



H867

Service Instructions

IMPORTANT
READ CAREFULLY BEFORE USE
KEEP FOR FUTURE REFERENCE

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1 About these instructions

These instructions have been prepared with utmost care. They contain information and notes intended to ensure long-term and reliable operation.

Should you notice any discrepancies or if you have improvement requests, then we would be glad to receive your feedback through **Customer Service** ( p. 99).

Consider the instructions part of the product and store them in a place where they are readily available.

1.1 For whom are these instructions intended?

These instructions are intended for:

- **Specialists:**
This group has the appropriate technical training for performing maintenance or repairing malfunctions.

With regard to minimum qualification and other requirements to be met by personnel, please also follow the chapter **Safety** ( p. 9).

1.2 Representation conventions – symbols and characters

Various information in these instructions is represented or highlighted by the following characters in order to facilitate easy and quick understanding:



Proper setting

Specifies proper setting.



Disturbances

Specifies the disturbances that can occur from an incorrect setting.



Cover

Specifies which covers must be disassembled in order to access the components to be set.



Steps to be performed when operating the machine (sewing and equipping)



Steps to be performed for service, maintenance, and installation



Steps to be performed via the software control panel

The individual steps are numbered:

1. First step
 2. Second step
 - ...
- The steps must always be followed in the specified order.
- Lists are marked by bullet points.



Result of performing an operation

Change to the machine or on the display/control panel.



Important

Special attention must be paid to this point when performing a step.



Information

Additional information, e.g. on alternative operating options.



Order

Specifies the work to be performed before or after a setting.

References



Reference to another section in these instructions.

Safety

Important warnings for the user of the machine are specifically marked. Since safety is of particular importance, hazard symbols, levels of danger and their signal words are described separately in the chapter **Safety** ( p. 9).

Location information

If no other clear location information is used in a figure, indications of **right** or **left** are always from the user's point of view.

1.3 Other documents

The machine includes components from other manufacturers. Each manufacturer has performed a hazard assessment for these purchased parts and confirmed their design compliance with applicable European and national regulations. The proper use of the built-in components is described in the corresponding manufacturer's instructions.

1.4 Liability

All information and notes in these instructions have been compiled in accordance with the latest technology and the applicable standards and regulations.

Dürkopp Adler cannot be held liable for any damage resulting from:

- Breakage and damage during transport
- Failure to observe these instructions
- Improper use
- Unauthorized modifications to the machine
- Use of untrained personnel
- Use of unapproved parts

Transport

Dürkopp Adler cannot be held liable for breakage and transport damages. Inspect the delivery immediately upon receiving it. Report any damage to the last transport manager. This also applies if the packaging is not damaged.

Leave machines, equipment and packaging material in the condition in which they were found when the damage was discovered. This will ensure any claims against the transport company.

Report all other complaints to Dürkopp Adler immediately after receiving the product.

2 Safety

This chapter contains basic information for your safety. Read the instructions carefully before setting up or operating the machine. Make sure to follow the information included in the safety instructions. Failure to do so can result in serious injury and property damage.



2.1 Basic safety instructions

The machine may only be used as described in these instructions.

These instructions must be available at the machine's location at all times.

Work on live components and equipment is prohibited. Exceptions are defined in the DIN VDE 0105.

For the following work, switch off the machine at the main switch or disconnect the power plug:

- Replacing the needle or other sewing tools
- Leaving the workstation
- Performing maintenance work and repairs
- Threading

Missing or faulty parts could impair safety and damage the machine. Only use original parts from the manufacturer.

Transport	Use a lifting carriage or forklift to transport the machine. Raise the machine max. 20 mm and secure it to prevent it from slipping off.
Setup	The connecting cable must have a power plug approved in the relevant country. The power plug may only be assembled to the power cable by qualified specialists.
Obligations of the operator	<p>Follow the country-specific safety and accident prevention regulations and the legal regulations concerning industrial safety and the protection of the environment.</p> <p>All the warnings and safety signs on the machine must always be in legible condition. Do not remove! Missing or damaged warnings and safety signs must be replaced immediately.</p>
Requirements to be met by the personnel	<p>Only qualified specialists may:</p> <ul style="list-style-type: none"> • set up the machine / put the machine in operation • perform maintenance work and repairs • perform work on electrical equipment <p>Only authorized persons may work on the machine and must first have understood these instructions.</p>

Operation Check the machine during operating for any externally visible damage. Stop working if you notice any changes to the machine. Report any changes to your supervisor. Do not use a damaged machine any further.

Safety equipment Safety equipment should not be removed or deactivated. If it is essential to remove or deactivate safety equipment for a repair operation, it must be assembled and put back into operation immediately afterward.

2.2 Signal words and symbols used in warnings

Warnings in the text are distinguished by color bars. The color scheme is based on the severity of the danger. Signal words indicate the severity of the danger.

Signal words Signal words and the hazard they describe:

Signal word	Meaning
DANGER	(with hazard symbol) If ignored, fatal or serious injury will result
WARNING	(with hazard symbol) If ignored, fatal or serious injury can result
CAUTION	(with hazard symbol) If ignored, moderate or minor injury can result
CAUTION	(with hazard symbol) If ignored, environmental damage can result
NOTICE	(without hazard symbol) If ignored, property damage can result

Symbols The following symbols indicate the type of danger to personnel:

Symbol	Type of danger
	General
	Electric shock

Symbol	Type of danger
	Puncture
	Crushing
	Environmental damage

Examples Examples of the layout of warnings in the text:

DANGER



Type and source of danger!
 Consequences of non-compliance.
 Measures for avoiding the danger.

↪ This is what a warning looks like for a hazard that will result in serious injury or even death if ignored.

WARNING



Type and source of danger!
 Consequences of non-compliance.
 Measures for avoiding the danger.

↪ This is what a warning looks like for a hazard that could result in serious or even fatal injury if ignored.

CAUTION



Type and source of danger!
 Consequences of non-compliance.
 Measures for avoiding the danger.

↪ This is what a warning looks like for a hazard that could result in moderate or minor injury if the warning is ignored.

CAUTION



Type and source of danger!

Consequences of non-compliance.

Measures for avoiding the danger.

-
- ↪ This is what a warning looks like for a hazard that could result in environmental damage if ignored.

NOTICE

Type and source of danger!

Consequences of non-compliance.

Measures for avoiding the danger.

-
- ↪ This is what a warning looks like for a hazard that could result in property damage if ignored.

3 Working basis

3.1 Order of the settings



Order

The setting positions for the machine are interdependent.

Always comply with the order of individual setting steps as specified.

It is absolutely essential that you follow all notices regarding prerequisites and subsequent settings that are marked with  in the margin.

NOTICE

Property damage may occur!

Risk of machine damage from incorrect order.

It is essential to follow the working order specified in these instructions.

3.2 Laying the cable guide

Ensure that all cables are laid in the machine such that the function of moving parts is not hampered.



To lay the cable guide:

1. Lay any excess cabling neatly in proper cable snakes.
2. Bind together the cable loops with cable ties.



Important

Tie loops wherever possible to fixed parts.
The cables must be secured firmly.

3. Cut off any overlapping cable ties.

NOTICE

Property damage may occur!

Excess cables can impair the functioning of moving machine parts.
This impairs the sewing function and can result in damage.

Lay excess cable as described above.

3.3 Removing the covers

WARNING**Risk of injury from moving parts!**

Crushing possible.

Move the machine to the service position or switch the machine off before removing the covers.

WARNING**Risk of injury from sharp parts!**

Punctures possible.

Move the machine to the service position or switch the machine off before removing the covers.

For many types of setting work, you will have to remove the machine covers first in order to access the components.

This chapter describes how to remove and then refit the individual covers. The text for each type of setting work then specifies only the cover that needs to be removed at that particular time.

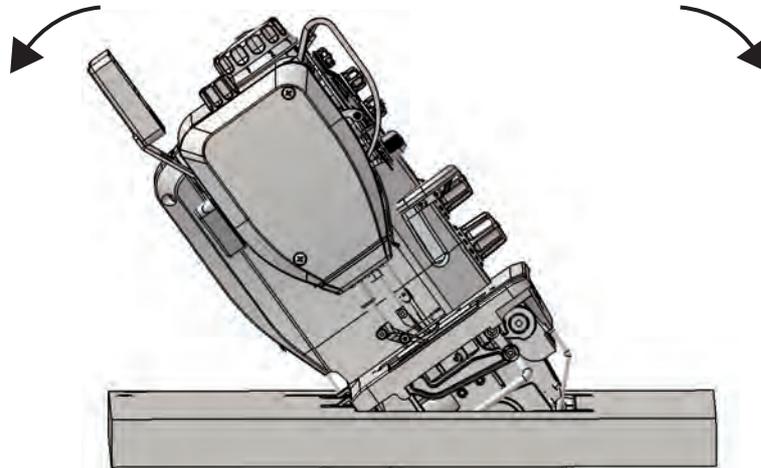
3.3.1 Access to the machine bottom section



Cover

In order to access the components at the machine bottom section, you must first tilt the machine upper section backwards.

Fig. 1: Access to the machine bottom section



Tilting the machine head



To tilt the machine head:

1. Tilt the machine head as far as it will go.

Erecting the machine head

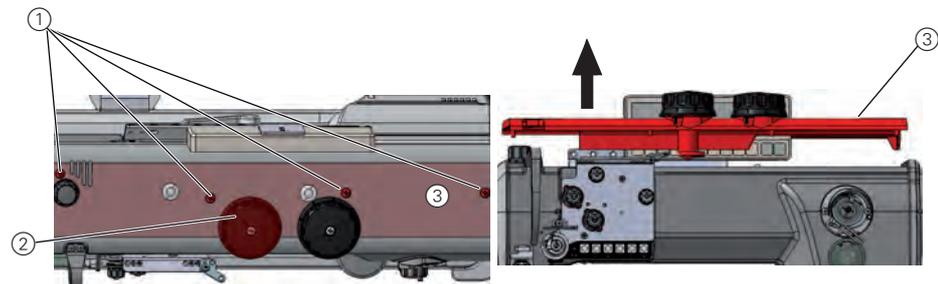


To erect the machine head:

1. Erect the machine head.

3.3.2 Removing and placing the arm cover

Fig. 2: Removing and placing the arm cover



- (1) - Screws
 (2) - left adjusting wheel for the sewing foot stroke
 (3) - Arm cover

Removing the arm cover



To remove the arm cover:

1. Position the left adjusting wheel for the sewing foot stroke (2) to 2.



Important

You can only remove the arm cover when the adjusting wheel is positioned at 2.

2. Loosen the screws (1).
3. Hold the arm cover (3) at the adjusting wheels and remove it.

Placing the arm cover

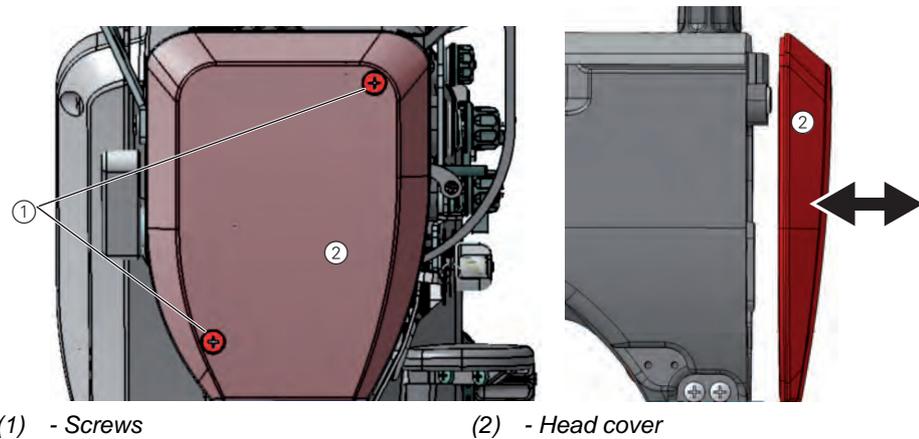


To place the arm cover:

1. Place the arm cover (3).
2. Tighten the screws (1).

3.3.3 Removing and placing the head cover

Fig. 3: Removing and placing the head cover



Removing the head cover



To remove the head cover:

1. Loosen the screws (1).
2. Remove the head cover (2).

Placing the head cover

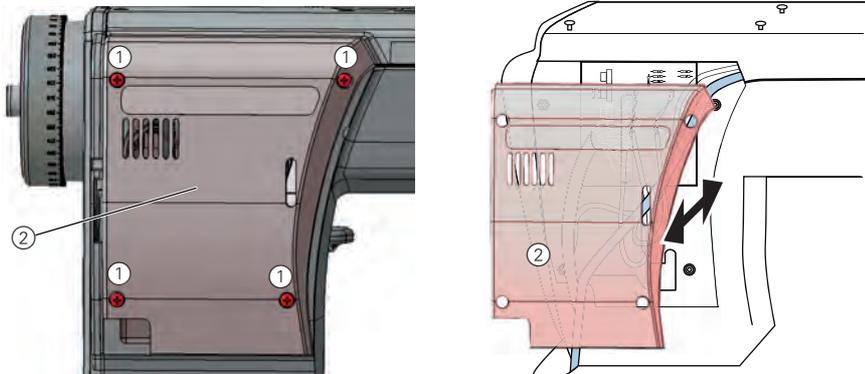


To place the head cover:

1. Place the head cover (2).
2. Tighten the screws (1).

3.3.4 Removing and placing the valve cover

Fig. 4: Removing and placing the valve cover



(1) - Screws

(2) - Valve cover

Removing the valve cover



To remove the valve cover:

1. Loosen the screws (1).
2. Remove the valve cover (2).



Important

When removing the valve cover, be sure not to pull off any cables.

Placing the valve cover



To place the valve cover:

1. Place the valve cover (2).
2. Tighten the screws (1).

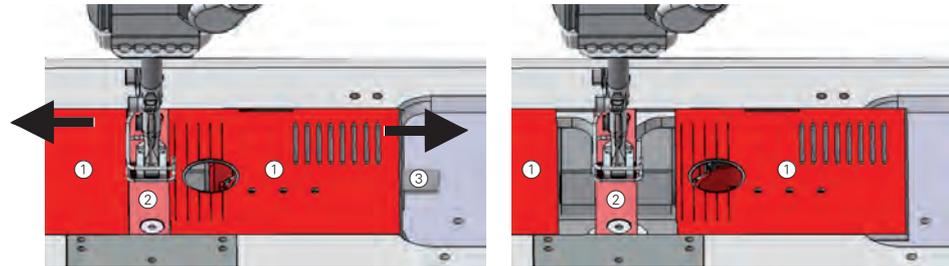


Important

When fitting the valve cover, be sure not to trap any cables.

3.3.5 Opening and closing the throat plate slide

Fig. 5: Opening and closing the throat plate slide



(1) - Throat plate slide
(2) - Throat plate

(3) - Clamping spring

Opening the throat plate slide



To open the throat plate slide:

1. Press the clamping spring (3) downwards.
2. Push the throat plate slide (1) apart.

Closing the throat plate slide

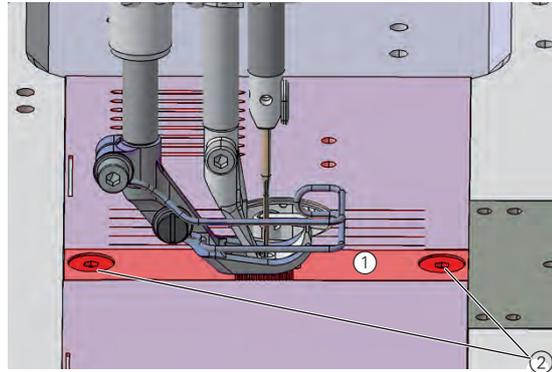


To close the throat plate slide:

1. Push the throat plate slide (1) back to its initial position.

3.3.6 Removing and assembling the throat plate

Fig. 6: Removing and assembling the throat plate



(1) - Throat plate

(2) - Screws

Removing the throat plate



To remove the throat plate:

1. Open the throat plate slide (📖 p. 19).
2. Loosen the screws (2).
3. Remove the throat plate (1).

Assembling the throat plate

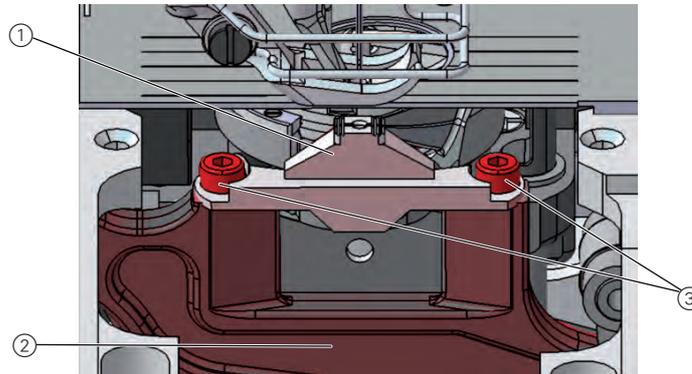


To assemble the throat plate:

1. Insert the throat plate (1).
2. Tighten the screws (2).
3. Push the throat plate slide (1) back to its initial position (📖 p. 19).

3.3.7 Disassembling and assembling the feed dog

Fig. 7: Disassembling and assembling the feed dog



(1) - Feed dog

(3) - Screws

(2) - Feed dog carrier

Disassembling the feed dog



To disassemble the feed dog:

1. Remove the throat plate ( p. 20).
2. Loosen the screws (3).
3. Take the feed dog (1) off the feed dog carrier (2).

Assembling the feed dog



To assemble the feed dog:

1. Place the feed dog (1) onto the feed dog carrier (2).
2. Tighten the screws (3).
3. Insert the throat plate ( p. 20).

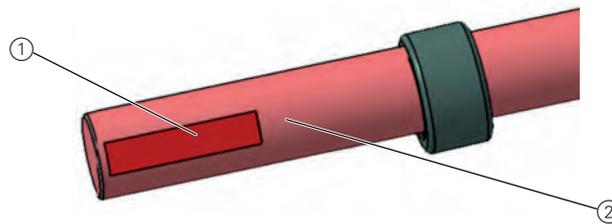


Important

Check the feed dog position in its movement by turning the handwheel. The feed dog must not hit against the throat plate.

3.4 Flats on shafts

Fig. 8: Flats on shafts



(1) - Flat

(2) - Shaft

Some shafts have flat surfaces at the points where the components are screwed on. This stabilizes the connection and makes setting easier.



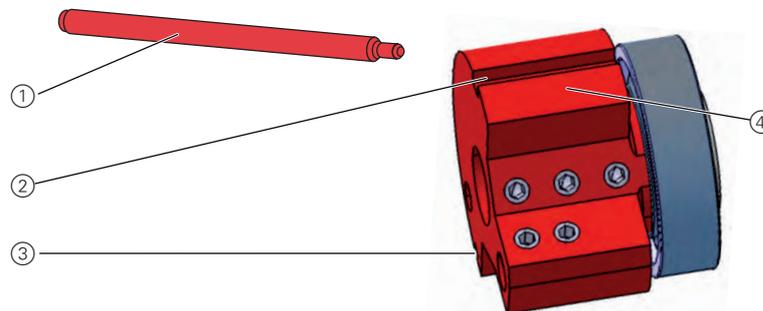
Important

Always ensure that the screws are completely flush with the surface.

3.5 Locking the machine in place

For some settings, the machine must be locked in place. To do this, the locking peg from the accessory pack is inserted into a slot on the arm shaft crank, blocking the arm shaft.

Fig. 9: Locking the machine in place (1)



(1) - Locking peg

(2) - Large arresting groove

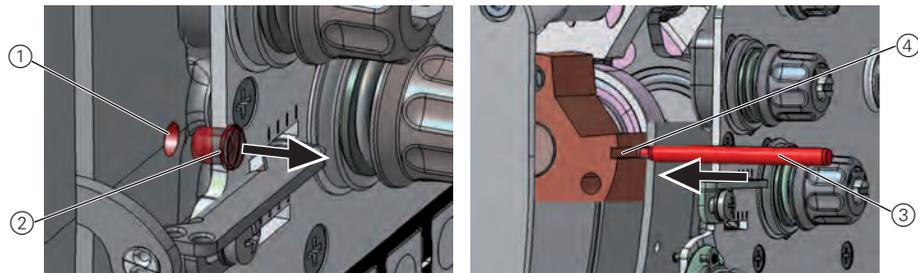
(3) - Small arresting groove

(4) - Arm shaft crank

There are two securing positions:

- **Position 1:** Loop stroke position
 - 5 mm end in the large groove
 - Setting the loop stroke and needle bar height
- **Position 2:** Handwheel zero position
 - 3 mm end in the small groove
 - Setting the handwheel position and checking the top dead center for the needle bar

Fig. 10: Locking the machine in place (2)



(1) - Locking opening
(2) - Plug

(3) - Locking peg
(4) - Groove

Locking the machine in place



To lock the machine in place:

1. Remove the plug (2) from the locking opening (1).
2. Turn the handwheel until the appropriate groove (3) is in front of the locking opening (2):
 - Small groove at handwheel position 0°
 - Large groove at handwheel position 200 – 205°
3. Insert the locking peg (3) with the appropriate end into the groove (4).

Removing the lock



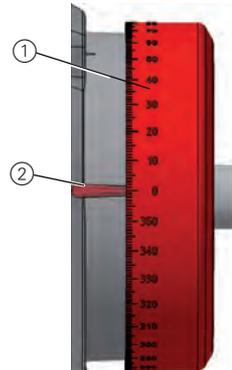
To remove the lock:

1. Pull the locking peg (3) out of the groove (4).
2. Insert the plug (2) into the locking opening (1).

3.6 Setting the handwheel into position

For some settings, the graduated scale on the handwheel has to be moved to a certain position.

Fig. 11: Setting the handwheel into position



(1) - Graduated scale

(2) - Marking



To set the handwheel into position:

1. Turn the handwheel until the specified number on the graduated scale (1) is next to the marking (2).

3.7 Setting the handwheel scale



Proper setting

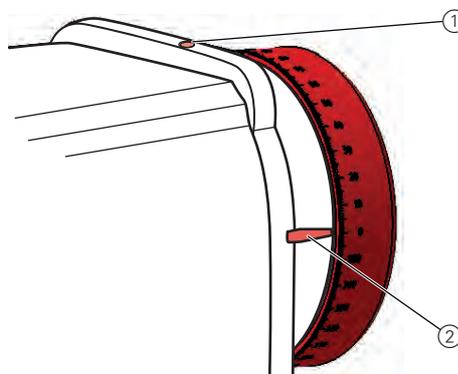
The machine is locked in place in the handwheel zero position ( p. 22).

↙ The handwheel is at position 0°.

If a different degree number is next to the marking (2), then you will have to reset the graduated scale. Otherwise you will not be able to work with the handwheel positions you need for specific settings.

The handwheel is fastened using two screws, which you can see through the screw opening (1).

Fig. 12: Setting the handwheel scale



(1) - Screw opening

(2) - Marking



To set the handwheel scale:

1. Turn the handwheel such that one screw is under the opening (1).

2. Loosen the screw using a 3 mm hex key through the opening (1).
3. Turn the handwheel such that the second screw is under the opening (1).
4. Loosen the screw using a 3 mm hex key through the opening (1).
5. Lock the machine in place in the handwheel zero position ( p. 22).
6. Turn the handwheel scale such that the 0° marking is exactly in the center of the marking (2).
7. Firmly tighten the screw using a 3 mm hex key through the opening (1).
8. Remove the lock ( p. 22).
9. Put the handwheel into the 50° position.
10. Tighten the second screw using a 3 mm hex key through the opening (1).

4 Positioning the arm shaft

WARNING



Risk of injury from moving parts!

Crushing possible.

Switch off the machine before you check and set the position of the arm shaft.



Proper setting

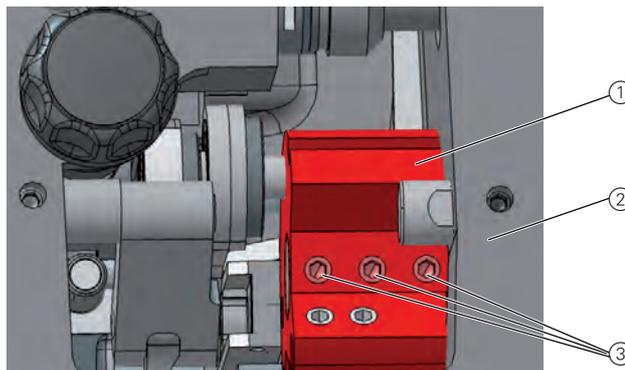
The three setscrews (3) on the arm shaft crank (1) are seated completely on the surface. The arm shaft crank (1) is flush with the machine casting (2).



Cover

- Arm cover ( p. 16)

Fig. 13: Positioning the arm shaft crank



(1) - Arm shaft crank
(2) - Machine casting

(3) - Setscrews



To position the arm shaft:

1. Loosen the three setscrews (3) on the arm shaft crank (1).
2. Turn the arm shaft crank (1) such that the setscrews (3) are seated completely on the surface of the arm shaft.
3. Push the arm shaft crank (1) to the right as far as it will go and against the machine casting (2).
4. Tighten the setscrews (3) on the arm shaft crank (1).

5 Positioning the toothed belt wheels

WARNING



Risk of injury from moving parts!

Crushing possible.

Switch off the machine before you position the toothed belt wheels.

The two toothed belt wheels must be positioned one on top of the other such that the toothed belt can run correctly. In short arm machines, the winder wheel is directly next to the upper toothed belt wheel and determines its alignment. In long arm machines, the winder wheel is fastened farther away in the center of the arm.



Order

Always check the position of the other toothed belt wheel after making a change on a toothed belt wheel.

Differences between the short arm and long arm machines

Differences in the setting sequence are caused by the differing position of the winder wheel.

In **long arm machines**, the winder wheel on the driver wheel is aligned in the center of the arm and is irrelevant for the toothed belt wheels ( p. 69).

Therefore, in long arm machines, it does not matter which toothed belt wheel you check first.

In **short arm machines**, the position of the upper toothed belt wheel is defined by the distance to the winder wheel.



Important

This is why you have to align the upper toothed belt wheel on the winder wheel first in short arm machines. After that, align the lower toothed belt wheel such that the toothed belt runs correctly over both wheels.

5.1 Positioning the upper toothed belt wheel



Proper setting

The two setscrews for the upper toothed belt wheel are seated completely on the surface.



Information

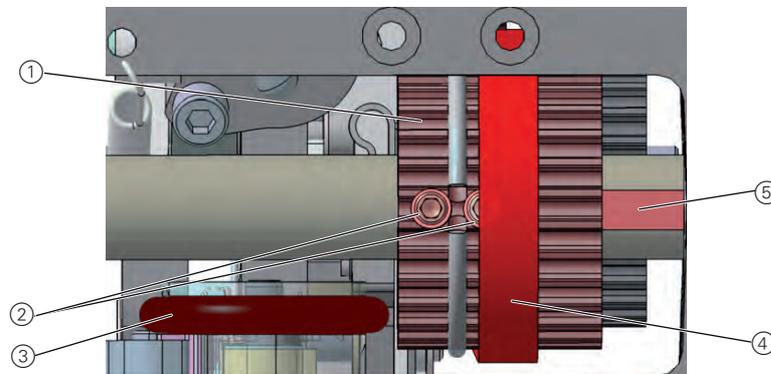
In **short arm machines**, also the distance between the winder wheel and the upper toothed belt wheel must be 0.8 mm.



Cover

- Arm cover ( p. 16)

Fig. 14: Positioning the upper toothed belt wheel



- | | |
|--|-------------------------|
| (1) - Upper toothed belt wheel | (4) - Toothed belt |
| (2) - Setscrews | (5) - Flat of arm shaft |
| (3) - Winder wheel (position for short arm machines) | |



To position the upper toothed belt wheel:

1. Using the screwdriver, push the toothed belt (4) as far to the side until the two setscrews (2) can be seen.
2. Loosen the setscrews (2).
3. Turn the upper toothed belt wheel (1) such that the setscrews (2) are seated completely on the surface (5) of the arm shaft.



Information

Additional setting step for short arm machines:

4. Move the upper toothed belt wheel (1) to the side such that the distance to the winder wheel (3) is 0.8 mm.
5. Tighten the setscrews (2).
6. Use the screwdriver to push the toothed belt (4) back again.

5.2 Positioning the lower toothed belt wheel



Proper setting

The two setscrews for the lower toothed belt wheel are seated completely on the surface of the lower shaft.

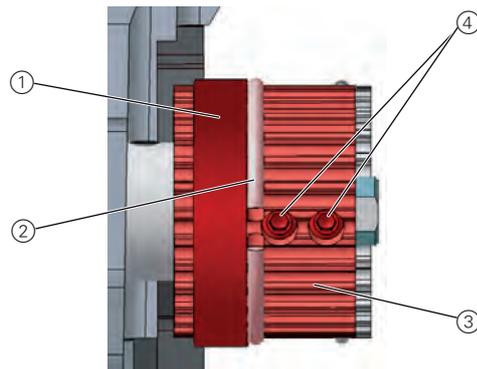
The toothed belt runs correctly without running against the retaining ring or slipping off.



Cover

- Tilt the machine head (📖 p. 15)

Fig. 15: Positioning the lower toothed belt wheel



(1) - Toothed belt
(2) - Retaining ring

(3) - Lower toothed belt wheel
(4) - Setscrews



To position the lower toothed belt wheel:

1. Loosen the setscrews (4).
2. Turn the lower toothed belt wheel (3) such that the setscrews (4) are seated on the surface of the arm shaft.
3. Move the lower toothed belt wheel (3) to the side such that the toothed belt (1) makes contact with the retaining ring (2), without being pushed away.
4. Tighten the setscrews (4).

6 Setting the stitch length adjusting wheels

WARNING

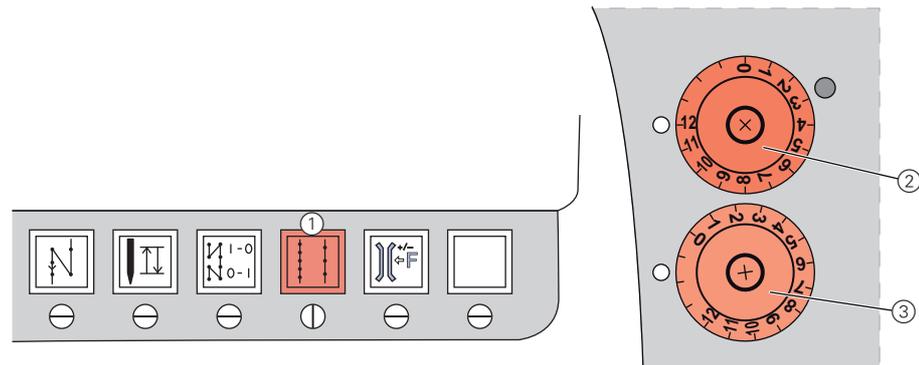


Risk of injury from moving parts!

Crushing possible.

Switch off the machine before you set the stitch length adjusting wheels.

Fig. 16: Setting the stitch length adjusting wheels



(1) - Key for the stitch length

(2) - Upper stitch length adjusting wheel

(3) - Lower stitch length adjusting wheel

The two adjusting wheels on the machine column determine the stitch length.

- Upper adjusting wheel: larger stitch length
- Lower adjusting wheel: smaller stitch length

On the lower adjusting wheel, it is not possible to set a larger stitch length than on the upper adjusting wheel.

To switch over between the stitch lengths: Press the key for the stitch length on the machine arm (1).

If the upper adjusting wheel is activated, then the key (1) lights up.

Upon switching on the machine, the stitch length adjusting wheel activated most recently is always active.

An automatic switchover to the upper adjusting wheel is made when you switch the machine off at the main switch.



Order

Set the upper stitch length adjusting wheel first and then the lower stitch length adjusting wheel.

6.1 Setting the upper stitch length adjusting wheel



Proper setting

Set the upper stitch length adjusting wheel to 0:

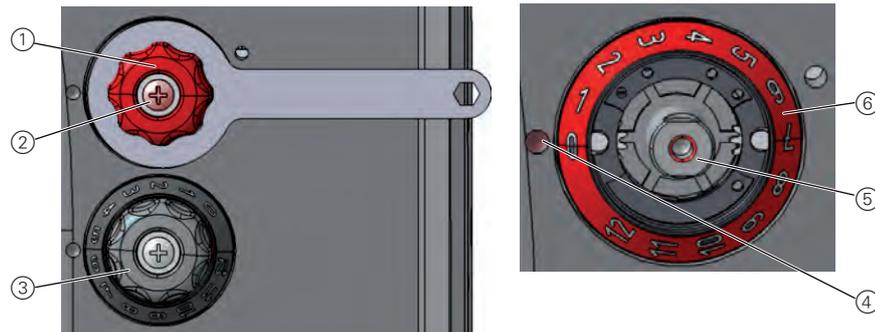
- ↙ No play on the stitch regulator gear.
The plates for the gear are parallel, the frame cannot be moved.



Cover

- Tilt the machine head (📖 p. 15)

Fig. 17: Setting the upper stitch length adjusting wheel (1)



- | | |
|---|----------------------|
| (1) - Upper stitch length adjusting wheel | (4) - Adjusting mark |
| (2) - Screw | (5) - Shaft |
| (3) - Lower stitch length adjusting wheel | (6) - Scale |



To set the upper stitch length adjusting wheel:

1. Switch off the machine.
- ↙ The machine switches over to the upper stitch length adjusting wheel.
2. Hold the upper stitch length adjusting wheel (1) using a star key.
3. Loosen the screw (2).
4. Remove the upper stitch length adjusting wheel (1) from the shaft (5).
5. Carefully turn the shaft (5) to the right using a 10 mm wrench.

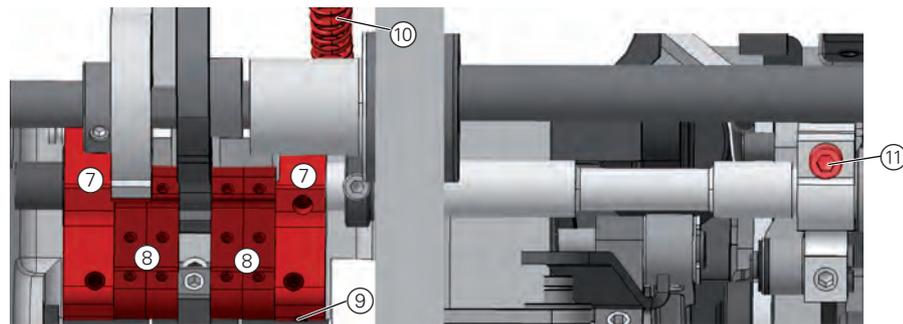
NOTICE

Property damage may occur!

If you turn the shaft too far to the right, then parts on the stitch regulator gear could bend or get stuck.

Turn the shaft carefully and stop as soon as you can feel slight resistance.

Fig. 18: Setting the upper stitch length adjusting wheel (2)



- (7) - Frame for the stitch regulator gear (10) - Tension spring
 (8) - Plates for the stitch regulator gear (11) - Screw
 (9) - Opening

6. Check whether the frame for the stitch regulator gear (7) can be moved.

Tip: In machines that have a stitch adjustment lever, you can check this by pressing the stitch adjustment lever.

In machines that do not have a stitch adjustment lever, you can insert the locking peg or a hex key into the opening (9) and use it to try and move the frame (7) up and down.

7. As soon as the frame (7) no longer moves:
 Remove the wrench from the shaft (5).
8. Turn the scale (6) for the upper stitch length adjusting wheel (1) such that the 0 is exactly next to the adjusting mark (4).
9. Place the upper stitch length adjusting wheel (1) onto the shaft (5).
10. Hold the upper stitch length adjusting wheel (1) using a star key.
11. Tighten the upper stitch length adjusting wheel (1) on the shaft (5) using the screw (2).



Important

Check whether the plates for the stitch regulator gear (8) are parallel to one another in this position.

If the plates (8) are not parallel to one another:

12. Remove the tension spring (10).
13. Loosen the screw (11).
14. Manually position the plates (8) so that they are parallel.
15. Tighten the screw (11).
16. Attach the tension spring (10).

6.2 Setting the lower stitch length adjusting wheel



Proper setting

Sewing with two different stitch lengths:

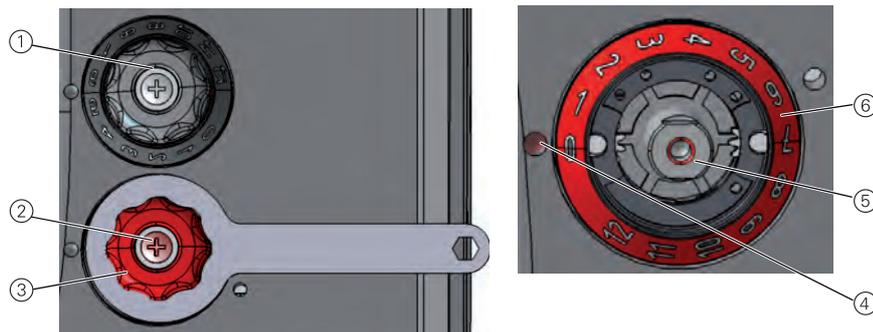
- ↘ The stitch lengths on the seam correspond with the set stitch lengths. The lower stitch length adjusting wheel can only be turned up to the stitch length set on the upper stitch length adjusting wheel.



Cover

- Tilt the machine head (📖 p. 15)

Fig. 19: Setting the lower stitch length adjusting wheel (1)



- | | |
|---|----------------------|
| (1) - Upper stitch length adjusting wheel | (4) - Adjusting mark |
| (2) - Screw | (5) - Shaft |
| (3) - Lower stitch length adjusting wheel | (6) - Scale |



To set the lower stitch length adjusting wheel:

1. Switching over to the smaller stitch lengths:
The key for the stitch length on the machine arm (1) must be off.
If it is lit up: Press the key (1).
2. Hold the lower stitch length adjusting wheel (3) using a star key.
3. Loosen the screw (2).
4. Remove the lower stitch length adjusting wheel (3) from the shaft (5).
5. Carefully turn the shaft (5) to the right using a 10 mm wrench.

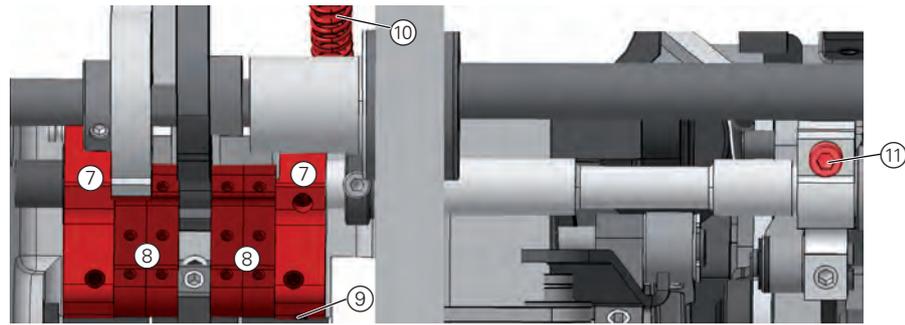
NOTICE

Property damage may occur!

If you turn the shaft too far to the right, then parts on the stitch regulator gear could bend or get stuck.

Turn the shaft carefully and stop as soon as you can feel slight resistance.

Fig. 20: Setting the upper stitch length adjusting wheel (2)



- | | |
|--|-----------------------|
| (7) - Frame for the stitch regulator gear | (10) - Tension spring |
| (8) - Plates for the stitch regulator gear | (11) - Screw |
| (9) - Opening | |

6. Check whether the frame for the stitch regulator gear (7) can be moved.
Tip: In machines that have a stitch adjustment lever, you can check this by pressing the stitch adjustment lever.
 In machines that do not have a stitch adjustment lever, you can insert the locking peg or a hex key into the opening (9) and use it to try and move the frame (7) up and down.
7. As soon as the frame (7) no longer moves:
 Remove the wrench from the shaft (5).
8. Turn the scale (6) for the lower stitch length adjusting wheel (3) such that the 0 is exactly next to the adjusting mark (4).
9. Place the lower stitch length adjusting wheel (3) onto the shaft (5).
10. Hold the lower stitch length adjusting wheel (3) using a star key.
11. Tighten the lower stitch length adjusting wheel (3) on the shaft (5) using the screw (2).

6.3 Setting the stitch length limit

If during the sewing operation not all stitch lengths are available, then you do have the option to limit the maximum stitch length that can be set.

12, 9, or 6 mm can be selected as the maximum stitch length. In doing so, the appropriate throat plate has to be selected for the respective maximum stitch length. The throat plate cut-out must be large enough that the feed dog does not hit against the edges of the throat plate at the front and rear dead center.

NOTICE

Property damage may occur!

If the throat plate cut-out is too small, then the feed dog can hit against the edges.

Make sure that an appropriate throat plate is used for the maximum stitch length set.



Proper setting

Turn the upper stitch length adjusting wheel to the right as far as it will go.

↳ The upper stitch length adjusting wheel can only be turned up to the maximum stitch length set.

Fig. 21: Setting the stitch length limit



(1) - Upper stitch length adjusting wheel (3) - Mark-off openings
(2) - Screw



To set the stitch length limit:

1. Position the upper stitch length adjusting wheel (1) to 0.
2. Hold the upper stitch length adjusting wheel (1) using a star key.
3. Loosen the screw (2) on the upper stitch length adjusting wheel (1).
4. Remove the upper stitch length adjusting wheel (1).
5. Remove the setscrew from one of the three mark-off openings (3).
6. Screw the setscrew into the mark-off opening for the required maximum stitch length.

The openings are given numbers for the stitch length: 6 mm, 9 mm, or 12 mm



Wichtig

Make sure that the scale for the adjusting wheel is not twisted.

7. Fit the upper stitch length adjusting wheel (1) back on.
8. Hold the upper stitch length adjusting wheel (1) using a star key.
9. Tighten the screw (2) on the upper stitch length adjusting wheel (1).

6.4 Setting the eccentric for the forward and backward stitches



Proper setting

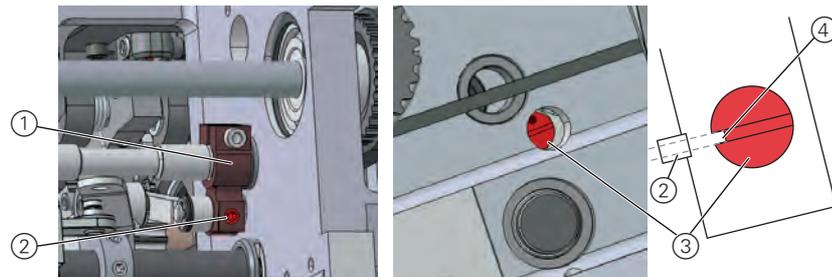
The forward and backward stitches are the same length.
As a test, sew a bartack. The insertions of the forward and backward stitches have to lie within each other.



Cover

- Tilt the machine head (📖 p. 15)

Fig. 22: Setting the eccentric for the forward and backward stitches



(1) - Clamp
(2) - Screw

(3) - Screw
(4) - Recess



To set the eccentric for the forward and backward stitches:

1. Loosen the setscrew (2).
2. Turn the screw (3) from the right through the opening in the machine frame.

Basic position:

The slot in the screw (3) is parallel to the setscrew (2), the recess (4) faces the front.

If the forward and backward stitches are not the same length:

- **turning clockwise:**
The forward stitch becomes larger, the backward stitch smaller.
 - **turning counterclockwise:**
The forward stitch becomes smaller, the backward stitch larger.
3. Tighten the setscrew (2).

7 Setting the feed dog

WARNING



Risk of injury from moving parts!

Crushing possible.

Switch off the machine before setting the feed dog.

The position and the movement of the feed dog and needle bar have to be coordinated such that the needle pierces exactly in the center of the needle hole of the feed dog.



Order

First check the following settings:

- Needle bar linkage ( p. 48)

7.1 Setting the feed dog position



Proper setting

The feed dog is exactly in the center of the throat plate cut-out, both side-ways and in the sewing direction.

If the stitch length is 0, the needle pierces exactly in the center of the needle hole.

Various settings have to be made depending on how far the actual position of the feed dog differs from the correct setting:

- For minimal deviations, it suffices to move the feed dog on the carrier ( p. 39)
- If this change does not suffice, then the whole feed dog carrier has to be moved on the sliding shaft ( p. 40)
- For basic realignment, the feed dog carrier has to be realigned together with the stitch regulator gear ( p. 41)

7.1.1 Moving the feed dog

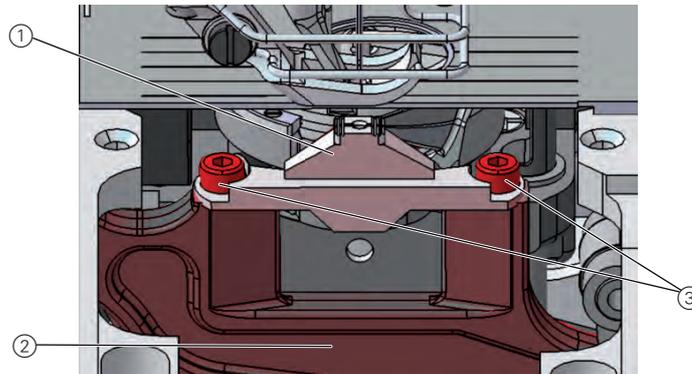
For minimal changes in position, it suffices to move the feed dog on the feed dog carrier.



Cover

- Throat plate ( p. 19)

Fig. 23: Moving the feed dog



(1) - Feed dog

(2) - Feed dog carrier

(3) - Screws



To move the feed dog:

1. Loosen the screws (3).
2. Move the feed dog (1) on the feed dog carrier (2).
Place the removed throat plate next to it as an aid for orientation so that the feed dog can be screwed on straight again.
3. Tighten the screws (3).

7.1.2 Moving the feed dog carrier

For the basic setting, the feed dog carrier has to be moved both sideways and in the sewing direction.

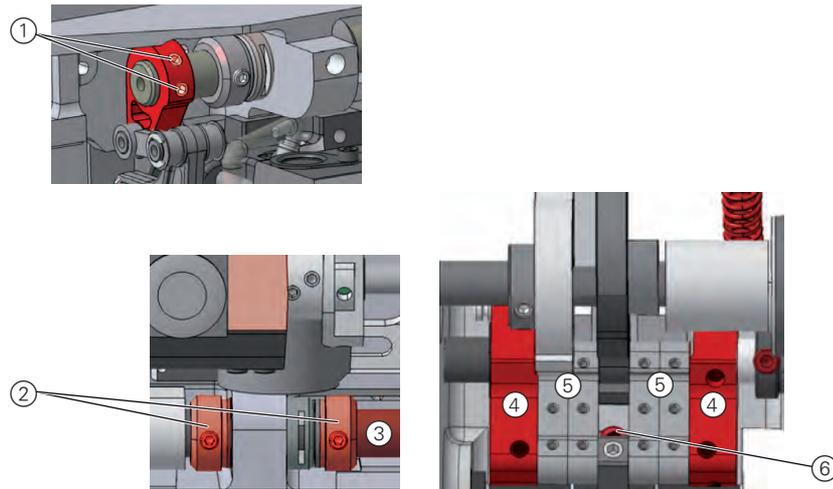
The feed dog carrier is connected to the stitch regulator gear via the sliding shaft and can be moved on this shaft.



Cover

- Tilt the machine head (📖 p. 15)

Fig. 24: Moving the feed dog carrier



- (1) - Screws
(2) - Adjusting rings
(3) - Sliding shaft

- (4) - Assembly frame
(5) - Plates
(6) - Screw



To move the feed dog carrier:

1. Position the upper stitch length adjusting wheel to 0.
2. Loosen the connection to the tie rod using the screws (1).
3. Loosen the screw (6).
4. Loosen the setscrews for the adjusting rings (2).
5. Move the feed dog carrier cross-line to the sewing direction such that the feed dog is exactly in the center of the throat plate cut-out.
6. Push the adjusting rings (2) toward each other as far as they will go.



Important

Make sure that the sliding shaft (3) is tightened by the clamping rings.

7. Tighten the setscrews for the adjusting rings (2).
8. Move the feed dog carrier in the sewing direction such that the feed dog is exactly in the center of the throat plate cut-out.
9. Tighten the screw (6).
10. Tighten the connection to the tie rod using the screws (1).



Important

In the process, make sure that the feed dog height has the correct setting (📖 p. 45).

7.1.3 Aligning the feed dog carrier together with the stitch regulator gear

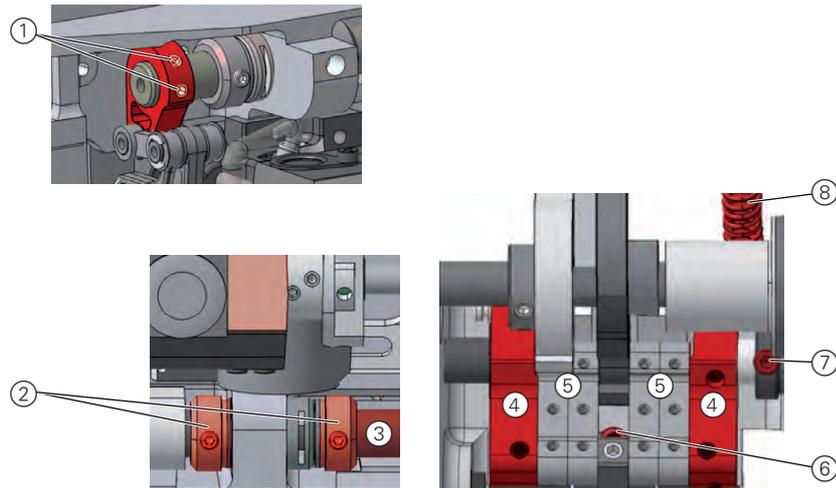
If moving the feed dog carrier does not suffice, the feed dog carrier must be aligned together with the stitch regulator gear.



Cover

- Tilt the machine head (📖 p. 15)

Fig. 25: Aligning the feed dog carrier together with the stitch regulator gear (1)



- (1) - Screws
- (2) - Adjusting rings
- (3) - Sliding shaft
- (4) - Assembly frame

- (5) - Plates
- (6) - Screw
- (7) - Screw
- (8) - Tension spring

Moving the feed dog carrier cross-line to the sewing direction



To align the feed dog carrier with the stitch regulator gear:

1. Remove the tension spring (8) from the mounting bracket.
2. Loosen the connection to the tie rod using the screws (1).
3. Loosen the screw (6).
4. Loosen the setscrews for the adjusting rings (2).
5. Move the feed dog carrier cross-line to the sewing direction such that the feed dog is exactly in the center of the throat plate cut-out.
6. Push the adjusting rings (2) toward each other as far as they will go.

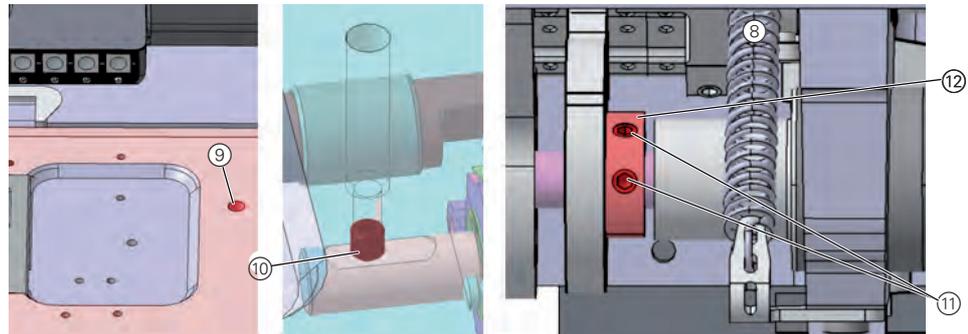


Important

- Make sure that the sliding shaft (3) is tightened by the clamping rings.
- 7. Tighten the setscrews for the adjusting rings (2).

Moving the stitch regulator gear sideways

Fig. 26: Aligning the feed dog carrier together with the stitch regulator gear (2)



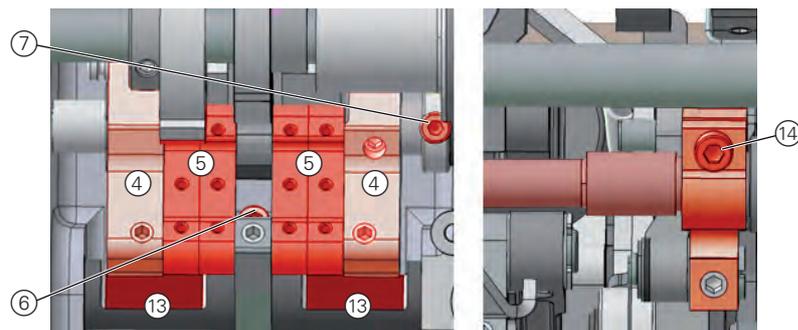
(8) - Tension spring
(9) - Screw opening
(10) - Setscrew

(11) - Setscrews
(12) - Pusher eccentric



8. Loosen the setscrew (10) through the screw opening (9) using a 3 mm hex key.
9. Loosen setscrews (11).

Fig. 27: Aligning the feed dog carrier together with the stitch regulator gear (3)



(4) - Assembly frame
(5) - Plates
(6) - Setscrew

(7) - Screw
(13) - Cut-outs for sliding shafts
(14) - Screw



10. Loosen the screw (7).
11. Move the assembly frames (4) sideways such that they are exactly in the center of the cut-outs for the sliding shafts (13).



Important

When doing so, make sure that the gear shaft is not moved so far that the plates hit against the sliding shaft.

12. Tighten the adjusting ring and fasten the screw (7).
13. Tighten the pin and fasten the assembly setscrew (10) through the screw opening (9).
14. Tighten the setscrews (11).

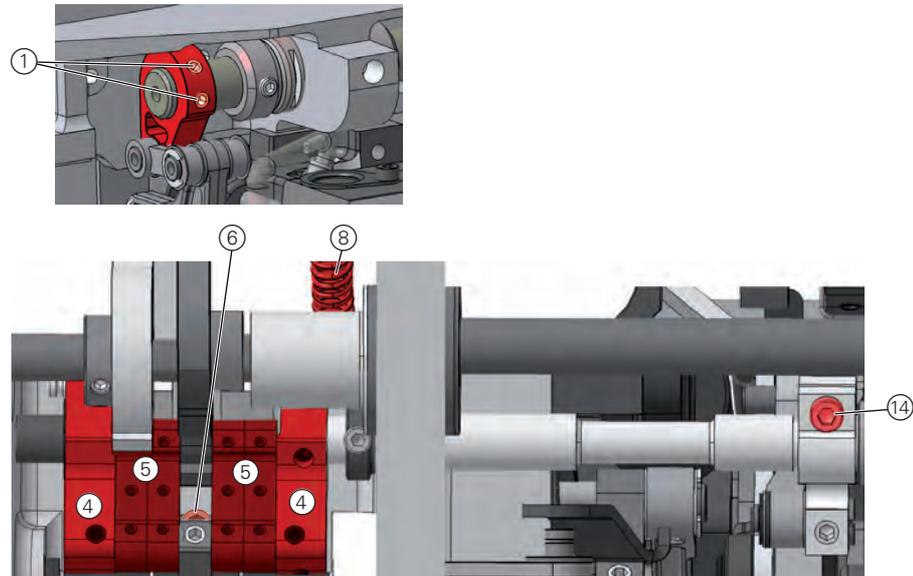


Important

When tightening the setscrews (11), make sure that the feed movement of the feed dog is correctly set (p. 44).

Moving the feed dog carrier in the sewing direction

Fig. 28: Aligning the feed dog carrier together with the stitch regulator gear (4)



(1) - Screws

(4) - Assembly frame

(5) - Plates

(6) - Screw

(8) - Tension spring

(14) - Screw



15. Position the upper stitch length adjusting wheel to 0.

16. Loosen the screw (14).

17. Align the assembly frame such that the plates (5) are parallel to one another.

18. Tighten the screw (14).

19. Move the feed dog carrier in the sewing direction such that it is exactly in the center of the throat plate cut-out.

20. Tighten the screw (6).

21. Tighten the connection to the tie rod using the screws (1).



Important

In the process, make sure that the feed dog height has the correct setting (p. 45).

22. Attach the tension spring (8) back in the mounting bracket.

7.2 Setting the feed dog movement

The feed dog moves in an elliptical cycle. To align this correctly, both the feed movement and the stroke height and stroke movement of the feed dog have to be set.



Order

First check the following settings:

- Feed dog (📖 p. 38)

7.2.1 Setting the feed movement

The correct setting for the feed movement is checked when the machine is at standstill and set using the pusher eccentric.



Proper setting

Handwheel at the 190° position and set the upper stitch length adjusting wheel to the maximum stitch length:

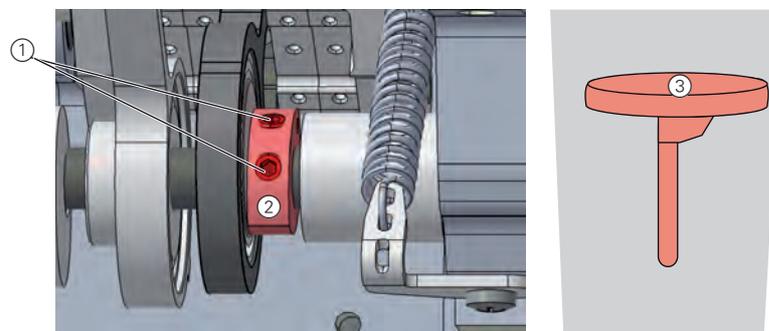
- ↪ If the stitch adjustment lever is pressed downwards, then the feed dog will stand still.



Cover

- Tilt the machine head (📖 p. 15)

Fig. 29: Setting the feed movement



- (1) - Setscrews
(2) - Pusher eccentric

- (3) - Stitch adjustment lever



To set the feed movement:

1. Set the upper stitch length adjusting wheel to the maximum stitch length.
2. Loosen the setscrews (1).
3. Put the handwheel into the 190° position.
4. Press stitch adjustment lever (3) downwards and observe the feed dog and needle in the process.
5. Turn the pusher eccentric (2) such that the feed dog and needle no longer move when the stitch adjustment lever (3) is pressed.
6. Tighten the setscrews (1).

7.2.2 Setting the feed dog height in the top dead center

The feed dog reaches the maximum stroke height at the top dead center when the position of the handwheel is 190°.



Proper setting

Handwheel in the 190° position:

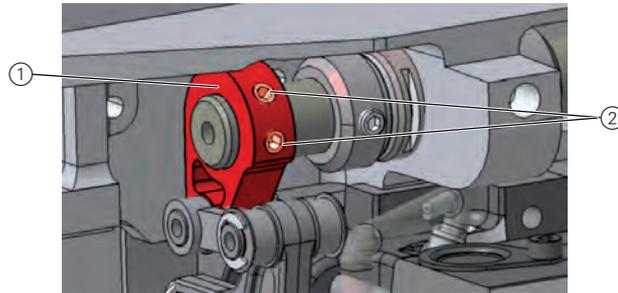
- ✎ The upper edge of the feed dog protrudes 0.8 mm above the throat plate.



Cover

- Tilt the machine head ( p. 15)

Fig. 30: Setting the feed dog height in the top dead center



(1) - Lever

(2) - Setscrews



To set the feed dog in the top dead center:

1. Put the handwheel into the 190° position.
2. Loosen the setscrews (2) on the lever (1) at the left, above the hook.
3. Turn the lever (1) such that the upper edge of the feed dog protrudes 0.8 mm above the throat plate.
4. Tighten the setscrews (2).

7.2.3 Setting the stroke movement



Order

First check the following settings:

- Feed dog height (📖 p. 45)



Proper setting

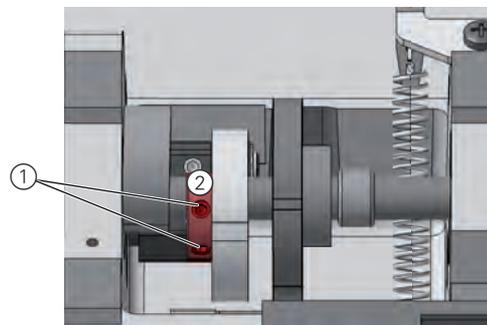
At the front dead center (handwheel position 90°) and at the rear dead center (handwheel position 270°) for the feed dog, the upper edge of the feed dog is at the same height as the upper edge of the throat plates. At 90°, the feed dog is in the upward movement; at 270°, in the downward movement.



Cover

- Tilt the machine head (📖 p. 15)

Fig. 31: Setting the stroke movement



(1) - Setscrews

(2) - Stroke eccentric



To set the stroke movement:

1. Loosen the setscrews (1).
2. Put the handwheel into the 90° position.
3. Turn the stroke eccentric (2) such that the upper edge of the feed dog is in the upward movement and at the same height as the upper edge of the throat plates.
4. Tighten the setscrews (1).

7.2.4 Setting the compensating weight



Proper setting

Handwheel position 210°:

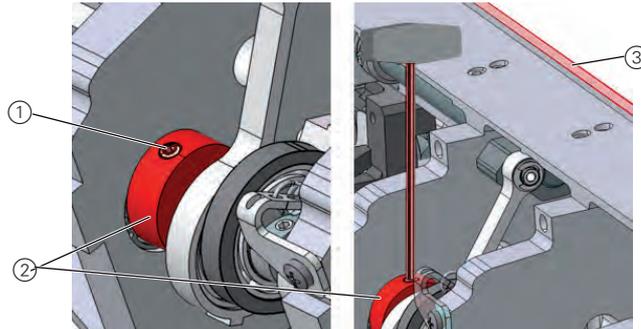
↙ The setscrew for the compensating weight is parallel to the base plate.



Cover

- Tilt the machine head ( p. 15)

Fig. 32: Setting the compensating weight



(1) - Setscrew

(2) - Compensating weight

(3) - Base plate



To set the compensating weight:

1. Put the handwheel into the 210° position.
2. Loosen the setscrew (1) on the compensating weight (2) using a 3 mm hex key.
3. Leave the hex key inserted in the setscrew.
4. Turn the compensating weight (2) such that the setscrew (1) is parallel to the base plate (3). Use the hex key inserted in the setscrew as a means of orientation.
5. Tighten the setscrew (1) on the compensating weight (2).

8 Aligning the needle bar linkage

WARNING



Risk of injury from moving parts!

Crushing possible.

Switch off the machine before aligning the needle bar linkage.



Proper setting

Upper stitch length adjusting wheel to 0:

↳ The needle pierces exactly in the center of the feed dog needle hole.

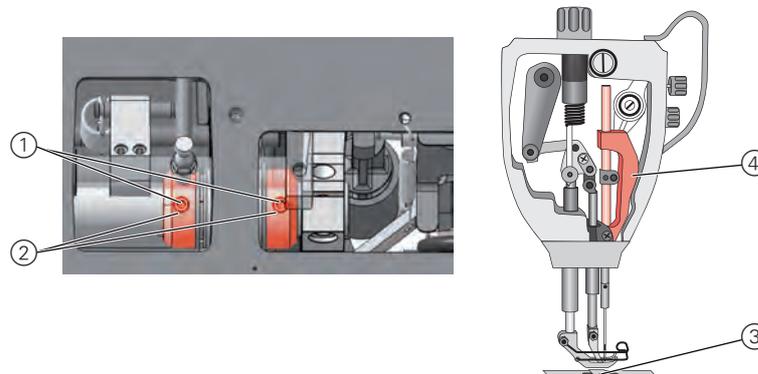
8.1 Moving the needle bar linkage sideways



Cover

- Arm cover (📖 p. 16)
- Head cover (📖 p. 17)

Fig. 33: Moving the needle bar linkage sideways (1)



- (1) - Setscrews
(2) - Adjusting rings

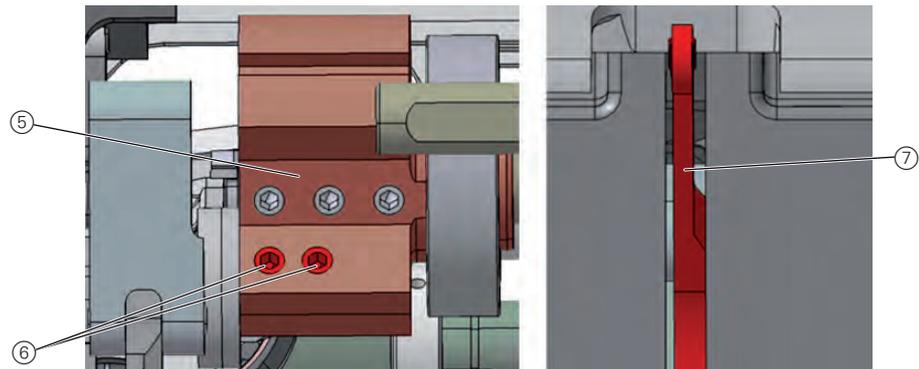
- (3) - Needle hole
(4) - Needle bar linkage



To move the needle bar linkage sideways:

1. Position the upper stitch length adjusting wheel to 0.
2. Loosen the setscrews (1) on the two adjusting rings (2) at the right-hand end of the shaft for the needle bar linkage.

Fig. 34: Moving the needle bar linkage sideways (2)



(5) - Arm shaft crank
(6) - Setscrews

(7) - Thread lever



3. Loosen the setscrews (6) on the arm shaft crank (5).



Important

Make sure that the setscrews stay on the surface.

4. Move the needle bar linkage (4) sideways such that the needle pierces exactly in the center of the needle hole (3) for the feed dog.
5. Push the two adjusting rings (2) inwards as far as they will go and tighten them.
6. Tighten the setscrews (1) on the two adjusting rings (2).
7. Align the thread lever (7) exactly in the middle of the slot.
8. Tighten the setscrews (6) on the arm shaft crank (5).



Order

Then check the following settings:

- Loop stroke position ( p. 53)
- Distance of the hook to the needle ( p. 51)

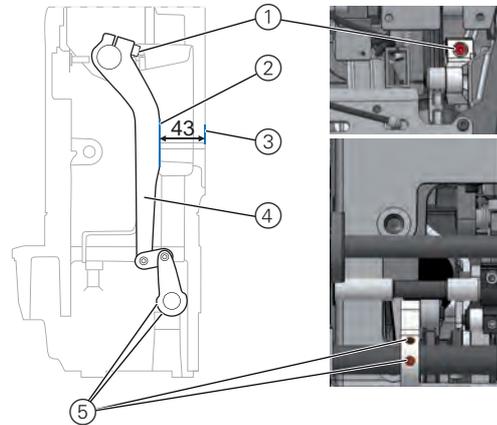
8.2 Aligning the needle bar linkage in the sewing direction



Cover

- Valve cover (📖 p. 18)
- Tilt the machine head (📖 p. 15)

Fig. 35: Aligning the needle bar linkage in the sewing direction



- | | |
|------------------------|-----------------|
| (1) - Screw | (4) - Lever |
| (2) - Straight surface | (5) - Setscrews |
| (3) - Outer edge | |



To align the needle bar linkage in the sewing direction:

1. Position the lower stitch length adjusting wheel to 0.
2. Position the upper stitch length adjusting wheel to 0.
3. Loosen the screw (1).
4. Loosen the setscrews (5).
5. Move the needle bar linkage in the sewing direction such that the distance between the straight surface (2) of the lever (4) and the outer edge (3) of the rear arm surface is exactly 43 mm.
6. Tighten the setscrews (5).
7. Turn the needle so far downwards that insertion into the needle hole can be checked.
8. Move the needle bar linkage in the sewing direction such that the needle pierces exactly in the center of the needle hole for the feed dog.
9. Tighten the screw (1).



Order

Then check the following settings:

- Loop stroke position (📖 p. 53)

9 Position of the hook and needle

WARNING



Risk of injury from sharp parts!

Puncture possible.

Switch off the machine before you set the position of hook and needle.

9.1 Setting the hook side clearance

NOTICE

Property damage may occur!

Damage to the machine, needle breakage, or thread damage due to an incorrect clearance between the needle and hook tip.

Check the clearance to the hook tip after inserting a new needle of a different size. Adjust this if necessary.



Order

First check the following settings:

- Needle bar linkage ( p. 48)
- Loop stroke position ( p. 53)



Proper setting

Machine locked in place in the loop stroke position ( p. 22):

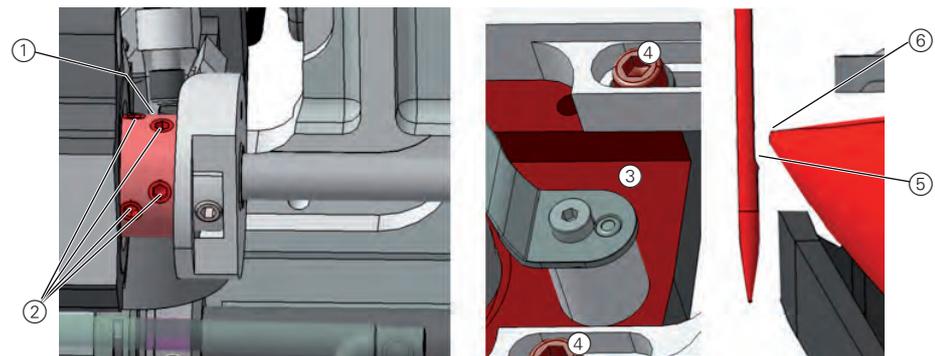
- ↳ Maximum 0.1 mm distance between the hook tip and the groove for the needle.



Cover

- Tilt the machine head ( p. 15)
- Throat plate slide ( p. 19)

Fig. 36: Setting the hook side clearance



(1) - Clamping ring
(2) - Setscrews
(3) - Hook support

(4) - Screws
(5) - Groove
(6) - Hook tip



To set the hook side clearance:

1. Lock the machine in place in the loop stroke position (📖 p. 22).
2. Loosen the screws (4) for the hook support (3).
3. Loosen the setscrews (2) for the clamping ring (1).
4. Move the hook support (3) sideways such that the distance between the hook tip (6) and the groove (5) is 0.1 mm at most, without the hook tip (6) touching the needle.
5. Tighten the screws (4) for the hook support (3).



Important

1. Check the loop stroke position (📖 p. 53).
2. Tighten the setscrews (2) for the clamping ring (1).
3. Remove the lock.



Order

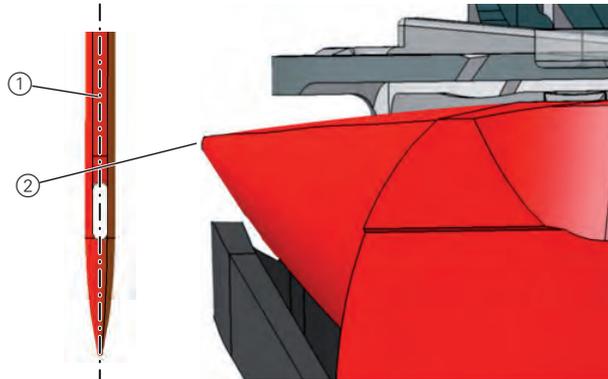
Then check the following settings:

- Position of the needle guard (📖 p. 55)

9.2 Setting the loop stroke position

The loop stroke is the path length from the lower dead center of the needle bar up to the position where the hook tip is exactly on the vertical center line of the groove for the needle.

Fig. 37: Setting the loop stroke position (1), position of the hook tip



(1) - Vertical center line of the needle (2) - Hook tip



Order

First check the following settings:

- Needle bar linkage ( p. 48)



Proper setting

Machine locked in place in the loop stroke position ( p. 22):

- ✎ The hook tip (2) points exactly to the vertical center line (1) of the needle.
The loop stroke is exactly 2.4 mm.



Disturbance

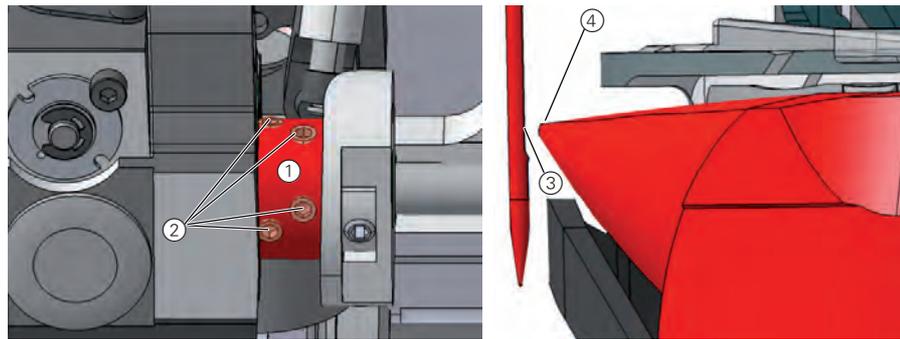
- Missing stitches



Cover

- Tilt the machine head ( p. 15)
- Feed dog ( p. 38)

Fig. 38: Setting the loop stroke position (2)



(1) - Clamping ring
(2) - Setscrews

(3) - Groove
(4) - Hook tip



To set the loop stroke position:

1. Lock the machine in place in the loop stroke position ( p. 22).
2. Position the upper stitch length adjusting wheel to 0.
3. Loosen the four setscrews (2) for the clamping ring (1) on the hook housing.
4. Turn the hook such that the hook tip (4) points exactly to the vertical center line of the needle (3).
5. Tighten the setscrews (2) for the clamping ring (1).
6. Remove the lock.



Order

Then check the following settings:

- Position of the needle guard ( p. 55)
- Point in time in cutting for the thread cutter ( p. 78)

9.3 Adjusting the needle guard

NOTICE

Property damage may occur!

Damage to the machine, needle breakage, or thread damage due to an incorrect clearance between the needle and hook tip.

Check the clearance to the hook tip after inserting a new needle of a different size. Adjust this if necessary.

The needle guard prevents contact between needle and hook tip.



Order

First check the following settings:

- Loop stroke position (📖 p. 53)
- Hook side clearance (📖 p. 51)
- Needle bar height (📖 p. 56)



Proper setting

Machine locked in place in the loop stroke position (📖 p. 22):

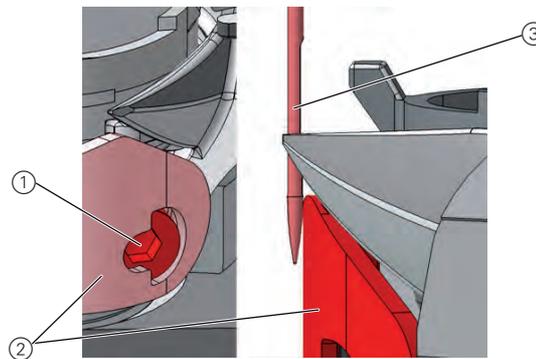
- ↳ The needle guard pushes the needle just enough away so that it cannot be touched by the hook tip.



Cover

- Feed dog (📖 p. 21)

Fig. 39: Adjusting the needle guard



- (1) - Screw
(2) - Needle guard

- (3) - Needle



To adjust the needle guard:

1. Turn the handwheel and check how far the needle guard pushes the needle away.

2. Turn the screw (1) on the needle guard (2) such that the needle guard (2) just pushes the needle (3) far away enough so that it cannot be touched by the hook tip:
 - **pushing away more:** turn it counterclockwise
 - **pushing away less:** turn it clockwise

9.4 Setting the needle bar height



Order

First check the following settings:

- Loop stroke position (📖 p. 53)



Proper setting

Machine locked in place in the loop stroke position (📖 p. 22) and the upper stitch length adjusting wheel set to 0:

- ↳ The hook tip is at the level of the lower third of the groove for the needle.



Disturbance

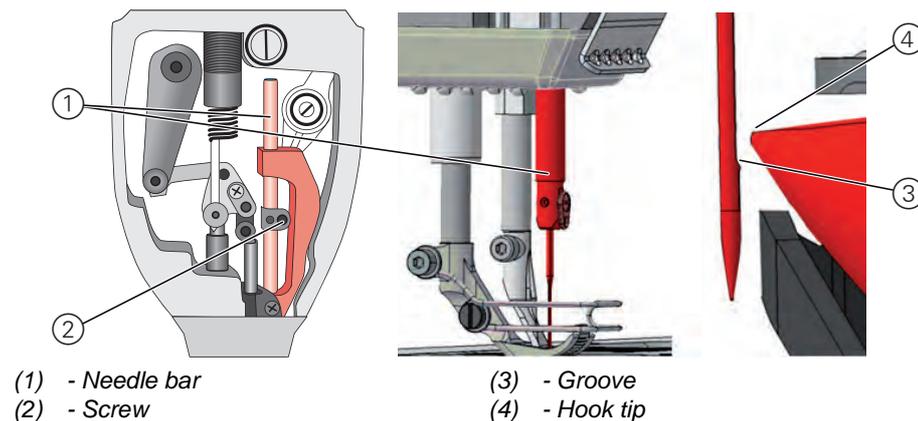
- Damage to the hook tip
- Jamming of the needle thread
- Missing stitches
- Thread breakage
- Needle breakage



Cover

- Head cover (📖 p. 17)

Fig. 40: Setting the needle bar height



To set the needle bar height:

1. Lock the machine in place in the loop stroke position (📖 p. 22).
2. Position the upper stitch length adjusting wheel to 0.
3. Loosen the screw (2) for the needle bar (1).
4. Move the height of the needle bar (1) such that the hook tip (4) is in the middle of the lower third of the groove.



Important

Do not twist the needle to the side in doing so. The groove (3) must face the hook.

5. Tighten the screw (2) for the needle bar (1).
6. Remove the lock.



Order

Then check the following settings:

- Position of the needle guard ( p. 55)

10 Setting the bobbin case lifter

WARNING

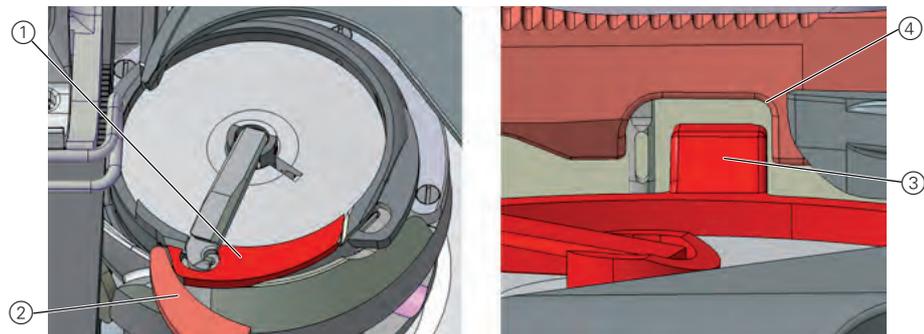


Risk of injury from moving parts!

Crushing possible.

Switch off the machine before you set the bobbin case lifter.

Fig. 41: Setting the bobbin case lifter



(1) - Bobbin case
(2) - Bobbin case lifter

(3) - Nose of the bobbin case
(4) - Slot in the throat plate

The hook pulls the needle thread through between the nose of the bobbin case (3) and the slot in the throat plate (4).

The bobbin case lifter (2) now pushes the bobbin case (1) away so that a gap appears for the thread.

If the hook tip is located below the bobbin case lifter (2), the bobbin case lifter (2) must open so that the thread can also slide past in that position.

So that the thread can slip through without a problem, the width of the lifting gap and the timing of opening have to be set.



Disturbance

Disturbances caused by an incorrect setting of the bobbin case lifter:

- Thread breaking
- Formation of loops on the bottom side of the seam
- Loud machine noise

10.1 Setting the lifting gap



Order

Always check the width of the lifting gap after making changes to the needle thread size. The correct width of the lifting gap depends on the thickness of the needle thread.



Proper setting

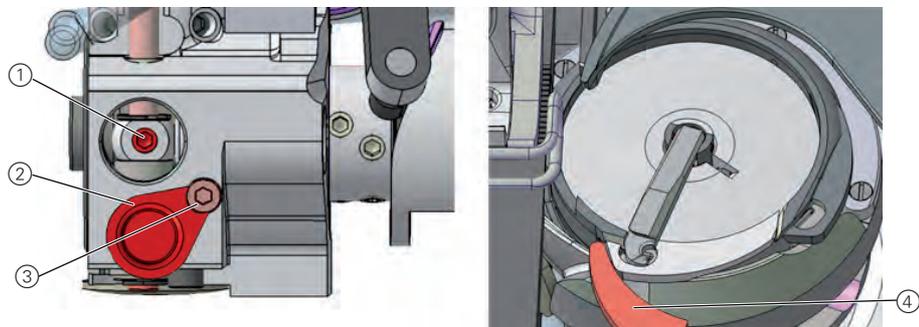
The needle thread slides through unobstructed between the nose of the bobbin case and the slot in the throat plate.



Cover

- Tilt the machine head ( p. 15)
- Throat plate slide ( p. 19)

Fig. 42: Setting the lifting gap



- (1) - Setscrew
(2) - Cover

- (3) - Screw
(4) - Bobbin case lifter



To set the lifting gap:

1. Loosen the screw (3).
2. Push the cover (2) downwards.
3. Loosen the setscrew (1).
4. Set the bobbin case lifter (4) so that the gap between the nose of the bobbin case and the slot in the throat plate is just large enough to allow the needle thread to slip through without a problem.



Important

Ensure that the gap is not too big. The middle part of the hook must not swing back and forth, hitting the slot in the throat plate (2).

5. Tighten the setscrew (1).
6. Push the cover (2) upwards.
7. Tighten the screw (3).

10.2 Setting the time for lifting



Proper setting

The bobbin case lifter starts to open exactly at the point when the hook tip is located below the bobbin case lifter after the loop is taken up.

In 1-needle machines, this happens when the handwheel position is approx. 100°.

In 2-needle machines, this happens when the handwheel position is approx. 100° for the right-hand hook, and when the handwheel position is approx. 300° for the left-hand hook.

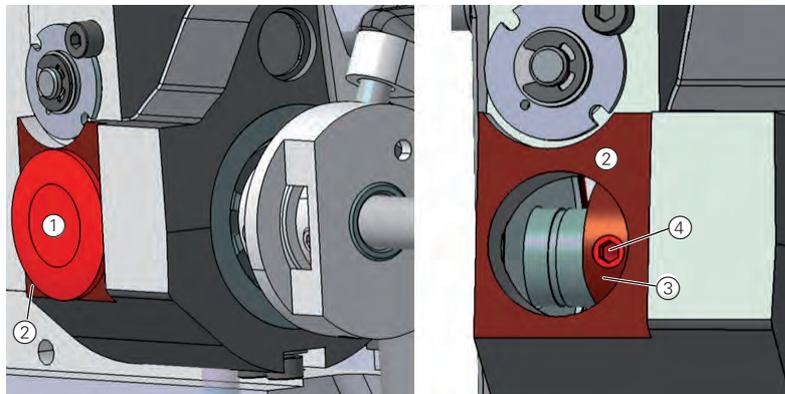
For 100° or 300°, the threaded pin (4) is exactly in the middle of the opening. (Insert hex key in the threaded pin for orientation).



Cover

- Tilt the machine head

Fig. 43: Setting the time for lifting



(1) - Plug

(2) - Hook housing

(3) - Control cam

(4) - Threaded pin



To set the timing for lifting:

1. Remove the plug (1) on the bottom side of the hook housing (2).
2. Loosen the control cam threaded pin (4) through the opening.
3. Turn the handwheel until the hook tip is exactly below the bobbin case lifter.
4. Use the hex key to turn the control cam (3) such that the bobbin case lifter opens at the correct point in time.
5. Tighten the threaded pin (4).
6. Insert the plug (1) into the opening.

11 Sewing feet

WARNING



Risk of injury from sharp and moving parts!

Puncture or crushing possible.

Switch off the machine before you set the sewing feet.

NOTICE

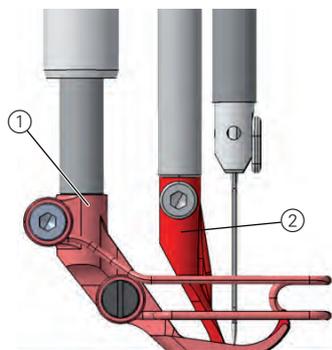
Property damage may occur!

Machine damage possible if the adjusting wheels are turned using brute force.

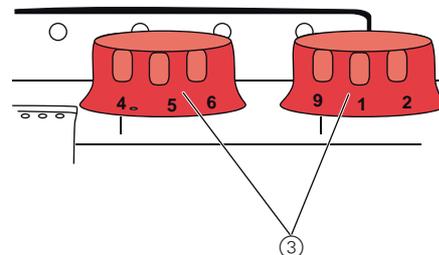
Do not attempt to use brute force to set a smaller sewing foot stroke at the right adjusting wheel.

The two adjusting wheels (3) on the machine arm determine how high the presser foot (1) and feeding foot (2) are raised during the sewing process. The left adjusting wheel determines the normal sewing foot stroke. The right adjusting wheel determines the elevated sewing foot stroke. The elevated sewing foot stroke must not be lower than the normal sewing foot stroke.

Fig. 44: Sewing feet



- (1) - Presser foot
- (2) - Feeding foot



- (3) - Adjusting wheels for the sewing foot stroke

11.1 Setting an even sewing foot stroke



Proper setting

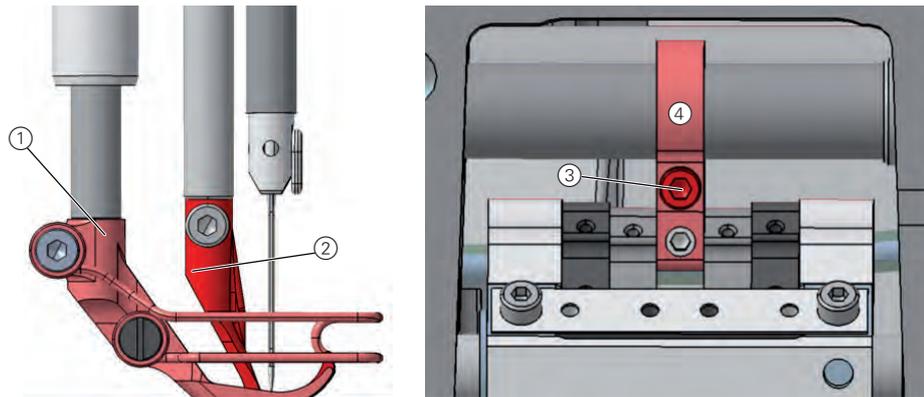
For sewing foot stroke 3, the presser foot and feeding foot are raised by the same height.



Cover

- Arm cover (📖 p. 16)

Fig. 45: Setting an even sewing foot stroke



- (1) - Presser foot
(2) - Feeding foot

- (3) - Screw
(4) - Lever



To set an even sewing foot stroke:

1. Set the handwheel to the 0° position.
2. Loosen the screw (3) for the lever (4).
3. Lower the presser foot (1) and feeding foot (2) together down to the throat plate.



Important

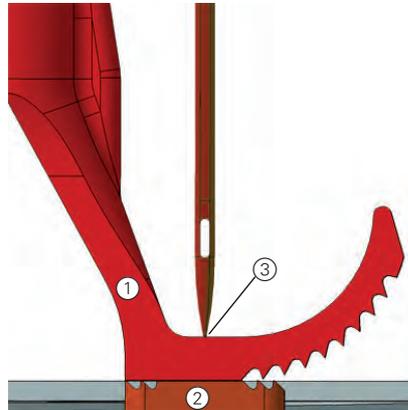
Make sure that the feeding foot is only lowered down to the throat plate. Do not inadvertently lower the feeding foot through the throat plate cut-out down to the feed dog.

4. Tighten the screw (3) for the lever (4).

11.2 Setting the stroke movement for the feeding foot

For correct feed, the stroke movement for the feeding foot must be aligned to the stroke movement for the feed dog.

Fig. 46: Setting the stroke movement for the feeding foot (1)



(1) - Feeding foot
(2) - Feed dog

(3) - Needle tip



Order

First check the following settings:

- Feed dog movement ( p. 44)
- Even sewing foot stroke ( p. 62)



Proper setting

Left adjusting wheel for the sewing foot stroke set to 9 and the upper stitch length adjusting wheel to 0:

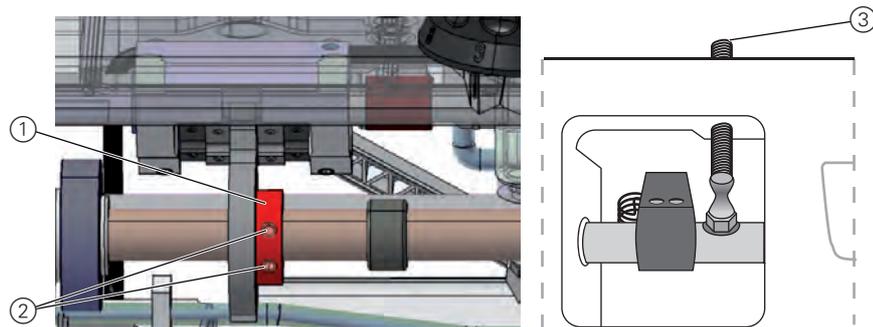
- ↳ The feeding foot (1) touches down exactly on the feed dog (2) when the downwards movement of the needle tip (3) reaches the upper edge of the feeding foot. This will occur when the handwheel is in the 95° position.



Cover

- Arm cover ( p. 16)

Fig. 47: Setting the stroke movement for the feeding foot (2)



(1) - Stroke eccentric
(2) - Setscrews

(3) - Setscrew



To set the stroke movement for the feeding foot:

1. Screw in the setscrew (3) so that a stroke is available.
2. Position the upper stitch length adjusting wheel to 0.
3. Loosen the setscrews (2).
4. Turn the stroke eccentric (1) such that the feeding foot touches down on the feed dog when the handwheel is in the 95° position.



Important

Do not move the stroke eccentric (1) laterally on the axle in doing so.

5. Tighten the setscrews (2).
6. Unscrew the setscrew (3) far enough so that there is no longer any contact with the clamp.

11.3 Setting the sewing foot pressure

The adjusting wheel at the top left of the machine arm determines the pressure for the sewing feet on the material to be sewn. The pressure can be adjusted continuously by turning the wheel.

The correct pressure depends on the material to be sewn:

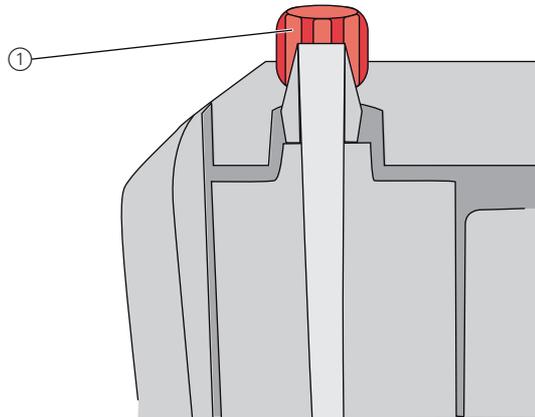
- Lower pressure for soft materials, e. g. silk
- Higher pressure for harder materials, e.g. leather



Proper setting

The material being sewn does not slip and is correctly transported.

Fig. 48: Setting the sewing foot pressure



(1) - Adjusting wheel for the sewing foot pressure



To set the sewing foot pressure:

1. Turn the adjusting wheel for the sewing foot pressure (1):
 - **more pressure:** turn clockwise
 - **less pressure:** turn counterclockwise

11.4 Setting the sewing foot lifting height

When the pedal is pressed back halfway, the sewing feet can be raised during sewing, e. g. to move the material being sewn.

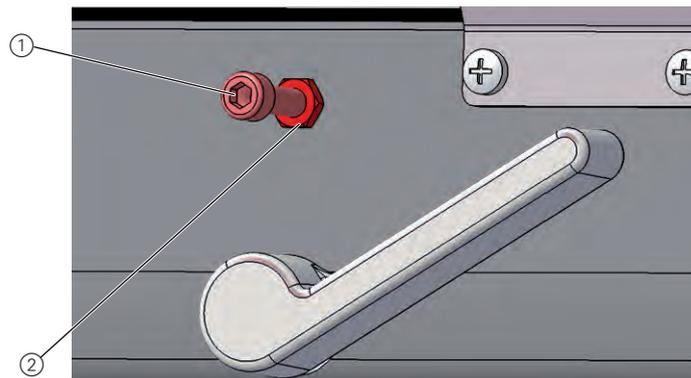
When the pedal is pressed completely back, the sewing feet will be raised after the thread is cut so that the material being sewn can be exchanged.



Proper setting

The distance between the raised sewing feet and the throat plate is preset to 25 mm on delivery.

Fig. 49: Setting the sewing foot lifting height



(1) - Adjusting screw

(2) - Counternut



To set the sewing foot lifting height:

1. Loosen the counternut (2) for the adjusting screw (1).
2. Turn the adjusting screw (1) to set the distance between the raised sewing feet and the throat plate:
 - **raising the sewing feet to a lesser height:** turn clockwise
 - **raising the sewing feet higher:** turn counterclockwise
3. Tighten the counternut (2) for the adjusting screw (1).

12 Adjusting the needle thread tension

12.1 Setting the needle thread regulator

WARNING



Risk of injury from sharp or moving parts!

Puncture or crushing possible.

Switch off the machine before setting the needle thread regulator.

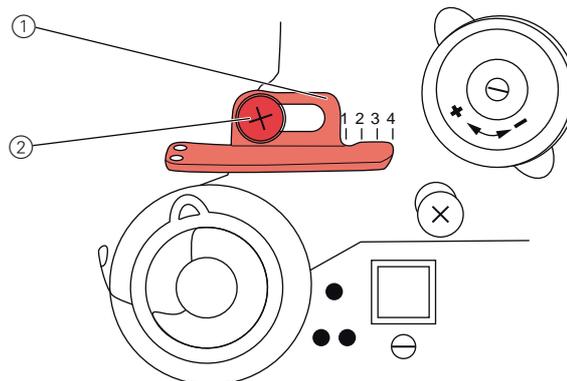
The thread regulator determines the tension applied to guide the needle thread around the hook. The required tension depends on the thickness of the material to be sewn, thread strength, and stitch length.



Proper setting

The loop of the needle thread slides at low tension over the thickest point of the hook, without forming loops or snagging.

Fig. 50: Setting the needle thread regulator



(1) - Needle thread regulator

(2) - Screw



To set the needle thread regulator:

1. Turn the handwheel and observe the cycle of the needle thread around the hook.
2. Loosen the screw (2).
3. Move the needle thread regulator (1):
 - **increase needle thread tension:** push to the left
 - **reduce needle thread tension:** push to the right
4. Tighten the screw (2).

12.2 Setting the thread tensioning spring

The thread tensioning spring holds the needle thread under tension from the upper position of the thread lever up to the point when the needle eye plunges into the material being sewn.



Proper setting

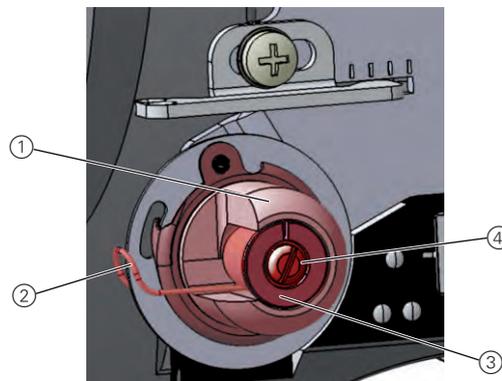
Basic setting: The thread tensioning spring does not contact the stop until the needle eye has plunged into the material being sewn.



Important

The setting for the thread tensioning spring has to vary according to the material being sewn and required sewing result.

Fig. 51: Setting the thread tensioning spring



(1) - Stop collar
(2) - Spring

(3) - Tension disc
(4) - Screw



To set the thread tensioning spring:

1. Loosen the screw (4).
2. **Setting the spring travel:**
Turn the stop collar (1):
 - **longer spring travel:** turn counterclockwise
 - **shorter spring travel:** turn clockwise
3. **Setting the spring tension**
Turn the tension disc (3):
 - **higher spring tension:** turn counterclockwise
 - **less spring tension:** turn clockwise



Important

Do not twist the stop collar in doing so.

4. Tighten the screw (4).

13 Winder

CAUTION



Type and source of danger!

Crushing possible.

Switch off the machine before setting the winder.

13.1 Adjusting the position of the winder wheel in long arm machines

Long arm machines have the winder in the center of the machine arm. The winder wheel is therefore not aligned on the upper toothed belt wheel in long arm machines, but rather on the driver wheel in the machine arm.



Proper setting

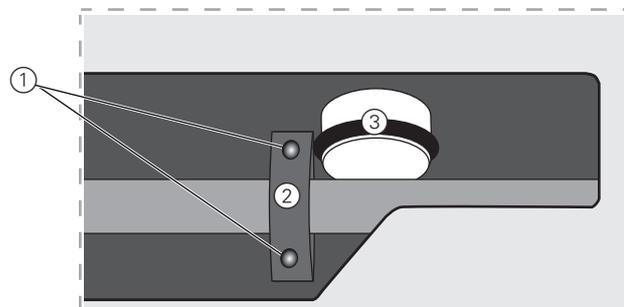
The distance between the winder wheel and the driver wheel is 0.8 mm.



Cover

- Arm cover ( p. 16)

Fig. 52: Adjusting the position of the winder wheel in long arm machines



(1) - Setscrews
(2) - Driver wheel

(3) - Winder wheel



To adjust the position of the winder in long arm machines:

1. Loosen the setscrews (1) on the driver wheel (2).
2. Move the driver wheel (2) to the right or left such that distance to the winder wheel (3) is exactly 0.8 mm.
3. Tighten the setscrews (1) on the driver wheel (2).

13.2 Setting the winder



Proper setting

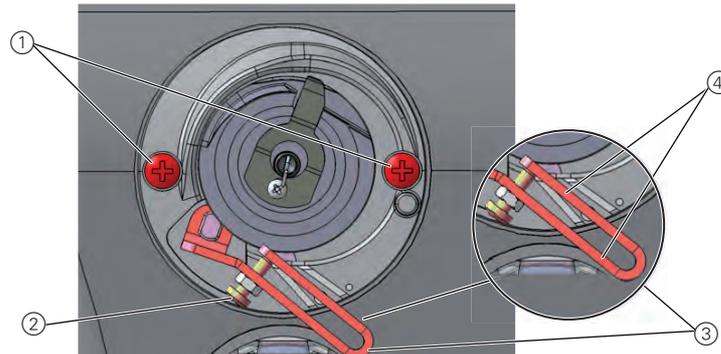
The winder wheel runs smoothly and without axial play.
The winding process will stop automatically when the required filling quantity of the bobbin is reached.



Cover

- Arm cover (📖 p. 16)

Fig. 53: Setting the winder (1)



(1) - Screws
(2) - Screw

(3) - Winder flap
(4) - Arms



To set the winder:

Removing the winder



1. Loosen the screws (1).
2. Remove the winder.

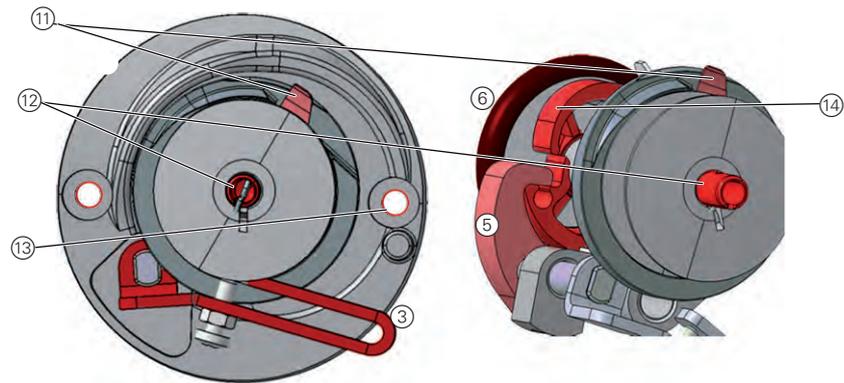
Setting the winder filling quantity



The position of the arms on the screw (2) determines the filling quantity:

- **Arms parallel:**
Automatic winding stop at 0.5 mm under the edge of the winder
 - **Arms closer together:**
Automatic stop with larger filling quantity
 - **Arms further apart from each other:**
Automatic stop with smaller filling quantity
3. Turn the screw (2):
 - **Arms closer together:** turn to the left
 - **Arms further apart from each other:** turn to the right
 4. Put the completely filled bobbin onto the winder.
 5. Fold the winder flap (3) upwards as far as it will go to the thread.

Fig. 54: Setting the winder (2)



(3) - Winder flap
 (5) - Clamp
 (6) - Winder wheel
 (11) - Tear-off knife

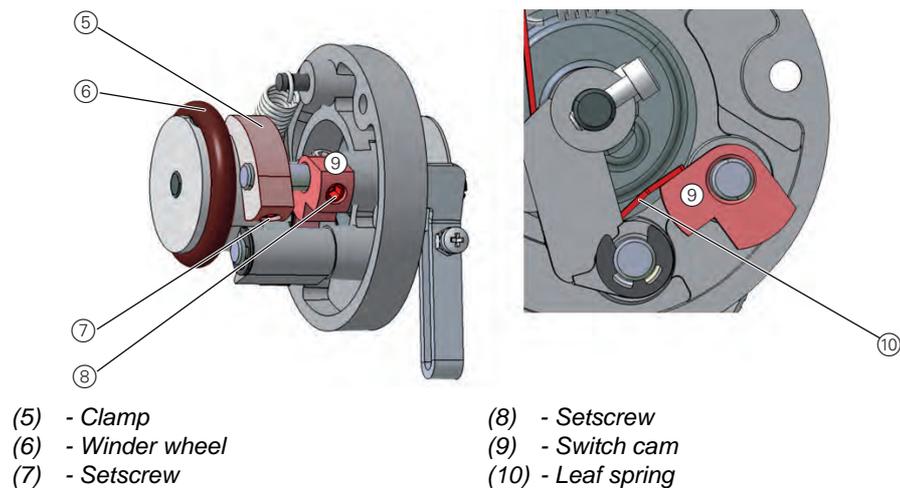
(12) - Winder spindle
 (13) - Right-hand screw hole
 (14) - Locking disk

Setting the winder spacing



6. Turn the winder spindle (12) such that the tear-off knife (11) is at the top right and is facing the right-hand screw hole (13).
7. Loosen the setscrew in the clamp (5).
8. Set the winder flap (3) such that the upper arm is above the marking for the XXXL hook (15).
- ↳ The distance between the winder flap and the outer thread on the bobbin is then 2 – 3 mm.
9. Set the clamp (5) such that it is resting against the locking disk (14).
10. Set the clamp (5) such that its distance to the winder wheel (6) is 0.5 mm.
11. Tighten the setscrew in the clamp (5).

Fig. 55: Setting the winder (3)

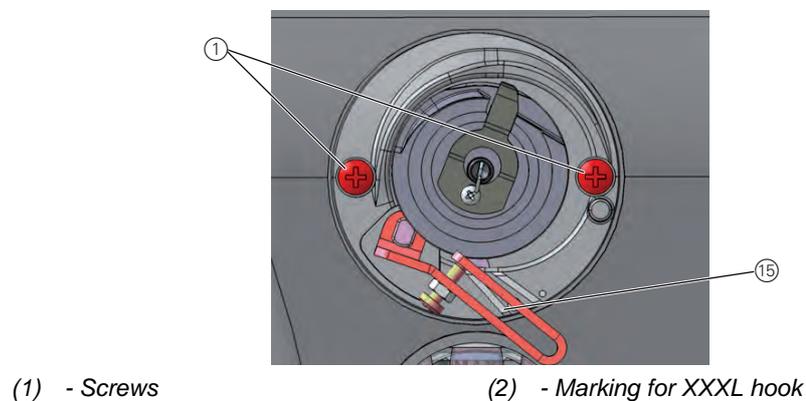


Setting the winder run



12. Loosen the setscrew (8).
13. Set the switch cam (9) such that it is just contacting the leaf spring (10) when the clamp (5) has engaged in the locking disc.
14. Set the switch cam (9) such that the winder flap (3) has no axial play.
15. Tighten the setscrew (8).

Fig. 56: Setting the winder (4)



Installing the winder



16. Fit the winder on the machine arm.
17. Tighten the screws (1).

13.3 Setting the hook thread guide

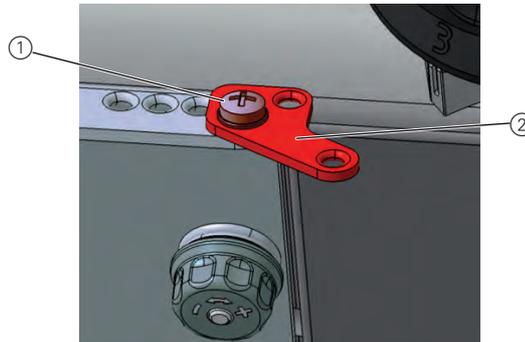
The position of the hook thread guide determines how the thread is wound onto the winder.



Proper setting

The thread is wound on evenly over the entire width of the bobbin.

Fig. 57: Setting the hook thread guide



(1) - Screw

(2) - Hook thread guide



To set the hook thread guide:

1. Loosen the screw (1).
2. Turn the hook thread guide (2):
 - **winding the thread further to the front:** turn to the front
 - **winding the thread further to the rear:** turn to the rear

14 Thread cutter

WARNING



Risk of injury from sharp parts!

Puncture or cutting possible.

Switch off the machine before setting the thread cutter.

14.1 Setting the height of the thread-pulling knife

The height of the thread-pulling knife is factory-set such that the distance (5) between the upper edge of the knife carrier (4) and the hook bearing screw-on surface (3) is 10.7 ± 0.5 mm. The distance depends on the setting of the counter blade.

Fine adjustment is made by means of washers between the knife carrier (4) and the thread-pulling knife (2).



Important

When changing the knives, make sure that you do not lose the washers.



Proper setting

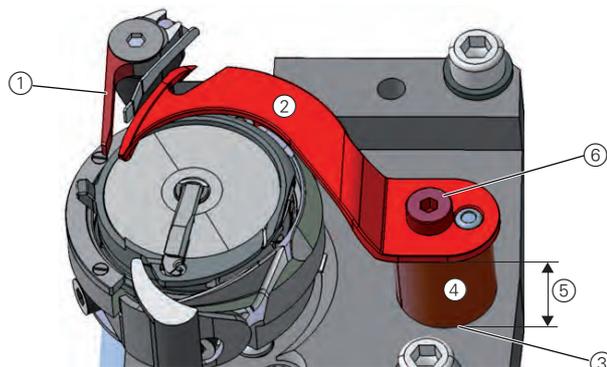
The thread-pulling knife (2) pivots as close as possible above the hook and is at the same height as the counter blade (1).



Cover

- Throat plate slide (📖 p. 19)

Fig. 58: Setting the height of the thread-pulling knife



- | | |
|-------------------------------------|---------------------|
| (1) - Counter blade | (4) - Knife carrier |
| (2) - Thread-pulling knife | (5) - Distance |
| (3) - Hook bearing screw-on surface | (6) - Screw |



To set the height of the thread-pulling knife:

1. Loosen the screw (6).
2. Remove the thread-pulling knife (2).
3. Place as many washers between the thread-pulling knife (2) and knife carrier (4) that the upper edges of the counter blade (1) and thread-pulling knife (2) are at the same height.
4. Keep any unrequired washers on the top side between the thread-pulling knife (2) and screw (6).
5. Tighten the thread-pulling knife (2) onto the knife carrier (4) using the screw (6).

14.2 Setting the cutoff curve



Proper setting

The control cam (4) makes direct contact with the hook clamping ring (1). The distance between the widest extent (6) of the control cam (4) and the roller (3) is 0.1 mm at most.

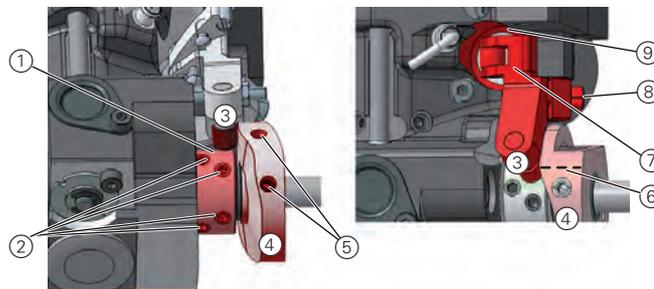
In resting position, the circle mark on the cutting edge of the thread-pulling knife is exactly next to the tip of the counter blade.



Cover

- Tilt the machine head ( p. 15)
- Throat plate slide ( p. 19)

Fig. 59: Setting the cutoff curve (1)



- (1) - Clamping ring
 (2) - Setscrews
 (3) - Roller
 (4) - Control cam
 (5) - Setscrews

- (6) - Widest extent
 (7) - Actuating lever
 (8) - Clamping screw
 (9) - Solenoid



To set the cutoff curve:

1. Loosen the setscrews (2) on the clamping ring (1).
2. Push the clamping ring (1) as far as it will go to the left.
3. Tighten the setscrews (2) on the clamping ring (1).

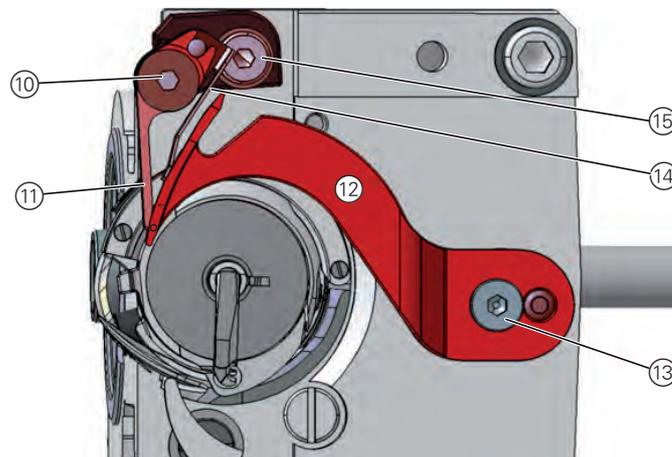


Important

Screw the setscrews (2) tightly in place on the clamping ring (1) before you loosen the setscrews (5). The clamping ring (1) and control cam (4) are both mutually used as a stop and should not be undone at the same time.

4. Loosen the setscrews (5).
5. Press the actuating lever (7) against the solenoid (9).
6. Turn the control cam (4) such that its widest extent (6) is at the top, next to the roller (3).
7. Move the control cam (4) such that the distance between its widest extent (6) and the roller (3) is 0.1 mm at most.
8. Tighten the setscrews (5).
9. Loosen the clamping screw (8) on the actuating lever (7).

Fig. 60: Setting the cutoff curve (2)



- | | |
|-----------------------------|---------------------|
| (10) - Screw | (13) - Screw |
| (11) - Counter blade | (14) - Thread clamp |
| (12) - Thread-pulling knife | (15) - Screw |



10. Turn the thread-pulling knife (12) such that the circle mark is exactly next to the tip of the counter blade (11).
11. Tighten the clamping screw (8) on the actuating lever (7) such that the actuating lever (7) has no axial play.
12. Loosen the setscrews (2) on the clamping ring (1).
13. Push the clamping ring (1) to the right as far as it will go and against the control cam (4).



Important

Check the loop stroke position (📖 p. 53).

14. Tighten the setscrews (2) on the clamping ring (1).

14.3 Setting the cutting pressure

The shape of the thread-pulling knife automatically creates the required cutting pressure as soon as the thread-pulling knife and counter blade make contact.



Proper setting

In the rest position, the lower thread clamp makes contact with the thread-pulling knife without any pressure being applied. 2 threads with the greatest strength for sewing can be neatly cut simultaneously.



Disturbance

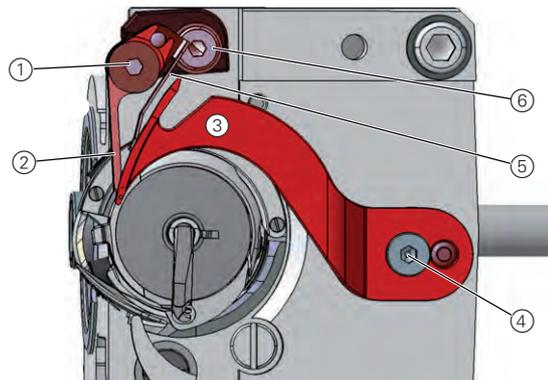
- Increased knife wear when the pressure is too great
- Problems when sewing on if the hook thread clamp is too high
- Problems in cutting the thread



Cover

- Throat plate slide ( p. 19)

Fig. 61: Setting the cutting pressure



- | | |
|----------------------------|--------------------|
| (1) - Screw | (4) - Screw |
| (2) - Counter blade | (5) - Thread clamp |
| (3) - Thread-pulling knife | (6) - Screw |



To set the cutting pressure:

1. Turn the handwheel until the thread-pulling knife (3) can be swung out by hand.
2. Loosen the screw (1).
3. Position the thread-pulling knife (3) such that the arrow mark is exactly next to the tip of the counter blade (2).
4. Turn the thread clamp (5) such that it rests against the thread-pulling knife (3).
5. Turn the counter blade (2) such that it rests against the thread-pulling knife (3).
6. Tighten the screw (1).



Important

After doing this, check the position of the knives, since the counter blade can easily become warped when the screw is being tightened.

14.4 Setting the point in time for cutting



Proper setting

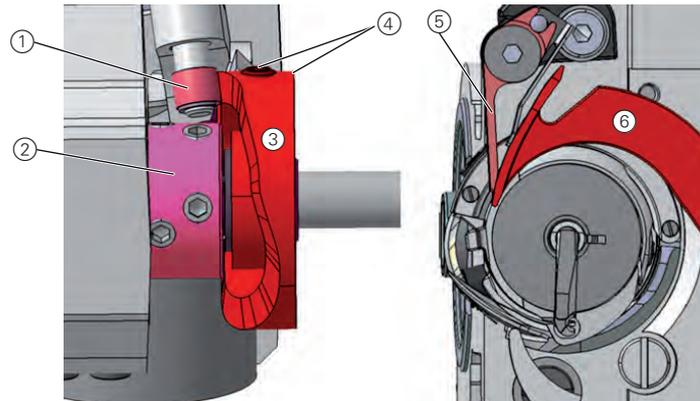
The threads are cut when the thread lever is at the top dead center (hand-wheel position 60°).



Cover

- Tilt the machine head (📖 p. 15)
- Throat plate slide (📖 p. 19)

Fig. 62: Setting the point in time for cutting



- (1) - Roller
(2) - Clamping ring
(3) - Control cam

- (4) - Setscrews
(5) - Counter blade
(6) - Thread-pulling knife



To set the point in time for cutting:

1. Loosen the setscrews (4).
2. Turn the handwheel until the thread-pulling knife (6) can be swung out by hand.
3. Pivot the thread-pulling knife (6) as far forward until the circle mark is exactly next to the tip of the counter blade (5).
4. Set the handwheel position to 60°.
5. Push the control cam (3) to the left as far as it will go and against the clamping ring (2).
6. Turn the control cam (3) such that the roller (1) runs up at the contour of control cam (3) and the widest extent of the control cam is at hand-wheel position 60° at the highest point.
7. Tighten the setscrews (4).
8. Insert the thread into thread-pulling knife (6) and slowly turn the handwheel.

Check in which handwheel position the thread is cut. If necessary, repeat setting steps 1 – 7 until the cut takes place at 60°.

15 Setting the potentiometer

The potentiometer adjusts the number of stitches to the set sewing foot stroke and reduces the number of stitches if the sewing foot stroke is too much.



Proper setting

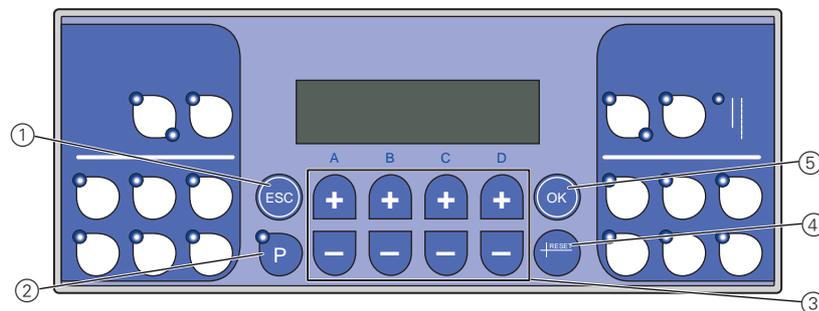
After accessing the technician level and pressing the OK key, the left display will show 1 in the first instance and the relevant maximum speed next to it.



Cover

- Arm cover ( p. 16)

Fig. 63: Setting the potentiometer (1)



(1) - ESC key

(2) - P key

(3) - Plus/Minus keys

(4) - Reset key

(5) - OK key



To set the potentiometer:

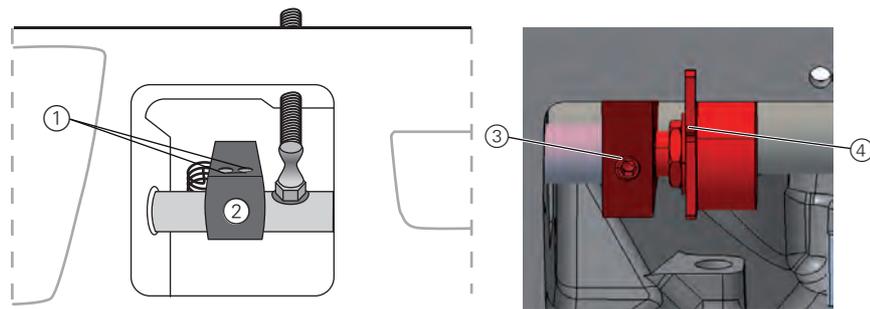
1. Switch off the machine.
2. Keep the **P** key (2) and **Reset** key (4) pressed down simultaneously and switch on the machine at the main power switch in doing so.
 - ↳ The display starts.
3. Release the **P** key (2) and **Reset** key (4).
 - ↳ The display indicates the current level.

The potentiometer is set at technician level $t\ 10\ 04$.

If the display indicates a different level:

4. Call up the technician level using the Plus/Minus keys (3):
As the case may be, press the Plus or Minus key under the letter or the number until the display indicates $t\ 10\ 04$.
5. Press the **OK** key (5).

Fig. 64: Setting the potentiometer (2)



(1) - Setscrews
(2) - Connecting clamp

(3) - Setscrew
(4) - Potentiometer



6. Check whether the lifting gear plates are flush.

If the plates are not flush:

7. Loosen the setscrews (1).
8. Set the connecting clamp (2) for the lifting cylinder such that the plates are flush.
9. Tighten the setscrews (1).
10. Loosen the setscrew (3) for the shaft.
11. Turn the potentiometer axle such that the left display shows *1* in the first instance and the relevant maximum speed next to it.
12. Tighten the setscrew (3) without changing the value shown in the display.



13. Press the **ESC** key two times.



Important

14. Switch off the machine.
 15. Switch on the machine.
- ↪ Switching off and on will save the setting.

16 Setting the safety snap-on coupling

The safety snap-on coupling disengages in the event of the thread jamming and thus prevents the hook from being misadjusted or damaged.

16.1 Attaching the safety snap-on coupling



Proper setting

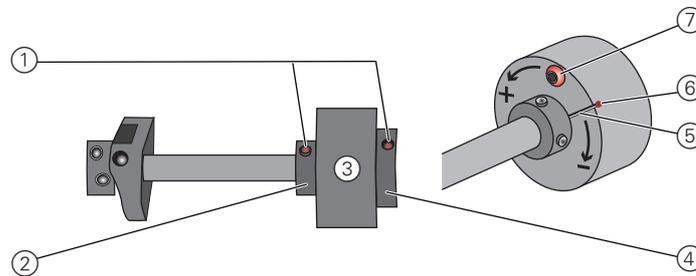
The four setscrews (1) on the two adjusting rings next to the safety snap-on coupling (3) must be parallel to one another. After the coupling has disengaged, they are no longer parallel.



Cover

- Tilt the machine head (📖 p. 15)

Fig. 65: Attaching the safety snap-on coupling



- | | |
|-------------------------------|---------------------|
| (1) - Setscrews | (5) - Setting slot |
| (2) - Left adjusting ring | (6) - Marking point |
| (3) - Safety snap-on coupling | (7) - Screw |
| (4) - Right adjusting ring | |



To attach the safety snap-on coupling:

1. Turn the left adjusting ring (2) such that the setscrews (1) on both adjusting rings are parallel to one another.
- ↳ The coupling engages.

16.2 Setting the torque

NOTICE

Property damage may occur!

If you change the torque, it could be that the coupling will not disengage although this would be required. This could cause machine damage, e. g. in the event of the thread jamming.

Do not change the factory setting and make sure that the torque remains at 8 Nm.



Proper setting

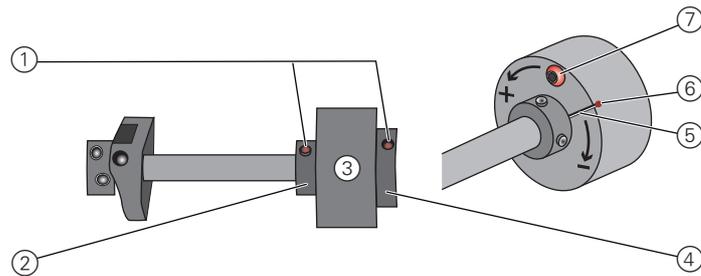
The machine is set at the factory such that the torque is 8 Nm when the marking point (6) is exactly above the setting slot (5).



Cover

- Tilt the machine head (📖 p. 15)

Fig. 66: Setting the torque



- | | |
|-------------------------------|---------------------|
| (1) - Setscrews | (5) - Setting slot |
| (2) - Left adjusting ring | (6) - Marking point |
| (3) - Safety snap-on coupling | (7) - Screw |
| (4) - Right adjusting ring | |



To set the torque:

1. Loosen the screw (7).
2. Using a screwdriver, turn the disc on the setting slot (5) such that 8 Nm is reached for the torque:
 - to increase the force: turn in the + direction
 - to reduce the force: turn in the - direction
3. Tighten the screw (7).

17 Maintenance

WARNING



Risk of injury from sharp parts!

Punctures and cutting possible.

Prior to any maintenance work, switch off the machine or set the machine to threading mode.

WARNING



Risk of injury from moving parts!

Crushing possible.

Prior to any maintenance work, switch off the machine or set the machine to threading mode.

This chapter describes maintenance work that needs to be carried out on a regular basis to extend the service life of the machine and achieve the desired seam quality.

Maintenance intervals

Work to be carried out	Operating hours			
	8	40	160	500
Machine head				
Removing lint and thread remnants	•			
Checking the oil level	•			
Check the hook lubrication		•		
Pneumatic system				
Check the water level in the pressure controller	•			
Cleaning the filter element				•
Specific components				
Cleaning the motor fan sieve		•		
Checking the toothed belt		•		

17.1 Cleaning

WARNING



Risk of injury from flying particles!

Flying particles can enter the eyes, causing injury.

Wear safety goggles.

Hold the compressed air gun so that the particles do not fly close to people.

Make sure no particles fly into the oil pan.

NOTICE

Property damage from soiling!

Lint and thread remnants can impair the operation of the machine.

Clean the machine as described.

NOTICE

Property damage from solvent-based cleaners!

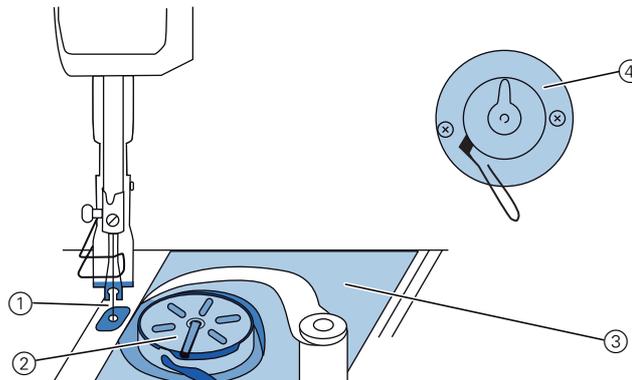
Solvent-based cleaners will damage paintwork.

Use only solvent-free substances for cleaning.

Lint and thread remnants should be removed after every 8 operating hours using a compressed air gun or a brush. If very fluffy sewing material is being sewn the machine must be cleaned more frequently.

17.1.1 Cleaning the machine head

Fig. 67: Cleaning the machine head



- (1) - Area around the needle
 (2) - Hook
 (3) - Area under the throat plate
 (4) - Cutter on the winder

Areas particularly susceptible to soiling:

- Cutter on the bobbin winder for the hook thread (4)
- Area under the throat plate (3)
- Hook (2)
- Area around the needle (1)



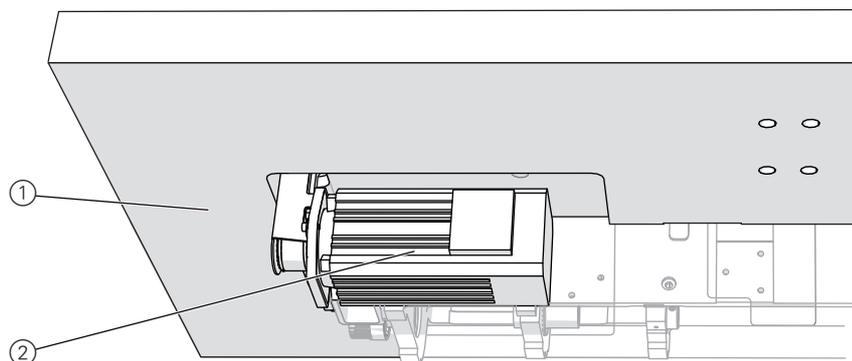
To clean the machine head:

1. Remove any dust and thread remains using a compressed-air pistol or a brush.

17.1.2 Cleaning the motor fan sieve

The motor fan sieve must be cleaned once a month using a compressed-air pistol. When very fluffy material is used for sewing, the motor fan sieve must be cleaned more frequently.

Fig. 68: Cleaning the motor fan sieve



- (1) - Table plate
 (2) - Motor fan sieve



To clean the motor fan sieve:

1. Remove any dust and thread remains using a compressed-air pistol.

17.2 Lubricating

CAUTION



Risk of injury from contact with oil!

Oil can cause a rash if it comes into contact with skin.

Avoid skin contact with oil.

If oil has come into contact with your skin, wash the affected areas thoroughly.

NOTICE

Property damage from incorrect oil!

Incorrect oil types can result in damage to the machine.

Only use oil that complies with the data in the instructions.

CAUTION



Risk of environmental damage from oil!

Oil is a pollutant and must not enter the sewage system or the soil.

Carefully collect up used oil.

Dispose of used oil and oily machine parts in accordance with national regulations.

The machine is equipped with a central oil-wick lubrication system. The bearings are supplied from the oil reservoir.

For topping off the oil reservoir, use only lubricating oil **DA 10** or oil of equivalent quality with the following specifications:

- Viscosity at 40 °C: 10 mm²/s
- Flash point: 150 °C

You can order the lubricating oil from our sales offices using the following part numbers:

Container	Part no.
250 ml	9047 000011
1 l	9047 000012
2 l	9047 000013
5 l	9047 000014

17.2.1 Lubricating the machine head

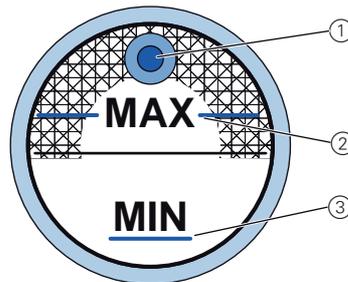
The central oil lubrication system supplies all bearing positions automatically with oil from the reservoir.



Proper setting

The oil level is between the minimum level marking and the maximum level marking.

Fig. 69: Lubricating the machine head



(1) - Refill opening

(2) - Maximum level marking

(3) - Minimum level marking



To lubricate the machine head:

1. Check the oil level indicator every day.

If the oil level is below the minimum level marking (3):

2. Pour oil through the refill opening (1) but no higher than the maximum level marking (2).



Information

Note for machines with CLASSIC equipment

If the oil level falls below the minimum level marking (3), the oil level indicator lights up in red.

3. Switch the machine off and on again after filling with oil.

↪ The red light goes out.

17.2.2 Setting the hook lubrication

The approved amount of oil for hook lubrication is a factory specification. Hold a sheet of blotting paper near to the hook when sewing.



Proper setting

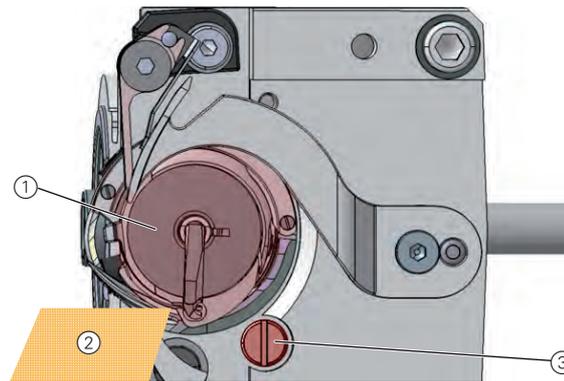
After sewing a stretch of approx. 1 m, the blotting paper has been sprayed with a thin and even film of oil.



Cover

- Throat plate slide (📖 p. 19)

Fig. 70: Setting the hook lubrication



(1) - Hook

(2) - Blotting paper

(3) - Regulating screw



To set the hook lubrication:

1. Turn the regulating screw (3):
 - **release more oil:** turn counterclockwise
 - **release less oil:** turn clockwise



Important

The released amount of oil does not change until the operating time has run a few minutes. Sew for several minutes before you check the setting again.

17.3 Servicing the pneumatic system

17.3.1 Setting the operating pressure

NOTICE

Property damage from incorrect setting!

Incorrect operating pressure can result in damage to the machine.

Ensure that the machine is only used when the operating pressure is set correctly.

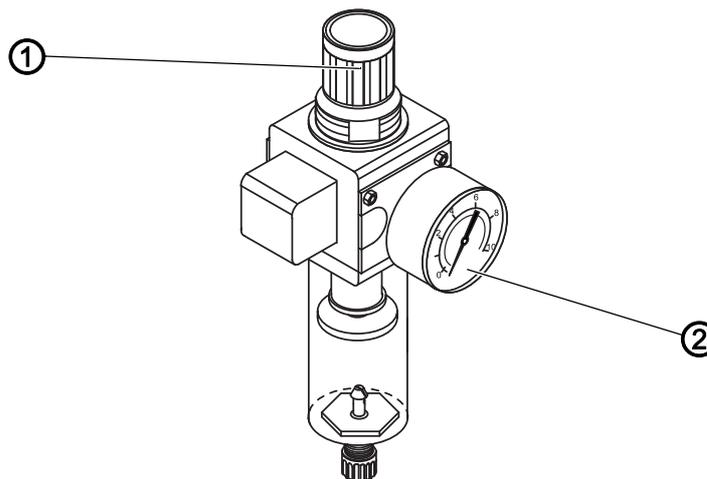


Proper setting

Refer to the **Technical data** (📖 p. 103) chapter for the permissible operating pressure. The operating pressure cannot deviate by more than ± 0.5 bar.

Check the operating pressure on a daily basis.

Fig. 71: Setting the operating pressure



(1) - Pressure controller

(2) - Pressure gage



To set the operating pressure:

1. Pull the pressure controller (1) up.
2. Turn the pressure controller until the pressure gage (2) indicates the proper setting:
 - Increase pressure = turn clockwise
 - Reduce pressure = turn counterclockwise
3. Push the pressure controller (1) down.

17.3.2 Draining the water condensation

NOTICE

Property damage from excess water!

Excess water can cause damage to the machine.

Drain water as required.

Water condensation accumulates in the water separator (2) of the pressure controller.

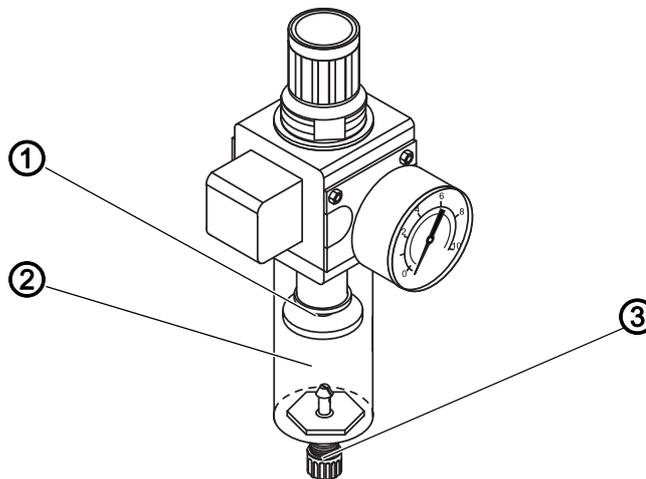


Proper setting

Water condensation must not rise up to the level of the filter element (1).

Check the water level in the water separator (2) on a daily basis.

Fig. 72: Draining the water condensation



(1) - Filter element
(2) - Water separator

(3) - Drain screw



To drain water condensation:

1. Disconnect the machine from the compressed air supply.
2. Place the collection tray under the drain screw (3).
3. Loosen the drain screw (3) completely.
4. Allow water to drain into the collection tray.
5. Tighten the drain screw (3).
6. Connect the machine to the compressed air supply.

17.3.3 Cleaning the filter element

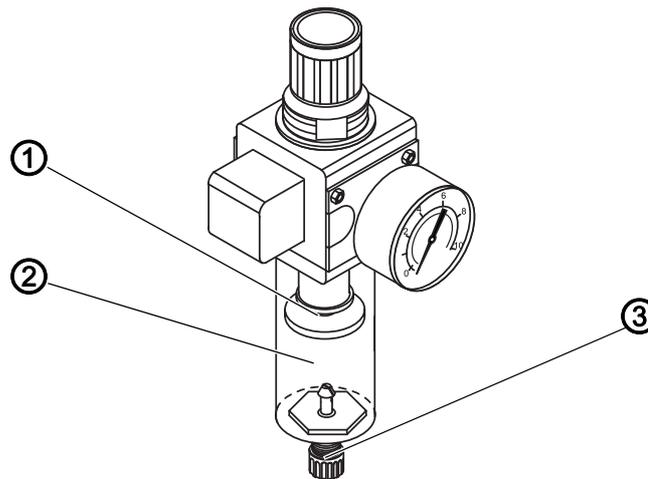
NOTICE

Damage to the paintwork from solvent-based cleaners!

Solvent-based cleaners damage the filter.

Use only solvent-free substances for washing out the filter tray.

Fig. 73: Cleaning the filter element



(1) - Filter element
(2) - Water separator

(3) - Drain screw



To clean the filter element:

1. Disconnect the machine from the compressed air supply.
2. Drain the water condensation ( S. 90).
3. Loosen the water separator (2).
4. Loosen the filter element (1).
5. Blow out the filter element (1) using the compressed air gun.
6. Wash out the filter tray using benzine.
7. Tighten the filter element (1).
8. Tighten the water separator (2).
9. Tighten the drain screw (3).
10. Connect the machine to the compressed air supply.

17.4 Checking the toothed belt

WARNUNG

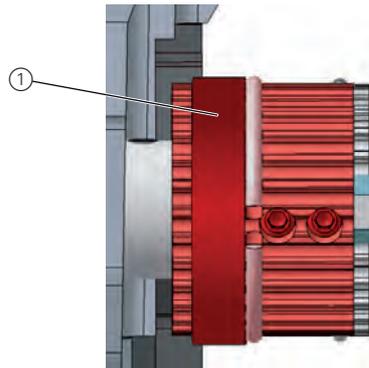


Risk of injury from moving parts!

Crushing possible.

Switch off the machine before checking the toothed belt.

Fig. 74: Checking the toothed belt



(1) - Toothed belt

The condition of the toothed belt must be checked once a month.



Important

A damaged toothed belt must be replaced immediately.



Proper setting

The toothed belt exhibits no cracks or fragile areas.

When pressed with a finger, the toothed belt gives no more than 10 mm.



Cover

- Tilt the machine head (📖 p. 15)



To check the toothed belt:

1. Check the toothed belt for cracks or fragile areas.
2. Prod the toothed belt gently in the middle using your finger.

17.5 Parts list

A parts list can be ordered from Dürkopp Adler. Or visit our website for further information at:

www.duerkopp-adler.com



18 Decommissioning

WARNING



Risk of injury from a lack of care!

Serious injuries may occur.

ONLY clean the machine when it is switched off.
Allow ONLY trained personnel to disconnect the machine.

CAUTION



Risk of injury from contact with oil!

Oil can cause a rash if it comes into contact with skin.

Avoid skin contact with oil.
If oil has come into contact with your skin, wash the affected areas thoroughly.



To decommission the machine:

1. Switch off the machine
2. Unplug the power plug.
3. If applicable, disconnect the machine from the compressed air supply.
4. Remove residual oil from the oil pan using a cloth.
5. Cover the control panel to protect it from soiling.
6. Cover the control to protect it from soiling.
7. Cover the entire machine if possible to protect it from contamination and damage.

19 Disposal

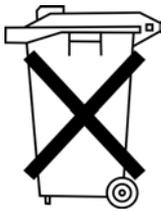
CAUTION



Risk of environmental damage from improper disposal!

Improper disposal of the machine can result in serious environmental damage.

ALWAYS comply with the national regulations regarding disposal.



The machine must not be disposed of in the normal household waste.

The machine must be disposed of in a suitable manner in accordance with all applicable national regulations.

When disposing of the machine, be aware that it consists of a range of different materials (steel, plastic, electronic components, etc.). Follow the national regulations when disposing these materials.

20 Troubleshooting

20.1 Customer Service

Contact for repairs and issues with the machine:

Dürkopp Adler AG

Potsdamer Str. 190
33719 Bielefeld, Germany

Tel. +49 (0) 180 5 383 756

Fax +49 (0) 521 925 2594

Email: service@duerkopp-adler.com

Internet: www.duerkopp-adler.com



20.2 Errors in sewing process

Error	Possible causes	Remedial action
Unthreading at seam beginning	Needle thread tension is too firm	Check needle thread tension
Thread breaking	Needle thread and hook thread have not been threaded correctly	Check threading path
	Needle is bent or sharp-edged	Replace the needle
	Needle is not inserted correctly into the needle bar	Insert the needle correctly into the needle bar
	The thread used is unsuitable	Use recommended thread
	Thread tensions are too tight for the thread used	Check thread tensions
	Thread-guiding parts, such as thread tube, thread guide or thread take-up disk, are sharp-edged	Check threading path
	Throat plate, hook or spread have been damaged by the needle	Have parts reworked by qualified specialists
Missing stitches	Needle thread and hook thread have not been threaded correctly	Check threading path
	Needle is blunt or bent	Replace the needle
	Needle is not inserted correctly into the needle bar	Insert the needle correctly into the needle bar
	The needle thickness used is unsuitable	Use recommended needle thickness
	The reel stand is installed incorrectly	Check the assembly of the reel stand
	Thread tensions are too tight	Check thread tensions
	Throat plate, hook or spread have been damaged by the needle	Have parts reworked by qualified specialists

Error	Possible causes	Remedial action
Loose stitches	Thread tensions are not adjusted to the sewing material, the sewing material thickness or the thread used	Check thread tensions
	Needle thread and hook thread have not been threaded correctly	Check threading path
Needle breakage	Needle thickness is unsuitable for the sewing material or the thread	Use recommended needle thickness

21 Technical data

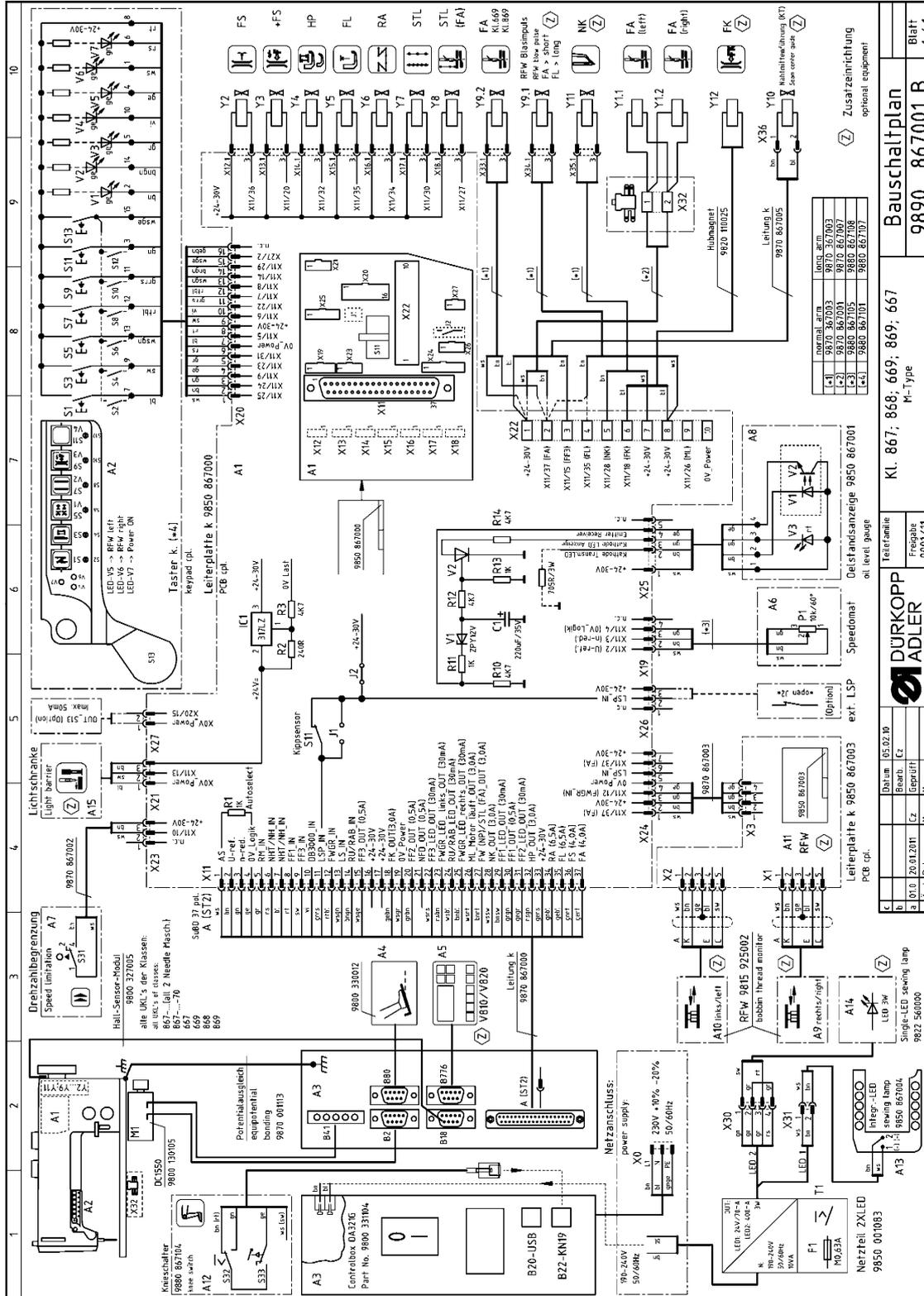
Data and characteristic values

Technical data	Unit	H867
Machine type		Long arm machine
Type of stitches		Lockstitch 301
Hook type		vertical, extra large (3XL)
Number of needles		1-2
Needle system		7x23, 238, 794 (with needle adapter)
Needle strength	[Nm]	140 - 230
Thread strength	[Nm]	8/3
Stitch length	[mm]	12
Speed maximum	[min ⁻¹]	1800
Speed on delivery	[min ⁻¹]	1800
Mains voltage	[V]	230
Mains frequency	[Hz]	50/60
Operating pressure	[bar]	6
Length	[mm]	1090
Width	[mm]	220
Height	[mm]	500
Weight	[kg]	94

22 Appendix

22.1 Wiring diagram

Fig. 75: Wiring diagram





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