

PFAFF

1571

1574

Instruction Manual

1591

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

2575633 →



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

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Editing/illustrations
Verlag TD
D-77901 Lahr

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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



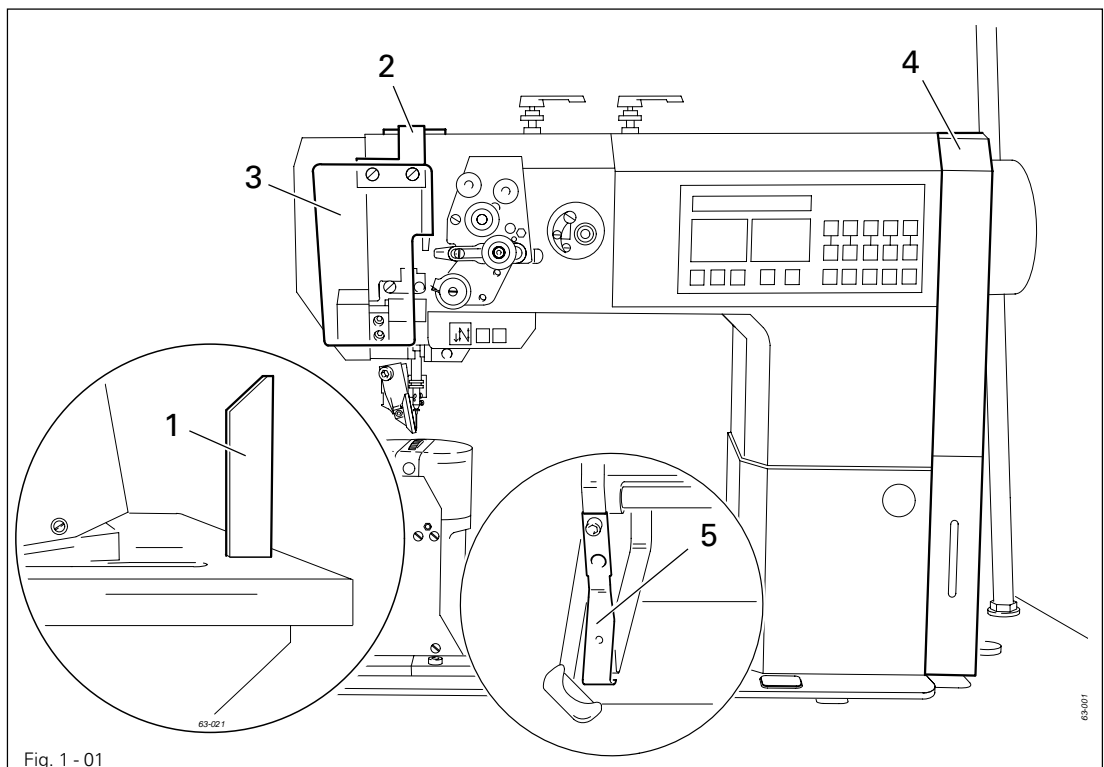
A working area of **1 meter** is to be kept free both in front of and behind the machine while it is in operation so that it is always easily accessible.



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!



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



Only operate the machine if eye shield **3** has been pulled down!
Eye shield **3** is a protection against oil particles from the thread lubrication.



Do not operate the machine without machine cover **4**!
Danger of injury from moving parts!



Do not operate the machine without tilt lock **5**!
Danger of crushing between the machine head and table top!

2

Proper use

The **PFAFF 1571 and PFAFF 1591** are high-speed, single-needle postbed sewing machines with a forwards and reverse feeding feed wheel and roller presser and needle feed.

PFAFF 1571 Post to the left of the needle.

PFAFF 1591 Post to the right of the needle.

The **PFAFF 1574** is a high-speed, two-needle postbed sewing machines with a forwards and reverse feeding feed wheel and roller presser.

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 1571, 1574, 1591 ▲

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 1571, 1574, 1591 Model A + B 3500 spm ♦
PFAFF 1574, 1591 Model C 2000 spm ♦
Max. stitch length: 5.0 mm
Cutting depth (for -725/..): 0.8 – 2.5 mm
Cutting speed (for -725/..): 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 level at workplace at appropriate speed

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

PFAFF 1571 and 1591, model A + B at a speed of 2800 spm.: $L_{pA} = 80$ dB(A) ■
PFAFF 1574 model B at a speed of 2800 spm.: $L_{pA} = 81$ dB(A) ■
PFAFF 1574 and 1591, model C at a speed of 1600 spm.: $L_{pA} = 74$ 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

3.02 Needles and threads

Model	Thread thickness▲ (Nm) max. synthetic	Needle thickness in 1/100 mm	Needle system for PFAFF 1571	Needle system for PFAFF 1574	Needle system for PFAFF 1591
A	60/3	70	134	-	134
B	40/3	100	134	134 - 35	134
C	15/3	130	-	134 - 35	134

▲ or similar strengths of other types of thread

3.03 Possible models and subclasses

PFAFF 1571, 1591

Model A For sewing lightweight materials

PFAFF 1571, 1574, 1591

Model B For sewing medium-weight materials

PFAFF 1574, 1591

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

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.

Explanation of symbols

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:



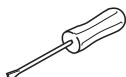
Note, information



Cleaning, care



Lubrication



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

7 Controls

7.01 Main switch

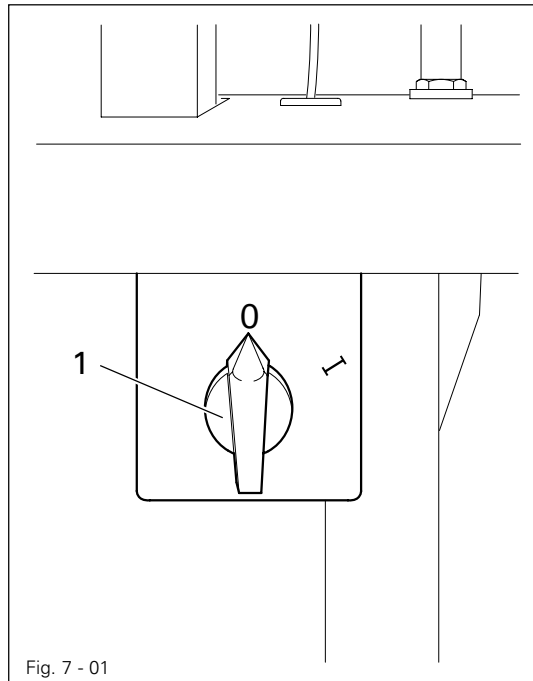


Fig. 7 - 01

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

7.02 Keys on the machine head

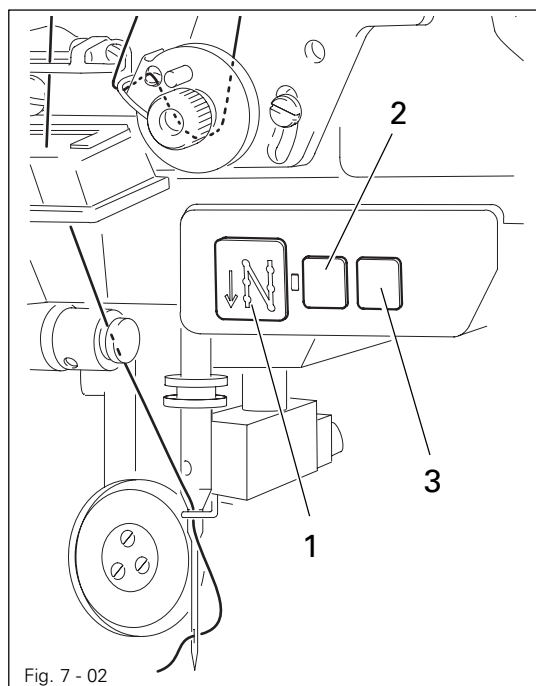
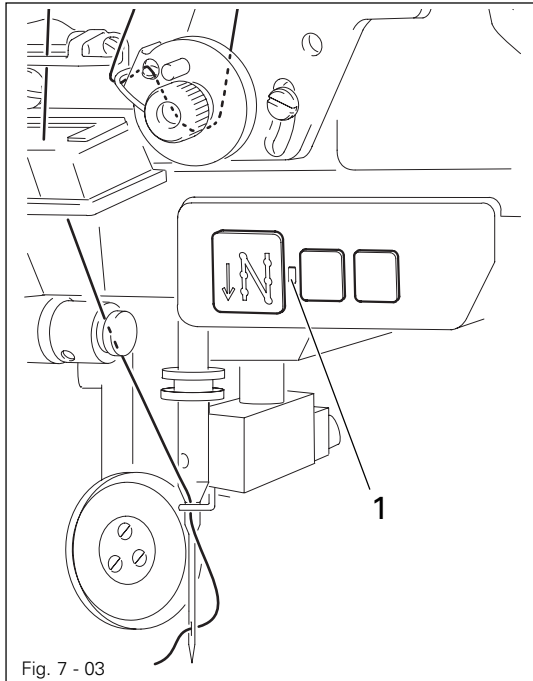


Fig. 7 - 02

- As long as key 1 is pressed in the sewing mode, the machine sews in reverse.
- Keys 2 and 3 can be used for parameter settings, see **Chapter 12.08 Parameter settings**.

7.03

Bobbin thread monitoring with stitch counting



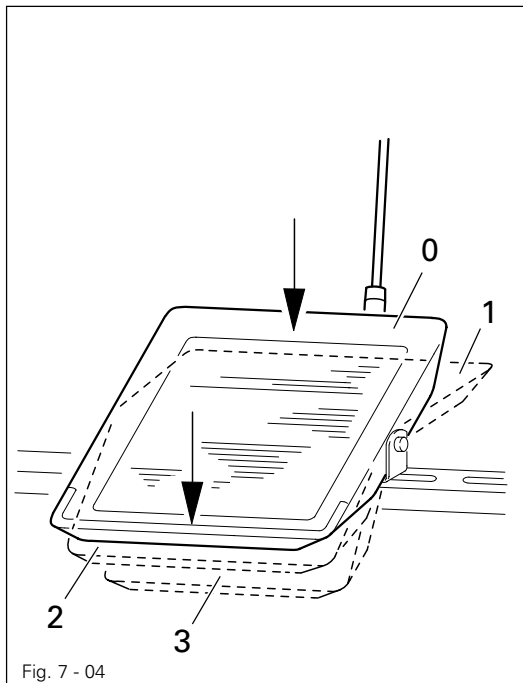
- About 100 stitches before reaching the preset number of stitches, LED 1 flashes.
- After the thread has been trimmed and the bobbin changed, the stitch counting begins anew.



Presetting the number of stitches, see **Chapter 9.10 Setting the stitch counting function for bobbin thread monitoring.**

7.04

Pedal



- 0 = Machine stop
- 1 = Sew
- 2 = Raise roller presser
- 3 = Trim thread and raise roller presser

7.05 Knee switch

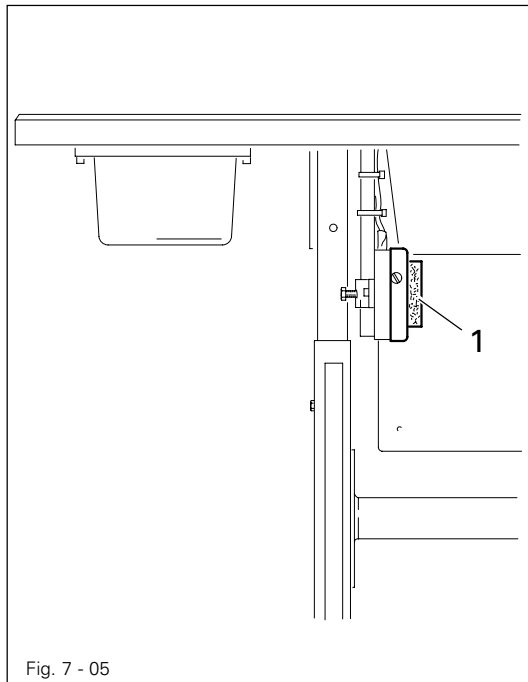


Fig. 7 - 05

- By operating knee switch 1 it is possible to choose between 2 preset amounts of fullness or 2 stitch lengths.



The function of knee switch 1 must be switched on with the control panel (see **chapter 10 Sewing**)

7.06 Knee lever

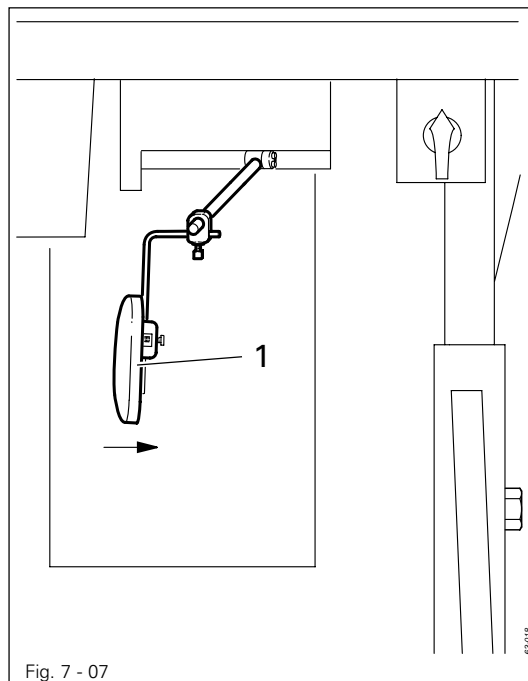
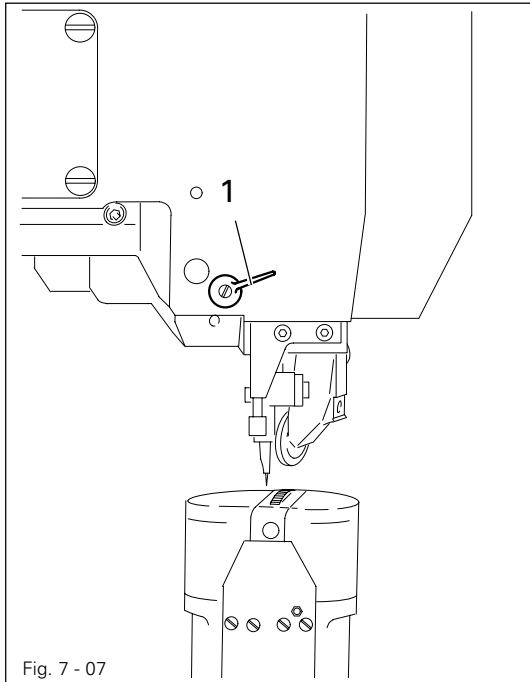


Fig. 7 - 07

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

7.07 Lever for raising the roller presser

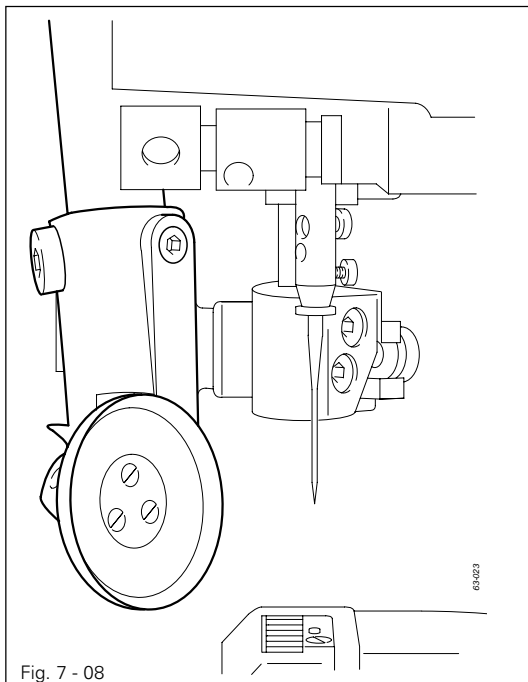


- The roller presser is raised by turning lever 1.



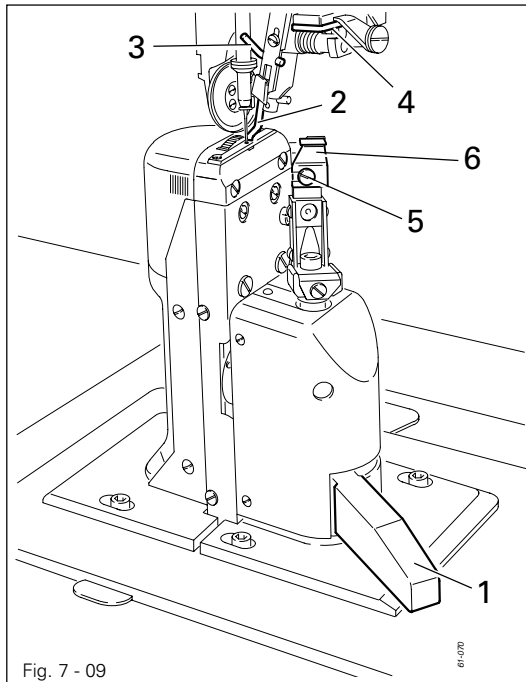
Fig. 7-07 shows the 1574.

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 1571



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:

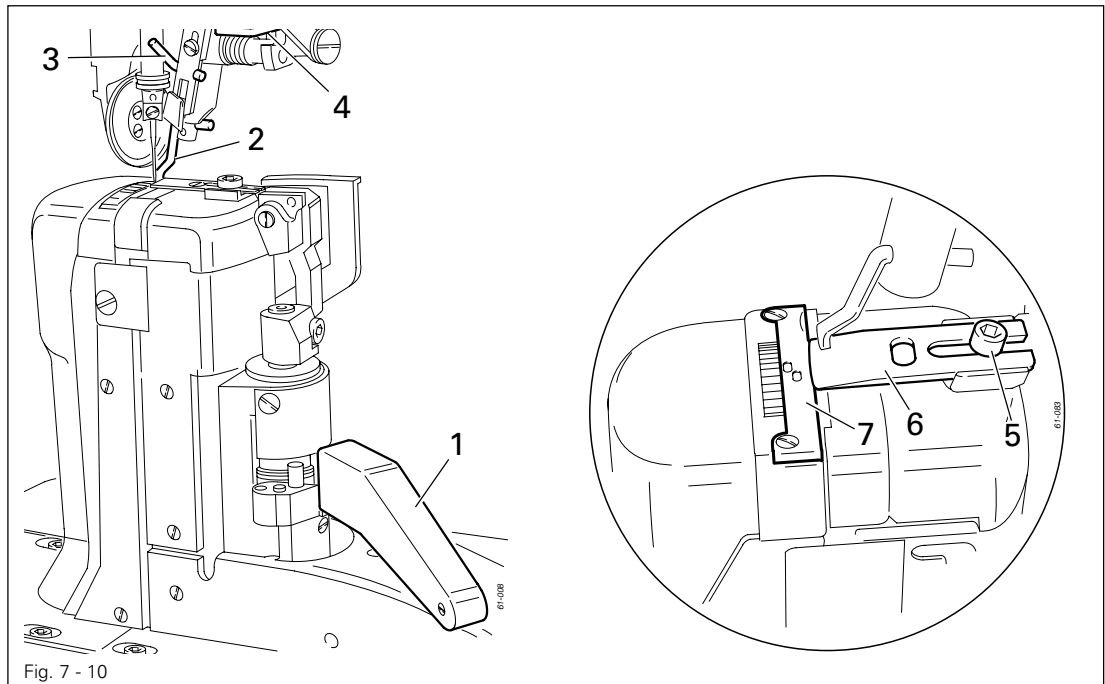
- Raise edge guide 2 and let it click into position. The edge guide 2 is out of operation.
- Raise lever 4. The edge guide swings backwards.

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 12.05.05 Cutting stroke and tighten screw 5.



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 12.05.07 Knife position and tighten screw 5.

7.11 Edge trimmer -726/05 for PFAFF 1591

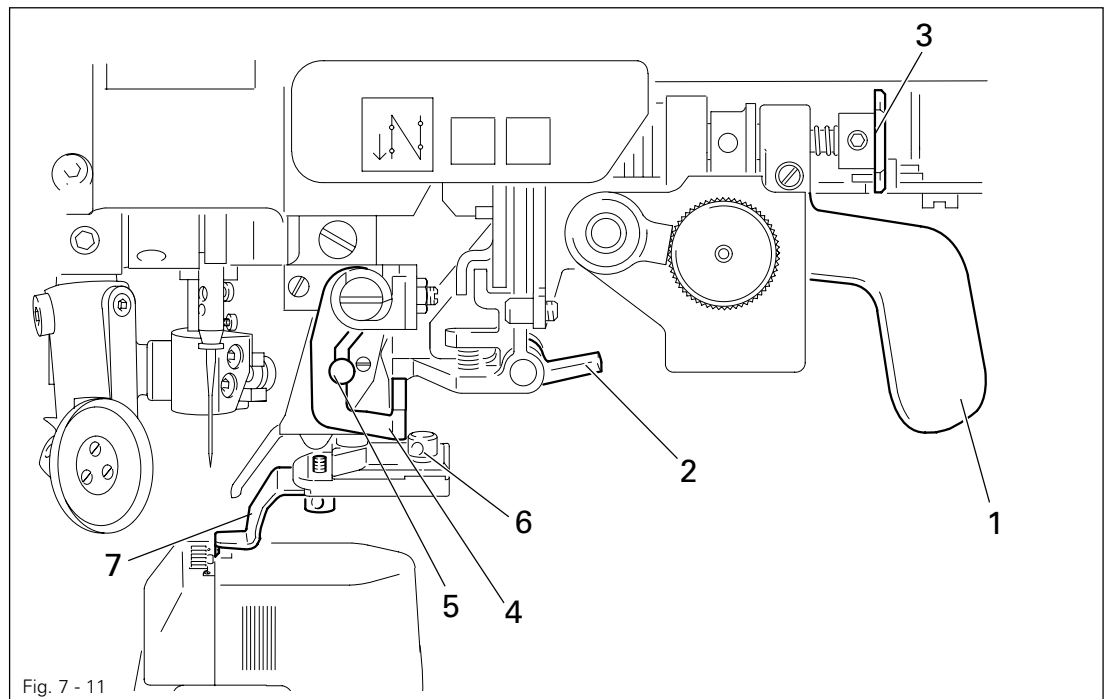


Fig. 7 - 11



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 12.06.01 Position of the knife to the needle plate** and **Chapter 12.06.02 Knife crosswise to sewing direction**.

7.12 Control panel

The control panel consists of display **1** and a row of function keys.

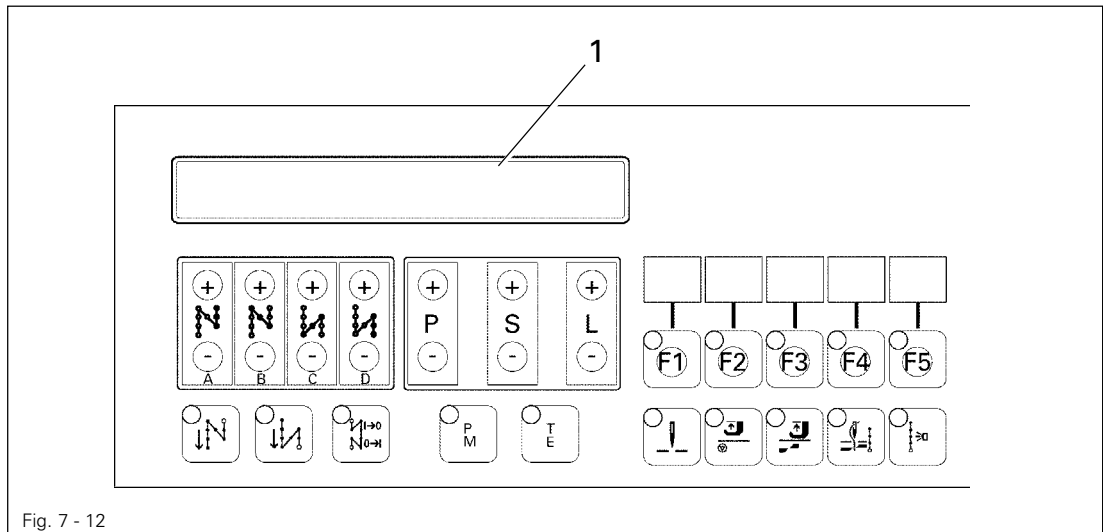


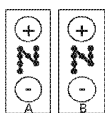
Fig. 7 - 12

7.12.01 Screen display

- During the sewing operation (LED on the **Parameter input** key is off) the current values are shown on the display with the use of the relevant function keys.
- In the Parameter input field the selected parameter with its appropriate value are displayed.

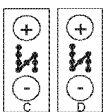
7.12.02 Functions of the keys

The keys described below are used mainly to select machine functions for preparation, sewing and for the parameter input.



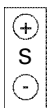
Start backtack stitches forwards/reverse

- In the sewing mode these keys can be used to change the number of forward stitches (A-key) or reverse stitches (B-key) for the start backtacks. The current value is shown on the display with the corresponding key.



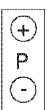
End backtack stitches forwards/reverse

- In the sewing mode these keys can be used to change the number of reverse stitches (C-key) or forward stitches (D-key) for the end backtacks. The current value is shown on the display with the corresponding key.



Stitch length (feed stroke of roller presser and feed wheel)

- In the sewing mode this key can be used to change the value for the stitch length (feed stroke of roller presser and feed wheel). The current value is shown on the display with the corresponding key.



Feed stroke of roller presser

- In the sewing mode this key can be used to change the value for the stitch length (feed stroke) of the roller presser. The current value is shown on the display with the corresponding key.



Feed stroke of wheel feed

- In the sewing mode this key can be used to change the value for the stitch length (feed stroke) of the feed wheel. The current value is shown on the display with the corresponding key.



Start backtacks on/off

- This key is used to switch the start backtacks on or off.
When the LED is on, the start backtacks are sewn.



End backtacks on/off

- This key is used to switch the end backtacks on or off.
When the LED is on, the end backtacks are sewn.



Backtack suppression

- Press the key **once**: start backtacks are not sewn.
- Press the key **twice**: start and end backtacks are not sewn.



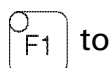
Program key

- When this key is activated (LED on) a "program" (stitch length value) can be entered or selected with the knee switch.



Parameter input

- After this function has been activated (LED is on) the operator is in the parameter input function. When the function is switched off, the operator returns to the sewing mode.



to



F1 – F5 keys

- In the sewing mode these keys do not have any function.
- When entering the code number these keys correspond to the numbers 1 – 5.



Needle position

- The position of the needle can be selected with this key.
Function activated (LED on): When sewing stops, the needle is positioned at t.d.c.
Function deactivated (LED off): When sewing stops, the needle is positioned at b.d.c.
- When entering the code number this key corresponds to number 6.



Position of the presser foot when sewing stops

- With this key it is possible to select the position of the presser foot when sewing stops.
Function activated (LED on): When sewing stops, the presser foot is raised
Function deactivated (LED off): When sewing stops, the presser foot is lowered
- When entering the code number this key corresponds to number 7.

Position of the presser foot after thread trimming



- With this key it is possible to select the position of the presser foot after thread trimming
Function activated (LED on): After thread trimming, the presser foot is raised
Function deactivated (LED off): After thread trimming, the presser foot is lowered
- When entering the code number this key corresponds to number 8.

Thread trimmer on/off



- This key is used to switch the thread trimmer on or off.
When the LED is on, the thread can be trimmed with the use of the pedal.
- When entering the code number this key corresponds to number 9.



- In sewing mode this key has no function.
- When entering the code number this key corresponds to number 0.

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

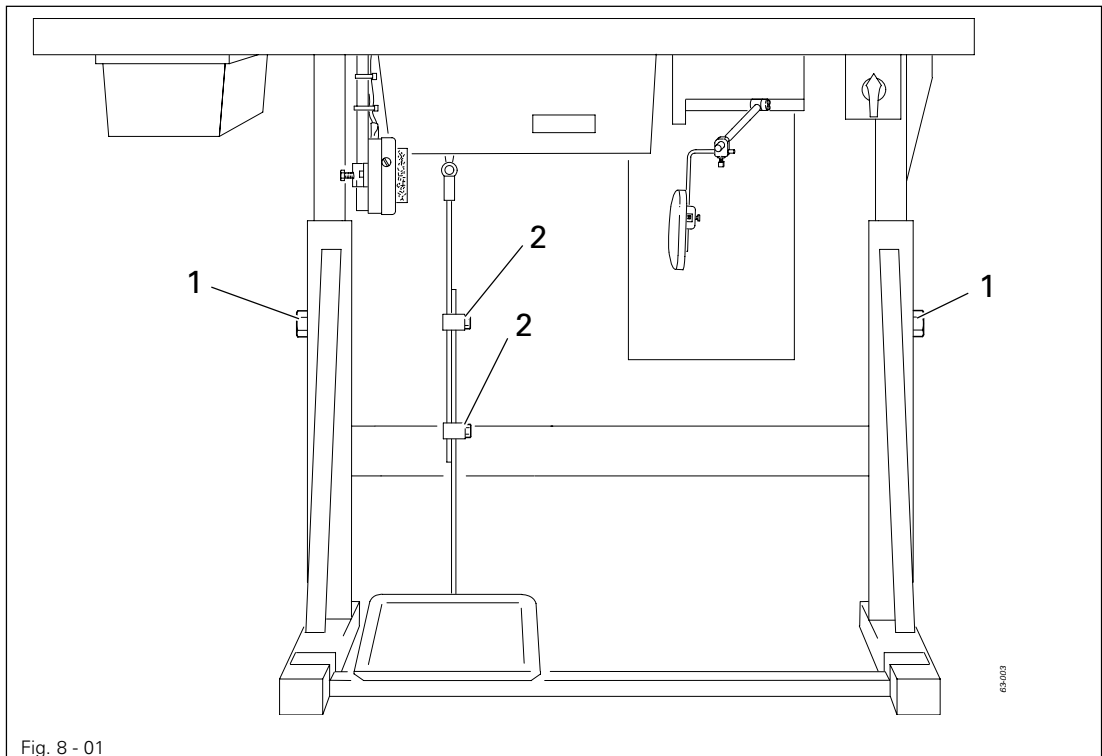
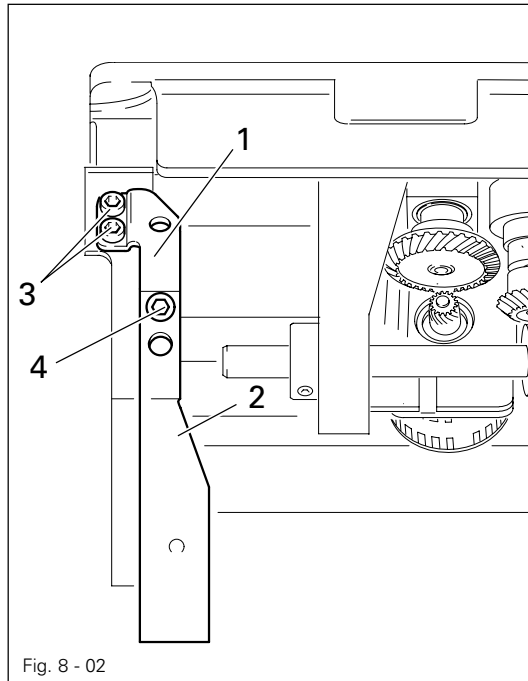


Fig. 8 - 01

- 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.

8.01.02 Fitting the tilt lock



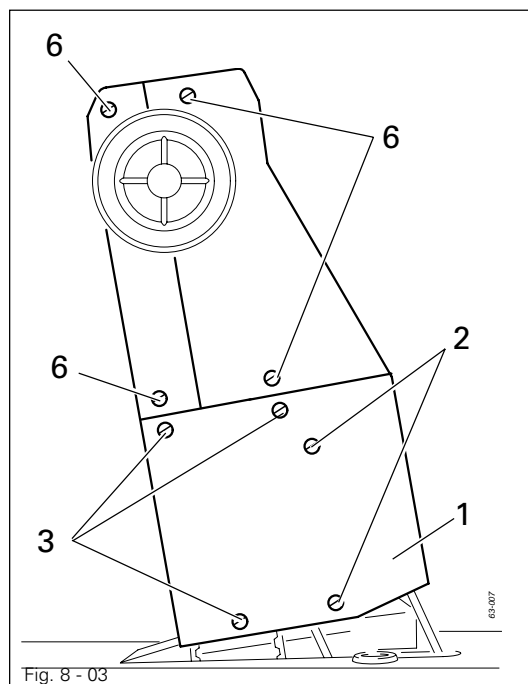
Switch off the machine!
Danger of injury if the machine is started accidentally!

- Screw on tilt lock parts 1 and 2, provided in the accessories, using screws 3 and 4.



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

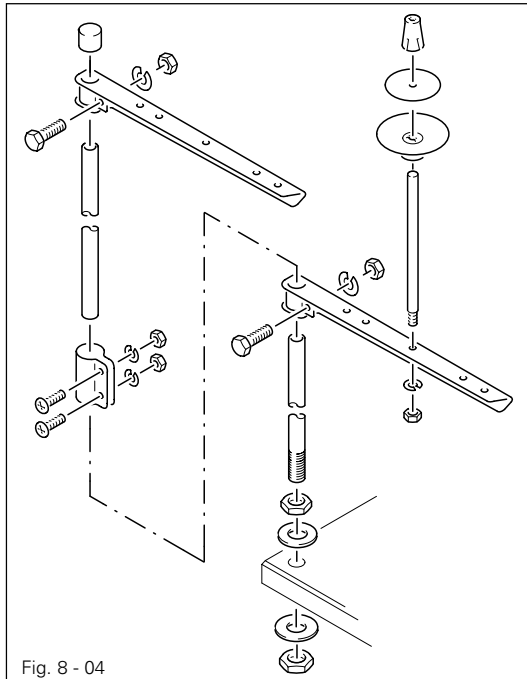
8.01.03 Fitting the machine cover



- Slide the slots of bottom cover 1 behind the heads of fastening screws 2 and attach with screws 3. Then tighten screws 2 through the boreholes.
- Attach the right and left cover with screws 6.

Installation and commissioning

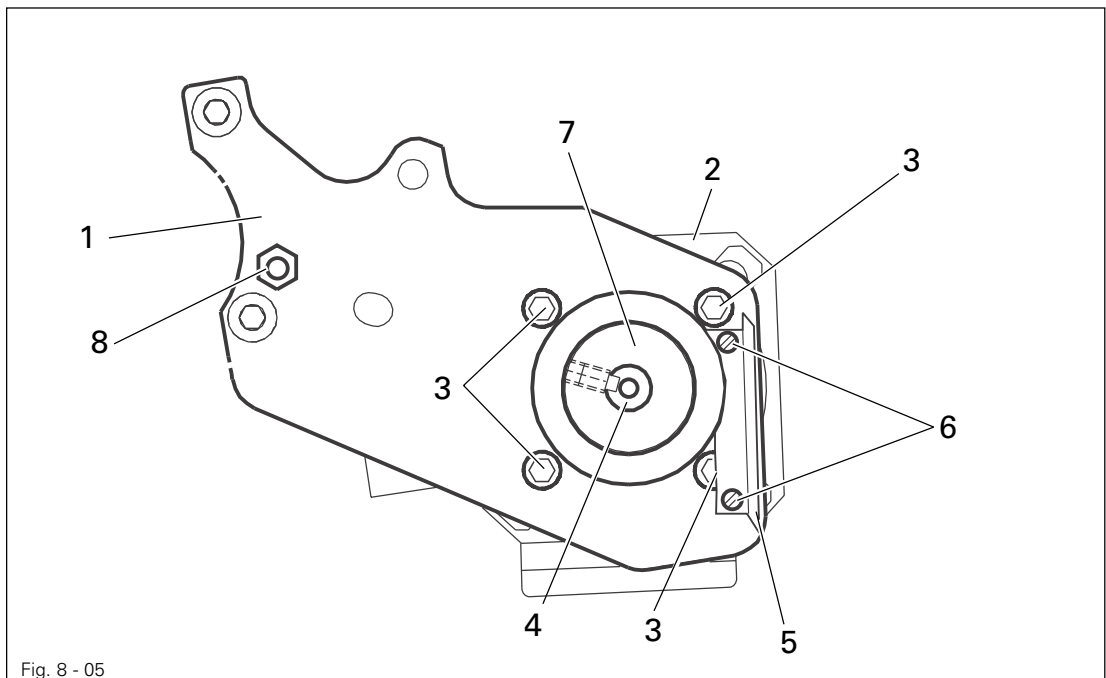
8.01.04 Fitting the reel stand



- Fit the reel stand as shown in Fig. 8-04.
- Afterwards insert the stand in the hole in the table top and secure it with the nuts provided.

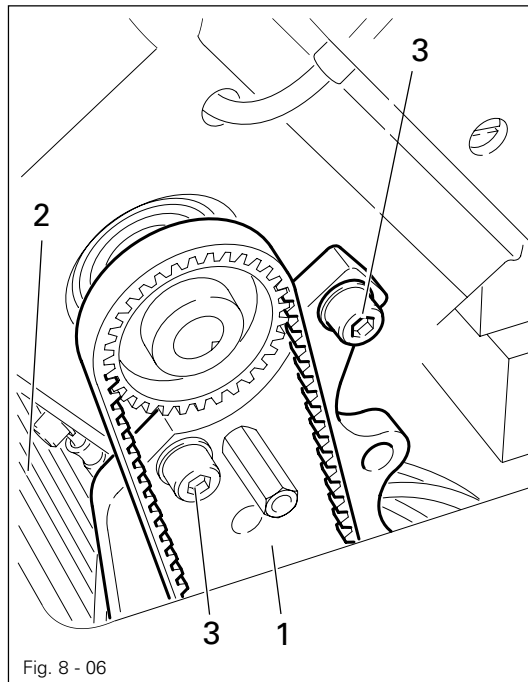
8.02 Mounting the flange motor

8.02.01 Mounting the flange motor to the bearing plate



- Attach bearing plate 1 to motor 2 with screws 3 as shown in Fig. 8 - 05.
- 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



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

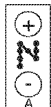
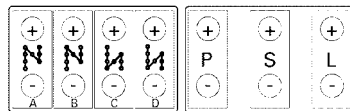
8.02.03 Basic position of the machine drive

- Switch on the machine.



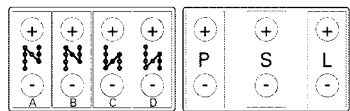
- Press the **Parameter input** key (LED on).

100



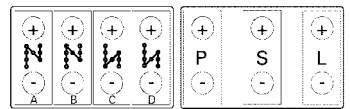
- Select parameter '600' by pressing the appropriate **Plus-/Minus** key (A-key).

600



- After pressing the **B-key** the request to enter the code appears on the display.

CODE 0

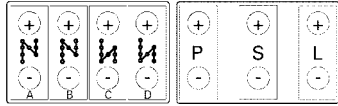


Installation and commissioning

- Enter the code number (the factory setting for the code is '1500'), see **Chapter 12.08 Entering/changing the code number.**
- Select Parameter "603" by pressing the appropriate **Plus-/Minus key (B-key).**



603 0



- Turn the balance wheel in sewing direction until the needle point is level with the top edge of the needle plate.
- Turn the engine shaft by hand until the value 8 or 11, depending on the machine type, appears on the display (1571, 1591 = 8; 1574 = 11).
- While making sure that neither the motor shaft **4** nor the machine are twisted, fit the toothed belt **5**.
- Swing the motor bearing plate **1** so that toothed belt **5** is tightened.
- In this position tighten screws **3**.
- Turn the balance wheel in sewing direction until the needle point is level with the top edge of the needle plate and check the value again. Permissible tolerance is ± 2 increments.



- Save the input by ending the parameter input (LED is off).

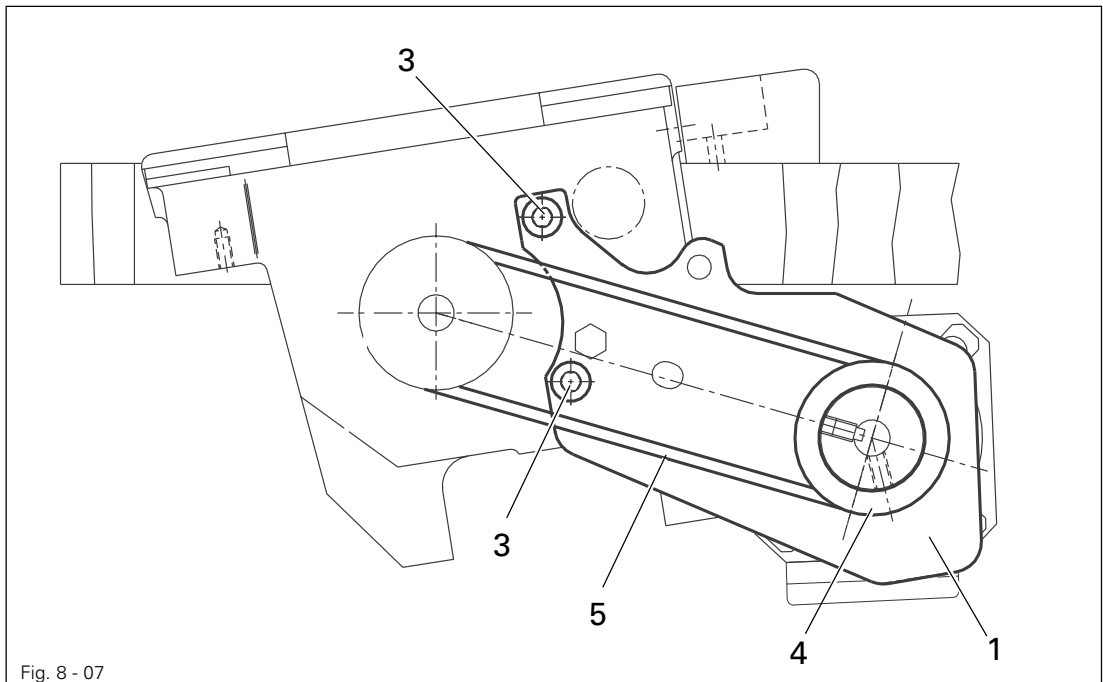
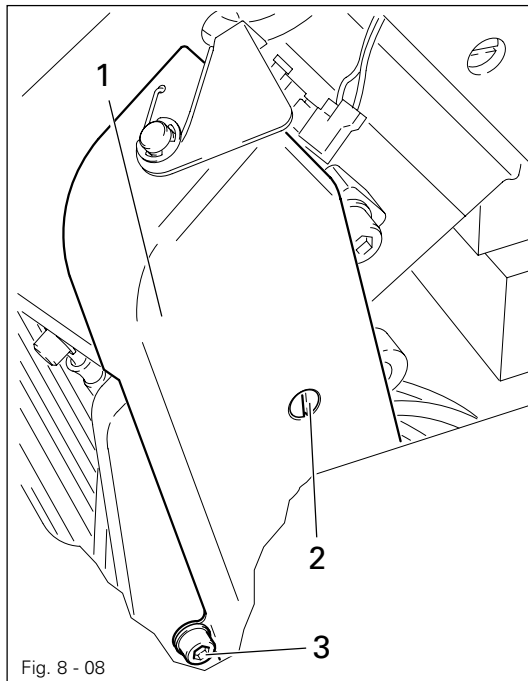


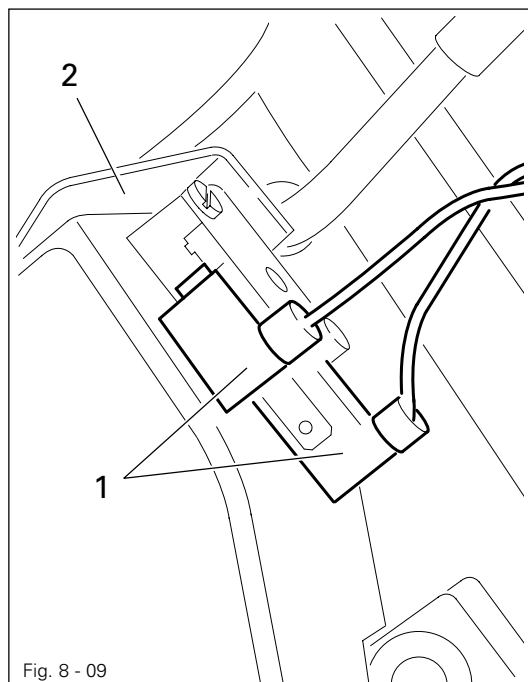
Fig. 8 - 07

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



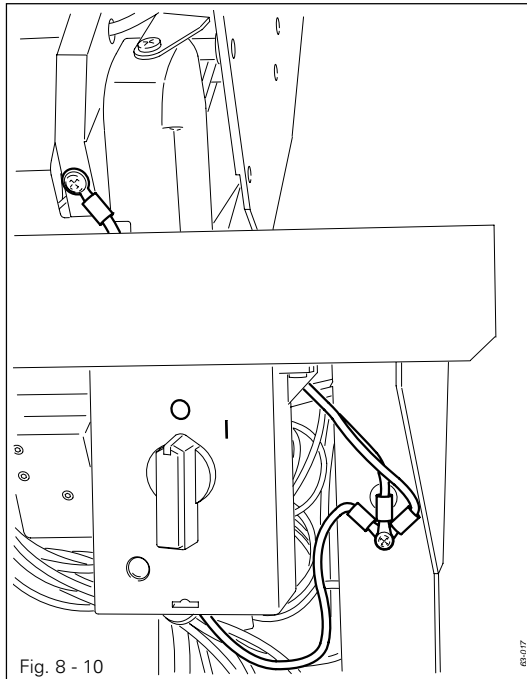
- Connect plug 1 of safety switch 2 as shown in Fig. 8-09.



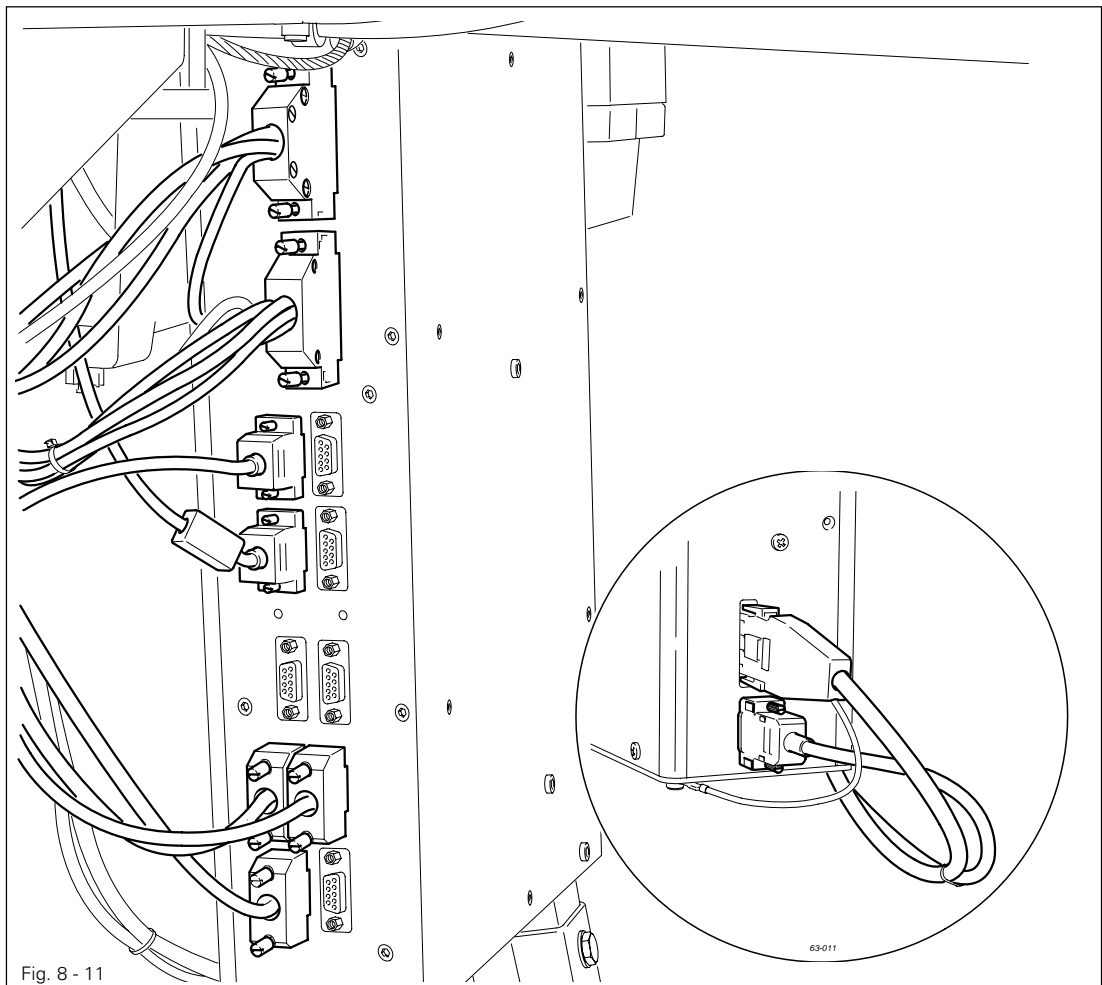
When the machine head is tilted back, the safety switch prevents the machine from starting when the main switch is on.

8.03

Attaching the earth cable / connecting the plug connections

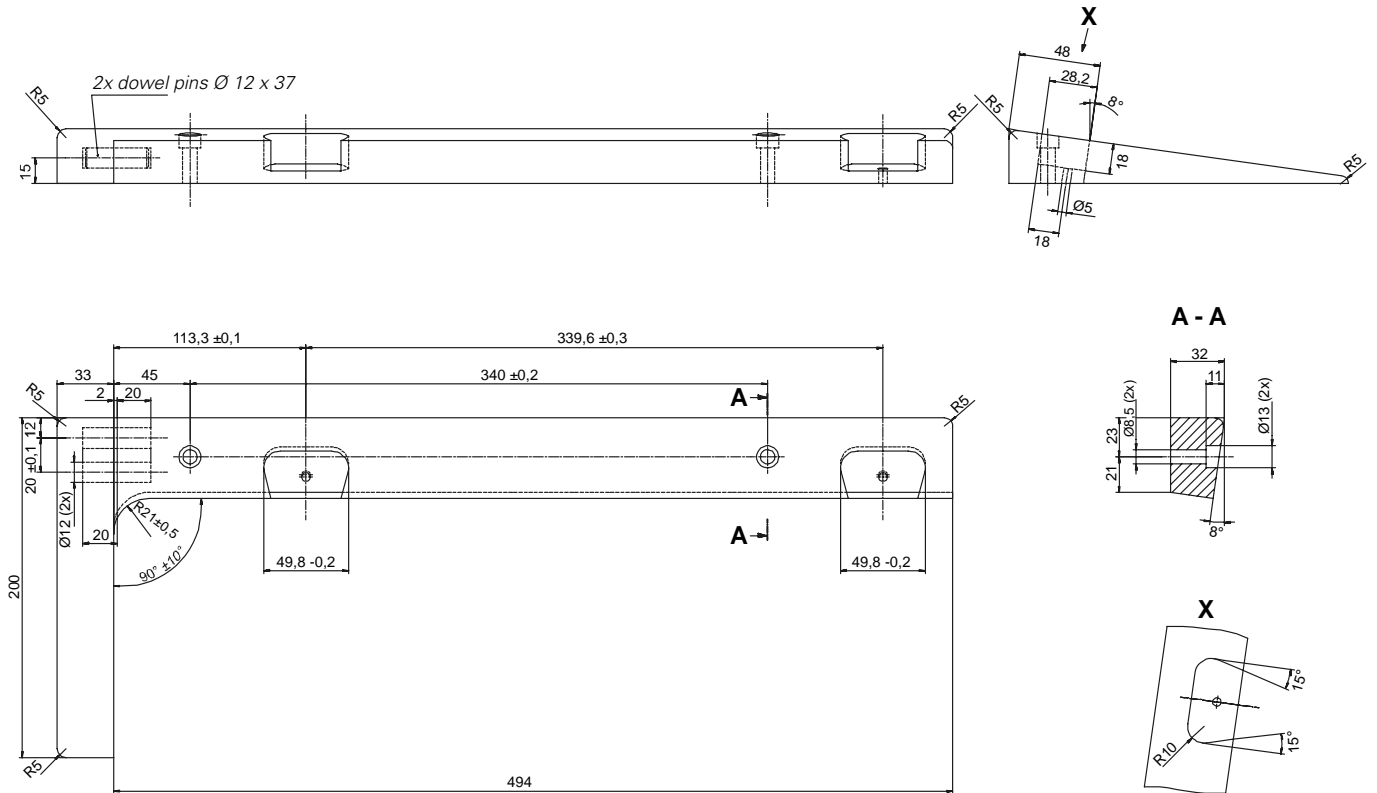


- Screw the earth cables from the sewing head, main switch and control box to the stand.



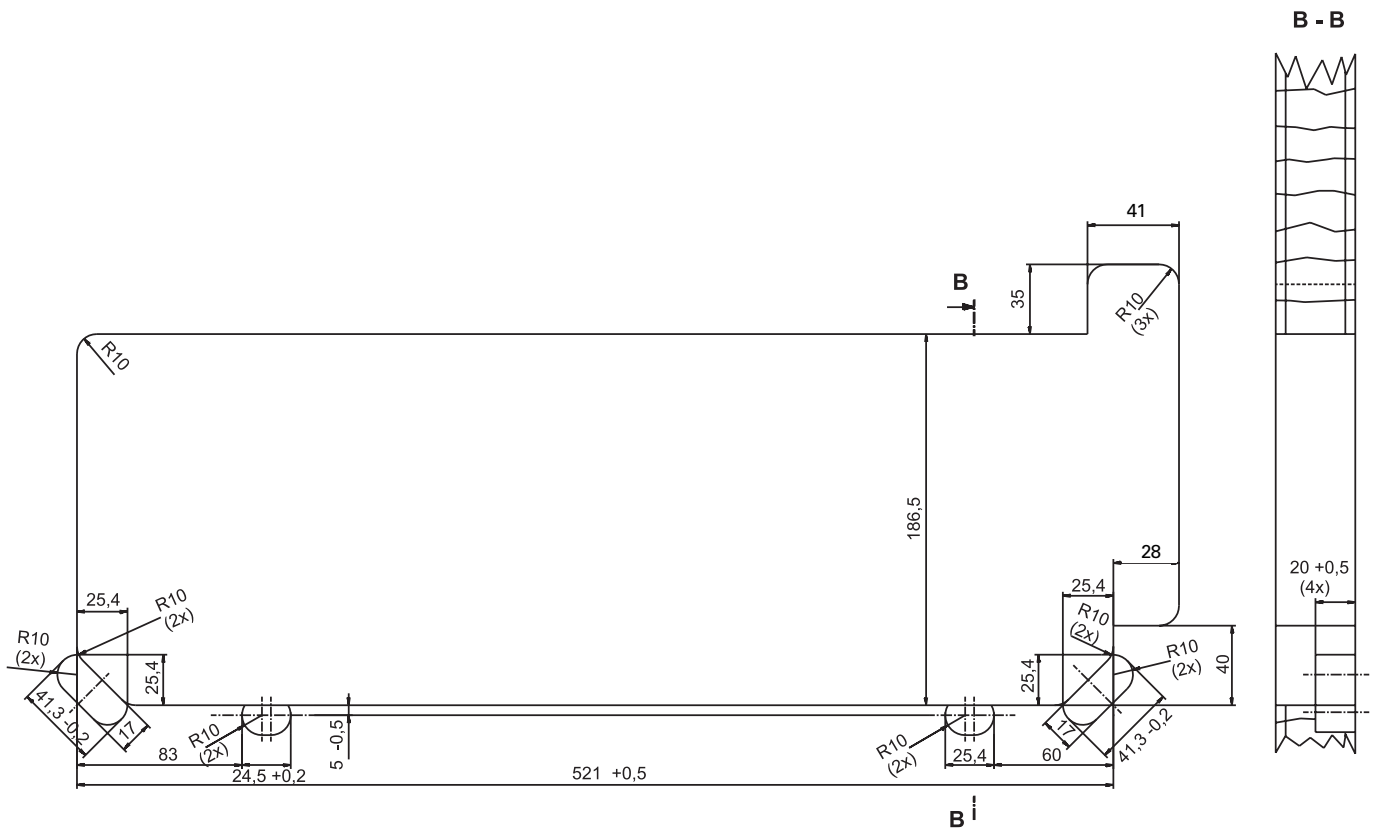
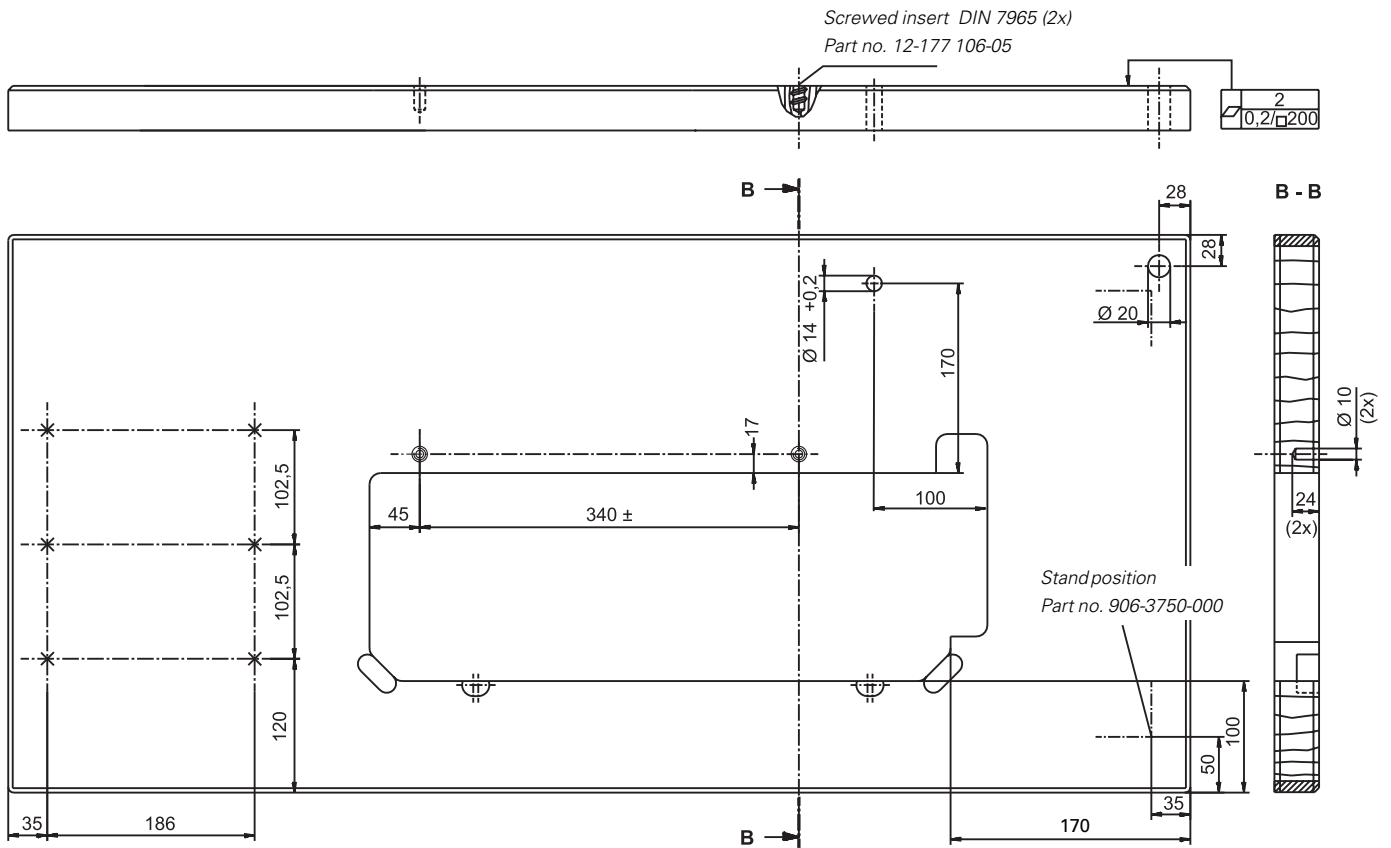
- Connect all plug connections to the control box as shown on their labels.

8.04 Tilted work base



Installation and commissioning

8.05 Table top cutout



8.06 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 11 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**.

8.07 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 PFAFF 1571 and 1591

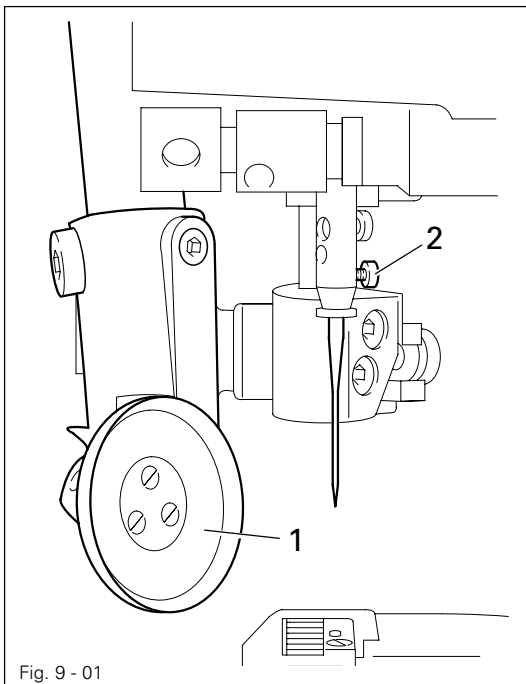


Fig. 9 - 01



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

Only use needles of system **134**.

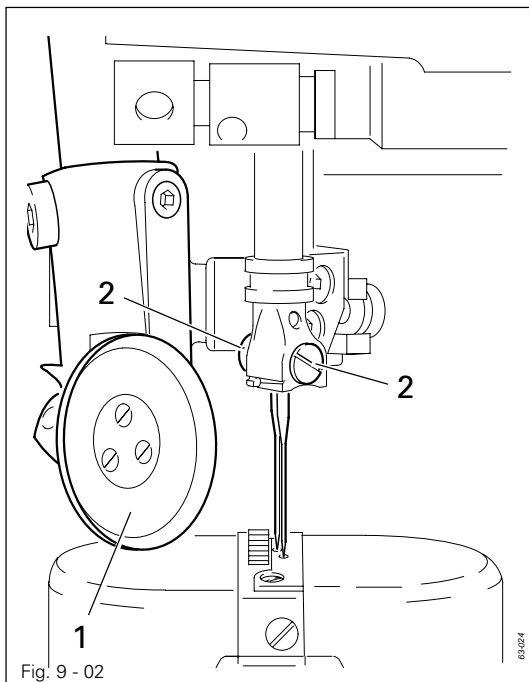
- Raise the roller presser **1** and swing it out.
- Loosen screw **2** and insert the needle as far as possible. The long groove must face to the right on model 1571 and to the left on model 1591.
- Tighten screw **2** and swing roller presser **1** back into position.



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

9.02

Inserting the needle on model 1574



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

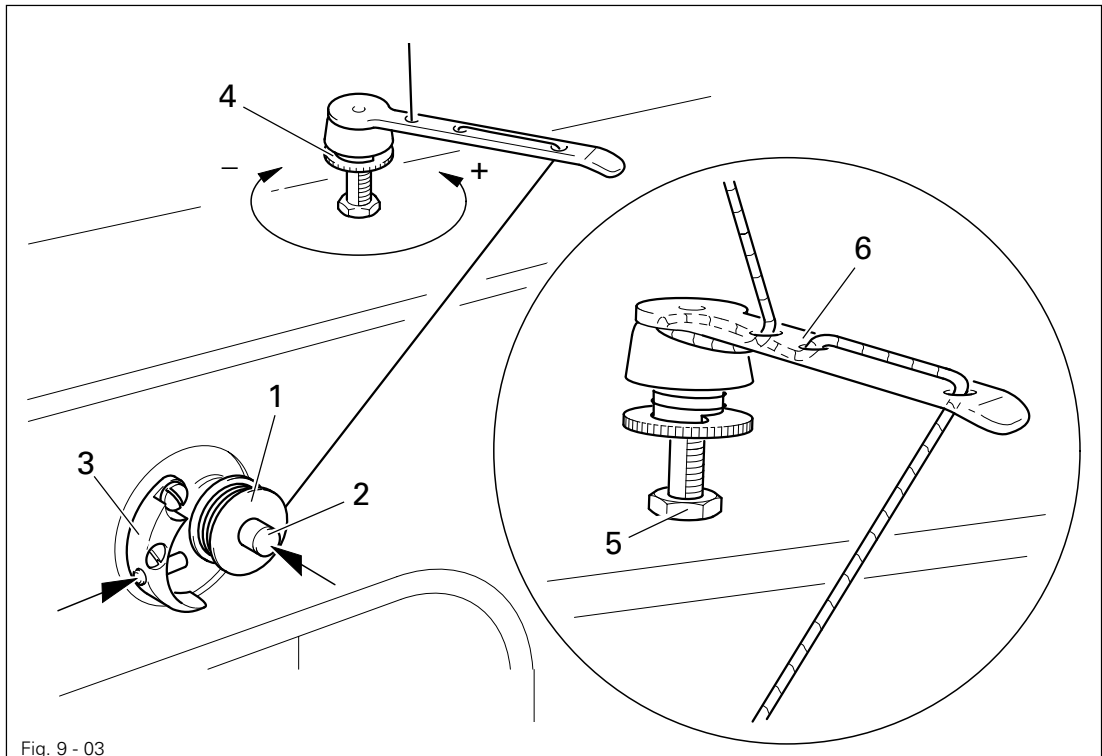


Fig. 9 - 03

- 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.



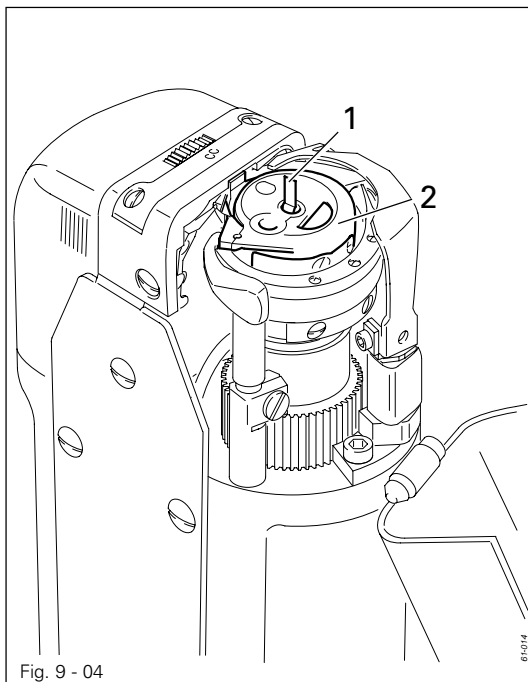
The bobbin is filled up during sewing.

- 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.

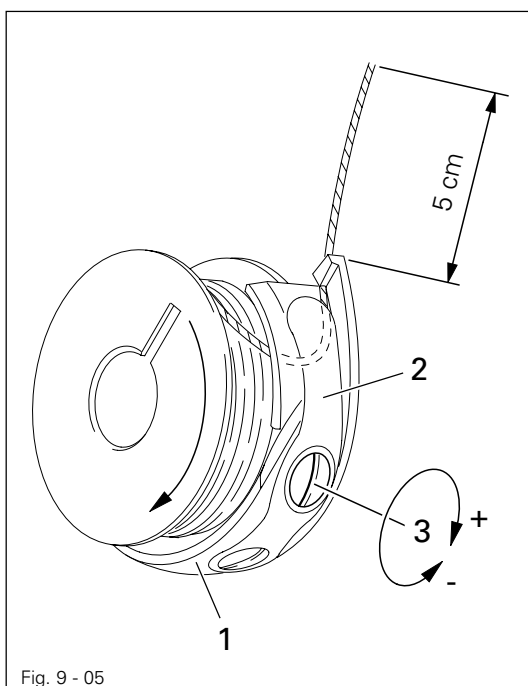
Inserting the bobbin case:

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



1574 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 1571 and 1591

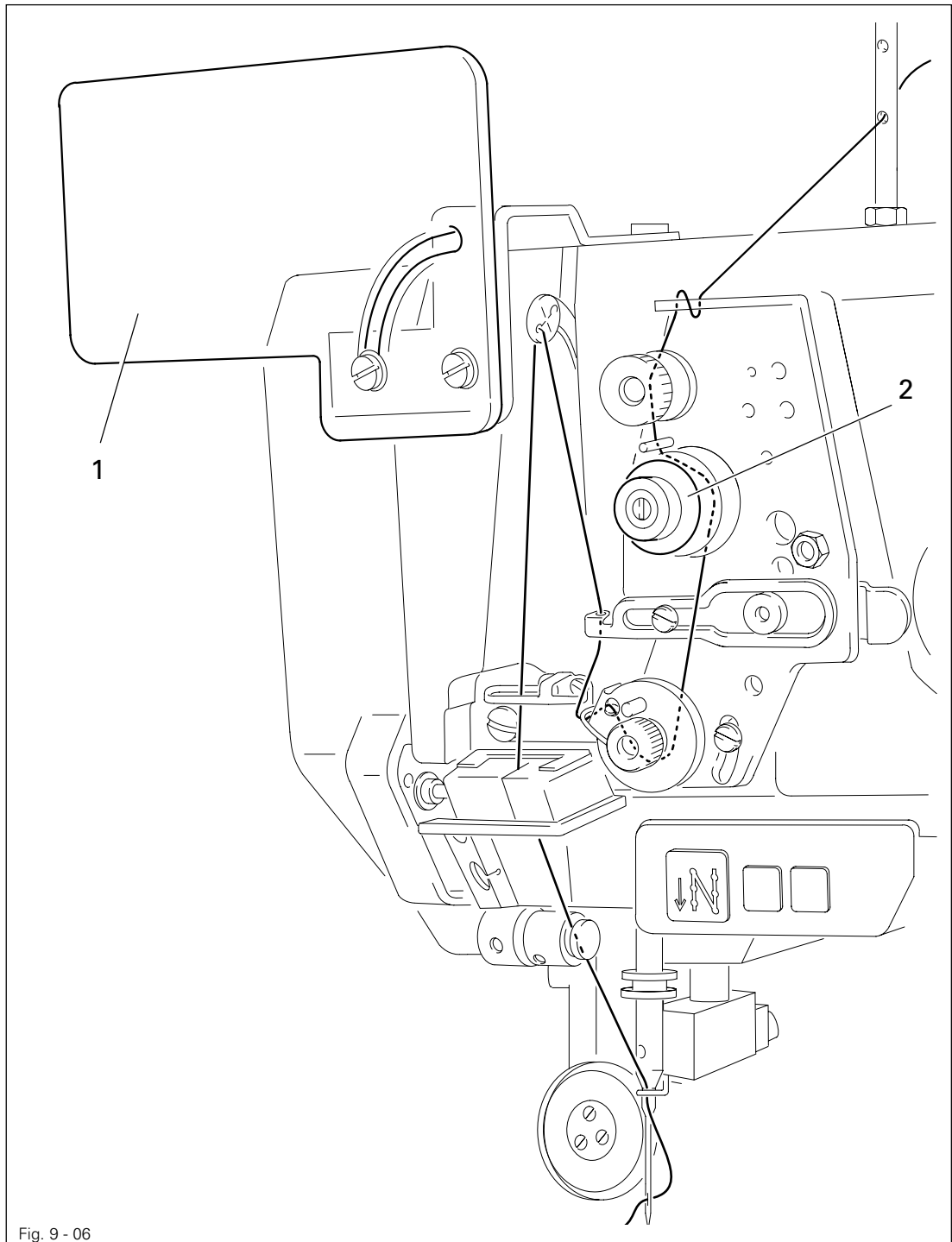


Fig. 9 - 06



Switch the machine off!
Danger of injury if the machine is started accidentally!
eye guard 1.

- Thread the needle thread as shown in **Fig. 9-06**.
- On model 1571 the needle is threaded from the right to the left, and on model 1591 from the left to the right.
- Adjust the needle thread tension by turning milled screw 2.

9.07

Threading the needle thread and regulating its tension on model 1574

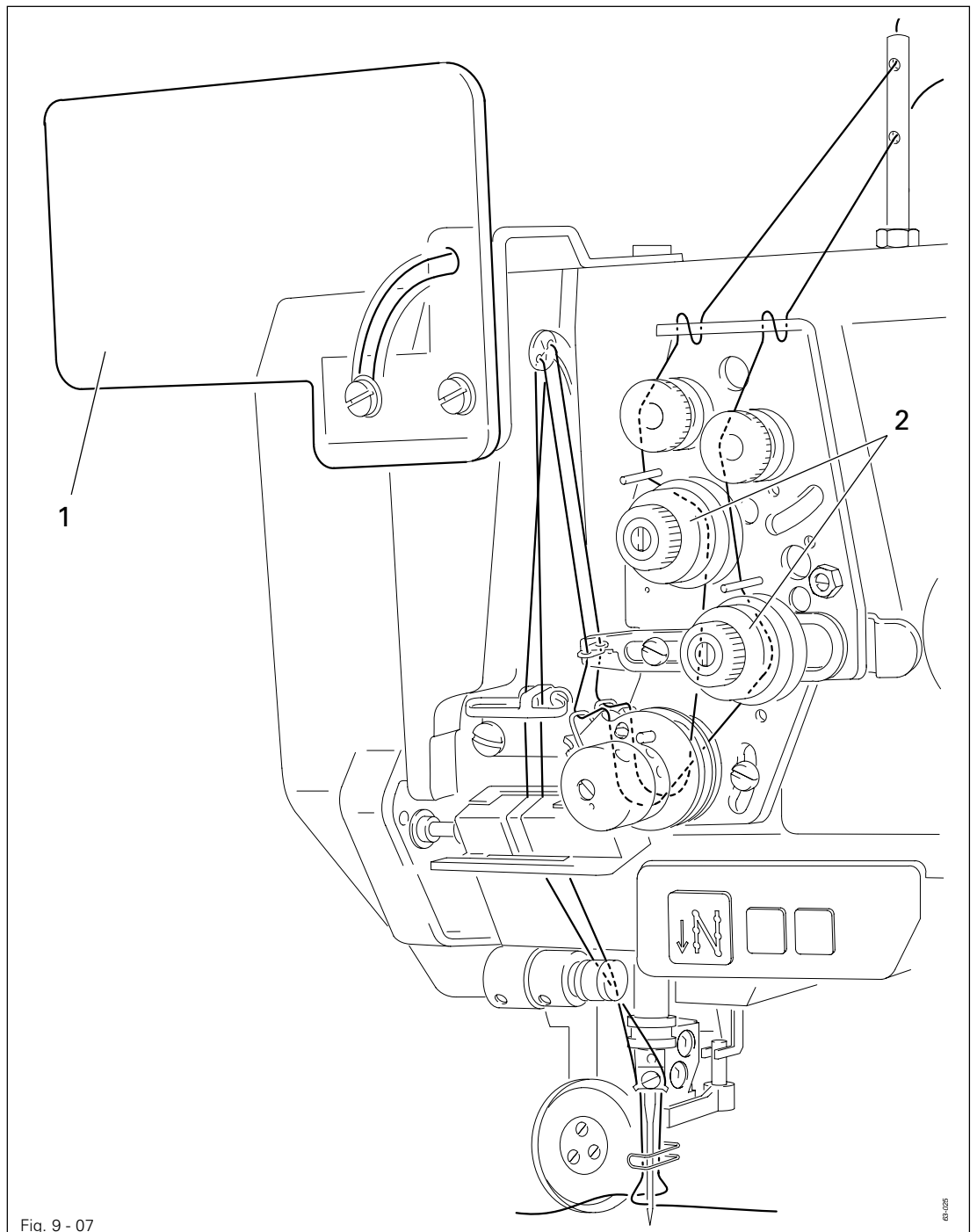


Fig. 9 - 07



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.

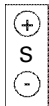
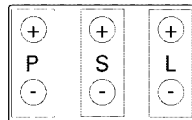
9.08 Stitch length

The stitch length is determined by the setting of the roller presser and feed wheel feed strokes. For applying fullness the roller presser feed stroke must be greater than that of the feed wheel.

9.08.01 Input for standard stitch length

After the machine has been switched on, the current values of the stitch lengths for roller presser and feed wheel are shown in the display.

- Switch on the machine



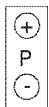
- Set the stitch length (feed stroke of roller presser and feed wheel) by pressing +/- (S-key).

9.08.02 Entering the second stitch length

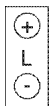


With the **Program key** a second fullness value can be set in addition to the standard value. When the **Program key** is activated it is possible to switch from one amount of fullness to the other by operating the knee switch.

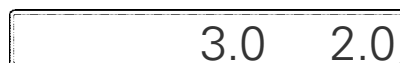
- Switch on the machine.
- Press the **Program key**.
- Sew 1 –2 stitches and operate the knee switch.



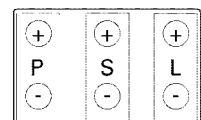
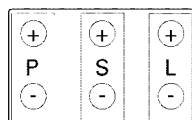
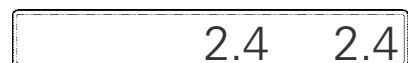
- Set the stitch length (feed stroke) for the roller presser by pressing +/- (P-key).



- Set the stitch length (feed stroke) for the feed wheel by pressing +/- (L-key).



<Knee switch>



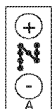
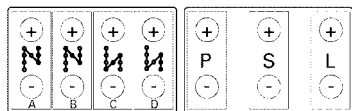
9.09 Entering/changing the code number

- Switch on the machine.



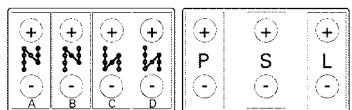
- Press the **Parameter input** key (LED is on).

100



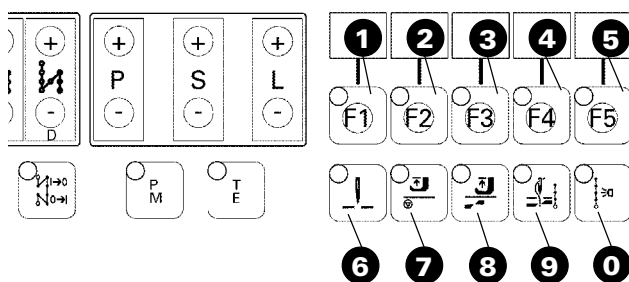
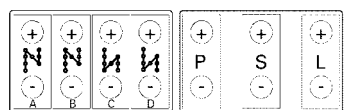
- Select the desired parameter by pressing the **Plus-/Minus** key.

801

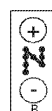


- Enter the code number (manufacturer's code setting is "1500")

CODE 0

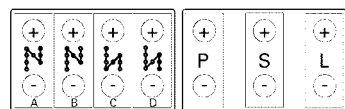


When entering the code number these keys correspond to the numbers above them.



- By pressing +/- on **Key A+B** select parameter "809".

809

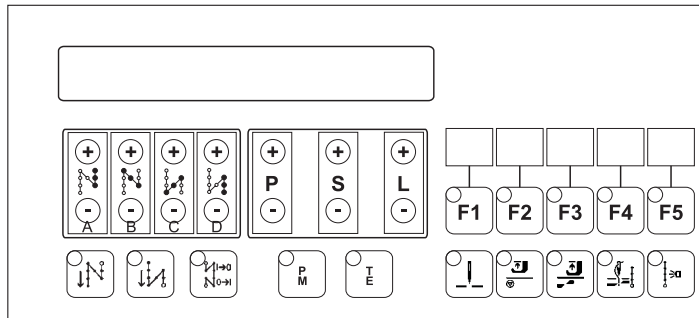


- Enter the new code number by pressing the appropriate keys.



- Save the input by ending the parameter input (LED is off).

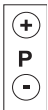
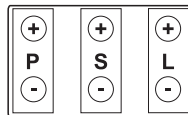
9.10 Setting the stitch counter for monitoring the bobbin thread



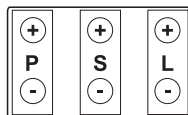
- Switch on the machine.



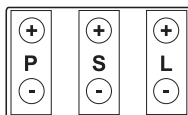
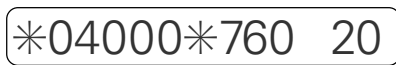
- Press the **Parameter input** key (LED is on).



- Select parameter group "760" by pressing +/- on the **P-key**.



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



- Save the input by ending the parameter input (LED is off).



On machines without a control panel, the same parameters can be entered on the display of the motor (see Motor Service Manual).

10 Sewing

10.01 Applying fullness

The machine must be installed and connected as described in **Chapter 8 Installation and Commissioning**.

- Setting up the machine, see **Chapter 9 Setting up**.
- Switch on the machine, see **Chapter 7.01 Main switch**.
- If necessary, change the fullness amount, see **Chapter 9.08.01 Standard stitch length/ Fullness**.
- The second fullness amount can be selected by operating the knee switch when the **program key** is activated (LED on), see also **Chapter 9.08.02 Entering a second stitch length/amount of fullness**.
- The sewing functions are selected with the right pedal, see **Chapter 7.02 Pedal**.



11 Care and maintenance

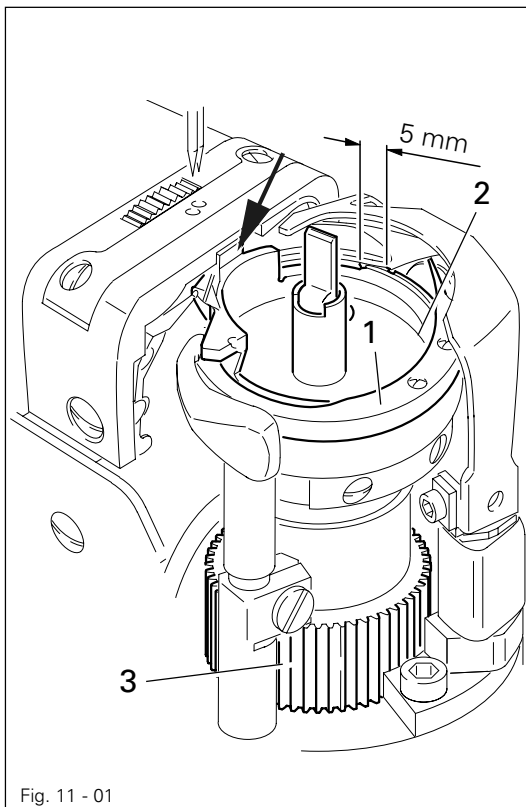
Cleaning	daily, several times if in continuous operation
Oil level (hook and needle head parts)	daily, before use
Lubricating the hook	daily, before use
Greasing the bevel gears	once a year



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.

11.01 Cleaning

Clean the hook, hook compartment and toothed wheel **3** daily, several times if in continuous use.



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.
- Insert bobbin case with the bobbin and close the post cap

11.02

Oiling the hook

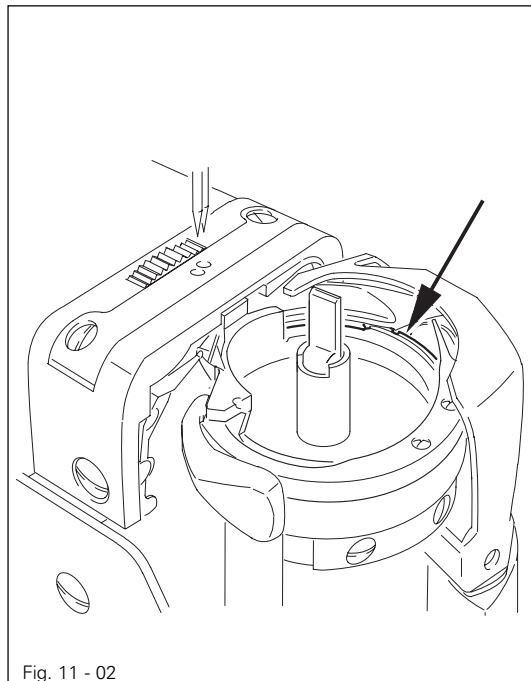


Fig. 11 - 02



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

- Before commissioning the machine, and after long periods out of operation, pour a few drops of oil into the hook race (see arrow).

11.03

Checking the oil level for hook and needle head parts

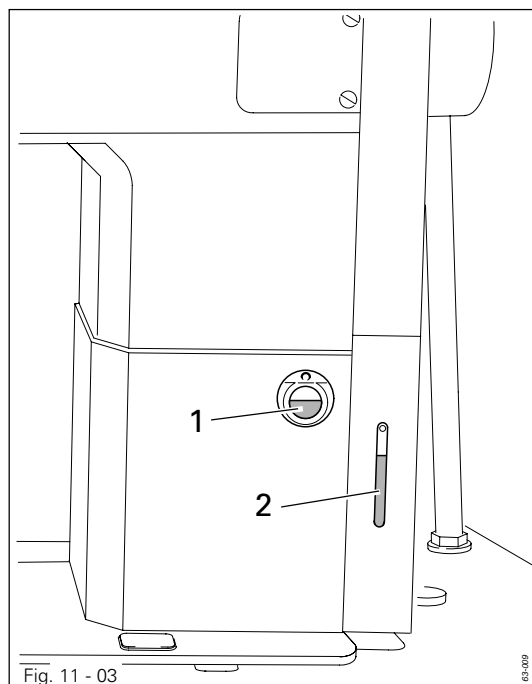


Fig. 11 - 03



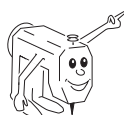
Check the oil level before each use.

Oil must always be visible in inspection glasses 1 and 2.

- If necessary, fill in oil through the holes above the inspections glasses.

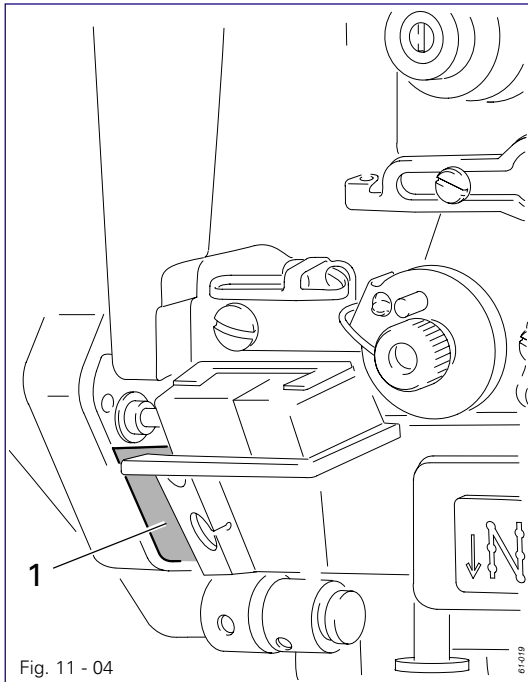


Only use oil with a mean viscosity of 22.0 mm²/s at 40°C and a density of 0.865 g/cm³ at 15°C.



We recommend PFAFF sewing machine oil, part number 280-1-120 144.

11.04 Filling the oil reservoir of the thread lubrication unit



Control the oil level before each use.

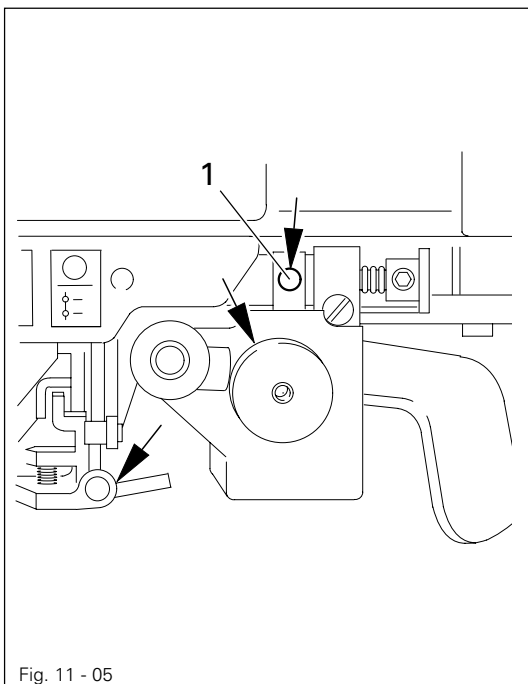
There must always be oil in the reservoir 1.

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



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

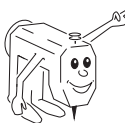
11.05 Oiling the edge trimmer -726/05



- All moving parts and bearings marked with arrows in Fig. 11-05 are to be supplied with oil twice a week.

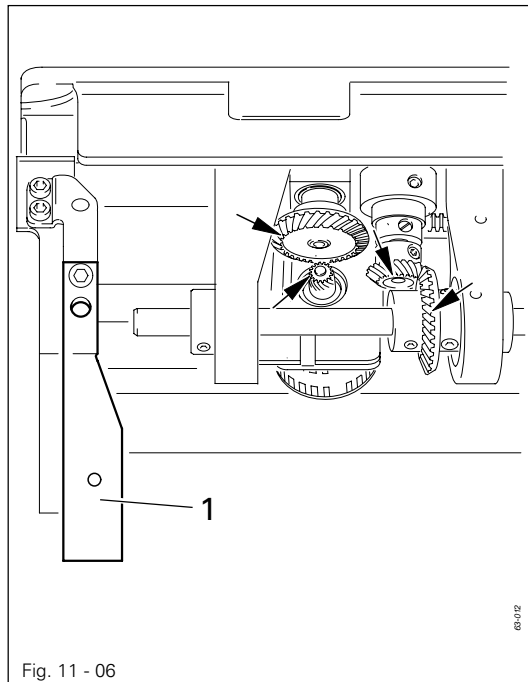


Use only oil with a mean viscosity of 22.0 mm²/s at 40°C and a density of 0.865 g/cm³ at 15°C.



We recommend
PFAFF sewing machine oil
Best.-Nr. 280-1-120 144.

11.06 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.

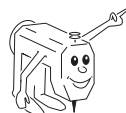


Fig. 11-06 shows the bevel gears of the 1591.

- 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.

12 Adjustment

12.01 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!

12.02 Tools, gauges and other accessories

- 1 set of screwdrivers with blade widths from 2 to 10 mm
- 1 set of wrenches with jaw widths from 7 to 13 mm
- 1 set of Allan keys from 1.5 to 6 mm
- 1 metal ruler (Part no. 08-880 218-00)
- 1 adjustment pin (needle position in direction of sewing Part no. 61-111 641-46)
- 1 adjustment gauge (Part No. 08-880 136-01)
- 1 adjustment gauge (Part No. 61-111 643-33)
- 1 locking pin for needle bar rise (Part No. 61-111 641-39)

12.03 Abbreviations

t.d.c. = top dead centre

b.d.c. = bottom dead centre

12.04 Adjusting the basic machine

12.04.01 Needle position in the direction of sewing on the PFAFF 1571 and 1591

Requirement

With the stitch length set at "5", in its front and rear point of reversal the needle should be the same distance from the inside edges of the needle hole.

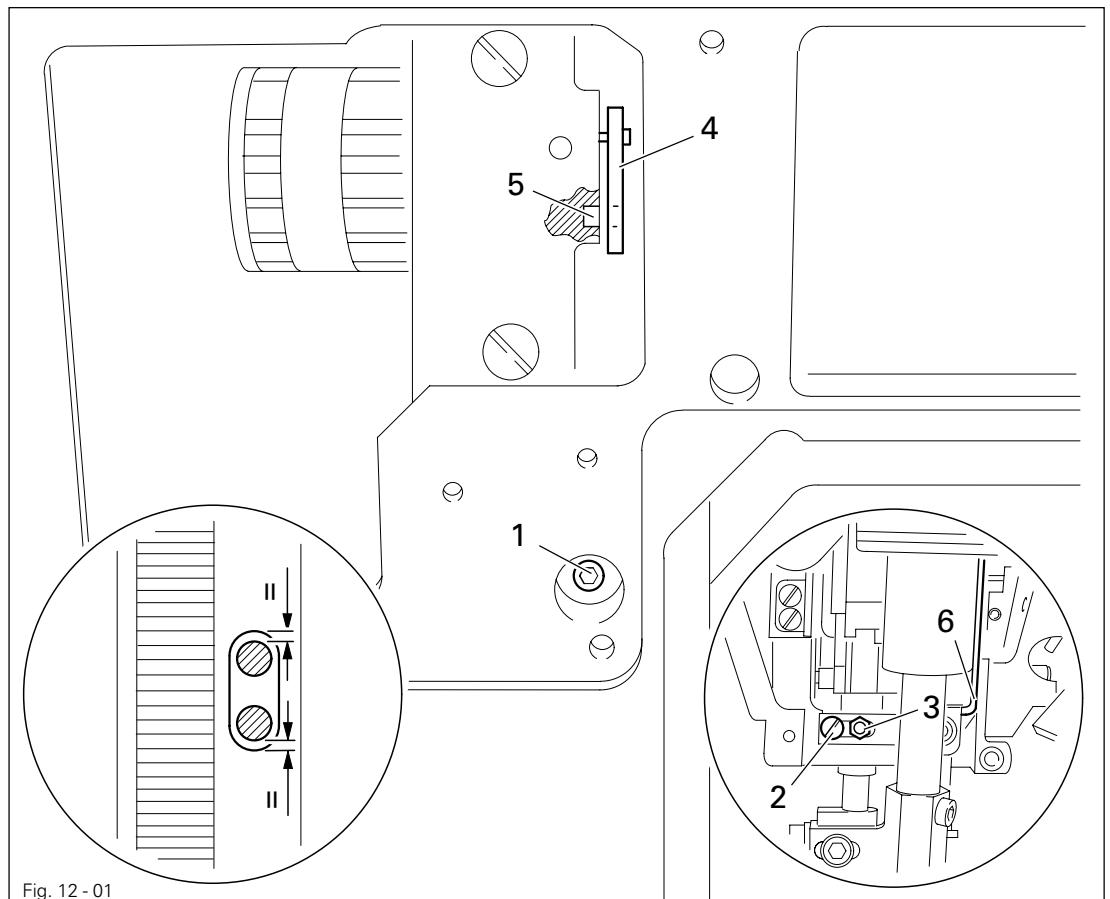
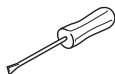


Fig. 12 - 01



- Switch on the machine and set the stitch length at "5".
- Switch the machine off and on (synchronization of the needle bar to the stitch length).
- Sew one stitch and check the rear position of the needle in accordance with the requirement.
- Press the reverse feed key, sew one stitch and check the front position of the needle in accordance with the requirement.
- Switch off the machine.
- To carry out the adjustment, loosen screw 1 through the hole on the back of the case.
- Loosen screw 2 and nut 3.
- Guide the bent part of the adjustment pin through the elongated hole on the rear side of the case and insert it into hole 5 through the hole in lever 4.
- Adjust the needle bar frame 6 (screw 1) in accordance with the requirement.



Screw 2 and nut 3 remain loosened for the next adjustment

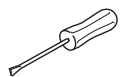
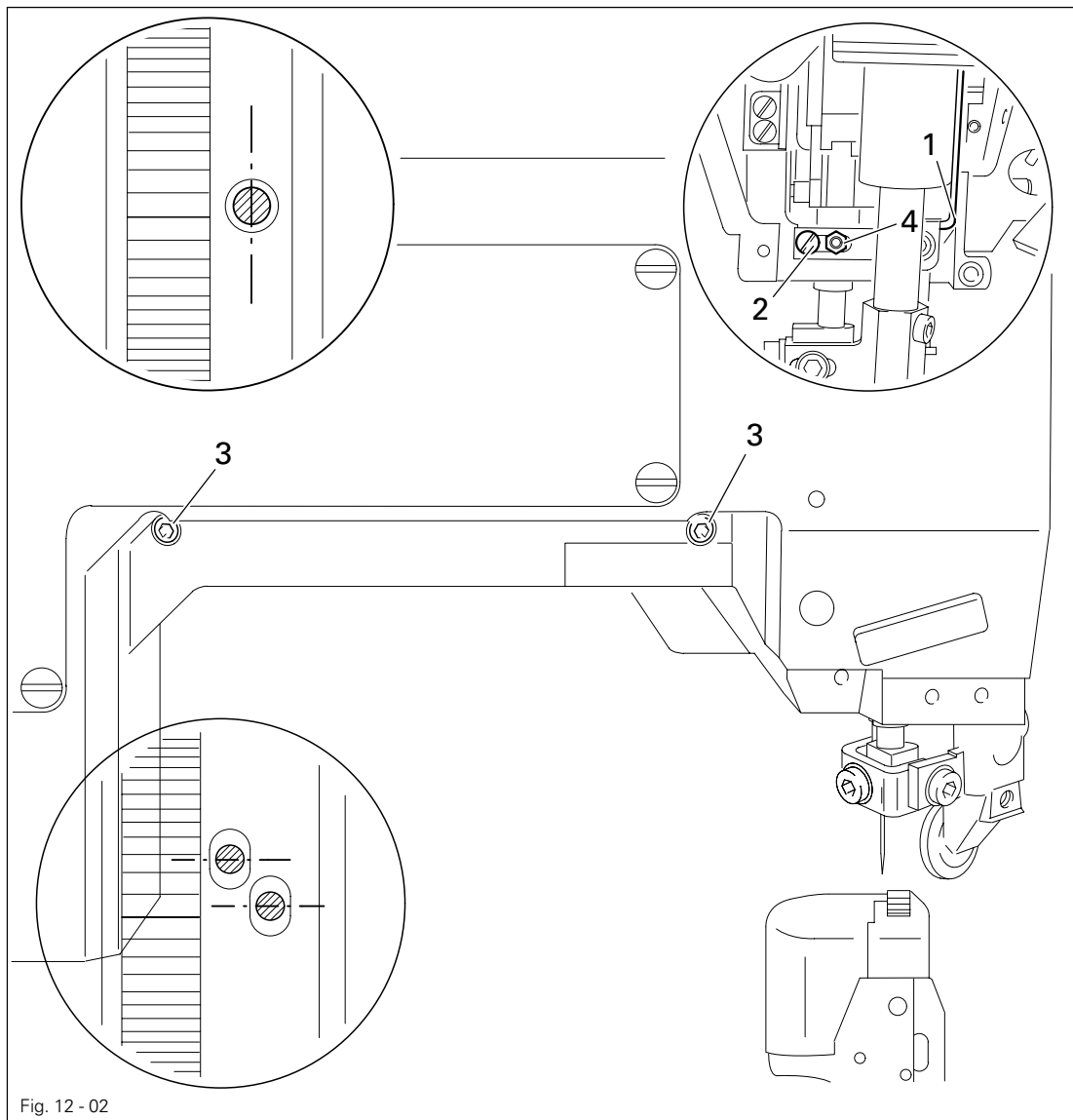
- Carry out a check in accordance with the **requirement**.

Adjustment

12.04.02 Positioning the needle in the direction of sewing PFAFF 1574

Requirement

The needle must penetrate the middle of the needle hole as viewed in the direction of sewing.



- Move the needle bar frame 1 (screws 2 and 4 and nut 3) in accordance with the requirement.



Screws 4 are accessible through the holes on the back of the housing.

12.04.03 Limiting the needle bar frame on the PFAFF 1591 and 1571

Requirement

With the stitch length set at "5", when the needle is in its front and rear point of reversal screw 4 should be the same distance from the inside edge of its hole.

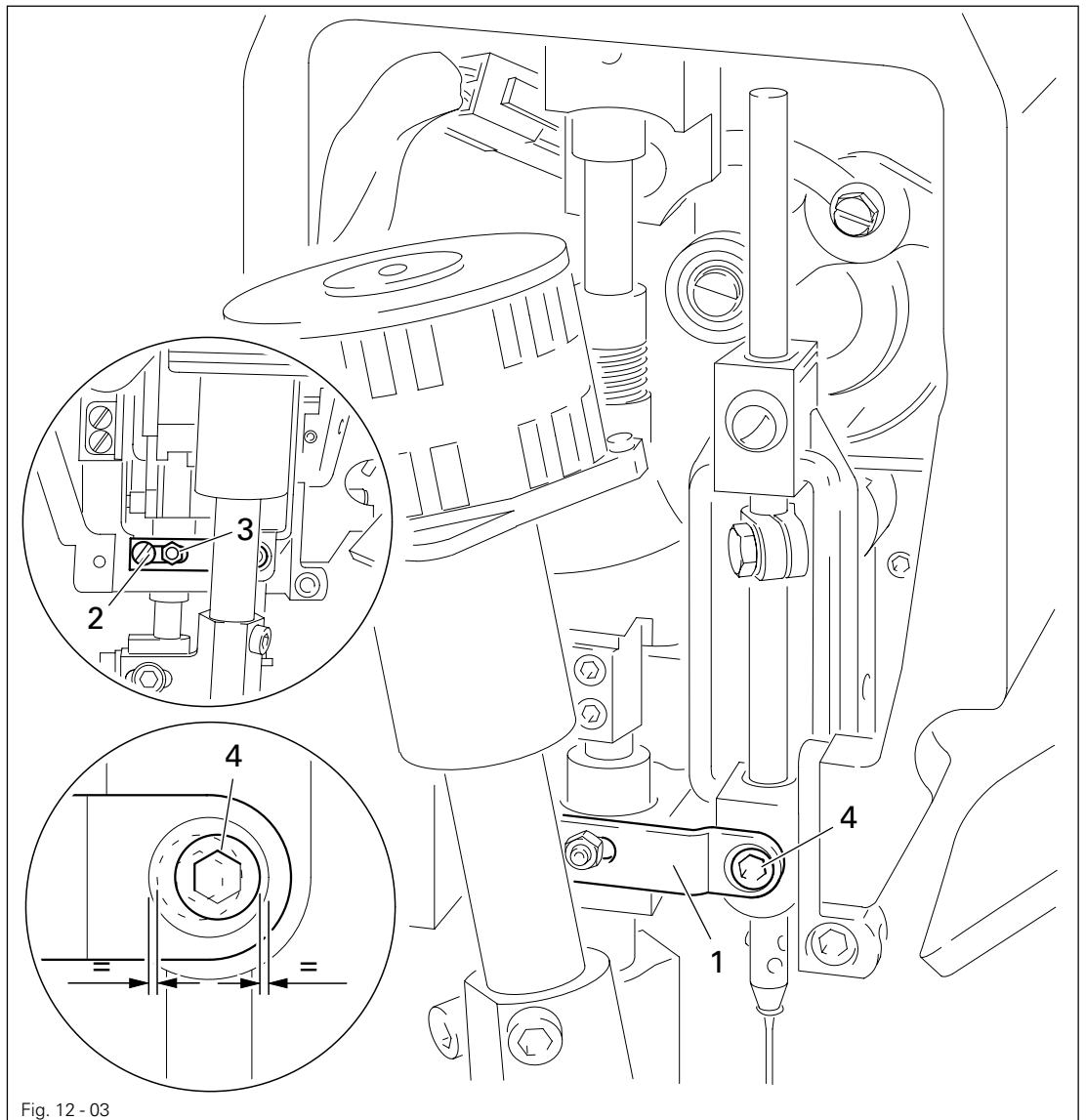
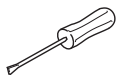


Fig. 12 - 03



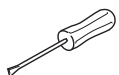
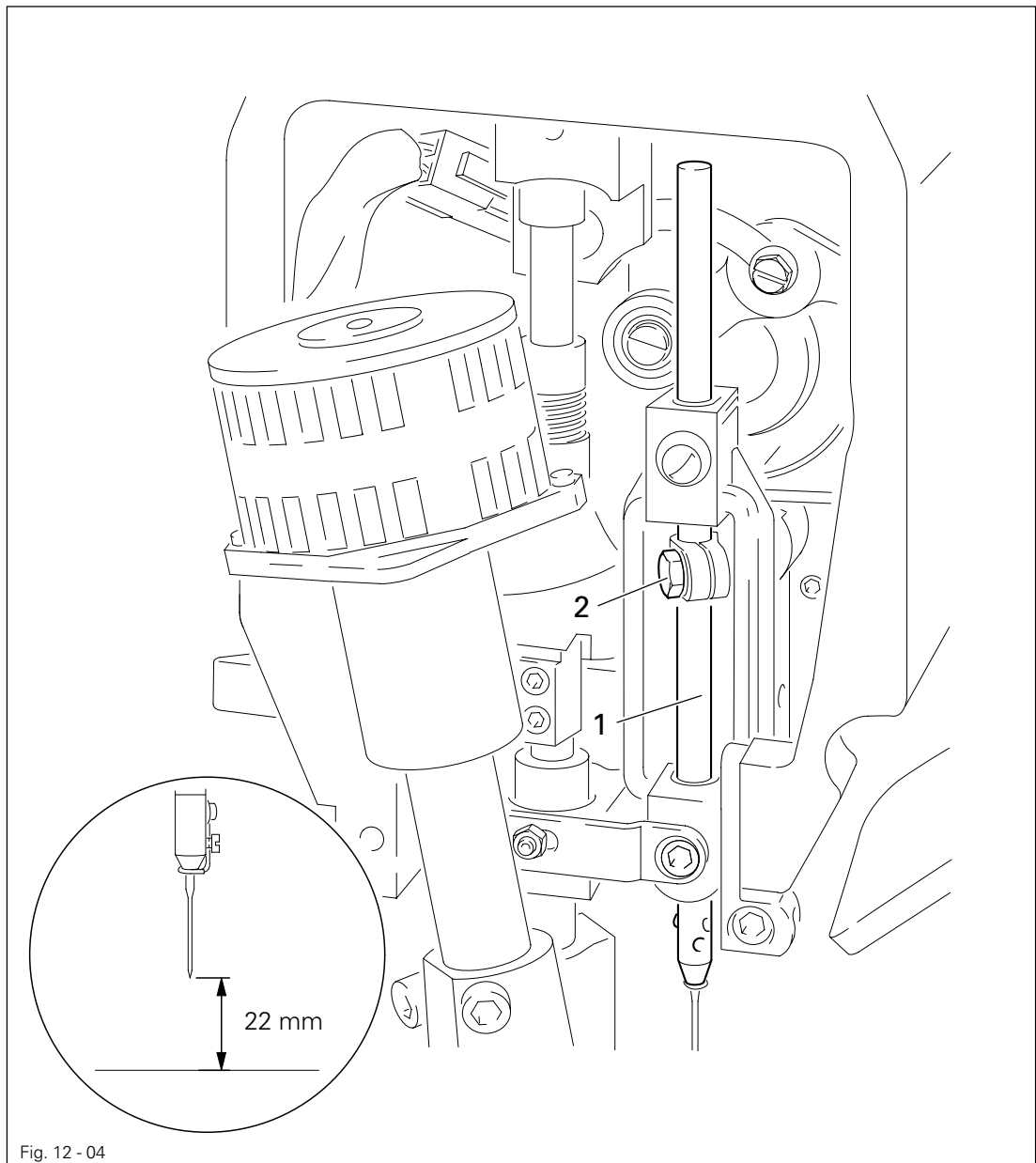
- Switch on the machine and set the stitch length at "5".
- Sew one stitch and check the rear position of screw 4 in accordance with the **requirement**.
- Operate the reverse feed key, sew one stitch and check the front position of screw 4 in accordance with the **requirement**.
- To carry out the adjustment shift plate 1 (screw 2 and nut 3) in accordance with the **requirement**.

Adjustment

12.04.04 Preadjusting the needle height

Requirement

With the needle bar at TDC there must be approx. **22 mm** between the point of the needle and the needle plate.



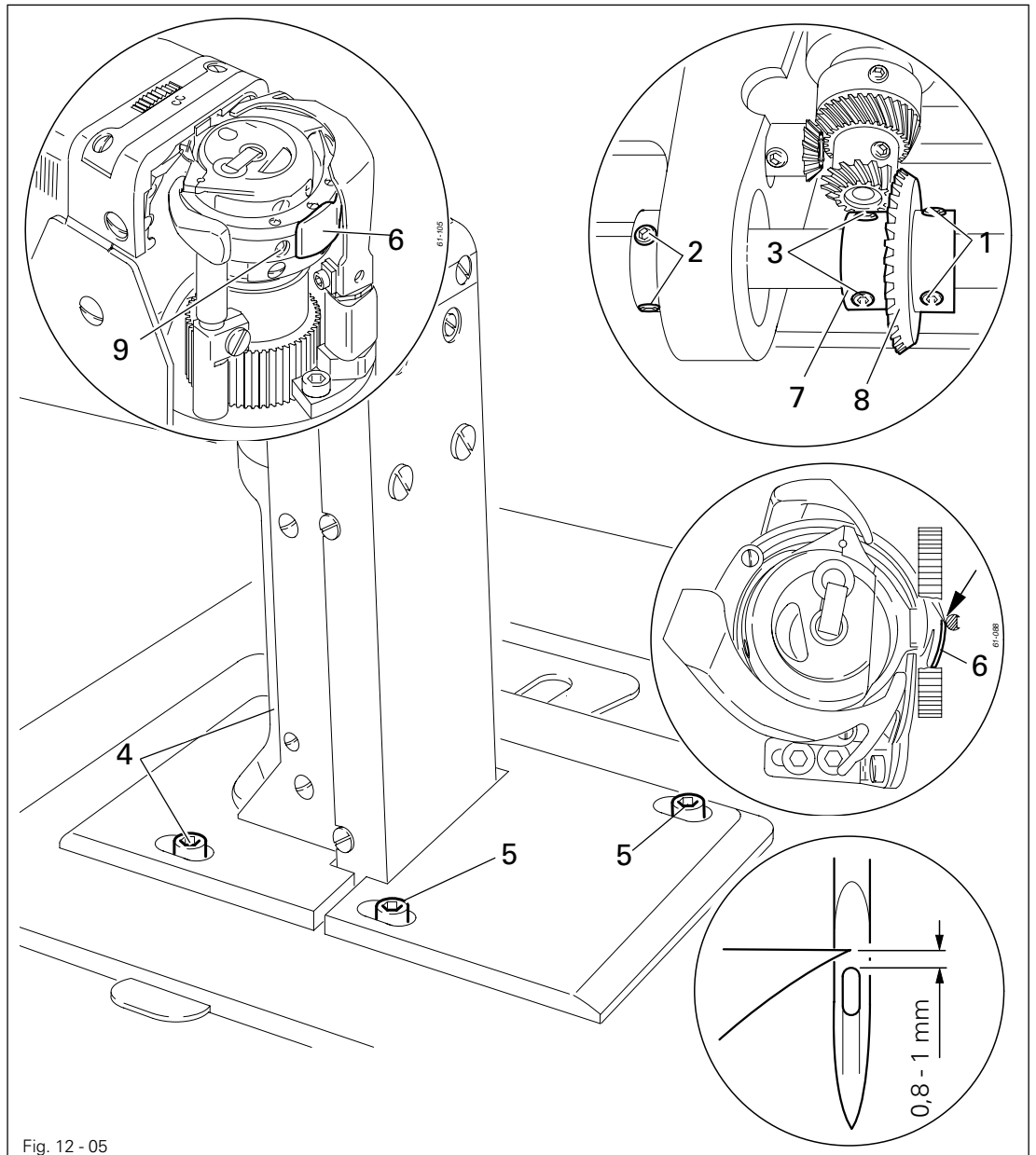
- Move the needle bar 1 (screw 2) in accordance with the **requirement** without turning it.

12.04.05 Needle rise, hook clearance, needle height and needle guard on the PFAFF 1571

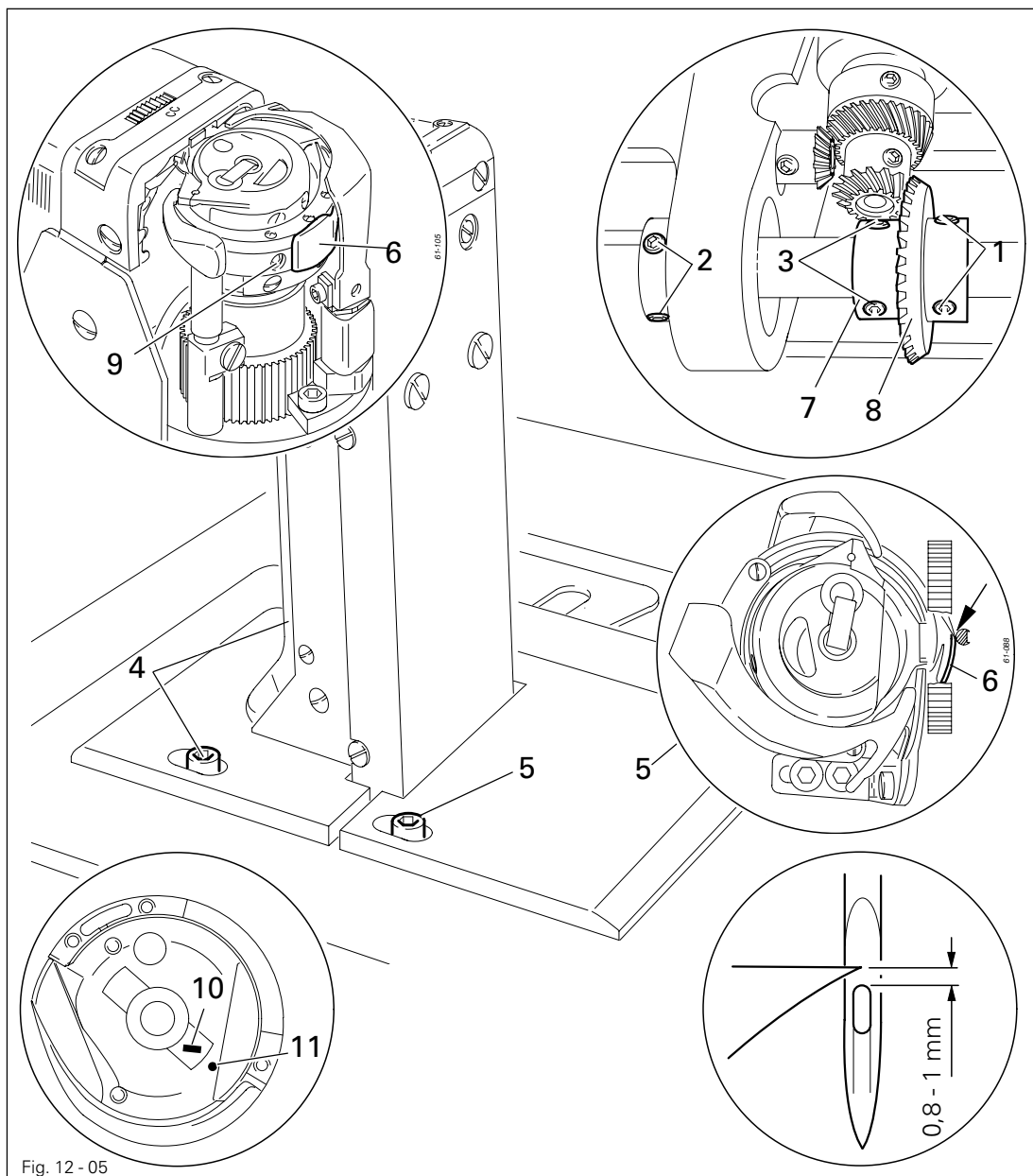
Requirement

With the needle bar positioned **2.0 mm after BDC** and the stitch length set at "0.8"

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



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



- Adjust the height of the needle in accordance with **requirement 2**, compare **Chapter 12.04.04 Preliminary adjustment of the needle height**.
- 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.

12.04.06 Needle rise, hook clearance, needle height and needle guard on the PFAFF 1574

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.

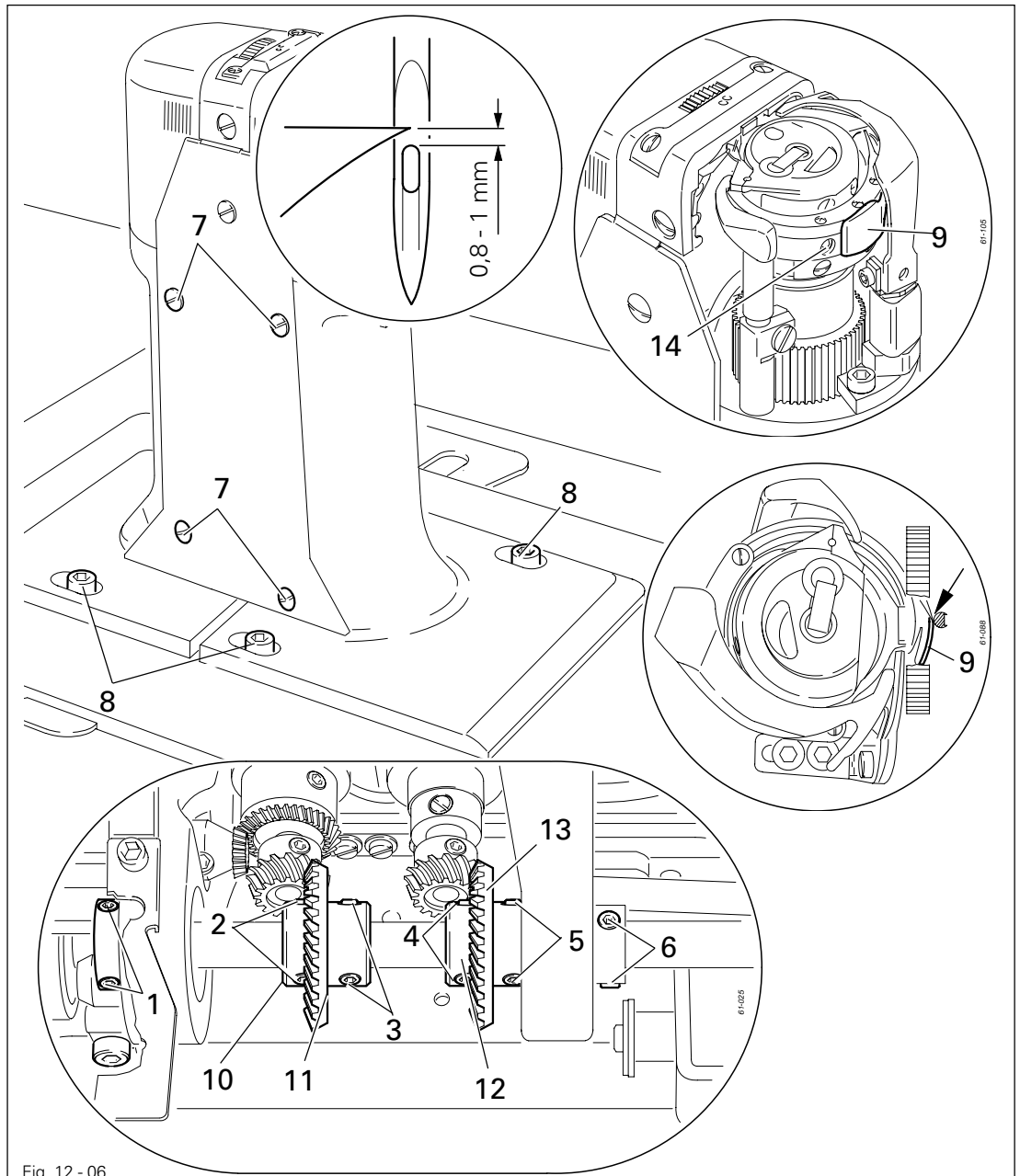
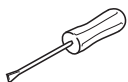


Fig. 12 - 06



- 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**.

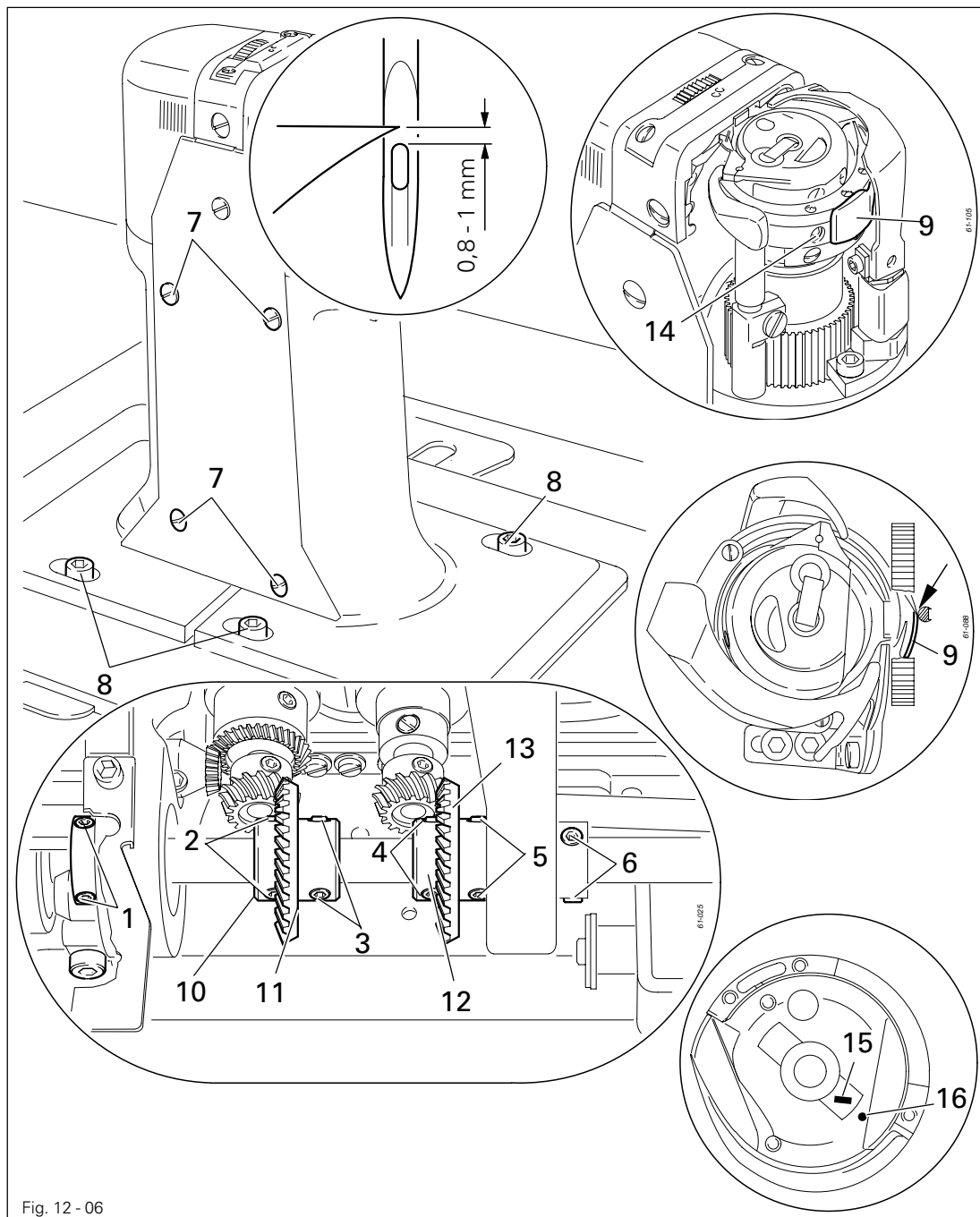


Fig. 12 - 06

- Adjust the height of the needle in accordance with **requirement 2**, compare **Chapter 12.04.04 Preliminary adjustment of the needle height**.
- 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.

12.04.07 Needle rise, hook clearance, needle height and needle guard on the PFAFF 1591

Requirement

With the needle bar positioned **2.0 mm after BDC** and the stitch length set at "0.8"

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

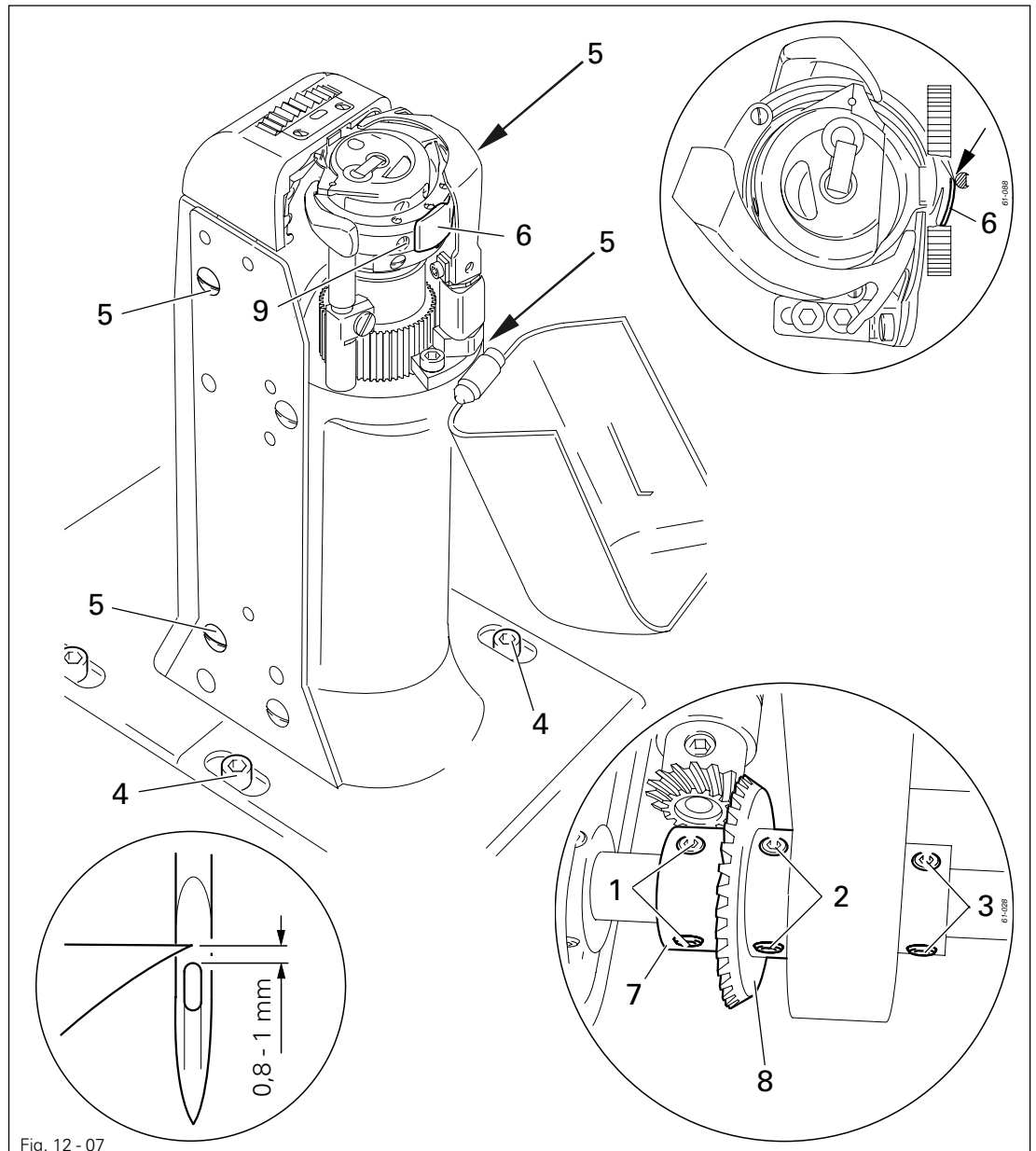
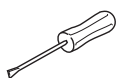


Fig. 12 - 07



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

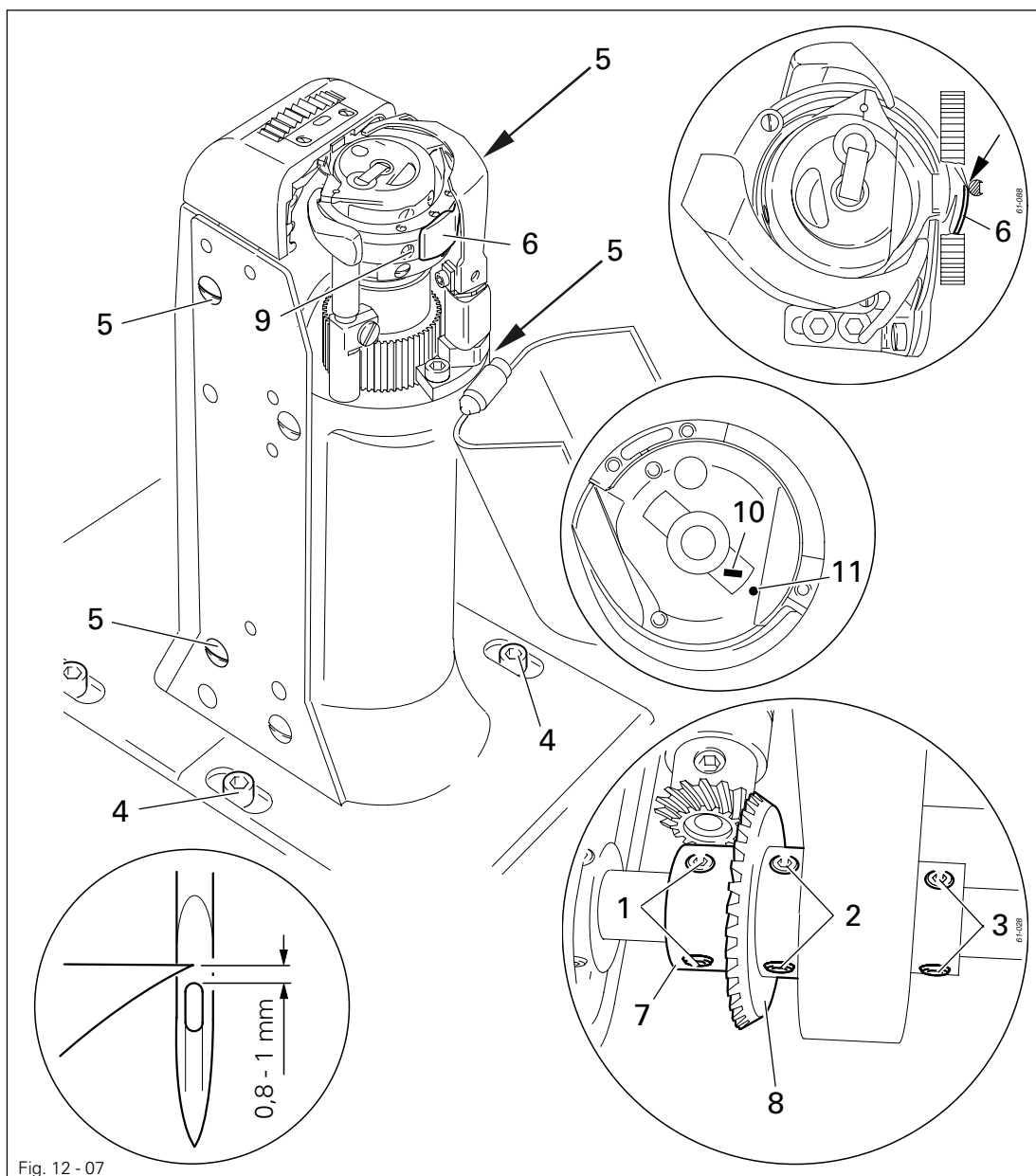


Fig. 12 - 07

- Adjust the height of the needle in accordance with **requirement 2**, compare **Chapter 12.04.04 Preliminary adjustment of the needle height**.
- Adjust hook post in accordance with **requirement 1** and tighten screws **4**.
- Taking the play of the bevel gear wheel into account, tighten screws **2**.
- Move collar **7** to touch bevel gear wheel **8** and tighten screws **1**.
- Screws **5** remain loosened for further adjustments.
- Adjust needle guard **6** (screw **9**) in accordance with **requirement 3**.

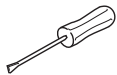
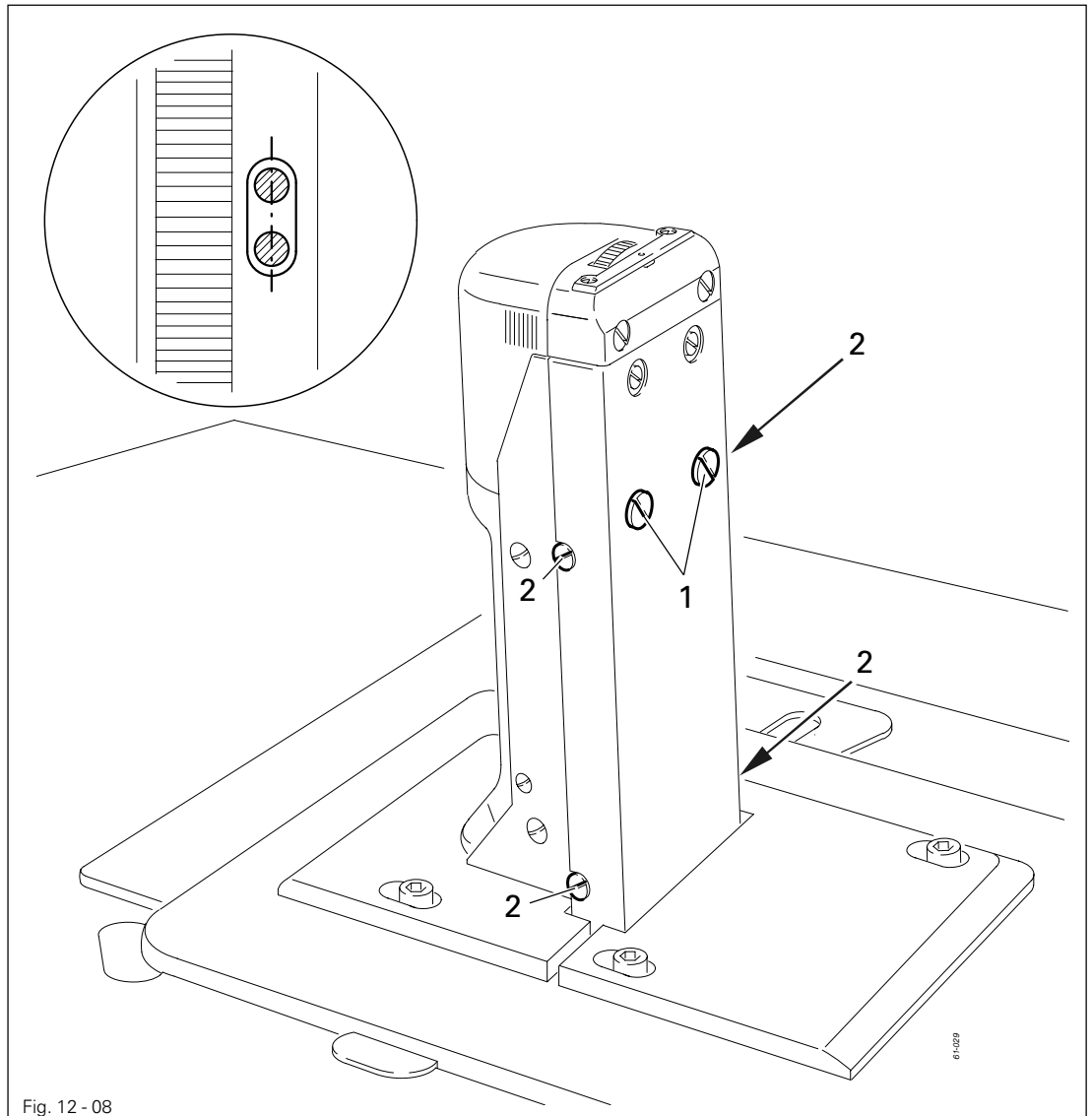


When changing the hook, care must be taken to ensure that markings **10** and **11** are located on one side.

12.04.08 Needle position crosswise to sewing direction on the PFAFF 1571

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**.

Adjustment

12.04.09 Needle position crosswise to sewing direction on the PFAFF 1574

Requirement

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

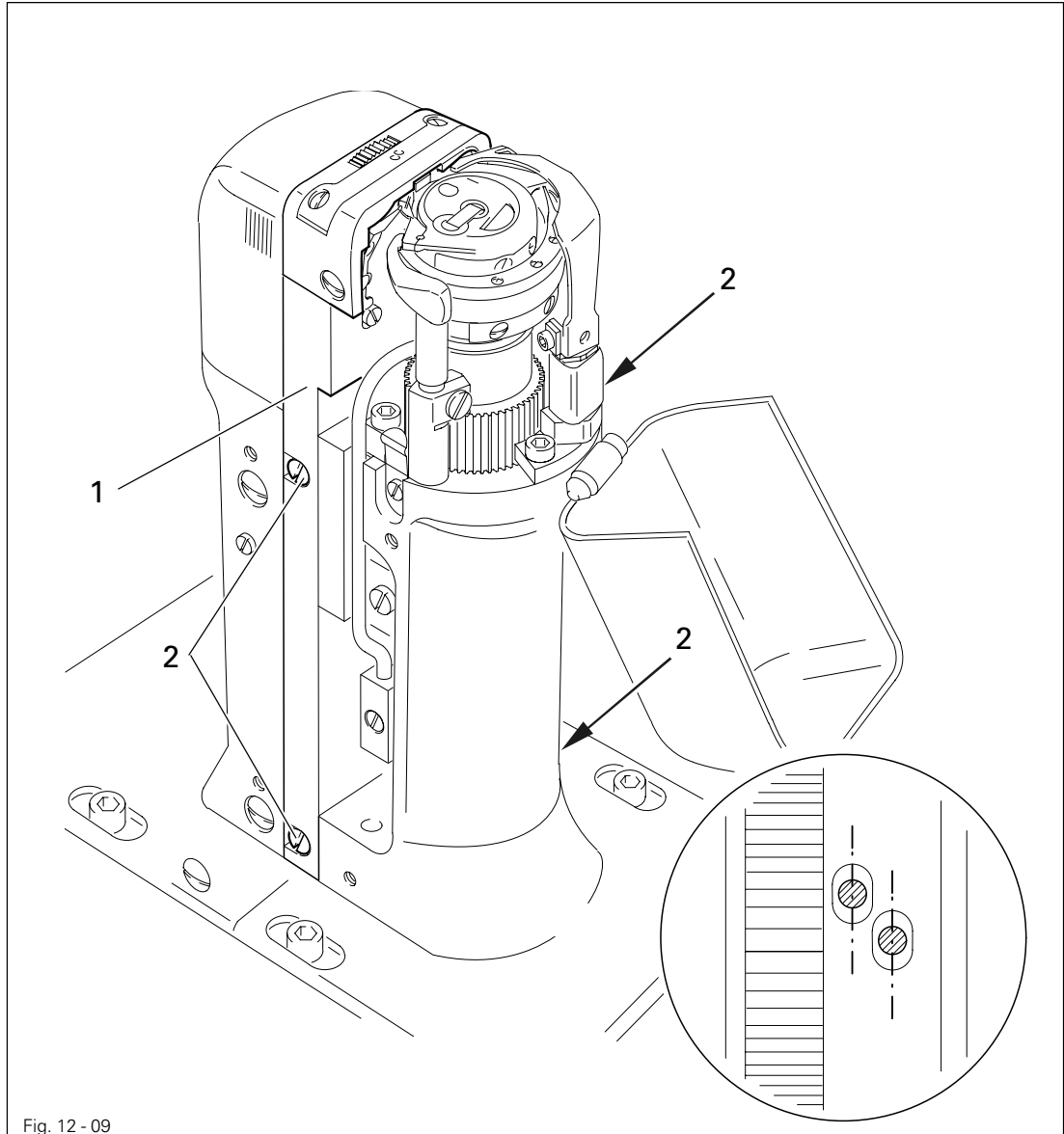


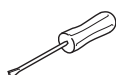
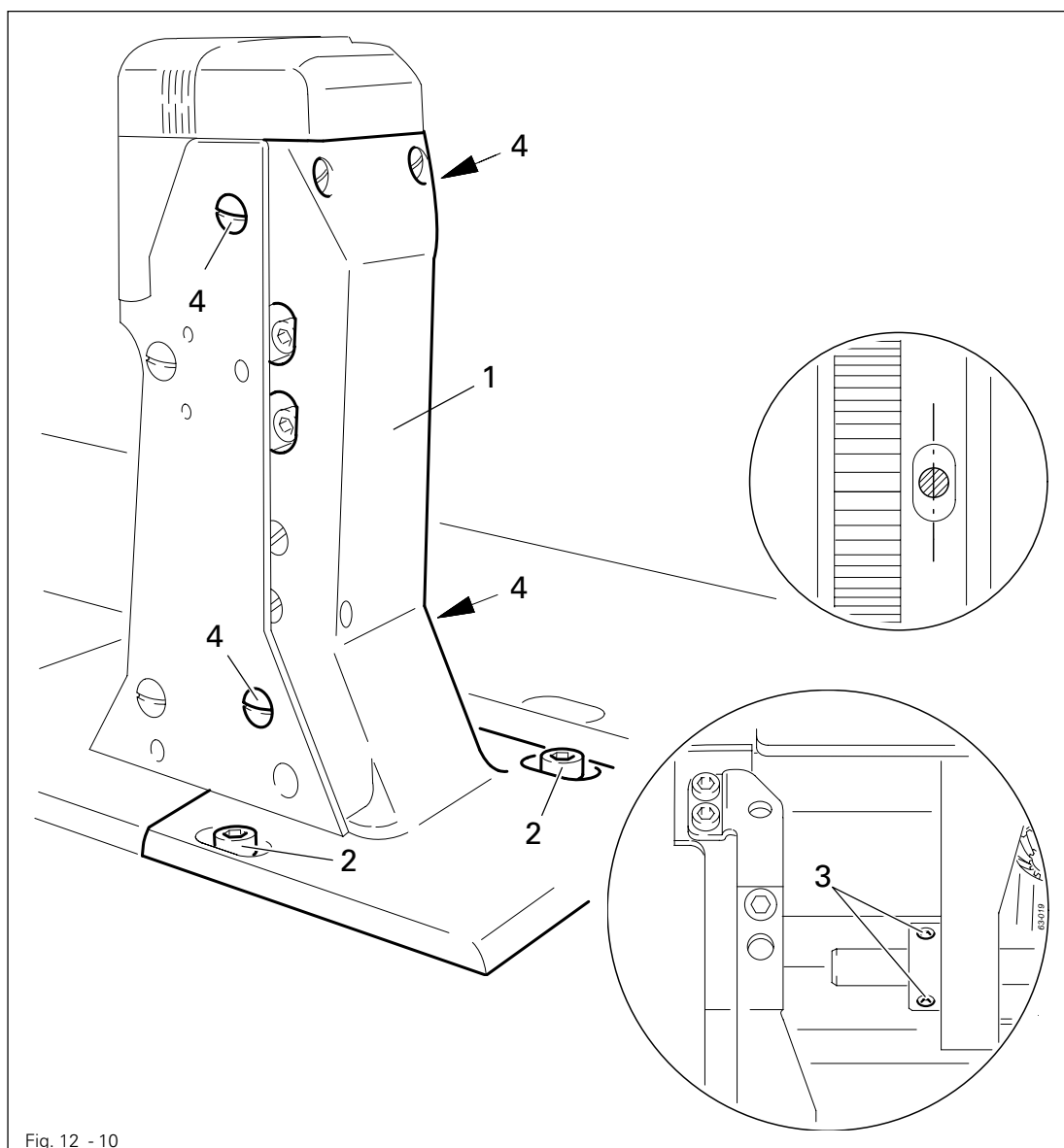
Fig. 12 - 09

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

12.04.10 Needle position crosswise to sewing direction on the PFAFF 1591

Requirement

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

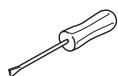
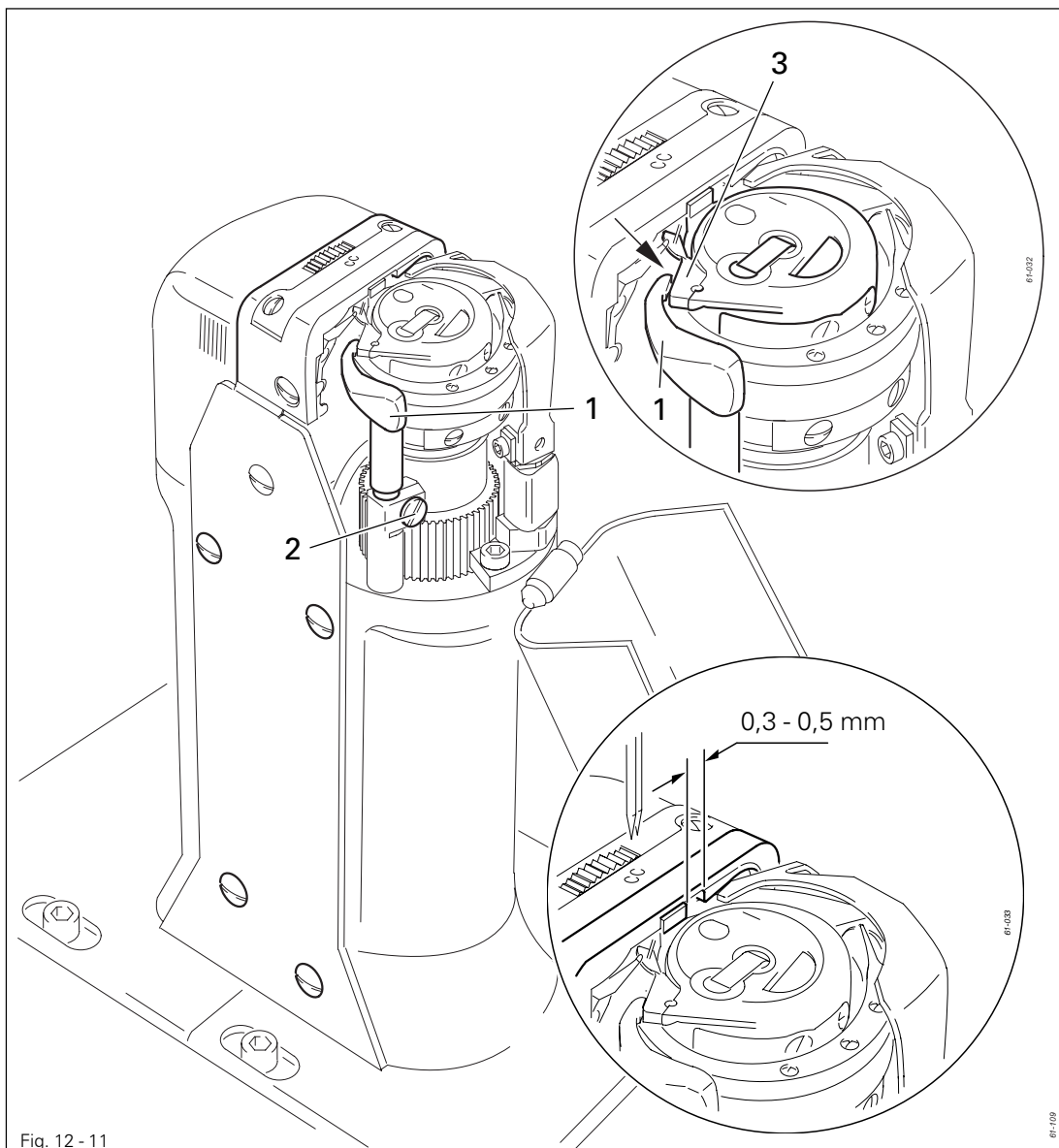


- Adjust feed wheel post 1 (screws 2, 3 and 4) according to the **requirement**.

12.04.11 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 1574 these adjustments must be repeated on the right post. Depending on the thread size, a variation of the setting in **Requirement 2** is permitted.

12.04.12 Height of the feed wheel on the PFAFF 1571

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**.

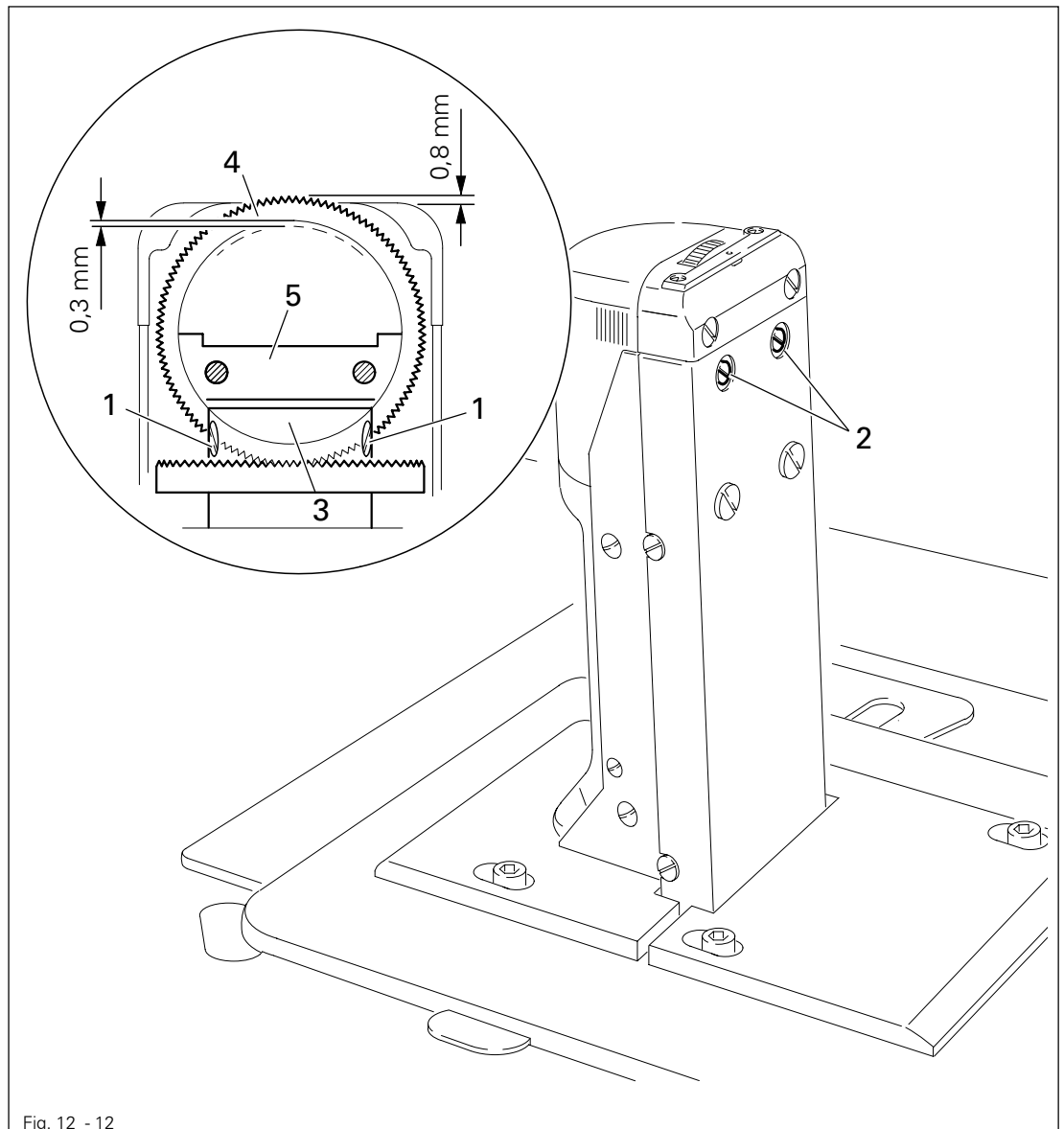
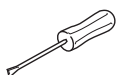


Fig. 12 - 12



- 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**.

12.04.13 Height of the feed wheel on the PFAFF 1574

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**.

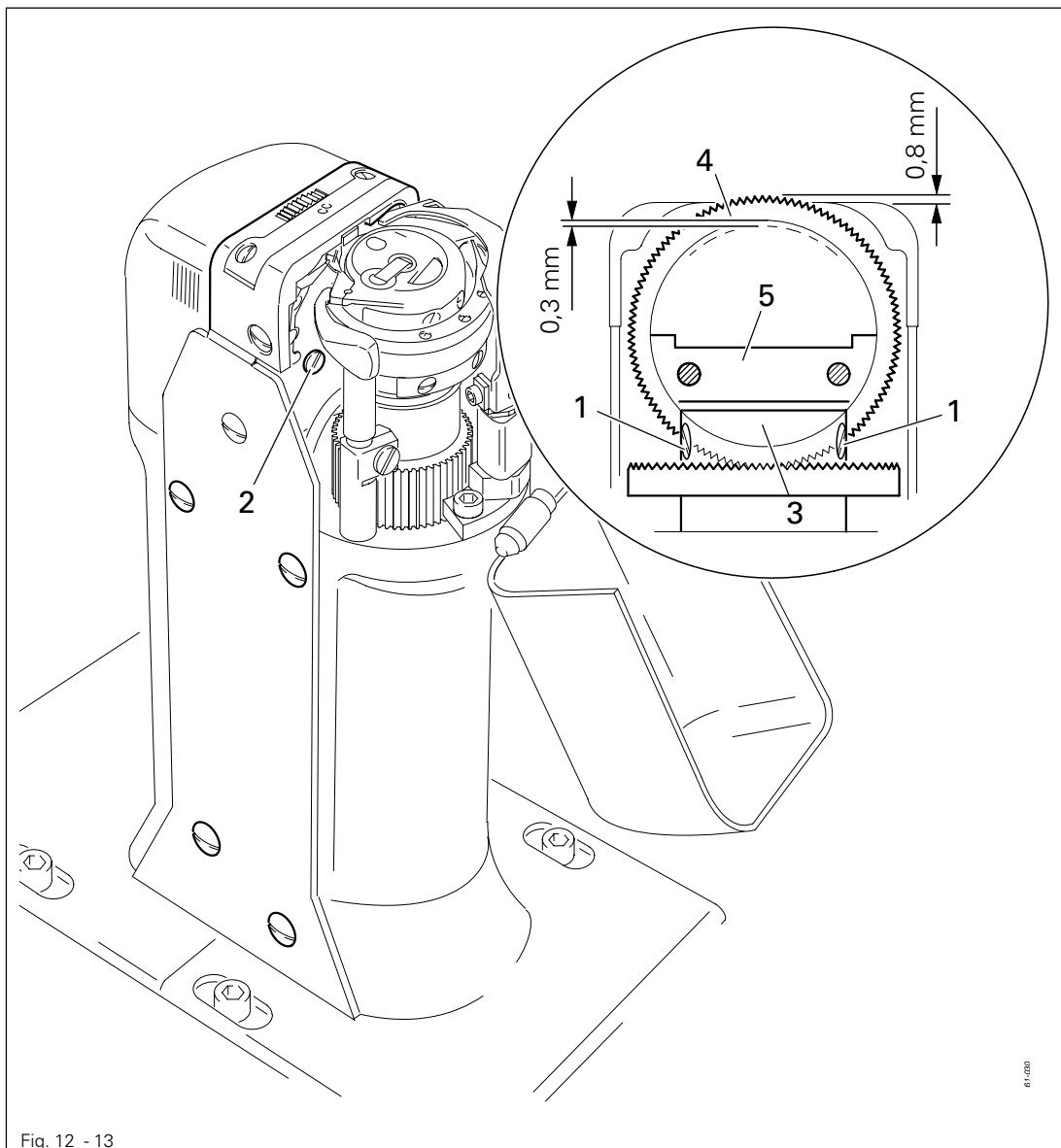
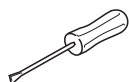


Fig. 12 - 13

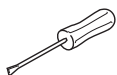
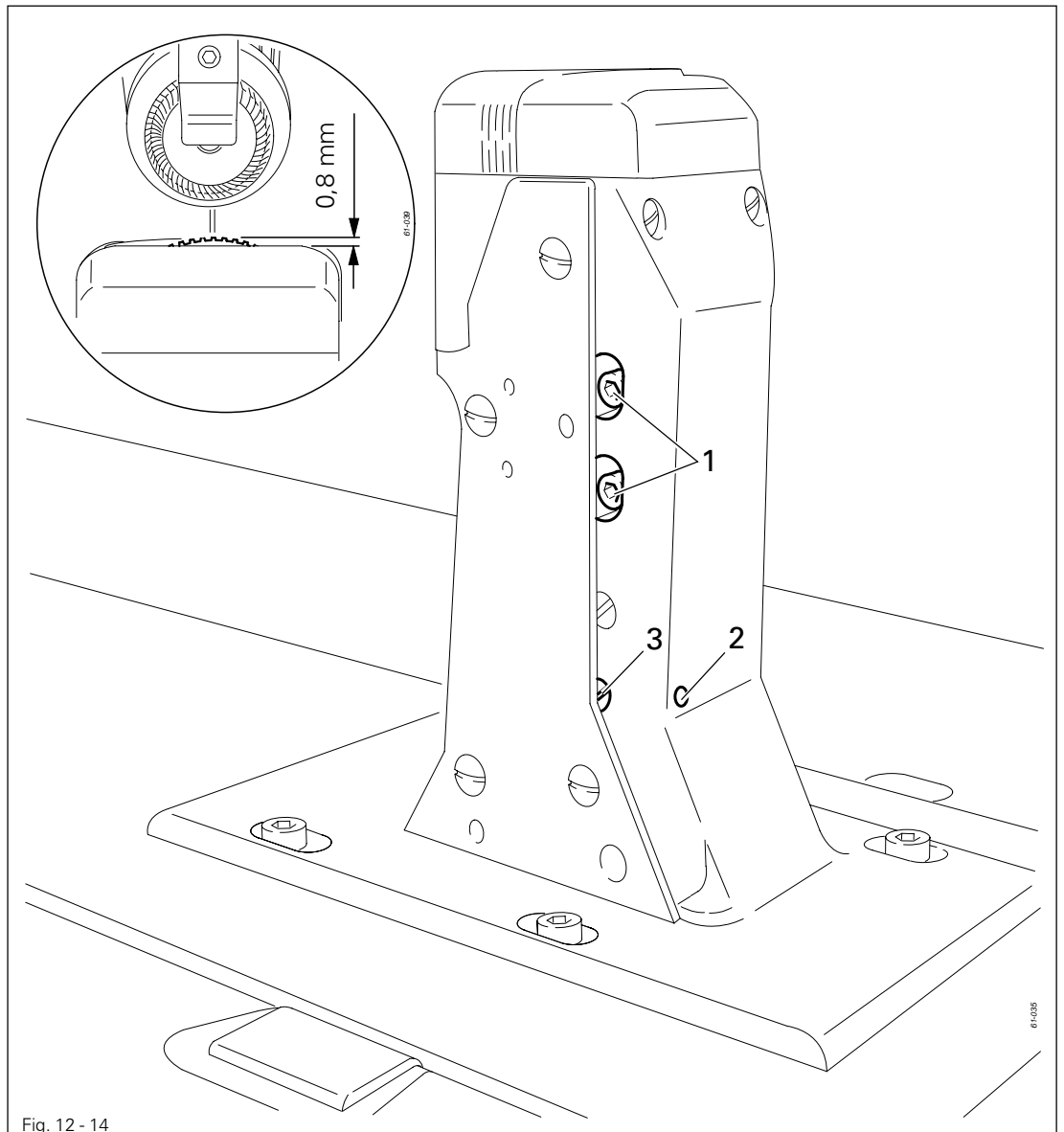


- Swing out the roller presser.
- Loosen screws **1** and **2** (two screws each).
- Adjust drive wheel **3** according to **requirement 1**, taking care to see that the teeth of drive wheel **3** and feed wheel **4** lock into each other properly.
- Tighten screws **1**.
- Adjust guide **5** according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

12.04.14 Height of the feed wheel on the PFAFF 1591

Requirement

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



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

12.04.15 Clearance between roller presser and feed wheel

Requirement

With lever 1 raised the clearance between the roller presser and the feed wheel must be 7 mm.

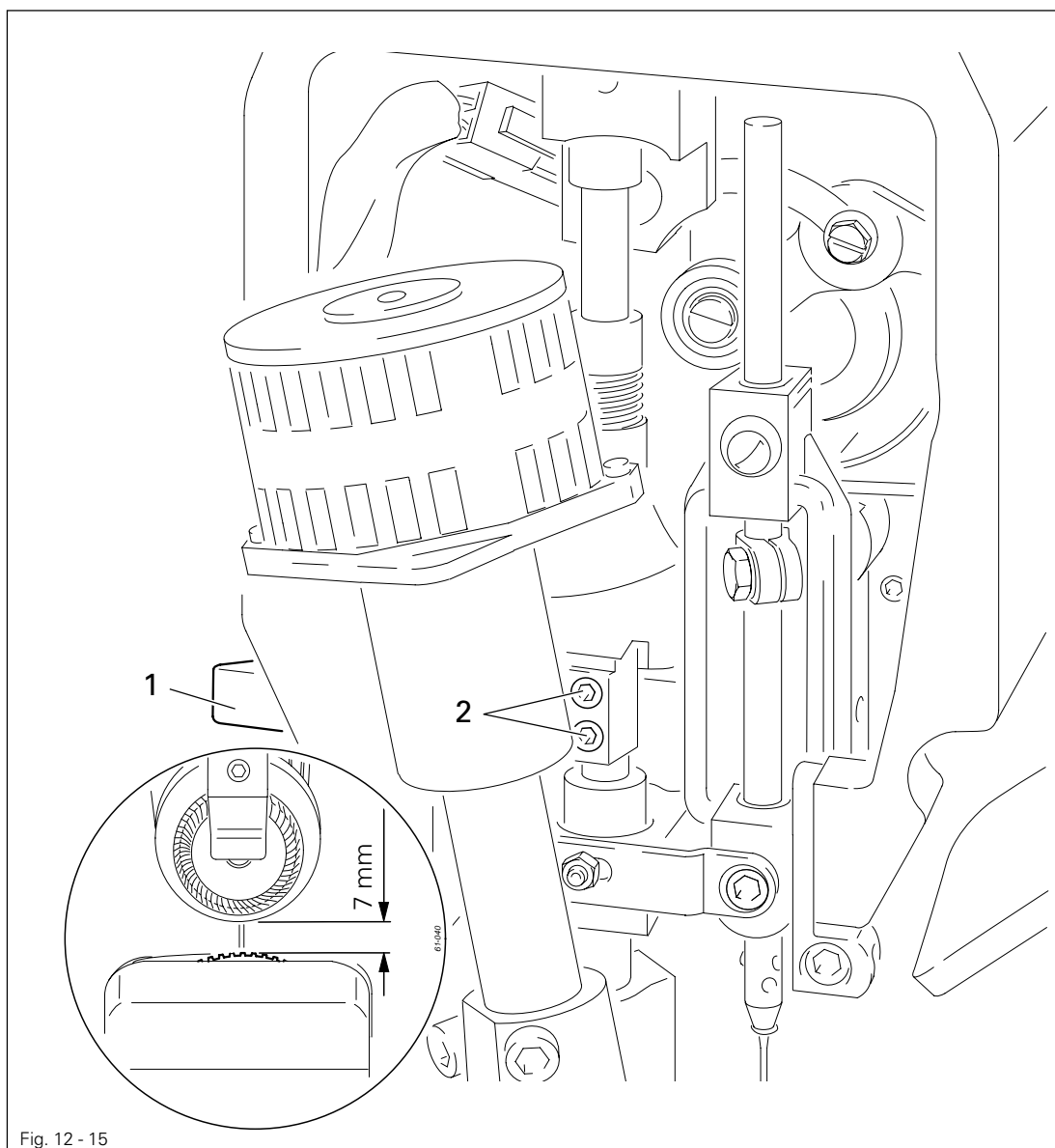
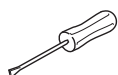


Fig. 12 - 15



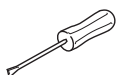
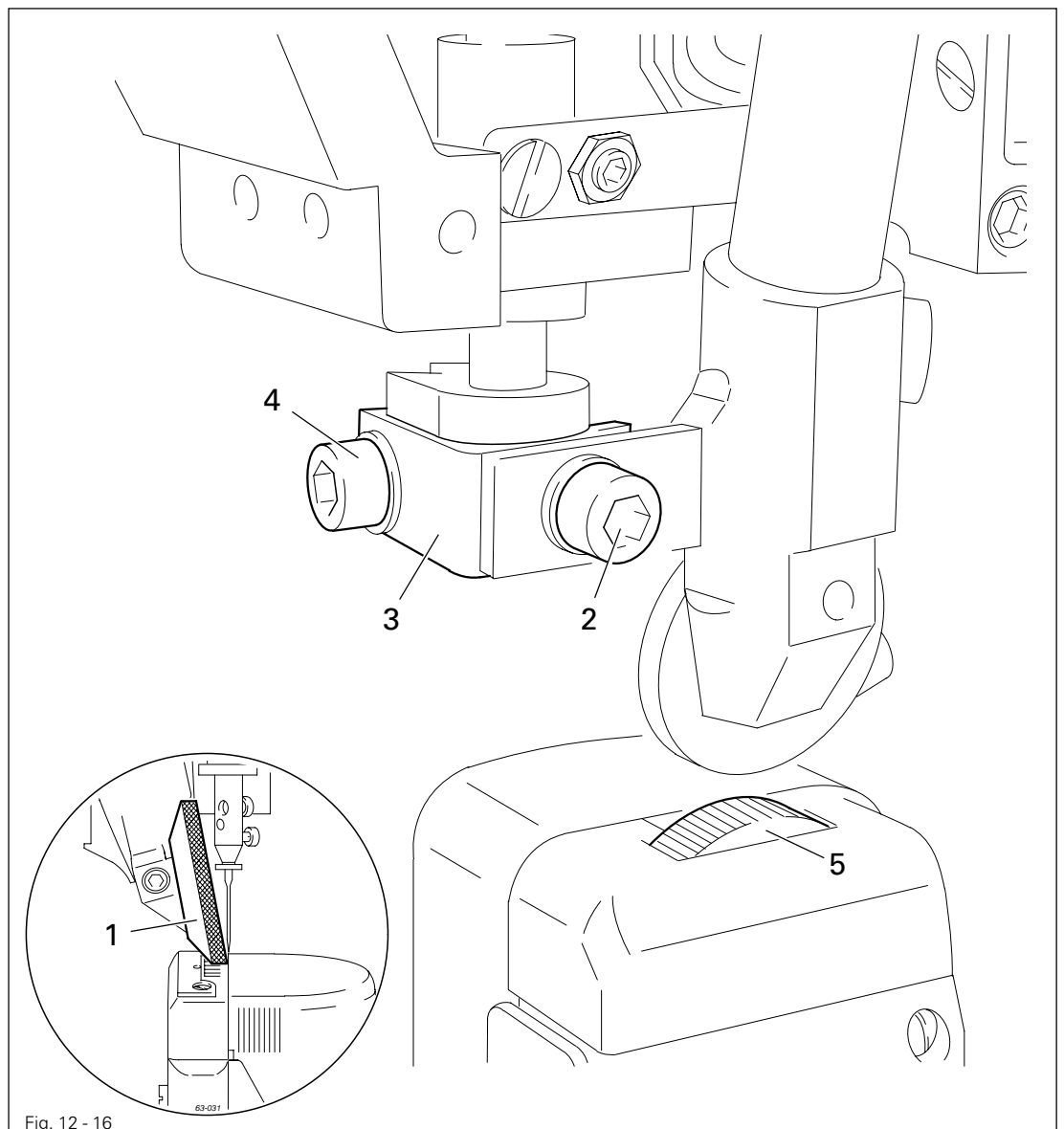
- Raise lever 1.
- Move the presser foot bar (screws 2) in accordance with the **requirement**. Take care to ensure that the roller presser is parallel to the feed wheel.

12.04.16 Roller-presser

Requirement

When the roller-presser **1** is resting on the feed wheel **5** it must

1. be parallel to the feed wheel **5** when viewed in the direction of sewing,
2. be in the middle of the (left) needle when viewed in the direction of sewing and
3. be as close as possible to the (left) needle when viewed in transverse direction of sewing.



- Raise the roller-presser **1**.
- Always observe **requirement 1** when carrying out the following adjustments.
- Move the roller-presser **1** (screw **2**) in accordance with **requirement 2**.
- Allow the roller-presser **1** to come to rest on the feed wheel **5**.
- Move the roller-presser bracket **3** (screw **4**) in accordance with **requirement 3**.



When sewing very tight curves the roller-presser **1** should be moved toward the operator slightly.

12.04.17 Retainer (only on the PFAFF 1574)

Requirement

Retainer 1 should

1. Be as near to the needle as possible, seen in the direction of sewing, and
2. Centred to the needle, seen crosswise to the direction of sewing.
3. When the roller presser is lowered, the clearance between the retainer 1 and the workpiece should be **0.2 - 0.3 mm**.

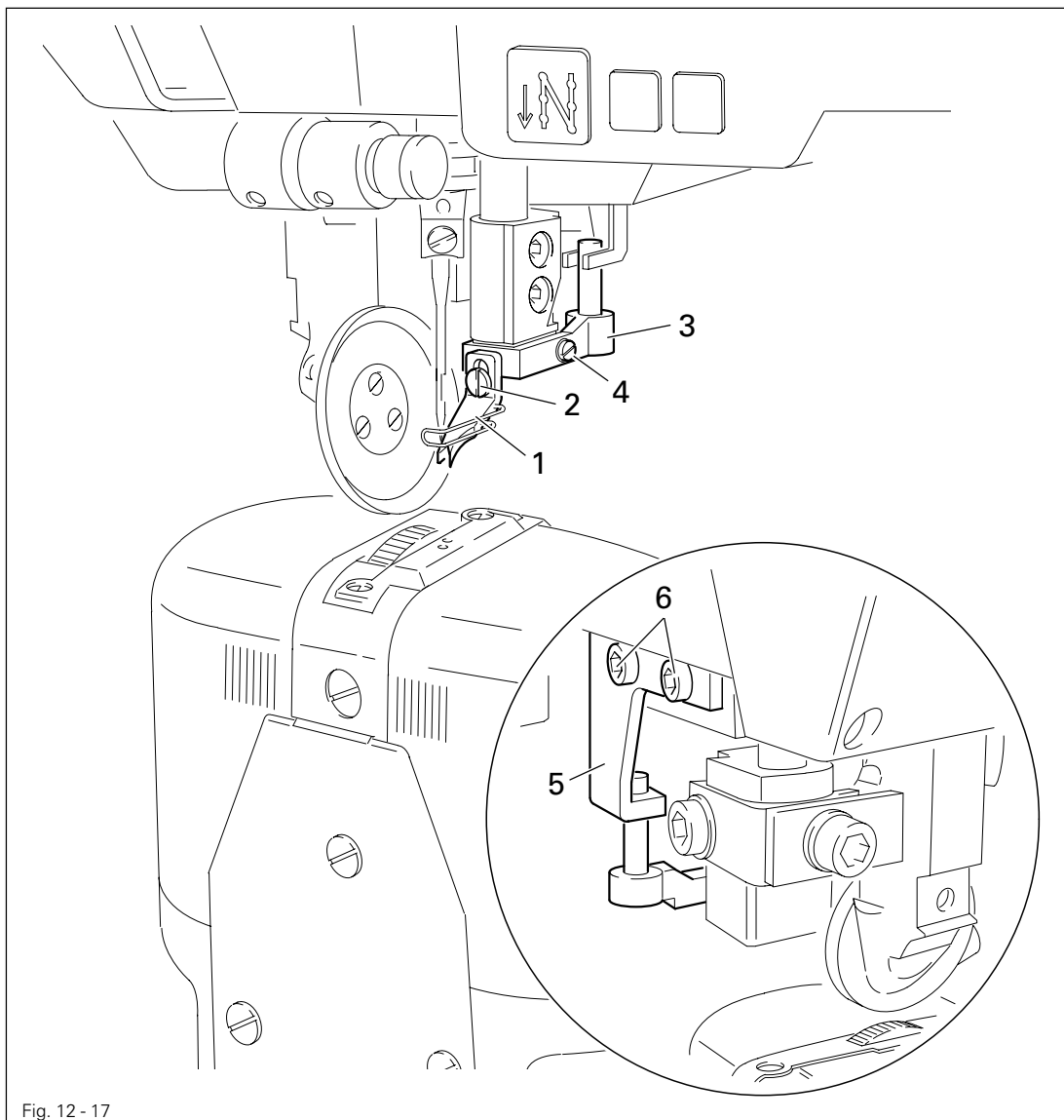
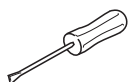


Fig. 12 - 17



- Adjust retainer 1 (screw 2) in accordance with **requirement 3**.
- Adjust holder 3 (screw 4) in accordance with **requirement 1**.
- Adjust holder 5 (screws 6) in accordance with **requirement 2**.

12.04.18 Automatic presser-foot lifter

Requirement

When solenoid 1 is activated, lever 3 for the roller-presser must drop automatically.

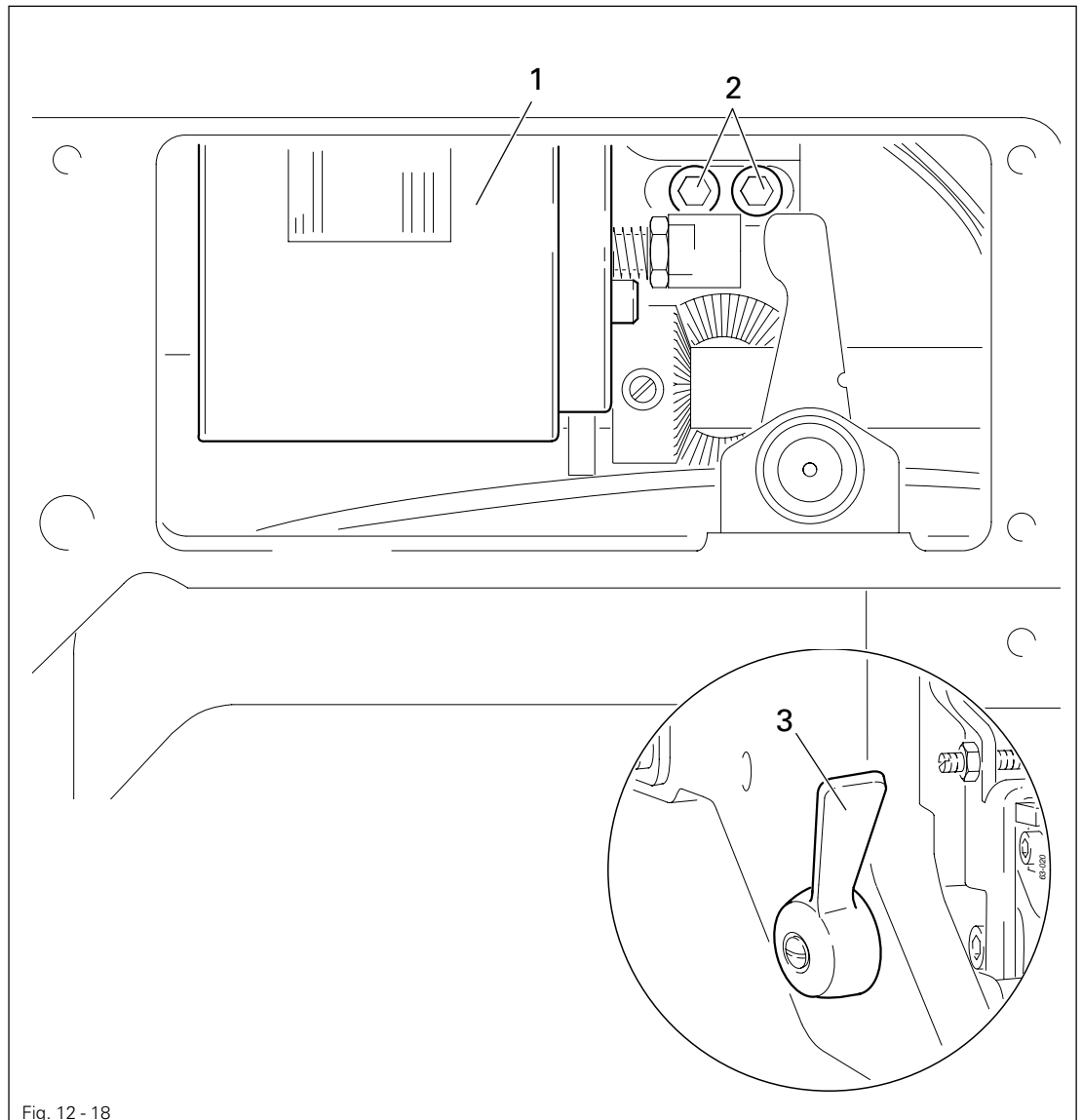


Fig. 12 - 18



- Move solenoid 1 (screws 2) in accordance with the **requirement**.
- Turn the machine on and check the **requirement**.
- Turn the machine off.

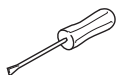
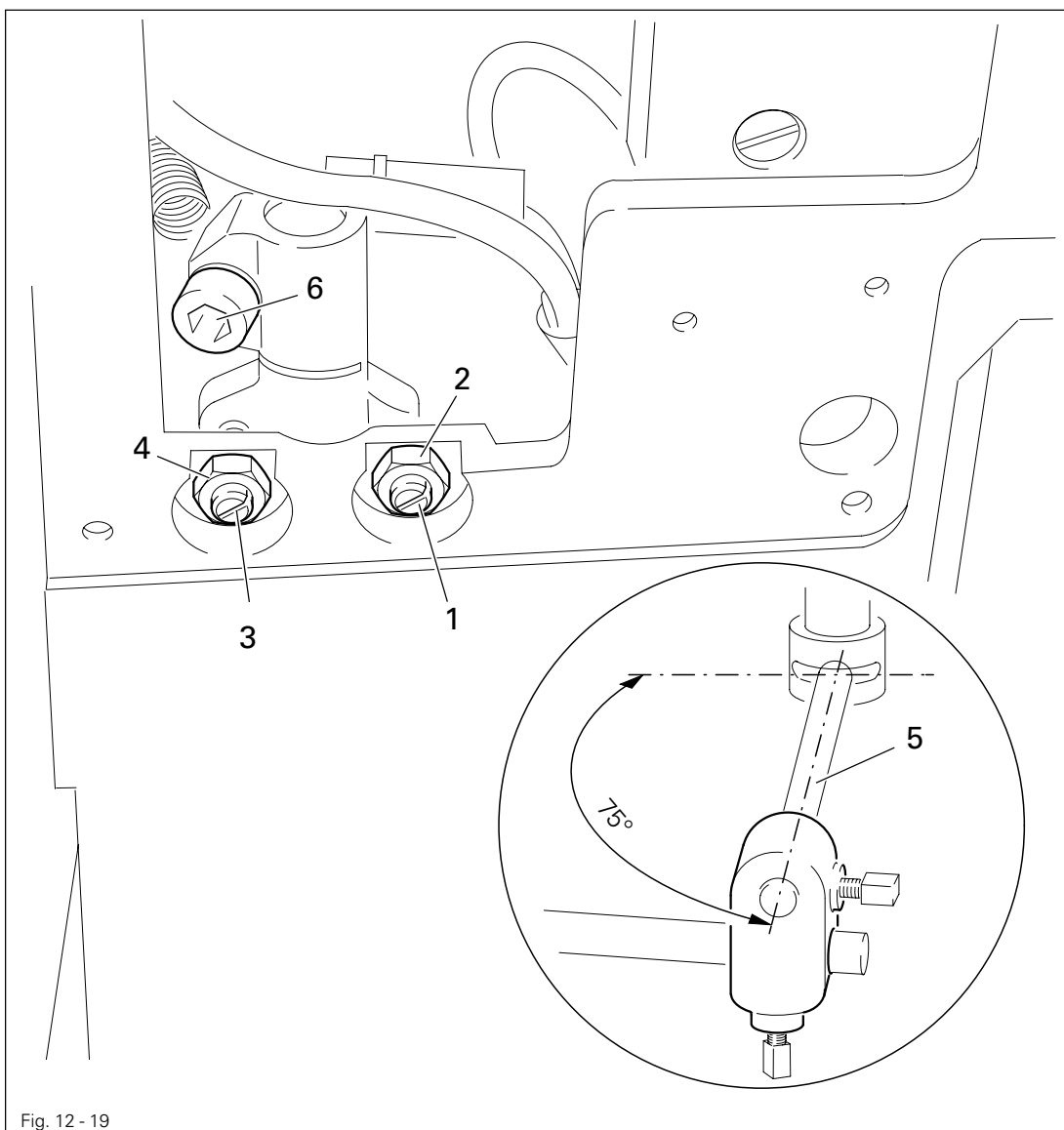


Depending on the thickness of the material, the clearance between the roller-presser and the feed wheel can be increased to a maximum of **10 mm** by moving the solenoid 1 to the right.

12.04.19 Knee lever

Requirement

1. The knee lever must have a little play before the roller-presser is raised.
2. The lever for the roller-presser must drop automatically when the knee lever is pressed as far as it will go.
3. Bar 5 of the knee lever must be at an angle of approx. 75° to the bedplate.

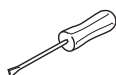
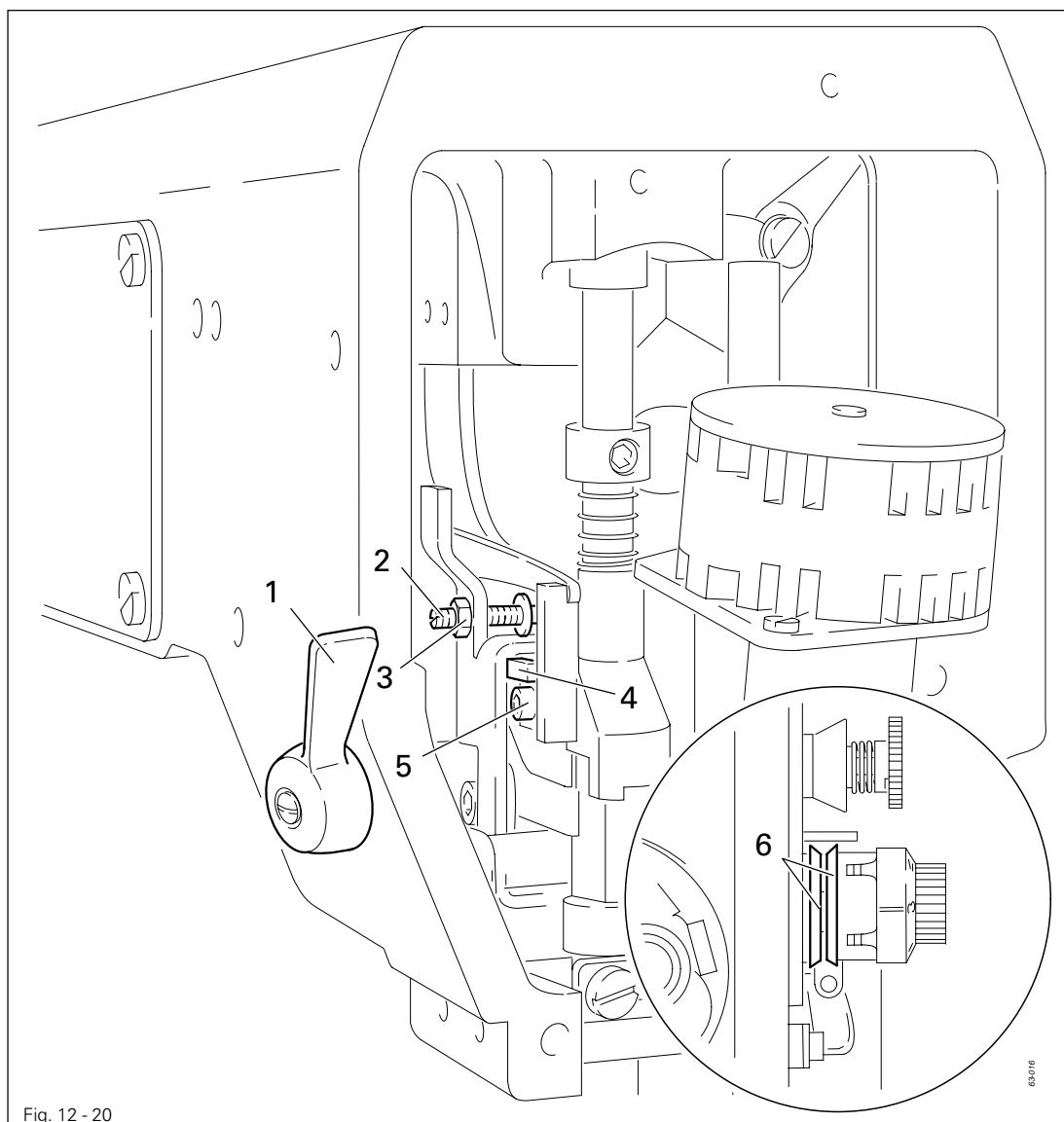


- Turn screw 1 (nut 2) in accordance with **requirement 1**.
- Turn screw 3 (nut 4) in accordance with **requirement 2**.
- Adjust bar 5 (screw 6) in accordance with **requirement 3**.

12.04.20 Tension release

Requirement

With lever **1** raised or the automatic presser foot lifter activated, both tension discs **6** must be at least **0.5 mm** apart.

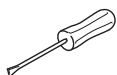
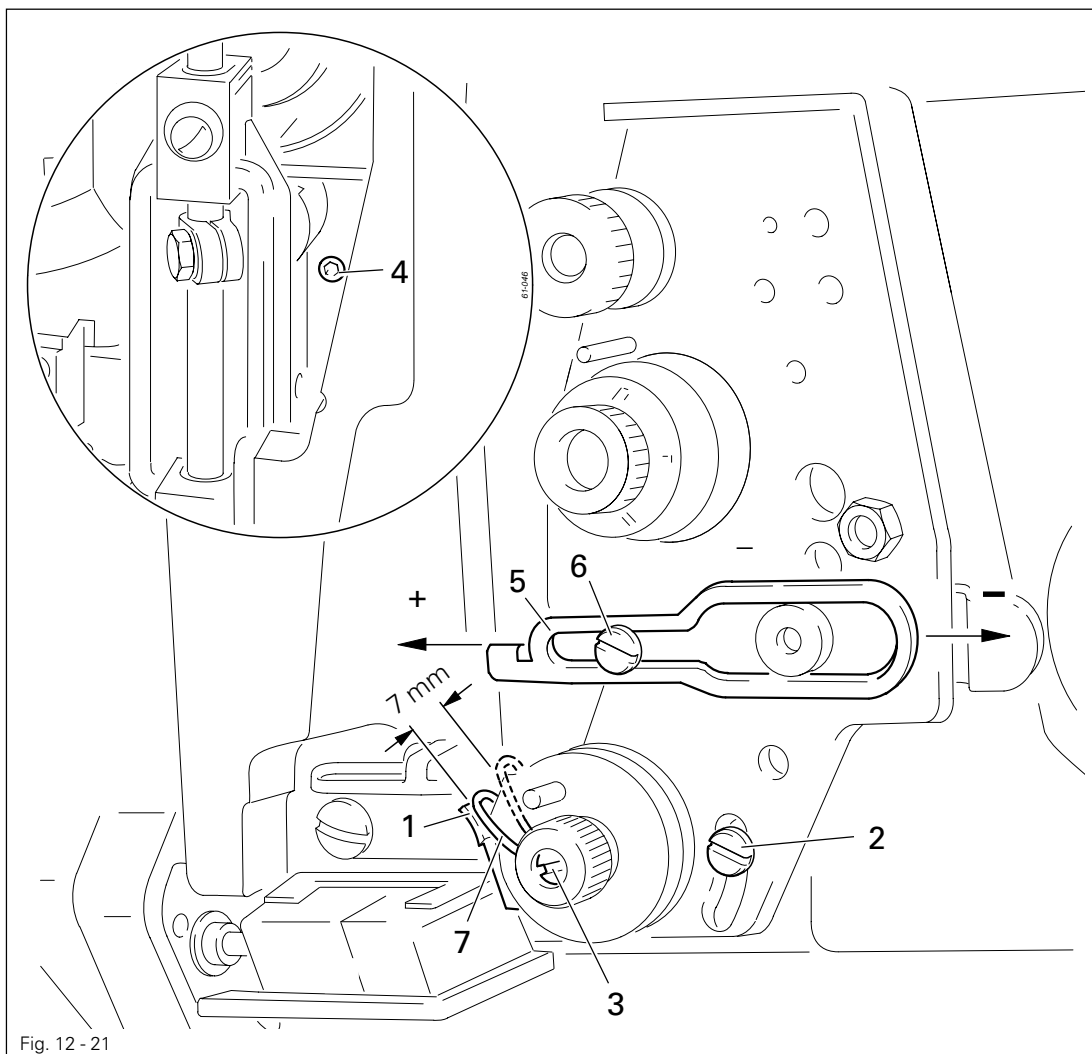


- Raise the roller-presser using lever **1**.
- Adjust screw **2** (nut **3**) in accordance with the **requirement**.
- Raise the roller-presser using the automatic presser foot lifter or the knee lever.
- Move the drive dog **4** (screw **5**) in accordance with the **requirement**.

12.04.21 Thread check spring (PFAFF 1571 and 1591)

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).

12.04.22 Thread check springs (PFAFF 1574)

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**.

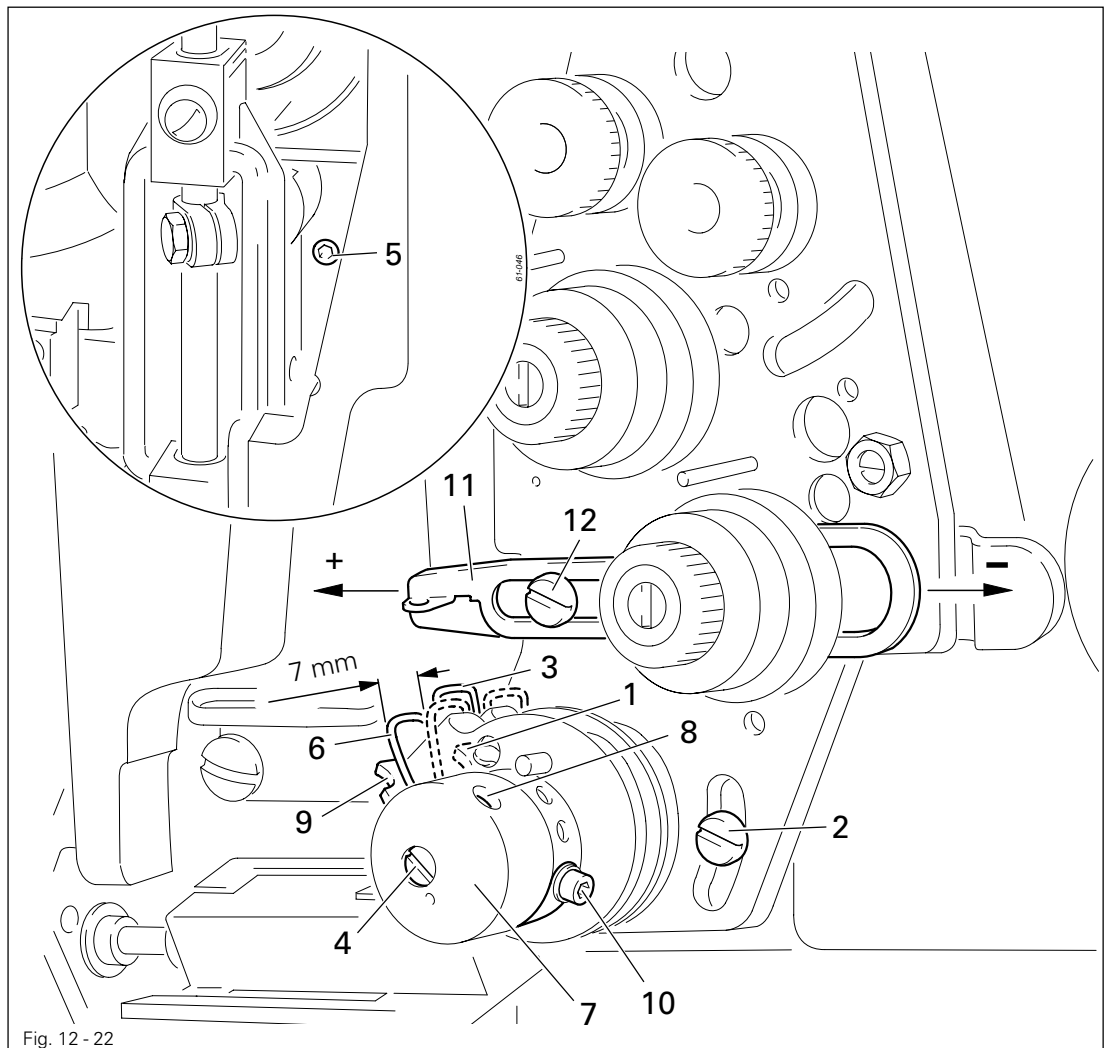
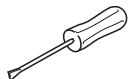


Fig. 12 - 22



- 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.

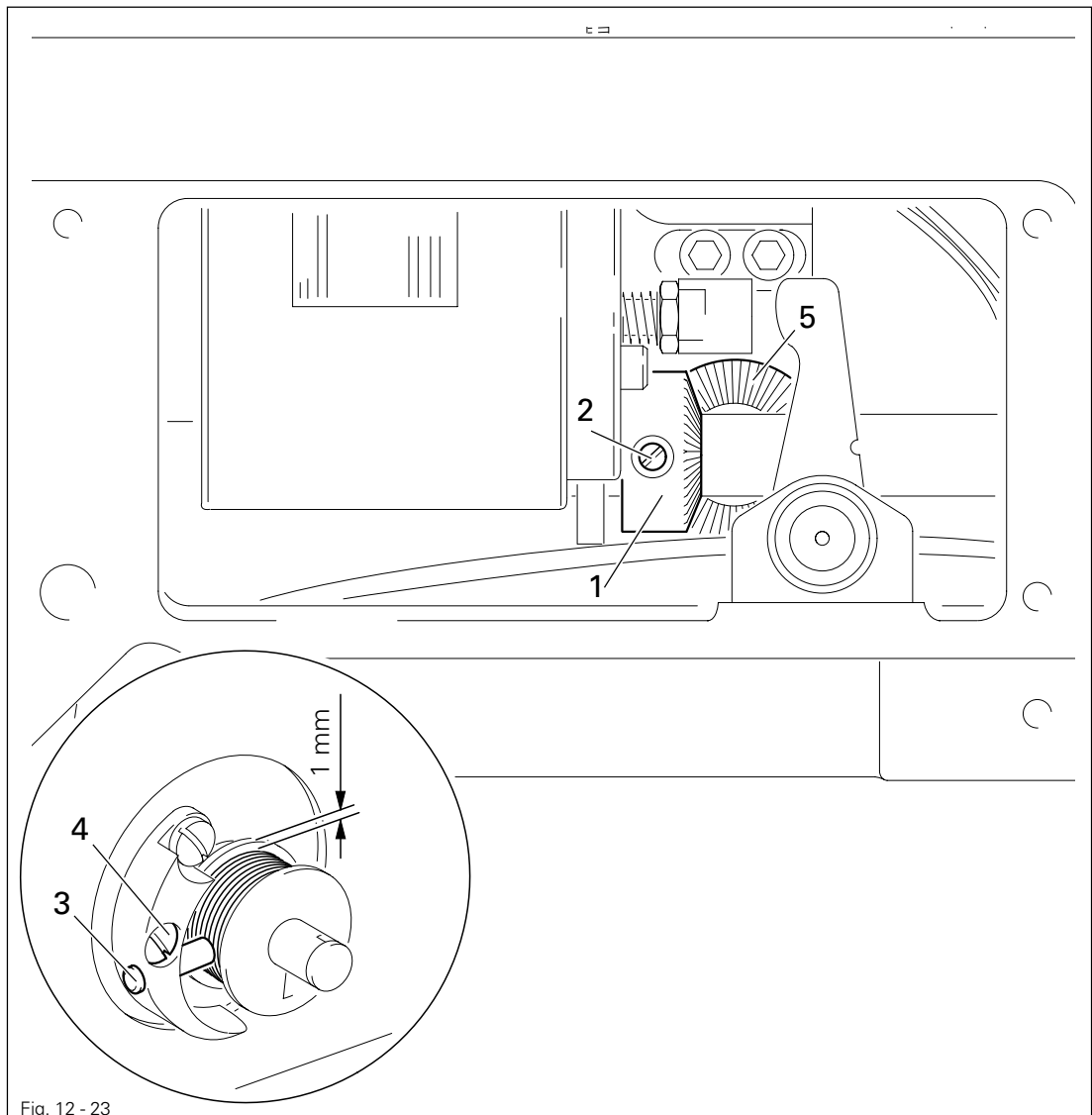
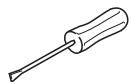


Fig. 12 - 23

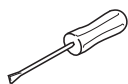
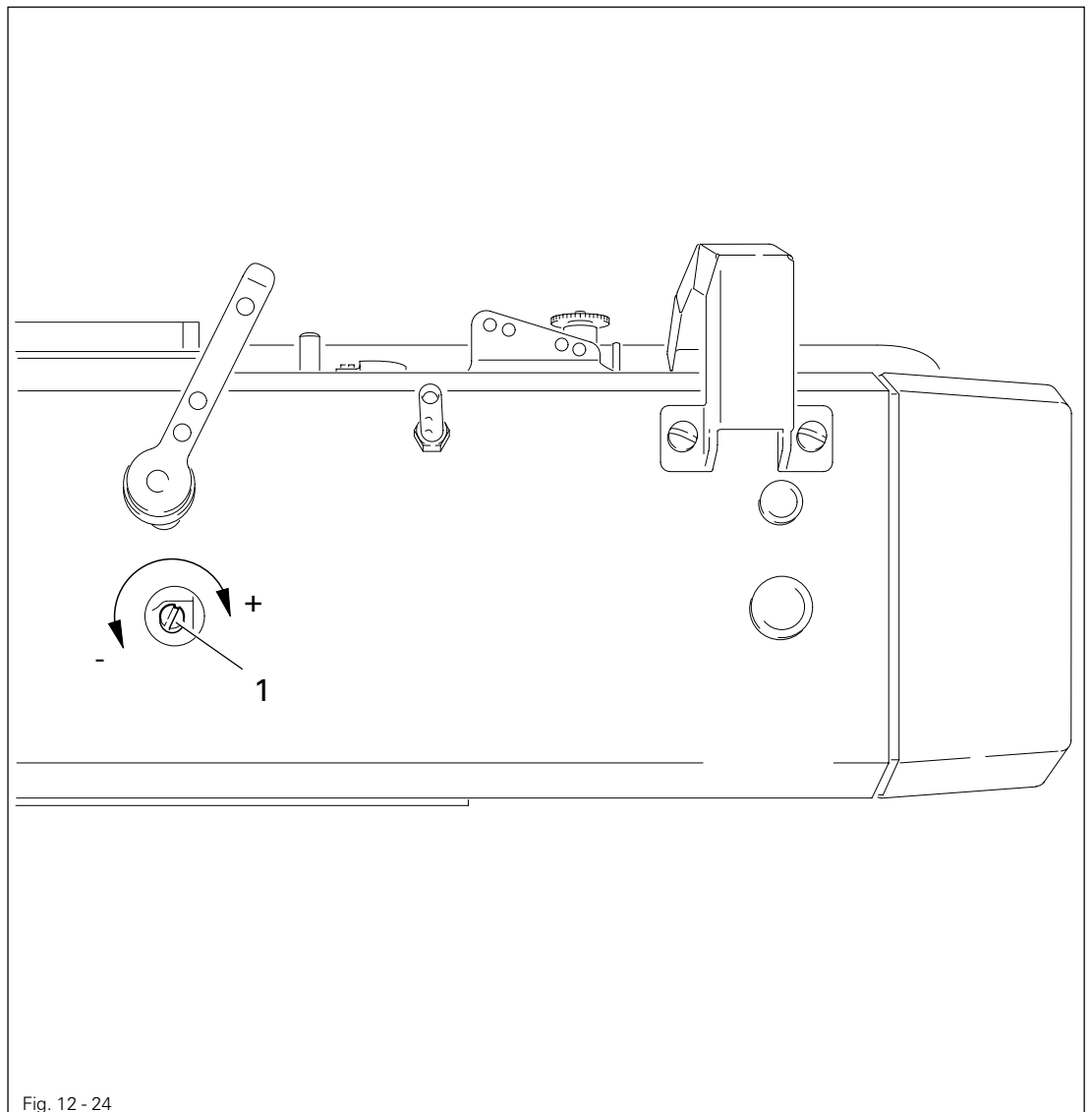


- Position drive wheel **1** (screws **2**) according to **requirement 1**.
- Position bolt **3** (screw **4**) according to **requirement 2**.

12.04.24 Roller-presser pressure

Requirement

The material must be fed reliably. No pressure marks may be made on the material.



- Adjust the roller-presser pressure with screw 1 in accordance with the **requirement**.



Screw 1 is underneath a cover.

Adjustment

12.04.25 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.

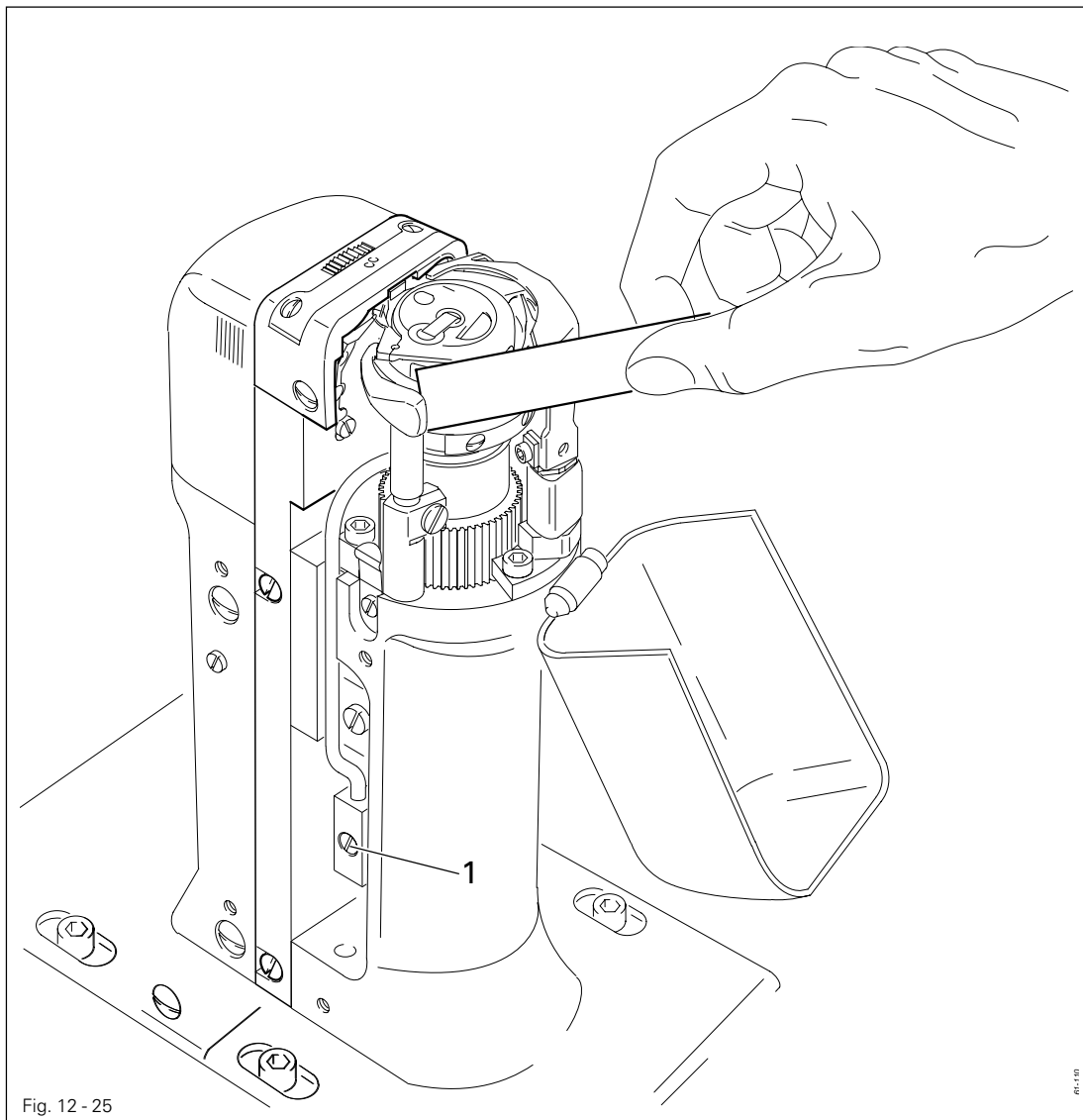
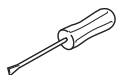


Fig. 12 - 25



- 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**.

12.04.26 Re-engage safety coupling



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

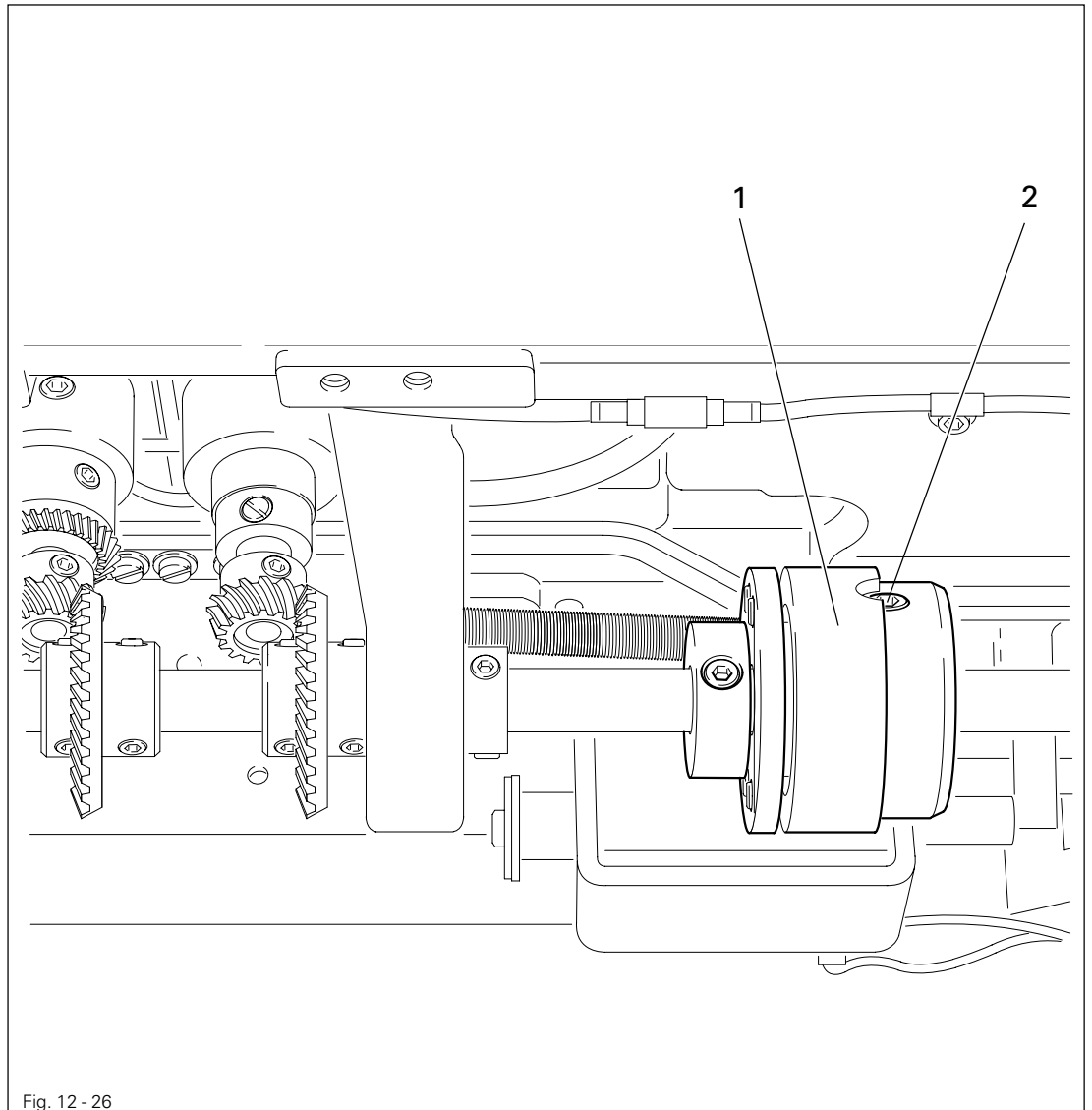
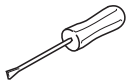


Fig. 12 - 26



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

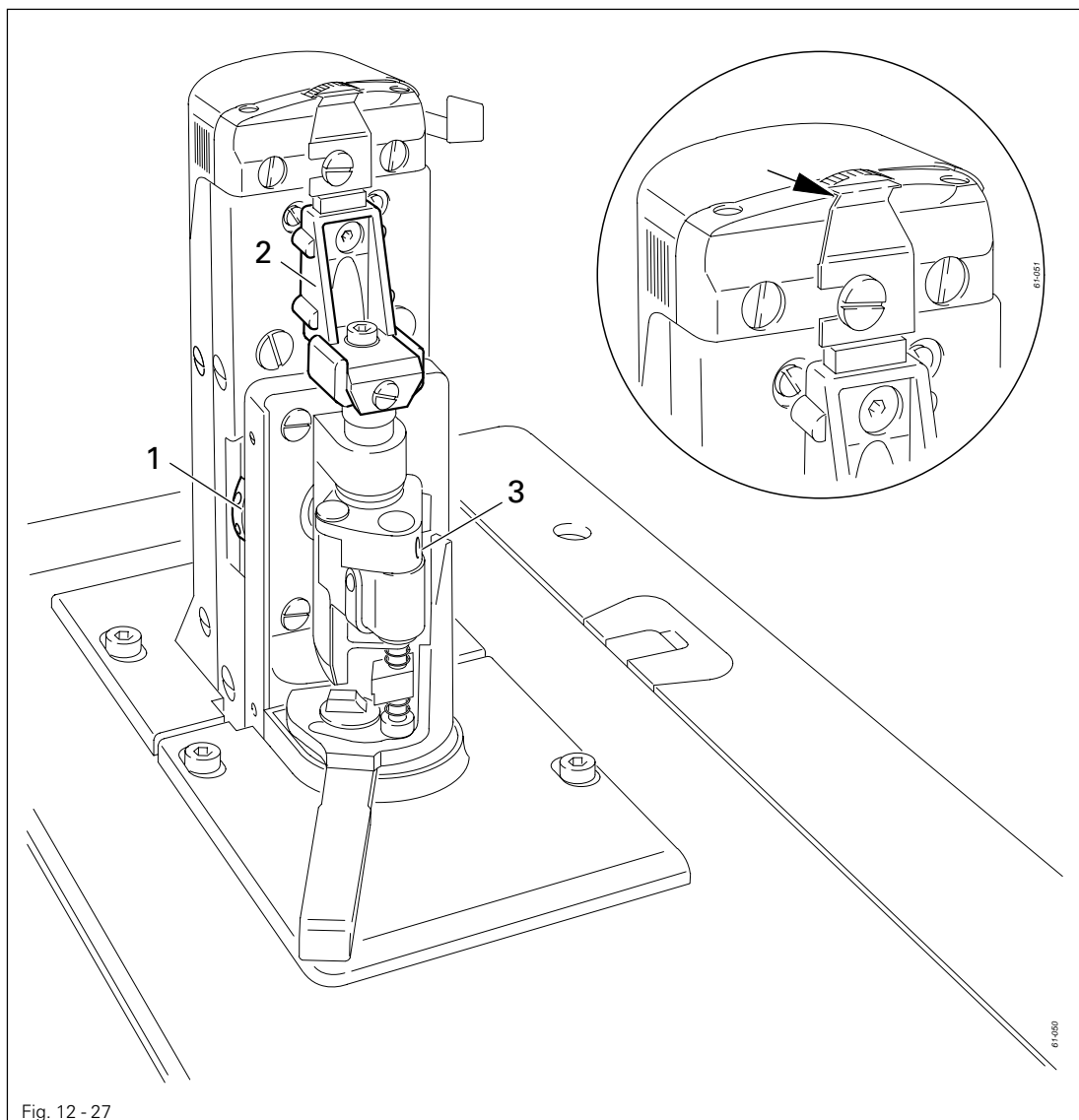
12.05 Adjusting the edge trimmer -725/04

12.05.01 Position of the knife holder on model 1571

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.

12.05.02 Position of the knife holder on models 1574 and 1591

Requirement

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

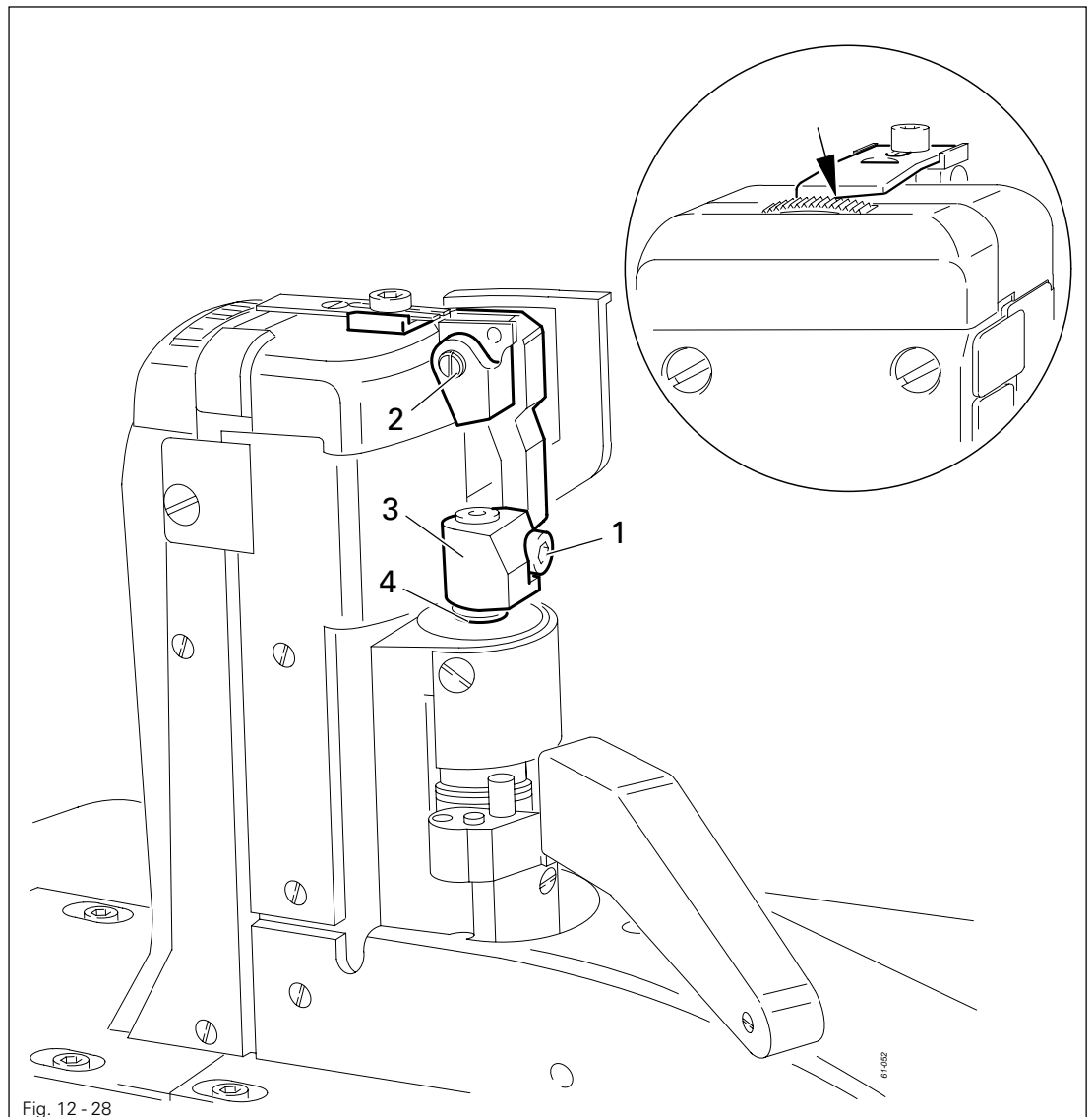
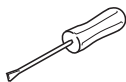


Fig. 12 - 28



- 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.



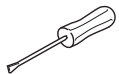
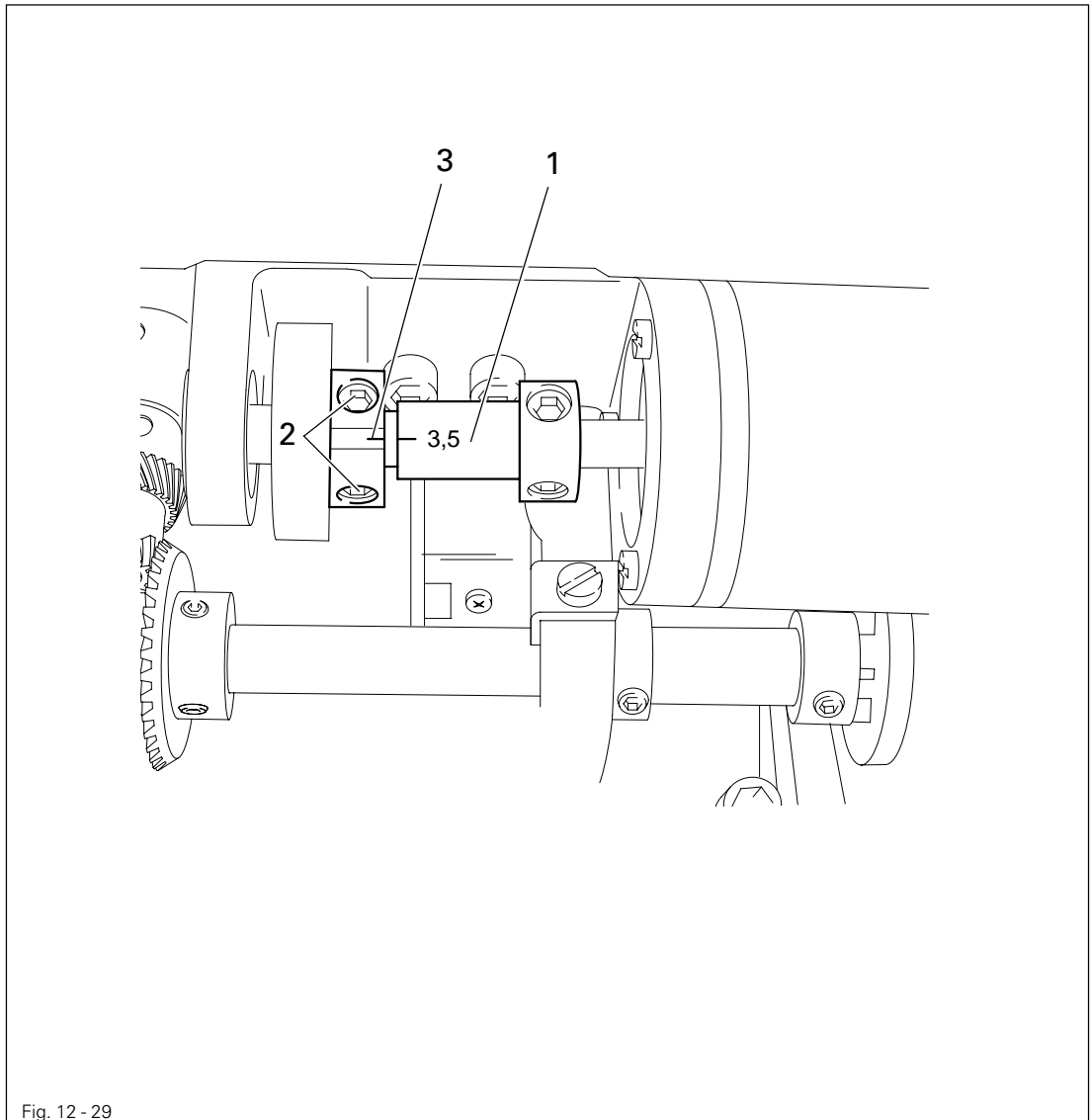
Depending on the material thickness, changes in the basic setting of eccentric 2 are possible.

Adjustment

12.05.03 Knife stroke on model 1571

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.

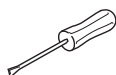
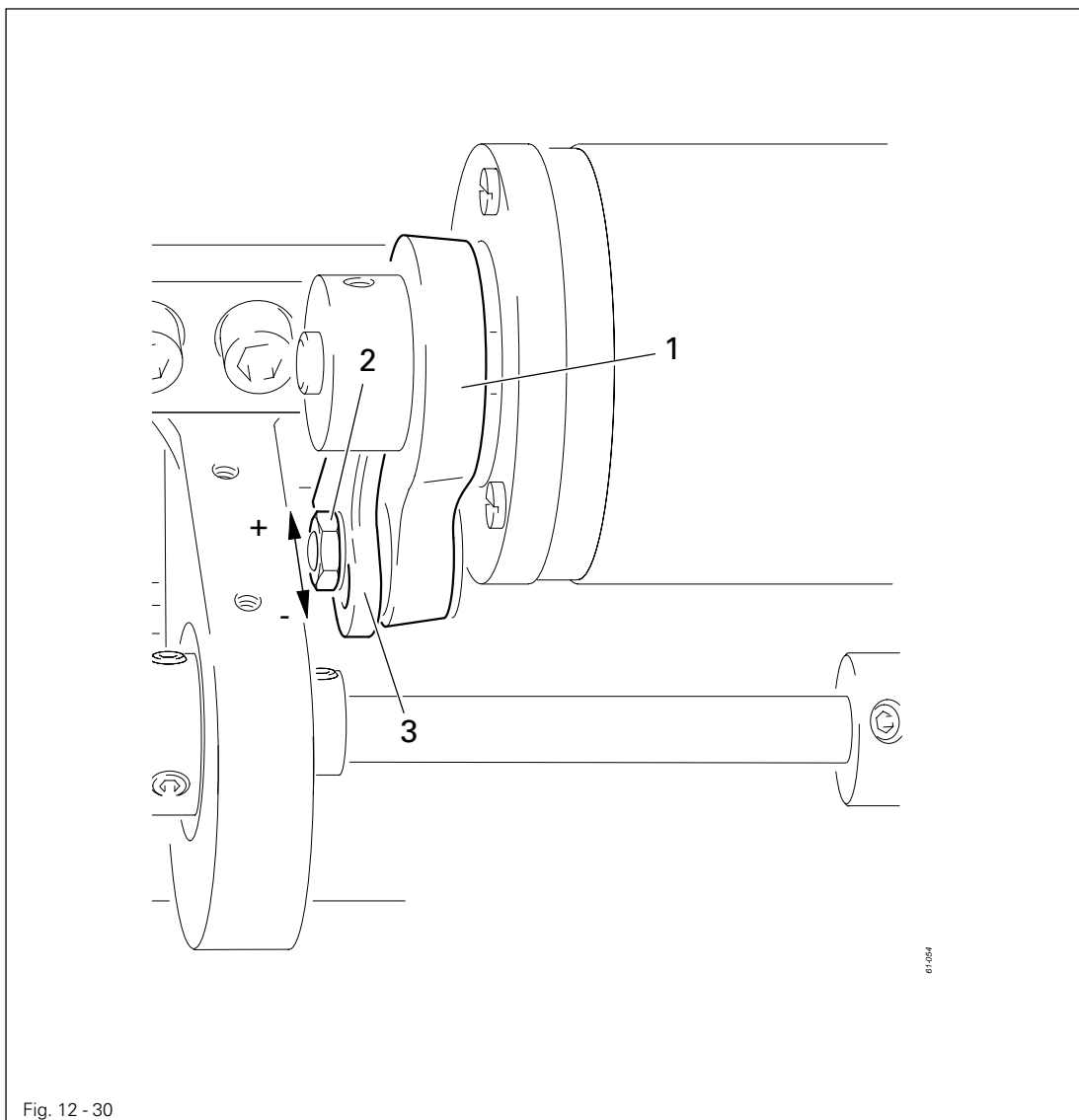


- Turn eccentric 1 (screws 2) so that the marking of the desired cutting stroke is opposite the marking on clamp collar 3.

12.05.04 Knife stroke on models 1574 and 1591

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

12.05.05 Cutting stroke on model 1571

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.

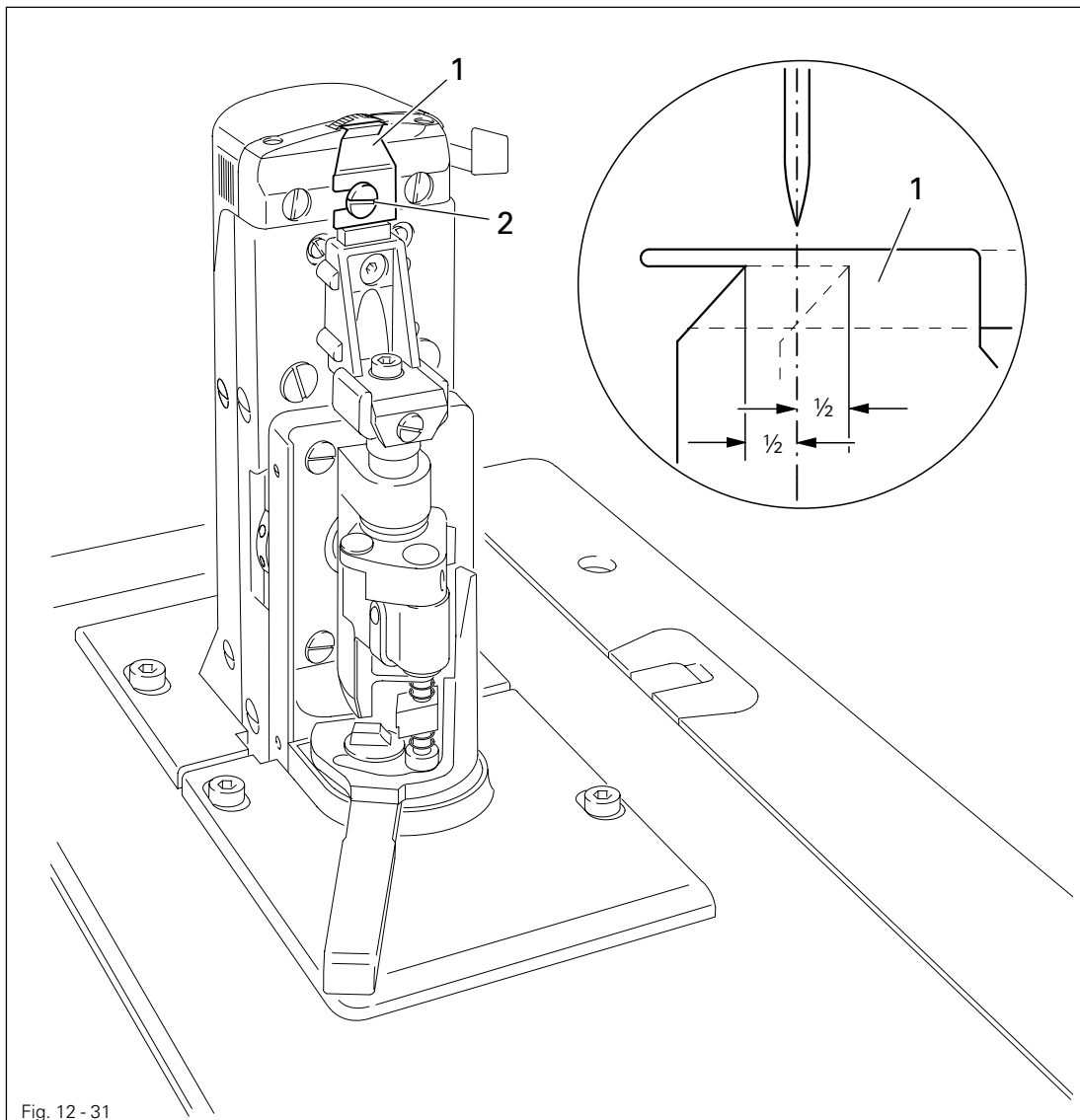
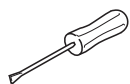


Fig. 12 - 31

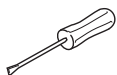
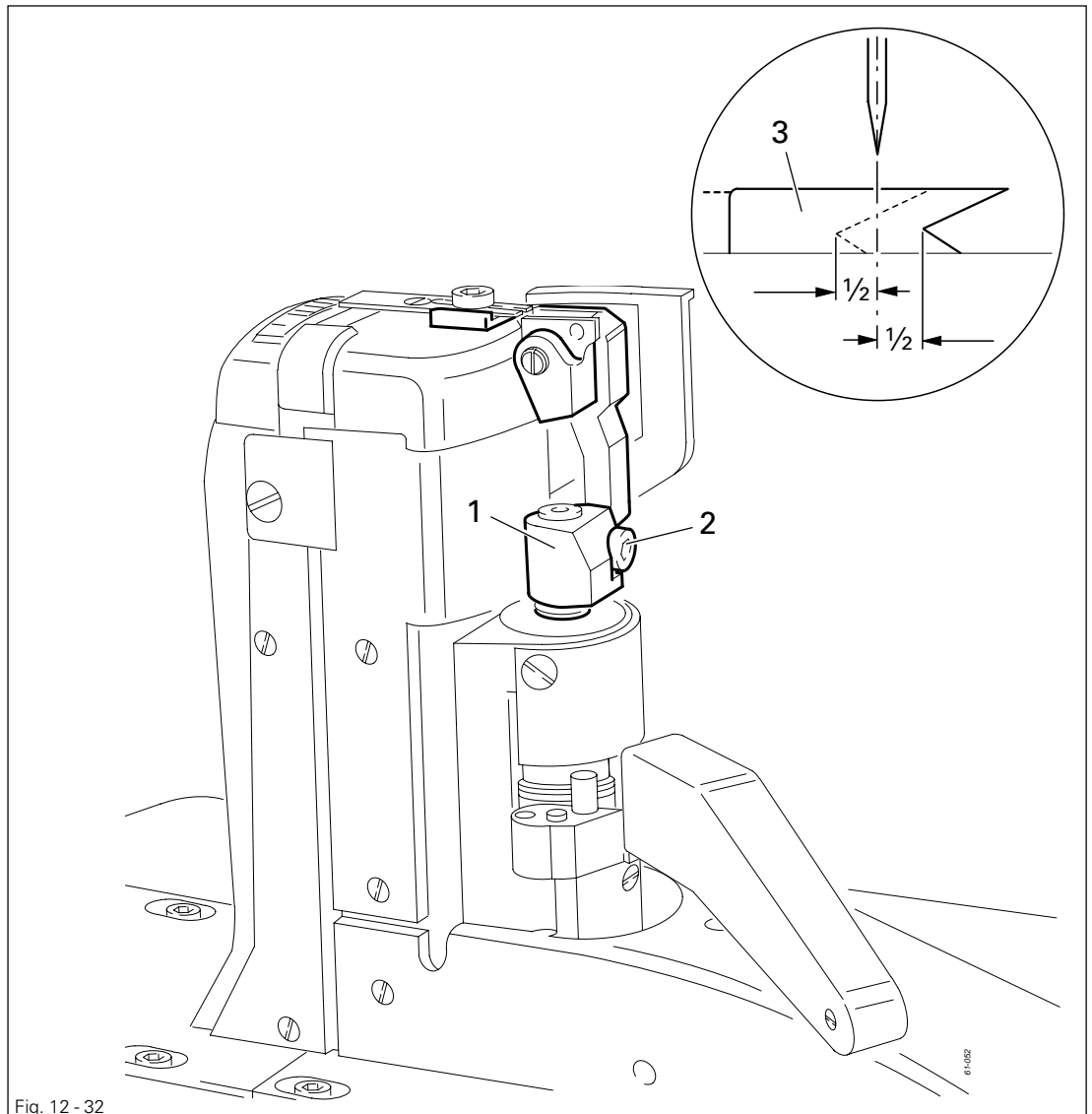


- Switch off the machine and engage the edge trimmer.
- Adjust knife 1 (screw 2) according to the requirement.

12.05.06 Cutting stroke on models 1574 and 1591

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

12.05.07 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.

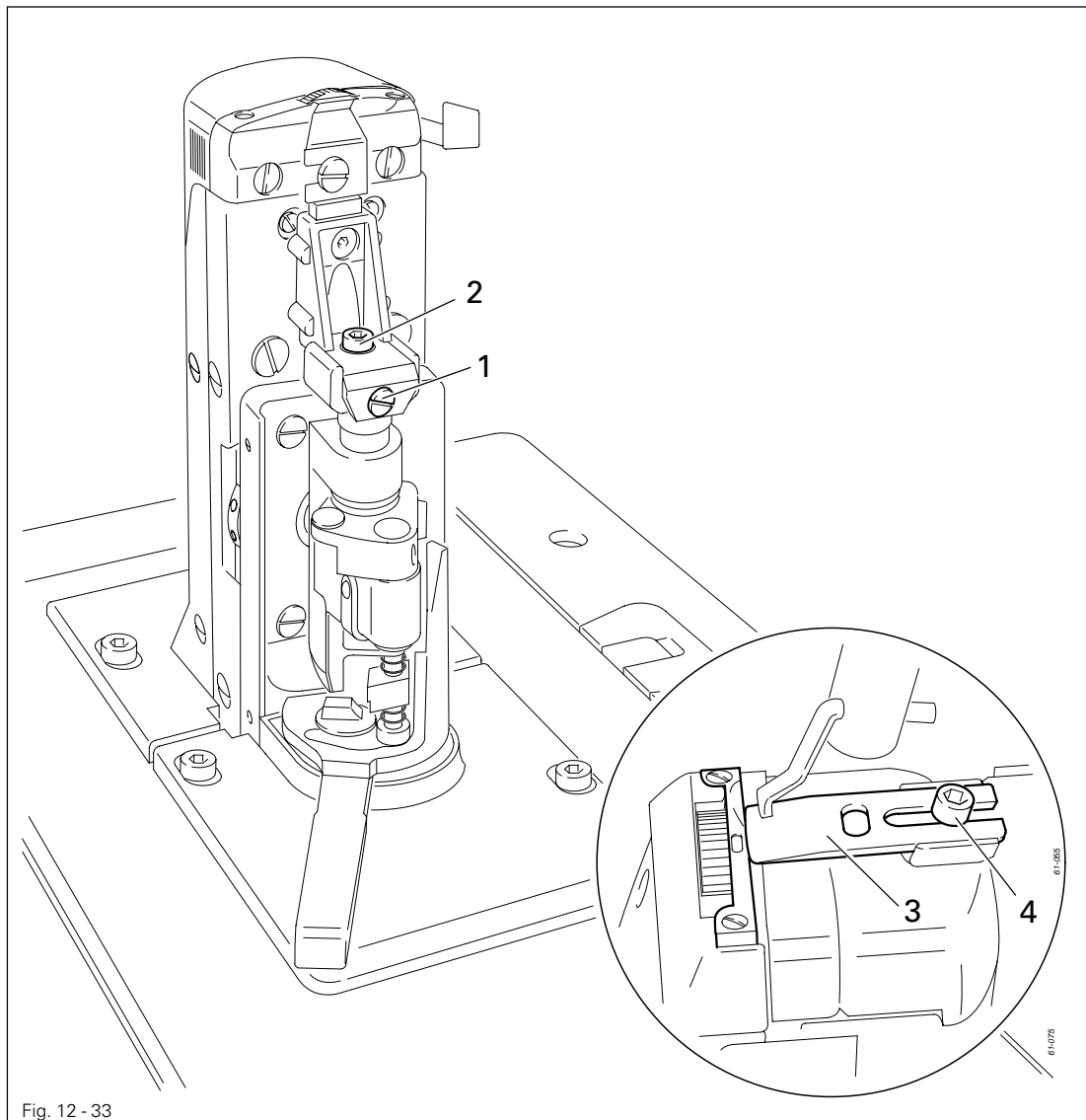
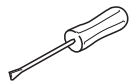


Fig. 12 - 33



1571

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

1574 and 1591

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

12.06 Adjusting the thread trimmer -726/05 on model 1591

12.06.01 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.

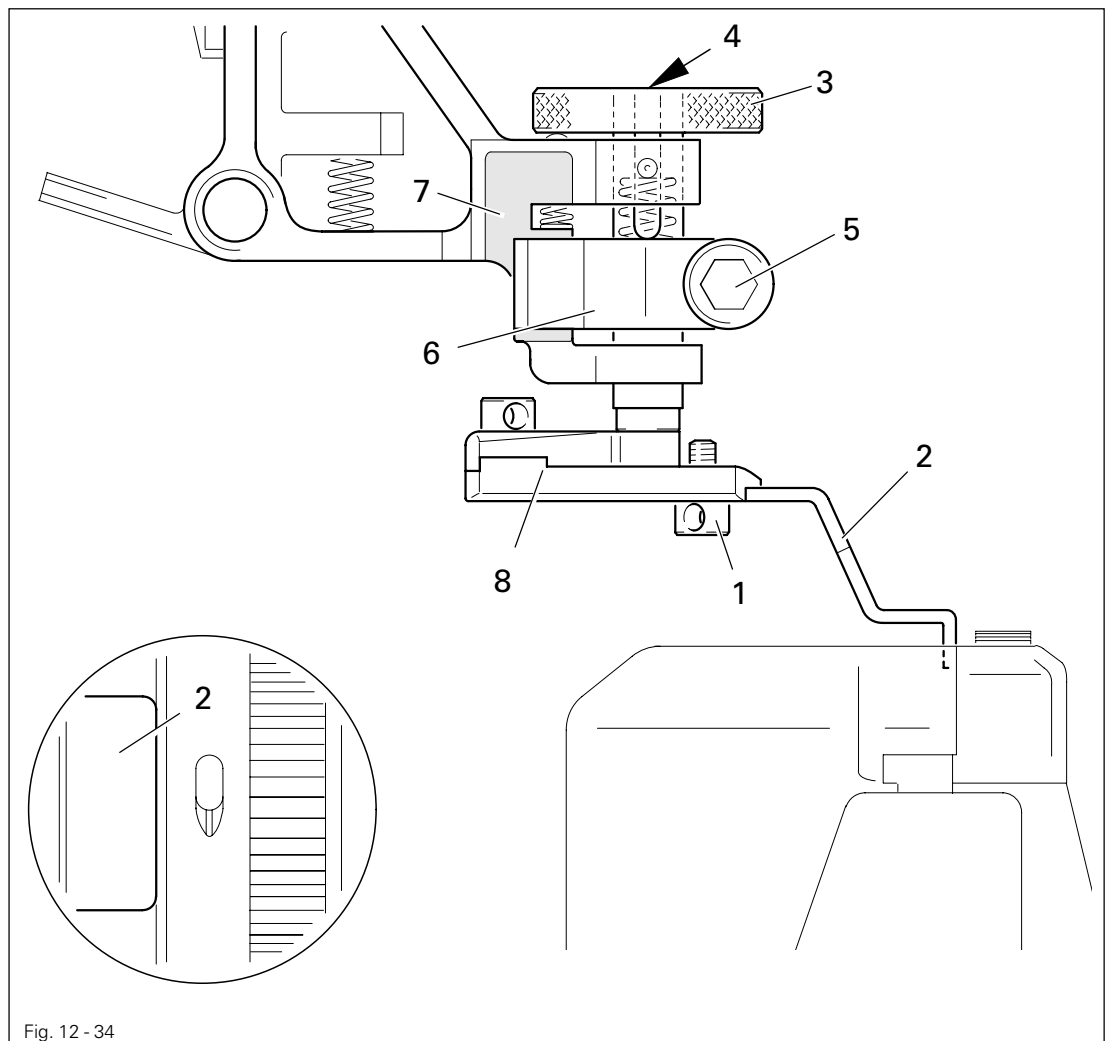
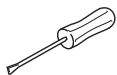


Fig. 12 - 34



- 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.

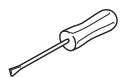
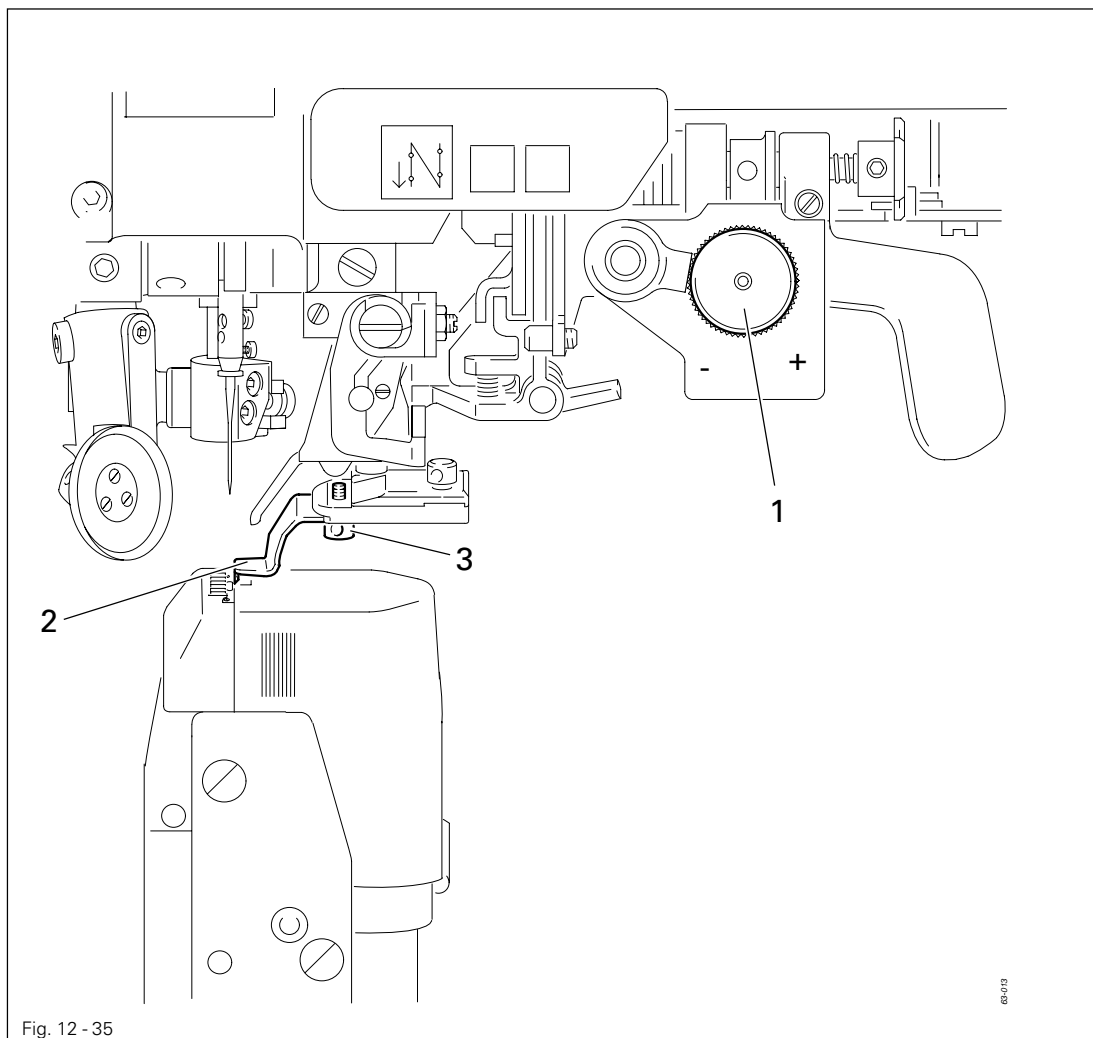


Screw 1 remains loosened for further adjustments.

12.06.02 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.

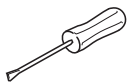
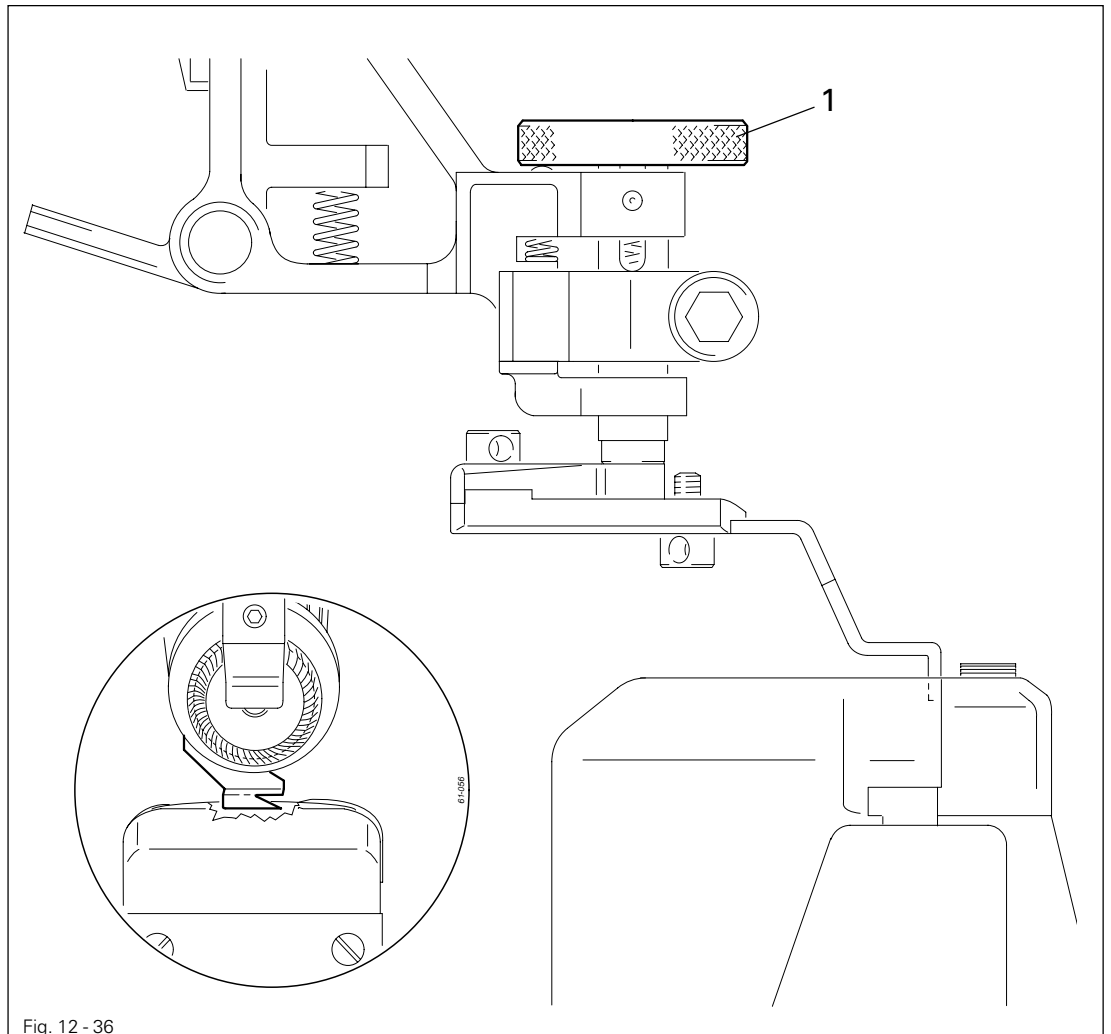


The cutting pressure can be adapted to the material used with milled screw 1.

12.06.03 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**.

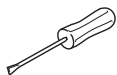
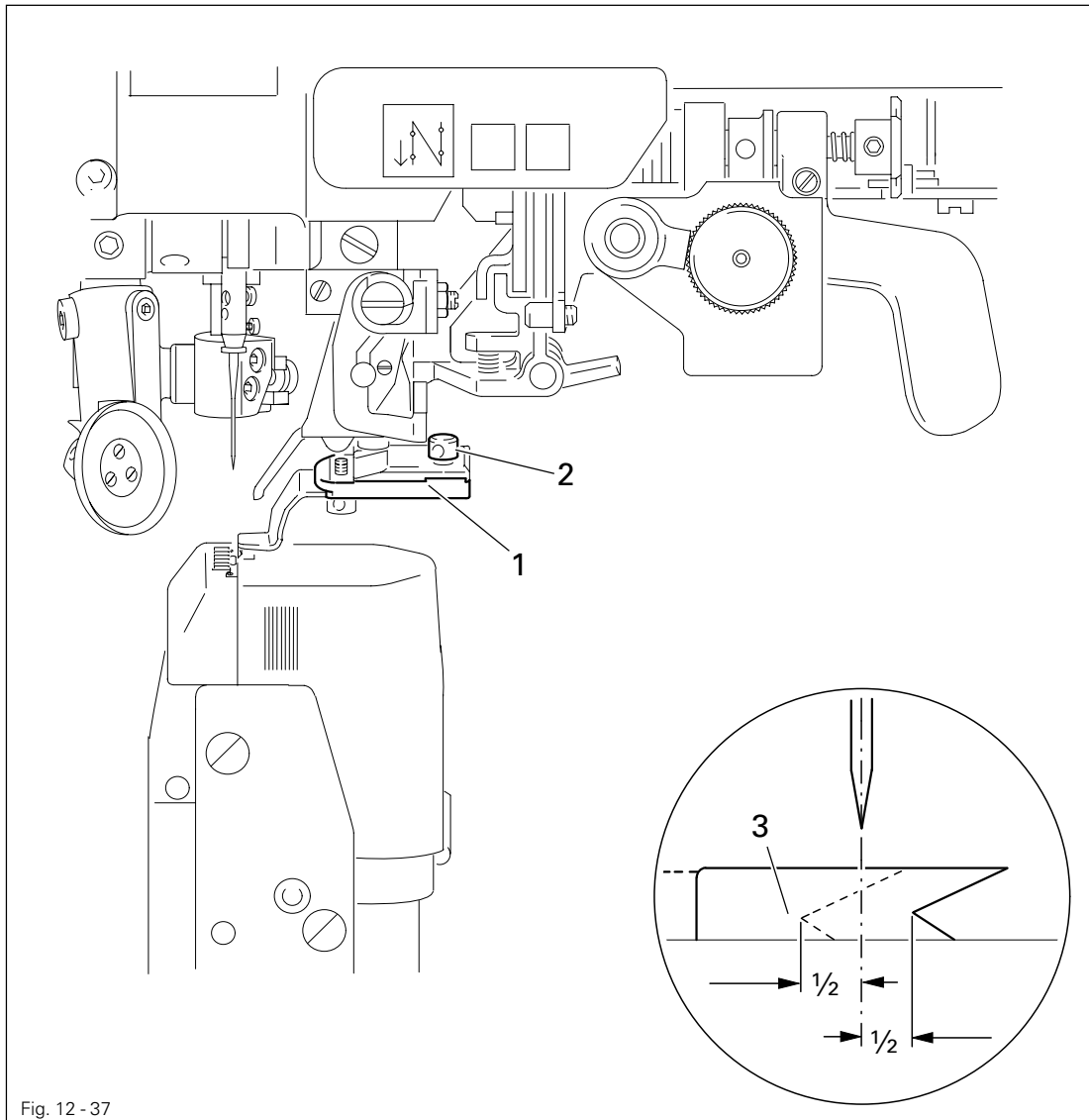


The basic setting may be changed depending on the material thickness.

12.06.04 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.

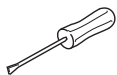
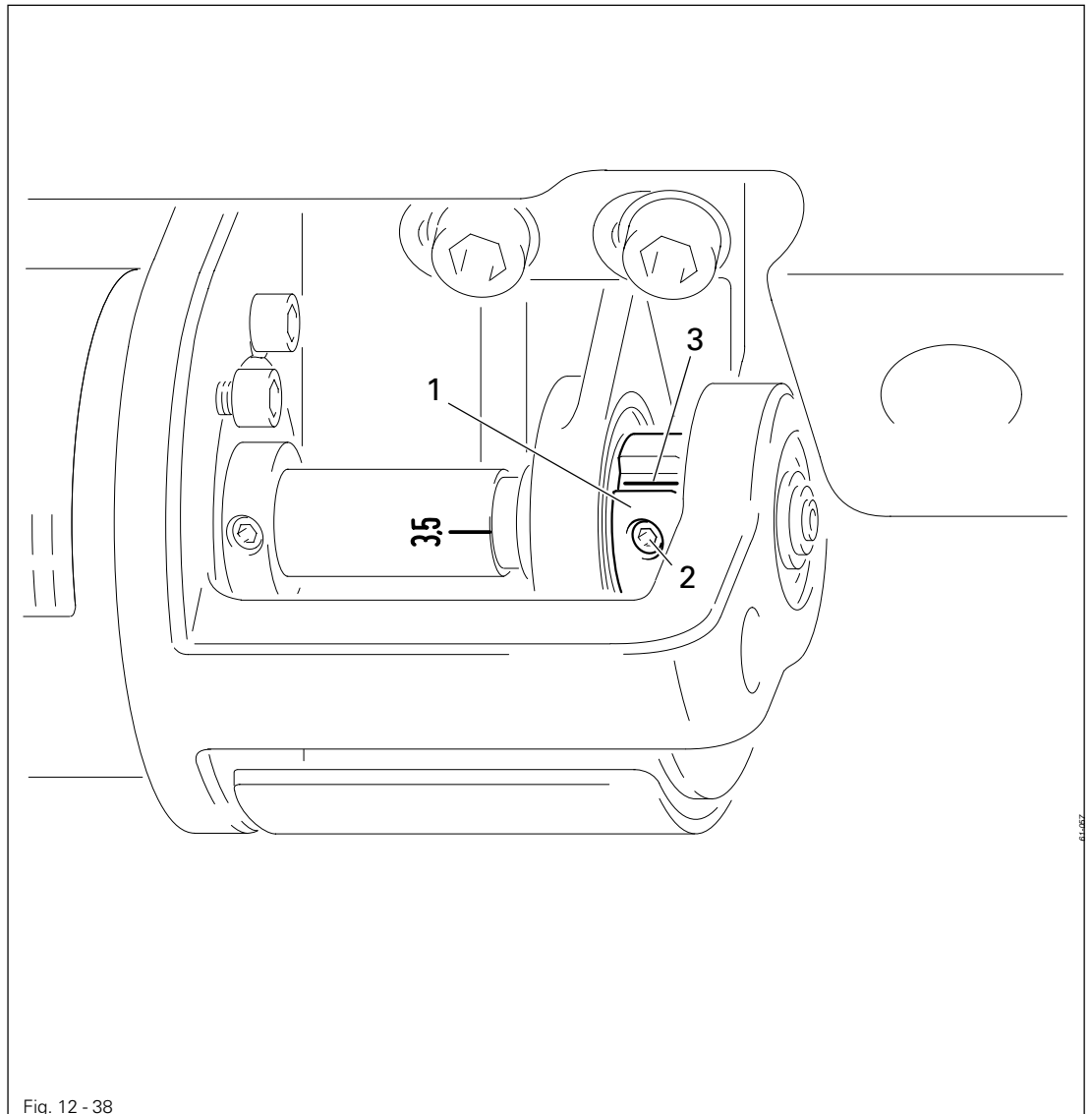


- Switch off the machine and engage the edge trimmer.
- Adjust knife holder **1** (screw **2**) according to the **requirement**.

12.06.05 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.



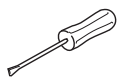
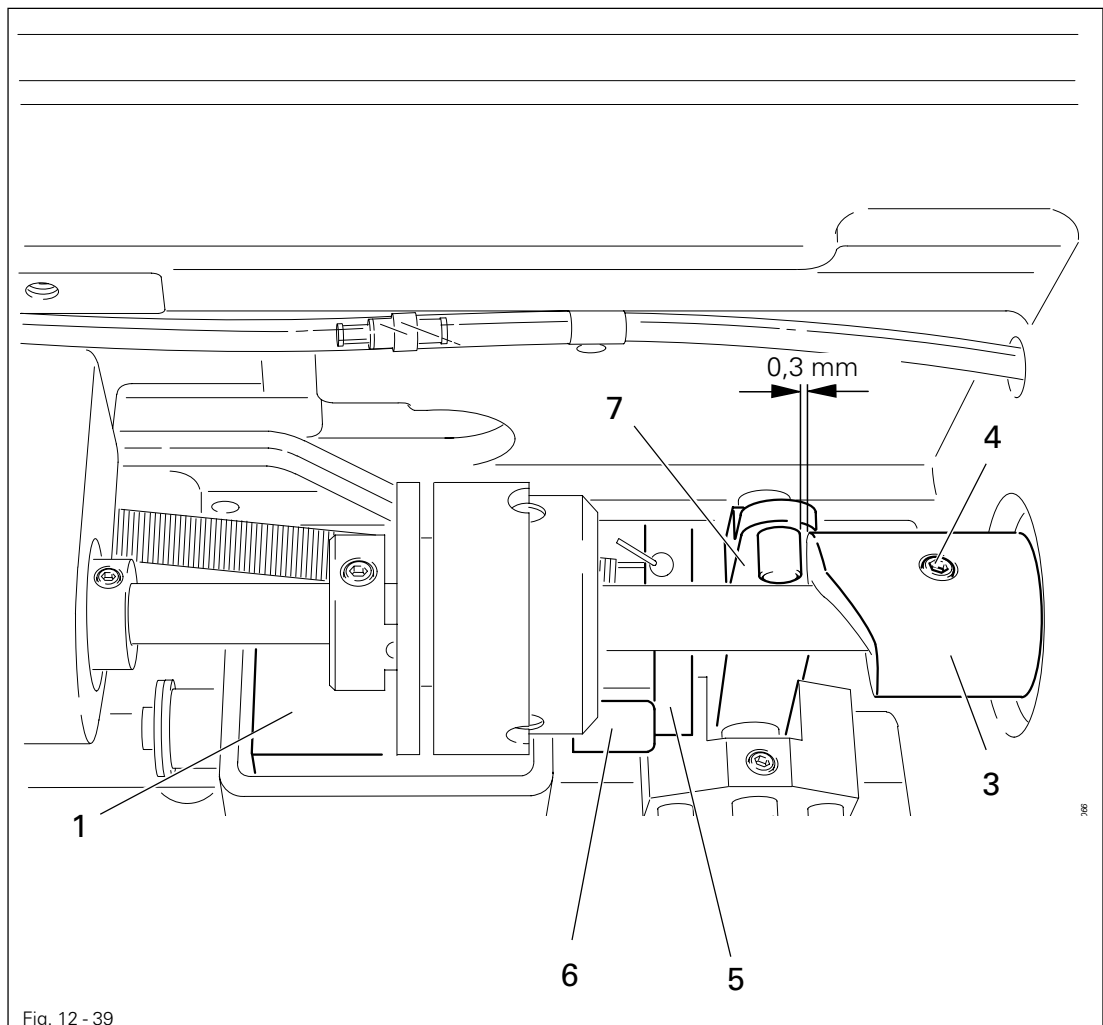
- Turn eccentric **1** (screws **2**) on the back of the sewing head so that the marking of the desired cutting stroke is opposite marking **3**.

12.07 Adjusting the thread trimmer -900/81

12.07.01 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**.

12.07.02 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).

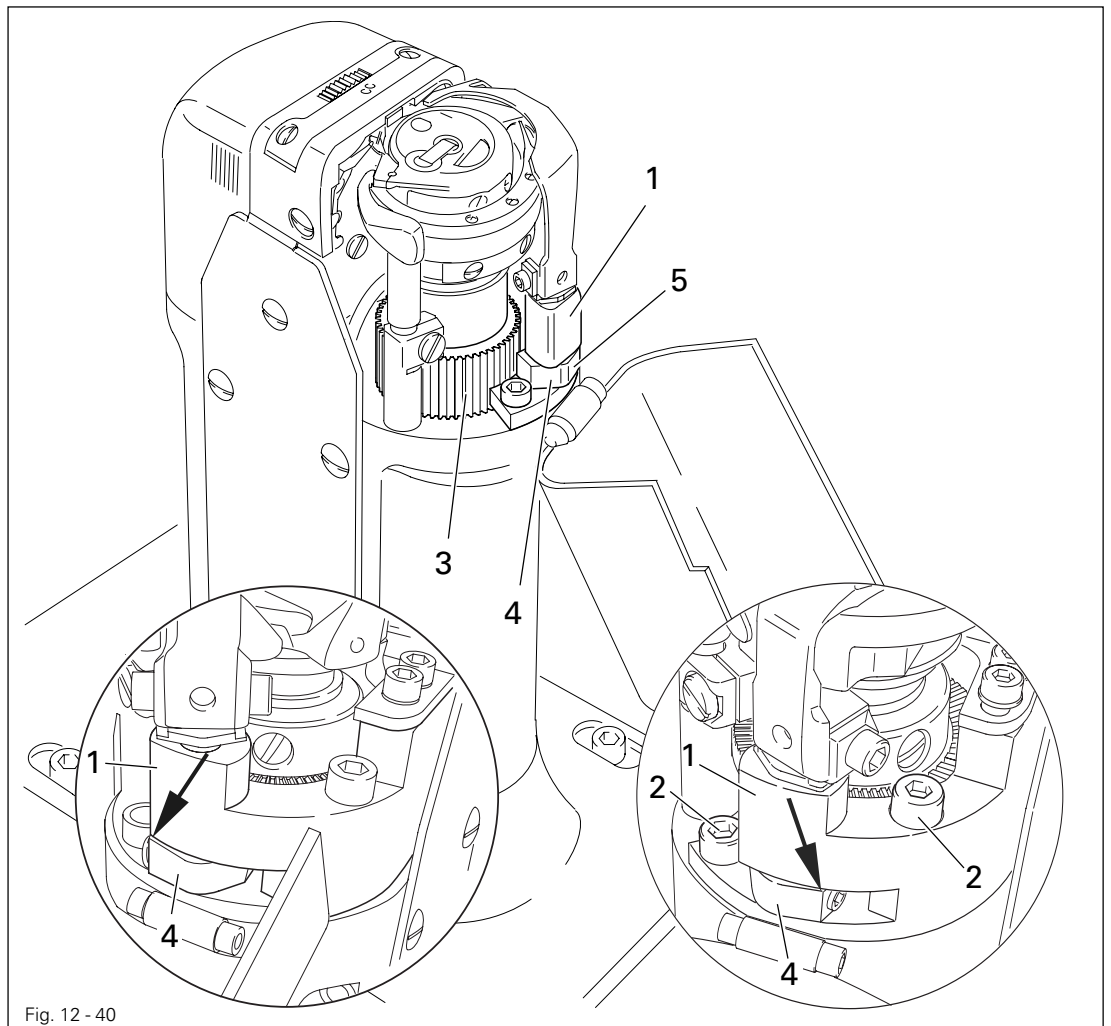
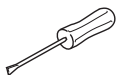


Fig. 12 - 40



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



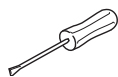
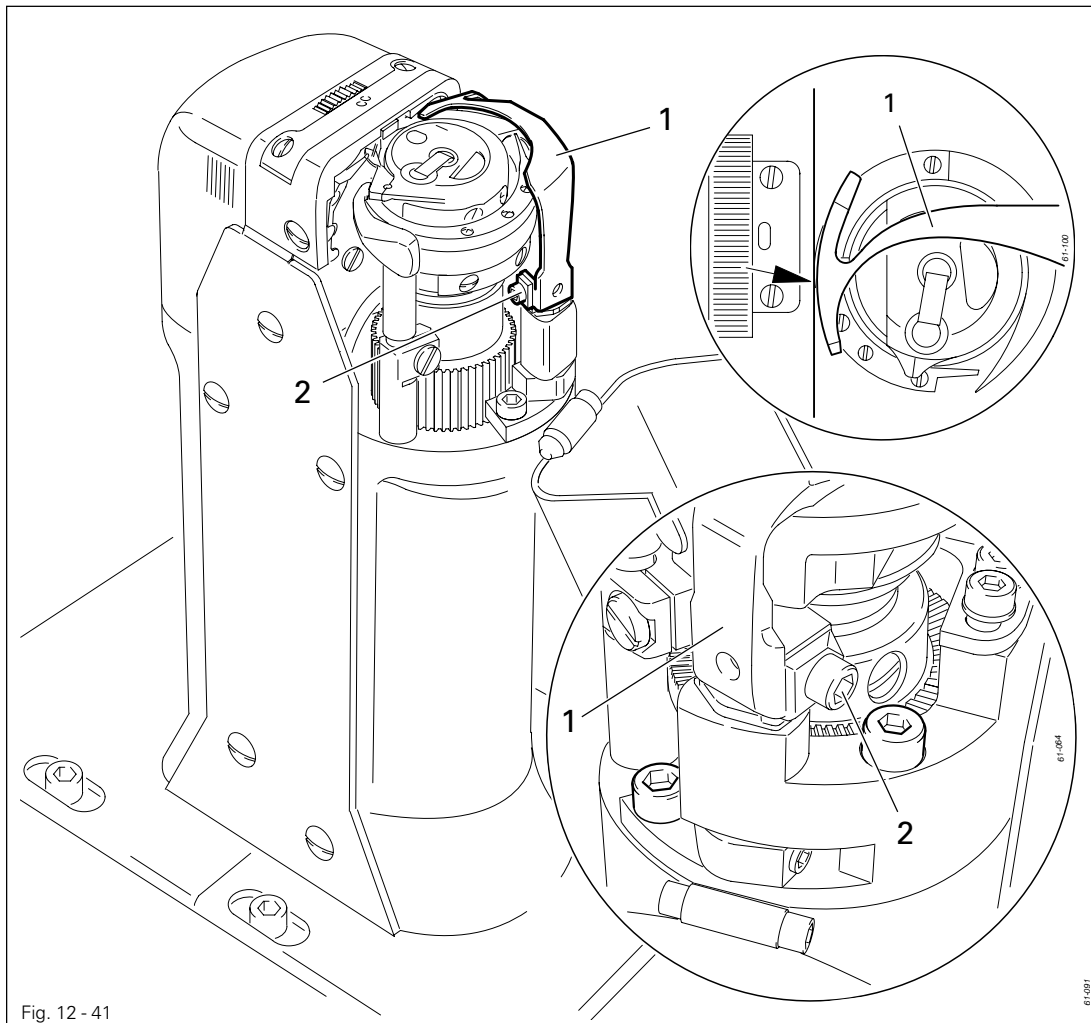
If requirement 2 cannot be fulfilled, loosen screw **2** and move the toothed segment **4** by one tooth.

Adjustment

12.07.03 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).

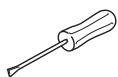
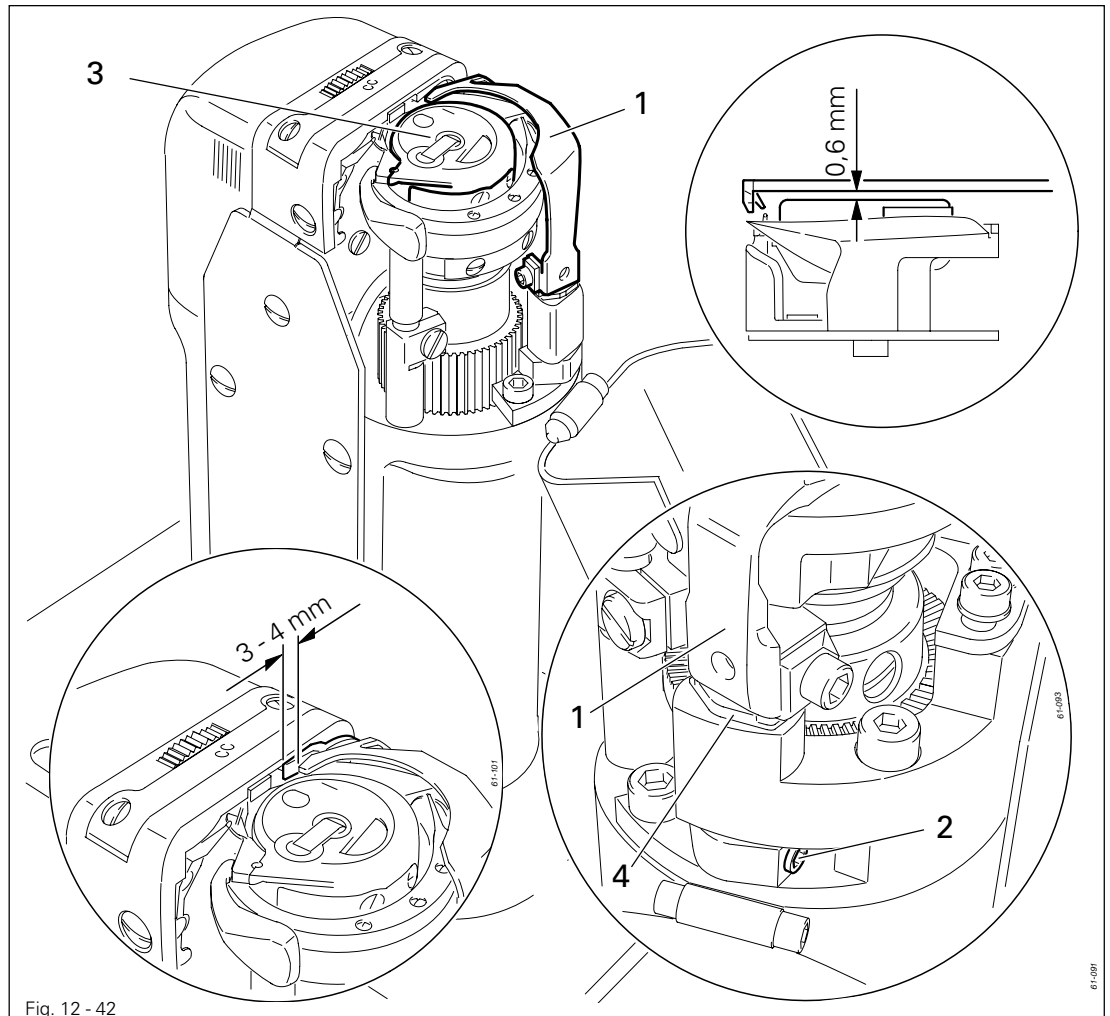


- Move thread catcher 1 (screws 2, two screws) parallel to the thread catcher holder in accordance with the requirement.

12.07.04 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.



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



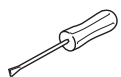
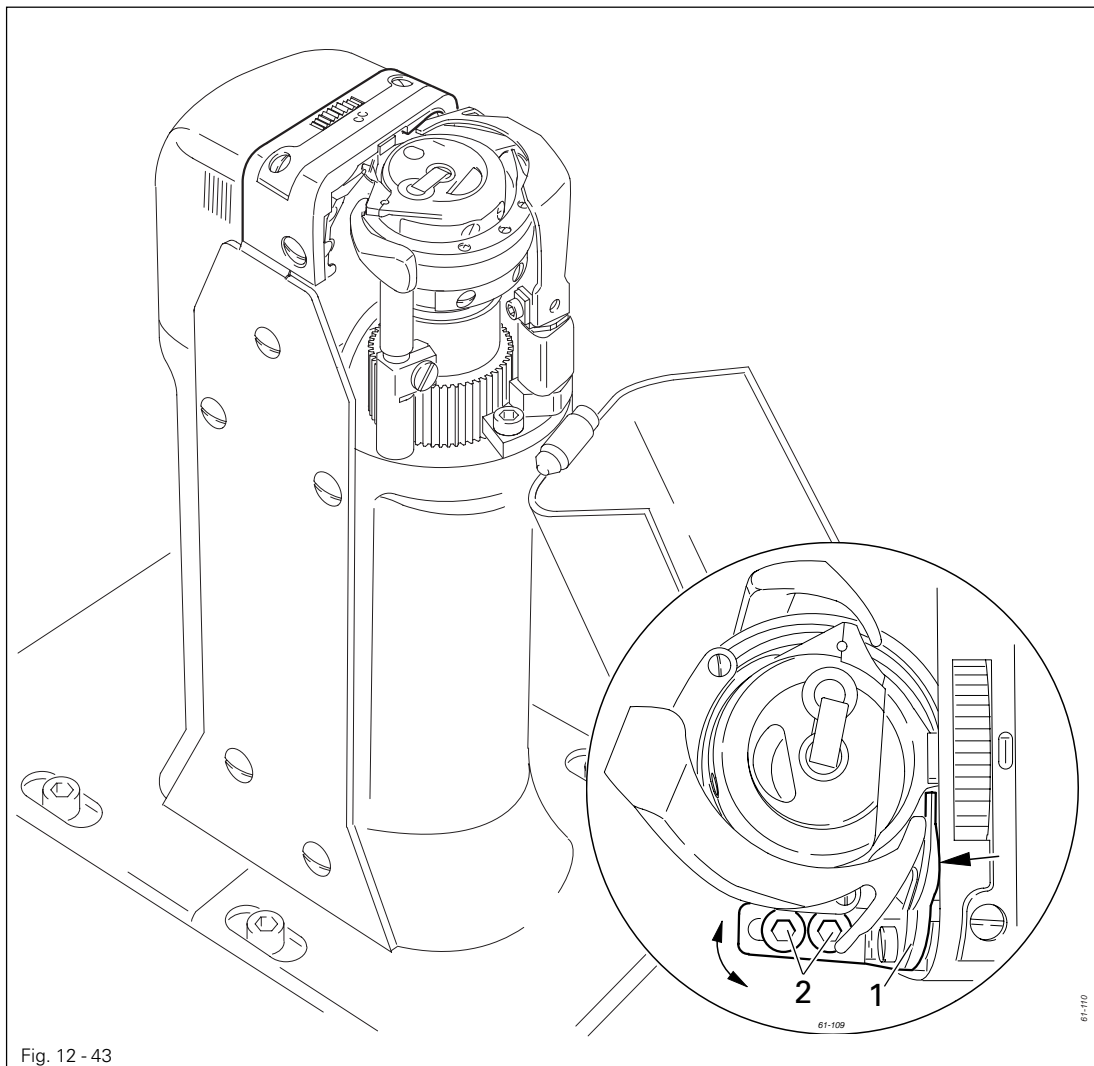
Thread catcher **1** must be parallel to the surface of the thread catcher holder **4**.

Adjustment

12.07.05 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**.

12.07.06 Bobbin thread retaining spring

Requirement

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

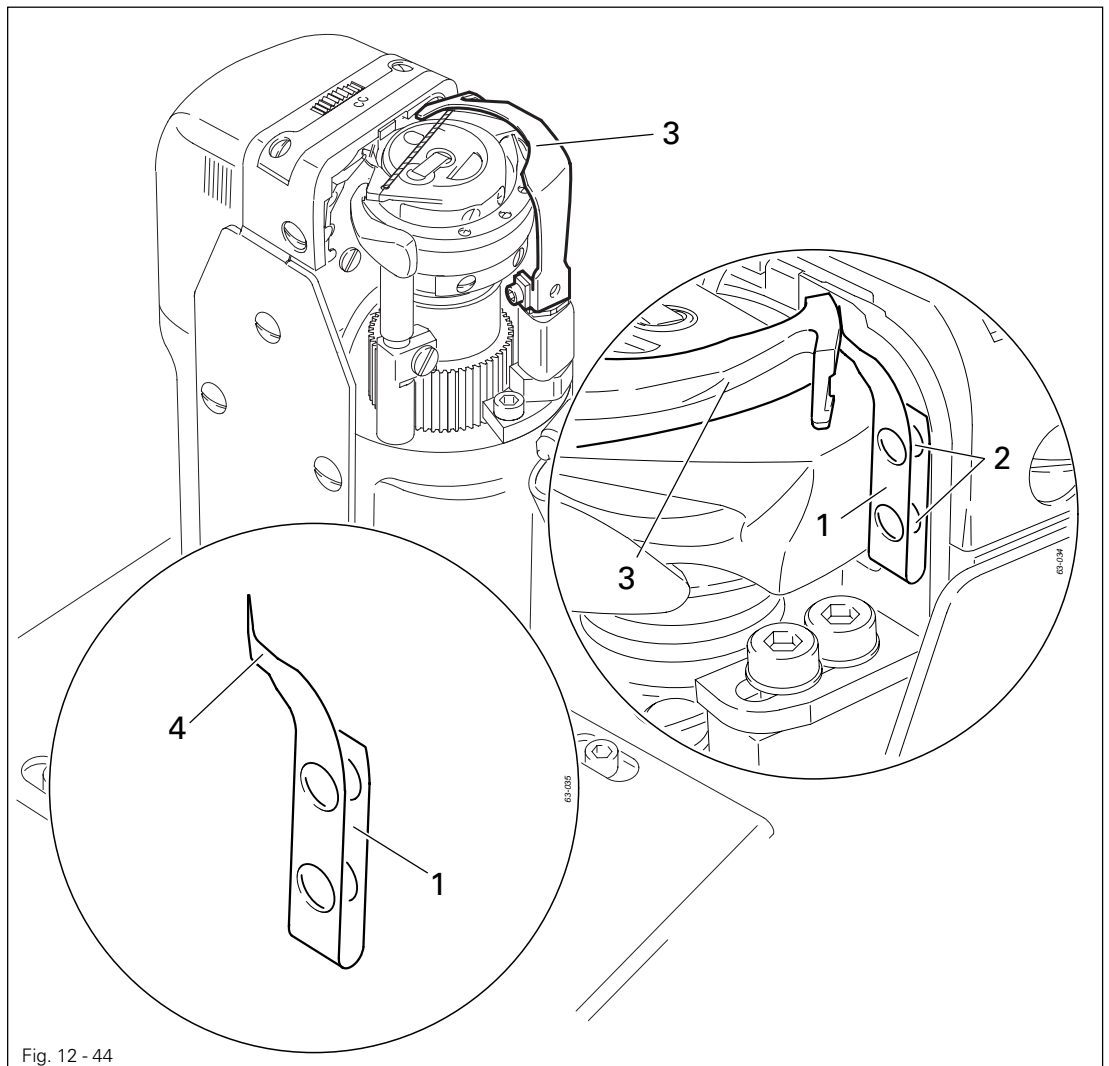
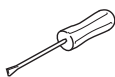


Fig. 12 - 44



- 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.

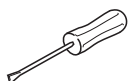
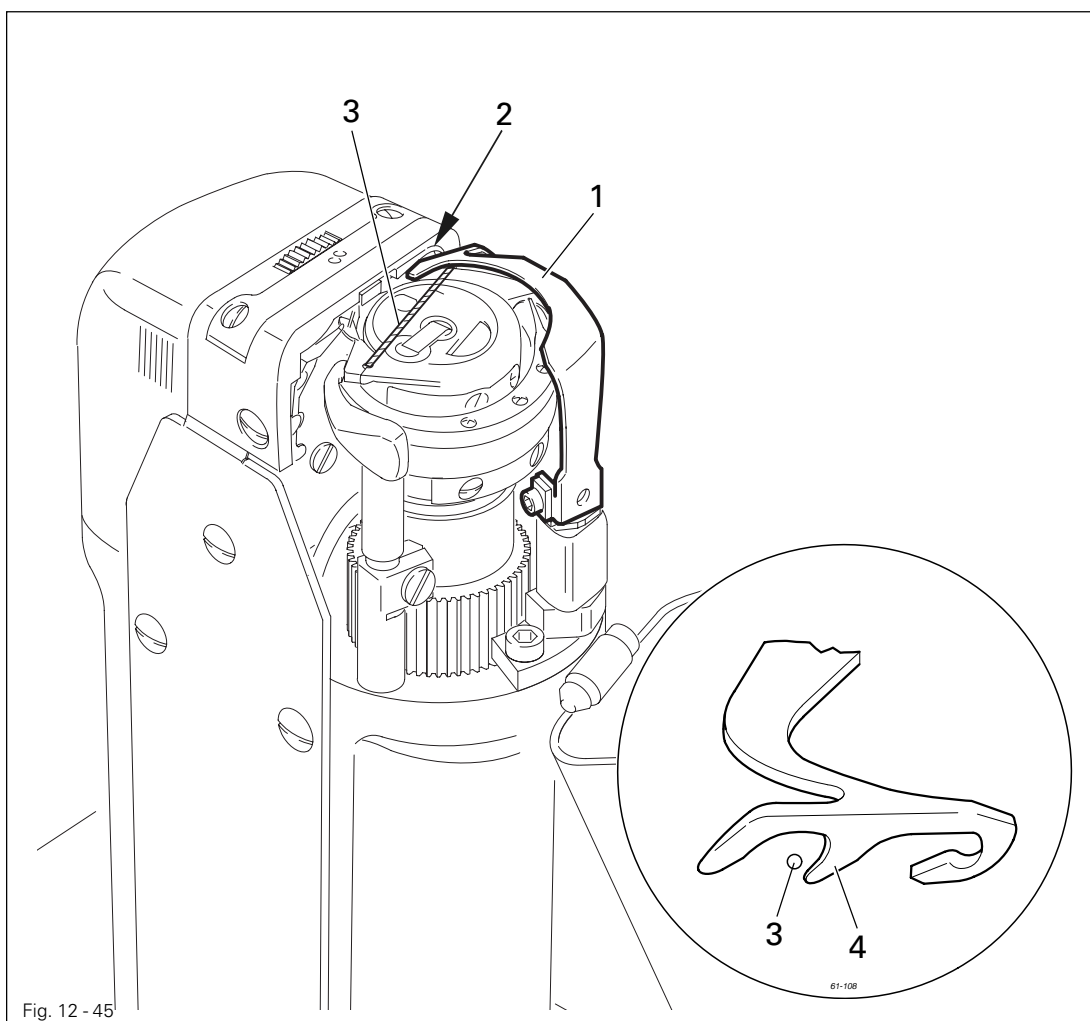
Control - requirement 2

- 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.

12.07.07 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 12.07.04 Position of the thread catcher**.
- Check **requirement 3**, and if necessary readjust the bobbin thread retaining spring 2 in accordance with **Chapter 12.07.06 Bobbin thread retaining spring**.

12.07.08 Tension release

Requirement

When solenoid 1 is activated, the tensions disks 3 should be at a distance of at least 0.5 mm from each other.

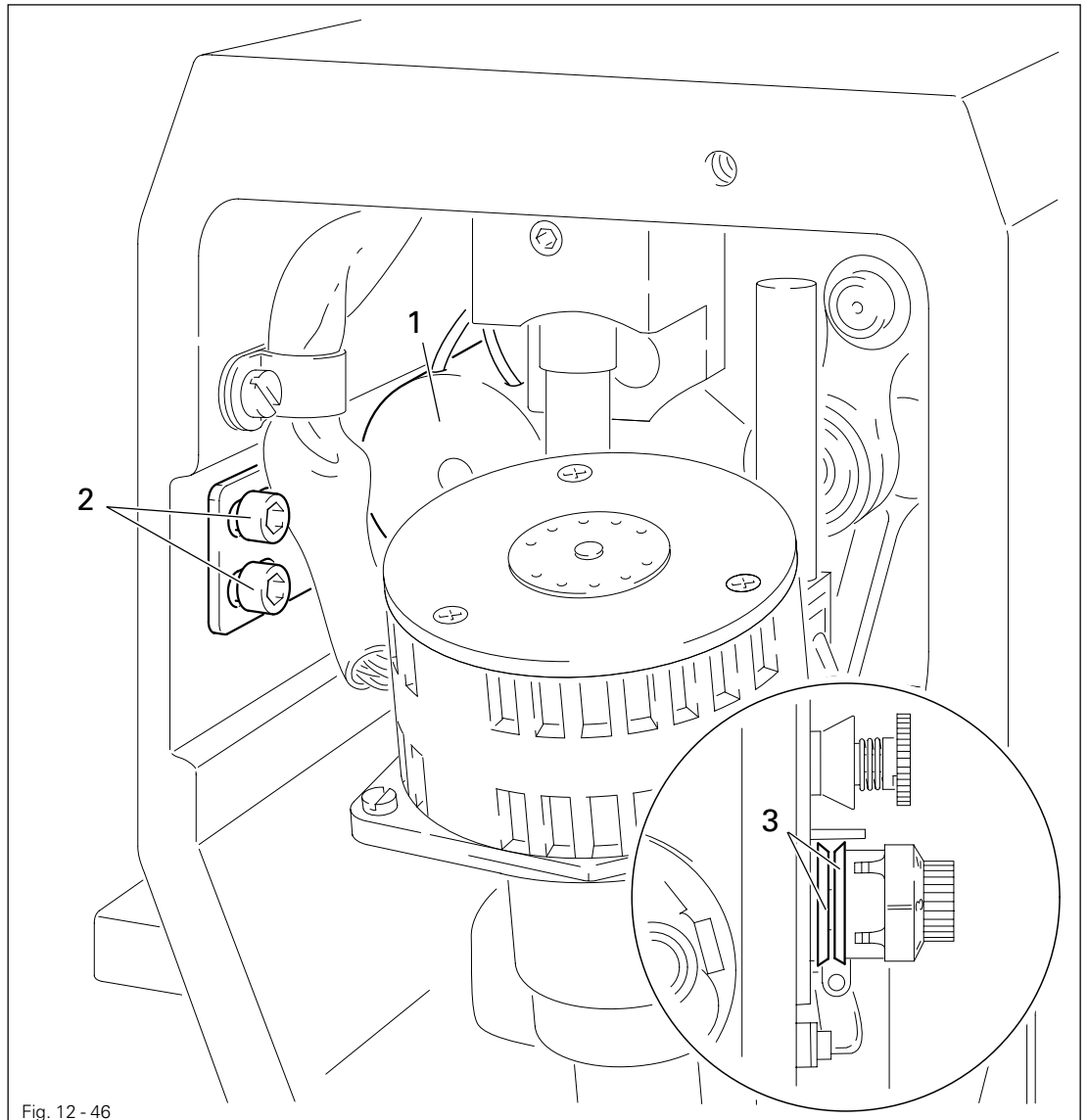
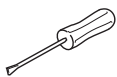


Fig. 12 - 46



- Activate magnet 1.
- Adjust magnet 1 (screws 2) in accordance with the **requirement**.



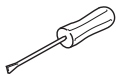
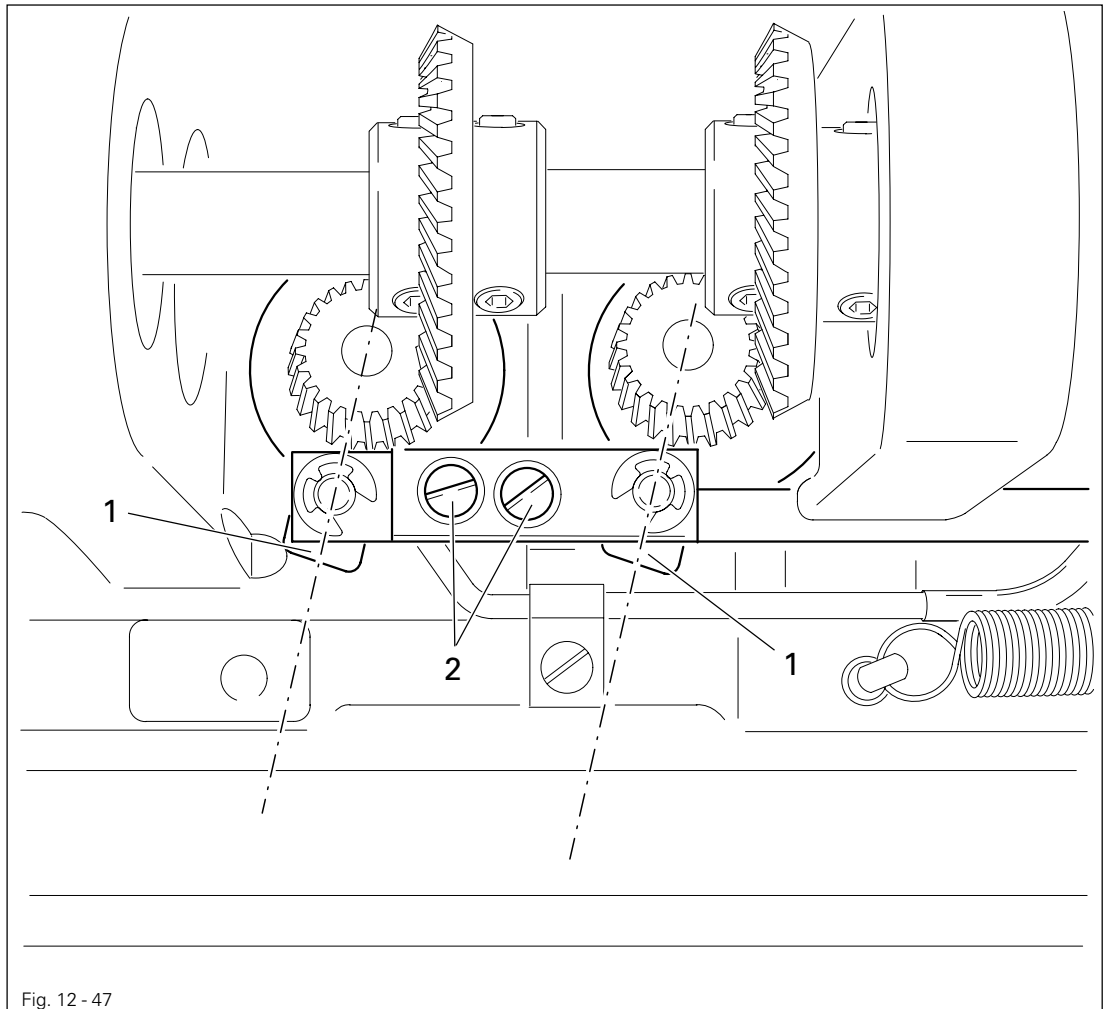
The point of time for releasing the tension can be set with the service functions, see **Chapter 12.08 Parameter settings**.

Adjustment

12.07.09 Linkage rod (only for the PFAFF 1574)

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**.

12.08 Parameter Settings



The operator has free access to the '100' parameters. Parameters '200' - '800' can only be changed after entering a code number and may only be changed by authorised personnel.

Groupe	Parameter	Description	Setting range	Setvalue	
				1571 1591	1574
1	101	Start backtack, pedal-controlled (I = OFF, II = ON)		I	I
	102	Reversing (I = OFF, II = ON)		I	I
	103	Stitch placement (I = OFF, II = ON)		I	I
	104	Bobbin thread monitoring (0 = OFF, 1 = reverse counter, 2 = thread monitor)	0 - 2	0	0
	105	Bobbin thread reverse counter	0 - 99999	30000	30000
	106	Remaining bobbin thread counter	0 -999	100	100
	107	Max. stitch length via fullness pedal	0.8 - 6.5	4.0	4.0
	108	Display software version of main processor	0302/....		
	109	Display software version of stepping motor processor	0305/....		
2	201	Machine configuration 1 = 1571, 1574, 1591	1	1	1
	202	Lowering speed roller presser I = fast, II = slow		I	I
	203	Allocation key 2 I = single stitch, II = needle raised		I	I
	204	Allocation key 3 I = semi-stitch, II = needle raised		I	I
3	301	Position take-up lever t.d.c.	0 - 127	125	0
	302	Position needle lowered	0 - 127	49	52
	303	Position cutting magnet 'on'	0 - 127	49	52

Adjustment

Groupe	Parameter	Description	Setting range	Setvalue	
				1571 1591	1574
3	304	Position cutting magnet "tacting"	0 - 127	100	103
	305	Position cutting magnet "off"	0 - 127	120	123
	306	Reverse position	0 - 127	100	108
	307	Placement stitch position	0 - 127	7	7
	308	Position thread tension release	0 - 127	98	101
4	401	Delay time lifting roller presser	0.01 - 1.50 s	0.02 s	0.02 s
	402	Start delay after lowering roller presser	0.01 - 1.50 s	0.15 s	0.15 s
	403	Set lift roller presser	0.01 - 0.20 s	0.03 s	0.03 s
	404	Tact thread cutting magnet	10 - 50%	35%	35%
5	501	Maximum speed	100 - 3500	3500	3500
	502	Speed start backtack	100 - 1500	700	700
	503	Speed end backtack	100 - 1500	700	700
	504	Speed soft start	100 - 3500	1500	1500
	505	Soft start stitches	0 - 15	0	0
6	601	Move stepping motor roller presser and feed wheel			
	602	Display inputs 0123456789ABCDEF 0: Centre position needle (E16) 1: End position needle (E15) 2: Coding intermittent (E14) 3: not assigned (E13) 4: not assigned (E12) 5: not assigned (E11) 6: not assigned (E10) 7: not assigned (E9) 8: not assigned (E8) 9: Bobbin thread error (E7) A: Knee switch (E6) B: Sensor (E5) C: Start-up lock (E4) D: Single stitch key on machine head (E3) E: Semi-stitch key on machine head (E2) F: Reverse stitch key on machine head (E1)			

Groupe	Parameter	Description	Setting range	Setvalue	
				1571 1591	1574
6	603	Basic position of machine drive (see Chap. 8.02.03)			
	604	Carry out cold start (see Chap. 12.09)			
7	701	P-quota speed controller	1 - 50	30	30
	702	I-quota speed controller	0 - 100	50	50
	703	P-quota position controller	1 - 50	20	20
	704	D-quota position controller	1 - 100	30	30
	705	Time for position controller	0 - 100	25	25
	706	P-quota position controller for rest brake	1 - 50	25	25
	707	D-quota position controller for rest brake	1 - 50	15	15
	708	Maximum moment for rest brake	0 - 100	0	0
	709	Minimum machine speed	3 - 64	6	6
	710	Maximum machine speed	1 - 35	35	35
	711	Maximum motor speed	1 - 90	90	90
	712	Positioning speed	3 - 25	18	18
	713	Acceleration ramp	1 - 50	35	35
	714	Brake ramp	1 - 50	30	30
	715	Reference position	0 - 127	11	11
	716	Time-out	0 - 255	40	40
	717	Starting current motor	3 - 10	8	8
	718	Anti-vibration filter	1 - 10	6	6
	719	Rotation direction allocation	0 - 1	0	0
	720	Reference position correction	0 - 127	64	64
8	801	Right of access function group 100	0 - 1	0	0
	802	Right of access function group 200	0 - 1	1	1
	803	Right of access function group 300	0 - 1	1	1
	804	Right of access function group 400	0 - 1	1	1

Groupe	Parameter	Description	Setting range	Setvalue	
				1571 1591	1574
8	805	Right of access function group 500	0 - 1	1	1
	806	Right of access function group 600	0 - 1	1	1
	807	Right of access function group 700	0 - 1	1	1
	808	Right of access function group 800	0 - 1	1	1
	809	Enter access code	0 to 9999	1500	1500

12.09 Error messages

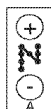
Error 1:	System fault
Error 2:	Sewing motor
Error 3:	Area
Error 4:	End of area
Error 5:	Pedal operated during start
Error 6:	Communication error with stepping motor processor
Error 7:	Ramp end
Error 8:	End position of needle drive not located
Error 9:	Centre position of needle drive not located
Error 10:	Error in stepping motor processor
Error 11:	Stepping frequency
Error 12:	Error in sewing start deflection
Error 14:	Incorrect program number (larger than 99)
Error 15:	Incorrect area number
Error 16:	Memory full
Error 17:	Incorrect stitch length
Error 19:	Interface to external controller
Error 20:	Incorrect controller
Error 21:	Power unit overload (24 V)
Error 22:	Mains voltage
Error 23:	24V too low

12.10 Carrying out a cold start

- Switch on the machine.

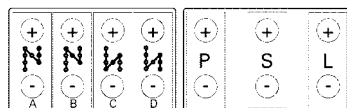


- Press the **Parameter input** key (LED on).



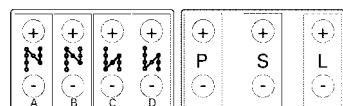
- Select the required parameter by pressing the **Plus/Minus** key.

600

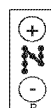


- Enter the code number (factory setting for code "1500").

CODE 0

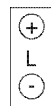
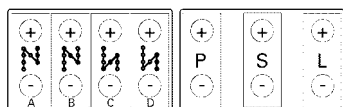


- Confirm input.



- Select the parameter "604" by pressing +/- on the **B** key.

604



- Carry out the cold start by pressing +/- on the **L** key.

- Switch off the machine.



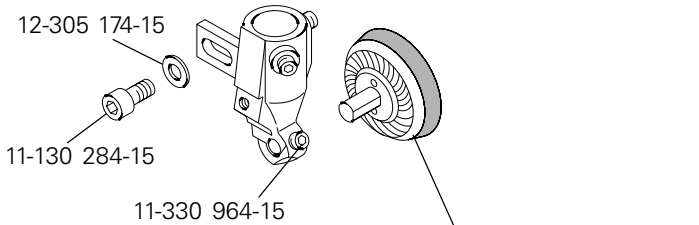
After a cold start all programmed values are reset to their status at the time of delivery.

Wearing parts

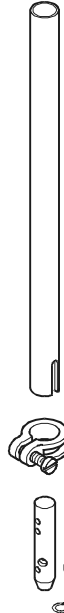
13.01 Wearing parts



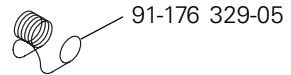
This list indicates the most important wearing parts.
 You can request a detailed parts list for the complete machine under parts number 296-12-18 573.



91-164 303-93/001 (Roller presser, with 35 mm dia., 4.0 mm wide, toothed)
 91-164 711-91-91 (Roller presser, with 35 mm dia., 4.0 mm wide, coated with plastic-material)

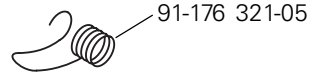


PFAFF 1571, 1574, 1591

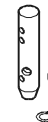


91-176 329-05

PFAFF 1574



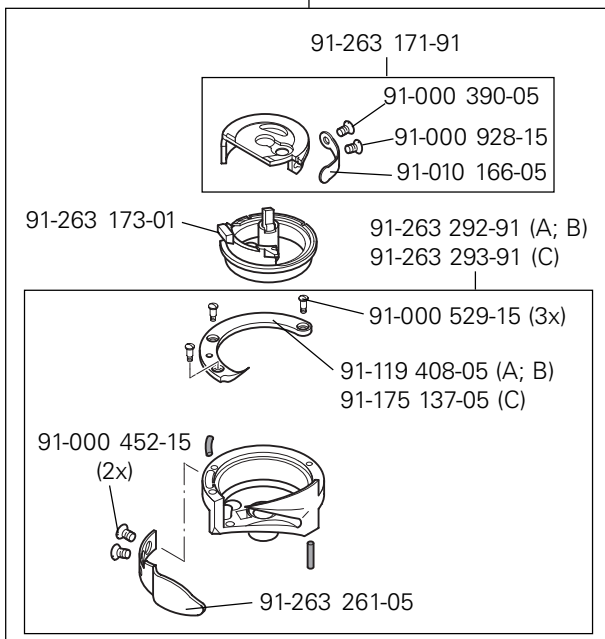
91-176 321-05



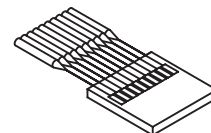
11-108 093-15

91-173 664-15

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



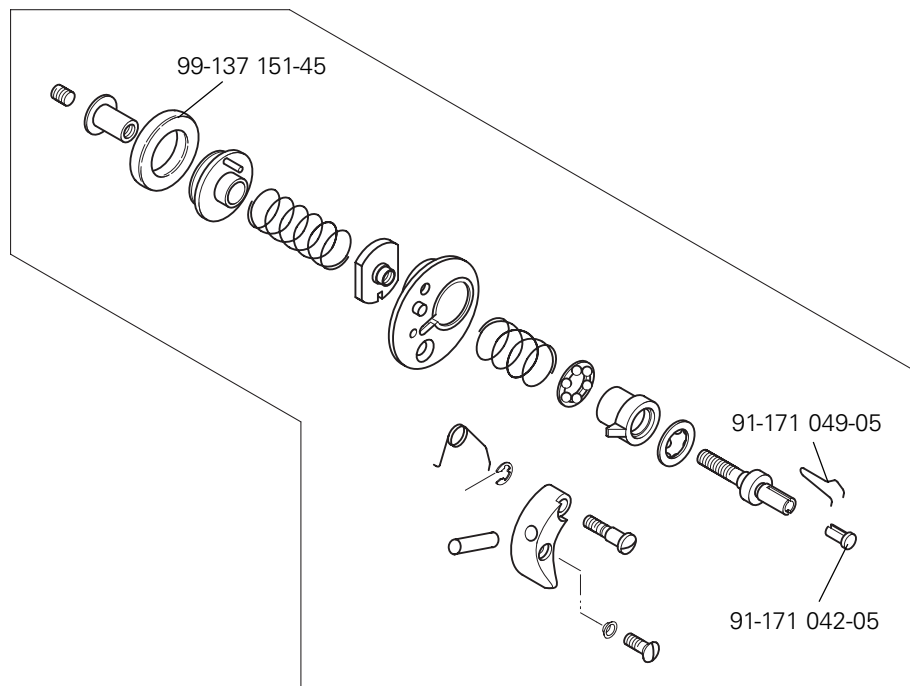
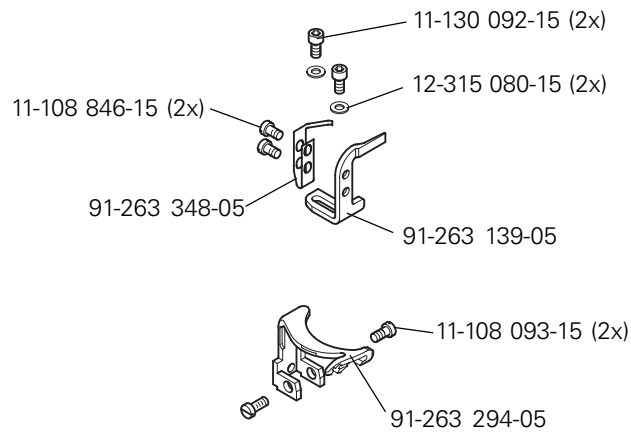
91-118 308-05



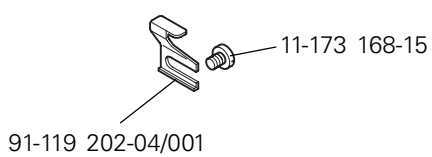
PFAFF 1571, 1591
 System 134

PFAFF 1574
 System 134-35

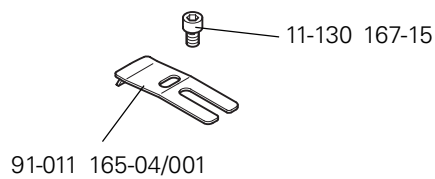
For sub-class -900/81



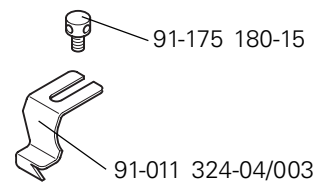
571-725/04



574-725/04; 591-725/04

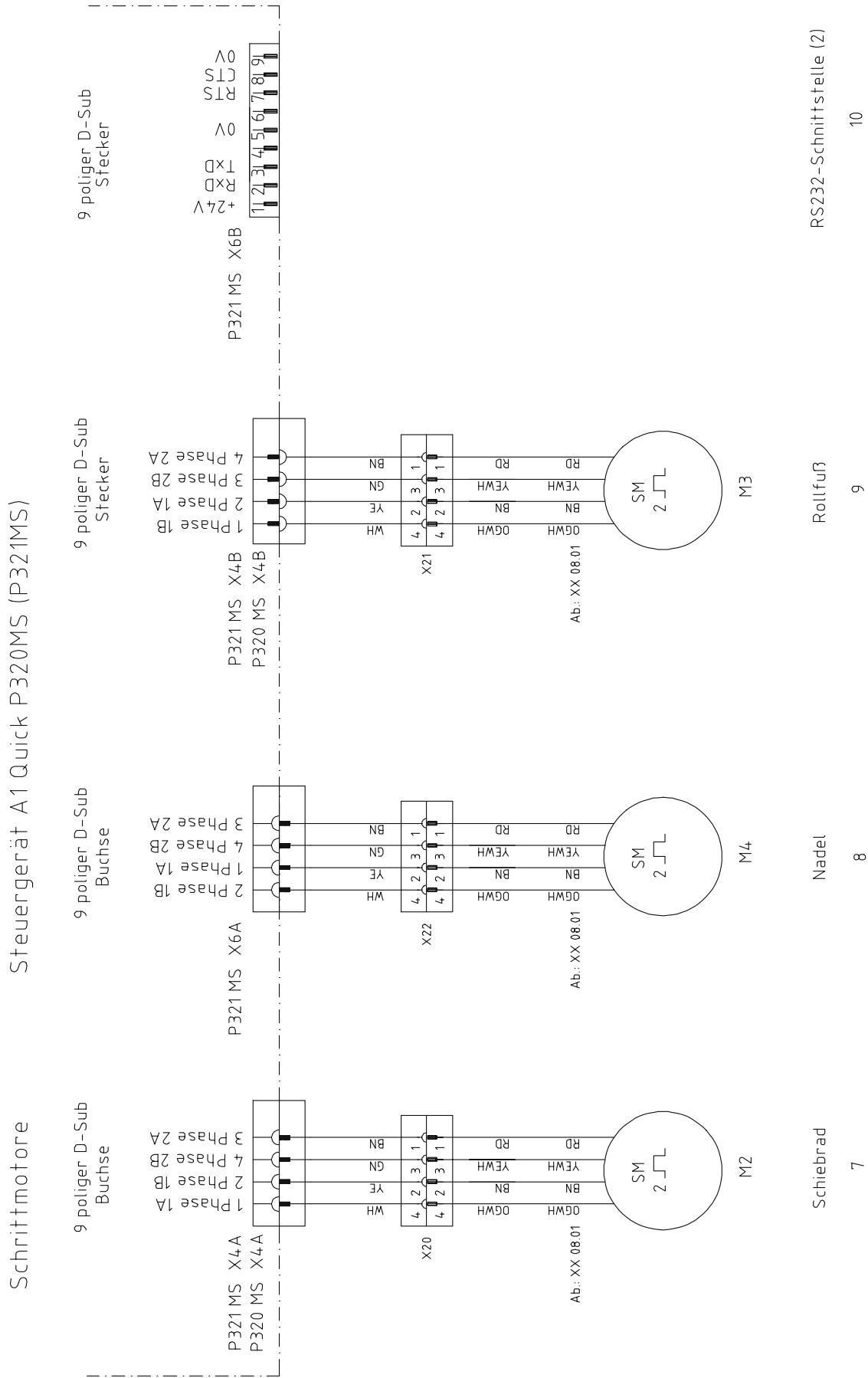


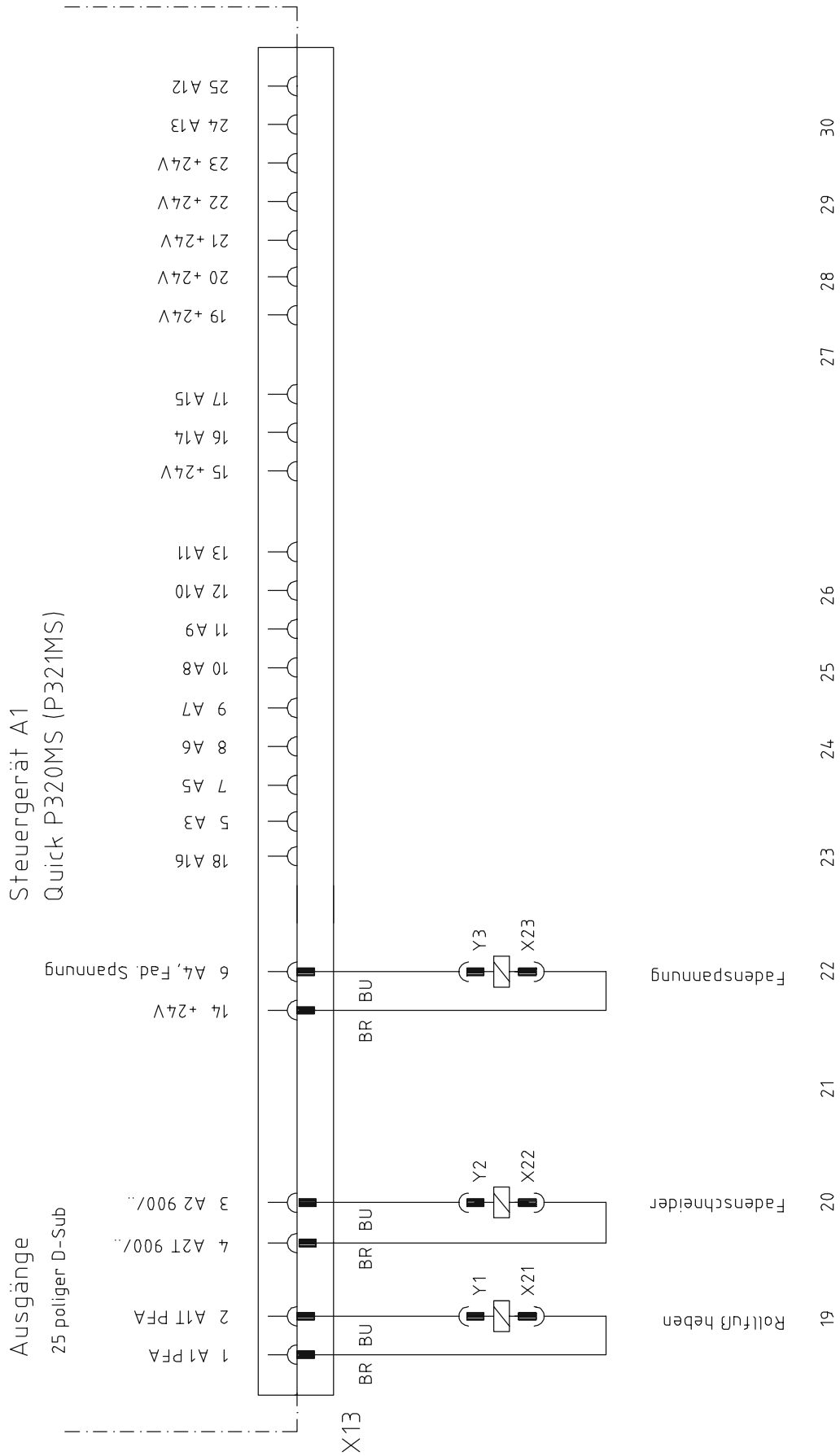
591-726/05



Reference list for circuit diagrams

A1	Controller Quick P320MS (P321MS)
A2	Control panel OC TOP
DX355	Needle pendulum (only with P321MS)
H1	Sewing lamp
H20	LED Stitch counter
M1	Sewing motor
M2	Stepping motor feed wheel
M3	Stepping motor roller presser
M4	Stepping motor needle (only with P321MS)
Q1	Main switch
S1	Pedal set value transmitter
S20	Knee switch (program)
S21	Manual reverse feed control switch
S22	Single stitch switch
S23	Needle position change switch
S24	Start inhibitor switch
X1	Mains plug
X1A	RS232 – interface 1
X1B	Control panel OC TOP
X3	Incremental transmitter (sewing motor)
X4A	Stepping motor feed wheel
X4B	Stepping motor roller presser
X5	Inputs
X6A	Stepping motor needle (only with P321MS)
X6B	RS232 – interface 2 (only with P321MS)
X8	Sewing motor
X11A	CAN interface
X11B	Pedal set value transmitter
X13	Outputs
Y1	910/..Automatic presser foot lift
Y2	900/..Thread trimmer
Y3	Thread tension





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Gedruckt in der BRD
Printed in Germany
Imprimé en R.F.A.
Impreso en la R.F.A.

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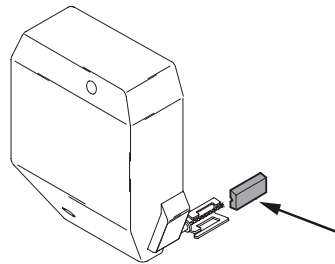
Supplement to the instruction
manual for the series
570 / 590 ; 1570 / 1590

Comments

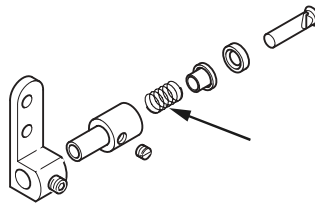
Various improvements have been made to the machines of the series 570 / 590; 1570 / 1590 with thread trimmer –900/81:

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

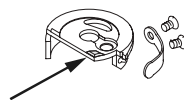
- a thinner thread lubricating felt (6 mm thick) to reduce the primary thread tension, Part-No. 91-165 384-05,



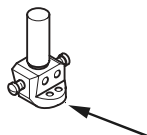
- a weaker spring for the primary thread tension to reduce the primary tension, Part-No. 91-263 391-05



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

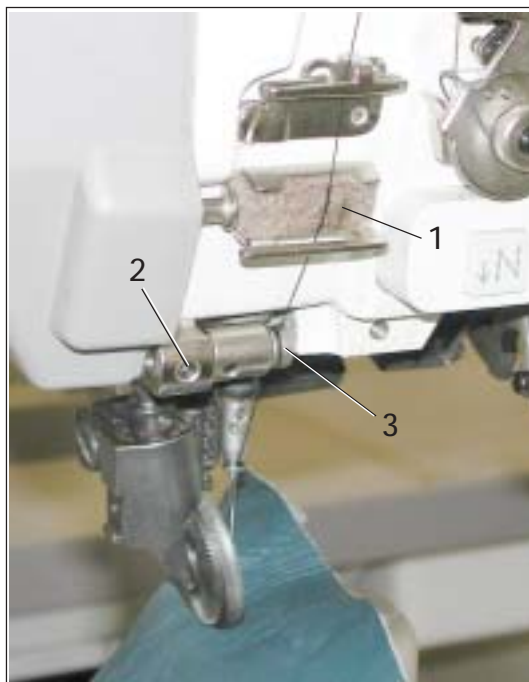


- a new needle holder for 2-needle machines,
Part No. 91-164 726-93/001 (diagonal needle gauge 2.4 mm)
Part No. 91-164 726-93/002 (diagonal needle gauge 2.8 mm)
Part No. 91-164 726-93/003 (diagonal needle gauge 3.2 mm)

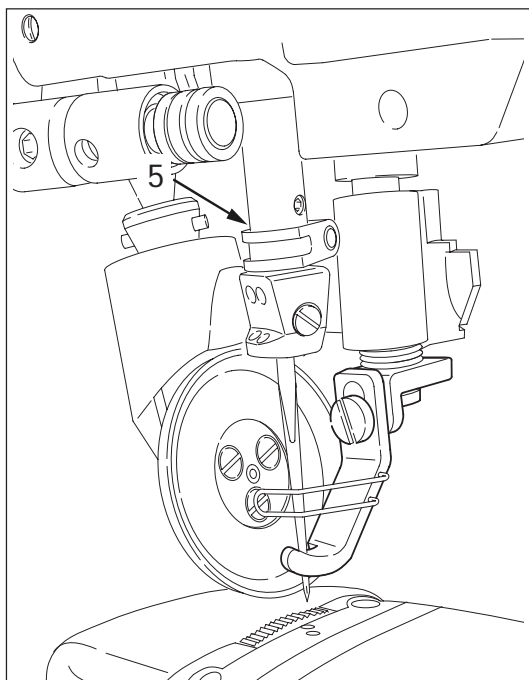


2. Adjustment modification due to the new parts
(see Chapter "Adjustment")

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.

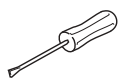
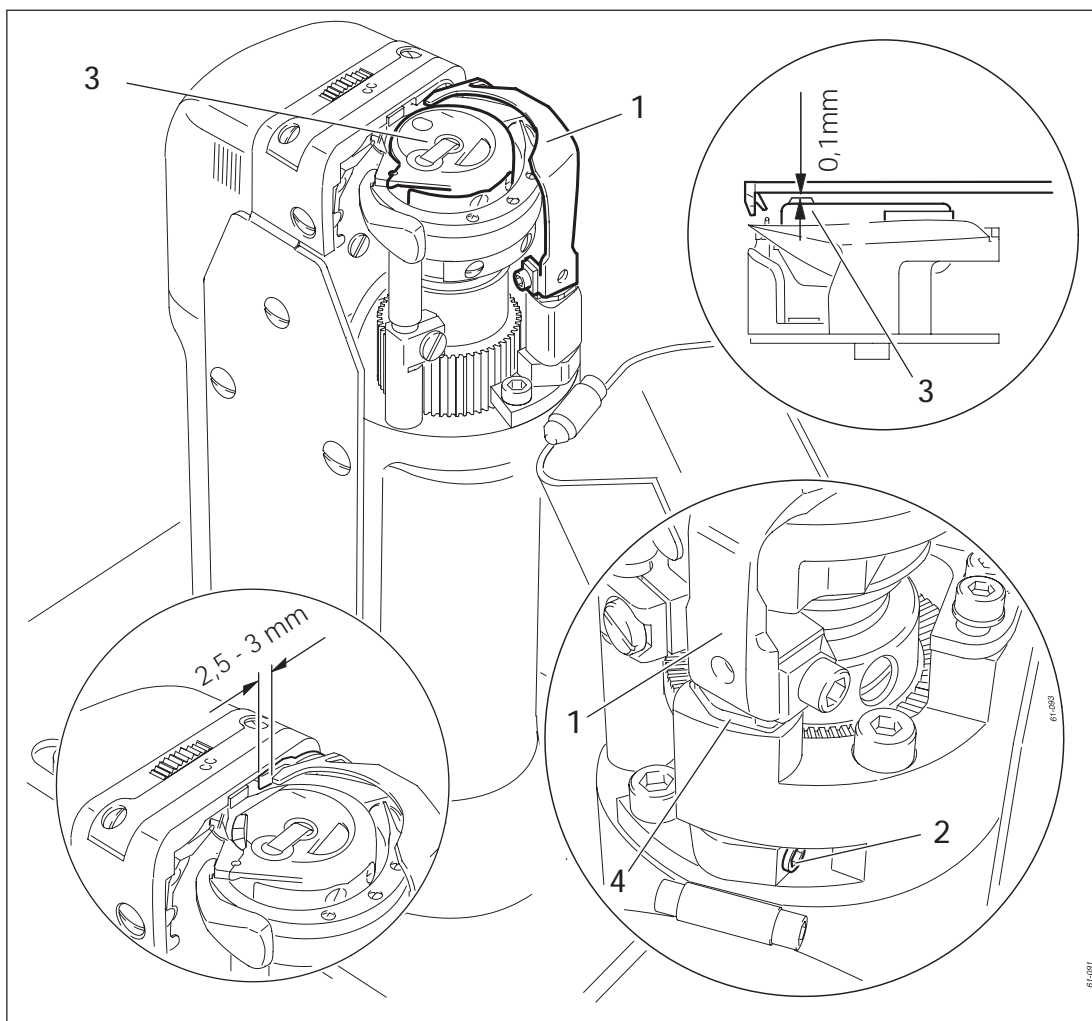


- Loosen screw 5 (see arrow) and remove the needle holder.
- Install the new needle holder and tighten screws 5 a little. Insert the needles.
- Adjust the hook-to-needle clearance (see Chapter Needle bar rise, Hook-to-needle clearance and Needle guard) and tighten screw 5.

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

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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Gedruckt in der BRD
Printed in Germany
Imprimé en R.F.A.
Impreso en la R.F.A.