

# PFAFF

## 571

## 574

Adjustment Manual

## 591

This Adjustment Manual is valid for machines from the following serial numbers onwards:

# 6 001 000 →

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## 13 Adjustment



Unless stated otherwise, during all adjustment work the machine must be disconnected from the electric and pneumatic power supply!  
Danger of injury if the machine is started accidentally!

### 13.01 Notes on adjustment

All following adjustments are based on a fully assembled machine and may only be carried out by expert staff trained for this purpose.

Machine covers, which have to be removed and replaced to carry out checks and adjustments, are not mentioned in the text.

The order of the following chapters corresponds to the most logical work sequence for machines which have to be completely adjusted. If only specific individual work steps are carried out, both the preceding and following chapters must be observed.

Screws, nuts indicated in brackets ( ) are fastenings for machine parts, which must be loosened before adjustment and tightened again afterwards.

### 13.02 Tools, gauges and other accessories

- 1 set of screwdrivers with blade widths from 2 to 10 mm
- 1 set of open-ended wrenches with opening sizes from 7 to 13 mm
- 1 set of allen keys from 1.5 to 6 mm
- 1 clamp (Order No. 08-880 137-00)
- 1 metal rule (Order No. 08-880 218-00)
- 1 gauge (Order No. 08-880 136-01)
- Sewing thread and test material

### 13.03 Abbreviations

TDC = top dead center

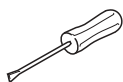
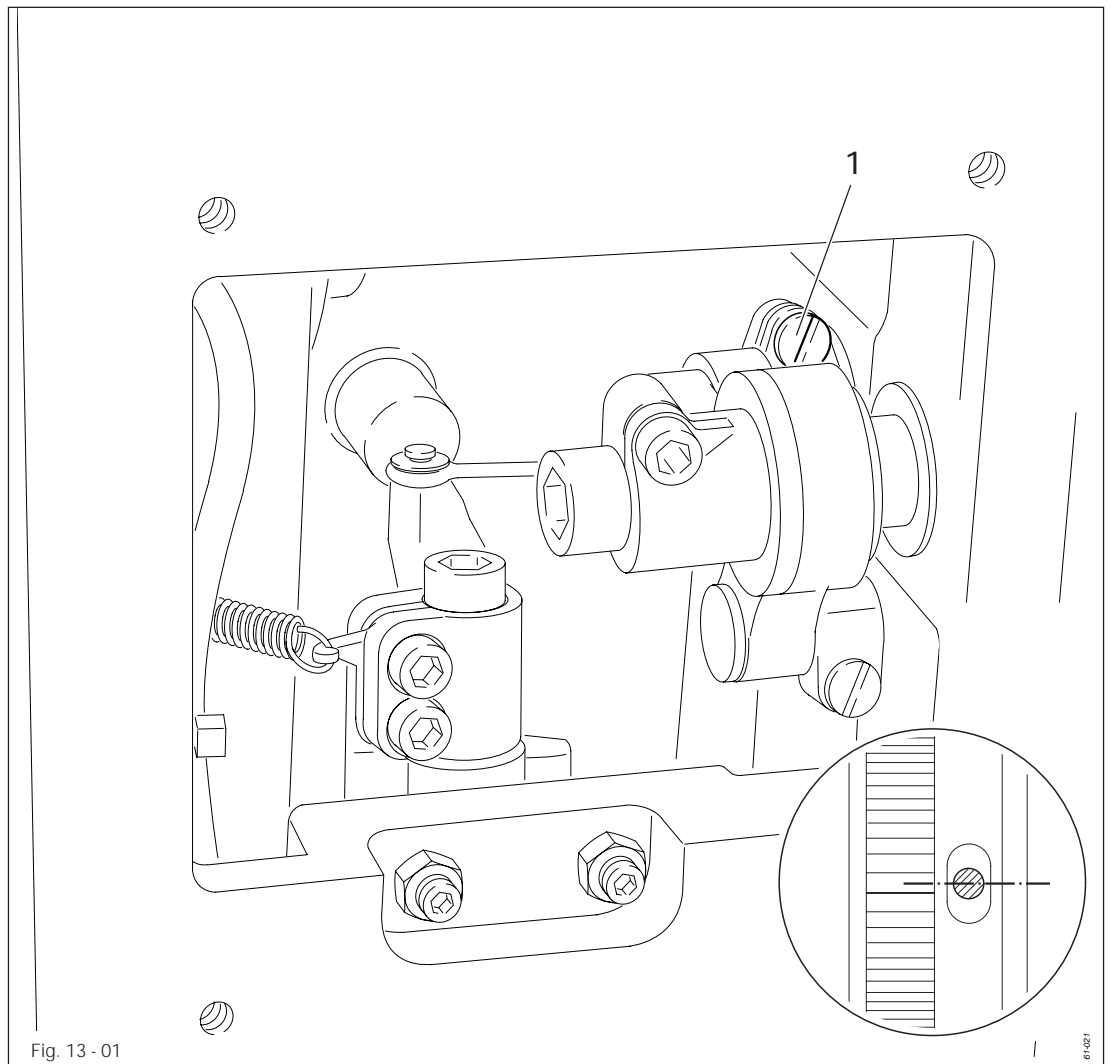
BDC = bottom dead center

## 13.04 Adjusting the basic machine

### 13.04.01 Needle position in sewing direction on the PFAFF 571 and 591

#### Requirement

With the stitch length set at its minimum, the needle should be positioned in the centre of the needle hole, as seen in the direction of sewing.



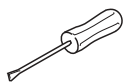
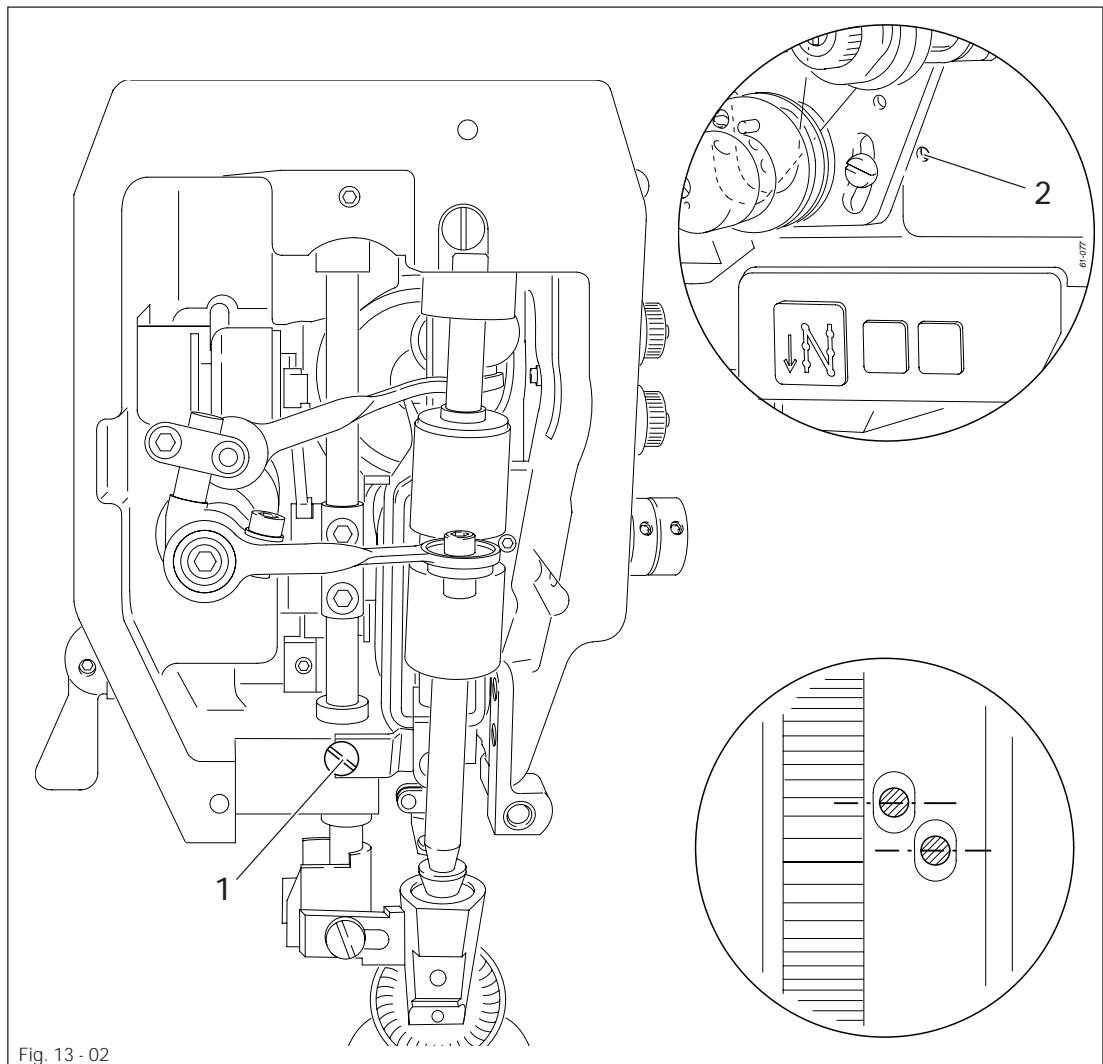
- Set the minimum stitch length.
- Adjust needle bar (screw 1) according to the requirement.

## Adjustment

### 13.04.02 Needle position in sewing direction on the PFAFF 574

#### Requirement

The needle should be positioned in the centre of the needle hole as seen in the direction of sewing.



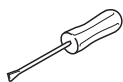
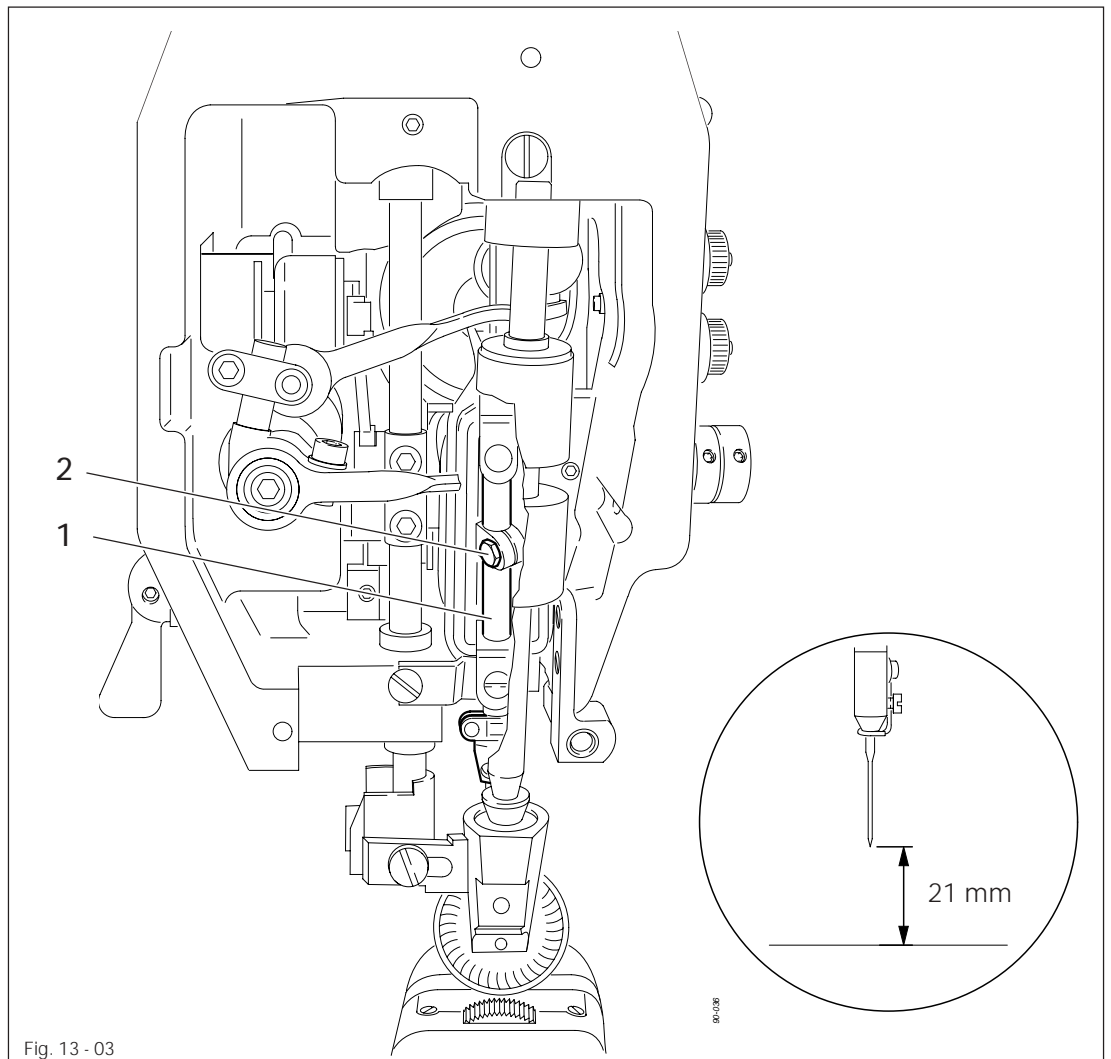
- Adjust needle bar (screws 1 and 2) according to the requirement.



## 13.04.03 Preliminary adjustment of the needle height

### Requirement

When the needle bar is at TDC, there must be a clearance of approx. 21 mm between the needle point and the needle plate.



- Adjust needle bar 1 (screw 2), without turning it, according to the requirement.

## 13.04.04 Needle rise, hook clearance, needle height and needle guard on the PFAFF 571

### Requirement

With the needle bar positioned 2,0 mm after BDC and the stitch length set at "0.8"

1. the hook point must be at needle centre with a hook-to-needle clearance of 0.05 to 0.1 mm;
2. the top of the needle eye must be 0.8 to 1.0 mm below the hook point;
3. the needle guard 6 must touch the needle lightly.

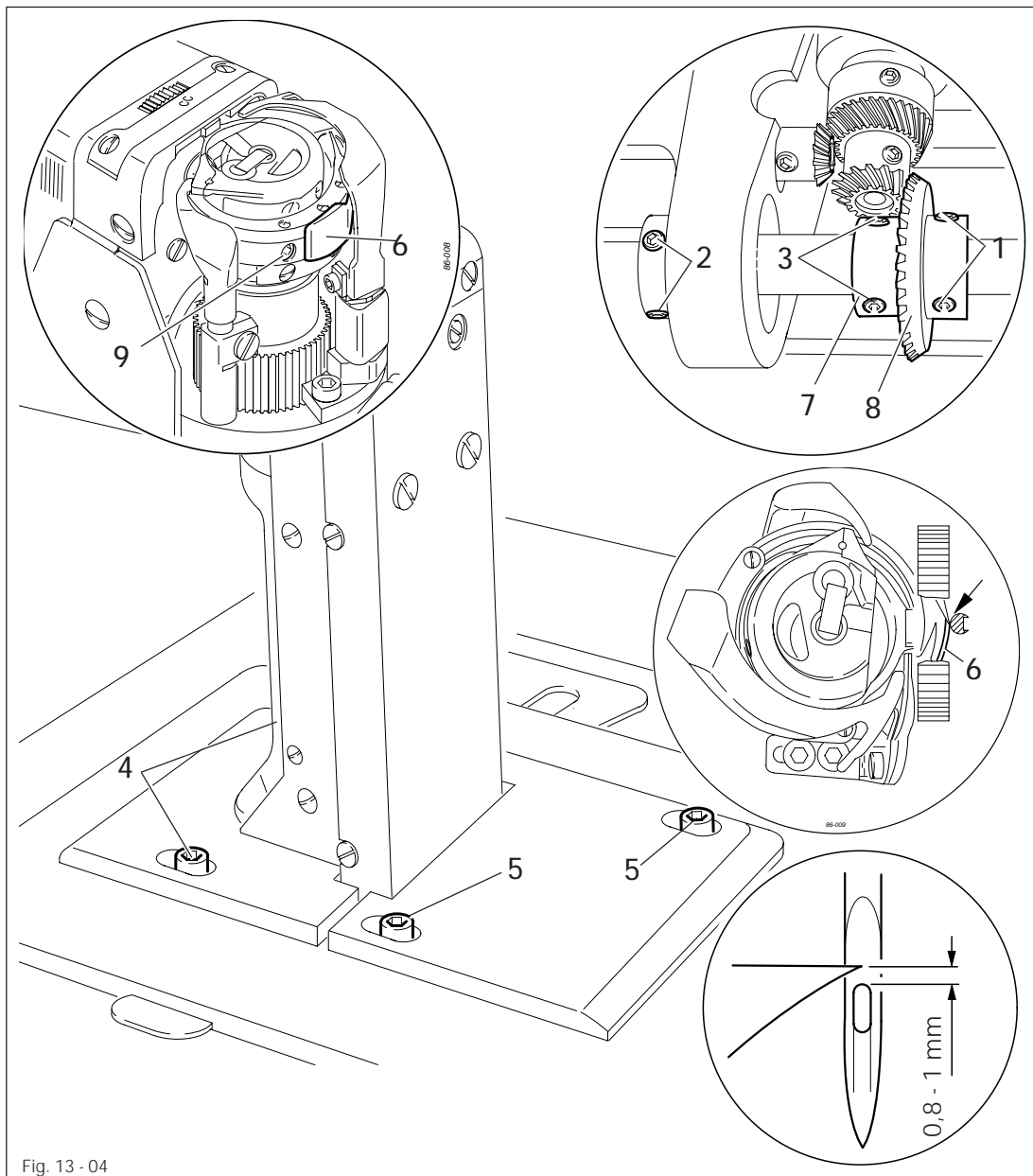
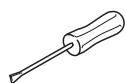


Fig. 13 - 04

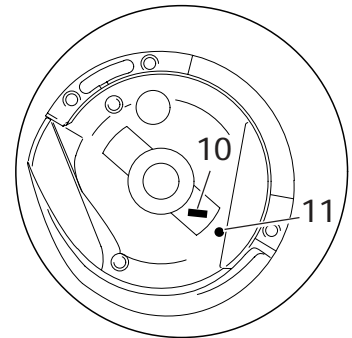


- Set stitch length at "0.8".
- Loosen both screws 1, 2, 3, 4 and 5.
- Bring needle bar to 2.0 mm past BDC:
- Set hook point at needle centre, making sure that the needle is not deflected by needle guard 6.
- Adjust needle height according to Requirement 2.

- Adjust hook post according to **Requirement 1** and tighten screws 4 and 5.
- Making sure that there is some play in the bevel gear, tighten screws 1.
- With retaining collar 7 touching bevel gear 8 tighten screws 2 and 3.
- Adjust needle guard 6 (screw 9) according to **requirement 3**.



When the hook is changed, make sure that the markings 10 and 11 are both on one side.



## 13.04.05 Needle rise, hook clearance, needle height and needle guard on the PFAFF 574

### Requirement

With the needle bar positioned 2,0 mm after BDC on both hooks

1. the hook point must be at needle centre with a hook-to-needle clearance of 0.05 to 0.1 mm;
2. the top of the needle eye must be 0.8 to 1.0 mm below the hook points;
3. the needle guard 9 must touch the needle lightly.

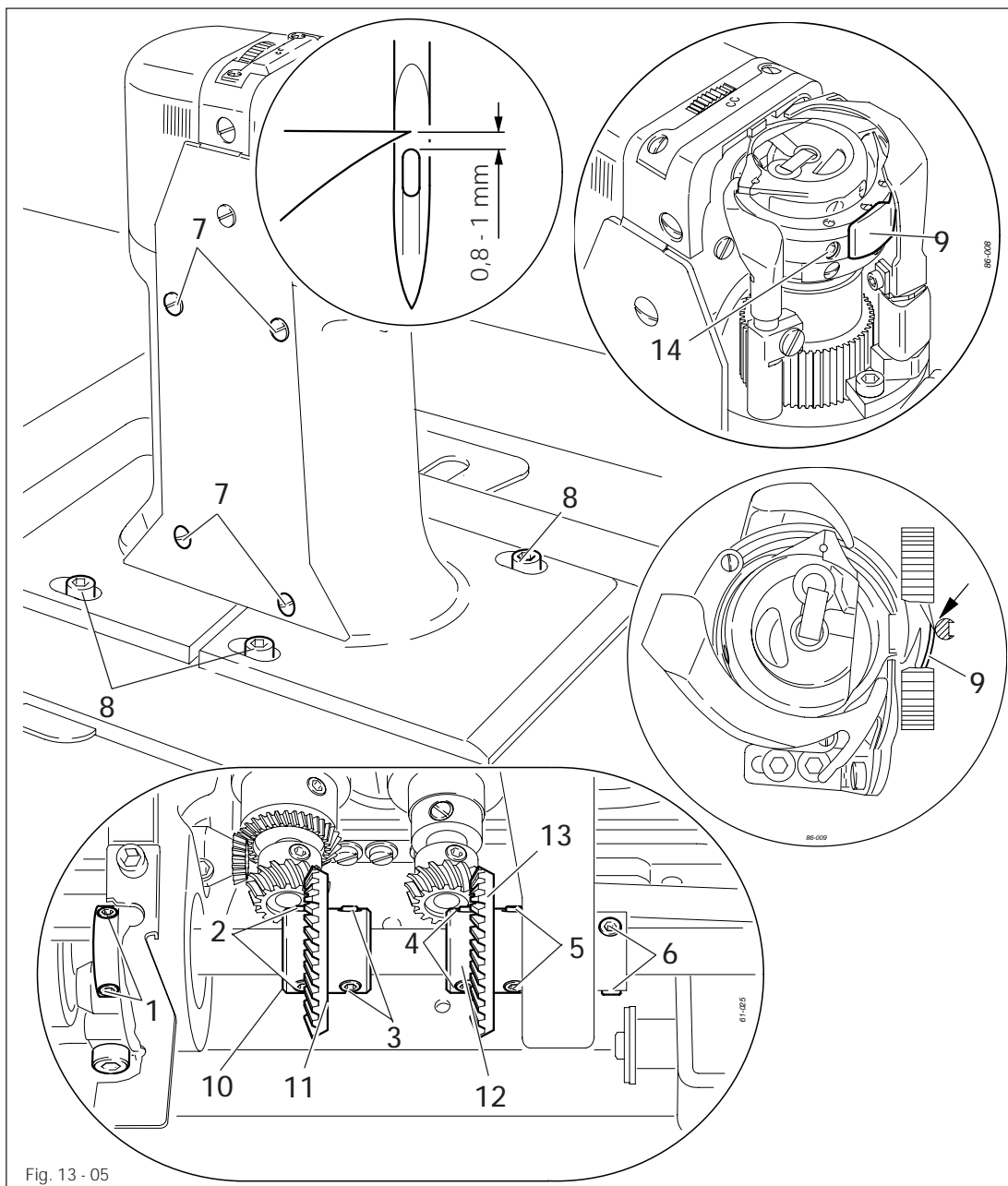
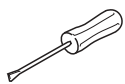


Fig. 13 - 05

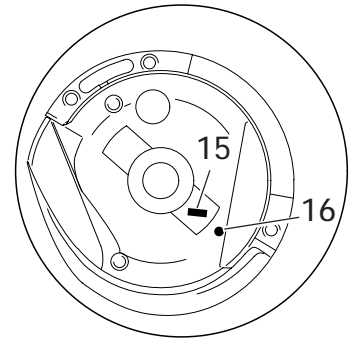


- Loosen screws 1, 2, 3, 4, 5, 6 and 7.
- Loosen screws 8 slightly.
- Bring needle bar to 2,0 mm past BDC:
- Set both hook points at needle centre, making sure that the needles are not deflected by needle guard 9.

- Adjust needle height according to **Requirement 2**.
- Adjust both hook posts according to **Requirement 1** and tighten screws **8**.
- Tighten screws **1** and **6**.
- Making sure that there is some play in the bevel gear, tighten screws **3** and **5**.
- With retaining collar **10** touching bevel gear **11** tighten screws **2**.
- With retaining collar **12** touching bevel gear **13** tighten screws **4**.
- Tighten screws **7** on both sides of the post.
- Adjust needle guard **9** (screw **14**) on both hooks according to **requirement 3**.



When a hook is changed, make sure that the markings **15** and **16** are both on one side.



# Adjustment

## 13.04.06 Needle rise, hook clearance, needle height and needle guard on the PFAFF 591

### Requirement

With the needle bar positioned 2,0 mm after BDC and the stitch length set at "0.8"

1. the hook point must be at needle centre with a hook-to-needle clearance of 0.05 to 0.1 mm;
2. the top of the needle eye must be 0.8 to 1.0 mm below the hook point;
3. the needle guard 6 must touch the needle lightly.

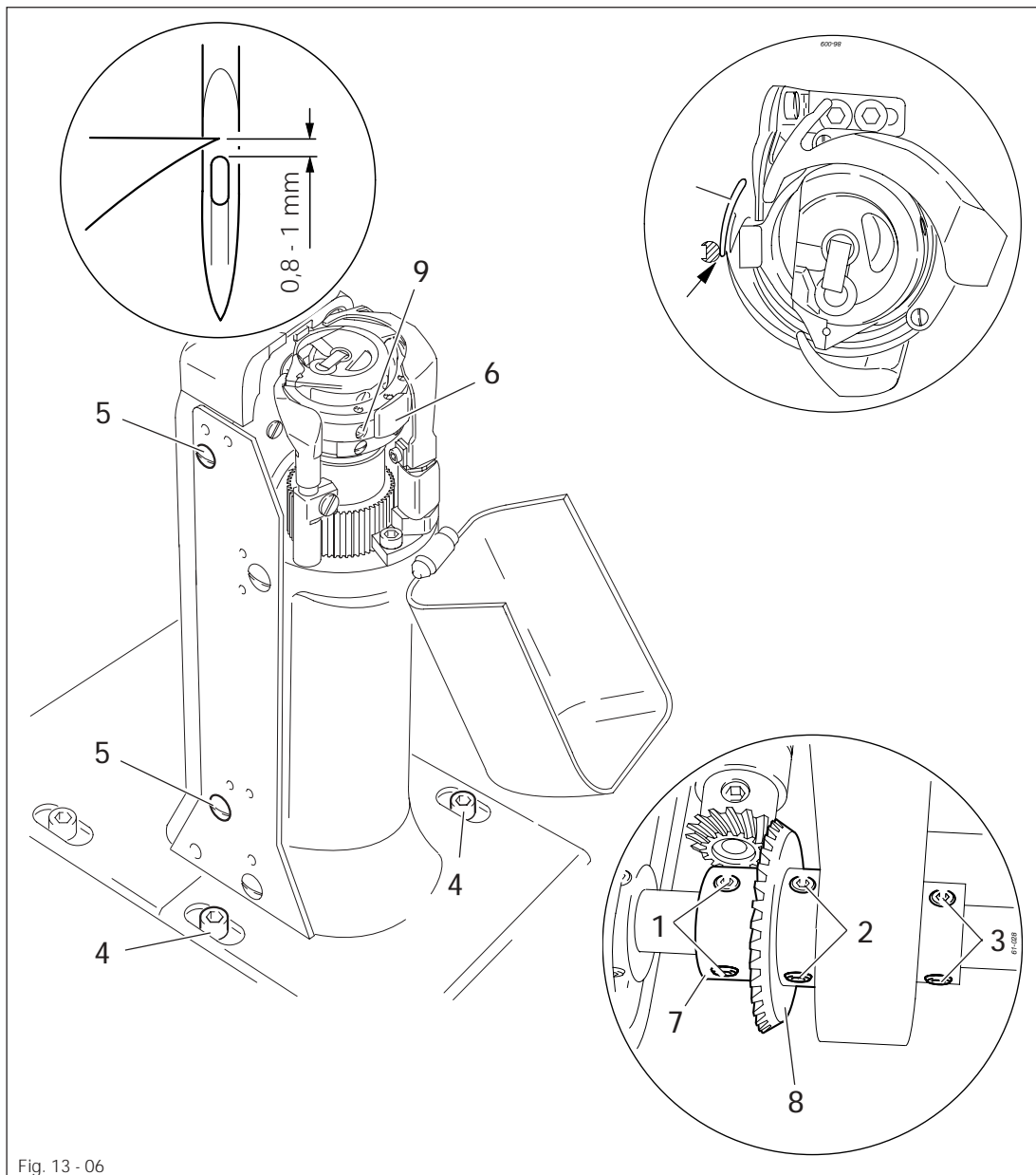
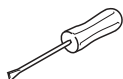


Fig. 13 - 06

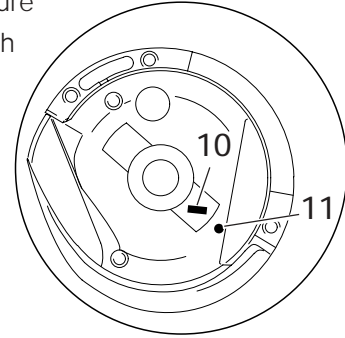


- Set stitch length at "0.8".
- Loosen screws 1, 2, 3, 4 and 5.
- Bring needle bar to 2.0 mm past BDC:
- Set hook point at needle centre, making sure that the needle is not deflected by needle guard 6.
- Adjust needle height according to Requirement 2.

- Adjust hook post according to **Requirement 1** and tighten screws 4.
- Making sure that there is some play in the bevel gear, tighten screws 2.
- With retaining collar 7 touching bevel gear 8 tighten screws 1.
- Adjust needle guard 6 (screw 9) according to **requirement 3**.



When the hook is changed, make sure that the markings 10 and 11 are both on one side.

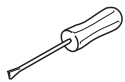
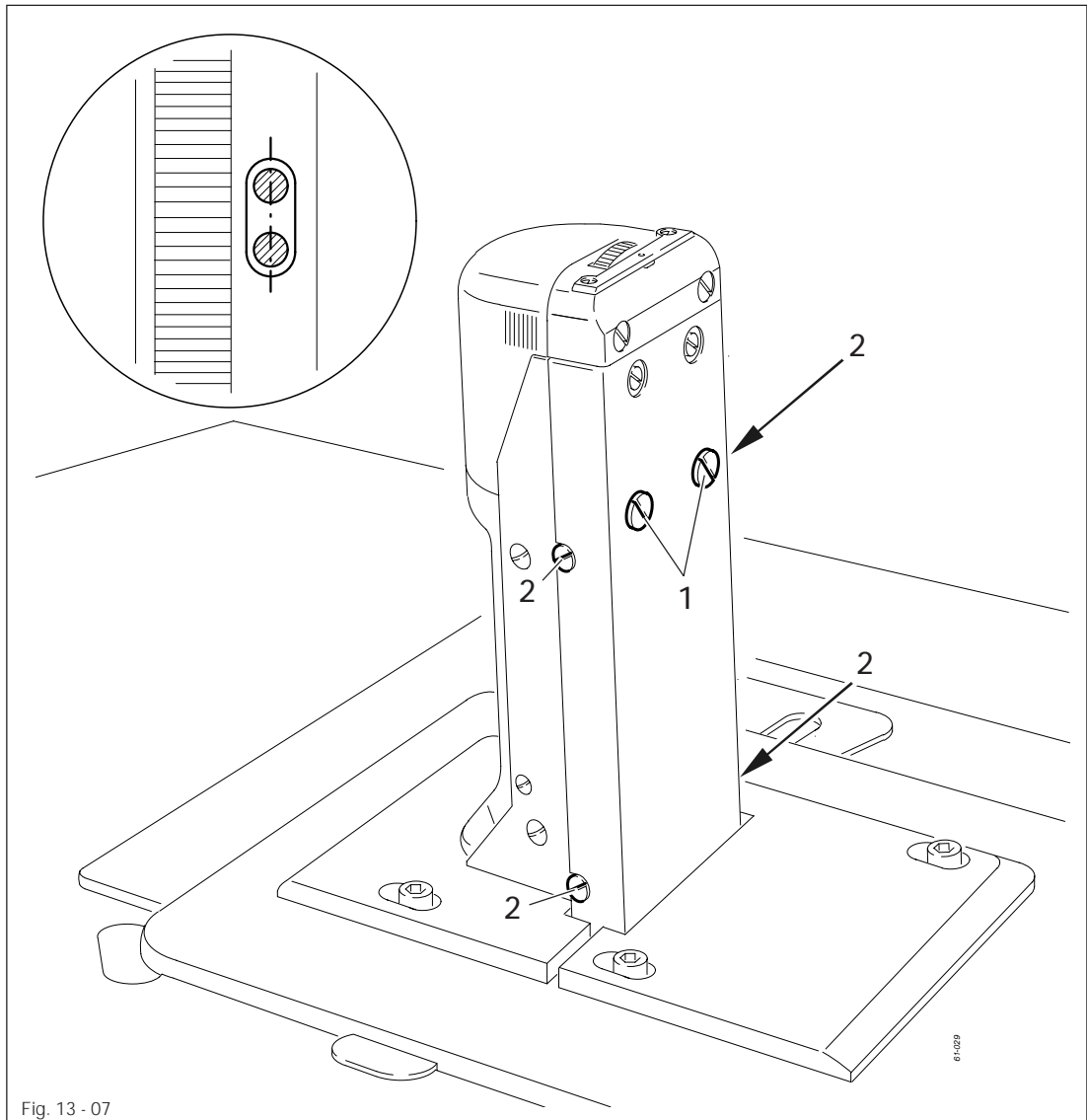


## Adjustment

### 13.04.07 Needle position crosswise to sewing direction on the PFAFF 571

#### Requirement

When the stitch length is set at its maximum, the needle must be positioned in the centre of the needle hole when entering and coming out of the needle plate.



- Turn screws 1 (screws 2, on both sides of the post) according to the requirement.



## 13.04.08 Needle position crosswise to sewing direction on the PFAFF 574

### Requirement

As seen crosswise to the sewing direction, the needles must penetrate in the centre of their needle holes.

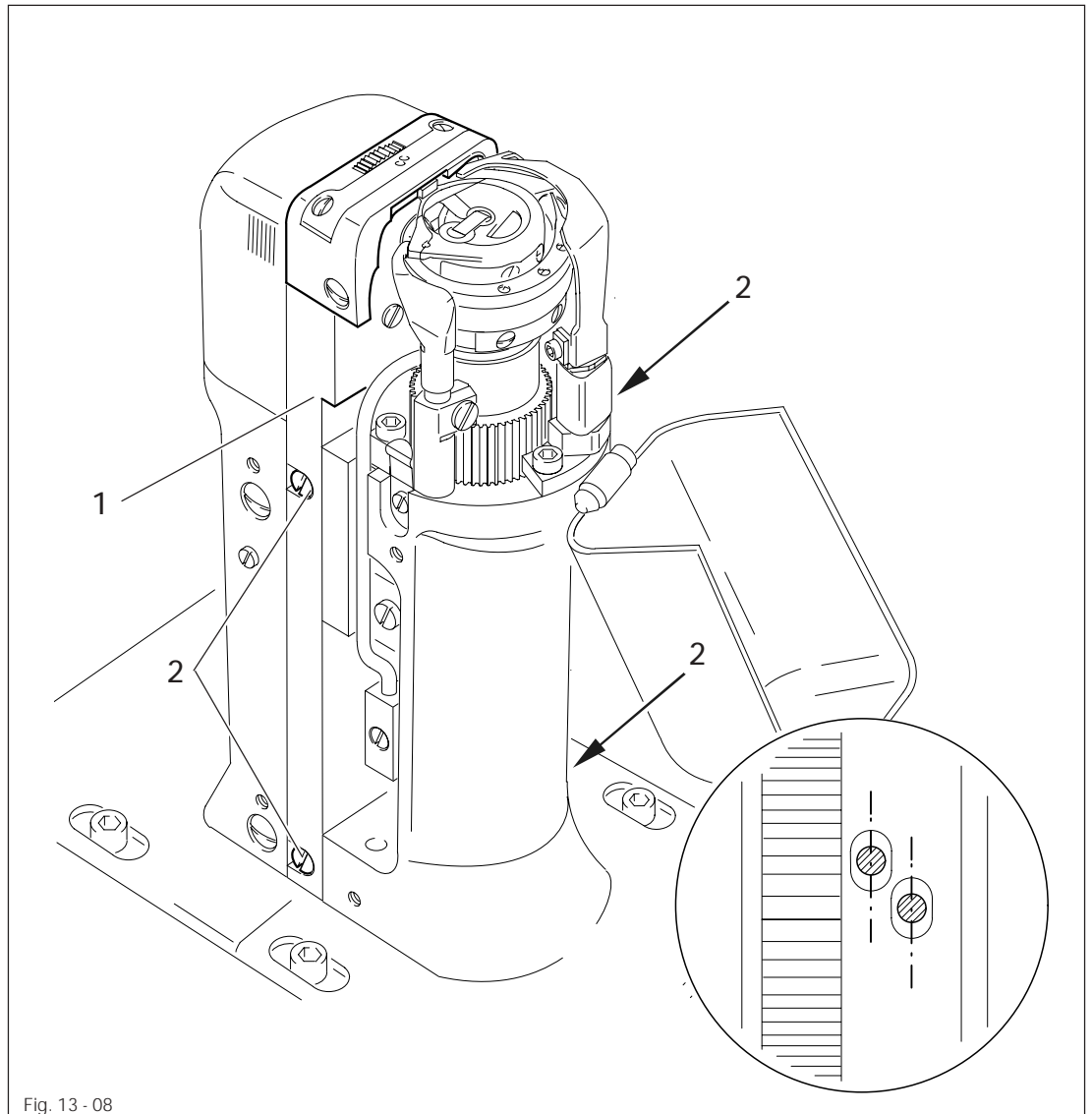


Fig. 13 - 08

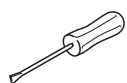
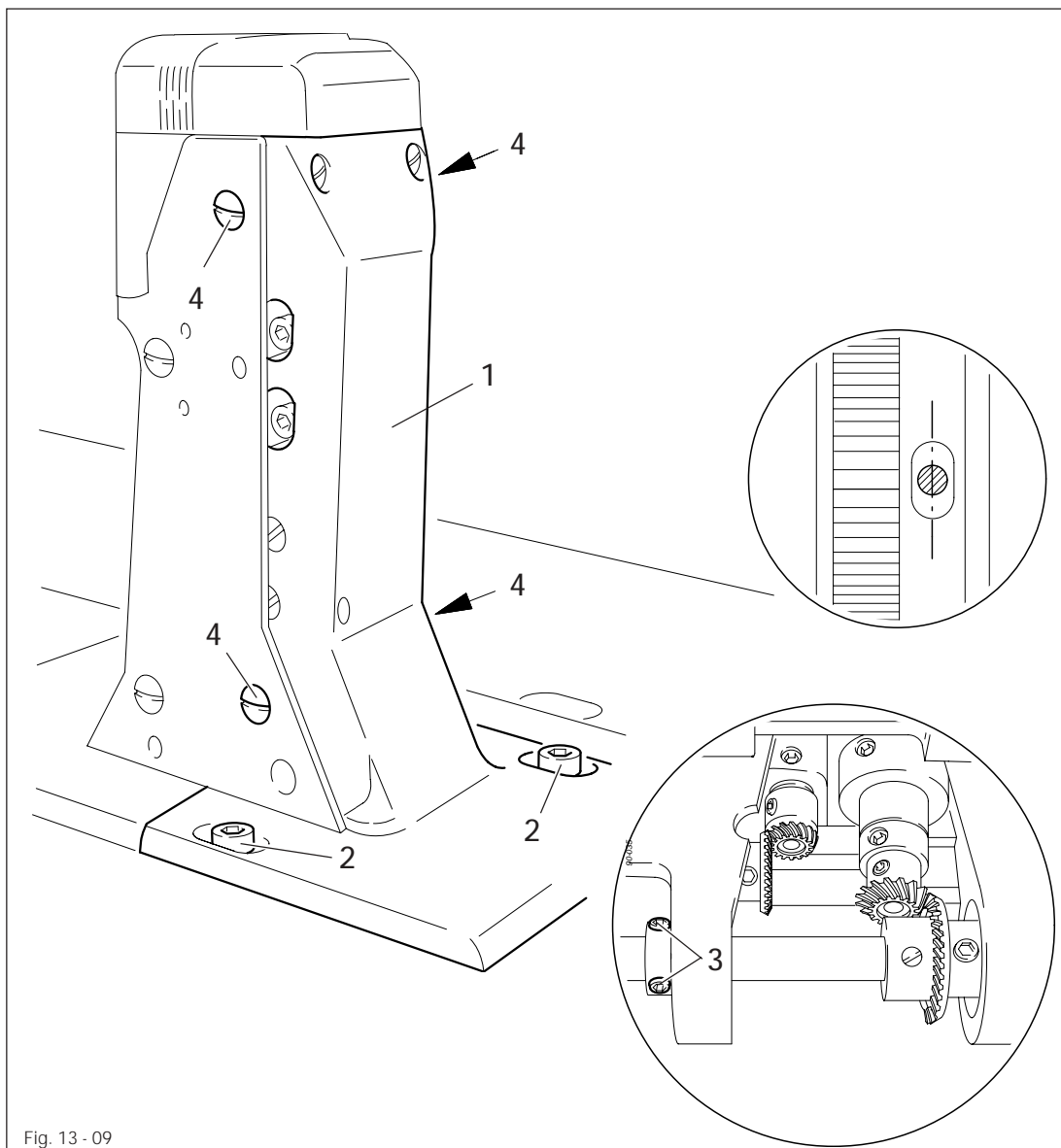
- Shift bearing plate 1 (screws 2, on both sides of the post) according to the requirement.

## Adjustment

### 13.04.09 Needle position crosswise to sewing direction on the PFAFF 591

#### Requirement

As seen crosswise to the sewing direction, the needle must penetrate in the centre of the needle hole.



- Adjust feed wheel post 1 (screws 2, 3 and 4) according to the requirement.

## 13.04.10 Height and stroke of the bobbin case opener

**Requirement**

1. The top edges of the bobbin case opener 1 and bobbin case base 3 should be on one level.
2. When the bobbin case opener 1 has deflected the bobbin case to its furthest point, the catch of the bobbin case should be 0.3 – 0.5 mm from the back edge of the needle plate recess.

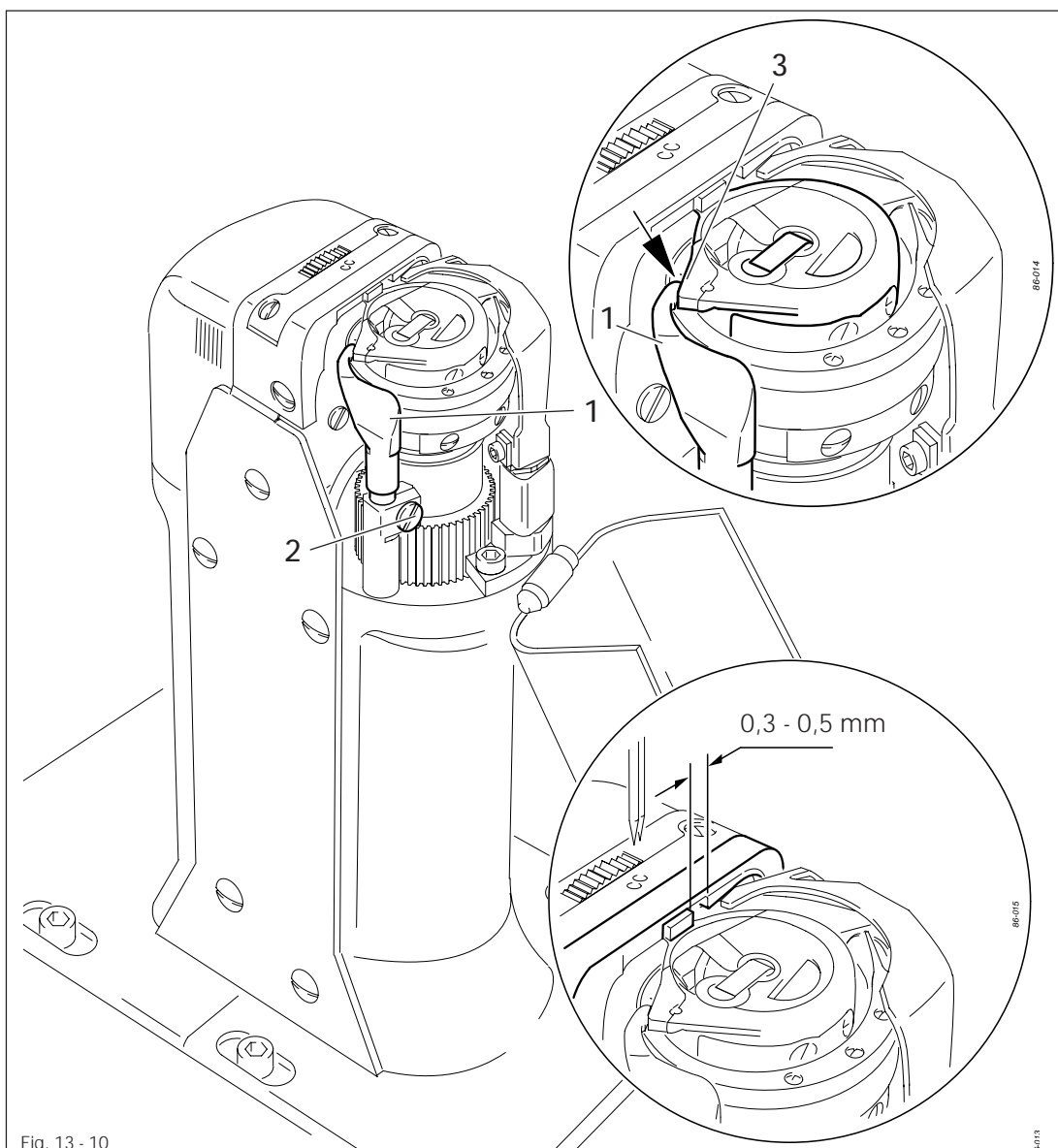
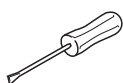


Fig. 13 - 10



- Adjust bobbin case opener 1 (screw 2) in accordance with **requirement 1**.
- Turn the balance wheel until the bobbin case opener has deflected the bobbin case to its furthest point.
- Adjust bobbin case opener 1 (screw 2) in accordance with **requirement 2**.

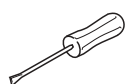
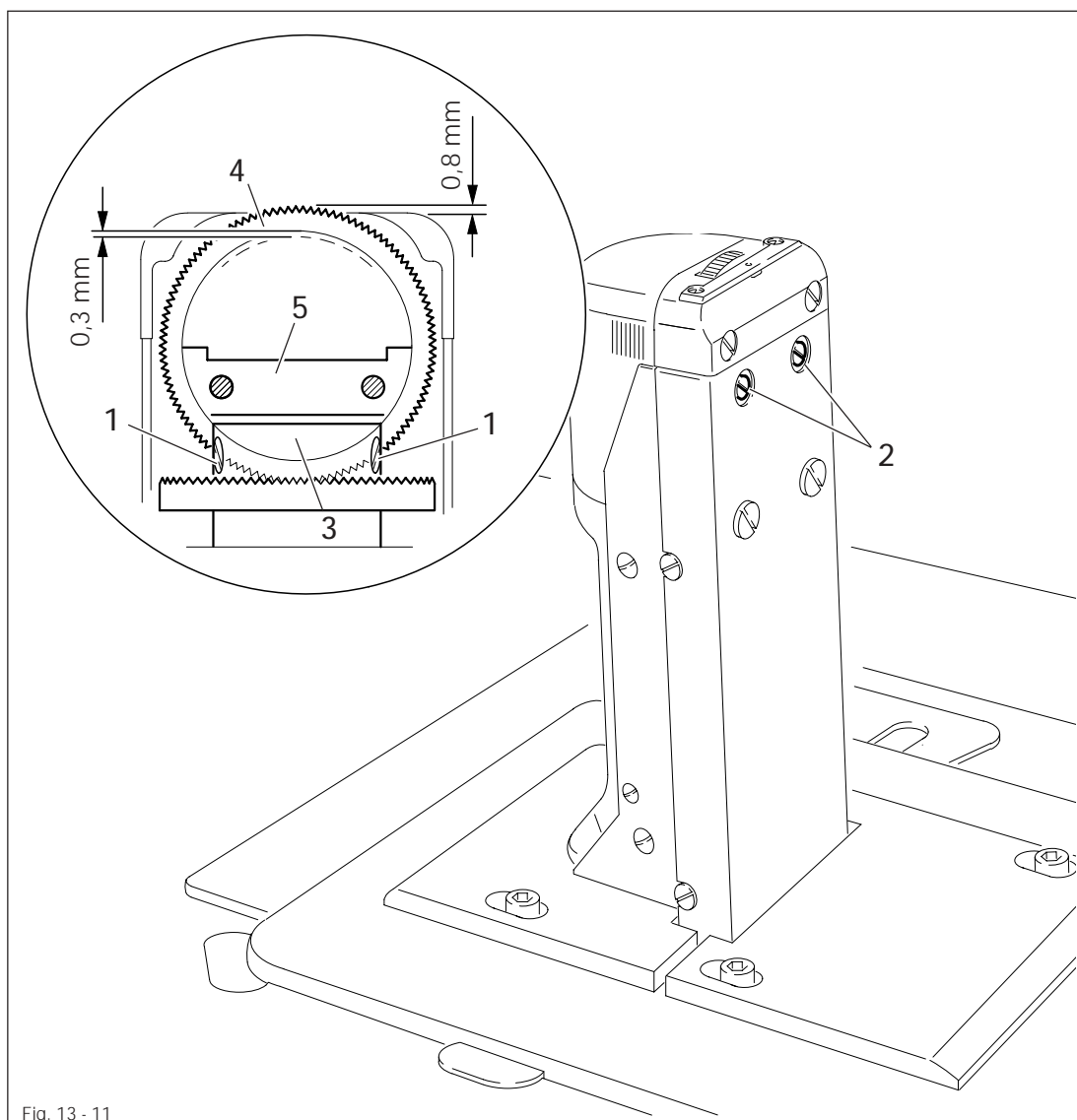


On the PFAFF 574 these adjustments must be repeated on the right post. Depending on the thread size, a variation of the setting in **Requirement 2** is permitted.

## 13.04.11 Height of the feed wheel on the PFAFF 571

### Requirement

1. When pressure is applied to the feed wheel 4, it should protrude from the needle plate by tooth height (approx. 0.8 mm)
2. When no pressure is applied to the feed wheel 4, it should have a vertical play of approx. 0.3 mm.



- Swing out the roller presser.
- Loosen screws 1 and 2.
- Adjust drive wheel 3 according to **requirement 1**, taking care to see that the teeth of drive wheel 3 and feed wheel 4 lock into each other properly.
- Tighten screws 1.
- Adjust guide 5 according to **requirement 2** and tighten screws 2.s

## 13.04.12 Height of the feed wheel on the PFAFF 574

**Requirement**

1. When pressure is applied to the feed wheel 4, it should protrude from the needle plate by tooth height (approx. 0.8 mm)
2. When no pressure is applied to the feed wheel 4, it should have a vertical play of approx. 0.3 mm.

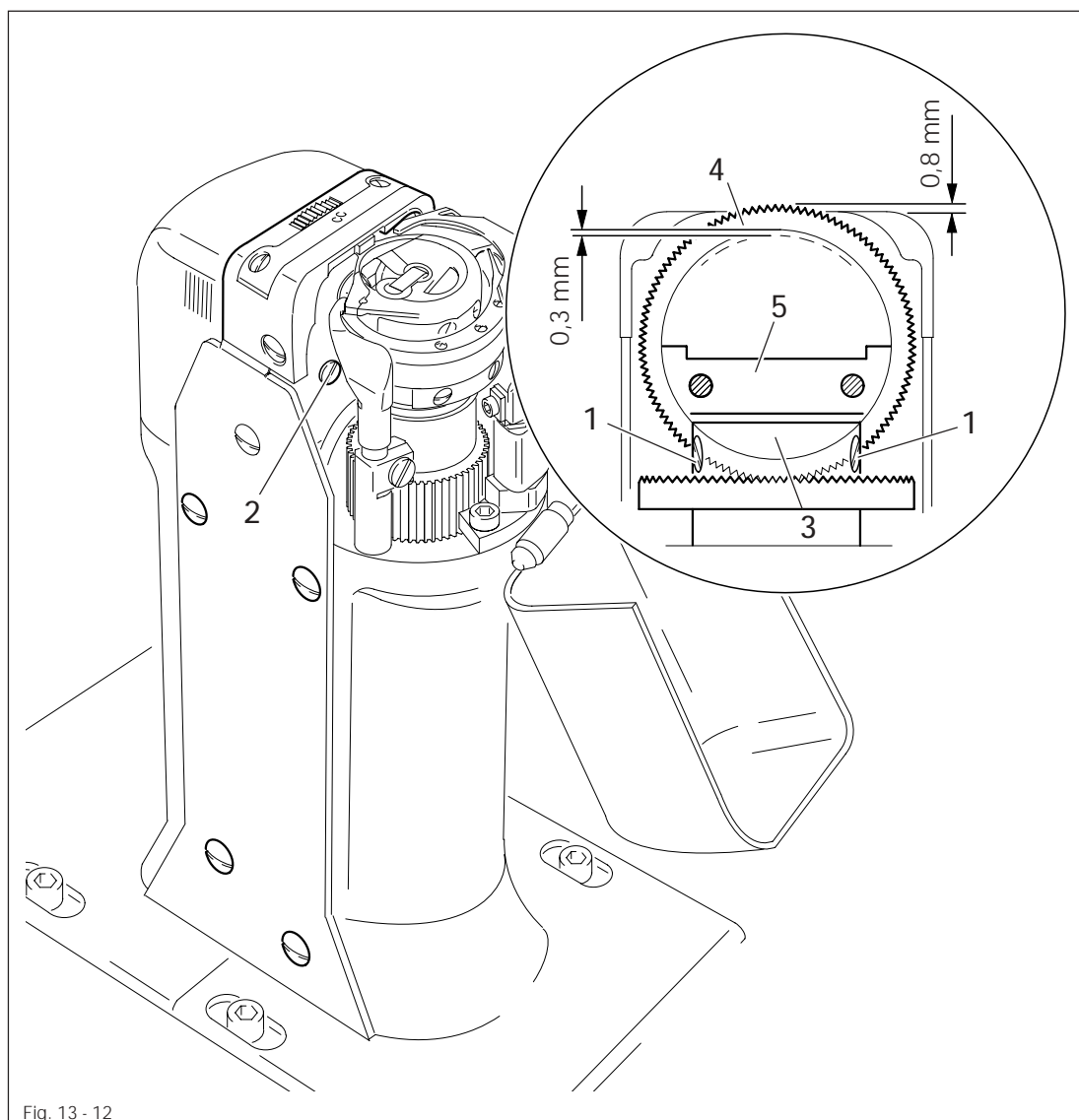
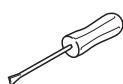


Fig. 13 - 12



- Swing out the roller presser.
- Loosen screws 1 and 2 (two screws each).
- Adjust drive wheel 3 according to requirement 1, taking care to see that the teeth of drive wheel 3 and feed wheel 4 lock into each other properly.
- Tighten screws 1.
- Adjust guide 5 according to requirement 2 and tighten screws 2.

## 13.04.13 Height of the feed wheel on the PFAFF 591

### Requirement

The feed wheel should protrude from the needle plate by tooth height (approx. 0.8 mm)

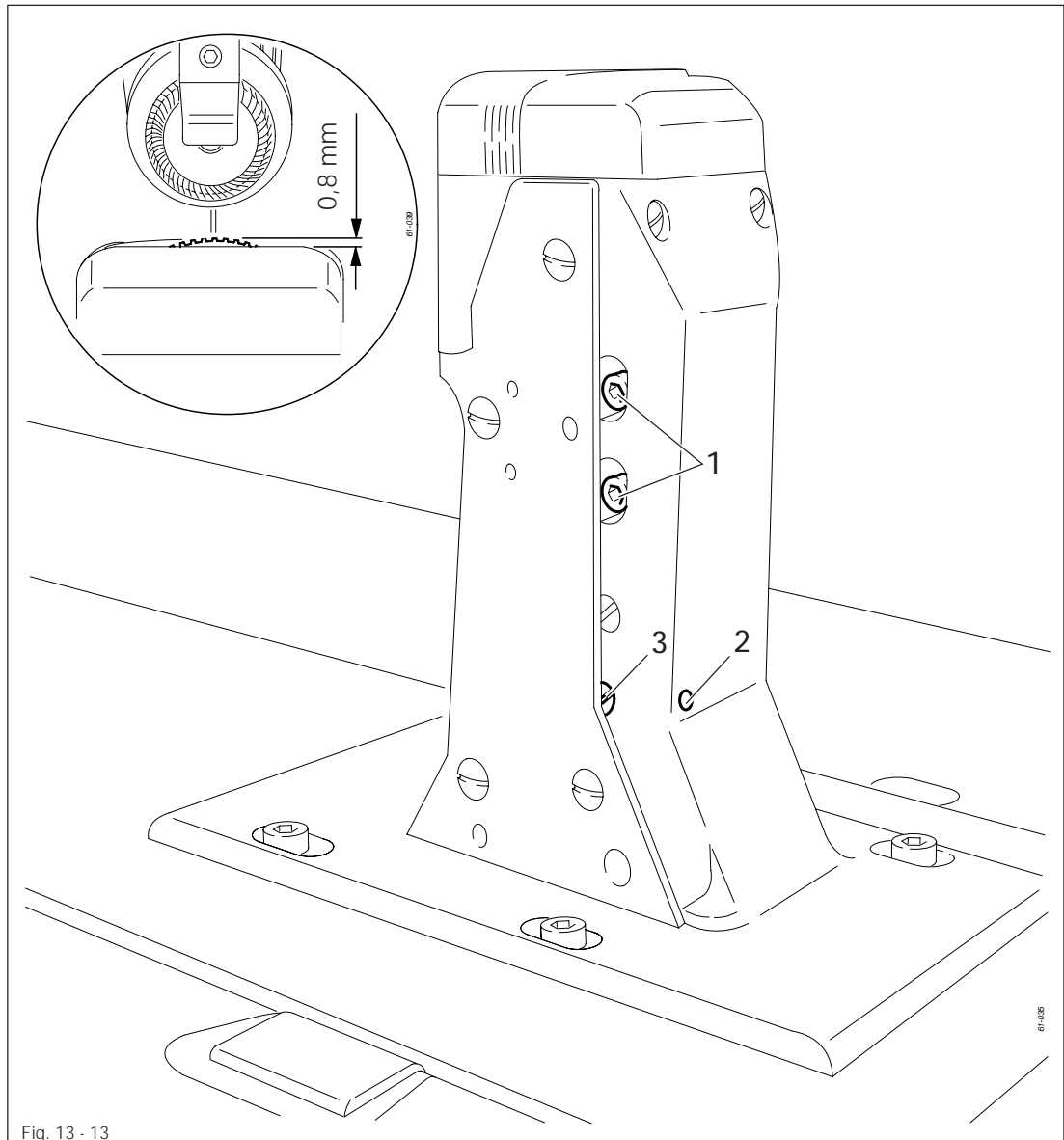
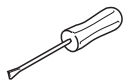


Fig. 13 - 13



- Swing out the roller presser.
- Loosen screws 1.
- Adjust eccentric 3 (fastening screw accessible through hole 2) according to the requirement.
- Tighten screws 1.

## 13.04.14 Stitch length control eccentric

**Requirement**

When the needle (with maximum stitch length set), coming from TDC, is 3 mm above the needle plate, the crank 3 must have reached its front point of reversal.

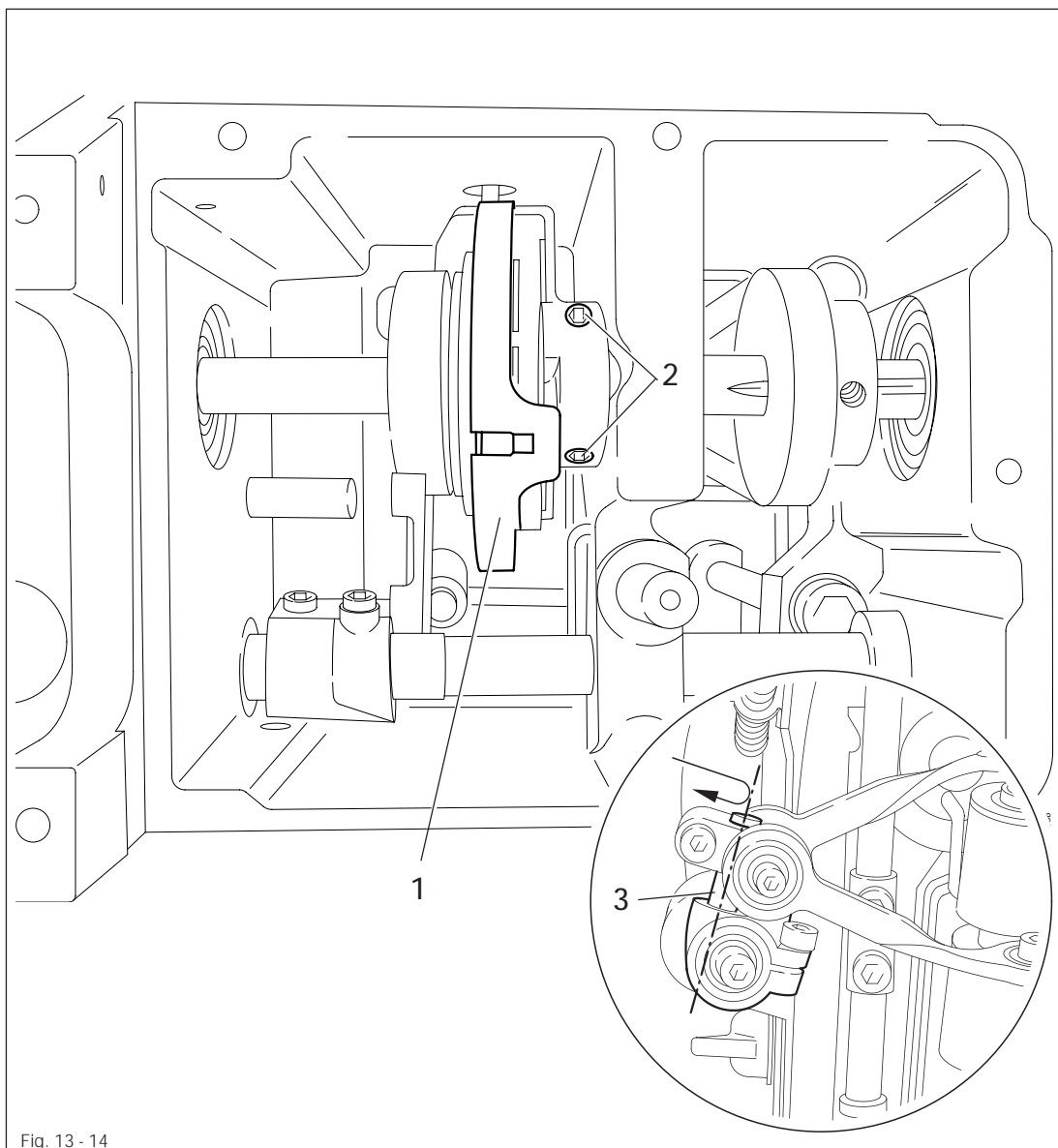
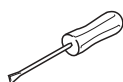


Fig. 13 - 14

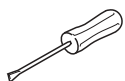
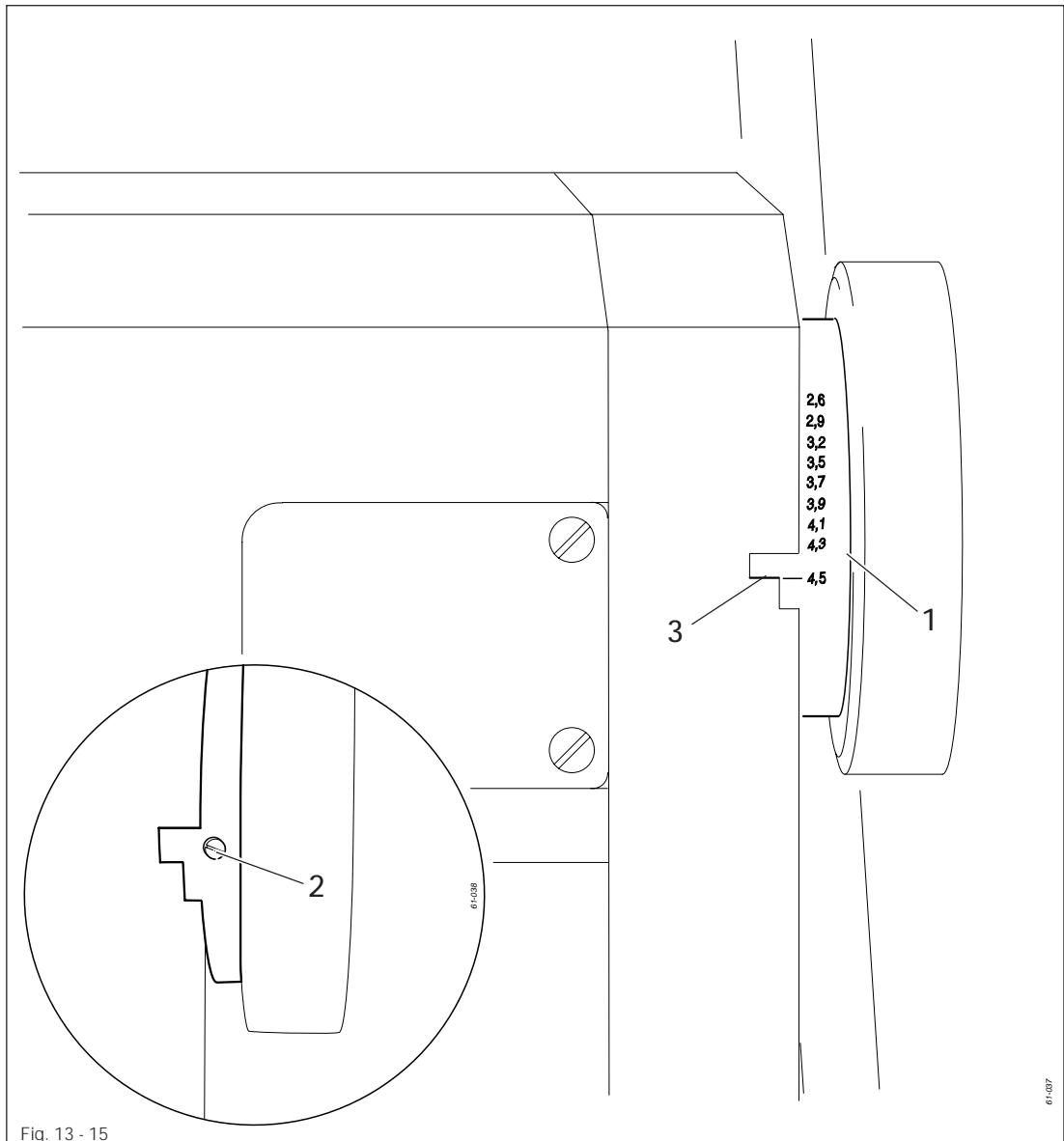


- Set the maximum stitch length.
- Turn stitch length control device 1 (screws 2) according to the requirement.

## 13.04.15 Stitch length scale disk

### Requirement

When the stitch length control device is locked in position, and the maximum stitch length is set, the marking line of the highest number on the scale disk 1 must be opposite the lower edge 3 of the belt guard recess.



- Set the maximum stitch length.
- Turn the scale disk 1 (screws 2) according to the requirement.



## 13.04.16 Shaft crank to feed wheel drive

**Requirement**

When the maximum stitch length is set, the linkage rod 3, or linkage rods 3 and 4 on the models 571 and 591, must be able to move freely when the balance wheel is turned.

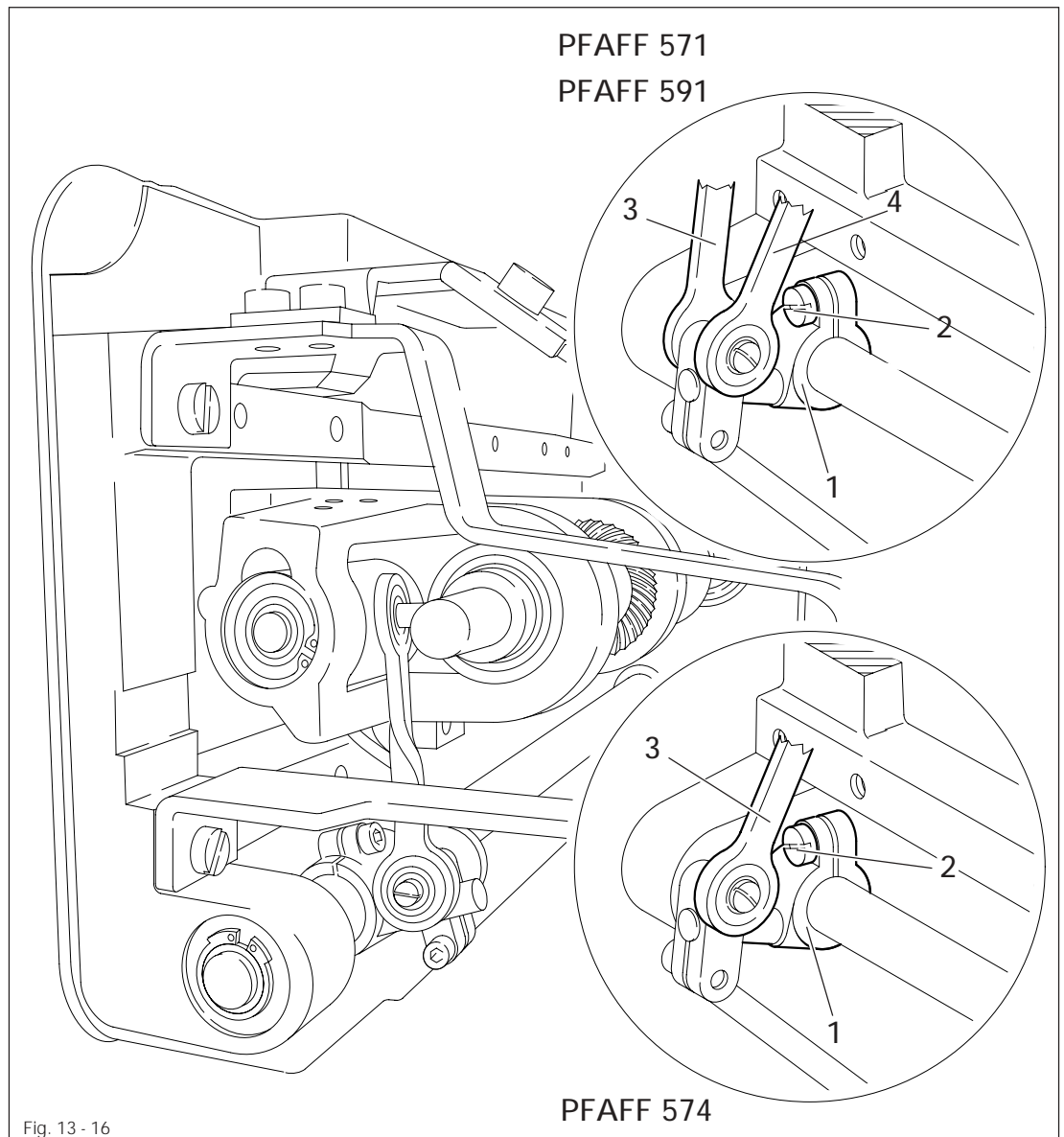
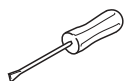


Fig. 13 - 16



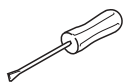
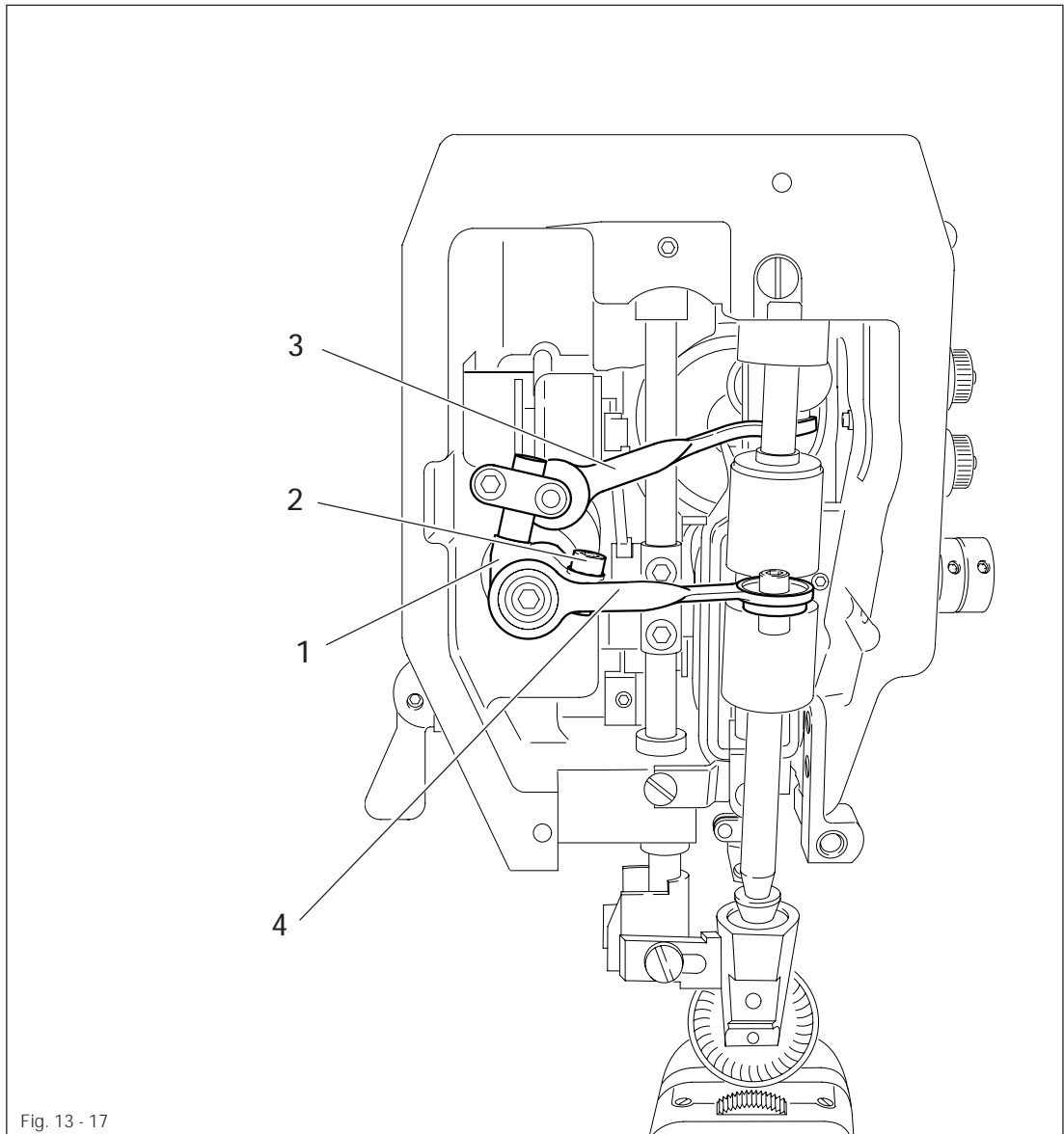
- Set the maximum stitch length.
- Twist or shift the shaft crank 1 (screw 2) according to the requirement.

## Adjustment

### 13.04.17 Shaft crank to roller presser drive

#### Requirement

When the maximum stitch length is set, the linkage rods 3 and 4 must be able to move freely at their left and right point of reversal when the balance wheel is turned.

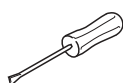
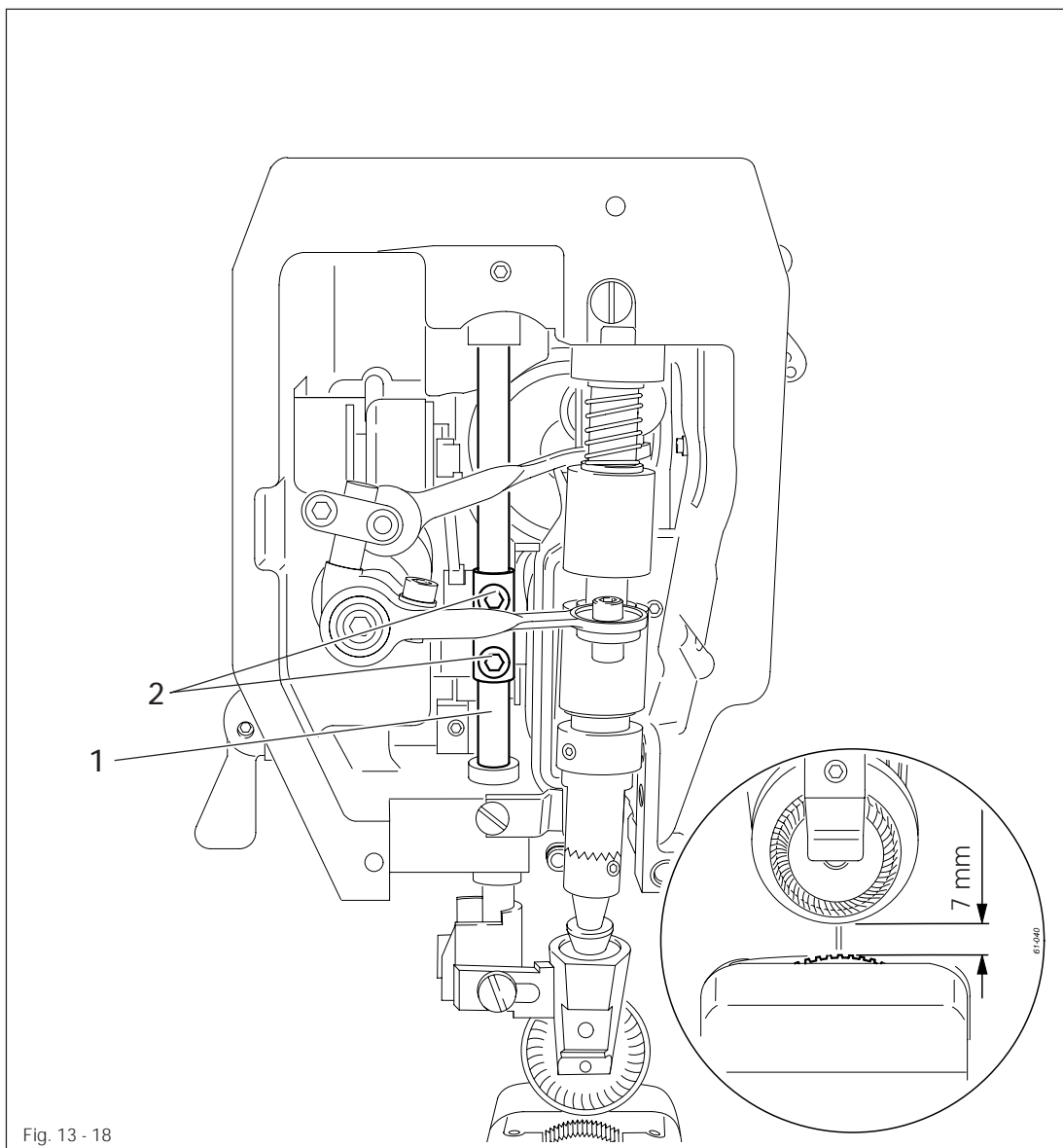


- Set the maximum stitch length.
- Twist clamp crank 1 (screw 2) according to the requirement.

## 13.04.18 Clearance between roller presser and feed wheel

**Requirement**

When the presser bar lifter is raised, the clearance between the roller presser and the feed wheel must be 7 mm.



- Raise the presser bar lifter.
- Adjust the presser bar 1 (screws 2) according to the **requirement**. Make sure that the roller presser is parallel to the feed wheel.

### Requirements

When the roller presser 1 is touching the feed wheel 5 it must

1. be parallel to feed wheel 5, as seen in the direction of sewing,
2. be in the centre of the needle (on model 574 the left needle), as seen in the direction of sewing,
3. be as near as possible to the needle (on model 574 the left needle), as seen crosswise to the direction of sewing.

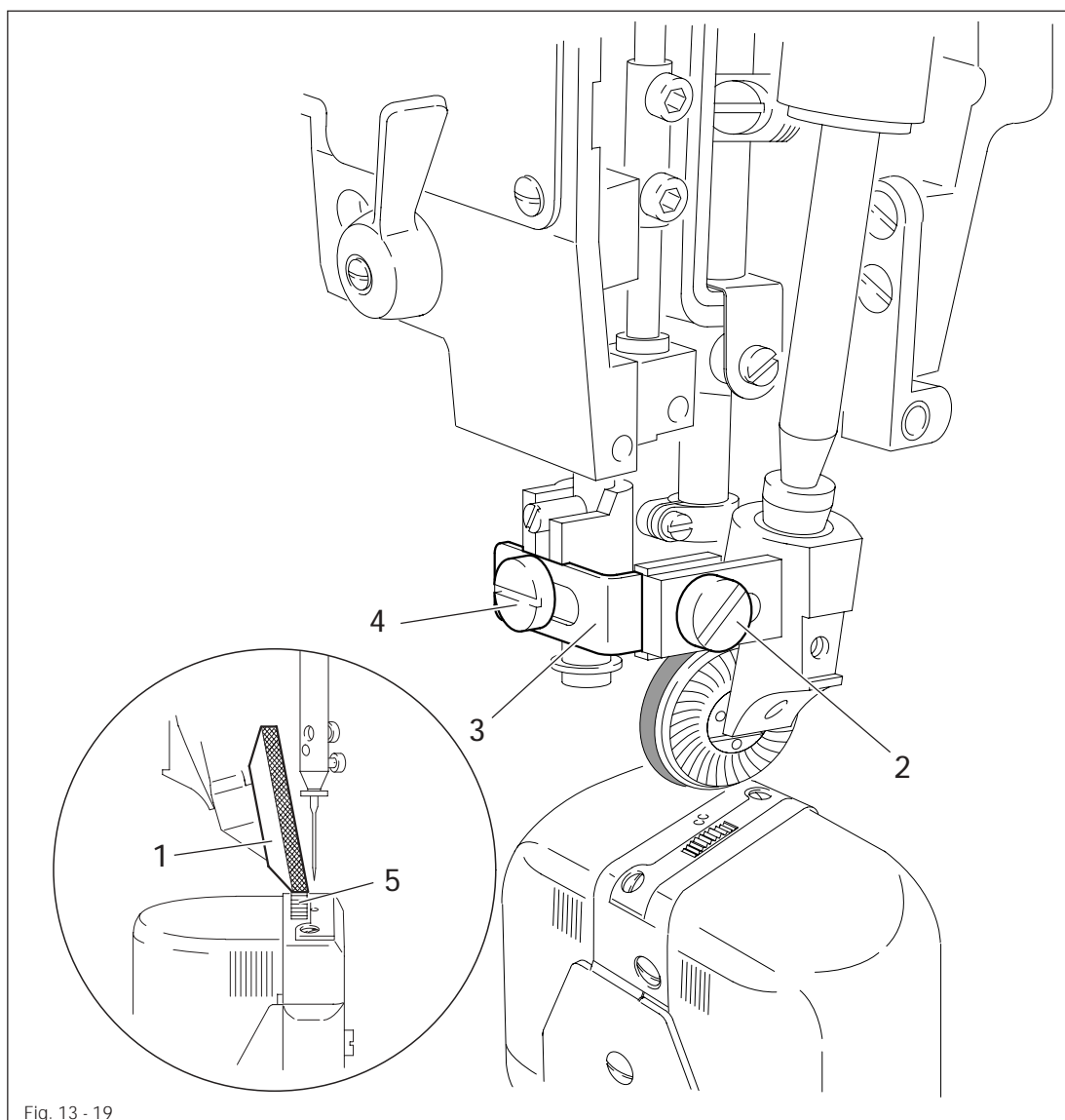
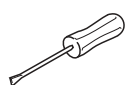


Fig. 13 - 19



- Raise the roller presser.
- Always observe **requirement 1** for subsequent adjustments.
- Adjust roller presser (screw 2) according to **requirement 2**.
- Lower roller presser 1 to rest on feed wheel 5.
- Adjust roller presser bracket 3 (screw 4) according to **requirement 3**.



When sewing very tight curves, the roller presser 1 must be moved a little towards the operator.

## 13.04.20 Stitch length on stitch length scale

### Requirement

When the stitch length is set at "3", and after the needle has entered a strip of leather 11 times, the total length from the first to last needle penetration must be 30 mm.

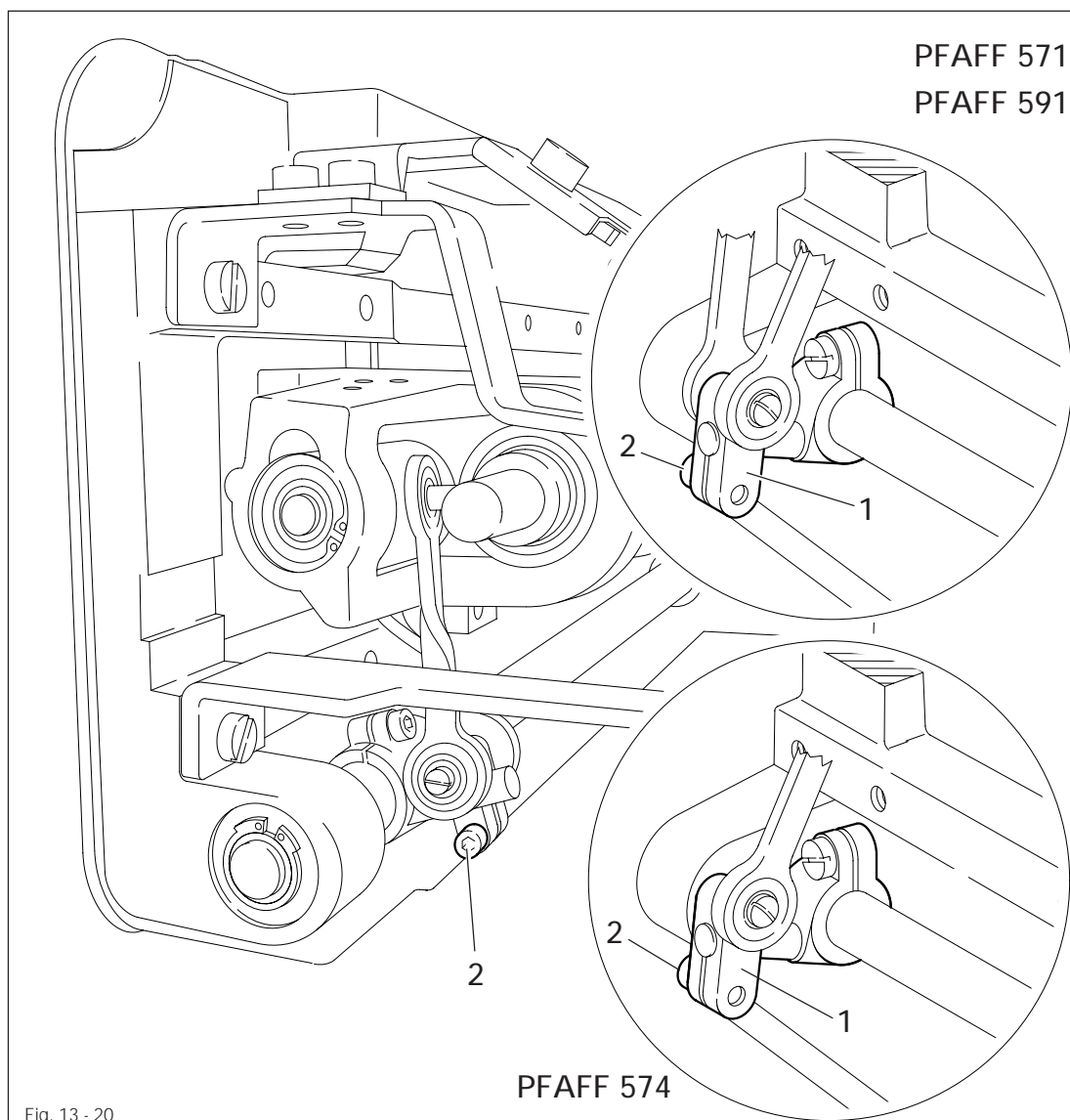
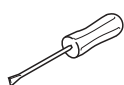


Fig. 13 - 20



- Set stitch length "3".
- By turning the balance wheel, let the needle enter 11 times and measure the total length.
- Adjust clamp 1 (screw 2) according to the requirement.

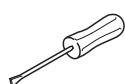
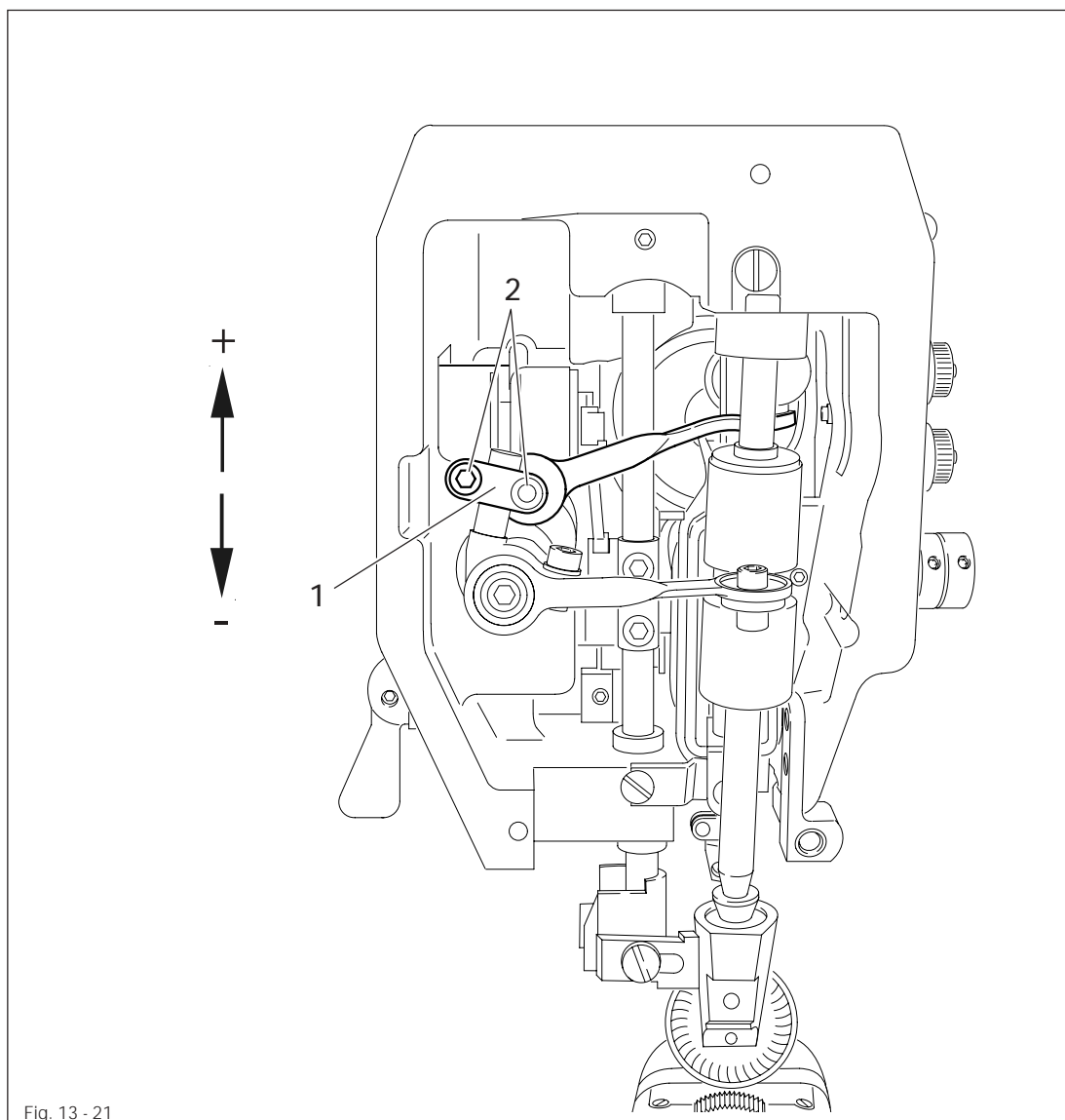


Clamp 1 must not be positioned diagonally to the rock shaft!

## 13.04.21 Synchronization of roller presser and feed wheel

### Requirement

After 30 needle penetrations in a strip of leather the total length from the first to the last penetration should be the same, both in the lower and the upper leather layer.



- Set stitch length "3".
- By turning the balance wheel, let the needle enter 30 times.
- Compare the total sewn length of the lower and upper leather layer.
- Adjust clamp 1 (screw 2) according to the requirement.



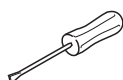
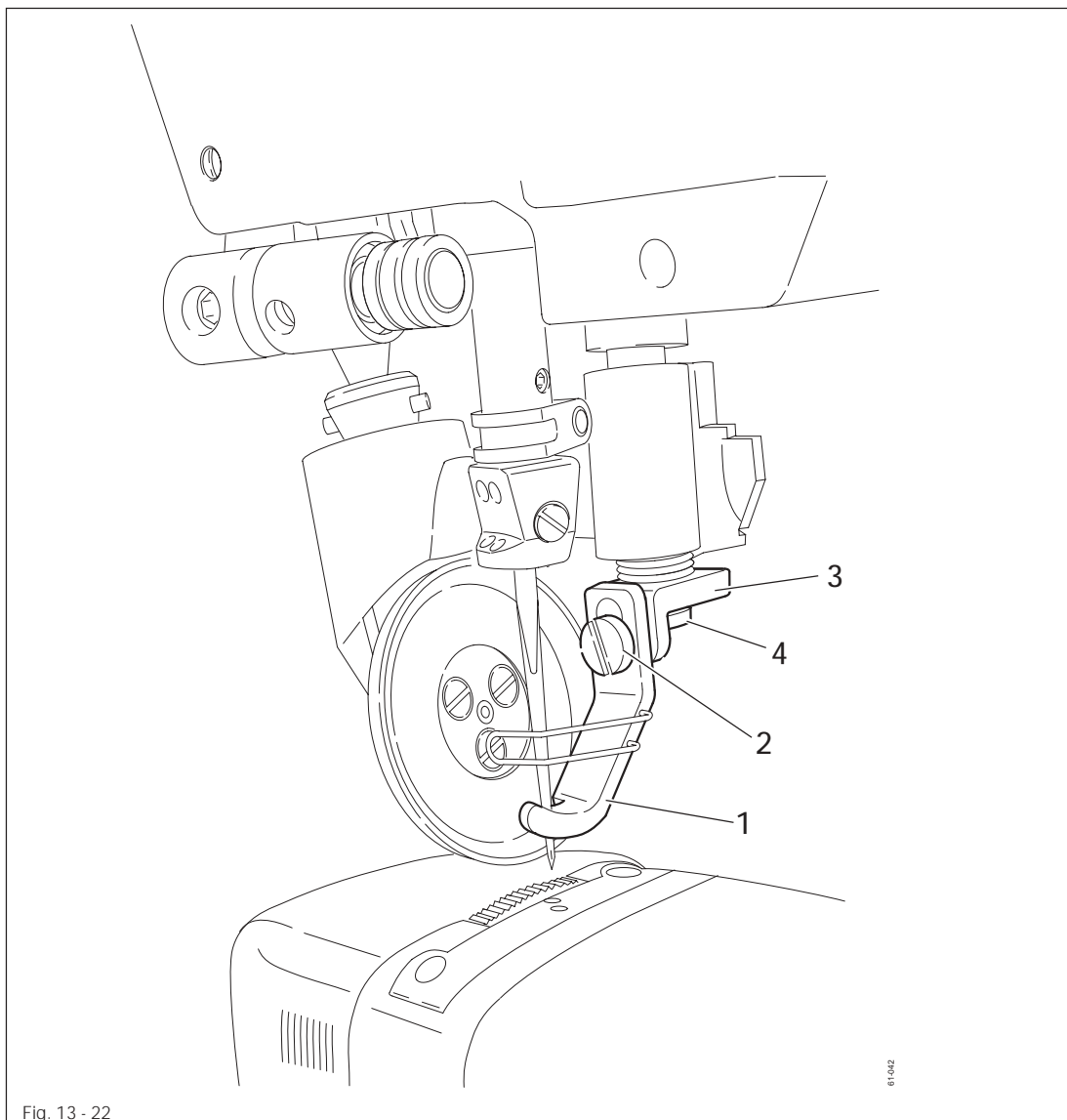
Clamp 1 must not be positioned diagonally to the rock shaft.

## 13.04.22 Retainer (only on model 574)

**Requirements**

The retainer 1 must

1. be as close as possible to the needle, as seen in the direction of sewing and
2. be in the centre of the needle, as seen crosswise to the direction of sewing.
3. When the roller presser is lowered, the distance between the retainer 1 and the workpiece must be 0.2 - 0.3 mm.

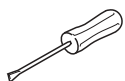
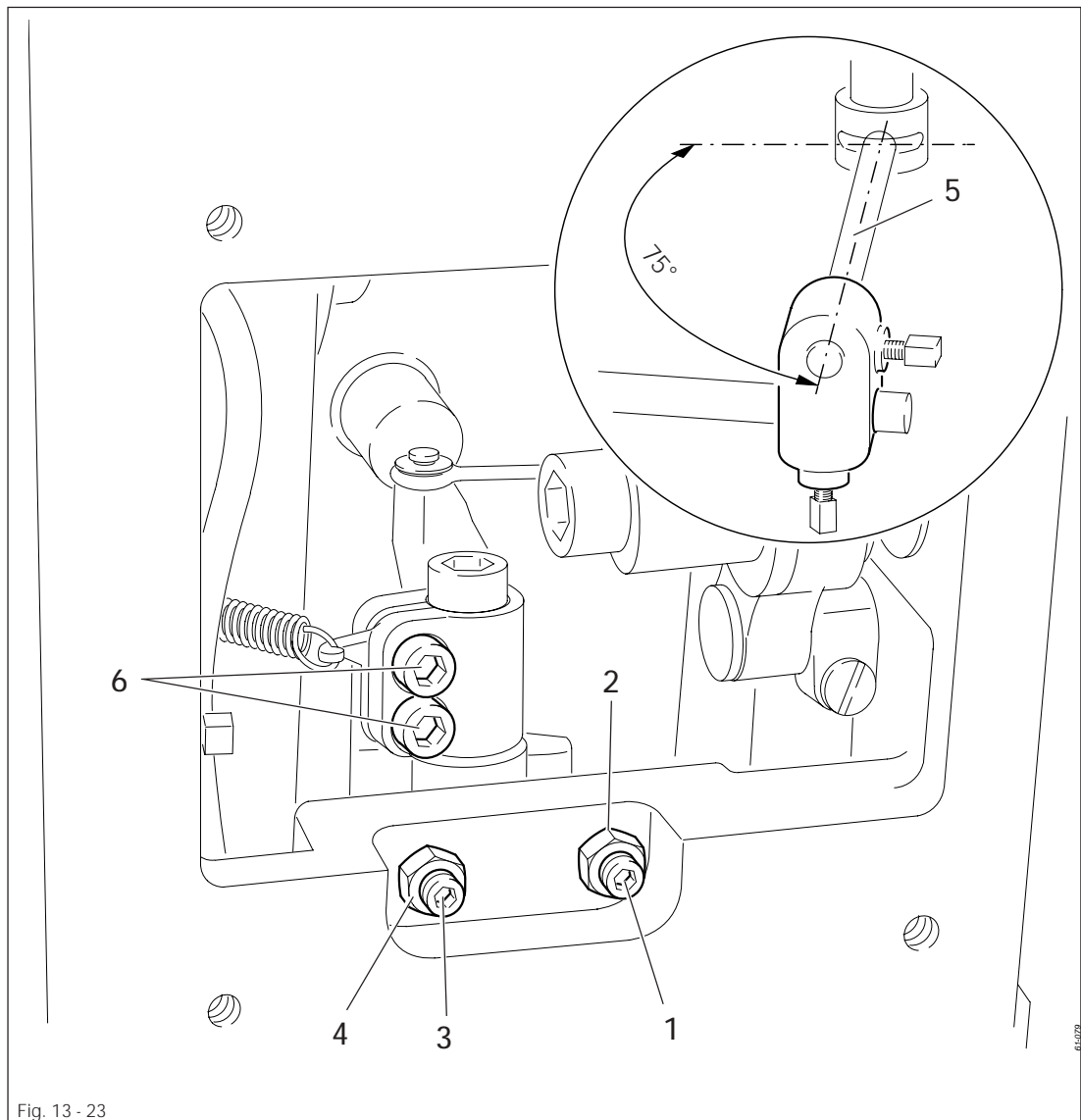


- Adjust retainer 1 (screw 2) according to requirement 3.
- Adjust bracket 3 (screw 4) according to requirement 1 and 2.

## 13.04.23 Knee lever

### Requirements

1. Before the roller presser rises, the knee lever must still have a slight play.
2. When the knee lever is raised as far as possible, the lever for the roller presser must drop automatically.
3. Knee lever bar 5 must be at an angle of **approx. 75°** to the bedplate.



- Adjust screw 1 (nut 2) according to requirement 3.
- Adjust screw 3 (nut 4) according to requirement 2.
- Set bar 5 (Screws 6) according to requirement 3.



## 13.04.24 Needle thread tension release

### Requirements

1. When the presser bar lifter is raised, the tension discs 3 should be pressed at least 0.5 mm apart.
2. When the roller presser is lowered, the tension must be fully effective.

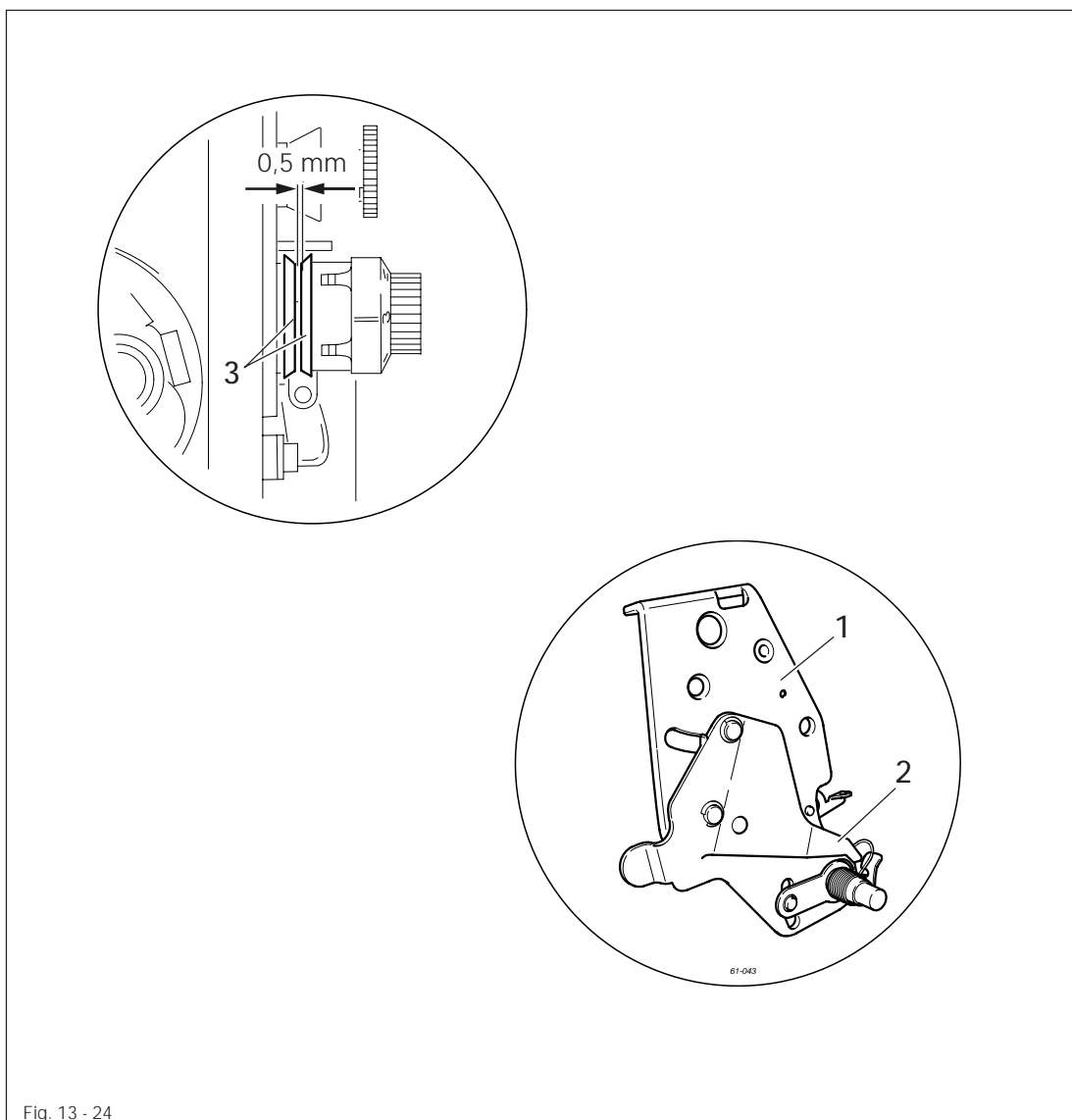
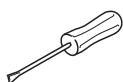


Fig. 13 - 24

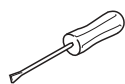
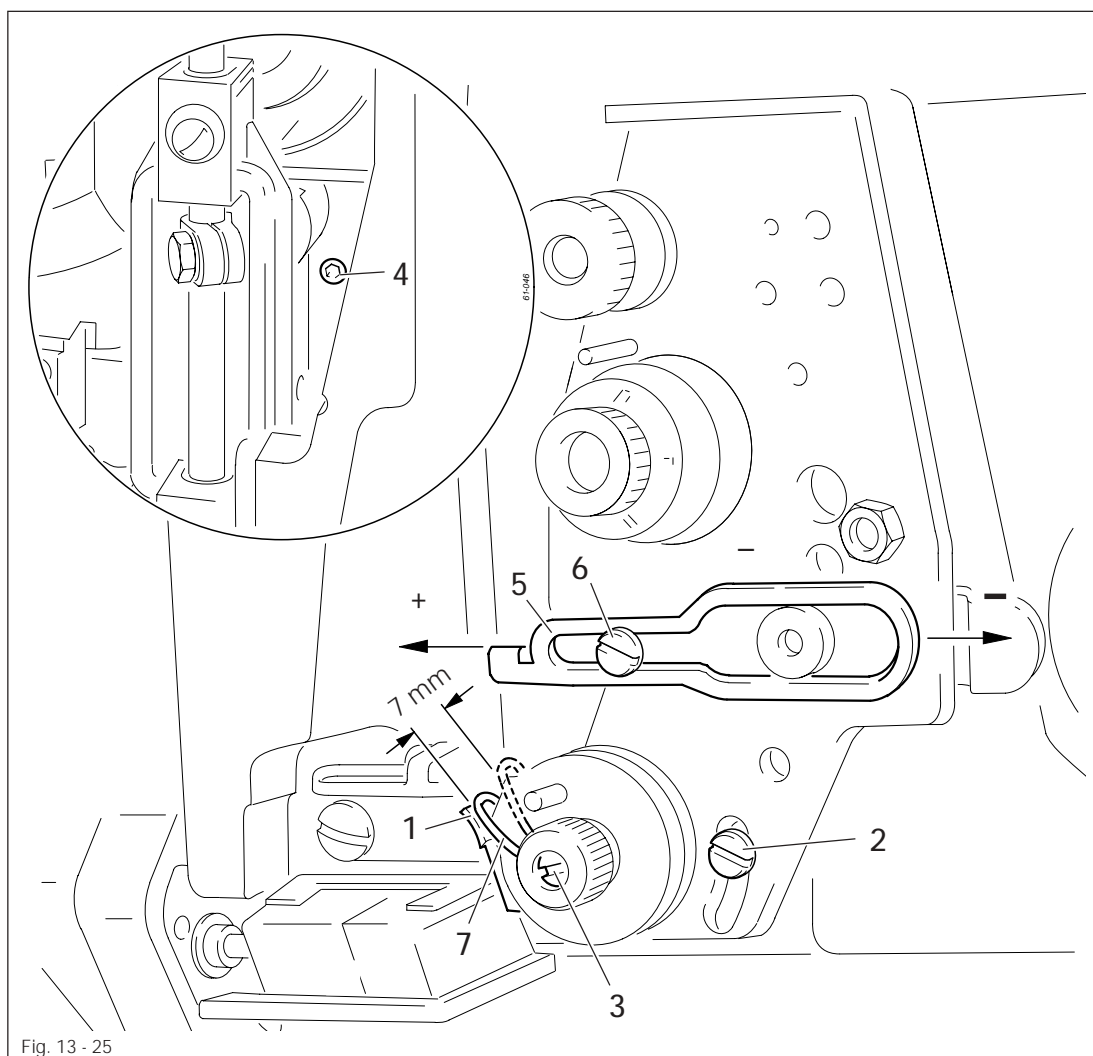


- Align tension mounting plate 1 and pressure plate 2 according to the requirement.

## 13.04.25 Thread check spring (PFAFF 571 and 591)

### Requirement

1. The movement of thread check spring 7 should be completed when the needle point penetrates the fabric (spring stroke approx. 7 mm).
2. When the largest thread loop is formed while the thread is passed around the hook, the thread check spring 7 should rise slightly from its support



- Adjust support 1 (screw 2) according to **requirement 1**.
- To adjust the spring tension turn screw 3 (screw 4).
- Adjust the thread regulator 5 (screw 6) according to **requirement 2**.



For technical reasons it may be necessary to deviate from the specified spring stroke or spring tension.

Move the thread regulator 5 (screw 6) towards "+" (= more thread) or "-" (= less thread).

## 13.04.26 Thread check springs (PFAFF 574)

**Requirement**

1. The movement of thread check springs **3** and **6** should be completed when the needle points penetrate the fabric (spring stroke approx. **7 mm**).
2. When the largest thread loop is formed while the thread is passed around the hook, the thread check springs **3** and **6** should rise slightly from supports **1** and **9**.

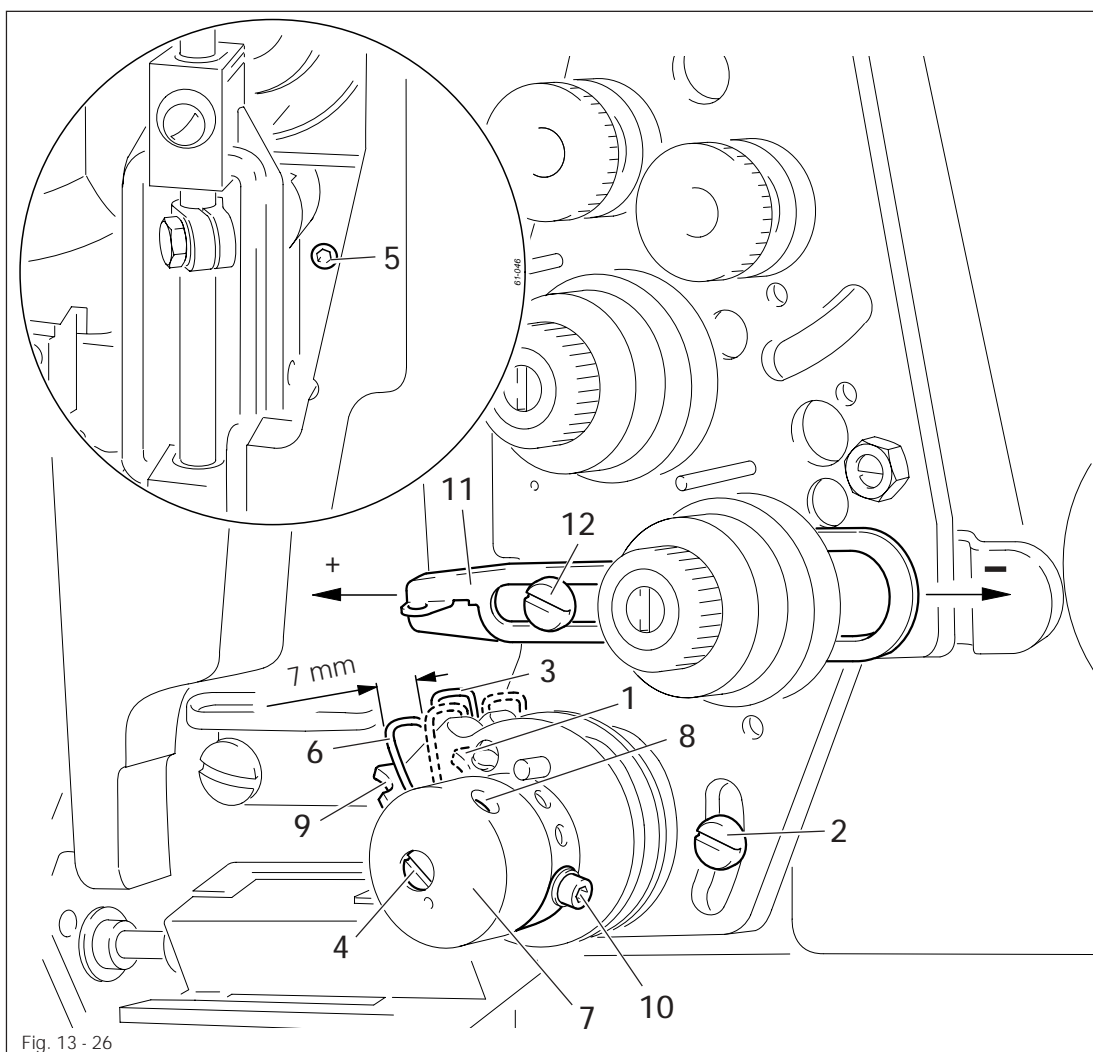
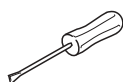


Fig. 13 - 26



- Adjust support **1** (screw **2**) according to **requirement 1**.
- To adjust the spring tension of thread check spring **3** turn screw **4** (screw **5**).
- To adjust the spring tension of thread check spring **6** turn bush **7** (screw **8**).
- Adjust support **9** (screw **10**) according to **requirement 1**. (If the adjustment range is too low, support **9** can be screwed into another hole).
- Adjust the thread regulator **11** (screw **12**) according to **requirement 2**.



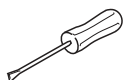
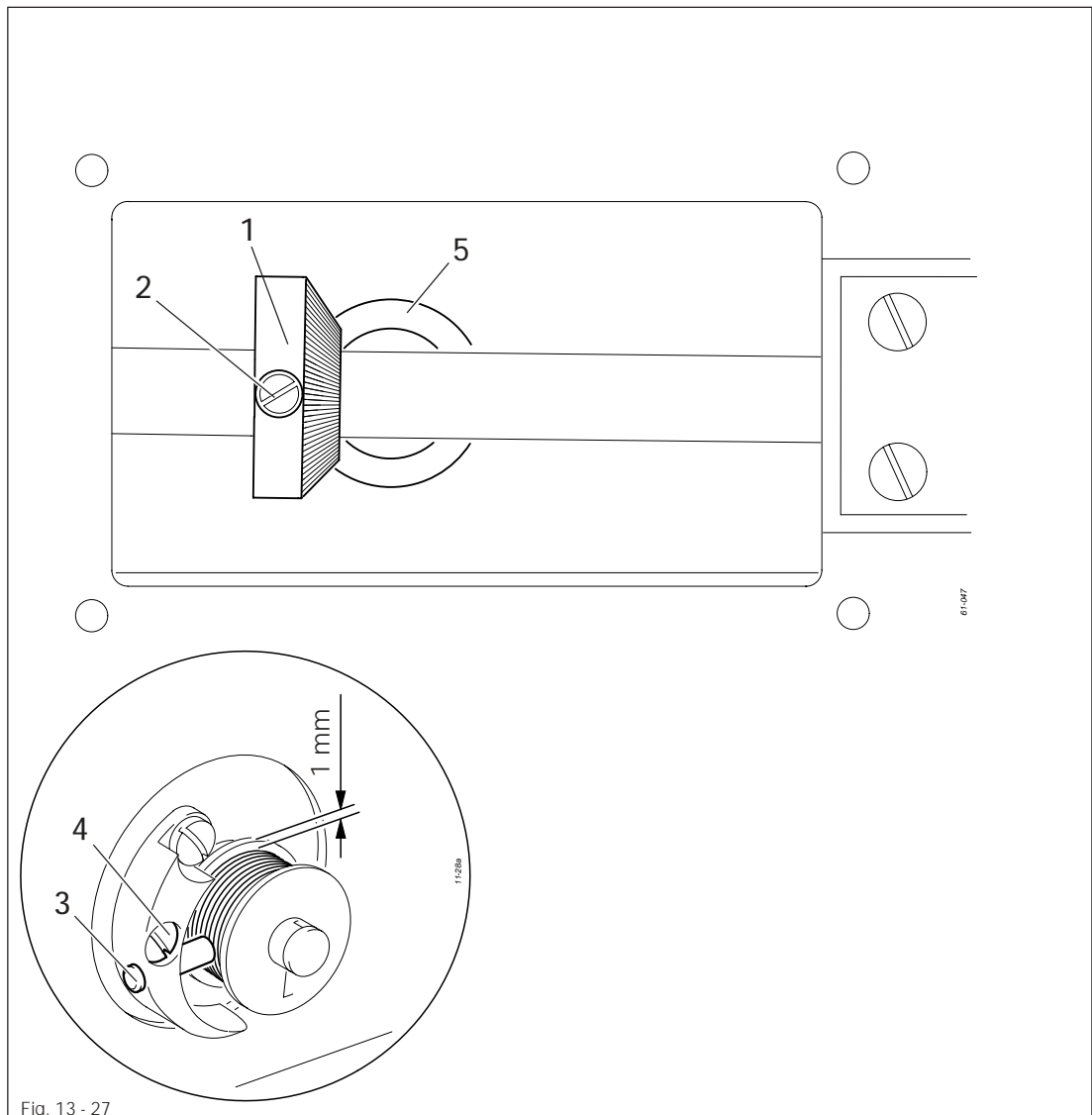
For technical reasons it may be necessary to deviate from the specified spring stroke or spring tension.

Move the thread regulator **11** (screw **12**) towards "+" (= more thread) or "-" (= less thread).

## 13.04.27 Bobbin winder

### Requirements

1. When the bobbin winder is engaged, the winding spindle must be driven reliably. When the bobbin winder is disengaged, the friction wheel 5 must not be moved by drive wheel 1.
2. The bobbin winder must switch itself off, when the filled thread is about 1 mm from the edge of the bobbin.

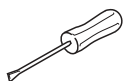
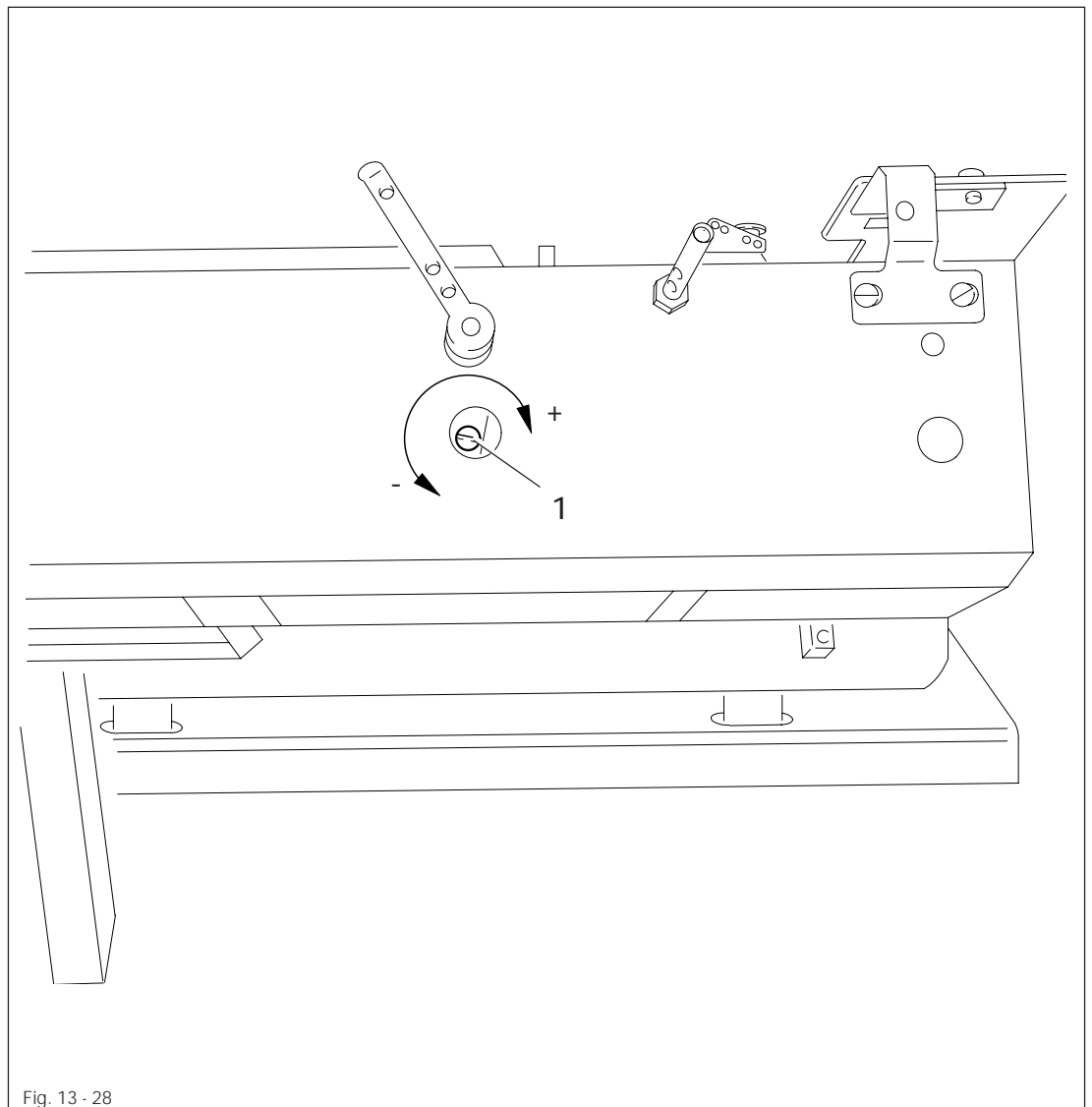


- Position drive wheel 1 (screws 2) according to requirement 1.
- Position bolt 3 (screw 4) according to requirement 2.

## 13.04.28 Pressure of roller presser

### Requirement

The material must be fed smoothly. No pressure marks should be visible on the material.

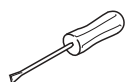
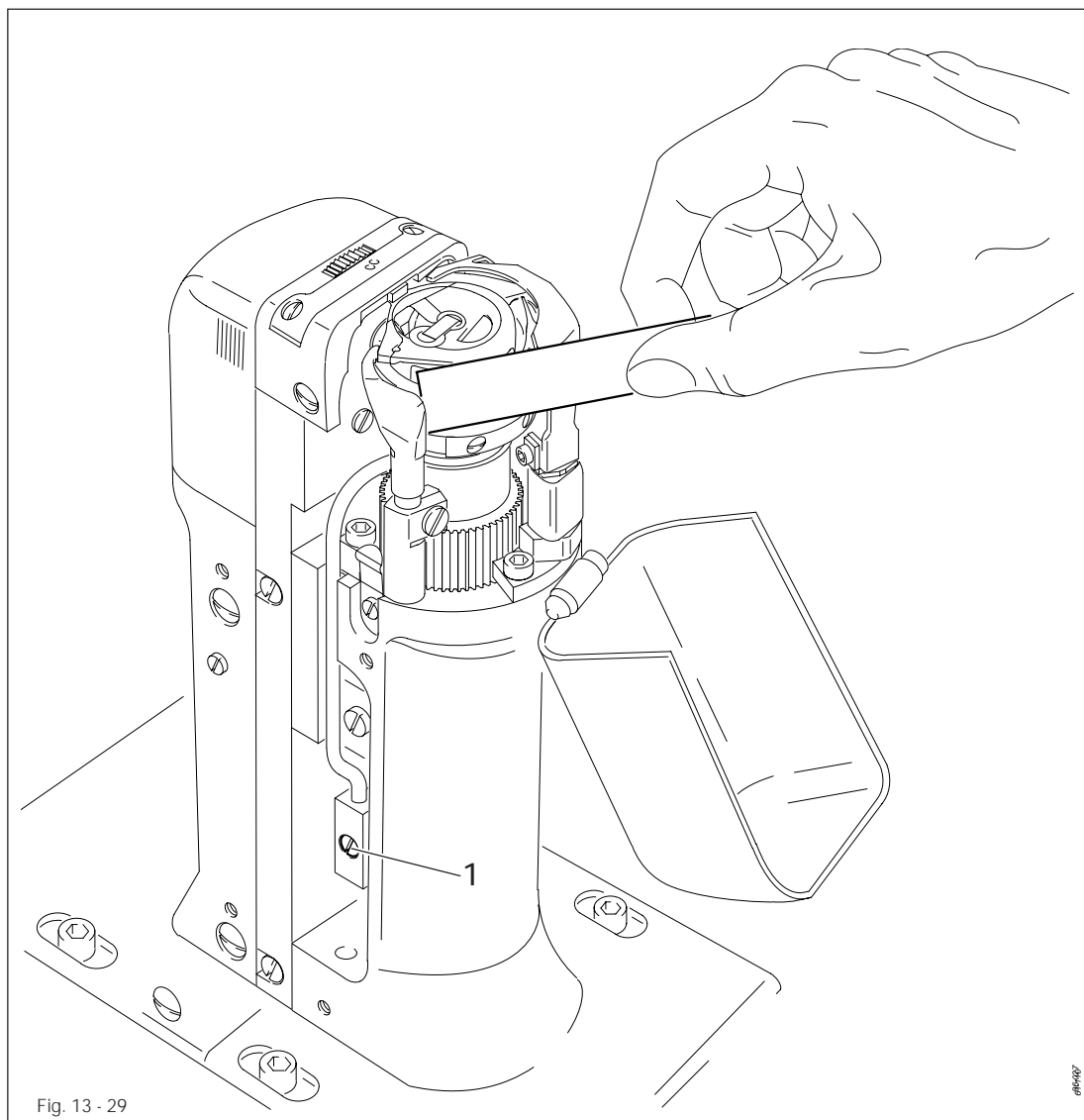


- Adjust roller presser pressure with screw 1 according to the requirement.

## 13.04.29 Lubrication

### Requirement

After a running time of 10 seconds a fine line of oil should form on a strip of paper held next to the hook.



- Check whether oil has been filled in and that there is no air in the oil lines.
- Let the machine run for 2-3 min..



While the machine is running do not place hands in the needle or hook area!  
Danger of injury from moving parts!

- With the machine running hold a strip of paper on the hook and check the requirement.
- If necessary, adjust the oil flow on screw 1.

## 13.04.30 Re-engage safety coupling



The coupling 1 is set by the manufacturer. When the thread jams, the coupling 1 disengages in order to avoid damage to the hooks. A description of how to engage the coupling follows.

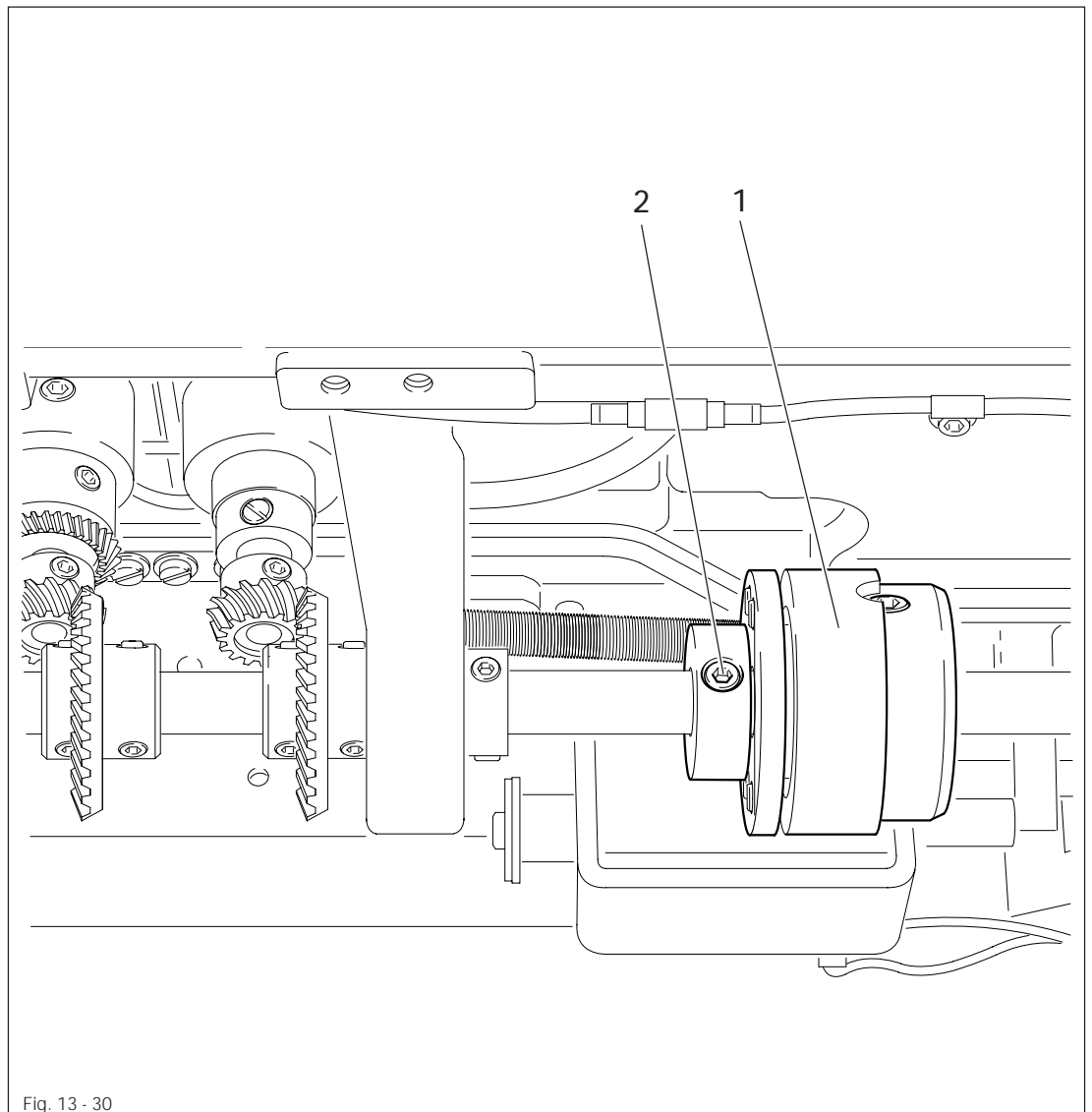
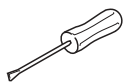


Fig. 13 - 30



- Remove jammed thread.
- Hold coupling 1 with screw 2 and turn the balance wheel, until you feel coupling 1 snap back into place again.

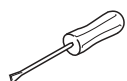
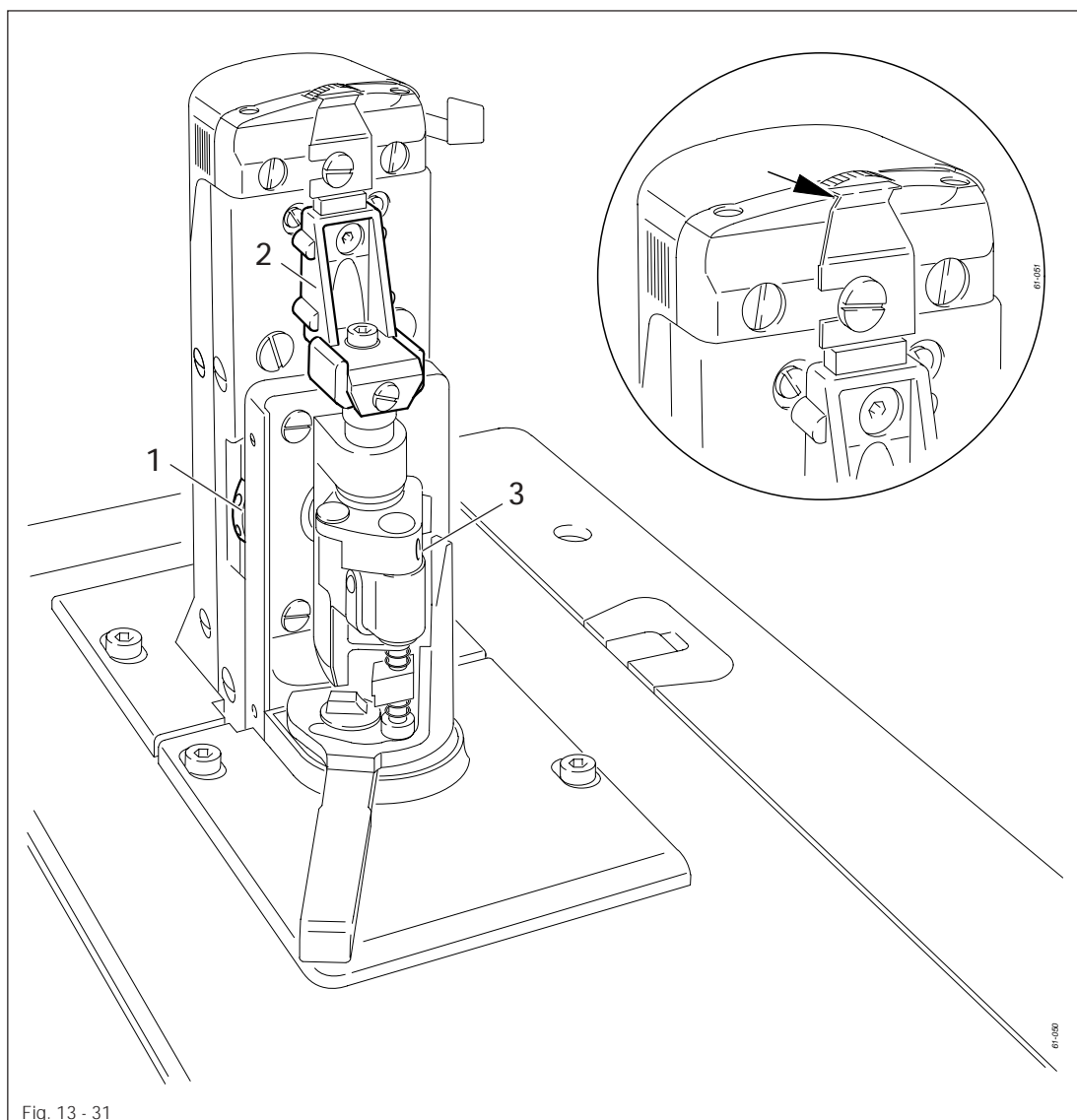
## 13.05 Adjusting the edge trimmer -725/04

### 13.05.01 Position of the knife holder on model 571

#### Requirements

When the thread trimmer is engaged and the adjusting wheel has been turned to its highest position

1. the knife holder 2 must be parallel to the post and
2. the top edge of the needle plate must be in the centre of the angular knife opening.



- Turn the adjusting wheel 1 to its highest position and engage edge trimmer.
- Adjust knife holder 2 (screw 3) according to the **requirements**.



## 13.05.02 Position of the knife holder on models 574 and 591

### Requirement

When the thread trimmer is engaged, the centre of the angular knife opening must be level with the top edge of the needle plate.

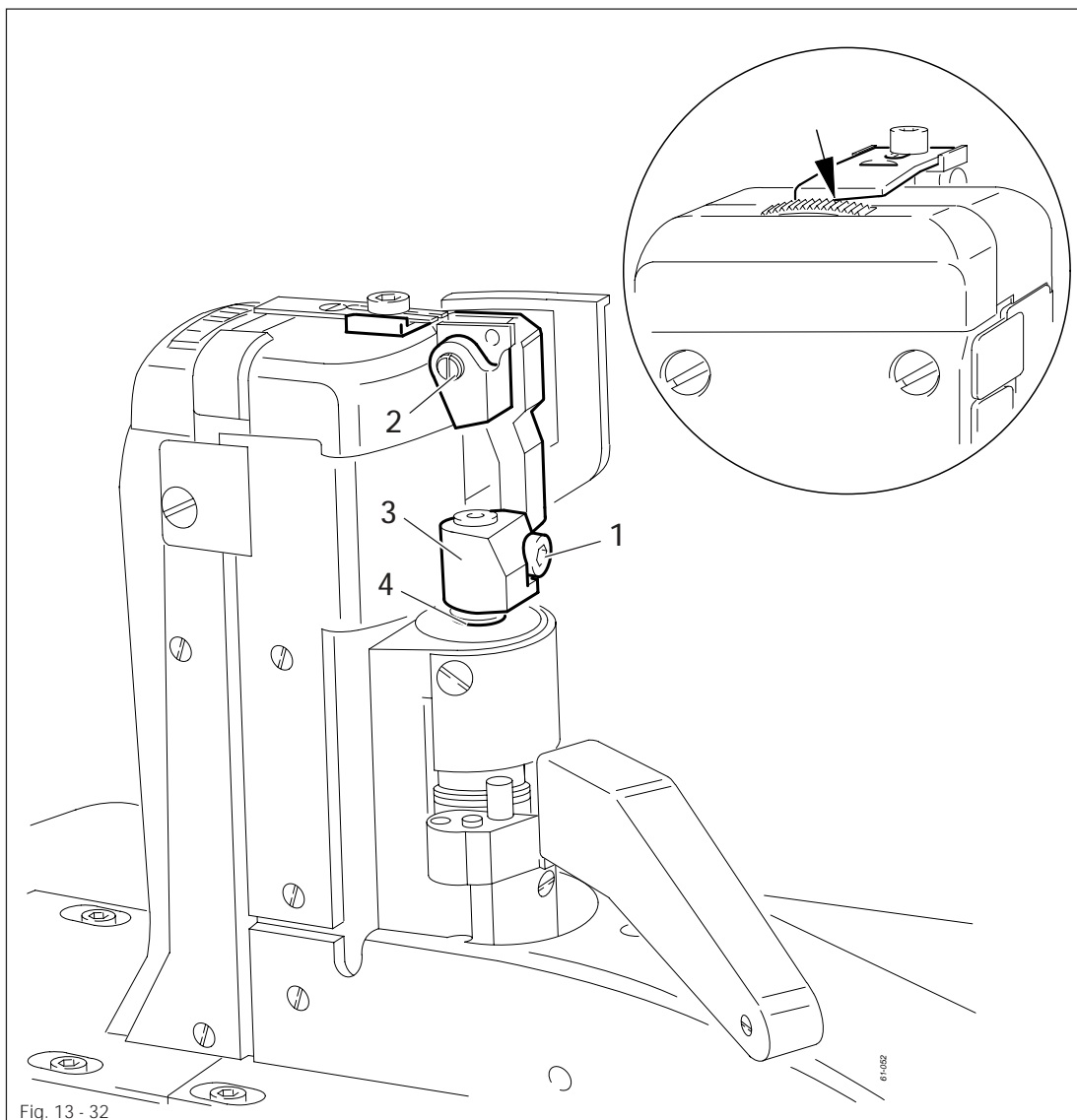
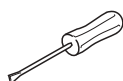


Fig. 13 - 32



- Switch off the machine and engage the edge trimmer.
- Loosen screw 1.
- By turning eccentric 2, position the knife in the centre of its adjustment range.
- Adjust knife holder 3 according to the **requirement** and tighten screw 1.
- Position locking ring 4 on the knife holder 3.



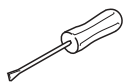
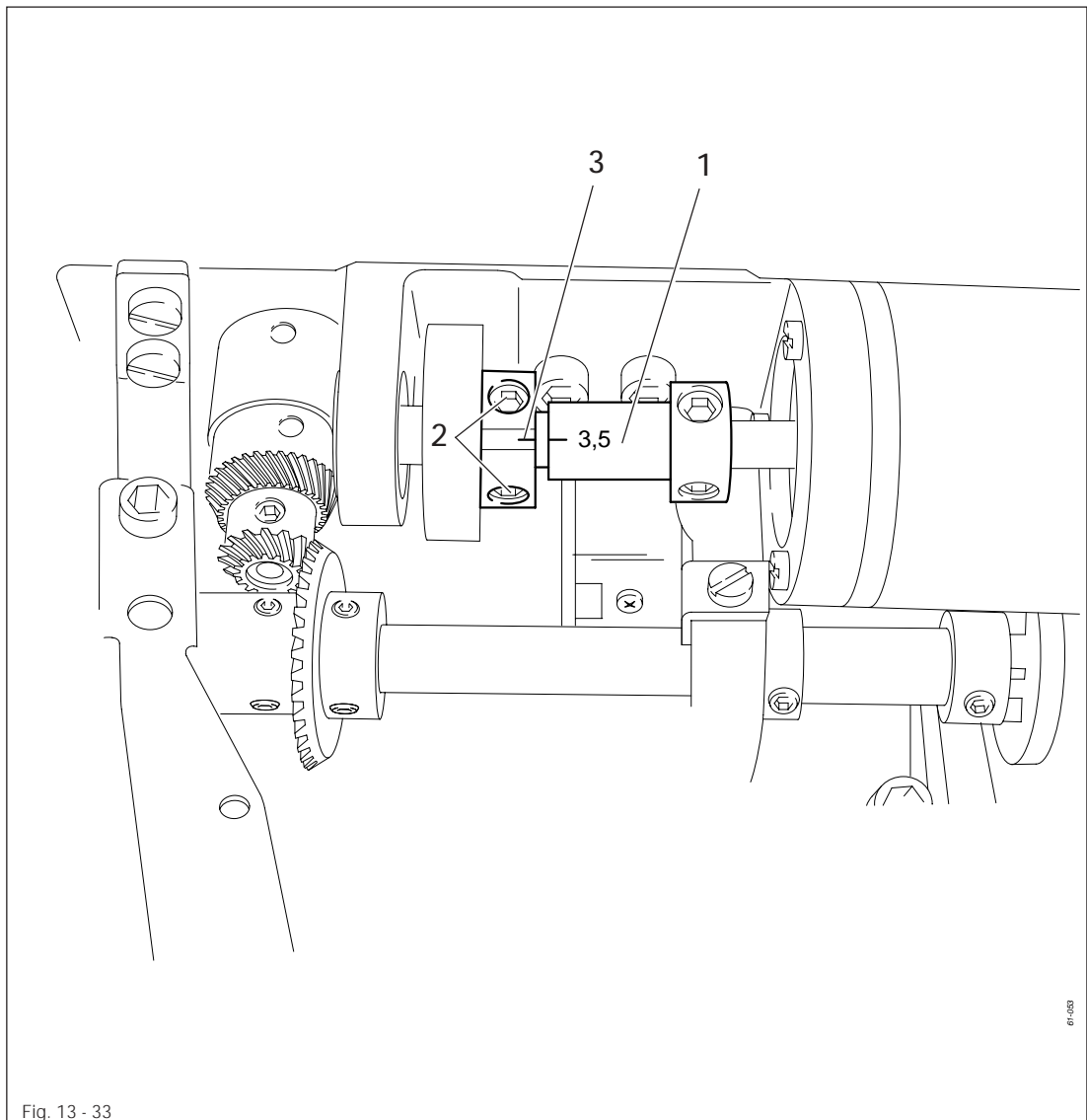
Depending on the material thickness, changes in the basic setting of eccentric 2 are possible.

## Adjustment

### 13.05.03 Knife stroke on model 571

#### Requirement

The knife stroke can be adjusted over a range from 1.0 to 3.5 mm, allowing the best possible adaption to all materials used.

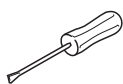
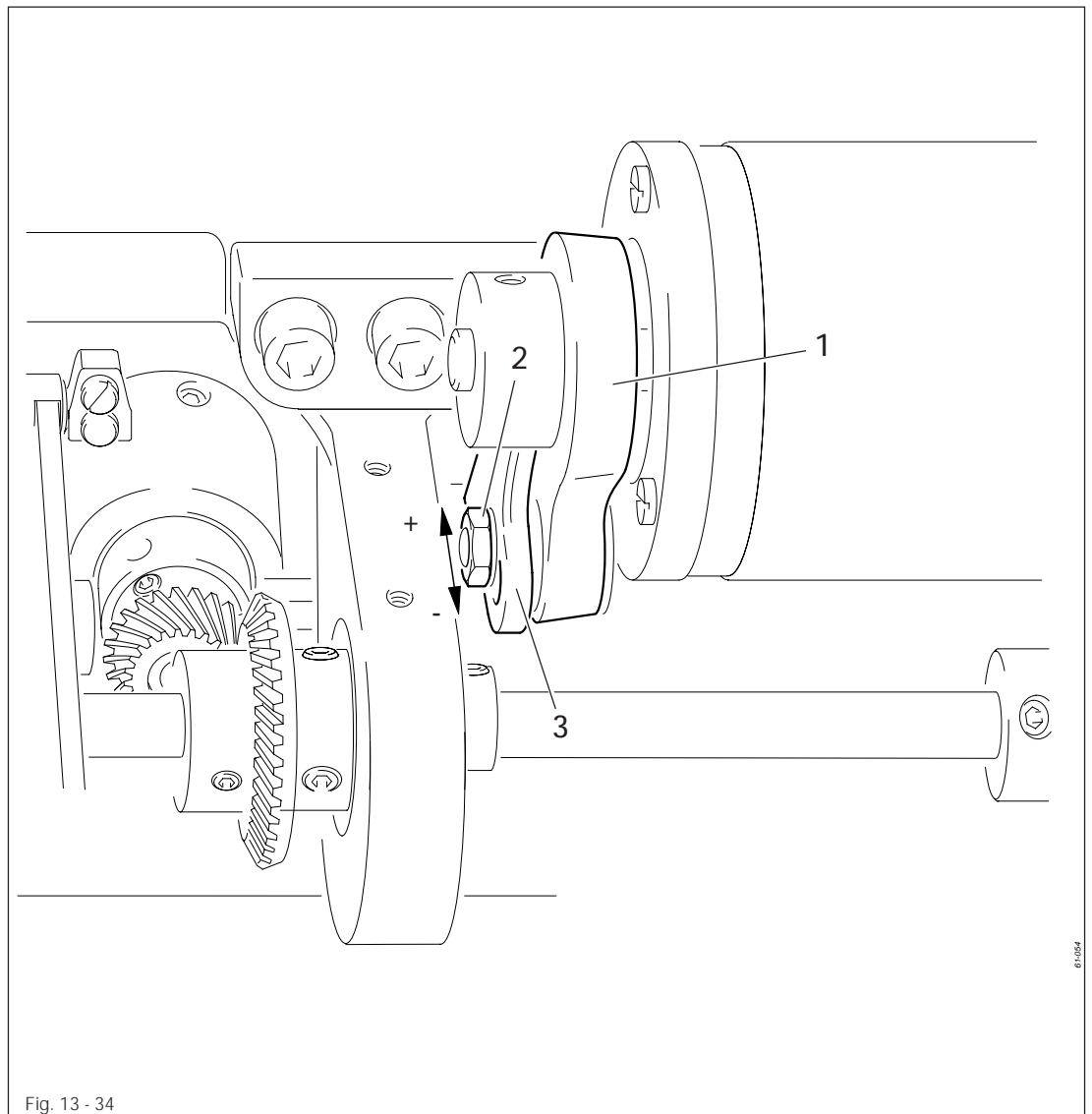


- Turn eccentric 1 (screws 2) so that the marking of the desired cutting stroke is opposite the marking on clamp collar 3.

## 13.05.04 Knife stroke on models 574 and 591

### Requirement

The knife stroke can be adjusted over a range from 2.0 to 3.5 mm, allowing the best possible adaption to all materials used.



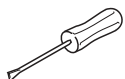
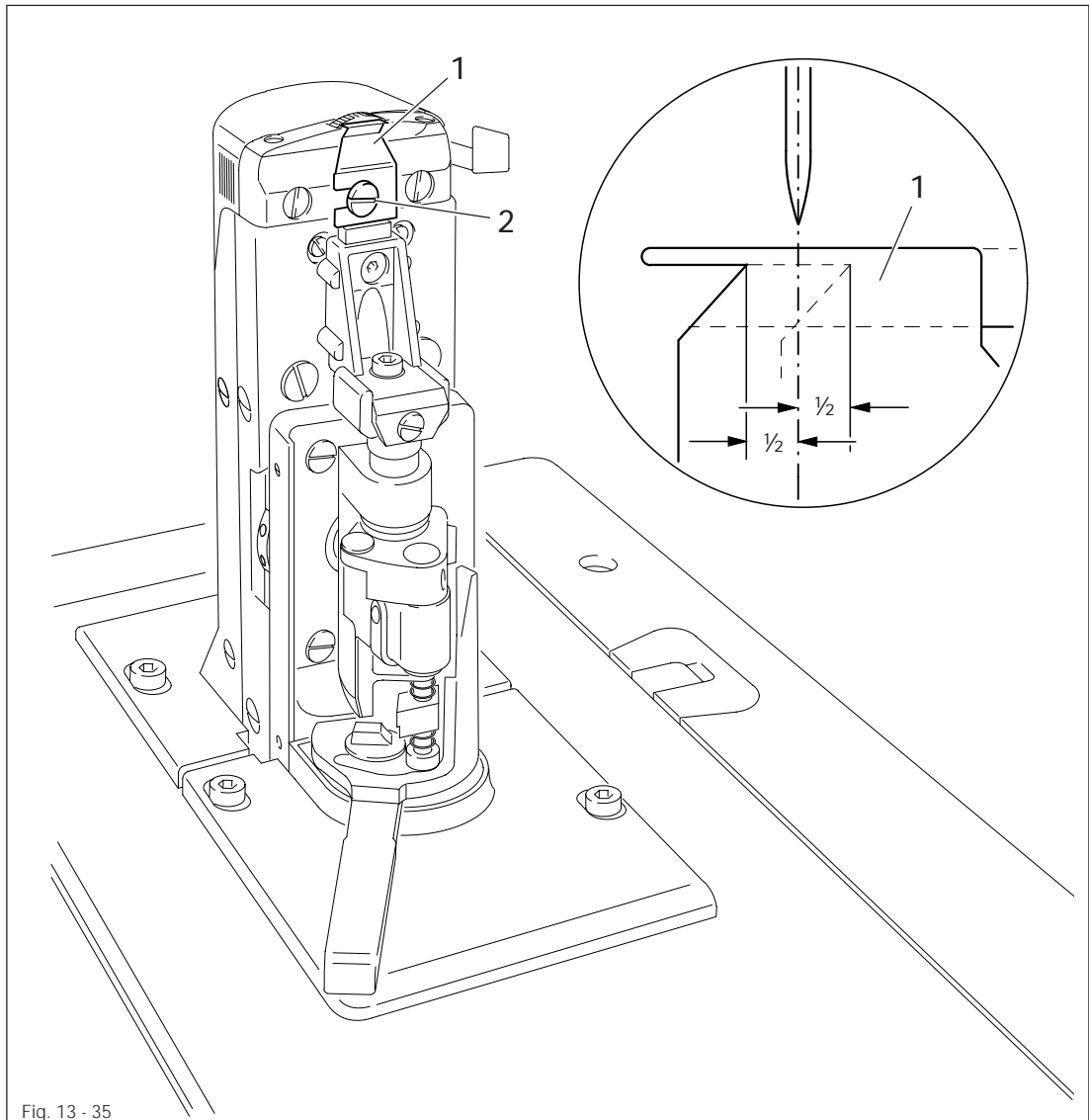
- Adjust crank 1 (nut 2) in slotted lever 3 according to the requirement.

## Adjustment

### 13.05.05 Cutting stroke on model 571

#### Requirement

When the edge trimmer is engaged and the needle is in the needle hole, the stroke of knife 1 should be half in front of and half behind the needle, when the motor shaft is turned by hand.

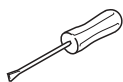
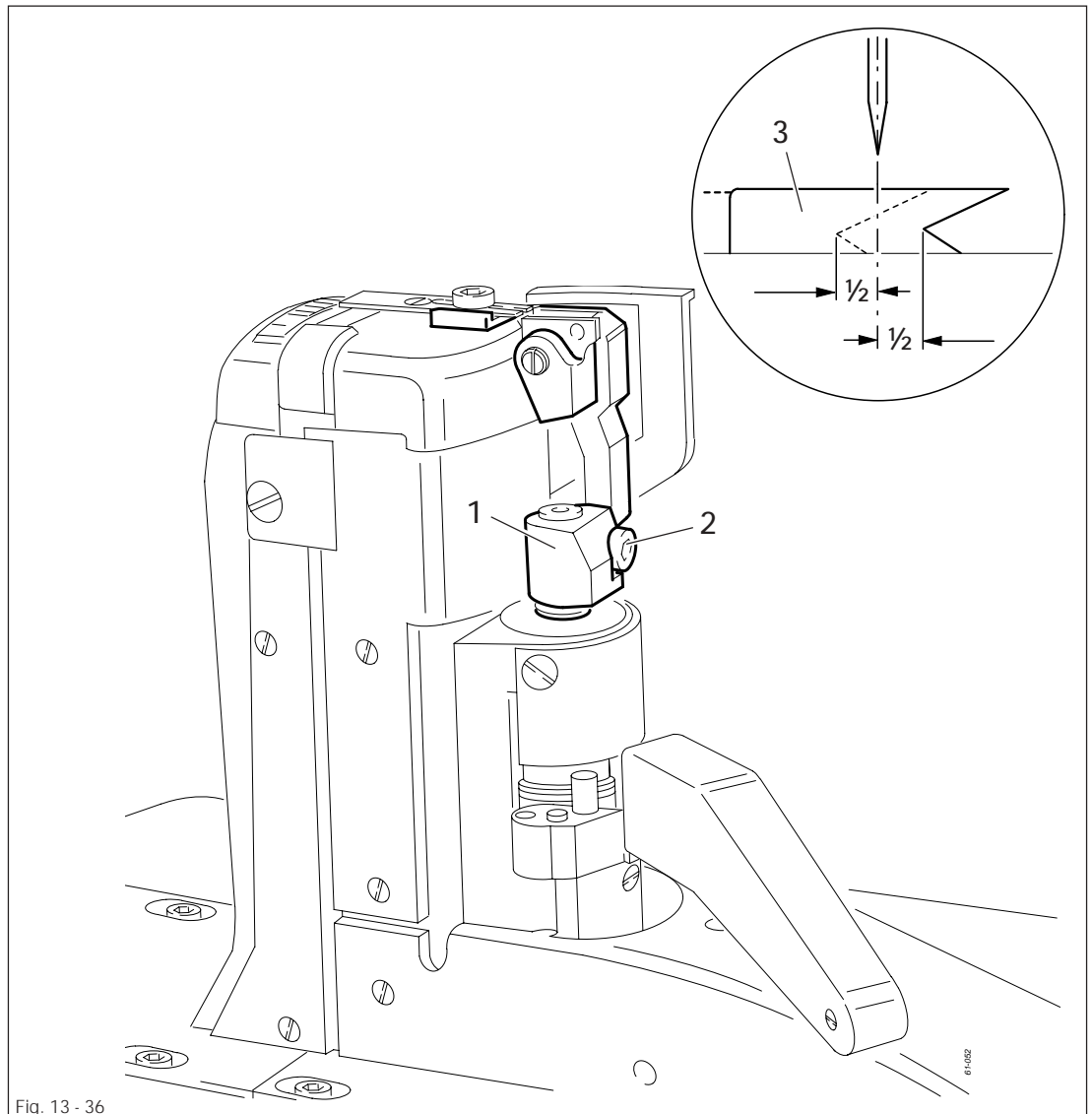


- Switch off the machine and engage the edge trimmer.
- Adjust knife 1 (screw 2) according to the requirement.

## 13.05.06 Cutting stroke on models 574 and 591

**Requirement**

When the edge trimmer is engaged and the needle is in the needle hole, the stroke of knife 3 should be half in front of and half behind the needle, when the motor shaft is turned by hand.

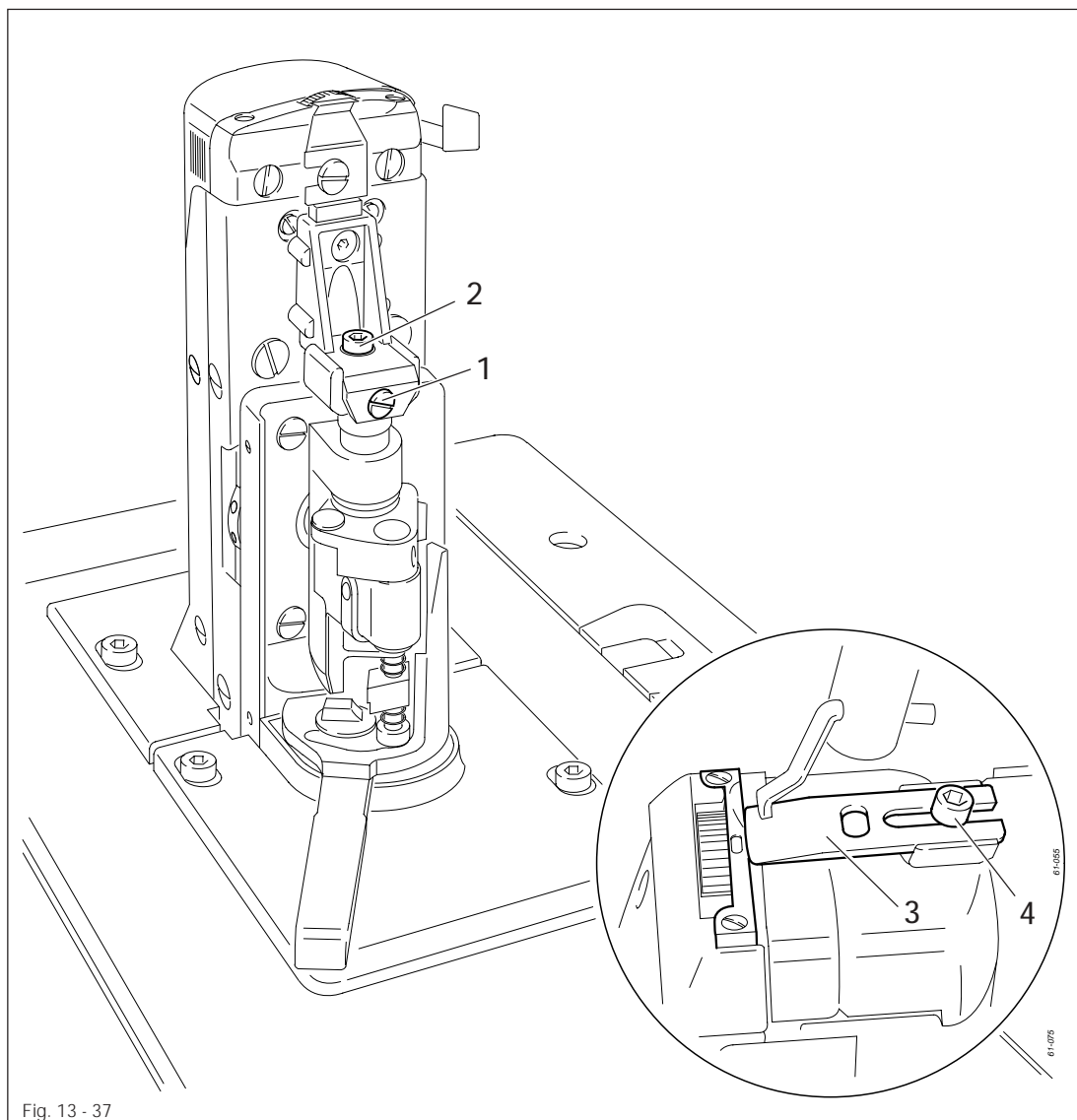


- Switch off the machine and engage the edge trimmer.
- Adjust knife holder 1 (screw 2) according to the requirement.

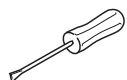
## 13.05.07 Knife position

### Requirement

When the edge trimmer is engaged, the knife should rest lightly on the needle plate insert, but no whistling sound should occur during trimming.



### 571



- Adjust screw 1 (screw 2) according to the requirements.
- Carry out a cutting test and repeat adjustment if necessary.

### 574 and 591

- Adjust knife 3 (screw 4) according to the requirements.
- Carry out a cutting test and repeat adjustment if necessary.

## 13.06 Adjusting the thread trimmer -726/05 on model 591

## 13.06.01 Position of the knife to the needle plate

**Requirement**

When the edge trimmer is engaged, the knife 2 must be parallel to the needle plate insert.

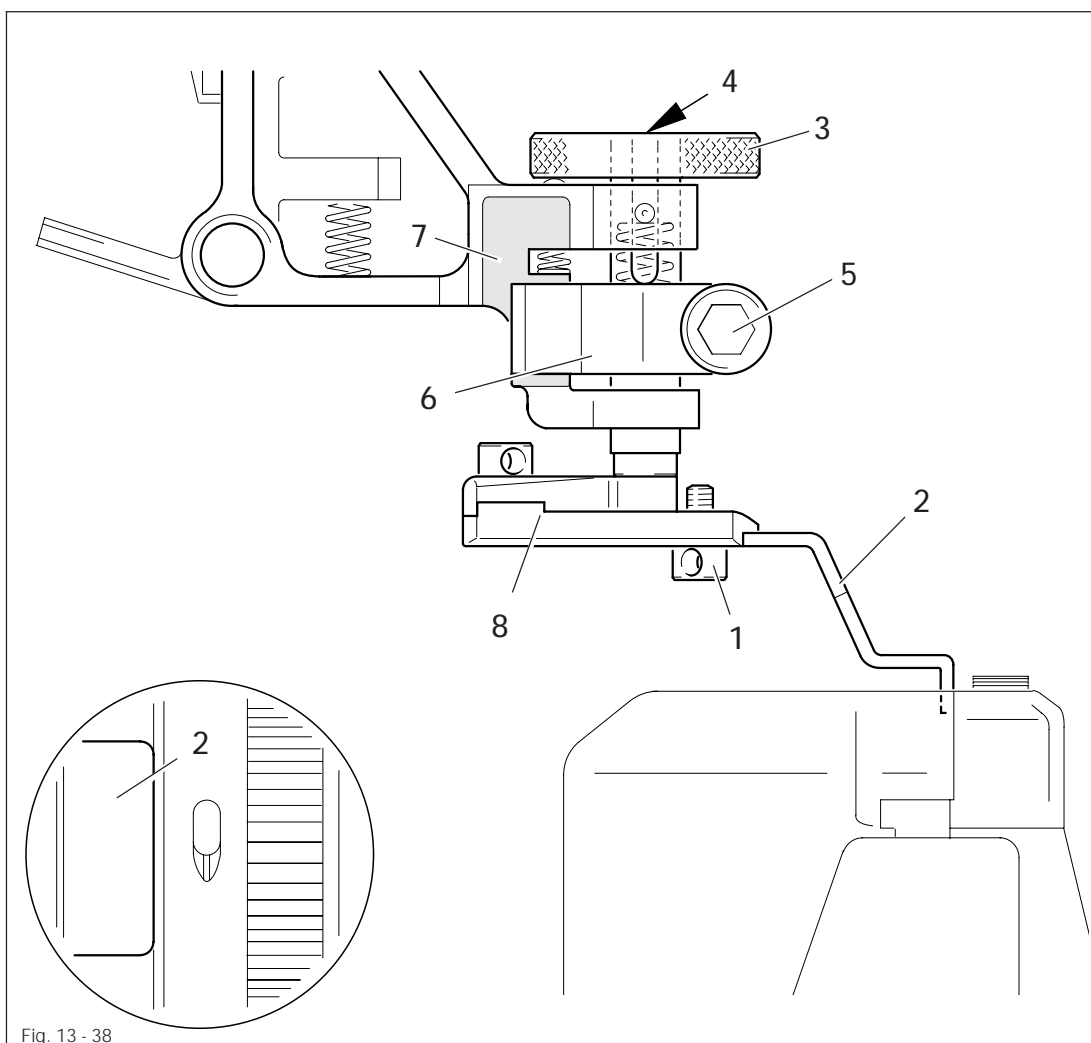
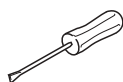


Fig. 13 - 38



- Switch off the machine and engage the edge trimmer.
- Loosen screw 1 and push back knife 2 slightly.
- Turn milled screw 3 until its top edge is flush with the top edge of the cylindrical guide 4.
- Loosen screw 5, position guide 6 in the centre of guide 7 and slightly tighten screw 5.
- Adjust knife holder 8 according to the **requirement** and tighten screw 5.

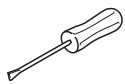
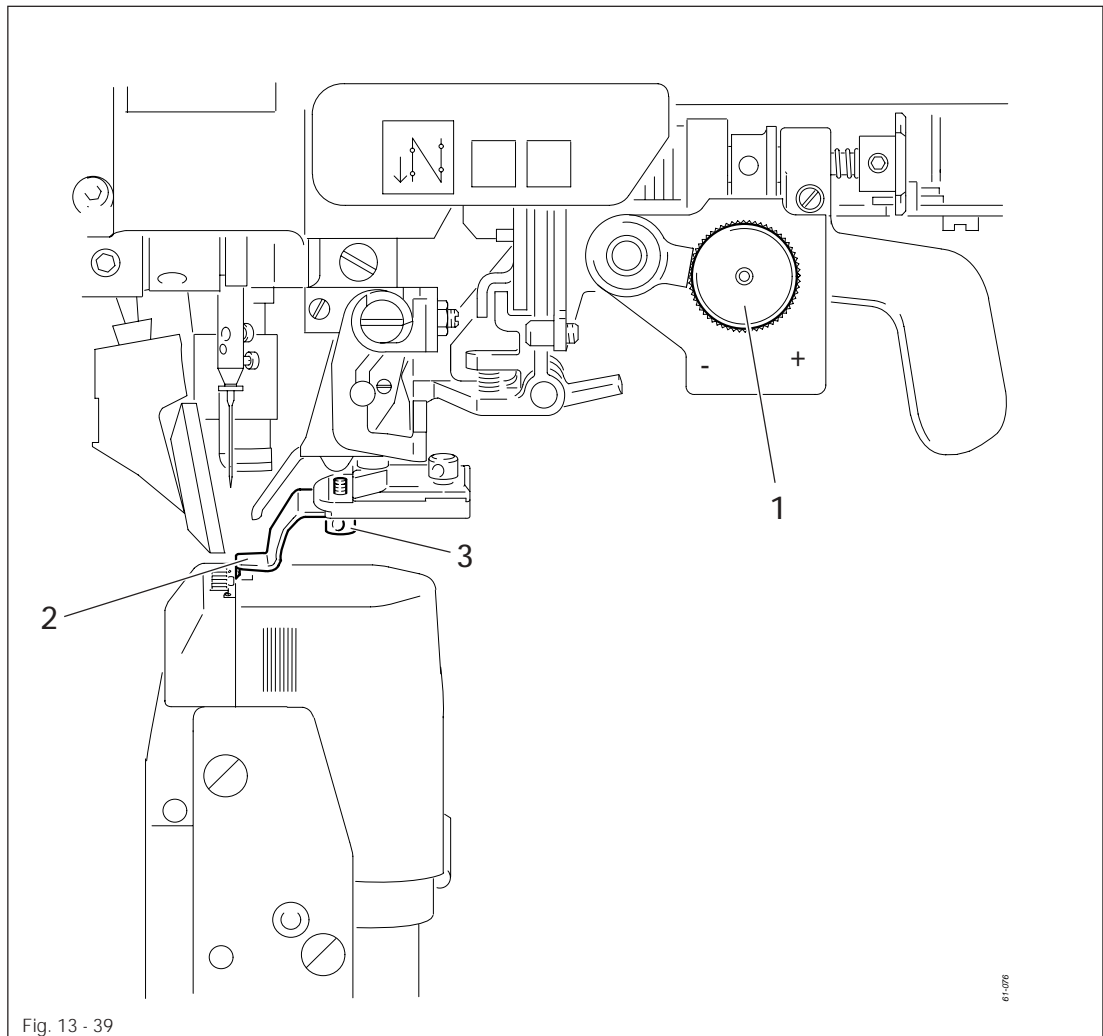


Screw 1 remains loosened for further adjustments.

## 13.06.02 Knife position crosswise to sewing direction

### Requirement

When the edge trimmer is engaged, knife 2 must be vertical and rest lightly on the needle plate insert.



- Switch off the machine and engage the edge trimmer.
- Bring the knife into a vertical position by turning milled screw 1.
- Bring knife 2 into light contact with the needle plate insert and tighten screw 3.



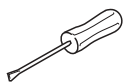
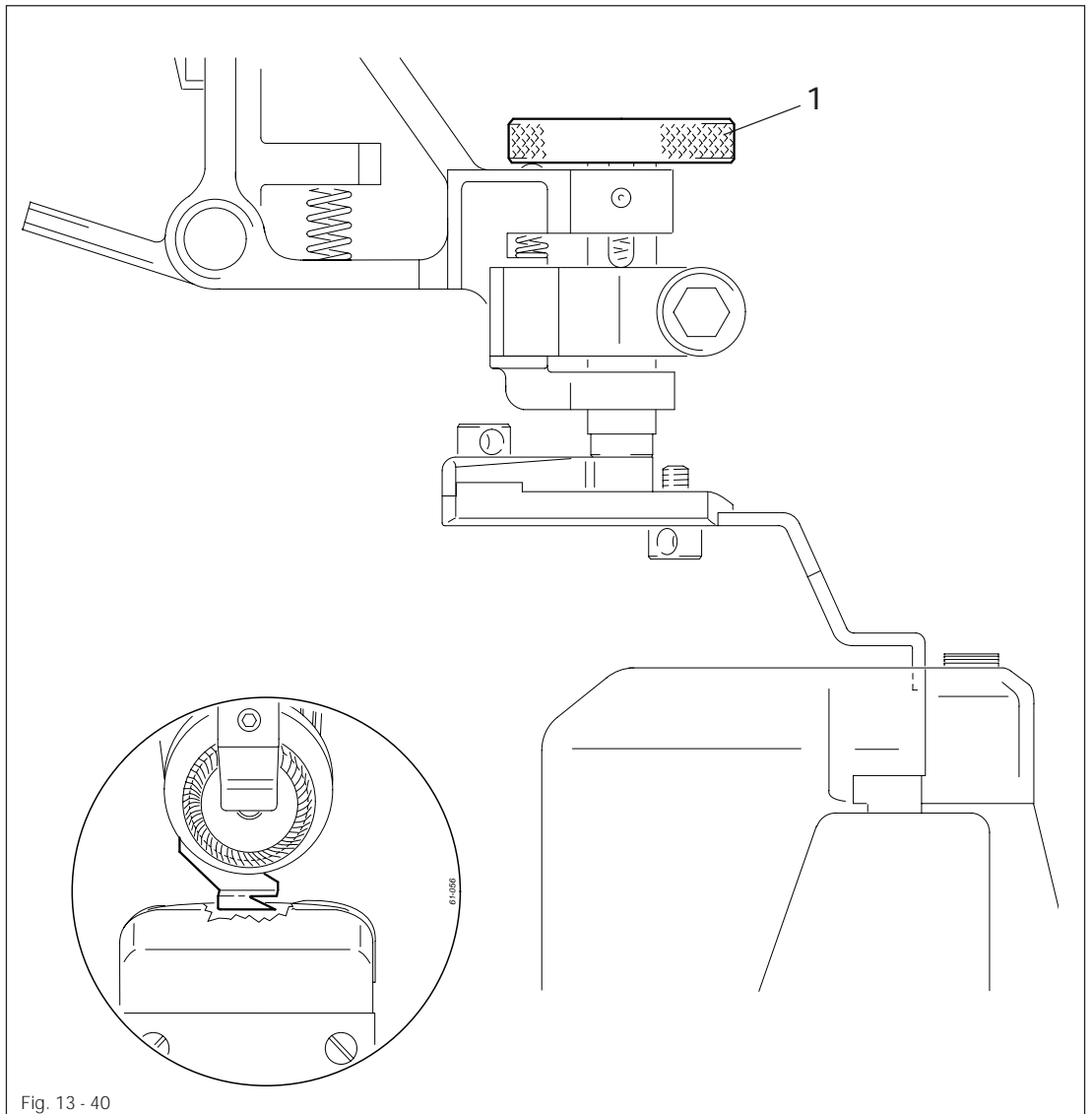
The cutting pressure can be adapted to the material used with milled screw 1.



## 13.06.03 Knife height

**Requirement**

When the edge trimmer is engaged, the centre of the angular knife opening must be at the same height as the upper edge of the needle plate.



- Switch off the machine and engage the edge trimmer.
- Adjust milled screw 1 according to the requirement.

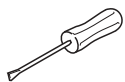
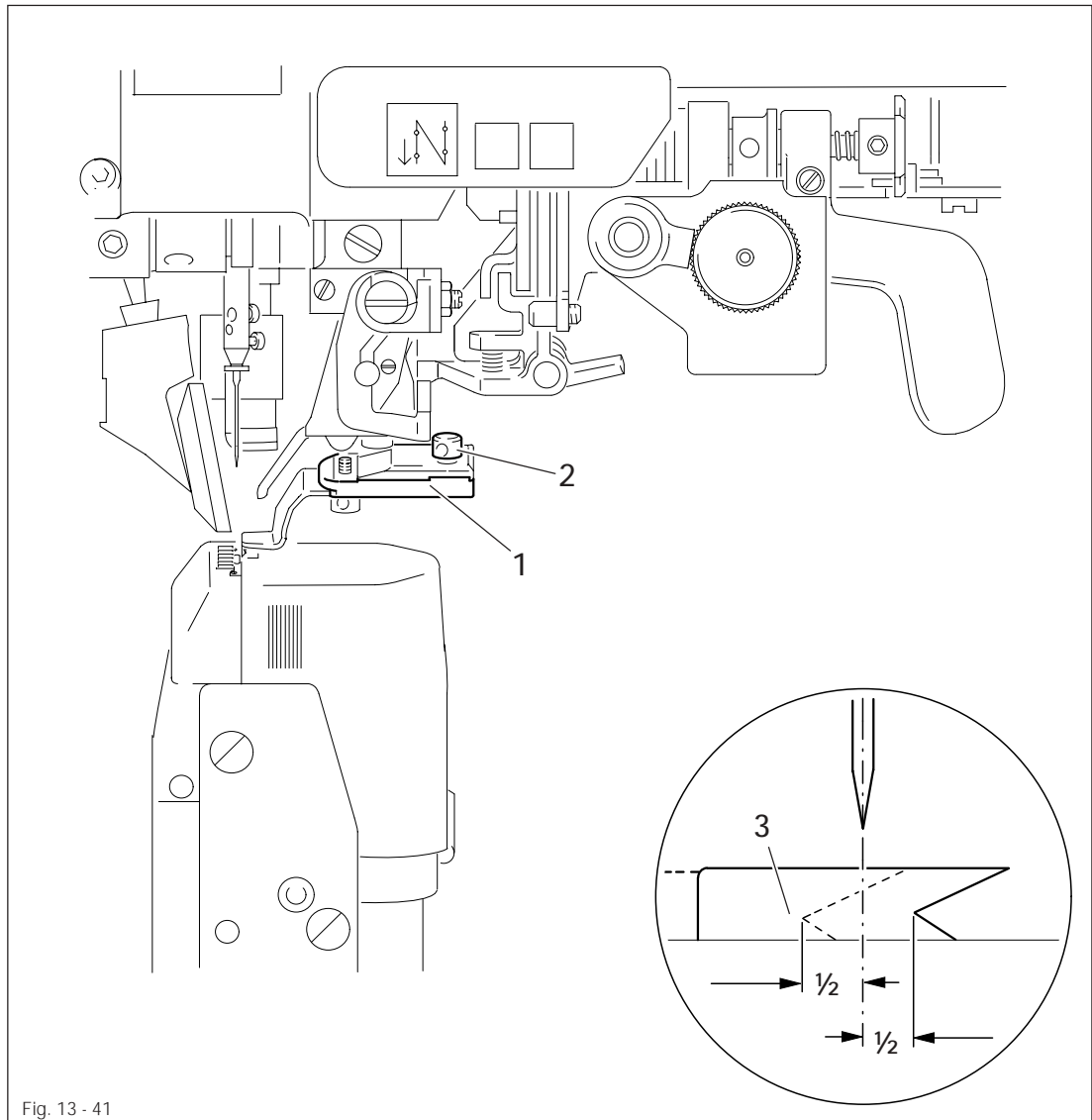


The basic setting may be changed depending on the material thickness.

## 13.06.04 Cutting stroke

### Requirement

When the edge trimmer is engaged and the needle is in the needle hole, the stroke of knife 3 should be half in front of and half behind the needle, when the motor shaft is turned by hand.

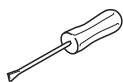
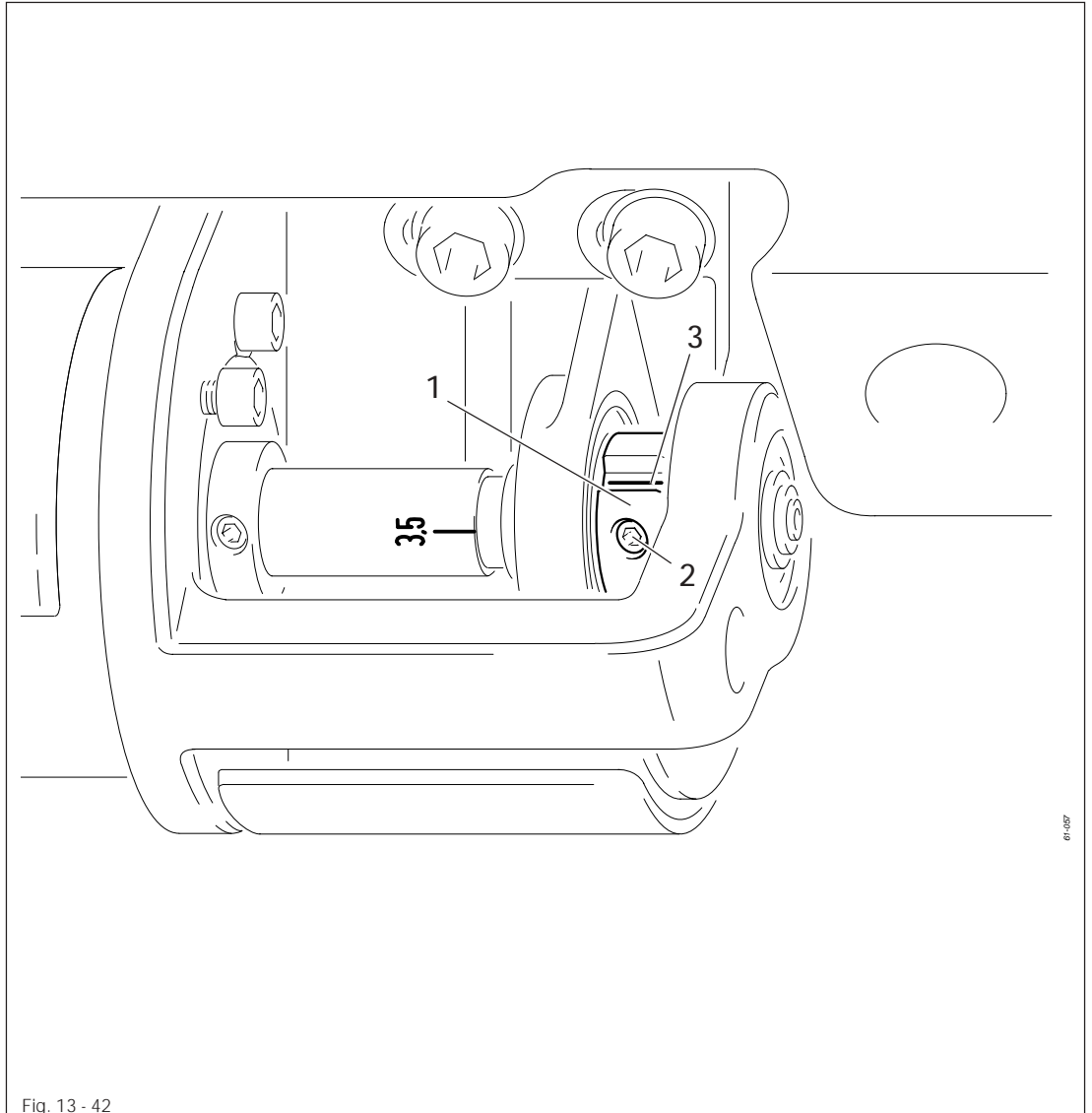


- Switch off the machine and engage the edge trimmer.
- Adjust knife holder 1 (screw 2) according to the requirement.

## 13.06.05 Knife stroke

### Requirement

The knife stroke can be adjusted over a range from 1.0 to 3.5 mm, allowing the best possible adaption to all materials used.



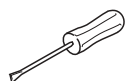
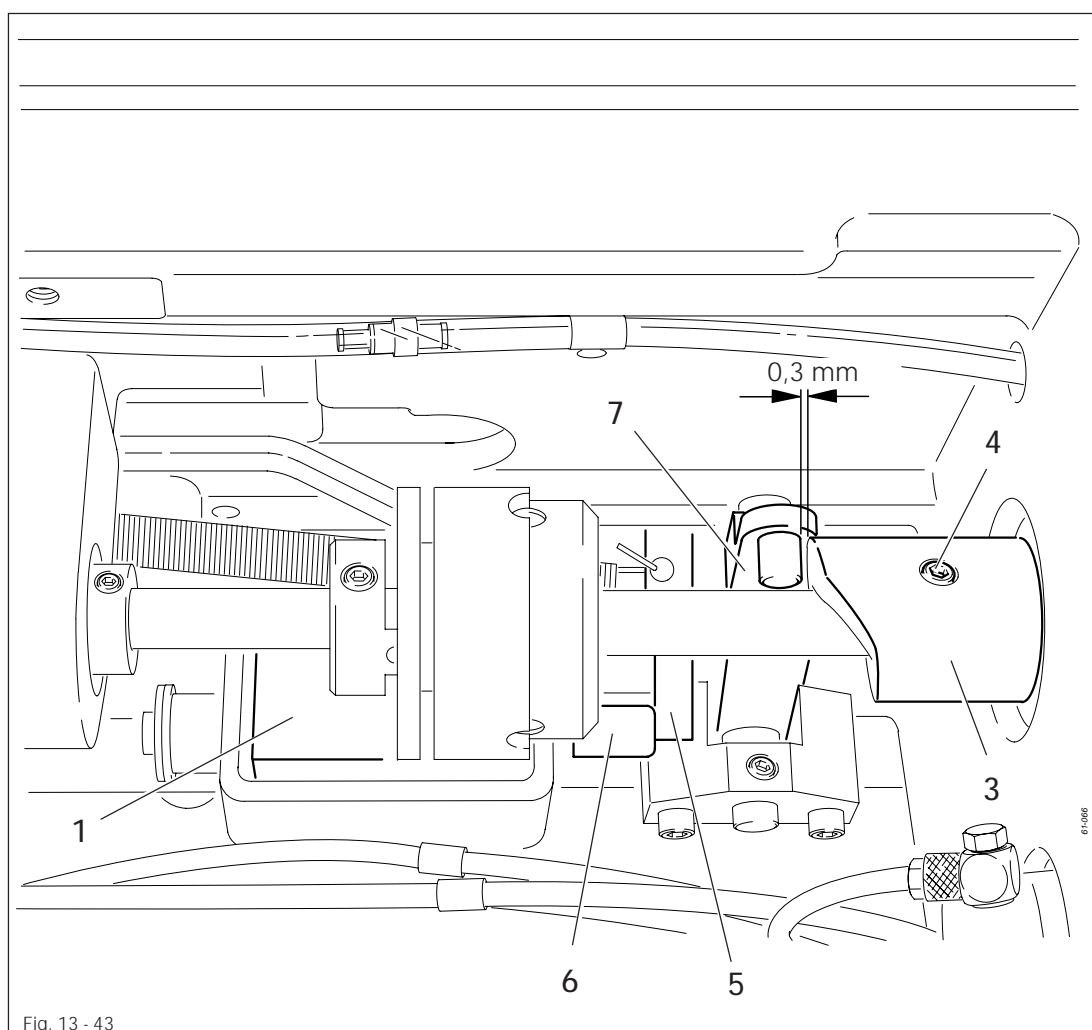
- Turn eccentric 1 (screws 2) on the back of the sewing head so that the marking of the desired cutting stroke is opposite marking 3.

## 13.07 Adjusting the thread trimmer -900/81

### 13.07.01 Resting position of the roller lever / radial position of the control cam

#### Requirement

1. When the thread trimmer is in its resting position, lever 5 should be touching piston 6 and the roller of roller lever 7 should be 0.3 mm away from control cam 3.
2. When the take-up lever is at t.d.c., control cam 3 should just have placed roller lever 7 in its resting position.



- Having made sure that piston 6 is positioned against the left stop, adjust magnet 1 (2 screws) in accordance with requirement 1.
- Adjust control cam 3 (screws 4) in accordance with requirement 2.

## 13.07.02 Position of the thread catcher holder

**Requirement**

1. There should be a minimum amount of play between toothed wheel 3 and toothed segment 4.
2. Both in the neutral position and the foremost position of the catcher, the distance between the toothed segment 4 and the outer edge of the thread catcher holder 1 should be the same (see arrow).

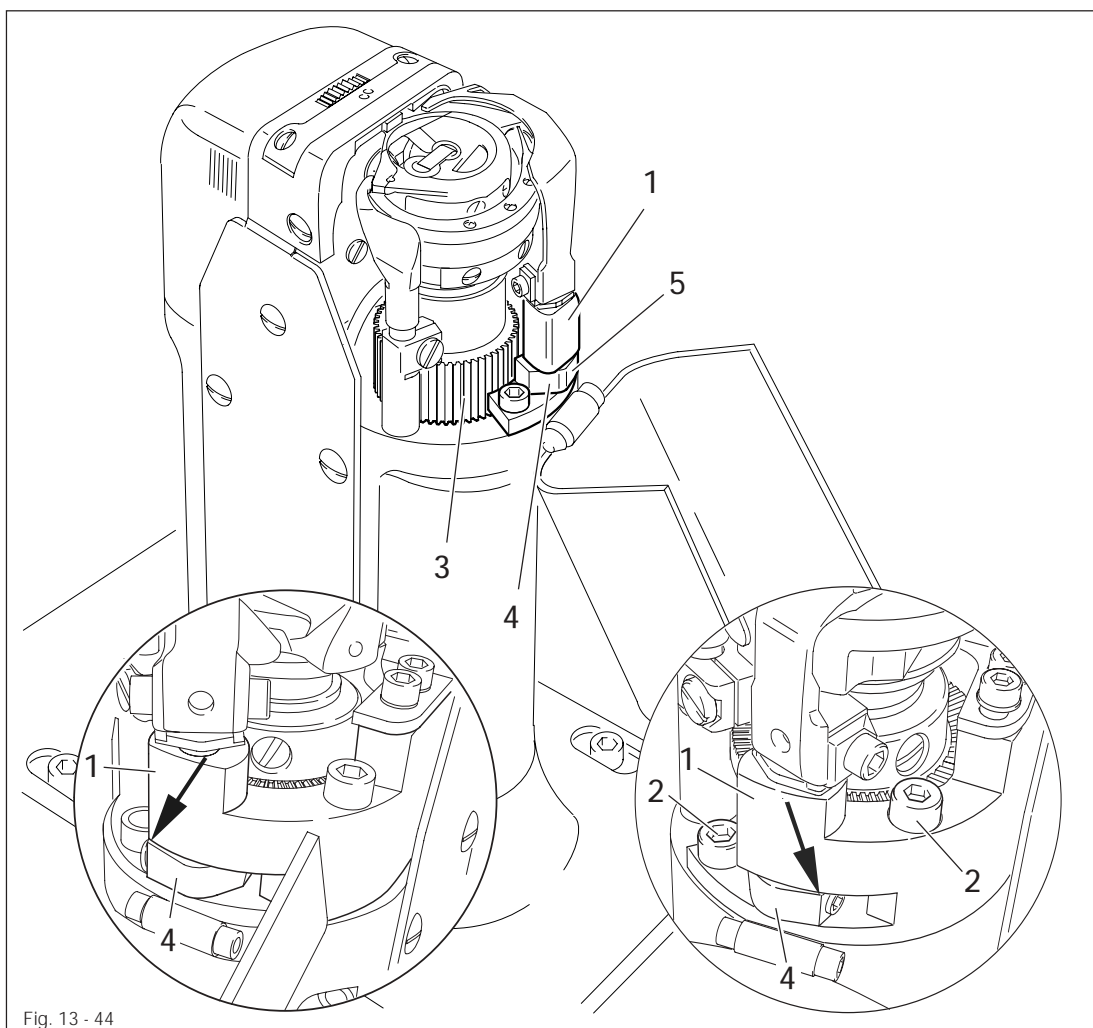
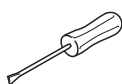


Fig. 13 - 44



- Adjust the thread catcher holder 1 (screws 2) according to the requirements.



If requirement 2 cannot be fulfilled, loosen screw 2 and move the toothed segment 4 by one tooth.

## Adjustment

### 13.07.03 Distance between thread catcher and needle plate

#### Requirement

During its swivel movement thread catcher 1 should not pass the edge of the needle plate (see arrow).

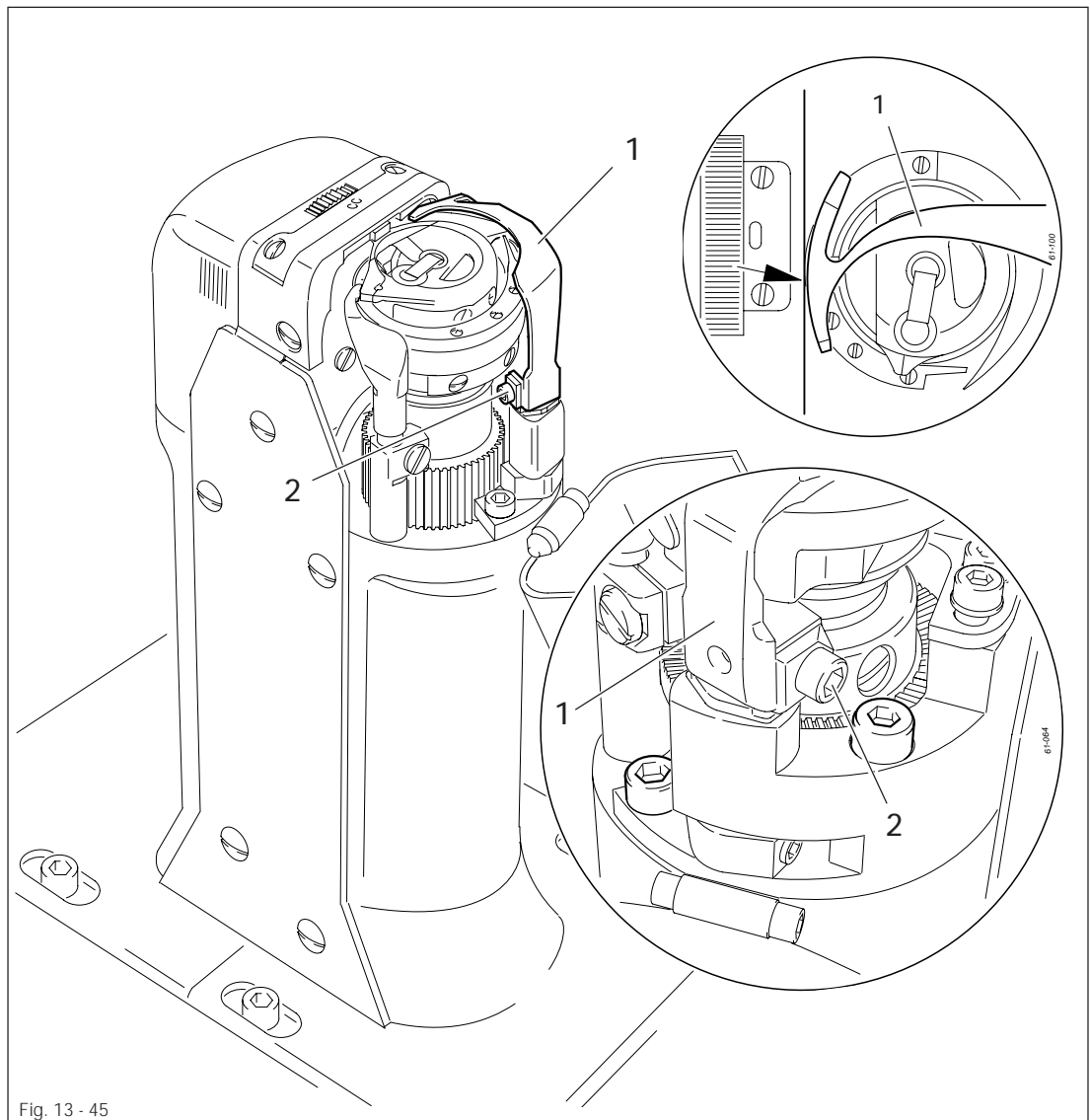
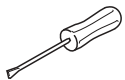


Fig. 13 - 45



- Move thread catcher 1 (screws 2, two screws) parallel to the thread catcher holder in accordance with the requirement.

## 13.07.04 Position of the thread catcher

## Requirement

1. The bottom edge of the thread catcher 1 should be at a distance of 0.1 mm from the positioning finger of the bobbin case 5.
2. When the thread trimmer is in its neutral position, the rear edge of thread catcher 1 should be positioned approx. 2.5 – 3 mm behind the edge of the knife.

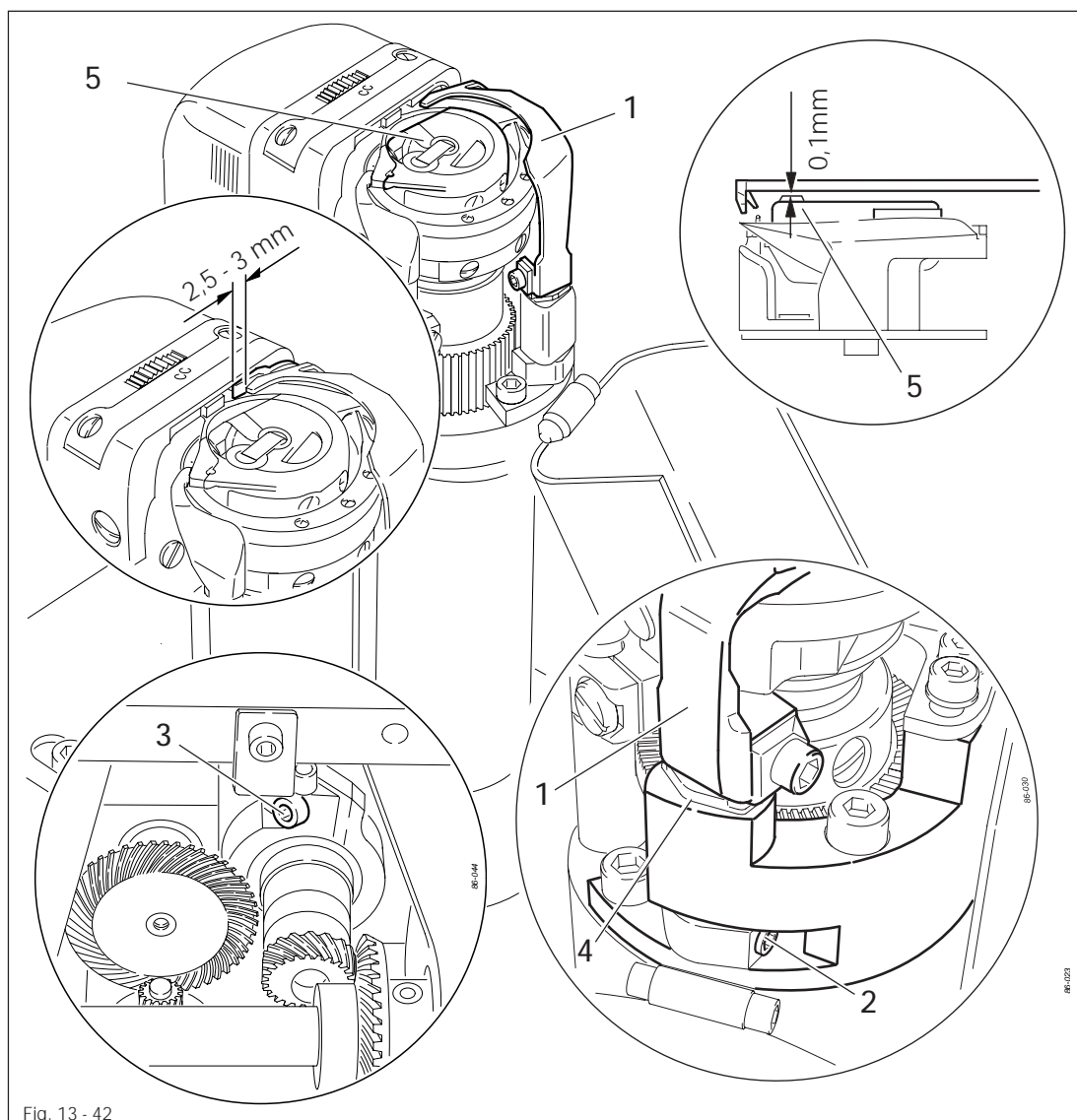
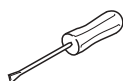


Fig. 13 - 42



- Move thread catcher 1 (screws 2, two screws) in accordance with requirement 1.
- Turn thread catcher 1 (screw 3) in accordance with requirement 2.

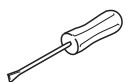
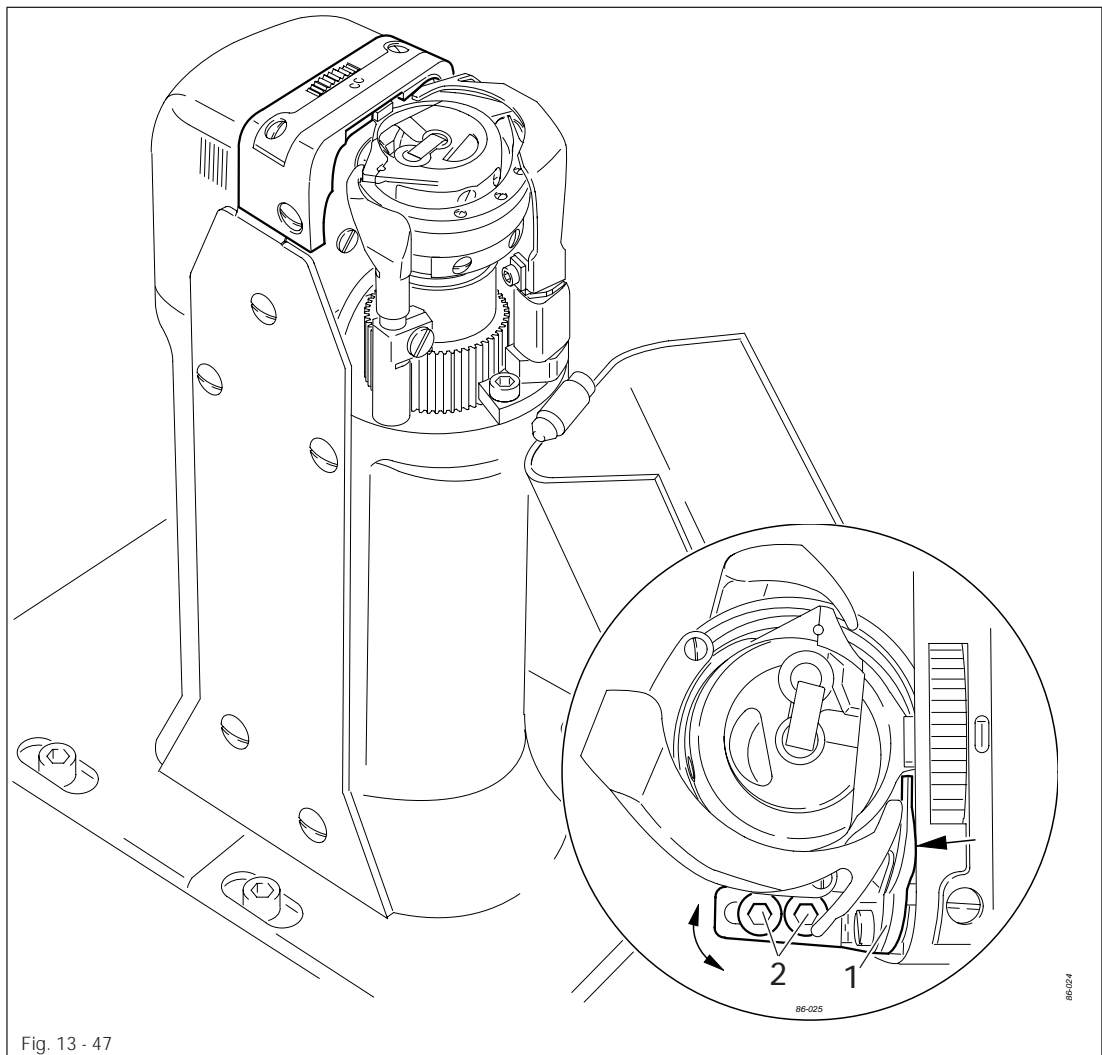


Thread catcher 1 must be parallel to the surface of the thread catcher holder 4.

## 13.07.05 Knife position and knife pressure

### Requirement

1. The knife 1 should be touching the needle plate.
2. The knife pressure should be set as low as possible but the cutting operation should still be carried out reliably.



- Move knife 1 (screws 2) in accordance with requirement 1 or swivel it in accordance with requirement 2.



## 13.07.06 Bobbin thread retaining spring

**Requirement**

1. The bobbin thread clamp spring should be guided reliably in the thread groove of the thread catcher 3.
2. The tension of the bobbin thread spring clamp should be as low as possible, but the bobbin thread should be held reliably after the cutting operation.

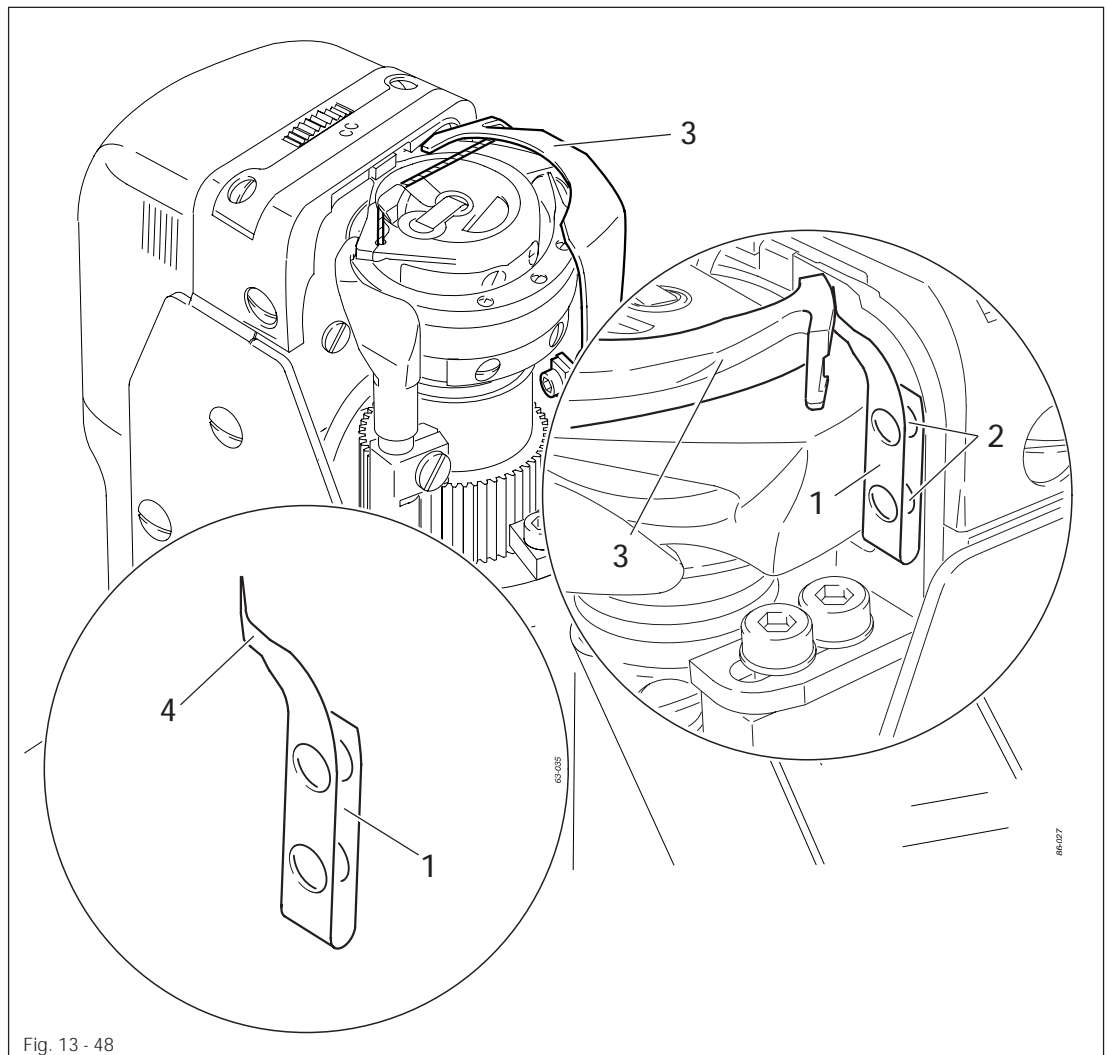
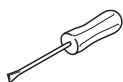


Fig. 13 - 48



- Adjust bobbin thread clamp spring 1 (screws 2) in accordance with **requirement 1**.
- Adjust the tension in accordance with **requirement 2** by bending side 4 of the bobbin thread clamp spring 1.

**Control – requirement 1**

- Switch off the machine and bring the take-up lever to its b.d.c.
- Engage and disengage the thread catcher 3 by hand and check **requirement 1**. Adjust if necessary.

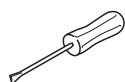
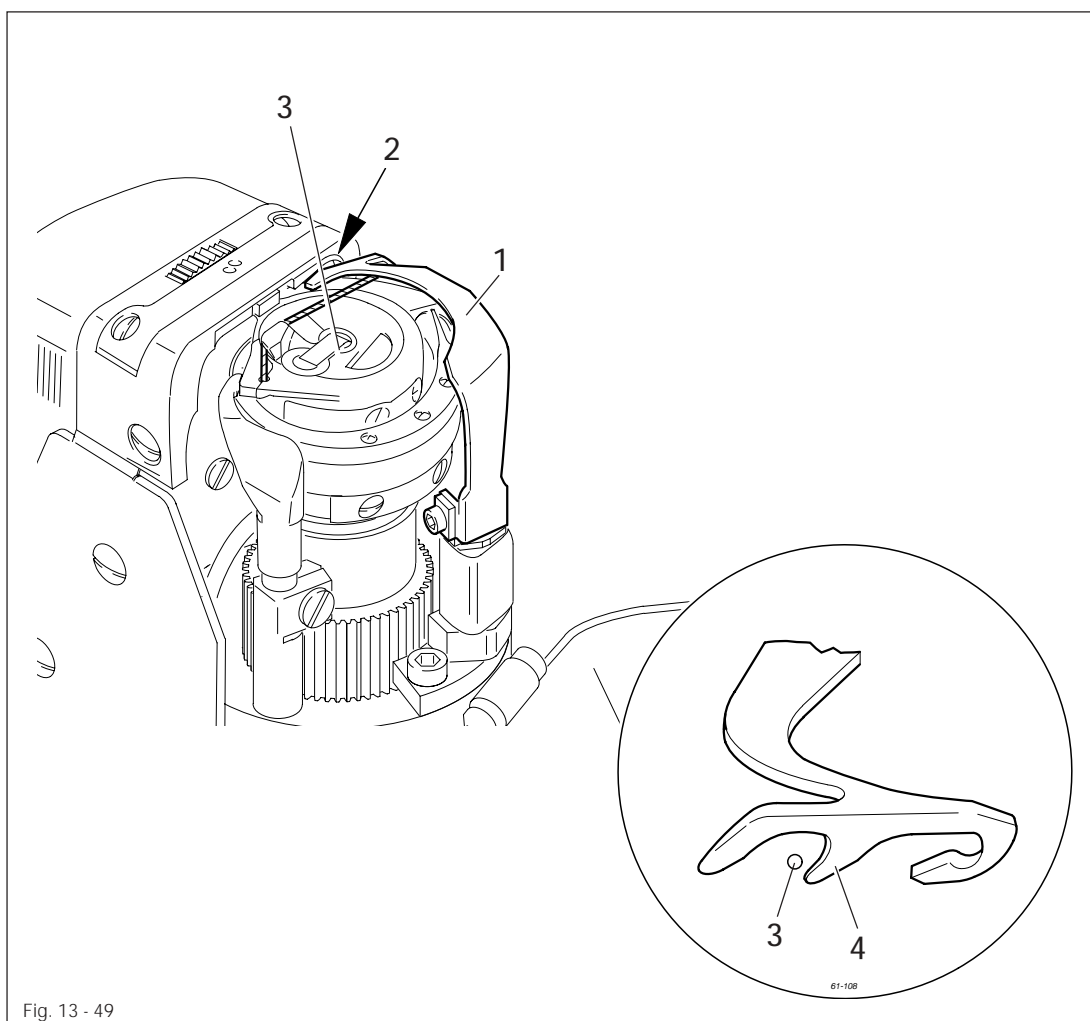
**Control – requirement 2**

- After the thread has been cut, sew a few stitches by turning the balance wheel, checking whether the bobbin thread is drawn out of the bobbin thread clamp spring between the 1<sup>st</sup> and 3<sup>rd</sup> stitches. If necessary, correct the tension.

## 13.07.07 Manual cutting test

### Requirement

1. When thread catcher 1 is on its forward stroke, it must not carry bobbin thread 3 forward too.
2. When thread catcher 1 is in its front position, bobbin thread 3 must be held reliably by hook 4.
3. After the trimming action, both the needle thread and the bobbin thread must be perfectly cut and bobbin thread 3 retained.

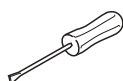
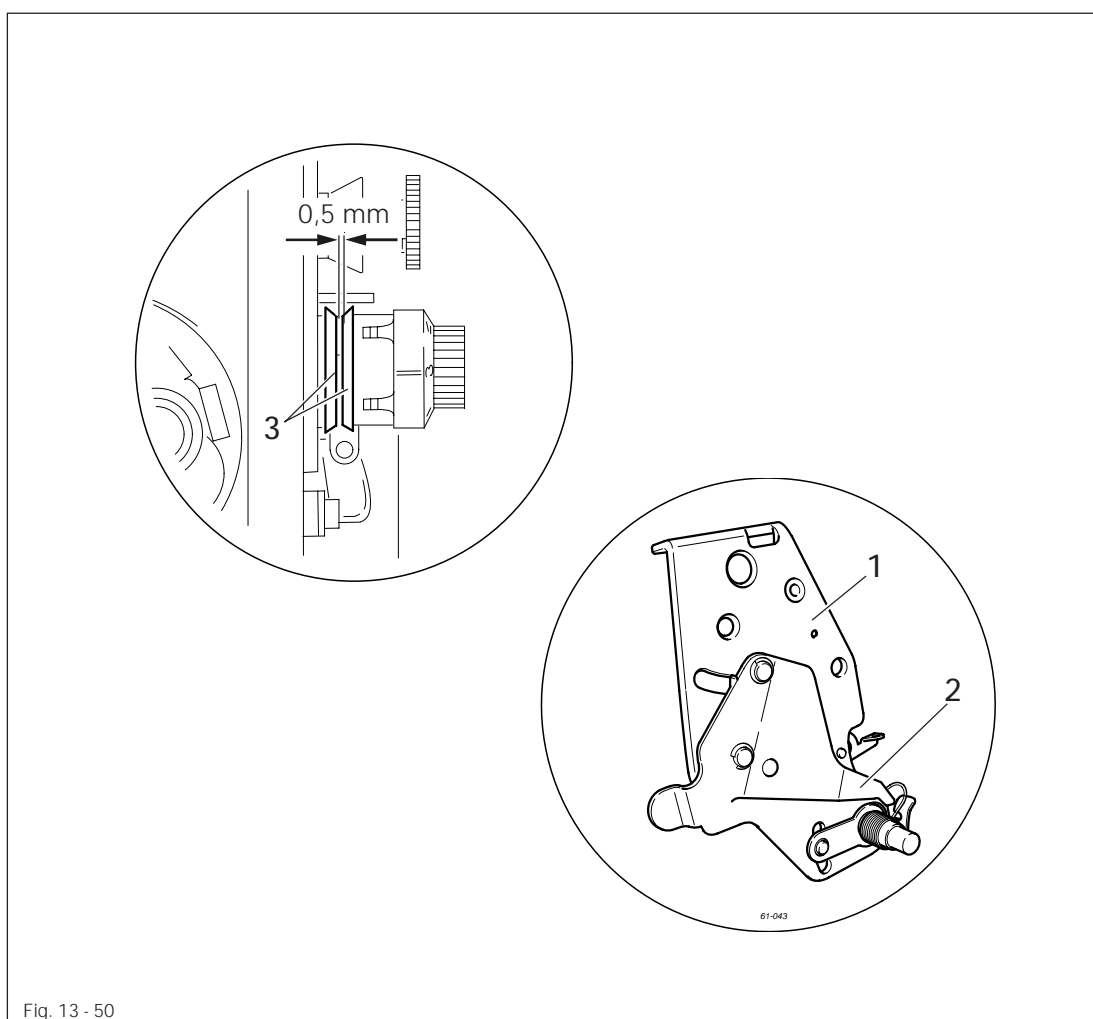


- Sew a few stitches.
- Turn off the on/off switch.
- Carry out the cutting operation manually.
- Check **requirement 1** and **2**, and if necessary readjust thread catcher **1** in accordance with **Chapter 13.07.04 Position of the thread catcher**.
- Check **requirement 3**, and if necessary readjust the bobbin thread retaining spring **2** in accordance with **Chapter 13.07.06 Bobbin thread retaining spring**.

## 13.07.08 Releasing the tension

### Requirement

When the magnet is activated, tension discs 3 must be at least 0.5 mm apart.



- Activate the magnet.
- Detach the tension bearing plate 1 and adjust pressure plate 2 in accordance with the requirement.



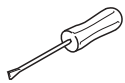
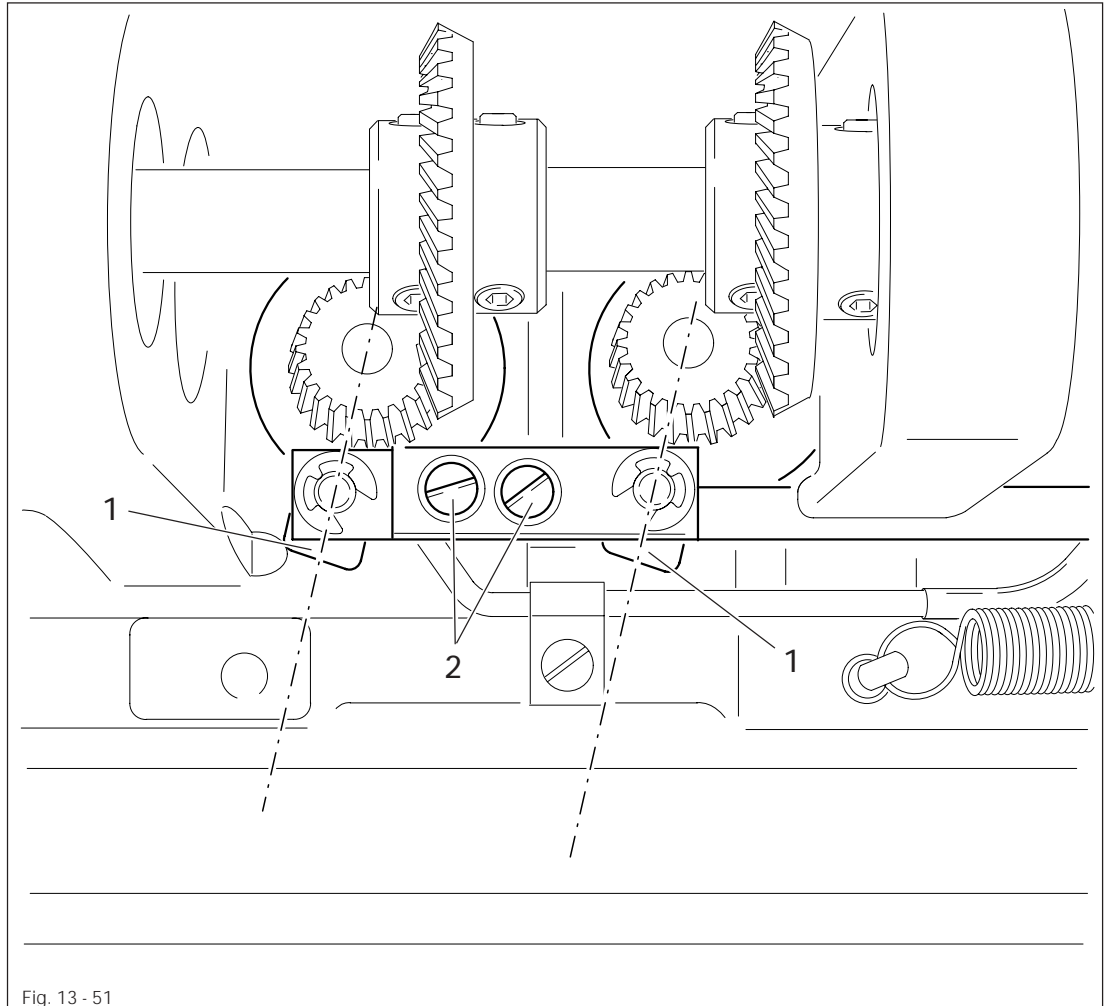
It is possible to set the time for releasing the tension with the parameter functions, see **Chapter 13.09 Parameter settings**.

## Adjustment

### 13.07.09 Linkage rod (only for the PFAFF 574)

#### Requirement

When the thread trimmer is in its resting position, the drive levers 1 must be parallel.



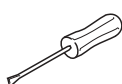
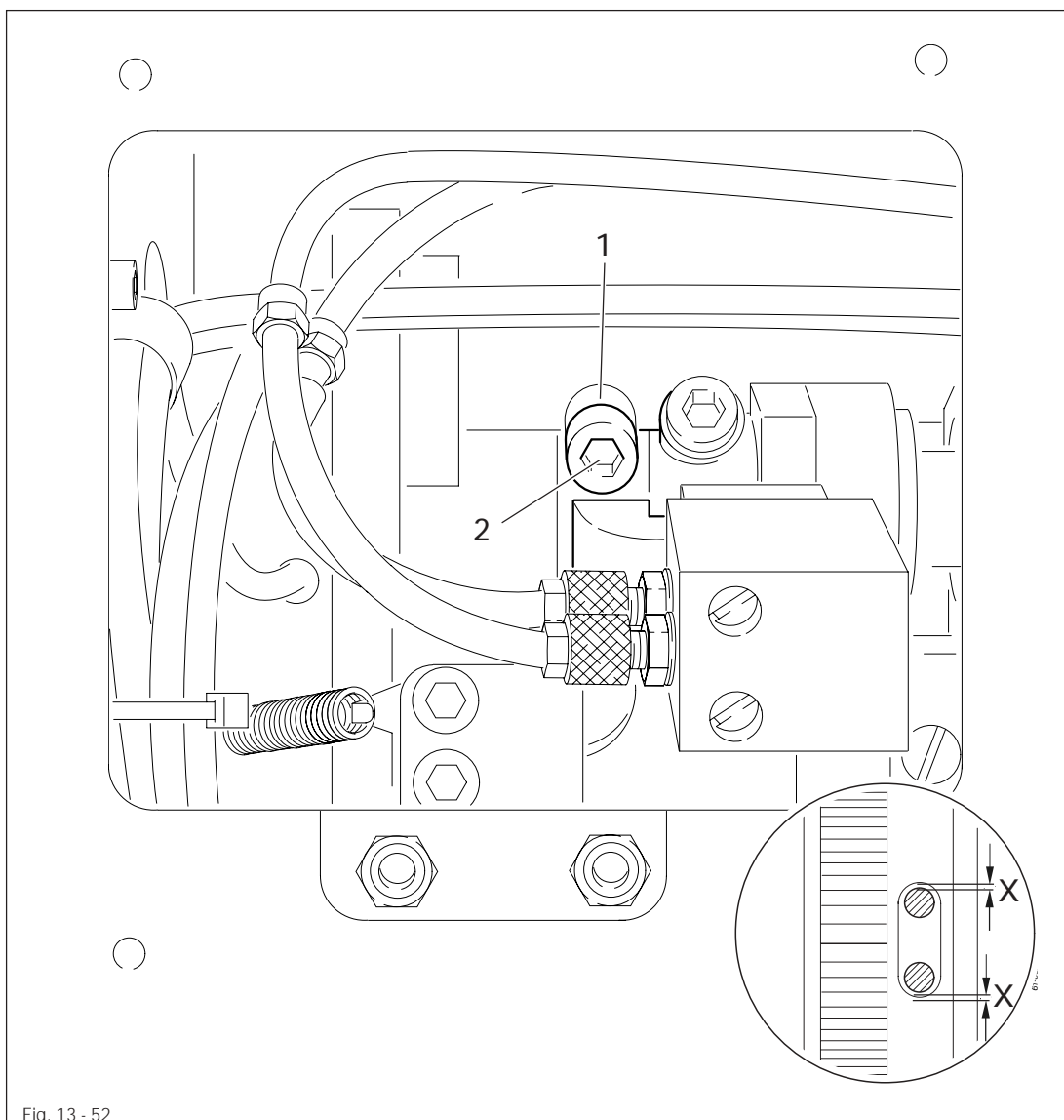
- Adjust drive levers 1 (screws 2) in accordance with the requirement.

## 13.08 Adjustment of backtacking mechanism -911/..

## 13.08.01 Needle in needle hole (only for PFAFF 571 and 591)

**Requirement**

When the maximum stitch length is set, the needle must be the same distance from the inside edge of the needle hole, both for forward and reverse stitch.



- Turn crank 1 (screws 2) according to the requirement.

## Adjustment

### 13.08.02 Coupling for roller presser drive

#### Requirement

There must be a distance of **3 mm** between coupling half 1 and locking disc 3 of the drive mechanism.

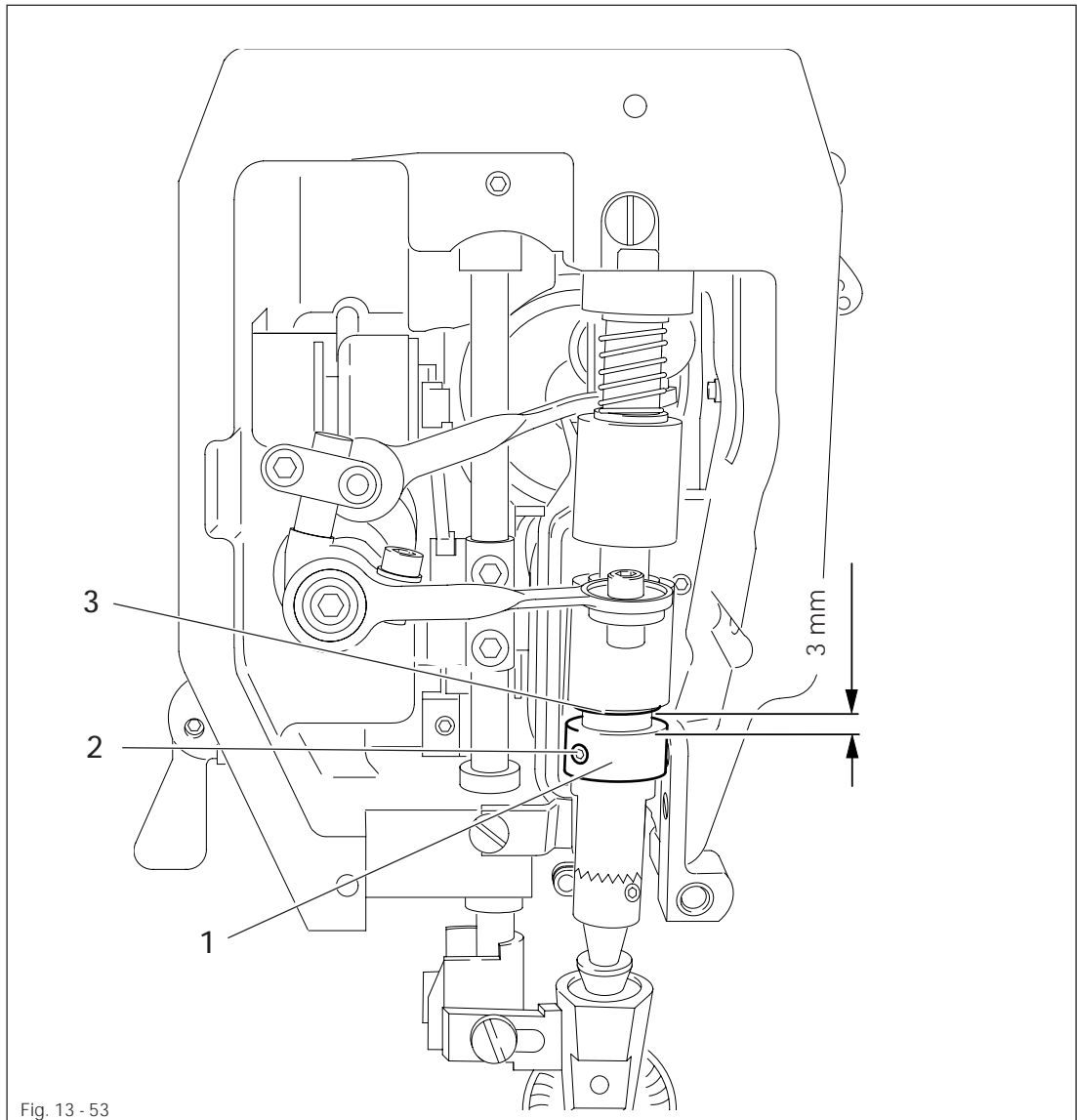
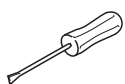


Fig. 13 - 53



- Adjust coupling half 1 (screw 2) according to the requirement.

## 13.08.03 Bevel gears for feed wheel drive (on the PFAFF 571 and 574)

### Requirements

1. Bevel gear 3 must fit well on the left side.
2. There must be a distance of **14 mm** between bevel gear 3 and bevel gear 5.

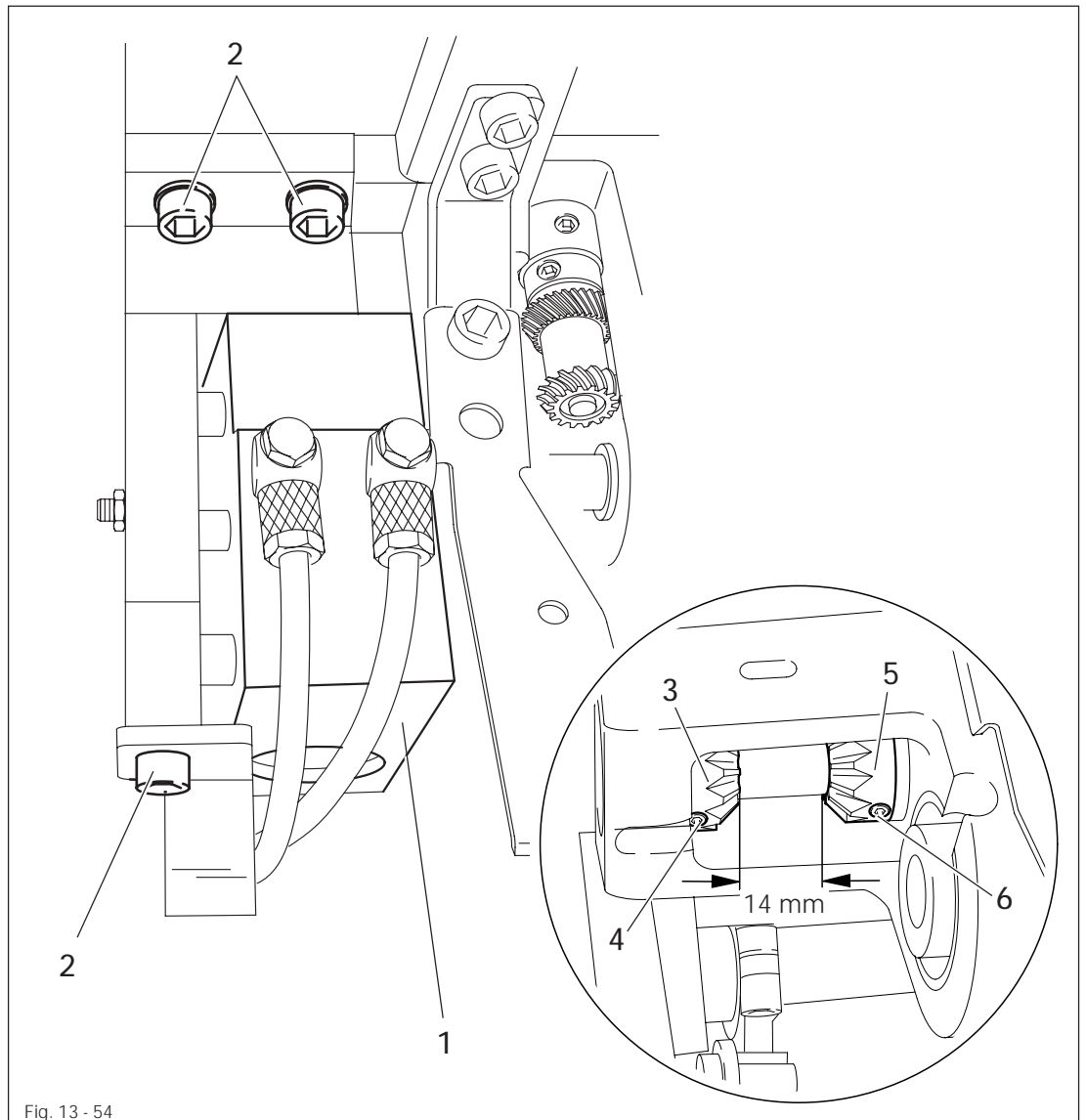
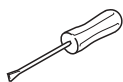


Fig. 13 - 54



- Remove control unit 1 (screws 2).
- Adjust bevel gear 3 (screws 4) according to requirement 1.
- Adjust bevel gear 5 (screws 6) according to requirement 2.

## 13.08.04 Bevel gear play (on the PFAFF 571 and 574)

### Requirements

1. When sewing forwards, there must be a slight play between bevel gears 6 and 7.
2. When sewing backwards, there must be a slight play between bevel gears 6 and 8.

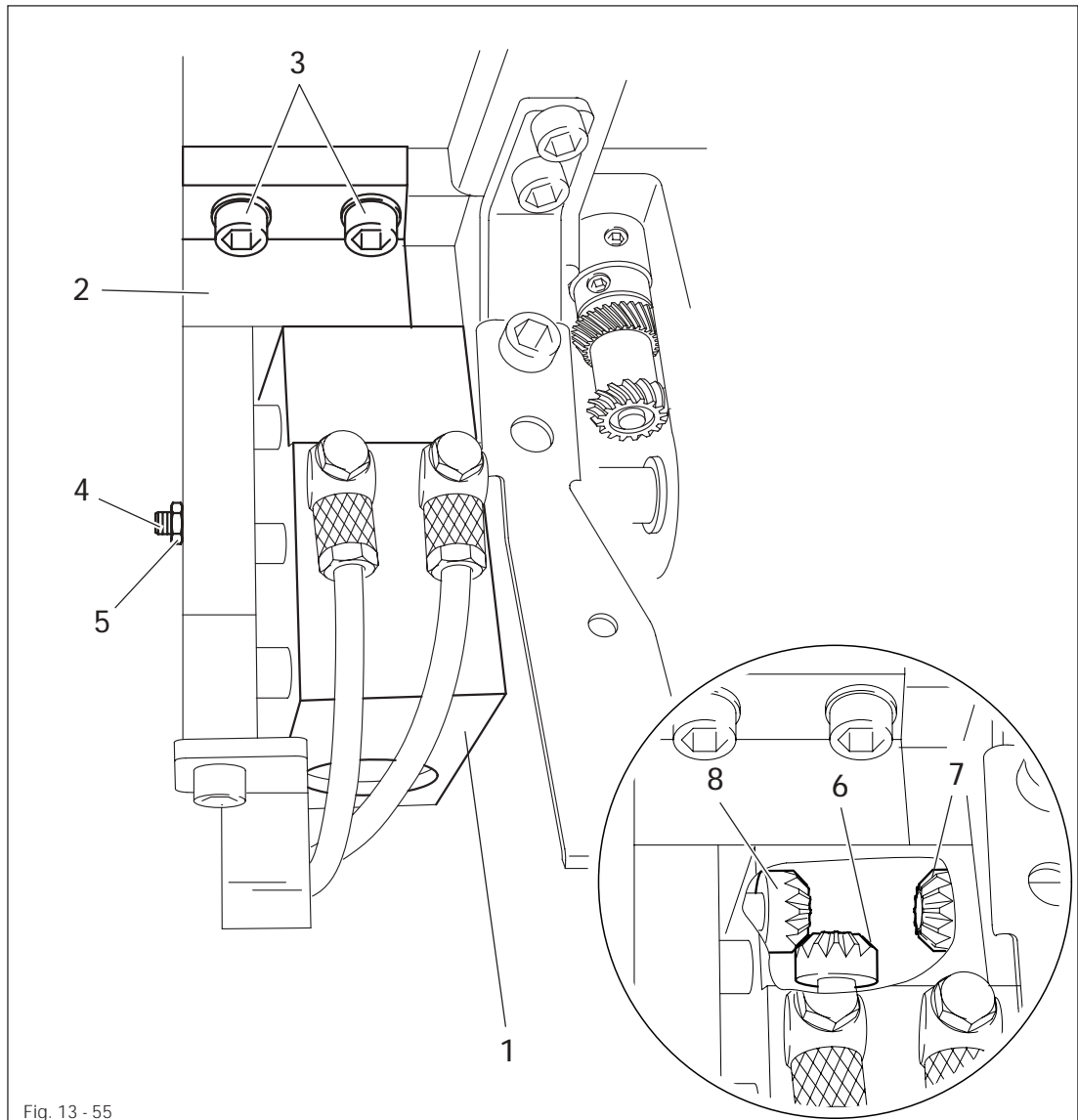
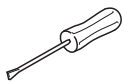


Fig. 13 - 55



- Disconnect air supply of the air filter/lubricator.
- Move unit 1 by hand as far as possible to the right.
- Adjust bracket 2 (screws 3) according to requirement 1.
- Move unit 1 by hand as far as possible to the left.
- Adjust screw 4 (nut 5) according to requirement 2.



## 13.08.05 KBevel gears for feed wheel drive (on the PFAFF 591)

### Requirements

1. The right side of bevel gear 1 must be flush with its drive shaft (see arrow).
2. There must be a distance of 13 mm between bevel gear 3 and bevel gear 1.

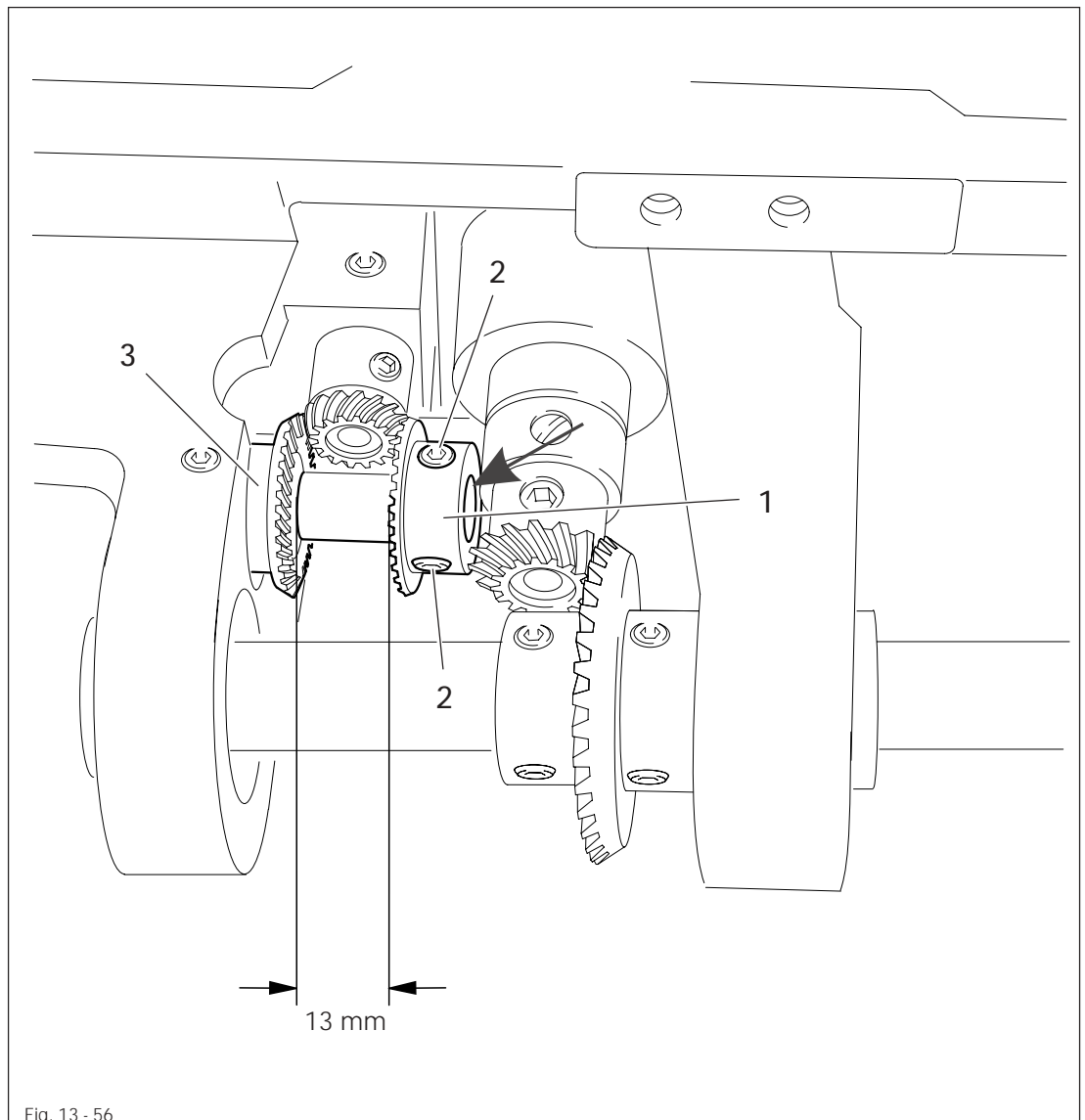
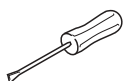


Fig. 13 - 56

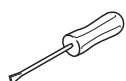
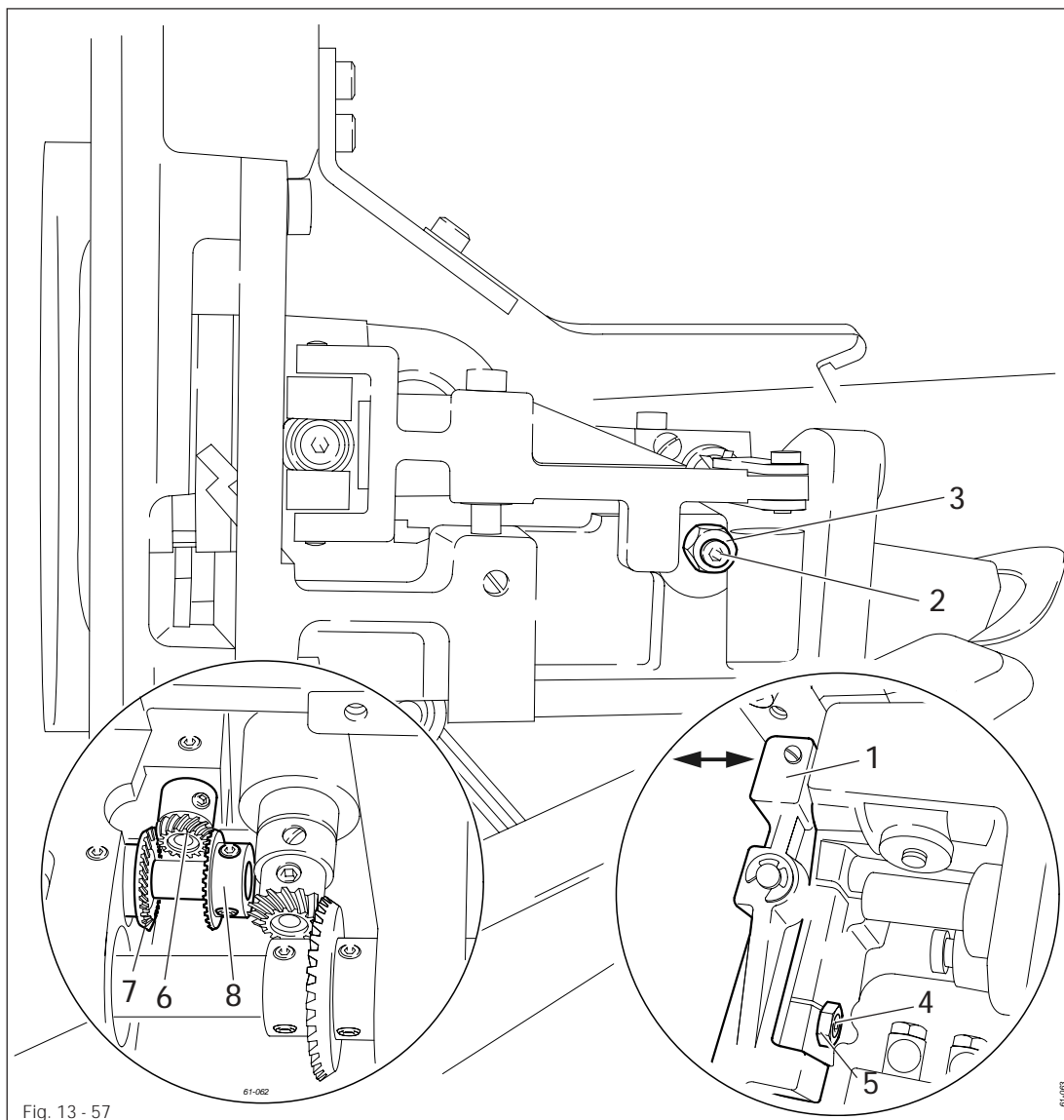


- Adjust bevel gear 1 (screws 2) according to requirement 1.
- Adjust bevel gear 3 (screws 4) according to requirement 2.

## 13.08.06 Bevel gear play (on the PFAFF 591)

### Requirements

1. When sewing forwards, there must be a slight play between bevel gears 6 and 7.
2. When sewing backwards, there must be a slight play between bevel gears 6 and 8.

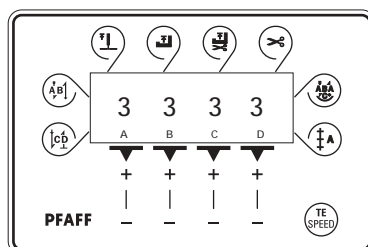


- Disconnect air supply of the air filter/lubricator.
- Move unit 1 by hand as far as possible to the right (see arrow).
- Adjust screw 2 (nut 3) according to requirement 1.
- Move unit 1 by hand as far as possible to the left (see arrow).
- Adjust screw 4 (nut 5) according to requirement 2.

## 13.09 Parameter settings

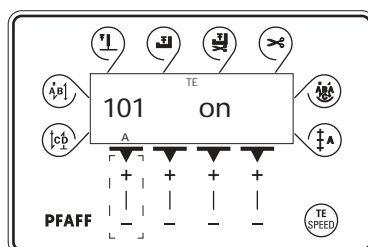
### 13.09.01 Selecting the user level

- Switch on the machine.

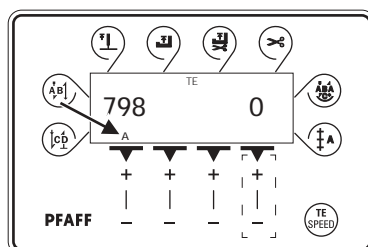


2 x 

- Press the TE/Speed key twice to call up the input mode.



- By pressing the corresponding +/- key select the parameter group "798".



- By pressing the corresponding +/- key select the desired user level:

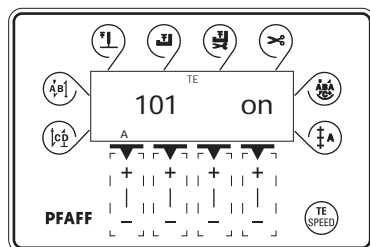
- "0" = operator level A
- "1" = technician level B
- "11" = service level C

The selected user level is displayed on the screen. (see arrow)

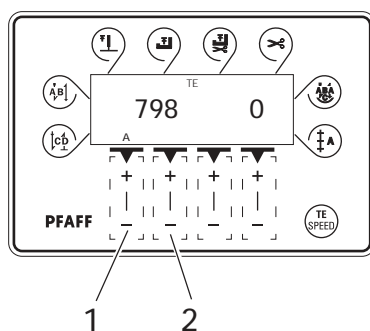
## 13.09.02 Example of a parameter input

- Switch on the machine.
- Press the **TE/Speed** key twice to select the input mode.

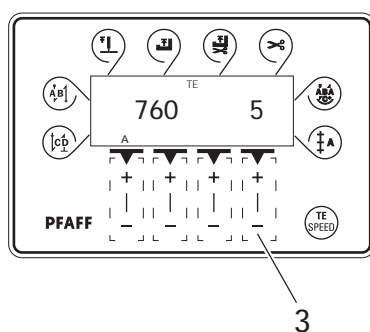
2 x 



- By pressing the corresponding plus/minus key select parameter "798" and the desired user level, see Chapter 13.09.01 Selecting the user level.



- Select parameter "760" by pressing the +/- keys 1 and 2.





- Select the required value for the total number of stitches (x200) for each bobbin by pressing the +/- key 3.
- By pressing the **TE/Speed** key the selected value is taken over and the machine switches to the sewing mode.

## 13.09.03 List of parameters

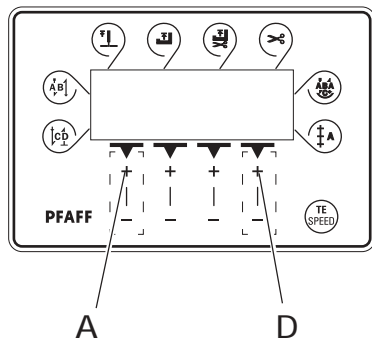
Group	Parameter	Description	User level	Setting range	Set value
1	101	Control panel beep tone (OFF = AUS, ON = EIN)	A,B,C	0 – 1	ON
5	523	Bartacks I = ornamental bartack, II – standard bartack	A,B,C	I – II	I
6	605	Speed display (OFF = AUS, ON = EIN)	B,C	I – II	OFF
	607	Speed PFAFF 571, 591 Speed PFAFF 574	B,C B,C	300 – 3200 300 – 2600	3000 2600
	609	Cutting speed 1	B,C	60 – 300	180
	660	Bobbin thread control 0 = off 1 = thread monitor 2 = reverse counter	A,B,C	0 – 2	0
7	700	Needle position 0 (needle reference position)	B,C	0 – 255	0
	702	Needle position 1 (needle lowered)	B,C	0 – 255	15
	703	Needle position 2 (take-up lever raised)	B,C	0 – 255	230
	705	Needle position 5 (end of cutting signal 1)	B,C	0 – 255	200
	706	Needle position 6 (start of cutting signal 2)	B,C	0 – 255	15
	707	Needle position 9 (start thread tension release)	B,C	0 – 255	190
	760	Multiplier for the fixed value (200) for stitch count	A,B,C	0 – 250	5
	798	User level 0 = User level 1 = Technician level 11 = Service level	A,B,C	0,1,11	0
	799	Selected machine class	C	1 – 4	2



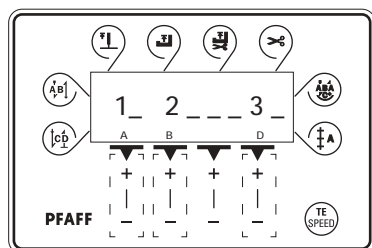
Further parameters are listed in the **Motor Instruction Manual**.

## 13.09.04 Reset / Cold start

After selecting the reset menu, by pressing the corresponding key it is possible to delete seam parameters, delete seam programs and to carry out a cold start.



- Press and hold "+" on keys A and D and switch on the machine, see Chapter 7.01 Main switch.



**A** Resetting the seam parameters

- Press "+" on key "A".  
All parameters are deleted, the display "—rE—" appears for a short time on the screen.



**B** Resetting the seam programs

- Press "+" on key "B".  
All seam programs are deleted, the display "—rE—nA" appears for a short time on the screen.



**D** Cold start

- Press "+" on key "D".  
With the exception of the value for the machine class, the values of the machine control unit are set back to their basic values, the display "—COLd—" appears for a short time on the screen.



After the cold start all programmed values are set back to their status at the time of delivery. For this reason after a cold start it is necessary to re-enter first the parameter "799" and then the parameter "700".

## 13.10 Internet update of the machine software

The machine software can be updated with PFAFF flash programming. For this purpose the PFP boot program and the appropriate control software for the machine type must be installed on a PC. To transfer the data to the machine, the PC and the machine control unit must be connected with an appropriate null modem cable (part no. 91-291 998-91).



The PFP boot program and the control software of the machine type can be downloaded from the PFAFF-homepage using the following path:  
[www.pfaff-industrial.com/de/service/download/steuerungssoftware.html](http://www.pfaff-industrial.com/de/service/download/steuerungssoftware.html)

To update the machine software carry out the following steps:



While the machine software is being updated, no setting up, maintenance or adjustment work may be carried out on the machine!

- Switch off the machine.
- Connect the PC (serial interface or appropriate USB-adapter) and the machine control unit (RS232).
- Switch on the PC and start the PFP boot program.
- Select the machine type.
- Press the "programming" button.
- An extra program (quick loader) is started.
- Switch on the machine within 60 seconds.
- The software update is carried out, the update progress is shown on the bar display.
- When the update has been completed, the message "**software update successfully completed**" appears.



If this message does not appear, the entire procedure must be repeated!  
The machine is not safe for operation until the programming has been completed successfully and without faults.

- Switch off the machine and end the quick loader and PFP boot program.
- End the connection between the PC and the machine control unit.
- Switch on the machine.
- A plausibility control is carried out and, if necessary, a cold start.



More information and assistance is at your disposal in the file "PFPHILFE.TXT", which can be called up from the PFP boot program by pressing the "help" button.

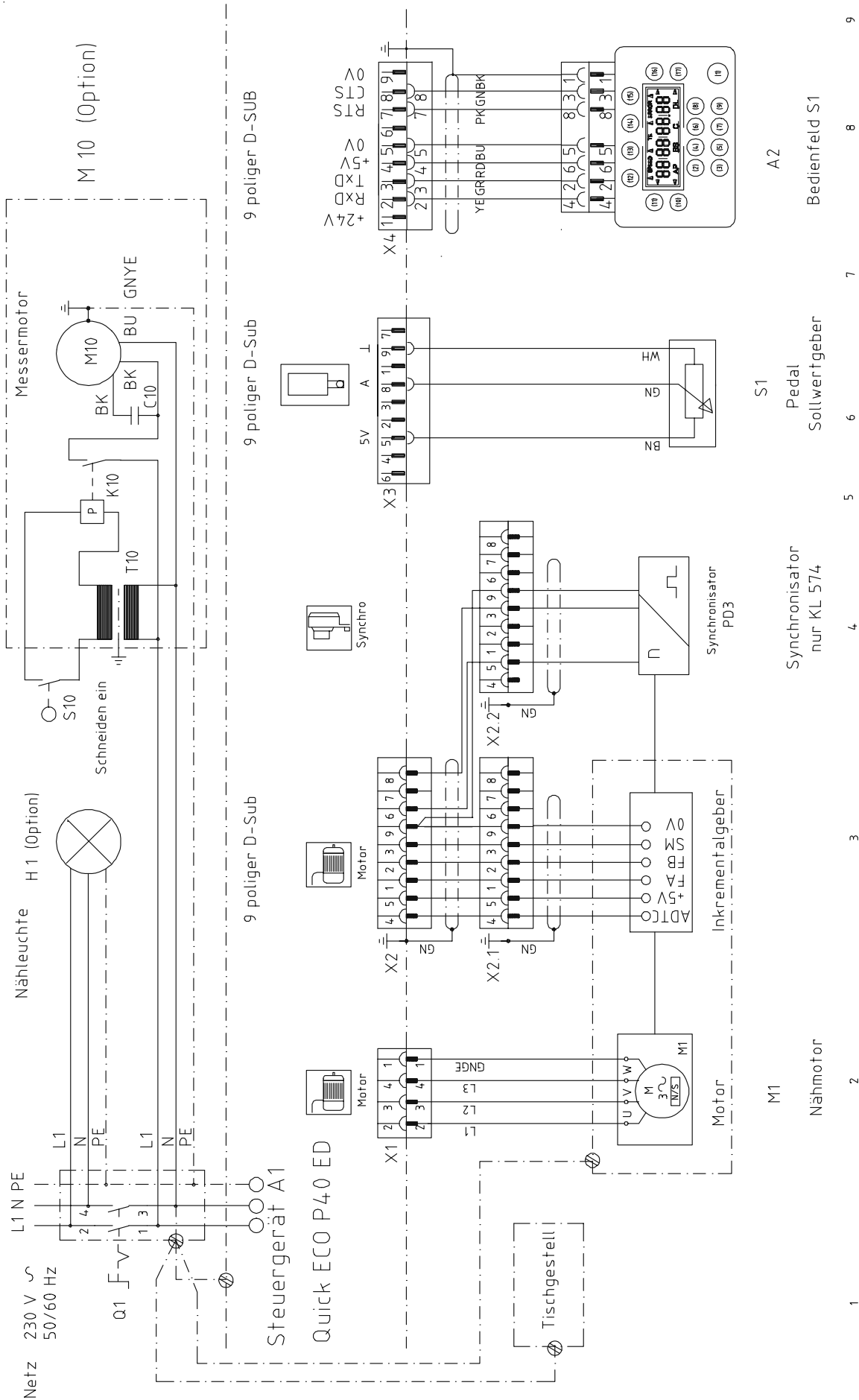
## 13.11 Explanation of the error signals

Signal	Description
E001	Pedal not in neutral position
E009	Start inhibitor during standstill
E010	Incorrect machine class
E062	Short circuit 24V
E063	Overload mains supply circuit
E064	Network monitoring
E065	Extint low in operation
E066	Short circuit
E067	Network off
E068	Extint low in operation
E069	No increments
E070	Motor blocking
E071	No incremental connector
E074	External transmitter for synchronisation marker missing
E088	RAM defective
E092	Start inhibitor when motor running
E173	Start error
E175	Start error

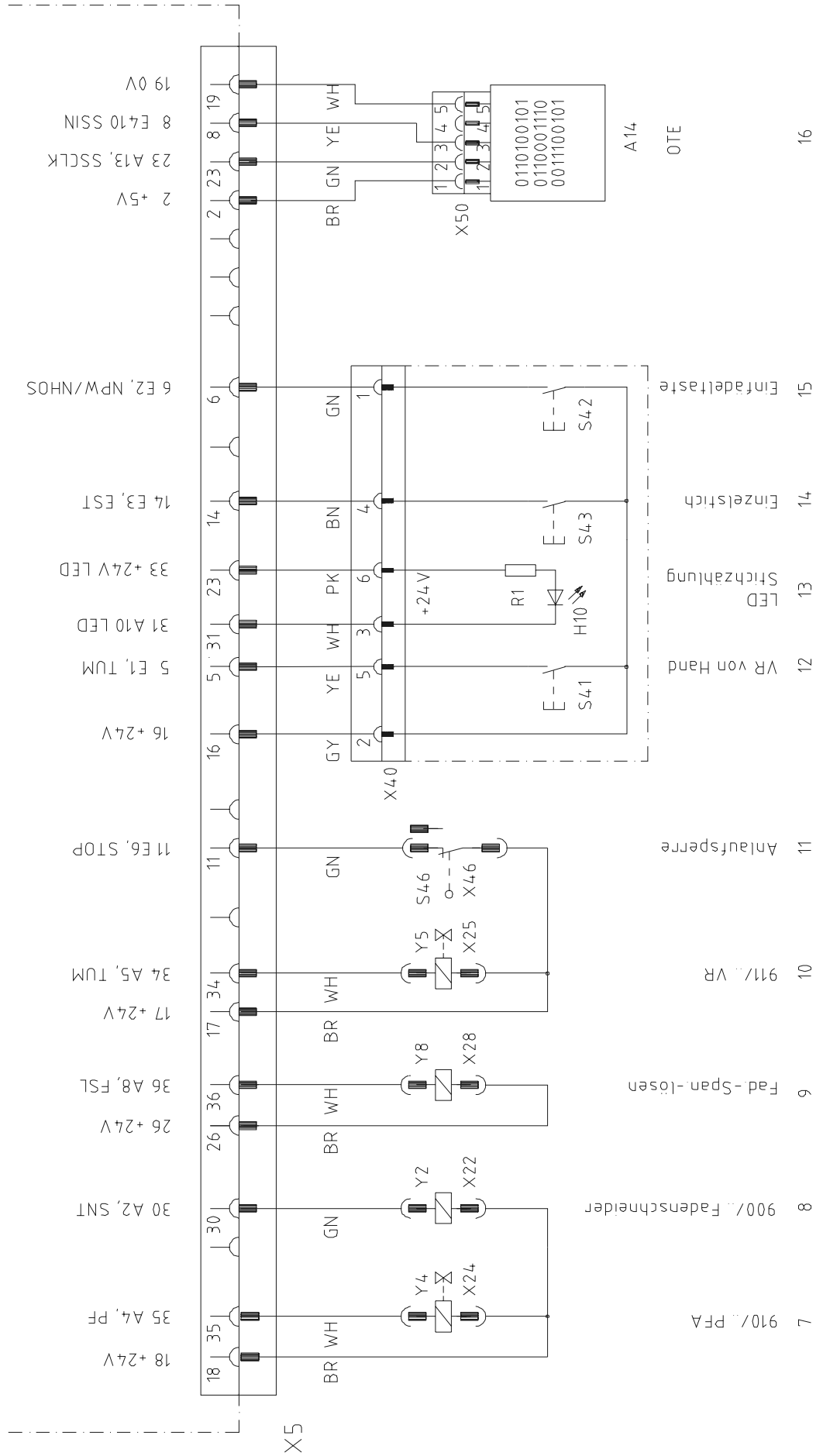


**14      Circuit diagrams****Reference list for circuit diagrams**

A1	Controller (Quick P40 ED)
A2	Control panel S1
A14	Sewing head identification (OTE)
C1	Start capacitor knife motor
H1	Sewing lamp
H10	LED Stitch counter
K1	Relay knife motor
M1	Sewing motor
M10	Knife motor
Q1	Main switch
PD3	Synchronizer
S1	Pedal set value transmitter
S10	Knife motor key
S41	Manual backtacking key
S42	Needle position change key
S43	Single stitch key
S46	Start inhibitor key
T10	Transformer knife motor
X0	RS232 – interface (PC)
X1	Motor
X2	Incremental transmitter
X2.1	Incremental transmitter
X2.2	Synchronizer PD3
X3	Set value transmitter
X4	Control panel
X5	Inputs/outputs
X6	Bobbin thread monitor (optional)
X7	Light barrier (optional)
X22	Thread trimmer (-900/..)
X24	Automatic presser foot lift (-910/..)
X25	Connector for backtacking device (-911/..)
X28	Thread tension solenoid
X40	Keyboard
X46	Start inhibitor
X50	Sewing head identification (OTE)
Y2	Thread trimmer ( - 900/..)
Y4	Automatic presser foot lift (-910/..)
Y2	Backtacking device (-911/..)
Y8	Thread tension solenoid

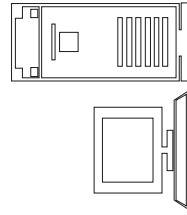
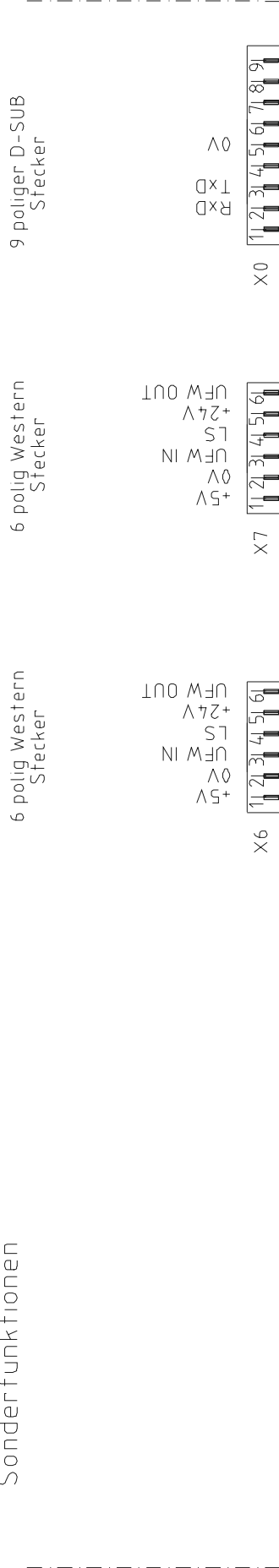


Ausgänge und Eingänge  
37 poliger D-Sub  
Steuergerät A1  
Quick P40 ED

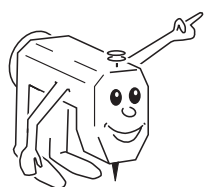


Steuergerät A1 Quick P40 ED

Sonderfunktionen



	(Option)	(Option)	RS232-Schnittstelle
17			26
18			
19			
20			
21			
22	Unterradenwächter	Lichtschränke	
23			
24			
25			



# Notes

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# PFAFF

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