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Part 3: Service Instructions Cl. 579

Program Version 579A04

1. General

These Service Instructions describe the settings of the automatic buttonhole machine in the proper order.

ATTENTION!

Various setting positions are interdependent. It is therefore essential that the individual settings be conducted while keeping to the order described.

ATTENTION !

The tasks described in these Service Instructions are only to be conducted by skilled personnel or by persons appropriately instructed!

Attention Danger of Breakage !

Before starting the sewing unit after disassembly, the setting work necessary for this must first be conducted as per these Service Instructions.

Caution Risk of Injury!

Before repair, conversion and maintenance work:

– Turn the main switch off or bring the machine into the “Safe Stop” position.
  Exception:
  Setting work which must be conducted with testing or setting programs.

Adjustment work and function tests with the automatic sewing unit running.

– Conduct adjustment work and function tests with the automatic sewing unit running only when observing all safety measures and with the greatest caution.

3

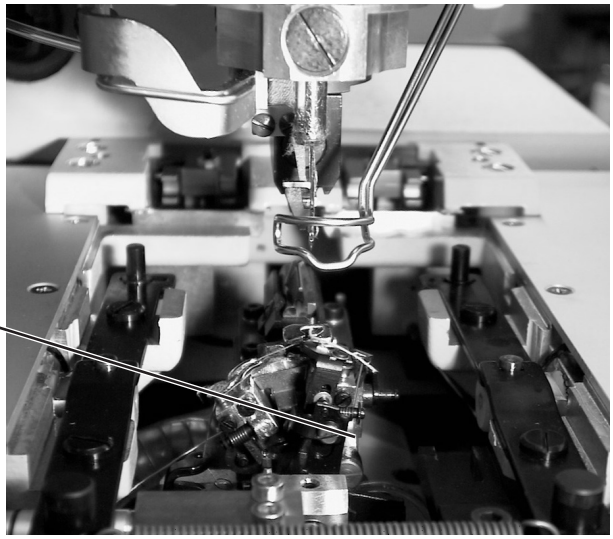
1.1 Necessary Program Setting

For setting the automatic buttonhole machine, the following buttonhole shape must be set at the control panel:

– Buttonhole without bartack
– Covering Stitch = 0
– No cutting space

(See Operating Instructions)


1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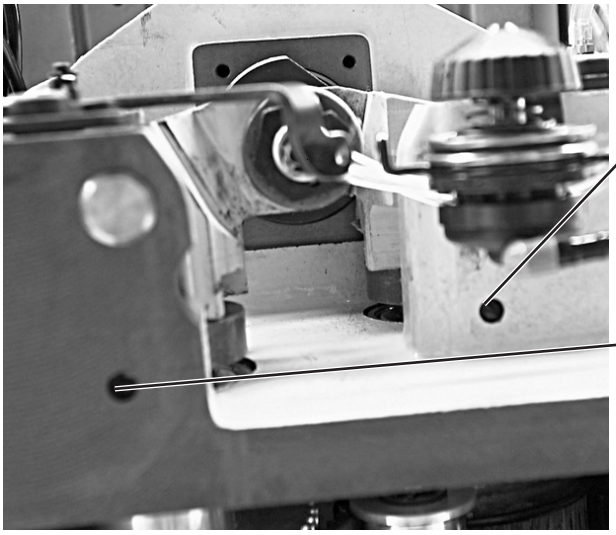
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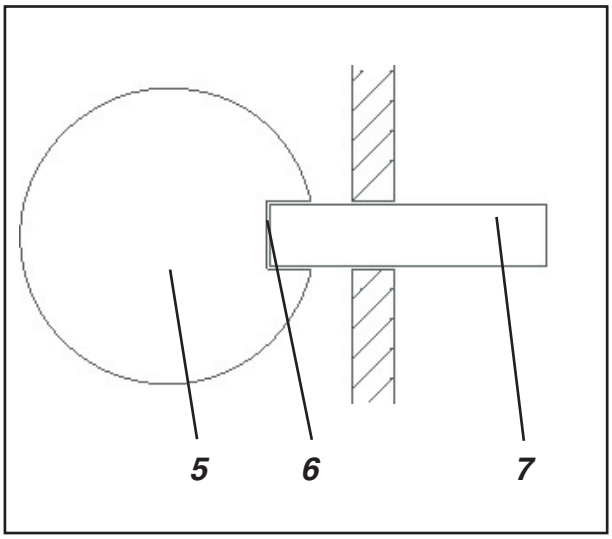
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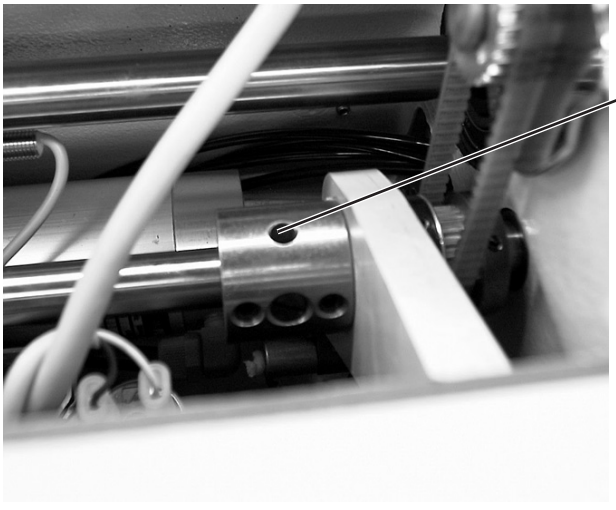
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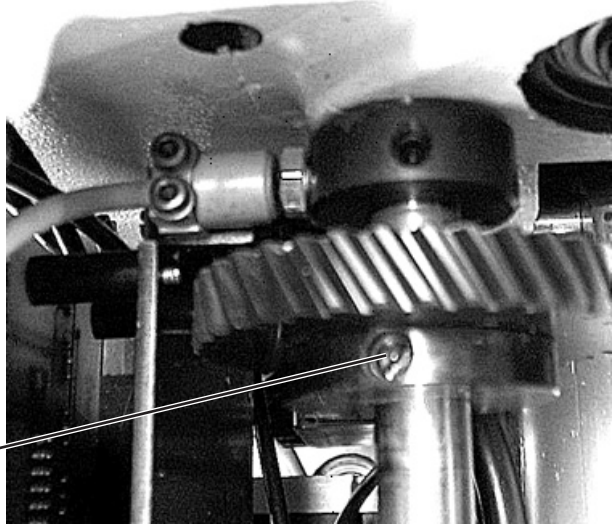

9

2. Setting the Positioning Points

Caution Risk of Injury!

Set the positioning points only in the “Safe Stop” position or with the machine turned off.

Rule and Control

With the aid of the positioning points, an easy setting of the needle movement to the looper and spreader movements is possible.

When the arm shaft is in the stake-out position, the cams for the spreader and looper must also be in the stake-out positions.

The positions are set at the factory so that the standard material can be sewn with the 579.
If you wish to use other needle sizes, thread strengths or materials, you may possibly need to set positions which deviate from the stake-out position.

The positioning pins are to be found in the accessories pack of the machine and have a diameter of 5 mm.

– Turn the handwheel until the looper support 2 is in the left end position. The needle bar must then be in the upper dead center in front of the left needle entry into the material.
– Turn the handwheel until the arm shaft can be staked out with a pin through the drilled hole 1.
– With another pin, check if the spreader cam (drilled hole 4) and the looper cam (drilled hole 3) are in the stake-out positions.
– The drilled hole 8 of the covering stitch cam must lie upward.

3

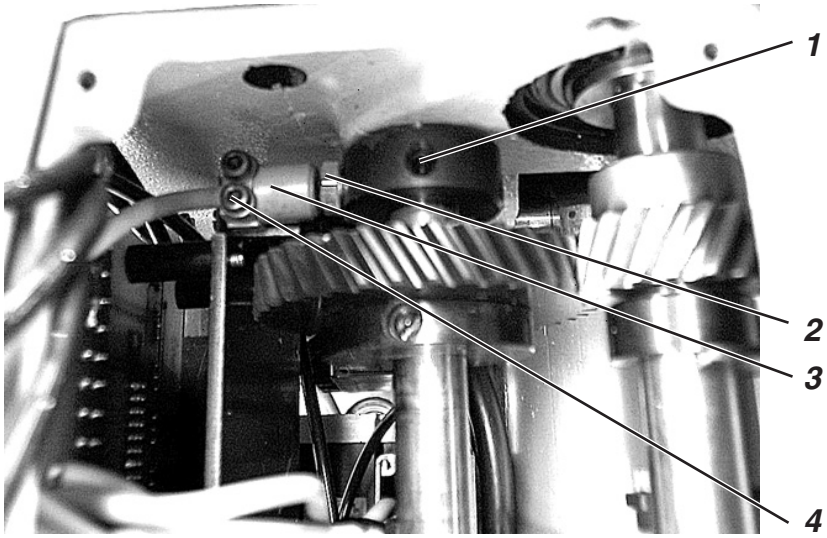
Caution Risk of Injury!

Set the swing motion only in the “Safe Stop” position or with the machine turned off.

Correction

– Stake out arm shaft with pin 1.
– Stake out the looper and spreader (drilled hole 4 for the spreader cam; drilled hole 3 for the looper cam).
– If the positioning points do not fit:
Loosen the screws on the respective cam.
– Turn the looper or spreader cam until the positioning pin 7 catches in the groove 6 of the respective cam 5.
– Tighten the screws again.
– Loosen screws 9 on the toothed wheel.
– Turn the cam shaft so that the stake-out hole 8 lies upward.
– Tighten screws 9 again.
– Remove the positioning pins.

3. Setting the Upper Dead Center



Caution Risk of Injury!

Set the upper dead center only in the “Safe Stop” position or with the machine turned off.

Rule and Control

With the aid of of the proximity switch, the automatic buttonhole machine recognizes if it is at the upper dead center in front of the left or right needle entry point.

If the needle bar is at the upper dead center for the left needle entry point, the screw 2 must lie in front of the proximity switch 3.

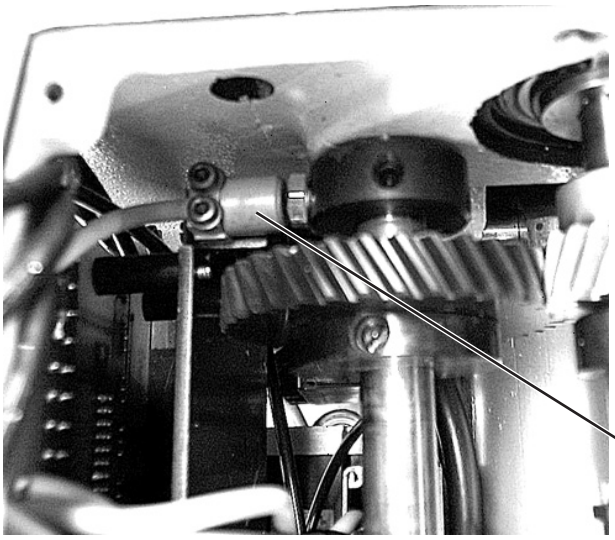
The clearance between screw 2 on the set collar and proximity switch 3 may be a max. of 0.5 mm.

Insert the positioning pin for the arm shaft in the appropriate drilled hole (see Chapter 2).

Correction

- Stake out arm shaft.
- Loosen screw 1.
- Turn the collar on the shaft.
- Tighten screw 1.
- Loosen screws 4.
- Move proximity switch 3 so that the clearance between screw 2 and proximity switch 3 is a max. of 0.5 mm.
- Tighten screws 4.
- Remove the positioning pin.

4. Setting of the Upper Dead Center for the Sewing Drive



Caution Risk of Injury!

Set the switching segment only in the “Safe Stop” position or with the machine turned off.

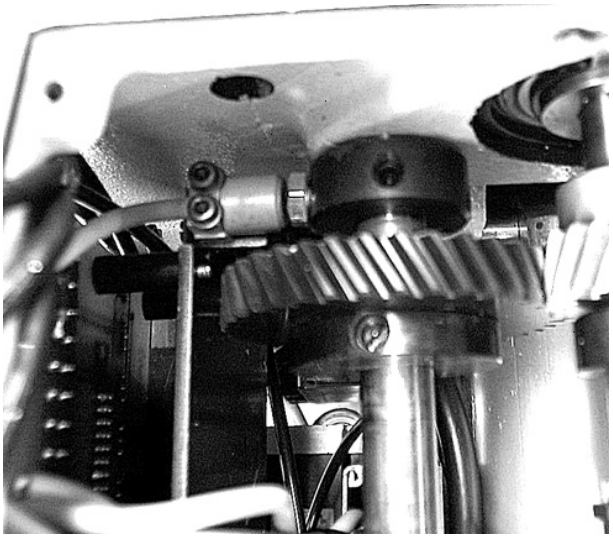
With the aid of the switching segment 2, the automatic buttonhole machine recognizes that the needle bar is at the upper dead center before start of the sewing cycle.

Rule and Control

When the needle bar is at the upper dead center in front of the left needle entry point, the switching segment must be set so that the switch 3 is activated and switch 1 deactivated. This is the case when the switch 1 is positioned to the switching segment 2 as in the illustration above right.

The clearance between proximity switch 1 and switching segment 2 may be a max. of 0.5 mm.

- Turn the sewing machine off.
- Turn the sewing machine on again. At the display of the Dürkopp-Adler logo, press the F key.
  After a brief period, a code prompt appears.
- Enter code “**25483**”and confirm with the OK key.
- Select the “Multitest” function and confirm with the OK key.
- Select the “Input Test” function and confirm with the OK key.
- Select the switch 3 (S08) with the arrow keys.
- Turn the handwheel in the direction of run.
- When the switch 3 (S08) is activated, the switch 1 must be positioned to the switching segment 2 as in the illustration above right. The switch 1 should not be activated. The LED on the switch 1 should not be lit.
  In the display, the symbol for switch 3 changes when the handwheel is turned.
- To exit the menu, press the “ESC” key.



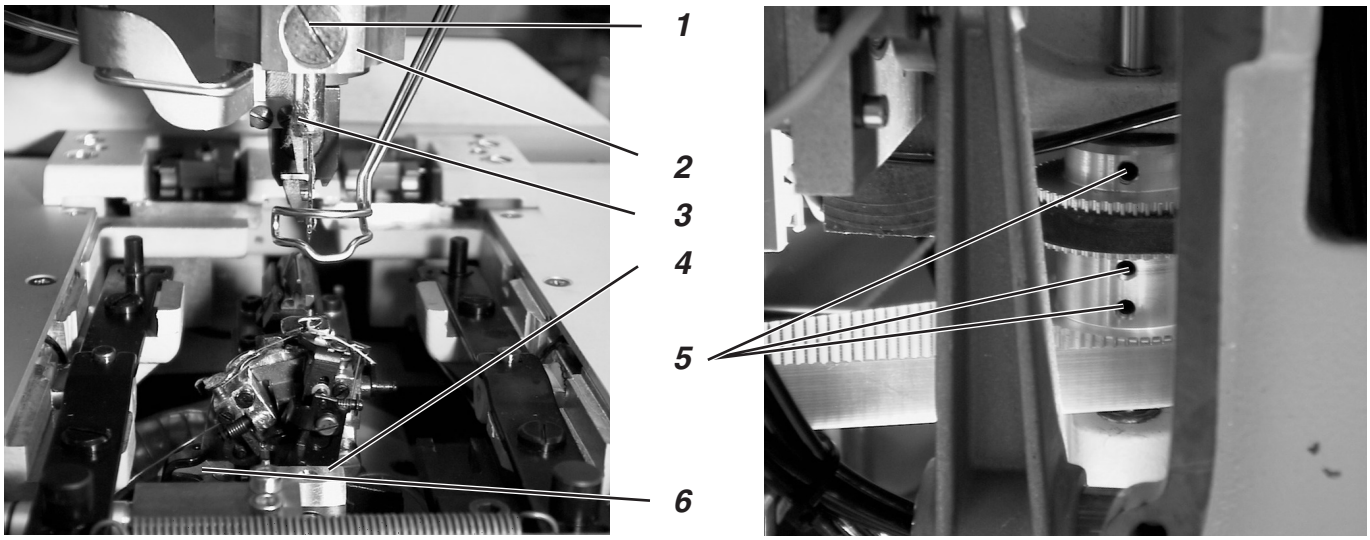
Correction

– Turn the machine on, the machine runs into the sewing position.
– Turn the Safe Stop on.
– Loosen the screws on the switching segment 3.
– Turn switching segment 3 in the direction of rotation so that the switch 2 receives contact.
– Turn switching segment 3 back so far that the switch 2 is deactivated again.
– Tighten the screws on the switching segment 3.

Correction of the clearance of the proximity switch to the disc

– Loosen nut 1.
– Screw proximity switch 2 out or in.
– Tighten nut 1.

5. Setting the Needle Bar Parallel to the Looper Turret



Caution Risk of Injury!

Set the parallelism of the needle bar to the looper turret only in the “Safe Stop” position or with the machine turned off.

Rule and Control

The needle bar guide 2 and the looper turret 6 must lie parallel to one another, that is, screw 1 and the block 4 must lie vertically above one another.

– Check if the block 4 on the looper turret and the screw 1 on the needle bar guide lie vertically above one another.

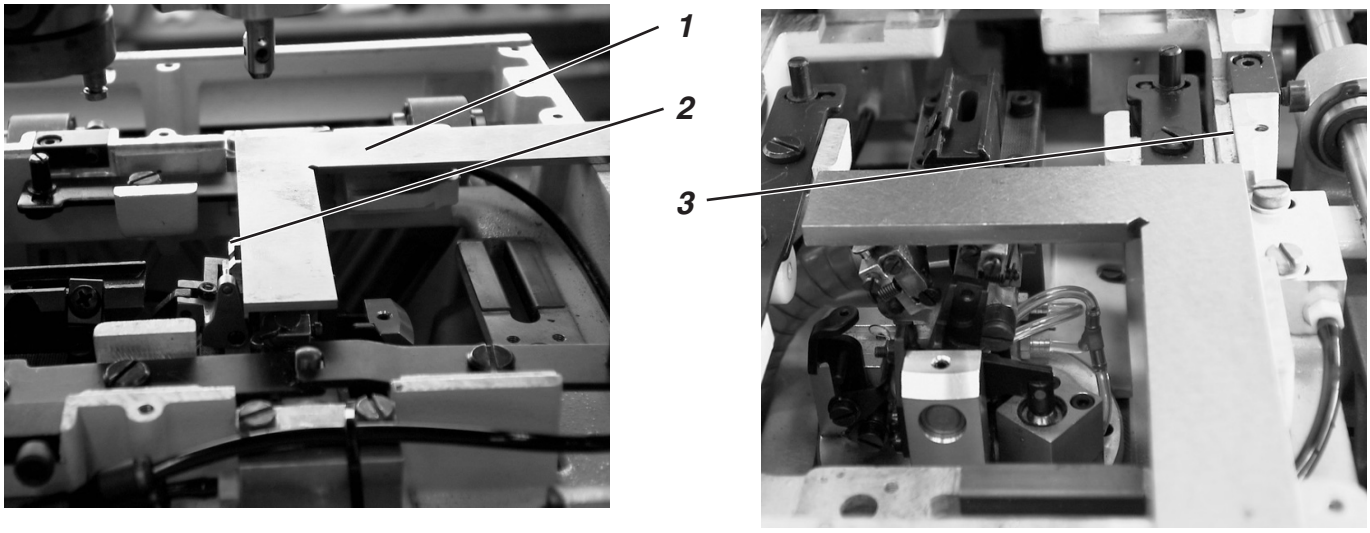
ATTENTION !

The needle fastening screw 3 must lie to the left.

Correction

– Loosen screws 5 on the toothed wheel.
– Hold the looper turret fast and turn the needle bar guide so that looper turret and swing sleeve lie parallel.
– Tighten screws 5 on the toothed wheel.

6. Alignment of the Looper turret to the Cloth Support Plate



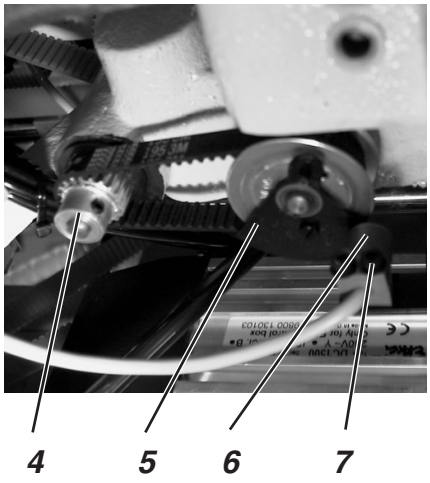
Caution Risk of Injury!

Align the looper turret only in the “Safe Stop” position or with the machine turned off.

Note:

Take care that a buttonhole is set as described in Chapter 1.1 “Necessary Program Settings”.

Rule and Control



In its initial position, the looper turret must lie at a right angle to the edge 3 of the cloth support plate.

The proximity switch 6 with the plate 5 determines the initial position of the looper turret and needle bar.

The clearance between proximity switch 6 and plate 5 may be a max. of 0.5 mm.

– Turn the machine on.
  The automatic buttonhole machine runs into the initial position.
– Turn the Safe Stop on.
– Place an angle 1 at the edge of the cloth support plate 3 and at the looper turret.
  The looper turret must lie at a right angle to the cloth support plate.

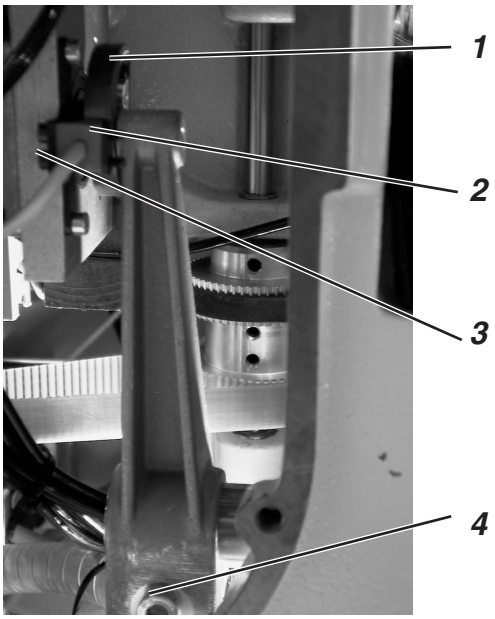
Correction
Clearance between proximity switch and plate

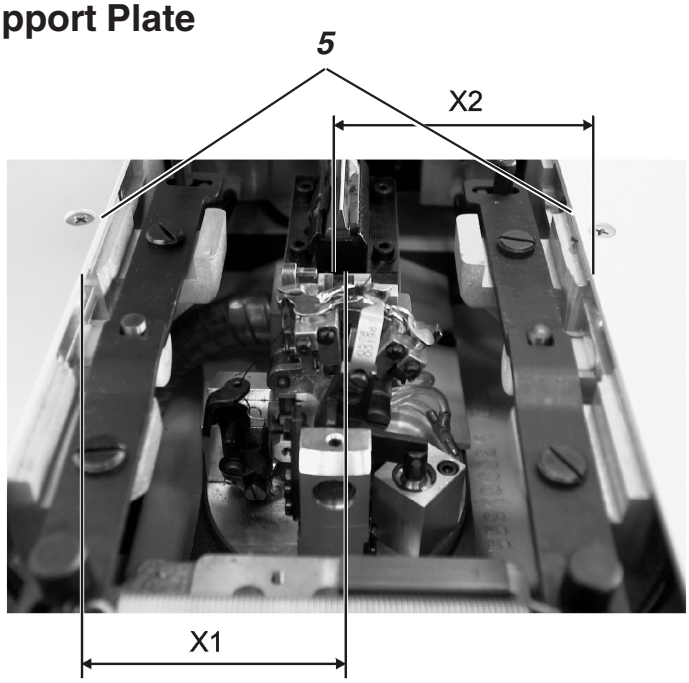
– Turn the machine off.
– Loosen screws 7 on the proximity switch.
– Move proximity switch 6.
– Tighten screws 7 on the proximity switch.

Setting the initial position

– Loosen the screws on toothed wheel 4.
– Turn toothed disk 4 on the shaft.
  The initial position is changed by the turning.
– Tighten the screws again.
– After the setting work, turn the machine on.
– As soon as the machine is in the base position, turn the Safe Stop on and again check with an angle if the automatic sewing unit runs into the initial position correctly.

7. Lateral Movement of the Cloth Support Plate





Caution Risk of Injury!

Set the setting the lateral movement of the cloth support plate only in the “Safe Stop” position or with the machine turned off.

Note:

Take care that a buttonhole is set as described in Chapter 1.1 “Necessary Program Settings”.

Rule and Control

The clearance between proximity switch 2 and cam plate 1 may be a max. of 0.5 mm.

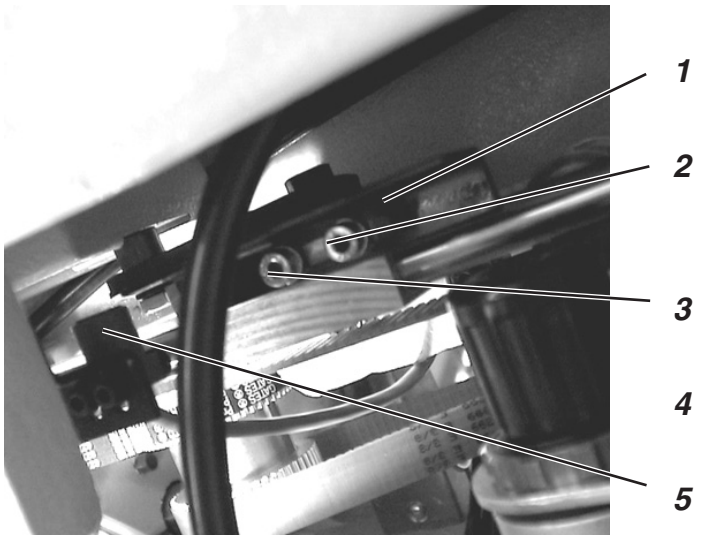
When the automatic buttonhole machine is in its initial position, the dimension X1 (groove of the needle plate mounting to the edge 5) must be the same as dimension X2 (edge to the groove of the needle plate mounting). In order to correctly measure the clearance, the left and right covers of the cloth support plate must be removed.

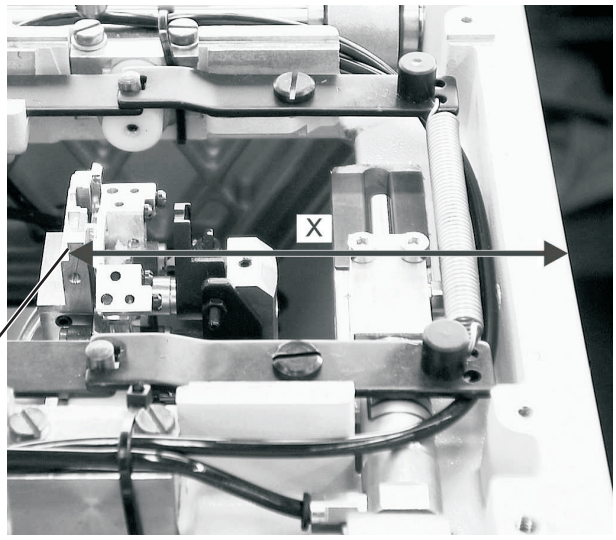
– Turn the machine on.
  The initial position is run into.

Correction

– Loosen screw 4.
– Manually move the cloth support plate so that the dimension is the same on both sides.
– Tighten screw 4 again.
– Turn the machine on.
  The initial position is run into.
– Turn the Safe Stop on.
– Check the dimension and redo the setting, if necessary.
– For the setting of the clearance of the proximity switch 2 to the cam plate 1, loosen screws 3.
– Move proximity switch 2.
– Tighten screws 3.

8. Lengthwise Movement of the Cloth Support Plate





Caution Risk of Injury!

Set the lengthwise movement of the cloth support plate only in the “Safe Stop” position or with the machine turned off.

Note:

Take care that a buttonhole is set as described in Chapter 1.1 “Necessary Program Settings”.

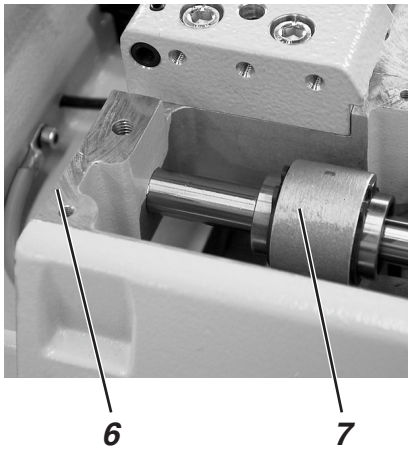
Rule and Control

The base position for the cloth support plate must be set so that the cloth support plate does not collide with other components in either end position.

The proximity switch 5 must have a clearance of a max. of 0.5 mm to the switching plate 1. The clearance must be adhered to along the whole length of the switching plate.

– Turn the machine on. The initial position is run into.
– The dimension from the edge 4 up to the forward edge of the cloth support plate must be 118.5 mm (see dimension X in the illustration above).

Correction
Presetting:

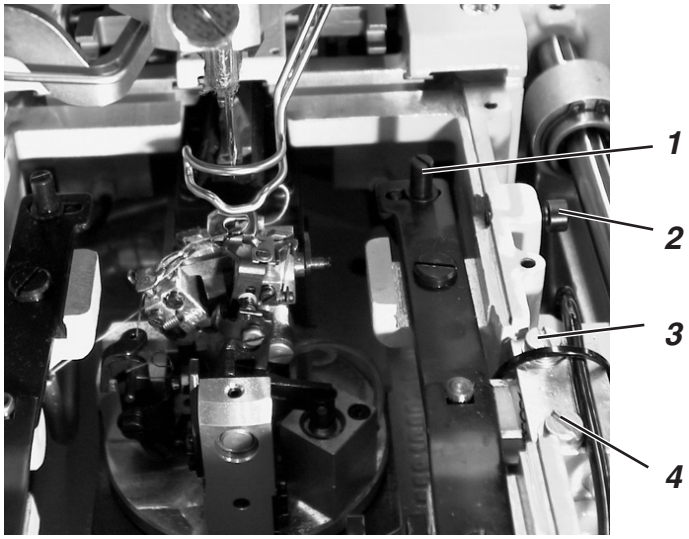


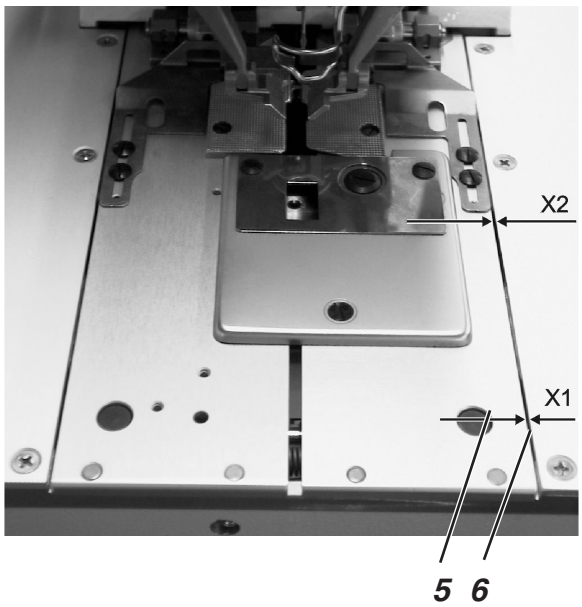
– Loosen screws 2 and 3.
– Align angle 1 so that the screws are seated centered in the slots.
– Tighten screws 2 and 3 again.

Setting

– Turn the machine on.
As soon as the automatic sewing unit is in its base position, turn the Safe Stop on.
The dimension X must be 118.5 mm.
– Set the slowest possible sewing speed.
– Sew a buttonhole.
– Observe the cloth support plate.
The lever 7 should in no case collide with the cloth support plate 6.
– If a collision does occur, slightly change the position of the angle as described under presetting.
Then recheck if a collision occurs during the sewing of a buttonhole.

9. Clamping Plates





9.1 Parallelism

Caution Risk of Injury!

Set the clamping plates only in the “Safe Stop” position or with the machine turned off.

Rule and Control

Both clamping plates must be set so that the clearance between the clamping plates 5 and the cloth support plate 6 is the same everywhere (Dimension X1 = X2).

Set a clearance which is the same along the whole length.

Correction

– Set pin 1.

9.2 Clearance of the Clamping Plates to the Cloth Support Plate

Caution Risk of Injury!

Set the clamping plates only in the “Safe Stop” position or with the machine turned off.

Rule and Control

The clearance of the clamping plates to the cloth support plate must be 1 mm along the whole length.

Correction

– Screw screw 2 out.
– Loosen screws 3 and 4 on the cylinder.
– Move the cylinder.
– Set the clearance at 1 mm.
– Tighten screws 3 and 4.

9.3 Setting the Spread

Caution Risk of Injury!

Set the clamping plates only in the “Safe Stop” position or with the machine turned off.

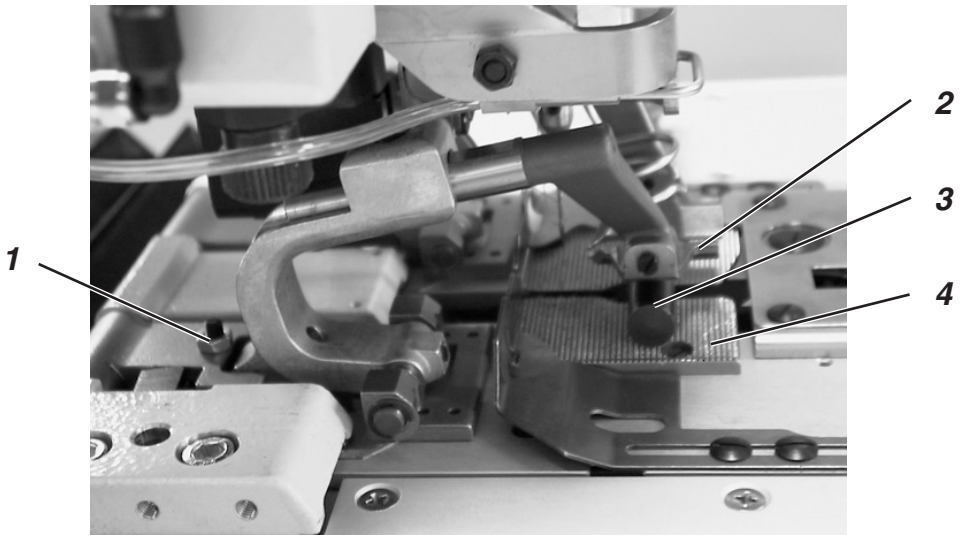
Rule and Control

Dependent on the sewing materials employed, the desired spread can be set with the screw 1.

Correction

– Turn screw 1 until the desired spread is set.

10. Height of the Cloth Clamps



Caution Risk of Injury!

Set the height of the cloth clamps only in the “Safe Stop” position or with the machine turned off.

Rule and Control

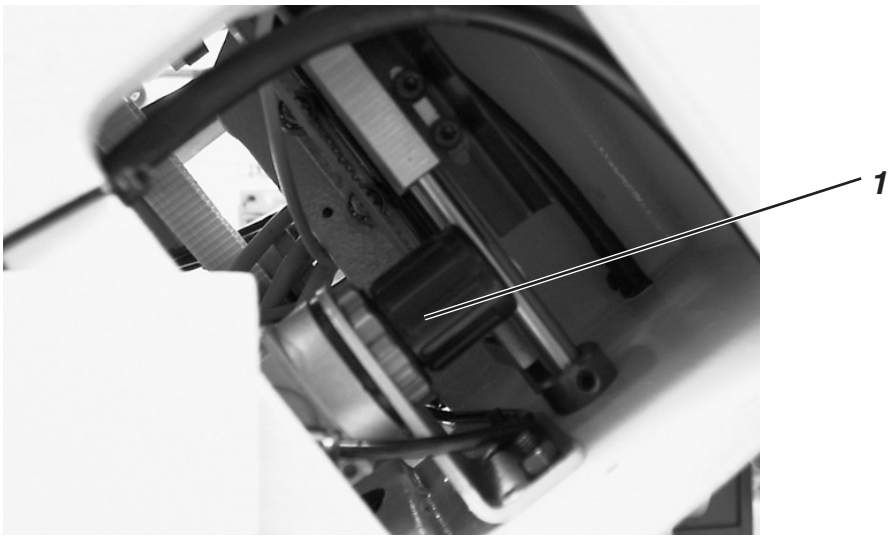
The height of the cloth clamps 2 must be set so that the clearance between the open upper cloth clamps 2 and the lower cloth clamps (pos. 3) is 10 mm.

– E.g. place a drill bit with a diameter of 10 mm between the cloth clamps in order to check the clearance.

Correction

– Loosen nut.
– Set the screws 1 on the cloth clamps accordingly.
– Tighten the nut.

11. Setting of the Cloth Clamp Pressure



Caution Risk of Injury!

Set the cloth clamp pressure only with the machine turned off.

Rule and Control

In order to avoid damage to the material or to keep thin material from bunching during clamping, the cloth clamp pressure should be set as low as necessary.

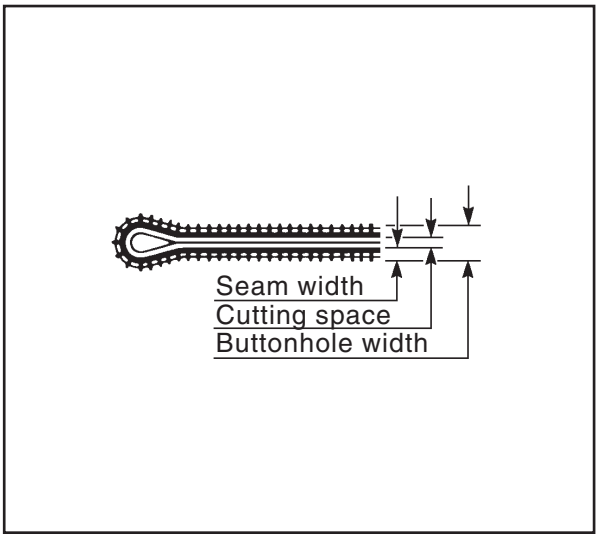
Thereby, care is to be taken that the sewing material is securely and firmly clamped.

Correction

- Turn the machine off.
- Swing the machine into the upmost position.
- Set the pressure at the regulator 1.
- Lower the machine again.

12. Setting the Seam Width

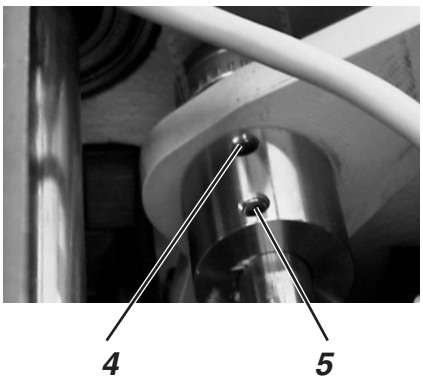
12.1 Narrow Seam Width



Caution Risk of Injury!

Set the stitch pattern only in the “Safe Stop” position or with the machine turned off.

The automatic buttonhole machine 579 has two fixed adjustable seam widths (see illustration). The value for the narrow seam width is 2.2 mm. And, for the wide seam width, it is 3.3 mm. The fixed seam widths can, additionally be enlarged or shrunk by 0.5 mm via the control panel (see Operating Instructions).



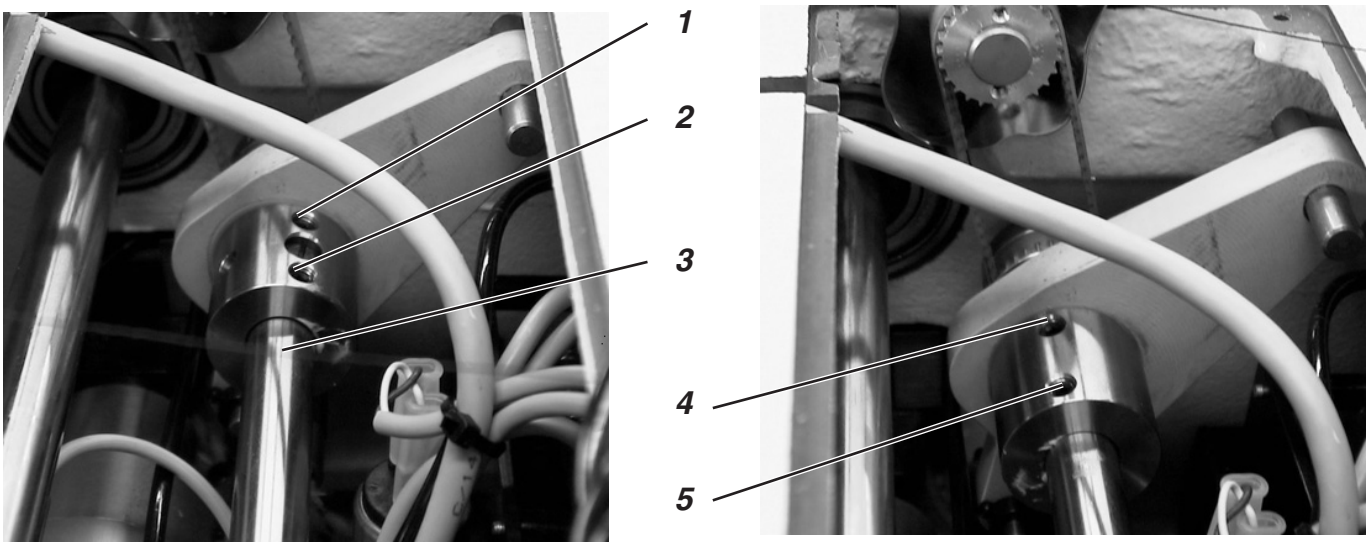
Rule and Control

- Turn the handwheel so that three screws are visible on the cam. Loosen screws 1 and 2 by one to two turns.
- Continue to turn the handwheel so that two screws are visible on the cam. Screw screws 4 and 5 in as far as possible.
- Tighten screws 1, 2, 4 and 5.
- Turn the machine on.
- At the display of the main menu, press the “F” key.
- With the arrow keys, set code “**25483**” and confirm with the OK key.
- Select the menu items “Configuration”, “Machine” and “Covering Stitch” in this order and confirm with the OK key.
- There must be a “S” for narrow behind the menu item. If there is instead a “B” for wide, change the setting with the arrow keys and confirm with the OK key.
- Exit the service menu by repeated pressing of the “ESC”key .

ATTENTION !

After the change of the seam width, the looping stroke (see Chapter Looping Stroke) must be set anew.

12.2 Wide Seam Width



Caution Risk of Injury!

Set the stitch pattern only in the “Safe Stop” position or with the machine turned off.

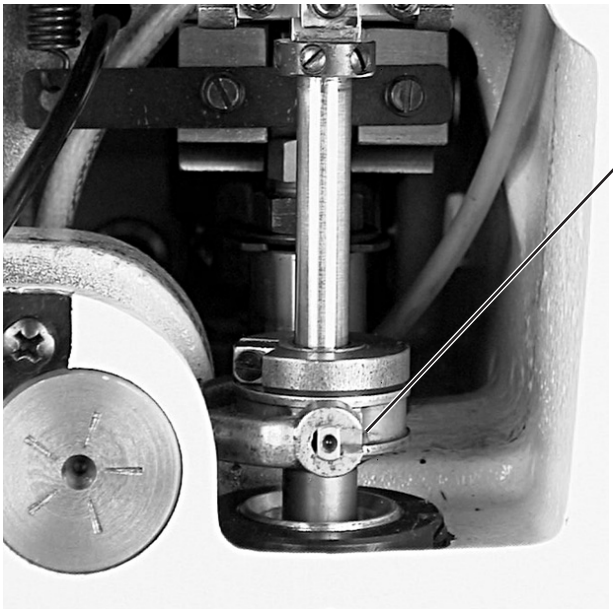
Rule and Control

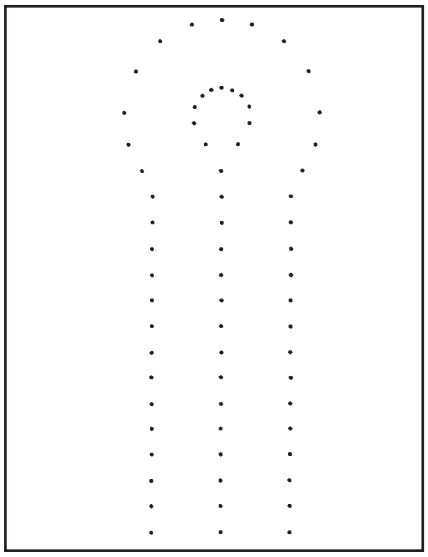
- Turn the handwheel so that two screws are visible on the cam. Loosen screws 4 and 5 by one to two turns.
- Turn the handwheel so that three screws are visible on the cam. Screw screws 1 and 2 in as far as possible.
- Tighten screws 4 and 5.
- At the display of the main menu, press the “F” key.
- With the arrow keys, set code “**25483**“ .
- Select the menu items “Configuration”, “Machine” and “Covering Stitch” in this order and confirm with the OK key.
- There must be a “B” for wide behind the menu item. If there is instead a “S” for narrow, change the setting with the arrow keys and confirm with the OK key.
- Exit the service menu by repeated pressing of the “ESC”key.

ATTENTION !

After the change of the seam width, the looping stroke (see Chapter Looping Stroke) must be set anew.

12.3 Needle-Zero Setting





Rule and Control

The needle zero position lies to the left (inside), meaning, the oscillation of the needle bar is one-sided, that is, during sewing, it moves from left (inside) to right (outside).

The inner needle entries of the forward and reverse lips must, at the needle zero position, lie inline (see adjacent illustration).

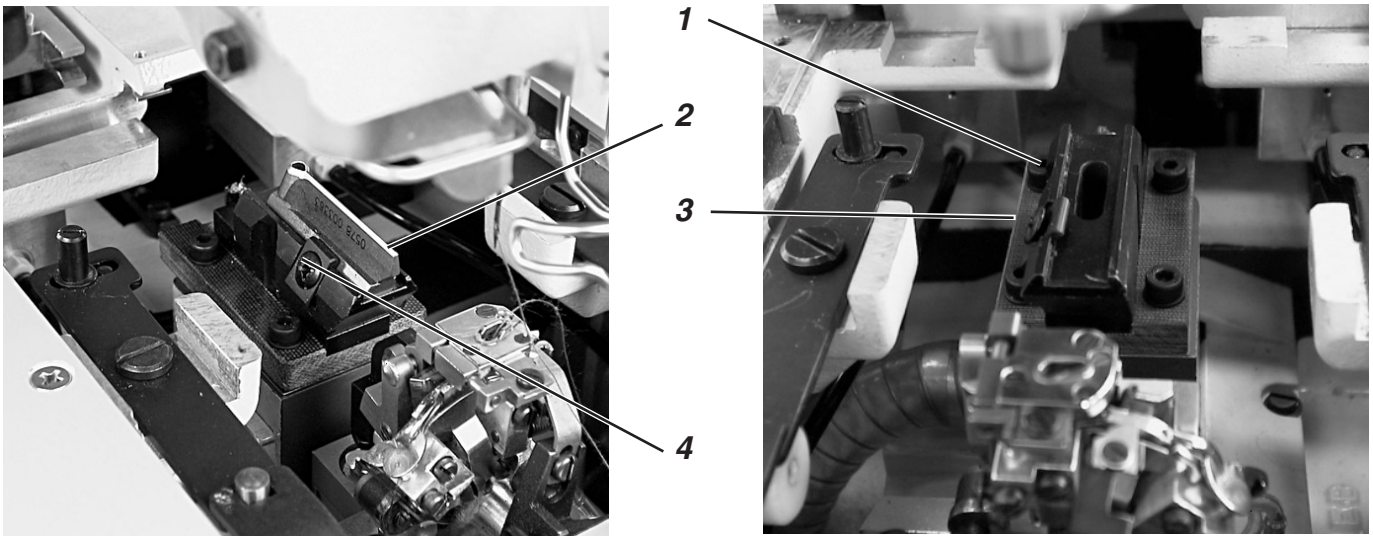
- Set a narrow seam width (see Chapter “Narrow Seam Width”).
- Insert a short needle (see Parts List).
- Insert a piece of paper or cardboard as sewing material.
- Sew a buttonhole without cutting the buttonhole.
- With a narrow zero stitch, the inner stitches of the lip must lie exactly above one another.

Correction

- Loosen screws 7 and 8.
- Push the swing sleeve 6 up or down.
- Tighten screws 7 and 8.
- Sew another buttonhole and check if the inner stitches of the forward and reverse lips lie above one another.

13. Cutting Knife

13.1 Position of the Cutting Knife



Caution Risk of Injury!

Set the cutting knife only in the “Safe Stop” position or with the machine turned off.

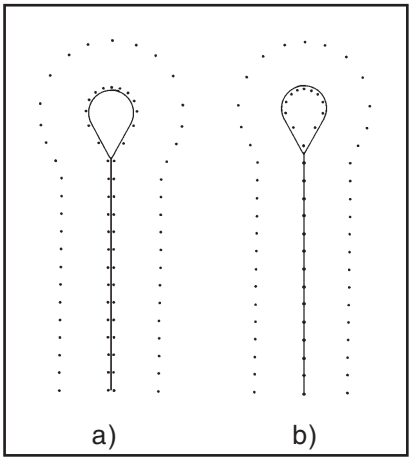
Rule and Control

The cutting knife should, on machines with cutting after sewing, cut exactly between the seam rows and in the center of the eye (see illustration a).

In case of cutting before sewing, the cutting knife should cut exactly on the needle entries lying above one another and around the eye (see illustration b).

Attention Danger of Breakage !

It is essential that care be taken that the cutting knife corresponds to the subclass and the E-group.



Dependent on subclass and E-group, the position of the cutting knife and cutting block can vary.

It is essential that care be taken that the correct position of the cutting knife and the cutting block are set when the subclass or the E-group are changed on the control panel.

The position of the cutting knife is shown in the table on the next page. Further, the appropriate clamping plates and cloth clamps for the newly set subclass and E-group must be attached.

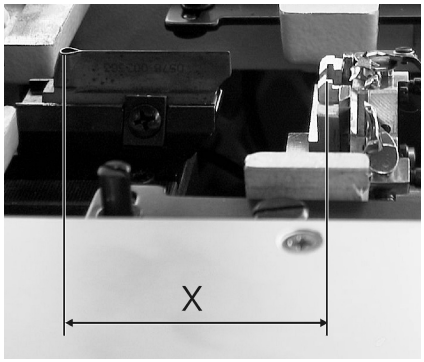
The machine may not be operated before the cutting block, the cutting knife, the clamping plate and the cloth clamps for the newly set subclass or E-group have been set.

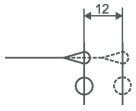
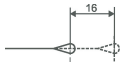
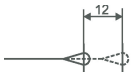
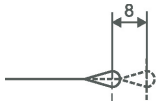
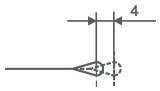
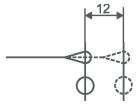
The cutting knife must be set so that the knife cuts into the center of the sewn buttonhole shape.

– Insert the cutting block.
– Insert a short needle.
– Insert a piece of paper or cardboard as sewing material.
– Sew a buttonhole.
– Check the position of the cut.

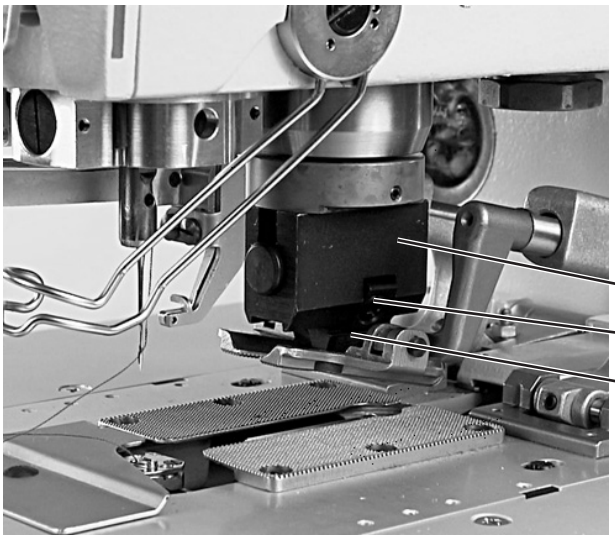
Correction

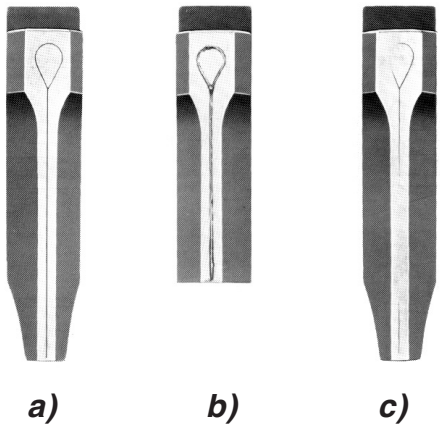
– Loosen the four screws 1 on the base plate 3.
– Correct the lateral position of the cutting knife 2 accordingly.
– Tighten the four screws 1 on the base plate 3.
– Loosen screw 4.
– Push the cutting knife 2 to the front or back.
  As a presetting, move the cutting knife so that the setting dimension X (center buttonhole eye to the groove in the needle plate mounting), as listed in the table below, results.
  As a fine adjustment, move the cutting knife so that the cutting knife cuts into the center of the buttonhole shape.
– Tighten screw 4.



Subclass	E-group	Offset	Setting dimension (Dimension X)
-112	579-E101 579-E102		approx. 59 mm
-112	579-E110 579-E111 579-E151		approx. 47 mm
-121	579-E201 579-E202 579-E204		approx. 59 mm
-141	579-E401 L1 579-E403 L1		approx. 43 mm
-141	579-E401 L2 579-E403 L2		approx. 47 mm
-141	579-E401 L3 579-E403 L3		approx. 51 mm
-141	579-E401 L4 579-E403 L4		approx. 55 mm
-141	579-E401 L5 579-E403 L5		approx. 59 mm
-151	579-E501 579-E504		approx. 59 mm
-151	579-E510 579-E511 579-E551		approx. 47 mm

13.2 Dressing of the Cutting Blocks





Rule and Control

The dressing of the cutting block is necessary when it has been cut into too strongly by the cutting knife or when two different knife shapes have worked on the cutting block. See illustration b.

The dressing of the cutting block must be conducted very precisely and may only be done with a faultless, straight bastard file.

The illustration c shows a badly filed, the illustration a a correctly filed cutting block.

As can be seen in the illustration a, the cutting block must be filed so that the impression of the knife blade can be seen everywhere very finely and precisely uniform.

ATTENTION !

As seen in the illustrations, the cutting block must touch parallel on the cutting knife in order to achieve a uniform distribution of the cutting pressure.

One-sided cutting pressure, particularly in the area of the eye, can lead to a breaking-out of the cutting knife.

Correction

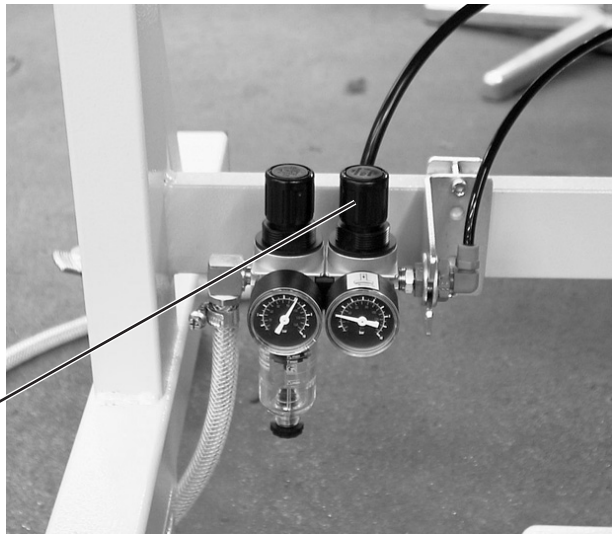
- Refinish cutting block 3 with a bastard file.
- Align cutting block 3 appropriate to the position of the cutting knife in the cutting block holder 1 and tighten with the clamping screw 2.
- Insert cutting block holder 1 into the machine.
- Remove both clamping plates.
- Turn the machine on and activate the “Output Test” test program (see Chapter “Output Test”).

Caution Risk of Injury!

Keep hands clear of the area of the cutting knife while the test program is being executed.

- Repeatedly activate and deactivate output Y16.
- Turn the machine off.
- Remove cutting block holder 1 from the machine.
- Check the cutting impression.

13.3 Cutting Block Setting



Caution Risk of Injury!

Set the cutting block only in the “Safe Stop” position or with the machine turned off.

Rule and Control

The cutting block must lie parallel to the cutting knife.

Correction

– Loosen screw 1.
– Turn cutting block 2 with the guide.
– Tighten screw 1.

13.4 Cutting Pressure

Rule and Control

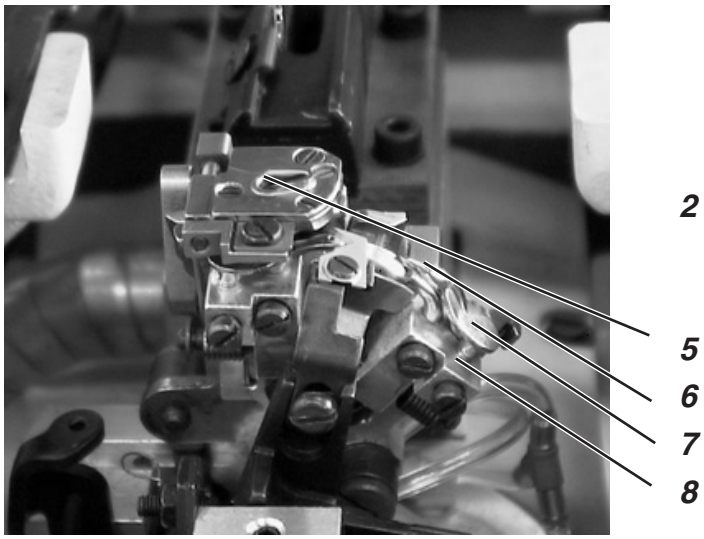
In order that all components be subjected to minimal stress and to increase the idle period of the cutting knife, the cutting pressure can be set.

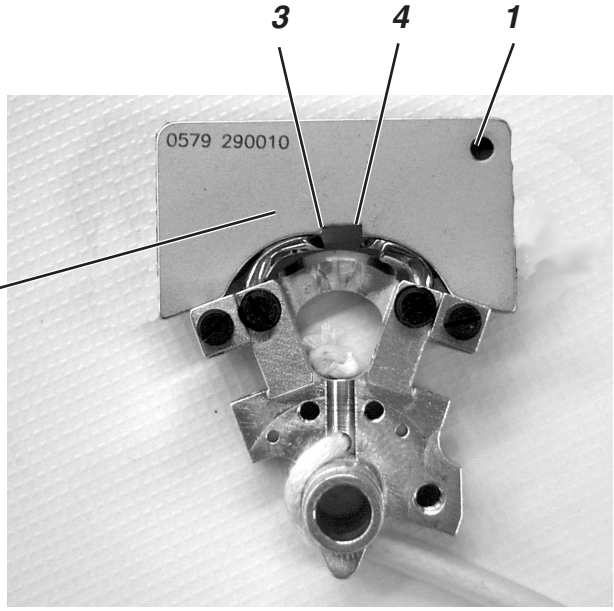
Dependent on the sewing material and material thickness, the cutting pressure should be set as low as possible. It must be set strong enough so that the material is still securely cut. The pressure is set at 4 bar at the factory.

Correction

– Set the desired pressure with the pressure regulator 3.

14. Looper Height



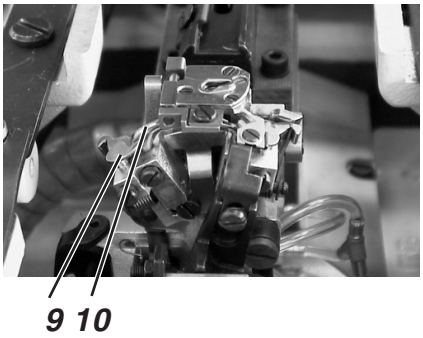


Before the setting of the looping stroke and the needle bar height and particularly after needle breakage, the correct looper height must be checked.

To check the looper height, use gauge 2.

Caution Risk of Injury!

Set the looper height only in the “Safe Stop” position or with the machine turned off.



Rule and Control

When the gauge is placed on the looper turrets, the following must be fulfilled:

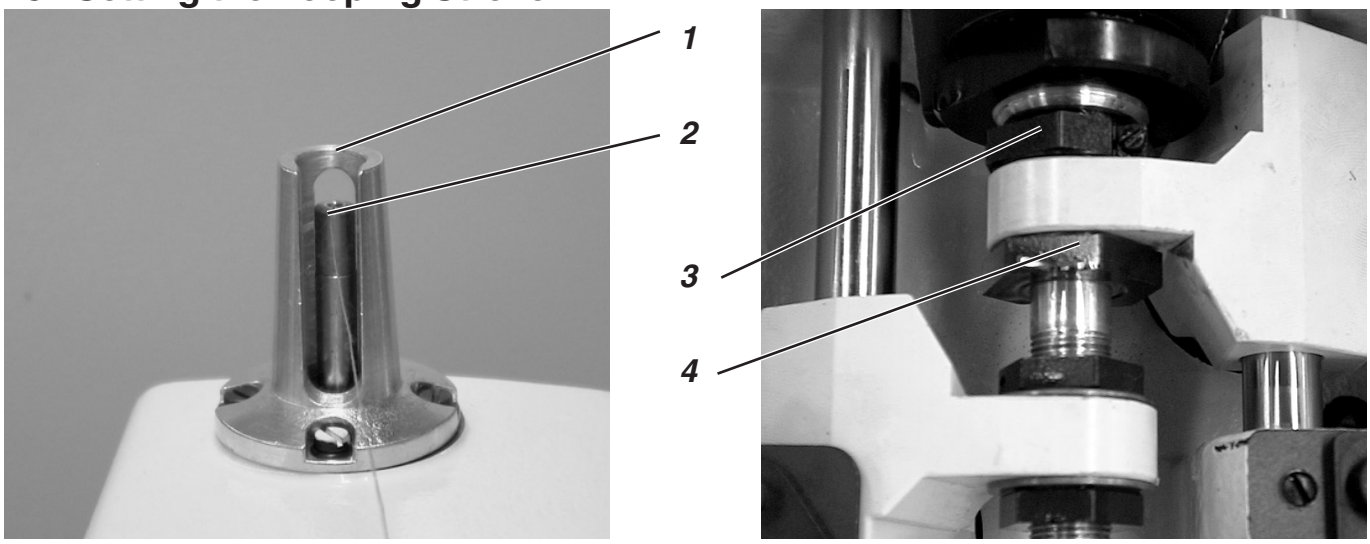
- The drilled hole 1 of the gauge must be at the upper right.
- The point of the left looper must lie under the edge 3 of the gauge.
- The point of the right looper must lie under the edge 4 of the gauge.
- The looper points must just touch the gauge.

- Remove needle plate 5, spreader stops 7 and 9 and spreader 6 and 10 from the looper turrets.
- Bring the needle bar into the up position by turning the handwheel.
- Place gauge 2 on the looper turret with the loopers inserted into the looper turrets up to the stop.
- In this position, the rules listed below must be fulfilled.

Correction

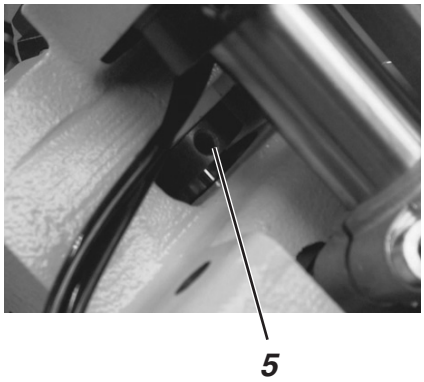
- Set the correct looper height through slight realignment of the looper.

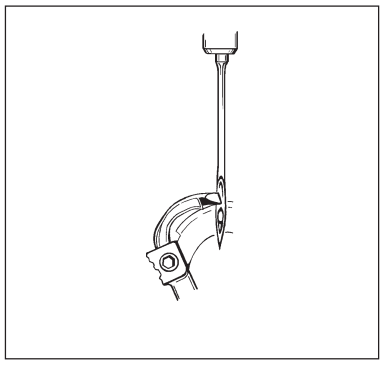
15. Setting the Looping Stroke



Caution Risk of Injury!

Set the looping stroke only in the “Safe Stop” position or with the machine turned off.





Rule and Control

With looping stroke, one means the distance that the needle bar travels from its lowest position up to the point at which the left or right looper tip lies at the center of the needle.

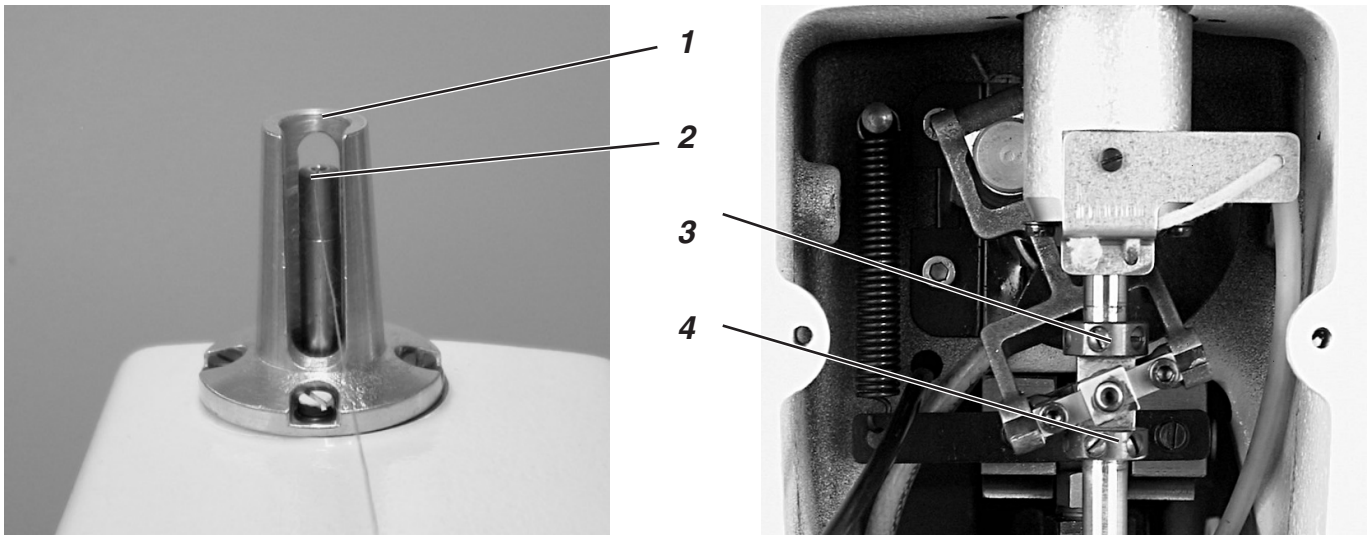
In the looping stroke position the looper tip must lie at the center of the needle.

- Turn the handwheel in the direction of rotation until the needle is at the lower dead center.
- Measure the clearance from the edge 1 up to the needle bar 2 with a caliber gauge.
- Reduce the dimension on the caliber gauge by 2.7 mm.
- Set the caliber gauge with the reduced dimension on the edge 1.
- Slowly continue to turn the handwheel in the direction of rotation until the needle bar touches the caliber gauge.
  The needle bar is in the looping stroke position.
- Repeat the same procedure for the second looper.
- With both loopers, the looper tips must lie at the center of the needle in the looping stroke position (see illustration at left).

Correction

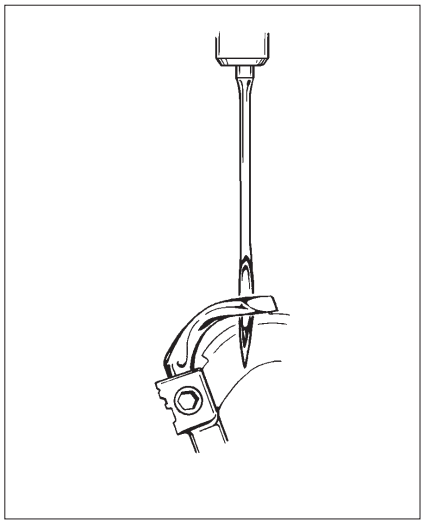
- Turn the set collars so that both looper points have the same clearance to the needle.
- Set the left and right looper so that both looper points lie in the same position to the needle in the looping stroke position. That is, both looper points lie either equally far in front of or behind the needle.
- Loosen screws on the set collars 3 and 4.
  By turning the set collars, set the looper position as described.
- Tighten screws 3 and 4.
  The looper turret must still be able to easily turn after the tightening of the screws.
- If the the looper points do not lie at the center of the needle, loosen the screws on the right cam 5.
- Turn cam 5 until the looper points lie at the center of the needle.
- Tighten the screws on the cam 5.

16. Needle Bar Height



Caution Risk of Injury!

Set the needle bars only in the “Safe Stop” position or with the machine turned off.



Rule and Control

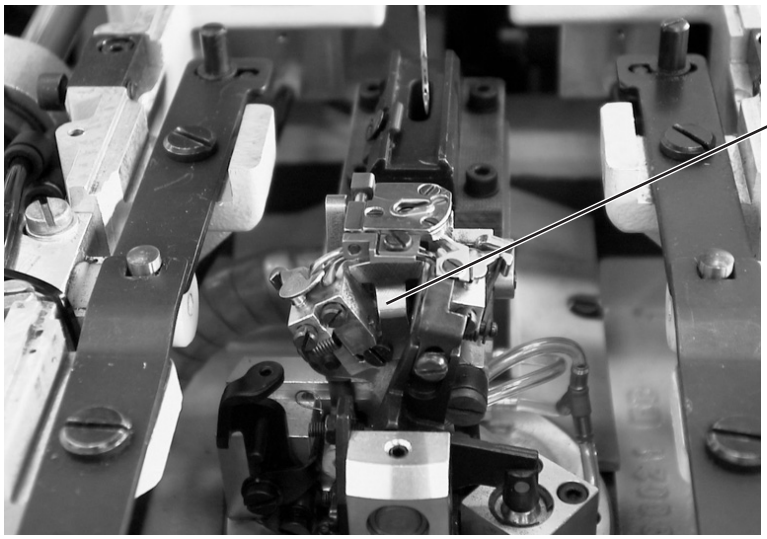
The needle bar must be set so that approx. 3/4 of the needle eye can be seen under the left looper point when the needle bar has moved 2.5 mm upward from the looping stroke position

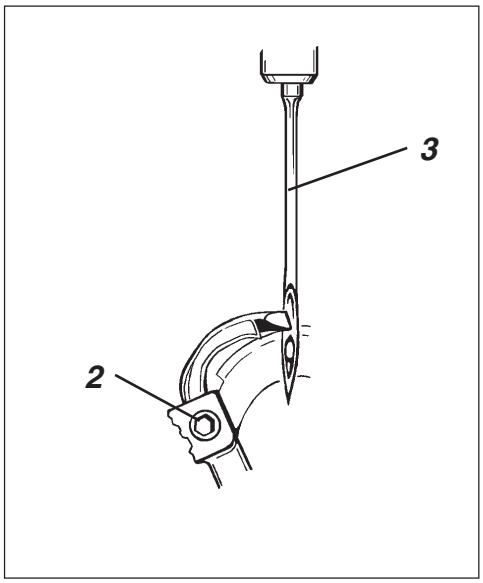
- Turn the handwheel until the needle is at the lower dead center
- With a caliber gauge, measure the clearance from the edge 1 up to the needle bar 2
- Reduce the dimension on the caliber gauge by the looping stroke dimension + 2.5 mm.
  Example:
  Looping stroke=2.7 mm => reduce the dimension by 5.2 mm
- Set the caliber gauge with the reduced dimension on edge 1
- Slowly continue to turn the handwheel in the direction of rotation until the needle bar strikes on the caliber gauge.

Correction

- Loosen the screws on the set collars 3 and 4.
- Move the set collars so that the rule is met.
- Tighten the screws on the set collars 3 and 4.
- The needle bar must still be easy to turn after the tightening of the screws.

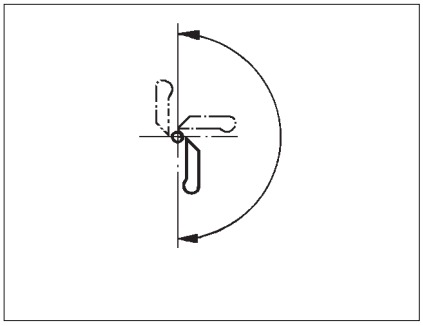
17. Looper Clearance to the Needle





Caution Risk of Injury!

Set the needle guard only in the “Safe Stop” position or with the machine turned off.



Rule and Control

The looper points should lie at a clearance of 0.1 mm to the needle. The looper clearance to the needle should remain the same during the whole turning movement of the looper turret.

– Turn the handwheel until the left looper point lies at the center of the needle. Check the clearance between needle and looper point in the following positions.
  1. Looper turret base position
  2. Looper turret turned 90° manually
  3. Looper turret turned 180° manually

If the clearance of the looper point to the needle is different in the 3 positions, the needle bar and looper turret centers of rotation must be aligned to one another (see Chapter “Aligning the Needle Bar-Center of Rotation to the Looper Turret-Center of Rotation”).

Correction

– Loosen screw 2 on the appropriate looper.
– Set the clearance of the looper to the needle accordingly.
– Tighten screws 2.

18. Needle Guard

Rule and Control

The needle 3 must lightly touch on the needle guard 1 until the looper points have reached the needle. The clearance between looper and needle must be 0.1 mm thereby.

The needle guard is set at the factory and normally does not nee to be set again. With other needle thicknesses, the needle guard may possibly need to be set again.

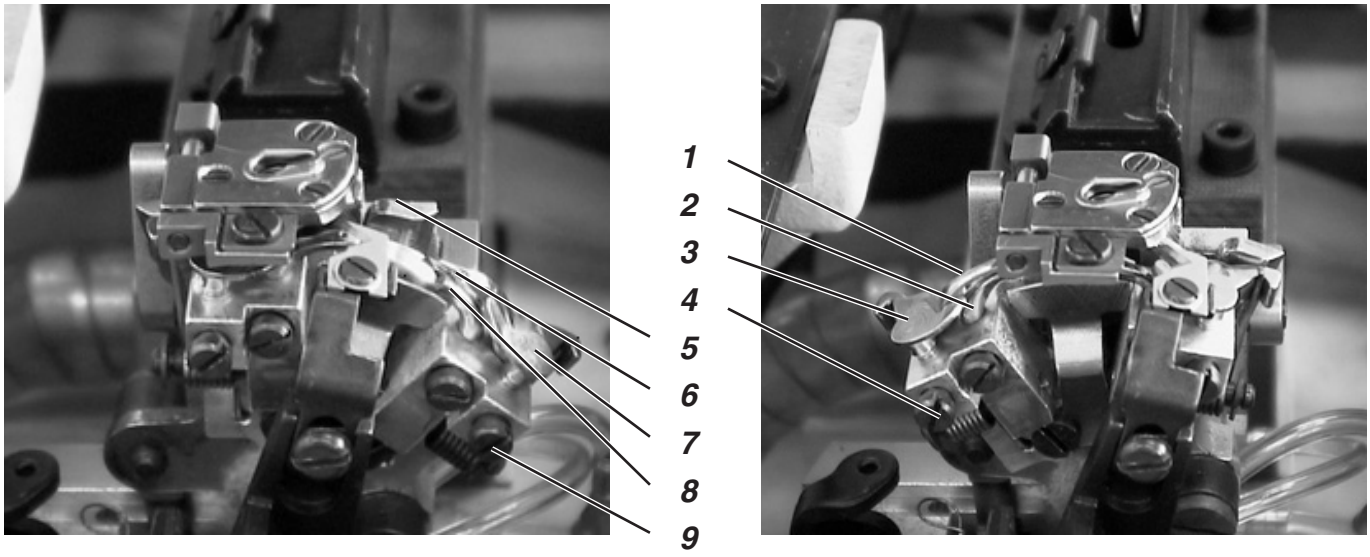
Caution Risk of Injury!

Set the needle guard only in the “Safe Stop” position or with the machine turned off.

Correction

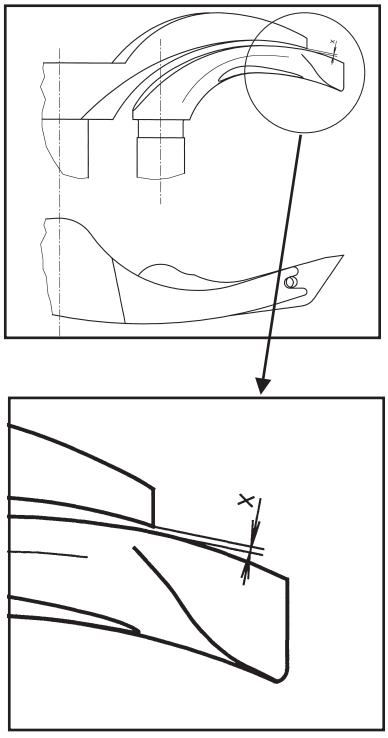
– If the required clearance is not met, the needle guard must be adjusted accordingly.

19. Spreader



Caution Risk of Injury!

Set the spreader only in the “Safe Stop” position or with the machine turned off.



Rule and Control

There must be a clearance between the forked spreader 1 and the left looper 2 which corresponds to the thickness of the looper thread used (see adjacent illustration X).

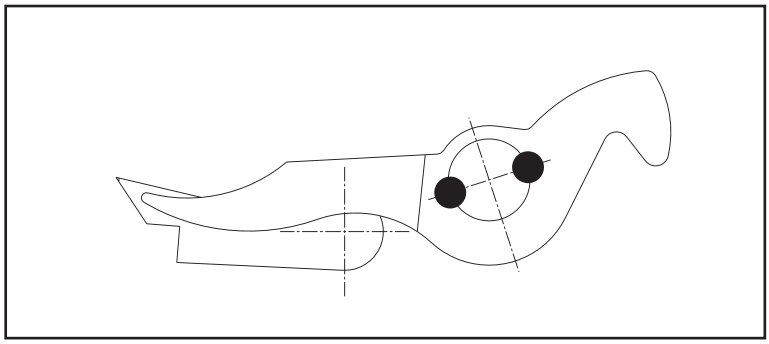
The right spreader 6 should move as closely as possible, but without contact, at the upper side of the right looper 8.

The spreaders, which are under spring-pressure, are held in their end position by the stops.

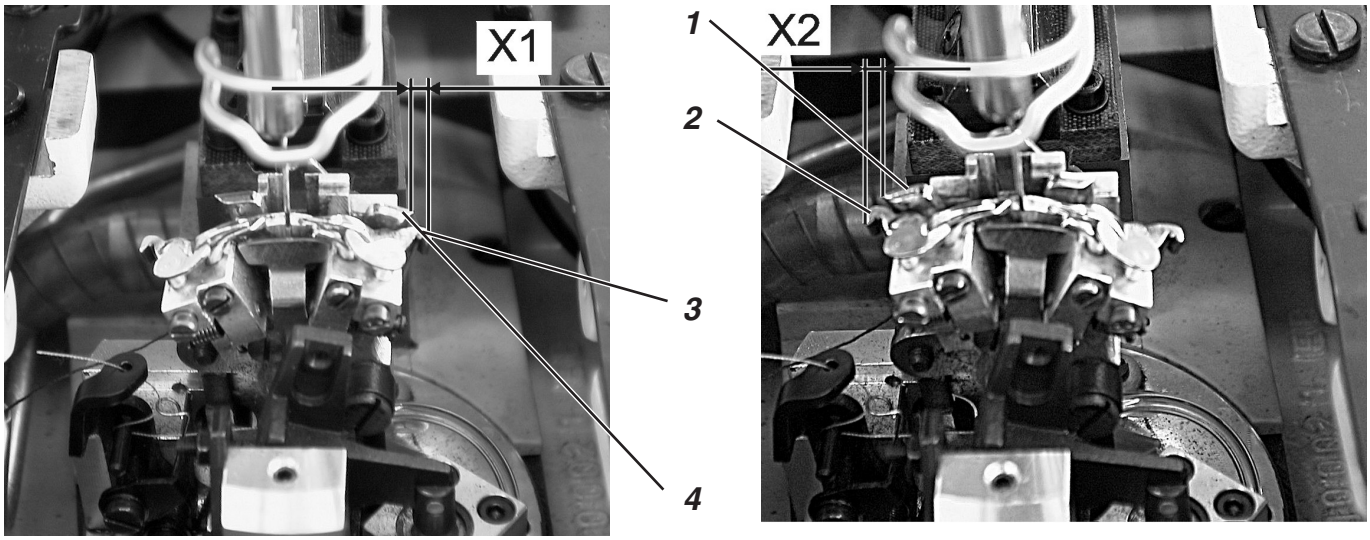
The fork of the left spreader should lie exactly over the thread hole of the left looper (see adjacent illustration) and the point of the right spreader centered over the tip of the right looper (see lower illustration).

Correction

- For the setting of the clearance to the loopers, adjust the spreaders slightly.
- For setting the end positions of the spreaders, loosen the screw 4 or 9 on the appropriate looper.
- Turn the spreader stop 3 or 7 slightly.
- Tighten screw 4 or 9.

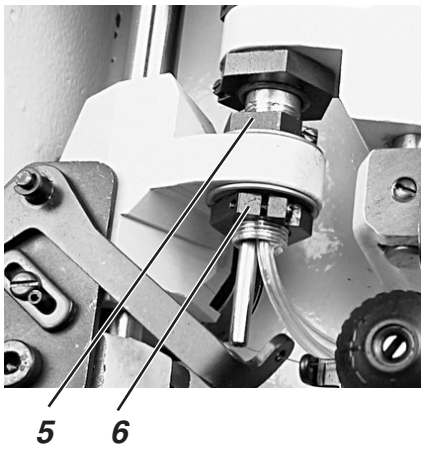


20. Spreader Plate



Caution Risk of Injury!

Set the setting of the spreader plate only in the “Safe Stop” position or with the machine turned off.



Rule and Control

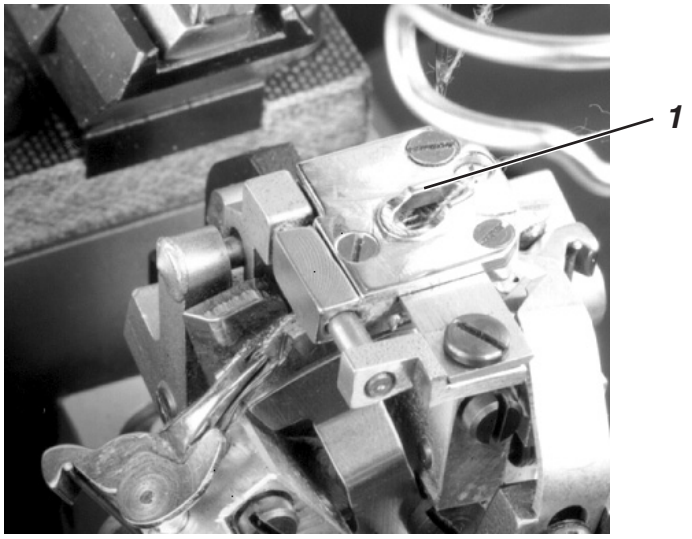
The opening and closing of the spreader occurs through the alternating motion of the spreader plate 4.

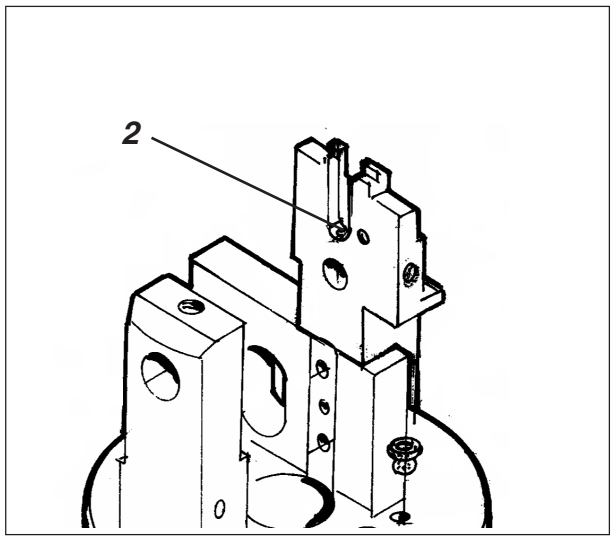
When the needle bar is at the lower dead center for the right needle entry point, the clearance between spreader plate 4 and spreader leg 3 must be exactly the same as the clearance from spreader plate 1 to spreader leg 2 (dimension X1 equals dimension X2), when the needle is at the lower dead center for the left needle entry point.

Correction

- Loosen screws 5 and 6.
- Turn the set collar so that the clearance of the spreader plates to the spreader legs is the same.
- Tighten screws 5 and 6.
- The looper turret must still be easy to turn after the tightening of the screws.

21. Needle Plate





Caution Risk of Injury!

Set the needle plate only in the “Safe Stop” position or with the machine turned off.

Rule and Control

The needle entry point of the needle in the stitch hole of the needle plate should occur one-sidedly at the edge 1.

The needle plate must be set as far up as possible.
This prevents the material from being pressed too far down at the entry point of the needle.

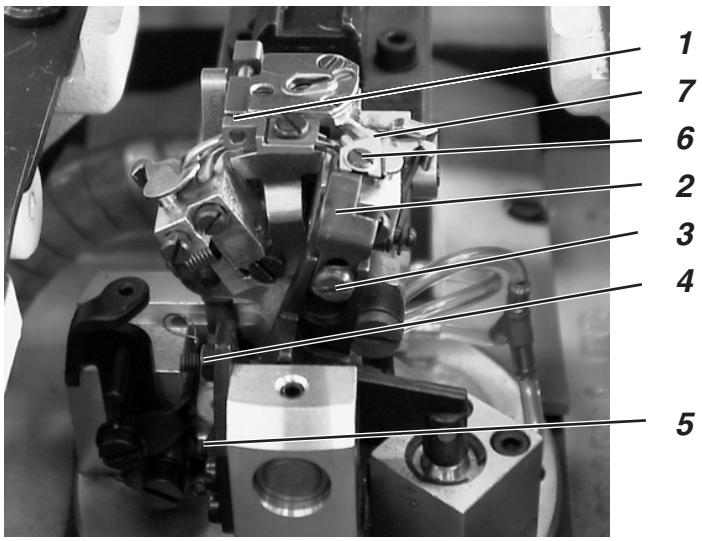
During the sewing sequence there must still be a slight clearance to the needle plate at the following points:

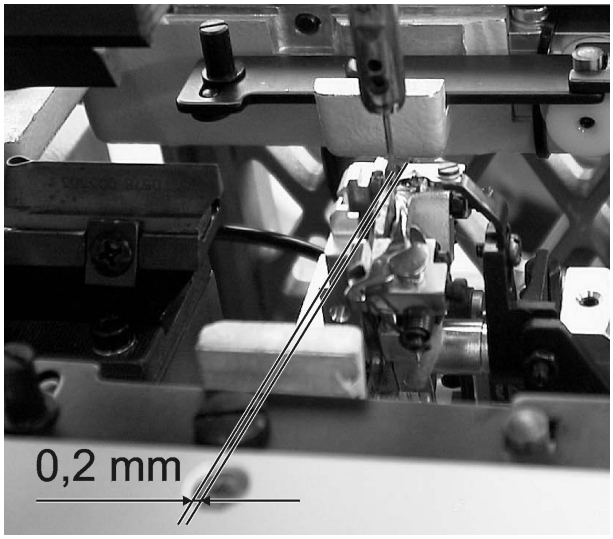
- Under the material / the closed upper cloth clamps.
  The material must be able to move unhindered over the needle plate.
- Under the shears of the looper thread and gimp trimmers.
- Under the lower cloth clamps.
- Above the needle thread knife.
  The needle thread knife must move as close as possible without touching under the needle plate.

Correction

- Set the height of the needle plate at the stop screw 2 in the needle plate guide.
  Through the stop screw the setting remains after a renewed insertion of the needle plate.

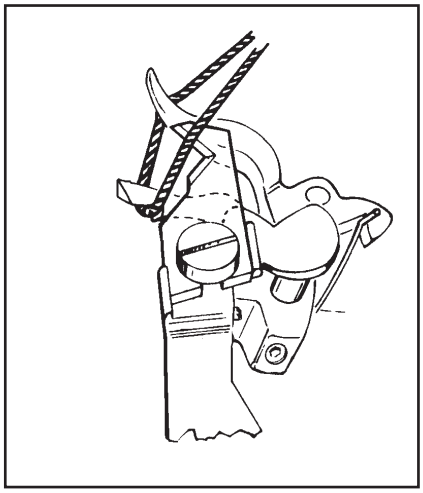
22. Setting the Needle Thread Knife





Caution Risk of Injury!

Set the needle thread knife only in the “Safe Stop” position or with the machine turned off.



Rule and Control

After sewing, the cutting motion of the needle thread knife occurs. The precise cutting moment is established at the controls.

While turning in the direction of rotation, the spreader stop should not touch the knife holder.

The needle thread knife should cut through the needle thread loop taken up from the right looper only at the front side of the looper. Both-sided cutting of the needle thread loop results in too short a thread end and thus missing stitches at the seam start.

The needle thread knife in the right end position should not be in the thread area nor touch the spreader stop.

There must be a clearance of approx. 0.2 mm between the needle and knife.

In the cutting position, the knife must move approx. 1 mm above the edge 1.

– Move the knife manually and check if all of the rules listed above are met.

Correction of the stop screws

– Loosen stop screws 4 and 5.
– Set the stops according to the rule.
– Tighten screws 4 and 5.

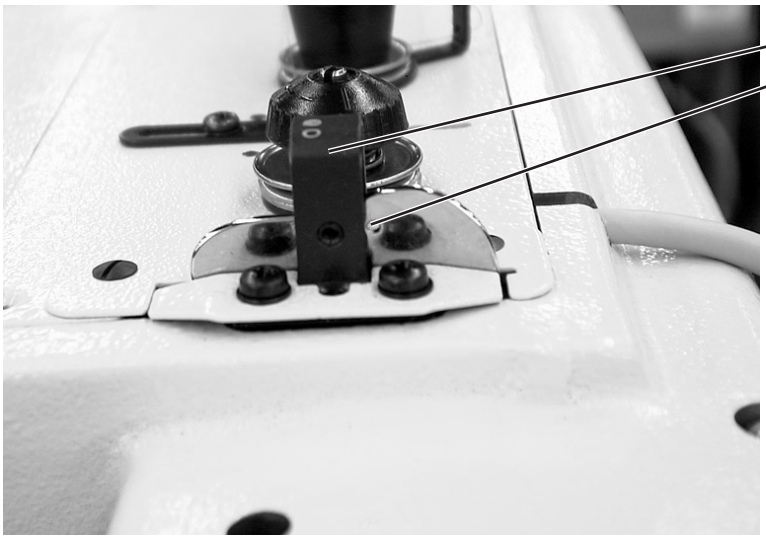
Setting the height

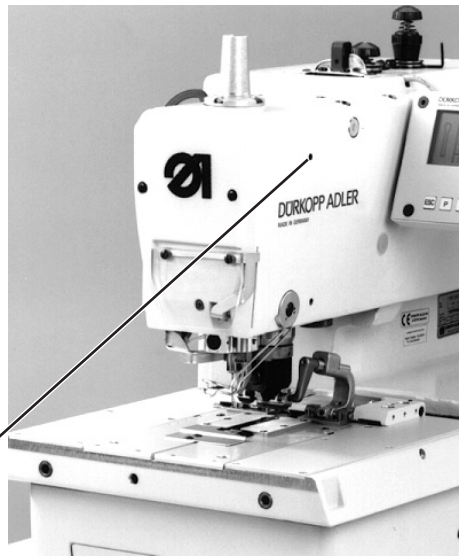
– Loosen screw 3.
– Set the height of the knife holder 2 accordingly.
  To check the ease of motion, swing the knife holder 2 manually.
– Tighten screw 3 again.

Setting the clearance to the needle

– Loosen screw 6.
– Move knife 7.
– Tighten screw 6.

23. Thread Take-up Disk



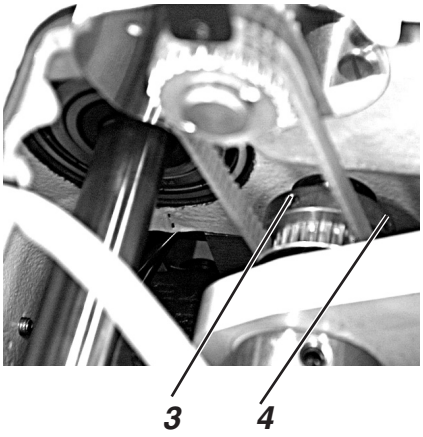


Rule and Control

- Insert a positioning pin into the drilled hole 5 of the sewing machine and arrest the sewing machine in the stake-out position. The looper support must be in the left end position thereby.
- Insert a pin (2 mm diameter) or the shank of the needle through the drilled hole 2 in the thread take-up disk.
- The pin must touch on the right side of the thread guide 1.

Caution Risk of Injury!

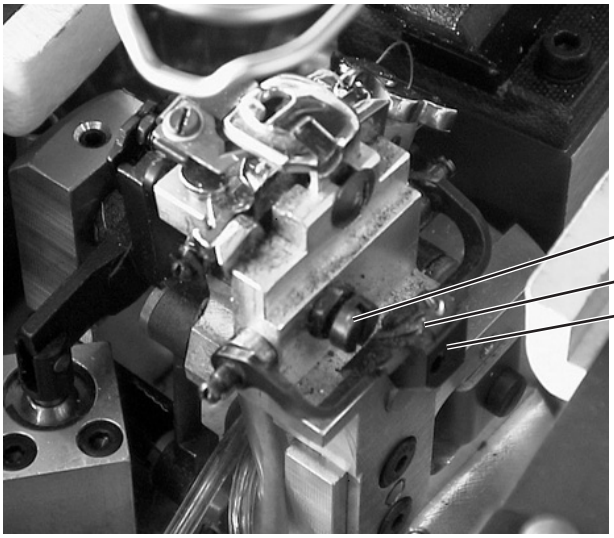
Set the thread take-up disk only in the “Safe Stop” position or with the machine turned off.



Correction

- Loosen screws 3 and 4 on the toothed belt sprocket.
- Turn the thread take-up disk so that the rule is fulfilled.
- Tighten screws 3 and 4.

24. Gimp-pull Mechanism for Subclass -141000



Caution Risk of Injury!

Set the gimp-pull mechanism only in the “Safe Stop” position or with the machine turned off.

Rule and Control

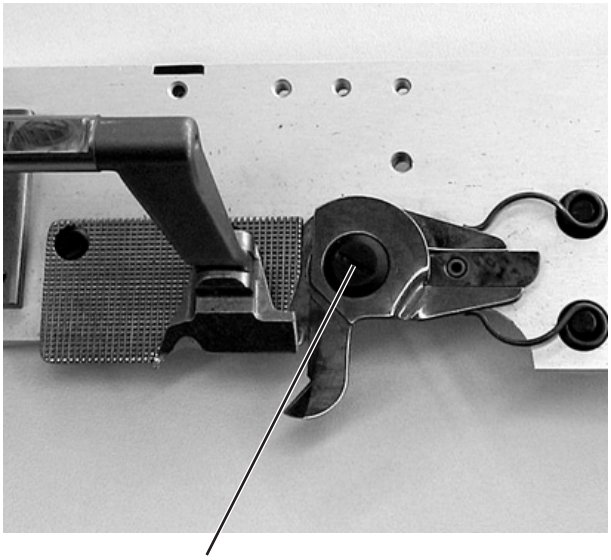
The drop weight 3 with the adjustable brake flap 2 pulls the gimp back to the correct starting length.

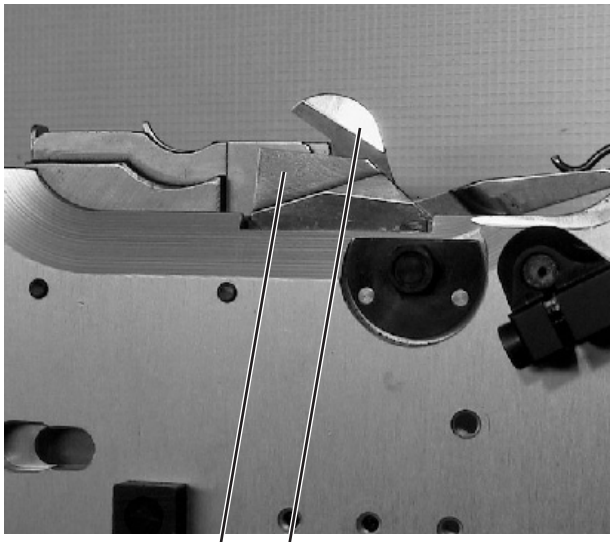
The path of the drop weight must be limited by the stop screw 1 so that, at the start of sewing, the gimp is as short as possible, but is still securely sewn on.

This is just about the case when the gimp end protrudes approx. 4 mm out of the gimp hole of the needle plate.

Correction

– Screw in screw 1 = Shorter gimp end.
– Screw out screw 1 = Longer gimp end.

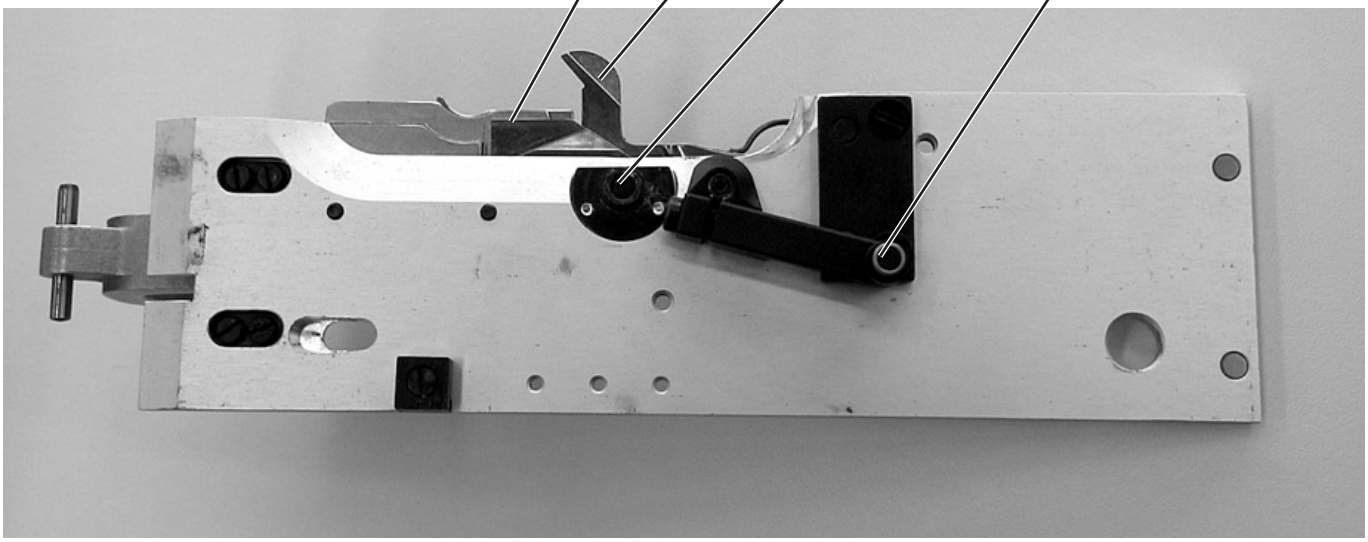




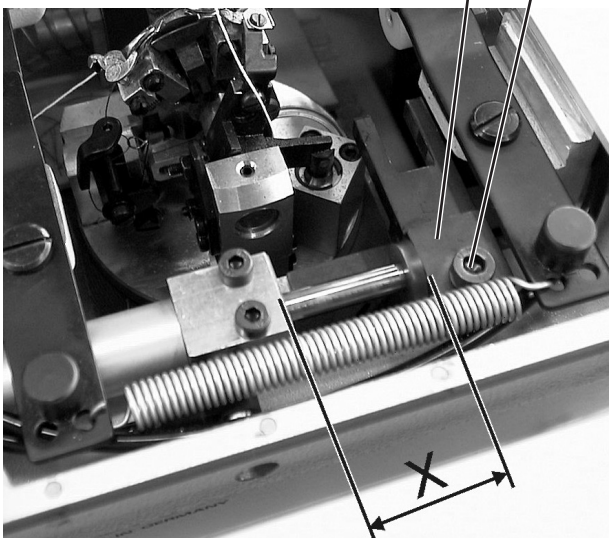
1

2 3 4

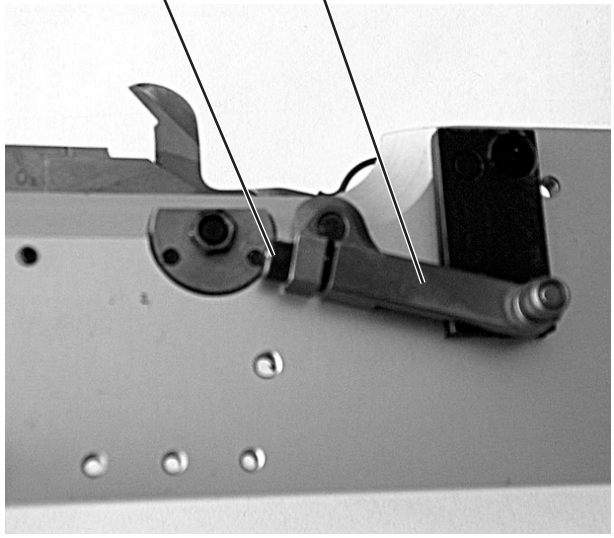
2 3 5



6 7



8 9



25. Short Trimmer for the Looper Thread and Gimp (579-141000)

Caution Risk of Injury!

Set the short trimmer only in the “Safe Stop” position or with the machine turned off.

Rule and Control

The blades of both shears 2 and 3 must have moved approx. 1 mm over one another in front of their reversal point.

The cutting pressure must be set so that the looper thread and the gimp are securely cut. Thereby the knife should not move sluggishly or block.

It must be possible to insert the clamping plates without clamping. The roller 5 must grip in the throat of the link 6.

– Remove both clamping plates.

Correction

Setting the throat (presetting)

– Loosen screw 7.
– Move link 6 on the piston rod. The dimension X in the illustration should be approx. 30 mm to 31 mm.
– Tighten screw 7.

ATTENTION !

The link should not strike on the cloth support plate.

Setting the overlap (fine adjustment)

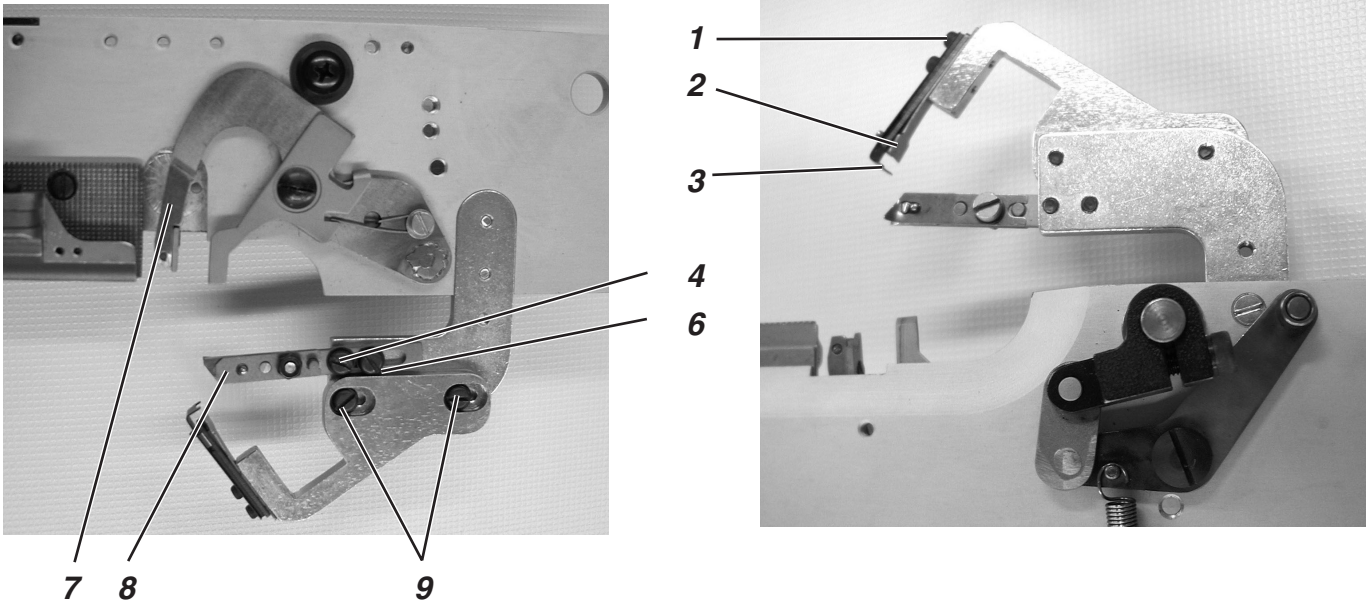
– Loosen clamping screw 8.
– Turn lever 9.
– Tighten screw 8.
– Turn the machine on.
– Activate the “Output Test” testing program (see “Output Test”).
– Switch output Y8 to “+”.
– Switch output Y10 to “+”.
– Check the size of the overlap.
– Switch output Y8 to “-”.
– Switch output Y10 to “-”.
– Turn the machine off.

Cutting pressure

– Loosen nut 4.
– Set the cutting pressure with the screw 1.
The cutting pressure must be set so that a good cutting result is achieved with the lowest possible cutting pressure.
– Tighten nut 4.
– Conduct a cutting trial with looper thread or gimp manually. Thereby, check the ease of motion of the knife movement.

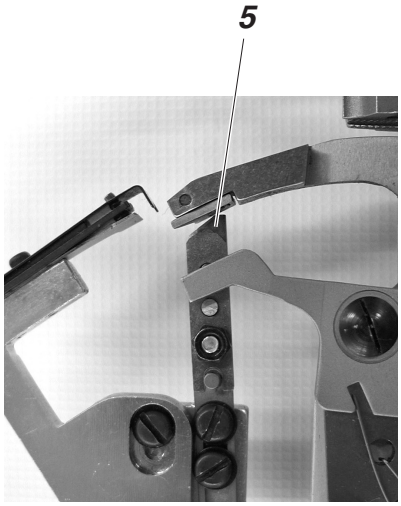
26. Long Trimmer for Looper Thread and Gimp (579-121000)

26.1 Cutting Pressure and Cutting Movement of the Looper and Gimp Thread Trimmer



Caution Risk of Injury!

Set the thread gripper and thread deflector only in the “Safe Stop” position or with the machine turned off.



Rule and Control

The deflector 3 is mounted above the fixed knife 2. It prevents the looper thread end and the gimp from lying between knife 2 and the back of the thread catcher 7. Instead, they will both be guided next to or into the thread catcher.
If this does not occur, the knife can be pushed away and doesn’t cut.

The cutting pressure can only be set so high as is necessary to securely cut the threads.

The thread catcher must move past the thread grippers 5 as closely as possible without the thread catcher touching the thread grippers.

Correction

Thread deflector

- Loosen screws 1.
- Adjust the thread deflector 3 so that the function described above is achieved.
- Tighten screws 1 again.

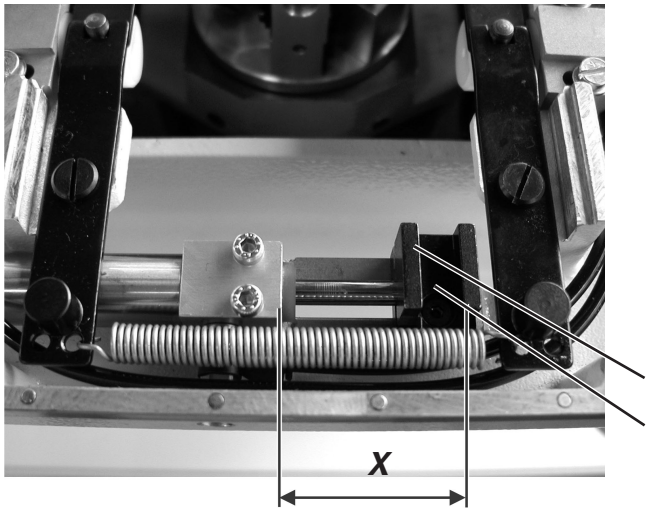
Cutting pressure

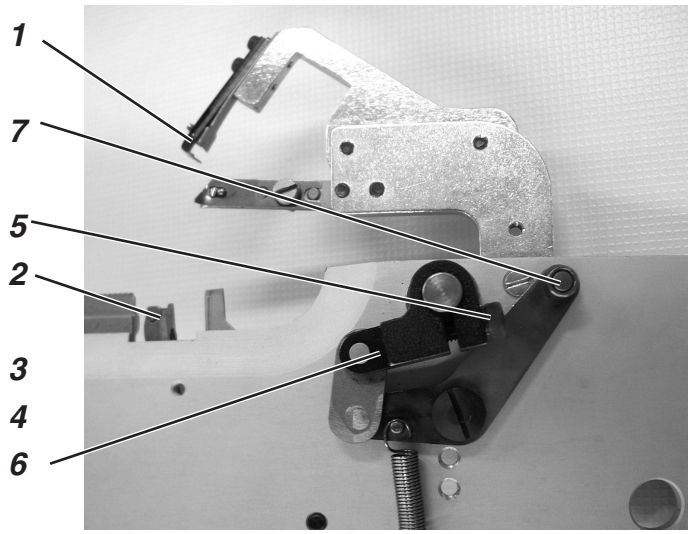
- Loosen screws 9.
- Move the fixed knife so that the under and gimp threads are securely cut.
- Tighten screws 9.

Clearance of the thread grippers to the thread catcher

- Loosen screws 4 and 6.
- Move the thread gripper.
- Tighten screws 4 and 6.

26.2 Setting the Overlap of the Knife





Caution Risk of Injury!

Set the long trimmer only in the “Safe Stop” position or with the machine turned off.

Rule and Control

The blades 1 and 2 must move approx. 1 mm over one another.

It must be possible to insert the clamping plate without clamping. The roller 7 must grip in the throat of the link 5.

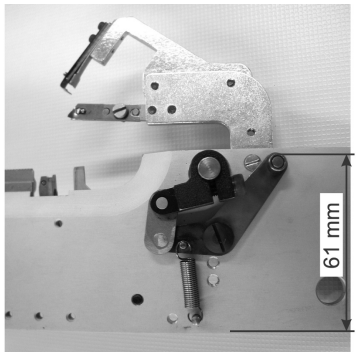
3

– Remove the right clamping plate.
– Insert the right clamping plate again.
  It must be possible to insert the clamping plate without clamping.

Correction

Setting the throat

– Loosen screw 4.
– Move link 3 on the piston rod.
  The dimension X in the illustration should be 39 mm.
– Tighten screw 4.



Setting the overlap

– Loosen clamping screw 5.
– Turn lever 6.
  Set it to have the measure 61 mm (see fig. on the left)
– Tighten screw 5.
– Insert the clamping plates.
– Turn the machine on.
– Activate the “Output Test” testing program (see “Output Test”).
– Switch output Y8 to “+”.
– Switch output Y10 to “+”.
– Check the size of the overlap.
– Switch output Y8 to “-”.
– Switch output Y10 to “-”.
– Turn the machine off.

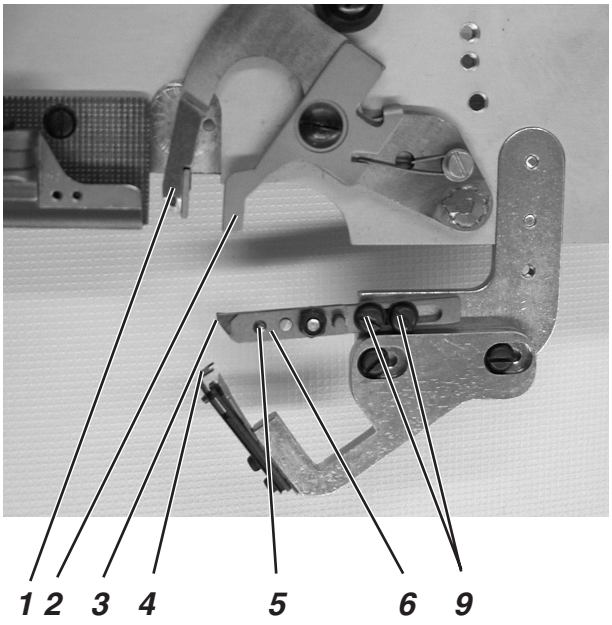


Abb. a)

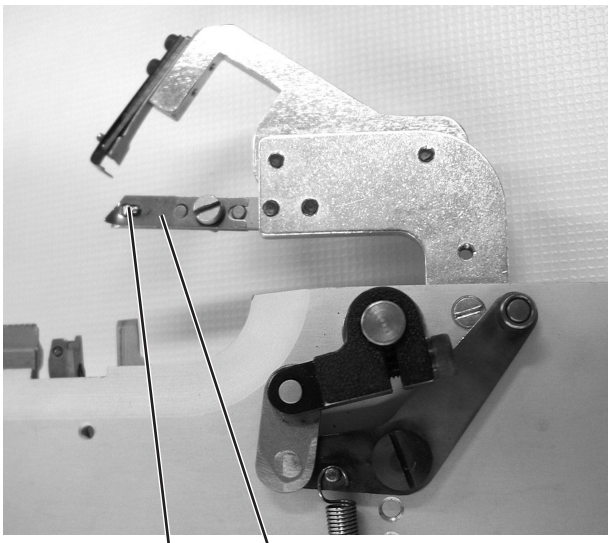
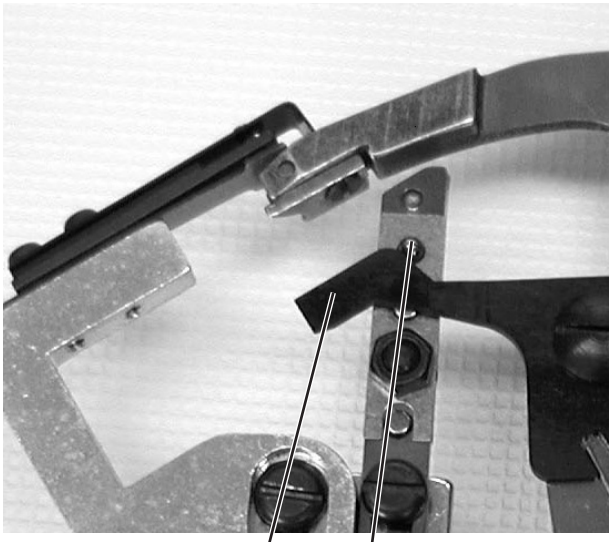
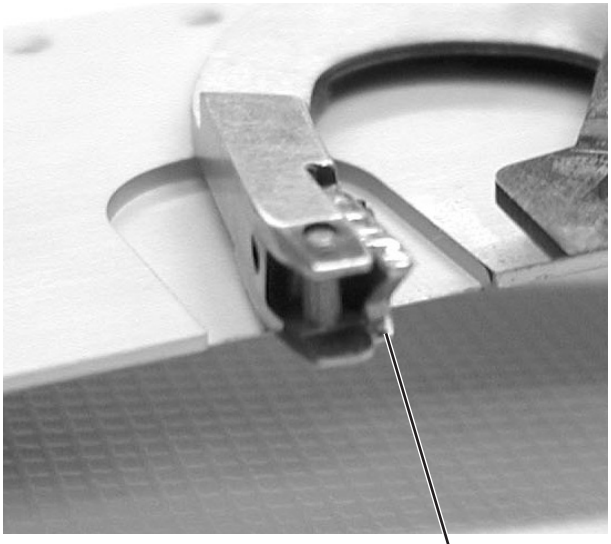


Abb. b)





26.3 Position of the Looper Thread and Gimp Clamp

Caution Risk of Injury!

Set the position of the looper thread and gimp clamp only in the “Safe Stop” position or with the machine turned off.

Rule and Control

The looper thread and the gimp are clenched by the long trimmer together under the clamping plate. The looper thread and the gimp must be held so firmly that a secure and tightly pulled seam beginning is assured.

It must be possible that the gimp thread be pulled unhindered underneath clamping spring 5. Thereby it should only be very slightly clamped.

Before beginning the cutting sequence at the fixed knife, the looper thread must be pulled between lower clamping spring 7 and clamping piece 3.

The gimp thread must be pulled between upper clamping spring 5 and clamping piece 3.

The thread divider 1 must divide the looper thread and gimp thread so that both threads are individually clamped in the thread grippers (gimp-upper thread gripper, looper thread-lower thread gripper).

For the secure insertion of the looper thread before the cutting, the clamping spring 7 is opened by trigger plate 2 via pin 5.

The opening width is dependent on the thickness of the looper thread used.

The gripper must, at the least, be opened so wide that the looper thread is pulled securely behind pin 8 and is not pulled out of the thread gripper after thread trimming.

When the thread catcher head 1 lies just at the knife, the trigger plate 2 must have opened the thread gripper 7.

With too great an opening width, the looper thread can jump back after the trimming.

Correction

Opening width

– Adjust the height of the trigger plate 2 so that the clamping spring for the looper thread is easily opened.

Timing

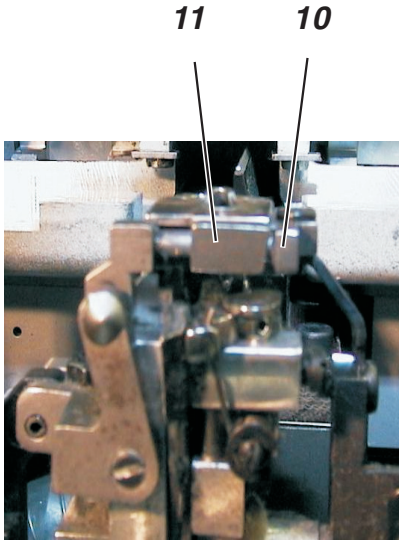
– Loosen screws 9 and 10.
– Turn trigger plate 2 so that the thread gripper 7 is opened when the catcher head lies just at the knife.
– Tighten screws 9 and 10.

Clamping force

– Set the pressure of the clamping spring 7 through adjustment so that the looper thread is held slightly clamped after trimming and doesn’t jump back.

Notes:

27. Short Trimmer for the Looper Thread (579-112000)



After completion of the seam, the cutting movement of the needle thread knife occurs. At the same time, the short trimmer is brought into the base position for the looper thread. Thereby, the looper thread slides from the blade of the knife.

Then the short trimmer is switched back. The looper thread is clamped und cut through the switching back. In order to assure that the looper thread is securely clamped at the seam beginning, the spring must push the knife against the knife plate.

The clamping pressure must be set so that the looper thread is securely held. With the clamping pressure set too high, the beginning stitches are pulled together very strongly.

Note:

By screwing out the screw 7, the clamping pressure is decreased und screwing in increases the clamping pressure.

The knife end position is set with the aid of the stop screw 9. Care is to be taken thereby that parts of the needle hole are not covered by the knife. Further, the knife holder 10 in its end position should not touch the needle plate 11.

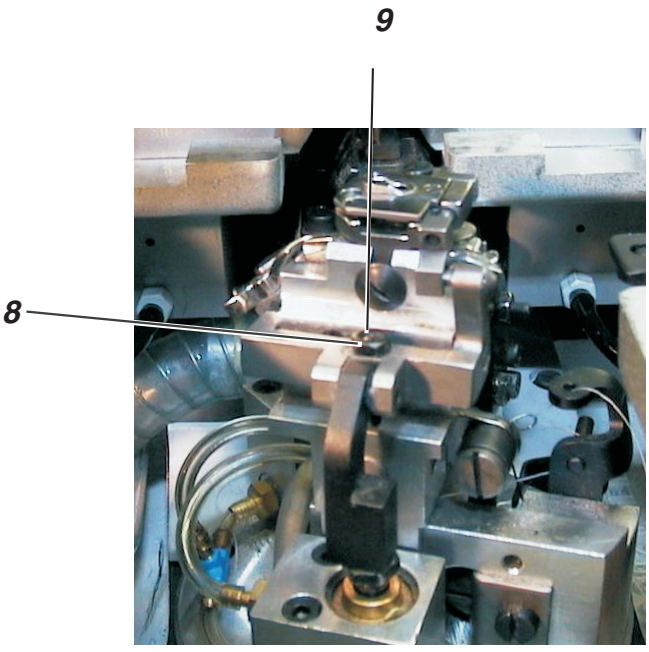
Setting the base position for the short trimmer:

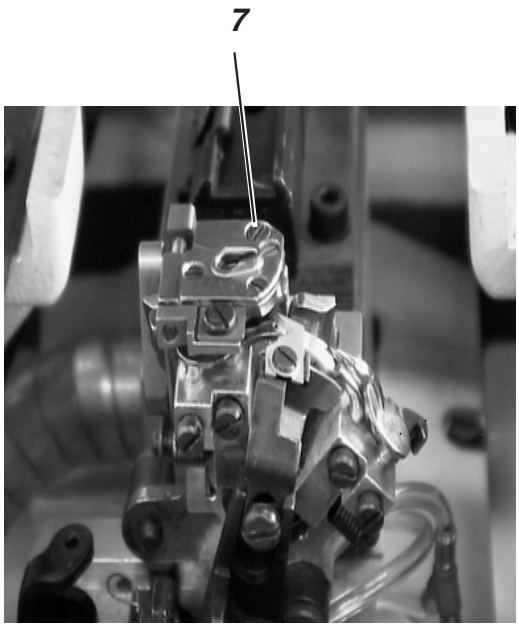
- Turn the sewing machine on
- The short trimmer is in its base position
- In the base position the knife should not be visible in the needle hole und the knife holder 10 should not touch the needle plate 11.
- Loosen lock nut 8.
- Turn stop screw 9.
- Tighten lock nut 8 again.

Setting the clamping pressure:

The clamping pressure should be set as low as possible.

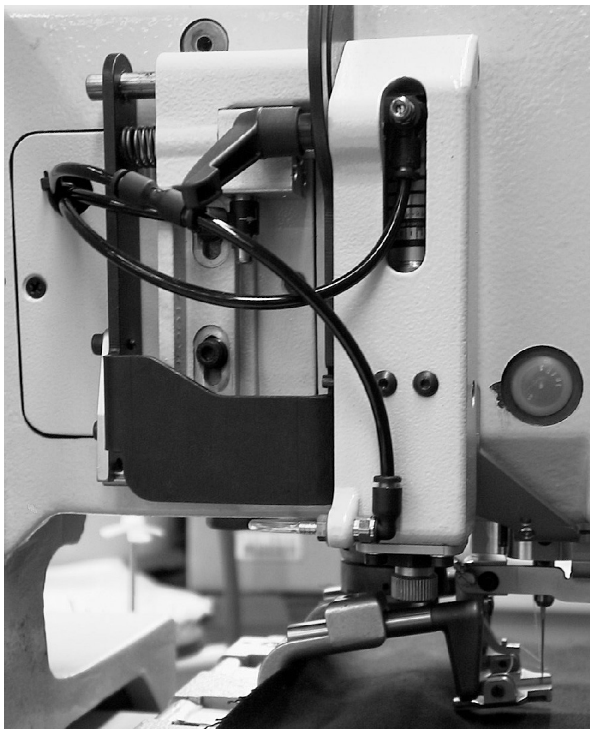
- By screwing in the screw 7, the clamping pressure is increased und screwing out decreases the clamping pressure.
- Incorrect clamping pressure or a needle plate too greatly soiled on the inside lead to an unthreading of the looper thread.





28. Thread Catcher

28.1 General



With the exception of subclass 579-151000, all subclasses have a needle thread catcher as standard equipment. The subclass 579-151000 can be retro-fitted with the needle thread catcher, if desired.

The function of the thread catcher is automatically switched off by buttonholes longer than 38 mm.

The fitting is not possible, however, when equipped with the “Upper Gimp Guide” component.

Immediately after the thread trimming procedure, the needle thread catcher grips the needle thread, holds it clamped and places it in the right lip when the next buttonhole is sewn.

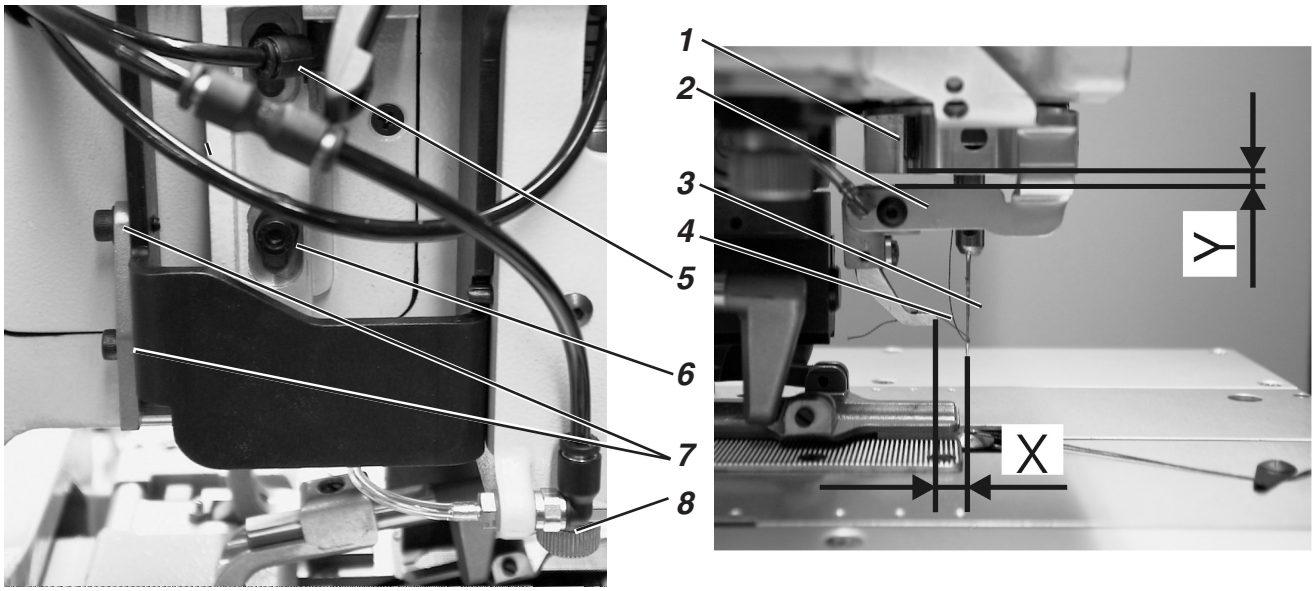
This offers the following advantages:

- Secure seam beginning, even in light, loose fabrics.
- Tightly pulled beginning stitches.
- The needle thread does not need to be cleaned because the beginning thread of the lip is sewn over.

Function sequence

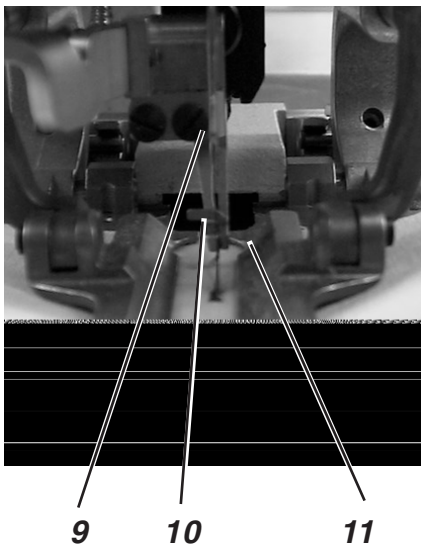
- After the turning-on of the automatic sewing machine, the needle thread catcher lowers onto the material with the thread held clamped.
- Appropriate to the prescribed sewing length, the sewing cycle is turned on and begins with the right lip.
  Thereby, the needle thread end positioned by the thread catcher is overstitched and sewn in.
- After reaching a point predetermined at the controls, the thread catcher rises and moves back into the upper position.
- Just before the seam end, the clamp of the thread catcher is opened and the thread catcher moves downward.
- After the end of the left lip, the needle positions in the up position. The needle thread is cut.
- The thread catcher swings forward. The clamp is closed. The thread is caught.
- The thread catcher swings back.
- The thread catcher moves up.

28.2 Setting



Caution Risk of Injury!

Set the thread catcher only in the “Safe Stop” position or with the machine turned off.



Rule and Control

The thread catcher must securely catch the needle thread after the sewing of a buttonhole.

The thread catcher must position the needle thread in the right lip.

The thread catcher should not collide with the clamping plates.

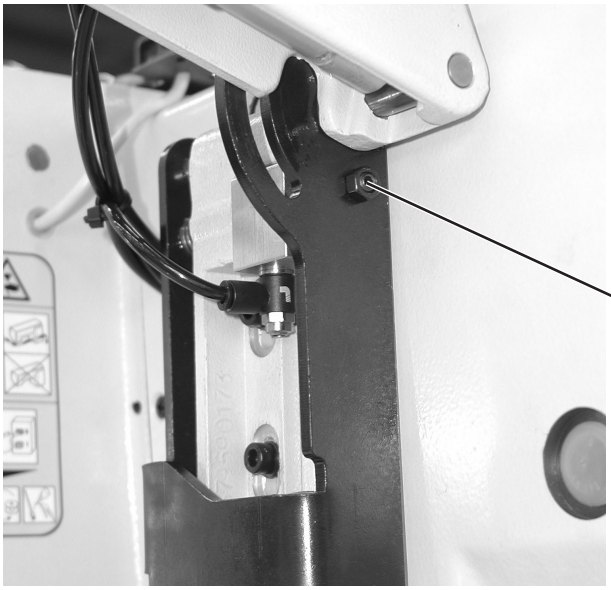
When the thread catcher is in the base position, the following conditions must be met:

- The clearance from the lower edge of the needle bar guide 1 to the thread catcher 2 must be approx. 2 mm (dimension Y).
- The clearance from the front edge of the thread catcher 4 to the needle 3 should be approx. 7-8 mm (dimension X).
- Laterally, needle 3 and the left edge of the clamp 10 of the thread catcher must lie inline.

Dependent on the thickness of the material used, the lower position must be set differently. When the thread catcher is lowered, there must still be a clearance of approx. 3 mm between the lower edge and the material.

When the thread catcher is lowered and run to the front, the hook 10 of the thread gripper must lie about at the needle center.

- Sew a buttonhole.
  The thread catcher should not collide with the clamping plates during the sewing cycle.
  The thread must be securely caught after the sewing cycle.
- Check, if the needle thread was sewn in centered in the right lip.



Correction

Height of the thread catcher and clearance of the thread catcher to the needle

- Loosen screws 5 and 6.
- Adjust the height of thread catcher unit.
  The clearance to the needle bar guide must be 2 mm.
- Tighten screws 5 and 6.
- Set the clearance to the needle through the stop screw 12.
  The clearance from the thread catcher to the needle must be approx. 7-8 mm (dimension X). The clearance to the needle can in some cases also deviate slightly from this value.

Lower position of the thread catcher

- Loosen the lock nut above the knurled screw 8.
- With the knurled screw 8, set the lower position of the thread catcher.
- The clearance between the thread catcher and the material must be approx. 3 mm.
- Manually press the thread catcher down and check the position of the thread catcher.
- Tighten the lock nut above the knurled screw 8.

Lateral position of the thread catcher

- Loosen screws 7.
- Set the lateral clearance of the thread catcher.
- Tighten screws 7.

29. Setting the Toothed Belt Tension

General

Malfunctions of the drive motors can be caused by too low toothed belt tension.

Further, it is very important that the toothed belts, dependent on running time, be cleaned of dust and thread residue. Dust and thread residue lodges between the teeth and become stuck because of the oil. Thus malfunctions can occur which can possibly lead to damage to the machine.

Possible malfunctions can be e.g. the following:

- After the sewing of the forward lip and the buttonhole eye, the sewing mechanism did not turn 180°.
- After the sewing of the back lip, the sewing mechanism did not turn 90° in the cross bar.
- Individual stitches lie outside the seam pattern.
- The seam is cut open by the buttonhole knife.
- Error code (208 to 213) is displayed.

A malfunction is also then present when the cloth support plate or the sewing mechanism, after completion of the buttonhole returns only very slowly into the initial position.

In all cases, the toothed belt tension should be checked first.

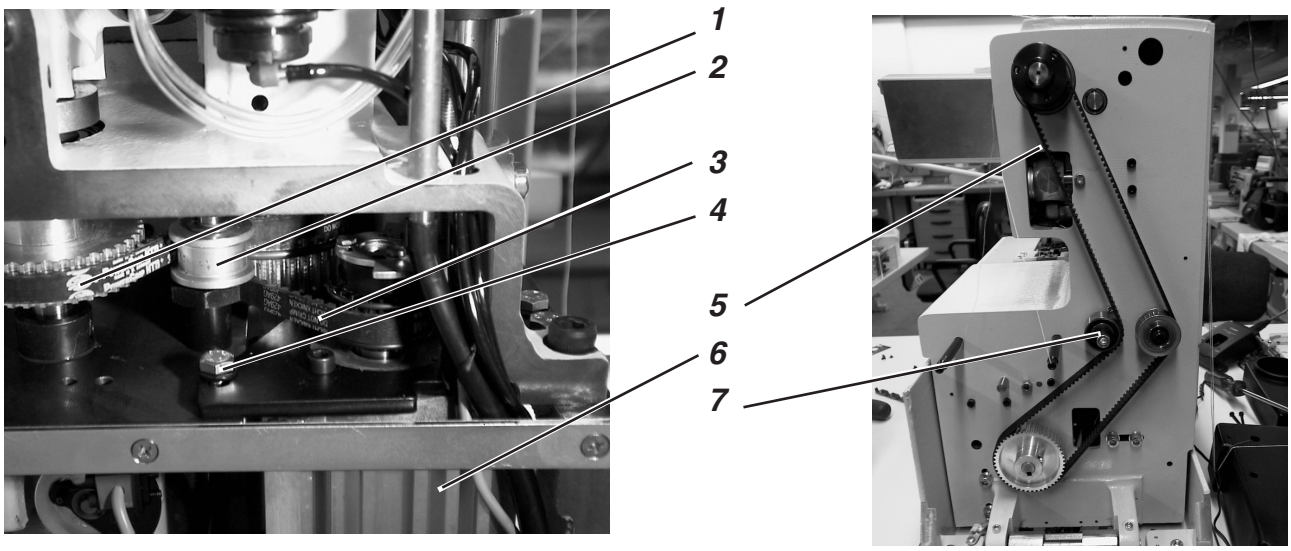
Caution Risk of Injury!

Note:

When cleaning the machine, particularly during the daily cleaning of the sewing area, care is to be taken that compressed air is not used. Otherwise, dust and thread residue would be distributed throughout the whole machine.

Adjust the setting of the toothed belt tension and clean the toothed belts only in the"Safe Stop" position or with the machine turned off.

29.1 Toothed Belts for the Sewing Drive



Correction-Toothed belt 1

– To set the tension of the toothed belt, turn the cam 2.

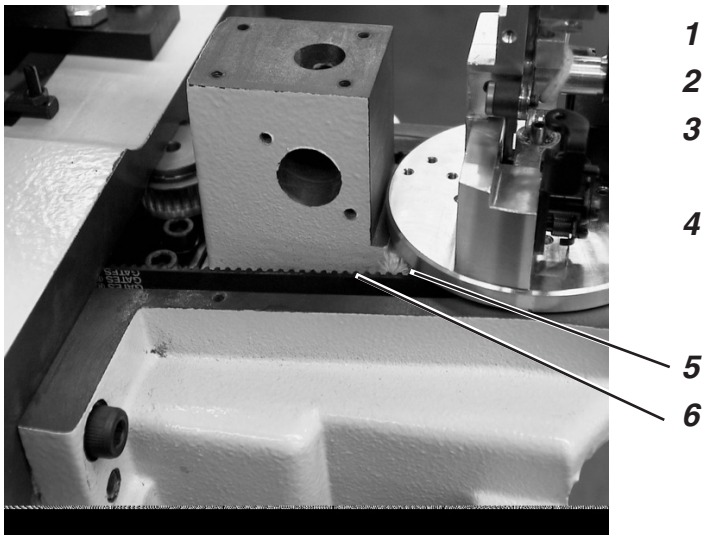
Correction-Toothed belt 3

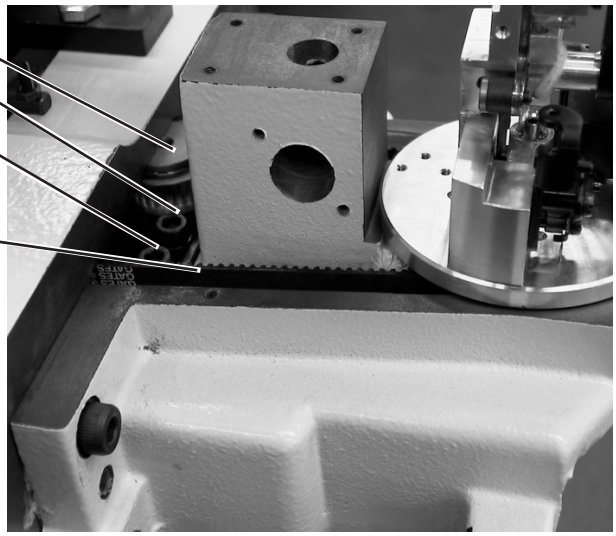
– To set the tension of the toothed belt, loosen the screws 4.
– Move the motor 6
– Tighten screws 4.

Correction-Toothed belt 5

– To set the tension of the toothed belt, turn the cam 7.

29.2 Toothed Belts for the Rotation of the Sewing Mechanism





Correction-Toothed belt 5

– Turn cam 6.

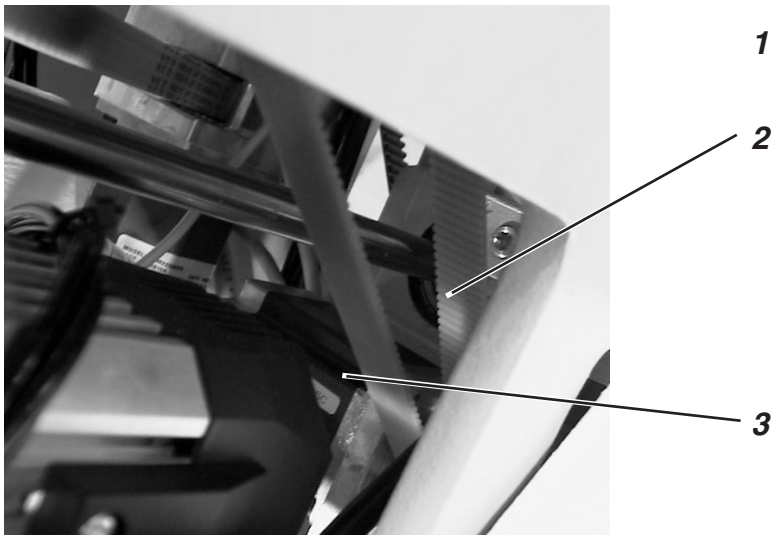
Correction-Toothed belt 4

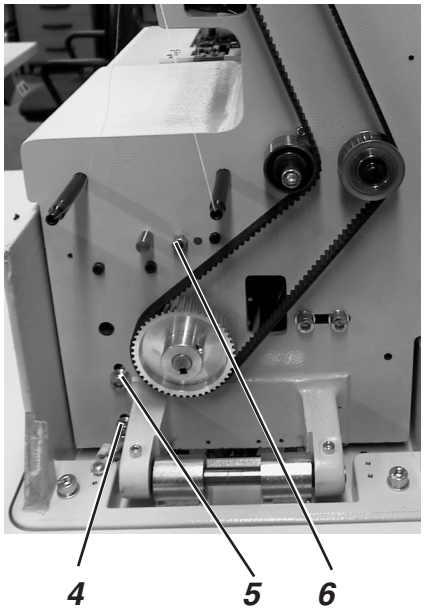
– Loosen screws 2 and 3.
– Move the toothed wheel 1.
– Tighten screws 2 and 3.

Correction-Toothed belt 7

– Loosen screws 8 and 9.
– Move the motor.
– Tighten screws 8 and 9.

29.3 Toothed Belts for the Motion of the Cloth Support Plate





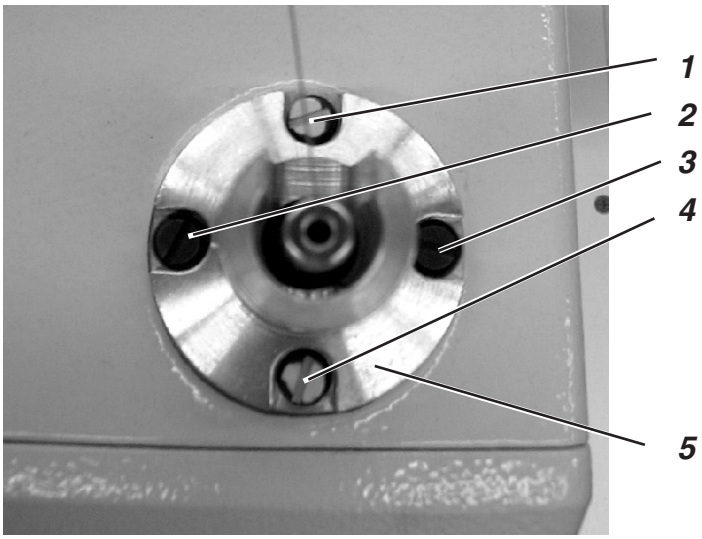
Correction-Toothed belt 1

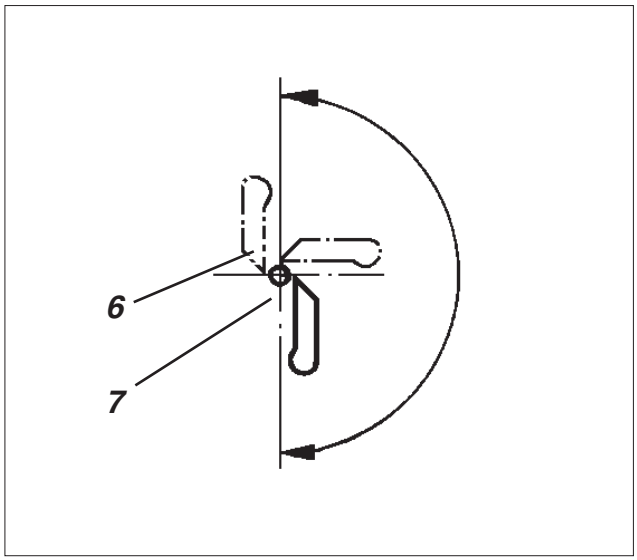
- Loosen the lock nut 6.
- Adjust the toothed belt tension with the 2nd nut
- Tighten lock nut.

Correction-Toothed belt 2

- Loosen screws 4 and 5.
- Adjust the height of the drive motor 3.
- Tighten screws 4 and 5.

30. Alignment of the Needle Bar's Center of Rotation to the Looper Turret's Center of Rotation





ATTENTION !

This setting is to be made only in exceptional cases, as a rule, this setting is not necessary.

The sewing mechanism is aligned at the factory so that the needle bar-center of rotation and looper turret-center of rotation lie above one another. This position is secured by the positioning screws 1 and 4 and the fastening screws 2 and 3.

The needle bars's center of rotation is correctly aligned when the clearance between needle 6 and point of the looper 7 is always equally large during the needle bar-looper turret rotation (see illus.).

Caution Risk of Injury!

Adjust the setting of the needle bars's center of rotation only in the "Safe Stop" position or with the machine turned off.

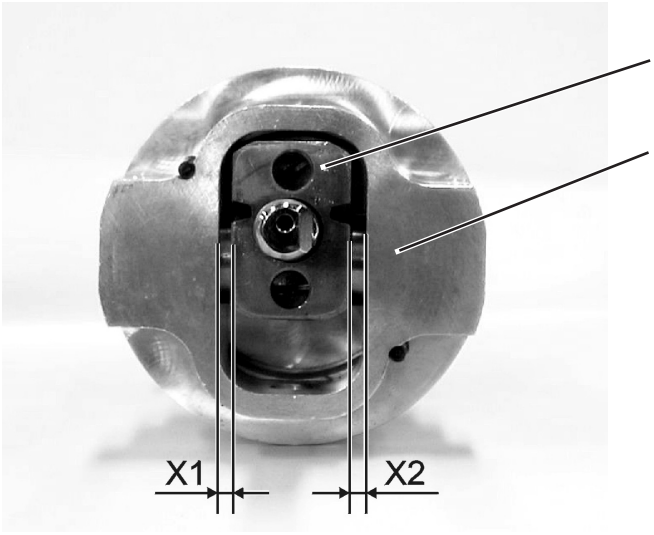
Rule and Control

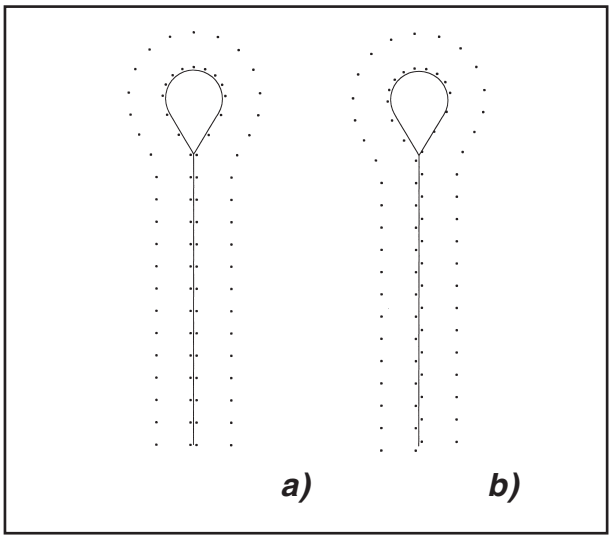
– Turn the handwheel until the left looper point lies at the middle of the needle. Check the clearance between needle and looper point in the following positions.
  1. Looper turret base position
  2. Looper turret turned 90° manually
  3. Looper turret turned 180° manually

Correction

– Loosen fastening screws 2 and 3 slightly.
– By way of exception, loosen the yellow-sealed positioning screws 1 and 4 slightly.
– Move guide 5 of the needle bar slightly.
– Tighten positioning and fastening screws 1,2,3 and 4.
– Check the position of the point of the looper 7 to the needle 6 in the 3 positions described above and repeat the correction, if necessary.

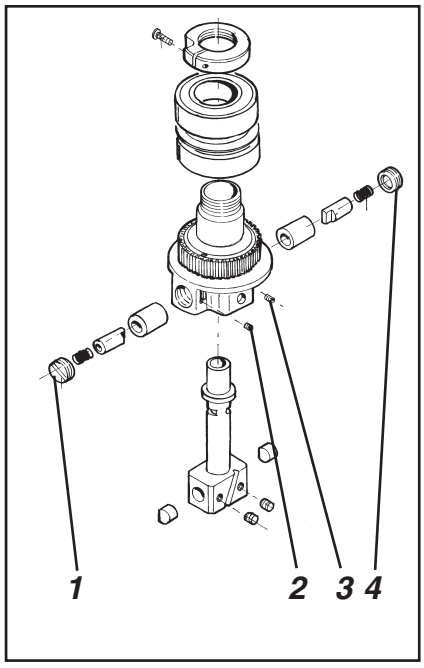
31. Needle Bar Guide





Caution Risk of Injury!

Conduct the setting of the needle bar guide only with the machine turned off.



Rule and Control

If the needle bar guide was disassembled, care is to be taken when re-assembling that the clearance between swing sleeve 5 and guide 6 is equal on both sides (dimension X1 equals dimension X2).

If the clearance differs, the stitch pattern appears displaced (see illustration above right).

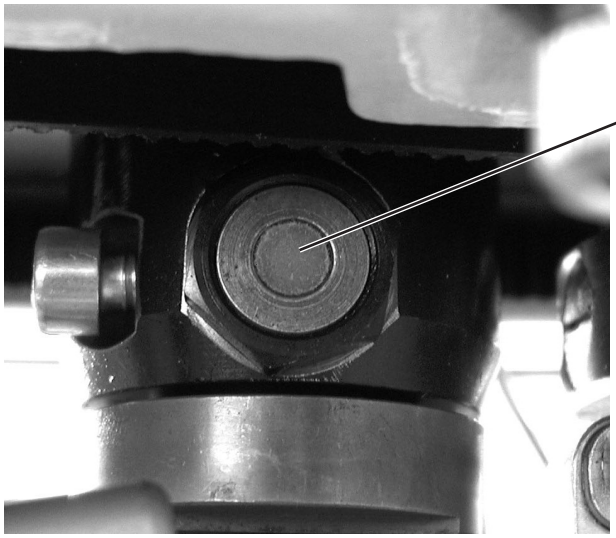
a) Correct stitch pattern.

b) Stitch pattern when the needle bar guide is not set centered.

Correction

- Assemble the guide (see illustration)
- Set the same clearance on both sides with the aid of the two setting screws 1 and 4.
- Tighten clamping screws 2 and 3
- Insert a short needle.
- As sewing material, insert a piece of paper or cardboard
- Sew a buttonhole
- Correct the clearance between the swing sleeve and the guide a little, if necessary.

32. Maintenance



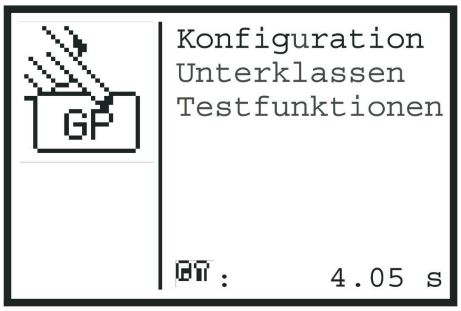
Caution Risk of Injury!

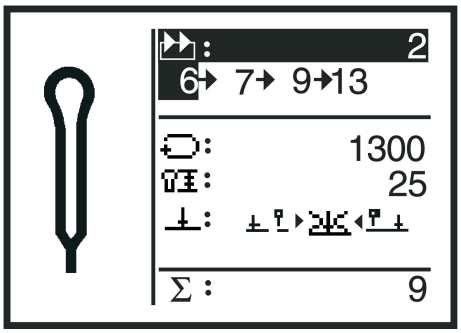
Turn the main switch off.
The maintenance of the sewing machine may only be conducted when it is turned off.

The maintenance tasks to be performed by the operating personnel of the sewing machine on a daily or weekly basis (cleaning and oiling) are described in the Part 1: Operating Instructions. They are included in the following table only for the sake of completeness.

Work to be conducted	Hours of operation			
	8	40	160	500
Machine head				
Clean the area under the needle plate of sewing dust		X		
Check the oil level	X			
Check and clean the toothed belts			X	
Oil the Blanking Punch 1			X	
Controls				
Clean the ventilator sieve	X			
Pneumatic system				
Check the water level in the pressure regulator	X			
Clean the filter insert in the maintenance unit	X			
Check the system for leaks				X

33. Service Menu 579





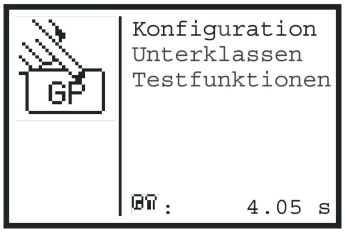
In the service menu of the 579, several base settings of the automatic sewing machine can be made and a number of test programs conducted. No maintenance or final position tasks are to be undertaken in the service menu.

Caution Risk of Injury!

Before beginning maintenance or final position work:

Turn the main switch off or bring the machine into the “Safe Stop” position.

33.1 Activating the Service Menu



- When the sewing menu (Illustration above right) is displayed, press the “**F**” key. A code prompt appears.
- Enter the code"**25483**“ with the arrow keys.
- Press the “**OK**” key. R The service menu appears (Illustration above left).
  One can select the individual positions with the arrow keys.
  One accesses the appropriate submenu by pressing the “**OK**” key.
- The bottom line shows the time needed for the sewing of the last buttonhole.
- One can always move from a submenu to the next higher-level menu with the “**ESC**” key.

33.2 Exiting the Service Menu

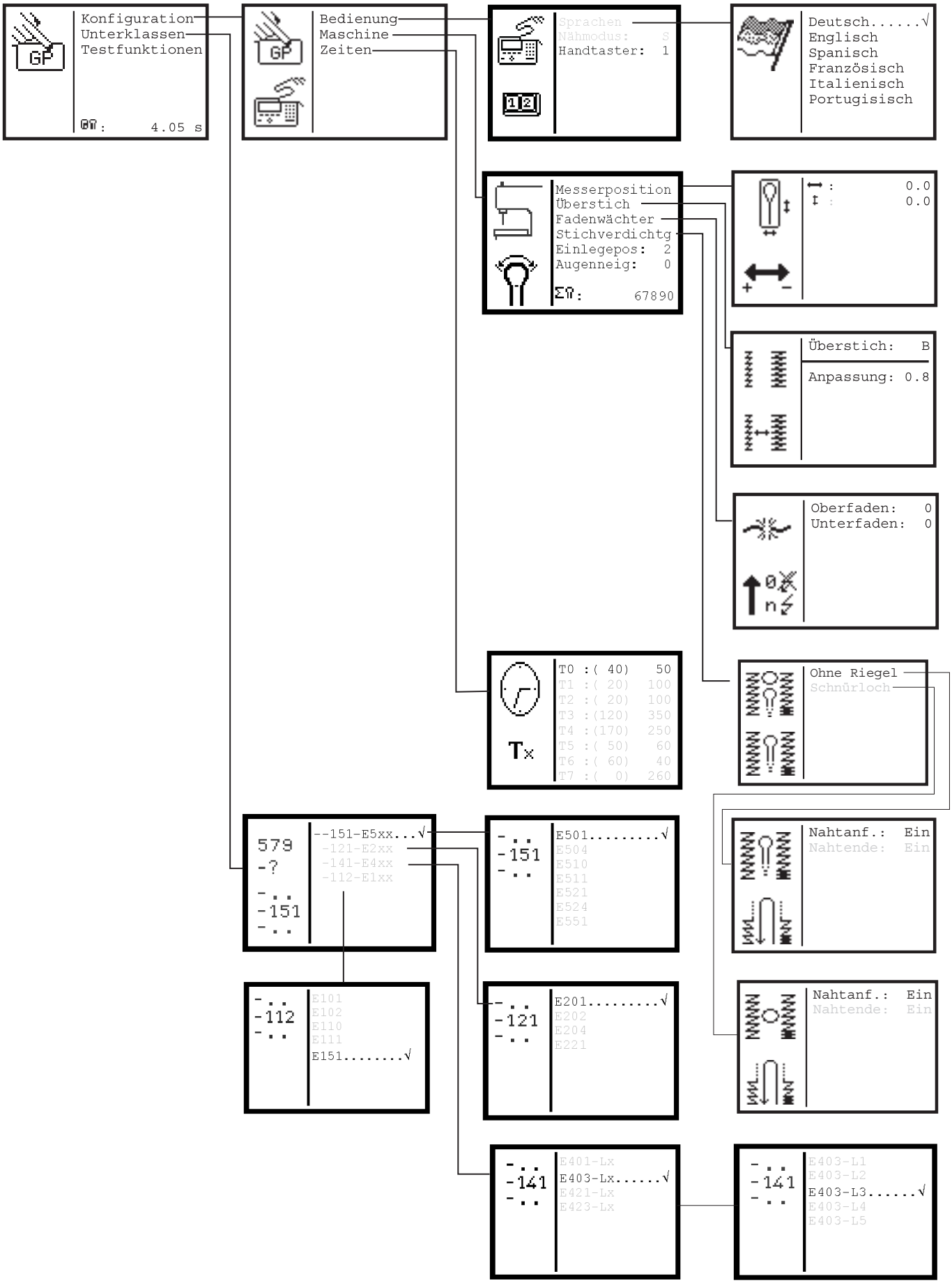
- When the service menu is displayed, press the “**ESC**” key.
  The service menu is exited and the sewing menu appears.

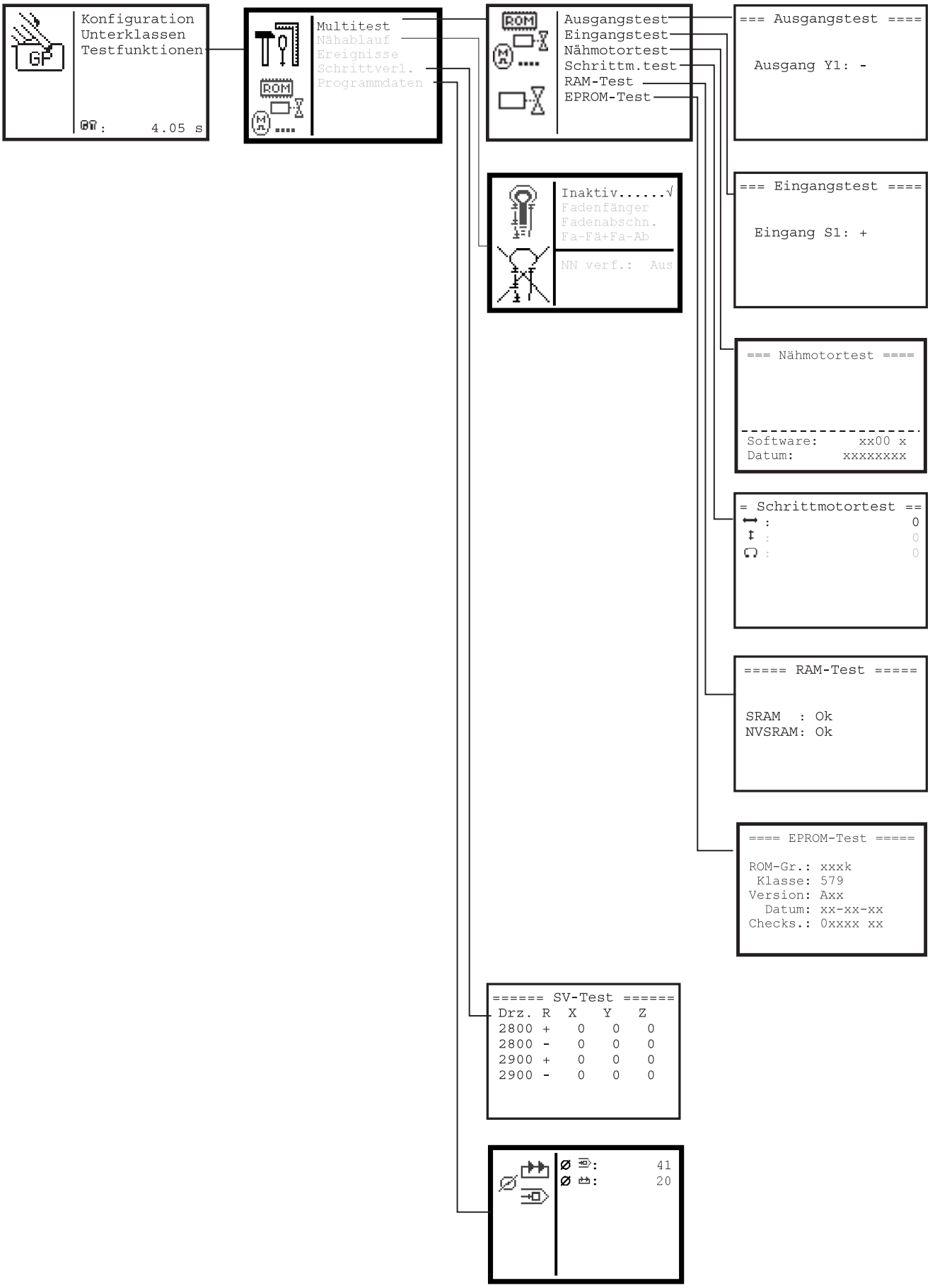
33.3 Multitest

The functions of the Multitest menu (input test, output test etc.) can be accessed either from the main menu of the service menu by selecting the menu items “Test Functions”, “Multitest” or directly in the following manner:

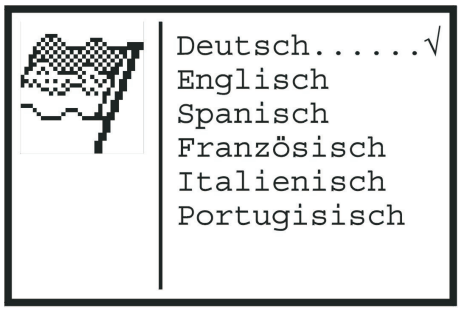
- Turn the machine on.
- At the display of the DÜRKOPP-ADLER logo, press the “**F**” key.
  The code prompt appears.
- Enter the code"**25483**“ with the arrow keys and confirm with the”**OK**“ key. The test menu appears.
- When one exits this menu by pressing the"**ESC**“ key, one moves to the sewing menu.

33.4 Menu Structure




Konfiguration
Unterklassen
Testfunktionen
4.05 s
Multitest
Nähablauf
Ereignisse
Schrittverl.
Programmdaten
Ausgangstest
Eingangstest
Nähmotortest
Schrittm.test
RAM-Test
EPROM-Test
=== Ausgangstest ====
Ausgang Y1: -
Inaktiv.....√
Fadenfänger
Fadenabschn.
Fa-Fä+Fa-Ab
NN verf.: Aus
=== Eingangstest ====
Eingang S1: +
=== Nähmotortest ====
Software: xx00 x
Datum: xxxxxxxx
= Schrittmotortest ==
0
0
0
===== RAM-Test =====
SRAM : Ok
NVSRAM: Ok
==== EPROM-Test =====
ROM-Gr.: xxxk
Klasse: 579
Version: Axx
Datum: xx-xx-xx
Checks.: 0xxxx xx
====== SV-Test ======
Drz. R X Y Z
2800 + 0 0 0
2800 - 0 0 0
2900 + 0 0 0
2900 - 0 0 0
41
20

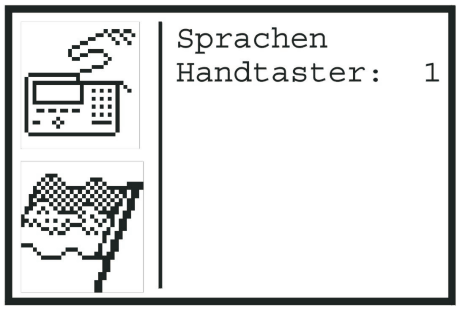
33.5 Setting the Language of the Menus



– When you are in the service menu, sequentially select the following menu items with the arrow keys and the “**OK**” key:
  - Configuration
  - Operation
  - Languages

  The language selection menu appears.
  A check mark appears behind the currently selected language.
– Select the desired language with the arrow keys.
– Press the “**OK**” key.
  The language is changed immediately.

33.6 Setting the Sewing Modus



The sewing modus must be setup. Please check chapter 9.4.2 in the instruction manual.

Setting:

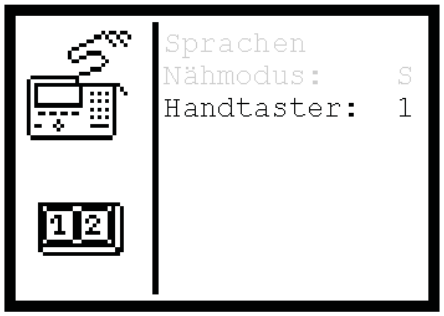
1. **Sewing Modus S**: Sequence mode can be selected.
2. **Sewing Modus B**: Single-buttonhole mode can be selected.

Shifting function

– When you are in the service menu, sequentially select the following menu items with the arrow keys and the “**OK**” key:
  - Configuration
  - Operation

  The **“Operation”** menu appears.
– Select the menu item “Sewing Modus” using the arrow keys.
– Change the setting value with the arrow keys and confirm it with the “**OK**” key.

33.7 Setting the Function of the Hand Switch



The method of operation of the hand switch can be changed.

1st Setting (Hand switch: 0 in the menu)

– Key 1: Clamps are opened or closed.
– Key 2: The sewing cyle starts when the clamps are closed.

2nd Setting (Hand switch: 1 in the menu)

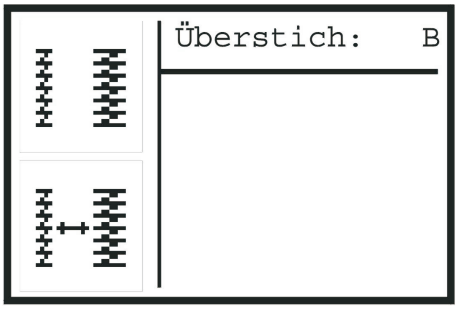
– Key 1: Clamps are opened or closed.
– If they are not already lowered, the clamps are lowered. The sewing cycle starts.

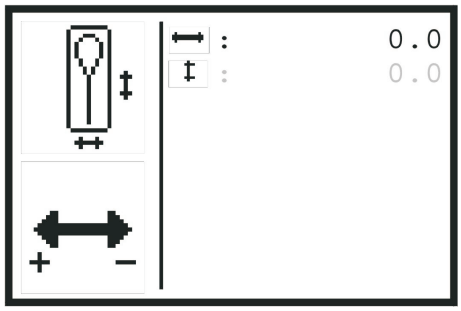
Changing the function

– When you are in the service menu, sequentially select the following menu items with the arrow keys and the “**OK**” key:
- Configuration
- Operation

  The “ **Operation** ” menu appears.
– Select the menu item “ **Hand switch** ” with the arrow keys.
– Press the “**OK**” key.
– Change the value with the arrow keys and confirm with the “**OK**” key.

33.8 Setting the Knife Position





The position of the knife can be corrected in this menu. The position of the knife can be corrected by +-0,3 mm on both axes. Which direction is meant by “+” and “-” is shown in the symbol at the lower left in the display.

– When you are in the service menu, sequentially select the following menu items with the arrow keys and the “**OK**” key:
  - Configuration
  - Machine
  - Cutter position

  The “ **Setting the Cutter Position** ” menu appears.
– Select the axis on which the knife is to be moved with the arrow keys.
– Press the “**OK**” key.
– Change the correction value with the arrow keys.
– Press the “**OK**” key.

33.9 Setting the Covering Stitch

The covering stitch can be changed between wide and narrow in this menu.

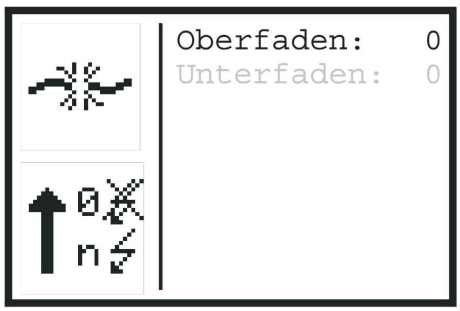
Wide covering stitch: “**B**” in the display.

Narrow covering stitch: “**S**” in the display.

– When you are in the service menu, sequentially select the following menu items with the arrow keys and the “**OK**” key:
  - Configuration
  - Machine
  - Covering Stitch

  The “ **Covering Stitch** ” menu appears.
– Press the “**OK**” key.
– Change the setting for covering stitch with the arrow keys.
– Press the “**OK**” key.

33.10 Setting the Thread Monitor



The thread monitors for the looper thread and the needle thread can be set in this menu. The values behind the needle thread and looper thread mean the following:

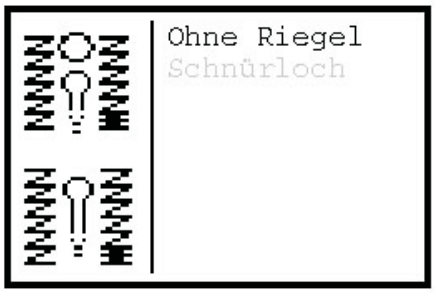
0 = The respective thread monitor is turned off

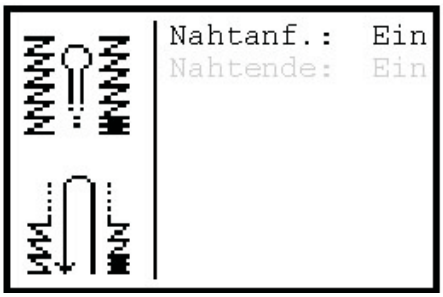
>0 = The number of stitches after which the sewing cycle is stopped because of thread breakage

– When you are in the service menu, sequentially select the following menu items with the arrow keys and the “**OK**” key:
  - Configuration
  - Machine
  - Thread Monitor

  The “ **Thread monitor** ” menu appears.
– Select the thread monitor which is to be set with the arrow keys.
– Press the “**OK**” key.
– Set the desired value with the arrow keys.
– Press the “**OK**” key.
  The value for the thread monitor are now saved.

33.11 Stitch Condensation



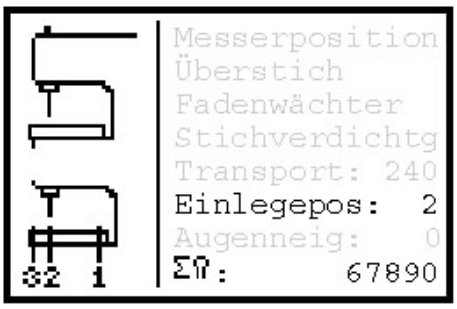


The stitch condensation at the seam beginning and seam end are turned on and off in this menu.

– When you are in the service menu, sequentially select the following menu items with the arrow keys and the “**OK**” key:
  - Configuration
  - Machine
  - Stitch condensation

  The “ **St. comp.** ” menu appears.
– Should you want to change the stitch condensation for an eyelet, select “**Eyelet**”, otherwise select “**Without Tack**”.
– Select" **S. start**“ (seam begin) or ” **S. end** “ (seam end) with the arrow keys.
– Press the “**OK**” key.
– Change the stitch condensation for the selected position with the arrow keys.
– Press the “**OK**” key.

33.12 Setting the Feed Position



The feed position can be established here. The following values can be set:

When you are in the service menu, sequentially select the following menu items with the arrow keys and the "**OK**" key:
- Configuration
- Machine

The "**Machine**" menu appears.

1 = The material is fed at the position for cutting a buttonhole.

2 = The material is fed at the seam beginning position

– Select " **Feed Position W0**" with the arrow keys.
– Press the "**OK**" key.
– Change the value for the feed position with the arrow keys.
– Press the "**OK**" key.

33.13 Setting the Eye Inclination

This allows the setting of the incline of the buttonhole eye in regard to the straight part of the buttonhole.

The entry range lies between -10° and +10°.

– When you are in the service menu, sequentially select the following menu items with the arrow keys and the "**OK**" keys:
- Configuration
- Machine

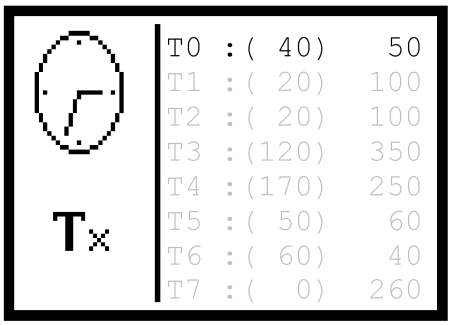
– The "**Machine**" menu appears.
– With the arrow keys select "**Eye incl.**" .
– Press the "**OK**" key.
– With the arrow keys change the value for the eye incline.
– Press the "**OK**" key.

33.14 Total Piece Counter

The total piece count for the machine is displayed in the lowest line of the "Machine"menu. This counter cannot be reset.

– When you are in the service menu, sequentially select the following menu items with the arrow keys and the "**OK**" key:
- Configuration
- Machine
– The "**Machine**" menu appears.
The bottom line displays the amount of pieces counted.

33.15 Setting the Times



The various time intervals which control the sewing cycle can be set in this menu. The values in brackets are the default values.

ATTENTION !
Change this setting only after consultation with **DÜRKOPP ADLER**.

– When you are in the service menu, sequentially select the following menu items with the arrow keys and the "**OK**" key:
- Configuration
- Times

The "**Times**" menu appears.

– Select the time interval to be changed with the arrow keys.
– Press the "**OK**" key.
– Change the value for the time with the arrow keys.
– Press the "**OK**" key.

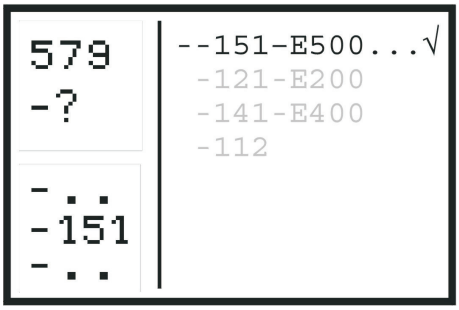
T0 (Cutting a buttonhole) Standard: 40 Setting range: 0-100	- Cutting the buttonhole - Contact - The interval T0 is run through. - The stamp moves upward Care must be taken to see that the buttonhole is cut open along its whole length.
T1 (Thread catcher) Standard: 20 Setting range: 0-100	- The thread gripper of the needle thread catcher is closed (valve Y11) - The interval T1 is run through - The needle thread catcher swings away from the needle (valve Y12) Care must be taken that the needle thread is clamped before the needle thread catcher swings back.
T2 (Thread catcher) Standard: 20 Setting range: 0-100	- The needle thread catcher swings away from the needle (valve Y12) - The interval T2 is run through - The needle thread catcher moves upward (valve Y09) Care must be taken that the thread gripper is no longer under the needle before the needle thread catcher runs upward.
T3 (Idle period) Standard: 120 Setting range: 0-200	- The buttonhole is cut open - Contact is triggered - The interval T3 is run through - The cloth support plate moves. Care must be taken that the cutting stamp is raised before the cloth support plate runs forward.

T4 (Needle thread trimmer) Standard: 170 with 579-112000: 140 Setting range 0-400	- Activation period for the valve Y06 The interval from the turning on to the turning off of the valve.
T5 (Needle thread drawer) Standard: 50 Setting range: 0-100	T5 applies only in case of trimming before the sewing - The needle thread is drawn forward - Trimming residue is vacuumed off - The intervals T14 and T5 are run through. - The needle thread gripper is opened - The thread tension is closed Care must be taken that the thread gripper is only then opened when the thread drawer is switched back.
T6 (Thread catcher) Standard: 60 Setting range: 0-100	- The needle thread catcher moves to the material - The interval T6 is run through - Care must be taken that the needle thread catcher is lowered so that the thread gripper does not strike against the needle during slewing.
T7 (Thread catcher) Standard: 0 Setting range: 0-100	- The needle thread catcher swings to the needle - The interval T7 is run through - The thread gripper of the needle thread catcher is closed. Care must be taken that the thread gripper lies under the needle before the thread gripper is closed.
T8 (Needle thread trimmer) Standard:70 with 579-121000: 165 Setting range: 0-300	- End of sewing - The interval T8 is run through - The needle thread is trimmed (valve Y06) Care must be taken that sewing is ended before the needle thread is trimmed.
T9 (Needle thread trimmer) Standard: 20 Setting range: 0-100	- The needle thread is trimmed - The interval T9 is run through. - The needle thread gripper is closed. Care must be taken that the thread gripper is closed only after the trimming of the needle thread.
T10 (Looper thread trimmer) Only in case of 579-121000 and 579-141000 Standard : 0 bei 579-121000: 5 bei 579-141000: 5 Setting range: 0-50	- Valve Y10 for looper thread trimmer is switched - The interval T10 is run through. - Valve Y08 for looper thread trimmer is switched The looper thread is trimmed Care must be taken that the cylinder is pressure-free before the looper thread trimming so that a collision is prevented through possible residual pressure.
T11 (Needle thread catcher) Only in case of 579-112000 Standard: 70 Setting range 0-150	- The needle thread catcher moves up (valve Y09) - The interval T11 is run through. - The looper thread is trimmed (valve Y08) Care must be taken that the needle thread is not cut by the looper thread trimmer.
T12 (Thread tension) Standard: 50 Setting range: 0-150	- End of sewing - The interval T12 is run through - The looper thread tension is opened and the looper thread is drawn forward Care must be taken that the machine has finished sewing before the looper thread is drawn forward.
T13 (Thread tension) Standard: 100 Setting range: 0-200	- Activation period for the valve Y07 (open the looper thread tension and draw the looper thread forward)
T14 (Needle thread drawer) Standard: 450 Setting range: 0-1000	- Activation period for the valve Y05 (needle thread drawn forward)

T15 (Looper thread trimmer) Only in case of 579-121000 and 579-141000 Standard: 100 (579-121000) 50 (579-141000) Setting range: 0-500	- Activation period for the valve Y10 (looper thread trimmer)
T16 (Sewing mechanism rotation) Only in case of 579-121000 and 579-141000 Setting range 0-100 Standard: 1	- Valve Y10 or Y08 (depending on subclass) is switched back. - The interval T16 is run through The sewing mechanism is rotated back into base position.
T17 (Sewing start) Standard: 20 Setting range: 0-100	- The machine is started - The interval T17 is run through - The machine starts sewing Care must be taken that the thread gripper for the needle thread is open and the material is spread before the machine starts sewing.
T18 (Thread tension) Only in case of 579-121000 and 579-141000 Standard: 100 Setting range: 0-200	Activation period for the valve Y07 (open the looper thread tension and draw forward the looper thread).
T19 (Sewing mechanism rotation) Only in case of 579-112000 Standard: 1 Setting range: 0-300	The looper thread is trimmed (valve Y08) The interval T19 is run through. The sewing mechanism is rotated back and the cloth support plate is moved. Care must be taken that the looper thread is trimmed before the sewing mechanism rotates back.
T20 (Idle period) Standard: 200 Setting range: 0-400	The cloth clamps open, the cutting block moves upward. The interval T20 is run through The reference run starts. Care must be taken that the cutting block is raised before the cloth support plate moves. (Important when “Cutting after Sewing” is set)
T21 (Cutting a buttonhole) Only for E-Group E510 Standard: 180 Setting range: 0-500	Valve Y16 (cutting a buttonhole) is switched. The interval T21 is run through. Valve Y16 is switched back. When the interval T21 is set to “0" T21 is the contact time.
T22 (Thread catcher) Standard:20 Setting range 0-100	The thread gripper of the needle thread catcher is opened (back seam/valve Y11) The interval T22 is run through The needle thread catcher moves to the material.
T23 (Idle period) Only in case of 579-121000, 579-141000 and 579-151000 Standard: 60 Setting range: 0-150	- End sewing - The interval T23 is run through. - Begin of the empty run to looper thread trimming (579-121000 and 579-141000) - Begin of the empty run to cutting the buttonhole (579-151000)
T24 (Looper thread trimmer) Only in case of 579-121000 and 579-141000 Standard: 0 Setting range: 0-100	- The looper thread trimmer is switched back. - The interval T24 is run through. - The empty run begins. Care must be taken that the looper thread trimmer is switched back before the cloth support plate moves in order to avoid a collision. The collision danger is particularly great with subclass 579-121000.
T25 (Looper thread trimmer) Only in case of 579-121000 and 579-141000 Standard: 1 Setting range: 0-100	The looper thread is trimmed (valve Y10) The interval T25 is run through. The looper thread trimmer is switched back (valve Y08).

T26 (Cutter) Standard: 1000 Setting range: 0-2000	The buttonhole is not cut open (no contact/no knife/no block) The interval T26 is run through. The cutter cylinder is switched back.
T27 (Clamp plate) Standard: 100 Setting range: 0-300	The clamp is closed The interval T27 is run through. The material is spread. Care must be taken that the clamps are closed first before the material is spread.

33.16 Setting the Subclasses



The subclass can be set in this menu. With the subclasses 579-112000 and 579-151000, the E-group can also be set. With the subclass 579-141000 the cutting length group can be selected.

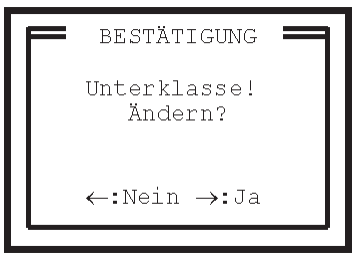
The currently selected settings are indicated by a check mark.

ATTENTION!

The subclass, E-group and cutting length group which are set in this menu must correspond with the machine being used.

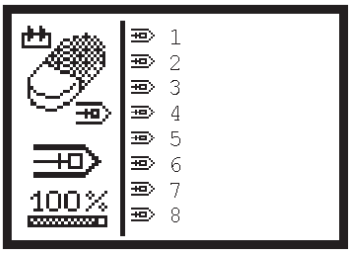
– When you are in the service menu, sequentially select the following menu items with the arrow keys and the"**OK**“ key:
  - Subclass

  The ”**Subclasses**“ menu appears.
– Select the subclass of the machine with the arrow keys.
– Press the “**OK**” key.
  If the E-group or the cutting length group for the subclass must still be selected, a submenu in which the E-group and/or cutting length group appears where the selection has to be be done.
  - Select the E-group or cutting length group using the arrow keys.
  - Press the “**OK**” key.
– If sufficient memory is available, the screen beside with the message: “Change Subclass ?” appears:
  If the Subclass should to be changed, strike the “⇨” key.
  If the Subclass should not be changed, strike the “⇦” key.



– When there is no memory available for further buttonhole shapes or buttonhole sequences, the following menu appears instead of the confirmation request. It allows you to delete data to free the memory for the new program data and shifting the subclass.

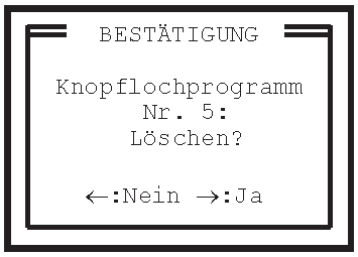
33.16.1 Data for one Subclass/Equipment/Cutting Length



Too much Buttonhole programs

If you reach the number of 50 buttonhole programs in one Subclass/Equipment/Cutting Length, the selection menu for deletion beside appears.

– Select the Buttonhole program with the arrow keys.



– Press the “OK” key.
The confirmation screen menu beside appears:
– After confirming with the arrow key “⇨” for “Yes” a mark appears on the right of the number.
– You can select further Buttonhole programs to be deleted.
– After selecting the Buttonhole programs to be deleted press the “ESC” key.
You will exit the menu.
The machine will display the Subclass menu again. You can now shift the subclass or create a buttonhole program.
– Check the position of the Eye Knife (see Chapter “Eye Knife”).

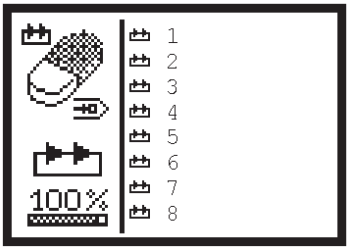
Hint:

Delete as much as possible Buttonhole programs, so that you can still create Buttonhole Programs after shifting the subclass.

ATTENTION !

The number of the remaining buttonhole programs may change after deleting some of the buttonholes. The data remains unaltered.

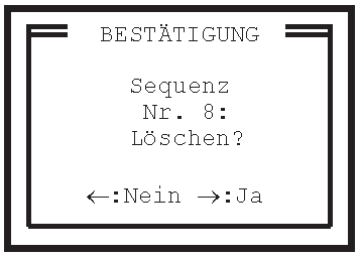
– Deleting buttonhole programs will remove it as well from the sequence.
– Change of buttonhole programs number will also affect the sequence.



Too much buttonhole sequences

If you reach the number of 25 sequences in one Subclass/Equipment/Cutting Length, the selection menu for deletion beside appears:

– Select the Buttonhole program with the arrow keys.



– Press the “OK” key. The confirmation screen menu beside appears:
– After confirming with the arrow key “⇨” for “Yes” a mark appears on the right of the number.
  You can select simultaneously several sequences.
– After selecting the sequences to be deleted press the “ESC” key.
  You will exit the menu.
  The machine will display the Subclass menu again.
  You can now shift the subclass or create a new sequence.

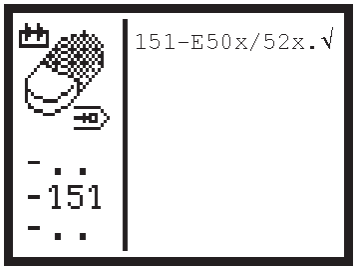
Hint:

Delete as much as possible Sequences, so that you can still create Sequences after shifting the subclass.

ATTENTION !

The number of the remaining sequences may change after deleting some of the sequences. The buttonhole sequences remain unaltered.

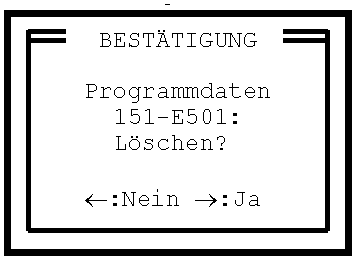
33.16.2 Data for several Subclass/Equipment/Cutting Length



All data (Buttonhole programs and Sequences) for the available Subclass/Equipment/Cutting Length will be listed.

Important:

The current Subclass/Setup will not be listed, which means the data cannot be deleted.

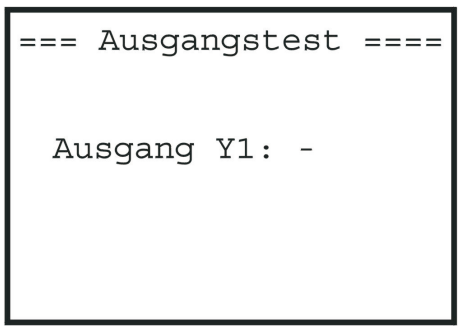


- Select the Subclass/Setup to be deleted with the arrow keys.
- Press the “OK” key. The confirmation screen menu beside appears:
- After confirming with the arrow key “⇨” for “Yes” a mark appears on the right of the number.
  You can select simultaneously several Subclass/Setup.
- After selecting the sequences to be deleted press the “ESC” key.
  You will exit the menu.
  The machine will display the Subclass menu again.
  You can now shift the subclass.

ATTENTION !

After changing the subclass, always check the position of the eye knife (see Chapter “Eye Knife”) before sewing a buttonhole. Since the position of the eye knife is different with the various subclasses, it can cause damage to the machine when the position of the eye knife is not correctly set.

33.17 Output Test



ATTENTION !

The turning-on of output elements can lead to collisions with other machine elements and to damage to the automatic sewing machine.

Before any output element is turned on make sure that this cannot collide with other components of the automatic sewing machine.

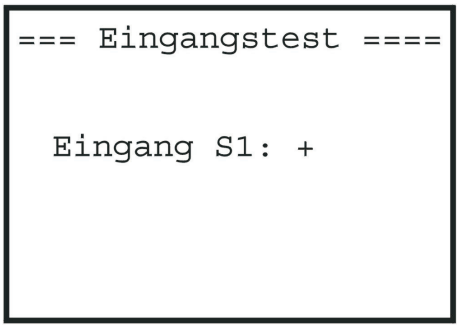
One can switch individual or several outputs in this menu.

– When you are in the service menu, sequentially select the following menu items with the arrow keys and the "**OK**" key:
  - Test Functions
  - Multitest
  - Output Test

  The " **Output Test** " menu appears.
– Select the desired output with the up and down arrow keys. The current status of the output is shown behind the output number:
  - = Output not activated
  + = Output activated
– Press the "**OK**" key.
– The output is switched over.
  With output Y16 (knife), a warning appears.
  Press the OK key. The knife is switched.

Output	Designation
Y1	Cloth clamps
Y2	Spread the material
Y3	Needle thread tension
Y4	Needle thread gripper
Y5	Draw forward the needle thread
Y6	Needle thread trimmer
Y7	Open the looper thread tension and draw thread forward
Y8	Looper thread trimmer depending on subclass
Y9	Needle thread catcher
Y10	Looper thread trimmer with subclass 579-121000 and 579-141000
Y11	Needle thread catcher gripper
Y12	Needle thread catcher swings to the needle
Y16	Cutting buttonholes

33.18 Input Test



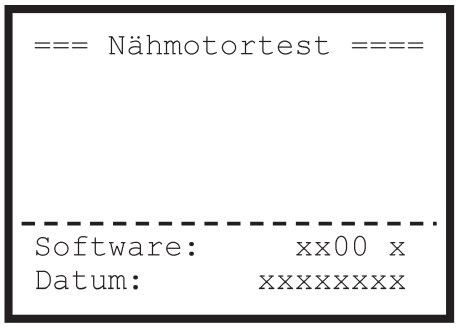
One can test individual inputs in this menu.

– When you are in the service menu, sequentially select the following menu items with the arrow keys and the “**OK**” key:
  - Test Functions
  - Multitest
  - Input Test

  The “ **Input Test** ” menu appears.
– Select the desired input with the up and down arrow keys. The current status of the input is shown behind the input number:
  - = Input not activated
  + = Input activated
– Manually move that part of the automatic sewing machine which triggers the appropriate input.
– The status of the input changes as soon as the input is operated.

Input	Designation
S01	Looper thread monitor
S02	Needle thread monitor
S08	Depending on subclass left or right needle penetration
S09	Pressure monitor
S10	Hand switch key “1"
S11	Hand switch key “2"
S13-S16	Pedal
S18	Switch “Safe Stop”
S24	Buttonhole cut
S25	Reference switch sewing mechanism rotation
S26	Reference switch lengthwise movement
S27	Reference switch-crosswise movement

33.19 Sewing Motor Test



One can test the sewing motor in this menu.

When you are in the service menu, sequentially select the following menu items with the arrow keys and the “**OK**” key:
- Test Functions
- Multitest
- Sewing Motor Test

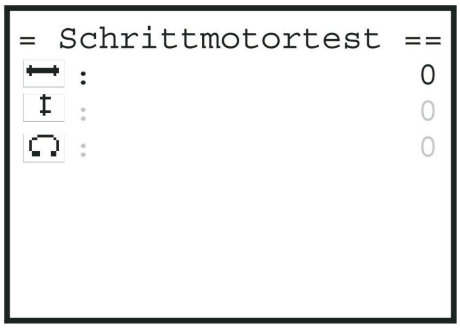
The “ **Sewing Motor Test** ” menu appears.

Behind “**Software**” and “**Date**”, the software version and the generation date of the software for the sewing motor appear.

Testing the sewing drive

- Press the arrow-up key.
  The sewing drive starts with a speed of 100 rpm.
- The speed can be changed with the arrow-up and -down keys.
- By pressure on the “**RST**” key, the sewing drive stops in stop position 1.
- To exit the sewing motor test press"**ESC**“ .

33.20 Step Motor Test



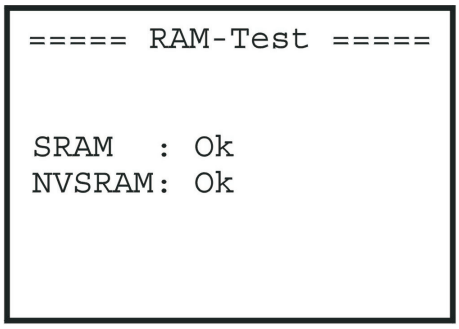
The step motors for the three motion axes of the 579 can be tested in this menu.

When you are in the service menu, sequentially select the following menu items with the arrow keys and the “**OK**” key:
- Test Functions
- Multitest
- Step Motor Test

The “ **Step Motor Test** ” menu appears.

- Select the desired axis with the arrow keys.
- Press the “**OK**” key.
- If the step motor for the lateral or rotational axis is selected, move the motor with the arrow-left and -right keys.
- If the step motor for the longitudinal axis is selected, move the motor with the arrow-up and -down keys.
- After the pressing of the key the step motor moves 5 steps.
- If one presses the"**ESC**“ key, the test of the current step motor is ended.
- Select another step motor or exit the step motor test by pressing on the “**ESC**” key.

33.21 RAM Test



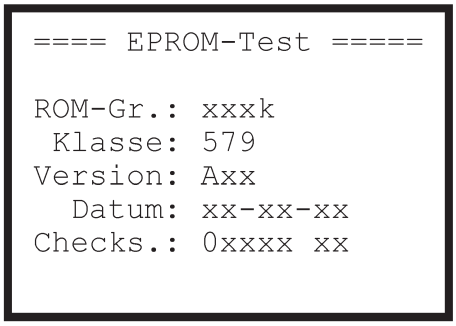
The RAM memory of the 579 can be tested in this menu.

When you are in the service menu, sequentially select the following menu items with the arrow keys and the "**OK**" key:
- Test Functions
- Multitest
- RAM Test

The "**RAM Test**" menu appears.

– The RAM test starts as soon as the menu is called up. The message "Please wait..." appears in the display.
– If the RAM of the 579 is okay, OK appears behind "SRAM" and "NVSRAM".
– If there is an error, "F" appears.

33.22 EPROM Test



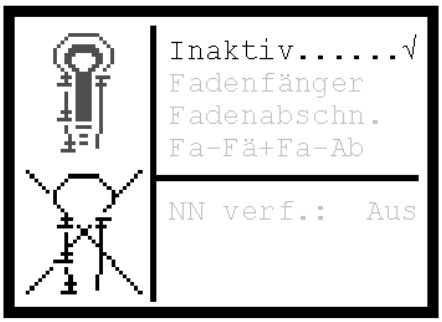
The EPROM of the 579 can be tested in this menu. Informations about the software version appear additionally.

When you are in the service menu, sequentially select the following menu items with the arrow keys and the "**OK**" key:
- Test Functions
- Multitest
- EPROM Test

The "**EPROM Test**" menu appears.

– The EPROM Test starts as soon as the menu is called up. The message "Please wait..." appears in the display instead of "Checks." Ok.
– If the EPROM of the 579 is okay Ok appears behind "Checks.".
– If there is an error, "F" appears.

33.23 Sewing Process Testing Program



With the aid of the “Sewing Process” testing program, the switching order of the valves can be checked.
This testing program is particularly helpful for the setting of the thread catcher and the thread trimming systems because one can see precisely how the individual components lie in regard to the needle thread, looper thread and the gimp.

Caution Risk of Injury!

The “Sewing Process” testing program serves only for the checking of cycles and functions. Maintenance or setting work may not be conducted during the “Sewing Process” testing program.

The testing program can be set to the following values. Depending on the sewing cycle, interruptions occur at different points.

Inactive	=	Normal sewing cycle, the testing program is turned off
Thr. Catcher	=	The sewing cycle is stopped after the valves of the thread catcher are switched
Thr. Cutter	=	The sewing cycle is stopped after the valve of the respective thread trimming system is switched
T Ca.+T Cu	=	The sewing cycle is stopped after each valve is switched

When the sewing cycle is stopped, the following values appear in the display:

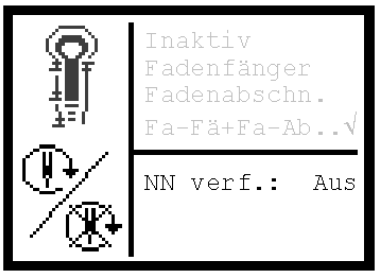
NC-Prog.:	NC program
TPxx:	Technology point with the number xx
No.:	Number of the stop point

These values are only of interest to the the Dürkopp-Adler Service Dept..

To continue the sewing sequence press the RST key, operate the foot pedal or the hand switch.

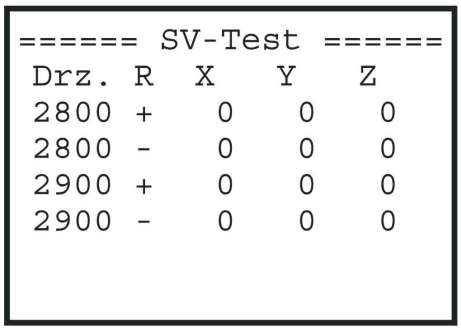
– When your are in the service menu, select the menu item with the arrow keys and the “**OK**” key:
  - Test functions
  - Sewing process

  The **“Sewing proc.**” menu appears.
– Select the “**Stop Points**” menu item with the arrow keys.
– Press the “**OK**” key.
– Set the desired value for the stop points with the arrow keys.
– Press the “**OK**” key.



- The sewing motor can be switched on or off during the sewing process with the stop points.
- Select the menu item “Not Sewing Process” with the arrow keys.
- Press the “**OK**” key.
- Select the desired value with the arrow keys.
- Press the “**OK**” key.

33.24 Step Loss Test



The stiffness of the 3 axes can be tested in this menu.

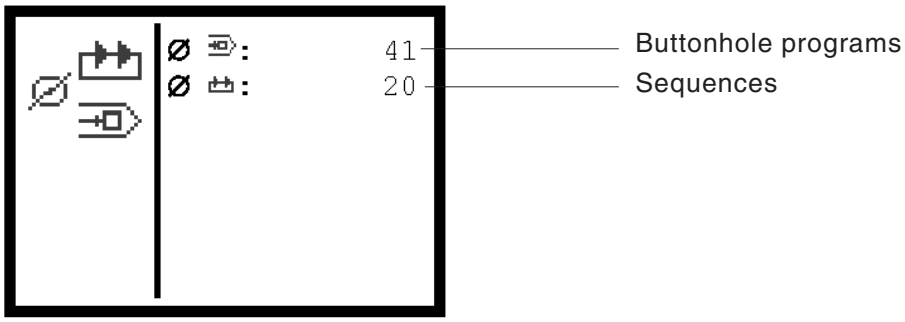
When you are in the service menu, sequentially select the following menu items with the arrow keys and the “**OK**” key:
- Test Functions
- Step Loss Test

The “ **Step Loss Test** ” menu appears.

This menu item serves for testing the mechanical sluggishness in the machine. An axis is too sluggish when, with an empty run rpm of 2800, the step losses exceed 1 step.

- To start the test program press the “**RST**” key.
- The starting rpm is 2800 min . All axes are moved a defined distance in the “+” and “-”- directions, then referenced. Thereby any possibly occurring step losses are established and displayed.
- The idle rpm is then increased by 100 min until more than 5 step losses have occurred on all 3 axes.
  The test is then ended automatically.

33.25 Program Data



The menu item above shows the memory space available for buttonhole programs and buttonhole sequences. The maximum space available should be: 49 buttonholes and 24 sequences

– When you are in the service menu, sequentially select the following menu items with the arrow keys and the “**OK**” key:
  -Test functions
  -Program data

  The “**Program Data**” menu appears.

33.26 Loading a New Program Version

After the turning-on of the machine, the DA logo and program version appear in the display.

It is possible to load a new program version with a bootbox and corresponding download cable und RAM card.

Additionally, the possibility of loading a new program version via a normal PC with appropriate download cable und a CD ROM exists.

The parts are available from the **DÜRKOPP ADLER AG** sales offices under the following parts numbers:

Parts	Parts numbers
Bootbox with download cable	9850 001054
RAM card	9850 579003 RP01
Diskette	9850 579003 DP01
CD ROM	9850 579003 CP01
Download cable for the PC	9850 001043

34. Error Messages

Caution Risk of Injury!

Search for and remedy errors only in the “Safe Stop” position or with the machine turned off.

No.	Description	Possible cause	Error remedy
134 135 136	Hardware error Amplifier X-motor, Y-motor, Z-motor	- Temperature too up - Error 5V power supply - Error 120V power supply - Amplifier defective	- Check the temperature - Check the fuses on the transformer - Replace the amplifier
141	Sewing motor controls: Communication interrupted	- Cable connections to the Efka controls not okay - Efka controls defective	- Check the cable connections to the sewing motor controls - Replace the Efka controls
143	Sewing motor controls: Command buffer full	Internal error	Contact Dürkopp-Adler Service
148	Sewing motor controls: Drive not ready	- Cable connections to the Efka controls not okay - Efka controls defective	- Check the cable connections to the sewing motor controls - Replace the Efka controls
149	Sewing motor controls: UART not ready	- CPU unit defective	- Replace the CPU unit
150	Sewing motor controls: Hardware error	- Hardware error Efka controls - Internal error - Synchronizer not connected or defective - Commutation initiator - Lead or voltage changer faulty - Mains voltage too down - Blockage, motor mechanically overloaded - 1 revolution after initial point run-up reset pulse not registered or synchronizer defective - Parameter not present or internal error - Transmission temporarily interrupted - Belt jumped off or defective	- Replace the Efka controls - Contact Dürkopp-Adler Service - Positionsgeberanschluß prüfen - Check the synchronizer connection - Check the setting for the mains voltage - Check the mechanics - Check the synchronizer (clearance to the disc) Replace the synchronizer - Contact Dürkopp-Adler Service - Check the cable connection to the Efka controls - Check the belt
182	False data checksum in the data memory		Turn the machine off and on again. Data is automatically reset to factory settings.
201	Data not present	Internal error	Contact Dürkopp-Adler Service
208 209	Step losses in the lateral motion axis	Lateral motion axis too sluggish or collision of components	Check the mechanics Conduct a step loss test
210 211	Step losses in the longitudinal motion axis	Longitudinal motion axis too sluggish or collision of components	Check the mechanics Conduct a step loss test
212 213	Step losses in the sewing mechanism rotation axis	Sewing mechanism rotation axis too sluggish or collision of components	Check the mechanics Conduct a step loss test

No.	Description	Possible cause	Error remedy
214	Theoretical step motor position corresponds to the set cutting position Thus danger of false cutting present	Internal error	Turn the machine off and on again, contact Dürkopp-Adler Service
216	Internal error		Turn the machine off and on again, contact Dürkopp-Adler Service

35. Troubleshooting

Error description	Possible cause	Error remedy
The automatic sewing machine does not start	A symbol, which gives the possible cause appears in the display.	Turn the handwheel in the direction of rotation so that the needle is at the upper dead center. With frequent repetition of the message, the proximity switches must be adjusted anew (see Chapter “Setting the Upper Dead Center” and “Setting of the Upper Dead Center for the Sewing Drive”)
	Adjacent symbol in the display The needle is not at the upper dead center.	
	Adjacent symbol in the display Before the start of sewing, the needle is in front of the wrong needle entry point Correct position before the beginning of sewing: With subclass -121, -141,-151: The needle lies in front of the left needle entry point With subclass -112 The needle is in front of the right needle entry point.	Turn the handwheel in the direction of rotation so that the needle is in front of the correct needle entry point. With frequent repetition of the message, the proximity switches must be adjusted anew (see Chapter “Setting the Upper Dead Center” and “Setting of the Upper Dead Center for the Sewing Drive”)
	Adjacent symbol in the display The machine was stopped during the sewing cycle and then the handwheel was turned.	Turn the machine off at the main switch and then on again after a short waiting period
	The air pressure for the pneumatic component is too low.	- Check the air pressure at the pressure gauge - Was the air pressure hose connected - Check air pressure fluctuations - Check all air pressure hoses and air pressure connections
	Safe Stop is turned on.	Turn the Safe Stop off.
	An error message with error number is shown in the control panel.	The error remedy is described in the Service Instructions under “Error Messages”
Missing stitches	The needle is blunt, bent or not correctly inserted in the needle bar.	Insert a new needle Insert the needle correctly in the needle bar.
	The threading of the needle and looper threads was not done correctly.	Check the threading path of the needle and looper threads. (see Operating Instructions “Threadung the Needle Thread” and “Threading the Looper Thread”)
	Yarn stand is mounted incorrectly	Check the yarn stand (see Installation Instructions “Mounting the Yarn Stand”)

	Thread tension is set too tight	Check the thread tension (see Operating Instructions “Thread Tension”)
	The material is not held properly	Check the cloth clamp pressure (See “Cloth Clamp Pressure”)
	The material is not or too little spread	Check the spread (See “Setting the Spread”)
	Dependent on the material, material weight and thread used, the appropriate needle size must be selected	Change the needle size (see Operating Instructions “Needles, Threads and Gimps”) **Attention!** After a change of the needle size, the clearance of needle to looper must be checked. (see Chapter “Looper Clearance to the Needle”)
	The needle plate, the looper or the spreader was possibly damaged by the needle	Have the parts dressed by service personnel
	Incorrect parts for the desired E-group were possibly used, such as e.g. needle plate, looper, spreader, clamping plates, upper/lower cloth clamps	Check the sewing arrangement parts in comparison to the Arrangement Sheet
	At the change of the seam width, the looping stroke was not adjusted	Set the looping stroke (see Chapter “Looping Stroke”)
	The looper or spreader have become misadjusted Even if no misadjustment is to be seen and the point listed above brought no improvement, check the adjacent points again	Check the settings described in the following chapters of the Service Instructions: “Setting the Positioning Points” “Setting the Looping Stroke” “Needle Bar Height” “Looper Clearance to the Needle” “Needle Guard” “Spreader” “Spreader Plate” “Needle Plate” “Thread Take-up Disk”
Thread breakage	Needle and looper threads are Improperly threaded	Check the threading path of the needle and looper threads (See Operating Instructions “Threading the Needle Thread”/ “Threading the Looper Thread”
	The needle is bent, sharp-edged or incorrectly inserted into the needle bar	Insert a new needle, insert the needle correctly into the needle bar
	The thread used is knoty, hard or too thick and thus unsuitable	Use a recommended thread (see Operating Instructions Needle, Threads and Gimps)
	The thread tensions are set too tight for the thread used	Check the thread tensions (see Operating Instructions “ Thread Tensions ”)

	Thread-guiding parts, such as e.g. thread conductor, thread guides or thread take-up disk have sharp edges	Check the thread path to see if thread-guiding parts have sharp edges
	Check if the needle plate, the looper or the spreader have been damaged by the needle	Have the parts dressed by service personnel.
Loose Stitches	The thread tensions are not appropriate to the material, the material weight or the threads used	Check the thread tensions (see Operating Instructions “Thread Tensions”)
	Incorrect threading of the needle or looper thread	Check the threading of the needle and looper threads (See Operating Instructions “Threading the Needle Thread”/ “Threading the Looper Thread”
The buttonhole is not cut open cleanly	The set cutting pressure is too low	Increase the cutting pressure (see Chapter “Cutting Pressure”)
	The knife edge is dull or broken out	Insert a new knife (See Chapter “Eye Knife”)
	The knife is working on a non-corresponding cutting block. If buttonholes are cut open before or after sewing or if buttonholes are sewn with or without eyes, the corresponding cutting block is always to be used. Cutting blocks with two knife impressions lead to an unclean cut	Dress the cutting block or insert a new cutting block. (see Chapter “Dressing the Cutting Block ”)
Needle breakage	The needle thickness is inappropriate for the material or the thread	Change the needle thickness
	The needle strikes on the cloth clamps The E-group is inappropriate to the set subclass	Check the subclass in the control panel
	Faulty transport of the cloth support plate or sewing mechanism	See under “Faulty Transport of the Cloth Support Plate” or “Faulty Rotation of the Sewing Mechanism”
	With a change in the seam width, the cloth clamps were not set or set too close together	Set the upper and lower cloth clamps as far apart as required

No secure seam beginning or unthreading	When the remaining tension for the needle thread is set too tight and thus the start thread for the next sewing start becomes too short.	Adjust the remaining tension (see Operating Instructions “Thread Tension”)
	When the thread gripper does not open at the start of sewing	Check the pneumatic cylinder for the opening of the thread gripper (see Operating Instructions “Thread Tension”)
Faulty transport of the cloth support plate	The toothed belts are insufficiently tight	Retension the toothed belts and replace, if necessary (see Chapter “Setting the Toothed Belt Tension”)
	The toothed belts and toothed wheels are dirty	Clean the toothed belts and toothed wheels, replace the toothed belts, if necessary (see Chapter “Setting the Toothed Belt Tension”)
	The cloth support plate collides with other components	Check the movement of the cloth support plate at low speed and watch for possible collisions.
	The cloth support plate can only be moved with difficulty with the machine turned off.	Check all components which belong to the cloth support plate drive.
	Possible sluggishness of individual components	If no faulty components or stiffness was found, it is possible, in some cases, to remedy the problem by changing one of the following parameters - Reducing the speed - Increasing the stitches in the eye - Decreasing the stitch length - Decreasing the overlap - Increasing the stitches in the round bartack - Decreasing the stitch length in the crossbar - Decreasing the covering stitch width in the crossbar (see Operating Instructions “Changing Buttonhole Programs”): If necessary, notify service personnel
Faulty rotation of the sewing mechanism	The toothed belts are insufficiently tight	Retension the toothed belts and replace, if necessary (see Chapter “Setting the Toothed Belt Tension”)
	The toothed belts and toothed wheels are dirty	Clean the toothed belts and toothed wheels, replace the toothed belts, if necessary (see Chapter “Setting the Toothed Belt Tension”)
	The sewing mechanism collides with other components	Check the movement of the sewing mechanism rotation at low speed and watch for possible collisions

The sewing mechanism can only be moved with difficulty with the machine turned off. The set collars on the looper turret drive or on the needle bar drive are set too tight against the drive lever or the crosshead	Check the set collars on the looper turret drive or on the needle bar drive and set a little play, if necessary (See Chapter “Setting the Looping Stroke”, “Needle Bar Height”, “Spreader Plate”
Possible sluggishness of individual components	Check all components involved in the sewing mechanism rotation. If no faulty components or stiffness was found, it is possible, in some cases, to remedy the problem by changing one of the following parameters - Reducing the speed - Increasing the stitches in the eye - Decreasing the stitch length - Decreasing the overlap - Increasing the stitches in the round bartack - Decreasing the stitch length in the crossbar - Decreasing the covering stitch width in the cross tack (see Operating Instructions “Changing Buttonhole Programs”): If necessary, notify service personnel