

PFAFF

571

574

Instruction Manual

591

This instruction manual applies to machines from the following serial numbers onwards:

PFAFF	571	#	2574794	→
PFAFF	574	#	2574796	→
PFAFF	591	#	2574800	→



This instruction manual applies to all versions and subclasses listed under "**Specifications**".

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1 Safety

1.01 Directives

This machine is constructed in accordance with the European regulations contained in the conformity and manufacturer's declarations.

In addition to this Instruction Manual, observe also all generally accepted, statutory and other regulations and legal requirements and all valid environmental protection regulations! The regionally valid regulations of the social insurance society for occupational accidents or other supervisory organisations are to be strictly adhered to!

1.02 General notes on safety

- This machine may only be operated by adequately trained operators and only after the Instruction Manual has been completely read and understood!
- All Notes on Safety and Instruction Manuals of the motor manufacturer are to be read before operating the machine!
- The danger and safety instructions on the machine itself are to be followed!
- This machine may only be used for the purpose for which it is intended and may not be operated without its safety devices. All safety regulations relevant to its operation are to be adhered to.
- When exchanging sewing tools (e.g. needle, roller presser, needle plate or bobbin), when threading the machine, when leaving the machine unattended and during maintenance work, the machine is to be separated from the power supply by switching off the On/Off switch or by removing the plug from the mains!
- Everyday maintenance work is only to be carried out by appropriately trained personnel!
- Repairs and special maintenance work may only be carried out by qualified service staff or appropriately trained personnel!
- Work on electrical equipment may only be carried out by appropriately trained personnel!
- Work is not permitted on parts and equipment which are connected to the power supply! Exceptions to this are only to be found in the regulations EN 50110.
- Modifications and alterations to the machine may only be carried out under observance of all the relevant safety regulations!
- Only spare parts which have been approved by us are to be used for repairs! We expressly point out that any replacement parts or accessories, which are not supplied by us, have not been tested and approved by us. The installation and/or use of any such products can lead to negative changes in the structural characteristics of the machine. We shall not be liable for any damage which may be caused by non-original parts.

1.03 Safety symbols



Danger!
Points to be observed.



Danger of injury for operating and specialist personnel!



Caution

Do not operate without finger guard and safety devices.
Before threading, changing bobbin and needle, cleaning etc. switch off main switch.

1.04 Important points for the user

- This Instruction Manual is a component part of the machine and must be available to the operating personnel at all times.
- The Instruction Manual must be read before operating the machine for the first time.
- The operating and specialist personnel is to be instructed as to the safety equipment of the machine and regarding safe work methods.
- It is the duty of the user to only operate the machine in perfect running order.
- It is the obligation of the user to ensure that none of the safety mechanisms are removed or deactivated.
- It is the obligation of the user to ensure that only authorized persons operate and work on the machine.

Further information can be obtained from your PFAFF agent.

1.05 Operating and specialist personnel

1.05.01 Operating personnel

Operating personnel are persons responsible for the equipping, operating and cleaning of the machine as well as taking care of faults arising in the sewing area.

The operating personnel is obliged to observe the following points and must:

- always observe the Notes on Safety in the Instruction Manual!
- never use any working methods which could limit the level of safety in using the machine!
- not wear loose-fitting clothing or jewellery such as chains or rings!
- also ensure that only authorized persons have access to the potentially dangerous area around the machine!
- always immediately report to the person responsible any changes in the machine which may limit its safety!

1.05.02 Specialist personnel

Specialist personnel are persons with a specialist education in the fields of electrics, electronics and mechanics. They are responsible for the lubrication, maintenance, repair and adjustment of the machine.

The specialist personnel is obliged to observe the following points and must:

- always observe the Notes on Safety in the Instruction Manual!
- switch off the On/Off switch before carrying out adjustments or repairs and ensure that it cannot be switched on again unintentionally!
- never work on parts which are still connected to the power supply! Exceptions are contained only in the regulations EN 50110.
- replace the protective coverings and close the electrical control box after all repairs or maintenance work!

1.06

Danger



A working area of **1 meter** is to be kept free both in front of and behind the machine while it is in operation so that it is always easily accessible.



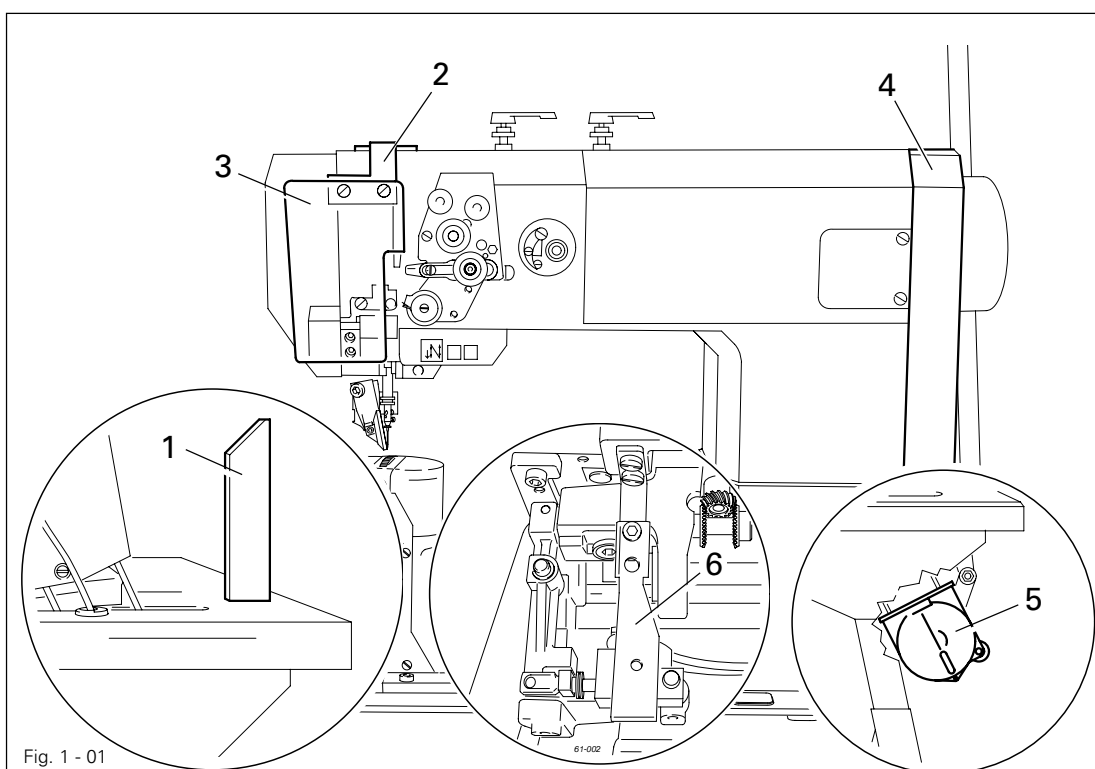
Never reach into the sewing area while sewing! Danger of injury by the needle!



Never leave objects on the table while adjusting the machine settings!
Objects can become trapped or be slung away! Danger of injury!



Do not operate the machine without support **1**! Danger due to top-heavy sewing head!
Machine can tip over backwards when tilted!



Switch the machine off before tilting it backwards!
Danger of injury if the machine is started accidentally!



Do not operate the machine without its take-up-lever guard **2**!
Danger of injury due to the motion of the take-up lever!



On machines with thread lubricator, only operate the machine with the eye guard **3** lowered!
The eye guard **3** protects the eyes from oil particles from the thread lubrication.



Do not operate the machine without belt guard **4** and **5**!
Danger of injury by rotating drive belt!



Do not operate the machine without tilt lock **6**!
Danger of crushing between sewing head and table top!

2

Proper use

The **PFAFF 571** is a single needle, high-speed post bed sewing machine (post to the left of the needle) with driven feed wheel and roller presser and synchronized needle.

The **PFAFF 574** is a two-needle, high-speed post bed sewing machine with driven feed wheel and roller presser

The **PFAFF 591** is a single needle, high-speed post bed sewing machine (post to the right of the needle) with driven feed wheel and roller presser and synchronized needle.

The machines are used for sewing lockstitch seams in the leather and upholstery industries.



Any use of these machines which is not approved by the manufacturer shall be considered as improper use! The manufacturer shall not be liable for any damage arising out of improper use! Proper use shall also be considered to include compliance with the operation, adjustment, service and repair measures specified by the manufacturer!

3 Specifications

3.01 PFAFF 571, 574 , 591 ▲

Stitch type: 301 (lockstitch)
 Handwheel eff. dia.: 65 mm
 Clearance under roller presser: 7 mm
 Clearance width: 245 mm
 Clearance height: 115 mm
 Post height: 180 mm

Sewing head dimensions:

Length: approx. 615 mm
 Width: approx. 240 mm
 Height (above table): approx. 500 mm
 Bedplate dimensions: 518 x 177 mm

Max. speed:

PFAFF 571, 574, 591 Model A + B 3000 spm ♦
 PFAFF 574, 591 Model C 2000 spm ♦
 Cutting depth (for -725/.. and -726/..): 0.8 – 2.5 mm
 Cutting speed (for -725/.. and -726/..): 2800 cuts/min.

Connection data:

Operating voltage: 230 V ± 10%, 50/60 Hz
 Max. power consumption: 1.2 kVA
 Fuse protection: 1 x 16 A, inert

Noise data:

Emission sound level at the workplace at appropriate speed

(Noise measurement in accordance with DIN 45 635-48-A-1, ISO 11204, ISO 3744, ISO 4871)

PFAFF 571 and 591, model A + B at a speed of 2400 spm.: $L_{pA} = 79$ dB(A) ■
 PFAFF 574, model C at a speed of 1600 spm.: $L_{pA} = 75$ dB(A) ■
 PFAFF 591, model C at a speed of 1600 spm.: $L_{pA} = 73$ dB(A) ■

Net weight of sewing head: approx. 61 kg

Gross weight of sewing head: approx. 71 kg

▲ Subject to alteration

♦ Dependent on material, work operation and stitch length

■ $K_{pA} = 2,5$ dB

Specifications

3.02 Needles and threads

Model	Thread thickness▲ (Nm) max. synthetic	Needle thickness in 1/100 mm	Needle system for PFAFF 571	Needle system for PFAFF 574	Needle system for PFAFF 591
A	60/3	70	134	-	134
B	40/3	100	134	-	134
C	15/3	130	-	134 - 35	134

▲ or similar strengths of other types of thread

3.03 Possible models and subclasses

PFAFF 571, 591

Model A For sewing lightweight materials

PFAFF 571, 591

Model B For sewing medium-weight materials

PFAFF 574, 591

Model C For sewing medium-heavy materials

Additional equipment:

Subclass -725/04 Edge trimmer

Subclass -726/05 Edge trimmer

Subclass -900/81 Thread trimmer

Subclass -910/15 Automatic presser foot lifter

Subclass -911/35 Bartacker

4 Disposal of Machine

- Proper disposal of the machine is the responsibility of the customer.
- The materials used for the machine are steel, aluminium, brass and various plastic materials.
The electrical equipment comprises plastic materials and copper.
- The machine is to be disposed of according to the locally valid pollution control regulations; if necessary, a specialist is to be commissioned.



Care must be taken that parts soiled with lubricants are disposed of separately according to the locally valid pollution control regulations!

5 Transportation, packing and storage

5.01 Transportation to customer's premises

Within the Federal Republic of Germany, complete machines (with table and motor) are delivered without packing.

Machines without table (only sewing heads) and machines intended for export are packed.

5.02 Transportation inside the customer's premises

The manufacturer cannot be made liable for transportation inside the customer's premises nor to other operating locations. It must be ensured that the machines are only transported in an upright position.

5.03 Disposal of packing materials

The packing materials of this machine comprise paper, cardboard and VCE fibre. Proper disposal of the packing material is the responsibility of the customer.

5.04 Storage

If the machine is not in use, it can be stored as it is for a period of up to six months, but It should be protected against dust and moisture.

If the machine is stored for longer periods, the individual parts, especially the surfaces of moving parts, must be protected against corrosion, e.g. by a film of oil.

6 Explanation of symbols

In this instruction manual, work to be carried out or important information is accentuated by symbols. These symbols have the following meanings:



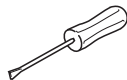
Note, information



Cleaning, care



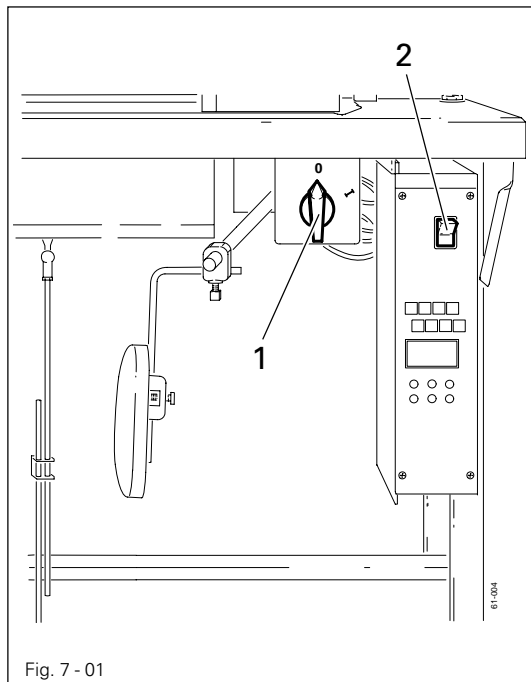
Lubrication



Maintenance, repairs, adjustment, service work
(only to be carried out by technical staff)

7 Controls

7.01 On/off switch

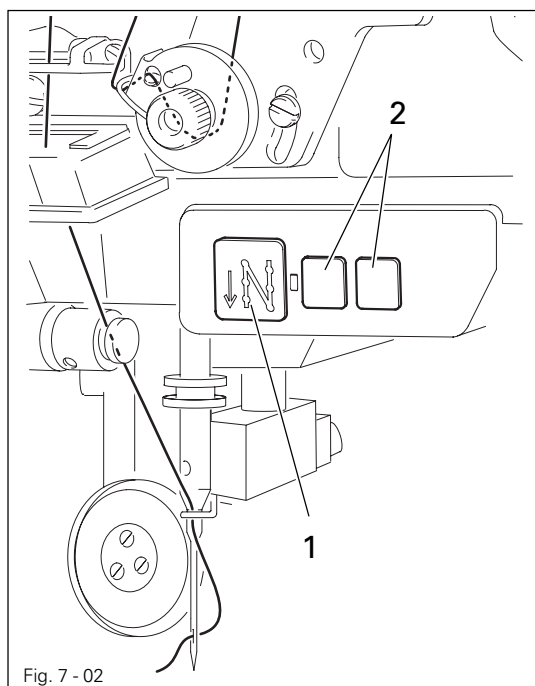


- Turn the machine on and off by turning switch 1 and pressing switch 2.



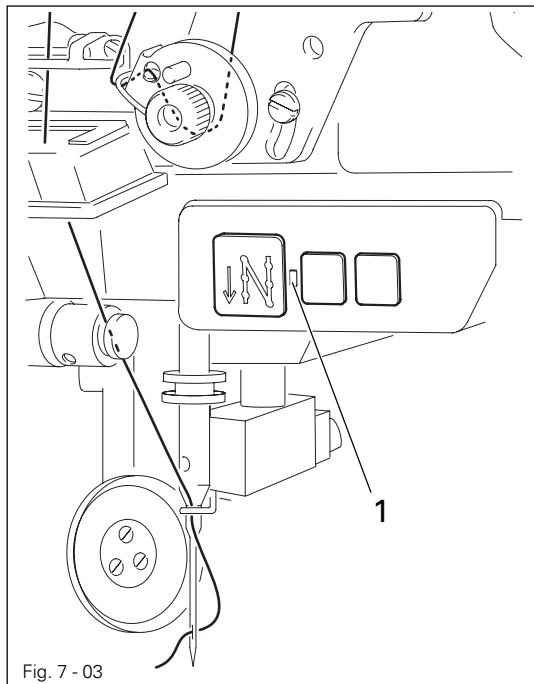
On machines without edge trimming device –725/.. or –726/.. there is no switch 1.

7.02 Keys on the machine head (only for machines with –911/..)



- As long as key 1 is pressed during sewing, the machine sews in reverse.
- Keys 2 can be used for parameter settings, see **Chapter 11.09 Parameter settings**.

7.03 Bobbin thread monitoring with stitch counting



Machines without -911/..

- Once the preset number of stitches have been sewn, the machine stops.
- After the thread has been trimmed and the bobbin changed, the stitch counting begins anew.

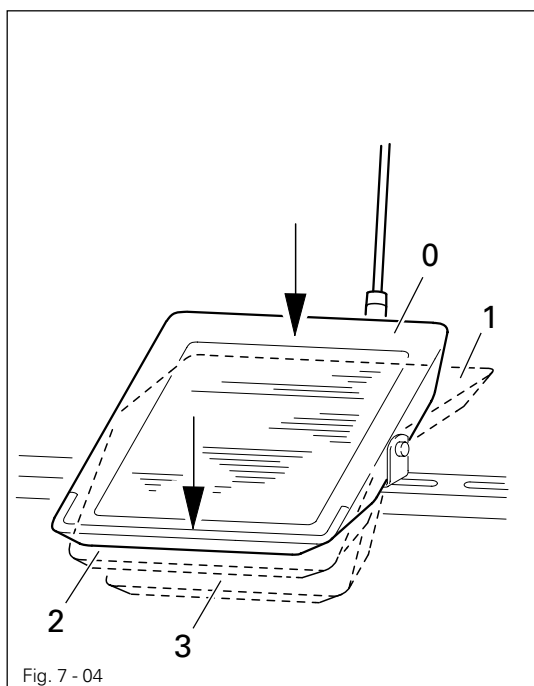
Machines with 911/..

- About 100 stitches before reaching the preset number of stitches, LED 1 flashes.
- After the thread has been trimmed and the bobbin changed, the stitch counting begins anew.



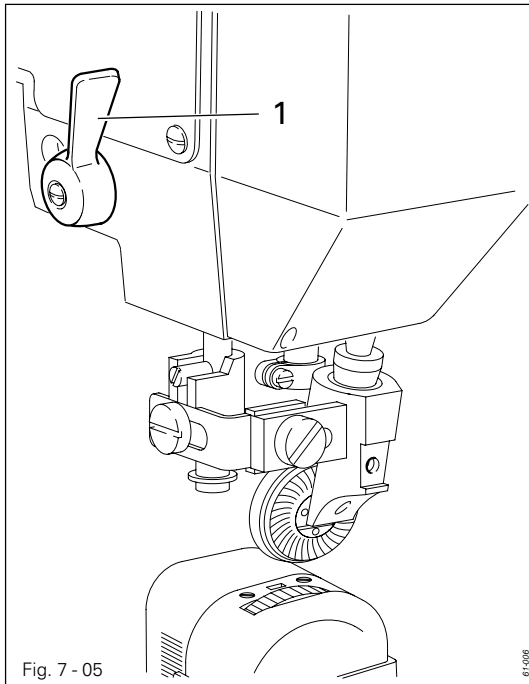
Presetting the number of stitches, see **Chapter 9.09 Setting the stitch counting function for bobbin thread monitoring.**

7.04 Pedal



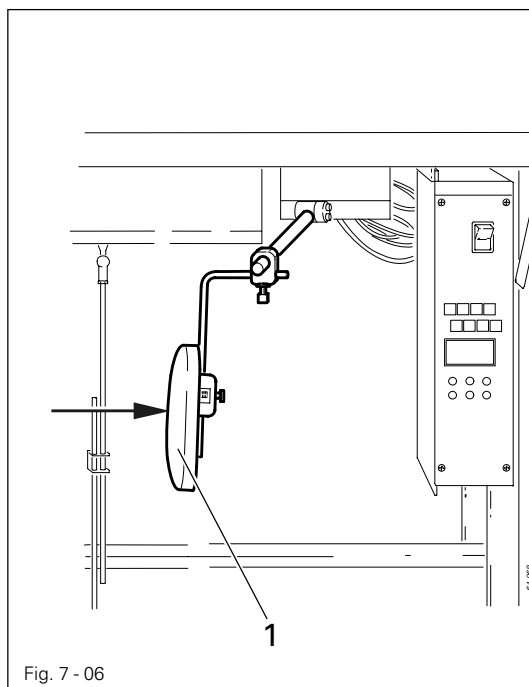
- 0 = Neutral position
- 1 = Sewing
- 2 = Raise roller presser (on machines with -910/..)
- 3 = Trim sewing threads (on machines with -900/..)

7.05 Lever for lifting roller presser



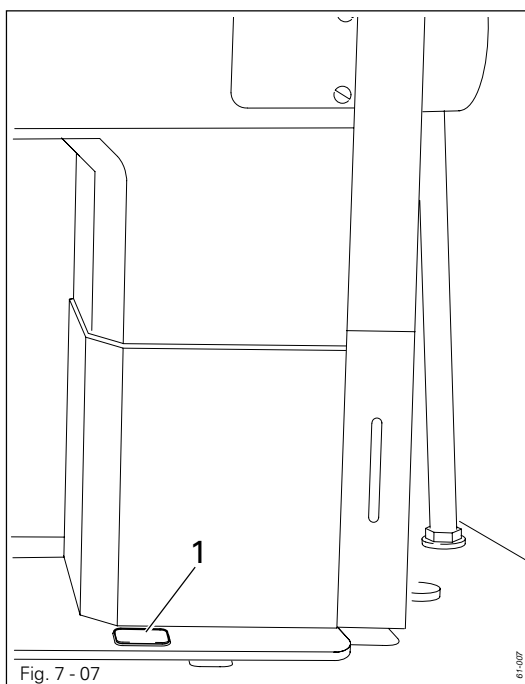
- The roller presser can be raised by turning lever 1.

7.06 Knee lever



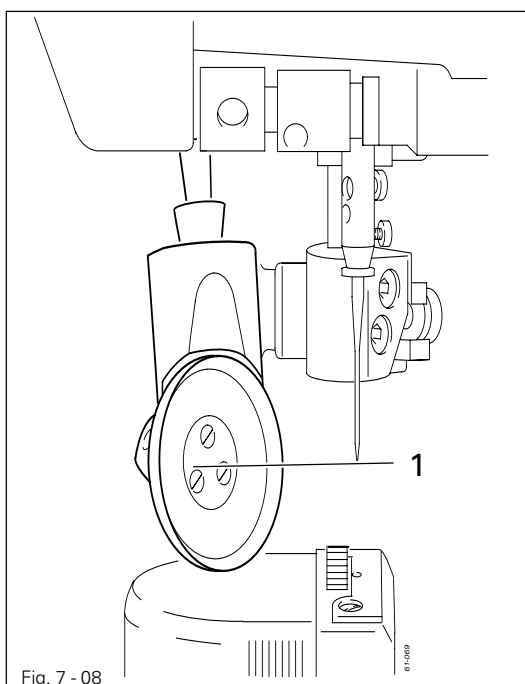
- The roller presser can be raised by pressing the knee lever 1 in the direction of the arrow.

7.07 Key for setting stitch length



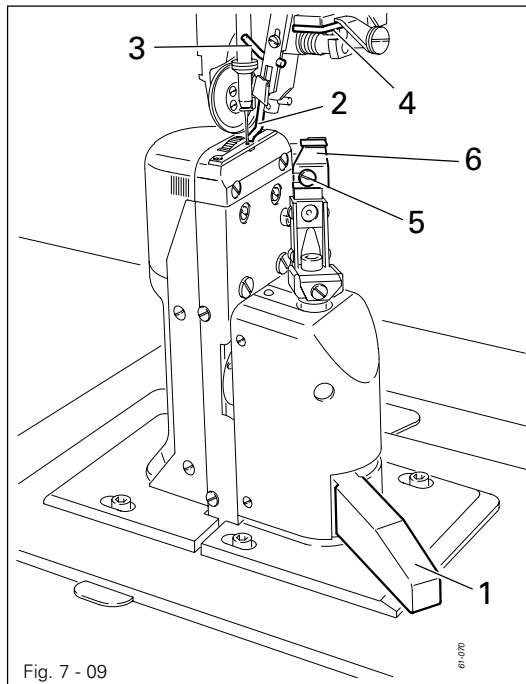
- The stitch length is set by pressing key 1 and turning the balance wheel (see Chapter 9.08 Setting the stitch length).

7.08 Swing out roller presser



- When the roller presser is raised, it can be swung out by pulling it lightly downwards.

7.09 Edge trimmer -725/04 for 571



Keep your hands away from the moving knife! Danger of injury!

Switch on knife drive:

- Move lever 1 backwards. The knife moves into operating position.

Switch off knife drive:

- Press lever 1. The knife swings backwards.

Switch on edge guide:

- Swing edge guide 2 into position by hand and press lever 3. The edge guide 2 moves into its operating position.

Switch off edge guide:

- Raise edge guide 2 and let it click into position. The edge guide 2 is out of operation.
- Raise lever 4. The edge guide swings backwards.

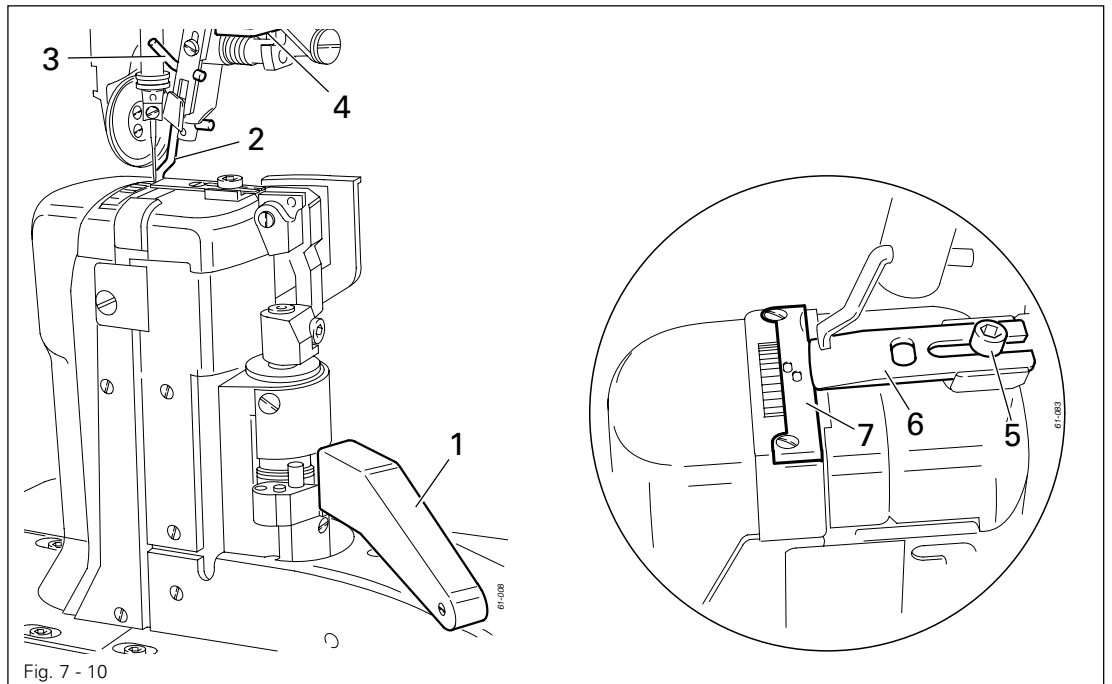
Changing the knife:



The following work may only be carried out by technical staff or by persons who have been properly instructed.

- Switch off the machine.
- Loosen screw 5 and remove knife 6.
- Insert new knife and slightly tighten screw 5.
- Adjust the knife according to Chapter 11.05.05 Cutting stroke and tighten screw 5.

7.10 Edge trimmer -725/04 for 574 and 591



Keep your hands away from the moving knife! Danger of injury!

Switch on knife drive:

- Move lever 1 backwards. The knife moves into operating position.

Switch off knife drive:

- Press lever 1. The knife swings backwards.

Switch on edge guide:

- Swing edge guide 2 into position by hand and press lever 3. The edge guide 2 moves into its operating position.

Switch off edge guide:

- Raise edge guide 2 and let it click into position. The edge guide 2 is out of operation.
- Raise lever 4. The edge guide swings backwards.

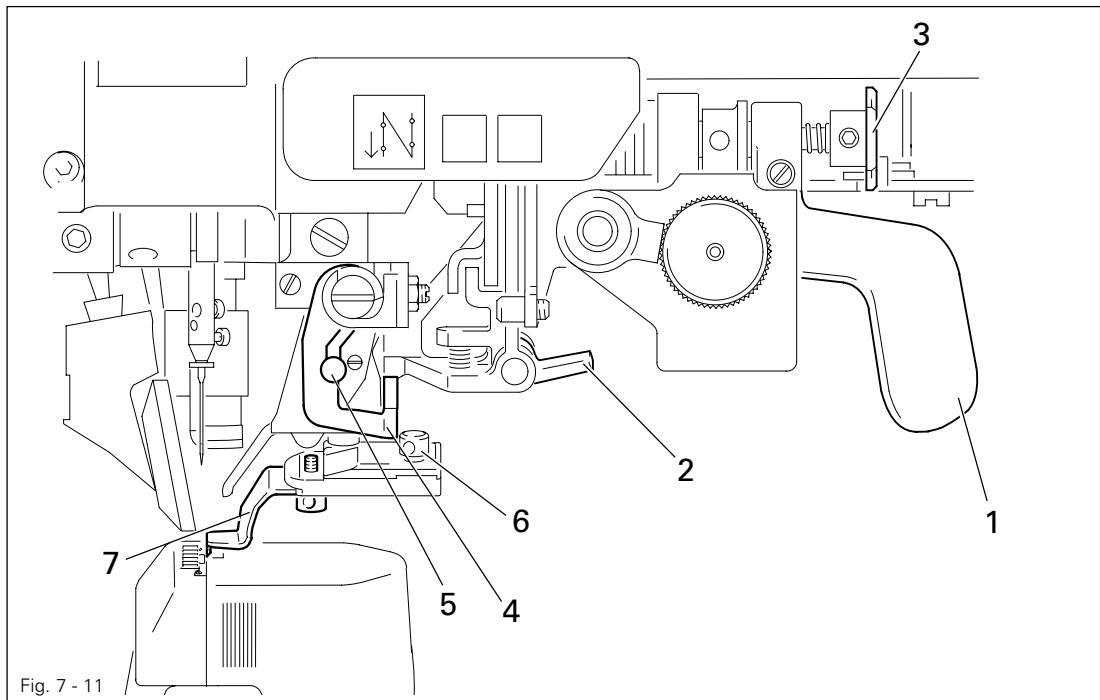
Changing the knife:



The following work may only be carried out by technical staff or by persons who have been properly instructed.

- Switch off the machine.
- Loosen screw 5 and remove knife 6.
- Insert new knife and push it close to needle plate insert 7.
- Slightly tighten screw 5.
- Adjust the knife according to Chapter 11.05.07 Knife position and tighten screw 5.

7.11 Edge trimmer -726/05 for 591



Keep your hands away from the moving knife! Danger of injury!

Switch on knife drive:

- By turning lever 1 the knife is moved into its operating position.

Switch off knife drive:

- By pressing lever 2 or key 3 the knife is put out of operation.

Switch on edge guide:

- After lever 4 has been pressed, the edge guide moves into its starting position.

Switch off edge guide:

- By raising lever 5, the edge guide is put out of operation.

Changing the knife:



The following work may only be carried out by technical staff or by persons who have been properly instructed.

- Switch off the machine.
- Loosen screw 6 and remove knife 7.
- Insert new knife and push it close to needle plate insert.
- Tighten screw 6.
- Adjust the knife according to **Chapter 11.06.01 Position of the knife to the needle plate** and **Chapter 11.06.02 Knife crosswise to sewing direction**.

8 Installation and commissioning



The machine must only be installed and commissioned by qualified personnel!
All relevant safety regulations must be strictly adhered to!



If the machine is delivered without a table, be sure to use a stand and table top that can hold the weight of the machine with its motor.
It is very important to ensure that the stand of the machine is firm and steady, also during sewing.

8.01 Installation

The site where the machine is installed must be provided with suitable connections for electric current.

It must be ensured that the standing surface of the machine site is firm and horizontal, and that sufficient lighting is provided for.



For packing and transportation reasons the table top is in the lowered position.
The table height is adjusted as described below.

8.01.01 Adjusting the table height

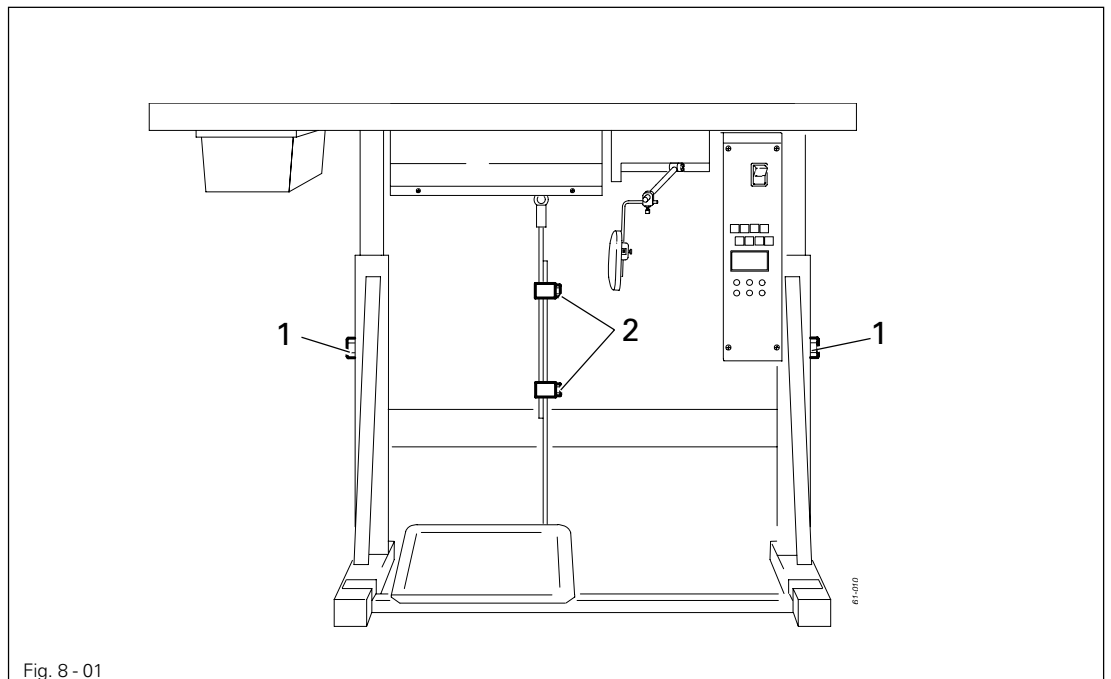
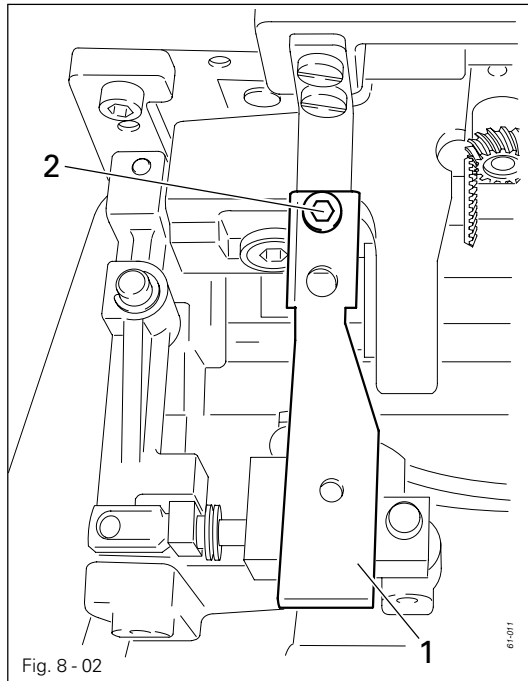


Fig. 8-01

- Loosen screws 1 and 2 and set the table height as required.
- Firmly tighten screw 1.
- Set the required pedal position and tighten screw 2.

Installation and commissioning

8.01.02 Fitting the tilt lock



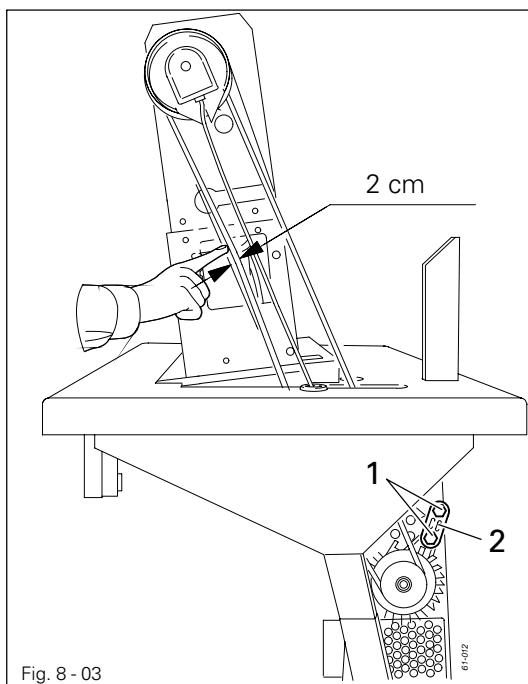
Switch off the machine!
Danger of injury if the machine is started accidentally!

- Screw on the tilt lock 1, provided in the accessories, using screw 2.



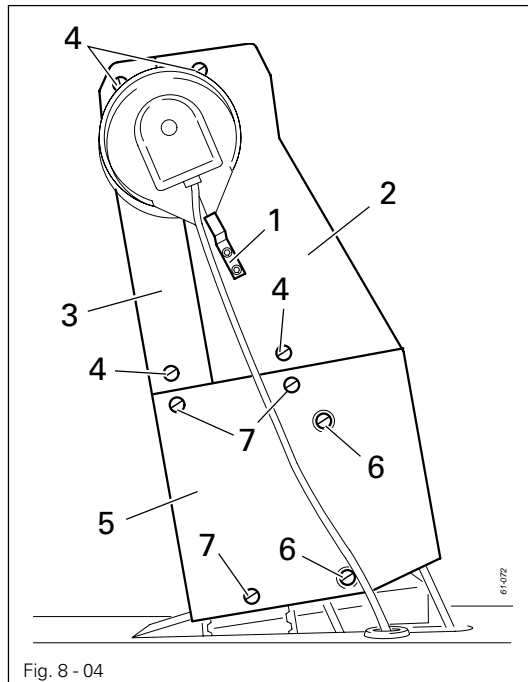
Do not operate the machine without tilt lock 1. Danger of crushing between sewing head and table top!

8.01.03 Adjusting the V-belt tension (does not apply to machines with flange motor)



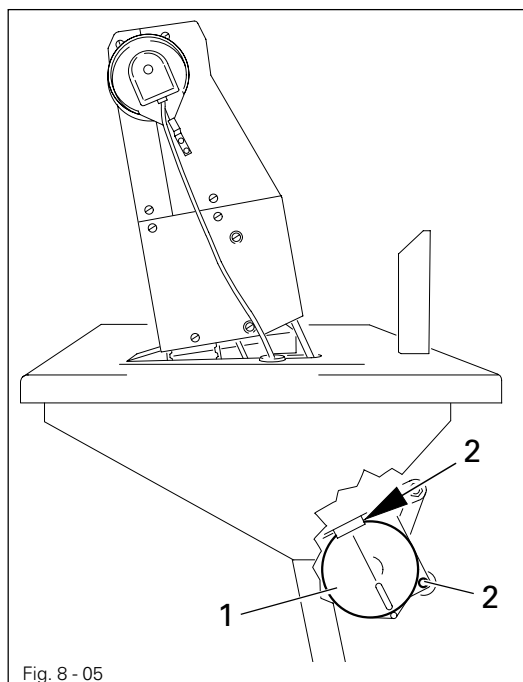
- Loosen the nuts 1.
- Set tension of v-belt using motor bracket 2.
- Tighten nuts 1.

8.01.04 Mounting the upper V-belt guard



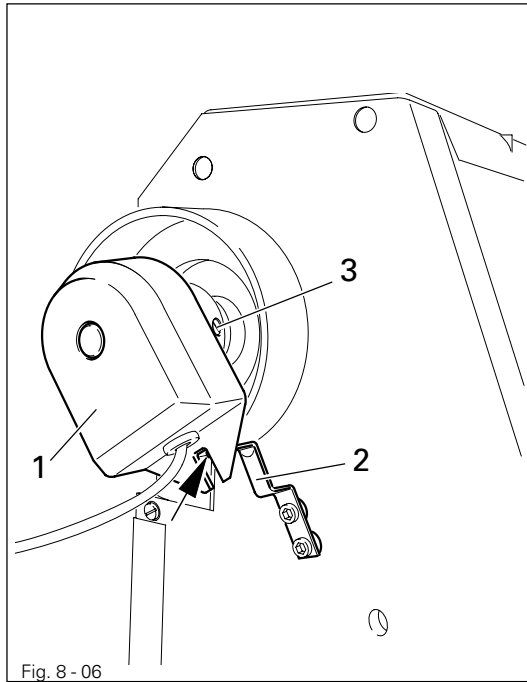
- Screw position stop 1 to the right side of the belt guard 2.
- Attach the right and left belt guard sections 2 and 3 with screws 4.
- Slide the slots of the bottom part 5 of the belt guard behind the heads of screws 6. Attach with screws 7 and then tighten screws 6 through the boreholes.

8.01.05 Mounting the lower V-belt guard (does not apply to machines with flange motor)



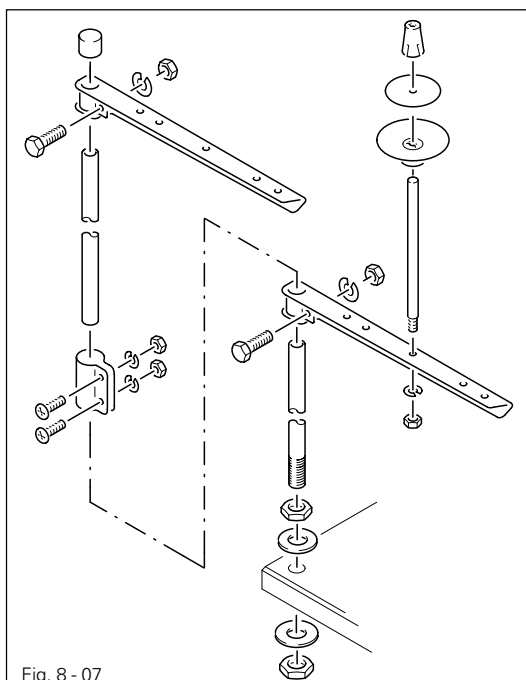
- Adjust the v-belt guard 1 so that the motor pulley and v-belt run freely.
- Tighten screws 2. Fig. 8-05 shows a Quick motor.

8.01.06 Mounting the synchronizer (does not apply to machines with flange motor)



- Attach position stop 2 (part no. 91-141 688-90) with two screws.
- Slide synchronizer 1 onto the shaft so that position stop 2 is located in the groove of synchronizer 1 (see arrow).
- Slightly tighten screws 3.
- Insert synchronizer plug into the coupling socket of the control box.
- Adjust synchronizer 1, see Chapter 11.04.01 Adjusting the synchronizer

8.01.07 Fitting the reel stand



- Fit the reel stand as shown in Fig. 8-07.
- Afterwards insert the stand in the hole in the table top and secure it with the nuts provided.

8.02 Mounting the flange motor

8.02.01 Mounting the flange motor to the bearing plate

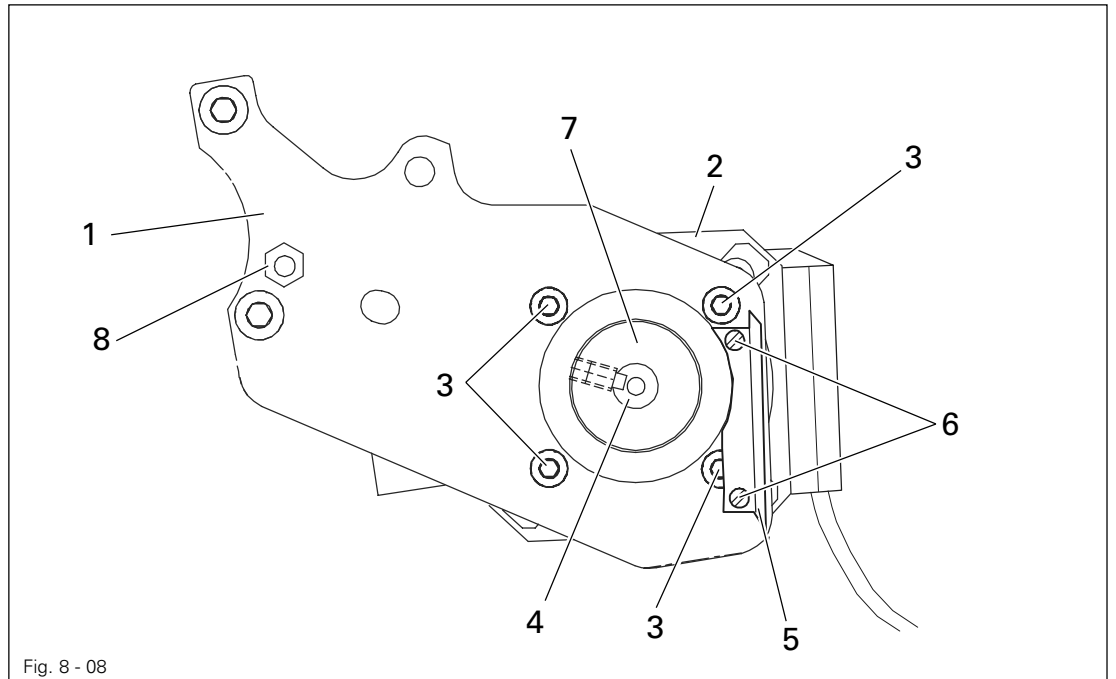


Fig. 8 - 08

- Attach bearing plate 1 to motor 2 with screws 3 as shown in Fig. 8 - 08.
- Remove the wedge from motor shaft 4.
- Attach angle bracket 5 with screws 6.
- Fit toothed belt wheel 7 to the motor shaft 4, so that the point of the screw is located in the groove of the motor shaft.
- Screw threaded stud 8 into the bearing plate 1.

8.02.02 Mounting the flange motor to the machine

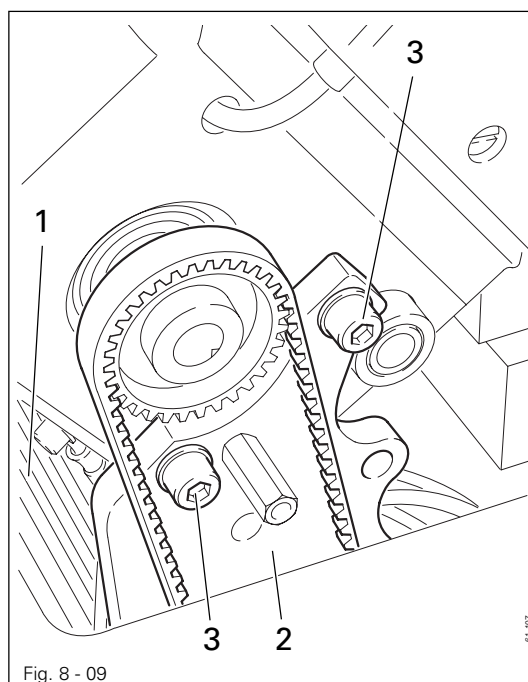
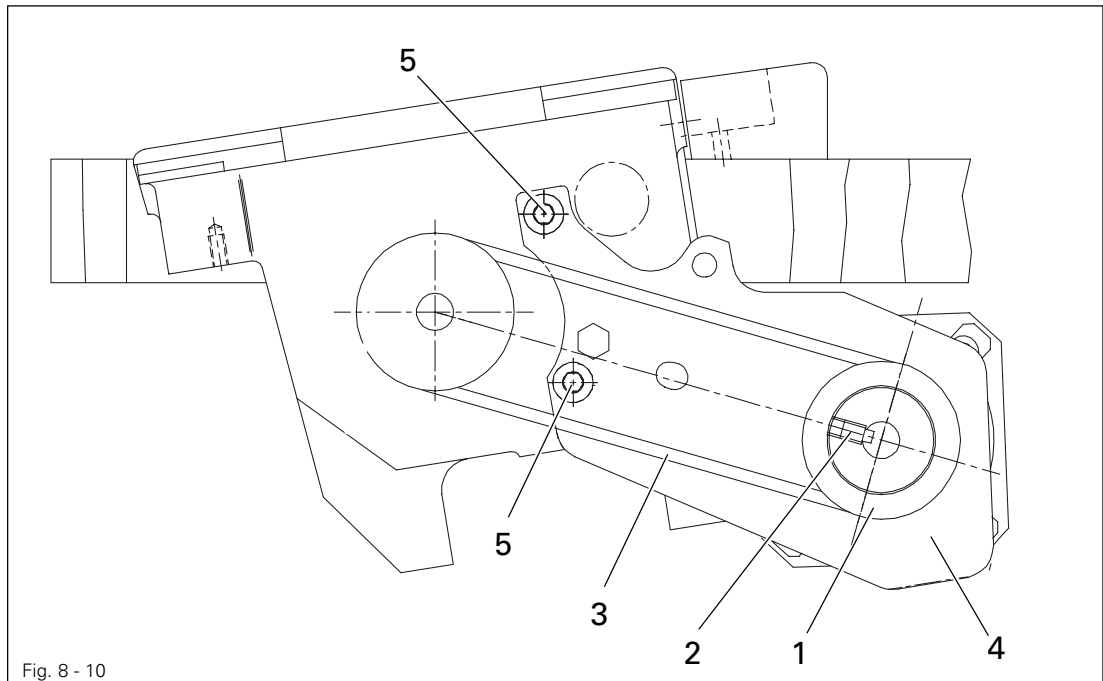


Fig. 8 - 09

- Attach bearing plate 1 of motor 2 to the machine case with screws 3 (only tighten screws 3 slightly).

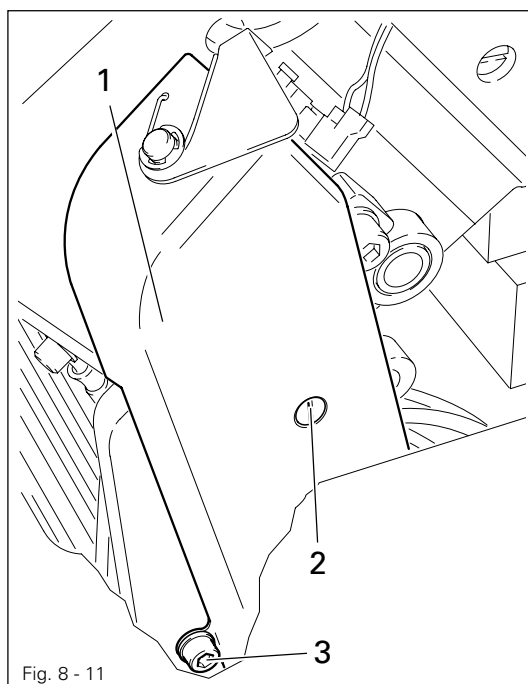
Installation and commissioning

8.02.03 Mounting the toothed belt and adjusting the tension



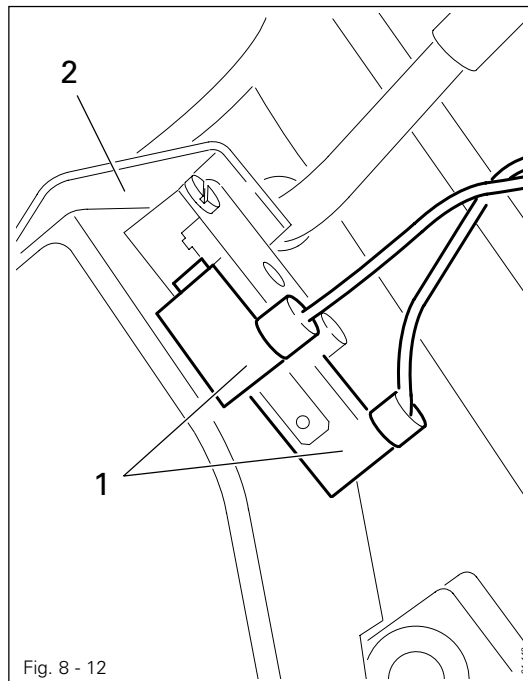
- Bring the take-up lever to b.d.c.
- Turn toothed belt wheel 1 until screw 2 is located in the position shown in Fig. 8 - 10.
- In this position fit toothed belt 3.
- Swing the bearing plate 4 of the motor, so that the toothed belt is tensioned.
- In this position tighten screws 5.

8.02.04 Mounting the belt guard of the flange motor



- Attach belt guard 1 with screws 2 and 3.

8.02.05 Connecting the safety switch

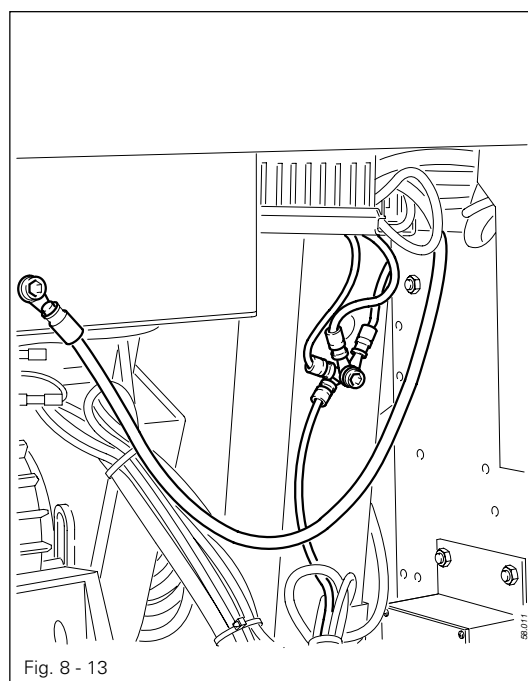


- Connect plug 1 of safety switch 2 as shown in Fig. 8-12.



When the sewing head is tilted back, the safety switch prevents the machine starting when the main switch is on. To deactivate the safety switch, the main switch must be switched off and then on again after the machine has been brought to an upright position.

8.03 Connecting the earth cable



- Screw the earth cable from the sewing head, motor, main switch and work aids to the stand.

8.04 Basic position of the machine drive unit

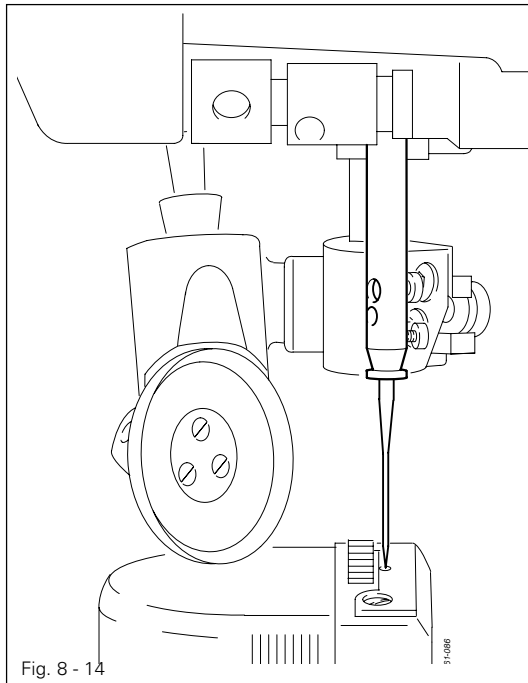
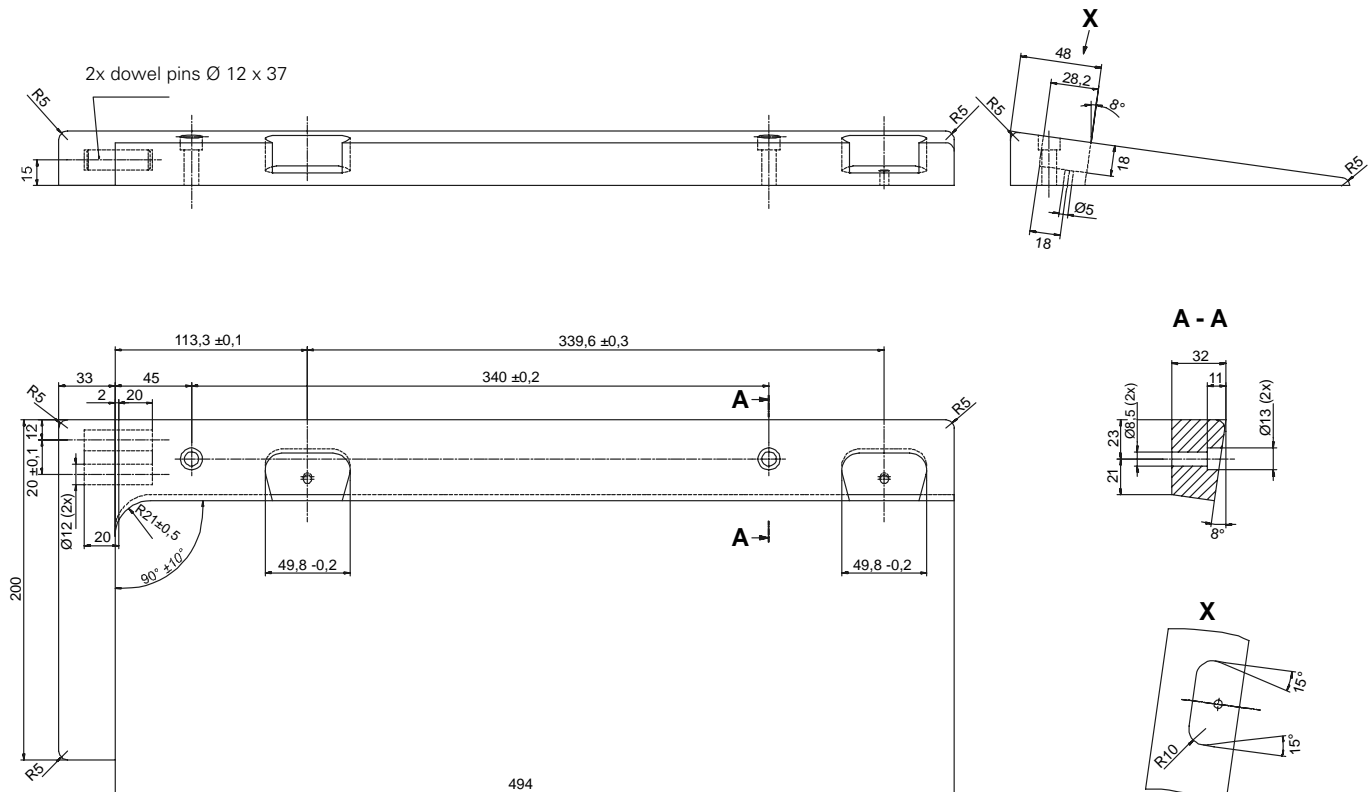


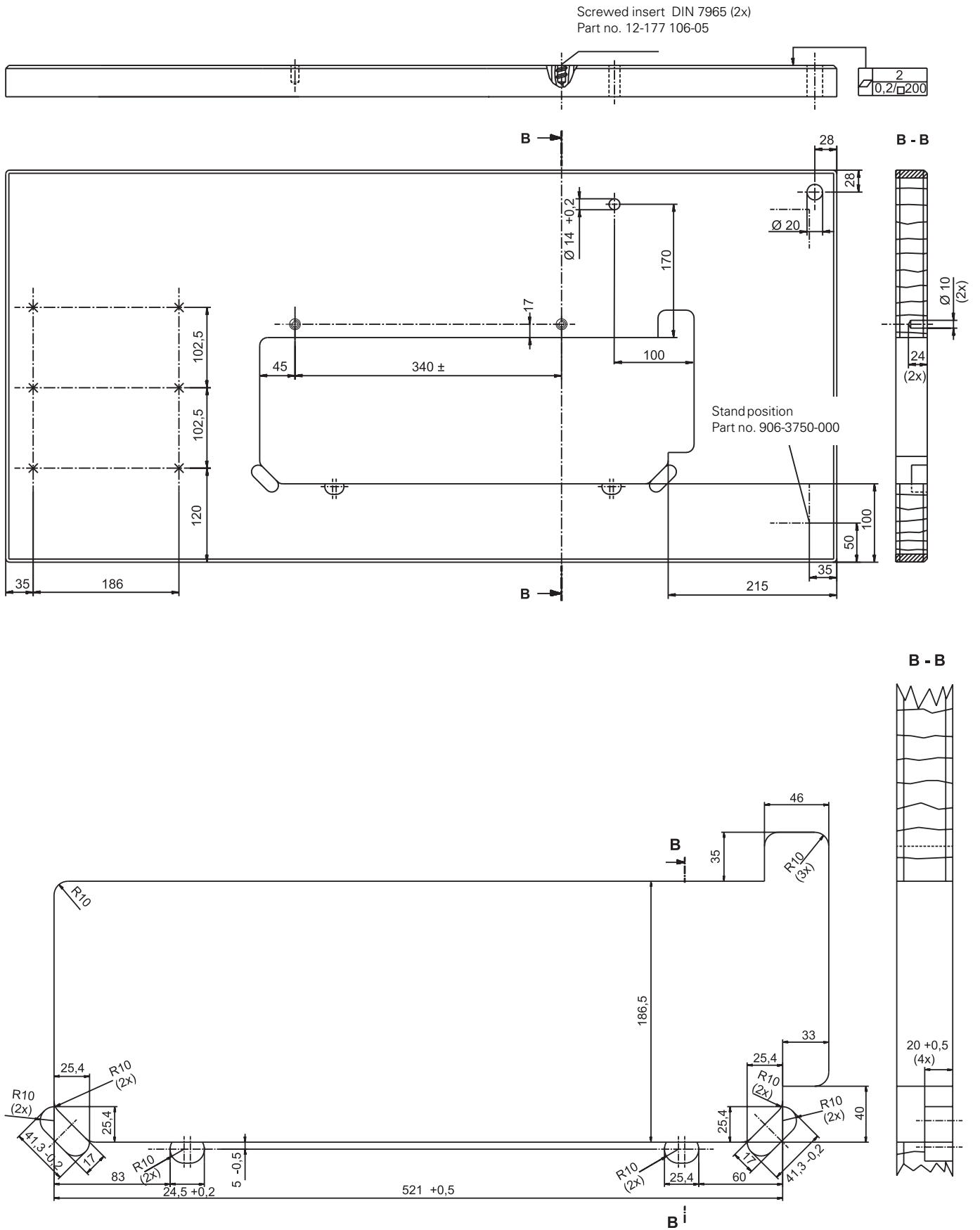
Fig. 8 - 14

- Position the needle point flush to the upper edge of the needle plate.
- Select parameter "700" and adjust it according to the motor service manual.

8.05 Tilted work base



8.06 Table top cutout



8.07

Commissioning

- Check the machine, particularly the electrical wiring, for any damage.
- Clean the machine thoroughly and then oil it or fill in oil (see **Chapter 10 Care and maintenance**).
- Have a mechanic check whether the motor of the machine can be operated with the available power supply, and that the motor is correctly connected in the junction box. If there are any discrepancies the machine **must not be operated under any circumstances**.



The machine may only be connected to an earthed socket!

- When the machine is running, the balance wheel must turn towards the operator. If it does not, have the motor connection changed by a mechanic.
- Machines with pneumatic equipment must be connected to the compressed air supply. The pressure gauge should indicate a pressure of 6 bar. If necessary, adjust to the correct setting (see **Chapter 10.05 Checking adjusting the air pressure**).

8.08

Switching the machine on/off

- Switch the machine on or off (see **Chapter 7.01 On/off switch**).

9

Setting up



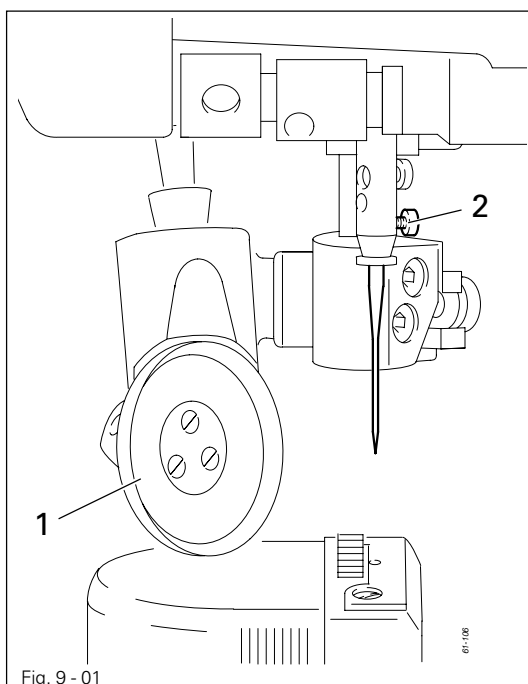
All instructions and regulations in this instruction manual must be observed. Special attention must be paid to all safety regulations!



All setting-up work must only be carried out by personnel with the appropriate training. For all setting-up work the machine must be disconnected from its power supply by turning off the on/off switch, or removing the plug from the electric power socket.

9.01

Inserting the needle on model 571 and 591



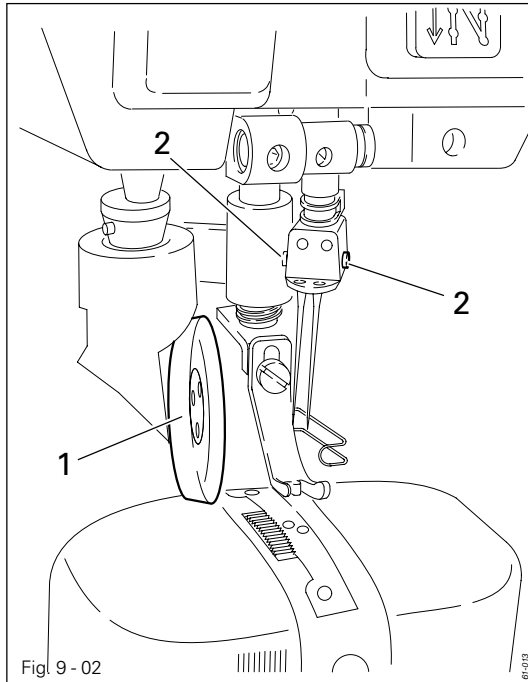
Switch the machine off!
Danger of injury if the machine is started accidentally!

Only use needles of system **134**.

- Raise the roller presser **1** and swing it out.
- Loosen screw **2** and insert the needle as far as possible. The long groove must face to the right on model 571 and to the left on model 591.
- Tighten screw **2** and swing roller presser **1** back into position.



The choice of needle depends on the model of the machine and the thread and material used (see **Chapter 3.02 Needles and threads**).



Switch the machine off!
Danger of injury if the machine
is started accidentally!

Only use needles of system 134-35.

- Raise the roller presser 1 and swing it out.
- Loosen screws 2 and insert the needles so that the long groove of the left needle is facing right, and that of the right needle is facing left.
- Tighten screws 2 and swing roller presser 1 back into position.



The choice of needle depends on the model of the machine and the thread and material used (see **Chapter 3.02 Needles and threads**).

9.03 Winding the bobbin thread; adjusting the primary thread tension

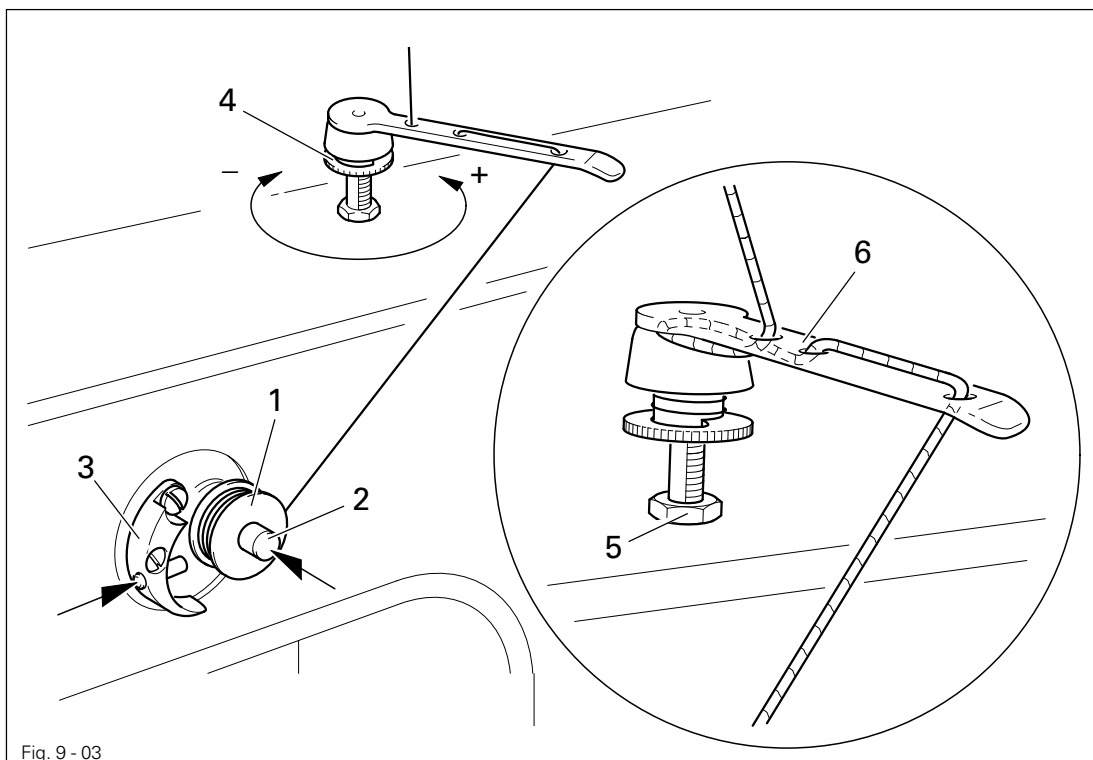


Fig. 9 - 03

- Place an empty bobbin 1 onto bobbin winder spindle 2.
- Thread the bobbin as shown in Fig. 9 - 03 and wind it clockwise around bobbin 1 a few times.
- Switch on the bobbin winder while at the same time pressing bobbin winder spindle 2 and lever 3.



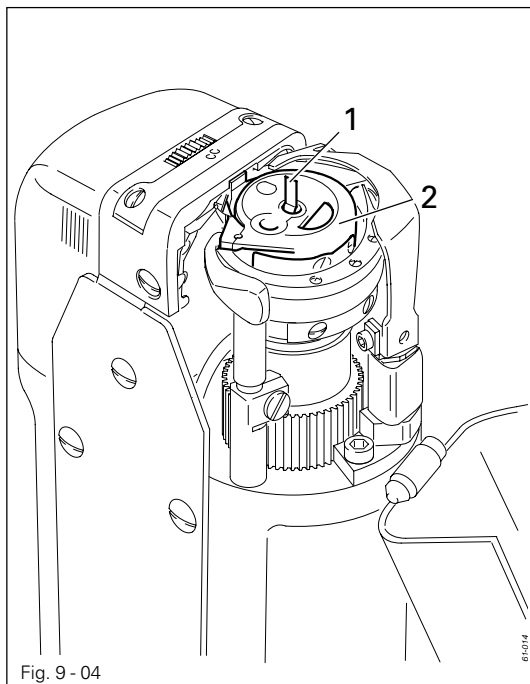
The bobbin is filled up during sewing.

- The thread tension on bobbin 1 can be adjusted using knurled screw 4.
- The bobbin winder stops automatically when bobbin 1 is full.

If the thread is wound unevenly:

- Loosen nut 5.
- Turn thread guide 6 accordingly.
- Tighten nut 5.

9.04 Removing/Inserting the bobbin case



Switch the machine off!
Danger of injury if the machine is started accidentally!

Removing the bobbin case:

- Open the post cap.
- Raise latch 1 and remove bobbin case 2.

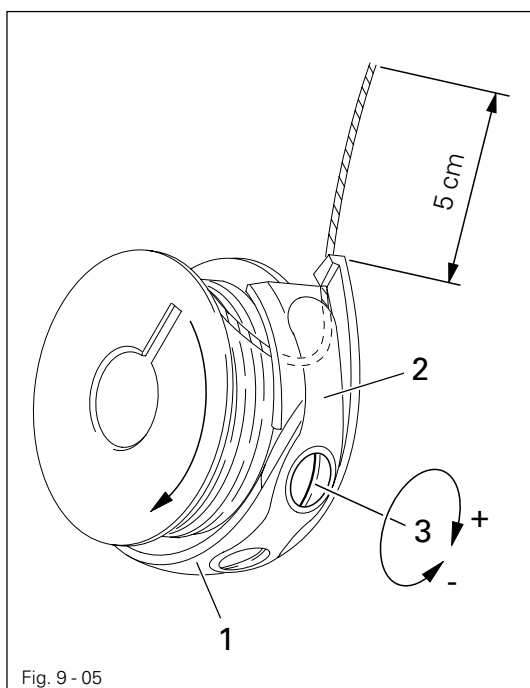
Inserting the bobbin case:

- Insert bobbin case 2.
- Close the latch and close the post cap.



574 is shown in Fig. 9 - 04.

9.05 Threading the bobbin case/Adjusting the bobbin thread tension

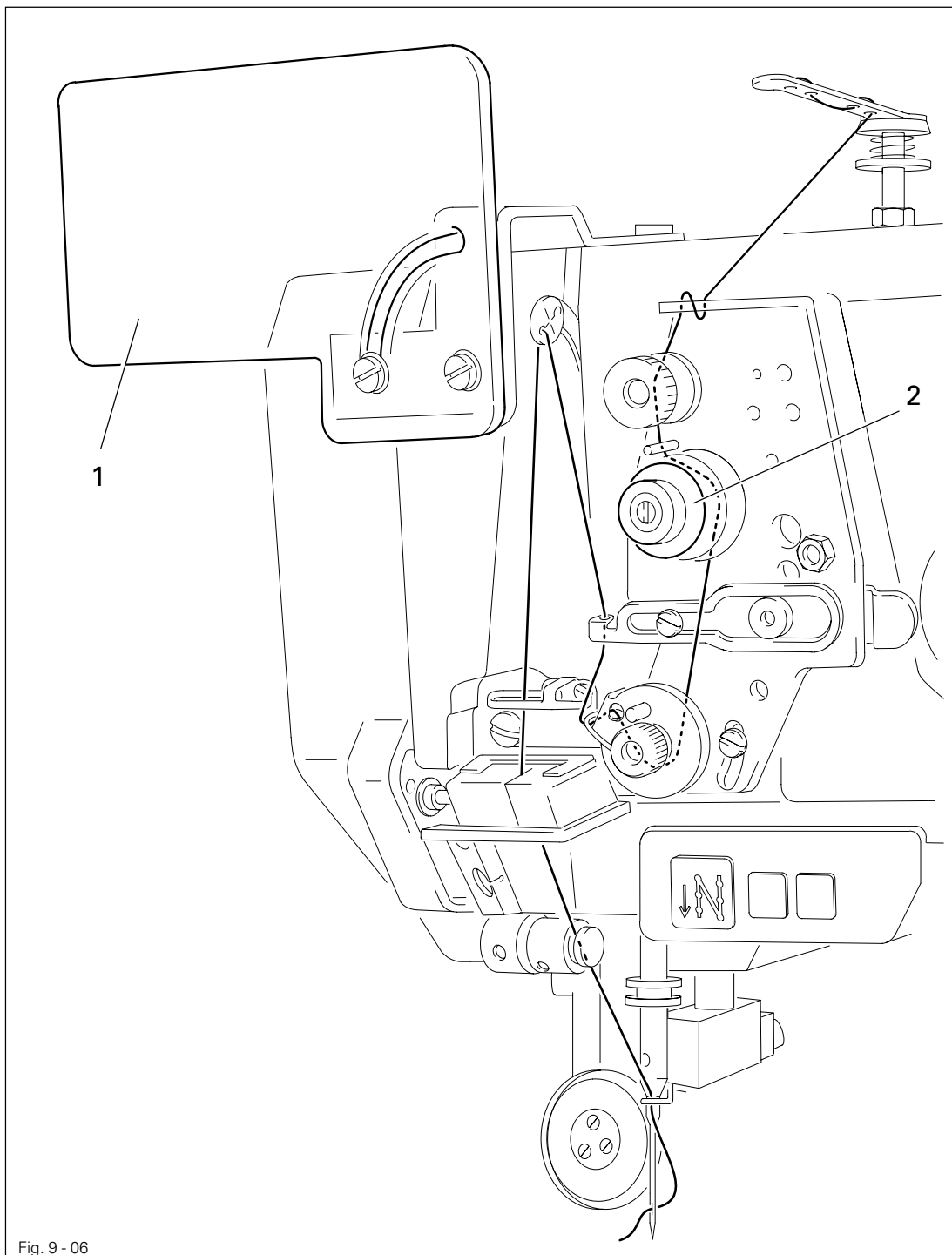


- Insert the bobbin into the bobbin case 1.
- Pass the thread through the slot under spring 2.
- Pass the thread through the notch.
- Adjust the thread tension by turning screw 3.



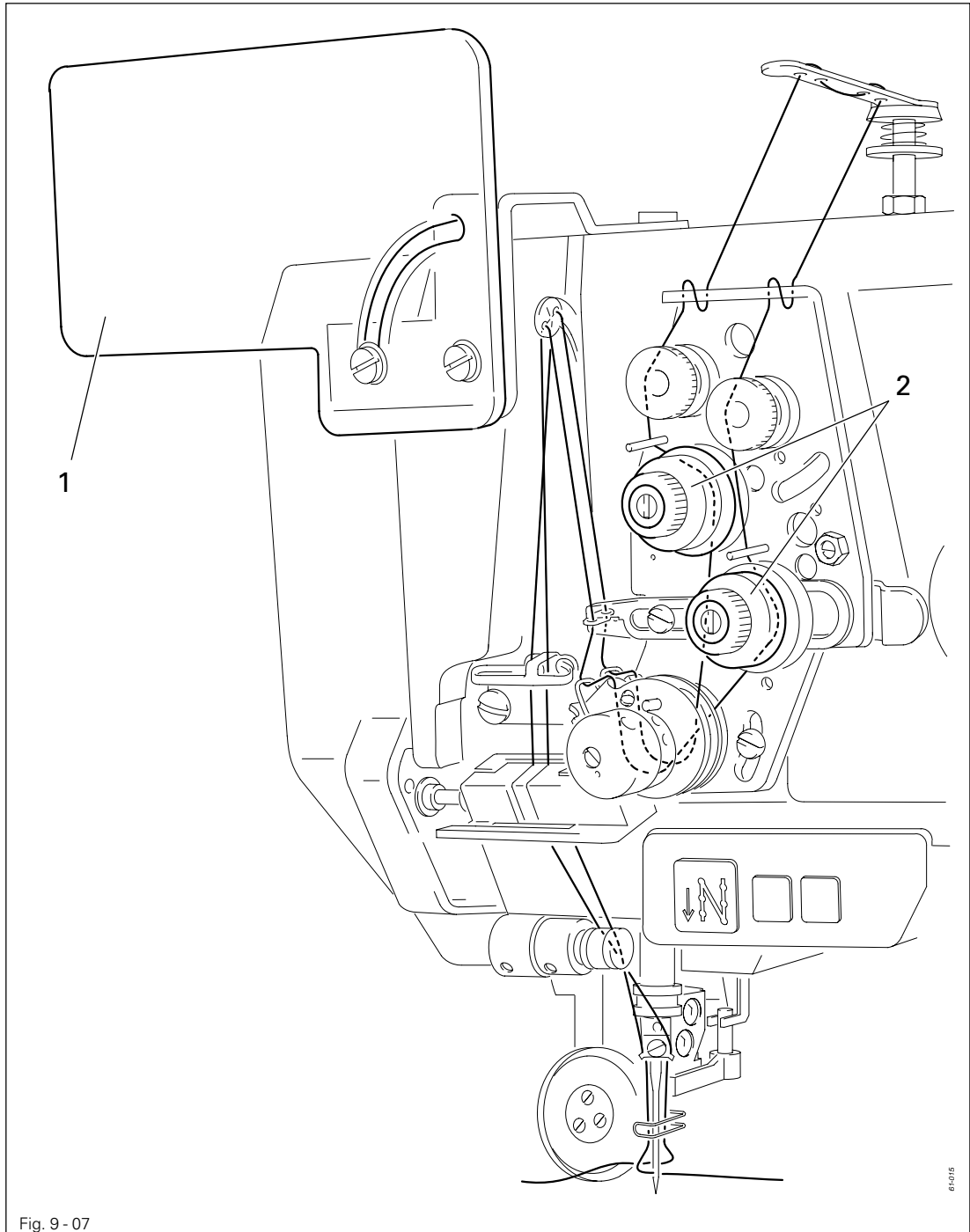
When the thread is pulled, the bobbin must rotate in the direction of the arrow.

9.06 Threading the needle thread and regulating its tension on model 571 and 591



Switch the machine off!
 Danger of injury if the machine is started accidentally!

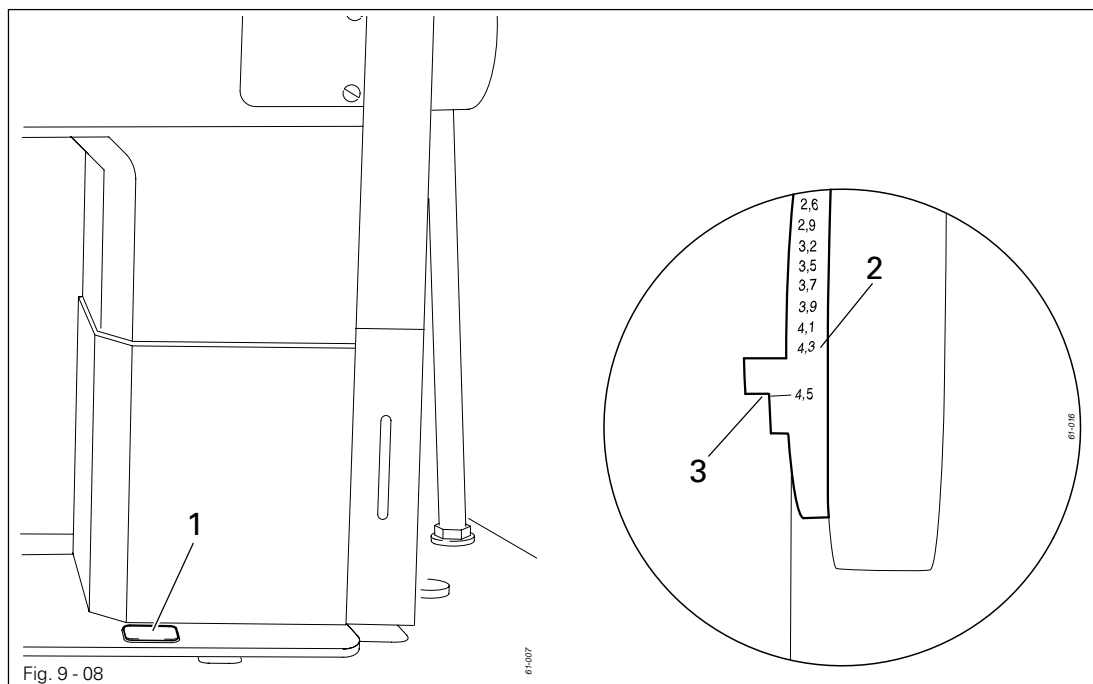
- Tilt up the eye guard 1.
- Thread the needle thread as shown in Fig. 9-06.
- On model 571 the needle is threaded from the right to the left, and on model 591 from the left to the right.
- Adjust the needle thread tension by turning milled screw 2.



Switch the machine off!
Danger of injury if the machine is started accidentally!

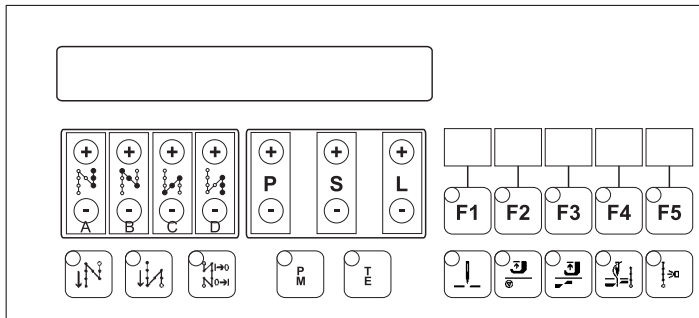
- Tilt up the eye guard 1.
- Thread both needle threads as shown in Fig. 9-07.
- The left needle is threaded from the right to the left, and the right needle from the left to the right.
- Adjust the needle thread tensions by turning milled screws 2.

9.08 Setting the stitch length



- Press key **1** and at the same time turn the balance wheel until the stitch setter clicks into position.
- Hold down key **1** and turn the balance wheel to and fro until the stitch length required is shown on the scale **2** opposite the bottom edge **3** of the belt guard recess.

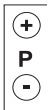
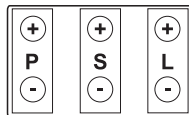
9.09 Setting the stitch counting function for bobbin thread monitoring



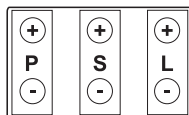
- Switch on the machine.



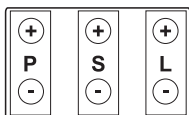
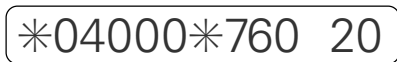
- Press the **Parameter input** key (LED on).



- By pressing +/- on **key P** select the parameter group "760".



- By pressing +/- on **key L** set the number of stitches to be sewn with one bobbin. The value displayed is multiplied by 200 and shown on the left side of the display screen. Example display 20 x200 = 4000 stitches.



- Save the input by terminating the parameter input (LED off).



On machines without a control panel the same parameter can be entered on the display screen of the motor (see motor service manual).

10 Care and maintenance

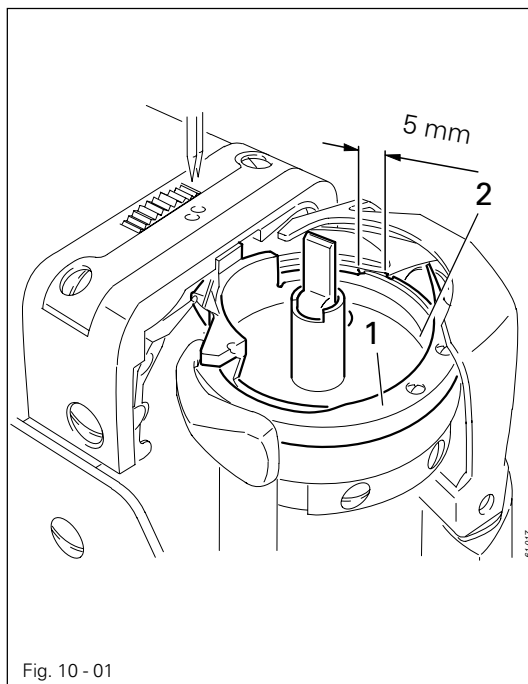
Clean	daily, more frequently if in continuous operation
Oil level (thread lubrication/hook lubrication)	daily, before use
Oil the hook	daily, before use
Lubricate the bevel gears	once a year
Check/adjust air pressure	daily, before use
Clean air filter of air-filter/lubricator	when required



These maintenance intervals are calculated for the average running time of a single shift operation. If the machine is operated more than this, shorter intervals are recommended.

10.01 Cleaning

Clean the hook and hook compartment daily, more often if in continuous operation.

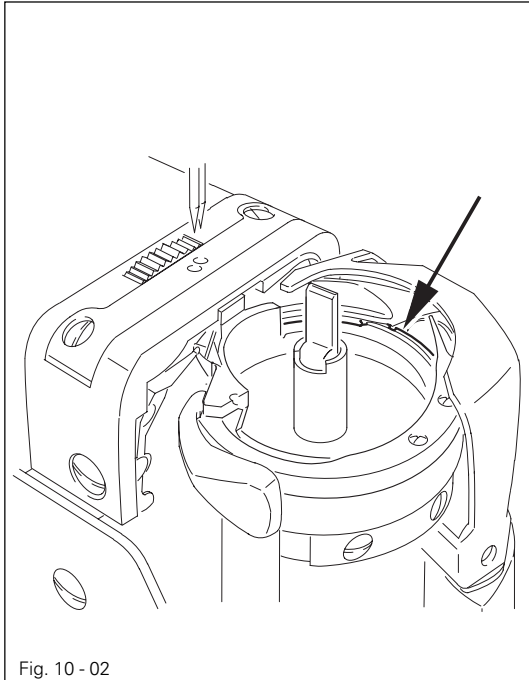


Switch the machine off!
Danger of injury if the machine is started accidentally!

- Bring the needle bar to its highest position.
- Open the post cap and remove the bobbin case cap and the bobbin.
- Unscrew hook gib 1.
- Turn the handwheel until the point of bobbin case 2 penetrates into the groove of the hook race approx. 5 mm.
- Remove bobbin case 2.
- Clean the hook race with paraffin.
- When inserting the bobbin case 2, ensure that the horn of the bobbin case 2 engages in the groove of the needle plate.
- Screw hook gib 1 back on and close the post cap.

10.02

Oiling the hook

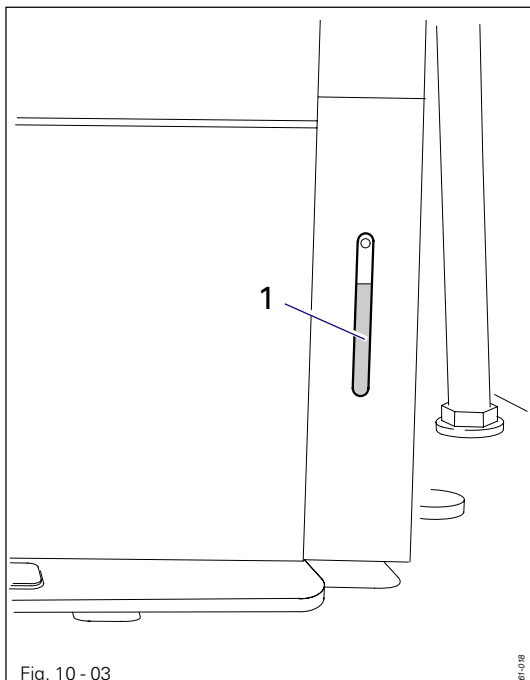


Switch the machine off!
Danger of injury if the machine is started accidentally!

- Pour **1-2 drops** of oil into hole **1** of the hook gib daily.
- Before commissioning the machine, and after long periods out of operation, pour a few drops of oil into the hook race (see arrow).

10.03

Oil bowl for hook lubrication

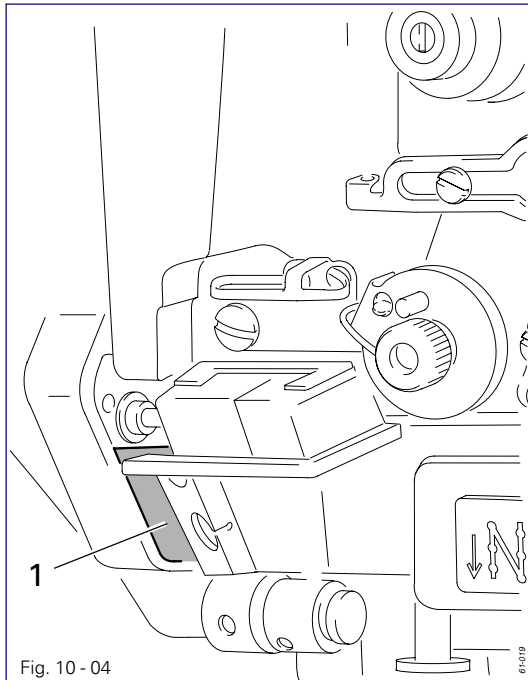


Check the oil level before each use.

There must always be oil in reservoir 1.

- If required refill oil through hole.

10.04 Filling the oil reservoir of the thread lubrication unit



Control the oil level before each use.

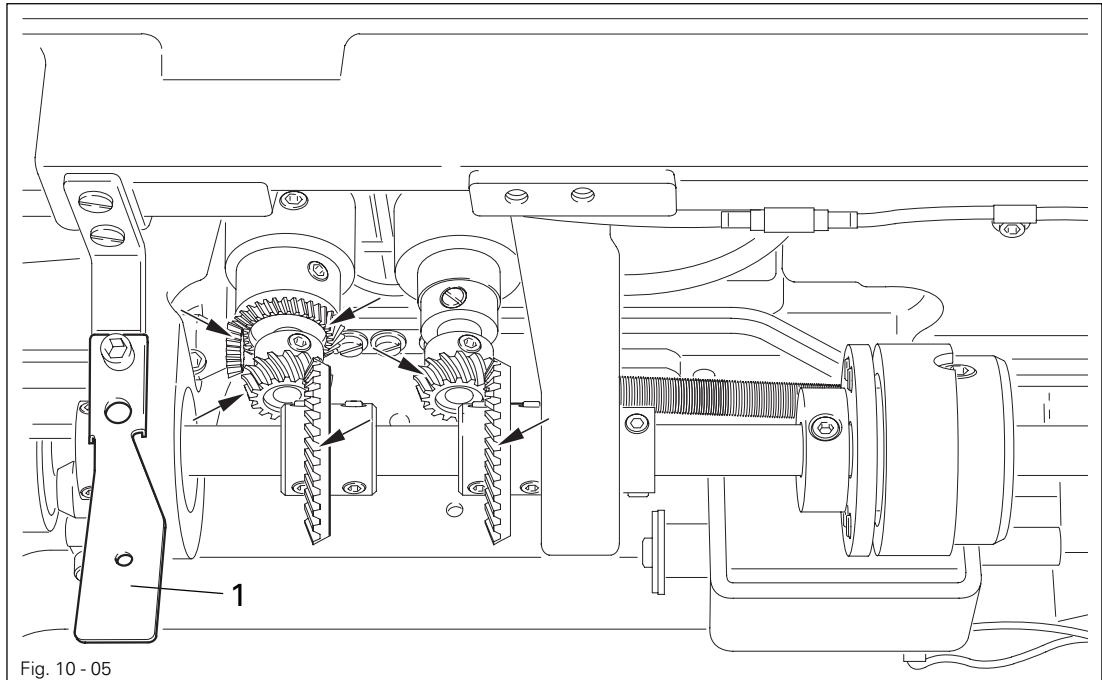
There must always be oil in the reservoir 1.

- If necessary, fill oil up to mark through hole.



We recommend
PFAFF thread lubricating oil,
Order No. 280-1-120 217.

10.05 Lubricating the bevel gears



Switch the machine off!
Danger of injury if the machine is started accidentally!

- All bevel gears must be supplied with new grease once a year.
- Tilt the sewing head back onto the support.

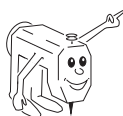


Fig. 10-05 shows the bevel gears of the 574.

- Apply grease to all the tooth flanks and the rack (see arrows).
- To set the sewing head upright, press tilt lock 1 backwards and set the sewing head upright using both hands.



Use both hands to set the sewing head upright!
Danger of crushing between the sewing head and the table top!



We recommend PFAFF sodium grease with a dripping point of approx. 150C,
Order No. 280-1-120 243.

10.06 Checking/adjusting the air pressure

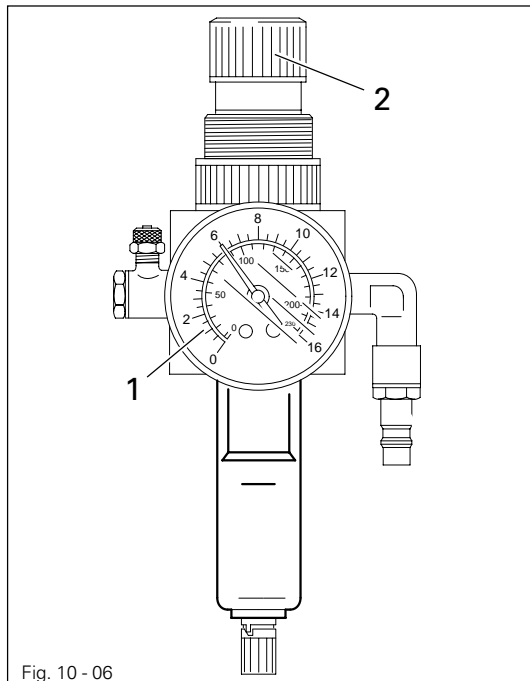
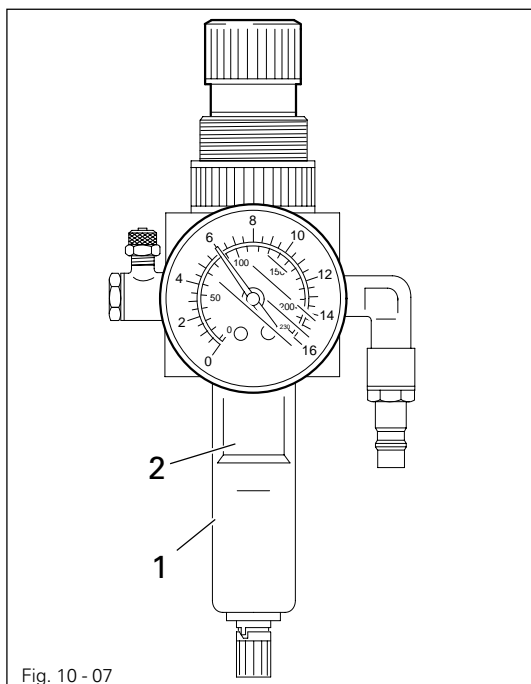


Fig. 10 - 06

- Before operating the machine, always check the air pressure on gauge 1.
- Gauge 1 must show a pressure of 6 bar.
- If necessary adjust to this reading.
- To do so, pull knob 2 upwards and turn it so that the gauge shows a pressure of 6 bar.

10.07

Cleaning the air filter of the air-filter/lubricator



Switch the machine off!

Disconnect the air hose at the air-filter/lubricator.

To drain water bowl 1:

- Water bowl 1 drains itself automatically when the compressed-air hose is disconnected from the air-filter/lubricator.

Cleaning filter 2:

- Unscrew water bowl 1.
- Take out filter 2.
- Clean filter 2 with compressed air or isopropyl alcohol (part No. 95-665 735-91).
- Screw in filter 2 and screw on water bowl 1.

11 Adjustment

11.01 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.



The machine must be switched off for all adjustment work!
Danger of injury if the machine is started accidentally!

11.02 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

11.03 Abbreviations

TDC = top dead center

BDC = bottom dead center

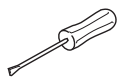
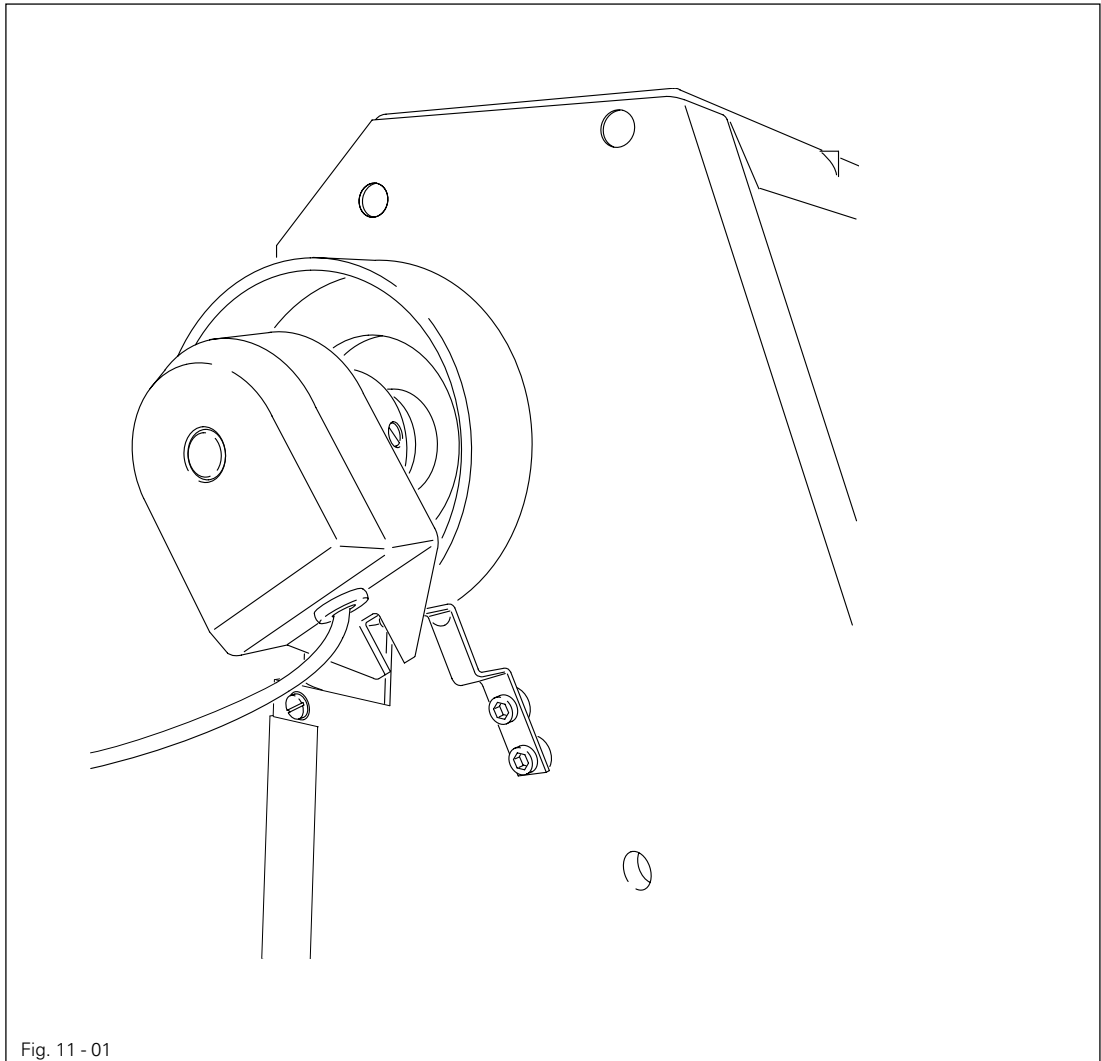
Adjustment

11.04 Adjusting the basic machine

11.04.01 Adjusting the synchronizer (does not apply to machines with flange motor)

Requirement

1. If sewing is interrupted the machine must position **5 mm before b.d.c.** of the needle bar.
2. After "pedal reverse" the machine must position at **t.d.c. take-up lever.**

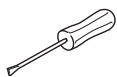
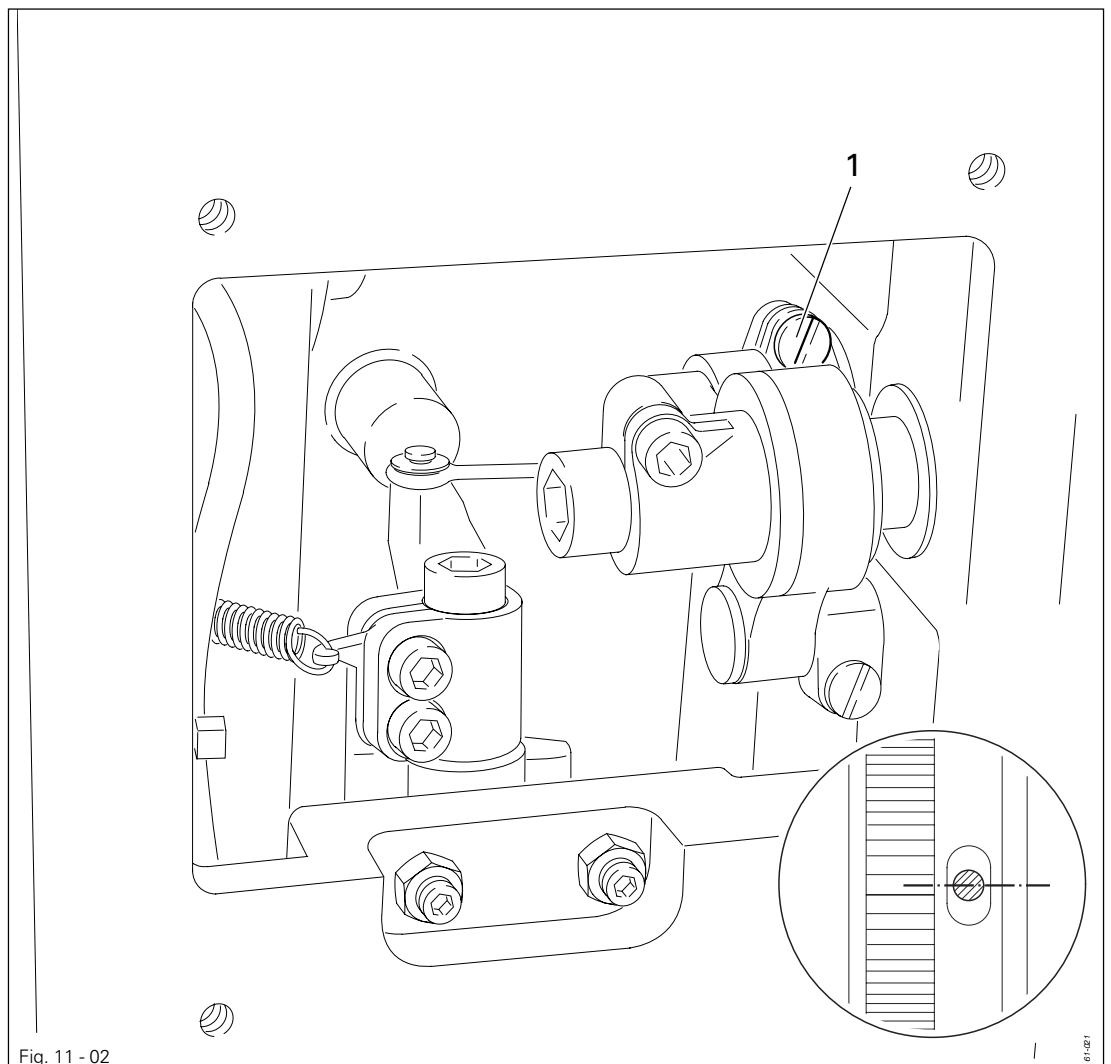


- Carry out adjustments according to the motor instruction manual.
- See also **Chapter 11.09** Parameter settings.

11.04.02 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.



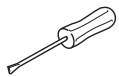
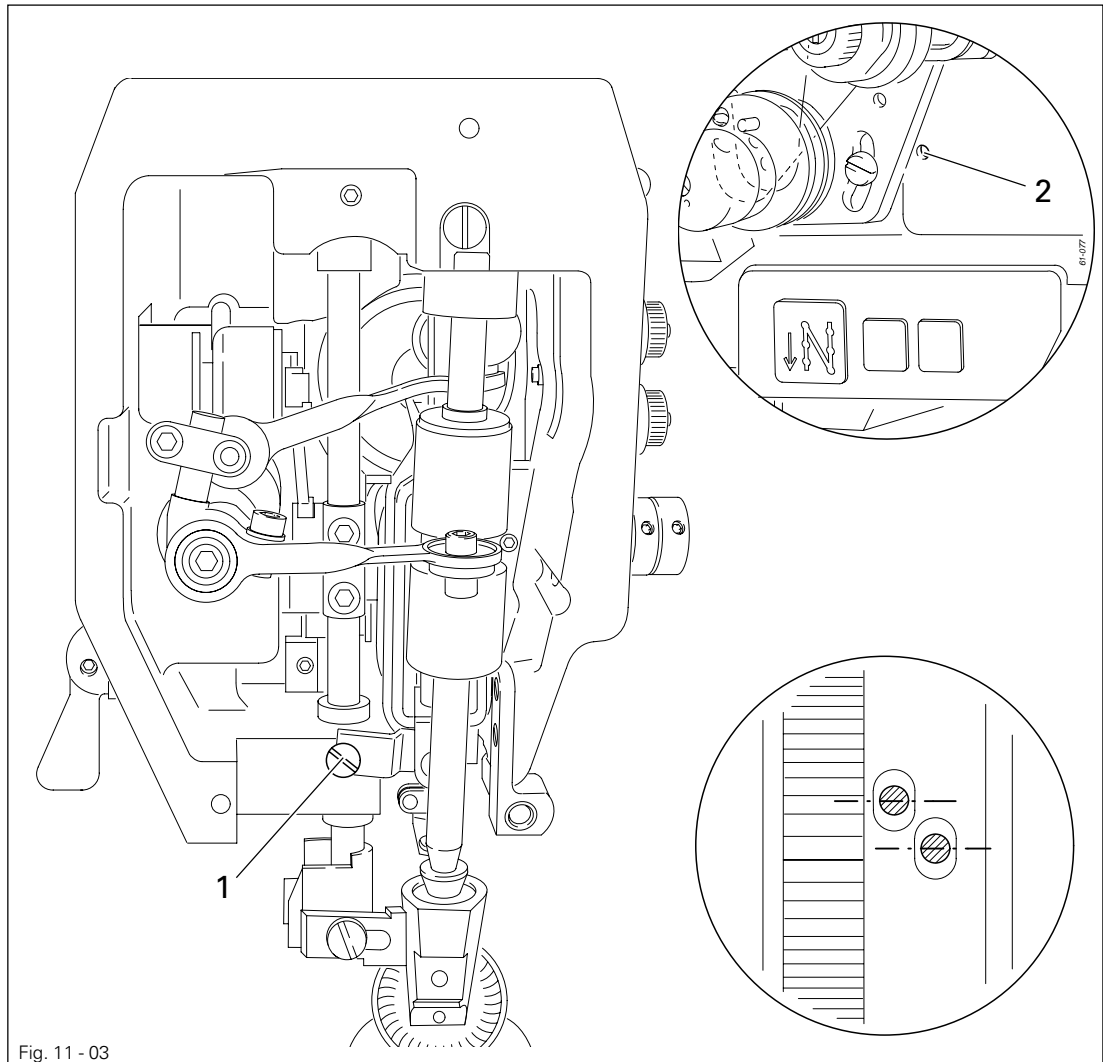
- Set the minimum stitch length.
- Adjust needle bar (screw 1) according to the requirement.

Adjustment

11.04.03 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.

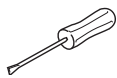
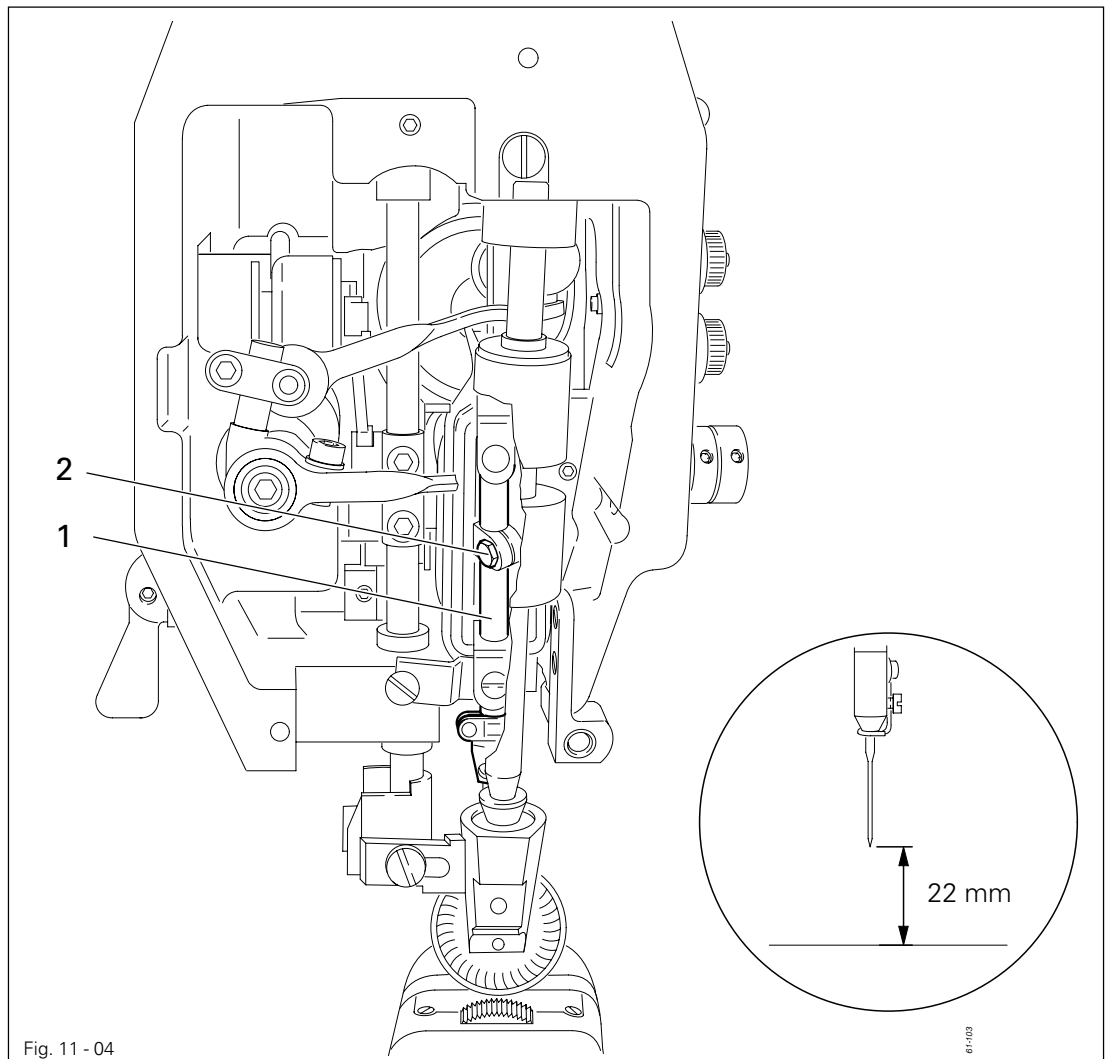


- Adjust needle bar (screws 1 and 2) according to the **requirement**.

11.04.04 Preliminary adjustment of the needle height

Requirement

When the needle bar is at TDC, there must be a clearance of approx. **22 mm** between the needle point and the needle plate.



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

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

Requirement

With the needle bar positioned 1.8 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.

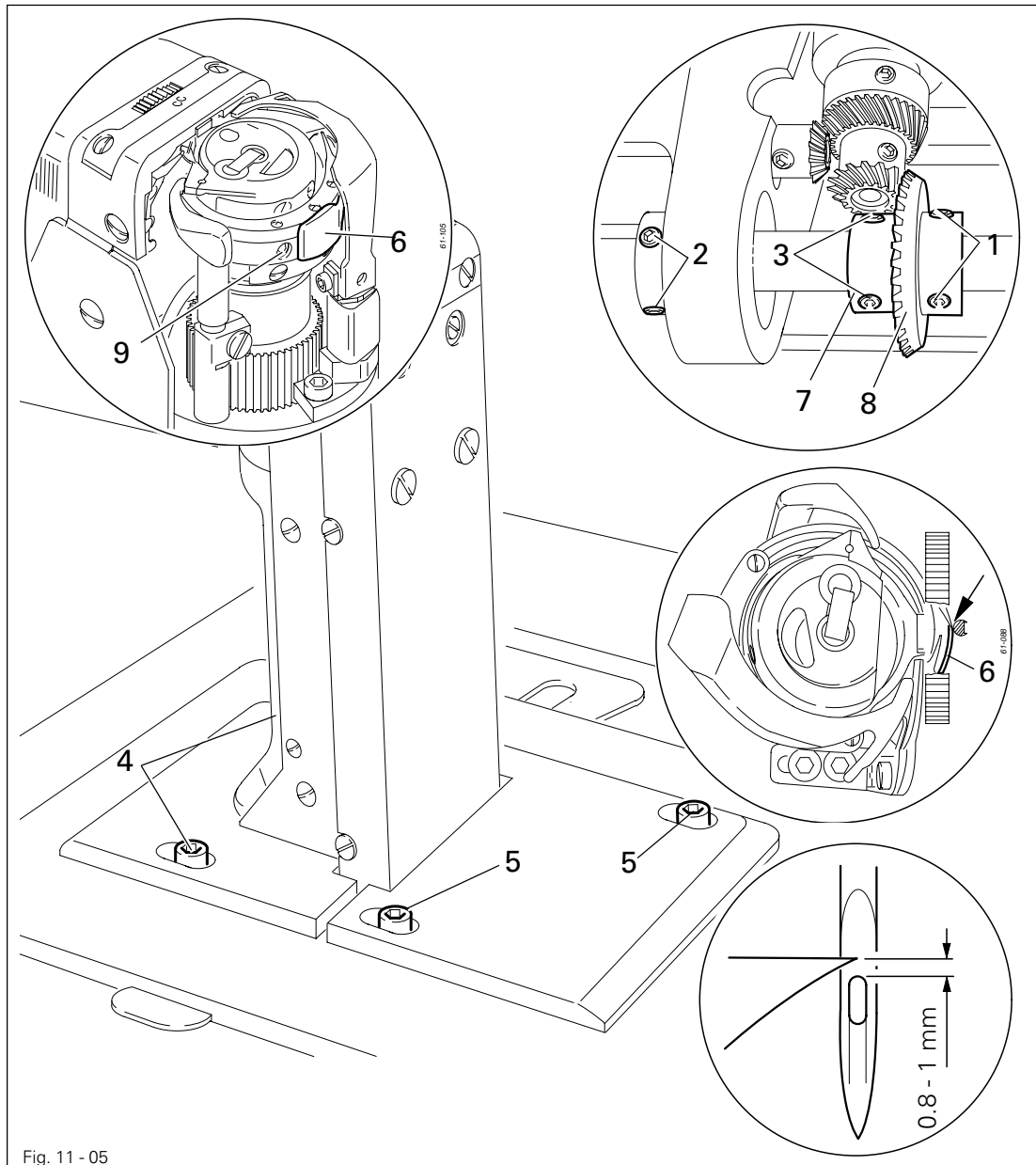
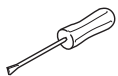


Fig. 11 - 05

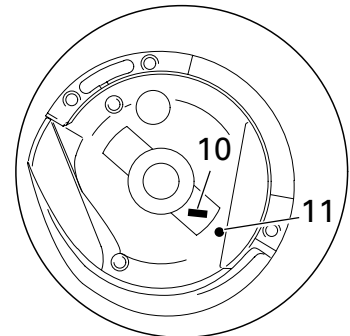


- Set stitch length at "0.8".
- Loosen both screws 1, 2, 3, 4 and 5.
- Bring needle bar to 1.8 mm past BDC:
- Set hook point at needle centre, making sure that the needle is not deflected by needle guard 6.
- Adjust needle height according to Requirement 2.

- 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.



11.04.06 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.

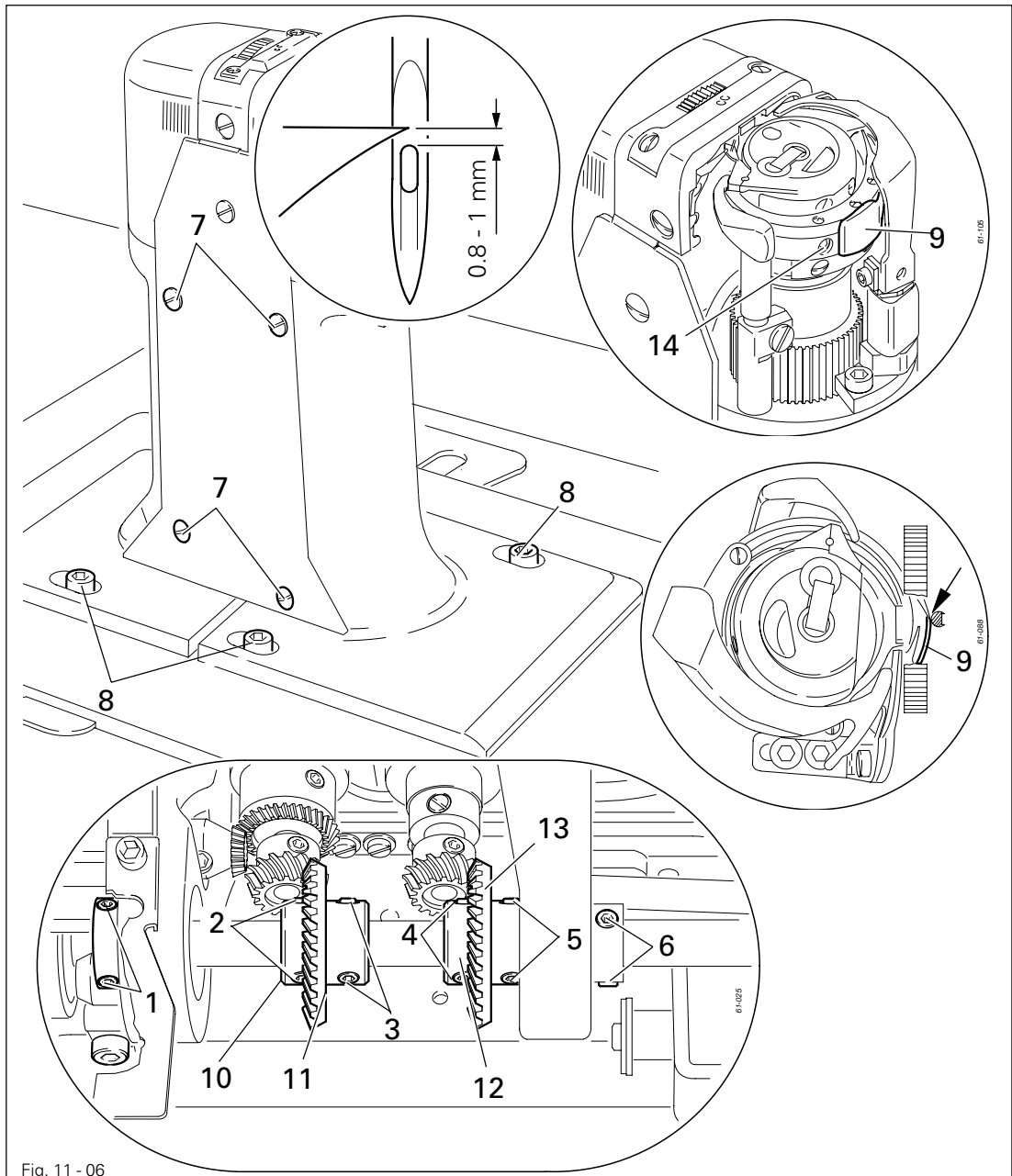
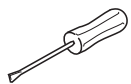


Fig. 11 - 06

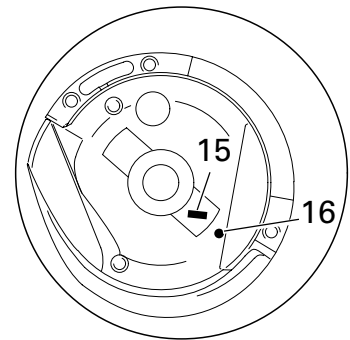


- Loosen screws 1, 2, 3, 4, 5, 6 and 7.
- Loosen screws 8 slightly.
- Bring needle bar to 2,0 mm past BDC:
- Set both hook points at needle centre, making sure that the needles are not deflected by needle guard 9.

- 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.



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

Requirement

In the needle rise position (see table) and with the stitch length setting "0,8", the following applies:

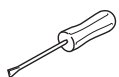
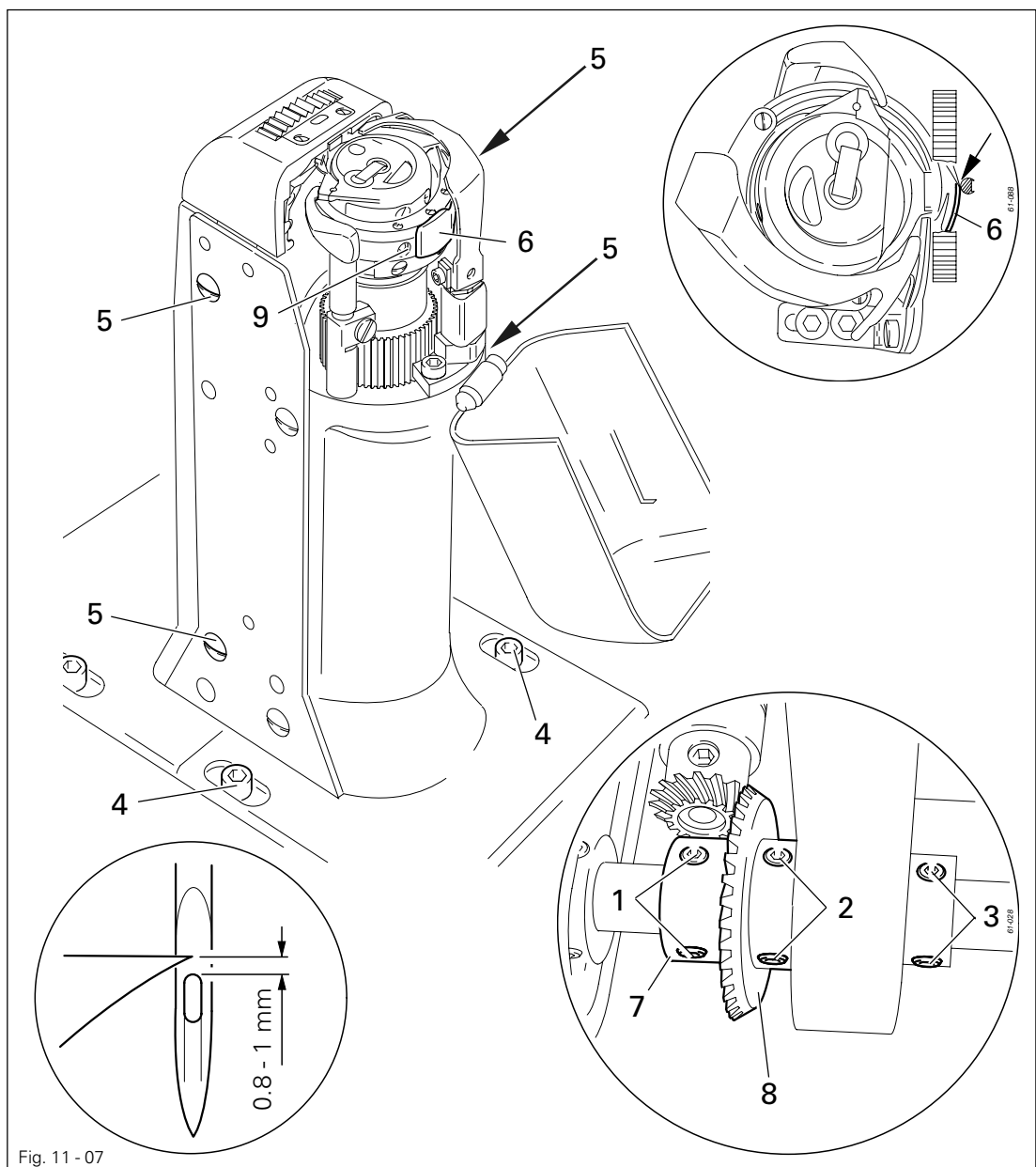
1. the hook point must be at needle centre with a hook-to-needle clearance of **0.05 to 0.1 mm**;
2. the top of the needle eye must be **0.8 to 1.0 mm** below the hook point;
3. the needle guard **6** must touch the needle lightly.



Needle rise position

Model A and B: **1.8 mm** after BDC of the needle bar.

Model C: **2.0 mm** after BDC of the needle bar.

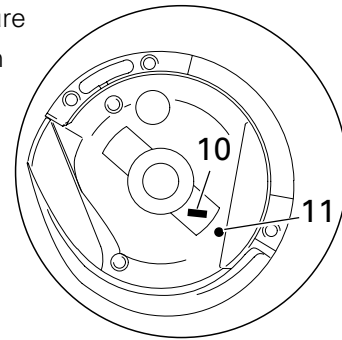


- Set stitch length at "0.8".
- Loosen screws **1, 2, 3, 4** and **5**.
- Move needle bar into version corresponding position (see table).

- 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.

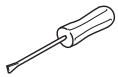
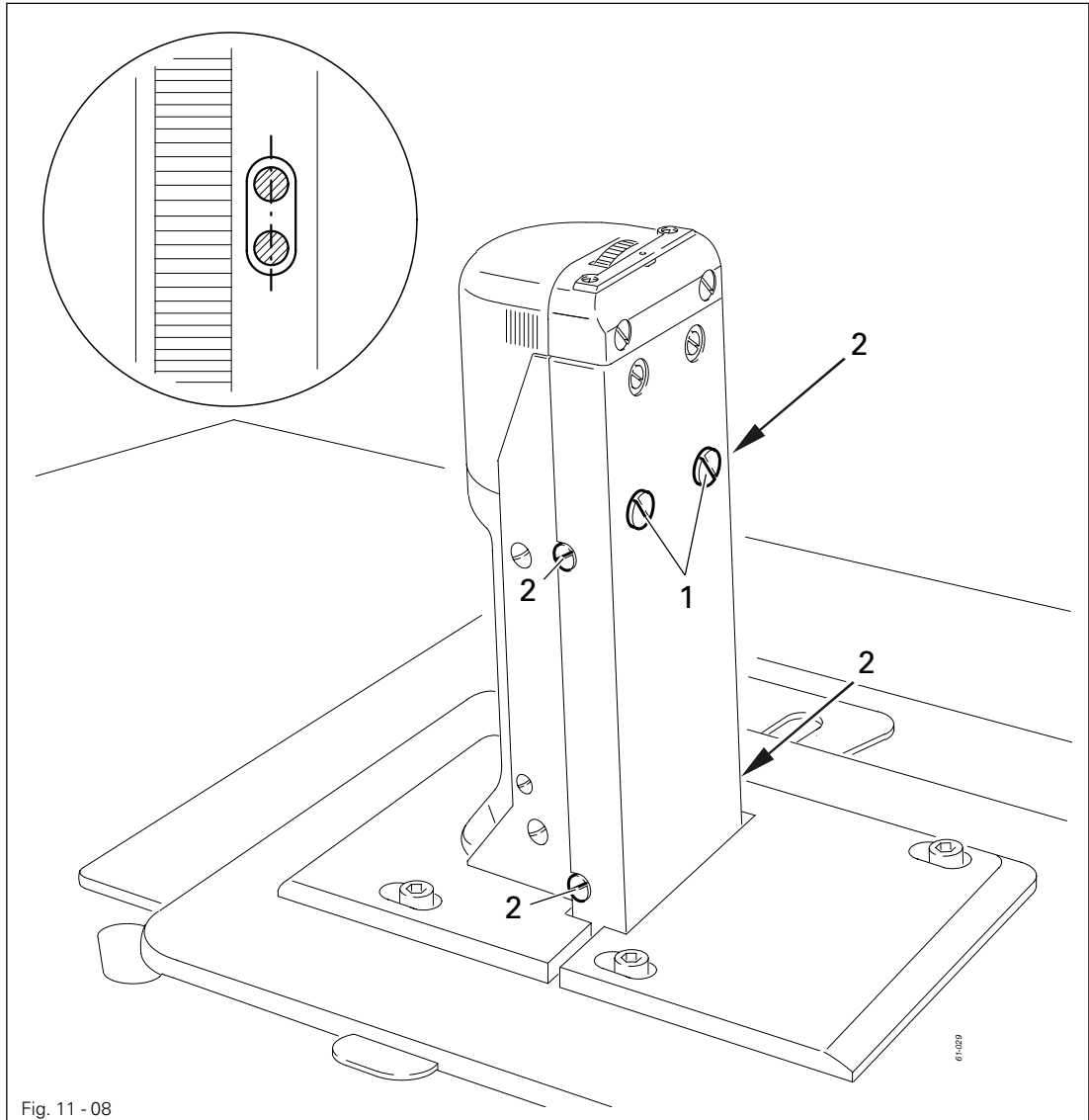


Adjustment

11.04.08 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.

11.04.09 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.

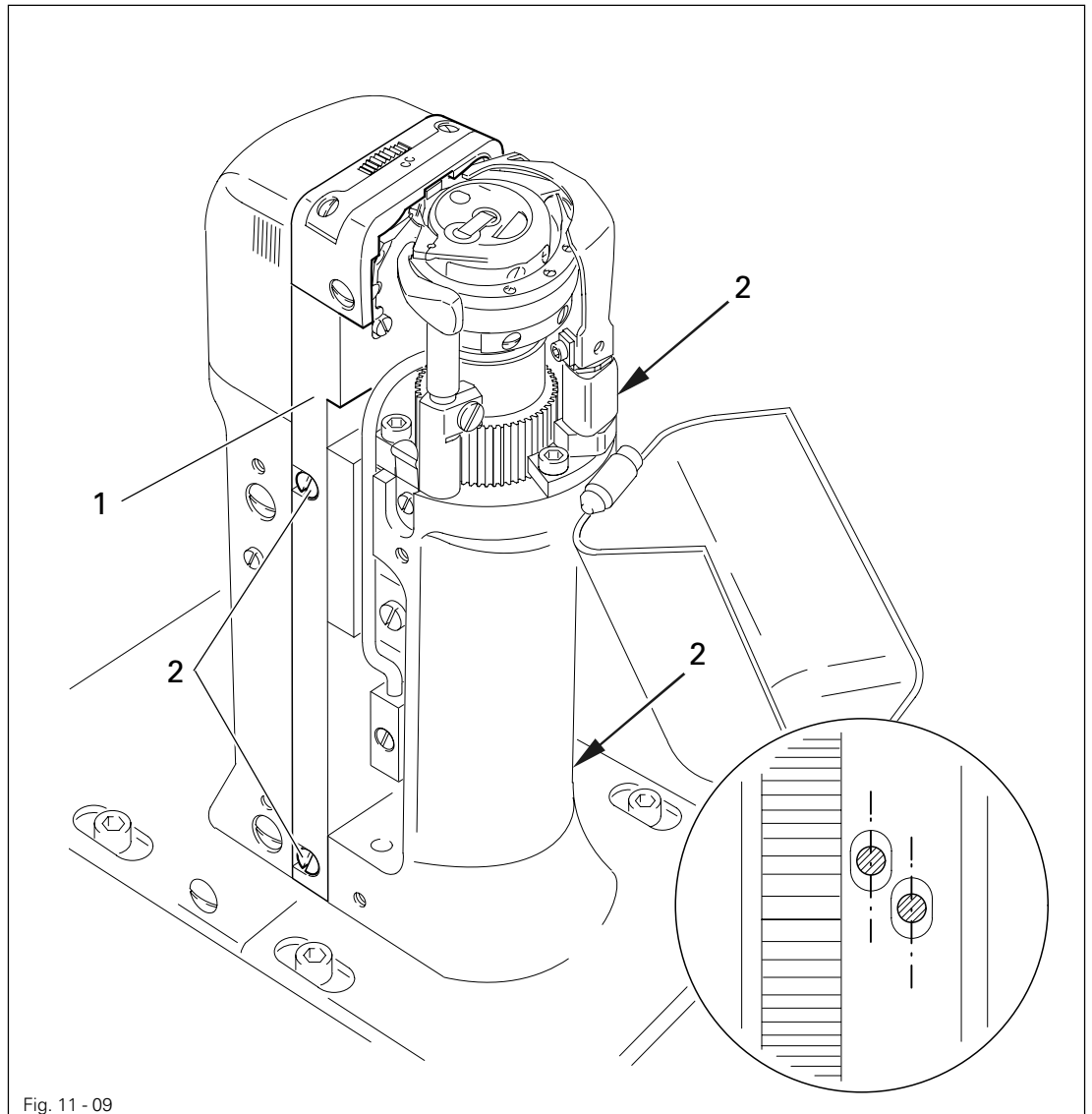


Fig. 11 - 09

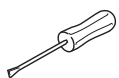
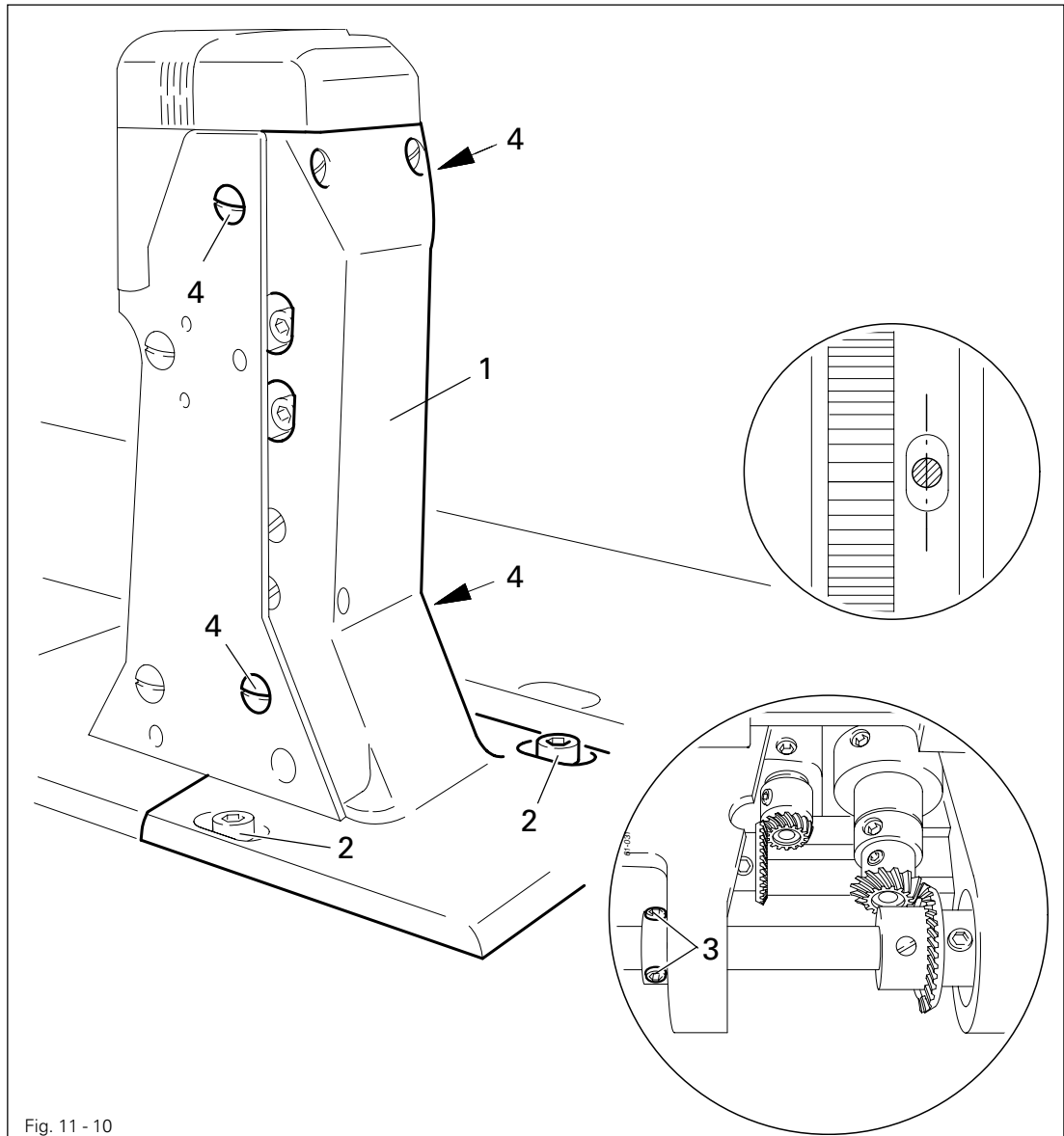
- Shift bearing plate 1 (screws 2, on both sides of the post) according to the requirement.

Adjustment

11.04.10 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.

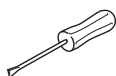
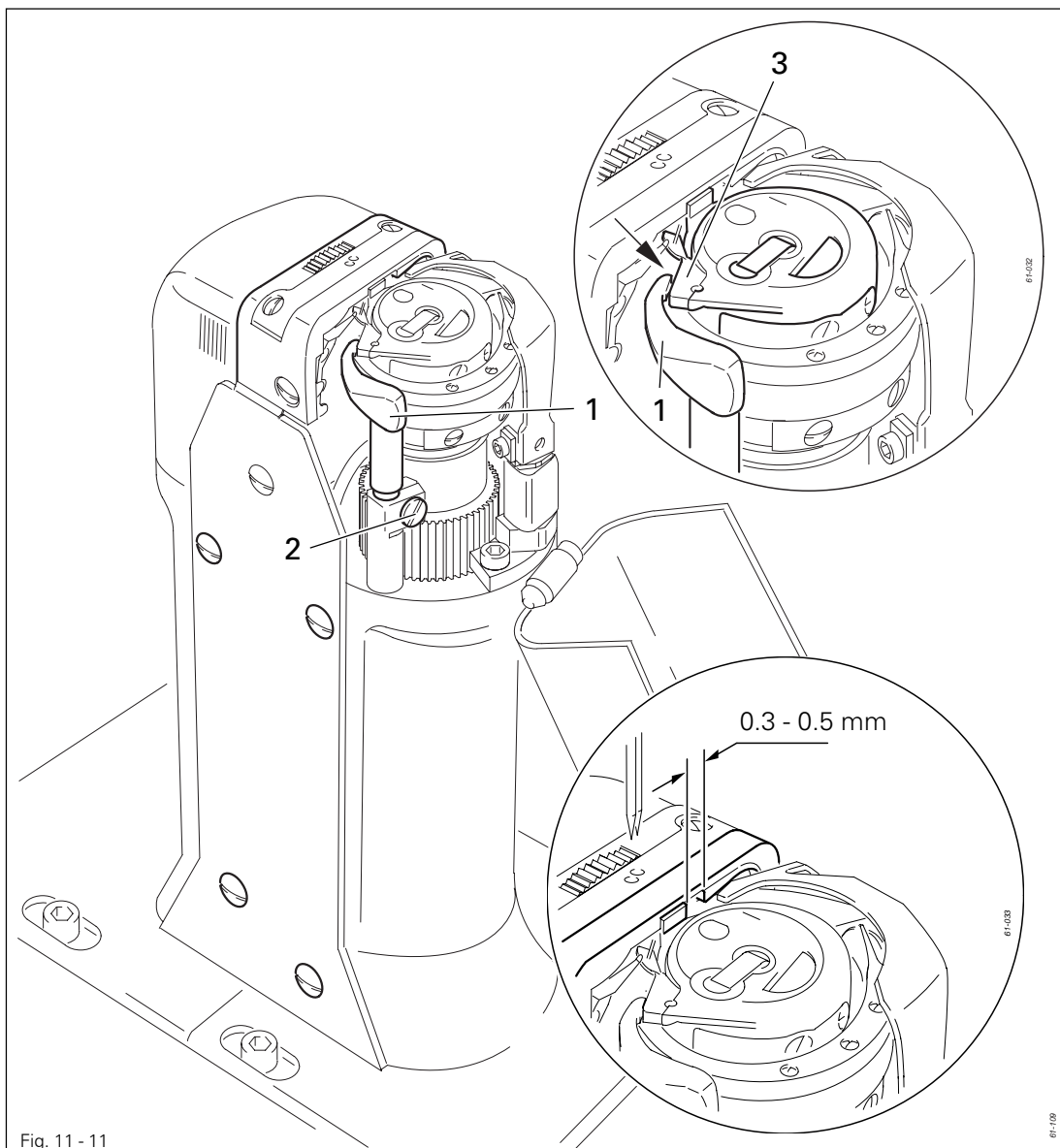


- Adjust feed wheel post 1 (screws 2, 3 and 4) according to the requirement.

11.04.11 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.



- 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.

11.04.12 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**.

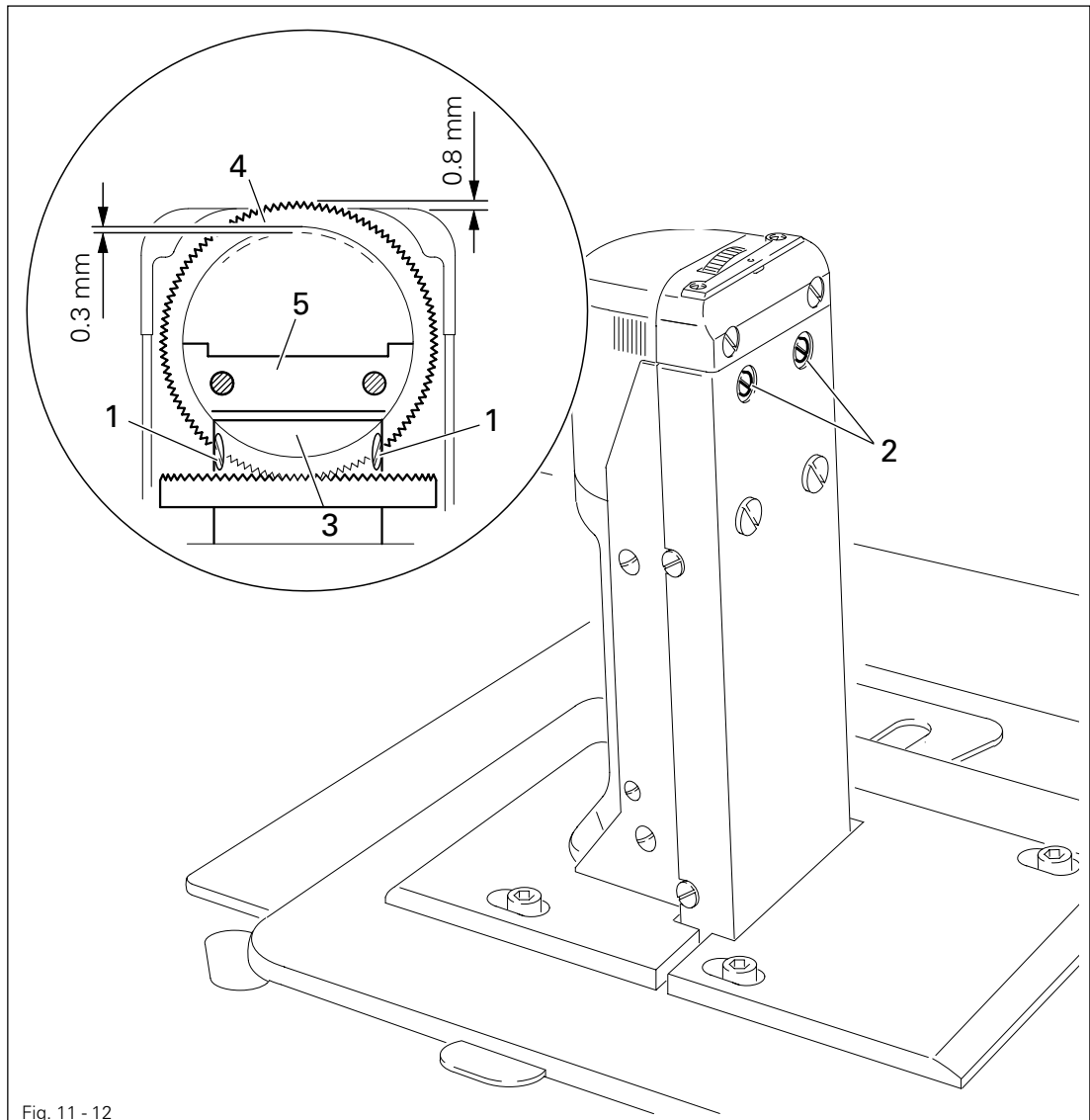
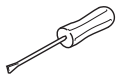


Fig. 11 - 12

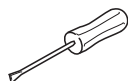
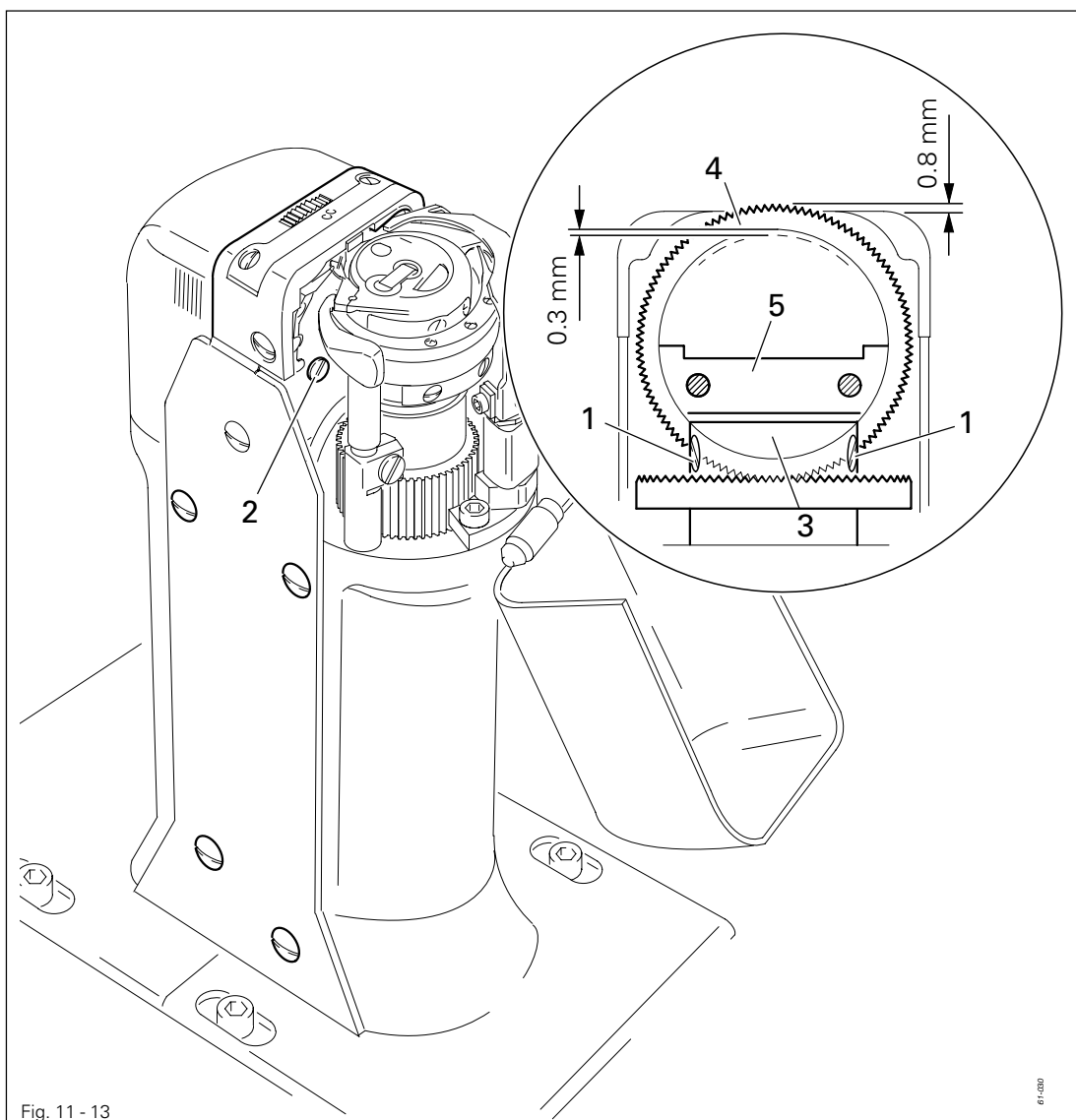


- Swing out the roller presser.
- Loosen screws **1** and **2**.
- Adjust drive wheel **3** according to **requirement 1**, taking care to see that the teeth of drive wheel **3** and feed wheel **4** lock into each other properly.
- Tighten screws **1**.
- Adjust guide **5** according to **requirement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

11.04.13 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**.



- 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**.

Adjustment

11.04.14 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**)

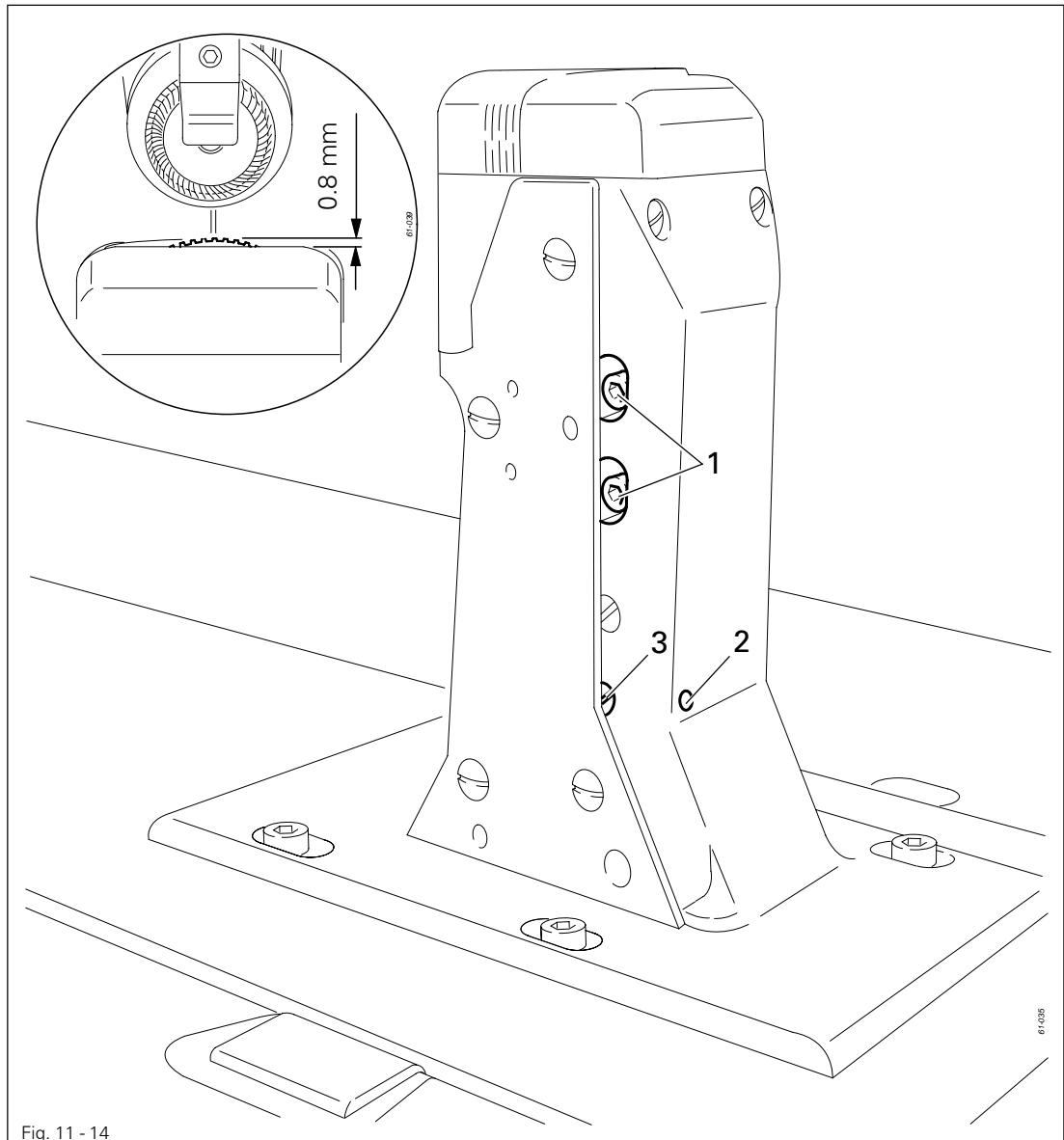
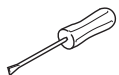


Fig. 11 - 14

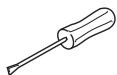
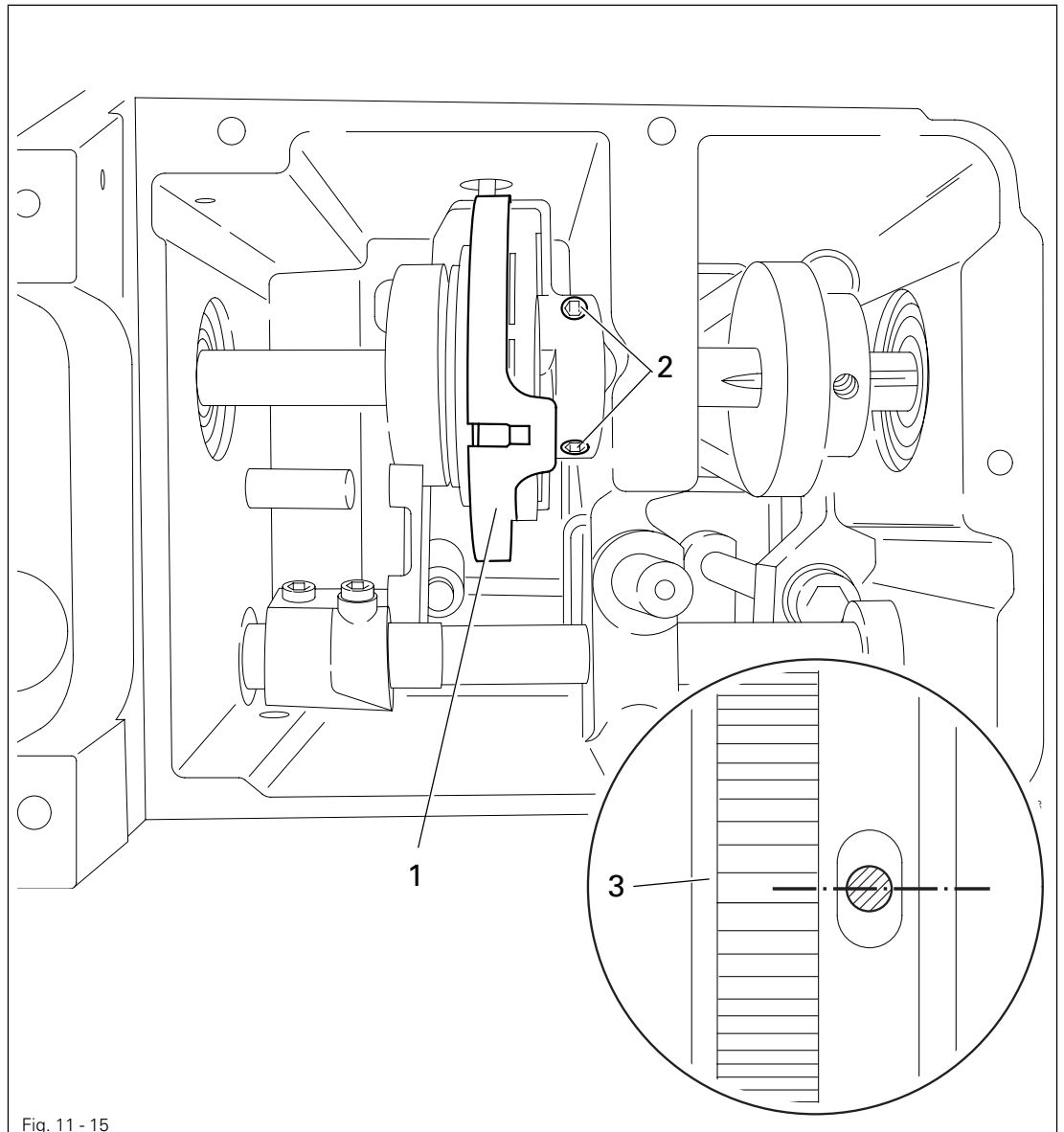


- Swing out the roller presser.
- Loosen screws 1.
- Adjust eccentric 3 (fastening screw accessible through hole 2) according to the requirement.
- Tighten screws 1.

11.04.15 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.

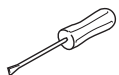
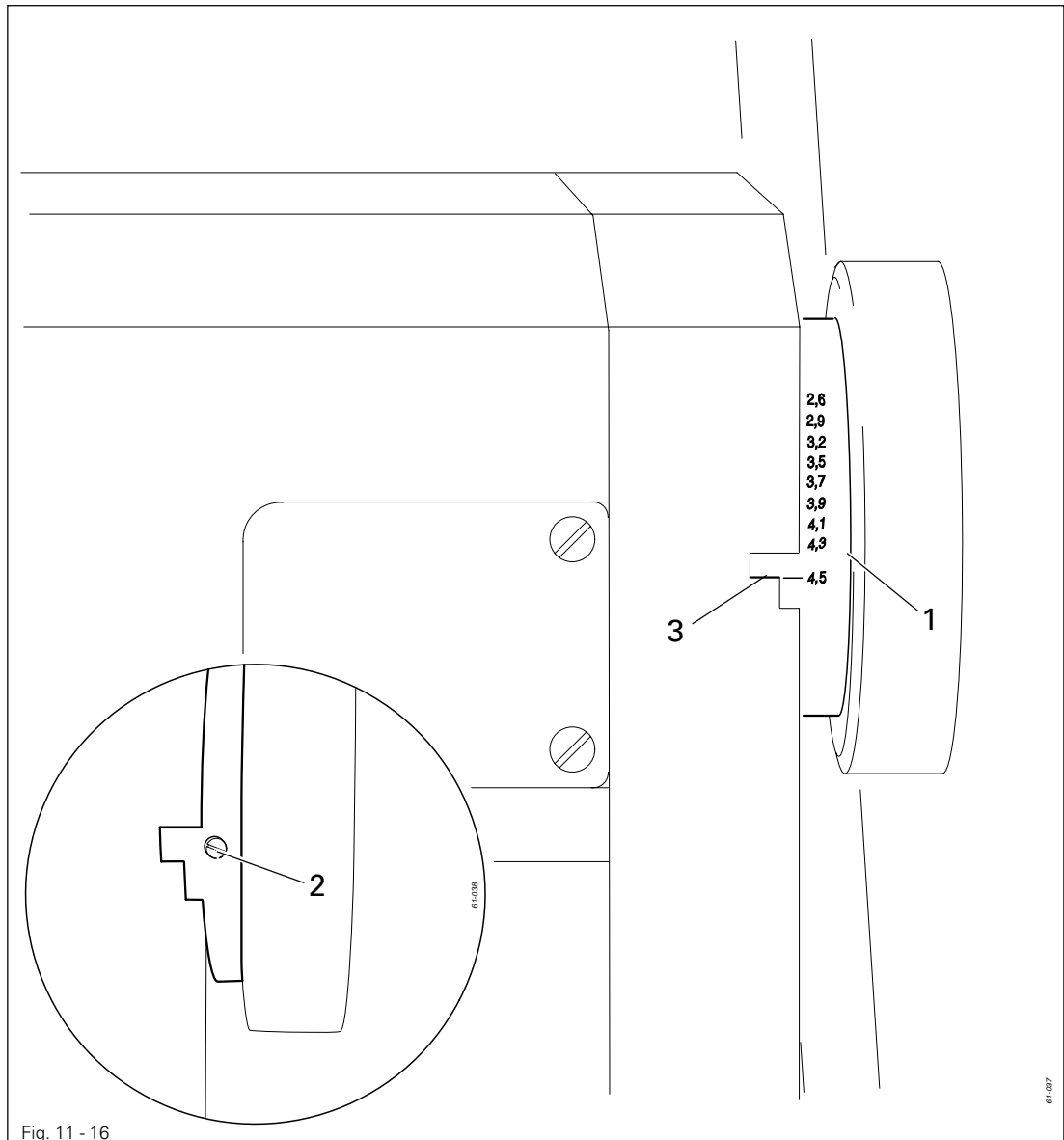


- Set the maximum stitch length.
- Turn stitch length control device **1** (screws **2**) according to the **requirement**.

11.04.16 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.

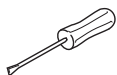
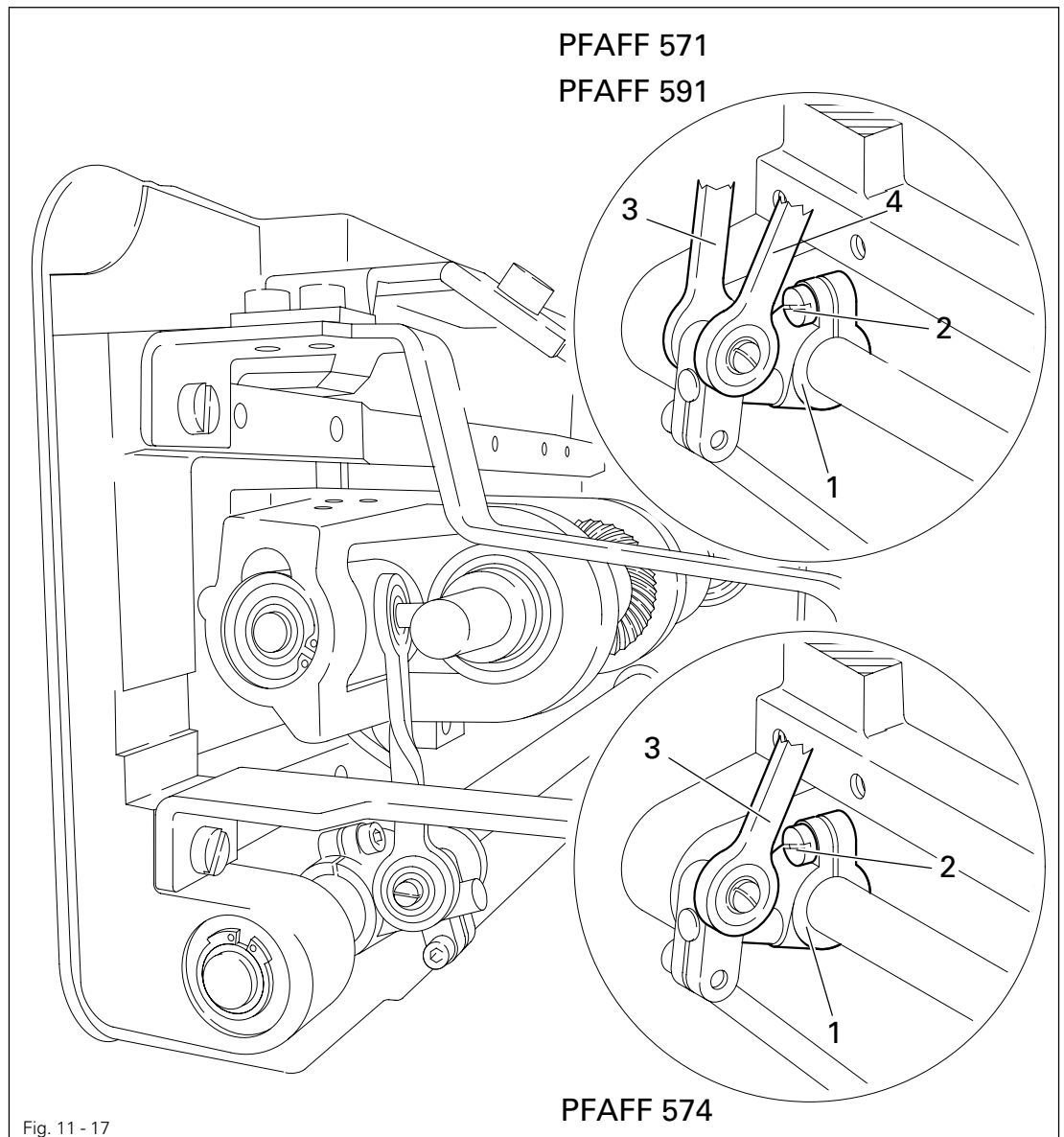


- Set the maximum stitch length.
- Turn the scale disk **1** (screws **2**) according to the **requirement**.

11.04.17 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.



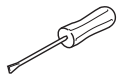
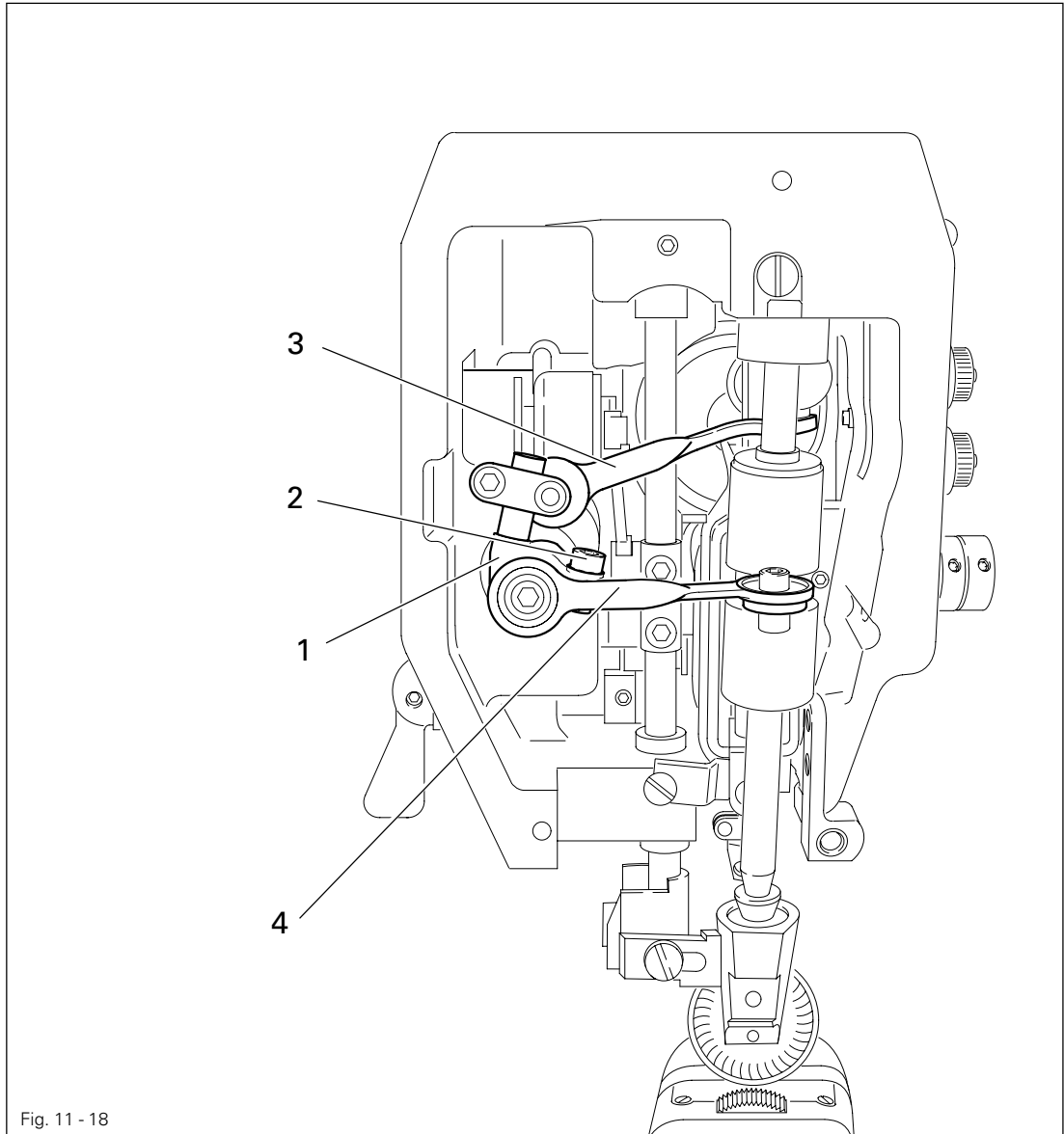
- Set the maximum stitch length.
- Twist or shift the shaft crank **1** (screw **2**) according to the **requirement**.

Adjustment

11.04.18 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.

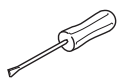
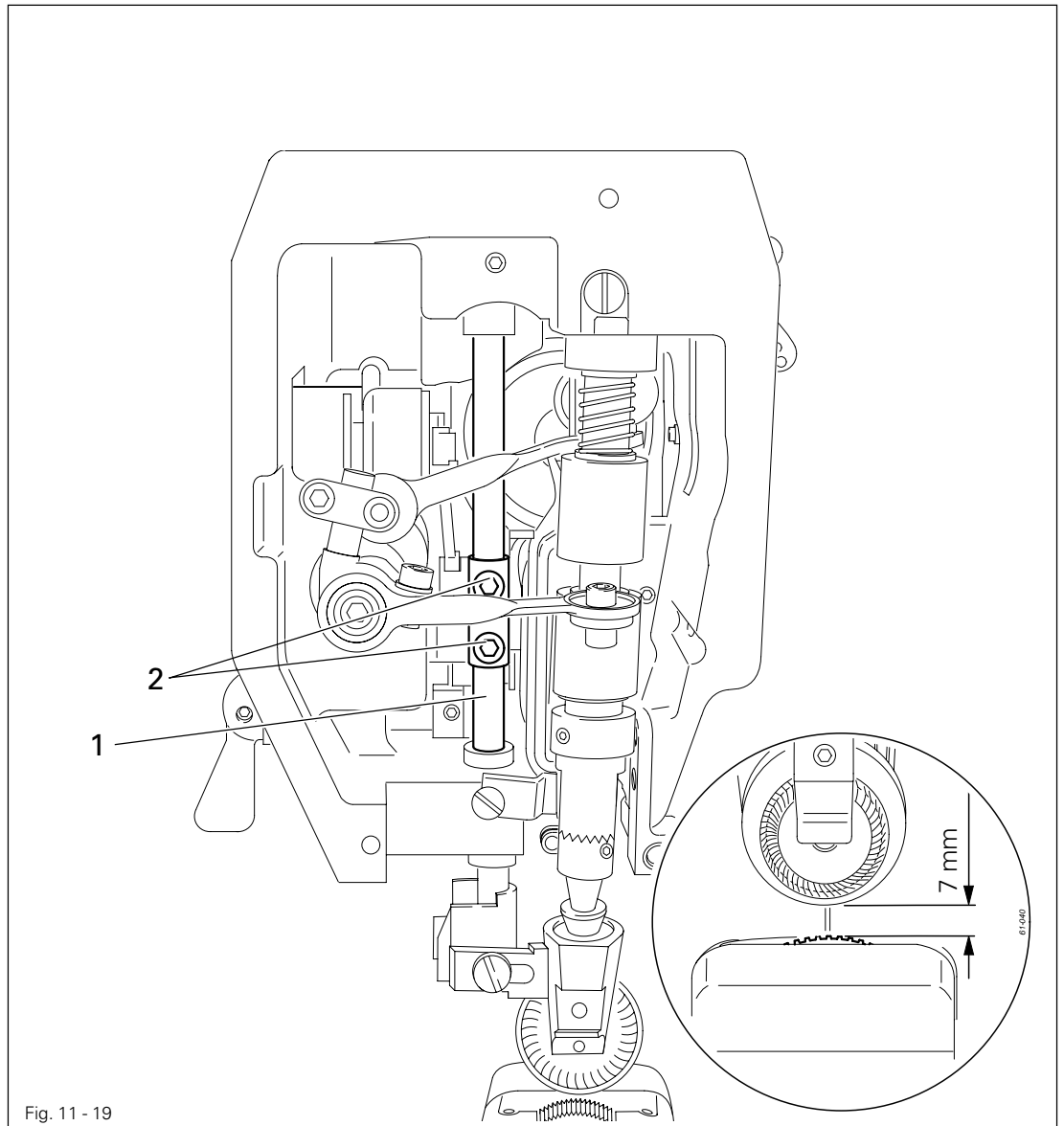


- Set the maximum stitch length.
- Twist clamp crank **1** (screw **2**) according to the **requirement**.

11.04.19 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.

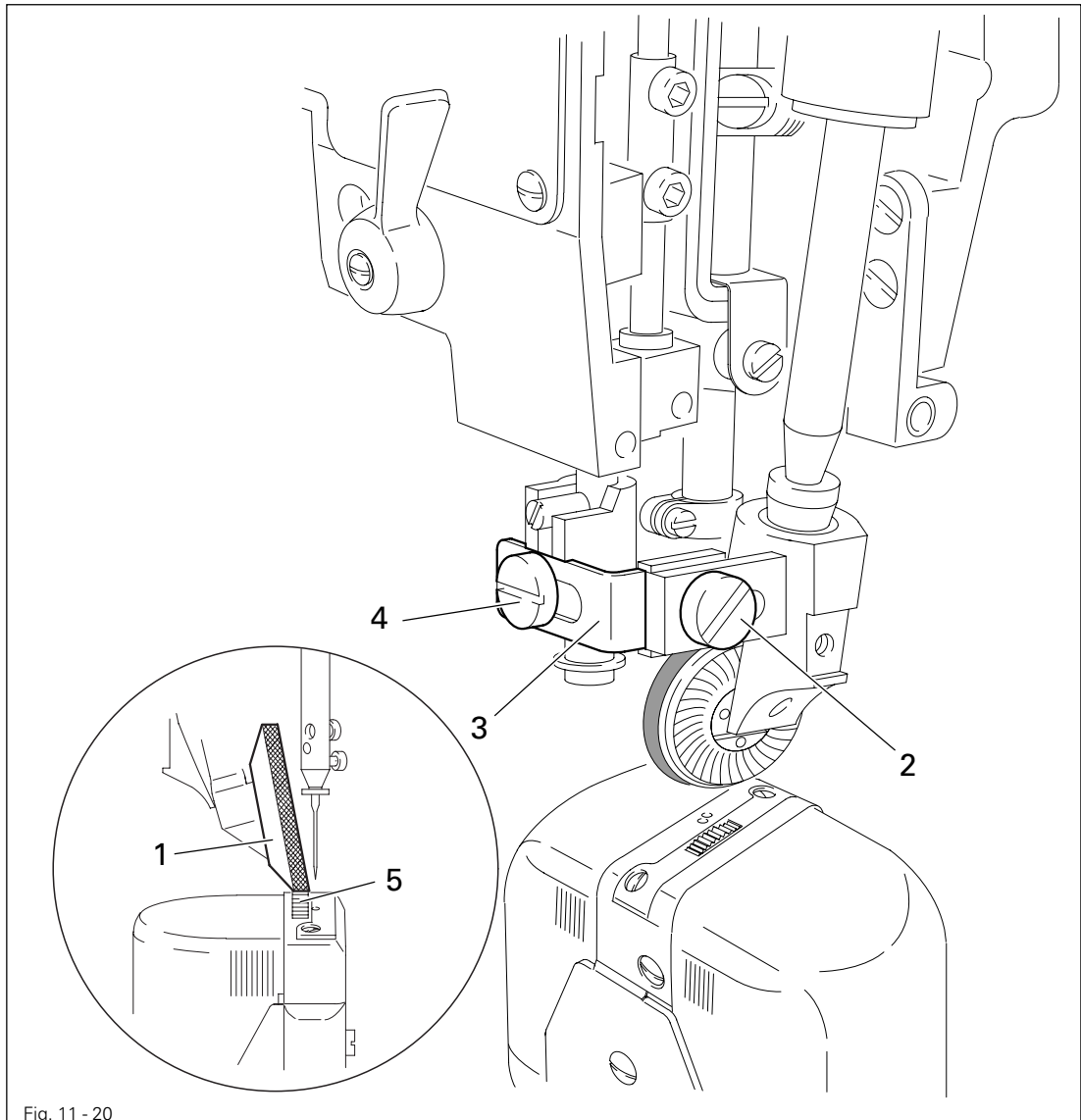
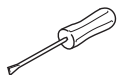


Fig. 11 - 20



- Raise the roller presser.
- Always observe **requirement 1** for subsequent adjustments.
- Adjust roller presser **1** (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**.

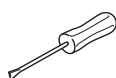
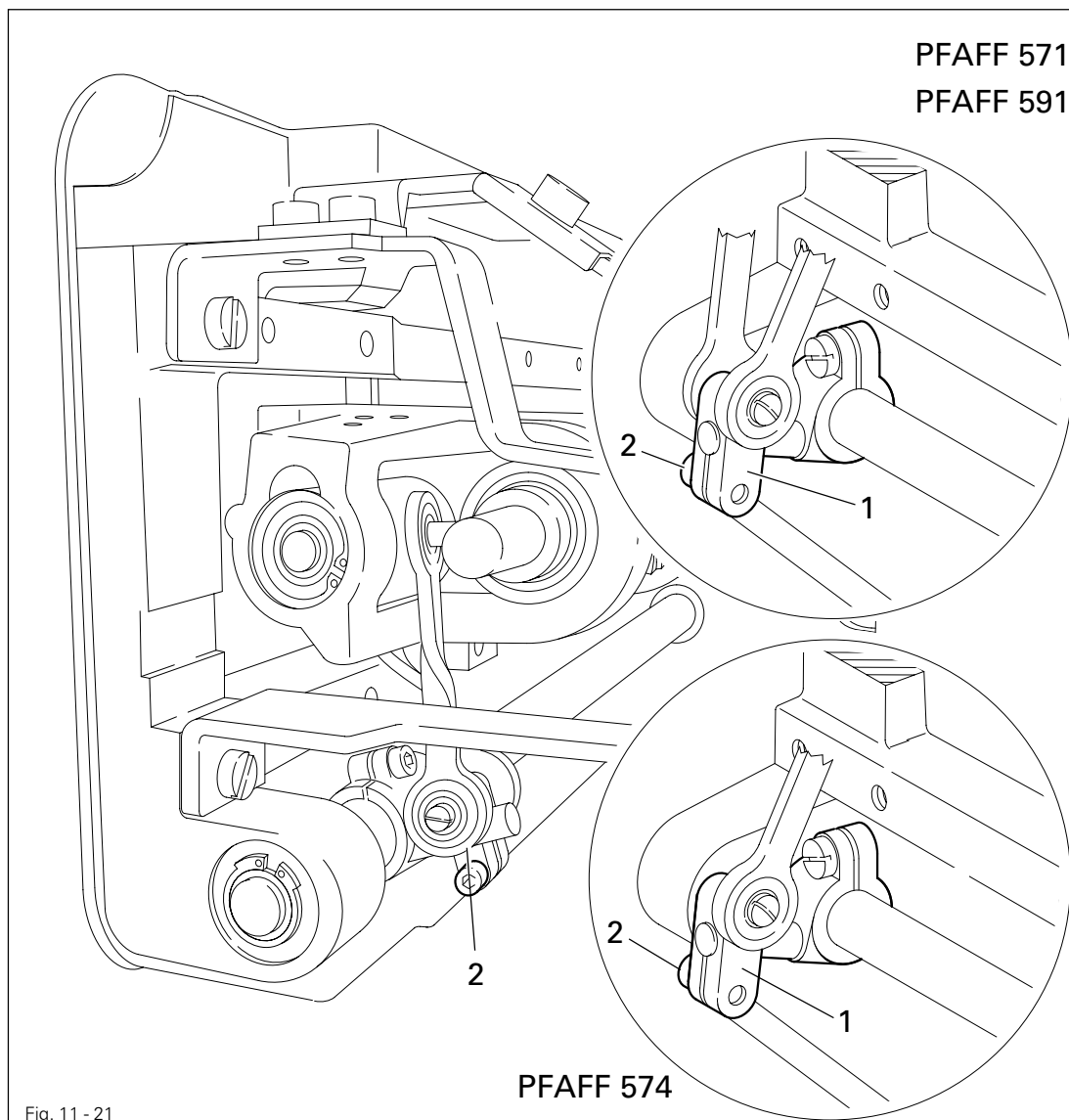


When sewing very tight curves, the roller presser **1** must be moved a little towards the operator.

11.04.21 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.



- 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.



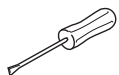
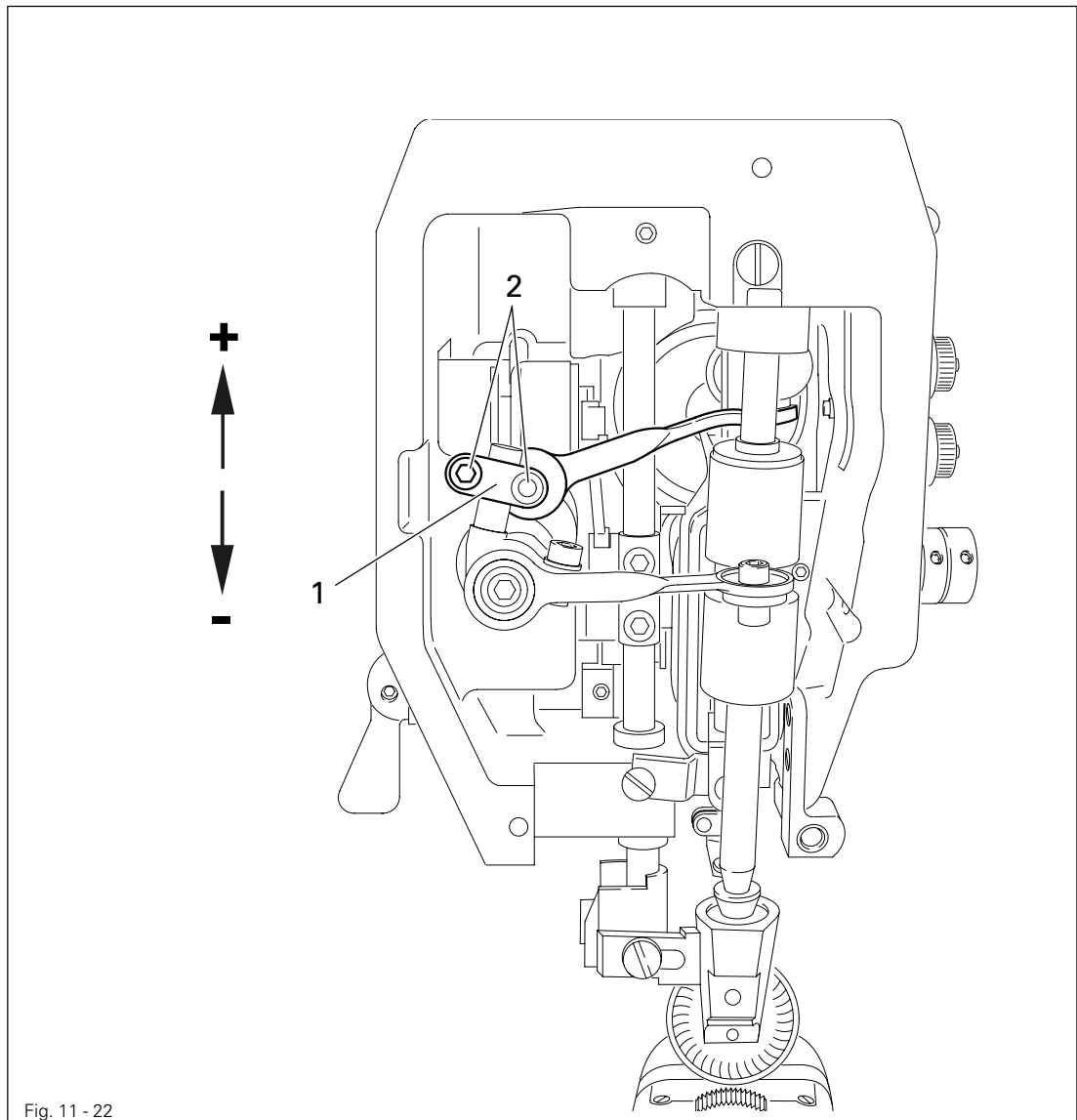
Clamp 1 must not be positioned diagonally to the rock shaft!

Adjustment

11.04.22 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**.



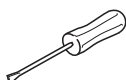
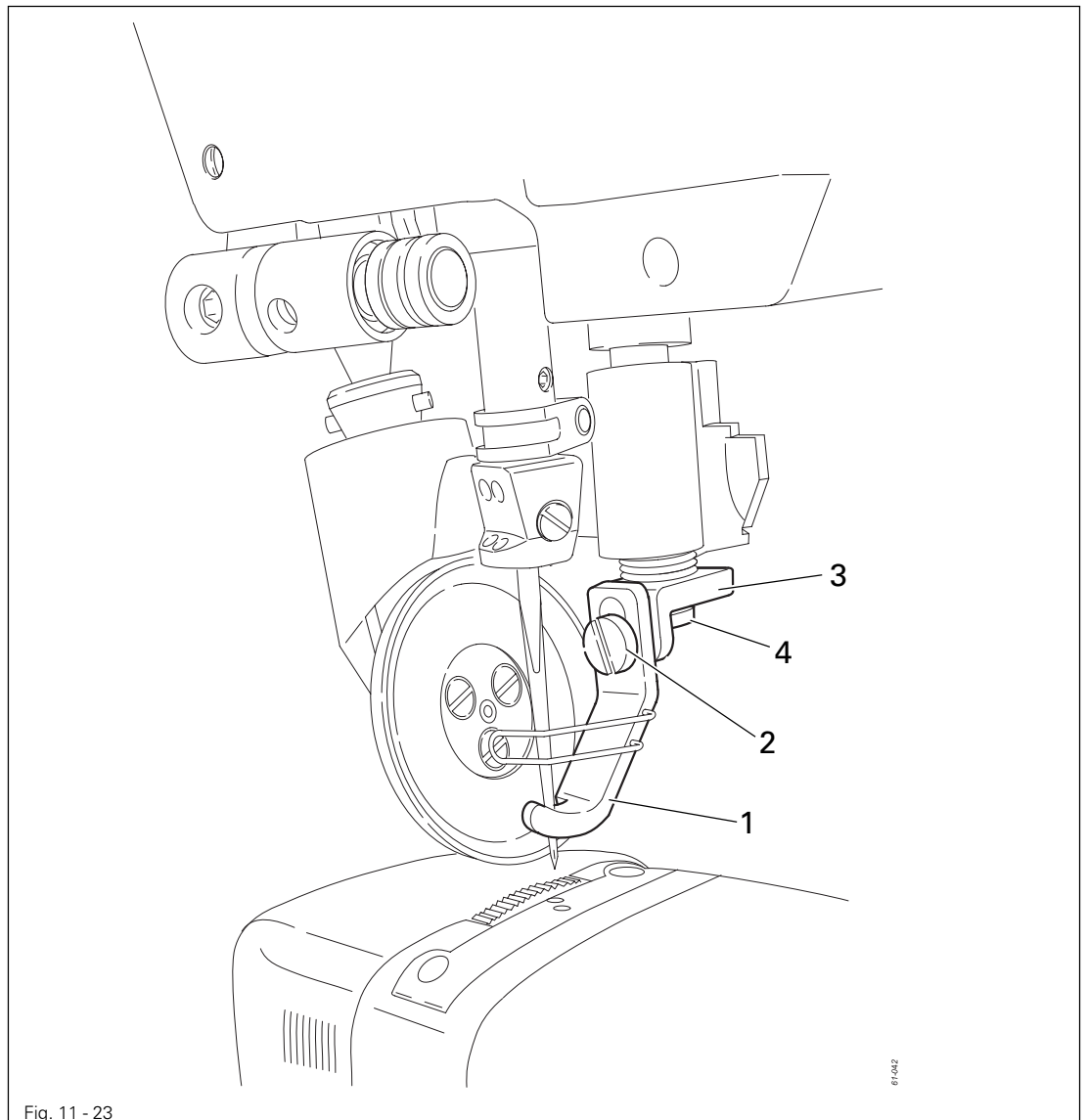
Clamp **1** must not be positioned diagonally to the rock shaft.

11.04.23 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**.



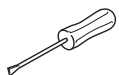
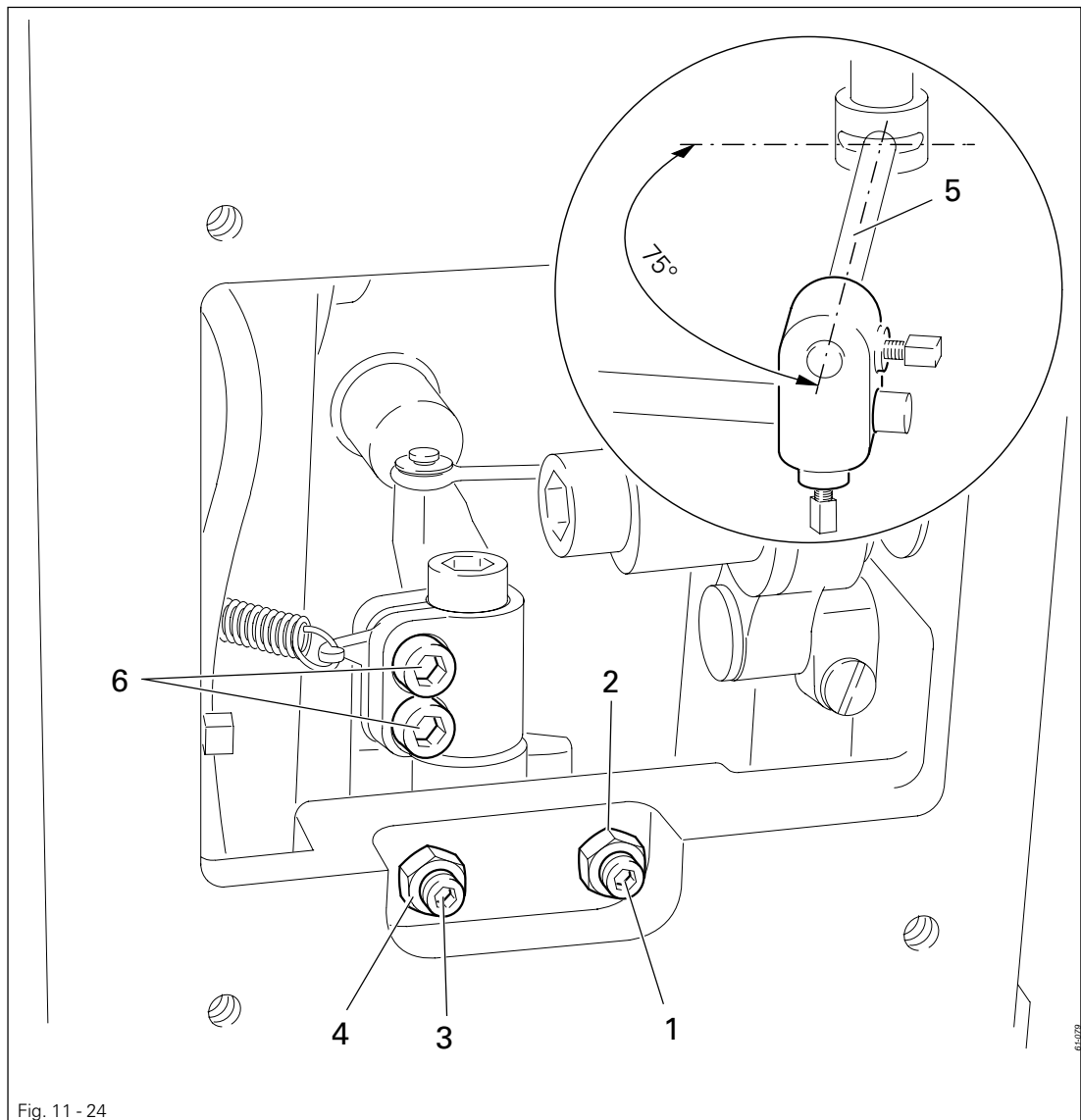
- Adjust retainer 1 (screw 2) according to **requirement 3**.
- Adjust bracket 3 (screw 4) according to **requirement 1 and 2**.

Adjustment

11.04.24 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**.

11.04.25 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.

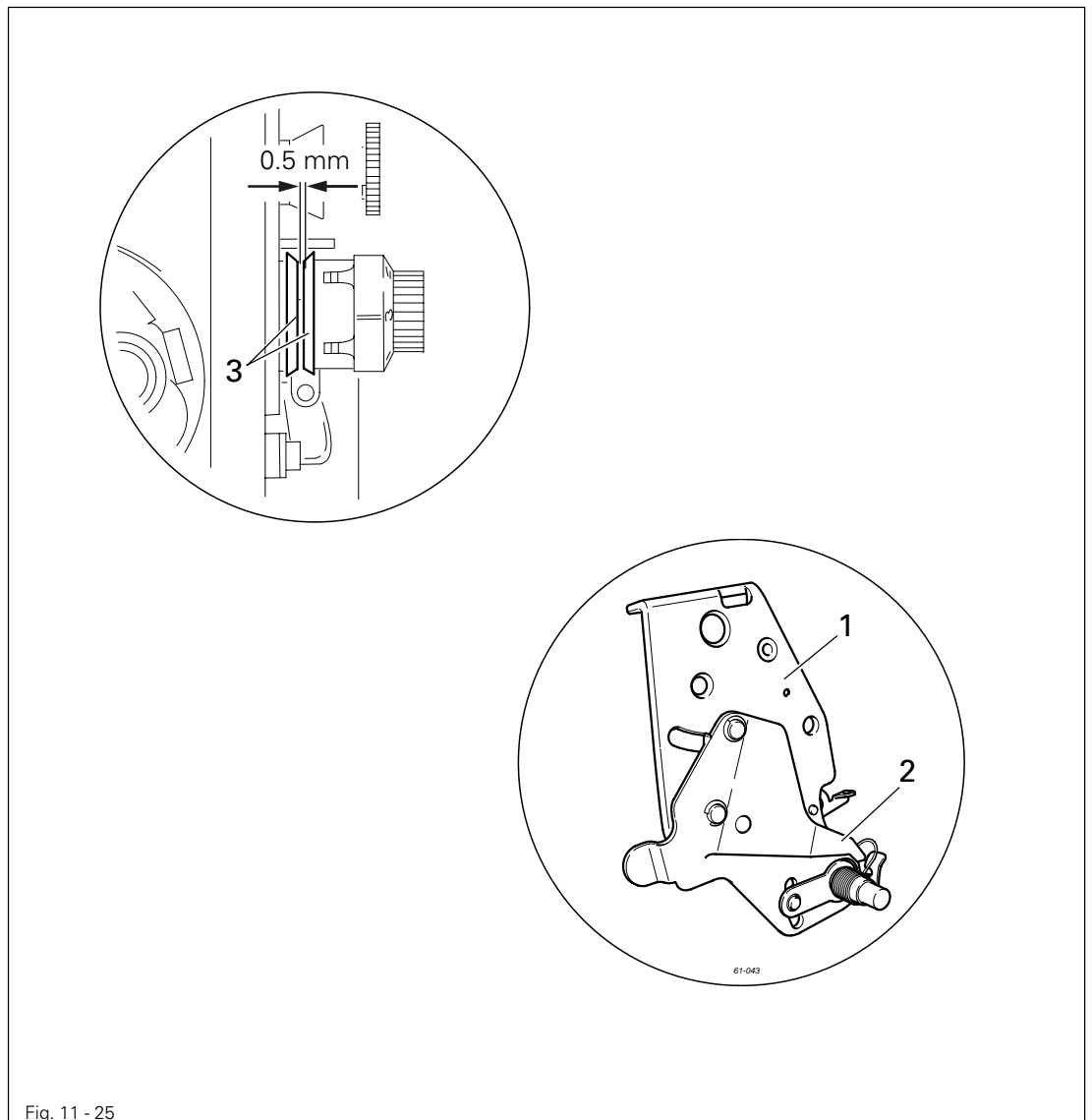
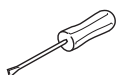


Fig. 11 - 25

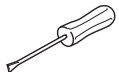
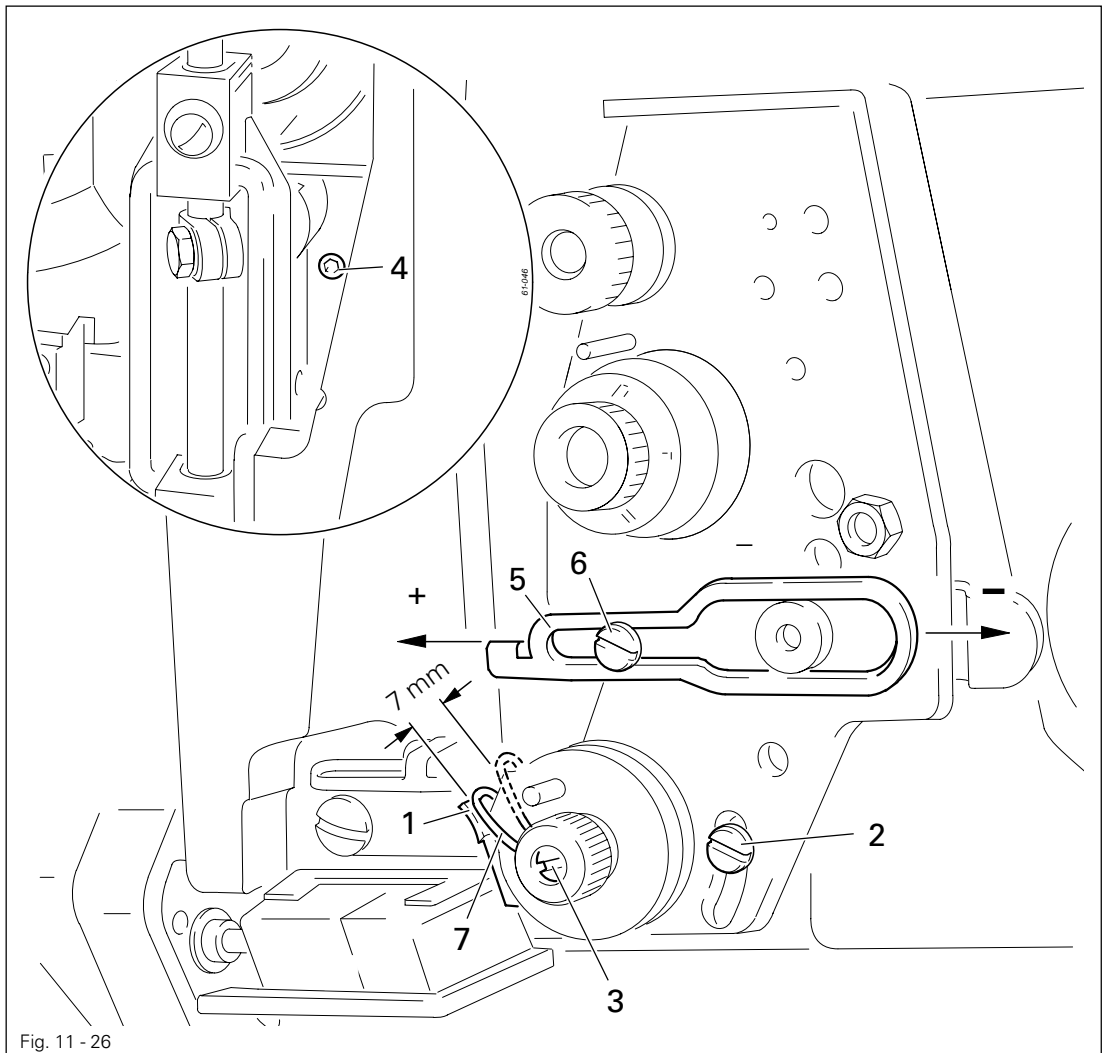


- Align tension mounting plate **1** and pressure plate **2** according to the **requirement**.

11.04.26 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).

11.04.27 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**.

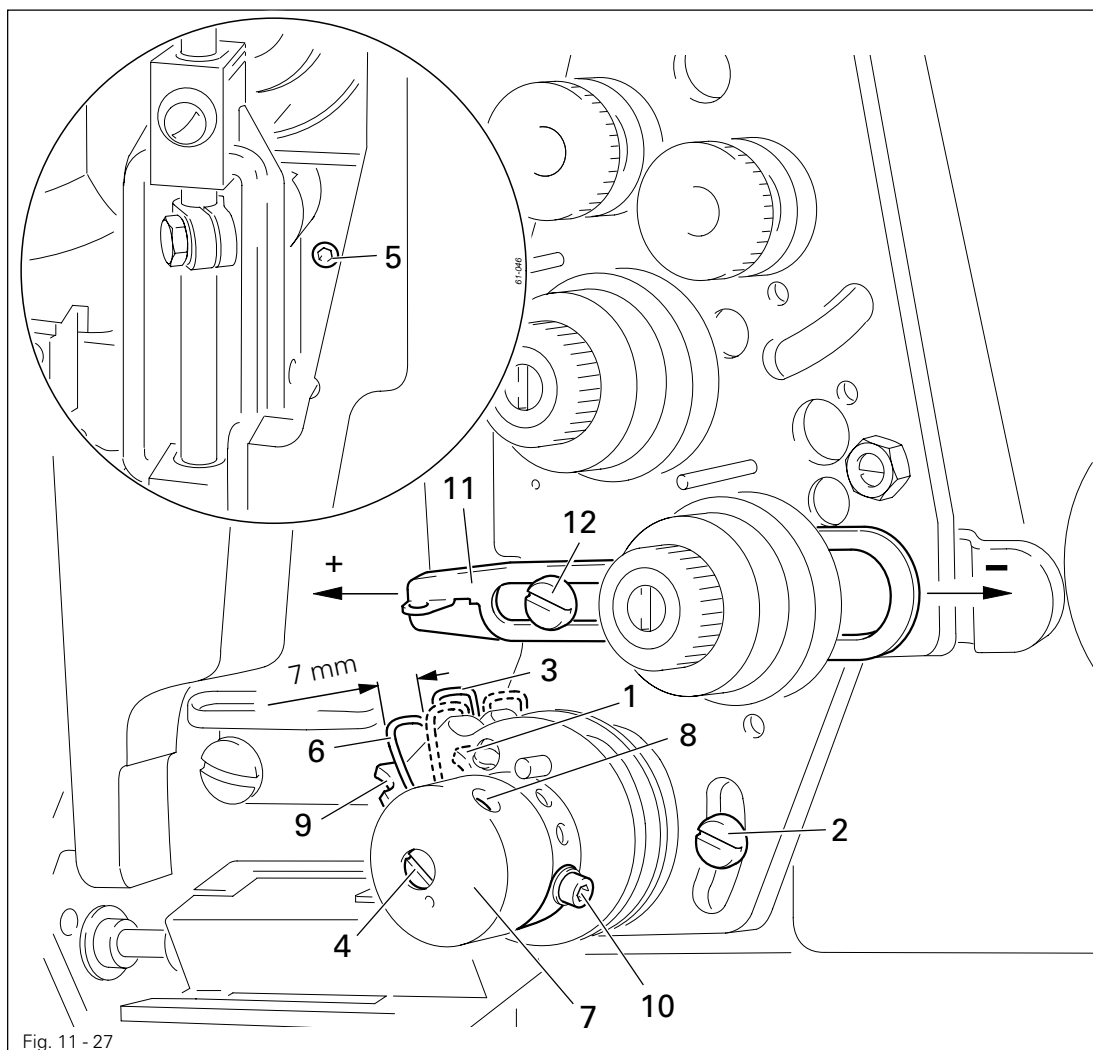
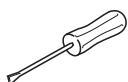


Fig. 11 - 27



- 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**.

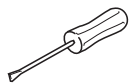
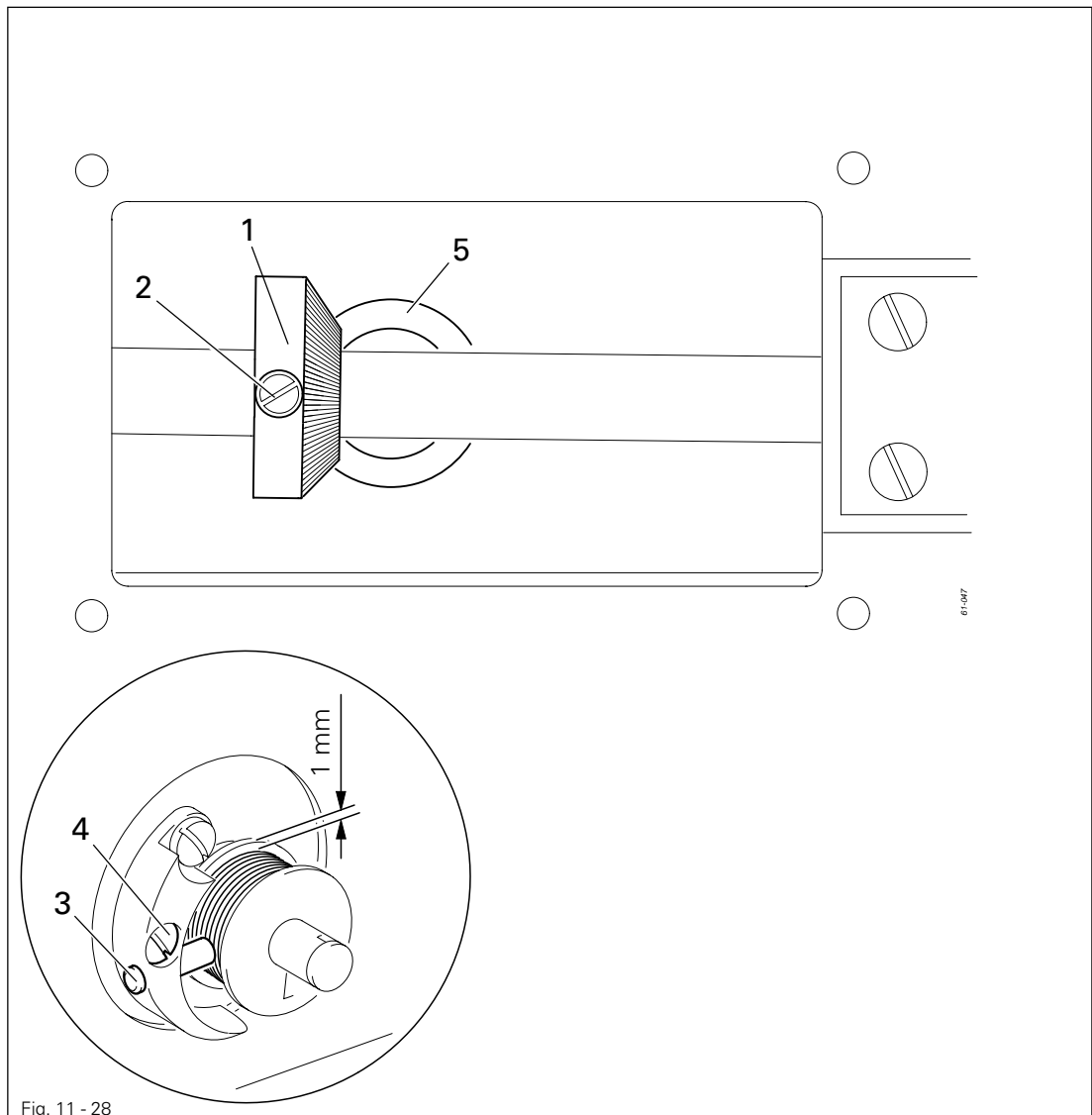


For technical reasons it may be necessary to deviate from the specified spring stroke or spring tension.

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

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.

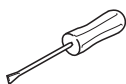
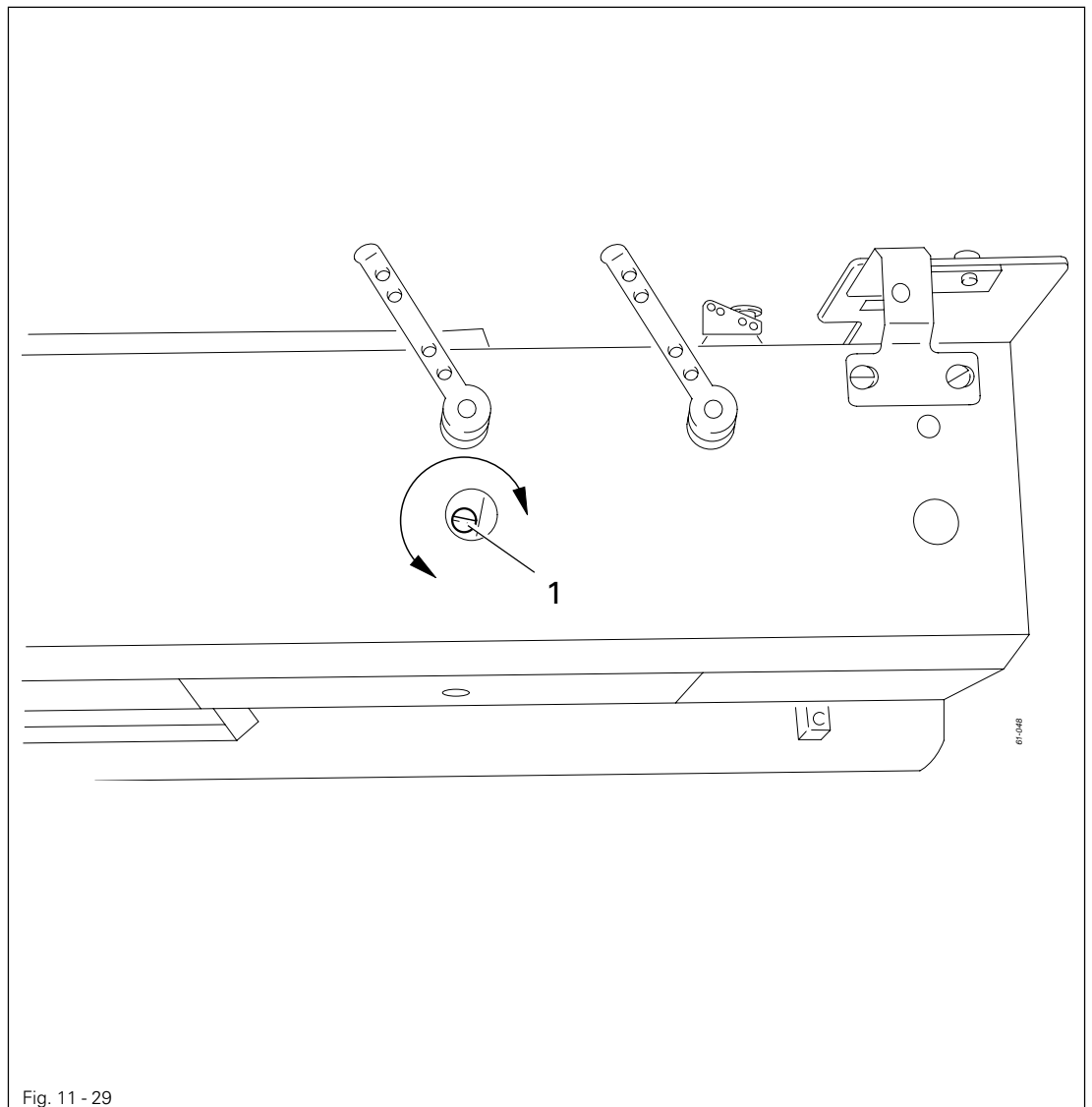


- Position drive wheel 1 (screws 2) according to **requirement 1**.
- Position bolt 3 (screw 4) according to **requirement 2**.

11.04.29 Pressure of roller presser

Requirement

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



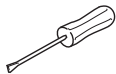
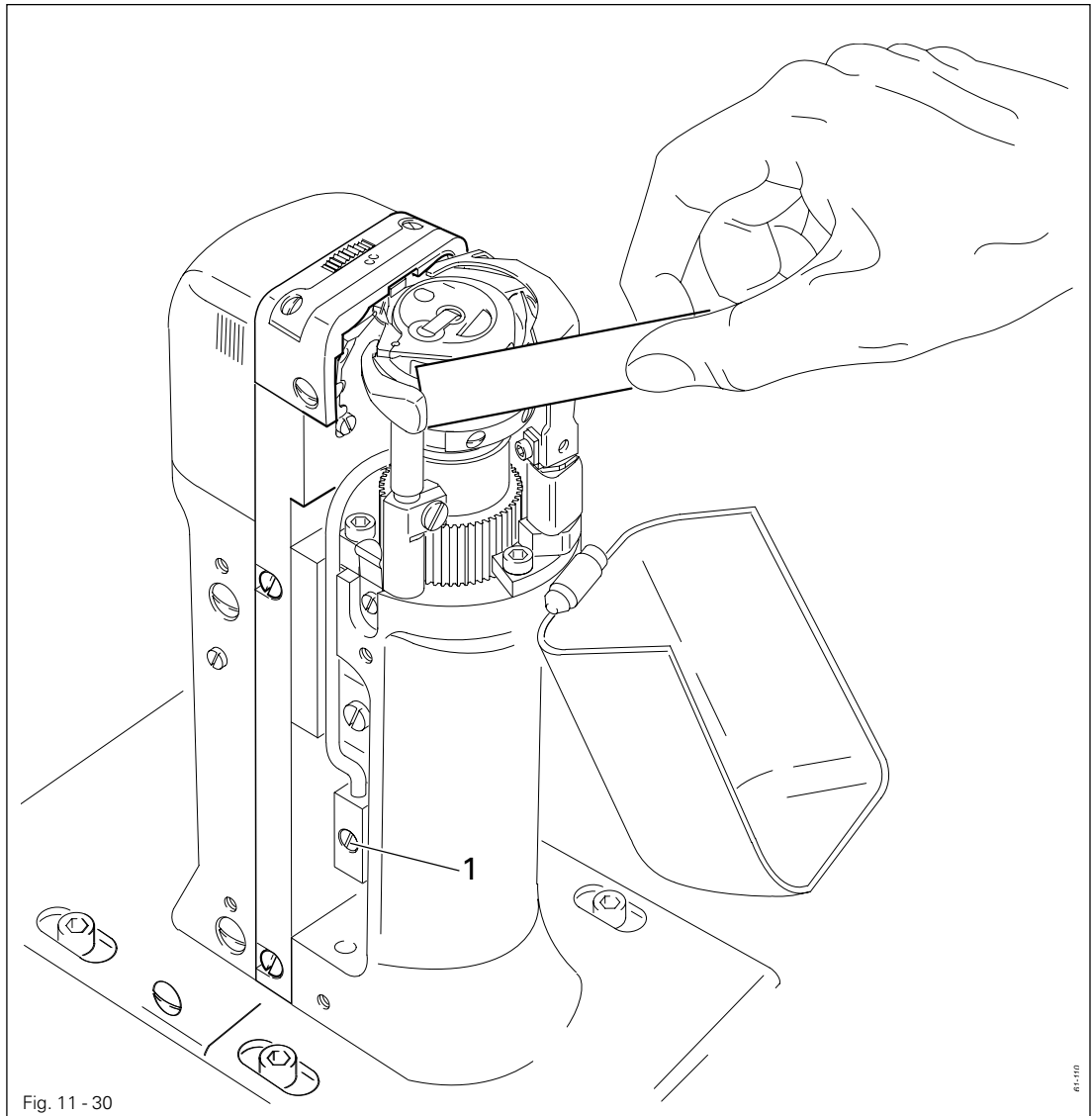
- Adjust roller presser pressure with screw **1** according to the **requirement**.

Adjustment

11.04.30 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.**



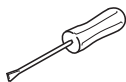
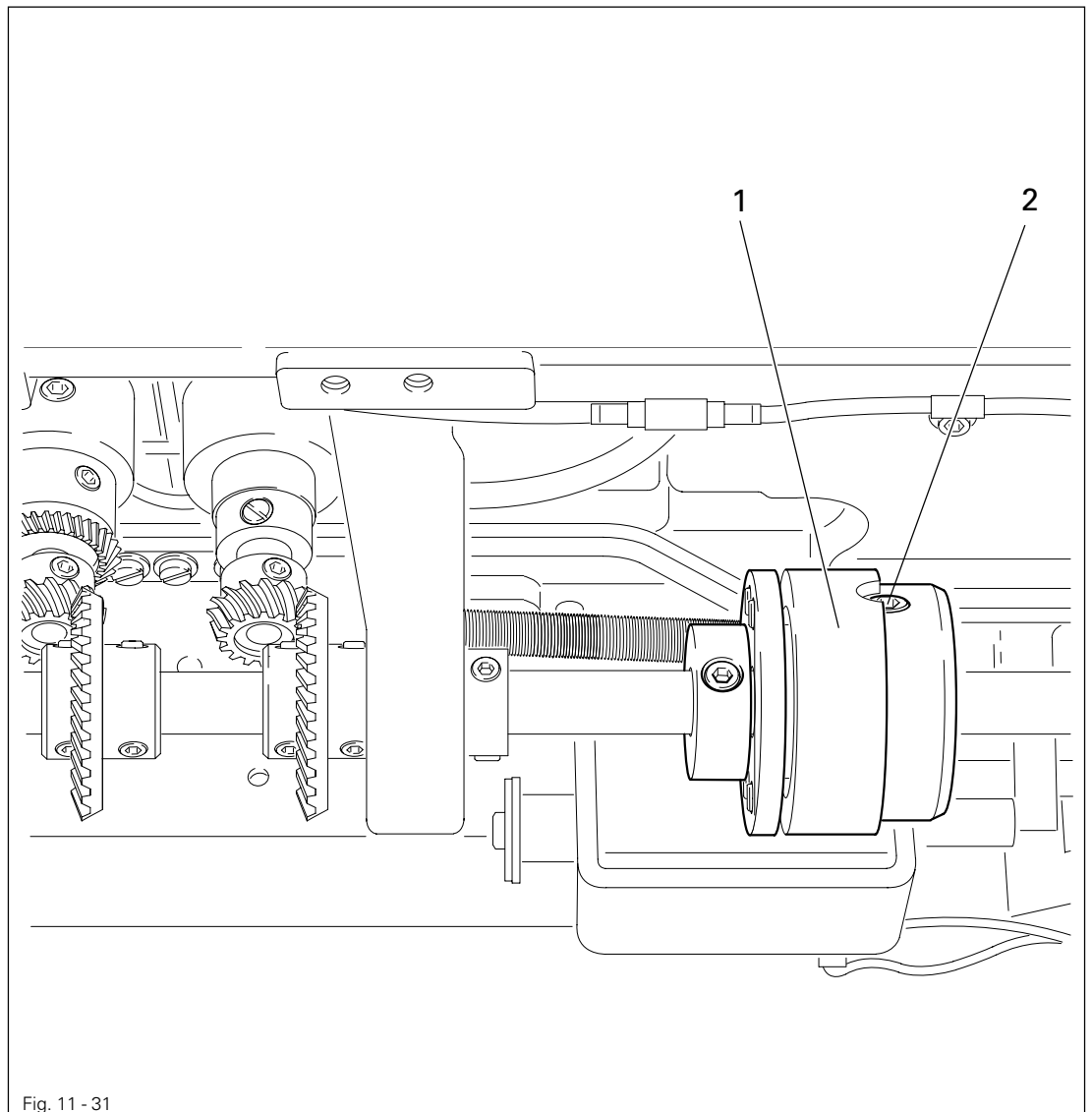
While the machine is running do not place hands in the needle or hook area!
Danger of injury from moving parts!

- 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**.

11.04.31 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.



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

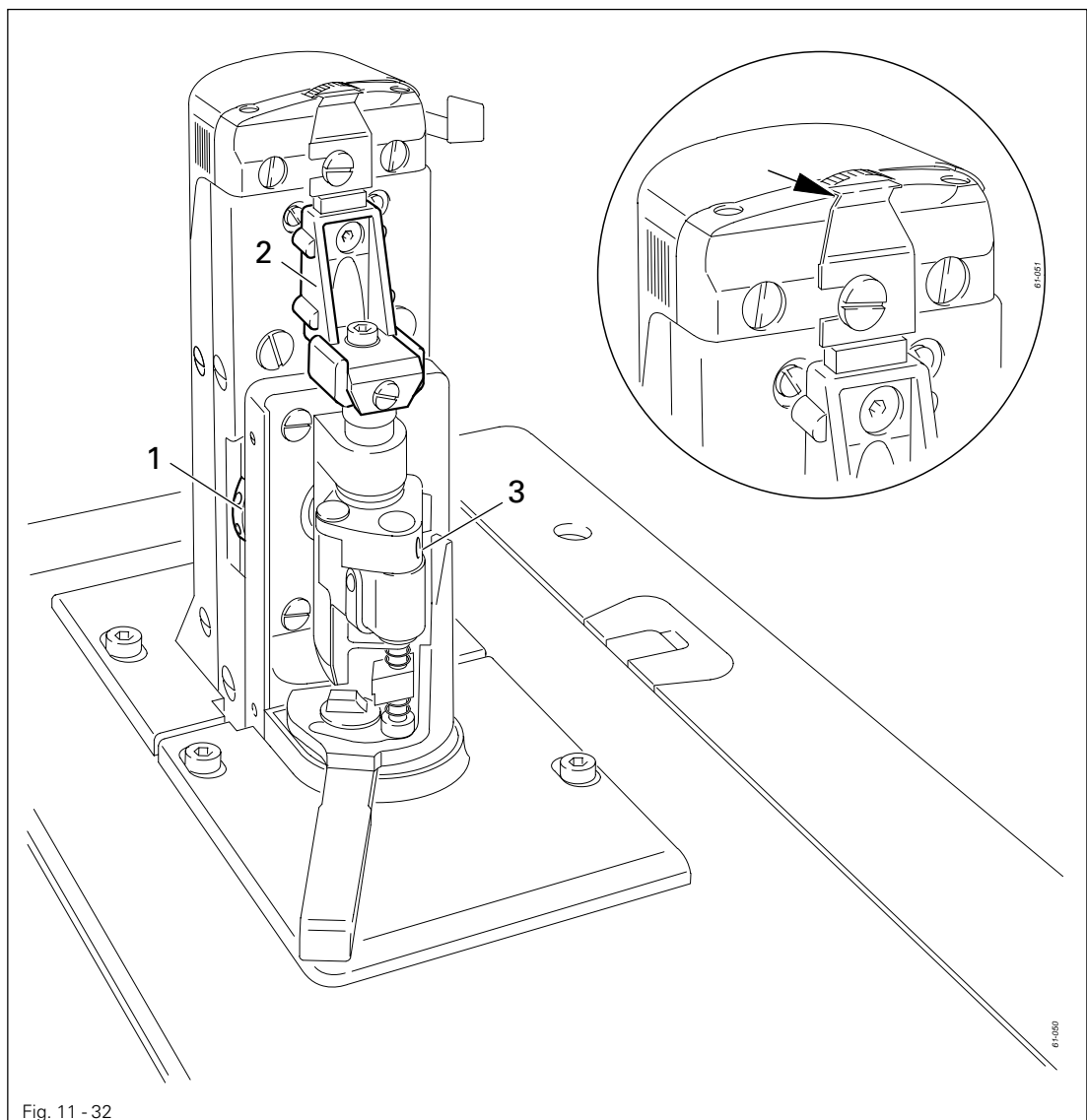
11.05 Adjusting the edge trimmer -725/04

11.05.01 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.

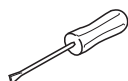
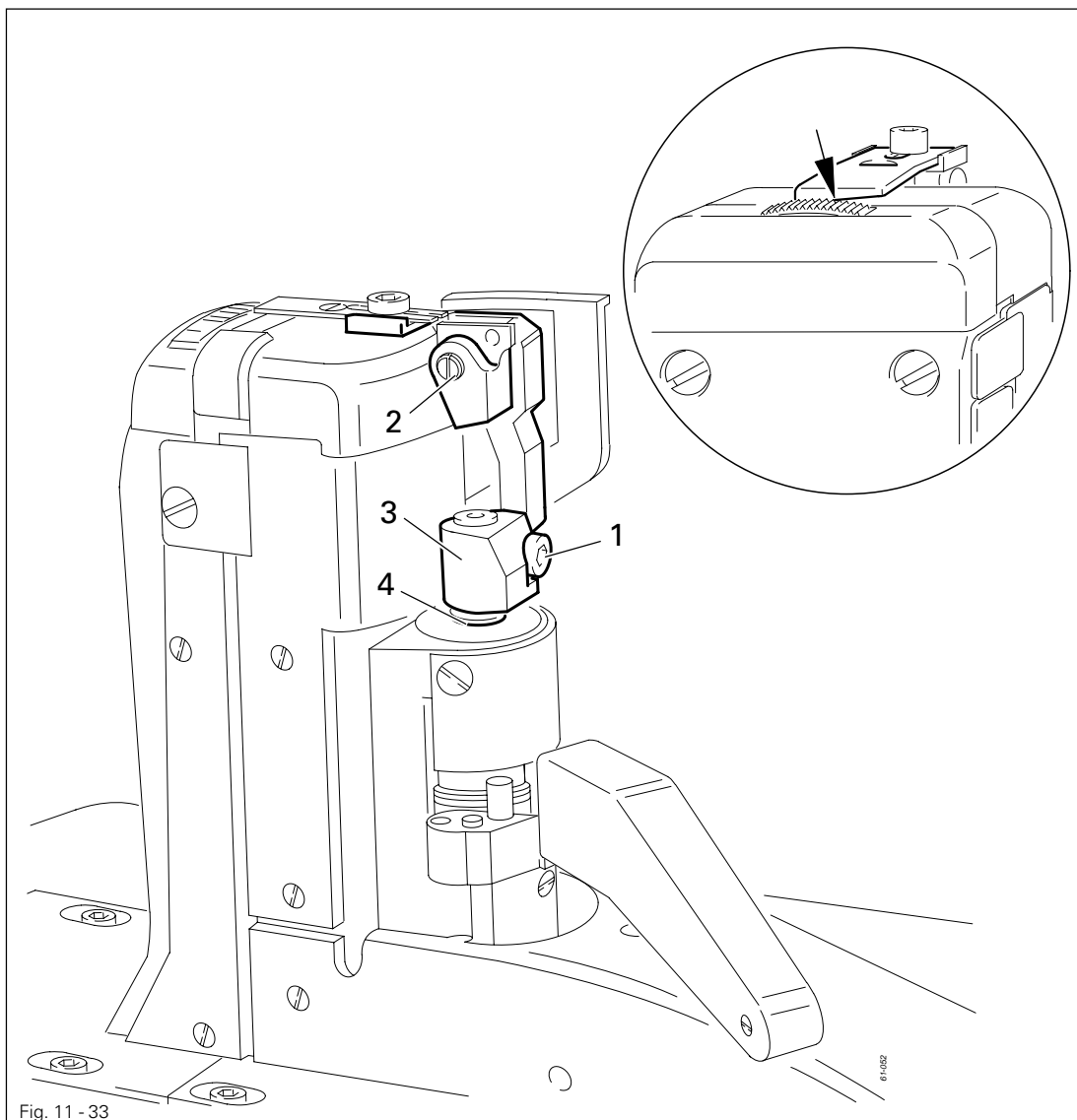


- Turn the adjusting wheel 1 to its highest position and engage edge trimmer.
- Adjust knife holder 2 (screw 3) according to the requirements.

11.05.02 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.



- 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.



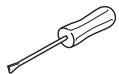
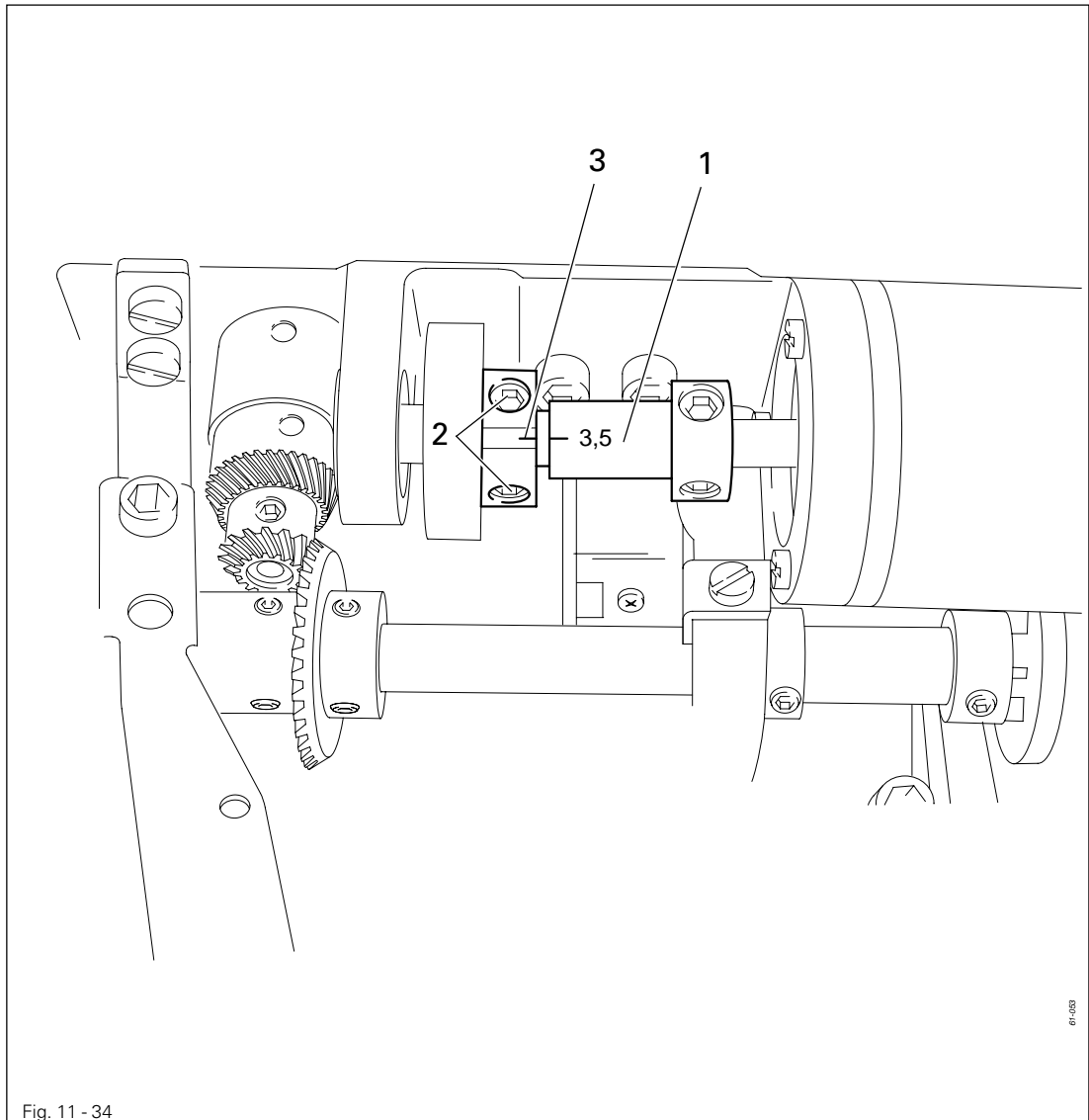
Depending on the material thickness, changes in the basic setting of eccentric 2 are possible.

Adjustment

11.05.03 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.

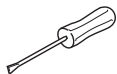
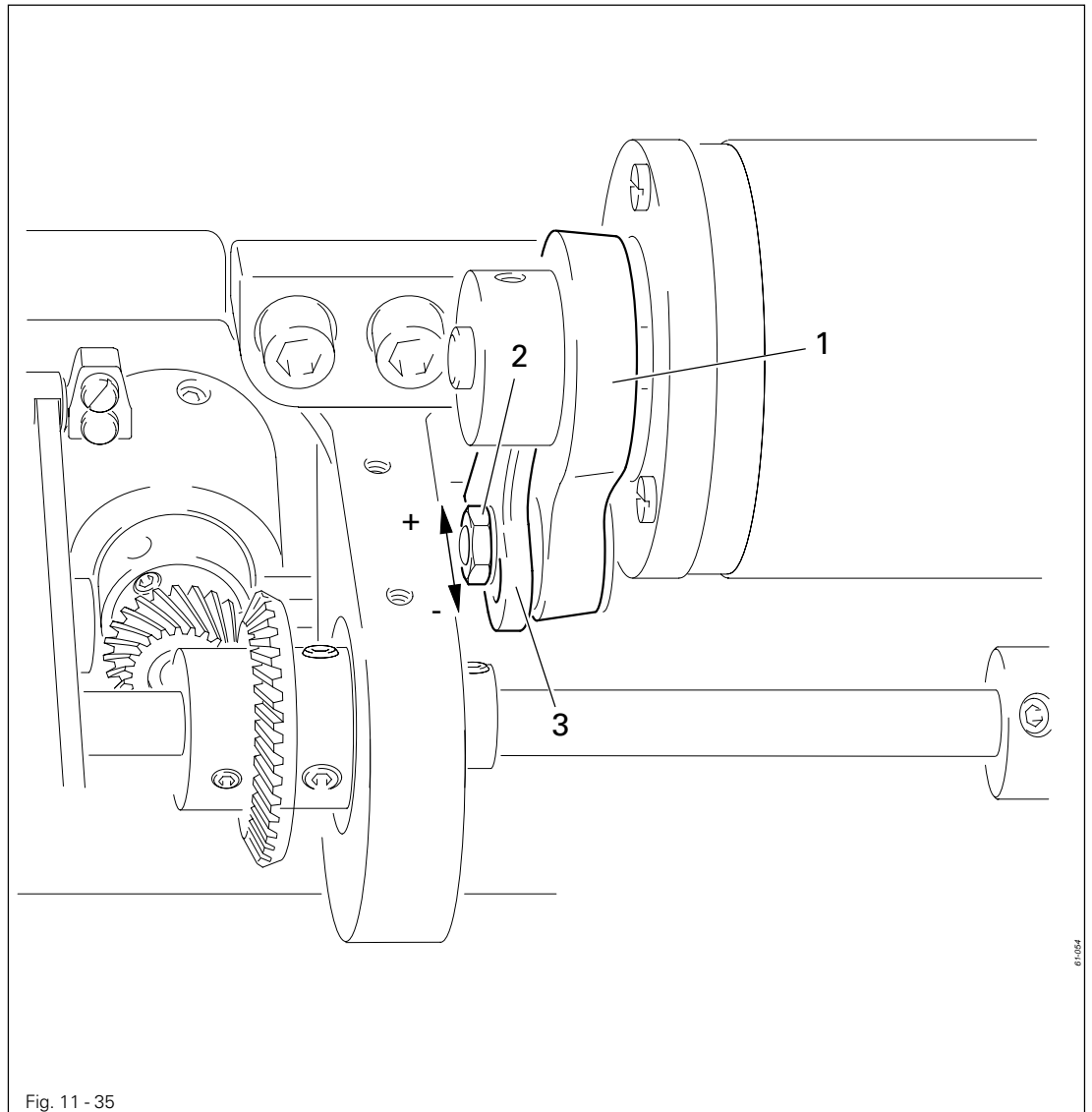


- Turn eccentric 1 (screws 2) so that the marking of the desired cutting stroke is opposite the marking on clamp collar 3.

11.05.04 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.



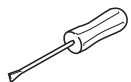
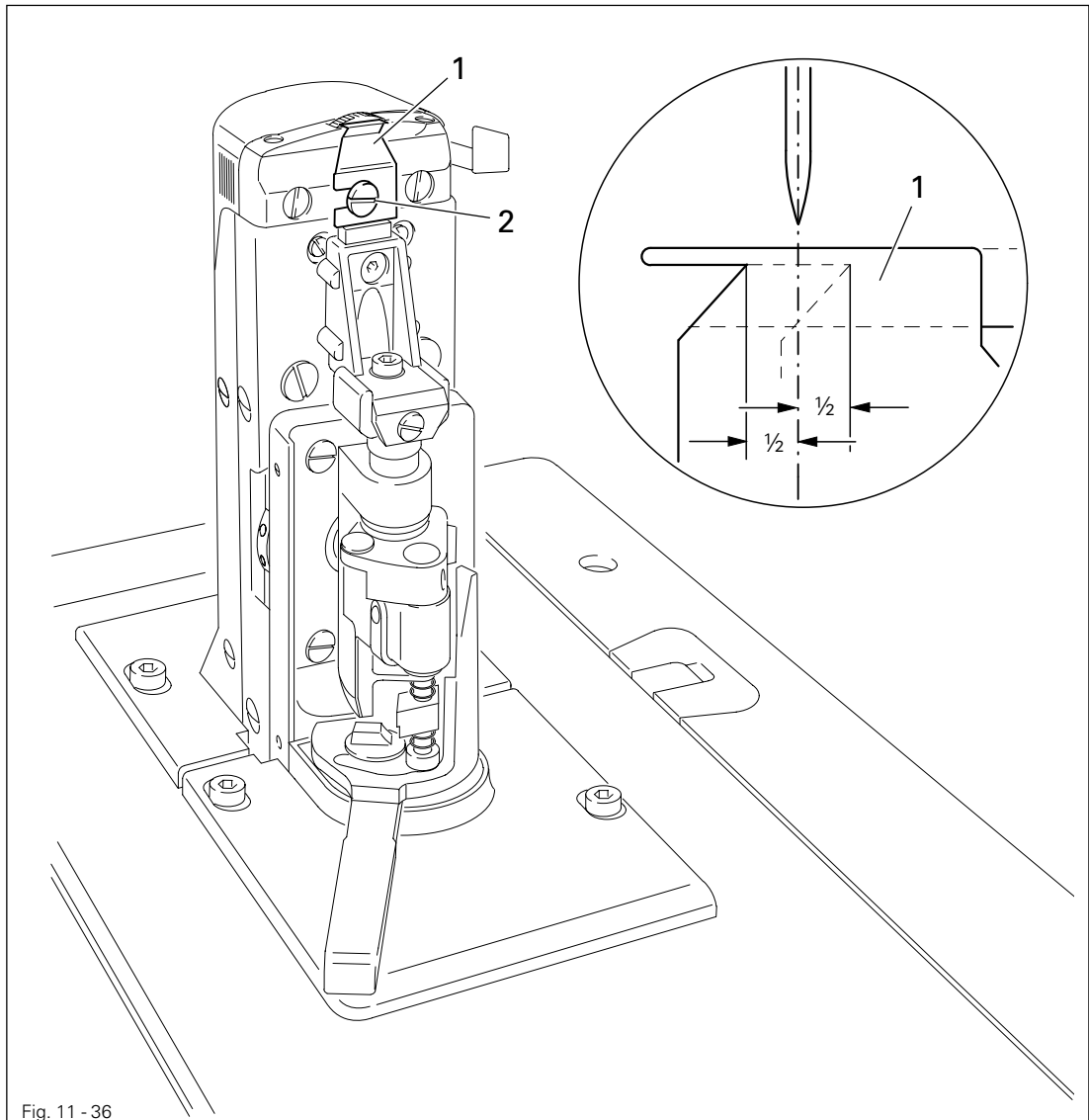
- Adjust crank 1 (nut 2) in slotted lever 3 according to the requirement.

Adjustment

11.05.05 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.

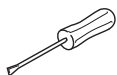
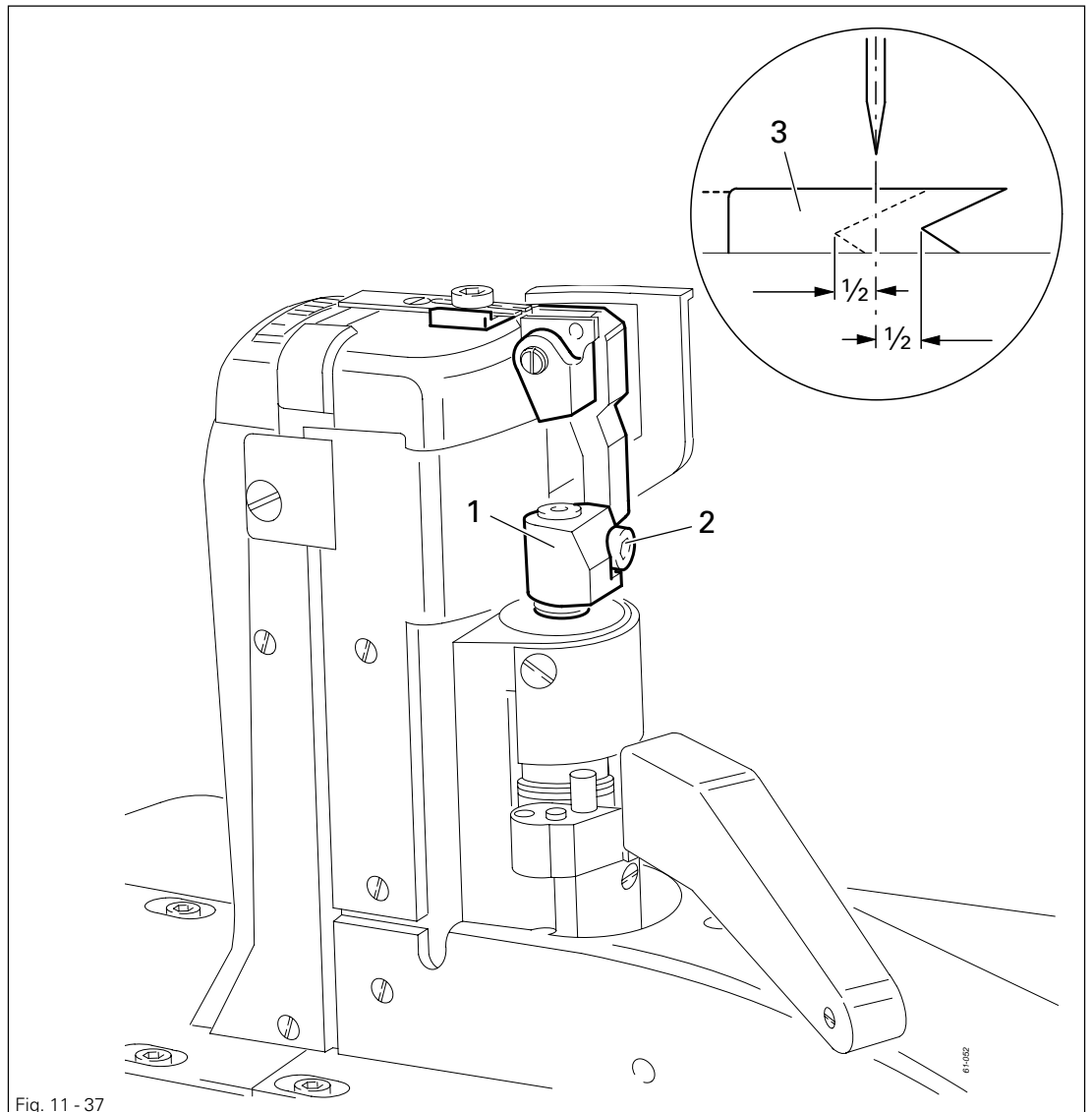


- Switch off the machine and engage the edge trimmer.
- Adjust knife 1 (screw 2) according to the requirement.

11.05.06 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.

Adjustment

11.05.07 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.

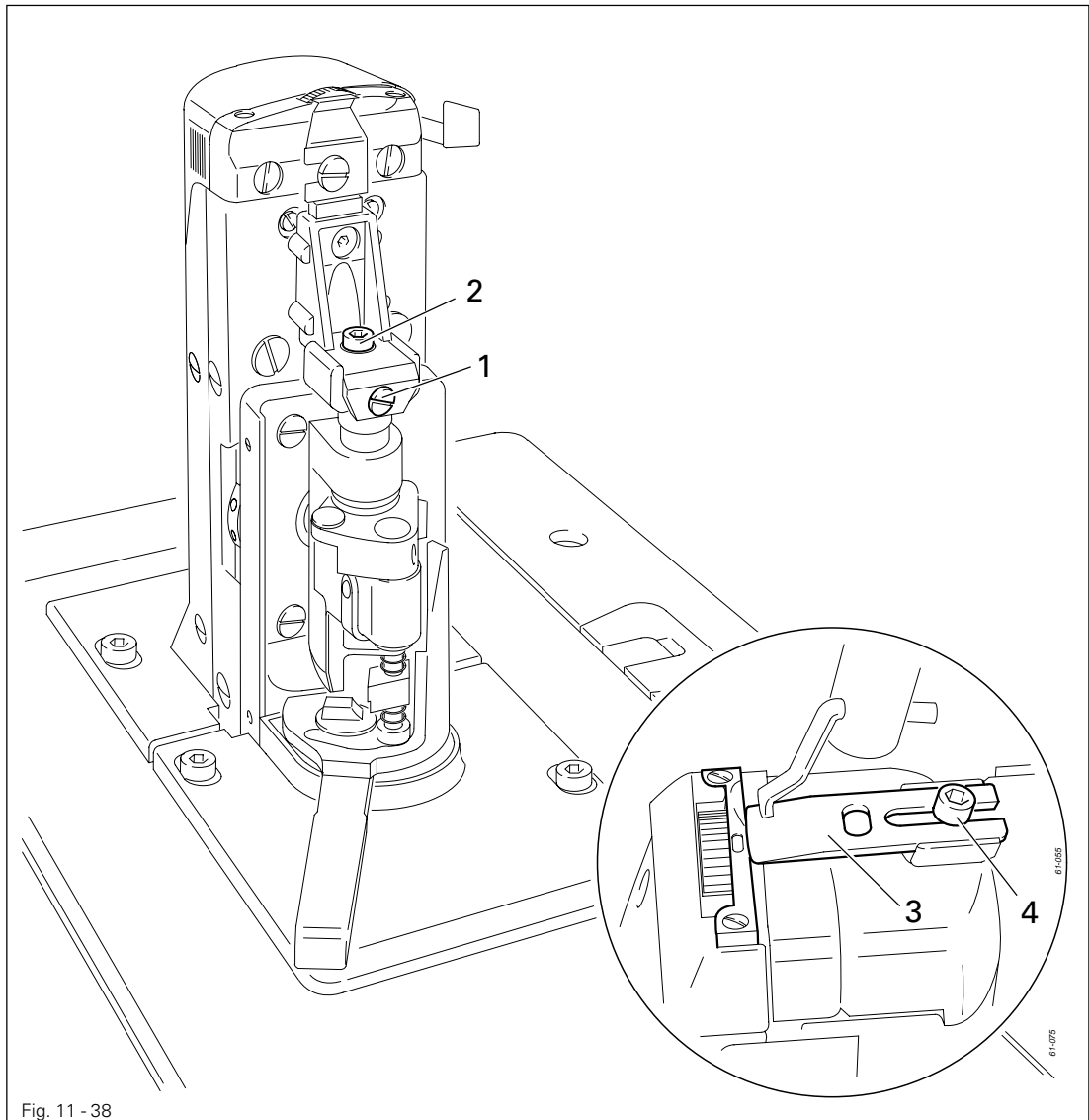
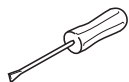


Fig. 11 - 38



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.

11.06 Adjusting the thread trimmer -726/05 on model 591

11.06.01 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.

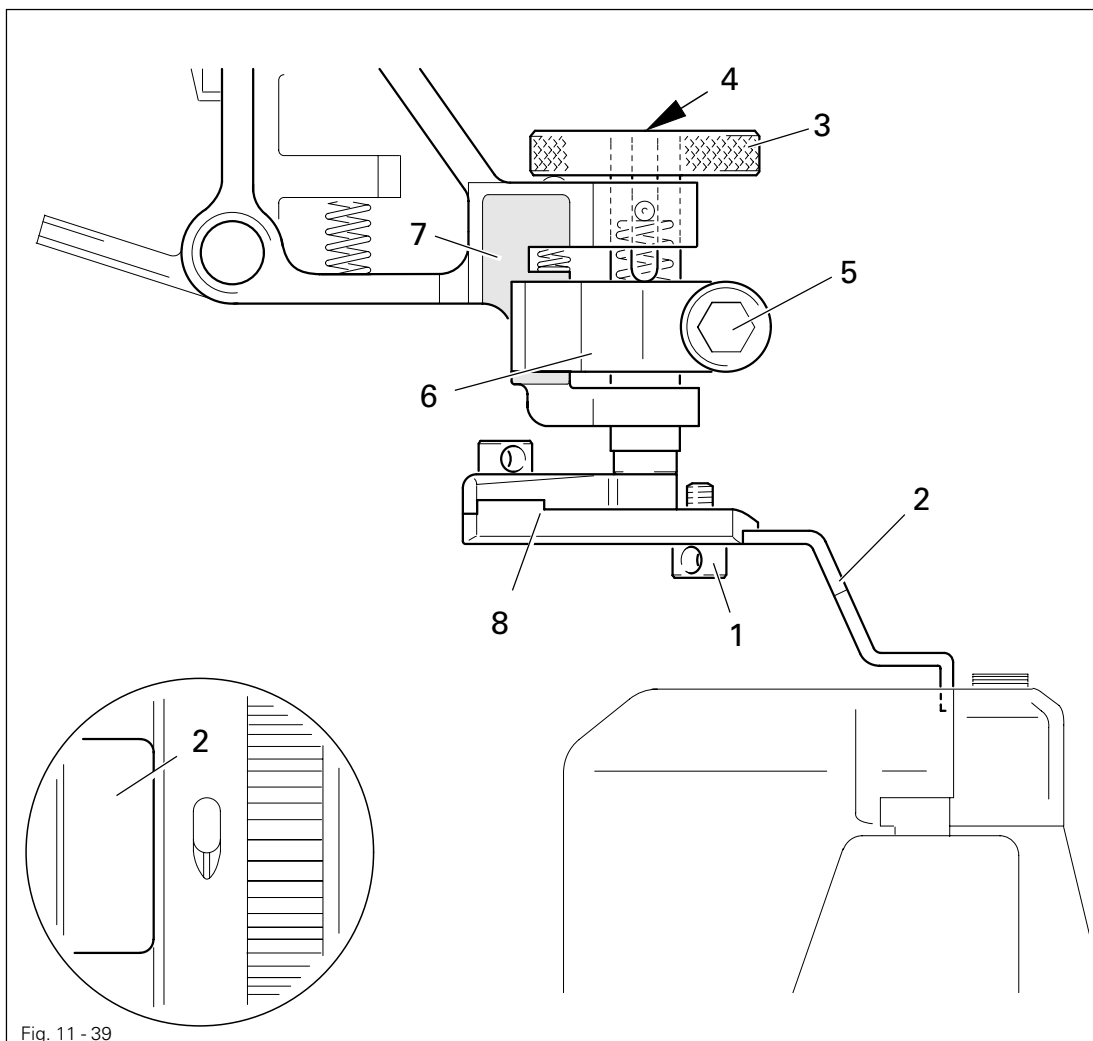
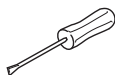


Fig. 11 - 39



- 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.

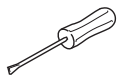
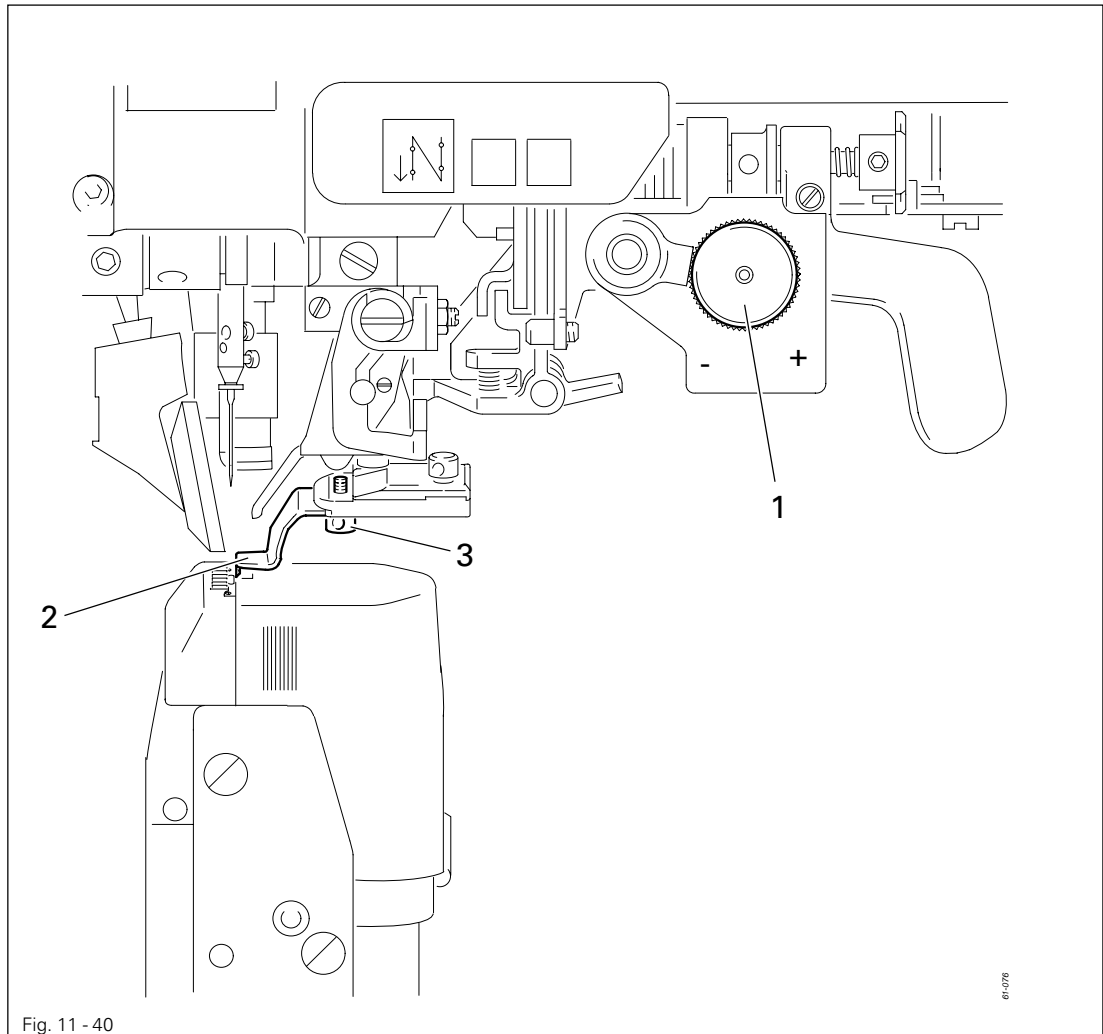


Screw 1 remains loosened for further adjustments.

11.06.02 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.

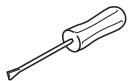
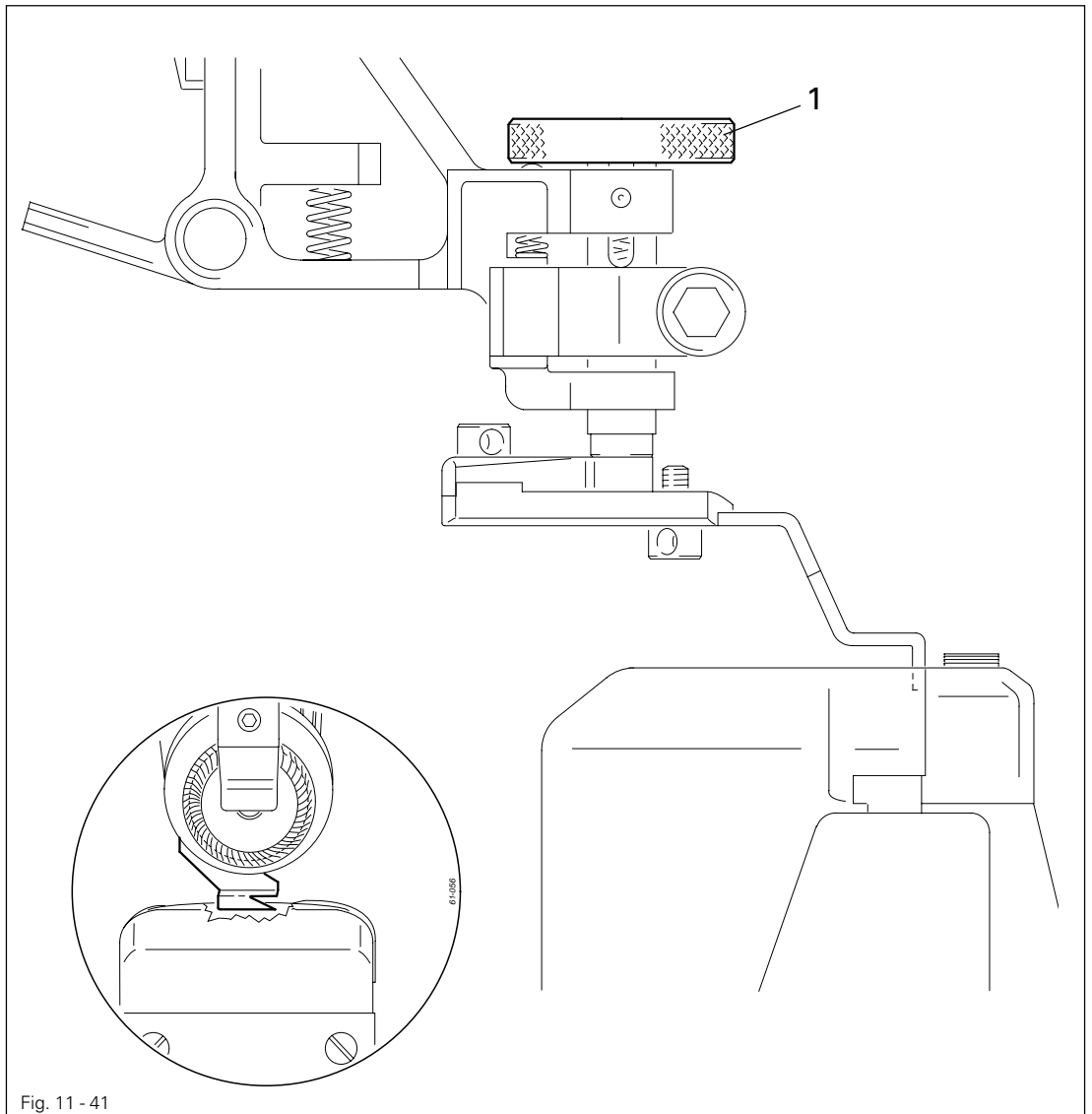


The cutting pressure can be adapted to the material used with milled screw 1.

11.06.03 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**.

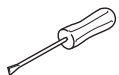
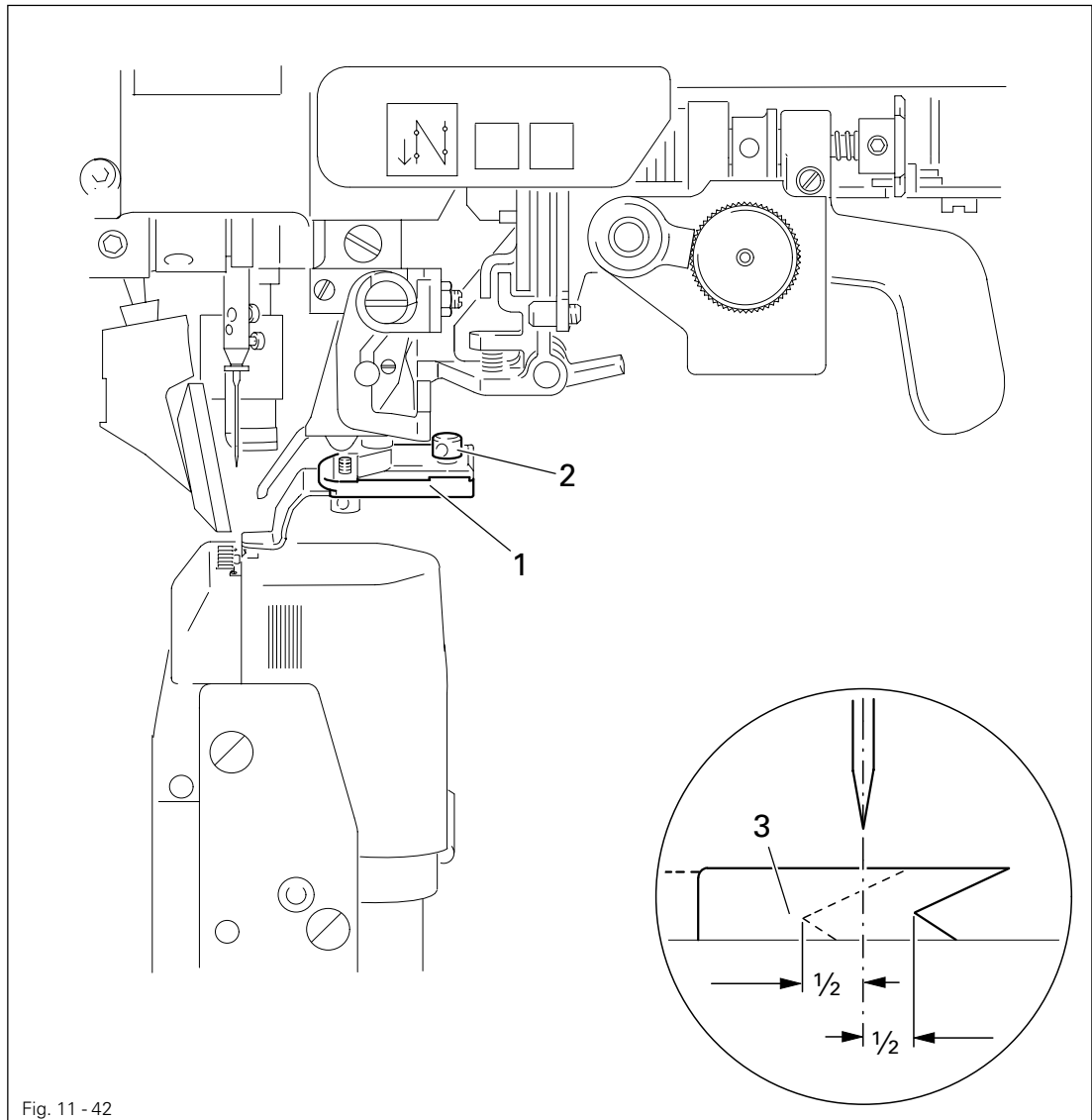


The basic setting may be changed depending on the material thickness.

11.06.04 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.

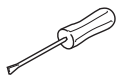
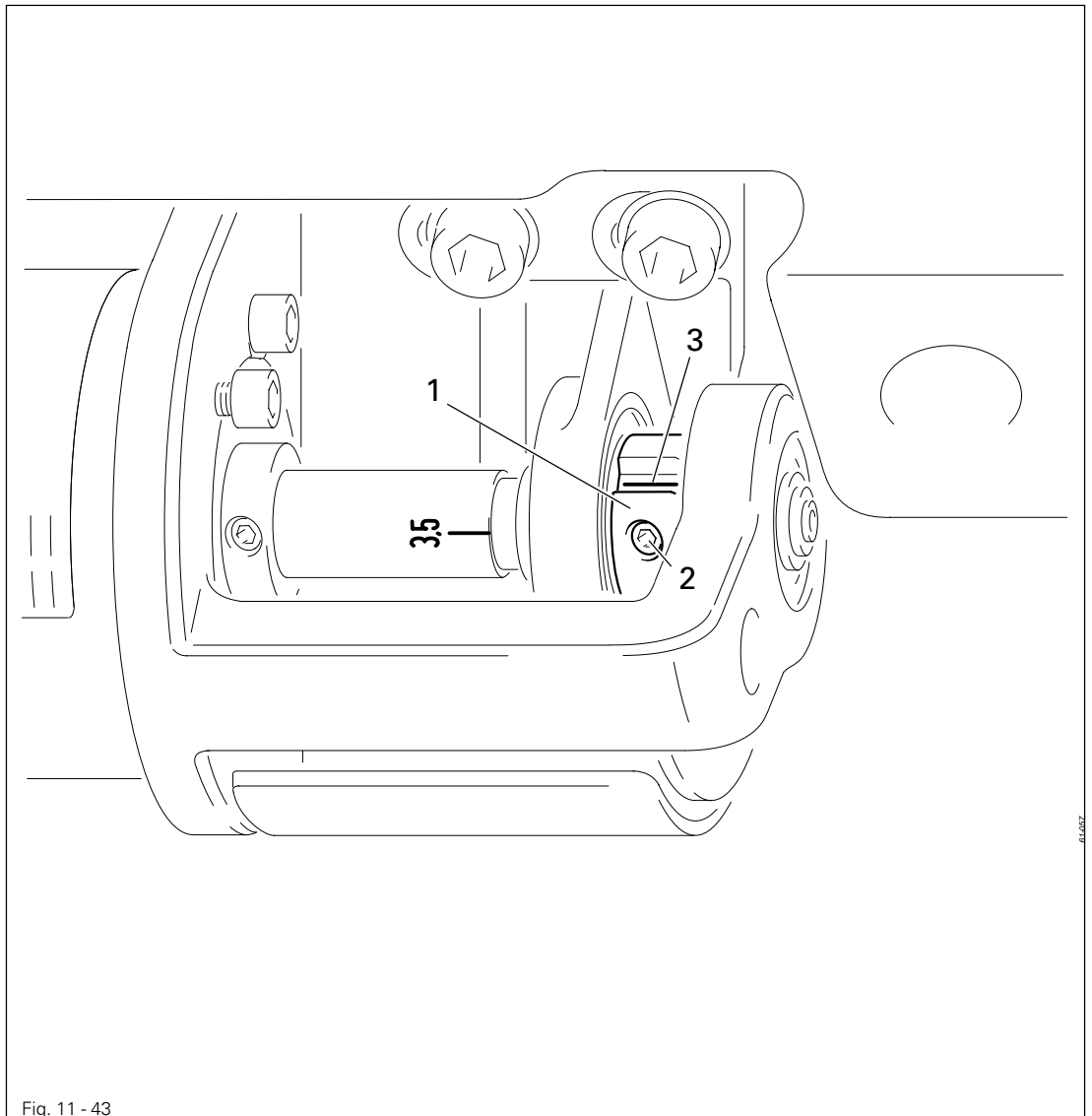


- Switch off the machine and engage the edge trimmer.
- Adjust knife holder **1** (screw **2**) according to the **requirement**.

11.06.05 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.



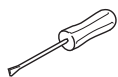
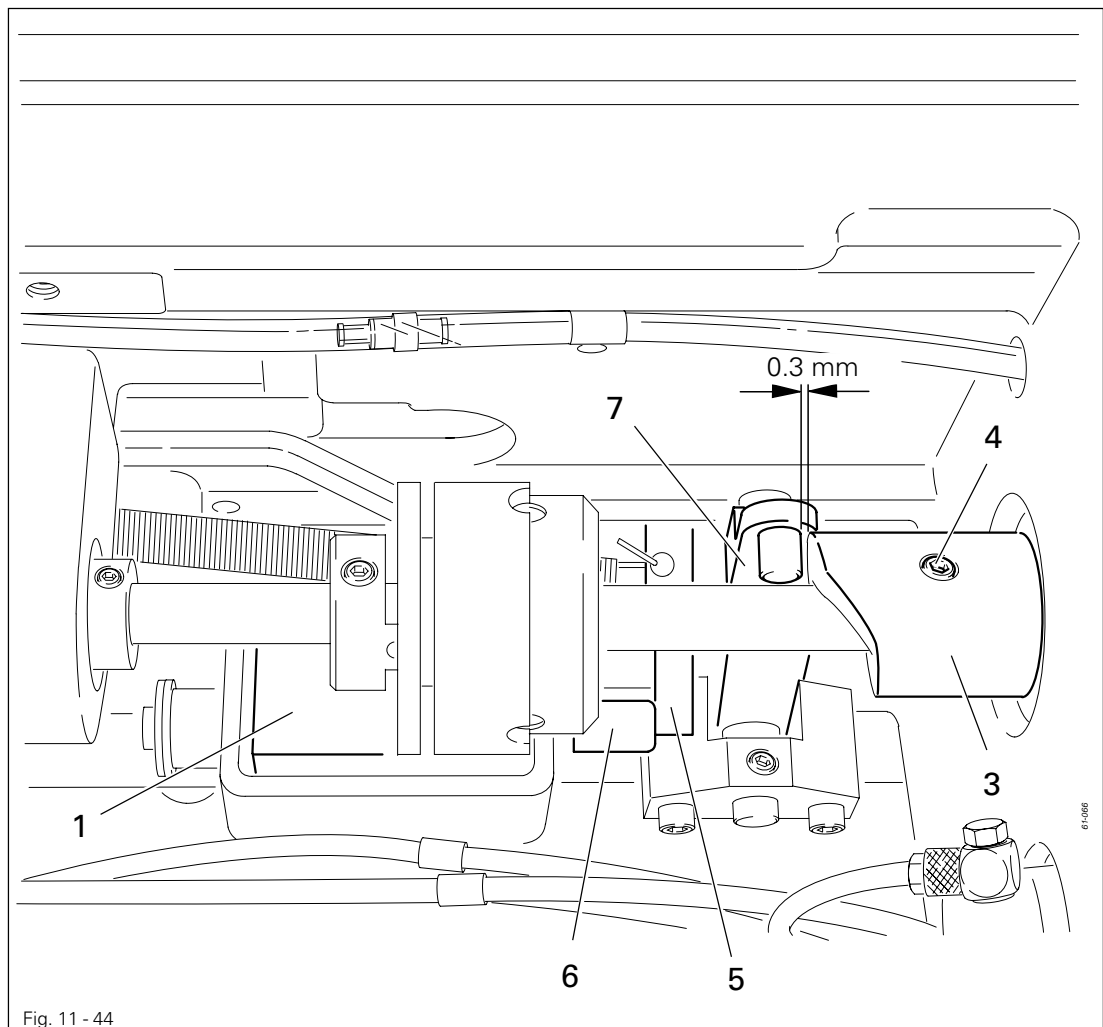
- Turn eccentric 1 (screws 2) on the back of the sewing head so that the marking of the desired cutting stroke is opposite marking 3.

11.07 Adjusting the thread trimmer –900/81

11.07.01 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**.

11.07.02 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).

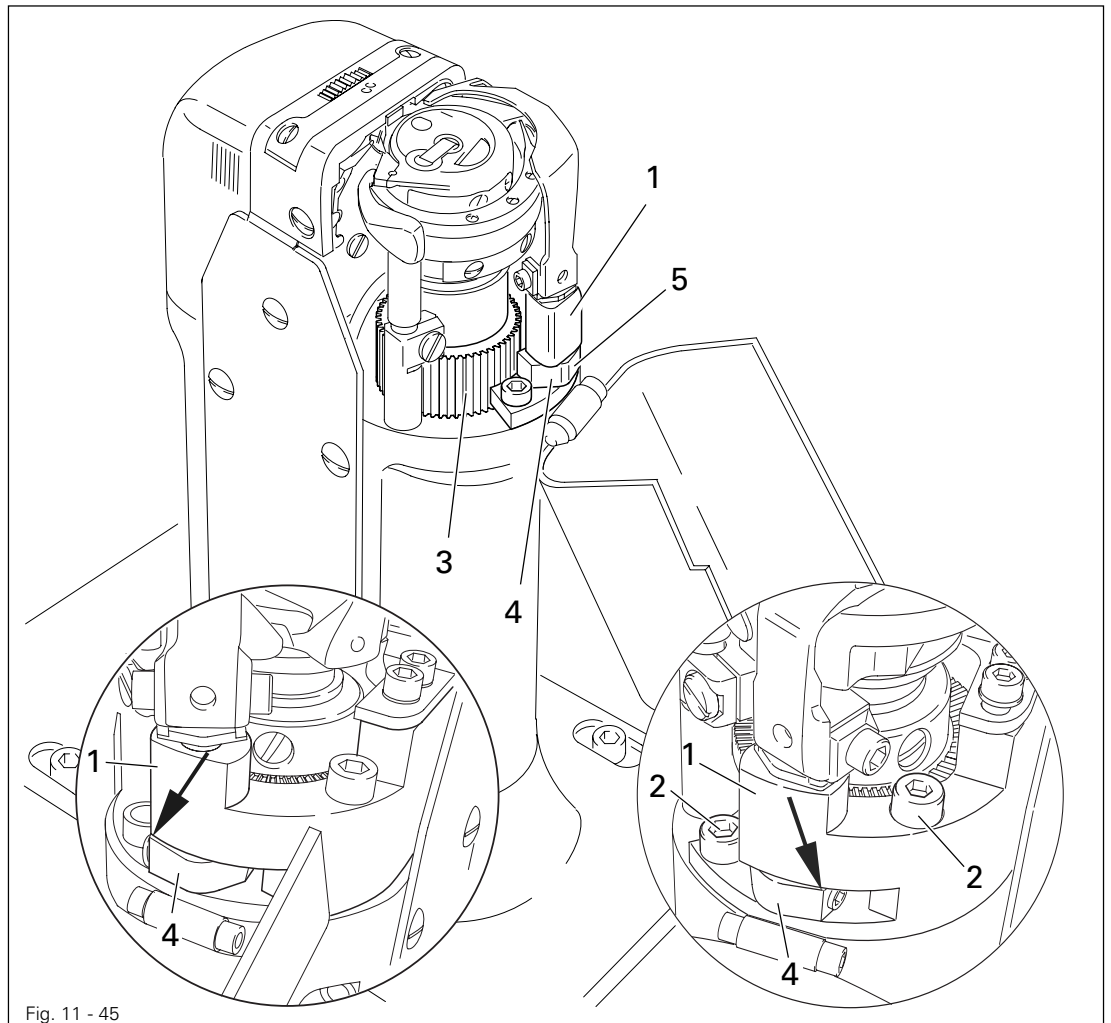
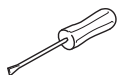


Fig. 11 - 45



- 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

11.07.03 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).

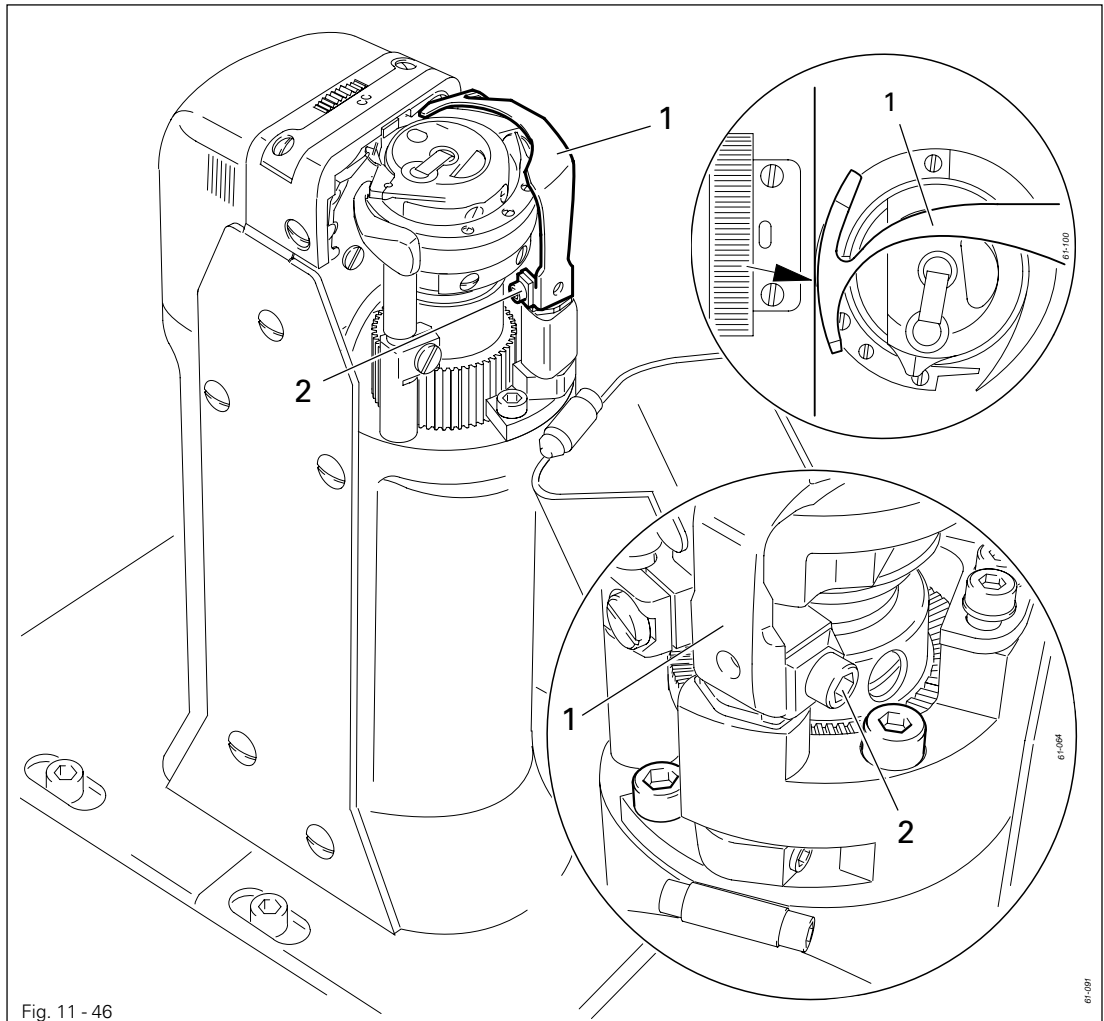
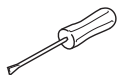


Fig. 11 - 46



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

11.07.04 Position of the thread catcher

Requirement

1. The bottom edge of thread catcher 1 should be **0.6 mm** away from bobbin case 3.
2. When the thread trimmer is in its resting position, the back edge of the thread catcher should be **approx. 3 – 4 mm** behind the edge of the knife.

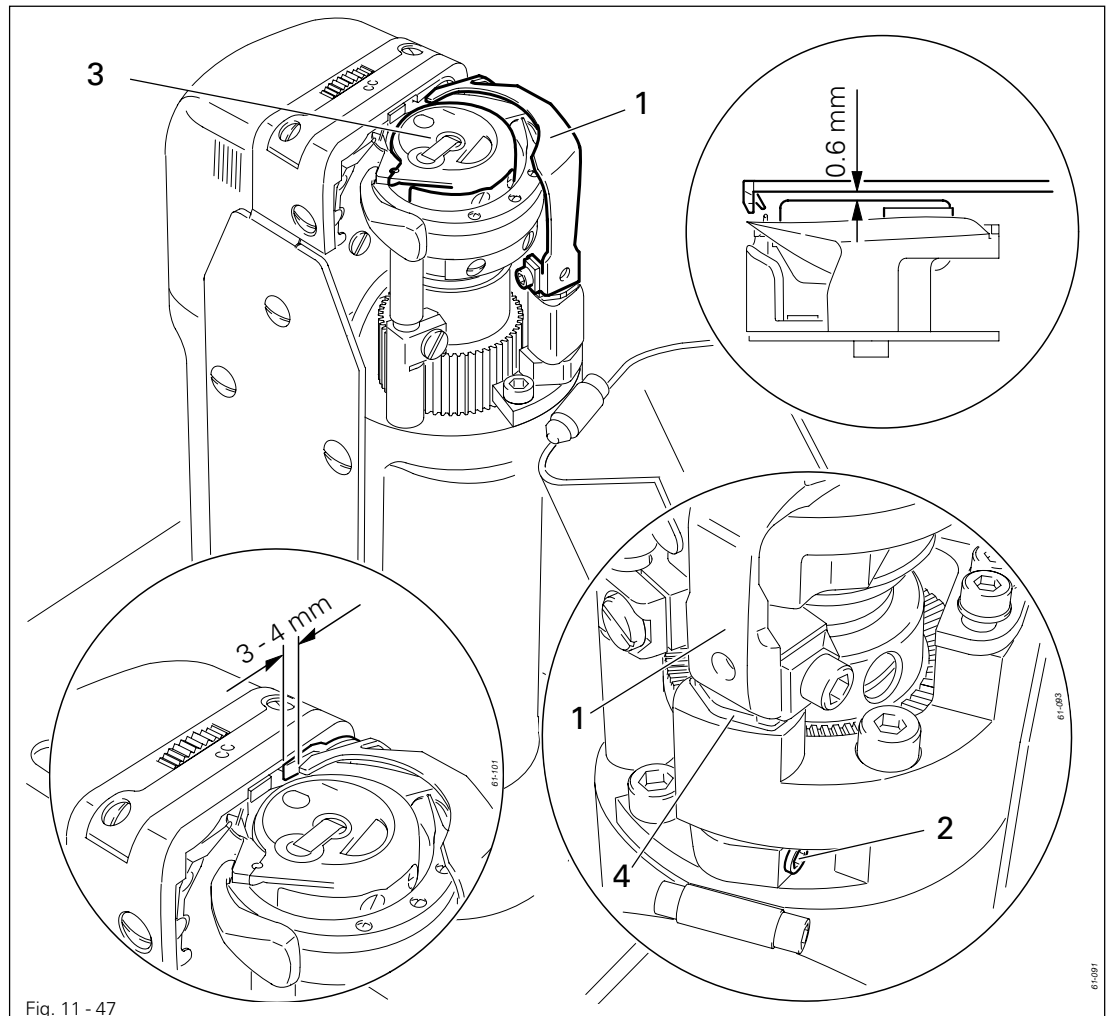
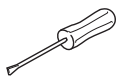


Fig. 11 - 47



- Move or turn thread catcher 1 (screws 2, **two screws**) in accordance with the requirements.

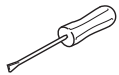
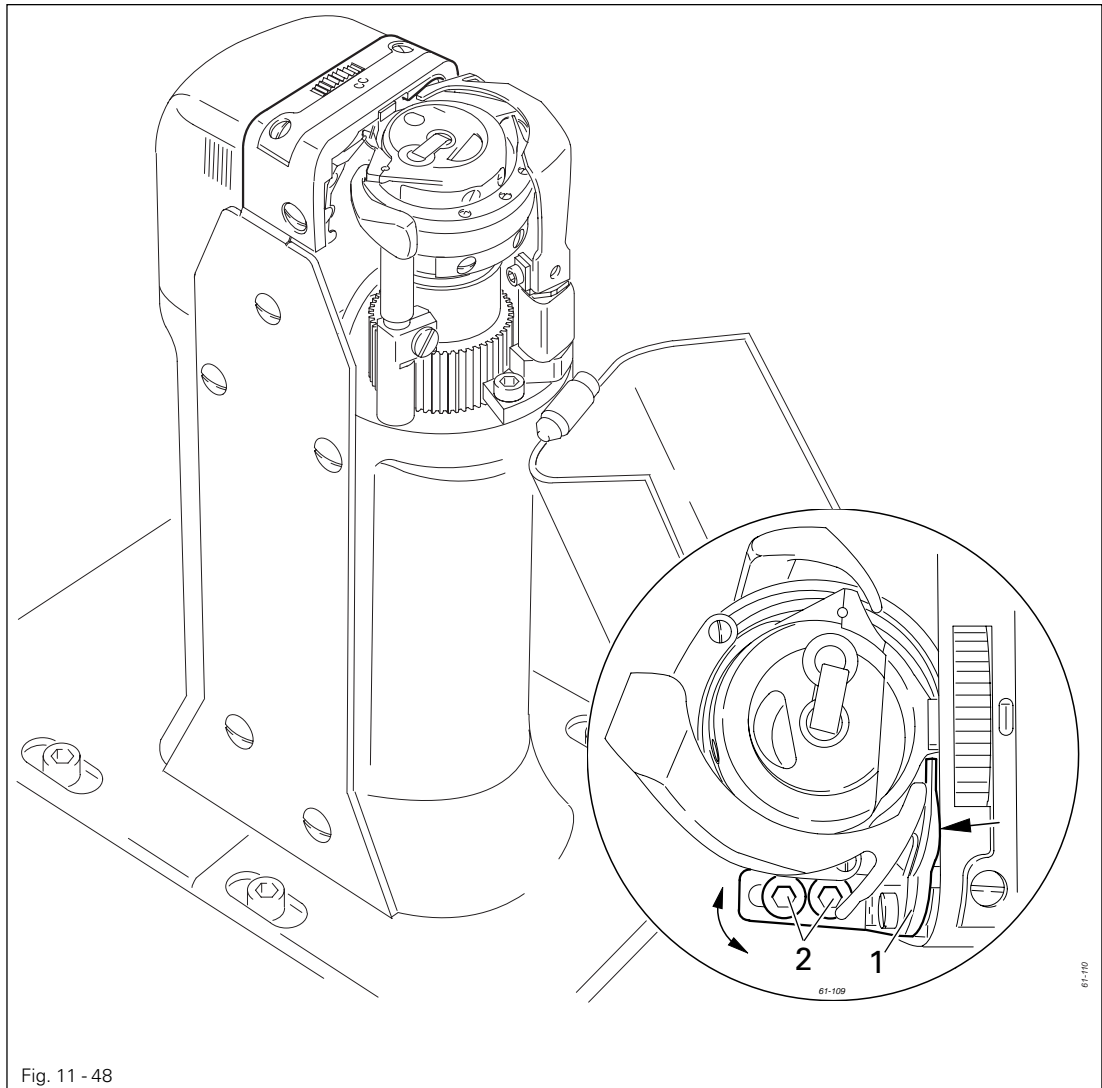


Thread catcher 1 must be parallel to the surface of the thread catcher holder 4.

11.07.05 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.

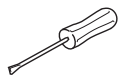
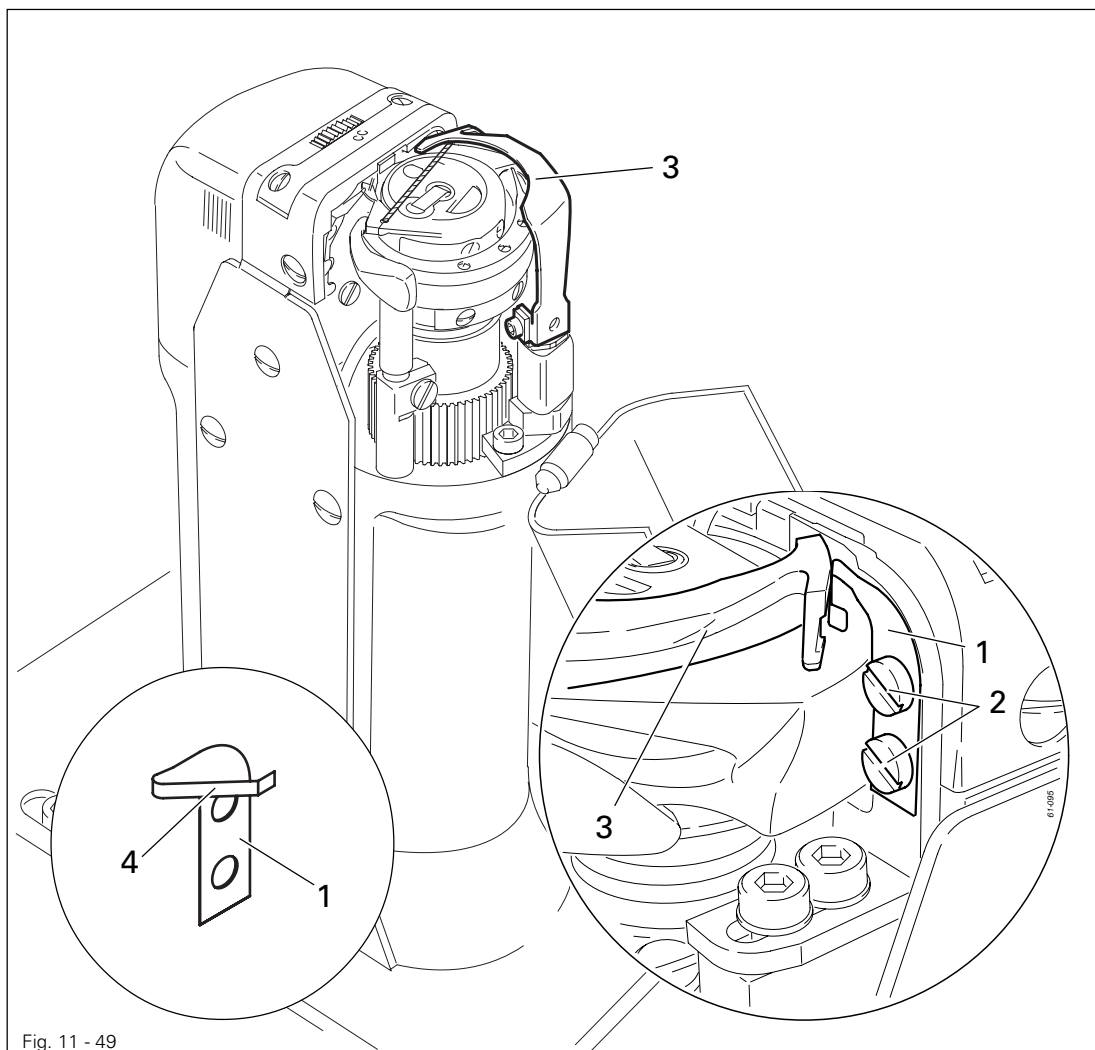


- Move knife **1** (screws **2**) in accordance with **requirement 1** or swivel it in accordance with **requirement 2**.

11.07.06 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.



- 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.

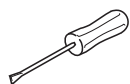
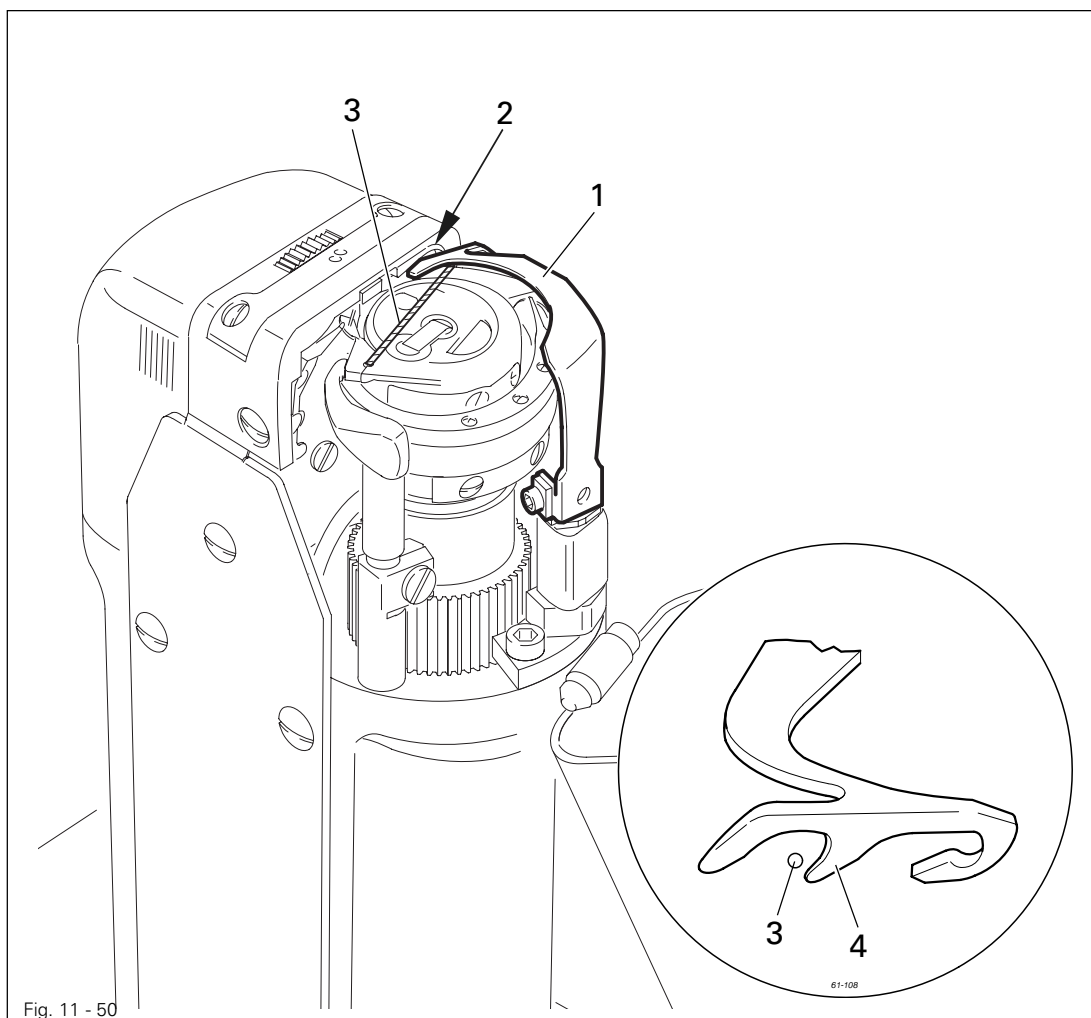
Control – requirement 2

- 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 1st and 3rd stitches. If necessary, correct the tension.

11.07.07 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.

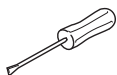
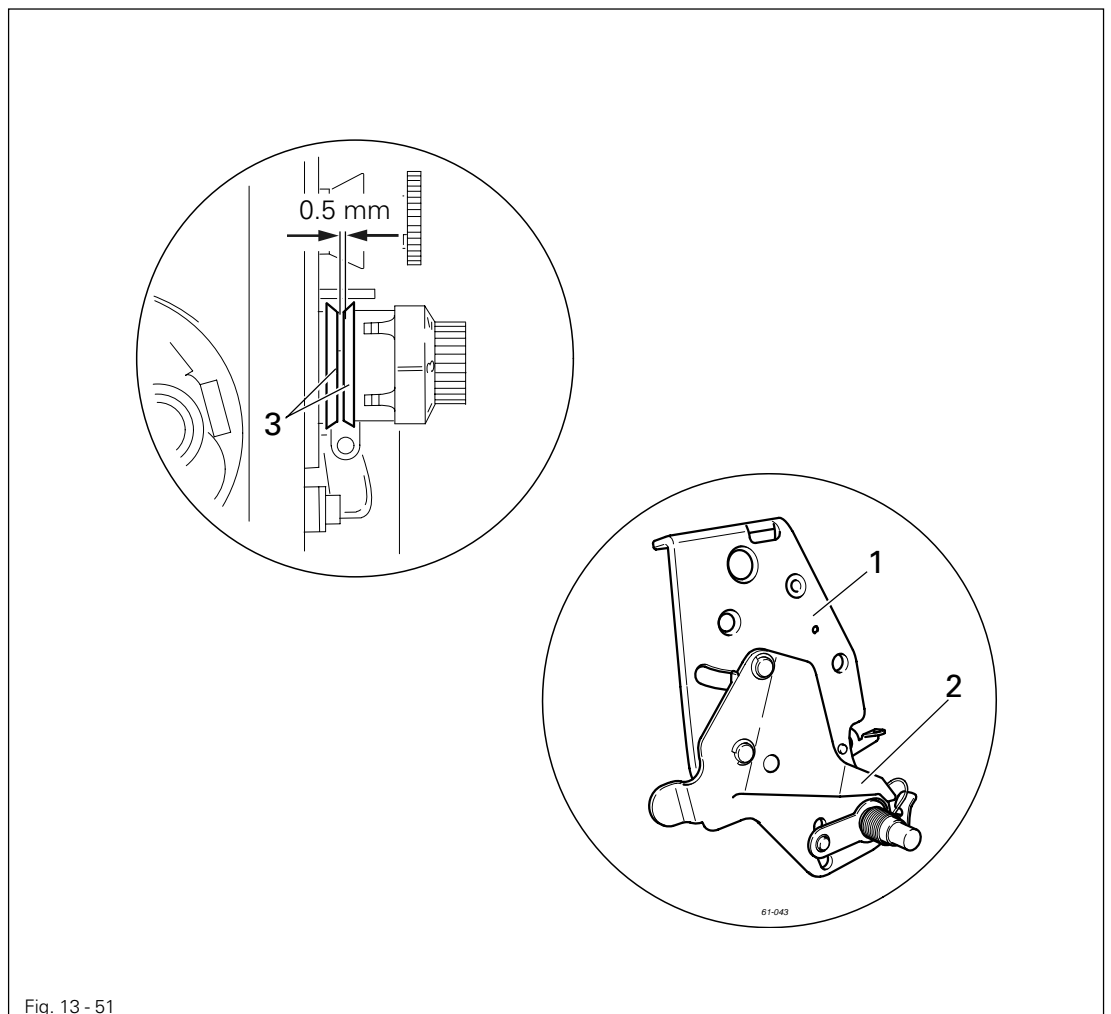


- Sew a few stitches.
- Turn off the on/off switch.
- Carry out the cutting operation manually.
- Check **requirement 1** and **2**, and if necessary readjust thread catcher **1** in accordance with **Chapter 11.07.04 Position of the thread catcher**.
- Check **requirement 3**, and if necessary readjust the bobbin thread retaining spring **2** in accordance with **Chapter 11.07.06 Bobbin thread retaining spring**.

11.07.08 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.



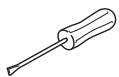
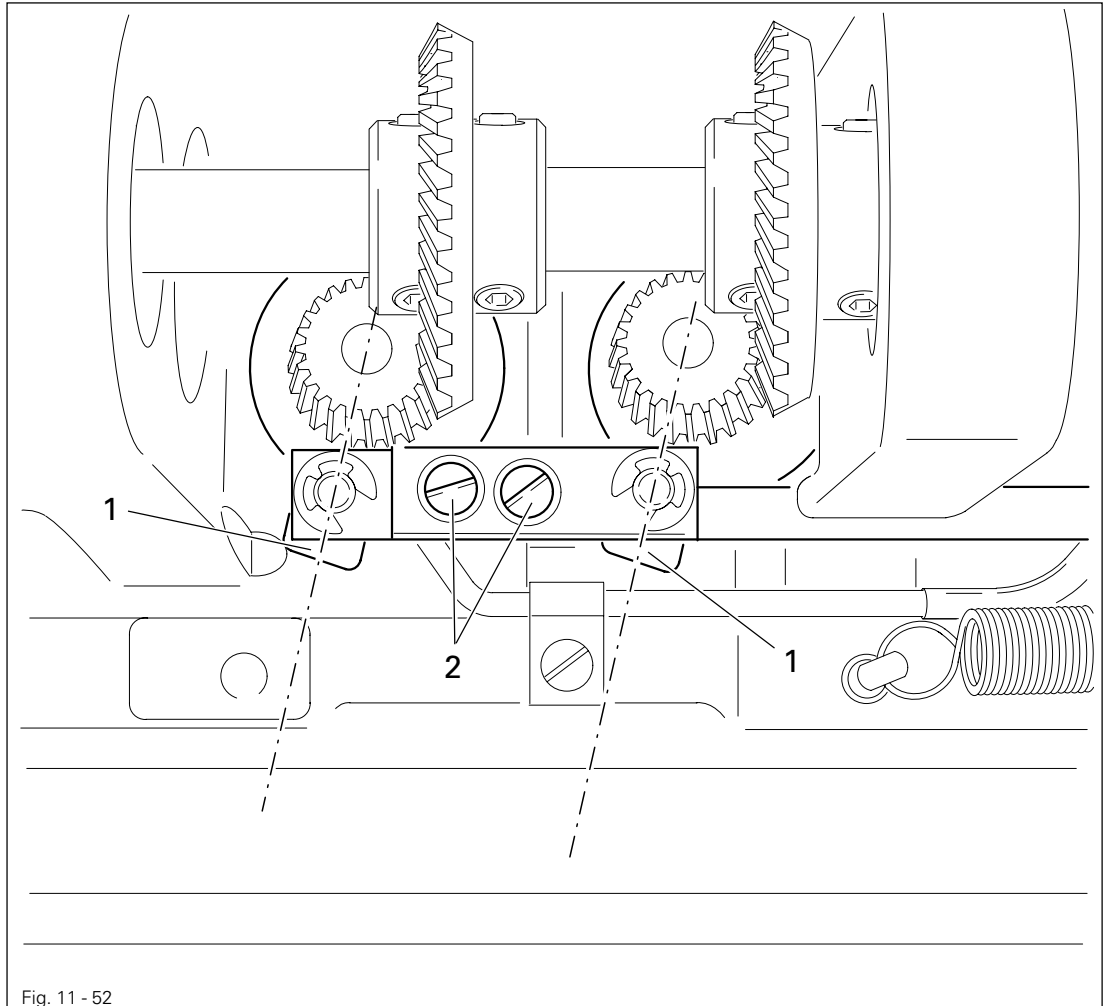
It is possible to set the time for releasing the tension with the parameter functions, see **Chapter 11.10 Parameter settings**.

Adjustment

11.07.09 Linkage rod (only for the PFAFF 574)

Requirement

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



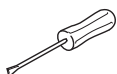
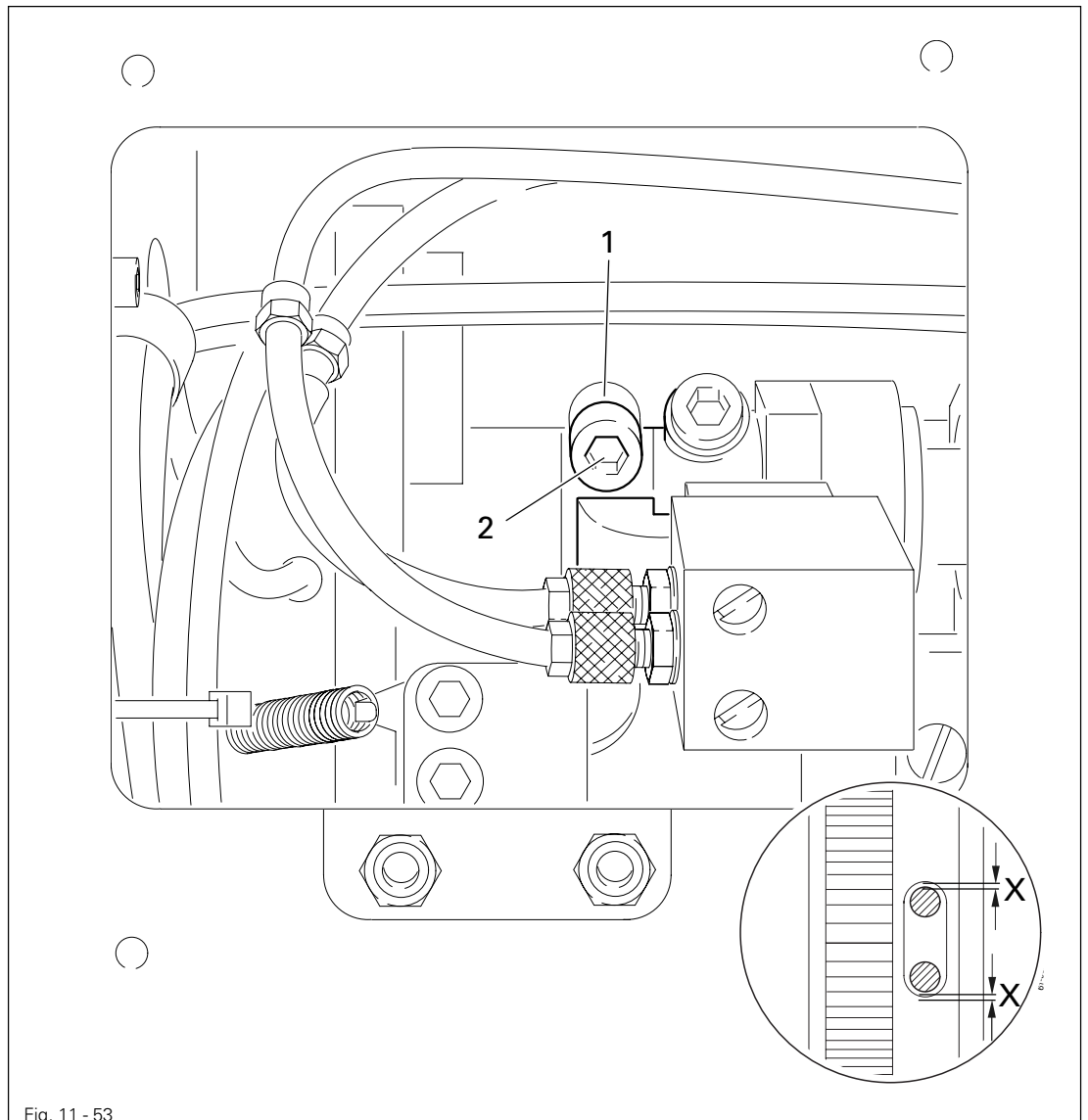
- Adjust drive levers **1** (screws **2**) in accordance with the requirement.

11.08 Adjustment of backtacking mechanism -911/..

11.08.01 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.



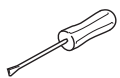
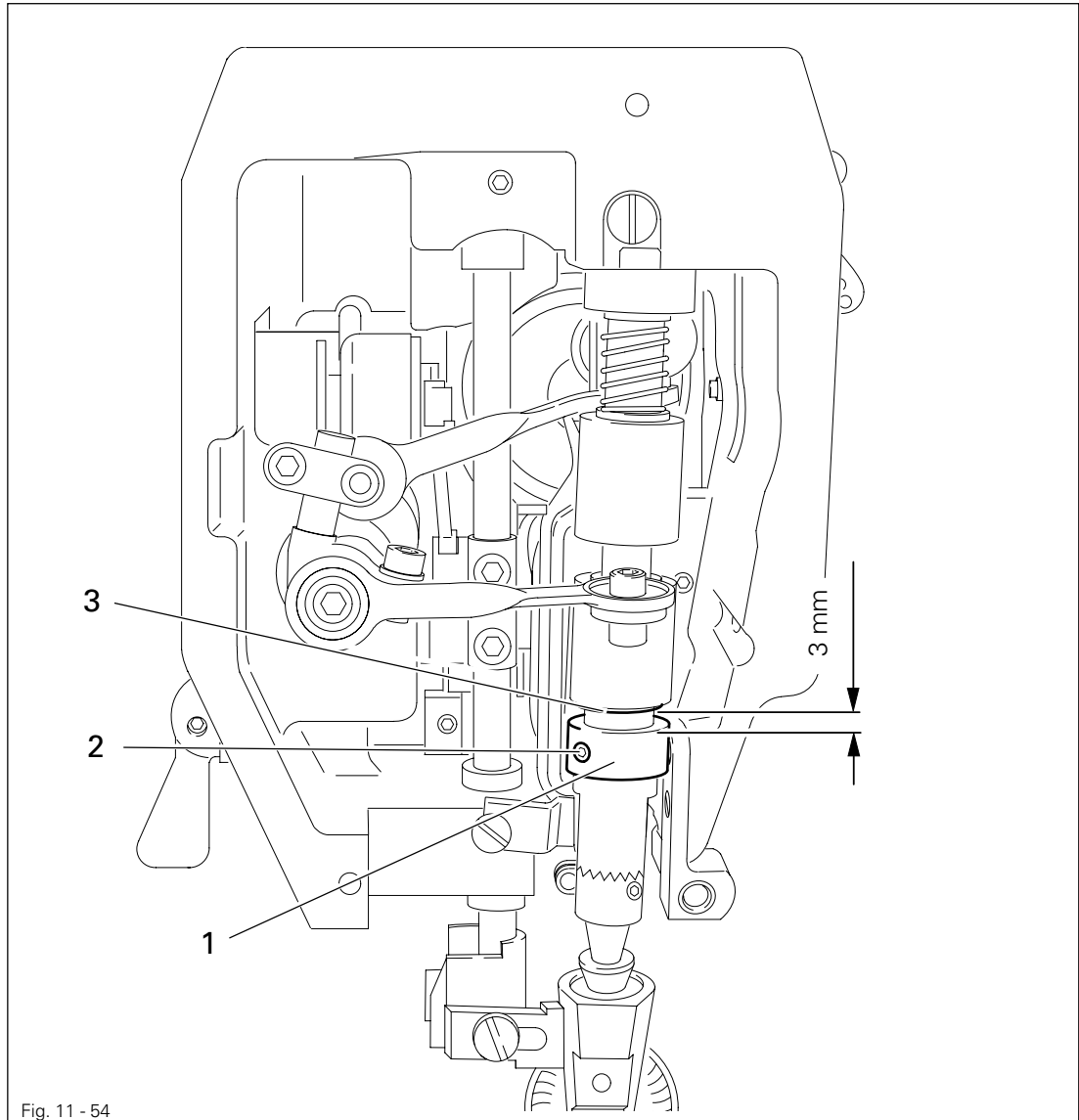
- Turn crank 1 (screws 2) according to the requirement.

Adjustment

11.08.02 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.

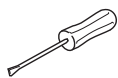
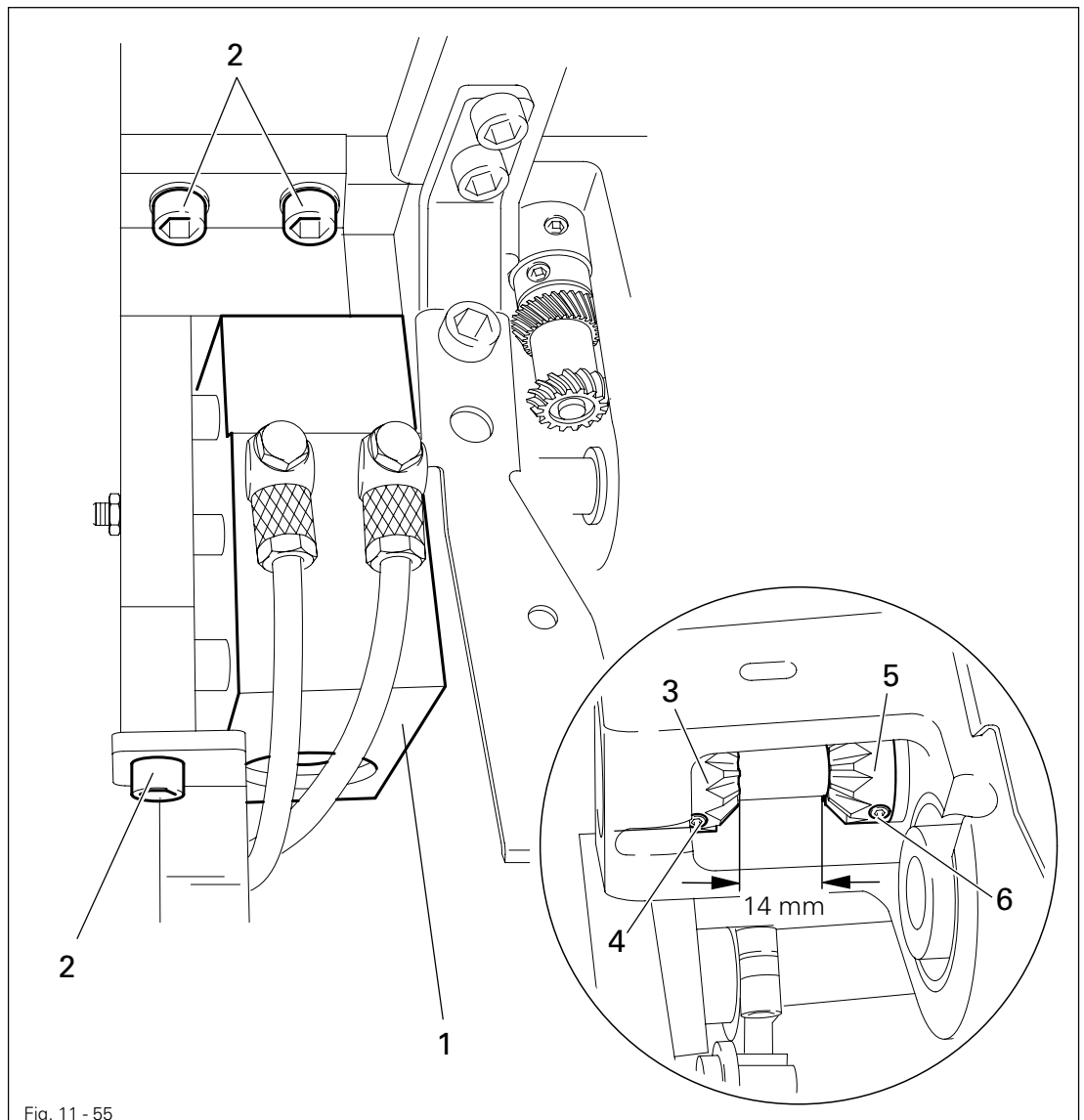


- Adjust coupling half **1** (screw **2**) according to the **requirement**.

11.08.03 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.



- 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.

Adjustment

11.08.04 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.

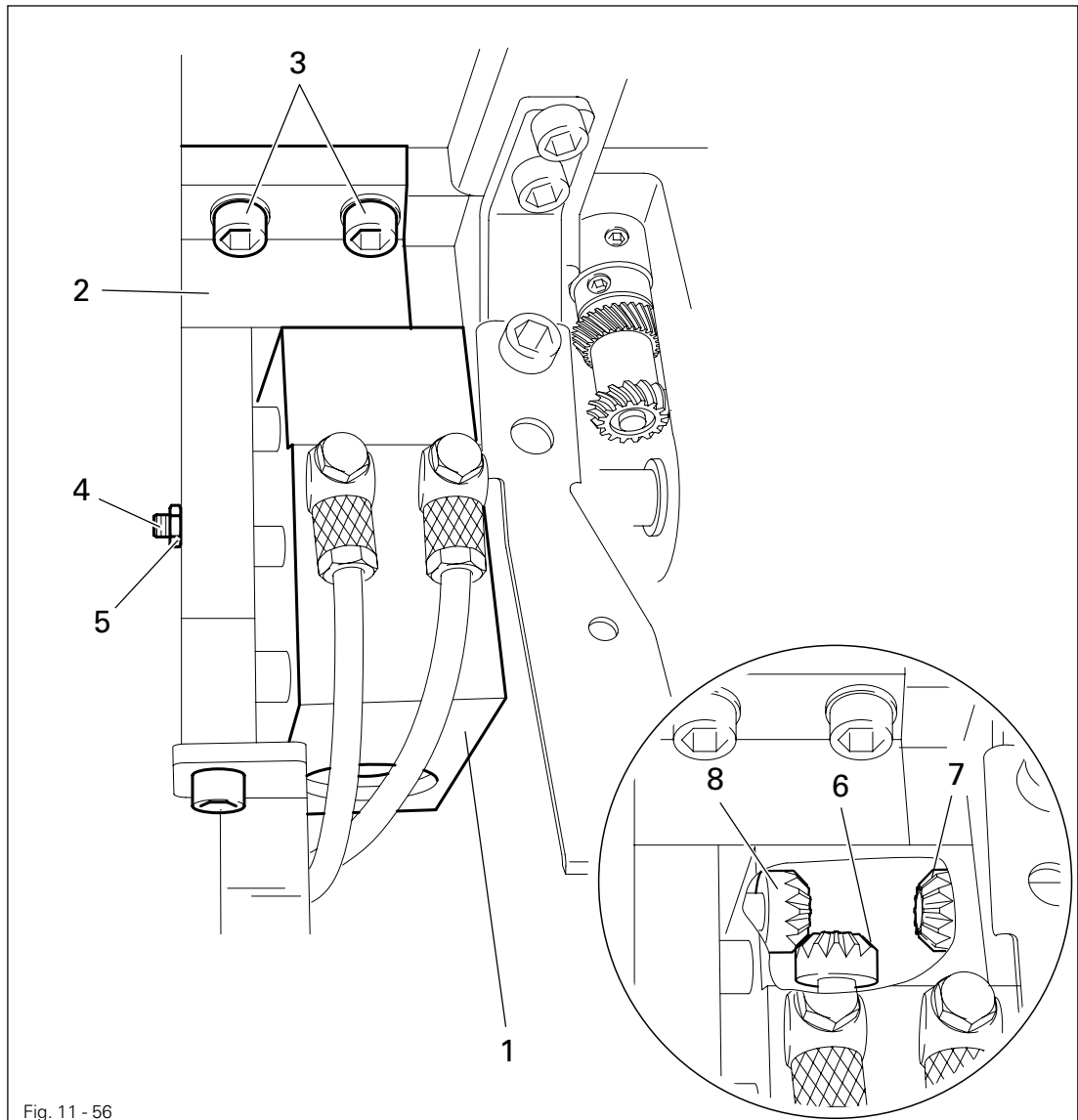
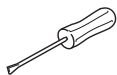


Fig. 11 - 56

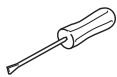
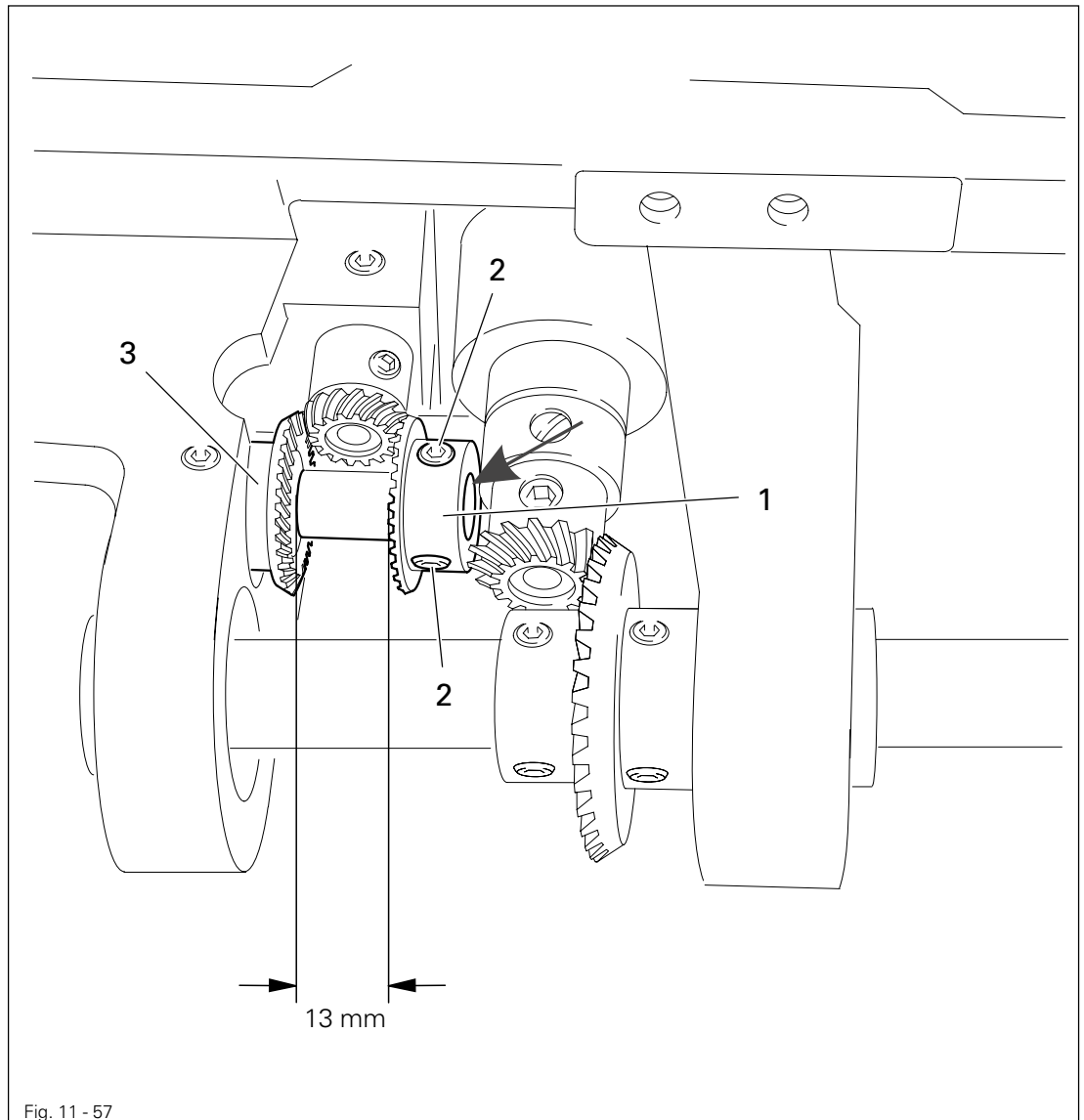


- Disconnect air supply of the air filter/lubricator.
- Move unit 1 by hand as far as possible to the right.
- Adjust bracket 2 (screws 3) according to **requirement 1**.
- Move unit 1 by hand as far as possible to the left.
- Adjust screw 4 (nut 5) according to **requirement 2**.

11.08.05 Bevel 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.

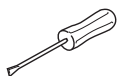
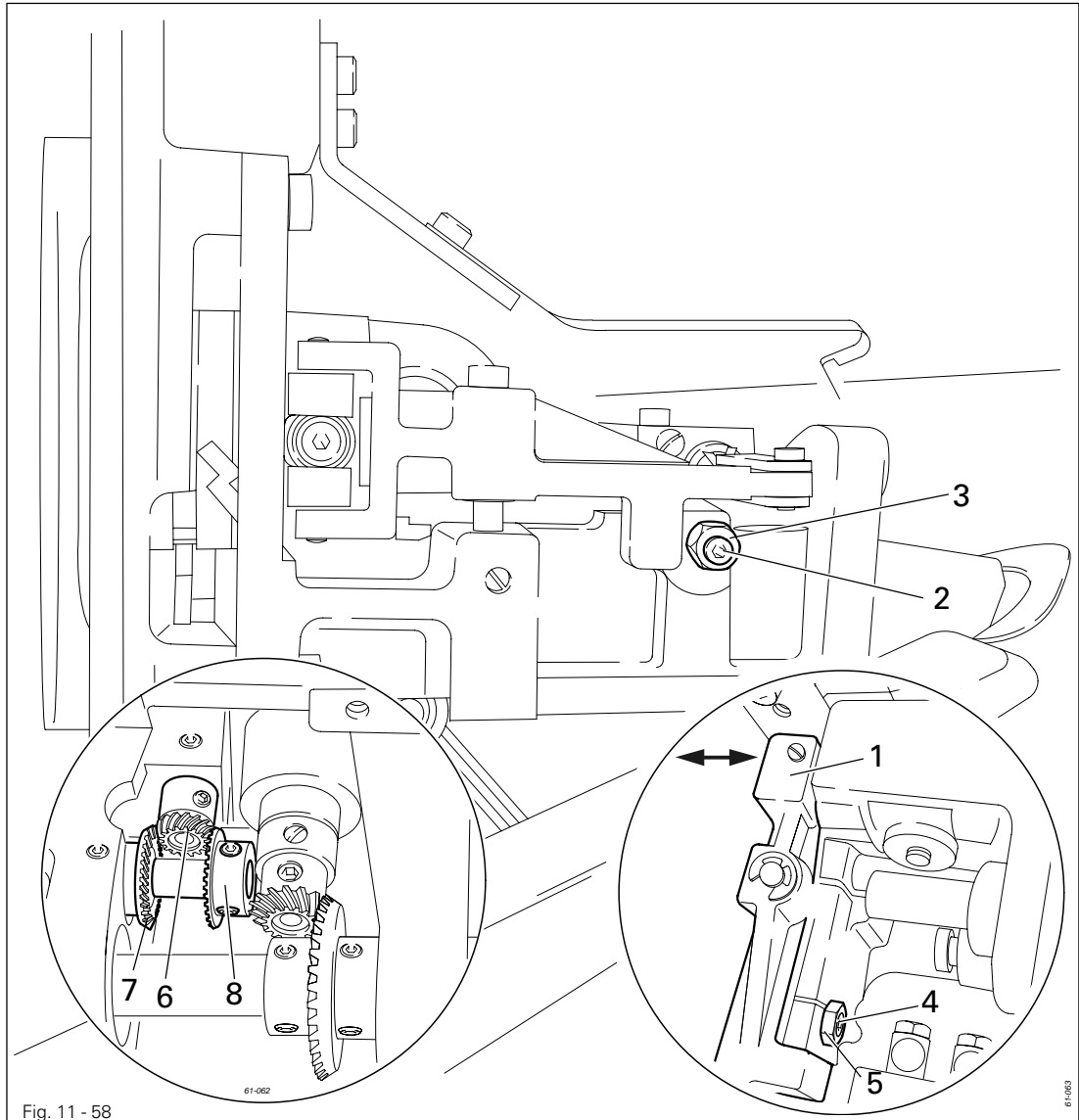


- Adjust bevel gear 1 (screws 2) according to **requirement 1**.
- Adjust bevel gear 3 (screws 4) according to **requirement 2**.

11.08.06 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**.

11.09 Parameter settings

Following parameters can be set on the control panel using the display:

Group	Parameter	Significance	Setting	Standard value
6	601	Cut I = yes II = no		I
	607	Max. speed	100 - 2800	2800
	609	Cutting speed 1	30 - 300	180
	660	Bobbin thread monitoring 0 = without 1 = with sensor 2 = with stitch counting	0 - 2	0
7	700	Needle position 0 Needle reference position	0 - 127	
	701	Angle setting I = Synchronizer setting with balance wheel II = Synchronizer setting with " + " and " - " keys		I
	702	Needle position 1 (needle lowered)	0 - 127	40
	703	Needle position 2 (take-up lever raised)	0 - 127	117
	705	Needle position 5 (end cutting signal 1)	0 - 127	90
	707	Needle position 9 (Start thread tension release)	0 - 127	100



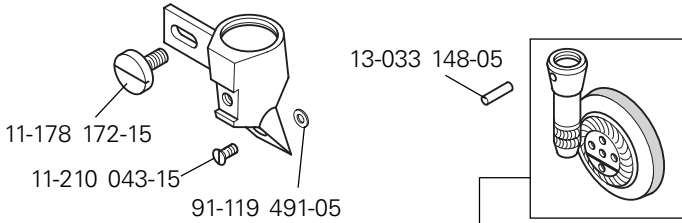
For more displays and information see the **motor instruction manual**.

Wearing parts

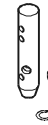
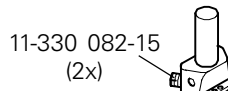
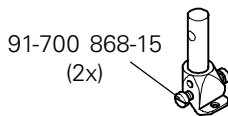
12.01 Wearing parts



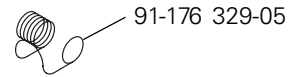
This list indicates the most important wearing parts.
You can request a detailed parts list for the complete machine under parts number 296-12-18461.



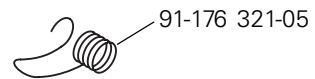
- 91-119 942-93/001 (Roller presser, with 35 mm dia., 4.0 mm wide, toothed)
- 91-175 109-90 (Roller presser, with 35 mm dia., 2.6 mm wide, smooth)
- 91-263 108-91 (Roller presser, with 35 mm dia., 4.0 mm wide, coated with plastic-material)
- 91-175 776-93/001 (Roller presser, with 25 mm dia., 4.0 mm wide, toothed)
- 91-119 478-93/001 (Roller presser, with 25 mm dia., 2.6 mm wide, toothed)
- 91-175 108-90 (Roller presser, with 25 mm dia., 2.6 mm wide, smooth)



PFAFF 571, 574, 591



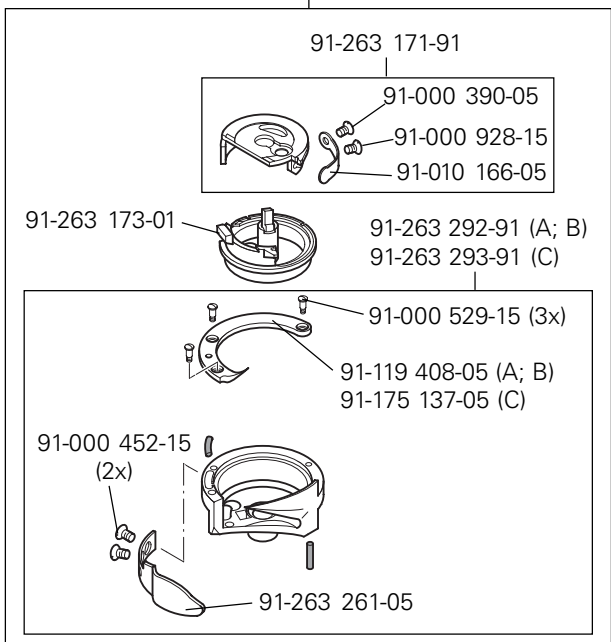
PFAFF 574



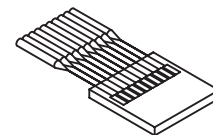
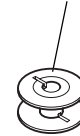
11-108 093-15

91-173 664-15

91-263 170-91 (A; B)
91-263 175-91 (C)



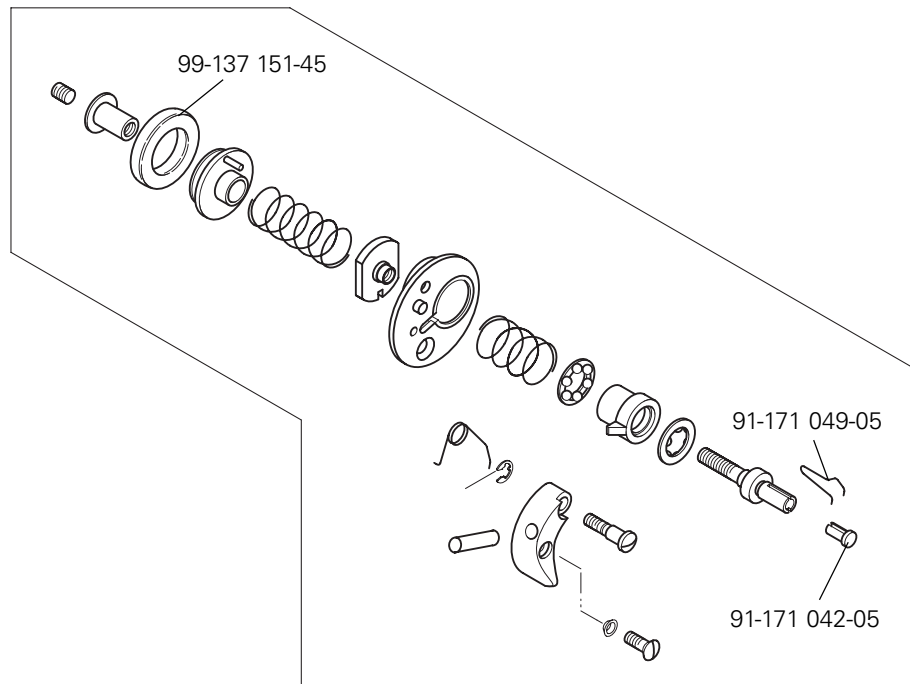
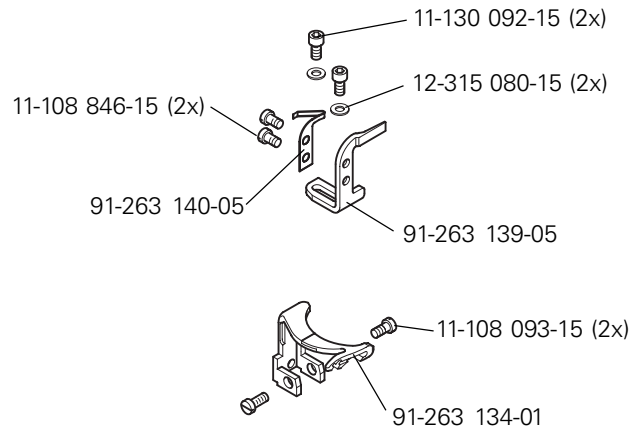
91-118 308-05



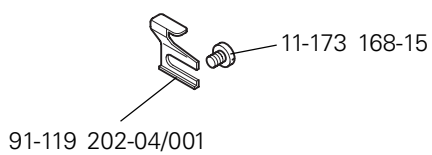
PFAFF 571, 591
System 134

PFAFF 574
System 134-35

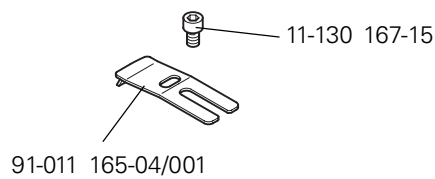
For sub-class -900/81



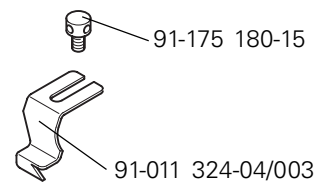
571-725/04



574-725/04; 591-725/04

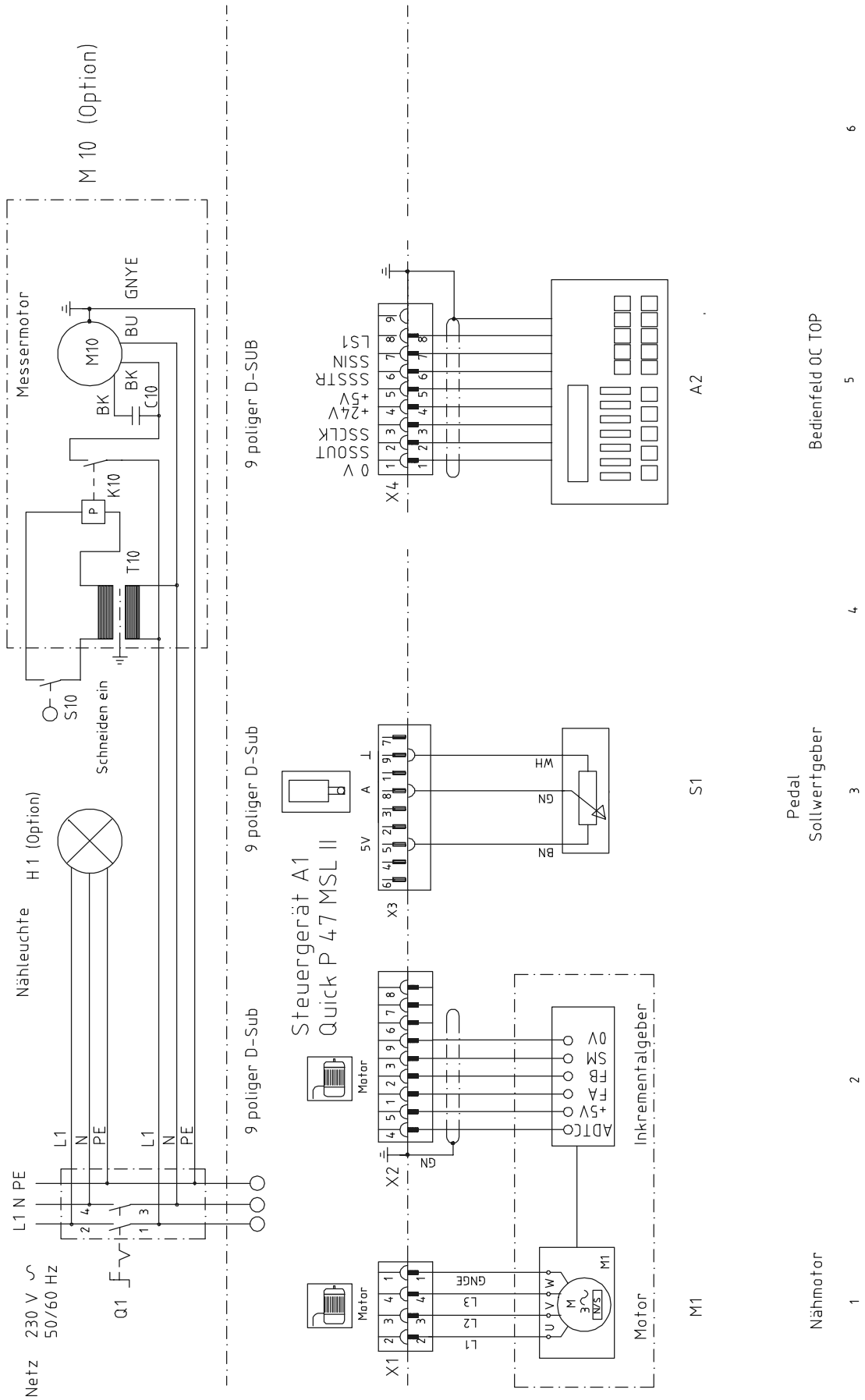


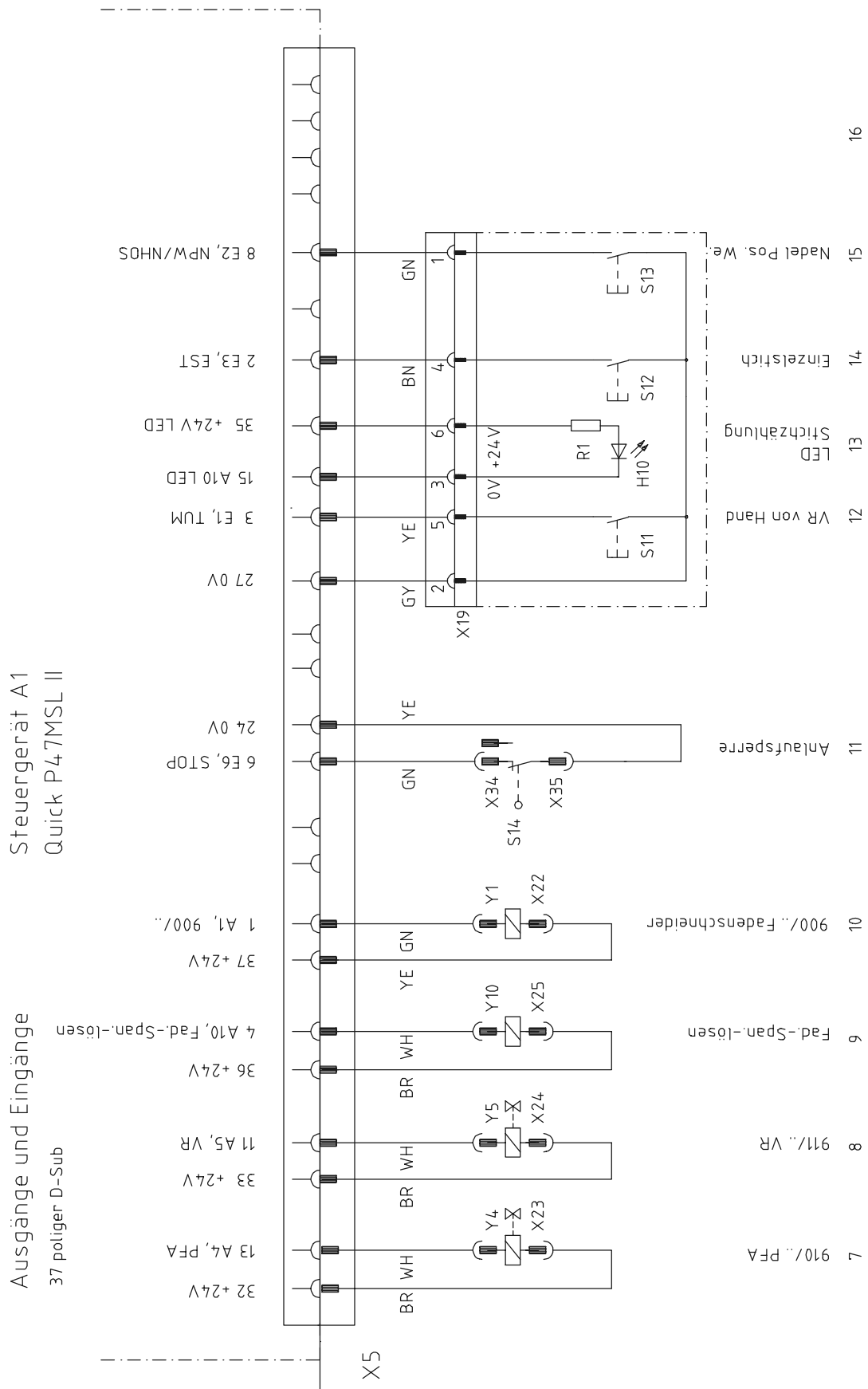
591-726/05



Reference list for the circuit diagrams

A1	Quick controller
A2	OC TOP operating panel
C1	Starting capacitor knife motor
H1	Sewing lamp
H10	LED stitch counting
K1	Relay knife motor
M1	Sewing motor
M10	Knife motor
Q1	On/off switch
T10	Transformer knife motor
Outputs	
Y1	900/..thread trimmer
Y4	910/..automatic presser foot lift
Y5	911/..backtacking mechanism
Y10	Thread tension
Inputs	
S1	Pedal set value transmitter
S10	Key knife motor
S11	Key backtacking by hand
S12	Key single stitch
S13	Key needle position change
S14	Key start inhibitor







PFAFF

Abteilung/Department
Produktmanagement

Datum/Date
2001-14-12

Latest information on the machine series 570/590

We have reached another milestone! From March 2002 we can offer our customers the subclass -940/02 to our machine series 570/590.

The outstanding feature of the subclass -940/02 is a **dome-shaped needle plate**. Preformed workpieces can be sewn better, and even small shank sizes are no problem. This subclass is standard on machines without a thread trimmer and can be attached to machines with a thread trimmer without much difficulty. To do so it is merely necessary to remove the thread trimmer block by loosening two Allen screws.

Here is a general summary of all the products from the 570/590 series available from March:

- 571 -940/02 BL
- 571 -725/04 -940/02 BL x 1,2
- 571 -725/04 -940/02 AL x 1,0
- 591 -940/02 BL
- 591 -940/02 AL
- 591 -940/02 CL N7
- 591 -725/04 -940/02 AL x 1,0
- 591 -725/04 -940/02 BL x 1,2
- 591 -725/04 -940/02 CL x 1,6
- 591 -726/05 -940/02 BL x 1,2

For your information our detailed specification sheets for the 570/590 machines series will be available from December.

Please send your orders to your contact partner in our order centre AZE in Kaiserslautern. For information about other products, visit our internet site at: www.pfaff-industrial.com.

We are looking forward to your call and, if you have any queries or need more information, we are available at any time under: (+49) 631/200-1330 or by Email: lothar.schilling@pfaff-industrial.com.

With kind regards, your product management department

L. Schilling / MPM-1330

A handwritten signature in black ink, appearing to read "L. Schilling", with a stylized flourish at the end.

G. Helf / MPM-1340

A handwritten signature in black ink, appearing to read "G. Helf", with a stylized flourish at the end.

PFAFF

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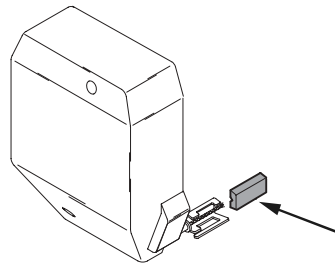
Supplement to the instruction
manual for the series
570 / 590 ; 1570 / 1590

Comments

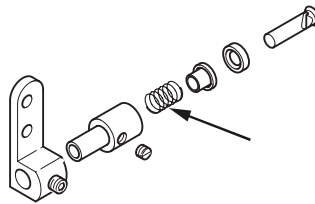
Various improvements have been made to the machines of the series 570 / 590; 1570 / 1590 with thread trimmer –900/81:

1. For a better sewing start after the thread has been trimmed, following parts were modified or added as new parts:

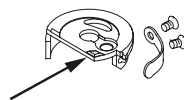
- a thinner thread lubricating felt (6 mm thick) to reduce the primary thread tension, Part-No. 91-165 384-05,



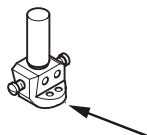
- a weaker spring for the primary thread tension to reduce the primary tension, Part-No. 91-263 391-05



- a new bobbin case with reversing cam, Part No. 91-263 378-91

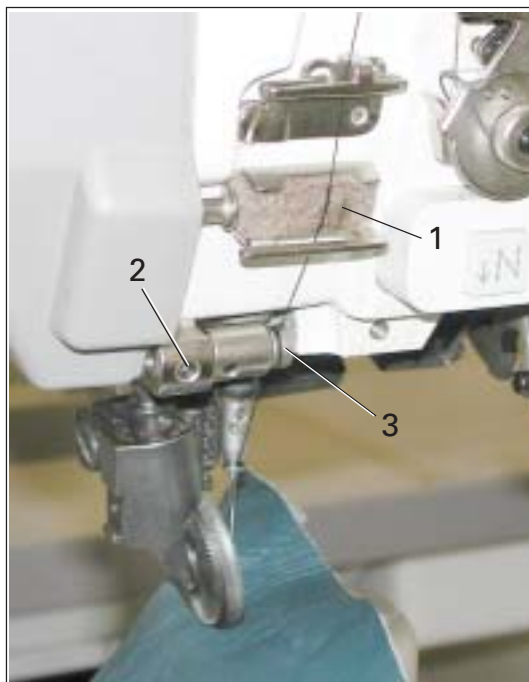


- a new needle holder for 2-needle machines,
Part No. 91-164 726-93/001 (diagonal needle gauge 2.4 mm)
Part No. 91-164 726-93/002 (diagonal needle gauge 2.8 mm)
Part No. 91-164 726-93/003 (diagonal needle gauge 3.2 mm)

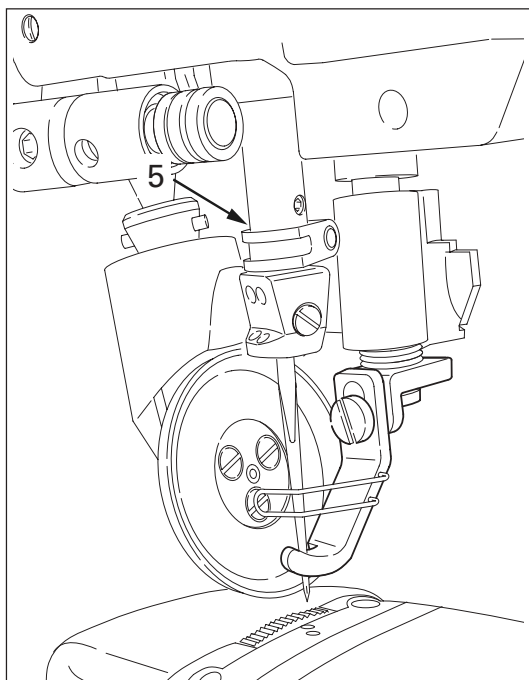


2. Adjustment modification due to the new parts
(see Chapter "Adjustment")

3. For a better error analysis a check list was developed for a simple correction of the problems (see Chapter "Check List")



- Remove felt 1 and replace it with the new felt.
- Loosen screw 2 and pull out thread tension device 3 to the right.
- Install the weaker spring and replace the parts in the reverse order.
- Install new bobbin case 4 with reversing cam.

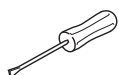
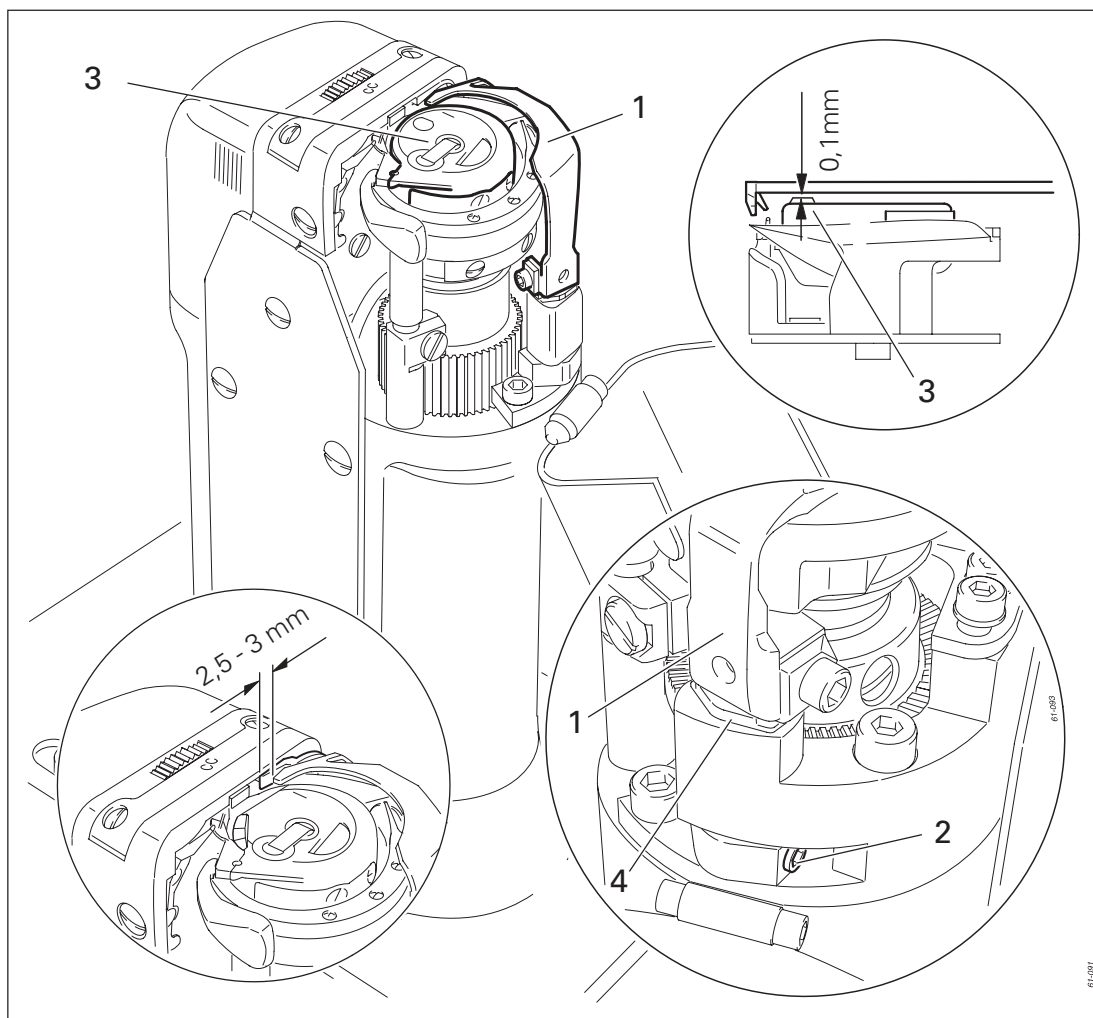


- Loosen screw 5 (see arrow) and remove the needle holder.
- Install the new needle holder and tighten screws 5 a little. Insert the needles.
- Adjust the hook-to-needle clearance (see Chapter **Needle bar rise, Hook-to-needle clearance and Needle guard**) and tighten screw 5.

Position of the thread catcher

Requirement

1. The bottom edge of thread catcher **1** must be at a distance of **0.1 mm** from the positioning finger of the bobbin case **3**.
2. When the thread trimming device is in its neutral position, the back edge of the thread catcher should be **approx. 2.5 – 3 mm** behind the edge of the knife.



- Shift or turn thread catcher **1** (screws **2**, 2 screws) in accordance with the requirements.



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



The remaining adjustments to the thread trimming device are listed in the corresponding instruction manuals.

Check list for correcting problems with the thread trimming device

Problem	Cause	Correction
<p>The first stitches have not been sewn</p>	<p>Bobbin thread clamp spring setting is too strong After trimming the needle thread is too short</p> <p>Bobbin thread has been cut too short and is not picked up by the centre hook of the catcher.</p> <p>Balance wheel set too high, so that the thread is not clamped between needle hole and material after the first stitch</p> <p>Needle hole too large</p> <p>Primary thread tension set too high in front of the needle</p>	<p>See instruction manual (Chapter Bobbin thread clamp spring) primary Check/adjust the tension. Check/adjust the position of the control cam (see instruction manual Chapter Radial position of the control cam) Check/adjust Parameter 707.</p> <p>Check and adjust catcher path and position (see Chapter Position of the thread catcher Page 4)</p> <p>Adjust the height of the balance wheel (see instruction manual Chapter Height of the balance wheel)</p> <p>Install new insert and extend it to the dimension required</p> <p>Insert new, weaker spring (see Pages 2 – 3)</p>
<p>The needle thread has not been cut</p>	<p>Thread is not drawn into the catcher</p> <p>Knife pressure is too low</p>	<p>Check/adjust Parameter 707. Check/adjust primary tension. Check/adjust position of control cam (see instruction manual Chapter Radial position of the control cam)</p> <p>Adjust the pressure of the knife (see instruction manual Chapter Knife position and knife pressure)</p>

Check list for correcting problems with the thread trimming device

Problem	Cause	Correction
The bobbin thread has not been cut	Thread catcher is too high, incorrect position of the thread catcher Knife pressure is too low	Check and adjust the position of the catcher (see Chapter Position of the thread catcher Page 4) Adjust the knife pressure (see instruction manual Chapter Knife position and knife pressure)
After trimming the needle thread is too short	Tension release is not functioning Parameter 707 (tension release time) Tension release solenoid is not drawing thread through Needle thread is being pulled into the bobbin thread position on the catcher	Check/adjust tension release (see instruction manual Chapter Tension release) Check/adjust (see instruction manual Chapter Parameter settings) Increase value for Parameter 719 (Tact retaining current) Check and adjust the position of the catcher (see Chapter Position of the thread catcher Page 4) Check/adjust control cam time (see instruction manual Chapter Neutral position of the roller lever / Radial position of the control cam)

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