

# Manual

Read the safety instructions.

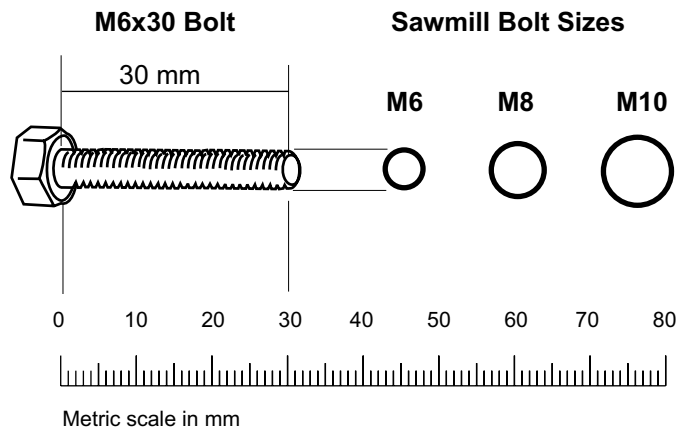


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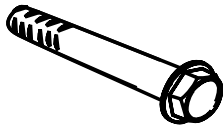
M7 serial no:



## Metric Parts Sizing Chart



Collar nut



Collar bolt



Allen head bolt



## Warranty

Logosol offers a two-year warranty against material and manufacturing defects. The company will replace or fix any faulty parts or constructions within two years of purchase.

## Free technical support

Regardless of where you bought our equipment, we offer free technical support by phone, fax, mail or e-mail.



## Regular information

All users of Logosol equipment receive regular information about new products and accessories. Our homepage is also a source of up-to-date information. Find the website address of your local distributor at the back of this manual.

### Cut this card out.

**Before operation, and to activate your warranty, you must fill out this form completely and mail it to your local distributor. Find the address of your local distributor at the back of this manual and write the address on the back of this card.**

I have the following equipment:

Sawmill M7 ☒   
 Chainsaw ☐  
 E 4000/5000/8000 ☐  
 Electric feeder ☐   
 Other: \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Tel: \_\_\_\_\_

Fax: \_\_\_\_\_

E-mail: \_\_\_\_\_

Where bought: \_\_\_\_\_

When bought: \_\_\_\_\_

### Please print legibility

Chainsaw serial number: \_\_\_\_\_

I have read and understood the chainsaw operating manual including safety rules and instructions. INITIAL: \_\_\_\_\_

I have read and understood the Logosol sawmill operating manual including safety rules and instructions. INITIAL: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_



Folde



World Service

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Tape

## Preface

You are now the owner of a Logosol M7 Portable Sawmill, the result of our collective experience and dedicated efforts since 1988. There are currently more than fifteen thousand Logosol Sawmills in use in Sweden and the rest of the world, making the Logosol Portable sawmill the top seller world-wide.


The goal for Logosol's development effort is to design smaller and lighter machines that solve a task intelligently, but without lowering the quality of the finished product. To top it off, Logosol products must be affordably priced so as to make them available to everyone working with wood.

Logosol produces a large range of products, enabling a single person to handle the entire production chain from forest felling to finished product.

In addition to various sized sawmills, the range includes such products as a multi-sided planer providing excellent profiling. For more information on Logosol products and accessories, send for our catalogue.

For us, the most important consideration is that you are 100% satisfied with your M7 Portable Sawmill. If you have any questions or thoughts about the sawmill, please do not hesitate to contact us.

In closing, I wish you much enjoyment and success with your future building projects.



Bengt-Olov Byström

Managing Director,

Logosol AB

Design and construction of the M7 Portable sawmill, plus manual text and pictures:  
Mattias Byström.

As LOGOSOL is constantly developing and improving all machines and devices, we must reserve the right to change the design, technical characteristics and equipment of our machines.

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Text and illustrations:  
Mattias Byström

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## Safety Instructions



**There are special safety rules to follow and dangers to be aware of when working with the Logosol M7 Portable Sawmill.**

**⚠ This symbol points to dangers. However, since all risks are not marked, you must read the entire text.**

**❗ This symbol calls for additional attention to the text.**

**Read through this whole manual carefully** before using the M7. Failure to observe these safety instructions may result in fatal injury.

Make sure that every person who uses the machine is well informed of the dangers and has read the whole manual. The manual must also be available to everyone using the sawmill. This is also necessary if the machine is sold or loaned out.

Read the manual and safety rules for the particular sawing unit used on the sawmill.

Minors under age 18 should not be allowed to operate the M7. Make sure that children and animals are kept at a safe distance.

While the Logosol portable sawmill is a one-person machine, be sure that there are other persons within hailing distance

should you need help. The proper safety distance for persons other than the operator is 8 m (26 feet) from all sides except where the logs are rolled in. The safety distance from this side is 15 m (50 feet), due to the danger of the chain being thrown out if it breaks.

Anyone working with the Logosol M7 portable sawmill must be well-rested, healthy and in good physical condition. Take regular breaks while working and never operate the machine while under the influence of alcohol, other drugs or medicines that might cause drowsiness or inattention.

Work only when the light is good – never in darkness, fog or the like.

Whenever you add extra equipment to the M7 sawmill, use products made by Logosol or specifically approved by Logosol for the purpose. Other equipment can cause accidents and thus should not be used. Logosol will not accept liability for personal injury or material damage incurred while using non-approved attachments.

Should a sawing unit weighing more than 15 kg (33 lbs) be used, support legs must be fitted under the guide rail ends in order to avoid tipping.

**❗ Always wear approved personal protective clothing and equipment.**

Close-fitting working overalls are the appropriate garment – never wear loose items, worker's jackets or the like. Do not wear a neckerchief, tie, jewellery or other items that can get caught in the equipment.



Use safety shoes with high-grip soles and steel toecaps.



Wear a safety helmet with hearing protection and a face shield.

**⚠ Remember that hearing can be damaged after relatively short exposure to the high frequency sounds from the motor and the cutting equipment.**

Protective goggles are also required as a face shield used alone will not provide sufficient protection for the eyes.



Wear strong gloves. There is an injury risk whenever you handle the chain, and the cutting equipment can be hot after sawing.

Never reach over or under the guide rail during operation – the cutting equipment can cause severe injuries.



## When using a petrol-driven chainsaw:

**⚠ Fire danger** – Turn the motor off before filling with petrol. Petrol is extremely flammable! Burns can cause death! If you spill any fuel, clean off any parts involved. If you get fuel on your clothing, change immediately.

Close the tank lid as tightly as possible in order to reduce the risk of it coming loose due to vibrations during sawing.

Never operate the chain-saw with the throttle lever locked. Always operate the throttle manually.

**⚠** Do not use a ripping chain for cross-cuts as this increases the danger of kickback.

### **⚠ Before using the M7 sawmill:**

Check the condition of the lifting lines especially carefully, replacing them at the slightest sign of wear. Check that all bolts and lock nuts on the log bed lifting unit and the locking system are tight and that all moving parts move freely.

To avoid tipping, check that the M7 stands level and is well fastened in the bedding.

To avoid chain breaks, check that the cutting equipment is correctly assembled.

To avoid kickbacks when starting, check that the chain-saw is correctly positioned on the guide rail.

## Service:

The M7 sawmill must be checked regularly and maintained as needed.

Perform only the maintenance and repairs specified in the manual. Other repairs must be done by Logosol or by authorized Logosol dealers.

Do not make any alterations in the construction of the sawmill as this can increase the accident risk. After service, the M7 sawmill should be returned to its original condition. Logosol accepts no liability for damage that occurs while working on an improperly modified machine.

## During operation:

**⚠ To avoid tipping, never place the machine at an angle while operating.**

**⚠** The M7 should be fastened directly to the floor or be placed on a bedding of planks in order to increase the contact surface (follow the manual).

Hold the crank firmly whenever raising or lowering a log. If released, the crank may spin back and hit your hand.

**⚠ Do not place your hand inside the long leg while raising or lowering the log.** Should the lifting line snap or the crank spin, your hand may be caught.

Logs must always be rolled on to the sawmill level with the horizontal beam. Do not lift logs

from ground level directly onto the sawmill as this can cause injury if the machine tips or the log falls.

**Do not saw logs that are so short that they do not extend 0.2 m (app. 10 ") outside each log bed.** A shorter log could fall when the log beds are raised.

The overall max. load capacity of the M7 is 500 kg (1100 lbs). The 2.5 m extension increases the capacity by 250 kg (550 lbs) for each extension with a lifting unit.

**⚠ Always stand to the right of the chain-saw while it is operating.**

**⚠** When a chain or band breaks, it is thrown out through the chip outlet.

Keep the worksite free of tools, pieces of wood, chips and other items you can trip on.

**⚠** Turn the chain-saw off after each cut. Do not leave the M7 sawmill unattended where unauthorized persons might start it.

**ALWAYS REMEMBER** that should any type of problem occur, stop sawing and turn off the chain-saw. Most accidents with dangerous machines happen when something goes wrong and the operator attempts to fix it while the machine is still running. A stop seldom shows up on the finished product.

## Description

- Because of the high quality and precision construction, none of the angles need setting. The only parts to adjust are the guide rail and the height of the log bed, in all three bolts.

- All aluminium components are anodized and completely rustproof, creating a wearing surface as tough as tempered steel. It has a low friction coefficient and is easy to keep free of pitch and chips.

- Adjustable legs make it easy to compensate for uneven sites.

- The M7 has a double ratchet mechanism enabling a simple shift by hand between 1/4" (6.25 mm) and 1/8" (3.12 mm) increments.

- Clear scales show the height of the log bed. Extra measuring rods are available as accessories to show sawing height settings.

- The knee joint on the front leg has a non-slip surface that facilitates log handling. The joint also has a mounting hole for ramps, log tables and the like.

- The cross beam between the short legs is a significant stabilization factor.

- the crank axle runs through maintenance-free bronze bearings that will stand up to any amount of wear. The slide rails use low-friction plastic that has a working life of several years thanks to the superbly smooth surface anodization.

- The settings for sawing parallel to the grain of conical logs are quick and simple. (The log beds can be set at different heights so

that more than half of the cuts give acceptable yield.)

- Most accessories for M5 and M6 fit on the M7 as well.

## Maintenance

The Logosol Sawmill should be kept clean, and all plastic parts should be lubricated with Logosol's Low Friction Agent or some silicone lubrication. Regularly check the condition of the lifting lines.

Tempered parts: The ratchet cam, the ratchet cam axle and the ratchet bar are only fairly protected against rust, and should be kept lubricated with a thin layer of oil to prevent them from rusting.

## Technical specifications

Length:	5.5 m (18 ft)
Width:	1.25 m (4 ft)
Width of log bed:	0.5 m (1ft 8 in)
Weight without saw:	52 kg (115 lbs)
Max. rec. log diam.:	0.6 m (2 ft)
Max. rec. log length (standard design):	5.1 m (16 ft 9 in)
Max. logweight:	500 kg (1 100 lbs)

## Partially assembled M7 unit


The Logosol M7 portable sawmill is also sold partially assembled where only the guide rail and the struts remain to be fitted.

The partially assembled M7 unit will still need the same siting and adjustments as are described in this manual (pg 21 +).

## Assembly

The M7 is designed for simple assembly and adjustment, mainly because there are fewer parts and assembly steps than were needed in earlier models. Most of the aluminium parts are anodized making it easier to force the bolts through the profile holes. Assemble the M7 on a surface that will not scratch the surface treatment.

**Save time** by reading the entire assembly instruction before beginning to work. Then follow the instructions step by step.

Whenever this symbol appears,  tighten bolt loosely to allow some movement.

When there is no symbol, tighten the bolts well.

## Tools needed

(Tools are not supplied with delivery of the M7 sawmill.)

Ring or flexible head spanners:

	Quantity
10 mm	2
13 mm	1
16 mm	1
17 mm	1

Hexagon socket wrench/Allen key (metric):

	Quantity
3 mm	1
5 mm	1
6 mm	1

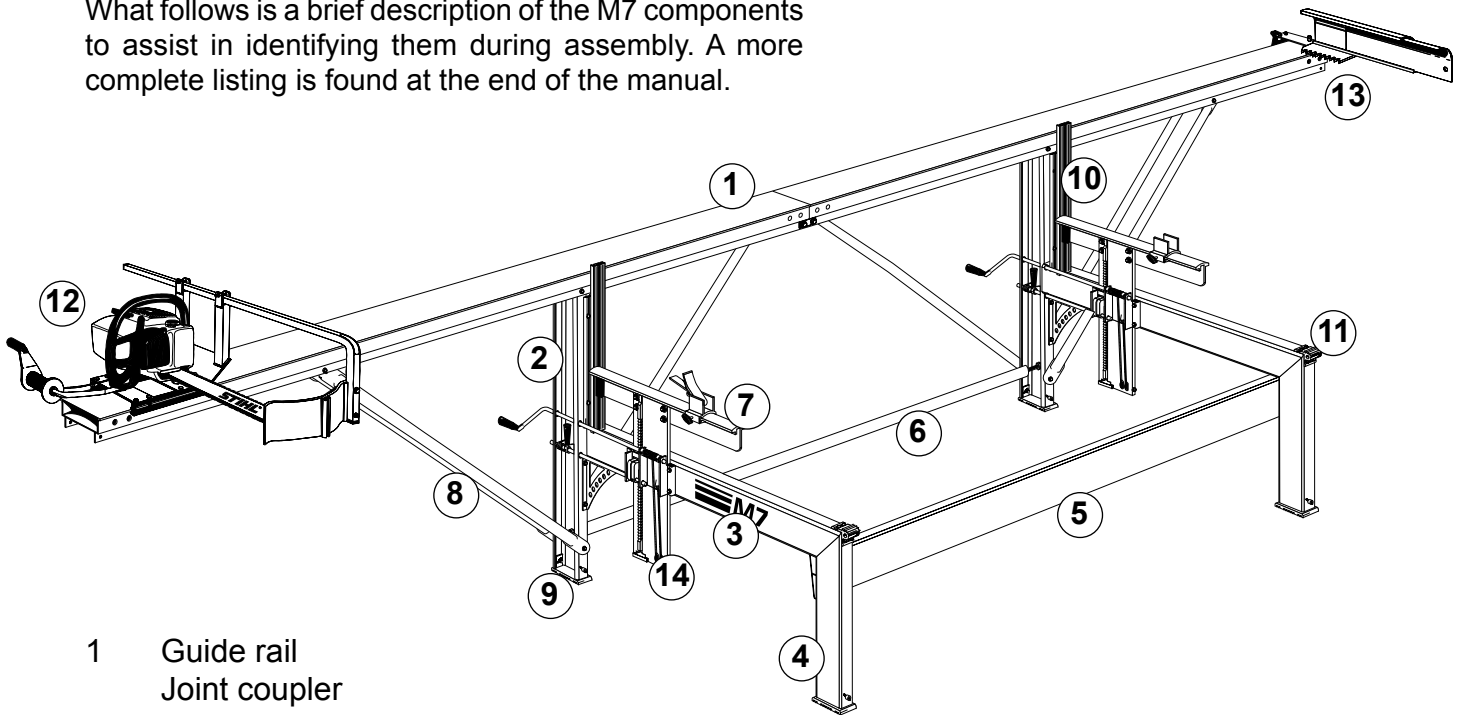
Set square 1

Assembly will be facilitated with a battery-driven drill or screwdriver with a 10 mm hexagon socket and a ratchet key with 10 and 13 mm hexagon sockets.

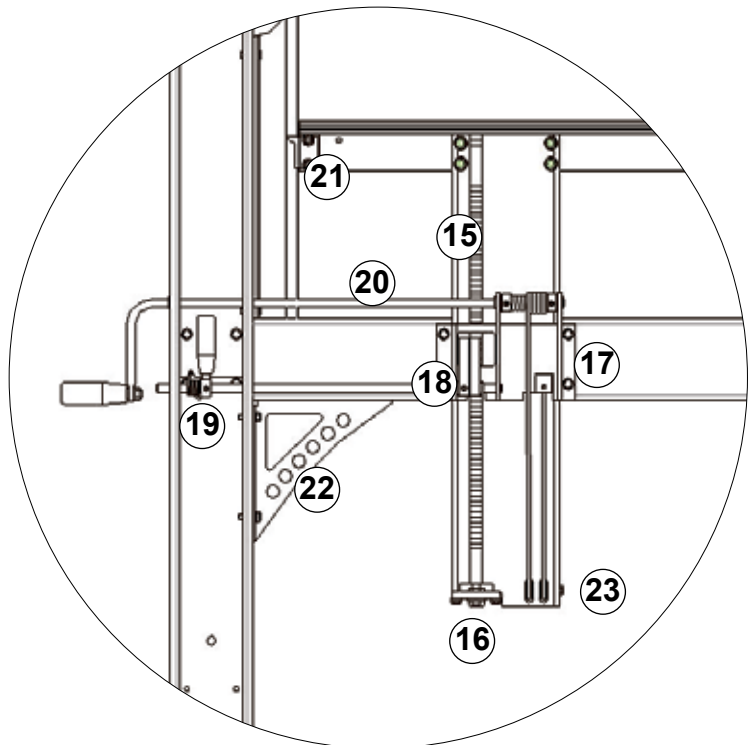


## M7 Components

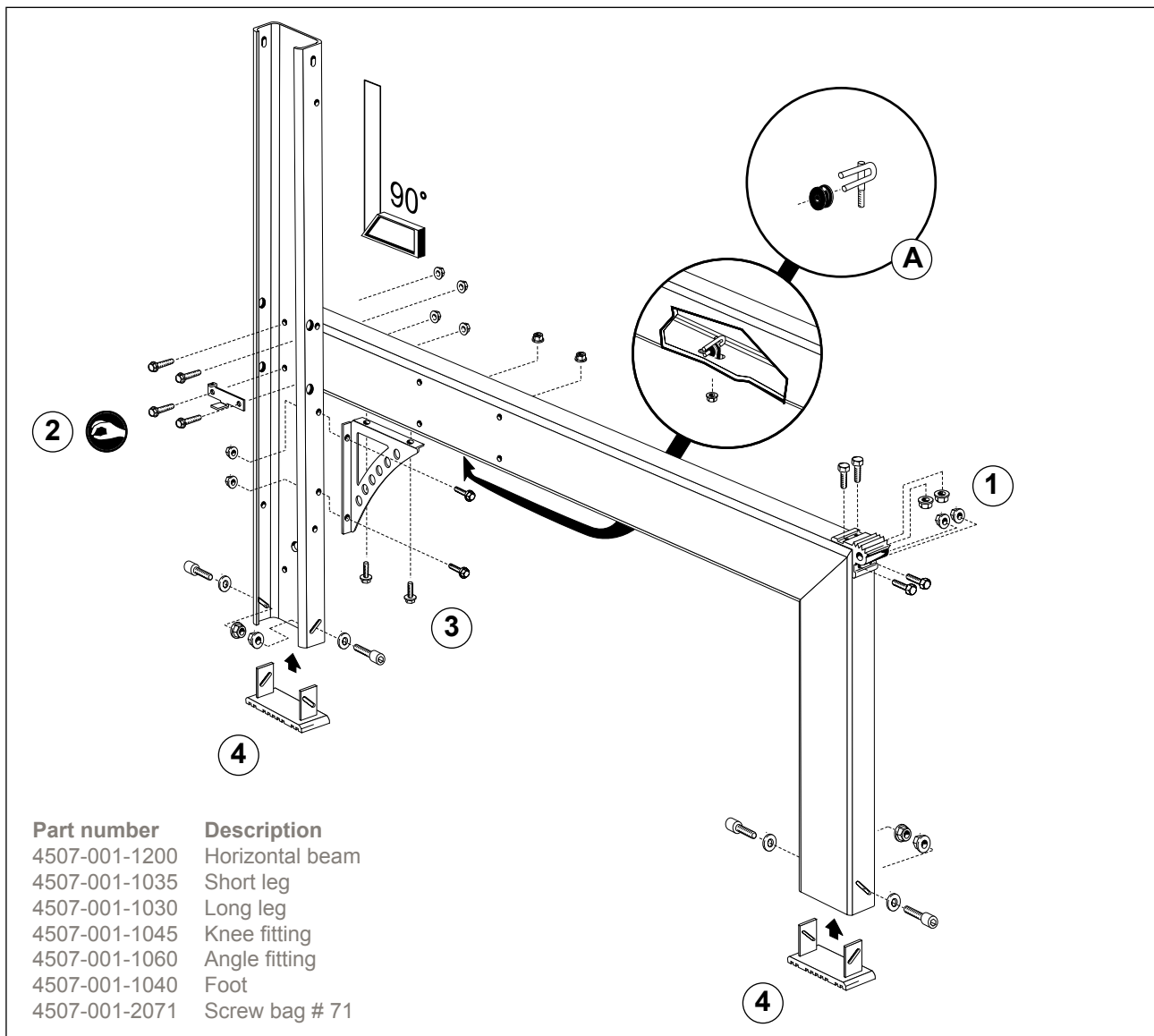
What follows is a brief description of the M7 components to assist in identifying them during assembly. A more complete listing is found at the end of the manual.



- 1 Guide rail
- Joint coupler
- 2 Long leg
- 3 Horizontal beam
- 4 Short leg
- 5 Cross beam
- 6 Adjusting strut
- 7 Log bed
- Edge support with log clamp
- 8 Guide rail strut
- 9 Foot
- 10 Log rest
- 11 Knee connector
- 12 Carriage
- 13 Log grip
- 14 Lifting beam
- 15 Ratchet bar
- 16 Ratchet bar stop plate
- 17 Saddle plate
- 18 Ratchet cam
- Ratchet cam axle
- 19 Ratchet handle
- Scale selector plate
- Turn spring
- 20 Crank
- Lockring
- Lockring with line attachment
- 21 Plastic slide rail on log bed
- Indicator
- 22 Angle fitting
- 23 Line pulleys



## Assembly: Frame



The right and left leg units of the frame are assembled in the same way. **The bolts listed below are for one leg unit.**

**(1)** Fit the horizontal beam to the short leg using the corner fitting. Be careful not to damage the bevelled faces before assembly. (4 x M6x20 bolts, 4 x M6 collar nuts)

**(2)** Fit the horizontal beam to the long leg. The scale plate is fitted to the long leg using the two lower bolts.

**! Tighten all four bolts loosely** to allow the beams to move somewhat in relation to each other. (4 x M6x20 collar bolts, 4 x M6 collar nuts)

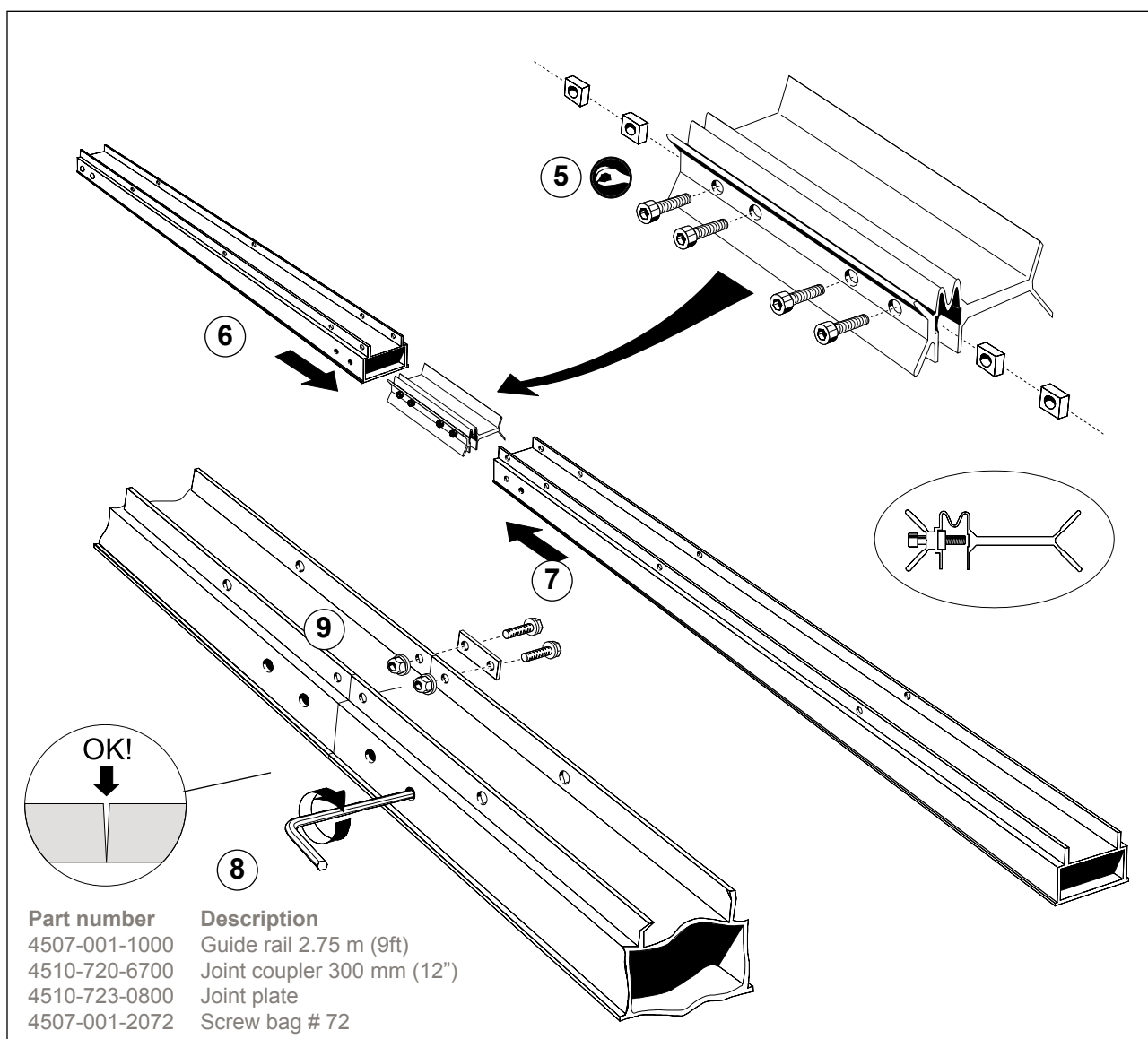
**(3)** Fit the angle fitting to the long leg and to the underside of the horizontal beam. **First, tighten the four bolts on the angle fitting loosely, then gradually tighten all the four screws until they are firmly tightened.** In this way the frame will be set at exactly 90°. (4 x M6x20 collar bolts, 4 x M6 collar nuts)

Finally tighten the bolts between the horizontal beam and the long leg. (2)

**(4)** Fit the sawmill feet, turning them so that the holes in the foot and the leg form a cross and that they lie correctly in the leg tracks. (4 x M8x25 allen head bolts, 4 x M8 nuts, 4 x M8 washers)

**(A)** Assemble the pulley, see picture. (1x M6 collar nut)

## Assembly: Guide Rail



❗ Hole placement in the ends of the guide rail differs and must be turned correctly.

❗ **Work on a level surface.** Cut the guide rail carton in half and place the two halves after each other to form an underlay where the slide rails cannot be scratched.

(5) Make sure that the bolts in the joint coupler are loose. They should be loosened approximately one turn from the point at which they begin to tighten. (4 x M8x35 allen head bolts, 4 x M8 square nuts)

(6) Insert the joint coupler in one end of the first guide rail section until the heads of the bolts are accessible through the side of the guide rail. Tighten the inner bolt somewhat.

❗ **The joint coupler must face the right way** (see drawing). The opening must be turned towards the guide rail sliding surface.

**Coat the sides of the joint coupler with oil.** This is important to ensure that the piece expands in the right way when the bolts are tightened.

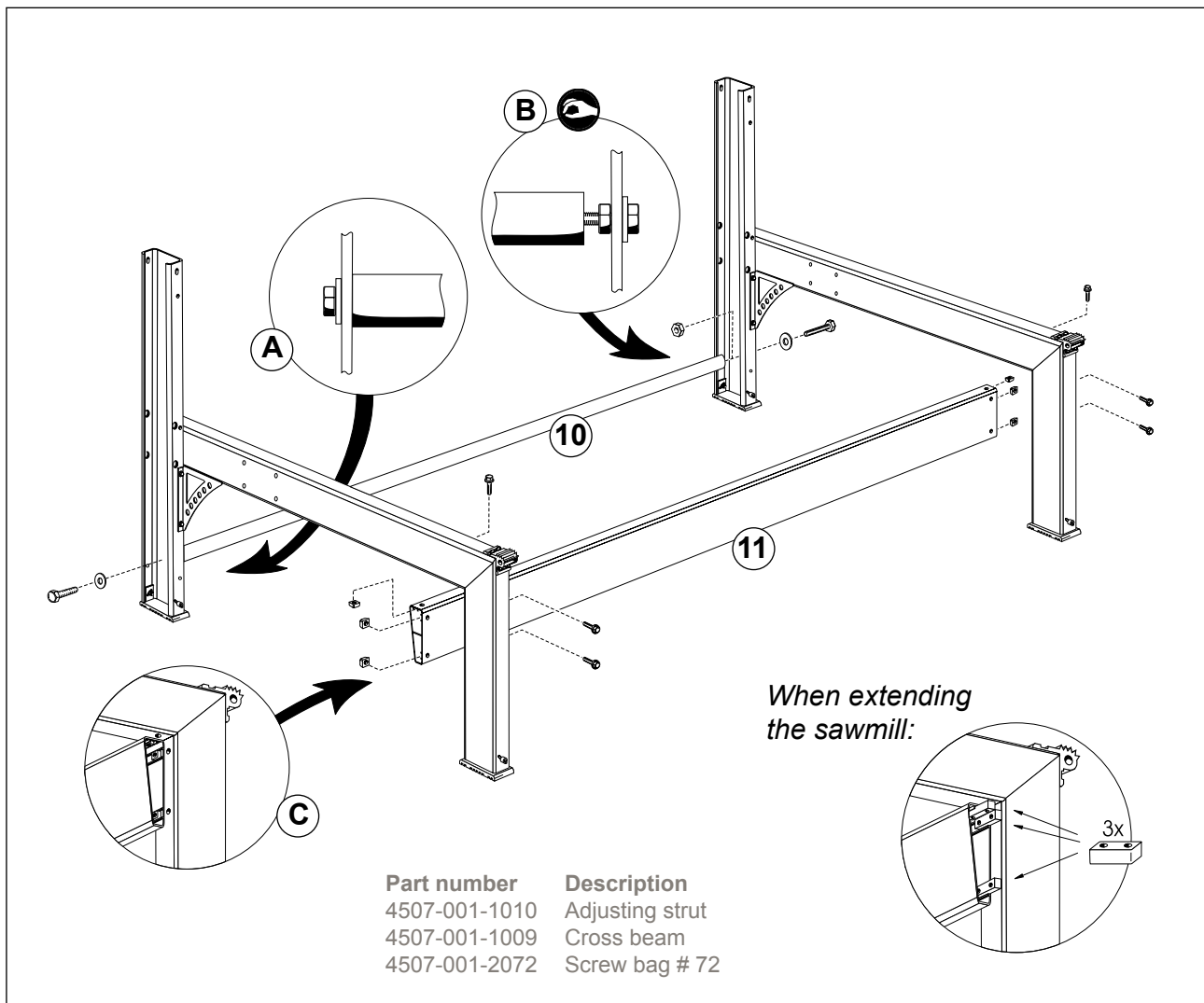
(7) Fit the other guide rail section over the joint coupler and push the sections completely together.

❗ If this is difficult, the reason can be that the guide rail sections are not correctly lined up or that the innermost bolt is too tight.

(8) Tighten the four allen head bolts.

(9) Fit the joint plates as shown. (4 x M6x20 collar bolts, 4 x M6 collar nuts)

## Assembly: Adjusting Cross Beam and Strut



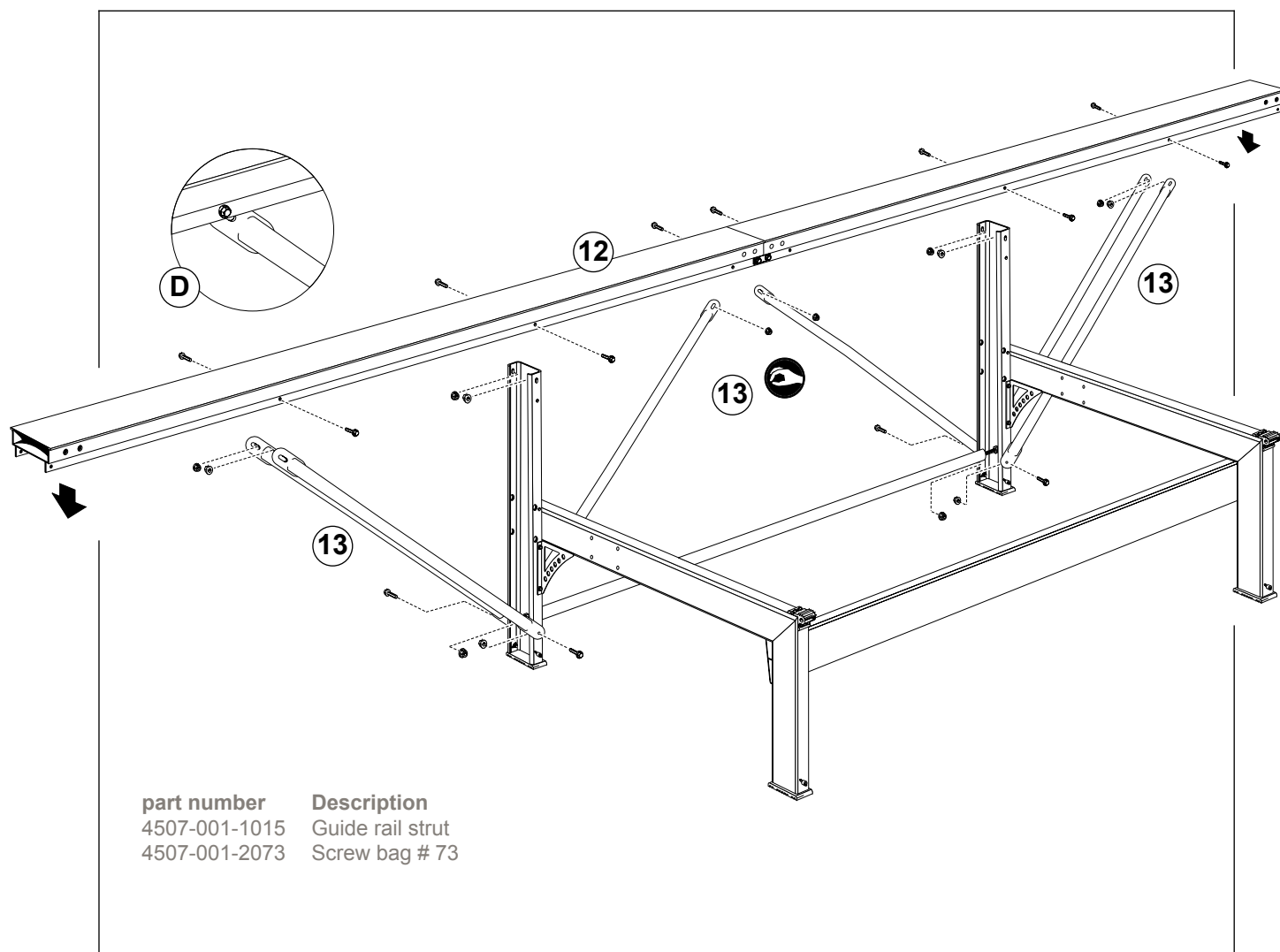
**(10)** Fit the adjusting strut. Use a short bolt on the side where the strut is bolted to the back of the long leg **(A)** pulling the strut right up against the leg. (1 x M10x40 bolt, 1 x M10 washer)

On the other side **(B)** use a long bolt with a nut on the inside of the leg. Screw the bolt approximately 20 mm into the adjusting strut. Do not tighten this bolt. (1 x M10x50 bolt, 1 x M10 nut, 1 x M10 washer)

**(11)** Fit the cross beam. In each leg there are six holes. The inner ones are used for the standard M7 unit **(C)**. (6 x M6x20 collar bolts, 6 x M6 square nuts)

**(D)** The others three holes are used when the M7 is extended, and an additional cross beam is fitted on either side (accessory). Then three blocks with two threaded holes is fitted, instead of the six square nuts.

## Assembly: Guide Rail Strut



**(12)** Place the guide rail on the long legs, pressing the guide rail down while the bolts are tightened. (4 x M6x20 collar bolts, 4 x M6 collar nuts)

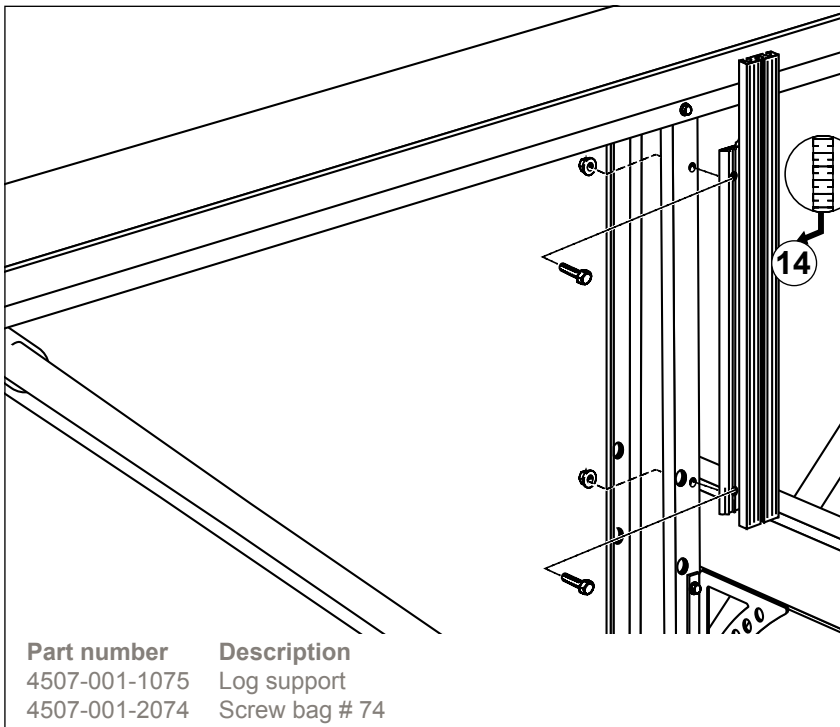
⚠ Check that the angle between the guide rail and the long leg is 90°.

**(13)** Fit the struts to the inside **(D)** of the guide rail flanges **with the oval hole up**. (10 x M6x20 collar bolts, 10 x M6 collar nuts)

⚠ Two struts are fastened in the same hole of the long legs (the side facing the operator). **Do not tighten all the way** (for adjustment, see page 22).



## Assembly: Log Side-Rest

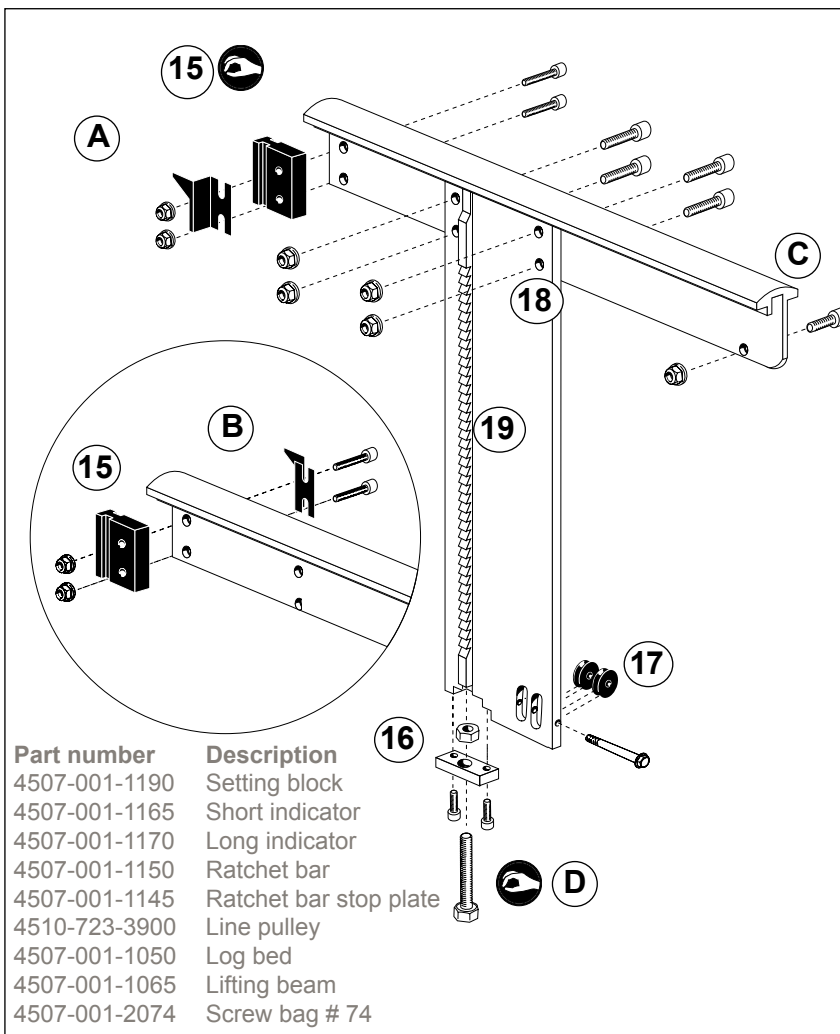


(14) Fit the log side-rest. Make sure that the measuring scales are both facing in towards the center of the mill so that the operator can read both scales from the center position. (2 x M6x20 bolts, 2 x M6 collar nuts)

(15) Place the plastic slide rail in the track of the log bed. Fit the longer scale (A) against the plastic rail on the right log bed and the shorter (B) against the side of the left log bed. Do not tighten the bolts all the way. (2 x M6x30 allen head bolts, 2 x M6 collar nuts)

(16) Fit the ratchet bar stop plate under the lifting beam. (2 x M6x25 allen head bolts)

## Assembly: Log Bed



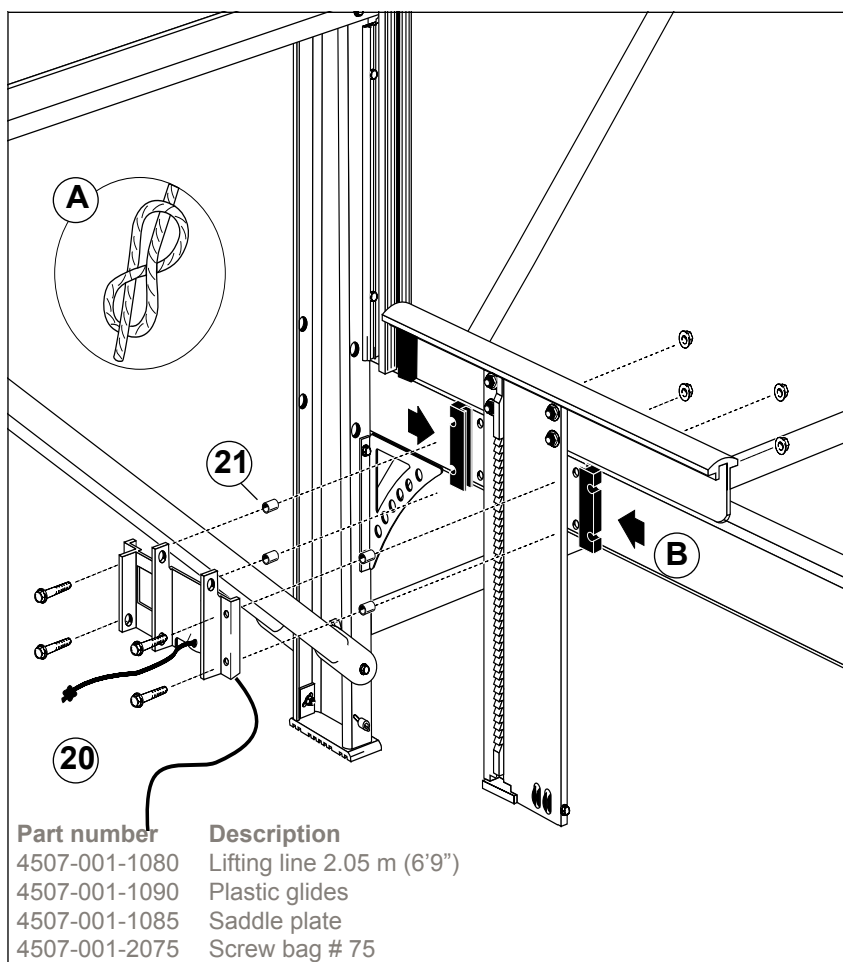
(17) Fit the line pulleys. (1 x M6x60 bolt)

(18) Fit the log bed on the lifting beam. As the bolts will be hard to screw through the holes, use an Allen key to pull the log support down to the lifting beam. **After approx. 20 hours of use, these bolts will need to be retightened.** (4 x M8x30 self-tapping allen head bolts, 4 x M8 collar nuts)

(C) Fit the bolt for extra support (1 x M8x16 allen head bolt, 1 x M8 collar nut)

(19) Fit the ratchet bar by threading the adjustment bolt (D) through the ratchet bar stop plate and screwing on the nut. Do not tighten. Place the bar in the track of the lifting beam and tighten the adjusting nut on the bar until the ratchet bar comes approx. 5 mm under the upper edge of the lifting beam. (1 x M10x40 bolt, 1 x M10 nut)

## Assembly: Saddle Plate



(20) Thread the lifting line through the hole in the lower part of the saddle plate and make the knot shown (A).

❗ Leave a 1 cm (3/8") end after the knot.

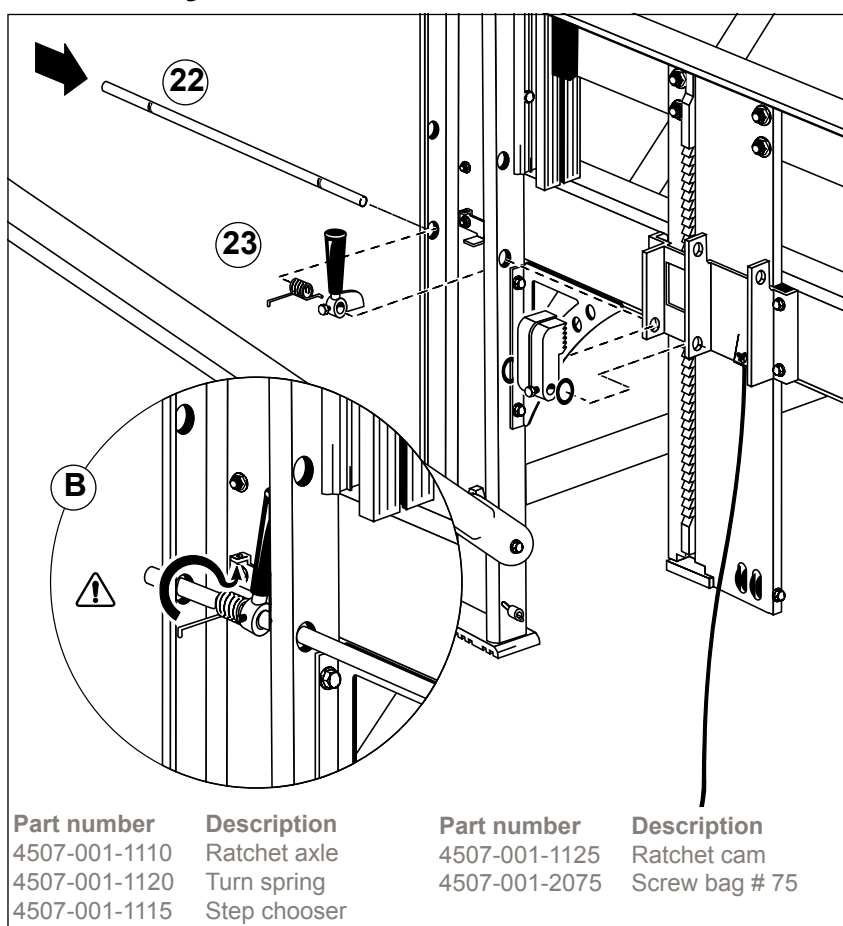
(21) Press the steel sleeves into the holes in the plastic glides.

Place the plastic glides (B) on each side of the lifting beam and fit the saddle plate over these. (4 x M6x40 collar bolts, 4 x M6 collar nuts)

(22) The ends of the ratchet cam axle are different. Insert the one that has the recess nearest the tip through the first lower hole in the long leg.

(23) Thread the short end of the spring through the scale selector's spring holder and slip both over the cam axle inside the long leg.

## Assembly: Ratchet Mechanism

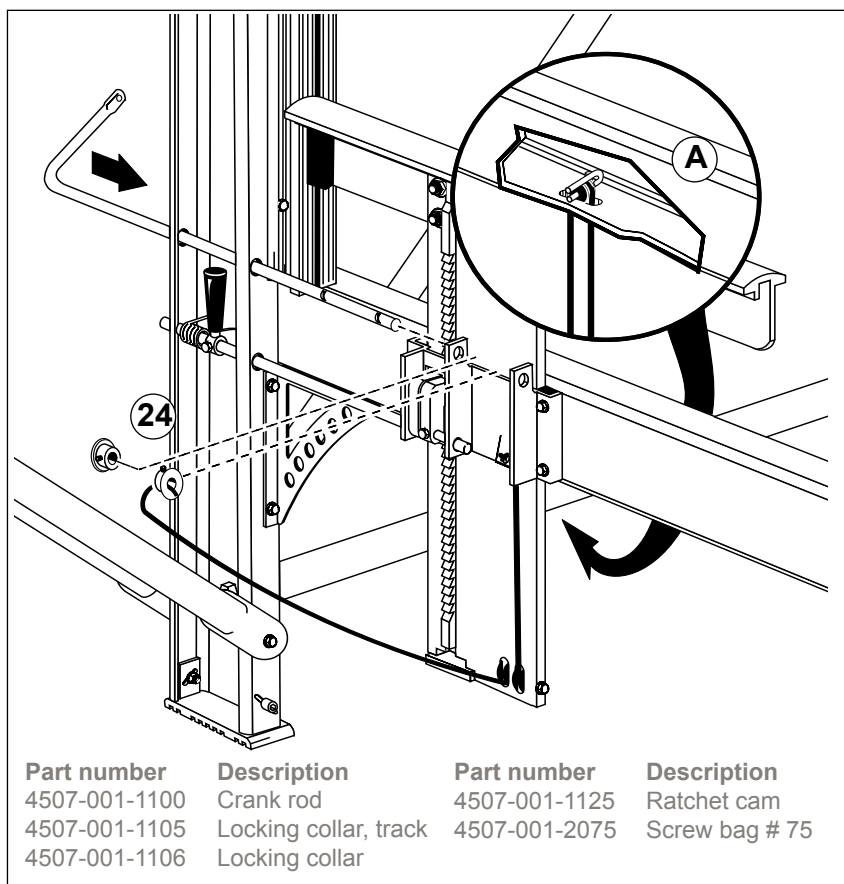


Now thread the axle through the first flange of the saddle plate. Thread the ratchet cam on in front of the opening in the saddle plate, placing an O-ring on both sides. Turn the axle so that the cam locking bolt (M6x10) lines up with the recess. Screw the locking screw into the recess.

Screw the cam axle handle locking bolt (M6x10) in the other recess.

⚠ Use protective gloves for the following step: (B) Pull the long end of the spring around to fasten it in the spring holder on the scale selector fitting.

## Assembly: Crank and Lifting Line



**(24)** Thread the lifting line under the outside pulley of the lifting beam, straight up and around the pulley on the horizontal beam **(A)** and then down again to the inner pulley on the lifting beam.

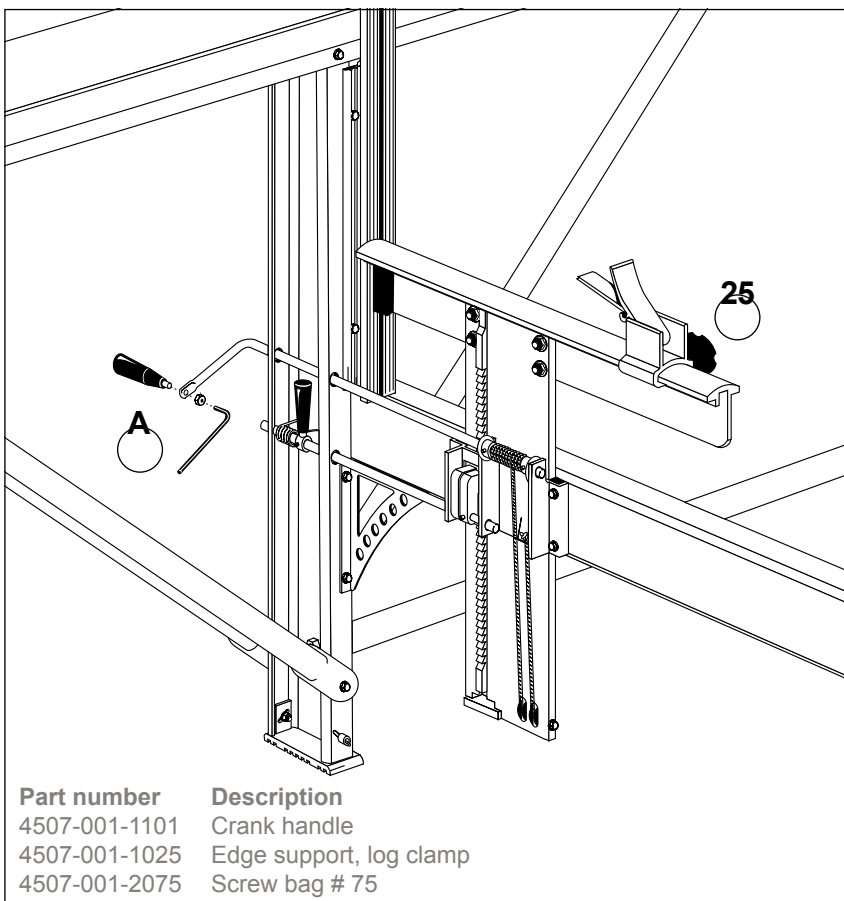
Fit the crank rod through the upper holes in the long leg and through the bushing on the middle flange.

Place the lifting line in the locking collar recess. Thread the collar bushing with the line and the other collar bushing, on the crank rod (collars facing out).

Push the crank rod through until approx. 1/8" extends beyond the outer saddle plate bushing.

Screw the locking screw of the locking collars into the recesses in the crank rod. Then tighten the locking screw that is holding the lifting line.

## Assembly: Edge Support

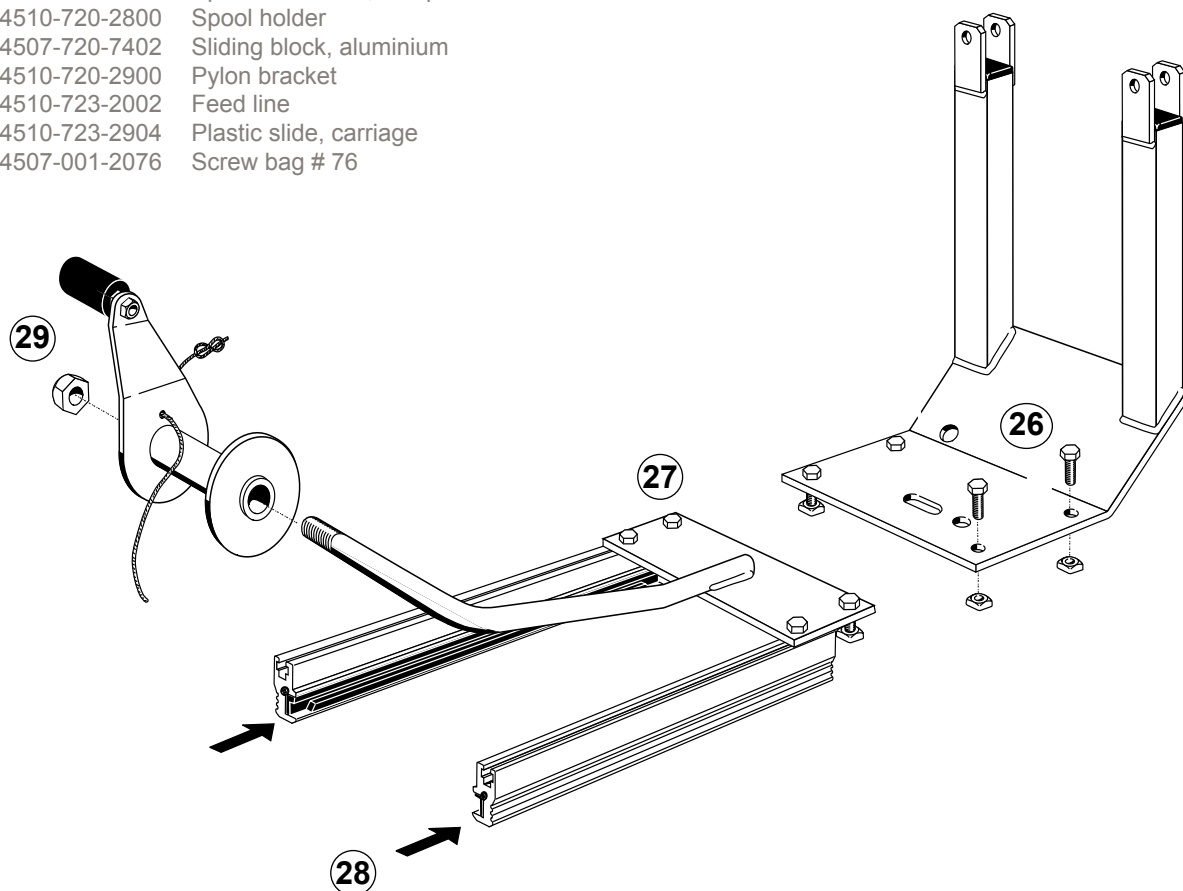


**(25)** Slide the edge support onto the log bed.

**(A)** Attach the crank handle to the crank rod by using a 4 mm Allen key in the screw in the handle while tightening the nut (1 x M8 locking nut).

## Assembly: Saw Carriage

Part number	Description
9999-000-1032	Spool with crank, compl.
4510-720-2800	Spool holder
4507-720-7402	Sliding block, aluminium
4510-720-2900	Pylon bracket
4510-723-2002	Feed line
4510-723-2904	Plastic slide, carriage
4507-001-2076	Screw bag # 76

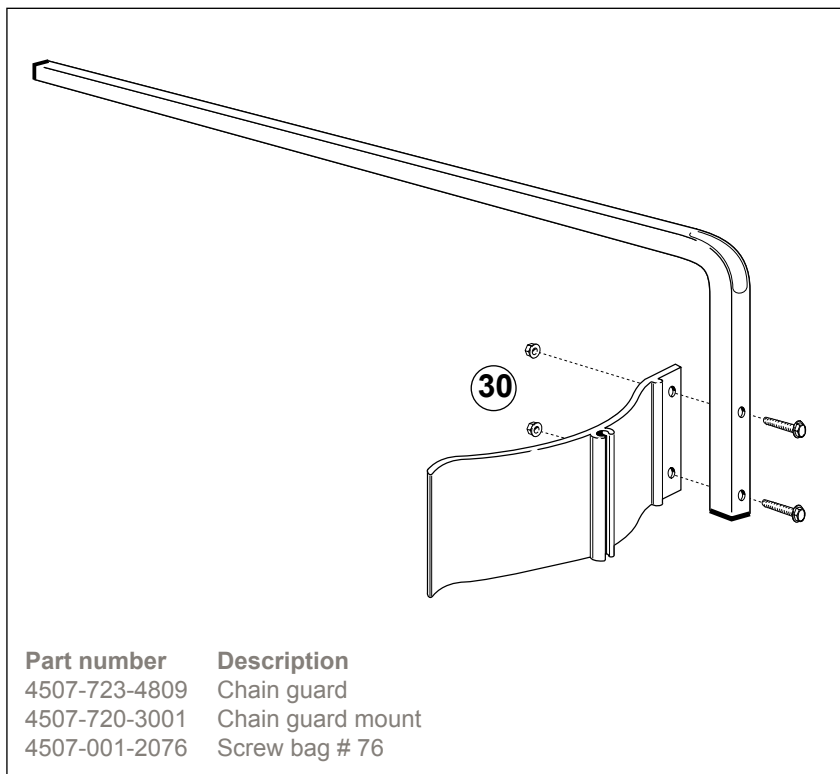


**(26)** Insert bolts through the holes along the sides of both the chainsaw bed (pylon) and the spool holder plate **(27)**. Turn the square nuts a few times. (8x M6x16 bolts, 8 x M6 square nuts)

**(28)** Insert the square nuts into the slide rail track, moving the spool holder plate and the chainsaw bed to opposite ends of the slide rails. Tighten the bolts.

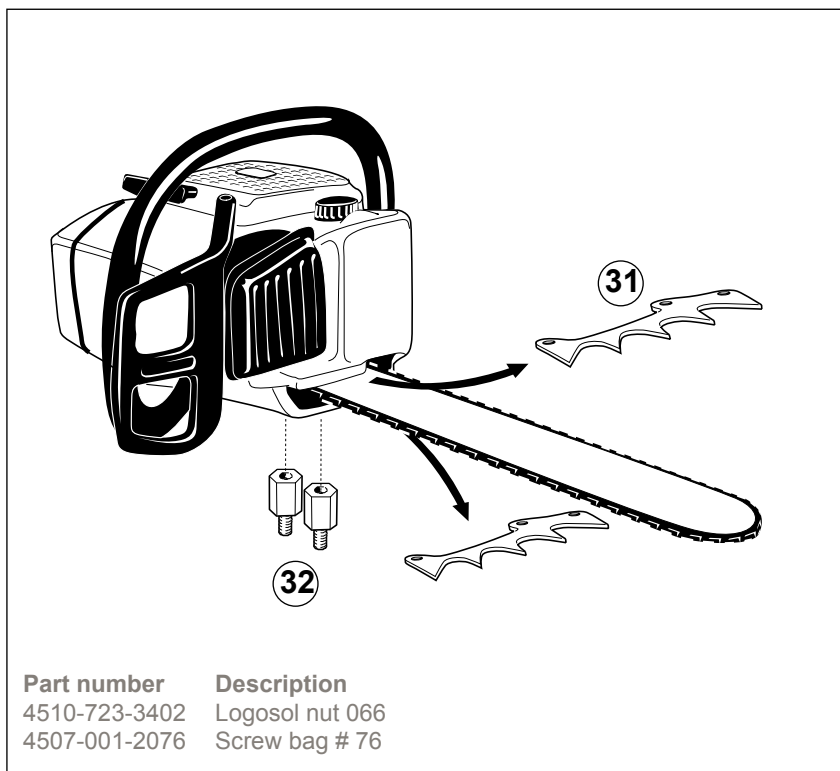
**(29)** Thread the line spool over the spool holder arm and tighten the nut. (1 x M10 locking nut)

## Assembly: Chain Guard



**(30)** Fit the chain guard on the support and bolt. (2 x M6x40 collar bolts, 2 x M6 locking nuts)

## Assembly: Extender Nuts



Remove the two bolts holding the guide bar and remove the guide bar cover.

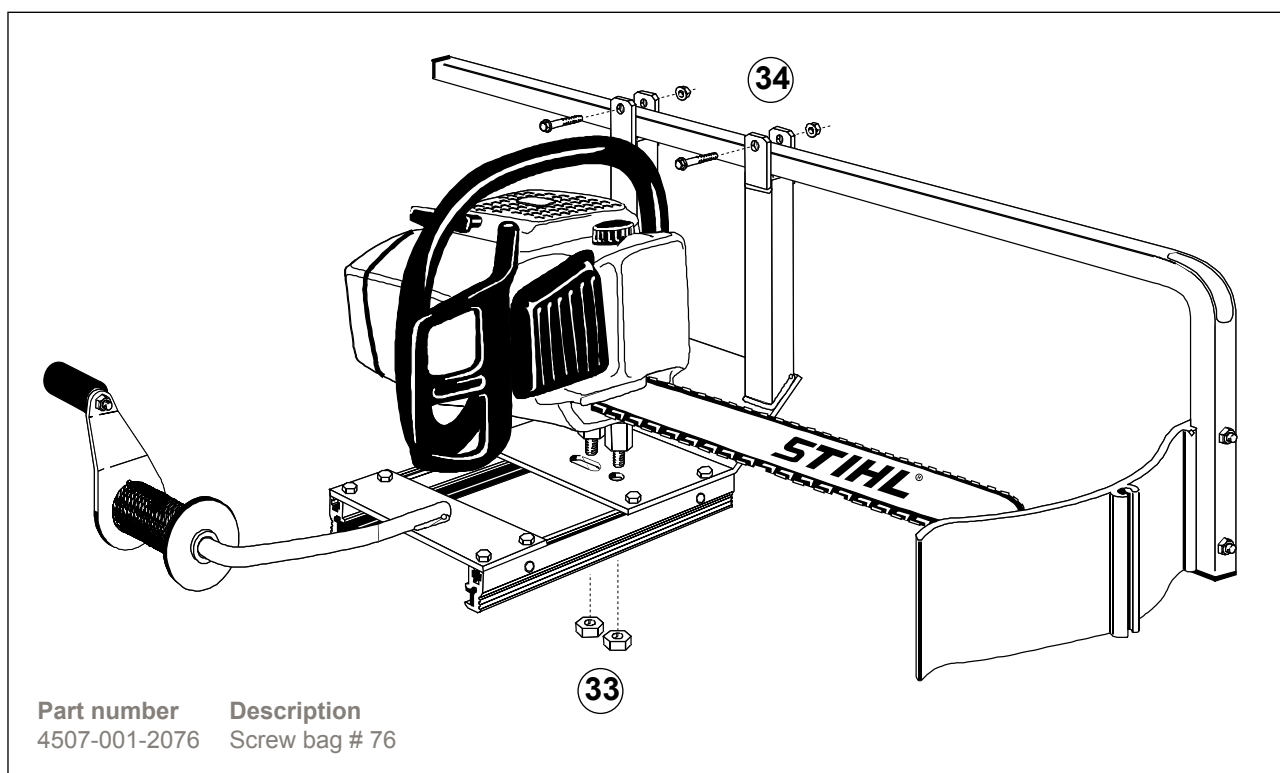
**(31)** Remove the bark grips, leaving the bolts and retightening the nuts.

**(32)** Refit the guide bar cover, replacing the guide bar bolts with the two extender nuts. The guide bar nuts will later be used to fasten the chainsaw to the carriage.

**⚠ Only CE-approved chainsaws with two guide bar nuts may be used with the M7 sawmill.**



## Assembly: Chainsaw and Chain Guard Support



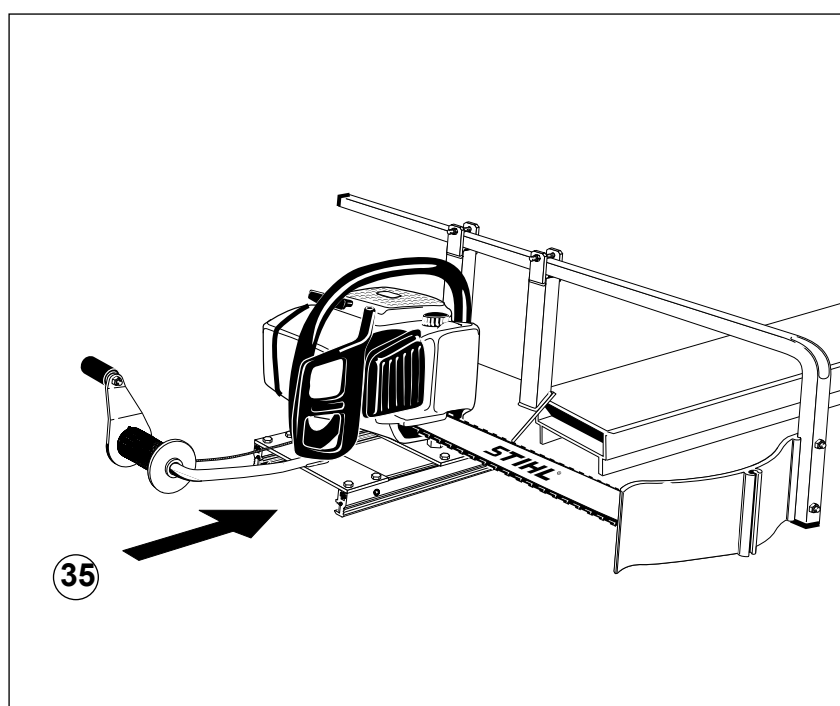
**(33)** Fit the Logosol extender nuts through the chainsaw plate using the front hole. (For some chainsaw models the rear hole

has to be used to ensure that the saw cover will not extend too far. However, this is relatively unusual.) Screw the chainsaw's guide bar nuts onto the Logosol extender nuts under the plate and tighten.

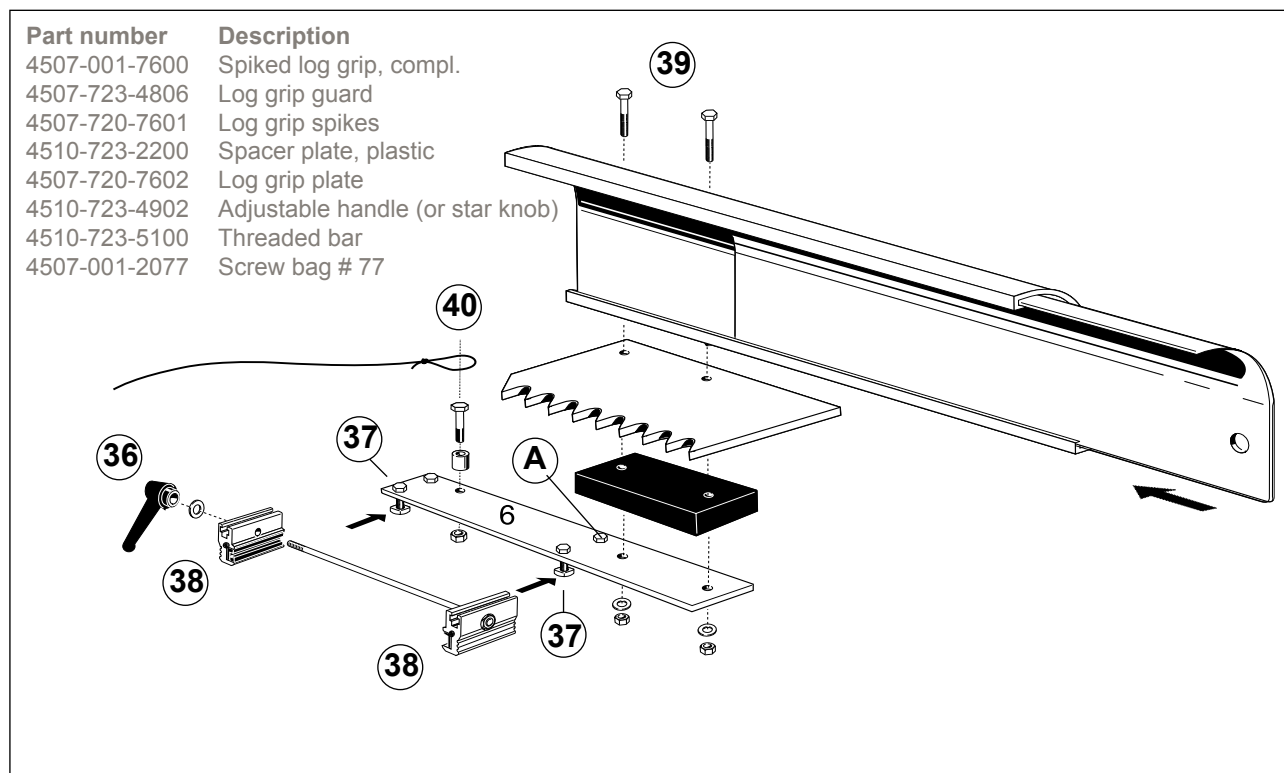
**(34)** Fit the chain guard support on the two arms of the chainsaw plate so that the chain guard sits app. 4 cm (1 1/2") from the tip of the guide bar. (2 x M6x40 bolts, 2 x M6 collar nuts)

**(35)** Push the assembled carriage onto the guide rail with the guide bar facing the log beds.

**!** Check that the carriage moves easily on the guide rail. If not, loosen the nuts on the threaded bars, push the carriage onto the guide rail, loosen the eight bolts holding the sliding rails, move the carriage back and forth and retighten the eight bolts. Tighten the nuts on the threaded bars until the carriage runs easily on the guide rail but yet is not fitted too loosely. If this is insufficient, check the plastic slide rails for damage.



## Assembly: Spiked Log Grip with Guard



**(36)** Screw the handle (on some models a knob) with a washer on the threaded rod for the log grip carriage. (1 x M6 washer)

**(37)** Insert the bolts and screw on square nuts in the same way as when the chainsaw carriage was assembled. (4 x M6x16 bolts, 4 x M6 square nuts)

**(38)** Fit the sliding rails under the plate so that the square nuts fit into the slide rail tracks.

**(39)** Center the guard, log grip and plastic spacer over the holes in the plate. The spacer should be turned so it extends as far as possible behind the grip. Thread the bolts through the holes and tighten. (2 x M6x40 bolts, 2 x M6 washers, 2 x M6 nuts)

**(40)** Thread the chainsaw feed line holder bolt through the spacer and fit on the plate. (1 x M6x25 bolt, 1 x M6 nut)

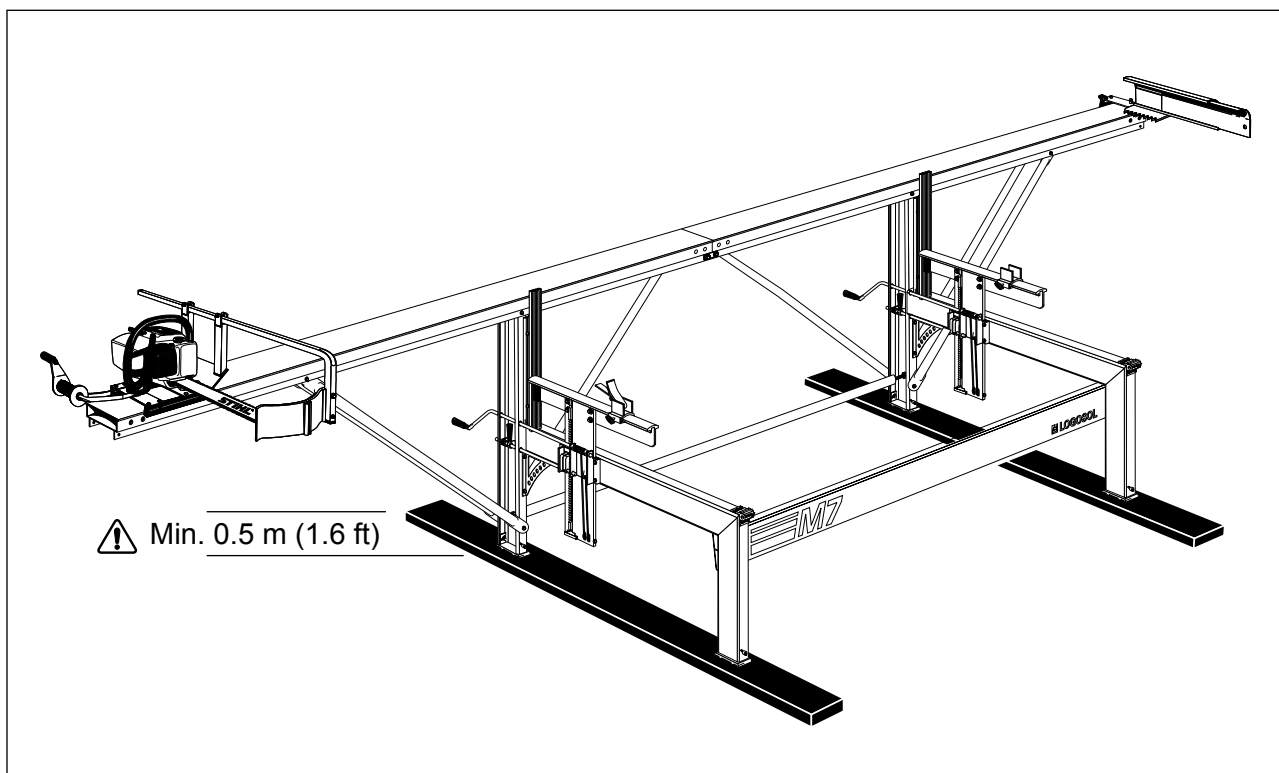
The holder bolt can be fitted in one of two holes depending on whether a petrol or an electric saw is being used. The picture illustrates set-up for a petrol saw. When using an electric saw, the bolt **(A)** is replaced by a M6x25 and a spacer sleeve.

Make a loop on the feed line and place it over the spacer.

**⚠ Risk of injury when the bar exits the log! The guard extension must be fitted when a guide bar longer than 45 cm (18") is being used.** The position of the extension can be adjusted by sticking a suitable tool, e.g. a screwdriver, through the hole. This way you can push the guard extension inwards or outwards.

**ⓘ The guard extension is an accessory,** which can be ordered from Logosol. See the parts list at the end of the manual.

## Siting



❗ The M7 portable sawmill may not tilt more than 5° from the horizontal in any direction.

⚠ The saw may tip over if the tilt is greater. The unit may not be operated unless the feet are fastened to the floor or to boards as described below.

⚠ The carriage may slide off the guide rail if the tilt is greater.

While the goal is to have the M7 sawmill fully level, any tilt, however slight, must not be away from the operator as this

can cause the logs to slide off or lie at an angle.

**When setting up the M7 directly on the ground:**

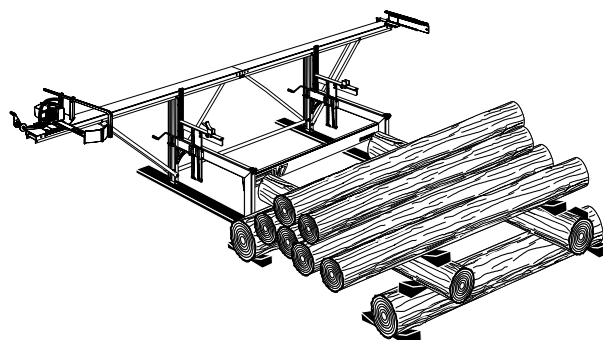
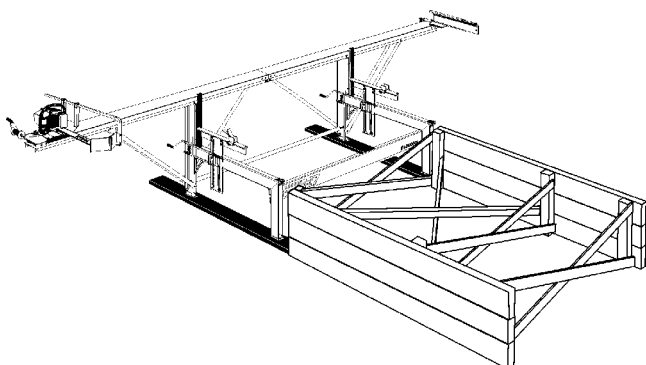
❗ The surface must be firm and level enough that driving a normal car on it would not be a problem.

❗ Fit a board under each pair of legs using two M6 bolts for each foot. The boards must be of good quality, at least 50x150 mm (2" x 6") and at least 2 m (6.5 ft) long. **The boards must extend at least 0.5 m (1.6 ft) beyond the long legs.**

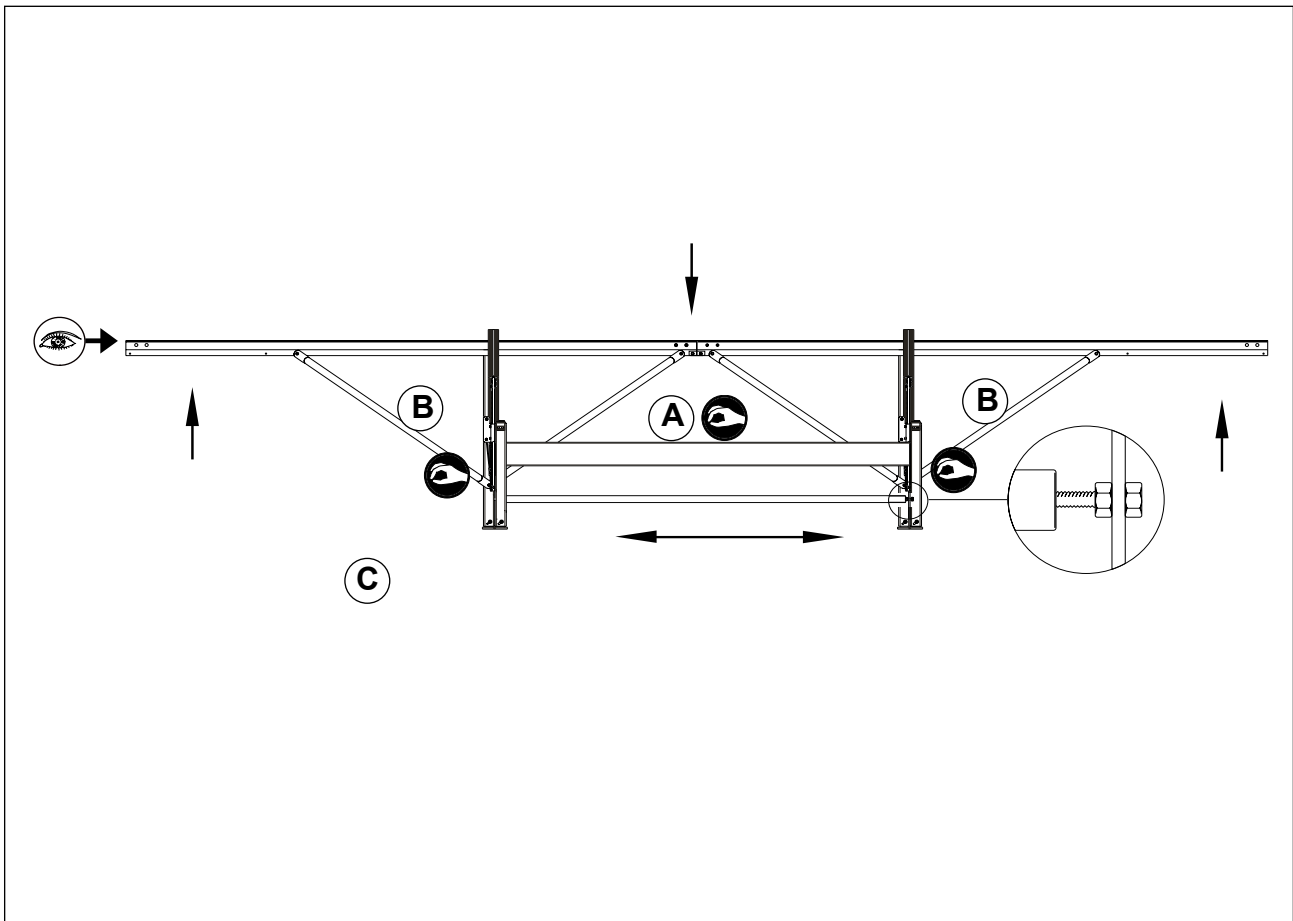
❗ When bolting the M7 to a concrete floor, asphalt surface or similar, rigid surface, a rubber underlay should be placed under each foot in order to prevent vibration damage to the sawmill. **Use a reliable fastening system between the feet and the surface.**

*Example of log feed.*

❗ Secure the logs with wedges.



## Adjustments – Guide Rail



To check the straightness of the guide rail, remove the carriage and log grip. Sight along the guide rail from one of its upper corners. Any curvature will be apparent.

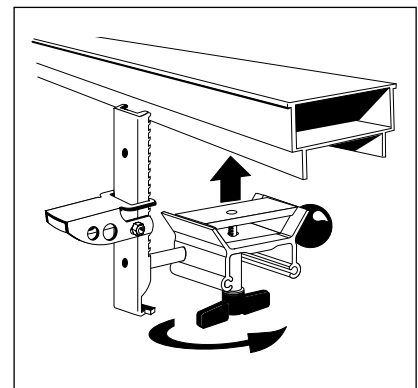
**(A)** Check that the struts in the middle of the frame are *not* firmly tightened either at the top or the bottom.

**(B)** Check that struts towards the ends of the guide rail are *not* firmly tightened at the bottom. Tighten the bolts at the upper ends by the guide rail.

**(C)** Adjust the guide rail straightness using the M10 bolt and the inner nut on the adjusting strut.

Pulling the legs together pulls the ends of the guide rail down. Pushing the legs apart brings the ends of the guide rail up.

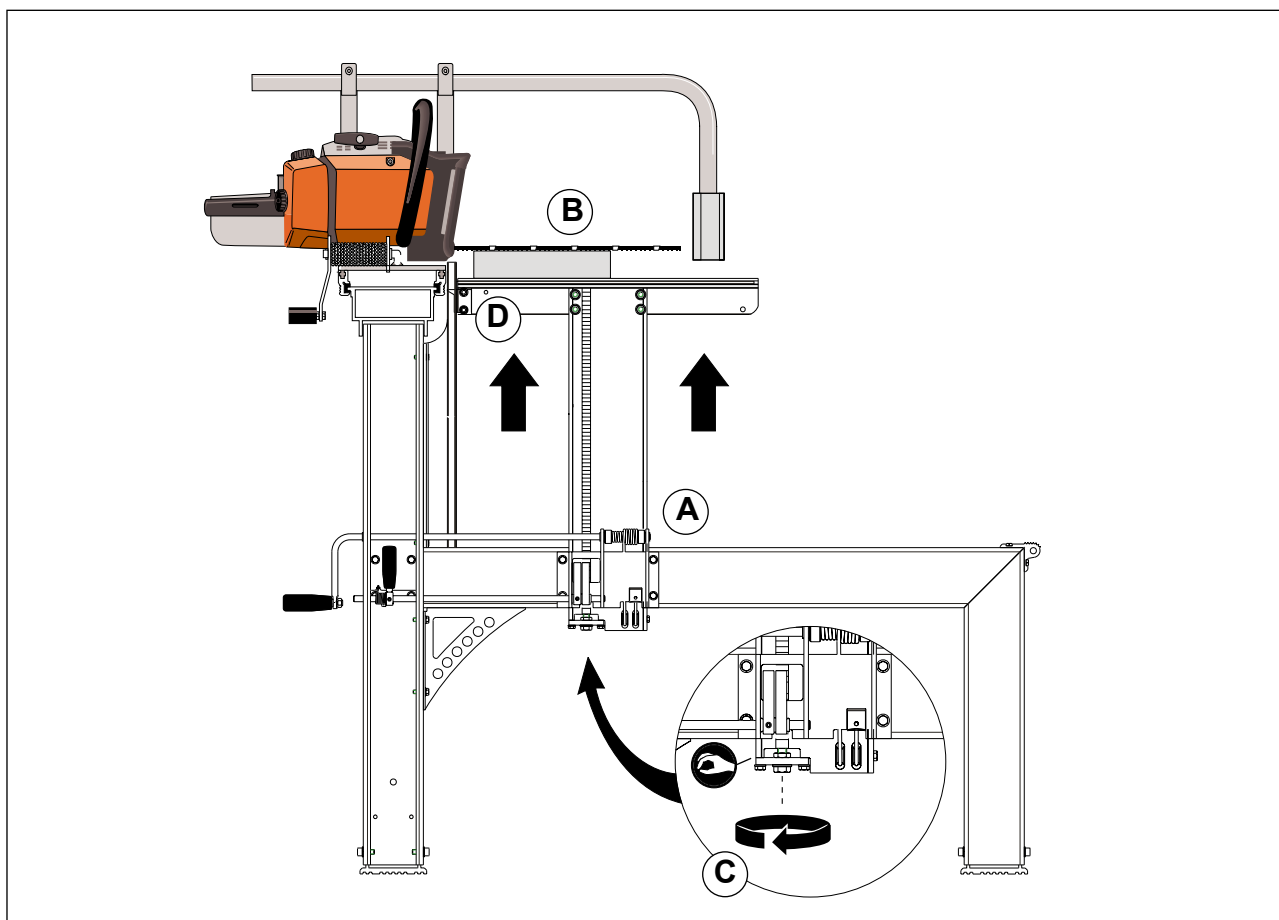
After tightening the M10 bolt and nut at the adjusting strut, retighten all guide rail strut bolts.



### Adjustable Log Support

This accessory provides the ability to stop vibrations when sawing long logs. The Log Support is positioned underneath the rail as show above, then the arm is adjusted against the log and tightened in place. It also can be used to provide support under boards and enables the processing of shorter logs.

## Adjustments – Log Bed



**(A)** Check that when the log bed is cranked down, it moves easily through the saddle plate driven by its own weight. If this is not the case:

- Place the log bed in its uppermost position.

**⚠ Lock it using the ratchet cam to prevent it from falling down.**

- Loosen the four bolts on the saddle plate and place it straight in relationship to the lifting beam.
- Place the log bed in its lowest position. Loosen the

plastic slide rail on the log bed **(D)** and adjust it so that it is straight in relation to the T-shaped log bed track.

- Lubricate the sliding surfaces and the T-track of the lifting beam using silicon or Teflon spray.

**(B)** Check the height of the log bed. Set the ratchet in the 1/4" position. Place the setting block on the log bed. Move the chainsaw so that the guide bar is right over the log bed. Move the log bed up to the notch where the setting block is nearest to the underside of the guide bar.

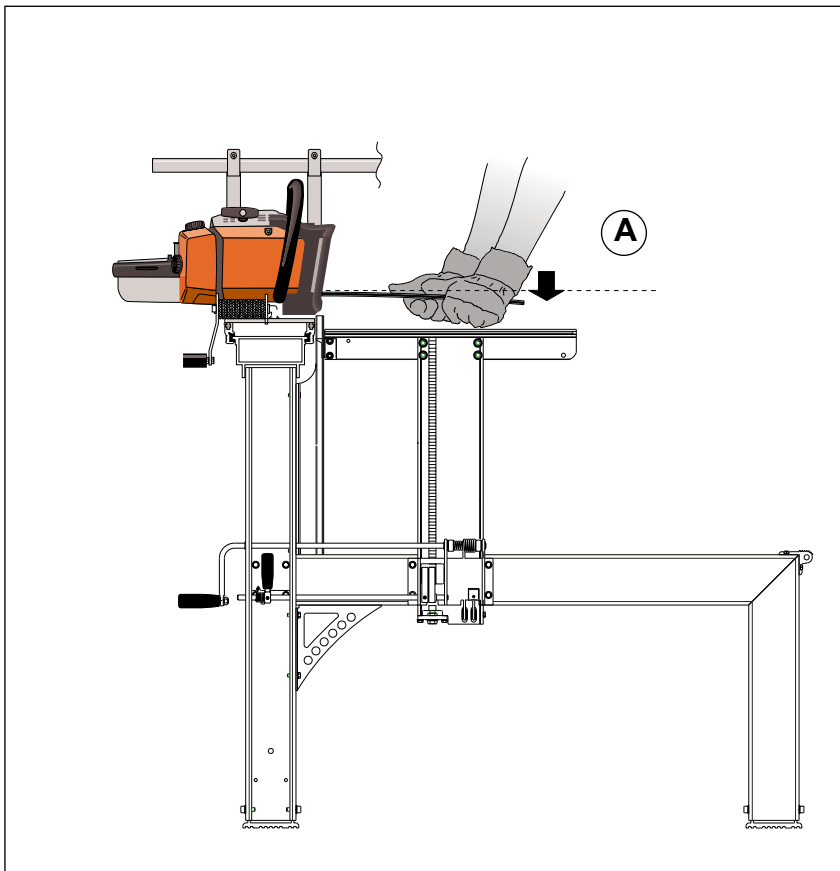
**(C)** Use the bolt and inside nut on the ratchet bar to move the log bed up until the setting block touches the underside of the guide bar. Should the adjustment be insufficient or too much, move the log bed up or down a notch and adjust again.

Lock using the inside nut.

**(D)** To adjust the scale indicator, loosen the two bolts holding it and the plastic block on the log bed. Set both indicators of the scale to 2" in the position where the setting block touches the underside of the guide bar.



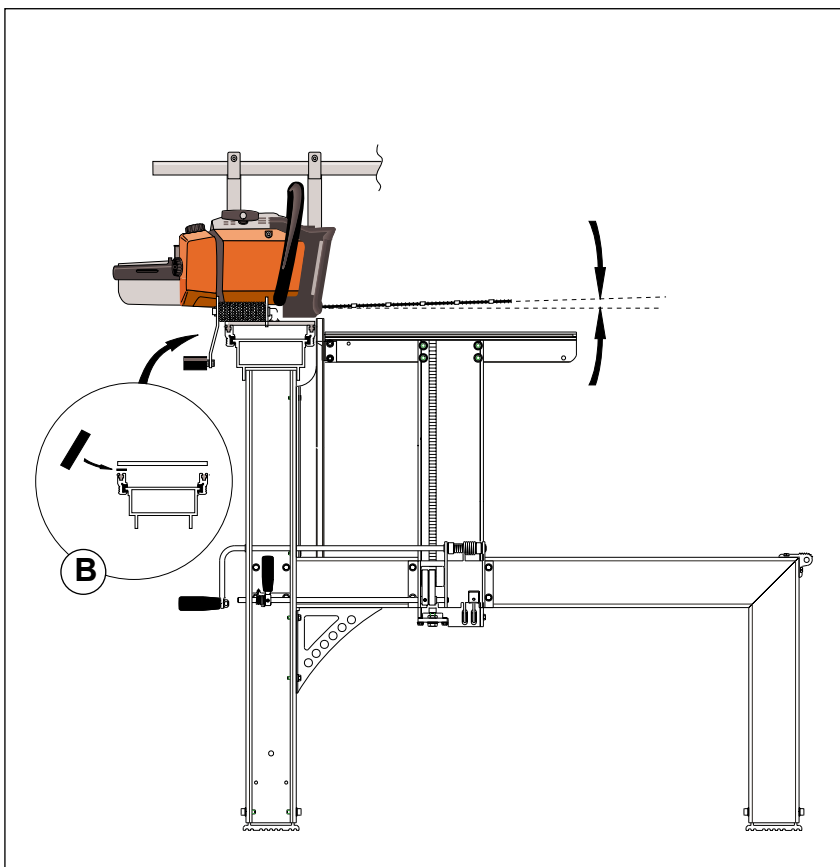
## Adjustments – Guide Bar



The guide bar should be **parallel to the log bed**. If this is not so, the guide bar is probably not straight. Remove the chain from the guide bar without removing the guide bar and move the sawing unit over the log bed.

 Use protective gloves!

**(A)** Grasp the middle of the guide bar with both hands as shown and bend it carefully until it is parallel to the log bed. Check using the setting block.

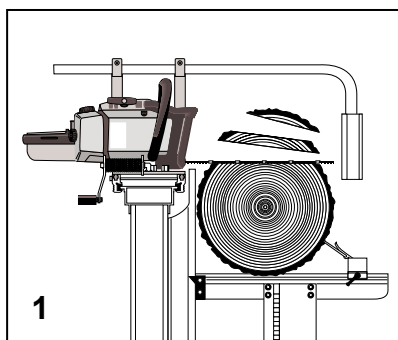


**(B)** How straight the guide bar mounts varies between chainsaws.

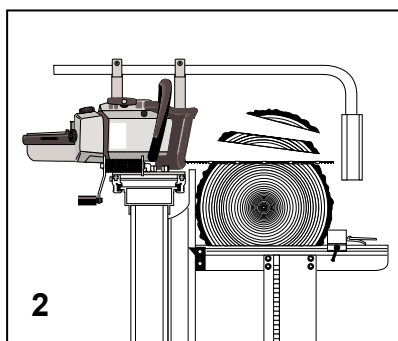
It should only be necessary to adjust a guide bar once, provided that it is not bent during sawing.

If after turning the guide bar you notice that you need to bend it again in the same direction as before, it may be that the guide bar mount is not true. This can be compensated for by placing one or more adjustment pieces between the aluminium sliding rails and the chainsaw or electric saw plate. Adjustment pieces can be ordered from Logosol, part. no. 4507-001-1305.

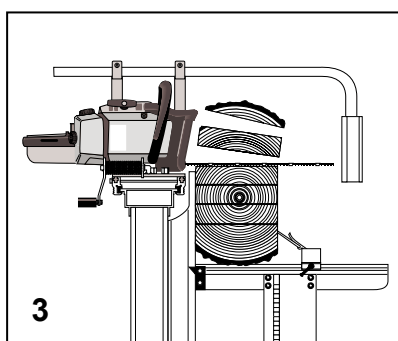
## Step-by-Step Sawing Instructions



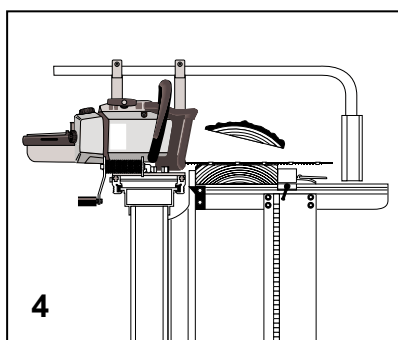
**1.1** Roll the log onto the log bed.



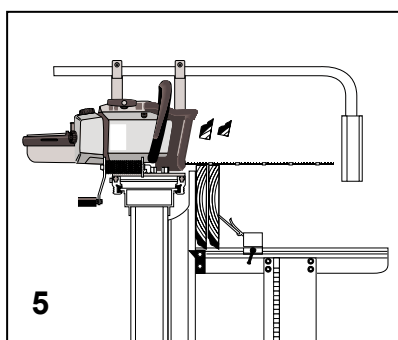
**1.2** Fasten the log in place using the edge support. Place the edge support arms backwards and lock the block in place using the edge support side.



**1.3** Set the ratchet cam on either 1/4" or 1/8" increments using the ratchet handle. The normal choice is the larger measurement.



**1.4** Raise the stock so that a suitable slab size will be cut off. Normally the top end of the log is raised 1/4" or 1/2" (one or two clicks) above the bottom end so that the cut will be parallel to the grain.



**1.5** Ram the spiked log grip into the butt end of the log to keep it from rotating. This should be done prior to each cut.

**1.6** Place the saw feed line on the bolt with the spacer on the log grip carriage (not with electric feed).

**1.7** Cut the slab off.

**1.8** On larger logs it is customary to raise the log bed to cut off another, wane-edged plank about 2 1/4" thick (nine clicks) to create a 2" plank. Don't forget to knock out the log grip before raising the log beds.

**2.1** Make the saw cut and then rotate the log 180°.

**2.2** Should the log be small, the block size might now be set to 6", for example. The log beds would be at the same height. For larger logs the log beds might be set at 7 1/4" or 8 1/4", depending on whether a 1" or 2" board is wanted.

**2.3** Cut the slab and perhaps one more board.

**3.1** Rotate the cant 90° and fix with the edge support arms. Set the height so that a suitable slab is sawn. Now lay the top end somewhat higher than the bottom.

**3.2** Raise both log beds the same distance while retaining the height differential. Saw out planks and boards until app. 10 cm (4") remain. Do not forget to add 1/4" to each desired board thickness to compensate for the kerf.

**4.1** Rotate the cant 180° and place both log beds at the same height. If a 1" and a 2" board are to be sawed out at the end, place the log beds at 3 1/4" (2+1+1/4).

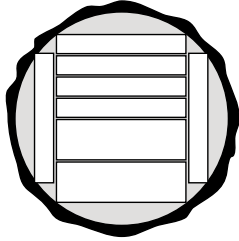
**4.2** Place the edge support arms backwards and lock the block in place using the edge support side. Otherwise you may saw into the arms.

**4.3** Cut off the last slab.

**4.4** Raise the log bed by 1 1/4" and saw the 1" board. What you have left is a 2" board.

**5** Place the wane edged boards on their short end. Lock them in place with the edge support arm and trim the wane. As is usual, adjust the log bed height for the fact that one edge is still barked. When you turn the boards so that the side down is trimmed, set the log beds to the same height.

## Sawing tips



*In the beginning it might serve you well to make a drawing on the butt end of how you want to piece the log. Use a thick marker so that the line corresponds to the saw kerf.*

### Remember that:

**When the log rests on a bark surface, the log bed at the top end is set higher than the one at the root end.**

**When a sawn surface faces down, the log beds are set at the same height.**

**Compensate for the kerf with one click (1/4") whenever the cut is above the guide bar.**

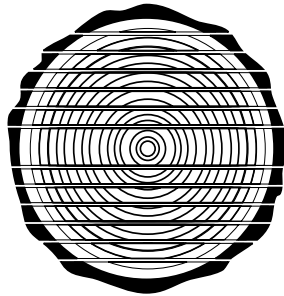
**Do *not* compensate for the kerf when the cut is below the guide bar.**

**The last board may not be thinner than 2".**

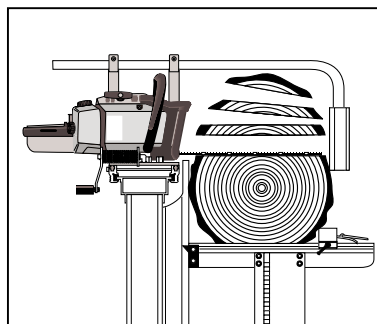
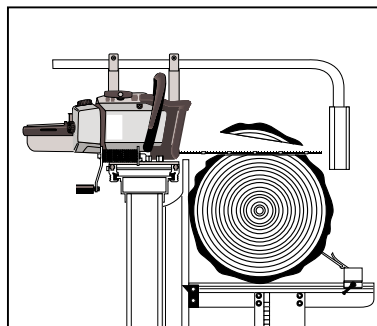
**Make sure you do not saw into the edge support spring arms.**

*Many of us here at Logosol can share our years of sawing experience with you. As a new Logosoloist, if you have any questions call us. We'll be happy to provide you useful tips.*

## Through sawing



At times it can be best to slice the log entirely into wane-edged boards. This way it is possible to get a bit more from each log. The price for the gain is that it takes a bit more time because of the need for after-trimming. If fine carpentry wood is the aim, it might be best to trim one side before drying. The last trim can be done when you know what the board will be used for – everything to allow maximum use of the wood.



When you are going to slice a log in this way it is best to saw off a thin slab first and then turn that side downwards. In this way the log will rest on an even

surface on at least one of the log beds, preventing movement between cuts and ensuring even boards.

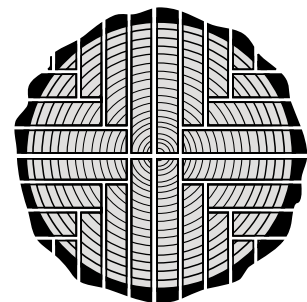
Turn the log when you approach the centre.

Figure out the height where you should start and then saw.

The example shown in the drawing calls for the first cut after the log is turned to be at 8 1/4", calculated as follows: 1+1+1+1+1+2= 7. For each + add 1/4" to compensate for the kerf. The total is (5x 1/4) + 7 = 8 1/4".

In this way the final cut will be correct and you will have a minimum of wastage.

## Quarter sawing



Quarter sawing provides you with the finest material. You obtain optimal grain direction in all boards, something that is a great advantage for carpentry work and the like. The price is in time, in difficulty and in that you obtain several different width boards. Do not quarter saw small logs.

Begin by halving and quartering the log. When sawing the boards out of the quarters, you turn the log 90° between each cut. Sometimes it is best to cut from below as this allows you to raise the log beds to the same height throughout.

## Material drying

Generally, once the wood is sawn it must be dried.

It is possible to use undried wood in some construction, but only keeping in mind a 7% shrinkage in width and height. While most wood shrinks some 0.4% in length, this amount can usually be ignored. In order to avoid rot, you should not enclose undried wood in a way that makes it hard for air to circulate. One further tip is not to drive two nails into undried wood next to each other as the board will probably crack in the middle when it dries out. Drive one nail and wait with the second until the wood has dried.

One example when you *ought* to use undried wood is building log structures. In such a situation, a heavy wall is a plus, as is the possibility that the logs still can be shaped when they are pressed against each other.

In most cases, however, the wood must be dried. If this is not done, there is a danger it will be damaged by dry or fungal rot.

The best time for outdoor drying is in the spring. At that time the relative humidity in the air is comparably low meaning that the wood will dry quicker.

Cut some supportive blocks (5x5") in the length that corresponds to the width of your pile. Place these at regular intervals as shown below on dry, level ground free of growth. The spacing should not exceed 1 m (app. 1 yd) and should lie level and in line with each other.

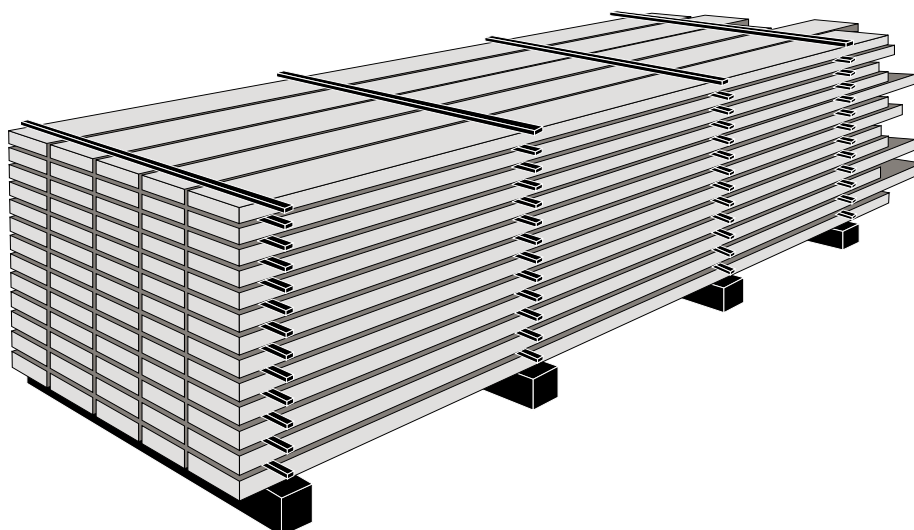
Cut spacers or drying sticks in the same length as the supportive blocks. They should

be the same thickness (1x1" or 1x2") and dry. You can get material for these by making an extra cut when trimming your boards.

Place your first row of boards on the support logs, leaving about an inch between them. Then place a spacer on the boards above each support log. It is important to place the spacers exactly over each other to keep the boards from warping or bending.

The higher you pile the boards, the better pressure there is on the lower boards. Place roofing or some material over the top, but leave the sides and ends open. Put a weight of some sort on top of the upper row to put pressure on those planks as well.

If the wood is to be used for fine carpentry it ought to be stored in a heated facility several weeks before use, or be dried in a kiln or other kind of wood drier.



## Trouble-shooting

### Reasons for wrong measurements on an M7 sawmill:

#### A. Incorrect adjustment or set-up

#### B. Cutting equipment malfunction

#### C. Tensions in the wood

##### A. Checking the M7

1. Check that all four legs stand firmly and that the feet do not sink into the ground when a heavy log is loaded.

2. Sight over the log beds and cross beam to check that the sawmill stands straight. Check both loaded and unloaded.

3. Use a set square to check **very carefully** that the guide rail is at an exact 90° angle to the long legs. Even a small deviation can lead to large measurement errors.

4. Set the distance between log bed and guide bar so that it is exactly the same on both log beds. Make sure the guide bar and the log beds are fully parallel. Use the setting block included with the machine.

5. Check that the guide rail is absolutely straight by sighting along the guide rail or by running a line over the guide rail and using nails or something similar as spacers between the line and the guide rail.

Take special note to loosen the struts towards the middle of the guide rail before checking the straightness. If support legs are used for the guide rail, it is essential that they stand on some rigid surface such as a pole driven into the ground.

6. Check that the guide bar is straight in relation to the sawing direction by placing a 1.5 m (5 ft) strip of wood on the guide bar without the chain. Sight across the strip to make sure it is parallel to the guide rail.

Even factory-new guide bar mounts can be out of true. This is discovered if the parallel relation to the log bed changes when the guide bar is turned. A bent guide bar is most easily straightened by being pressed up or down while the saw is mounted on the sawmill (see page 24). An out of true mount is corrected for by placing washers between the carriage plate and the slide rail.

Non-parallel guide bars or mounts will most often occur when chainsaws other than Stihl are used.

7. The set-up of the M7 can be checked by placing a board with maximum length on the log beds. First trim off a narrow strip from one side of the board. Then turn it, set both log beds to the same height and remove a similar strip. Now measure the width of the board carefully. If the

board is not the same width along its entire length it can mean that the log beds are incorrectly set or that the guide rail is crooked. It is also possible that the guide rail has been depressed by the weight of the log. When a heavy cutting unit is used, this problem can even occur if the support legs are not on a rigid surface. If a chain-saw is used the same thing can happen if you extend the guide rail more than 0.5 m (1.5 ft) without adding support legs.

##### B. Checking the cutting equipment

The guide bar must not cut upwards or downwards during sawing. This is most obvious when the guide bar leaves the log. If the guide bar does not simply float out of the log but springs up or down, problems can arise. In such cases there can be something wrong with the guide bar or the chain.

Reasons for malfunction in the cutting equipment:

1. One frequent reason for problems when using the M7 is that the chain is dull (see page 30).

2. The chain may be damaged on one side, such as by metal objects in the log. The chain may still cut, but pulls up or down (see page 31).

3. The chain may have been filed wrong. The cutters may be filed less on one



side than on the other. To get a more even result, try to maintain the same working position when filing the left and the right sides of the chain. That individual cutters are faulty or that some are missing, such as after sawing through nails, usually has very small effect on the function.

4. When precision diminishes after a period of fault-free sawing, it is almost always due to wear on the guide bar (see page 31).

*Tensions in the wood can sometimes result in similar symptoms as faults in the cutting equipment.*

### **C. Tensions in the wood**

The M7 sawmill can only saw straight. If the wood grain twists during sawing, precision will be lost. Tension can cause large variations in measurement. Broad leaved trees have greater tension than do evergreens, but even the latter can have problematic tensions. One example is in trees that have grown on sharp inclines. In such cases a whole group of logs can be hard to saw.

Tensions can also arise in storage. If the bark and top segment begin to dry, the whole surface will begin to shrink. In such a case, when one side is trimmed, the log may bend slightly.

It is easy to discover tension in logs that leads to measurement errors. Each time you pull the saw back, you can read what is happening in the log. As long as the guide bar continues to lie just above the newly sawn surface, the log has not bent. However, if spaces show up between the guide bar and the sawn surface or if the guide bar is pressed upwards, it is time to plan how the next cut will go to reduce the tensions.

When sawing from the top towards the bottom, the wood has a tendency to sink at the ends pulled by its own weight. This is especially true if there is large root-end growth. If this is true, then it would be best to turn the log after passing through the centre and saw the rest of the material from the other side.

### **Some tips for avoiding the effects of wood tensions.**

1. Cut wood with tension in as short lengths as possible. By reducing the log length to app. 2.5 m (8.2 ft) the precision will be high even if there is great tension in the wood.
2. Work around the log, sawing all sides in order.
3. Special arrangements may be needed in order to get

a perfect measurement on the last board of a long log. One effective way is to saw the last cuts using a recently sawn board as support. Another way is to use one of the special accessories designed for the M7 to support the ends of long logs (articulated support, part. no. 4500-070-1000; adjustable log support, part. no. 4510-720-6102). If many logs over 5 m (16.5 ft) are to be sawn, it is best to extend the sawmill by 2 m (6.5 ft) and one extra log bed (F820, part. no. 4507-010-0820) in order to obtain additional support.

There is no limit to how far the Logosol M7 sawmill can be extended.

### **When the bar is not fitted straight**

On some chainsaws the bar fitting is not level, making the bar tilted sideways. Clean the bar fitting. Place a straight and approx. 1 m (3.3 ft) long board across the bar (without the chain). Measure the distance between the upper side of the guide rail and each end of the board. If the bar is tilted sideways, place thin strips of metal (e.g. 1-3 layers of strips from an aluminium soda can) between the bottom plate of the carriage and the aluminium slide profiles until the board is parallel to the guide rail. (For electric saws, read *The Handbook for Your Cutting Equipment*, which you can find on our website.)

### **Precision of the Logosol Sawmill components.**

The Logosol Sawmill is constructed of *extruded aluminium profiles*. This material can, by nature, deviate somewhat when it comes to angles and flatness. When designing the sawmill, we have taken this into consideration, so possible deviations will not affect the functions of the sawmill. One place where the slightest deviation is clearly noticeable, is *the joint where the ends of the guide rail meet*. Often, the deviation seems bigger than it actually is. When the guide rails are cut into length with a large metal cutting circular saw there will inevitably be deviations of +/- some tenth of degrees, which results in noticeable deviations. These deviations, however, are of no importance, provided that you do not compress the gap. Press the guide rail sections together without using violence. The joint coupler will adjust and fix the guide rail sections. *Plastic* is soft and difficult to process. For the Logosol Sawmill we want to have as exact fit as possible as regards the plastic slides. As an effect of this, the log beds can be somewhat difficult to move. If this is the case, use a fine sandpaper and polish the plastic until they run easily up and down. Usually, after having been

used for a couple of days, the plastic will have worn down without any actions taken. (Before polishing, read the section about adjusting the sawmill, pp 22-24).

### **Demands for precision**

We are convinced that the M7 sawmill can provide as good or better results as other small-scale sawing methods.

A large number of users of the Logosol sawmills have reported that they have never had better wood products than those they have sawn themselves with their Logosol mill.

However, it is natural that we also meet customers who want to improve on the precision. By now we know that variations in sawing results can have many explanations. The choice of raw material is vital. Cutting good boards from short, sturdy logs is considerably easier than getting the same results with thin, long ones. Tensions caused by storage or place of growth can cause problems. Some tree types cause more problems than others. The reasons are many, including how much time is available. Sawyers with unlimited time have a greater chance to succeed than those whose time is short.

The precision requirements also vary. A result that is satisfactory for someone sawing boards for rustic fence posts may not be good enough for someone sawing boards to be used in construction without being planed.

If you have gone through the various steps for adjusting the M7 sawmill, checked the cutting equipment and observed the effects of tensions in the wood, but still do not get the sawing results you expect, contact us at Logosol. We have years of experience and can always help you find solutions to problems you may have.

## Cutting equipment

The Logosol PMX chain provides for rapid ripping with a narrow kerf. But it is more sensitive than normal chains. Still, if you keep the cutting equipment in trim, you will get the right measurements, the sawing will be quicker and the cutting equipment will last longer.

### File before it slows down

You will sense that the chain is loosing its edge by the fact that the sawing slows down, the guide bar gets hot and the feed is harder. Stop sawing at once! At this point it's really too late to file. Sawing with a dull chain exposes the sawing equipment to great wear and tear. You must learn to file *before* the chain gets dull.

### File comfortably

Both hand and electrical chain filing can give good results. The machine is faster and simpler. For hand filing, we recommend a double file with a built-in filing gauge. (Pferd 4 mm, part. no. 9999-000-0400).

It is much easier to sharpen the chain if you have a proper work place. Fasten the guide bar in a screw vice or a saw clamp. Best is to build a table next to the sawmill for filing and other chain-saw

maintenance. If you have an electric saw, you will need a file block (part. no. 9999-000-0620) to hold the chain during filing.

### Avoid chain breaks

If you saw too long with a dull chain, it can break under the cutter where the material is worn.

If, on the other hand, a drive link breaks the reason can be that the chain and the sprocket are not matched. For best results you should alternate five chains on one sprocket. When the chains are worn out, replace the entire set, including the sprocket. A new chain placed on a worn down sprocket can break during the first few minutes.

It is not good to drive a normal 3/8" chain and a PMX chain with the same sprocket.

### The guide bar can pull askew

If the chain has been damaged on one side or filed unevenly, the guide bar can steer askew. The guide bar will be pressed up or down or jumps when it leaves the log. This way the chain wears more on one bar rail and if you continue to saw, the guide bar will be

worn lopsidedly. Even if you change the chain, a worn down guide bar can steer wrong and the new chain can be worn down.

A lopsided guide bar can be fixed. File the bar rails until they are even, using a tool like a UKF file (part. no. 9999-000-0450).

Another, more common reason that the guide bar pulls askew is that it is so worn out that the drive link bottoms in the bar groove and the chain loses its support from the guide bar walls. This can be seen on the chain in that the tip of the drive link becomes worn.

### The best chain oil

In order for the chain oil to work well it must be viscous and thready. When you place a drop between the thumb and the index finger and then open them, long threads should form. We recommend Stihl chain oil (part. no. 0781-516-3353).

## Keep the edge within the chromium layer

The cutter on a chain-saw chain is covered with a very thin chromium layer, giving a very sharp and durable edge.

As long as the edge is in the chromium layer, your chain will have perfect sharpness. However, after between 50 and 100 cuts with the M7 sawmill, the edge in the chromium layer will be worn down. At that point it is time to file the chain. If you are really sensitive, you will notice that the chain slows up, the guide bar heats up and the feed pressure must be increased. If you file as soon as you sense that the chain is no longer perfectly sharp, you will need only a few, light pulls with the file.

If you always file *before* the chain becomes dull, wear on the guide bar and chain will be minimal.

However, if you make 5-10 cuts after the edge has left the chromium layer, the chain will be so dull it will be difficult to saw. The sawing speed will be low and the feed pressure high. The guide bar and chain will easily overheat. It is still possible to saw, but the equipment will wear out very quickly.

When you file a chain, there is a real danger that you won't reach the chromium layer. The chain may feel sharp, but because it isn't in the chromium layer, it will become dull again very quickly.

If you don't file in time, you will have to remove a lot of the cutter to get it sharp. The working life of the chain will be short. And if a lot of the sawing is done with a dull chain, you will need a high feed pressure, with consequent rapid guide bar wear and a high risk for chain breaks.

In conclusion, file before the chain is dull so that you avoid getting into a vicious circle where the wear on the sawing equipment increases and the sawing result goes down.

**Regular chain sharpening is especially important if you are sawing wood that is aggressive to the chain, such as dry material, hard wood or wood with sand or earth in the bark.**

## Fine-tuning the M7

Read the pages 28 and 29 about possible reasons for getting wrong measurements when sawing.

Provided that the Logosol Sawmill is correctly adjusted according to the instructions on pp 22-24, measurements deviations are not generally due to the sawmill itself. When you are sawing boards from a beam, without turning it over, the setting of the Logosol Sawmill has no importance whatsoever as regards the thickness of the board. The deviation you get is due to movements of the log while you are sawing, or defectiveness of the cutting equipment. You have to take into account that the measurements of unprocessed boards always vary. You do not get millimetre precision until you have planed the boards.

**In normal cases we recommend you not to carry out the steps 1-5 below.**

In some special cases there might be need for an exactly adjusted sawmill, e.g. in case you want to cut large beams that have as exact angles between the cut surfaces as possible.

There are adjustments that you can carry out on your sawmill to further increase the sawing precision. In case you want to do this, it is vital that you follow the entire instructions, and take the steps 1-5 in order. The

adjustments normally take 1-3 hours, provided that you have prepared the sawmill and have all necessary tools easy of access. However, the more meticulous you are the longer time it takes. When measuring, you should not be more precise than 0.5 mm (0.02").

To obtain a sawmill that stays adjusted regardless of vibrations and rough handling, we have designed the M7 to have as few adjusting screws as possible. Instead, you use schims, thin strips of sheet metal, as spacers. Adjustments made by this method are more exact and are not affected by vibrations.

Read all the steps 1-5, before starting the adjustment.

### Necessary measure tools:

**Set square.** Check your set square by placing it on a level surface and drawing a thin line along the set square. Rotate the set square 180 degrees and draw another thin line next to the first. These two lines should be exactly parallel to each other.

**Setting block.** Make a small block that is exactly 51.5 mm (2.03").

**Thickness gauge.** (Alternatively a piece of schims that is 0.5 mm (0.02" thick.)

**Two exactly straight boards,** with a length of at least 1 m (3.3 ft).

**Callipers.**

**Sheet metal schims** 0.2 mm (0.008") and 0.5 mm (0.02").

### Preparations.

The sawmill must be bolted to a firm surface and the feet adjusted so that the horizontal beams (between the long and the short legs) are parallel to each other. If you have fitted a support leg to the sawmill, it should also stand on a firm surface. Clean the sawmill carefully. You will attain the best precision if a bar shorter than 50 cm (20") is used. Remove the saw chain but refit the bar on the saw. While adjusting, use the bar length you will primarily use.

**1. Make sure the bar is straight.**

Even a new bar can be crooked. Place the chainsaw carriage (or the E 5000) on a level surface and with the bar mounted, but not the chain. Check the distance between the bar and the surface. Note down the measurement you get closest to the chainsaw and the measurement at the bar nose. Turn the bar over and measure again. Now, the first inner measurement should agree with the second inner measurement. Likewise, the two measurements at the bar nose should agree with each other. If the measurements deviate, the bar is crooked. (The two inner measurements do not have to be same as the outer ones, though.)

**Remedy:** Adjust the bar before continuing the fine-tuning. Use protective gloves.



### ***Fine-tuning the M7***

#### ***2. Make sure the guide rail is not warped.***

Remove the saw unit and the log grip. If the sawmill is equipped with any support legs and guide rail extensions, remove these. Place two straight boards or two spirit levels across the guide rail with a space of at least 2 metres (6.5 ft) between them. Stand at the end of the guide rail and sight along the guide rail over the boards. Place the boards at different positions on the guide rail. If the boards (or spirit levels) are not parallel, the guide rail is warped.

**Remedy:** Make sure that the angle between the guide rail and the long leg is 90 degrees. If this is not the case, adjust this angle. In case this is not enough to eliminate the warping, loosen one guide rail strut at a time, press the guide rail straight and retighten the struts. Recheck the straightness of the guide rail according to the instructions on p.22. Be careful not to press the guide rail in any direction when refitting any support legs and extensions.

#### ***3. Check the angle between the log bed and log support.***

The play in the plastic slide profiles of the log bed affects the measuring. Therefore, the log bed should always be pushed *out* from the log support when you are measuring. The angle must be exactly 90 degrees.

**Remedy:** If this angle is not 90 degrees, you can adjust this by using schims, i.e. thin pieces of sheet metal. You can buy schims from Logosol, but you can just as well cut strips from an aluminium soda can or the like. To lift the outer edge of the log bed, loosen the log bed from the lifting beam. Place one or several layers of schims (15x12 mm = 0.6"x0.5") on top of the lifting beam, either at the outer end or at the inner end. If you place 0.2 mm (0.008") on the lifting beam, the outer edge of the log bed will be raised approx. 1 mm (0.04").

Carefully place the log bed on the lifting beam and tighten the screws. Repeat the process until you are satisfied with the angle. Then, adjust the height of the log beds according to the instructions on p.23, *but*

*only measure furthest in on the log bed, closest to the bar fitting. When the log bed is set at 2", the distance between the guide bar and the log bed is to be 52 mm (2.05"). Use your setting block and calliper when adjusting.*

#### ***4. Check the adjustments made in points 2 and 3.***

Push the saw unit (without the chain mounted) onto the guide rail. Make sure that you have the same deviation on both the log beds. Push the log bed outwards when measuring. For example, if the log bed is set at 2", you will get the measurement 52 mm (2.05") at the inner end and 48.5 mm (1.9") at the outer end of *both* the log beds. The measurements are now incorrect, but they are at least the same. This indicates that you have adjusted correctly in step 2 and 3. The deviation will be corrected in step 5.

If you do not get the same measurements on both the log beds, the guide rail is still warped, or the angle between the log bed and the log support is not 90 degrees (repeat step 2 and 3).



**5. Check the parallelity between the log bed and the guide bar.**

Push the saw unit (without the chain mounted) onto the sawmill. The measurement between the guide bar and the log bed is to be 52 mm (2.05") at both the inner and the outer end of the log bed. Push the log bed outwards when measuring. If you do not get the same measurements at both the inner and the outer end of the log bed, you have to adjust this.

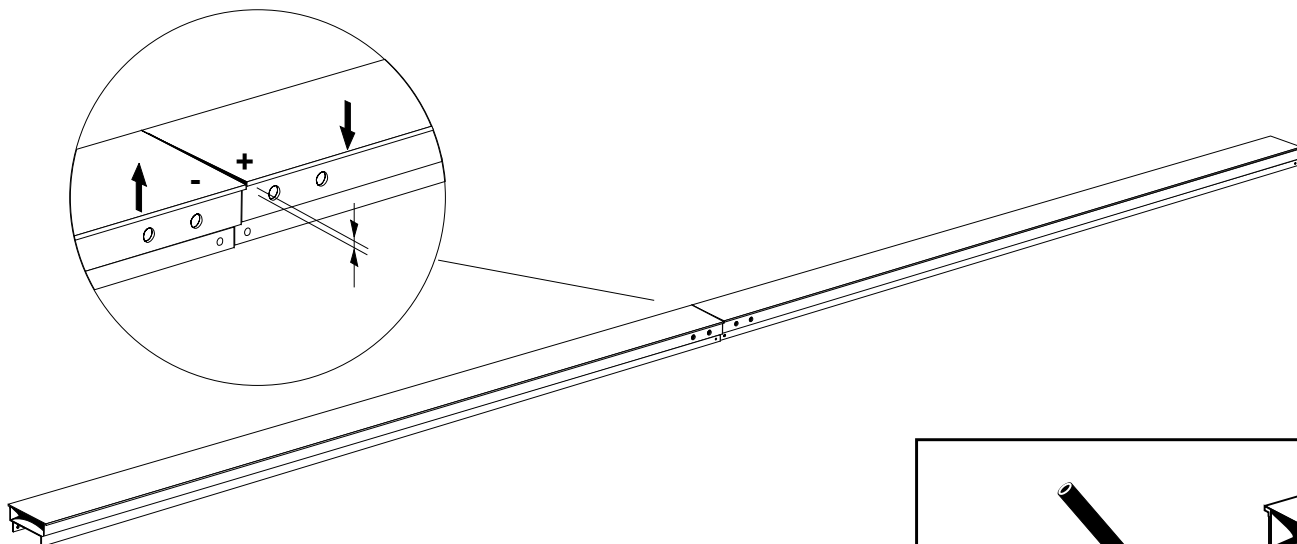
**Remedy:** Place schims between the bottom plate of the saw carriage (or the E 5000) and the aluminium slide profiles. The schims should be 15-20 mm (0.6"-0.8") wide and of a length that allows them to fit in between the screws that hold the slide profiles. Turn the screws a couple of times, so that you can insert schims from the side, but make sure that the square nuts that are in the slide profile do not come loose from the screws. Only place schims in one slide profile. Place equally many pieces of schims between each screw and at the end of the slide profile to ensure that the bottom plate will not be

inclined when the screws are tightened. Check the angle of the guide bar. When you get the same measurements at the inner and the outer end of the log bed, the adjustment is done. If necessary, adjust the height of the log bed according to the instructions on p.23.

**Congratulations!** Now you have an exceptionally accurately adjusted M7 Sawmill.

If you are careful with the sawmill, it will stay adjusted for a longer time. Provided that the cutting equipment is in good condition, deviations will be due to sagging timber or tensions in the wood.

To increase the precision when such problems occur, we recommend the accessories Cross support (no. 4500-070-1000), Log Fence with Support (no. 4510-720-6104) and Log End Support (no. 4507-001-2010).



## Fine-tuning the joint couplers.

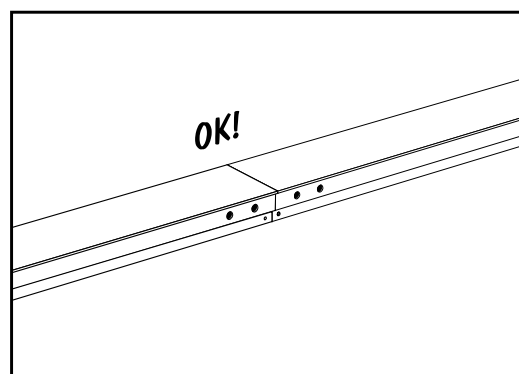
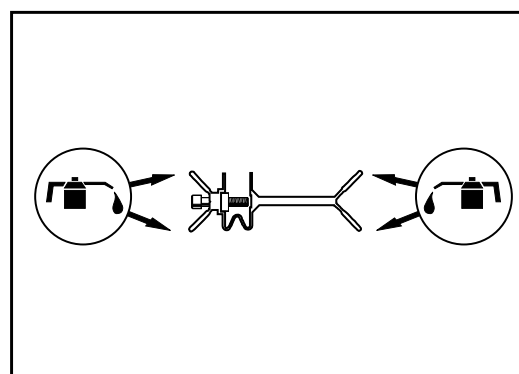
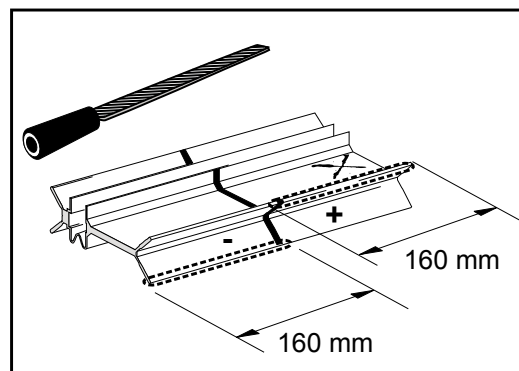
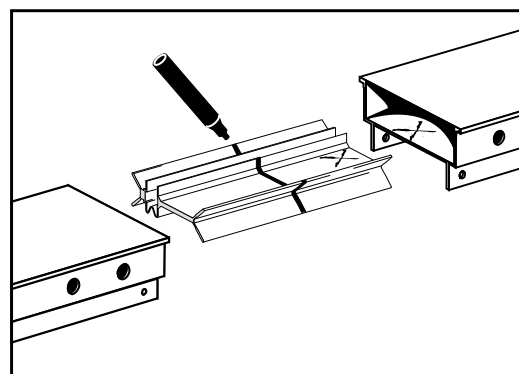
When two guide rails are coupled together, you often get a small difference in level on the sliding surface, which can make it difficult for the saw unit to run or make it bump as it passes the joint. This can easily be adjusted at the joint coupler.

Before you start modifying the joint coupler, make sure that it is correctly fitted in the rails. The joint coupler should be fitted as follows:

- Grind off sharp edges on both ends of the guide rail using a fine sandpaper or a fine-cut file.
- Check the sides of the joint coupler. If necessary, file away protruding damages.
- Clean the inside of the guide rails.
- Oil the long sides of the joint coupler before you insert it into the guide rails.
- Turn the joint coupler to the correct direction. The screws should be visible on the upper side before the guide rails are pushed together.
- Hit the rails gently using your hand or a rubber hammer while you are gradually tightening the expander screws to make sure that the joint coupler expands properly inside the guide rails.

## Adjusting the joint coupler.

- If you can feel that there is a height difference on the joint where the guide rails meet, mark the point that is too high with '+' and the point that is too low with '-', using a pencil. NB: Height deviations on the middle point of the joint do not matter and should not be adjusted.
- Mark the joint coupler with a felt pen, so that you know which end of the coupler belongs to which guide rail. For instance, write 'X' inside one of the guide rails and on one of the coupler's ends. Also draw a line across the joint coupler, so that you know where the middle is.
- File carefully using a flat file on the upper flange or flanges of the coupler that belongs to the side or sides of the guide rail you want to lower (+), and file equally on the lower flange that belongs to the side you want to raise (-). Start from the edge and file 160 mm towards the other end, i.e. 10 mm over the centre line.
- Oil the filed surfaces.
- Fit the guide rails together according to the instructions above (A-E) and inspect the result of your adjustment. If you are not satisfied, repeat the process from step 1 until the guide rails are level. Deviations less than 0.1 mm should not be adjusted.



## Accessories

Logosol offers a great range of extensions, special tools and other accessories for the M7 sawmill. Simple extensions can be bought in 0.5 or 1 m lengths (1.6 – 3.2 ft). It is possible to extend the M7 both at the ends and in the middle. In the latter case, the log beds would be moved apart, a great advantage for logs exceeding 5.5 m (18 ft). You can also extend the machine with one or more 2 m (6.5 ft) extensions, plus an extra log bed so that logs around 8 m (26 ft) or longer are to be sawn. **The product catalog is available at no cost. Just order it.**

### Cutting equipment

For Stihl 064 / 066 / E4000 / E5000 / E8000:

Guide bar - 16" (40 cm), 1.3 picco

Ripping chain for guide bar above, 60 DL

Guide bar - 25" (63 cm), 1.3 picco

Ripping chain for guide bar above, 84 DL

For Stihl 064 / 066:

Chain drive sprocket, picco

For E 5000:

Star drive, picco

Bar nose steering, for petrol chainsaw

Bar nose steering, for Logosol's electric saw unit

Water cooling for the cutting equipment on Logosol's electric saw unit

### Sharpening equipment

File vice to hold the chain steady while filing

Pferd file gauge 4.8 mm (0.2"), files cutter and drive link together

Round file 4.8 mm (0.2") for Pferd file gauge

Manual electric chain grinder

Automatic sharpening robot

### Extensions

End extension 0.5 m (1.6 ft)

Mid extension 0.5 m (1.6 ft)

End extension 1.0 m\* (3.2 ft)

Support leg\* with adjustable foot

Half M7 sawmill 2.0 m (6.5 ft)

### Aids

Measuring rod to check saw height setting

Ramp mount to fasten a 2x5" in the knee joint

Log steps to load logs over 20" (50 cm), 2 items

Stop plate with spring-loaded arm

Loading ramp to simplify control of saw on an M7

Accessory for rounding logs, saws 16 sides

Adjustable log support, a universal tool

X 550 articulated support for holding thin logs

Log roller, to move logs sideways

Log boss, for handling heavy logs

Log turner, helps you rotate the log

Hearing protection with face shield

Folding rule 2 m, Logosol, with millimeter and inch scales

Cap, Logosol

### Electric sawing unit

E 5000, high capacity 3-phase saw, incl. support leg

Feed for E 5000, stepless in both directions

Bandsaw, 3-phase, with 350 mm (13.8") opening

### Moulders

Electric log moulder, 3-phase

Log moulder powered by petrol chainsaw

Logosol SH230 planer, dimensioner and moulder

### Article number

3003-025-0040

3999-000-0060

3003-025-0063

3999-000-0084

1122-640-2006

1207-642-1310

6605-000-0205

6605-000-0200

6605-000-0100

9999-000-0620

9999-000-0410

9999-000-0411

9999-000-1525

9999-000-1515

4507-000-0600

4507-000-0500

4507-000-0800

6600-000-3001

4507-000-2000

4507-001-1300

4507-001-1304

4507-001-1302

4507-001-1025

9999-000-0920

9999-000-1100

4510-720-6104

4500-070-1000

9999-000-1420

9999-000-0561

9999-000-2702

7001-884-2233

9922-130-0000

9922-120-0000

6601-000-0005

6600-000-1000

9999-000-7500

7600-000-0230

7700-000-0230

7202-000-0230



Guide bars adapted for sawmills.



Create beautiful posts with the round sawing attachments.



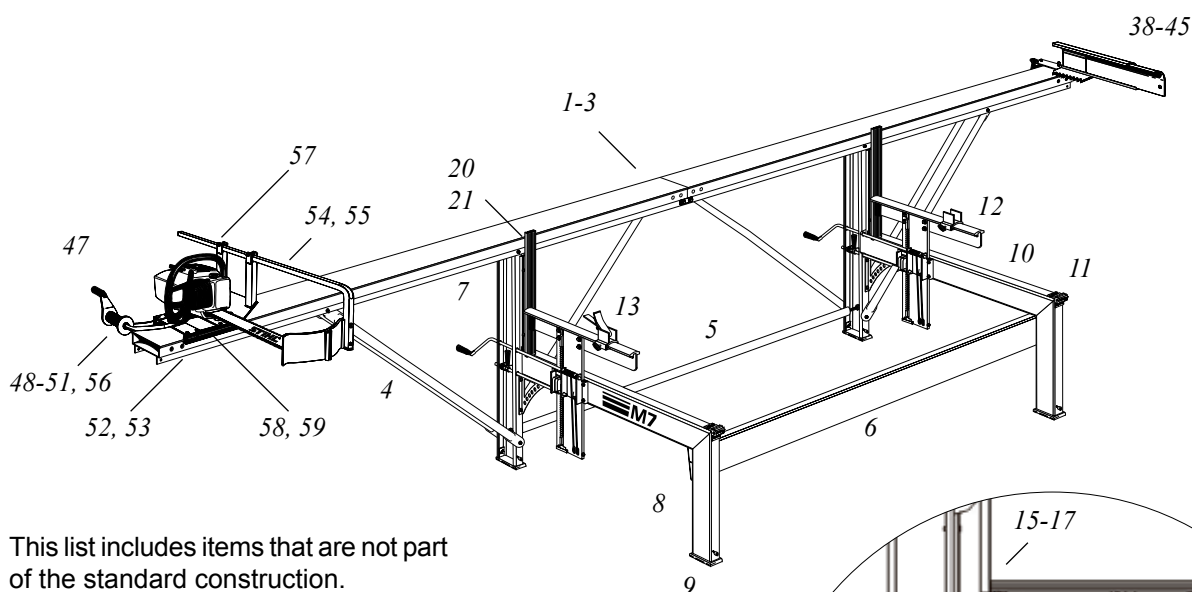
With ramp mounts you can fasten a plank to the sawmill's knee joint.



The log turner makes it easier to handle logs.

\* Guide rail support legs should be used if the M7 is extended more than 0.5 m (1.6 ft) on one side using the extensions above or if an electric saw, log moulder is used.

## Parts list



This list includes items that are not part of the standard construction.

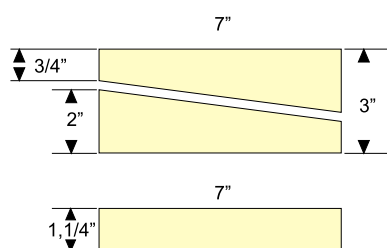
The items are ordered one at a time. The number listed in the table indicates the number usually included.

No. Article number Quantity Description

1.	4507-001-1000	2	Guide rail, 2.75 m (9 ft)
2.	4510-720-6700	1	Joint coupler 300 mm
3.	4510-723-0800	2	Joint plates
4.	4507-001-1015	6	Guide rail strut
5.	4507-001-1010	1	Adjusting strut
6.	4507-001-1009	1	Cross beam
7.	4507-001-1030	2	Long leg
8.	4507-001-1035	2	Short leg
9.	4507-001-1040	4	Foot
10.	4507-001-1200	2	Horizontal beam
11.	4507-001-1045	2	Knee connector
12.	4507-001-1050	2	Log bed
13.	4507-001-1025	2	Edge support with log clamp
14.	4507-001-0300	6	Line pulley
15.	4507-001-1190	2	Setting block for log bed
16.	4507-001-1165	2	Short indicator
17.	4507-001-1170	2	Long indicator
18.	4507-001-1055	2	Ratchet Cam Neutral plate
19.	4507-001-1060	2	Angle fitting
20.	4507-001-1075	2	Log support
21.	4507-001-1070	4	Scale
22.	4507-001-1065	2	Lifting beam
23.	4507-001-1080	2	Lifting line, 2.05 m (6'9")
24.	4507-001-1085	2	Saddle Plate, compl.
25.	4507-001-1090	4	Plastic glide, saddle plate
26.	4507-001-1095	8	Spacer sleeve
27a.	4507-001-1100	2	Crank rod
27b.	4507-001-1101	2	Crank handle
28.	4507-001-1105	2	Locking collar, track
29.	4507-001-1106	2	Locking collar
30.	4507-001-1150	2	Ratchet bar
31.	4507-001-1115	2	Scale selector
32.	4507-001-1120	2	Turn spring
33.	4507-001-1125	2	Ratchet Cam
34.	4507-001-1130	4	O-ring
35.	4507-001-1020	2	Ratchet handle
36.	4507-001-1145	2	Ratchet bar stop plate
37.	4507-001-1205	2	Line pulley holder
38.	4507-001-7600	1	Log grip, compl.
39a.	4510-723-2905	2	Plastic slide, log grip *
39b.	4507-720-7604	2	Sliding block, aluminium *

40.	4510-723-2511	1	Spacer sleeve *
41.	4507-723-4806	1	Log grip guard *
42.	4510-723-4807	1	Extension, log grip guard
43.	4510-723-5100	1	Threaded bar *
44.	4510-723-4902	1	Adjustable handle, M6 *
45a.	4507-720-7601	1	Spiked log grip, spikes, 9-points *
45b.	4510-723-2200	1	Plastic spacer plate, log grip *
45c.	4507-720-7602	1	Holder plate *
46.	4507-001-1110	2	Ratchet cam axle
47.	4507-720-7502	1	Carriage, complete
48.	4510-723-2002	1	Chainsaw feed line, 8 m (26 ft) *
49.	9999-000-6010	1	Electric saw feed line 8 m (26 ft) *
50.	6600-001-3063	1	Feed line E37, 16 m (52 ft) *
51.	9999-000-1032	1	Line spool *
52.	4510-723-2904	2	Plastic slide, carriage *
53.	4507-720-7402	2	Sliding block, aluminium, carriage *
54.	4507-723-4809	1	Chain guard *
55.	4507-720-3001	1	Chain guard mount *
56.	4510-720-2800	1	Spool holder *
57.	4510-720-2900	1	Pylon carriage bracket *
58.	4510-723-3402	2	Logosol nut 066 *
59.	4510-723-3404	2	Logosol nut 088 *
60.	4507-001-1500	2	Adjusting plate 70 x 10 x 0.5 mm *
	4507-001-2071	2	Screw bag # 71, page 10
	4707-001-2072	1	Screw bag # 72, page 11-12
	4507-001-2073	1	Screw bag # 73, page 13
	4507-001-2074	1	Screw bag # 74, page 14
	4507-001-2075	1	Screw bag # 75, page 15-16
	4507-001-2076	1	Screw bag # 76, page 17-19
	4507-001-2077	1	Screw bag # 77, page 20

\* Articles that are part of another article number, but can be ordered as a spare part or accessory.



To produce the two diagonally sawn boards, make a 7" block that is 221 cm (87 inches) long. Make a diagonal cut by not letting the cradle foot on the short arm reach the notch in the screw plate, but letting it be positioned next to it. Support the guide rail by placing sticks under it, in order to prevent the guide rail from moving while you are sawing. Make sure the block is securely fastened.

**It only takes an hour or two from log to completed bench. Use a chainsaw, folding rule, set square, hammer, and nails – and do not be unnecessarily precise, you will get a good result anyway!**

#### Boards:

Diagonally sawn 2"x7" (51x178 mm):  
two 185 cm (72"), two 35 cm (14").

1 1/4"x7" (32x178mm):  
one 140 cm (55"), four 35 cm (14").

#### Building instructions:

Draw a curve on the 140 cm (55") long board (e.g. by attaching a pencil to a 150 cm (59") long string and fastening the other end of the string 142 cm (56") from the center of the board). Let the curve barely cover half the board width. Saw along the drawn line with a saw.

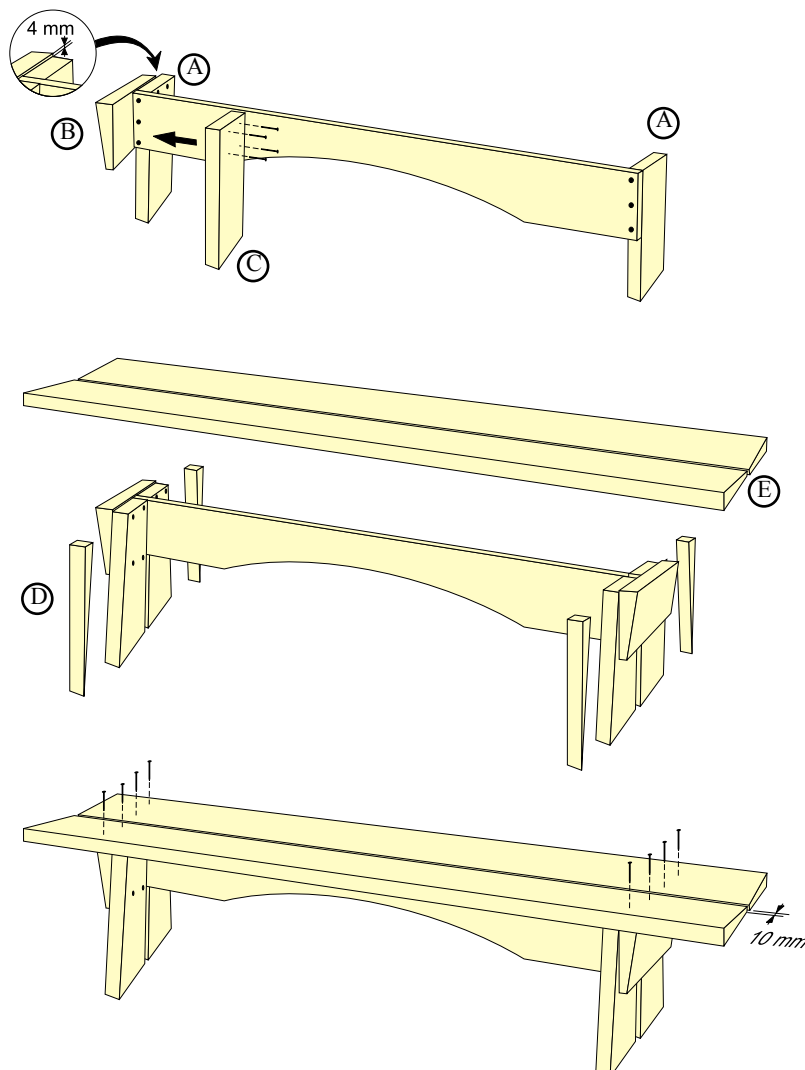
Nail two of the legs (A) to the curved board. Make sure that the curved board does not protrude from the outer side of the leg board. Mark the middle of the short, diagonally cut boards (B) and nail them to the legs, centered on the end of the curved board. Let the diagonally sawn piece stick up 3-4 mm above the leg board and the curved board.

Attach the two other legs with nails (C).

Cut off the leg boards with the chainsaw (C) so that they are in line (D) with the upper corners of the short diagonally cut boards (B) and the lower corners of the legs.

Place the long, diagonally cut boards (E) on the construction, and nail them to the short, diagonally cut boards with a space of 1 cm between them.

Finally, you carve off the rough edges with a sharp knife.









## EU declaration

In accord with EU's machinery directive  
98/37/EG, Annexe 2A

Manufacturer: LOGOSOL AB,  
Industrigatan 13,  
SE-871 53 Härnösand

The company hereby certifies that

Logosol's sawmill

Type: M7

is manufactured in accord with the  
following EU directives:

98/37/EG, Machinery directive

2006/95/EG, Low voltage directive

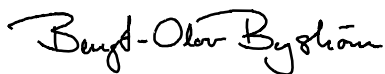
2004/108/EG, EMC directive

As framework for this declaration following  
standards have been used:

EN ISO 12100-1:2003, EN ISO 12100-  
2:2003,

EN 60204-1:2007 +(EMC standard)

Härnösand, 16-06-2009



Bengt-Olov Byström MD,

Logosol AB, Sweden





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