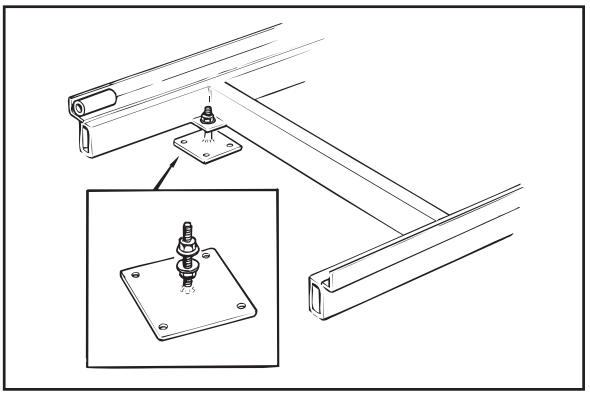
Lay the rail sections in-line after one another on wooden cross-studs. The distance between the wooden studs should be about 1,5 m.

Continue as follows:

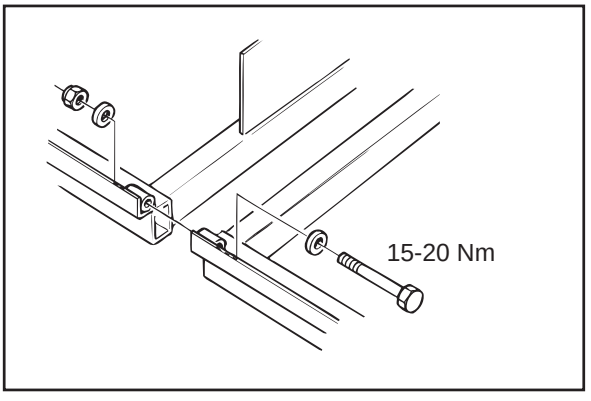
1. Adjust the supporting surface until the rails form a straight line and rest firmly on each wooden stud. Use a level or a length of twine to check this.
   If necessary, use adjustable feets, to position the rails on the studs.
2. Secure the rails to one another using the M12 screws and nuts supplied. Two screws with nuts and four washers are needed at every rail joint. Tighten the nuts on the screws to a torque of 15-20 Nm.
3. Fit the two stops on the ends of the rails.
4. Apply a load on the rails over every stud by shifting your weight on them to make sure that they lay firmly and do not move.



Aligning the rail



Adjustable foot



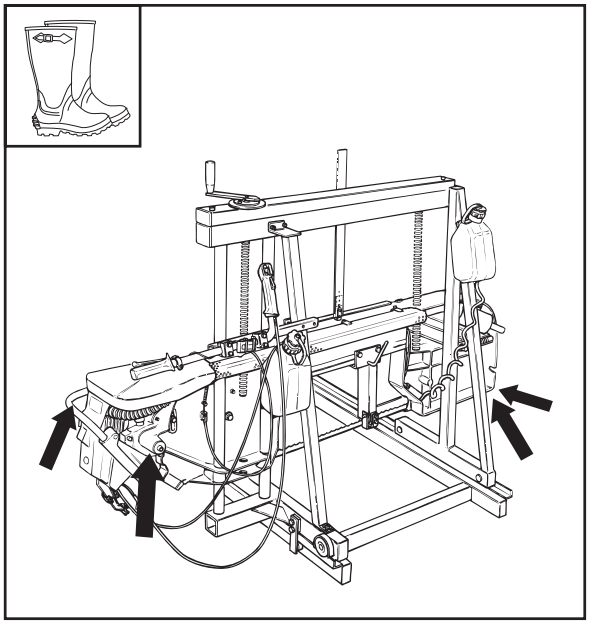
Screws and nut

Setting up the saw carriage

WARNING!
The saw carriage is heavy. Two persons are needed to handle it.

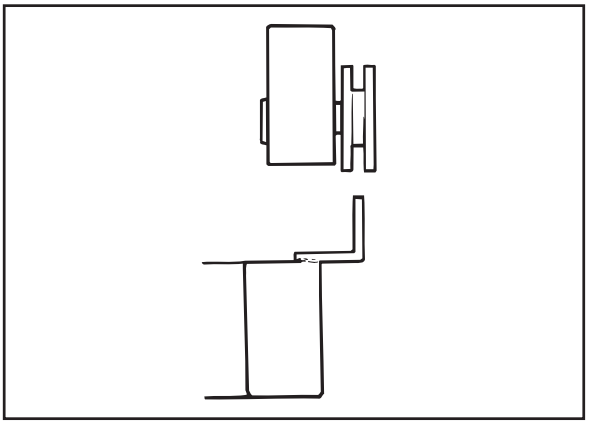
NOTE!
Do not place the saw carriage on the rails or any other hard surface too hastily. This can cause permanent damage to the saw carriage bearings.

NOTE!
Do not place the saw carriage directly on the ground where dirt and impurities can come in contact with the saw carriage wheels.



Place the saw carriage onto the rails, and position it by carrying out the following:

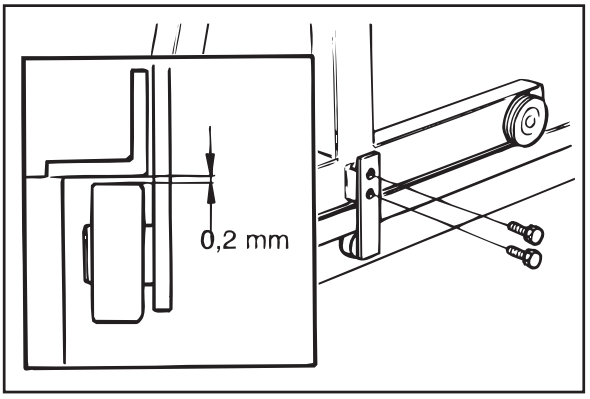
1. Arrange for two persons, one on each side, to take hold of the saw carriage. Lift the saw carriage as follows:
   Right side: At the crank for band tensioning and under the blade wheel guard.
   Left side: At the motor bar and the blade wheel guard.
2. Lift the saw carriage and lower it carefully on the rails. The grooved rim of the wheels at the base of the carriage must fit over and rest on the rails.



To adjust the position of the saw carriage

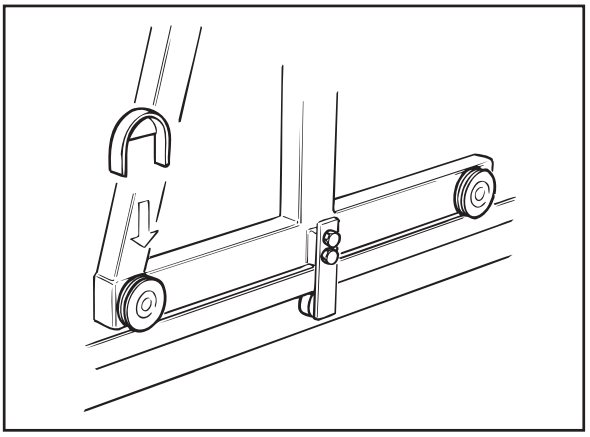
The position of the saw carriage on the rails can be adjusted when the guide wheels and rail guards are mounted. The purpose of the guide wheels (bearings) is to retain the saw carriage on the rails and to prevent it from tilting. The rail guards are designed to keep the rails and the saw carriage wheels free of dirt and the like.
The following parts must be mounted on the saw carriage:

- Two guide wheels (bearings)
- Four saw carriage rail guards.



To mount them, proceed as follows:

1. Fit the guide wheel mounting bracket in position by means of screws. Hold a 0,2 mm thick feeler gauge between the guide wheel and the rail.
2. Press the guide wheel upward against the rail and tighten screws of the guide wheel mounting bracket to secure it in position. Tightening torque: 40-50 Nm. Then remove the feeler gauge.
3. Repeat steps 1-2 above when fitting the other guide wheel.
4. Fit the four rail guards over each grooved-rim wheel.



Fuel tank

Mount the fuel tank on the saw carriage as follows:

1. Secure the tank by means of screws on the left-hand support beam of the saw carriage.
2. Connect the fuel line from the tank to the motor.

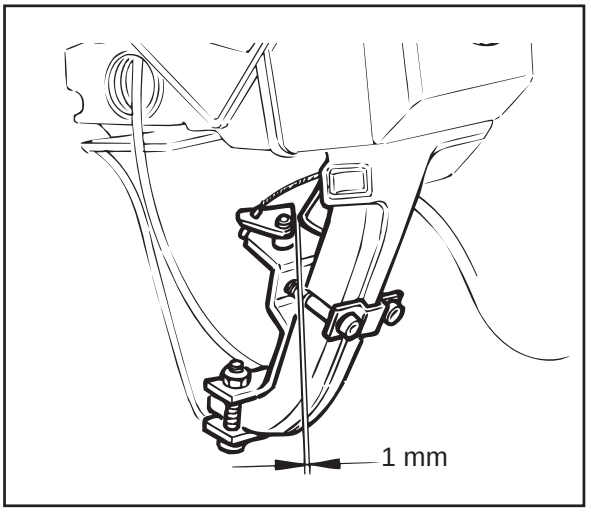
Cleaning liquid tank

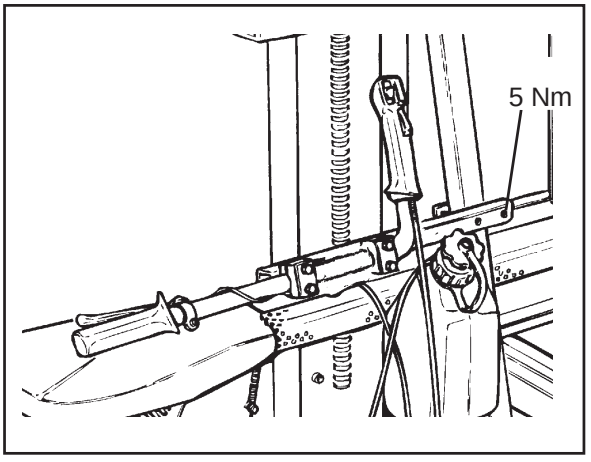
Mount the cleaning liquid tank on the right-hand support beam of the saw carriage and connect spiral hose.

Steering handle

Mount the steering handle on the left-hand support beam and tighten the screws to a torque of 5 Nm.
Allow 1 mm of play at the motor throttle control.

Position the steering handle in a suitable height. Make sure that the wires are running easily.





Saw blade

WARNING!
Always use protective gloves when handling the saw blade!
On delivery, a new saw blade is coiled up under high mechanical tension.
Unpack the saw blade carefully so that it will not pop open and cause injuries!

Only saw blades with order number 531 01 94-65 are allowed to be used.

Mount the saw blade as follows:

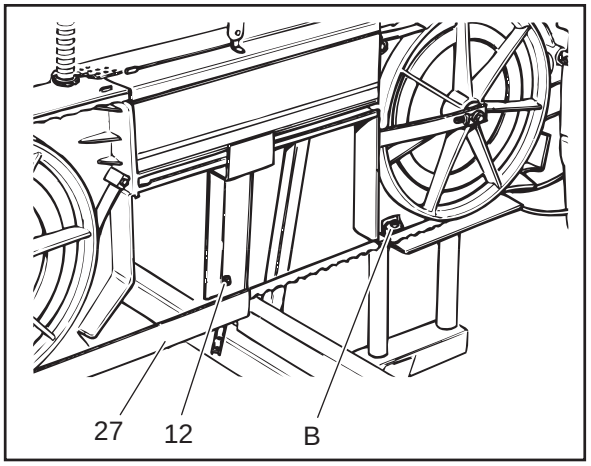
1. Remove the guard over the blade wheel. The guard is secured by three rubber straps, an upper, a lower and an intermediate strap.
2. Use the crank to reposition the adjustable blade wheel forward until the blade wheels are at minimum distance from one another.
3. Lower the blade guard (27) and fit the saw blade in position with its teeth facing outward. Make sure that the saw blade runs in the movable blade guide (12) and in the fixed blade guide (B).
4. Turn the crank to tension the saw blade until the suspension washers are correctly compressed. See the figure.
   Rotate the blade wheel a few turns by hand to centre the saw blade on the blade wheels.

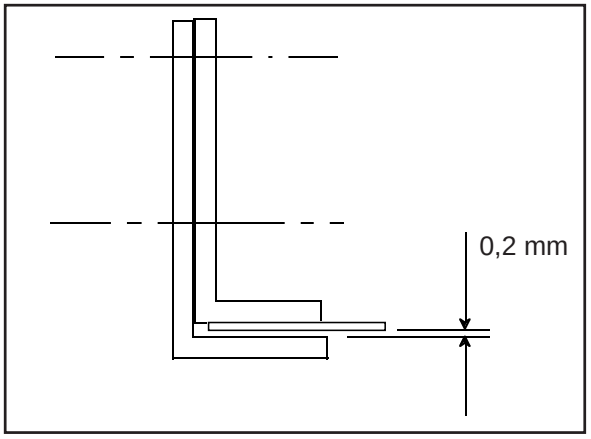
   Caution! Do not tension the saw blade so hard that this compresses the washers completely. This is important! The washers must have a certain spring action in order to absorb variations in blade tension.

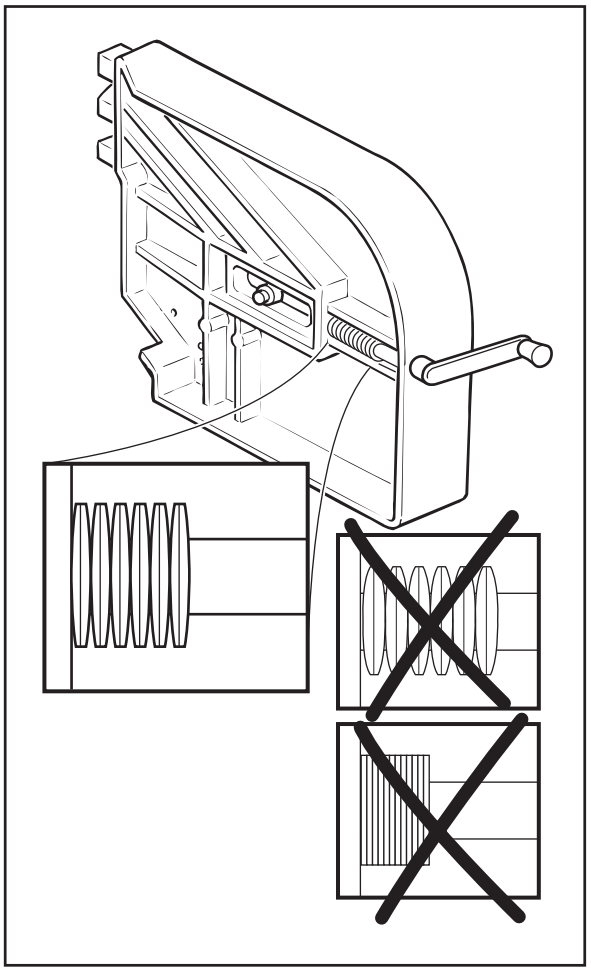
   Improper blade tension (too hard or too loose) involves the risk of the saw blade wandering and slipping off the blade wheel.
5. Adjust the blade guides to allow 0,2 mm of play.

   The saw blade should just tangent the upper section of the blade guide.

   The play should be between the saw blade and the upper section of the blade guard.
6. Raise the blade guard (27).
7. Refit the guard over the blade wheel and refit the rubber retaining straps.







Scale

Mount the scale on the saw carriage as follows:

A. Back off the screws of the support (A) on the upper beam of the saw carriage.

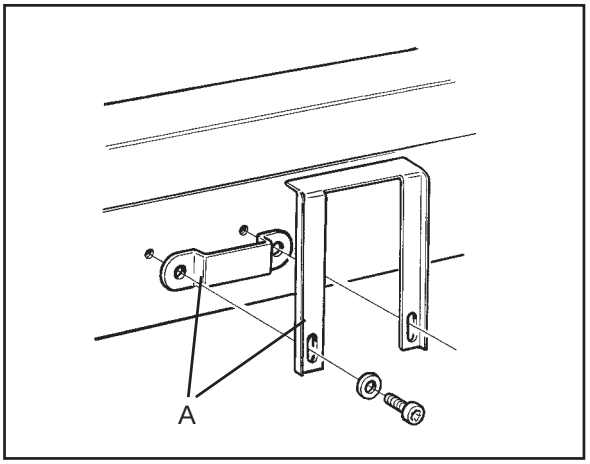
B. Insert the scale through the top of the support and slide it downward. The highest value marked on the scale should be at the bottom end.
Secure the scale by means of screws on the movable section of the blade carriage.

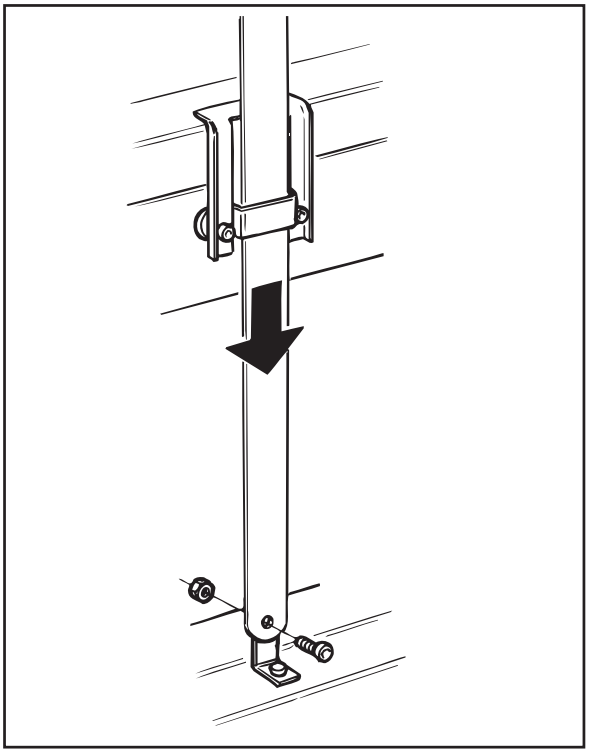
C. Place a level or other straight gauge block over two of the rail cross-beams under the saw carriage.

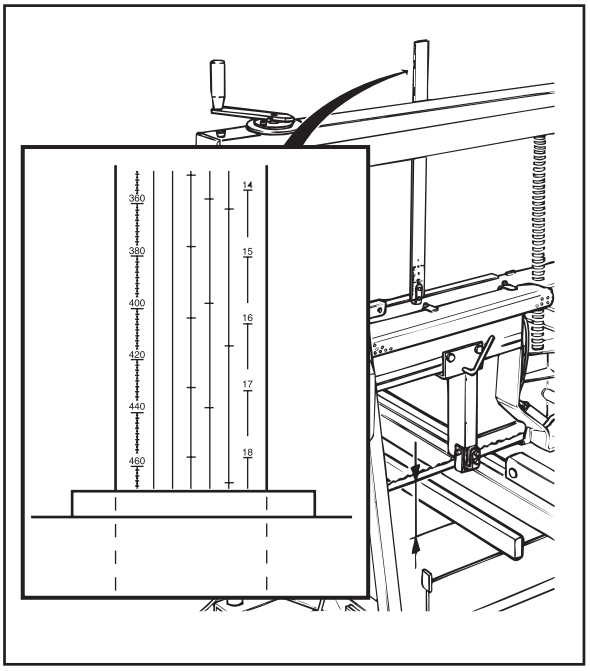
D. Measure the distance between the lower section of the saw blade and the lower section of the level or gauge block.
N.B! At this moment, the saw blade must be tensioned and adjusted.

E. Preset the position of the support so that the same value can be read on the scale at the pointer.

F. Tighten the screws on the support.







Fuel

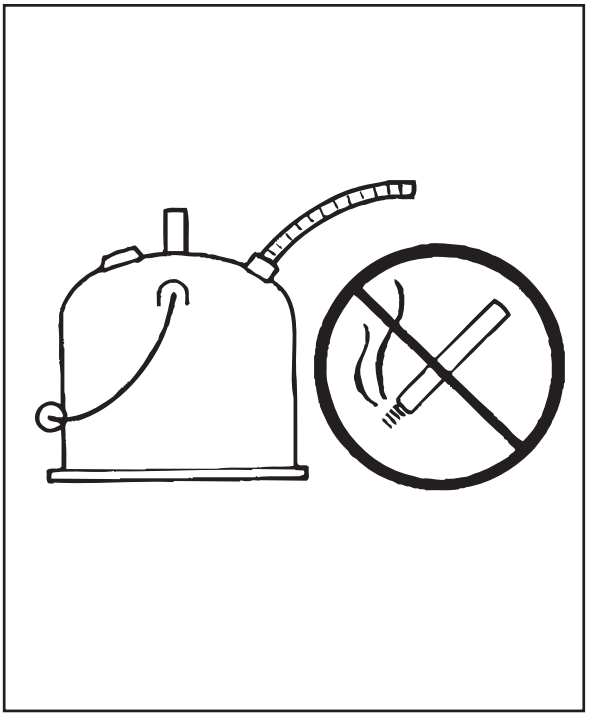
Fuel safety

WARNING!
The fuel used for the one-man sawmill has the following hazardous properties:

1. The liquid, its fumes and exhaust gases are poisonous.

2. Can cause skin irritation.

3. Is extremely flammable.



It is absolutely prohibited to do the following while filling the fuel tank:

- **To smoke.**
- **To start a fire or have a hot object in the immediate viscinity.**
- **To leave the motor running.**

Petrol

CAUTION!
The one-man sawmill is equipped with a two-stroke motor and must always be run on a mixture of petrol and two-stroke motor oil. To ensure the correct mixing ratio, it is important to carefully measure the quantity of oil to be mixed. When mixing small quantities of fuel, even a small deviation from the correct quantity of oil will effect the mixing ratio. Allow adequate air ventilation when handling fuel.

Use leaded or non-leaded motor petrol.
90 octane petrol is recommended. If the motor is run on petrol having a lower octane rating, motor may begin to knock. Motor knock will lead to higher motor temperature and may cause a breakdown.

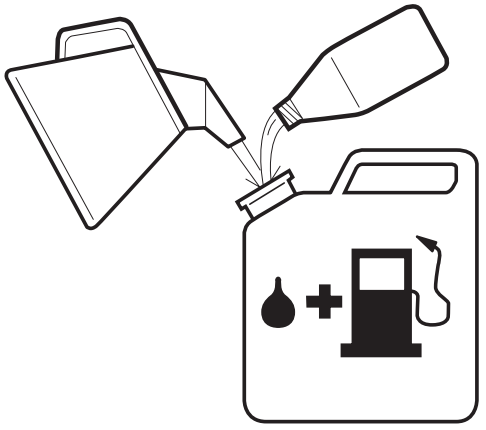
Two-stroke motor oil

- For best performance, use HUSQVARNA two-stroke motor oil, which has been specially developed for Husqvarna chain saw motors. Mixing ratio: 1:50 (2%).
- If HUSQVARNA two-stoke motor oil isn't available, an another brand of high-quality two-stroke motor oil intended for air-cooled engines may be used. Get in touch with you local dealer when selecting motor oil.
  Mixing ratio: 1:33 (3%)-1:25 (4%).
- Never use two-stroke motor oil intended for water-cooled outboard motors, so-called outboard motor oil.
- Never use motor oil intended for four-stroke engines.

Gasolin Benzin Essence Gasolina Lit.	Oil • Öl Huile • Aceite Lit.		
	2%(1:50)	3%(1:33)	4%(1:25)
5	0,10	0,15	0,20
10	0,20	0,30	0,40
15	0,30	0,45	0,60
20	0,40	0,60	0,80
US gallon	US fl. oz.		
	2%(1:50)	3%(1:33)	4%(1:25)
1	2 1/2	3 3/4	5 1/8
2 1/2	6 1/2	9 3/4	12 7/8
5	12 7/8	19 1/4	25 3/4

Mixing

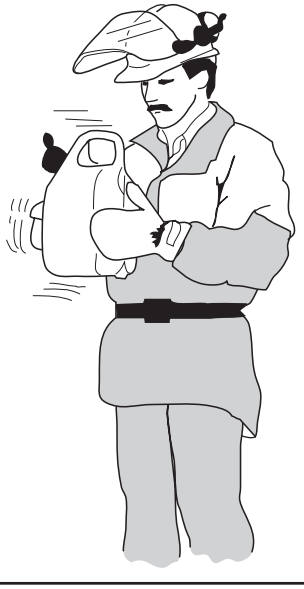
- Always mix oil and petrol in a clean container which has been granted approval for petrol.
- Always begin by filling the container with half of the amount of petrol to be mixed. Then fill the entire quantity of oil required. Mix (shake) the fuel mixture. Fill the remaining quantity of petrol.
- Mix (shake) the fuel mixture carefully before filling the fuel tank of the saw.
- Do not mix more fuel than that required for approx. 2 months of operation.
- If the saw is not used during a longer period of time, the petrol tank should be emptied and flushed out with petrol.



To fill the tank

1. Remove the fuel tank cap slowly to relieve any overpressure.
2. Tighten the fuel tank cap carefully after filling the fuel tank.
3. Wipe the surface clean around the fuel tank cap.

Clean the fuel tank and the oil tank regularly. The fuel filter should be changed at least once a year. Any impurities, remaining in the tanks, will cause breakdowns. Make sure that the fuel is thoroughly mixed by shaking the container before filling the tank.



WARNING!
Observe the following before starting the motor:

- **The motor must must be mounted on the sawmill before it is started. Otherwise, the coupling may come loose and cause personal injury.**
- **Make sure that no unauthorized persons are in the risk zone.**

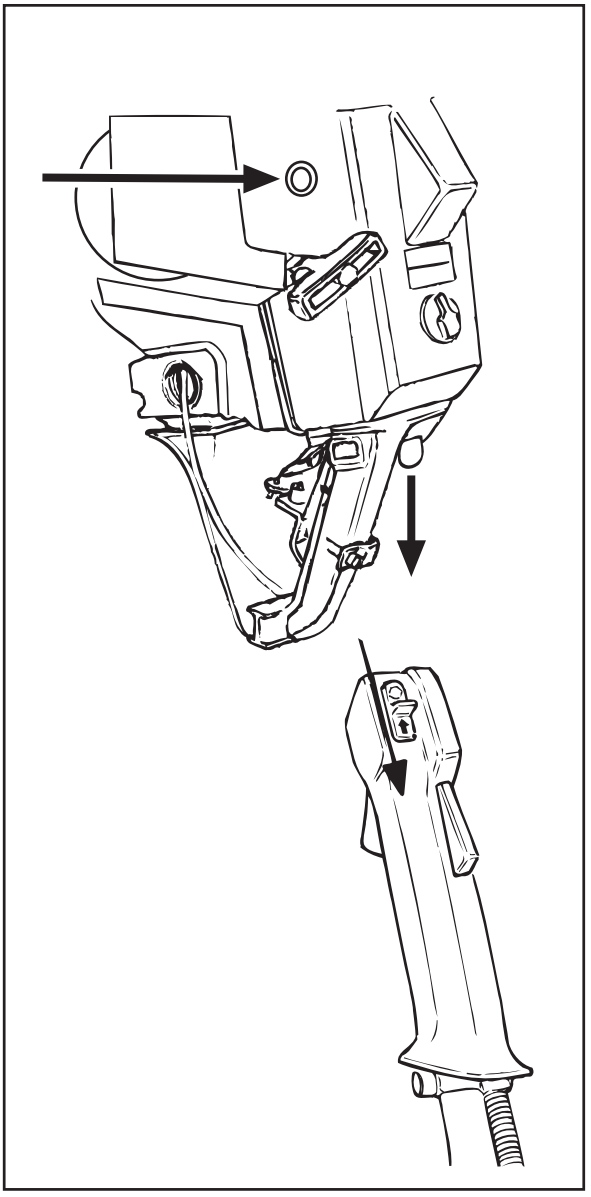
Starting a cold motor

A cold motor should be started in the following manner:

1. Move the stop switch to the starting position. Check that the stop switch on the motor unit is also in the starting position.
2. Pull out the choke. When this is done, the throttle damper will automatically reset for start.

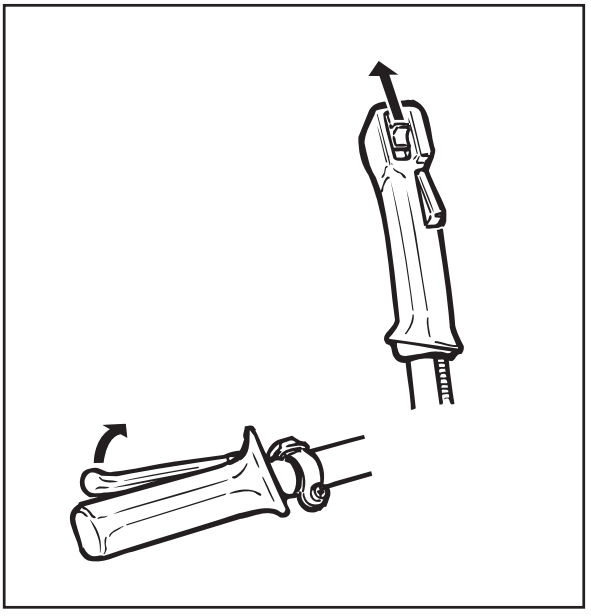
CAUTION!
Do not pull the starter cord completely out nor let go of the starter cord handle while it is pulled out. This will damage the starter.

3. Press in the decompression valve.
4. Pull the starting cord handle out slowly until you feel resistance (the starter pawls engage). Then pull-start the motor with quick, energetic pulls.
5. When the motor fires, push in the choke and continue as directed in item 4 above.
6. When the motor starts running, open the throttle to full and immediately disengage it. The starting throttle position will then disengage automatically.
7. To allow the saw blade to move, activate the brake handle during the start procedure.



Starting a warm motor

A warm motor can be started in the same manner as as cold motor, however with the following exception:
Set the starting throttle position by first pulling out and then **pushing in the choke.** The choke should not be used when the motor is warm.



Stopping the motor

The motor can be stopped by setting the stop switch (emergency stop) in the stop position and de-activate the brake handle.

Securing the log

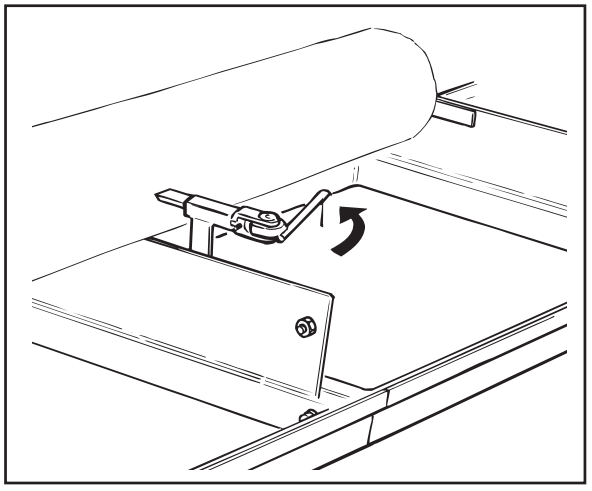
WARNING!
Be careful when handling the log.
Heavy lifting!
Wear boots or shoes with steel toe cap.

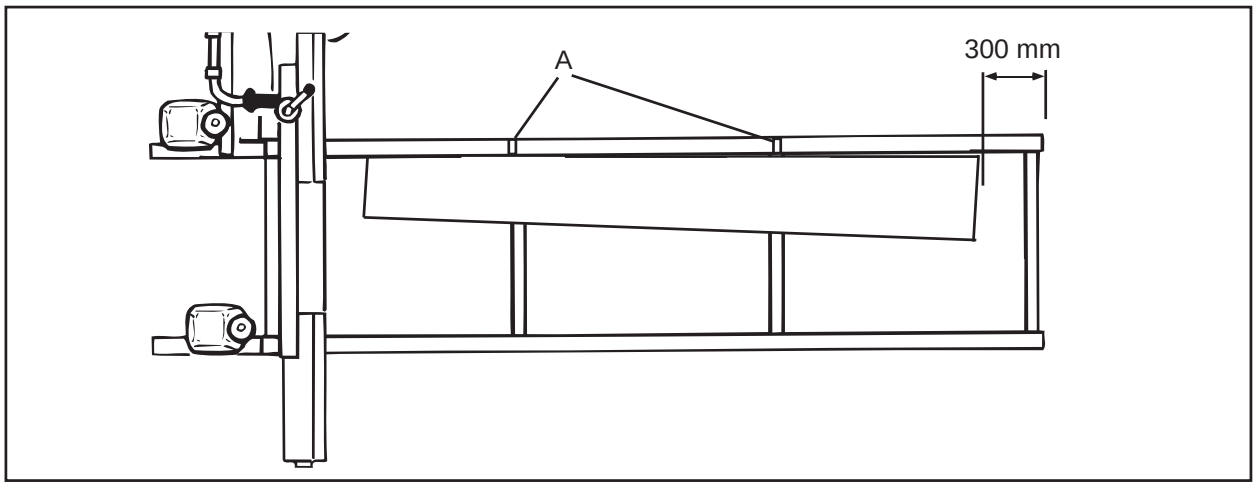
1. Fold up the stops (A) on the left side of the rail.

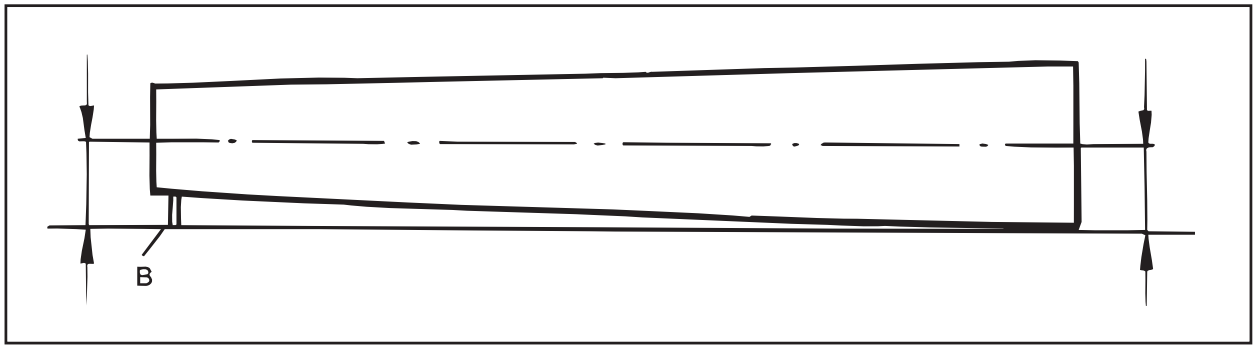
2. Roll the log against the stop (A). The log mus not be closer than:
   • 300 mm to the farthest end of the rail.
   • 500 mm to the beginning of the rail.
   Therefore, if two rail sections are used, t max. permissible length of the log is 5200 mm.

3. Use the height adjusting device (B) to rais the log until its heartwood is horizontal.

4. Secure the log in position by means of the lo locking device



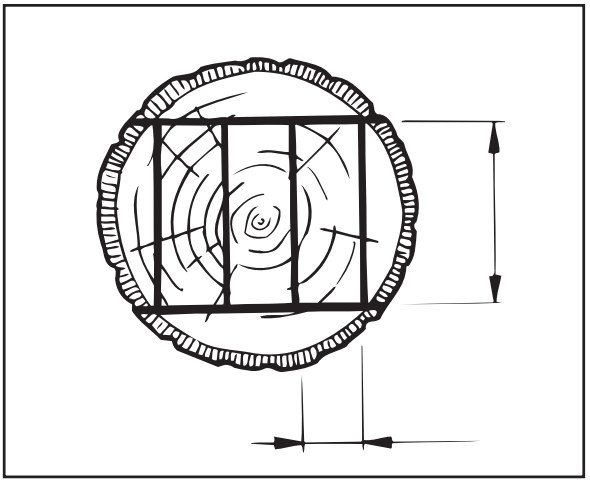




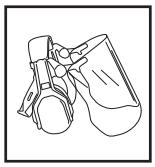
Calculating the yield

Measure the top of the log and determine how the log must be cut to to yield the lumber required. Take the thickness of the saw blade into account in your calculations.

Saw-blade thickness = 2 mm.

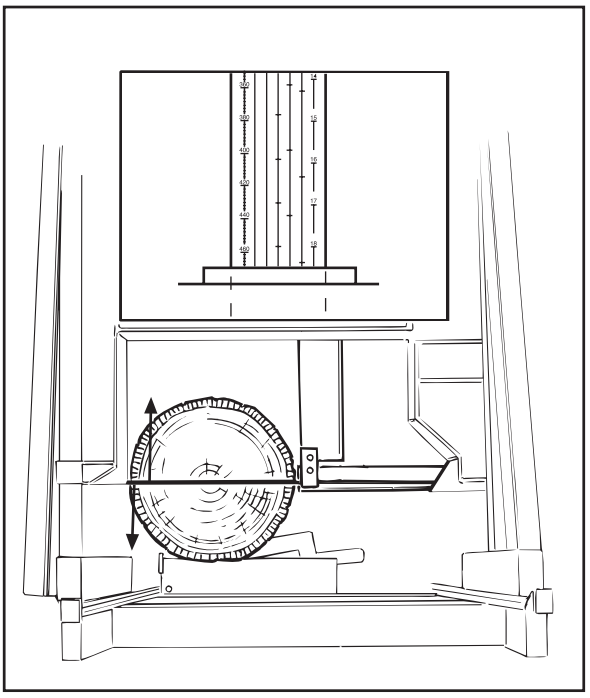


Using the saw

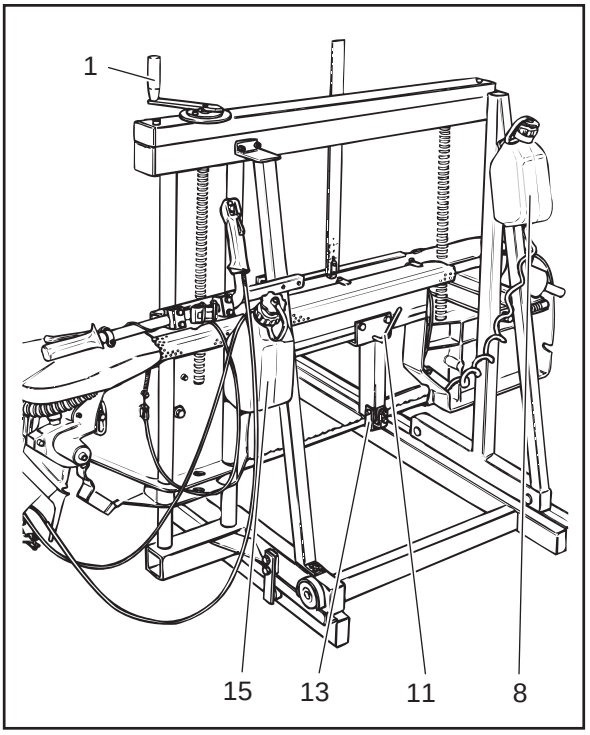


WARNING!
Use the following protective gear whenever you use the saw:
- **Boots or shoes with steel toe cap.**
- **Ear protection.**
- **Eye protection.**
- **A first aid kit must be kept nearby.**

Before starting the motor, check that:
- **All of the guards are fitted and are in faultless condition.**
- **No unauthorised persons may be within the risk zone.**



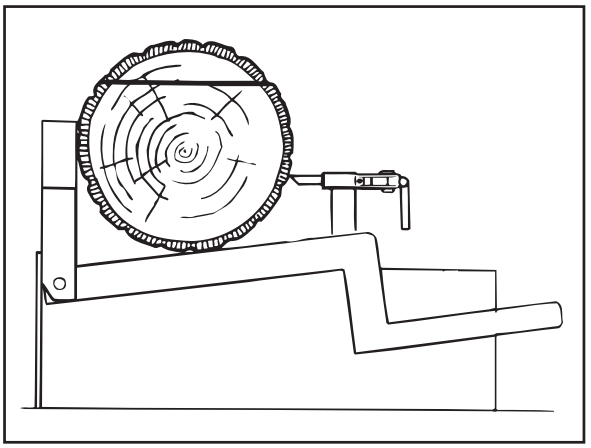
1. Use the crank (1) to set the saw blade height.
2. Brush off the logs to prevent unnecessary wear of the saw blade.
3. Locate the blade guide (13) as close as possible to the log without coming in contact with it. Tighten the knob (11) to lock the blade guide in position.
4. Check the cleaning liquid level in the tank (8) and if necessary add more cleaning liquid. Use cleaning liquid having lubricating properties, for example dish washing detergent and water in equal portions.
5. Check the petrol level in the fuel tank (15) and fill with petrol, if necessary. See pages. 23-24.

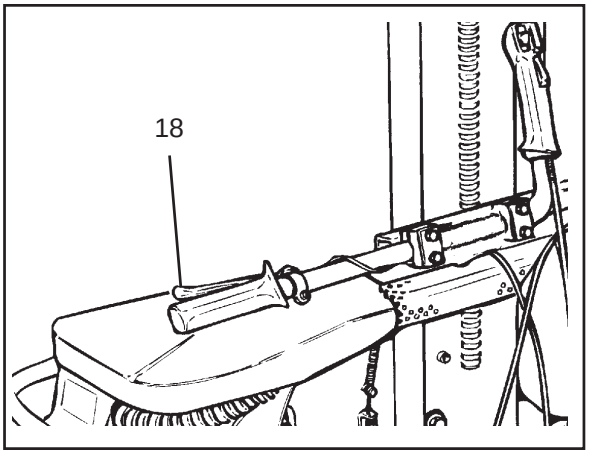


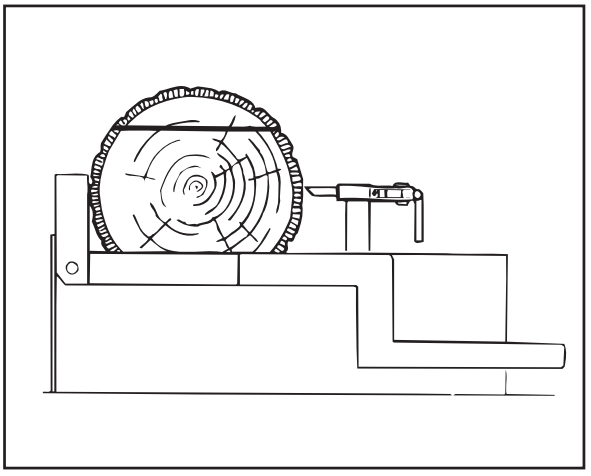
WARNING!
While using the saw, check to make sure that the saw blade does not come in contact with the removable stops or the log locking device.

WARNING!
The saw carriage must not be moved backwards while the saw blade is running. Otherwise the blade may jump off its track and cause injury.

6. Start the motor. See page 25.
7. Release the brake (18) and apply full throttle, move the saw carriage forward and saw off the slab. Do not advance the saw blade harder than necessary. Allow the motor to run at relatively high speed.
8. Remove the slab.
9. Release the log, rotate it through 180°, lower the height adjustment device and lock the log in position.
10. Reset the saw height required using the height adjustment crank.
11. Set the band guide as close as possible to the log without coming in contact with it. Use the locking knob to lock the band guide in position.
12. Saw off the other slab. See pages 6 and 7.

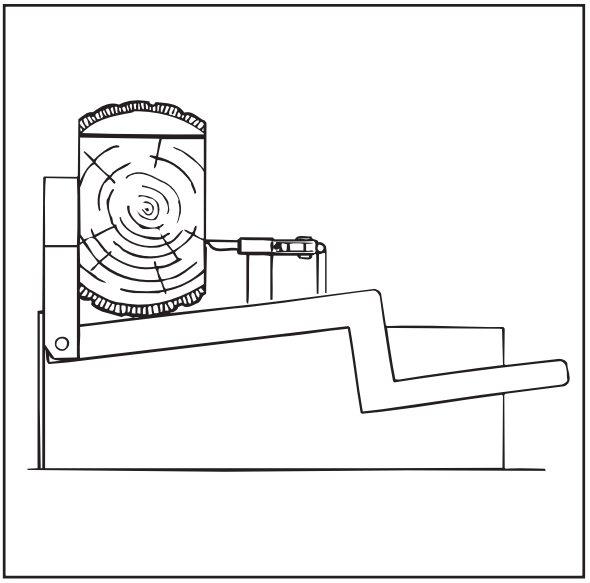






13. Release the log and rotate it through 90°.

14. Adjust the position of the short end of the log using the log lifter and secure the log, locking it in position with the flat surface hard up against the stop.



15. Saw off the upper slab. See pages 9-10.

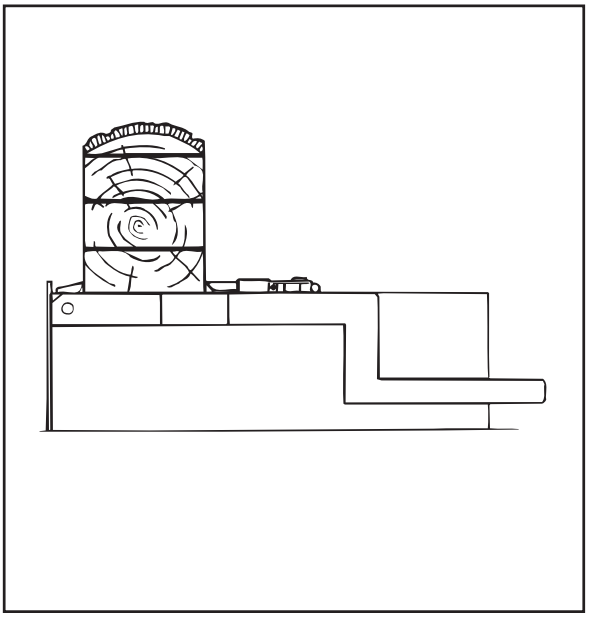
16. Release the log, rotate it through 180°, lower the height adjusting device and lock the log in position.

17. Saw the timber block into boards according to the instructions above. Remember to compensate for the thickness of the saw blade every time you reset the the saw-blade height.

    Particulars of the height adjustment crank:

    • 1 full turn = 5 mm

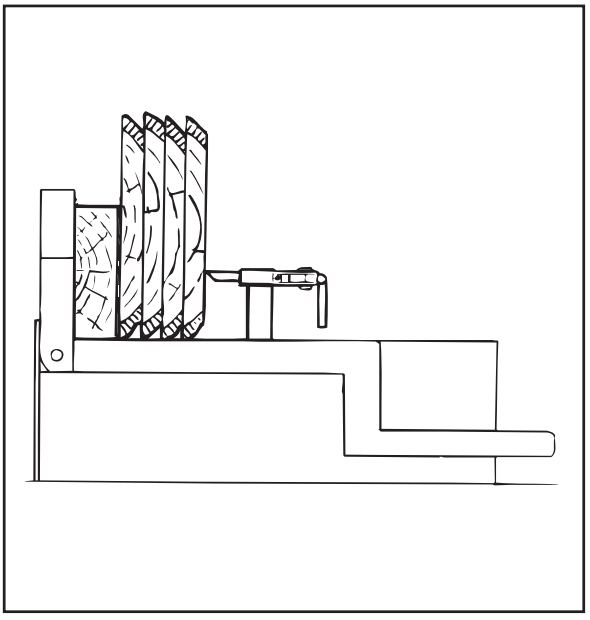
    • The pitch disc can be reset by turning it.



Trimming the edges

The edges of several boards can be trimmed at the same time by securing them hard up against the stop.

To ensure that the boards will remain stationary while they are being sawed, place one board upright between the boards to be trimmed and the stop. This board should be at least 50 x 100 mm.



Trial run

WARNING!
When the sawmill is running and the blade is rotating without any sawing being done, the lower saw blade guard must be pulled out completely to the left.

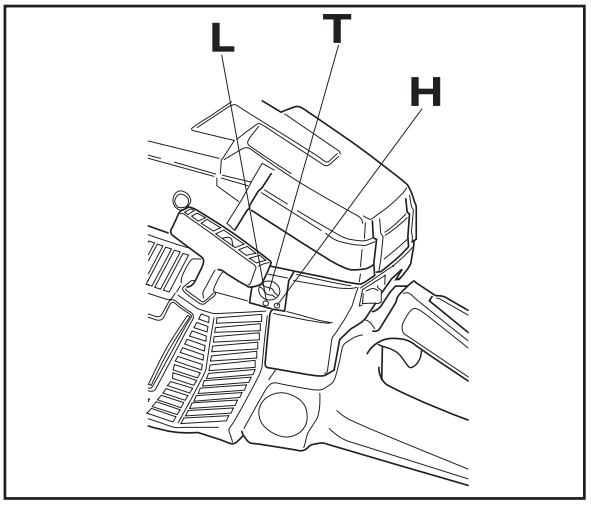
WARNING!
The motor must be mounted on the saw before it is started. Otherwise, the coupling can come loose and cause injuries.

Carburettor

Operation

- The carburettor governs the engine speed via the throttle. Air/fuel are mixed in the carburettor. The air/fuel mixture is adjustable. To take advantage of the saw's maximum output the setting must be correct.
- Adjusting the carburettor means the engine is adapted to local operating conditions, e.g. climate, altitude, petrol and the type of 2-stroke oil used.
- The carburettor has three adjustment possibilities:

  L = Low speed jet.
  H = High speed jet.
  T = Adjustment screw for idling.



- The fuel quantity required in relation to the air flow, provided by opening the throttle, is adjusted by the L and H-jets. If they are screwed clockwise the air/fuel ratio becomes leaner (less fuel) and if they are turned anti-clockwise the ratio becomes richer (more fuel). A leaner mixture gives a higher engine speed and a richer mixture give a lower engine speed.
- The T screw regulates the idling speed. If the screw T is turned clockwise this gives a higher idling speed; anti-clockwise a lower idling speed.

Basic setting and running in

The carburettor is adjusted to a basic setting when the saw is tested at the factory.
The basic setting is: H = 1 $^1/_4$ turns respective L = 1 $^1/_4$ turns.
To provide the engine's components with a good level of lubrication (running in) the carburettor should be set for a richer fuel mixture for the first 3-4 hours of operating. To obtain this adjust the overspeed 6-700 rpm under the recommended max. overspeed.

If you do not have the possibility to check the overspeed using a tachometer the H-jet should not be set for a leaner mixture than that stated for the basic setting.
The recommended overspeed should not be exceeded.
NOTE! If the chain rotates while idling the T screw should be adjusted anti-clockwise until it stops.

Fine adjustment

When the saw has been "run-in" the carburettor should be finely adjusted. **The fine adjustment should be carried out by qualified person.** First adjust the L-jet, then the idling screw T and then the H-jet.
The following engine speed applies:

Max. overspeed	12.500	rpm
Idling speed	2.500	rpm

Conditions

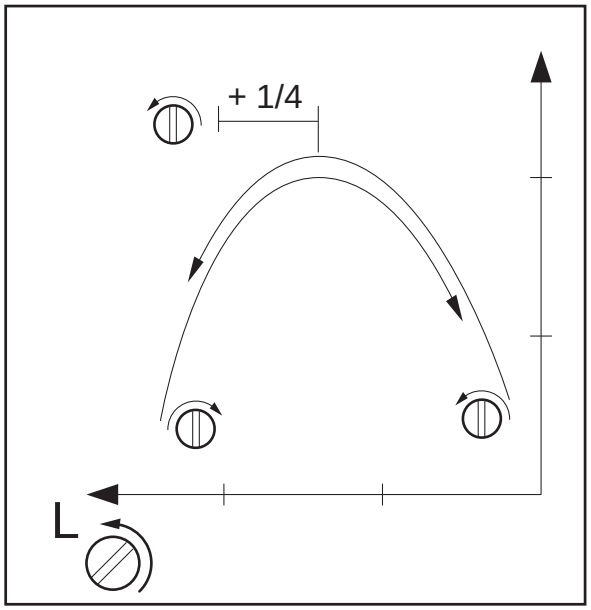
- Before any adjustments are made the air filter should be clean and the cylinder cowling fitted. Adjusting the carburettor while a dirty air filter is in use will result in a leaner mixture when the filter is finally cleaned. This can give rise to serious engine damage.
- Carefully turn the L and H-jets clockwise to the bottom. Now turn the jets one turn anti-clockwise. The carburettor is now set to H = 1 and L = 1.
- Now start the saw according to the starting instructions and run it warm for 10 minutes.

CAUTION!
If the saw blade rotates while the motor is running at idling speed, the T-screw must be turned counter-clockwise until the saw blade stops moving.

Low speed needle L

Try to find the highest idling speed, turning the low speed needle L clockwise respectively counter-clockwise. When the highest speed has been found, turn the low speed needle L 1/4 turn counter-clockwise.

CAUTION!
If the saw blade rotates while the motor is running at idling speed, the T-screw must be turned counter-clockwise until the saw blade stops moving.



Final setting of the idling speed T

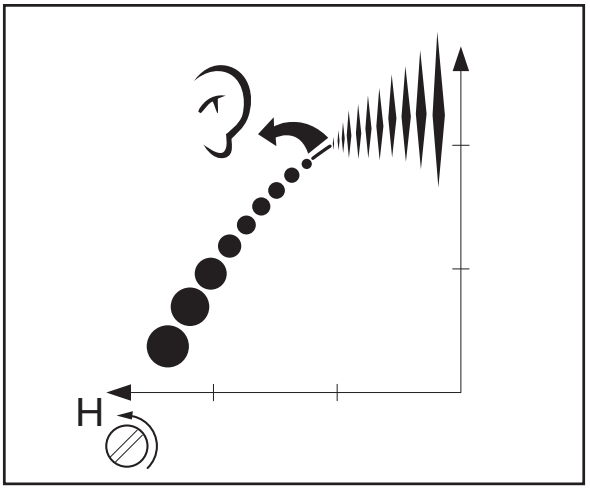
Adjust the idling speed with the screw T. If it is necessary to re-adjust, first turn the idle speed adjusting screw T clockwise, until the chain starts to rotate. Then turn, counter-clockwise until the chain stops. A correctly adjusted idle speed setting occurs when the engine runs smoothly in every position. It should also be good margin to the rpm when the chain starts to rotate.

WARNING!
Contact your servicing dealer, if the idle speed setting cannot be adjusted so that the chain stops. Do not use the saw until it has been properly adjusted or repaired.

High speed needle H

- The high speed needle H influences the power of the saw. A too lean adjusted high speed needle H (high speed needle H closed too much) gives overrevs and damages the engine. Let the saw run at full speed for about 10 seconds. Thereafter, turn the high speed needle H 1/4 turn counter-clockwise. Let the saw run again at full speed for about 10 seconds and note the difference of the enginesound. Repeat this procedure with the high speed needle H turned 1/4 turn more counter-clockwise.
- The saw has now been tested with the following settings: H=±0, H=+1/4, H=+1/2 from basic adjustment. At full speed the engine has produced a different sound for each setting. The high speed needle H is correctly set when the saw ”4-cycles” a little. If the saw ”whistles” the setting is too lean. If there is too much exhaust gas at the same time as the saw ”4-cycles” much, the setting is too rich. Turn the high speed needle H until the setting sounds correct.

NOTE!
For optimum setting of the carburettor, contact a qualified servicing dealer who has a revolution counter at his disposal. The maximum speed recommended must not be exceeded.



Correctly adjusted carburettor

A correctly adjusted carburettor means that the saw accelerates without hesitation and the saw 4-cycles a little at max speed. Furthermore, the chain must not rotate at idling. A too lean adjusted low speed needle L may cause starting difficulties and bad acceleration.

A too lean adjusted high speed needle H gives lower power=less capacity, bad acceleration and/or damage to the engine.

A too rich adjustment of the two speed needles L and H gives acceleration problems or too low working speed.

Air filter

The air filter must be regularly cleaned from dust and dirt in order to avoid:

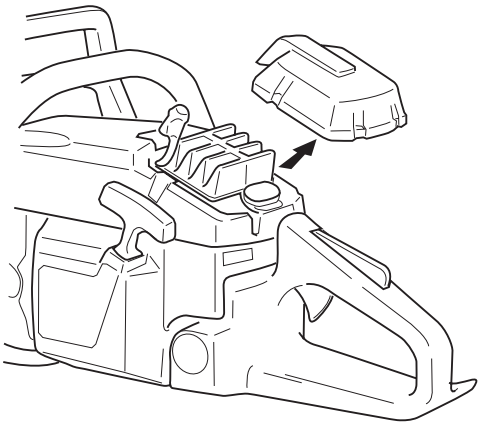
- Carburettor malfunctions
- Starting problems
- Engine power reduction
- Unnecessary wear on the engine parts
- Abnormal fuel consumption

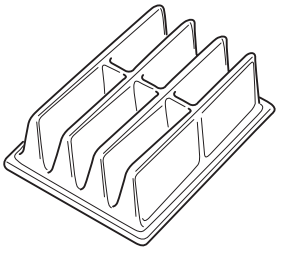
Clean the air filter daily or more often if the air is exceptionally dusty in the working area.

- Disassemble the air filter by removing the cylinder cover and unscrew the filter. When reassembling, make sure that the filter is tight against the filter holder. Clean the filter by brushing or shaking it.
- A more thorough cleaning of the filter is obtained by washing it in water and soap.

An air filter, which is used for some time, cannot be cleaned completely. Therefore it must be replaced by a new one, with regular intervals.

IMPORTANT! A damaged air filter must always be replaced.





Spark plug

The spark plug condition is influenced by:

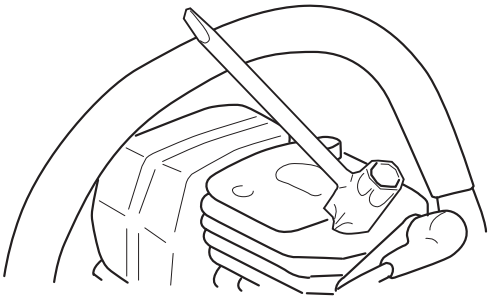
- An incorrect carburettor setting.
- Wrong fuel mixture (too much oil in the gasoline).
- A dirty air filter.

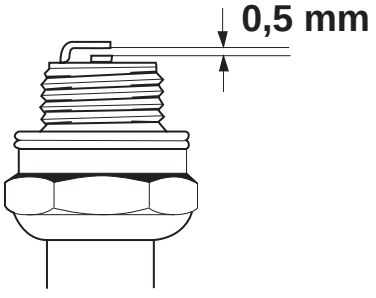
These factors cause deposits on the spark plug electrodes, which may result in malfunction and starting difficulties.

If the engine is low on power, difficult to start or runs poorly at idling speed, always check the spark plug first.

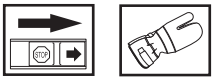
If the spark plug is dirty, clean it and check the electrode gap. Readjust if necessary. The correct gap is 0.5 mm (.020"). The spark plug should be replaced after about a month in operation or earlier if the electrodes are badly eroded.

IMPORTANT! Always use the recommended spark plug type. An incorrect spark plug can severely damage the piston/cylinder.





Cooling system

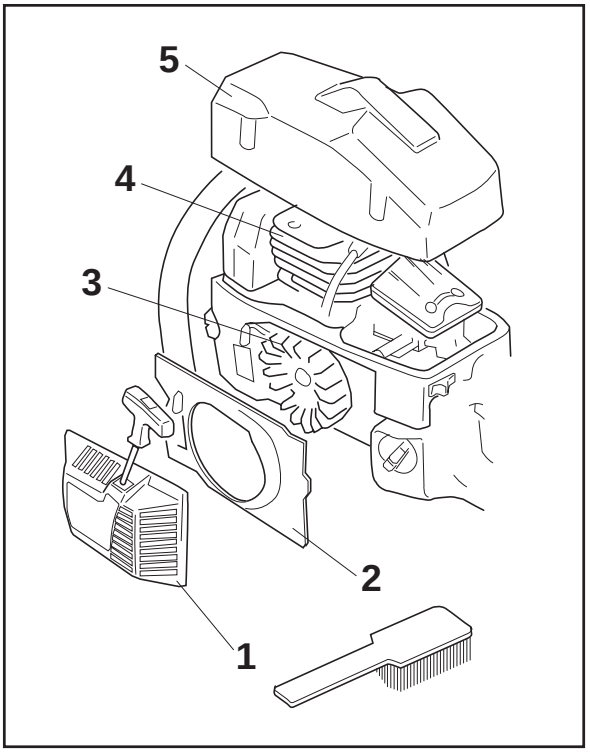


To obtain the lowest possible running temperature the saw is equipped with a cooling system.The cooling system consists of:

1. Air intake on the starter unit.
2. Air guide plate.
3. Fan blades on the flywheel.
4. Cooling fins on the cylinder.
5. Cylinder cowling (supplies cold air over the cylinder).

Clean the cooling system with a brush once a week, more often in demanding conditions.

A dirty or blocked cooling system results in the saw overheating which causes damage to piston and cylinder.

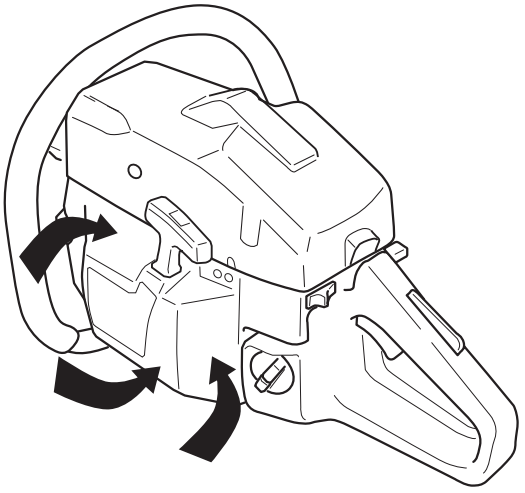


Centrifugal cleaning ”Air Injection”

Centrifugal cleaning means the following:
All air to the carburettor is carried through the starter. Dirt and dust is centrifuged away by the cooling fan.

IMPORTANT! In order to keep the function of the centrifugal cleaning, a continous maintenance and care must be made.

Clean the air intake to the starter, the fan wings of the flywheel, the space around the flywheel, inlet pipe and carburettor space.



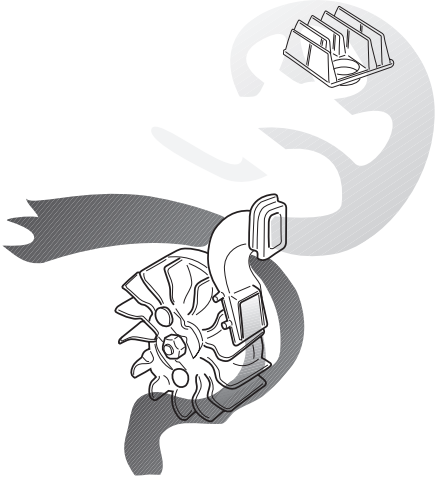
Winter use

During winter time, powder snow and cold weather can cause running problems, such as:

- Too low engine temperature.
- Icing on the air filter and carburettor.

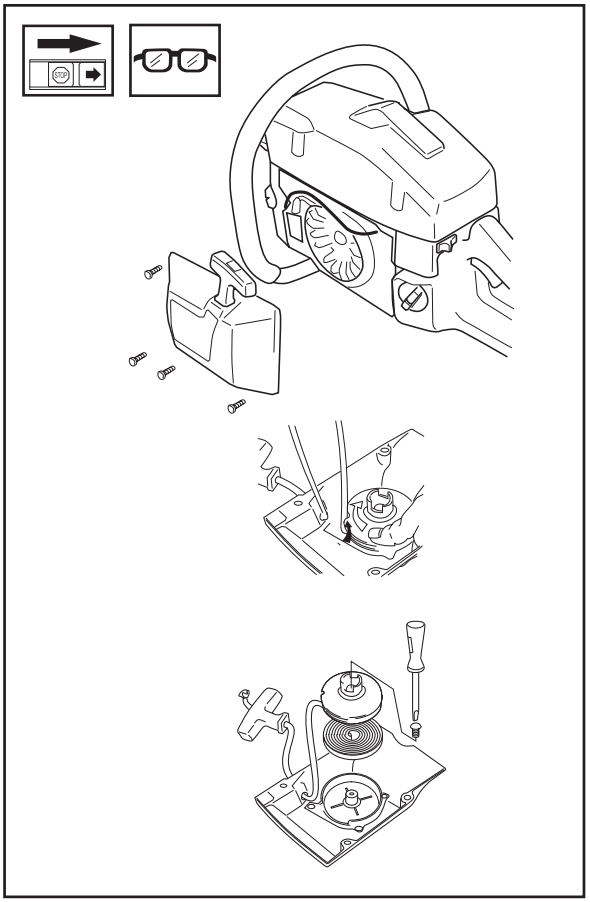
Therefore some special measures are required:

- Partly reduce the air inlet of the starter and by doing that increase the engine temperature.
- Preheat the intake air to the carburettor by removing the special plug between the cylinder and the carburettor space.



Starter device

WARNING!
• When the recoil spring is assembled in the starter housing, it is in tensioned position and can when treated carelessly, pop out and cause injuries.
• Always be careful, when changing the recoil spring or the starter cord. Always wear safety goggles for eye protection.



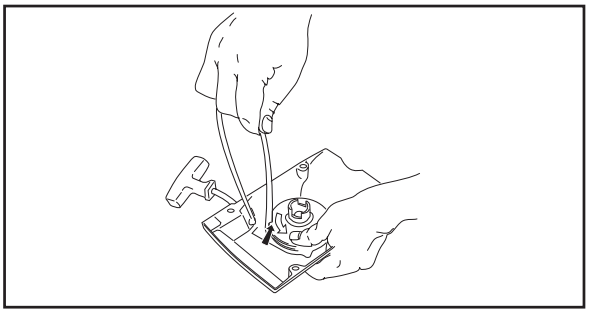
Changing a broken or worn starter cord

- Loosen the screws, that hold the starter device against the crankcase and remove the starter device.
- Pull out the cord approx. 30 cm and lift it up into the notch in the pulley. Zero-set the recoil spring by letting the pulley rotate slowly backwards. Undo the screw in the centre of the pulley and remove the pulley.
- Insert and fasten a new starter cord in the pulley. Wind approx. 3 turns of the starter cord on to the pulley. Assemble the starter pulley against the recoil spring, so the end of the spring engages to the pulley. Fit the screw in the centre of the pulley. Carry the starter cord through the hole in the starter housing and the starter handle. Make a knot on the starter cord.

Tensioning the recoil spring

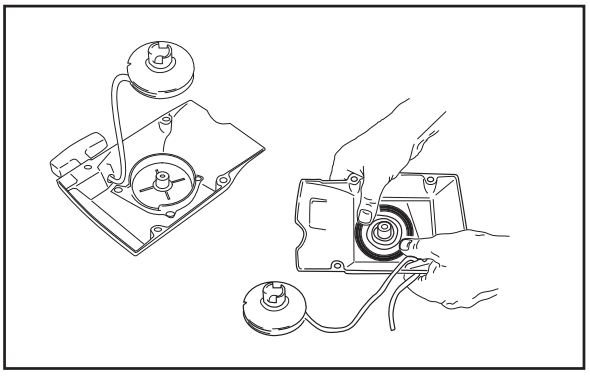
Lift the starter cord up in the notch on the starter pulley and turn the starter pulley 2 turns clockwise.

NOTE! Check that the starter pulley can be turned at least half a turn, when the starter cord is entirely pulled out.



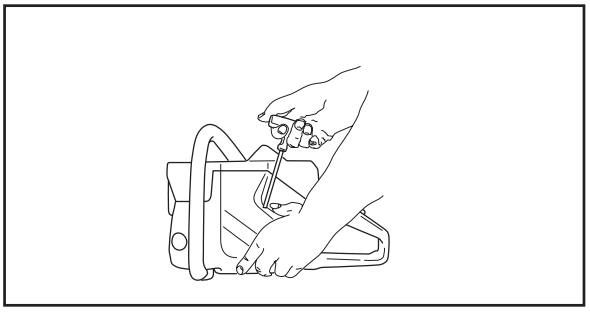
Changing the broken recoil spring

- Lift the starter pulley. (See, Changing a broken or worn starter cord). The recoil spring is disassembled from the starter device, with its inside facing down. Tap the starter lightly against a working bench or similar.
- Put a new recoil spring in the right position. If the spring pops out when assembling, it should be mounted again, out and in towards the centre.
- Lubricate the recoil spring with thin oil. Assemble the starter pulley, and tension the recoil spring.



Starter device assembly

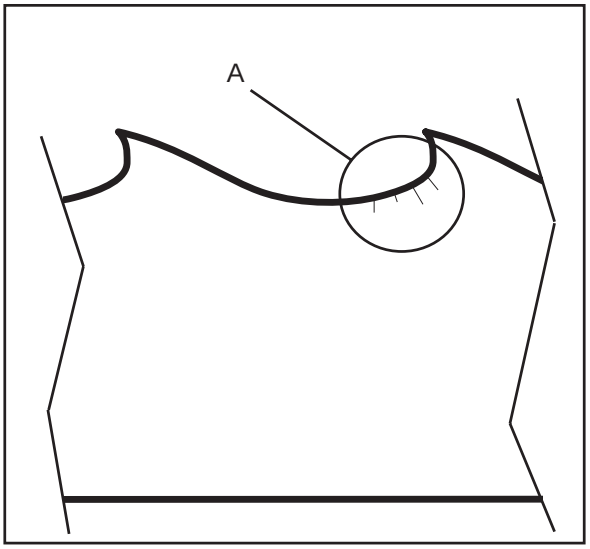
- Assemble the starter device, by pulling the starter cord out first, then place the starter against the crankcase. Then slowly release the starter cord so that the pulley engages with the pawls.
- Assemble and tighten the screws, which hold the starter.



Saw blade

WARNING!
The saw blade has sharp cutting surfaces. Be careful to avoid injury. Always wear protective gloves while handling the saw blade.

For optimum capacity, the teeth of the saw blade must be set and sharpened at regular intervals. For normal sawing in most types of wood, this must be done after every 2 hour session of **effective sawing time,** i.e. the time during which the saw blade is cutting.
If certain types of wood having a high content of sand are sawed, the saw blade will have to be sharpened more often.



To remove the saw blade

Remove the saw blade in the following manner:

1. Remove the blade wheel guard. See page 14.
2. Loosen the right-hand blade wheel by cranking it about 10 turns counter-clockwise.
3. Remove the saw blade carefully.

Cleaning and checking for cracks

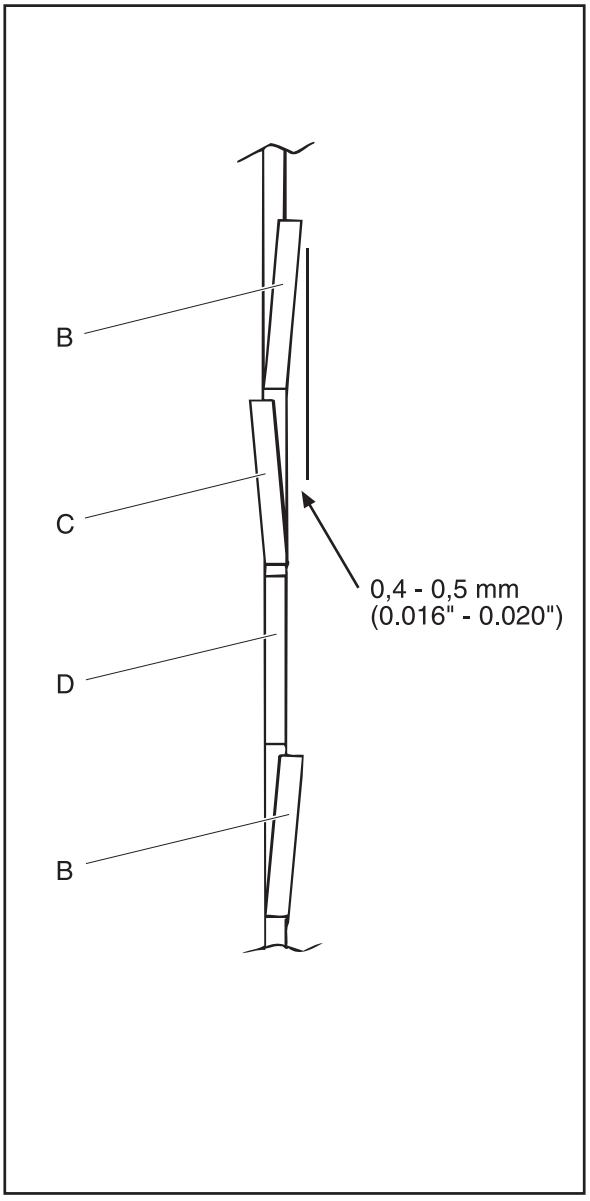
Clean the saw blade to remove sawdust and coatings. Then check the blade to detect any cracks (A) at the tooth gullets. Small cracks can be ground off when setting the teeth of the saw blade. If the cracks are so large that they cannot be ground off the saw bladewill have to be scrapped.
Cracks in the saw blade is the most common cause of the blade breaking.

Setting the saw teeth

The teeth of the saw blade must be set to the dimensions given in the ajacent figure. Every third tooth must be left straight. Set the teeth as follows:

B=Right-hand setting, 0,4-0,5 mm.
C=Left-hand setting, 0,4-0,5 mm
D=No setting.

The greater the setting accuracy, the better the saw teeth will run smoothly and in linear manner through the log being sawed.

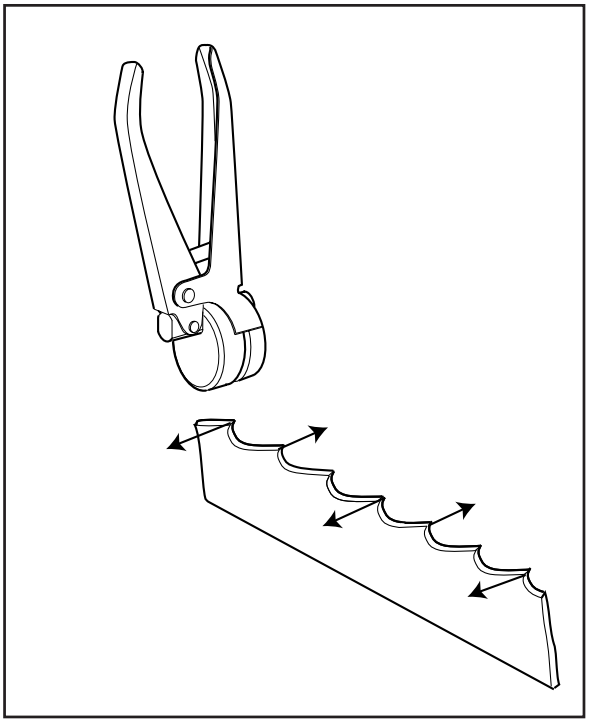


Setting tongs

To achieve the best results, a pair of setting tongs of the type described on page 17, should be used for setting the teeth of the saw blade. The pair of setting tongs is factory-preset to the correct setting dimensions.

Place the pair of setting tongs over the saw tooth in such a way that the contact angles of the tongs rest on the two nearest teeth.

Activate the tongs to set the saw teeth.

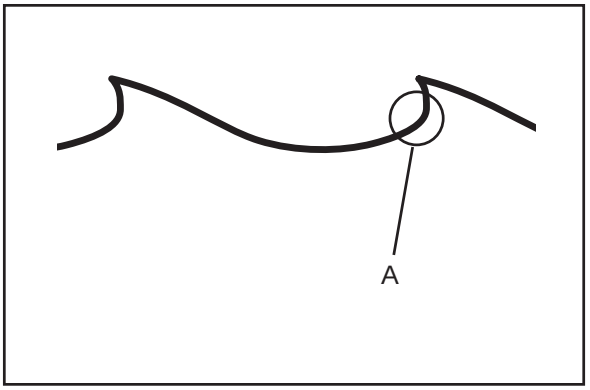


To sharpen the saw blade

WARNING!
The saw blade has sharp cutting surfaces. Be careful to avoid injury. Always wear protective gloves while handling the saw blade.

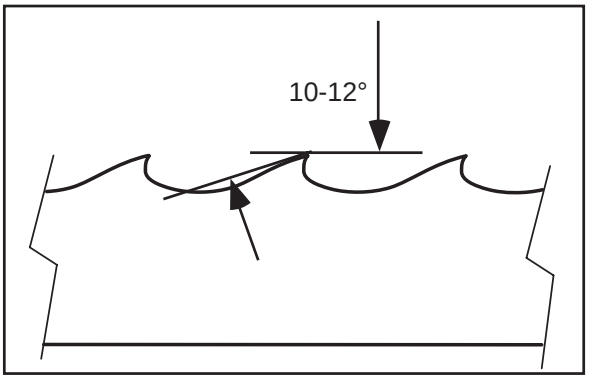
Before sharpening can begin, the teeth of thesaw blade must be set as described on the preceding pages.

The greater the sharpening accuracy, the better the saw blade will run smoothly and in a linear manner through the log while sawing.



Radii

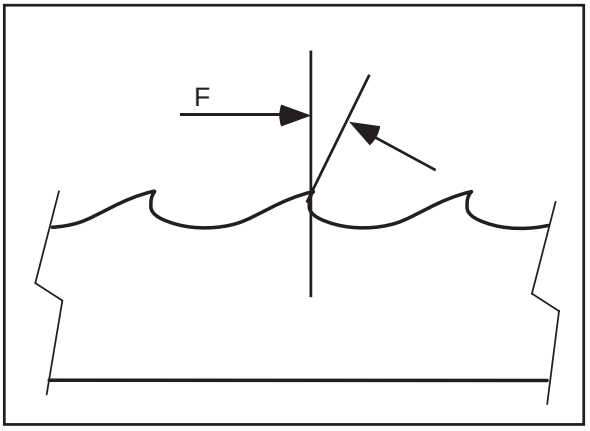
The radii at (A) must be 1-3 mm.
Radii less than 1 mm increase the risk of cracking.
Radii more than 3 mm will impair chip-off.



Angles

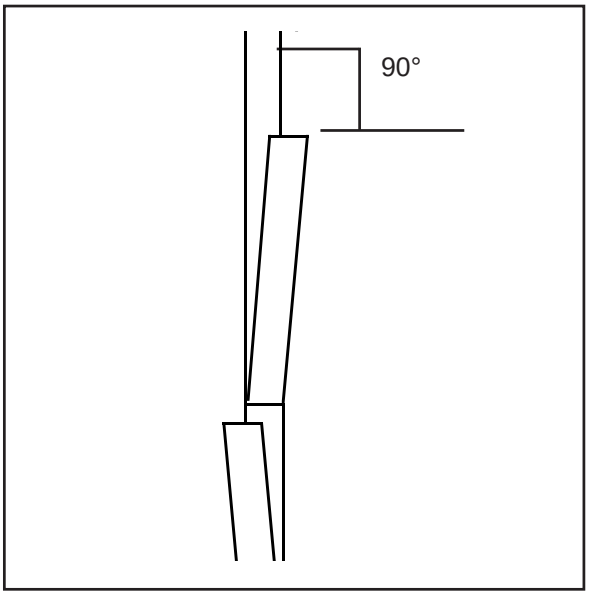
The angle of taper must be 10-12° and the side plate angle (F) varies with different types of wood as follows:

Hardwood or frozen lumber	11°
Medium hardwood	15°
Softwood	19°



Before sharpening can begin, the teeth of thesaw blade must be set as described on the preceding pages.

The breast angle must be 90 °. See the figure to the right.



Tooth pattern

As the saw blade is sharpened, it is important that the teeth and the gullet bottom keep their original form.

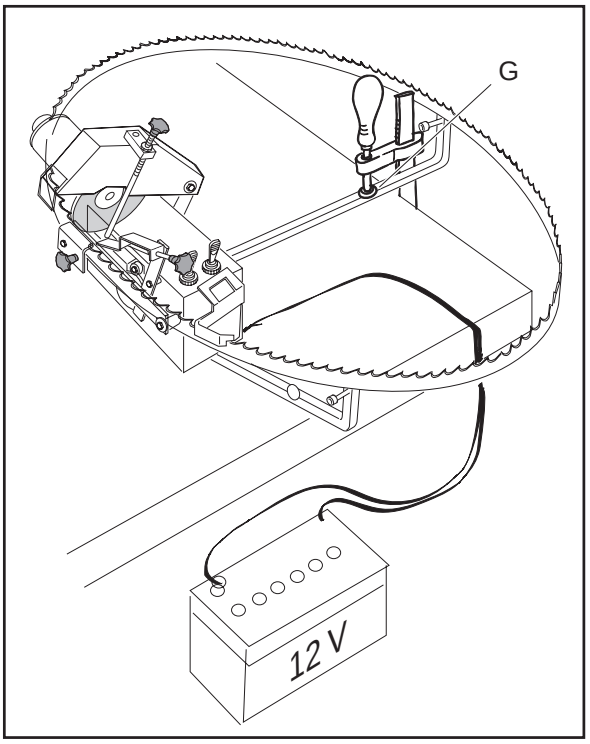
For optimum results, use a grinding unit to sharpen the saw blade. The grinding procedure is described on next pages.
The grinding unit is factory-preset to the correct angles and tooth pattern.

Setting up the grinding unit

WARNING!
Do not store petrol near the grinding unit. Sparks from the grinding disc or electrical connection can cause petrol fumes to ignite.

Place the grinding unit on a table and draw out the support arms. Clamp the centre support arm to the table at G for better stability.

Connect the power cables to a 12 volt power source. A battery or a battery charger may be used as a power source.
Connect the red cable to + and the black cable to the - pole. If the cables are transposed, the grinding disc and feed motor will rotate in the wrong direction.

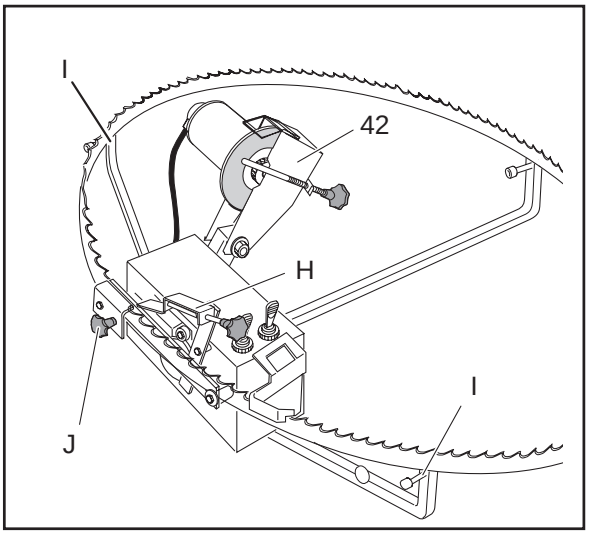


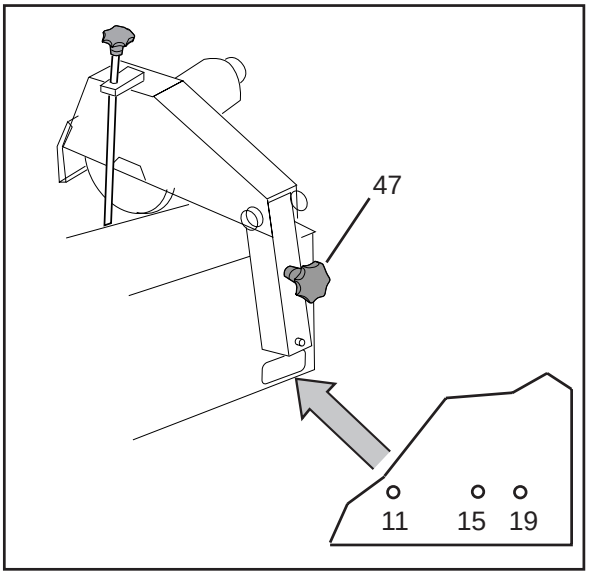
Using the grinding unit

The grinding unit can be used to grind saw blades having 16 - 32 mm tooth pitches. If the unit is used for other tooth patterns, the grinding disc will have to be reshaped.

WARNING!
The saw blade has sharp cutting surfaces. Be careful to avoid injury. Always wear protective gloves when handling the saw band!

1. Check that the grinding disc has the correct profile. See the templates on the back cover of this manual. The templates can be cut out and held against the grinding disc.
   NOTE!
   A new grinding disc must be shaped to the correct profile before use. For this purpose use the grinding stone supplied.
2. Raise the grinder motor (42), raise the band advancing linkage (H) and place the saw blade in position. The saw blade must rest in the notch in all of the support arms.
3. Check that the saw blade rests on the two supports (I). If the saw blade isn't resting against both supports, the support arms might become bent.
4. Adjust screw (J) so that the saw blade runs easily while being held in position.
5. Loosen knob (47) and set the correct side plate angle (F). See the figure to the right and on the preceding page.
6. Tighten the knob (47).





WARNING!
The risk that the grinding disc may spin off and cause personal injury.
Make sure that the power supply is correctly wired so that the grinding disc rotates in the right direction, i.e. grinds downward and backwards.

WARNING!
There is risk that the grinding disc or the saw blade may be dasmaged. This may lead to personal injury. The grinding disc must not be in operation while the procedure in items 8-11 below are being carried out.

7. Start the feeding device by flipping the power switch (44). The cam wheel (K) of the feeding device must rotate counter-clockwise.
   If it rotates in the wrong direction, transpose the power cables.

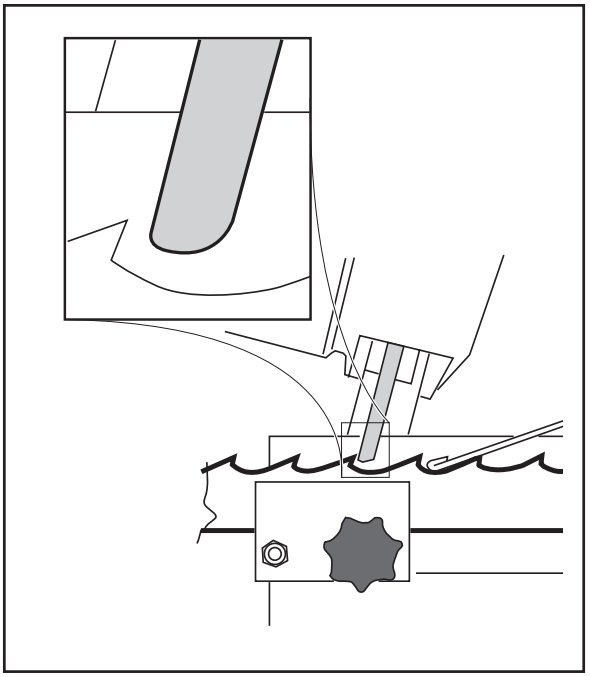
8. Stop the feeding device and check where the grinding wheel moves down against the saw blade.

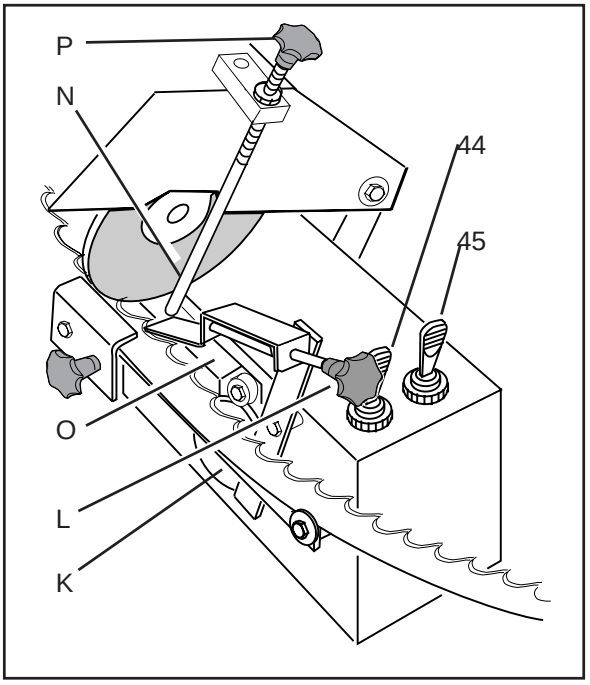
9. Adjust knob (L) until the grinding disc is exactly tangent to the inner side of the saw tooth (M). Repeat steps 7 and 8, if required.

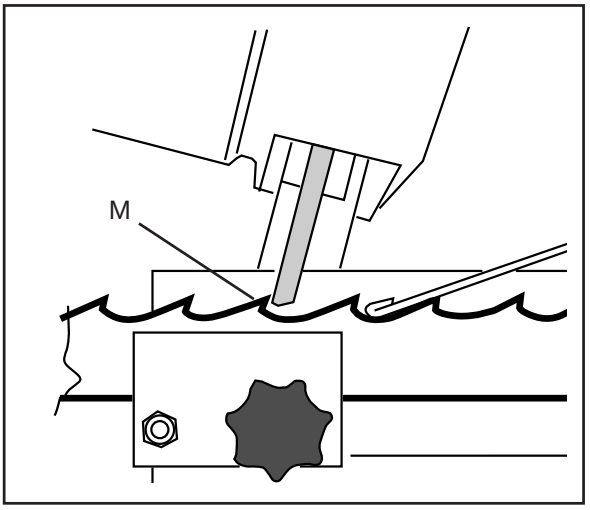
10. Set the lifting device (N) in the apprpriate hole in the lever (O) and start the feeding device. Adjust knob (P) until the grinding wheel is exactly tangent tothe entire gullet bottom during feeding.

11. Stop the feeding device and turn both knobs counter-clockwise 1/2 turn.

Note! Do not grind the saw blade too much as this will impair its temper.



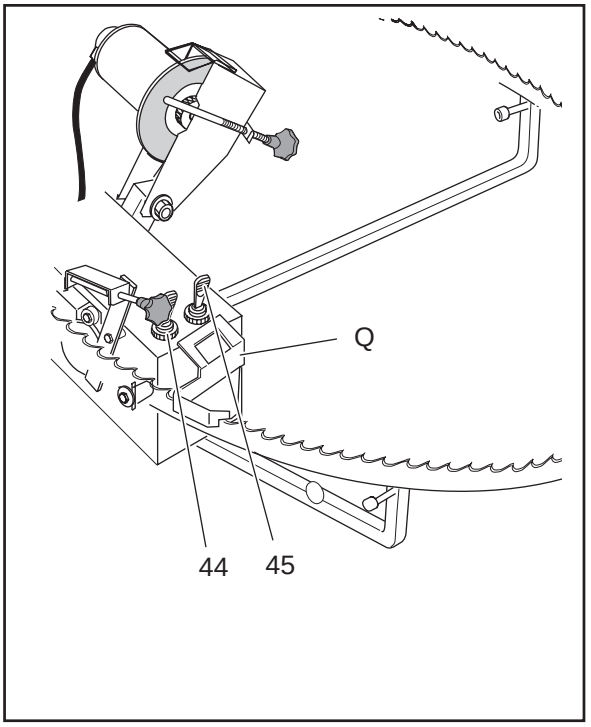




WARNING!
Check that the grinding disc is not cracked and that it is securely mounted on the shaft. Stop the grinding disc immediately if abnormal vibrations arise.

WARNING!
Wear protective eye glasses while grinding!

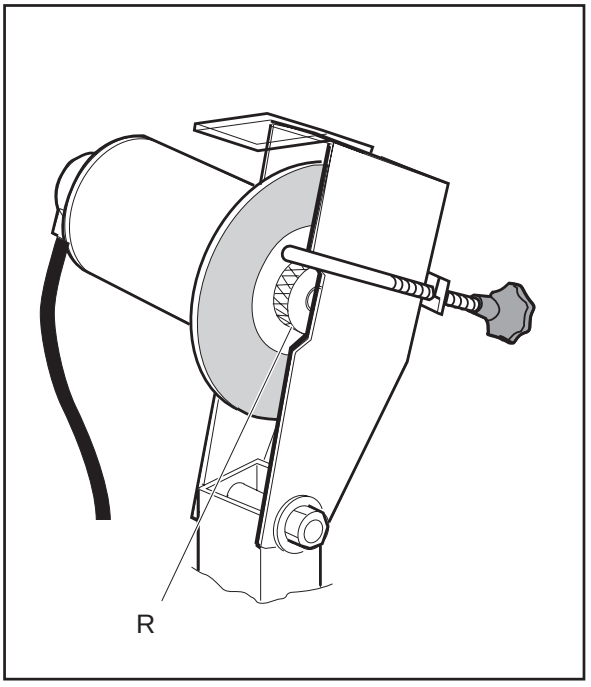
12. Fit the stop pin (Q).
13. Start up the grinding disc and the feeding device by flipping the power switches (44 and 45) to the on position.
14. When the grinding unit stops automatically, remove the stop pin.
15. Raise the grinding disc assembly with motor and remove the saw blade.



To replace the grinding disc

WARNING!
Before replacing the grinding disc, disconnect the power supply to the grinding unit!

1. Raise the upper section of the grinding unit.
2. Hold the grindiing disc in place and use a pair of tongs to loosen the nut (R).
3. Remove the worn grinding disc and fit the new disc. Tighten nut (R) lightly using a pair of tongs.



To mount the saw blade

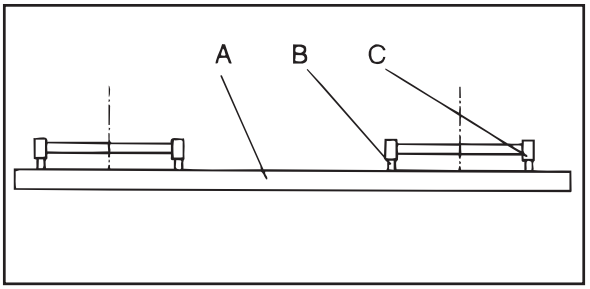
Mount the saw blade on the one-man sawmill according to the instructions on page 21.

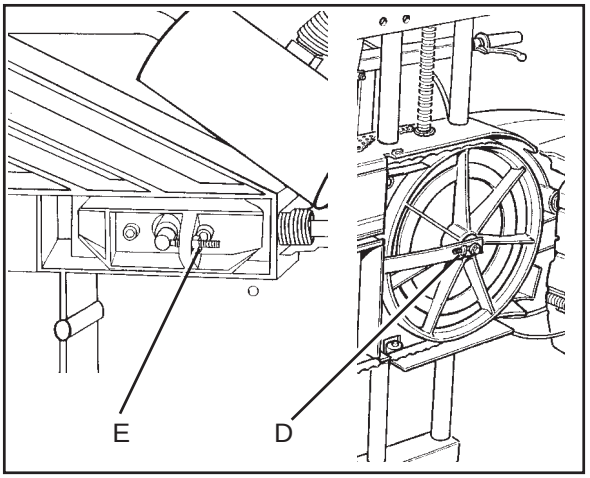
To adjust the blade wheel

After the sawmill has been in use over a long period of time, the blade wheel bearings will have become worn and their position altered, while the working geometry of the base will have stabilised. This will necessitate readjusing the parallel alignment of the blade wheels.

This adjustment is carried out as follows:

1. The saw blade must be mounted and adjusted.
2. Remove the blade wheel guard.
3. Hold a straight-edge (A) with 4 intervening gauge blocks (B) against the blade wheels. Position the gauge blocks against the side of the blade wheels at their periphery (C). The straight-edge must be held at "blade wheel centre" height. Do not press the straight-edge more than necessary. The 4 gauge blocks must have the same dimensions.
4. If the distance between the straight-edge and the side of blade wheel at its periphery, deviates, the relevant blade wheel must be adjusted.
5. Use screw (D) to adjust the left-hand blade wheel.
6. Use screw (E) to adjust the right-hand blade wheel. A lock nut on the screw must be backed off while the adjustment is carried out.





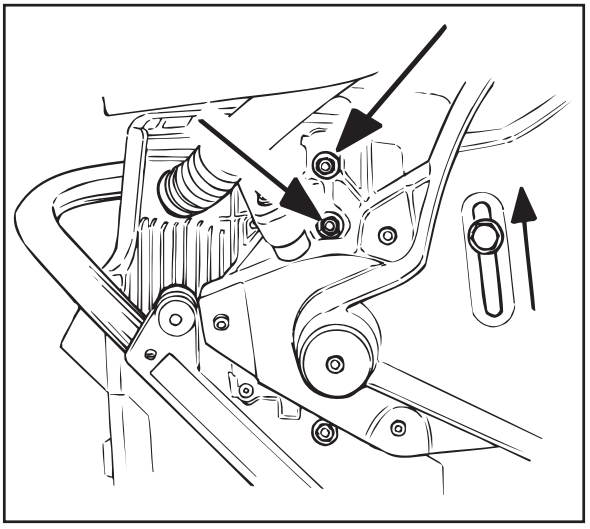
Drive belt

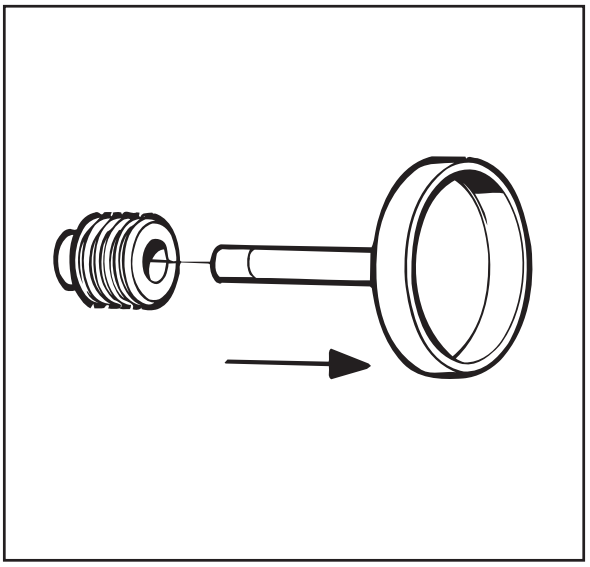
As the sawmill is in use, the drive belt becomes worn. To prevent belt failure while the sawmill is in use, the belt must be changed after 200 hours of operation.

If the drive belt slips on its pulleys or if it often requires adjustment, this is a sure sign that the belt needs to be replaced.

Change the belt as follows:

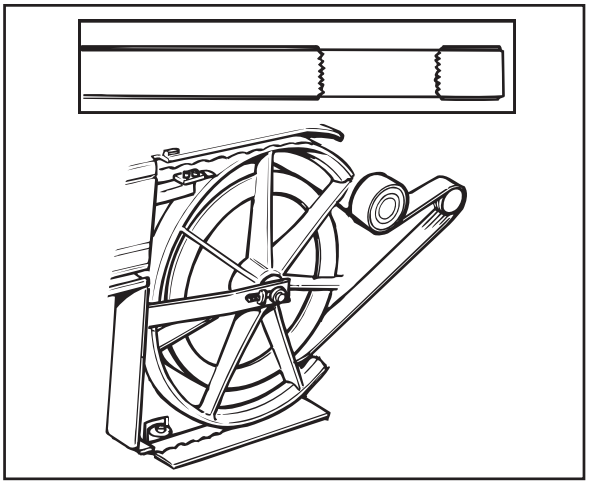
1. Carefully remove the motor's fuel connection, trying not to spill any fuel.
2. Disconnect the throttle wire and the emergency stop connection from the motor.
3. Remove the motor (held by two M8 nuts).
4. Remove the coupling drums with drive shaft.
5. Do the following:
   - Loosen the belt.
   - Loosen stay D.
   - Ease the brake and pull the blade wheel outward a bit. Then remove the worn belt.
6. To fit the new belt, follow the steps above in the reverse order. For particulars of belt adjustment, see page 42.
7. Tighten the two M8 nuts to secure the motor. Tightening torque: 25 Nm.



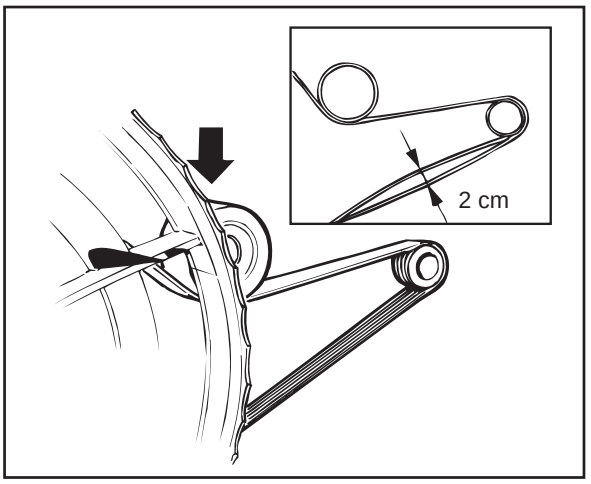


To adjust the drive belt

Adjust the drive belt according to the following instructions:

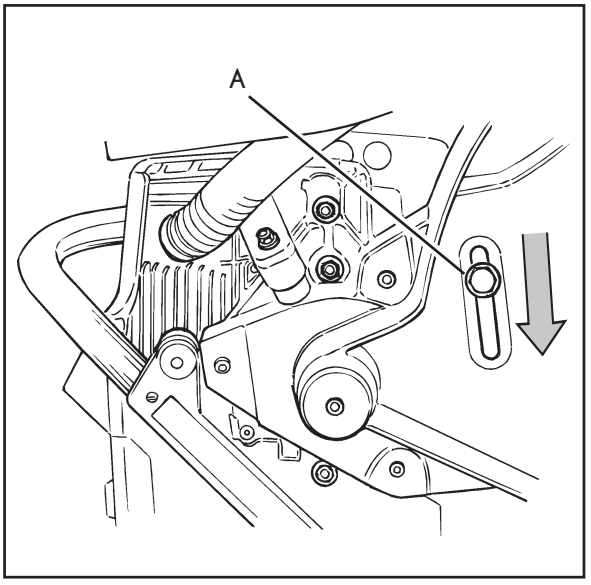


1. Check that the belt is resting in position on the two pulleys and on the tensioning pulley.



2. Tension the belt by pressing the tensioning pulley over the belt and tighten screw (A).

   When the belt is correctly tensioned, the longer (lower) section of the belt should deflect (pushing it with a finger) one centimetre in either direction.



Checking the brake performance

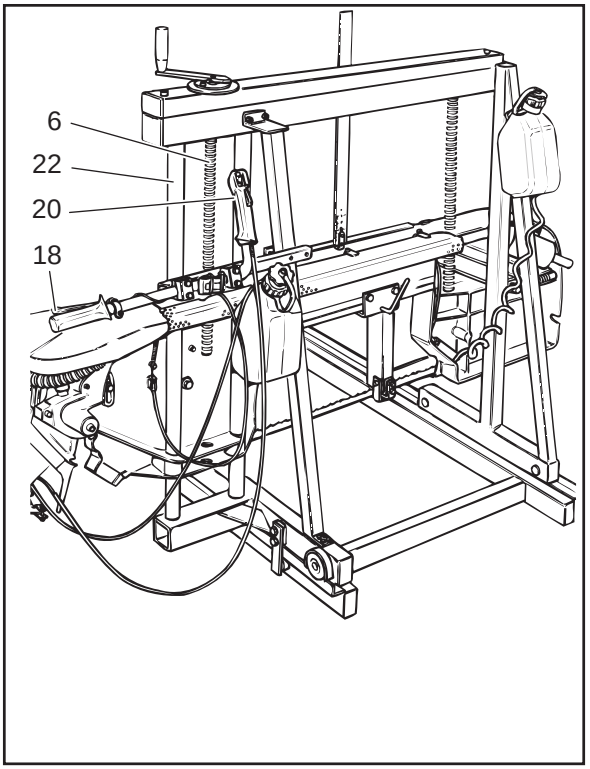
The one-man sawmill must conform to local safety requirements. Therefore, the performance of the break must be checked once a week. Check the brake as follows:

1. Start up the saw motor.

2. Increase the throttle (20) without activating the brake handle (18).

3. The saw blade must not start.

4. If the saw blade begins moving, stop the saw and do not use it until the brake mechanism has been repaired. Get in touch with your local dealer.



Saw blade height adjustment

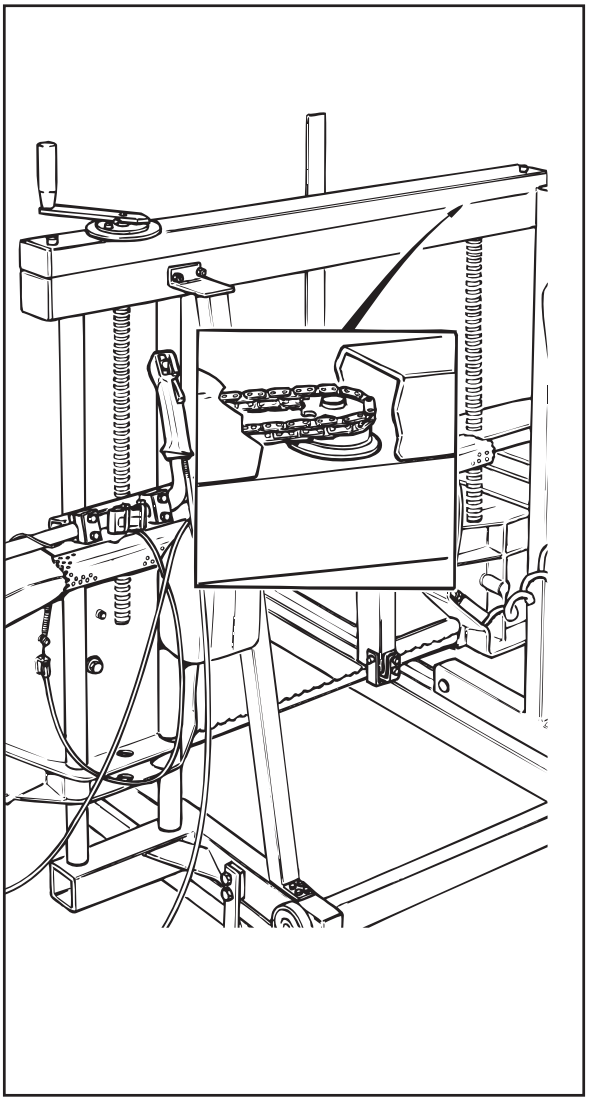
To keep the saw blade height adjustment mechanism in good working order, maintenance on the following components is required.

Guide rails (22)
The guide rods that hold the saw unit in position should be wiped off and coated with a thin film of oil, whenever necessary.

Screws (6) and chain
The screws should be wiped off, whenever necessary.

The drive chain, which unites the two height adjustment screws should be oiled once a year.
To oil the chain, proceed as follows:

Turn the crank back and forth, about 20 turns in each direction, and, at the same time, spray oil on the chain. Use a cloth, or the like, to wipe off any excess oil.



Maintenance

The maintenance described below is to be carried out by the user. Should any faults arise, which cannot be remedied by following the instructions in this manual, get in touch with the nearest authorised service workshop for HUSQVARNA products.

Daily maintenance

1. Check the tightness of all screws and nuts.
2. Height adjustment device:Clean the screws and the guide rods. See pages 8-9.
3. Adjust the saw blade tension. See page 21.
4. Check that the cleaning liquid supply to the saw blade is working. Cleaning liquid skall be consumed at a constant rate.
5. Check all of the guards. Make sure that they are intact and in good condition. Check the following:
   - Brake. See page. 43.
   - Emergency stop. See page 15
   - Blade wheel guard. See page. 14.
   - Saw blade guard. See page 14.
   - Muffler. See page 14.
   - Exhaust pipe guard. See page 14.
   - Rail stops. See page 15.
   - Rail guards. See page 15.
   - Chain guard. See page 15.
6. Set and grind the saw blade, if necessary. When sawing timber of normal sand content and hardness, the service described above should be carried out after about 2 hours of sawing (not including the time required for set-up, handling timber, etc.). See pages 33-40.

Weekly maintenance

1. Clean the air filter. Replace it, if necessary. See page 32.
2. Clean the air intake of the starter. Check the starter device, recoil spring and starter cord. See page 34.
3. Clean the fan blades on the fly wheel. See page 33.
4. Clean the cooling fins on the cylinder. See page 33.
5. Clean the carburetor space.
6. Clean the spark plug. Check the electrode gap, should be 0,5 mm. See page 32.
7. Clean the height adjustment screws, guide rails and chain. See pages 8-9.
8. Check the belt tension. Adjust, if necessary. See page 42.
9. Clean the area around the rails. Remove sawdust, bark and wood chips to facilitate handling the one-man sawmill.

Monthly maintenance

1. Check the coupling centre, the coupling drum and the coupling spring for wear.
2. Clean the outside of the carburetor.
3. Check the fuel filter and the fuel line. Change if necessary.
4. Flush the inside of the fuel tank with petrol.
5. Flush the inside of the cleaning liquid tank.
6. Check all the cables and the connections.
7. Check that the saw carriage moves easily and doesn't seize. Seizing indicates damaged bearings. Replace wheels if necessary. See page 19.
8. Adjust the play of the bearings that run against the inner surfaces fo the rail. See page 19.
9. Check the tightness of the nuts of the screws that secure the rail sections. See page 18.
10. Check that the rails are hard up against all their points of contact on the wooden beams. See page 18.

Storing

If the one-man sawmill is stored for a longer period of time without being used, do the following:

1. Empty and flush the fuel tank with petrol.
2. Empty and flush the inside of the cleaning liquid tank.
3. Remove the saw blade.
4. Spray preserving oil in the spark plug hole and in the carburetor. At the same time, turn the motor over a few revolutions by pulling the starter cord handle.
5. Remove the saw carriage and screw apart the rail sections.
6. Lubricate and spray oil on all of the parts.
7. Store the one-man sawmill in a dry storage space.
8. Service the sawmill at one-year intervals as follows:
   - Spray preserving oil in the spark plug hole and in the carburetor. At the same time, turn the motor over a few revolutions by pulling the starter cord handle.
   - Lubricate and spray oil on all of the parts.

Technical particulars

Motor

Cylinder volume, cm^3:	94
Cylinder bore, mm:	56
Stroke, mm:	38
Idling speed, rpm:	2 500
Rec. max. speed, run-in, rpm:	11 900
Rec. max. speed, rpm:	12 500
Power, kW/rpm:	5,2/8 800

Ignition system

Manufacturer:	SEM
Type of ignition system:	CD
Spark plug:	Champion RCJ 6Y
Electrode gap, mm:	0,5

Fuel and lubrication system

Carburetor:	Walbro
Carburetor, type:	WJ39
Fuel tank, volume, liters:	2,5
Fuel:	See page 23
Cleaning liquid tank, volume, liters:	2,5

Cleaning liquid: Dish washing detergent

Weights

Saw carriage:	96 kg
Two rail sections:	115 kg
Compl. sawmill w. 2 rail sections:	223 kg

Saw blade

Blade speed:	30 m/s
Pitch:	25 mm
Width:	35 mm
Thickness, mm:	1 mm + setting
Length, mm:	3 570 mm
Starting at, rpm:	3 700
Ordering number:	531 01 94-65

Sawing

Max. log height, mm:	600
Max. log width, mm:	500
Rec. speed when sawing, rpm:	8 500-9 500

The max. permissible log length is contingent on the number of rail sections fitted.

Height adjustment crank, mm/turn:	5
Pitch disc, resolution, mm:	1

Noise levels

Equivalent (see Note 1) noise pressure level at operator's ear, measured according to relevant international standards, dB(A):	96,3
Equivalent (see Note 1) noise power level, measured according to relevant international standards, dB(A):	108,2
Vibration level in left steering handle (see Note 2), m/s^2:	2,6
Vibration level in right steering handle (see Note 2), m/s^2:	2,3

Note 1: Equivalent noise level is, according to ISO 7182 and ISO 9207, calculated as the time-weighted energy total for noise levels under various working conditions with the following time distribution: 1/2 idle, 1/2 full load.

Note 2: Equivalent vibration level is, according to ISO 7505, calculated as the time-weighted energy total for vibration levels under various working conditions with the following time distribution: 1/2 idle, 1/2 full load.

Motor data Grindlux 4000

Grinding motor, technical data

Voltage:	12 V
Motor speed:	2800 rpm
Periphery speed:	22 m/sec
Power:	90 W
Rated current:	7,5 A
Grinding disc:	150x6x16 mm (531 01 32-66)
Fuse:	12 A
Fuse:	0,25 A
Weight:	8,24 kg
Sharpening tool:	531 01 32-63

Templates for shaping the grinding disc.