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wood floors. protected

Operating Instructions PALLMANN Cobra II Sanding Machine





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1.0 Introduction

Thank you for your purchase of the PALLMANN Cobra II sanding machine. The best choice with respect to quality and performance. Since 1950, Cobra sanding machines have been industry leaders in the wood flooring market. We channel this rich history of machine expertise into every Cobra II that leaves our facility in Ilsfeld, Germany. All Cobra II machines then undergo a rigorous 20 point inspection and testing procedure at our North American Headquarters in Aurora, Colorado.



These operating instructions contain important information for the use and safe operation of the Cobra II.



Caution!


Read these operating instructions carefully before assembling or operating the COBRA II. Ensure that all operators read these operating instructions prior to operating the machine.

Adherence to the safety notes helps to protect against potential dangers for health and personal safety and to prevent an improper utilization of the machine.

Before starting to work, make yourself familiar with the operation of the machine.

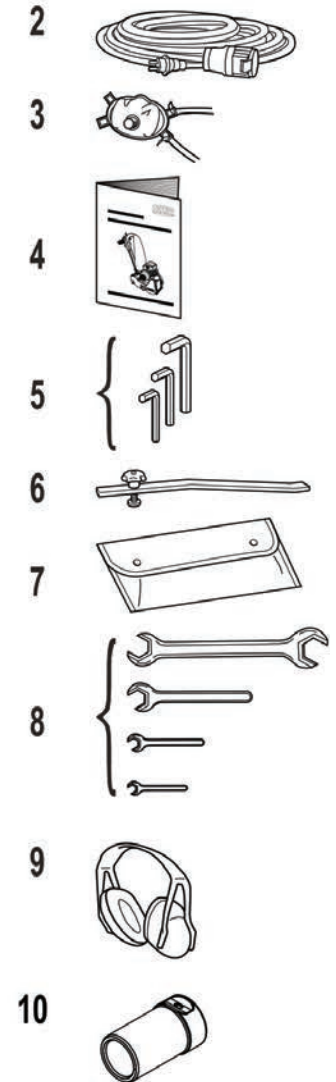
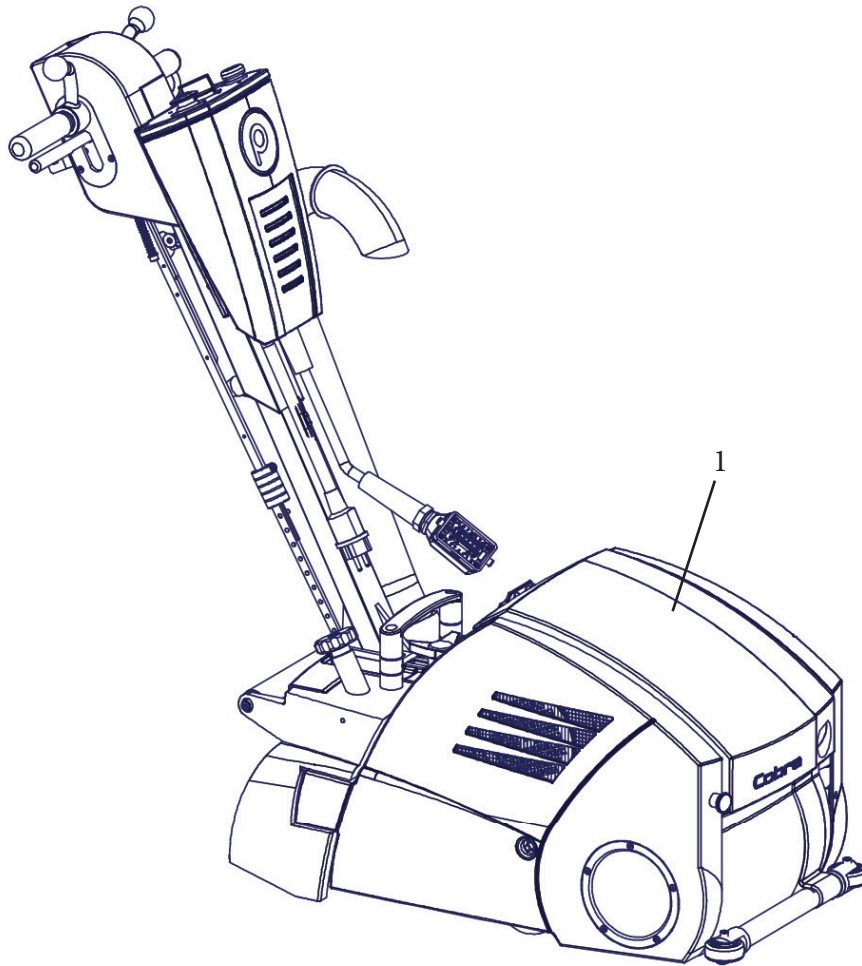
It's too late if you do it while working!

Never allow anyone without sufficient skills and knowledge to operate the machine.

This brochure uses the symbol  to mark important instructions for safety and preventing damage. Please give special attention to the marked instructions.

They refer to a potentially dangerous situation. Failure to comply can result in fatal or severe injuries and damage to property.

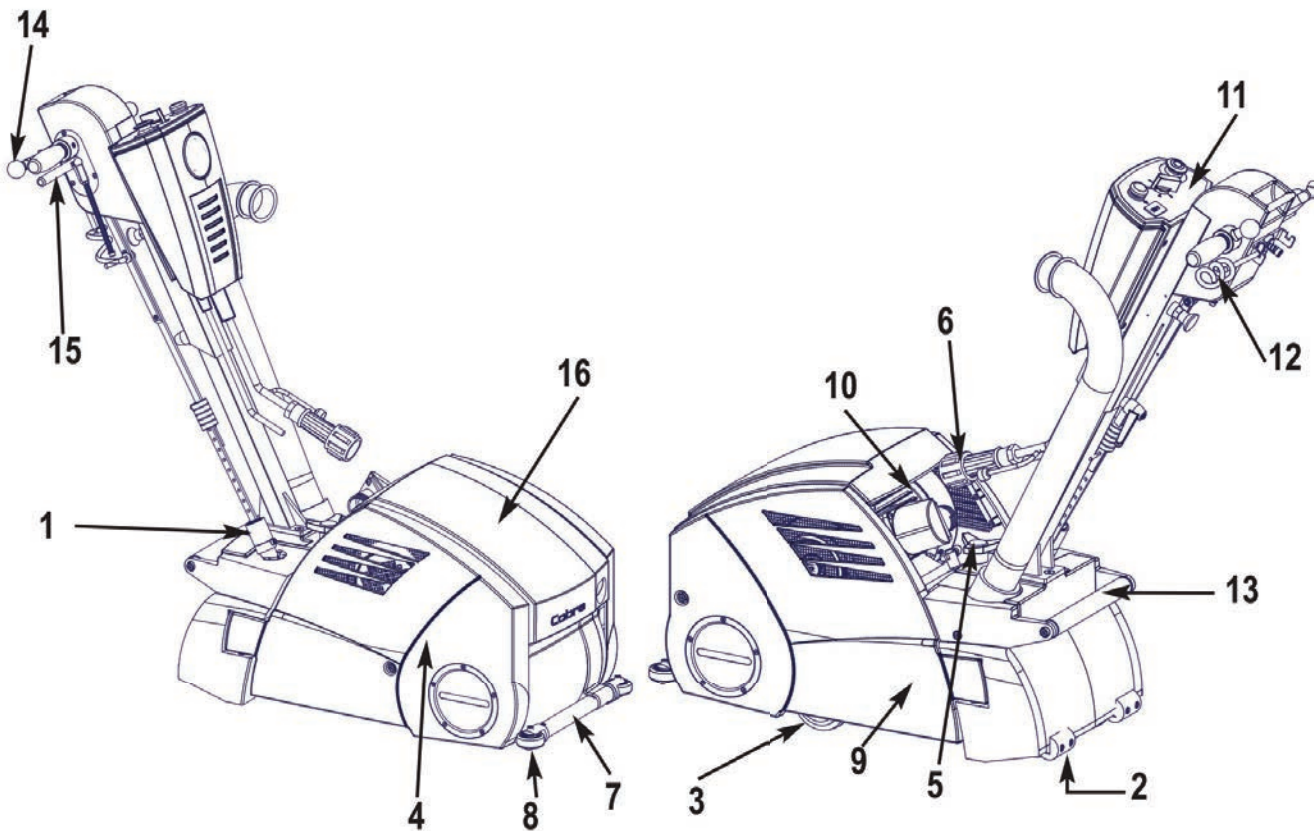
2.0 Scope of delivery



1. machine
2. power cord with female twist lock
3. respirator
4. operating instructions
5. allen keys: 5 mm, 6 mm, 10 mm
6. running wheel adjustment gauge
7. tool bag
8. fork wrench: 10 mm, 13 mm, 17 mm, 30/36 mm
9. hearing protection
10. dust containment attachments

3.0 Machine specifications of Cobra II

3.1 Important components



- 1. Sanding pressure adjustment
- 2. Caster wheels
- 3. Running wheels
- 4. Access door
- 5. Star-shaped knob
- 6. Motor plug
- 7. Front carrying bar
- 8. Wall bumper wheel

- 9. Belt cover
- 10. Motor
- 11. Cockpit
- 12. Power cord holder
- 13. Rear carrying bar
- 14. Main lifting lever
- 15. Feathering handle
- 16. Hood



3.2 Technical data

Single-phase AC motor	240V, 60 HZ
Motor capacity	3,68 kW (5,0HP)
Sanding drum speed	2550 rpm
Sanding width	7-7/8"
Sanding belt dimensions	7-7/8" x 29-1/2"
Total machine weight	212 lbs

3.3 Safety and machine protection

Cobra II is equipped with an

- overcurrent cutout
- no-volt release

The overcurrent cutout protects the machine and operator from danger in case of short circuits or power surges into the machine.

The no-volt release prevents uncontrolled restart of the machine after power failure. The motor will not start automatically when the power returns; it will have to be switched on again.

4.0 Proper use

The Cobra II wood floor sander is suitable for dry sanding of wood floors. No other use is recommended.



Caution!
Never use Cobra II for wet procedures (fatal risk from electric shock)!



5.0 Starting the machine

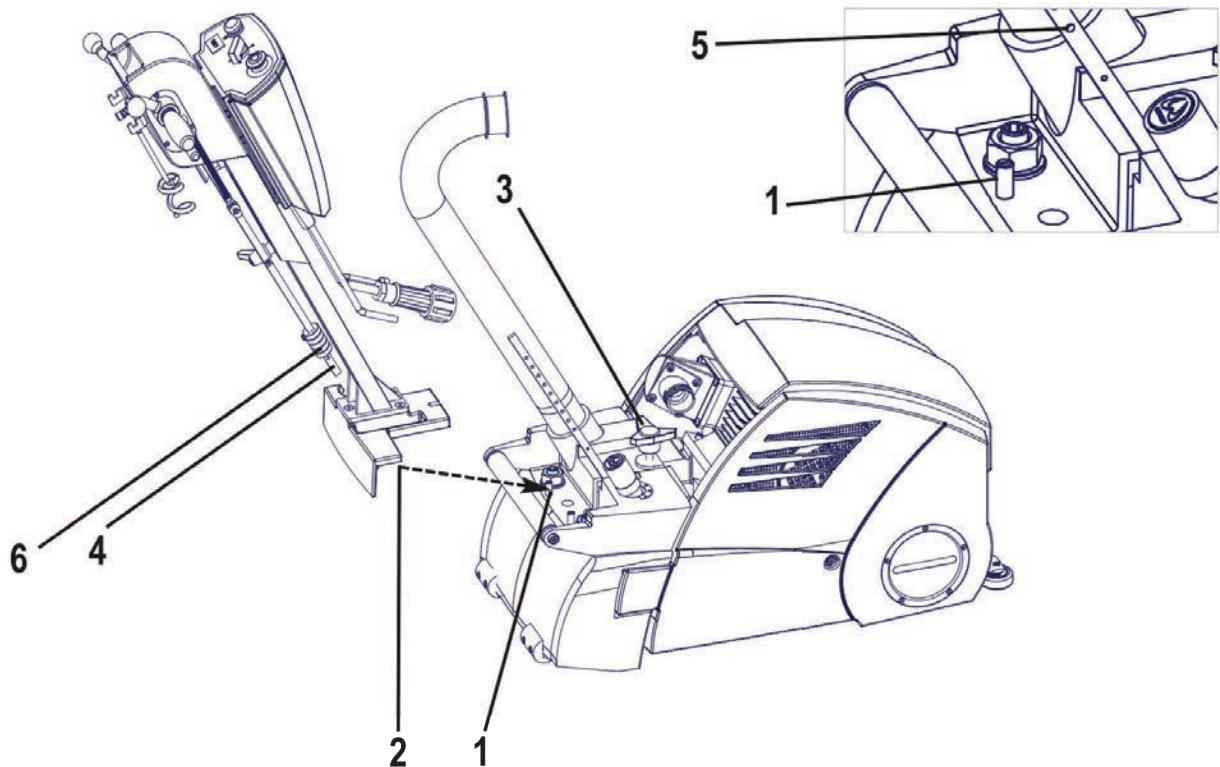
5.1 Mounting the handle

The Cobra II is delivered with the handle and dust pipe dismantled.

Caution!



Injury to the operator or other persons could occur or damage could occur if the machine starts up unintentionally. Disconnect the machine from the main power supply before working on the machine!



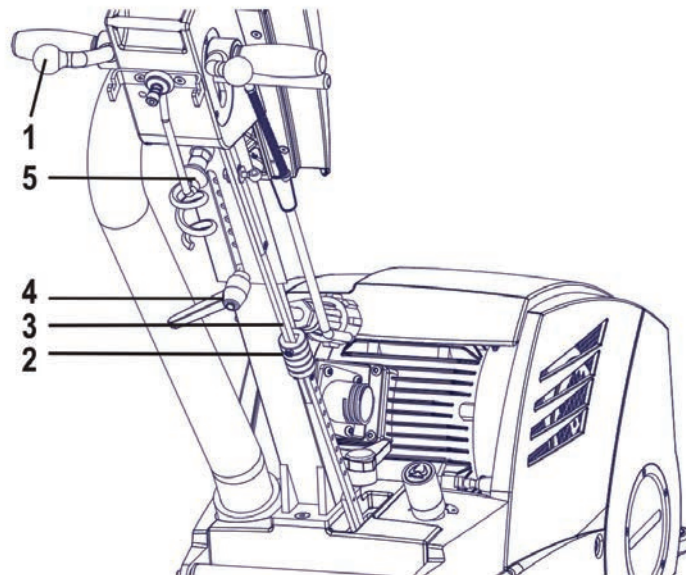
How to mount the handle:

1. Insert the bottom part of the connecting rod through the slot of the handle mount. Make sure that the fixing studs (1) are inserted into the positioning holes (2).
2. Tighten the star-shaped knob (3).
3. Check the position number of the handle.
4. Insert the stud (4) on the rod into the corresponding hole (5).
5. The clamp sleeve (6) firmly fixes the two parts of the connecting rod.

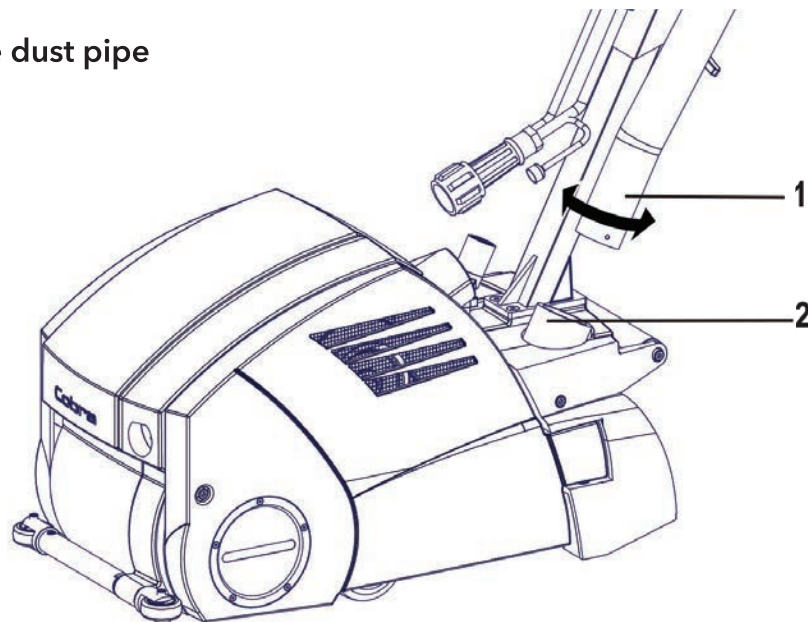


5.1.1 Adjusting the handle height

1. Lower the main lifting lever (1) to the front.
2. Slide the clamp sleeve (2) to the top and take apart the connecting rod (3).
3. Loosen the clamp bolt (4).
4. Pull the locking stud (5) and have it snapped in at the desired position.
5. Assemble the connecting rod (3) on this position.



5.2 Mounting the dust pipe



Insert the dust pipe (1) into the pipe connection (2) while gently rotating it. It is sealed with 2 O-rings.

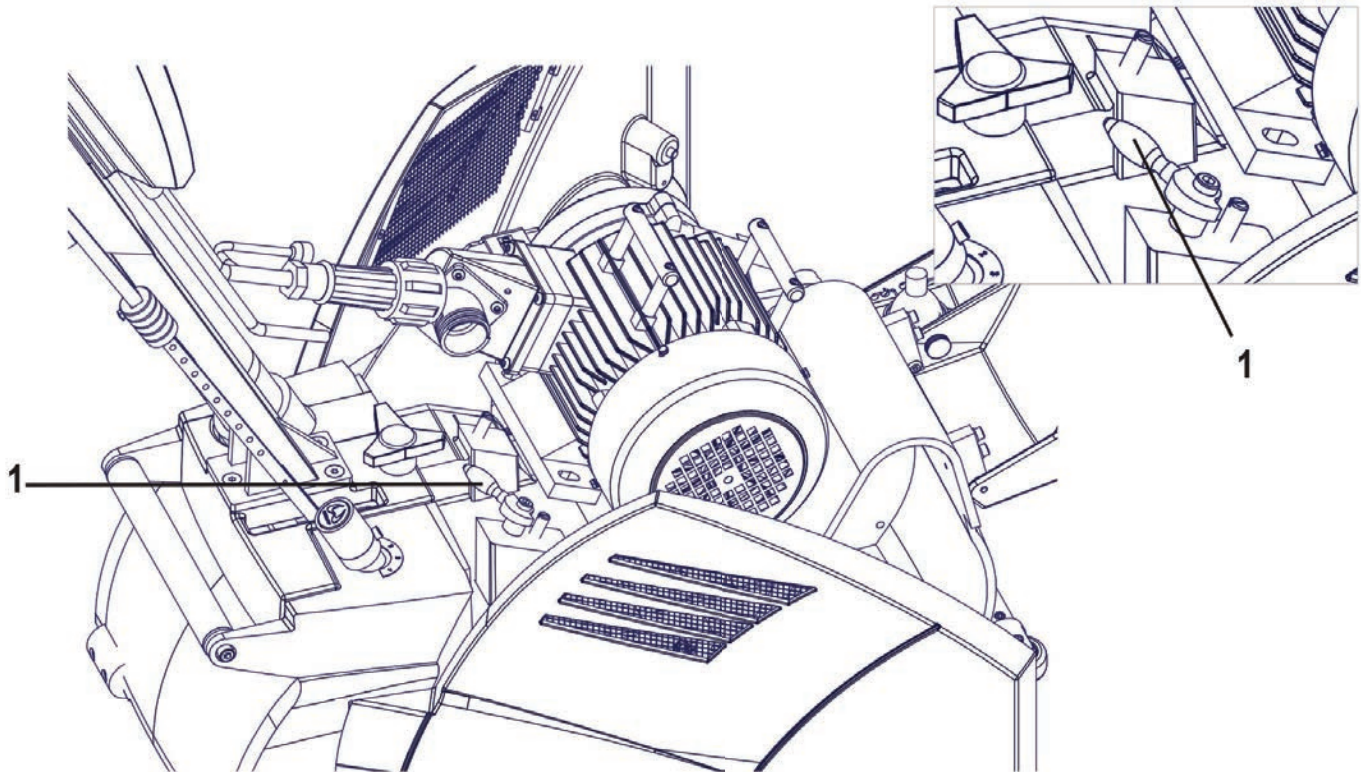


5.3 Mounting the motor

The machine is delivered with the motor already mounted.

Due to reasons of weight, it may however be necessary to remove the motor to transport the machine (see chapter 6.2, Removing the motor, on page 16).

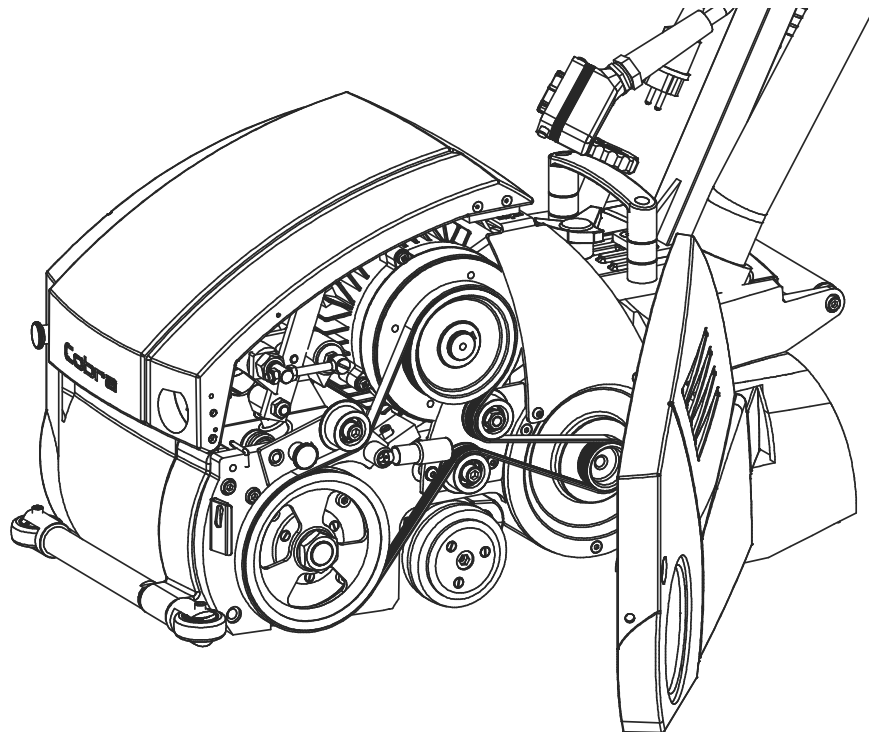
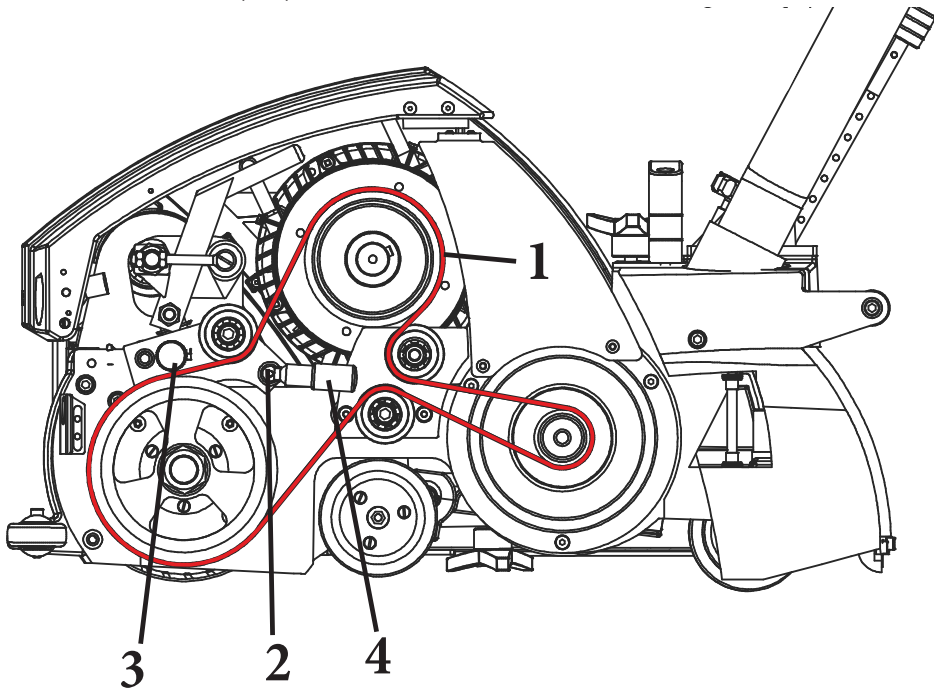
Before placing the motor onto the machine, make sure the latch (1) is in the open position. When the motor is placed correctly, lock the latch (1) to fix the motor.





5.4 Installing the belt

1. Swing out the lever (4) and lift the belt tensioner (2) until the locking stud (3) unlatches.
2. Insert the belt (1) around the belt pulleys and deflection roller as shown in the figure.
3. Slightly lift the belt tensioner (2) and pull back the locking stud (3).
4. Lower the belt tensioner to take up belt slack.
5. Pull the lever (4) and fold it in.





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5.5 Mounting the dust bag



Caution!

Only use original PALLMANN® dust bags for the Cobra II sanding machine.

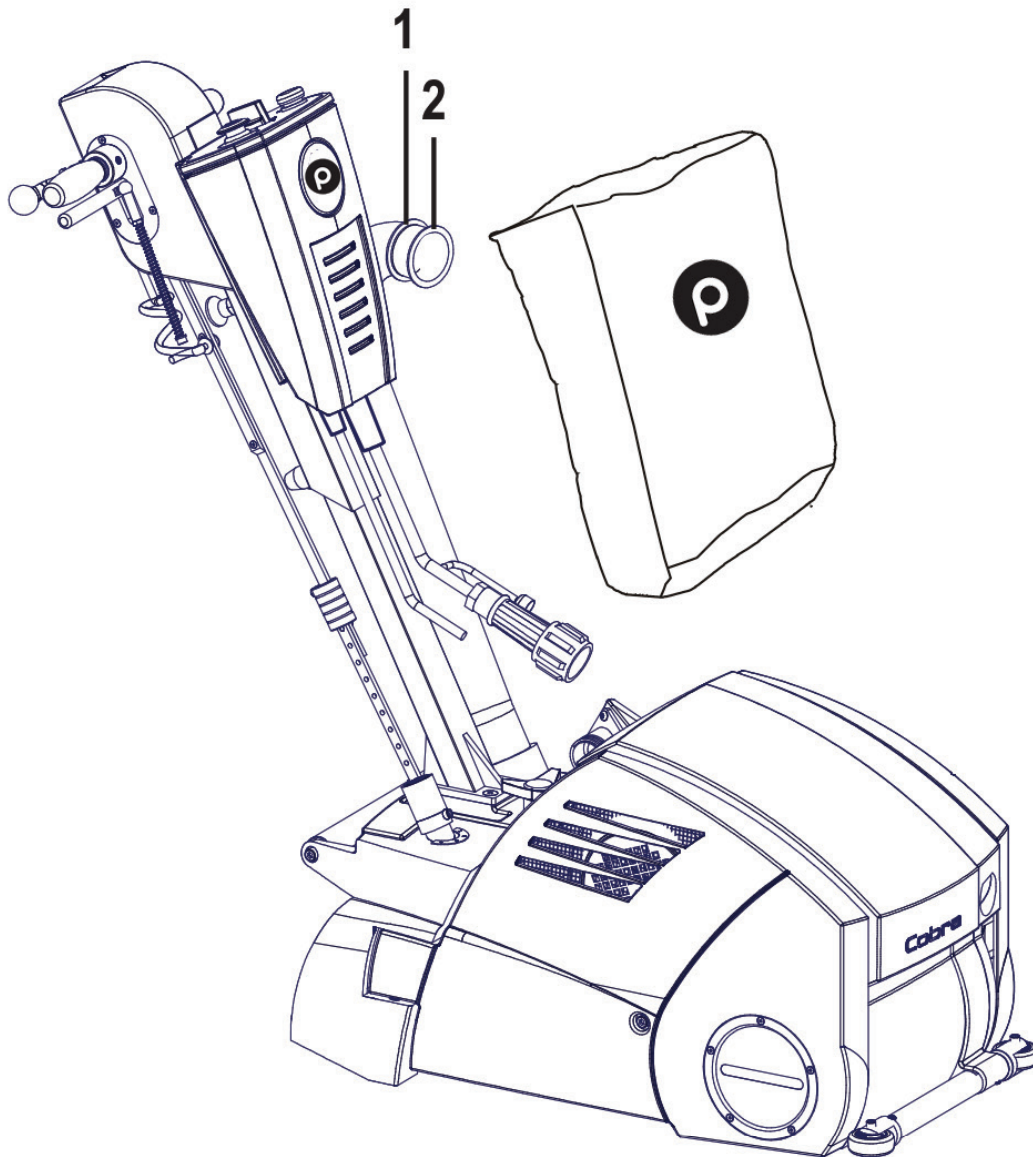


Caution!

Make sure the dust bag is fitted securely to the dust pipe before sanding.

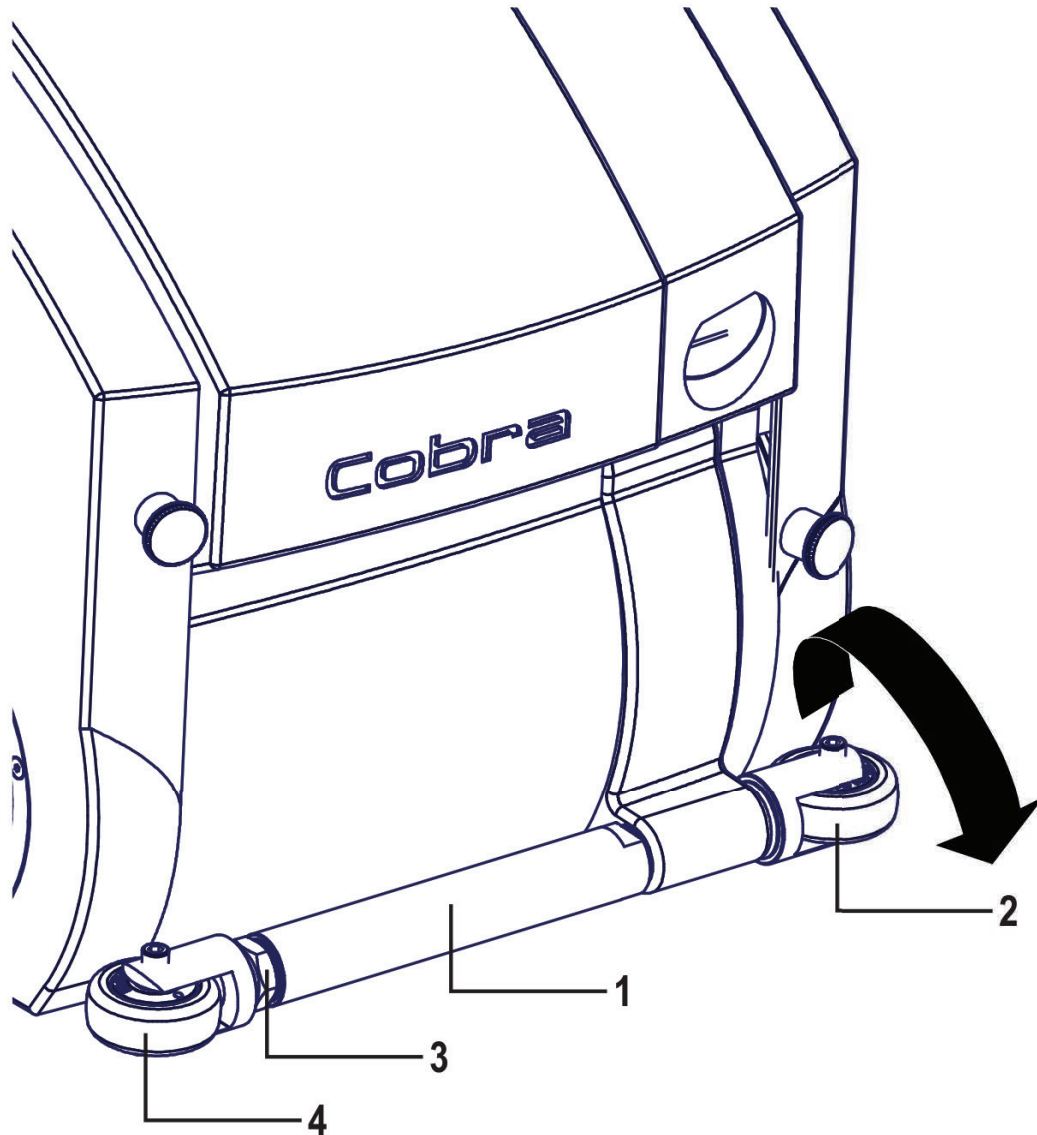
How to install the dust bag:

1. Pull the outer bag over the dust pipe behind the pipe reinforcement (1).
Lace up the cords carefully.
2. Make sure that the zipper to the bag is closed.





5.6 Adjusting the wall bumper wheels



1. Loosen carrying bar (1) with the fork wrench (SW 22)
2. Unscrew left bumper wheel (2).
3. Tighten the carrying bar (1) again.
4. Loosen counter nut (3) with the fork wrench (SW 24)
5. Unscrew right bumper wheel (4)
6. Tighten counter nut (3)
7. The carrying bar can be locked by the fork wrench (SW 24)



5.7 Connecting the Cobra II to the main power supply

How to connect the machine to the main power supply:

1. Make sure that the switch (1) is in the off position.

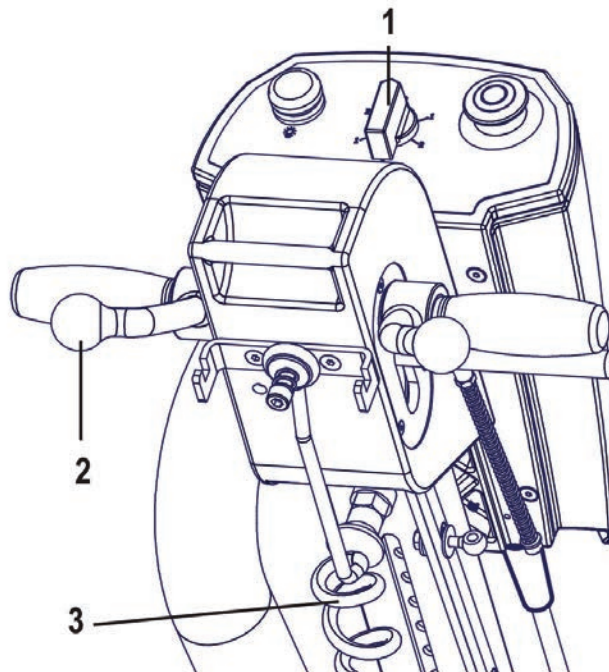
The machine must be switched off before connecting it to the main power supply.

2. The main lifting lever for the sanding drum (2) must be folded backward so that the sanding drum is raised from the floor.

3. Hang the pivoting power cord holder into the left or right power cord bracket as required. Wind the power cord through the curls at the end of the cord arm (3) to keep the cord away from the sanding zone.

4. Connect the motor coupling to main power cord.

5. Connect the coupling of the lamp cord to the plug.



Caution!

Make sure that the abrasive belt is tight before you switch on the motor.



Caution!

Make sure that the sanding drum is raised from the floor before you switch on the motor.



Caution!

Risk of injury if the machine starts unintentionally! Disconnect the machine from the main power supply when not in use, when changing the abrasive belt, or when carrying out service work on the machine.



6 Disassembling for transportation

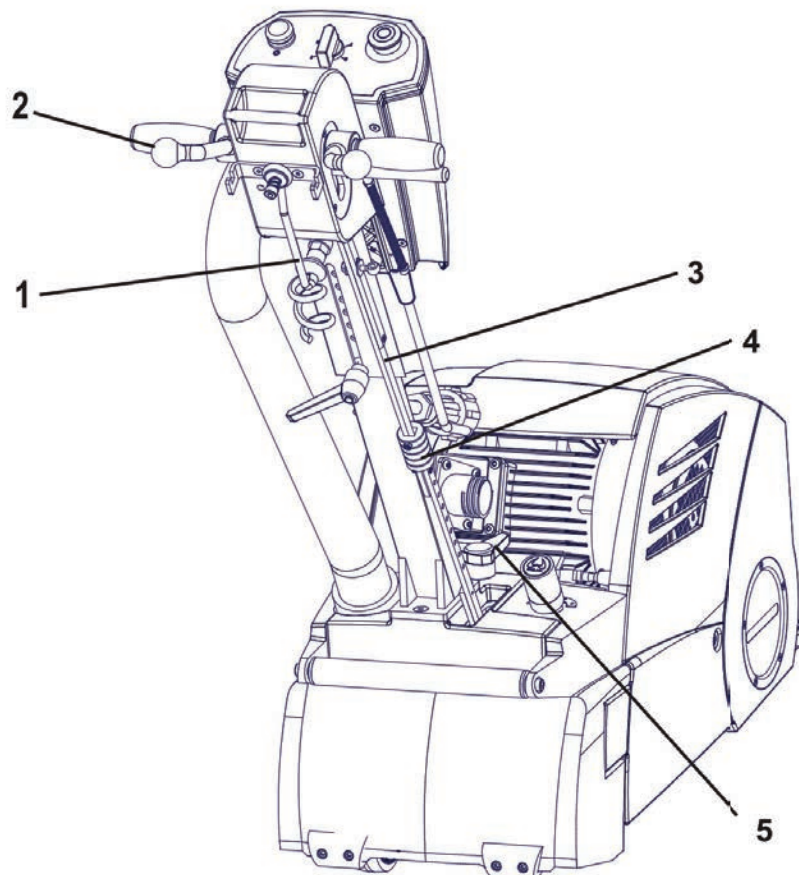
For easier transportation, the handle, the dust pipe, and the motor can be removed.

6.1 Removing the handle

There is the risk of injury or damage caused by an unintentional starting of the machine. Disconnect the machine from the main power supply before working on the machine!

How to remove the handle:

1. Disconnect the motor and lamp couplings.
2. Fold down the power cord holder (1).
3. Fold the main lifting lever (2) to the front position to lower the sanding drum to the floor. This removes load from the connecting rod (3).
4. Slide the clamp sleeve (4) to the top and take apart the two halves of the connecting rod (3).
5. Remove the star-shaped knob (5), and you can lift off the handle.



6.2 Removing the motor

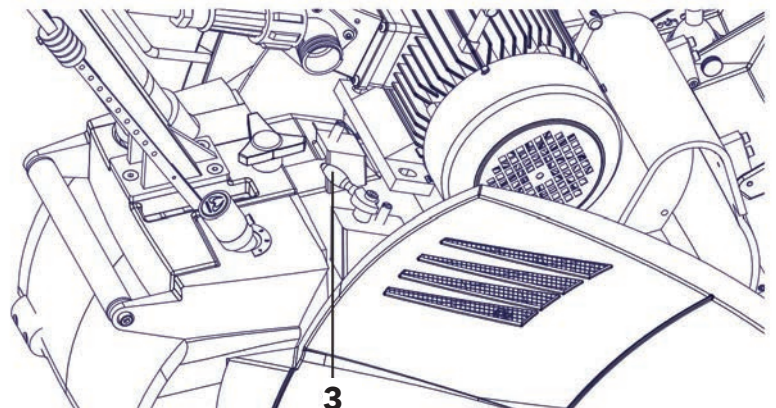
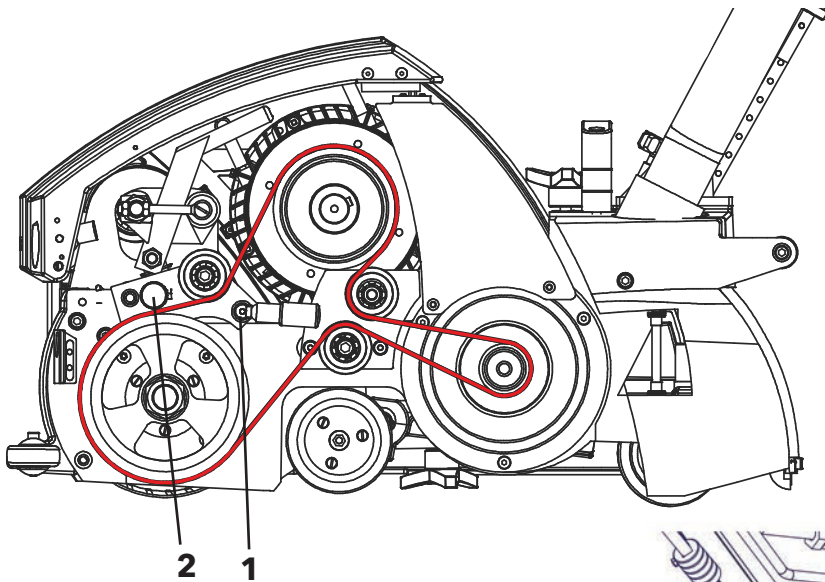
Caution!



Injury to the operator or other persons could occur or damage could occur if the machine starts up unintentionally. Disconnect the machine from the main power supply before working on the machine!

How to remove the motor:

1. Make sure that the motor switch is in the off position and that the power cable is disconnected from the motor plug.
2. Unscrew the bolt from the belt cover and open the cover.
3. Slacken the belt by raising the belt tensioner (1) until the locking stud (2) unlatches.
4. Remove the belt.
6. Open the catch (3) on the motor base.
7. You can lift off the motor.
8. See chapter 5.3, page 10 on how to mount the motor.

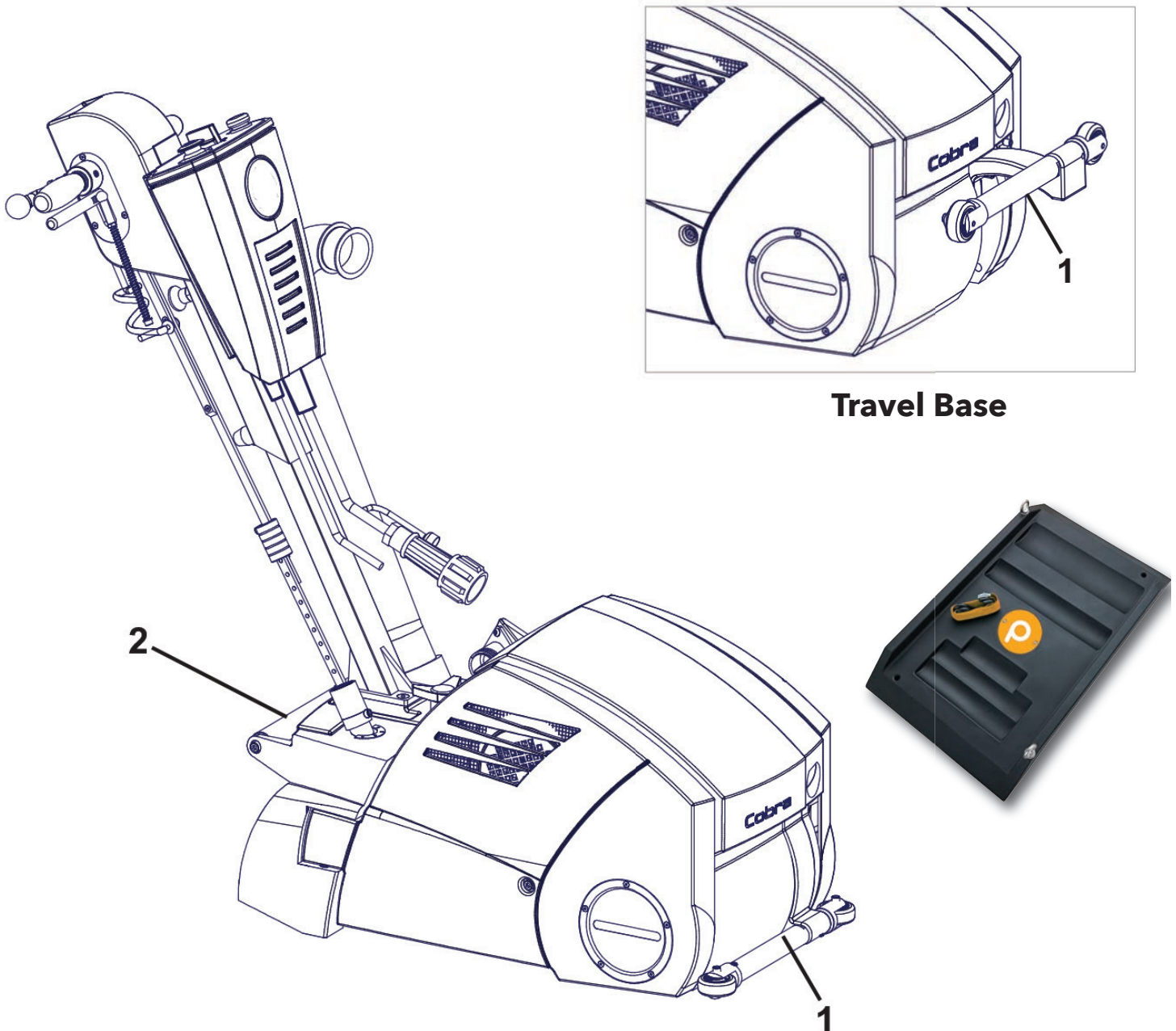




6.3 Transporting the machine

To carry the machine, use the two carrying bars at the front (1) and back (2). The front carrying bar (1) can be folded up.

The travel base (provided) is recommended when storing the machine. The sanding drum and wheels are off the ground when the machine is placed on the travel base.





7 Operating the Cobra II

7.1 Proper clothing and equipment



Caution! Wear hearing protection!

The supplied hearing protection must be worn when using the machine.

The following sound level values have been measured for the parquet floor sander COBRA II according to DIN 45 645:

Idle mode LEQ = 84 dB(A)

Working mode LEQ = 85 dB(A)

The noise produced when the machine is working depends on various factors. Local conditions such as room size and quality of the floor affect noise development.



Caution! Wear a respirator!

When using the COBRA II floor sander and when disposing of the sanding dust, always wear a respirator (See chapter 7.2 and 7.3). Wear the respirator which is supplied with the accessories.



Caution! Wear safety goggles!

When using the COBRA II floor sander and when working on COBRA II, always wear safety goggles to protect your eyes.



Caution! Wear proper working clothing!

When using the COBRA II floor sander and when working on COBRA II, never wear loose clothing. This can get caught up in moving parts.



7.2 Safety instructions regarding dust

Caution! Ultra-fine sanding dust!

Always wear a respirator (included in tool bag) when sanding wood floors.



When the machine is used for its proper purpose, the sanding of wood floors naturally produces dust. The machine has an integrated dust collecting system which blows the dust into the dust bag. The dust is collected in the dust bag. Even so, this cannot prevent fine and ultra-fine dust being produced when using the machine.

Caution! Fire risk!

No smoking while sanding!



All ignition sources are prohibited in rooms where sanding work is being carried out!
Air the rooms thoroughly.

Together with an ignition source and the oxygen in the air, wood dust can cause fires and explosions.

Caution! Fire risk!



Sanding over metal parts such as nails can produce sparks which are blown into the dust bag together with the wood dust. The glowing metal chips can still cause a fire even hours later.

7.3 Disposing of sanding dust

Caution!



When the dust bag becomes 1/3 full the bag must be emptied. The dust collecting capacity is greatly reduced when the bag is filled past this point. The sanding dust must be disposed of in a fire proof, non-flammable container. The container must be covered with a fire proof, non-flammable lid. Store the container only outdoors.

Caution! Fire risk!



Because of the fire risk, the sanding dust contained in the dust bag must always be disposed of immediately if the machine is stopped for an extended period of time. The sanding dust must be disposed of in a fire proof, non-flammable container. The container must be covered with a fire proof, non-flammable lid. Store the container only outdoors.



7.4 Replacing the abrasive belt



Caution! Risk of injury if the machine starts unintentionally!

When replacing the abrasive belt, there is a risk of starting the machine unintentionally. Unplug the machine from the main power supply before working on the abrasive belt.

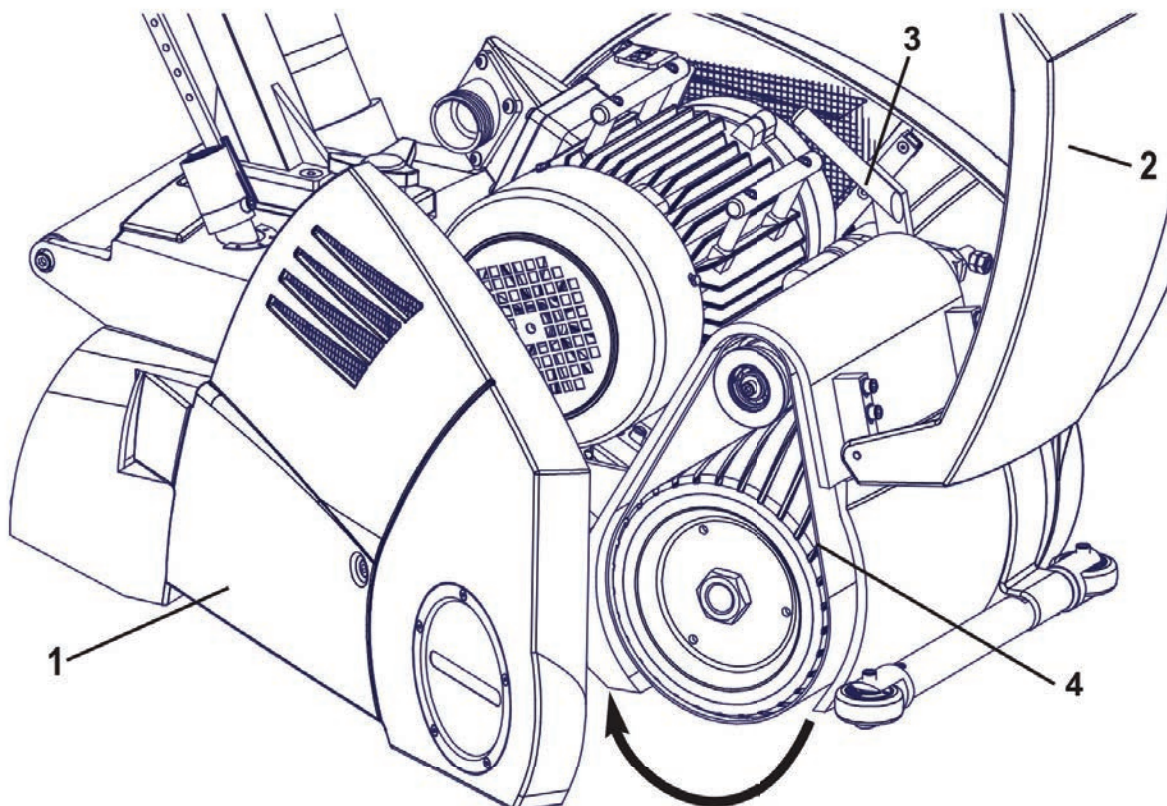


Caution! Risk of cutting your hands!

The sanding grains of the abrasive belt have sharp edges. Always wear safety gloves when replacing the abrasive belt.

How to replace the abrasive belt:

1. Switch off the machine.
2. Unplug the power cord from the main power supply.
3. Open the access door (1) and the hood (2).
4. Pull the tension lever (3) towards the front of the machine. The abrasive belt (4) will be released from the sanding drum. Pull the abrasive belt out to the side.
5. Insert a new abrasive belt.
6. Push the tension lever (3) back to tighten the abrasive belt to the sanding drum.
7. Close the access door (1) and the hood (2).





7.5 Adjusting the sanding pressure

Use the sanding pressure regulator (1) to adjust the required sanding pressure.

1. Pull the main lifting lever so that the sanding drum is up off the floor.
2. Turn the sanding pressure regulator (1) to the desired position (2)

High sanding pressure:

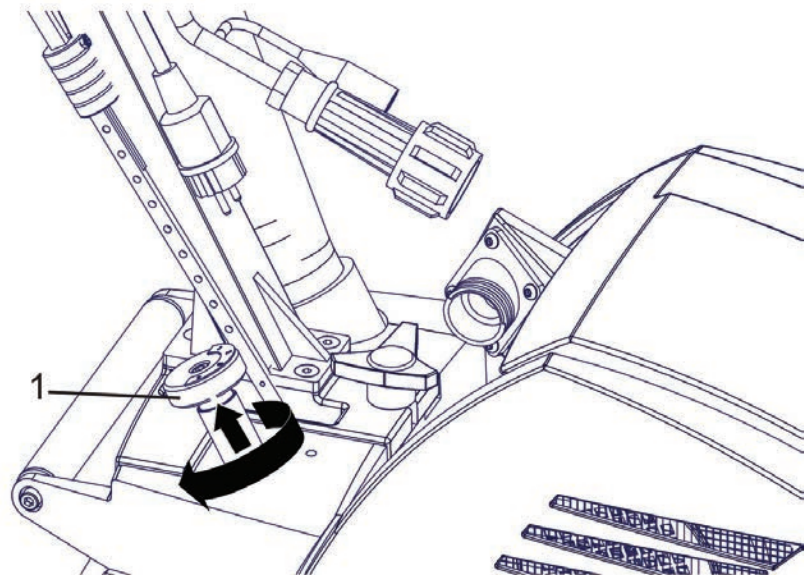
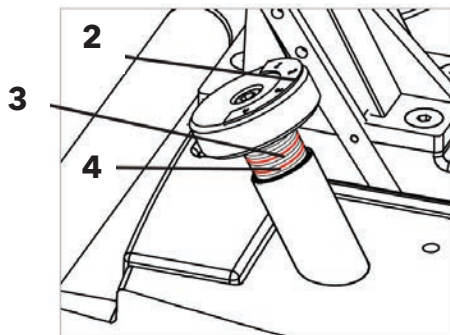
Turn the pressure regulating screw inwards as far as it will go.

Medium sanding pressure:

Turn the pressure regulating screw outwards to the upper marking (3) on the screw thread.

Low sanding pressure:

Turn the pressure regulating screw outwards to the lower marking (4) on the screw thread.



7.6 Safety instructions for electrical cord and connections



Caution! Risk of fatal injuries from electrical shock!

Always inspect electrical cords and connections. Replace cords and connections by a qualified electrician. Risk of fatal injuries can occur from electrical shock by damaged cords and connections.



Caution! Risk of fatal injuries from electrical shock!

Do not run over the electrical cords with the sanding machines. Fatal injuries can occur from electrical shock!



7.7 Switching on/off the Cobra II with the cockpit control panel

1. Before starting the machine, make sure that the main lifting lever (1) for the sanding drum is pulled back and in the locked position. The sanding drum should be up off of the floor.
2. Before starting the machine, make sure that the abrasive belt is tightened.
3. Turn the switch (4) to **START**. When the motor has been completely ramped up, turn the switch to **RUN**.

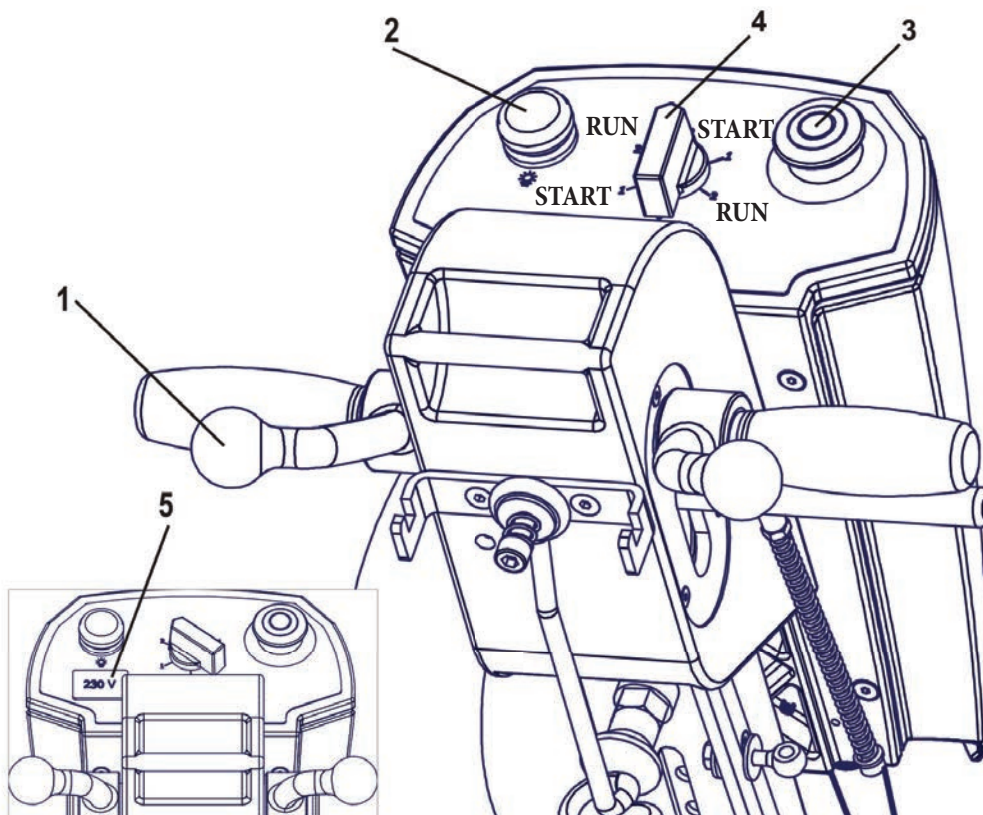
The gradual ramp up of the motor avoids pulling high currents directly into the motor.

4. When the machine has sat idle in colder climates the motor may need a longer warm up period. Cold bearings have a greater resistance and need to warm up first.

It may be necessary to run the motor without an abrasive belt for a few minutes prior to sanding with the machine.

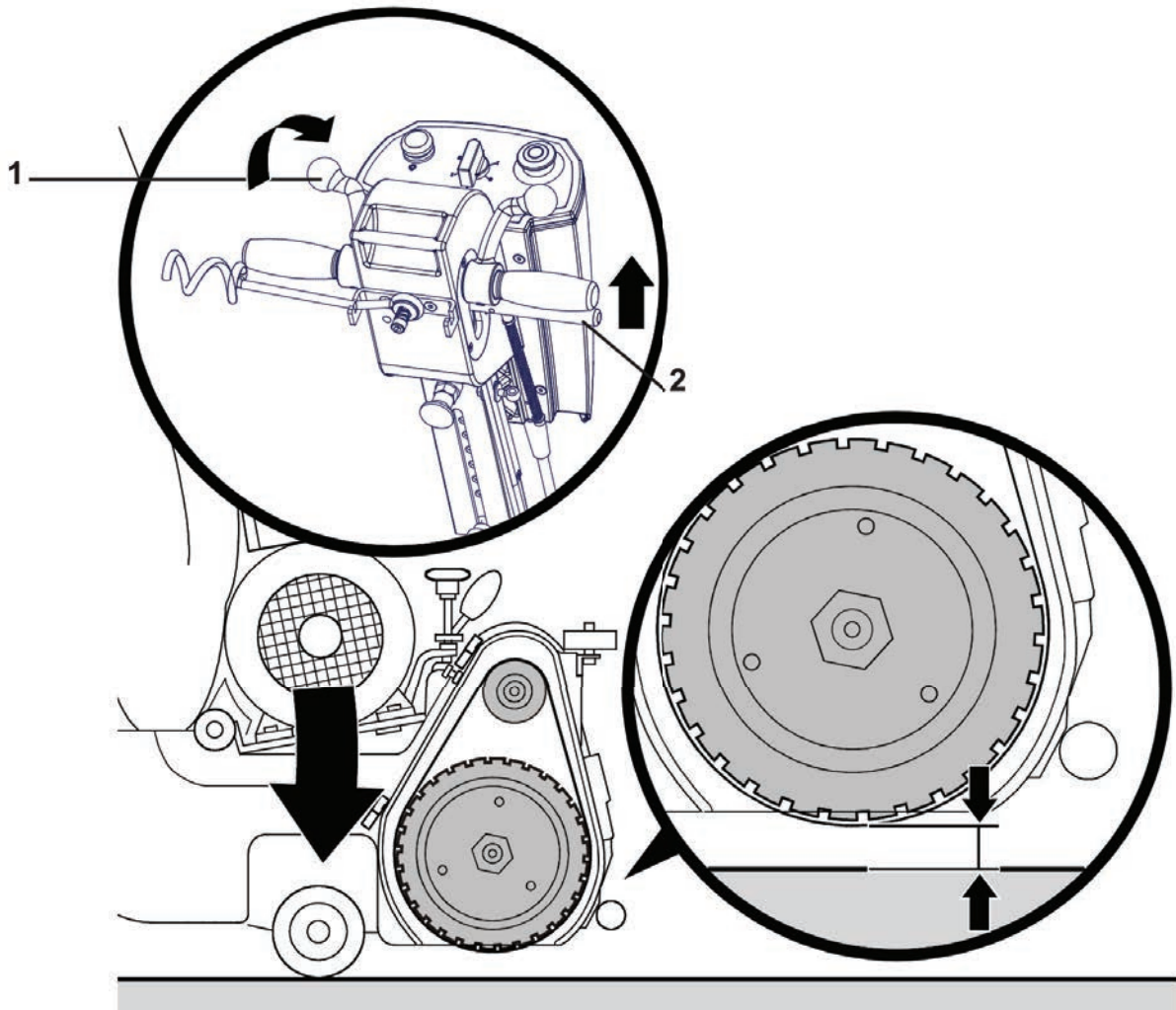
5. You can use the button (2) to switch on/off the light. The volt indicator is located below (5).
6. The emergency stop button (3) will interrupt power to the motor causing the machine to stop. To reset the emergency switch twist and pull the emergency stop button to reset.

If the emergency stop button is pressed while the machine is operational, the main switch (4) must be reset to the 0 position before the motor can be started again.





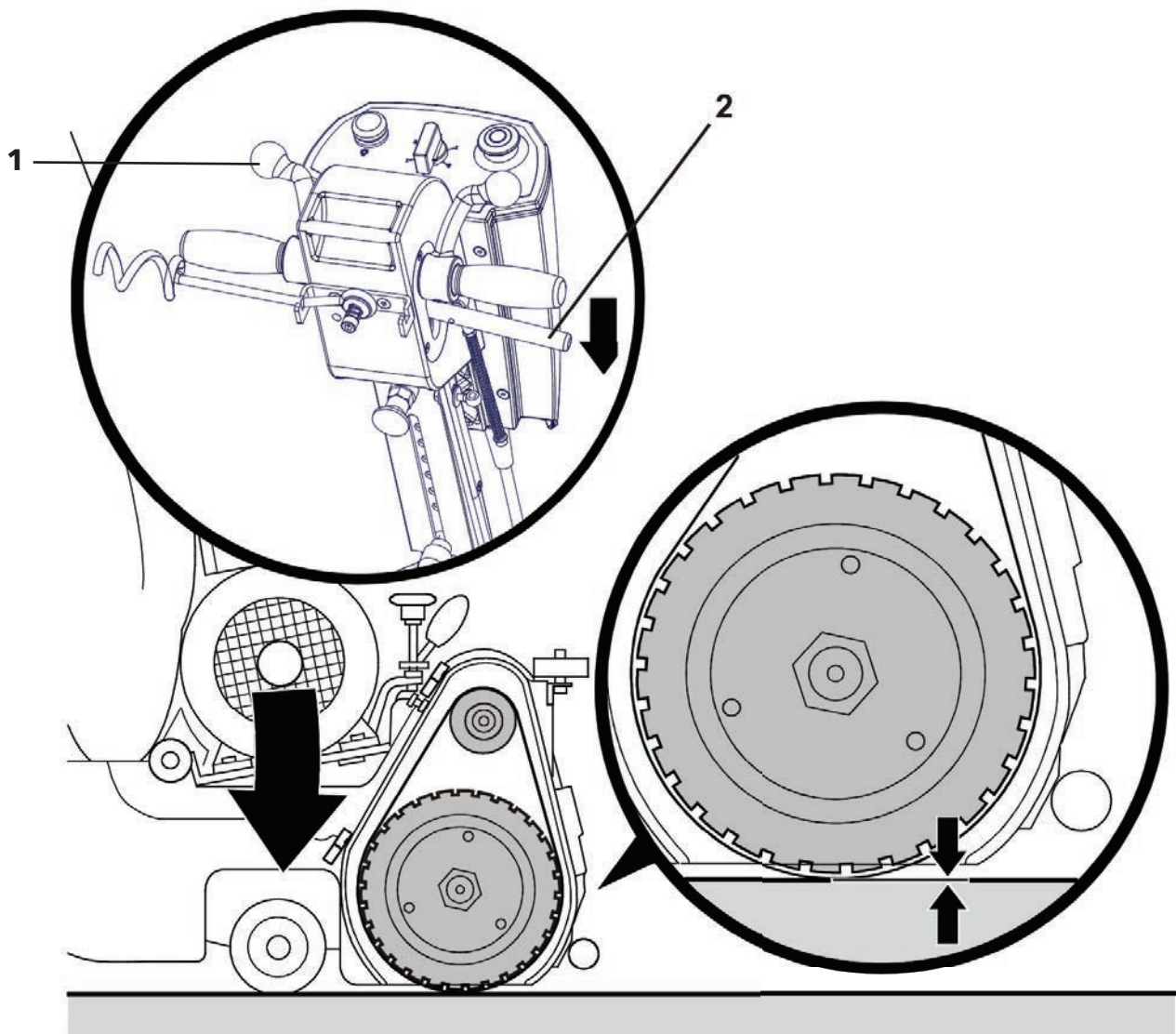
7.8 Sanding with Cobra II



1. Before starting the machine, the main lifting lever for the sanding drum (1) must be in the rear position. The sanding drum is clearly raised from the floor. The distance to the floor is approx. 1/2".
2. Before starting the machine, ensure that the sanding belt is tightened.
3. Make sure that the emergency stop switch has been reset prior to starting the motor in the operating position.
4. Set the switch to "**Start**". Once the motor has started up, switch the setting to "**Run**". This gradual start-up procedure avoids high current to enter the motor during start up.



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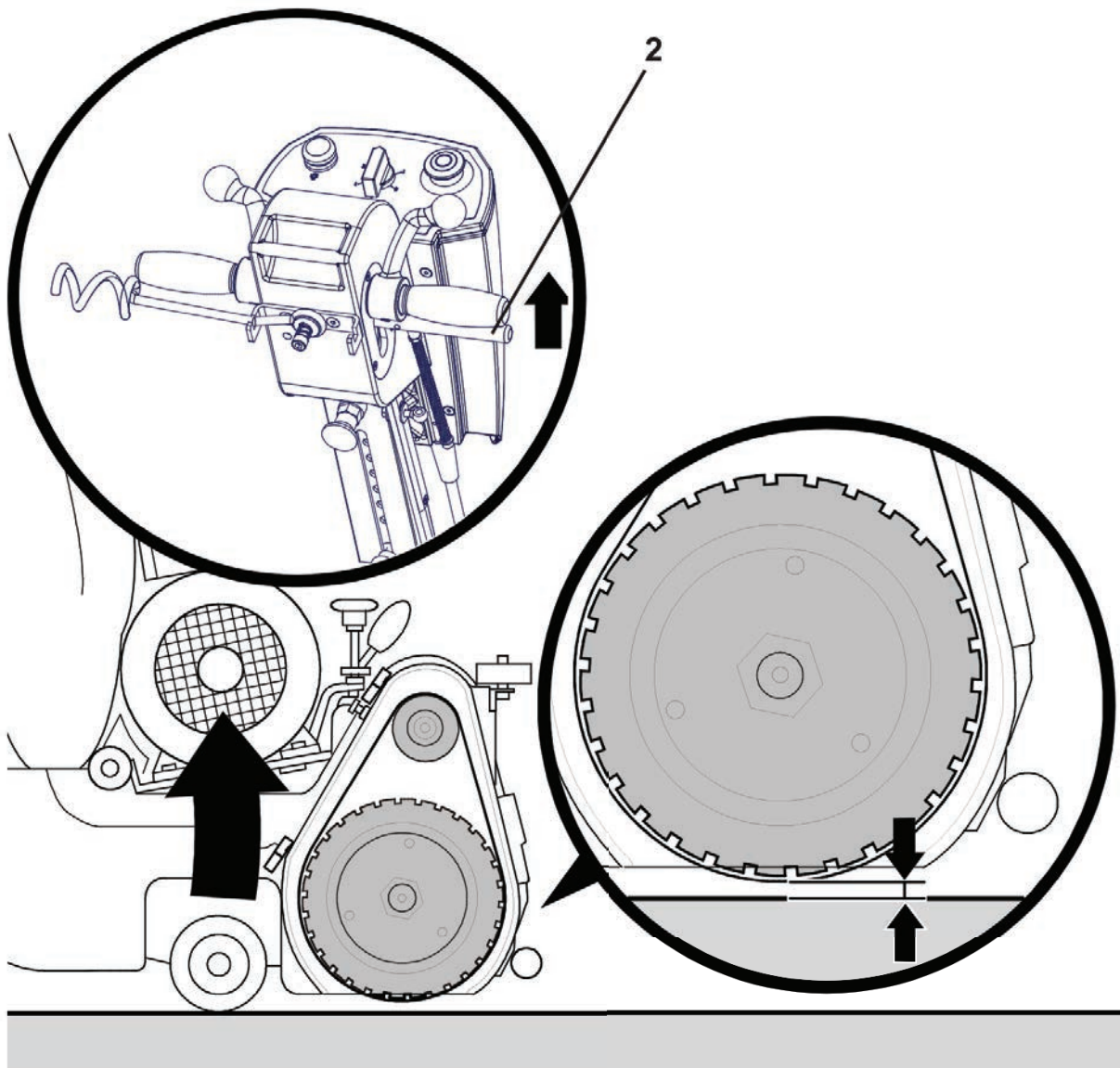


5. To lower the sanding drum, you must first pull the feathering handle (2) up with your right hand and hold in position.
6. While holding the feathering handle (2) up, push the main lifting lever (1) forward. This will engage the sanding drum. The feathering handle (2) must always be held up during this process or the sanding drum will be lowered to the floor.
7. To begin, slowly lower the feather handle (2) while moving the machine forward. The sanding drum will engage the floor.



Caution!

To avoid creating uneven sanding marks in floor, always walk at an even pace while sanding.



8. Before finishing with the forward sanding pass of the machine, raise the sanding drum from the floor by lifting up on the feather handle (2).
9. Each forward sanding pass is followed by a backward sanding pass. The backward sanding pass will follow the same area just covered in the forward sanding pass. Upon completing the backward sanding pass, move the machine over half the sanding belt width to the right of the sanding pass you have just finished.

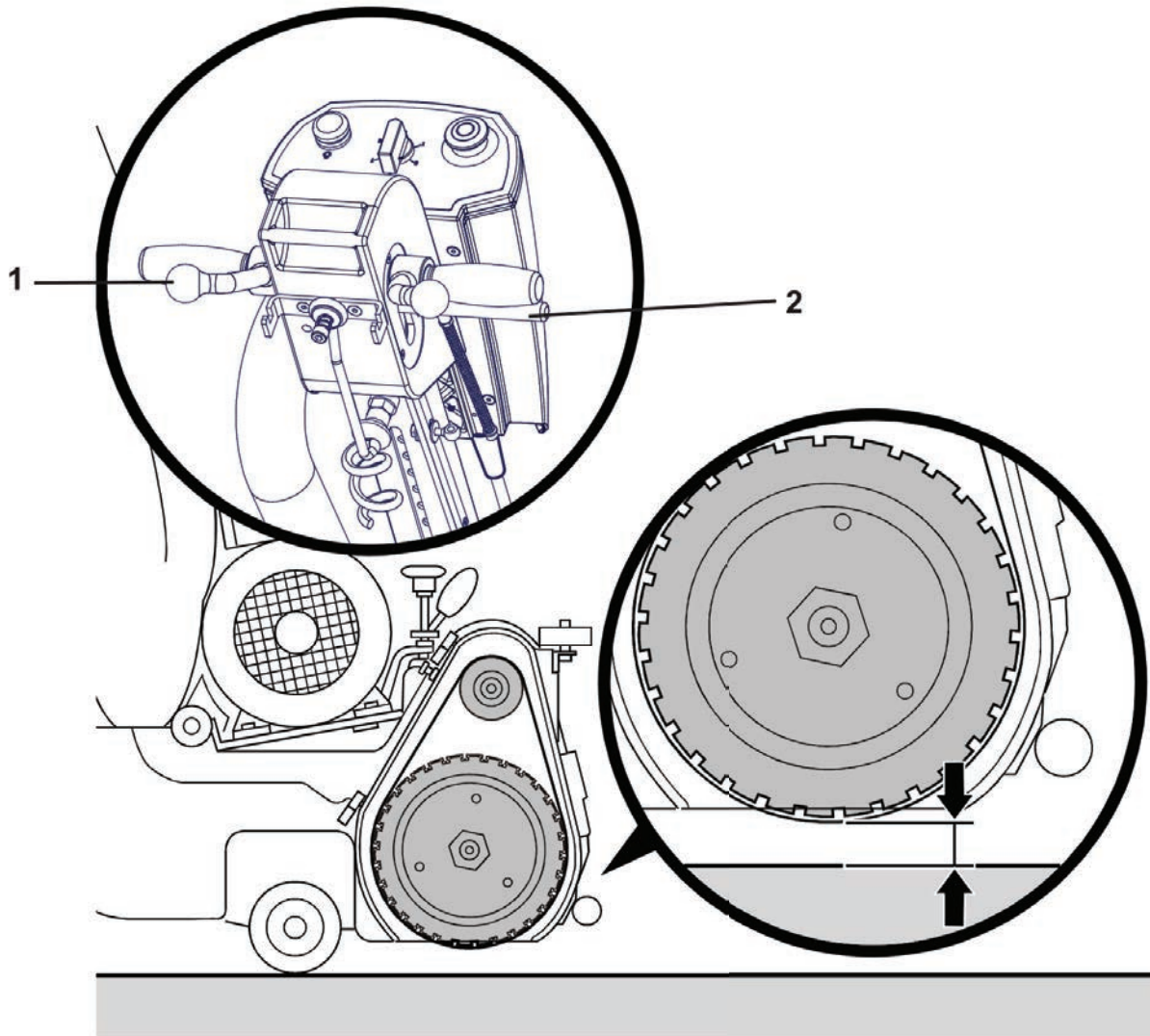
Caution!



Never allow the machine to come to a standstill while the sanding drum is engaged. This will cause a severe indentation in the floor. Whenever changing movement between forward and backwards sanding passes, make sure the sanding drum is raised from the floor and only lowered when the machine is moving.



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10. Stopping the sanding procedure:

To stop the sanding procedure, lift up on the feathering handle (2) with your right hand, and with your left hand pull the main lifting lever (1) back until the sanding drum is disengaged. Do not release the feathering handle (2) until the main lifting lever is locked in place.

Switch the motor off and disconnect main power cord from motor.

Safeguard the machine to prevent it from rolling away from desired location.

The sanding dust contained in the dust bag must be disposed of immediately in a fire proof, non-flammable container. The container must be covered with a fire proof, non-flammable lid. Store the container only outdoors.

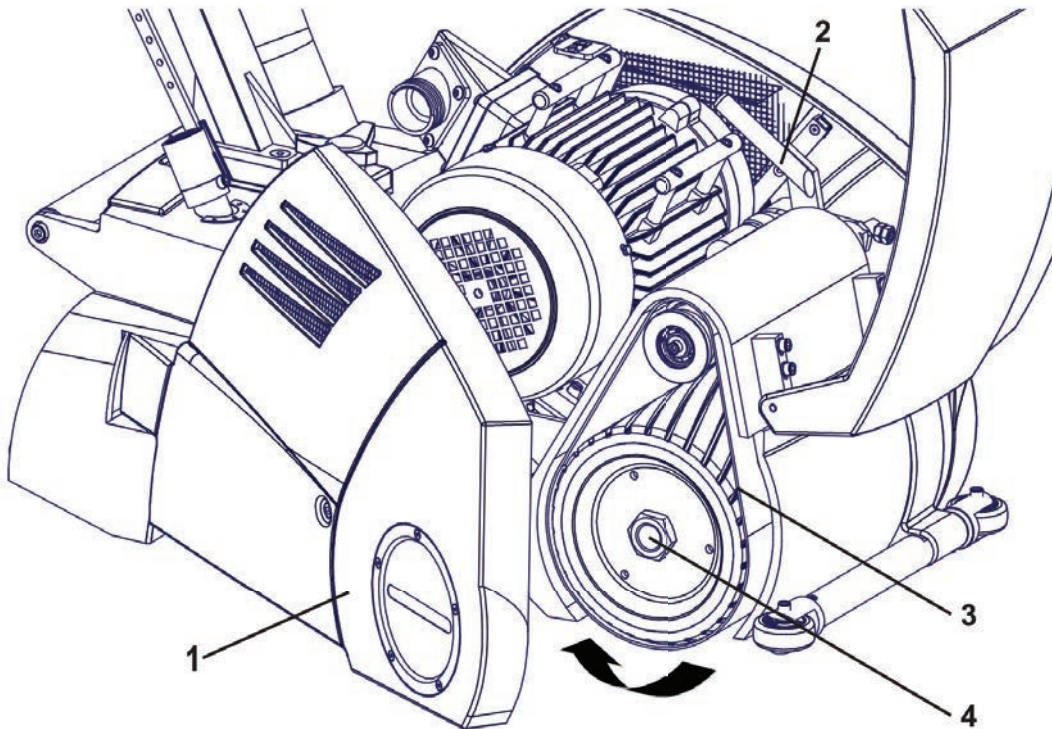


8.0 Maintenance

8.1 Changing the sanding drum

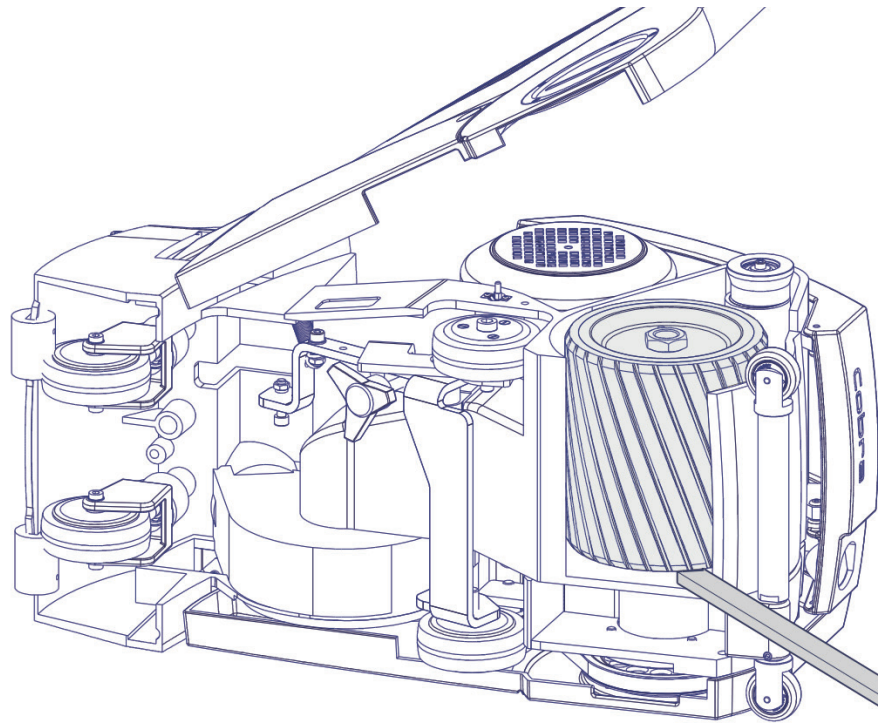
If the sanding drum is damaged or worn, it must be replaced.

Instructions:



1. Turn the machine off.
2. Disconnect the main power from motor.
3. Open the access door (1).
4. Fold the tension lever (2) forward to relieve the tension on the sanding belt.
5. Remove the sanding belt (3) to the side.
6. Unscrew the retaining nut (4):

The retaining nut is glued to the threads of the sanding drum shaft to ensure that it will not fall off while the COBRA II is in operation. To unscrew the retaining nut, use the double fork wrench that comes with the machine. Lower the sanding drum so it has contact with the floor to prevent it from turning while you are unscrewing the retaining nut.



7. Lay the machine on its left side.
8. Press against the sanding drum carefully with a flat iron bar.
9. Remove the sanding drum out of the machine.
10. Be careful not to lose the parallel key.
11. Slide a new sanding drum onto the sanding drum shaft. The parallel key must fit properly in the slot on the sanding drum shaft.
12. Apply metal adhesive to the retaining nut and screw it back on the sanding drum shaft. Stand the machine up and lower the sanding drum to the floor to ensure that the sanding drum does not turn while you tighten the retaining nut in the next step. Tighten the retaining nut securely with the enclosed double fork wrench.
13. Pull the main lifting lever back to lift the sanding drum off the floor.
14. Close the access door.
15. Ensure that the machine cannot roll away.

Note!

After changing the sanding drum, the surface setting on the machine must be readjusted (See chapter 8.2).

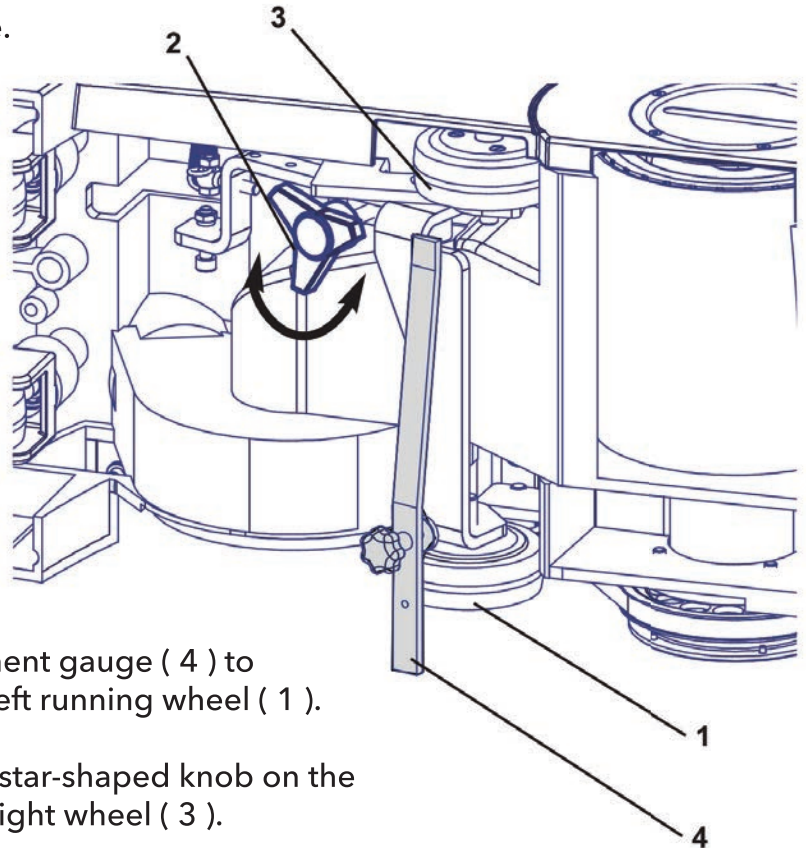


8.2 Adjusting the running wheels

If the machine only sands on one side, the surface setting must be adjusted. Following replacement of the sanding drum or running wheels, the surface setting must always be adjusted. To make a level, uniform setting, the sanding drum and the running wheels must rest on the same plane. The right running wheel is adjustable. The left wheel does not adjust. The running wheel adjustment gauge is required to adjust the machine. For optimal results, check the grinding pattern after adjusting.

Instructions:

1. Turn the machine off.
2. Disconnect the main power cord from motor.
3. Lay the machine on its left side.



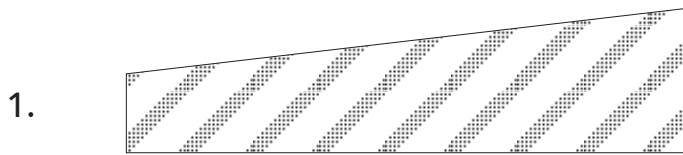
4. Use the running wheel adjustment gauge (4) to determine the position of the left running wheel (1).
5. Loosen the lock nut (2) of the star-shaped knob on the running gear lever behind the right wheel (3).
6. Use the running wheel adjustment gauge to adjust the right running wheel (3) to the position of the left running wheel (1). Turn the star-shaped knob of the right running wheel (3) until the right running wheel (3) slightly touches the bar of the running wheel adjustment gauge (4).
7. Tighten the lock nut (2) of the star-shaped knob on the running gear lever beside the right running wheel.



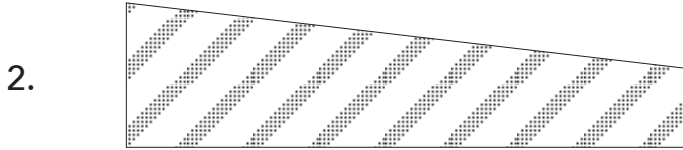
PALLMANN®

8. Check on the grinding pattern:

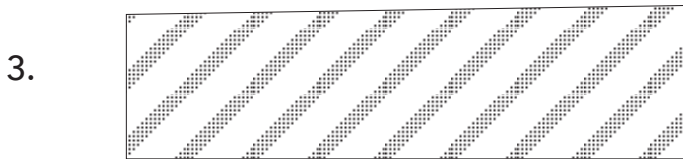
1. Adjusting required
2. Adjusting required
3. Optimal sanding pattern



Incorrect



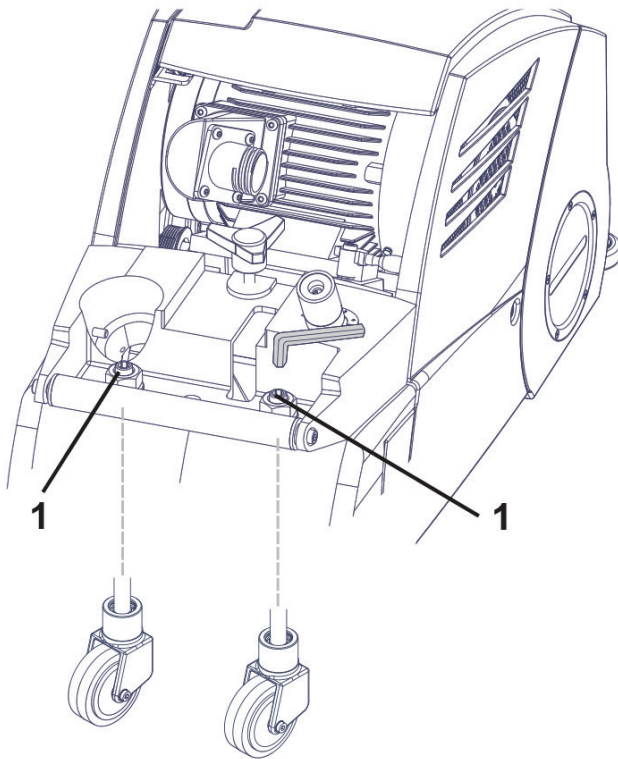
Incorrect



Correct



8.3 Adjusting the caster wheels



1. Turn the machine off.
2. Disconnect the main power cord from motor.
3. Loosen the lock nut (1).
4. Turn the casting shaft with the hexagon socket screw key until both of the caster wheels bear weight.
5. Tighten the lock nut.

8.4 Adjusting the tension roller

The tension roller keeps automatically the track of the sanding belt centered to the sanding drum. If with time the sanding belt fails to run centered to the sanding drum, the tension roller must be newly adjusted.



Caution! Danger of injury!

Adjustments of the sanding belt while the machine is running and the access door is open may only be performed by qualified personnel.



Caution!

Wear safety goggles and avoid loose clothing before making these adjustments.



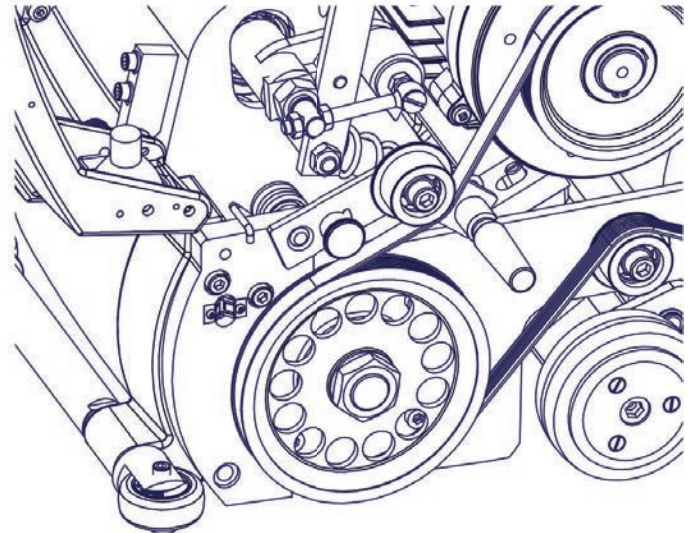
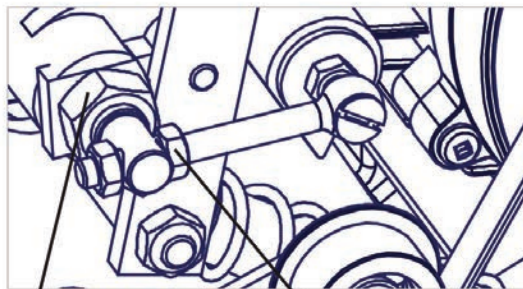
Instructions:



Caution!

Before beginning with the following procedure, the main lifting lever must be pulled back and engaged to ensure the sanding drum is away from the floor.

1. Turn motor to the off position and disconnect main power cord from motor.
2. Open the access door.
3. Insert a sanding belt.
4. Shift the tension lever backwards to place tension on the sanding belt.

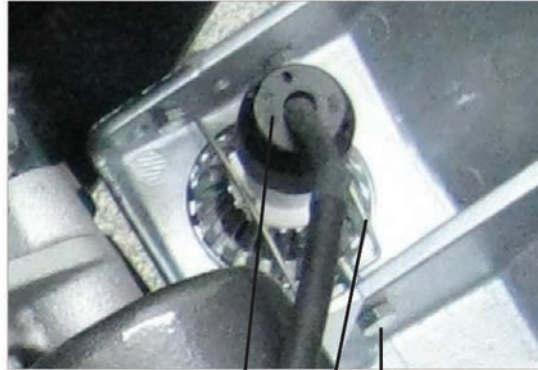


5. Loosen the retaining nut (1)
6. Connect main power cord to motor (see chapter 7.7 and chapter 7.8)
7. Allow the machine to run in position "**Start**".
8. By turning the adjusting nuts (2), you can move the tension roller to change the path of the sanding belt. Adjust the position of the sanding belt until it runs in the middle of the sanding drum.
9. Switch the machine off. Disconnect the main power cord from the motor.
10. Tighten the adjusting nuts (2). Tighten the retaining nut (1) securely.
11. Close the access door.



8.5 Replacing the lamp

1. Remove the socket from the lamp (3) by twisting it a quarter turn to the left.
2. Unscrew the knurled bolt (2) until you can fold up the clamping bracket (1).
3. The installation of a new lamp is in reverse order.



3 1 2

8.6 Checking dust extraction

In order to ensure optimum dust extraction, the following points must be checked:

- The seal in the roller doors must not be damaged.
- A damaged seal must be replaced. The suction channel must not be blocked or have any deposits in it.
- Dirt must be removed.

8.7 Switching off and storing the machine

When switching the machine off, the lowering lever must be in the up position.

The machine must be secured to prevent it from rolling away.

Store the machine in an enclosed, dry space.



9 Warranty

The warranty period for new Pallmann machines® shall last for one year from the point at which the machine is transferred / delivered to the customer, insofar as statutory legal requirements do not stipulate otherwise.

When validating warranty claims, the invoice or proof of purchase must always be submitted. All repairs within the framework of the warranty agreement must be undertaken by a service center that has been accredited by us.

Customers performing their own repairs and/or improper repairs regularly lead to the exclusion of warranty claims. The same also applies to incorrect operation and/or use.

Replacement of parts, accessories and other modifications to Pallmann machines

Users of Pallmann® sanding machines enjoy a high level of safety and reliability of their machine. In order to maintain this status quo, your Pallmann sanding machine may not be modified from the condition in which it is delivered without the following rules below.

These rules apply to both the replacement of parts and equipping the machine with accessories as well as other technical modifications.

- ❑ All work undertaken to your Pallmann machine must be **undertaken exclusively by a workshop** that has suitably trained and experienced personnel at its disposal, as well as the requisite work equipment. We recommend using authorized service centers.
- ❑ In the event of planned replacement of parts, planned addition of accessories or other planned technical modifications, an assessment must always be carried out **by an authorized service center or us, as manufacturer**, before work is commenced.
- ❑ It is highly recommended that only safety-approved **Original Pallmann** replacement parts and **Original Pallmann** accessories are used, which have been approved by us, as manufacturer.

Replacement parts and accessories can be obtained from your authorized service center, which will also be able to undertake professional installation on your behalf. Original Pallmann replacement parts and Original Pallmann accessories have been checked for safety and suitability especially for Pallmann machines.

We are unable to adequately assess the safety and suitability of non-Original Pallmann replacement parts.

- ❑ In order to preserve operational safety and to prevent damage in the event of technical modifications, of whatsoever nature, our technical guidelines **must always be observed**. We are also always happy to hear from you should you have any other questions about your Pallmann machine.

Please note that we cannot accept any liability for damage, insofar as this is sustained as the result of incorrect work undertaken or as the result of violation of the rules stated above.