

# PFAFF

1245  
1246

Instruction manual



This Instruction manual is valid for all models and subclasses listed in the chapter „Specifications“.

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## 1 Safety

### 1.01 Directives

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

In addition to this Instruction Manual, observe also all generally accepted, statutory and other regulations and legal requirements -including those of the country 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 having completely read and understood the Instruction Manual!
- 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, presser foot, needle plate, feed dog 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!
- When servicing or carrying out repairs on pneumatic devices, the machine is to be removed from the compressed air supply! The only exceptions to this are adjustments and function checks carried out by 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!

### 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 operator to only operate the machine in perfect running order.
- It is the obligation of the operator to ensure that none of the safety mechanisms are removed or deactivated.
- It is the obligation of the operator to ensure that only authorized persons operate and work on the machine.

Further information can be obtained at 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 operate the machine.
- always immediately report to the user 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.
- when servicing or carrying out repairs on pneumatic devices, remove the machine from the compressed air supply! The only exceptions to this are function checks.
- replace the protective coverings and close the electrical control box after all repairs or maintenance work!



1.06 Danger



A working area of **1 metre** 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 or in the needle plate area while adjusting the machine settings! Objects can become trapped or be slung away! Danger of injury!



On mechanically activated clutch motors without an actuating lock, wait until the motor has come to a standstill! Danger of injury!

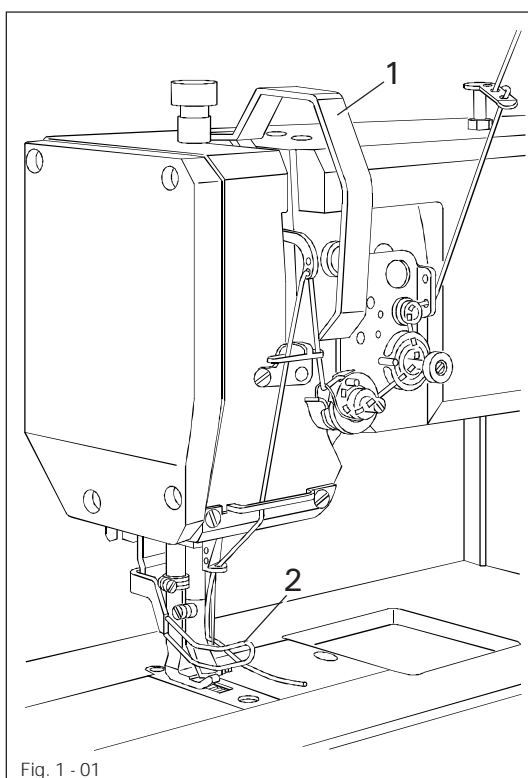


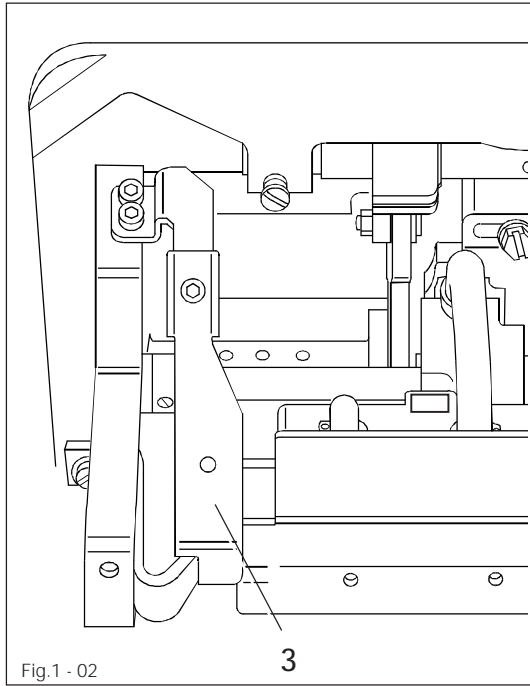
Fig. 1 - 01



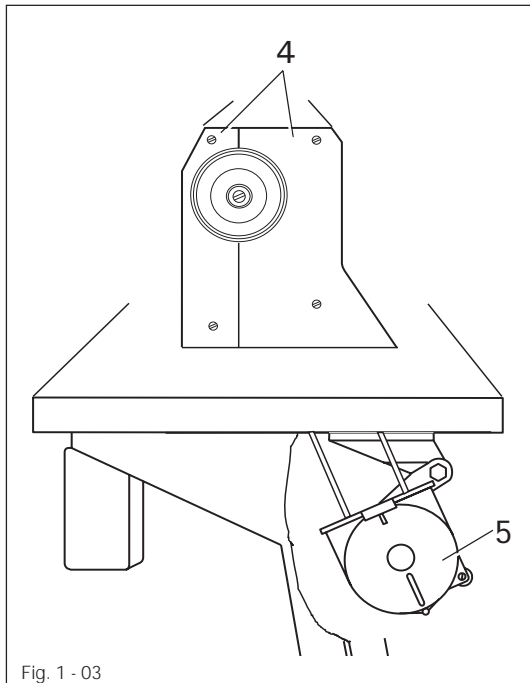
Do not operate the machine without the take-up lever guard **1**!  
Danger of injury due to the movement of the take-up lever!



Do not operate the machine without the finger guard **2**!  
Danger of injury by the moving needle!



Do not operate the machine without tilt-back safeguard **3**!  
Danger of crushing between upper part and table top!



Do not operate the machine without belt guards **4** and **5**!  
Danger of injury by the revolving V-belt!

## Proper use

### **PFAFF 1245**

The PFAFF 1245 is a single needle, flatbed sewing machine with bottom, top and needle feeds as well as a large vertical hook for sewing lockstitch seams. The machine is designed for commercial use (industry).

### **PFAFF 1246**

The Pfaff 1246 is a two-needle, flat bed sewing machine with bottom, top and needle feed as well as vertical sewing hook for lockstitch seams. The machine is intended for commercial (industrial) use only.



Any and all uses of this machine which have not been approved of by the manufacturer are considered to be inappropriate! The manufacturer cannot be held liable for any damage caused by the inappropriate use of the machine! The appropriate use of the machine includes the observance of all operational, adjustment, maintenance and repair measures required by the manufacturer!

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## Specifications

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### 3 Specifications ♦

#### 3.01 PFAFF 1245

Stitch type: .....	301 (lockstitch)
Needle system: .....	134-35
Needle thickness in 1/100 mm:	
Model C: .....	110 - 140
Max. thread thickness (synthetic ▲):	
Model C: .....	20/3
Max. stitch length:	
Model N: .....	6.0 mm
Model N8: .....	8.0 mm
Handwheel eff. dia.: .....	80 mm
Max. speed: .....	see chapter 3.03
Dimensions of machine:	
Length: .....	approx. 570 mm
Width: .....	approx. 177 mm
Height: .....	approx. 410 mm
Clearance width: .....	265 mm
Clearance height: .....	115 mm
Fabric clearance (presser foot raised): .....	14 mm
Net weight (machine head): .....	approx. 40 kg
Power supply: .....	190 - 240 V 50 / 60 Hz, 1 phase
Power consumption: .....	max. 600 VA
Fuse protection: .....	1 x 16 A, delayed action
Working air pressure: .....	6 bar
Air consumption: .....	~0.8 l / work cycle
Working noise level:	
Emission at workplace	
n = 2300 spm: .....	82 dB (A)
Noise measurement in accordance with DIN 45 635-48-A-1	

♦ Subject to alteration

▲ Or comparable thicknesses of other thread types

#### 3.02 Possible models and subclasses

Model C: .....	For processing medium-heavy materials
Additional equipment:	
Subclass -900/56 .....	Thread trimmer
Subclass -910/ .....	Automatic presser-foot lifter
Subclass -911/ .....	Bartacker

3.03 Max. number of stitches/min<sup>-1</sup>

Top feed lift	Max. number of stitches/min <sup>-1</sup> for stitch lengths up to 6 mm	Max. number of stitches/min <sup>-1</sup> for stitch lengths from 6 mm to 8 mm
less than 3.5 mm	2800	2600
from 3.5 to 5.5 mm	2500	2500
from 5.5 to 7 mm	2000	2000

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## Specifications

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3.04

### PFAFF 1246♦

Stitch type: .....	301 (lockstitch)
Needle system: .....	134-35
Needle thickness in 1/100 mm:	
Model B: .....	80 - 100
Model C: .....	110 - 140
Max. thread thickness (synthetic ▲):	
Model B: .....	40/3
Model C: .....	20/3
Max. stitch length:	
Model BN and CN: .....	6.0 mm
Model CN8: .....	8.0 mm
Handwheel eff. dia.: .....	80 mm
Max. speed: .....	see chapter 3.06
Dimensions of machine:	
Length: .....	approx. 570 mm
Width: .....	approx. 177 mm
Height: .....	approx. 410 mm
Clearance width: .....	265 mm
Clearance height: .....	115 mm
Fabric clearance (presser foot raised): .....	14 mm
Net weight (machine head): .....	approx. 40 kg
Power supply: .....	190 - 240 V 50 / 60 Hz, 1 phase
Power consumption: .....	max. 600 VA
Fuse protection: .....	1 x 16 A, delayed action
Working air pressure: .....	6 bar
Air consumption: .....	~0.8 l / work cycle
Working noise level:	
Emission at workplace	
n = 2200 spm: .....	82 dB (A)
Noise measurement in accordance with DIN 45 635-48-A-1	

♦ Subject to alteration

▲ Or comparable thicknesses of other thread types

3.05

### Possible models and subclasses

Model B: .....	For processing medium materials
Model C: .....	For processing medium-heavy materials
Additional equipment:	
Subclass -900/56 .....	Thread trimmer
Subclass -910/04 .....	Automatic presser-foot lifter
Subclass -911/35 .....	Bartacker

3.06 Max. number of stitches/min<sup>-1</sup>

Top feed lift	Max. number of stitches/min <sup>-1</sup> for stitch lengths up to 6 mm and needle gauge of up to 10 mm	Max. number of stitches/min <sup>-1</sup> for stitch lengths up to 6 mm and needle gauge of more than 10 mm	Max. number of stitches/min <sup>-1</sup> for stitch lengths from 6 mm to 8 mm and needle gauge of up to 10 mm	Max. number of stitches/min <sup>-1</sup> for stitch lengths up to 6 mm to 8 mm and needle gauge of more than 10 mm
less than 3.5 mm	2700	2500	2500	2300
from 3.5 to 5.5 mm	2400	2200	2400	2100
from 5.5 to 7 mm	1900	1700	1900	1600

### 4 Disposal of machine waste

- The proper disposal of machine waste is the responsibility of the customer.
- The materials used on the machines are steel, aluminium, brass and various plastics. The electrical equipment consists of plastics and copper.
- The machine waste is to be disposed of in accordance with the locally valid environmental protection regulations. If necessary a specialist is to be commissioned.



Special care is to be taken that parts soiled with lubricants are separately disposed of in accordance with the locally valid pollution control regulations!



### 5 Transport packaging and storage

#### 5.01 Transport to the customer's premises

Within the Federal Republic of Germany, the machine is delivered without packaging. Machines for export are packaged in a crate or wrapped depending on how they are transported.

#### 5.02 Transport within the customer's premises

The manufacturer carries no liability for transport within the customer's premises. Care is to be taken to transport the machine in an upright position only.

#### 5.03 Disposal of the packaging

The packaging of the machine consists of wood, paper, cardboard and VCE fibre. The proper disposal of the packaging is the responsibility of the customer.

#### 5.04 Storage

The machine can be stored for up to 6 months if not in use. During this time it should be protected from dust and moisture.

For longer storage the individual parts of the machine, especially the moving parts, should be protected against corrosion e.g. by a film of oil.

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## Explanation of the symbols

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### 6 Explanation of the symbols

In the following section of this Instruction Manual, certain tasks or important pieces of information are accentuated by symbols.

The symbols used have the following meanings:



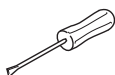
Note, information



Cleaning, care



Lubrication, greasing



Servicing, repairing, adjustment, maintenance  
(only to be carried out by specialist personnel)

7 Controls

7.01 On/off switch

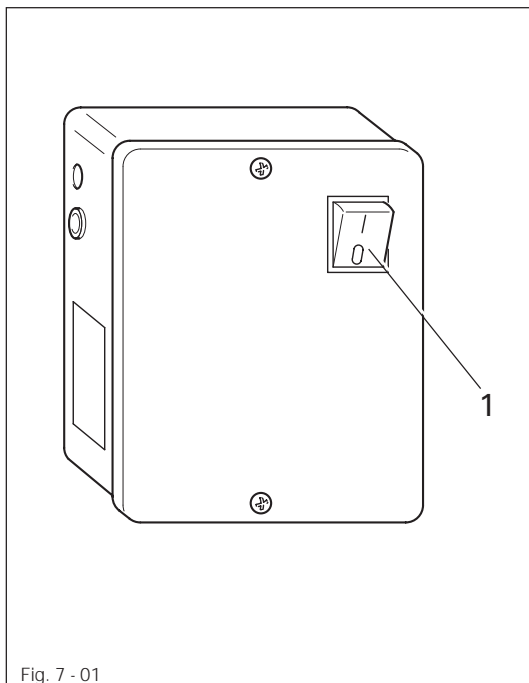


Fig. 7 - 01

- Turn the machine on and off by switching the on/off switch 1 on and off. When the machine is on, the light in the switch is also on.



The switch in the illustration can be found on machines with Quick motors. When other motors are used, the switch may not look the same.

7.02 Pedals (on machines with subclass -910/01)

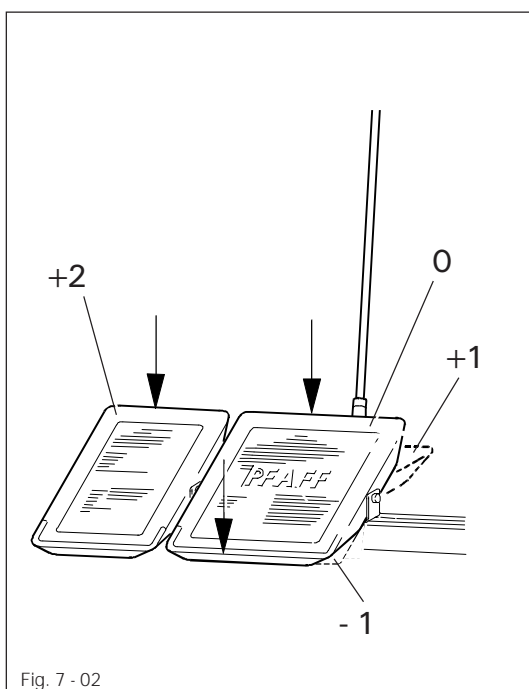


Fig. 7 - 02

With the on/off switch on

- 0** = Machine stop
- +1** = Sew
- 1** = Trim thread (on machines with thread trimmer)
- +2** = Raise presserfoot

## 7.03 Pedal (on machines with automatic presser-foot lifter -910/98)

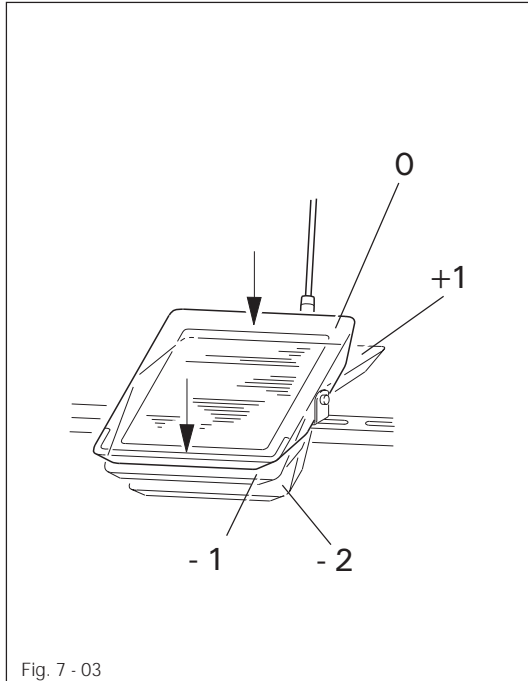


Fig. 7 - 03

With the on/off switch on

**0** = Machine stop

**+1** = Sew

**-1** = Raise presserfoot

**-2** = Trim thread (on machines with thread trimmer)

## 7.04 Key on the machine head (for machines with backtacking mechanism -911/97)

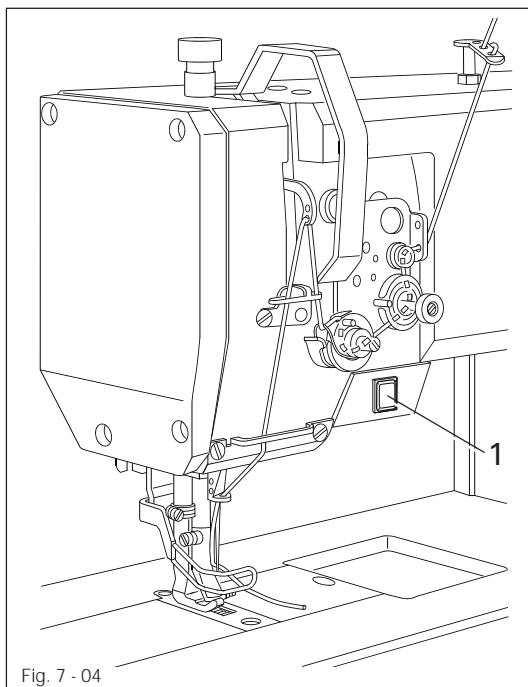
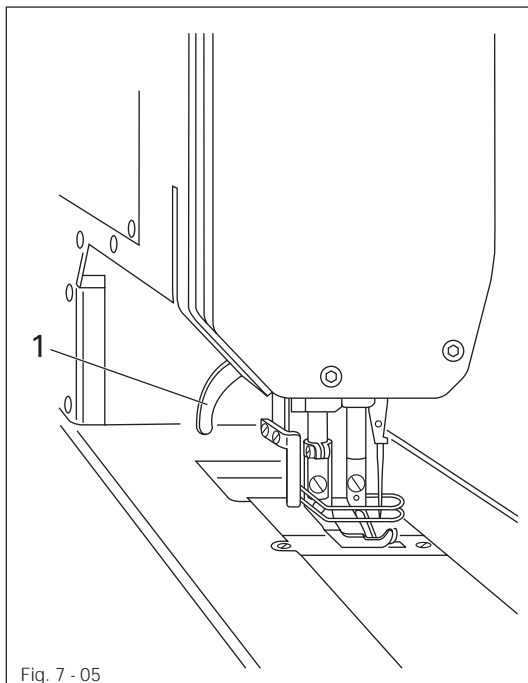


Fig. 7 - 04

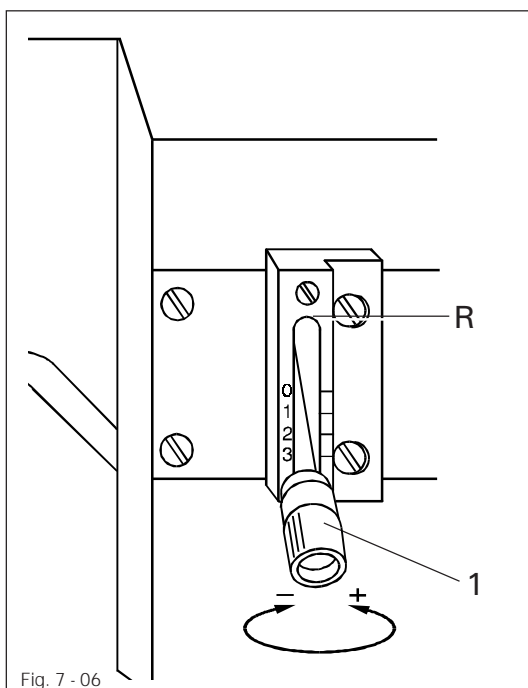
● Switch to reverse sewing by pressing key 1 while sewing.

7.05 Lever for lifting the presser foot



- The sewing foot can be lifted by raising lever 1.

7.06 Feed regulator / reverse sewing



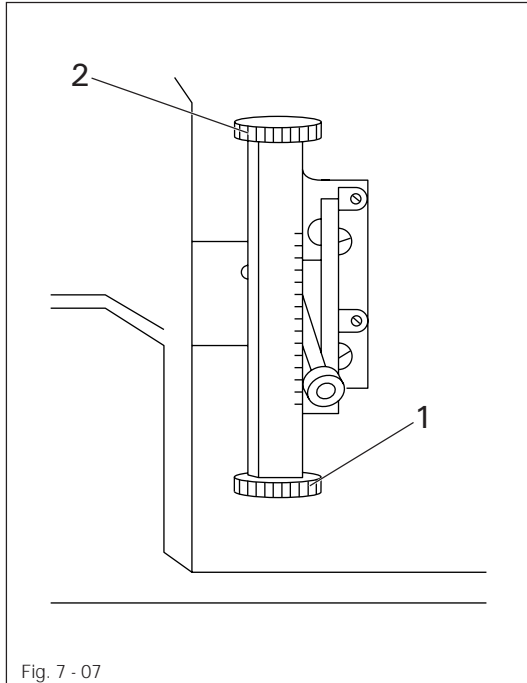
- Adjust the stitch length by turning the knurled nut 1 accordingly.

Reverse sewing

- Press knurled nut 1 upwards as far as possible (position „R“).

7.07

## Feed regulator (on machines with backtacking mechanism -911/97)



You can set the length of the reverse stitch as large as is required, independent of the forward stitch.

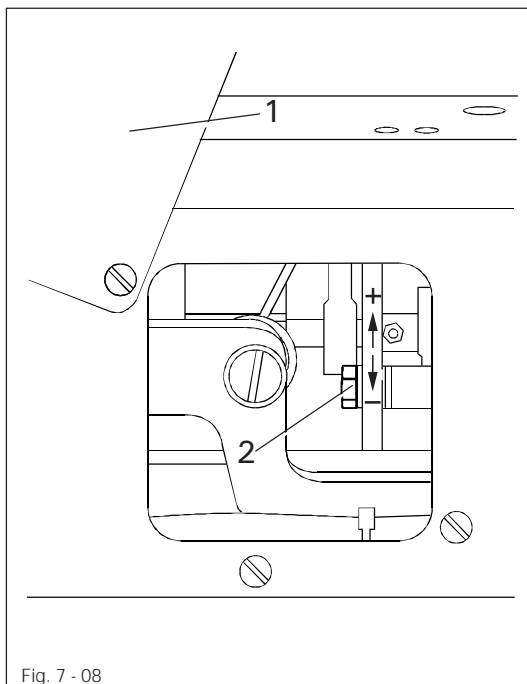
- The forward stitch is set with knurled screw 1 and the reverse stitch with knurled screw 2.



The options for setting the automatic start and end bartacks are to be found in the instruction manual of the motor.

7.08

## Adjustment nut for the top-feed stroke



Turn the machine off!

- Open cover 1 on the back of the machine, loosen screw 2 and move as required.

## 8 Mounting and commissioning the machine



The machine must only be mounted and commissioned by qualified personnel!

All relevant safety regulations are to be observed!

If the machine is delivered without a table, it must be ensured that the frame and the table top which you intend to use can hold the weight of the machine and the motor, even while sewing.

### 8.01 Mounting

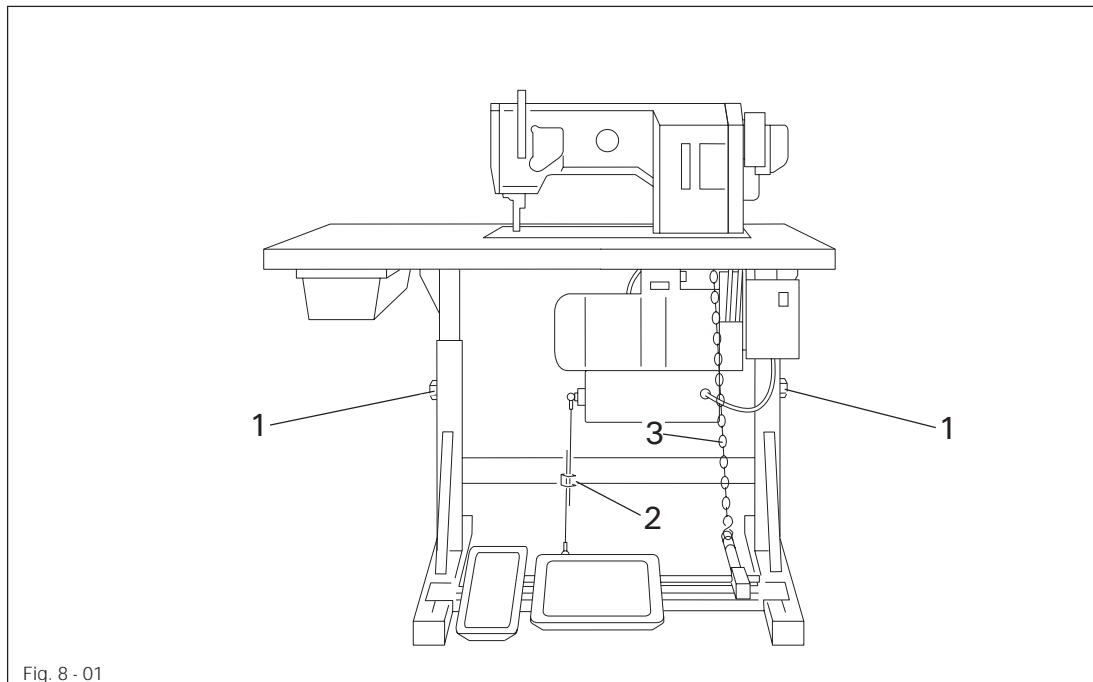
The necessary electricity and compressed air supplies must be available at the machine's location (see specifications).

A stable and horizontal surface as well as sufficient illumination at the machine's location.



Due to reasons of packaging, the table top is lowered for transport. The following is a description of how to adjust the height of the table top.

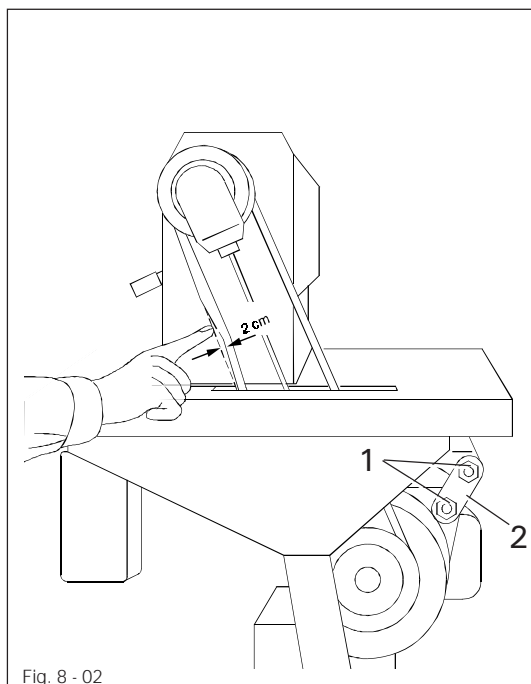
#### 8.01.01 Adjusting the table-top height



- Loosen screws 1 and 2.
- Set the desired table-top height and tighten screws 1 well.
- Adjust the position of the right pedal so that you can operate it comfortably and tighten screw 2.
- The setting of the left pedal can be adjusted with chain 3. (This adjustment is not necessary on machines with an automatic presser-foot lifter)

## Mounting and commissioning the machine

### 8.01.02 Adjusting the V-belt tension

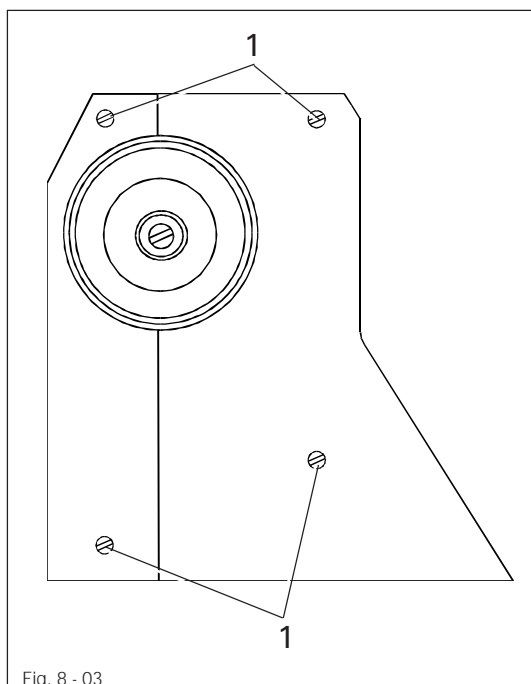


- Loosen nuts 1.
- Tighten the V-belt with belt take-up hanger 2.
- Tighten nuts 1.



Fig. 8 - 02 shows a Quick motor. If another motor is used, proceed as described in the motor's instruction manual.

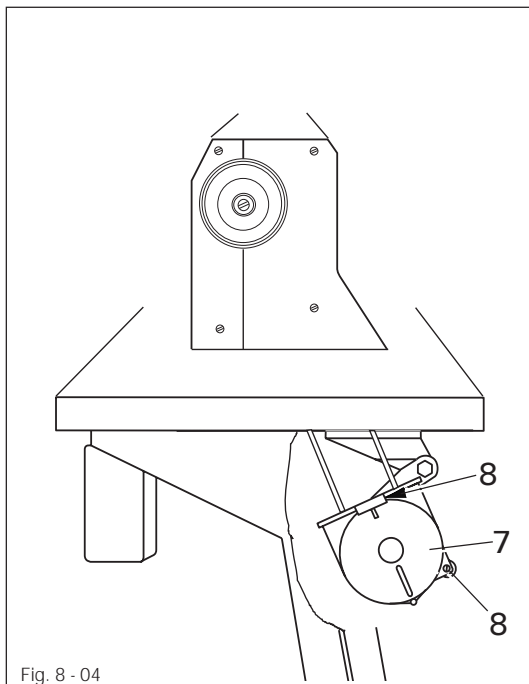
### 8.01.03 Mounting the upper V-belt guard



- Attach both halves of the belt-guard with screws 1.



### 8.01.04 Mounting the lower V-belt guard

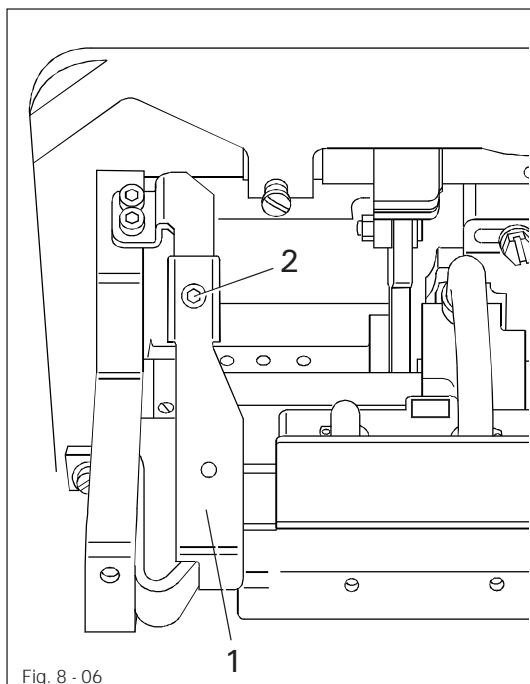


- Align belt-guard 7 in such a way that both the motor pulley and the V-belt run freely.
- Tighten screws 8.



Fig. 8 - 04 shows a Quick motor. If another motor is used, proceed as described in the motor's instruction manual.

### 8.01.05 Mounting tilt-over safeguard



- Screw-mount tilt-over safeguard 1 included in the accessories with screw 2.



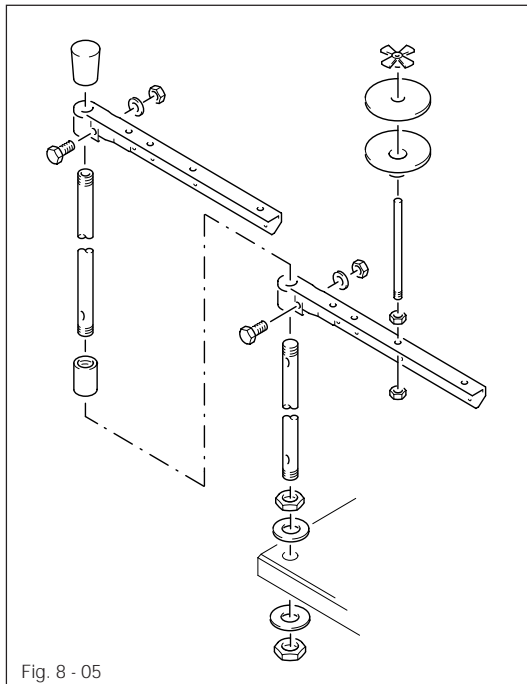
Do not operate the machine without tilt-over safeguard 1!  
Danger of crushing between upper part and table top!

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## Mounting and commissioning the machine

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### 8.01.06 Mounting the spool holder



- Mount the spool holder as shown in Fig. 8 - 05.
- Insert spool holder in the table-top hole and fasten it by means of the included nuts.

### 8.01.07 Mounting the sewing lamp<sup>▲</sup>

- Screw the sewing lamp onto the table top (wood screws 5x35) and have it connected by a specialist.

<sup>▲</sup> The sewing lamp is not included in the normal delivery package.

### 8.02 Commissioning the machine

- Before commissioning the machine, check the electrical leads and pneumatic hoses for any damage.
- Remove pin 1 of the oil reservoir 2 (Fig. 8 - 06). The pin serves only to protect the machine from damage during transport and must not be used when sewing.
- Clean the machine thoroughly and oil it (see chapter 10 Care and maintenance)
- Have specialists ensure that the machine's motor can be operated with the available electricity supply and that it is connected correctly to the terminal box. If not, the machine must not be operated.
- The handwheel must rotate towards the operator when the machine is running, if not, have the motor re-adjusted converted by a specialist.
- Connect the machine to the compressed air system. The pressure gauge must display a pressure of approx. 6 bar. If not, adjust the pressure to this value (see chapter 10.07 Checking the air pressure).

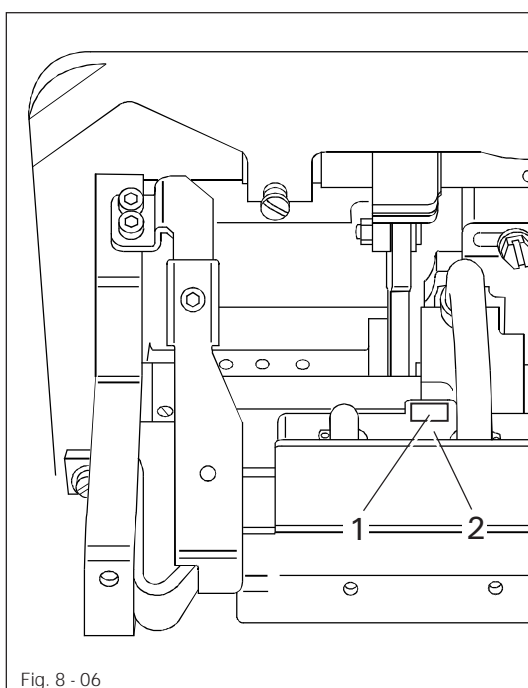


Fig. 8 - 06

### 8.03 Switching the machine on/off

- Switch on the machine (see chapter 7.01).
- Carry out a test run.



All regulations and instructions in this Instruction manual are to be observed!  
Special attention is to be paid to all Notes on Safety!



All preparation work is only to be carried out by appropriately trained personnel.  
Before all preparation work, the machine is to be switched off via the on/off switch or to be separated from the electricity supply by removing the plug from the mains!

### 9.01

### Inserting the needle in the PFAFF 1245

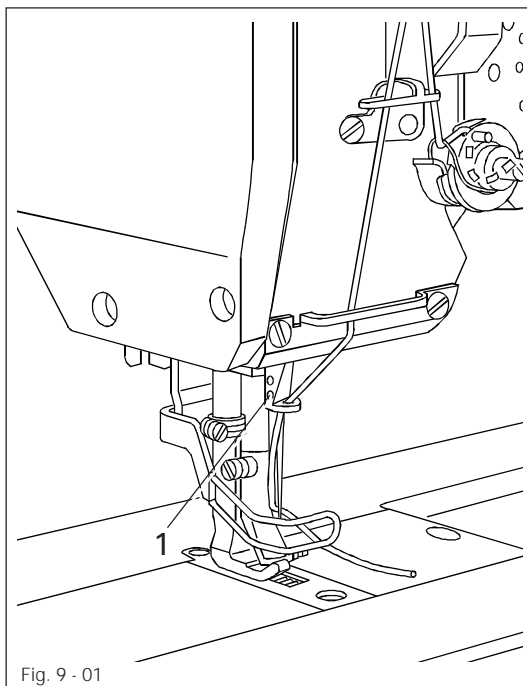


Fig. 9 - 01



Turn the machine off!

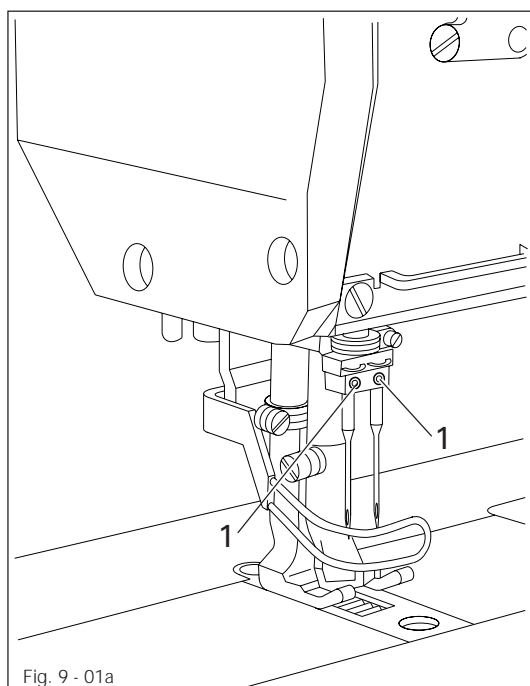
Use only system 134 - 35 needles!

- Loosen needle retaining screw 1.
- Insert the needle as far as possible (the long needle-groove must be facing left).
- Tighten needle retaining screw 1.



The selection of the correct needle depends on the model of the machine and the material and threads being sewn.

9.02 Inserting the needle in the PFAFF 1246



Turn the machine off!

Use only system 134 - 35 needles!

- Loosen needle retaining screws 1.
- Insert needles as far as it will go (the longitudinal needle groove of the left-hand needle must be pointing to the right and that of the right-hand needle to the left).
- Tighten needle retaining screws 1.



The selection of the correct needle depends on the model of the machine and the material and threads being sewn.

## 9.03 Winding the bobbin thread, adjusting the thread tension

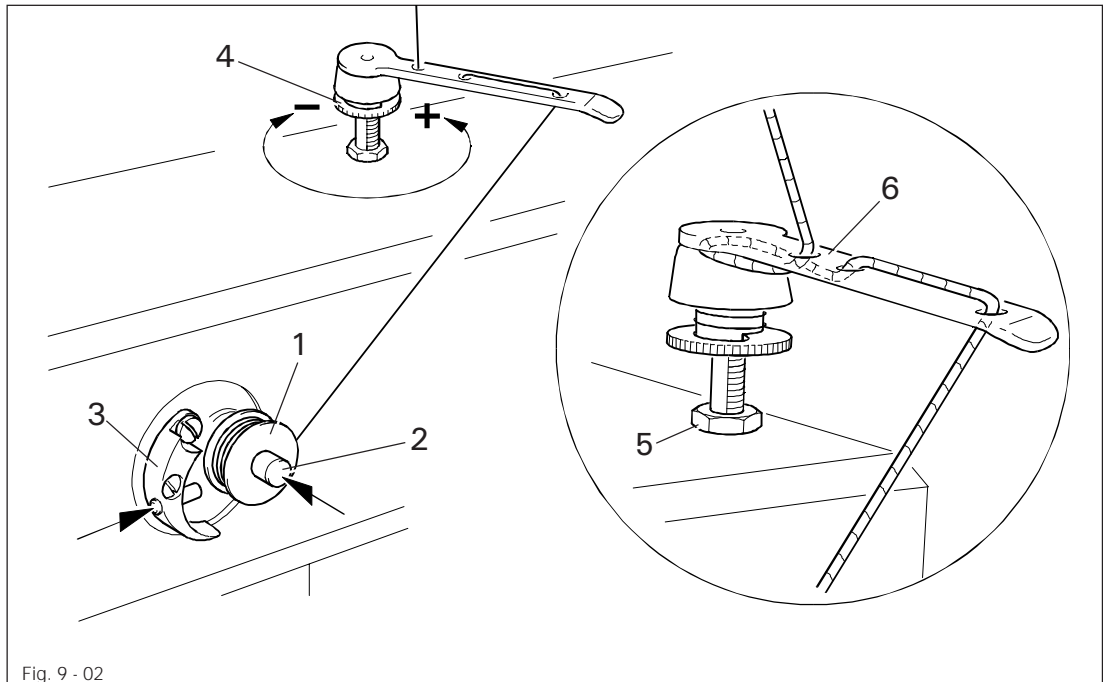


Fig. 9 - 02

- Place an empty bobbin 1 onto bobbin shaft 2.
- Thread the bobbin in accordance with Fig. 9 - 02 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.



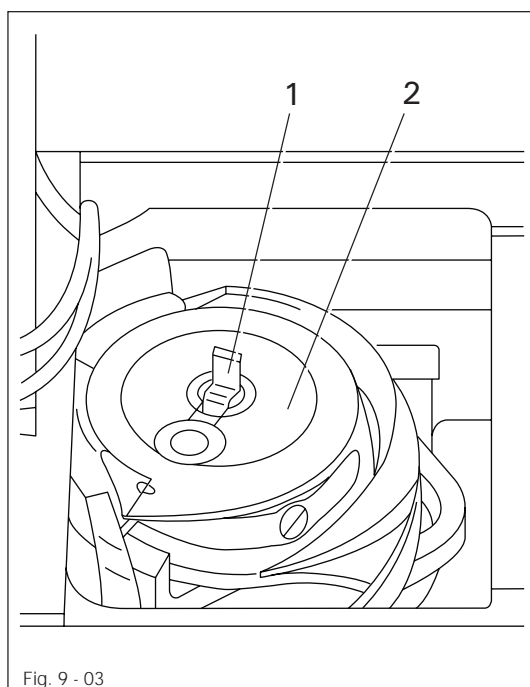
The bobbin fills up while you are sewing.

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

If the thread is wound unevenly:

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

9.04 Removing/Threading the bobbin case



Turn the machine off!

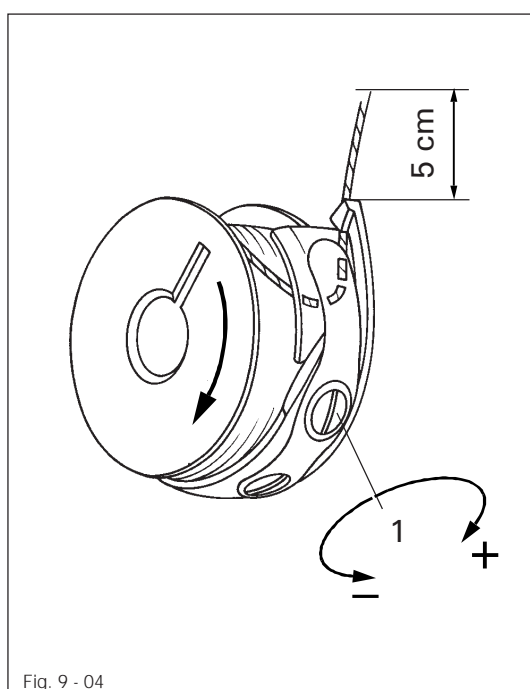
Removing the bobbin case.

- Open the bed slide.
- Raise latch 1 and remove bobbin case 2.

Inserting the bobbin case.

- Insert bobbin case 2 so that it clicks into place.
- Close latch 1 and close the bed slide.

9.05 Inserting the bobbin case / Adjusting the bobbin thread tension



Turn the machine off!

Threading the bobbin case.

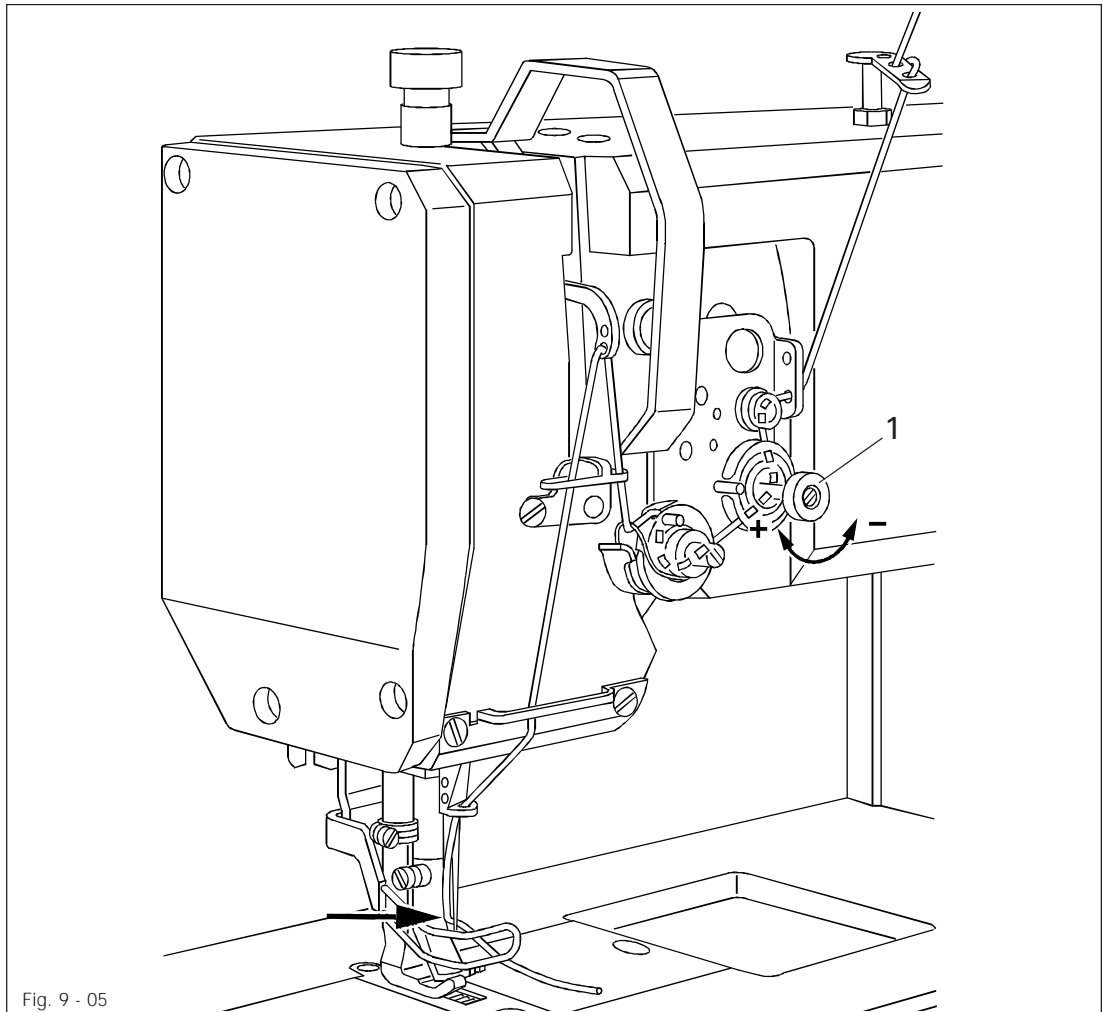
- Thread the bobbin as shown in Fig. 9 - 04.
- When the thread is pulled, the bobbin must rotate in the direction of the arrow.

Regulating the bobbin thread tension.

- Regulate the bobbin thread tension with screw 1.

9.06

Threading the needle thread / Adjusting the needle thread tension in the PFAFF 1245

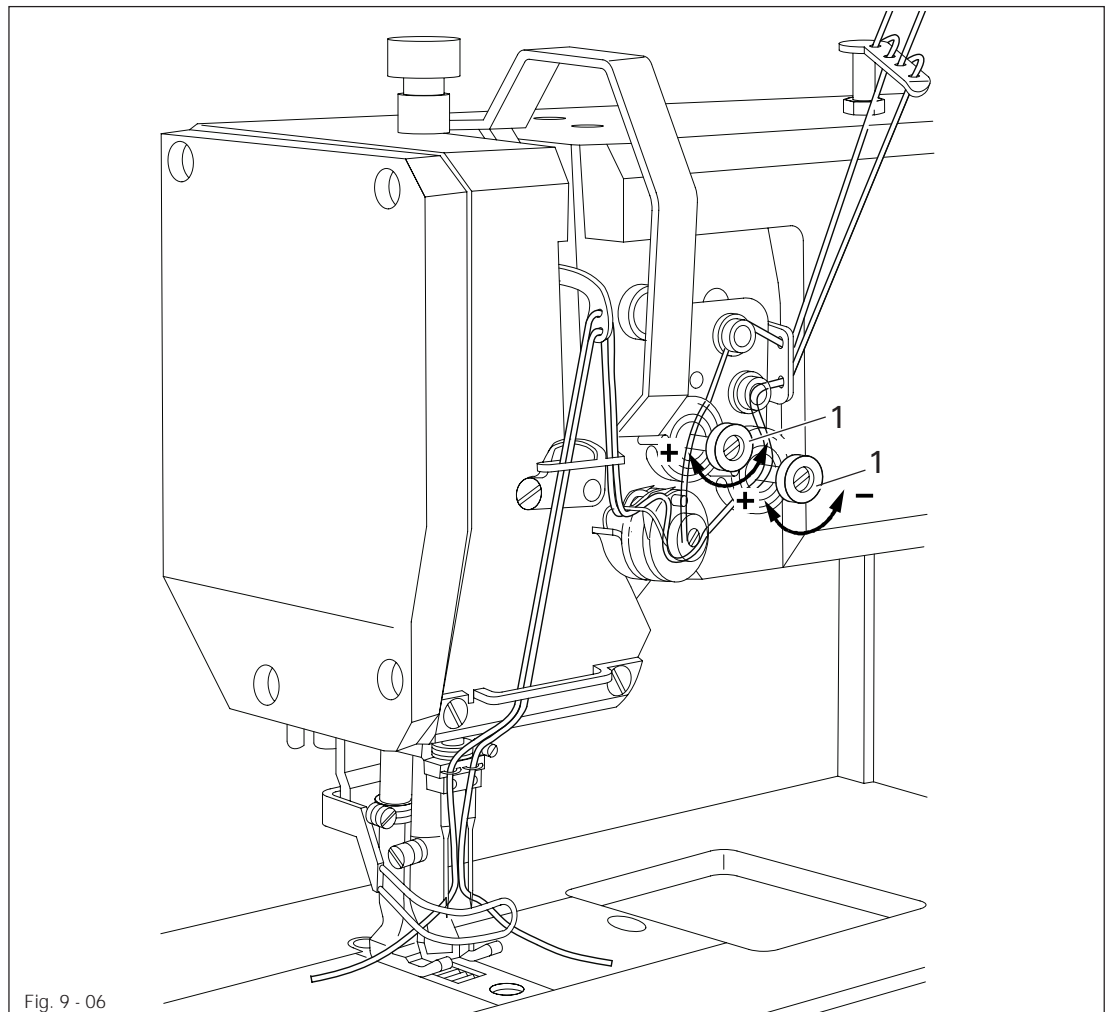


Turn the machine off!

- Thread the machine as shown in Fig. 9 - 05. Take note that the needle is threaded from the left (see arrow).
- Adjust the needle thread tension by turning knuled screws 1..



9.07 Threading the needle thread / Adjusting the needle thread tension in the PFAFF 1246



Maschine ausschalten!

- Thread the machine as shown in Fig. 9 - 06. Care must be taken that the left-hand needle is threaded from the right and the right-hand needle is threaded from the left.
- Adjust the needle thread tension by turning knurled screws 1.

## 10 Care and maintenance

### 10.01 Servicing and maintenance intervals

Check the air pressure .....	daily before use
Clean the hook compartment .....	daily, more often if in continuous operation
Check the water container of the air filter .....	daily before use
General lubrication .....	twice a week
Lubricate the front parts .....	twice a week
Check the hook oil-container .....	once a week
Clean the hook .....	once a week
Lubricate the top-feed drive eccentric .....	Annually



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

### 10.02 Cleaning

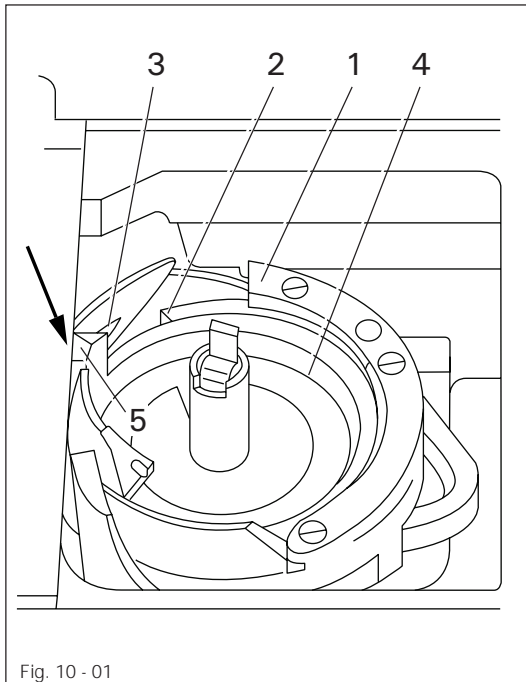


Fig. 10 - 01



Turn the machine off!

- Clean the hook compartment daily with a brush, more often if in continuous operation.
  - Thoroughly clean the hook once a week.
  - Open the bed slide.
  - Bring the needle bar to its highest position.
  - Remove the bobbin case cap and the bobbin.
  - Unscrew hook gib 1.
  - Turn the handwheel until point 2 penetrates into groove 3 approx. 5 mm.
  - In this position, remove bobbin case 4.
  - Clean the hook race with paraffin.
- When inserting the bobbin case, ensure that horn 5 meshes in the groove of the needle plate (see arrow).
  - Finally, screw hook gib 1 back on.
  - Insert the bobbin case and close the bed slide.





Turn the machine off!

- Lubricate all bearings marked in Fig. 10.02 twice a week.
- Open the bed slide to gain access to oiling point 1.
- Pull the knee lever out to the front and lay the machine on its back.
- Lubricate all bearings marked in Fig. 10.03 twice a week.

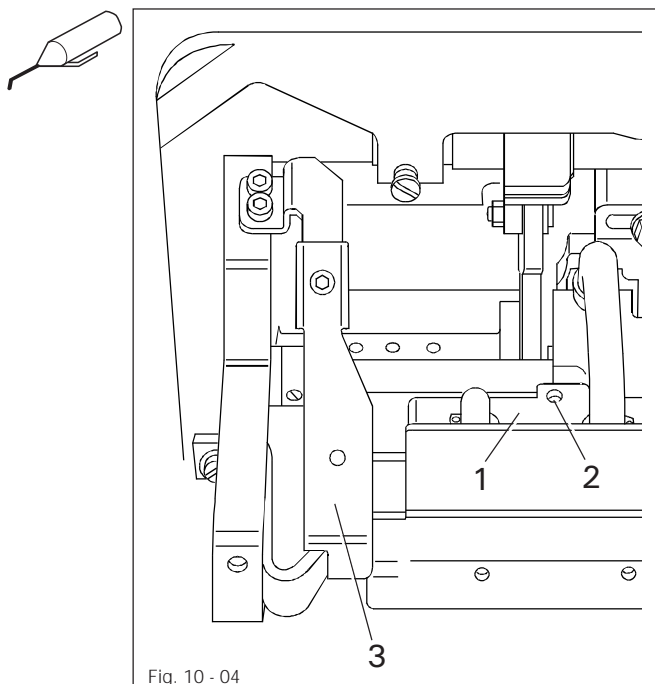
Setting the machine upright

- Hold the machine, press tilt safety device 3 (Fig. 10-04) and return the machine to an upright position with both hands.



Danger of crushing between machine and table top!

### 10.04 Lubricating the hook



Turn the machine off!

- Pull the knee lever out to the front and lay the machine on its back.
- Fill oil reservoir 1 through hole 2 up till the topmost marking.

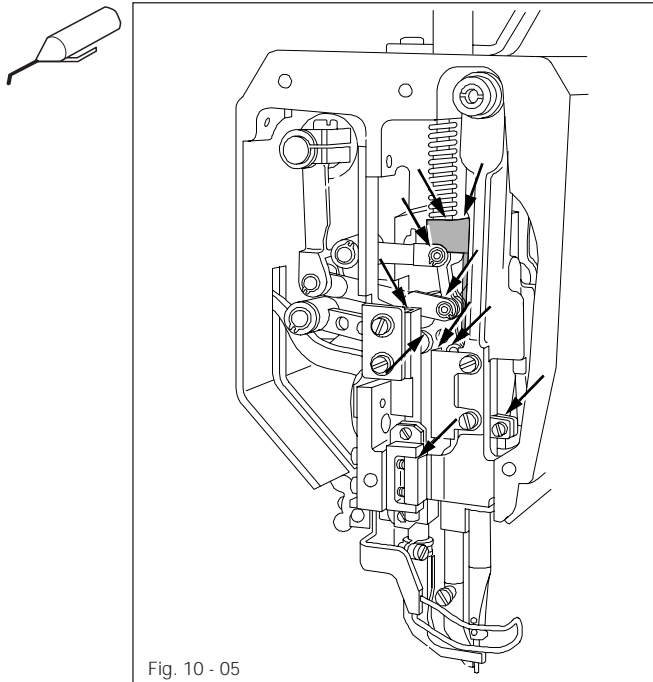
Setting the machine upright

- Hold the machine, press tilt safety device 3 and return the machine to an upright position with both hands.



Danger of crushing between machine and table top!

10.05 Lubricating the head



Turn the machine off!

- Unscrew the face plate.
- Lubricate all bearings and moving parts marked in Fig. 10 - 05 twice a week.
- Screw the face plate back on.

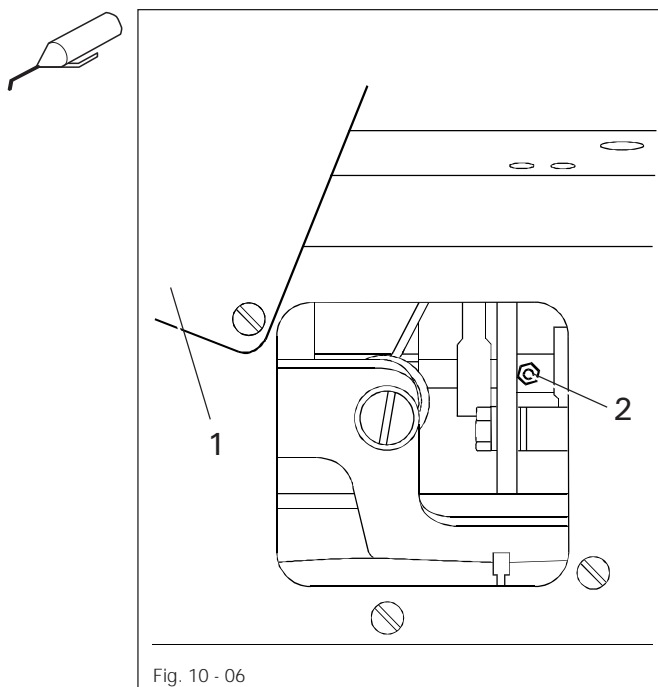


Only use oil with a mean viscosity of 22.0 mm<sup>2</sup>/s at 40°C and a density of 0.865 g/cm<sup>3</sup> at 15°C.



We recommend PFAFF sewing machine oil. Part no. 280-1-120 144.

10.06 Lubricating the top-feed drive excentric

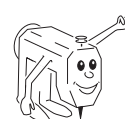


Turn the machine off!

- Open cover 1 on the back of the machine.
- Grease nipple 2 at least once a year (use grease gun).
- Screw cover 1 back on.

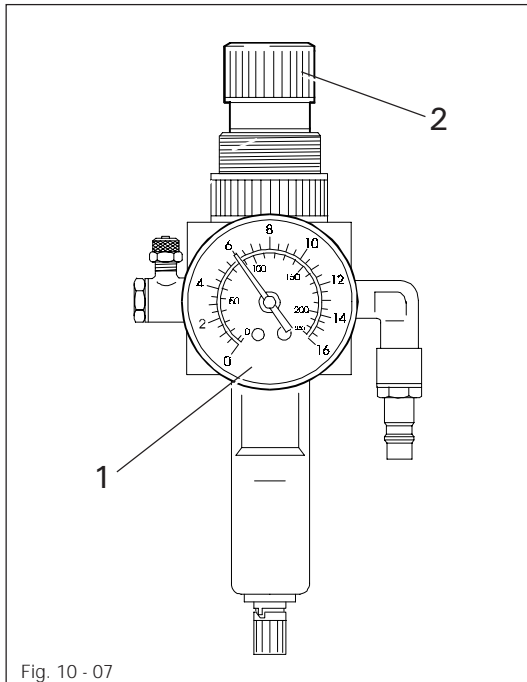


Only use lithium base grease with a dripping point of 185°C and a worked penetration of 22-25 mm at 25°C.



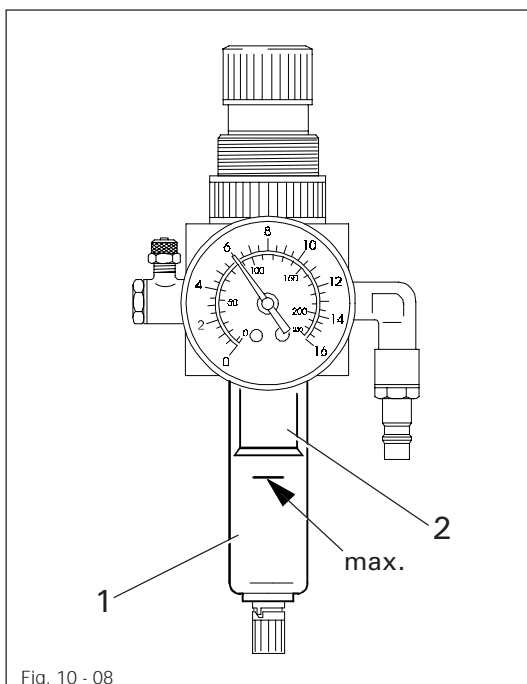
We recommend Pfaff sewingmachine grease Part no. 280-1-120 247.

### 10.07 Checking the air pressure



- Before each use of the machine, check the air pressure on gauge 1.
- The gauge must display a pressure of **6 bar**.
- If necessary, alter the pressure to this level.
- To do so, lift button 2 and turn it so that the gauge shows a pressure of **6 bar**.
- Press button 2 back down again.

### 10.08 Emptying / Cleaning the water container of the air filter



Turn the machine off!  
Remove the compressed-air hose from the air filter.

#### Emptying the water trap

- Water trap 1 empties itself automatically when the compressed-air hose is removed from the air filter.

#### Cleaning the filter

- Unscrew water trap 1 and filter 2.
- Clean the filter with compressed air or with isopropyl alcohol, Part number 95-665 735-91.
- Screw filter 2 back in and water trap 1 back on.

## 11 Adjustment



The illustrations in this section show the **PFAFF 1245** single-needle machine. For the **PFAFF 1246** two-needle machine, various adjustments must be made twice, i.e. to the left- and right-hand sewing hooks. This will be pointed out in the respective sections, whereby it is often possible to apply the mirror image of the illustrations.

### 11.01 Tools, gauges and other accessories for adjusting

- Screwdrivers with blade widths from 2 to 10 mm
- Screwdrivers with blade widths from 7 to 14 mm
- Allan keys from 2 to 6 mm
- Metal rule, (Part No. 08-880 218-00)
- Adjustment gauge, (Part No. 08-880 136-14)
- Adjustable clamp, (Part No. 08-880 137-00)
- Gauge, (top feed stroke 7 mm) (Part No. 61-111 630-14)
- Needles, system 134-35
- Sewing thread and test material

### 11.02 Notes on adjusting

All adjustments in these adjustment instructions are based on a completely installed machine and must only be carried out by **appropriately trained specialists**. Covers on the machine which have to be removed and replaced for checks and adjustment work are not mentioned here. The screws and nuts in brackets ( ) are attachments of machine parts which are to be loosened before making the adjustment and tightened again when the adjustment is complete.

### 11.03 Abbreviations

TDC = top dead center  
BDC = bottom dead center

# Adjustment

## 11.04 Adjusting the basic machine

### 11.04.01 Positioning the feed dog across the direction of sewing

#### Requirement

The bottom feed dog must be the same distance from the left and right side of the needle-plate cutout.

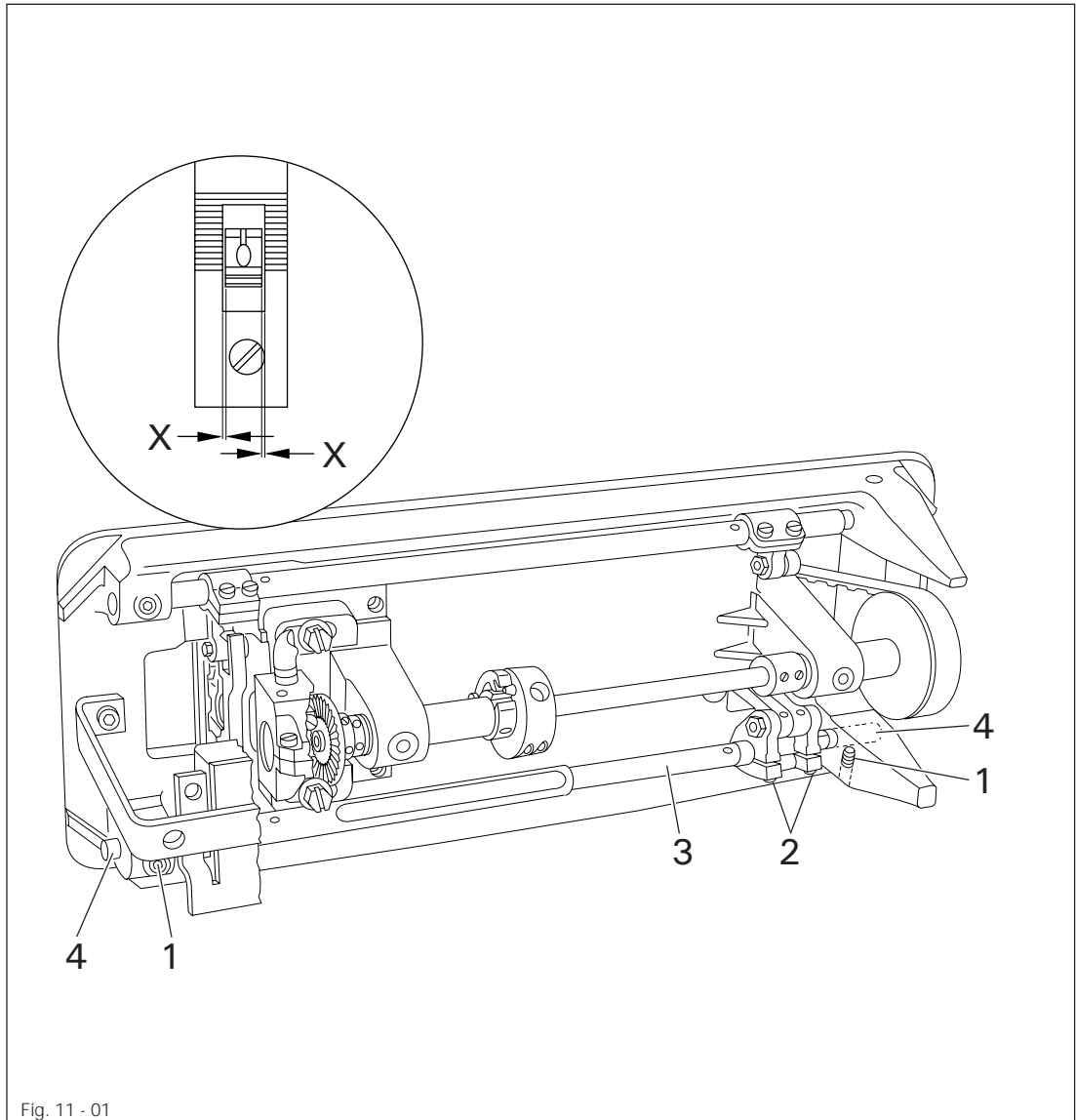
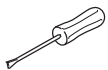


Fig. 11 - 01



- Loosen screws 1 and 2.
- Laterally align rock shaft 3 in accordance with the **requirement**.
- Now tighten screws 1.



The flat sides of pins 4 must be opposite the flat sides of screws 1 and rock shaft 3 must exhibit neither play nor stiffness.

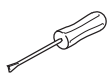
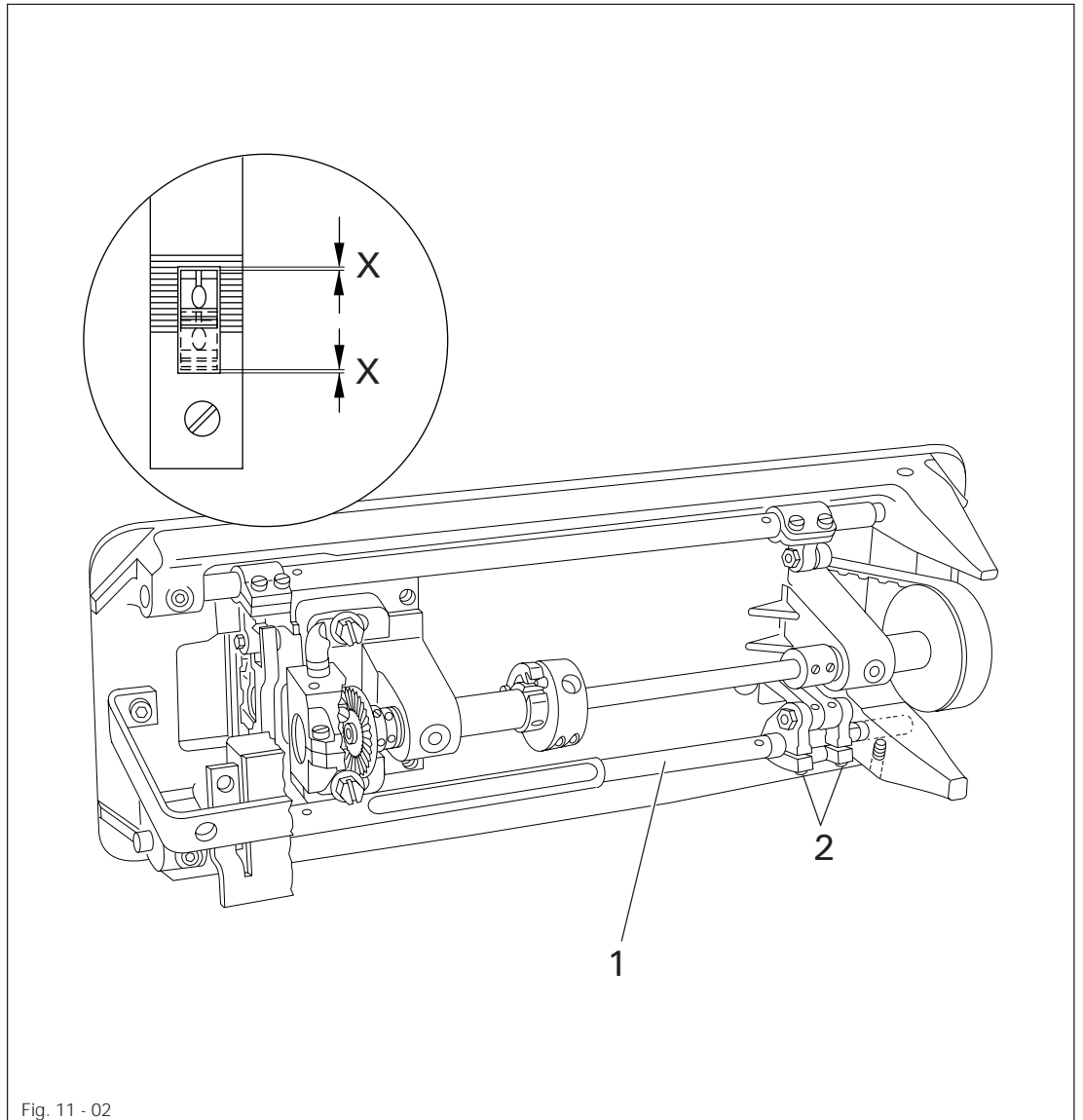
- Screws 2 remain loose for the following adjustments.



## 11.04.02 Positioning the feed dog in the direction of sewing

### Requirement

With the longest stitch set, the bottom feed dog must have the same clearance the front and the back with respect to the needle-plate cutout when feeding both forwards and backwards.

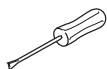
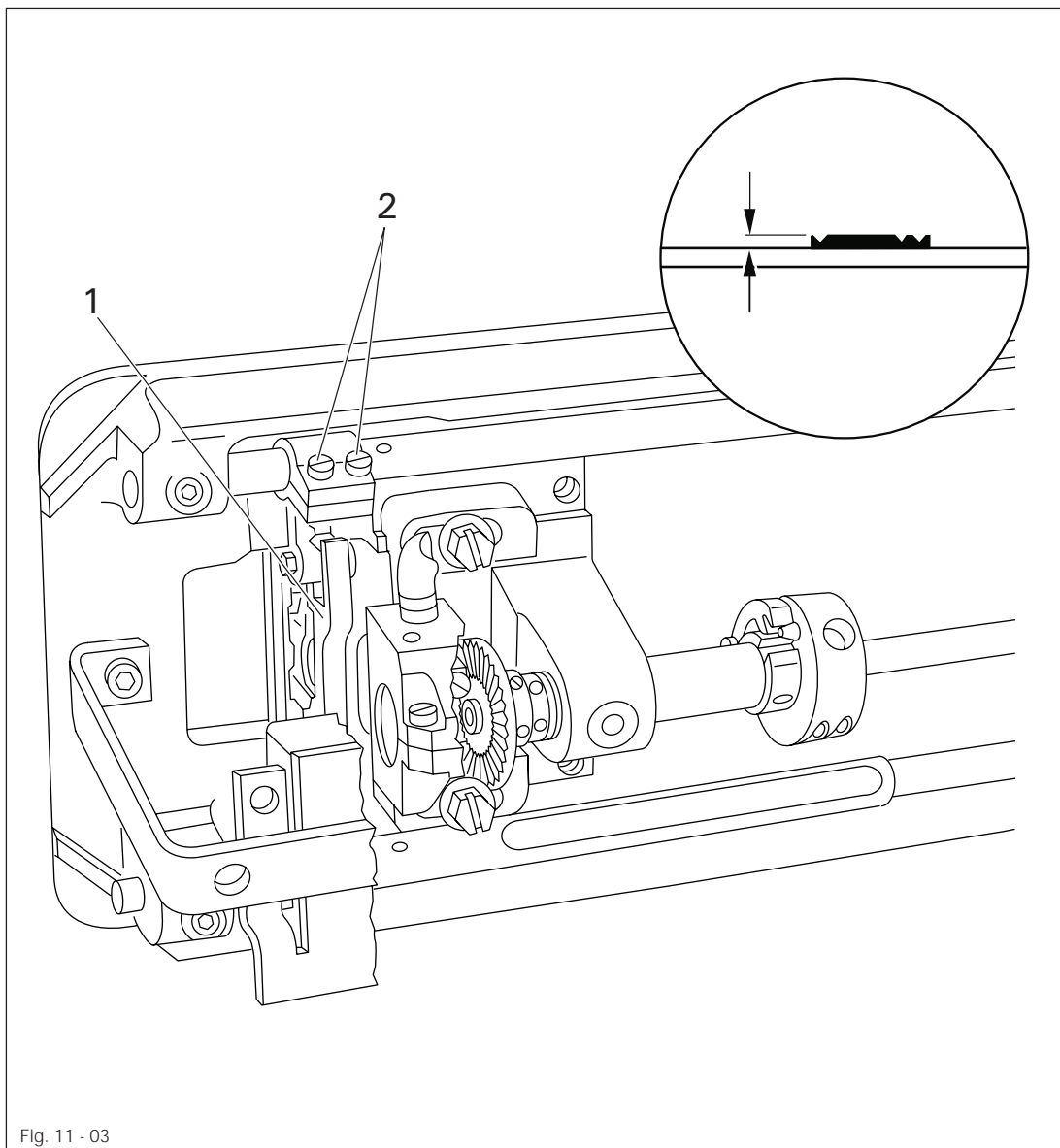


- Set the longest stitch.
- Adjust rock shaft 1 in accordance with the **requirement** and tighten screws 2.

## 11.04.03 Height of the bottom feed-dog

### Requirement

With the stitch length set at „0“, the bottom feed dog must protrude over the needle plate as high as the teeth when at TDC.



- Set stitch length „0“
- Bring the bottom feed dog to its TDC by turning the handwheel.
- Adjust feed dog carrier 1 (screws 2) in accordance with the **requirement**.



If required, the feed dog height can be reduced a little on machines without a bottom feed lifting phase (without P).

11.04.04 Pre-adjusting the needle height

**Requirement**

With the needle bar at BDC, the distance between the needle bar and the needle plate must be 15 mm.

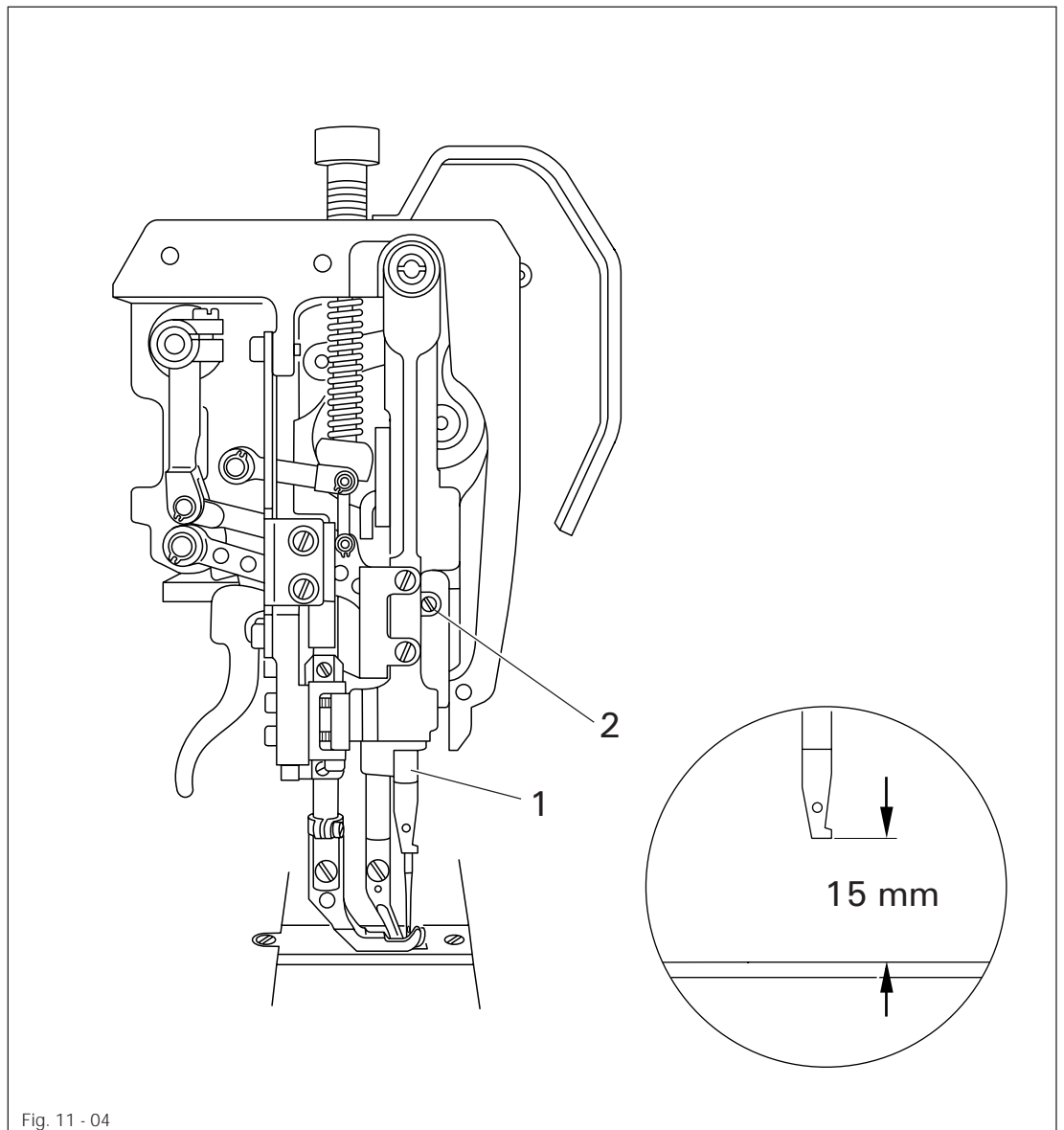
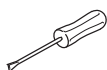


Fig. 11 - 04



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

## 11.04.05 Centering the needle in the needle hole

### Requirement

With the stitch length set at „0“ the needle must enter the needle hole exactly in the middle.

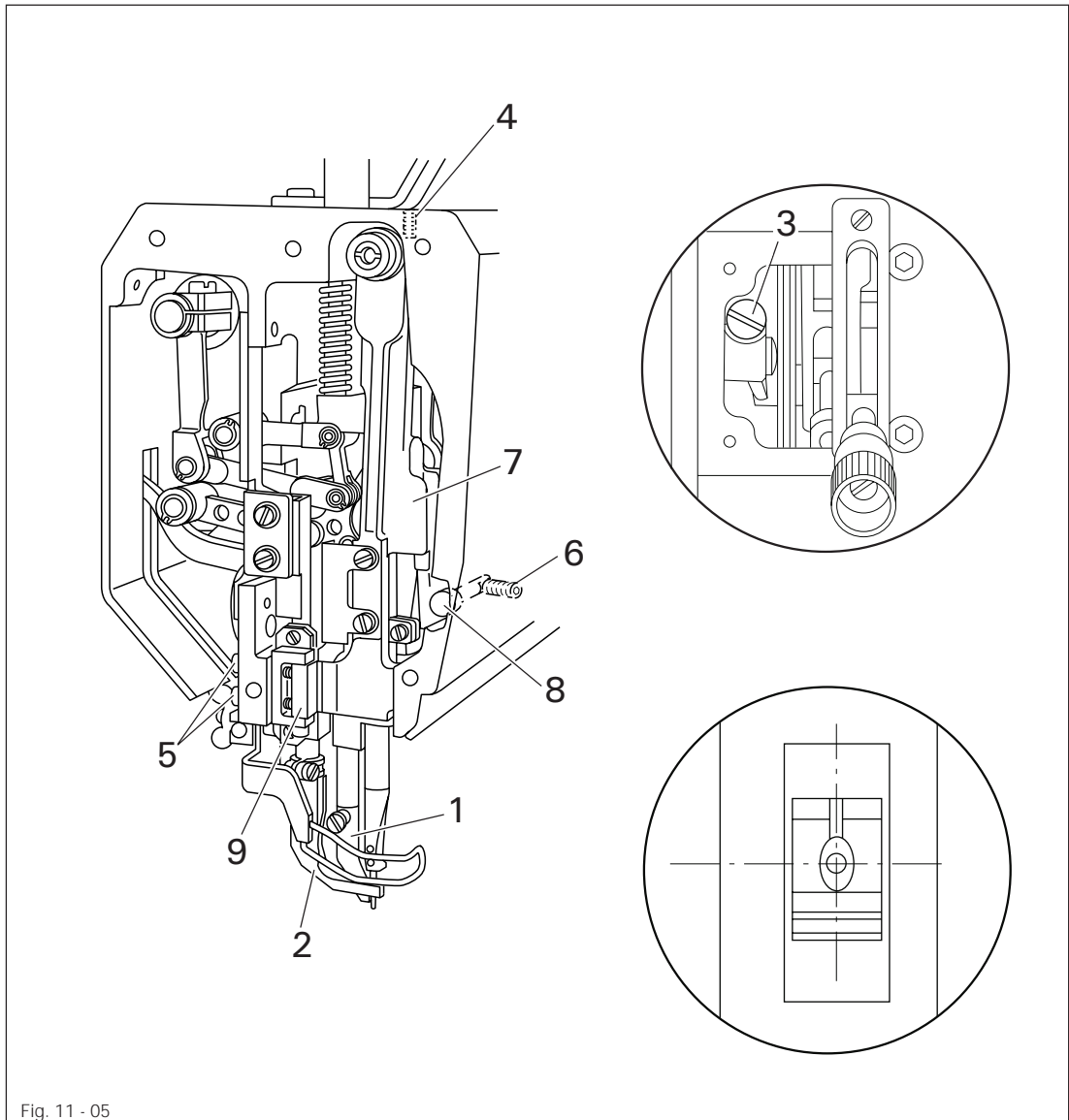
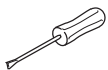


Fig. 11 - 05



- Unscrew vibrating presser 1 and presser foot 2.
- Set stitch length „0“ and bring the needle bar to its TDC.
- Insert a new needle. Loosen screws 3, 4, 5 and 6.
- Position the needle directly over the bottom feed dog by turning the handwheel.
- Move needle bar frame 7 in accordance with the **requirement**.
- Tighten screws 3, 4 and 5.
- Position stop 8 so that it is touching needle bar frame 7 and tighten screw 6.



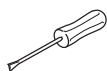
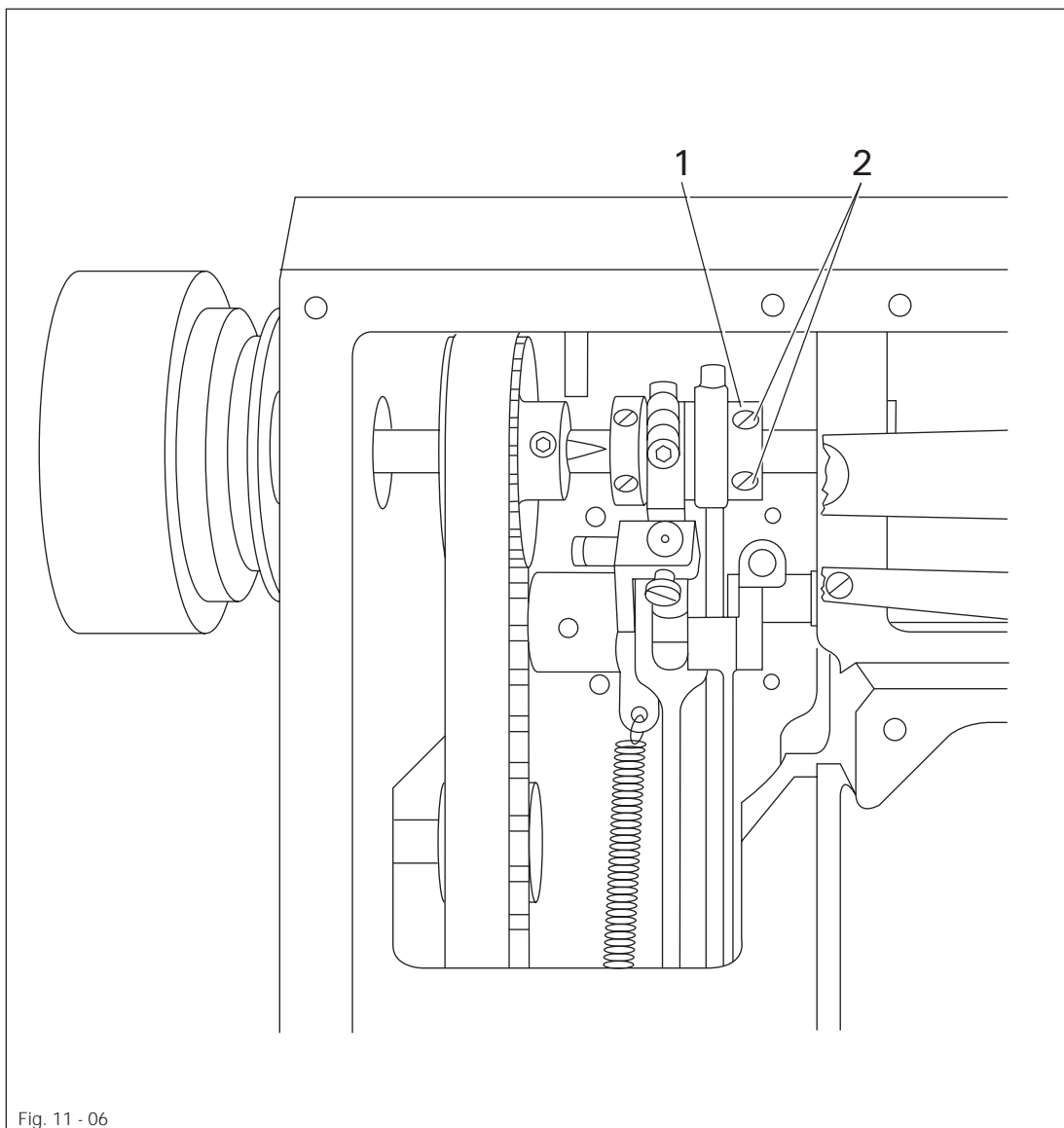
The movement of needle bar frame 7 in guide 9 and of the top feed drive bars must not be stiff.

## 11.04.06 Lifting motion of the bottom feed-dog

This adjustment does not apply for machines without a bottom feed lifting phase (without P).

### Requirement

1. With the needle bar at its BDC, the bottom feed dog must be at its TDC.
2. With the longest stitch set, the bottom feed dog must reach the top surface of the needle plate at the same time as the needle point when the handwheel is turned.

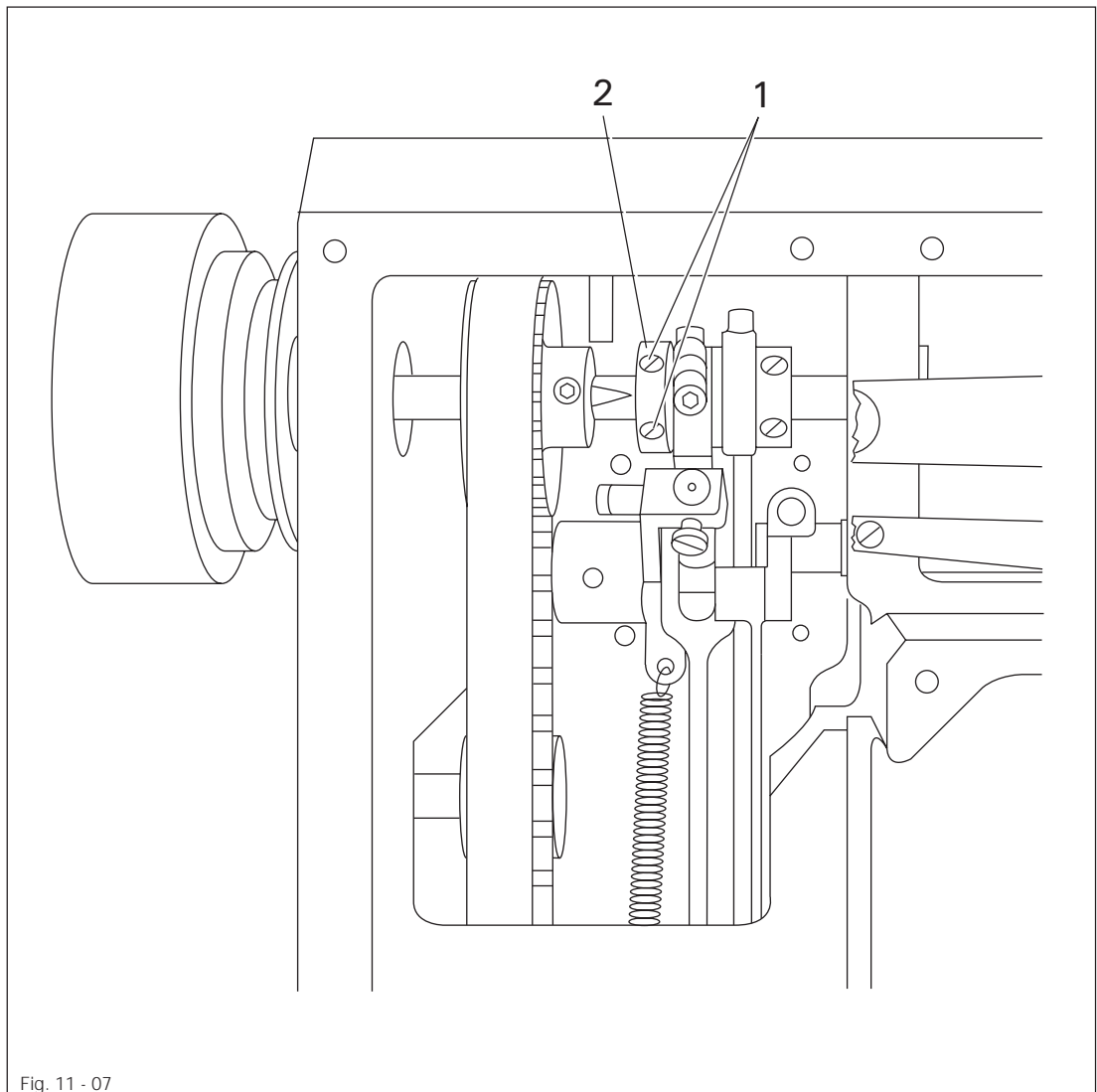


- Bring the needle bar to its BDC.
- Turn feed lifting eccentric 1 (screws 2) in accordance with **requirement 1**.
- In this position, tighten the accessible screw 2 until feed lifting eccentric 1 can be turned with difficulty.
- Turn feed lifting eccentric 1 a little further in accordance with **requirement 2**.
- Tighten both screws 2.

## 11.04.07 Driving motion of the bottom and top feeds

### Requirement

With the longest stitch length set and the needle bar at its BDC, the top and bottom feeds should not move when the reverse-feed lever is activated.



- Set the longest stitch.
- Loosen screws 1 just far enough so that the feed driving eccentric 2 can be turned on the shaft with difficulty.
- Bring the needle bar to its BDC.
- Turn the feed driving eccentric 2 so that its eccentricity is facing downwards.
- Now turn it a little in the direction of rotation in accordance with the **requirement**.
- In this position, tighten screws 1.
- Carry out a check in accordance with the **requirement**.

## 11.04.08 Hook-to-needle clearance, needle rise, needle height and needle guard (On Model 1246 make these adjustments on both sewing hooks.)

### Requirement

With the stitch length set at „3“ and the needle rise at (1.8 mm after BDC of the needle bar on model „B“ and 2.0 mm after BDC of the needle bar on model „C“), the following must be true:

1. The distance to the needle must be 0.05 - 0.1 mm and the hook point must be pointing to the middle of the needle.
2. The top edge of the eye of the needle must be 0.8 - 1 mm below the hook point.
3. The needle guard must lightly touch the needle.

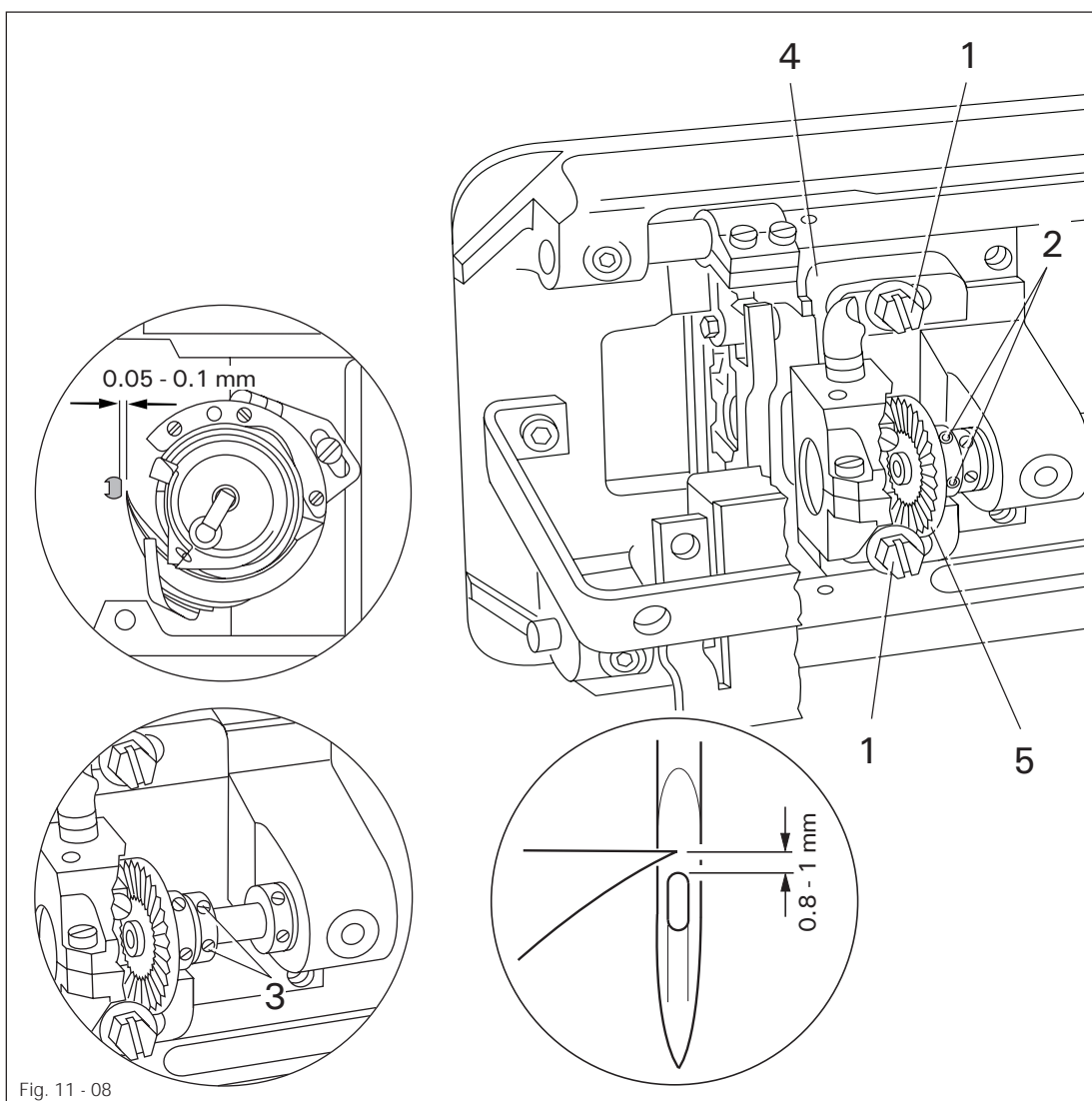
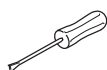


Fig. 11 - 08



- Set stitch length „3“ and loosen screws 1 and 2 (also loosen screws 3 on machines with automatic thread trimmer -900/56).
- Move hook bearing 4 in accordance with requirement 1.
- Tighten screws 1.
- Bring the needle to its BDC and slide the 1.8 or 2 mm thick feeler gauge under the needle bar bearing, allow the adjustable clamp to come to rest on the feeler gauge and screw it tight.
- Remove the feeler gauge and turn the handwheel in its direction of rotation until the

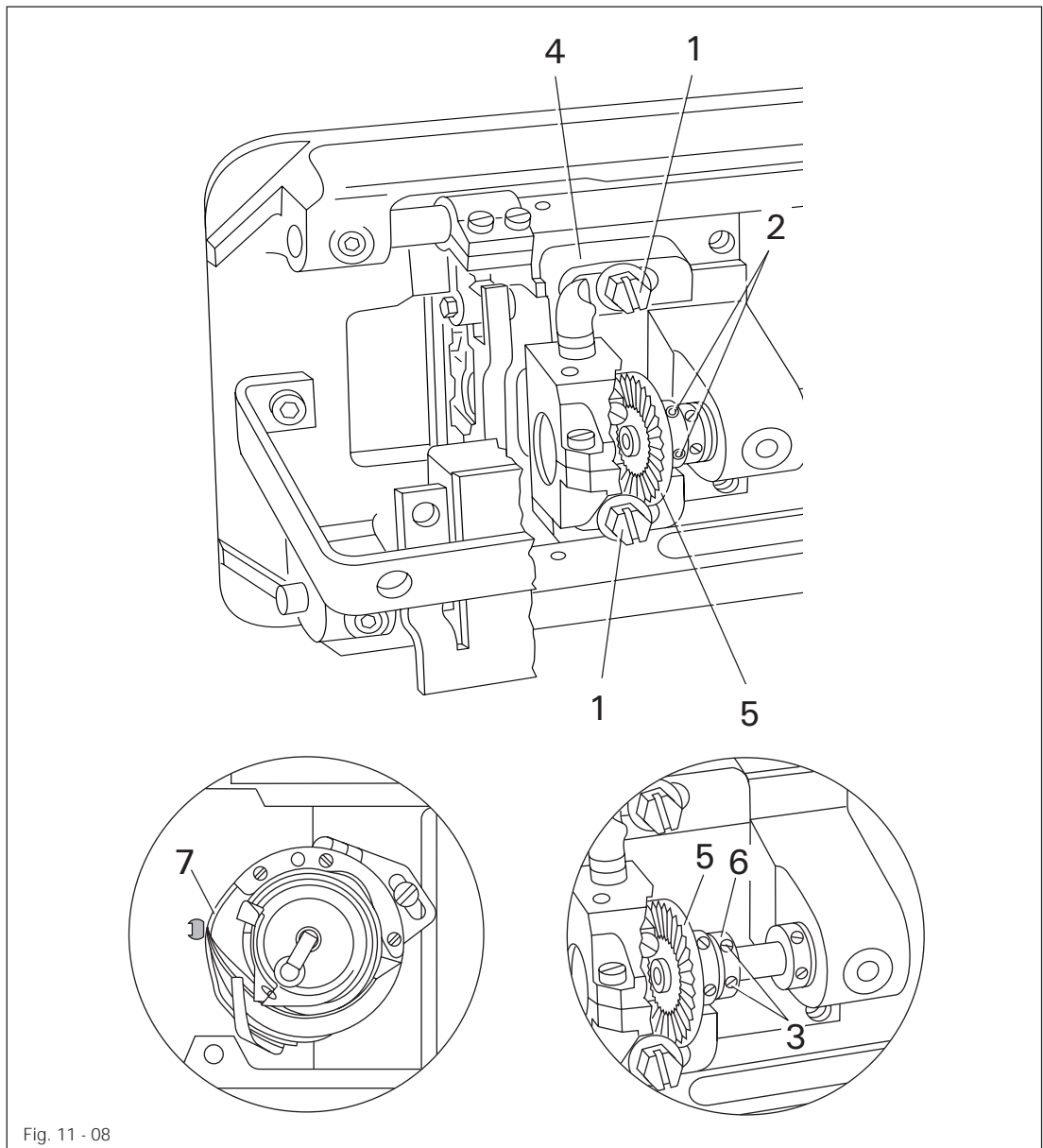
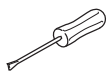


Fig. 11 - 08



adjustable clamp is touching the needle bar bearing.

- Position the hook point at the middle of the needle, taking care to ensure that the needle is not pressed by needle guard 7.
- While ensuring that bevel pinion 5 is not too close, and that the hook does not exhibit too much play, tighten screws 2.
- On machines with automatic thread trimmer -900/56, bring retaining collar 6 to rest on bevel pinion 5 and tighten screws 3.
- Adjust the needle height in accordance with **requirement 2** (see also **chapter 11.04.04**).
- Align needle guard 7 in accordance with **requirement 3**.



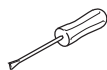
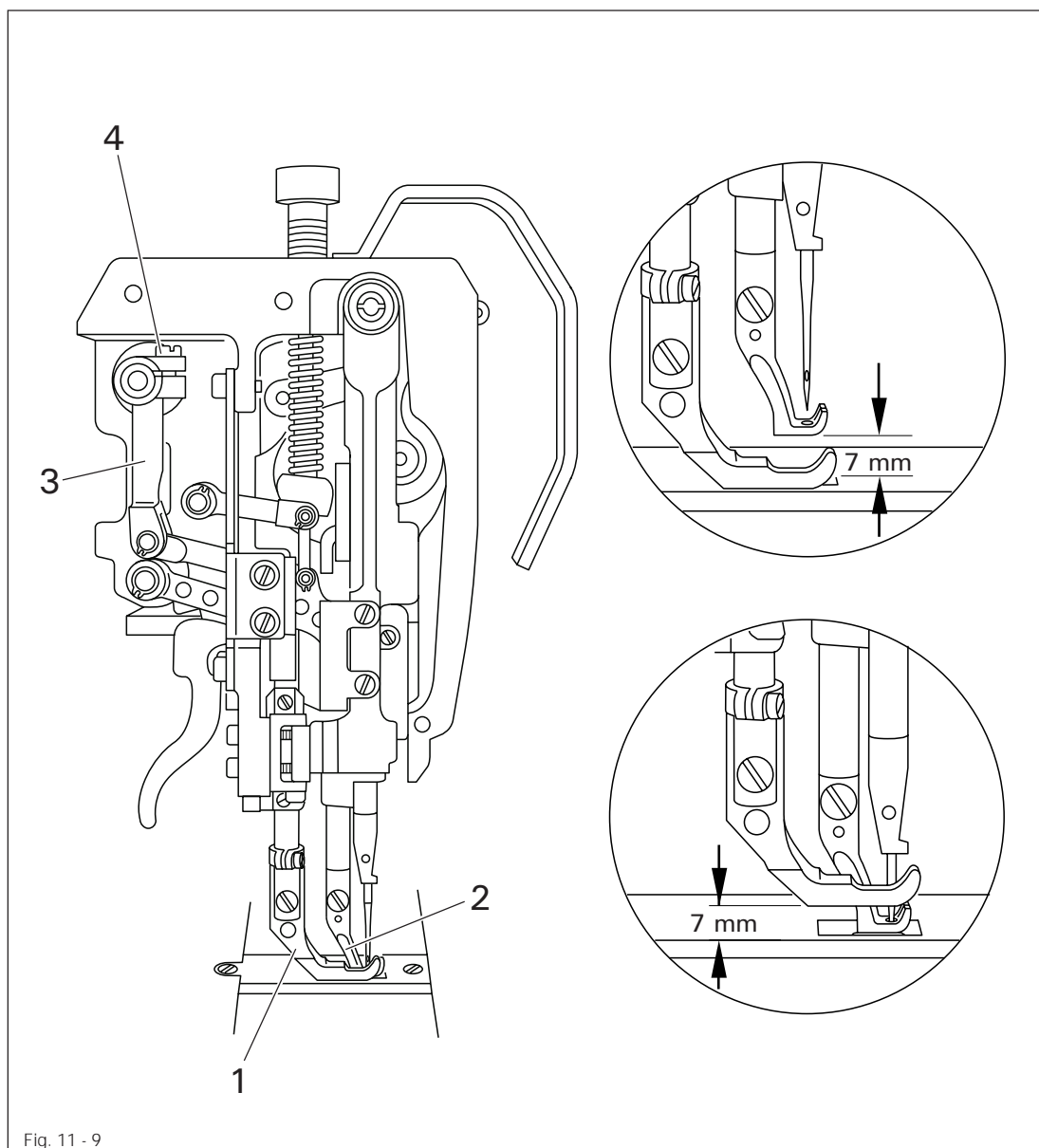
Bei der PFAFF 1246 ist nach Veränderung des Nadelabstandes unbedingt die Verbindungsstange zum Fadenabschneider (siehe auch **Kap.11.05.10**) neu zu justieren.



## 11.04.9 Top-feed stroke

**Requirement**

At the largest top-feed stroke setting and stitch length „0“, presser foot 1 and vibrating presser foot 2 must lift 7.0 mm from the needle plate when the handwheel is turned.



- Set the largest top-feed stroke and the stitch length at „0“.
- Bring presser foot 1 to rest on the needle plate.
- Turn the handwheel in the direction of rotation until vibrating presser foot 2 has reached its highest point.
- Turn crank 3 (screws 4) in accordance with the **requirement**.
- Carry out a check in accordance with the **requirement**.

## 11.04.10 Lifting motion of the top feed

### Requirement

When presser foot 1 is resting on the needle plate, the vibrating presser foot 4 and the point of the needle must both reach the needle plate at the same time when the top feed stroke is set at maximum.

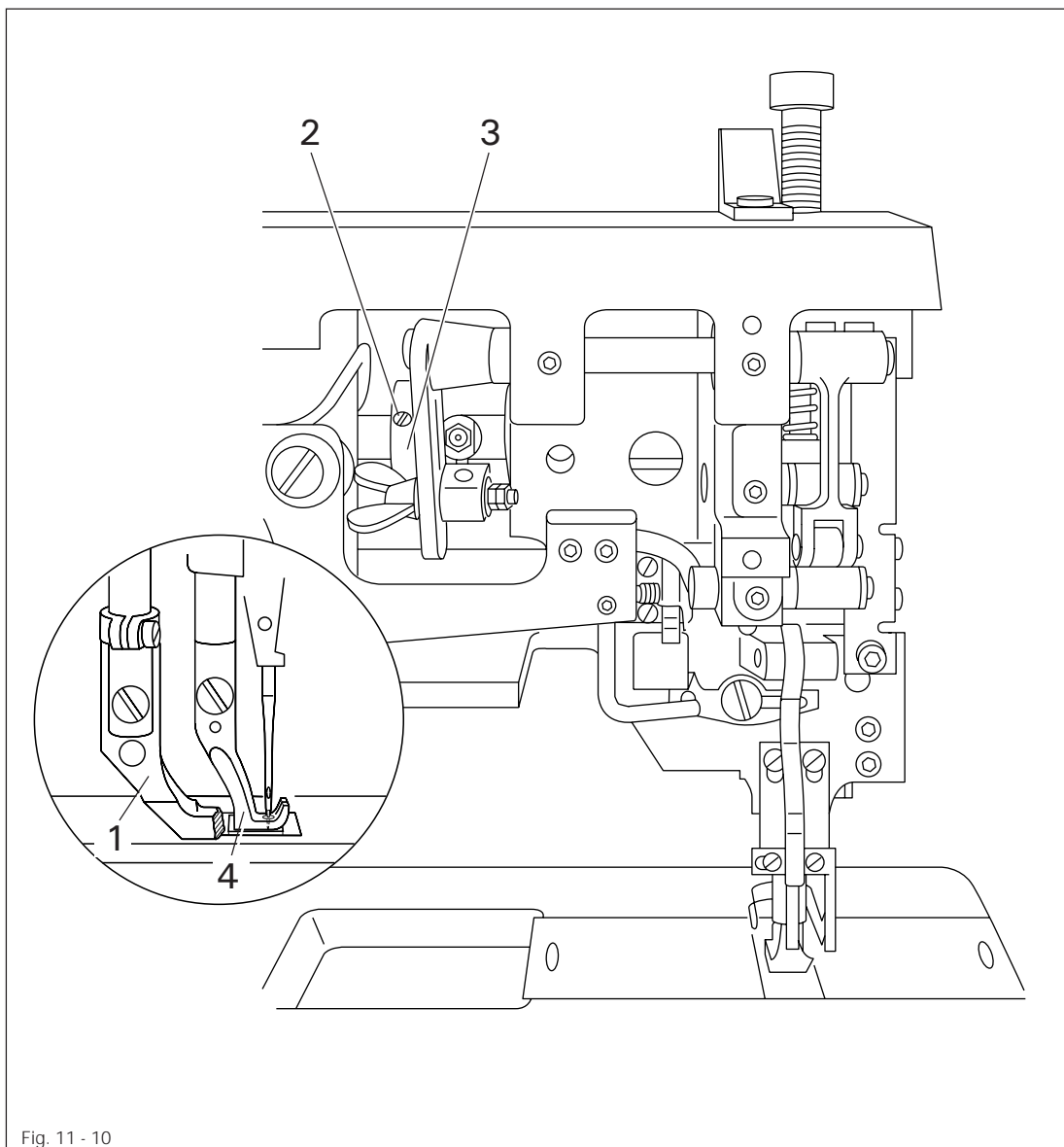
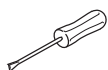


Fig. 11 - 10



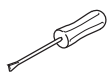
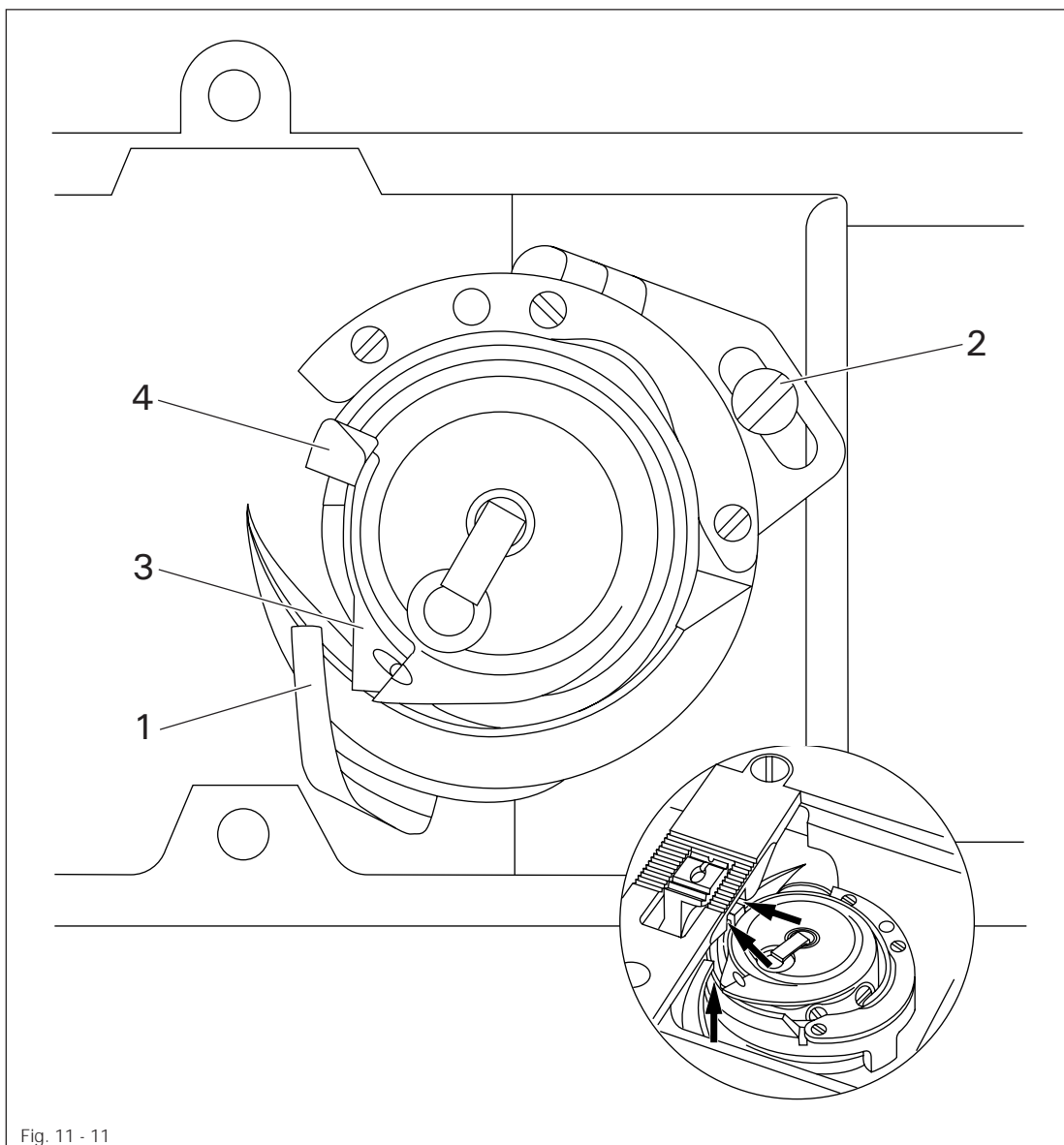
- Allow presser foot 1 to rest on the needle plate.
- Loosen screws 2 until feed lifting eccentric 3 can be turned on its shaft with difficulty.
- Turn feed lifting eccentric 3 in accordance with the **requirement**.
- Tighten screws 2.
- Carry out a check in accordance with the **requirement**.

## 11.04.11 Bobbin-case opener

(On Model 1246 make these adjustments on both bobbin openers.)

### Requirement

The needle thread must not be clamped between the bobbin-case opener 1 and the bobbin-case base 3 nor may it be clamped between projection 4 and the retaining trip of the needle plate (see arrows).

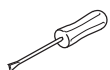
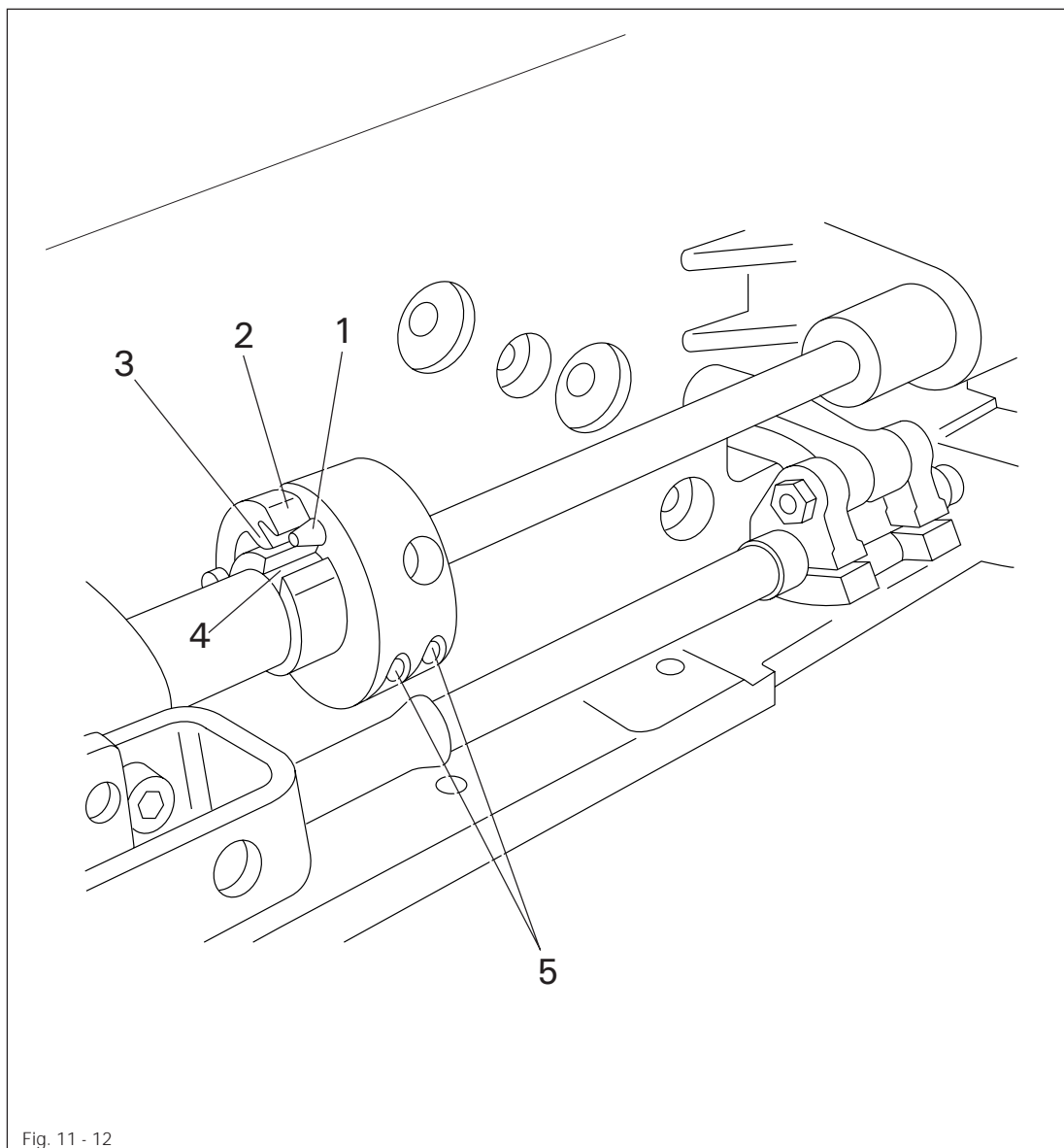


- Thread the machine, insert test material and allow the presser foot to rest on the needle plate.
- Sew a few stitches by turning the handwheel and carry out a check in accordance with the **requirement**.
- Turn bobbin-case opener 1 (screw 2) in accordance with the **requirement**.

## 11.04.12 Safety clutch



The safety clutch is set by the manufacturer and screws 5 are sealed. If the thread jams, the safety clutch snaps out to prevent damage to the hook. A description of how to snap the clutch back in follows.



- Remove the jammed thread.
- Press piston 1 and turn the handwheel until hook 3 of pawl 2 clicks into groove 4.

11.04.13 Needle thread tension release

**Requirement**

With the presser foot raised, both of the tension discs must be at least **0.5 mm** apart.



The clearance of 0.5 mm is a minimum and can increase to more than 1 mm when using thick threads.

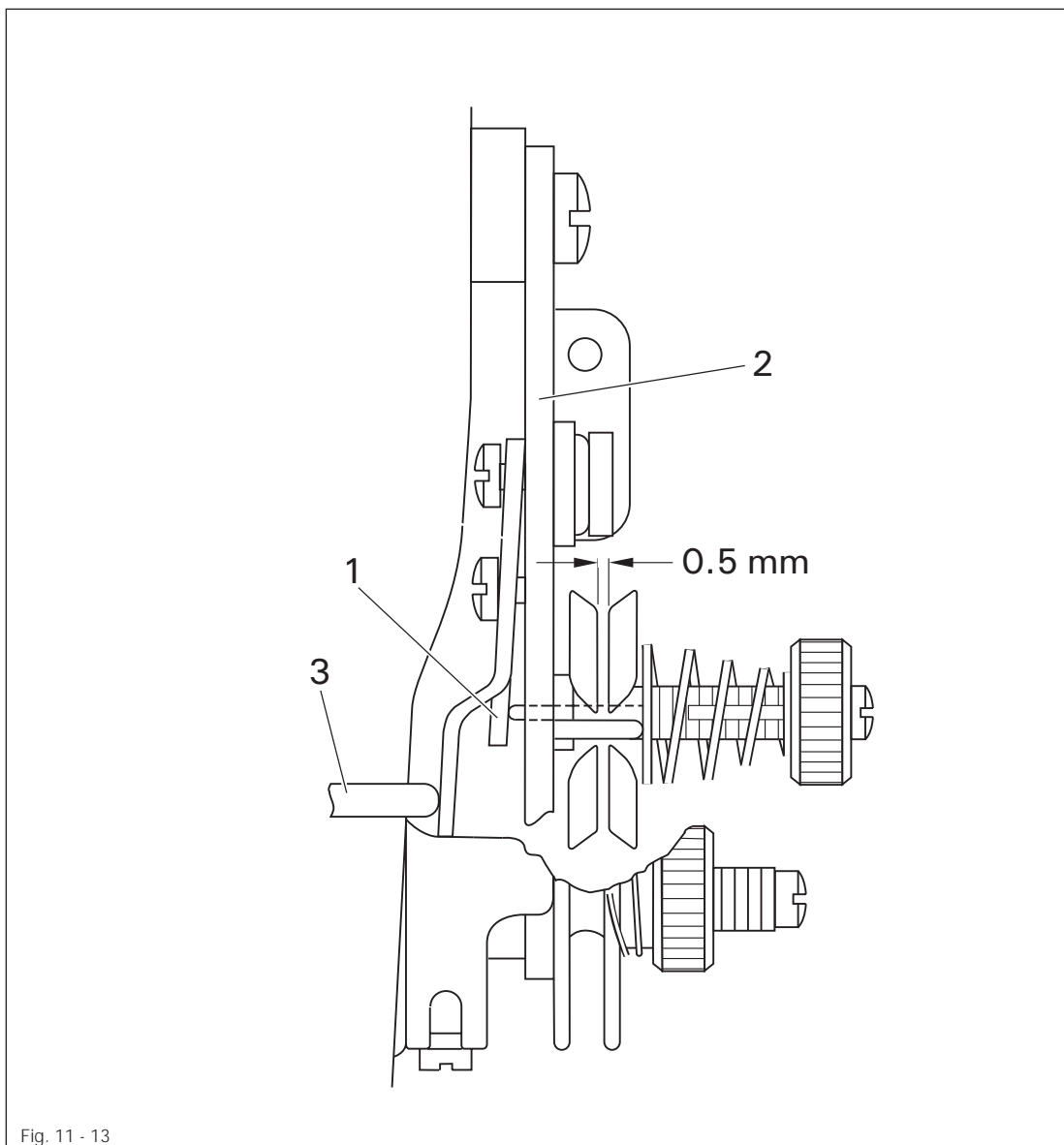
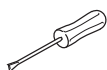


Fig. 11 - 13



- Align pressure plate 1 behind tension carrier plate 2 in accordance with the **requirement**.



If the tension is correct, release pin 3 must not be under pressure.

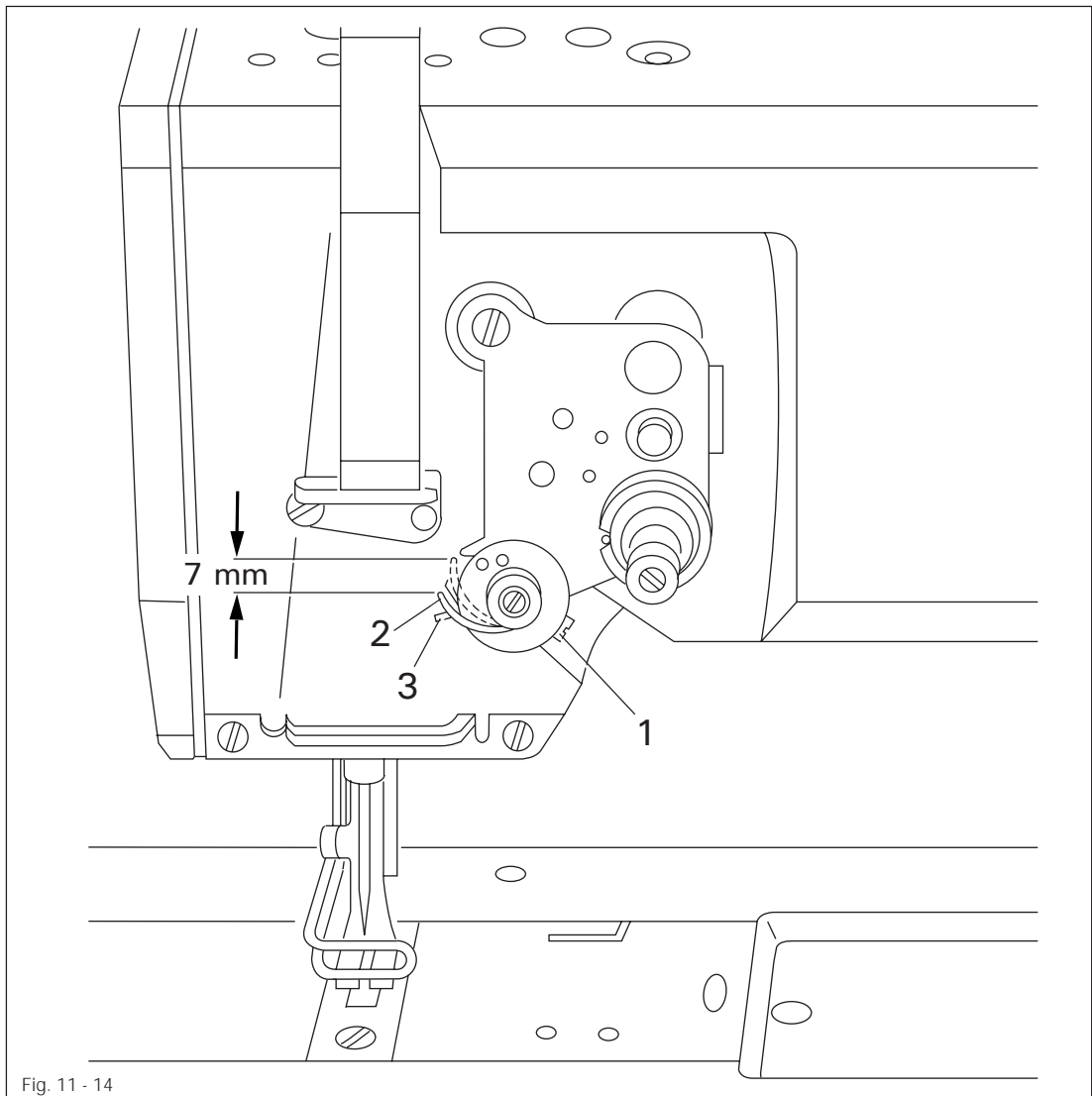
## 11.04.14 Thread check spring

### Requirement

The movement of thread check spring 2 must be finished when the needle point enters the material (approx. 7 mm spring path).



Due to technical reasons, the length of the thread-check spring path can vary a little in either direction.



- Thread the machine, place test material under the presser foot and allow the presser foot to rest on the fabric using the presser foot lifter.
- Loosen screw 1.
- Sew a few stitches by turning the handwheel and then bring the take-up lever to its TDC.
- Continue to turn the handwheel (in its direction of rotation) until the needle enters the material.
- In this position, bring stop 3 to rest on thread check spring 2 and tighten screw 1.

## 11.04.15 Thread check spring on PFAFF 1246 with thread trimmer -900/56

### Requirement

The motion of thread controller springs 1 and 6 should cease as soon as the needle point penetrates the material (= about 7 mm spring deflection).



Due to technical reasons, the length of the thread-check spring path can vary a little in either direction.

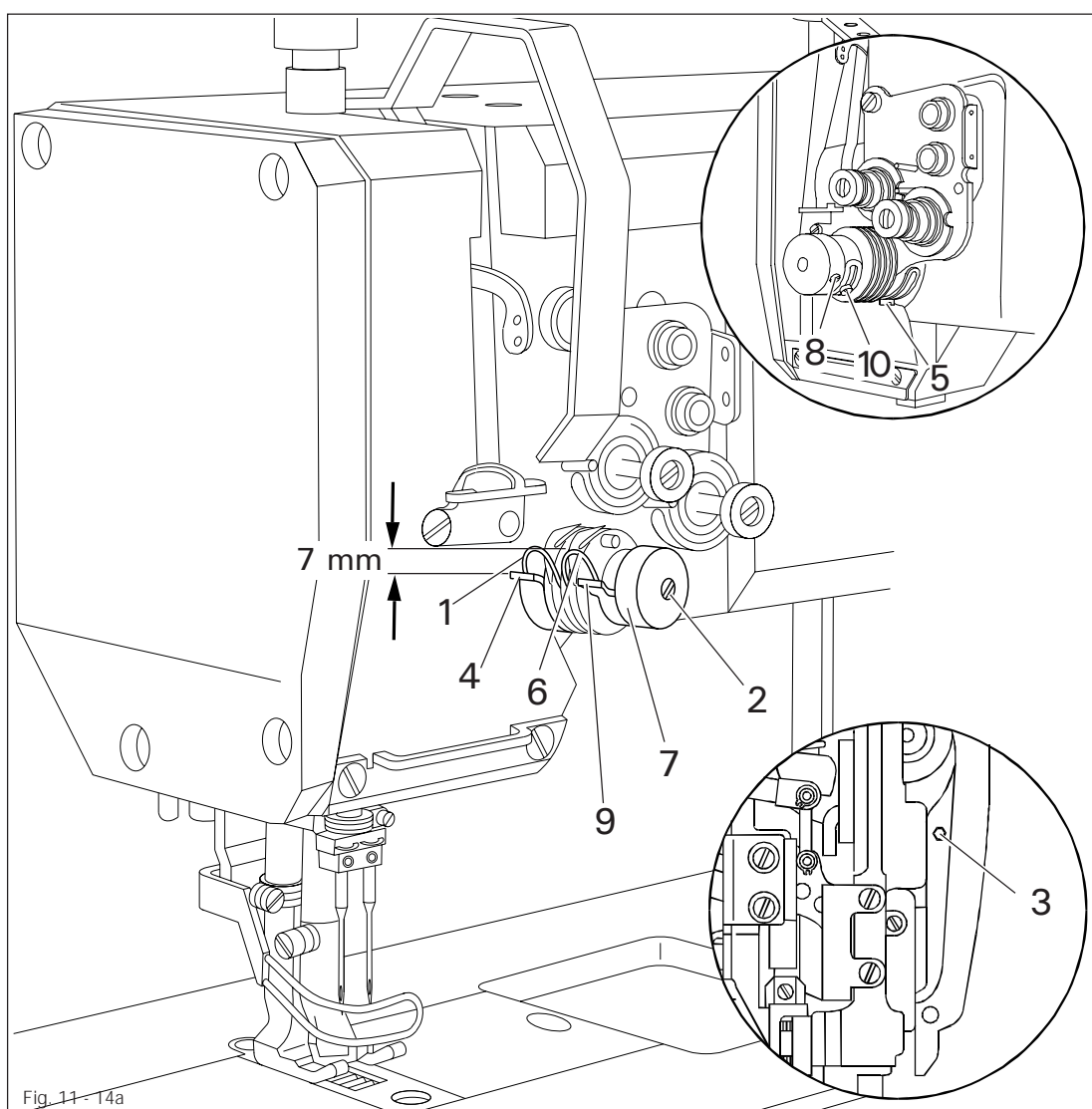


Fig. 11 - 14a



- Turn screw 2 (screw 3) to adjust the spring resistance of thread check spring 1.
- Turn retainer 4 (screw 5) according to the requirement.
- Turn screw 7 (screw 8) to adjust the spring resistance of thread check spring 6.
- Turn retainer 9 (screw 10) according to the requirement.

## Requirement

1. With the bobbin winder switched on, the bobbin winder spindle must engage reliably. With the bobbin winder switched off, friction wheel 5 must not touch drive wheel 1.
2. The bobbin winder must switch off automatically when the thread level is approximately 1 mm from the edge of the bobbin.

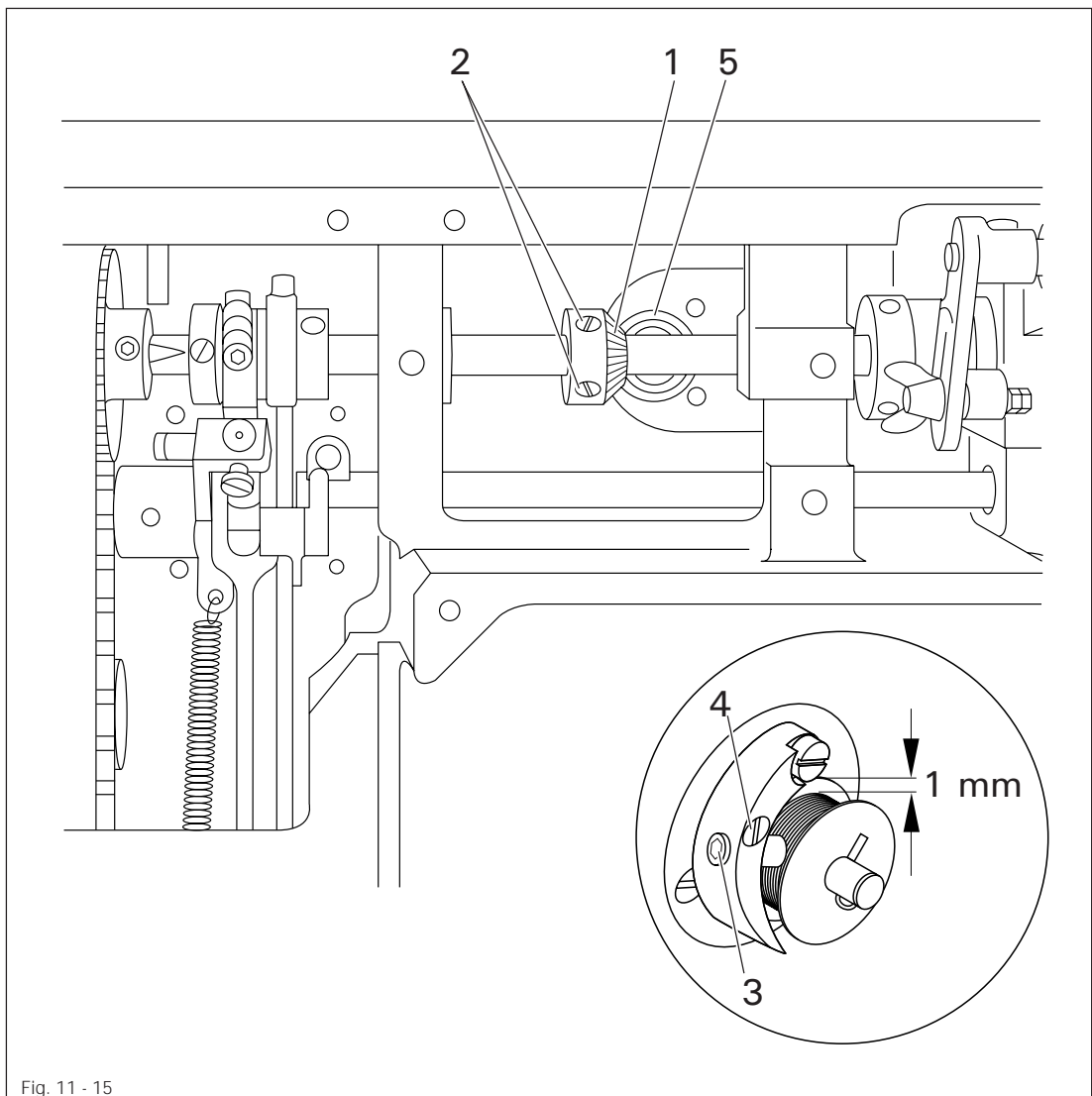
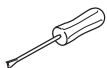


Fig. 11 - 15



- Move drive wheel 1 (screws 2) in accordance with requirement 1.
- Place a bobbin on the bobbin winder, thread the bobbin and switch on the bobbin winder.
- Move stop latch 3 (screws 4) in accordance with requirement 2.



11.04.17 Presser-foot pressure

**Requirement**

The material must be fed reliably even at top sewing-speed. There mustn't be pressure marks on the material.

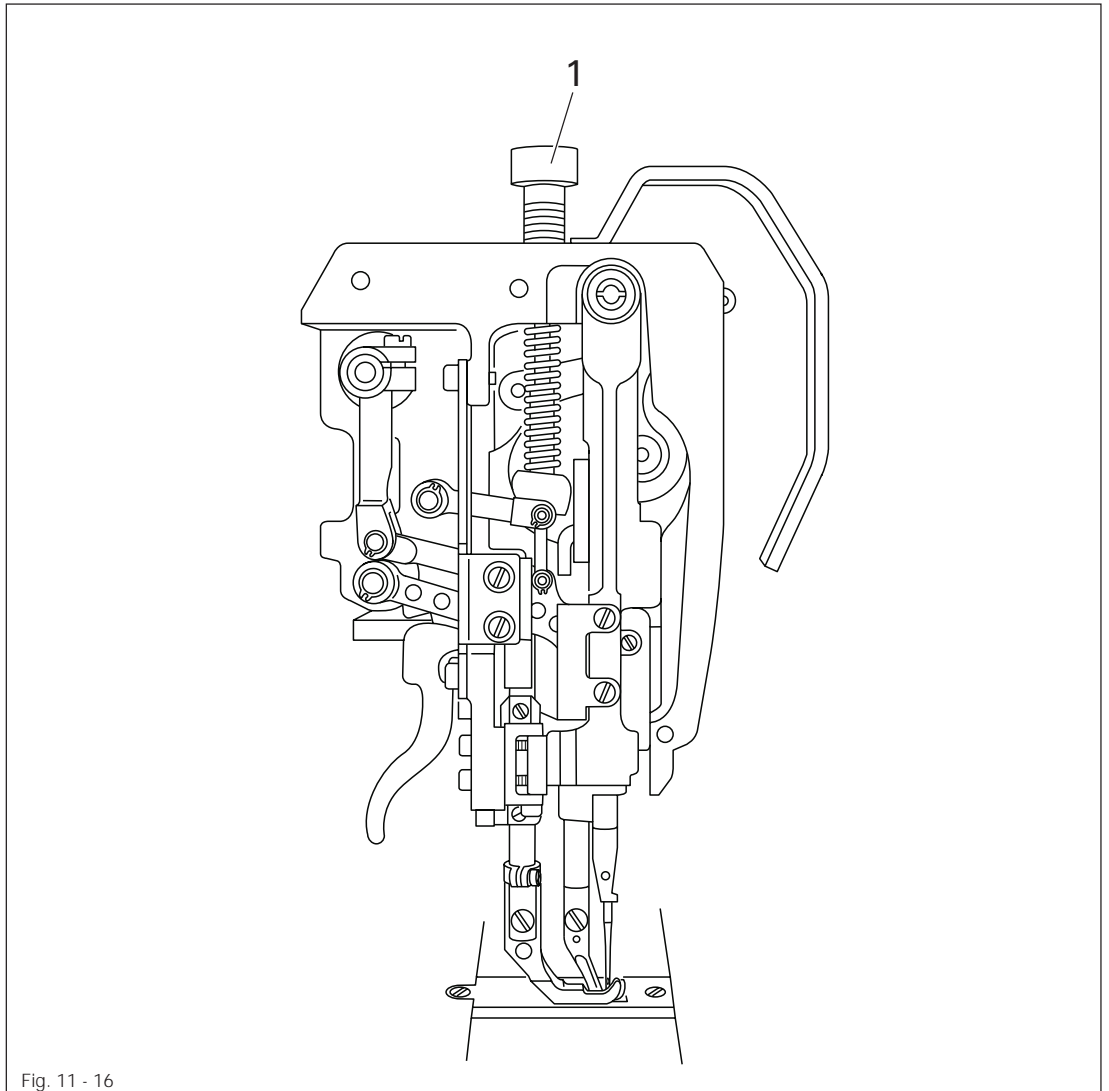
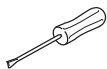


Fig. 11 - 16



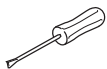
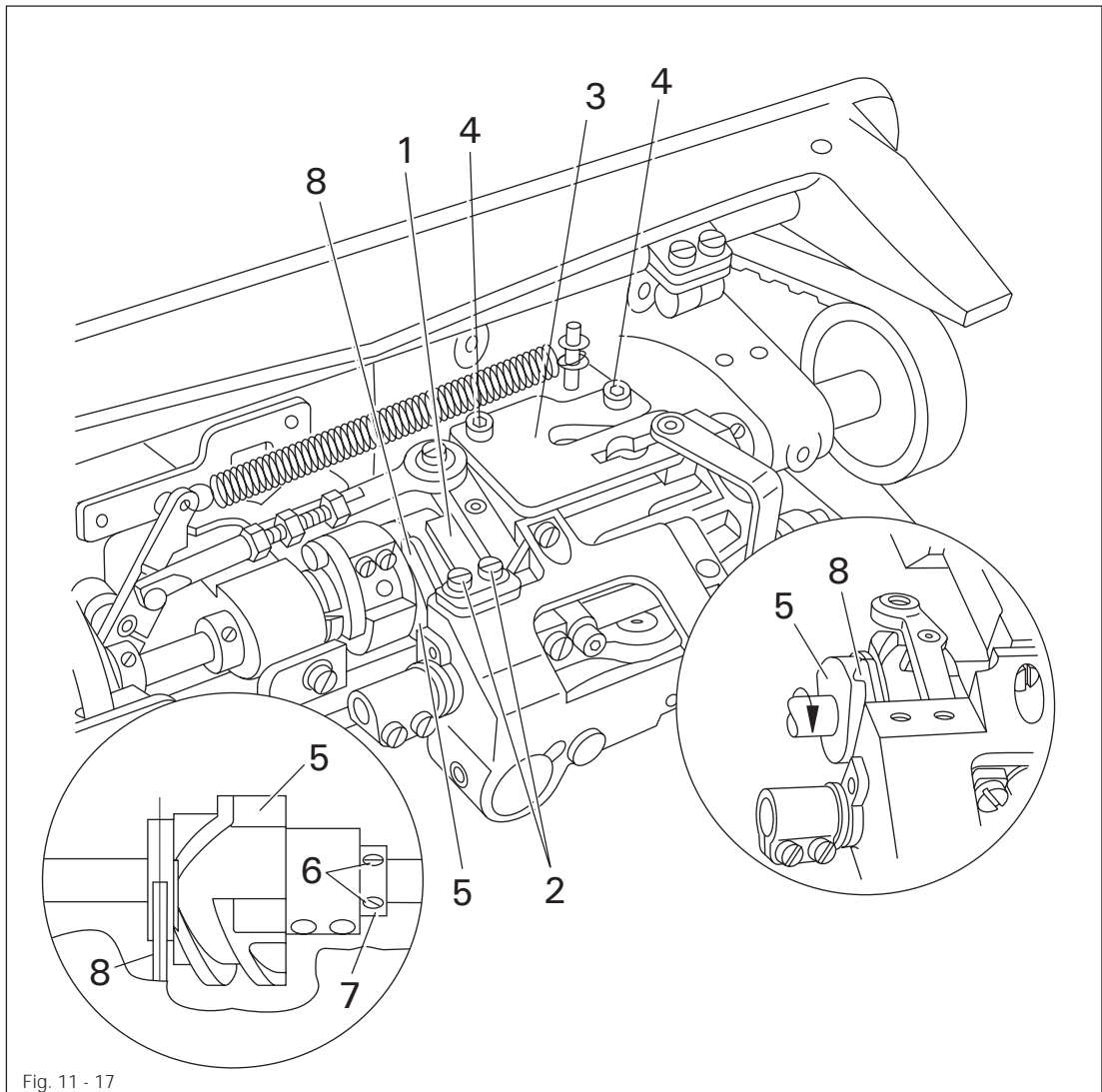
- Turn screw 1 in accordance with the **requirement**.

## 11.05 Adjusting the thread trimmer -900/56

### 11.05.01 Pre-adjusting the control cam

#### Requirement

1. The eccentric bearing-surface of control cam 5 must be laterally in the middle of pawl 8.
2. With the take-up lever at its TDC, the beginning of the largest eccentricity of the bearing surface (in the direction of rotation) must be underneath the point of pawl 8.



- Remove catch 1 (screws 2).
- Remove plate 3 (screws 4).
- Loosen the four screws of control cam 5 and screws 6 of retaining collar 7.
- Move control cam 5 laterally in accordance with **requirement 1**.
- In this position bring retaining collar 7 to rest on control cam 5 and tighten screws 6.
- Bring the take-up lever to its TDC by turning the handwheel.
- Turn control cam 5 in the direction of rotation in accordance with **requirement 2**, taking care to note that it is touching retaining collar 7.
- In this position, tighten the four screws on control cam 5.

## 11.05.02 Tripping lever

**Requirement**

In needle rise position, the flattened pin of control lever 6 (see arrow) must fall slightly into the track of control cam 7 when activating lever 8 is activated.

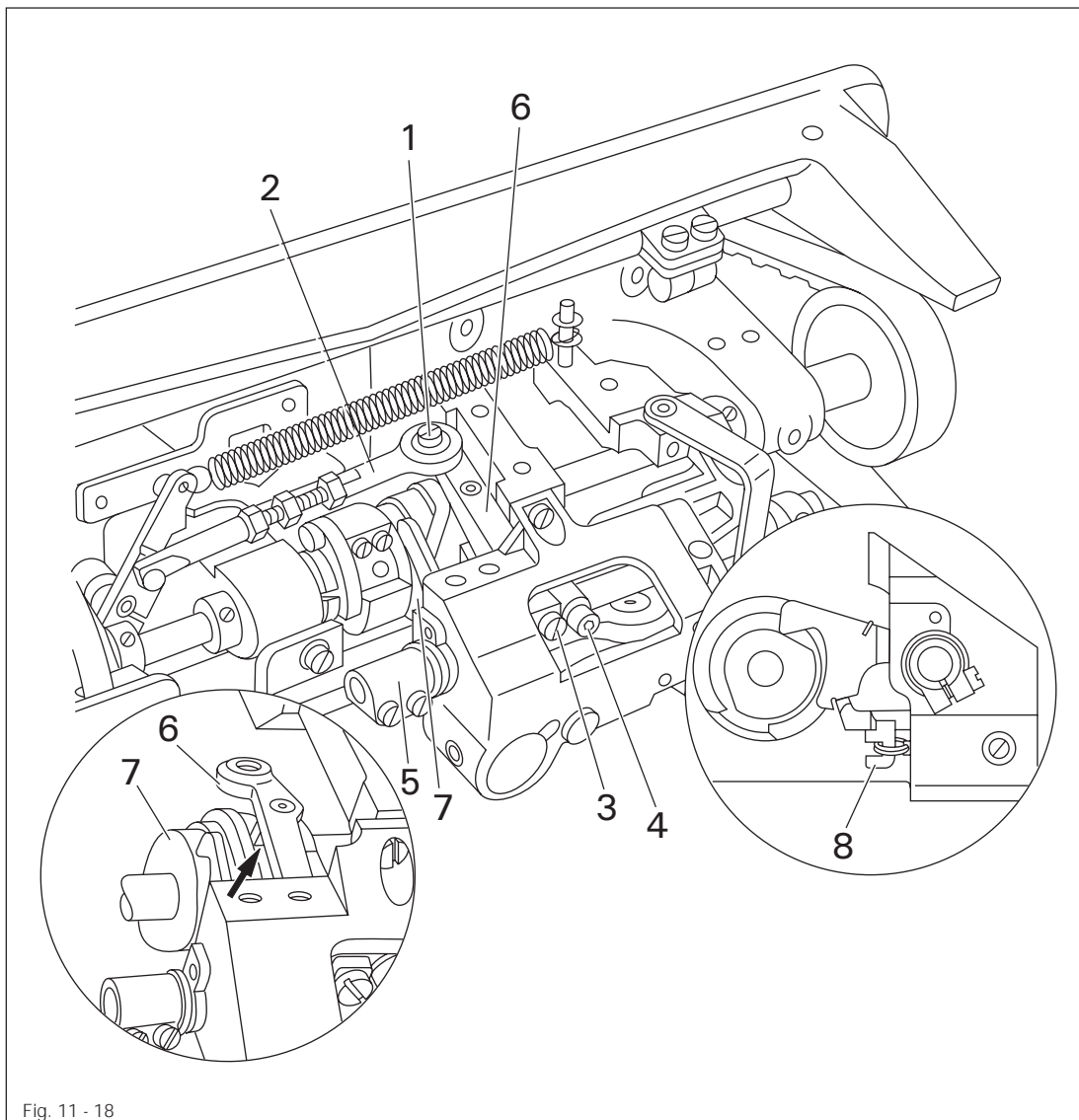


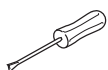
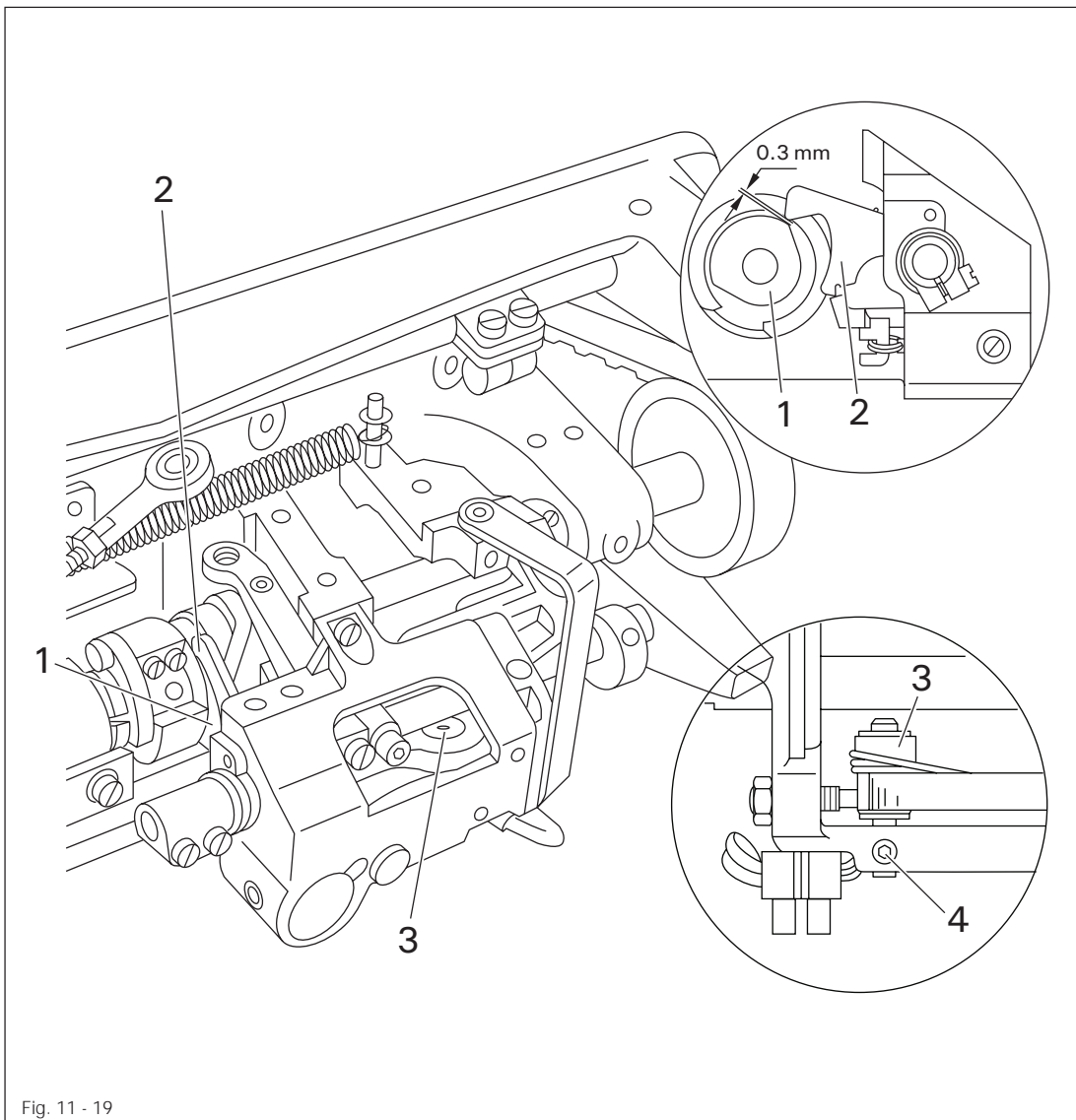
Fig. 11 - 18



- Screw out screw 1 and swing out connecting rod 2.
- Loosen screws 3 and 4.
- Bring the needle bar to needle rise position by turning the handwheel.
- Bring clamp 5 to rest on the right side of the housing.
- Keeping this position, move control lever 6 laterally in accordance with the **requirement** and then press control lever 6 onto the bottom of the cam track.
- In this position, tighten screw 3.
- Carry out a check in accordance with the **requirement**.
- Screw 4 remains loosened until the release trip is adjusted.

## Requirement

With the cut-off mechanism in resting position, there must be a distance of **0.3 mm** between the largest eccentricity of bearing surface 1 and pawl 2.

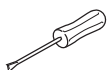
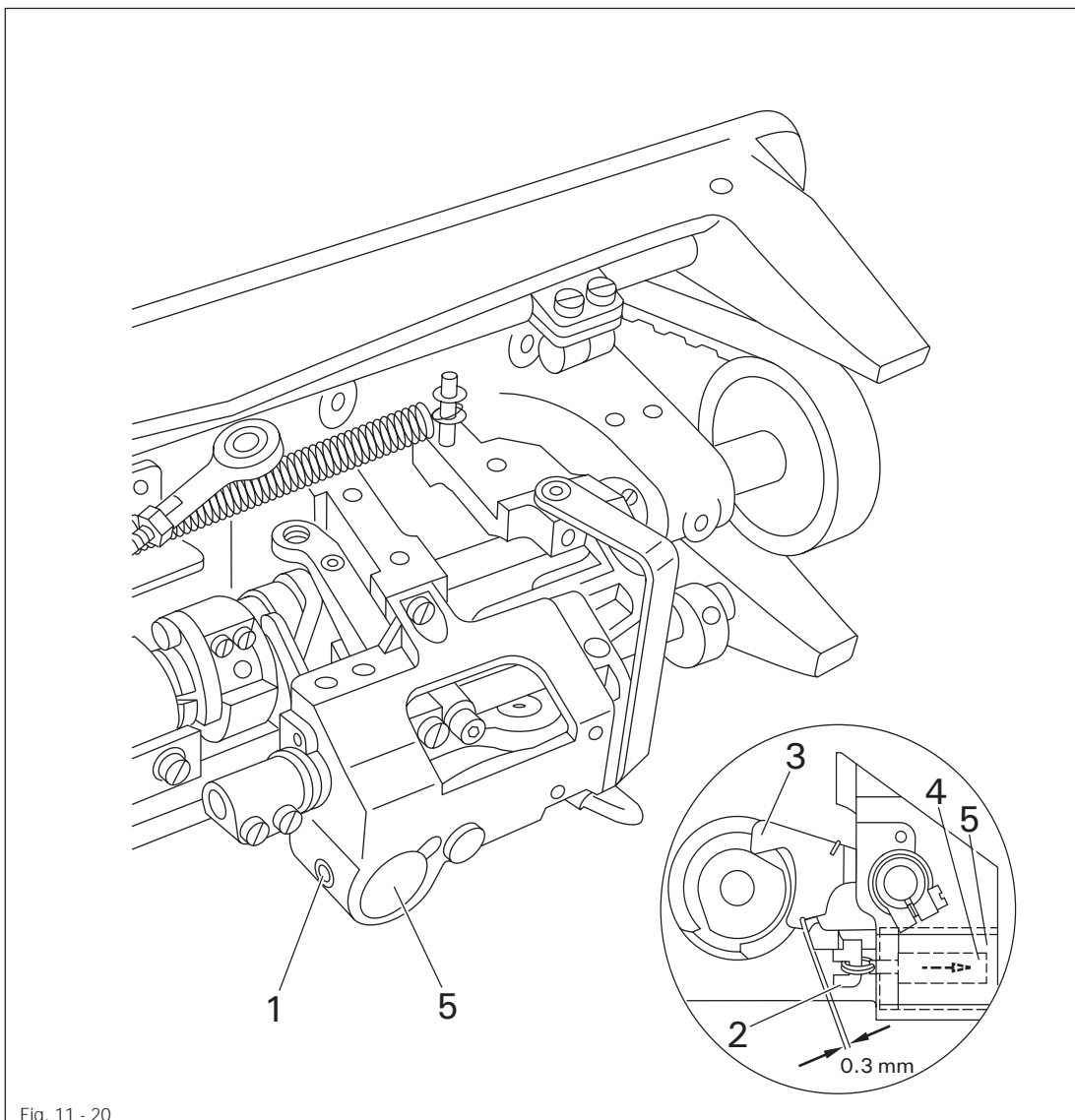


- Position the largest eccentricity of bearing surface 1 underneath pawl 2 by turning the handwheel.
- Move bearing bolt 3 (screw 4) in accordance with the requirement.

## 11.05.04 Engaging solenoid

**Requirement**

In needle rise position and with engaging solenoid **5** activated, there must be a distance of **0.3 mm** between engaging lever **2** and pawl **3**.

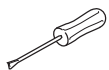
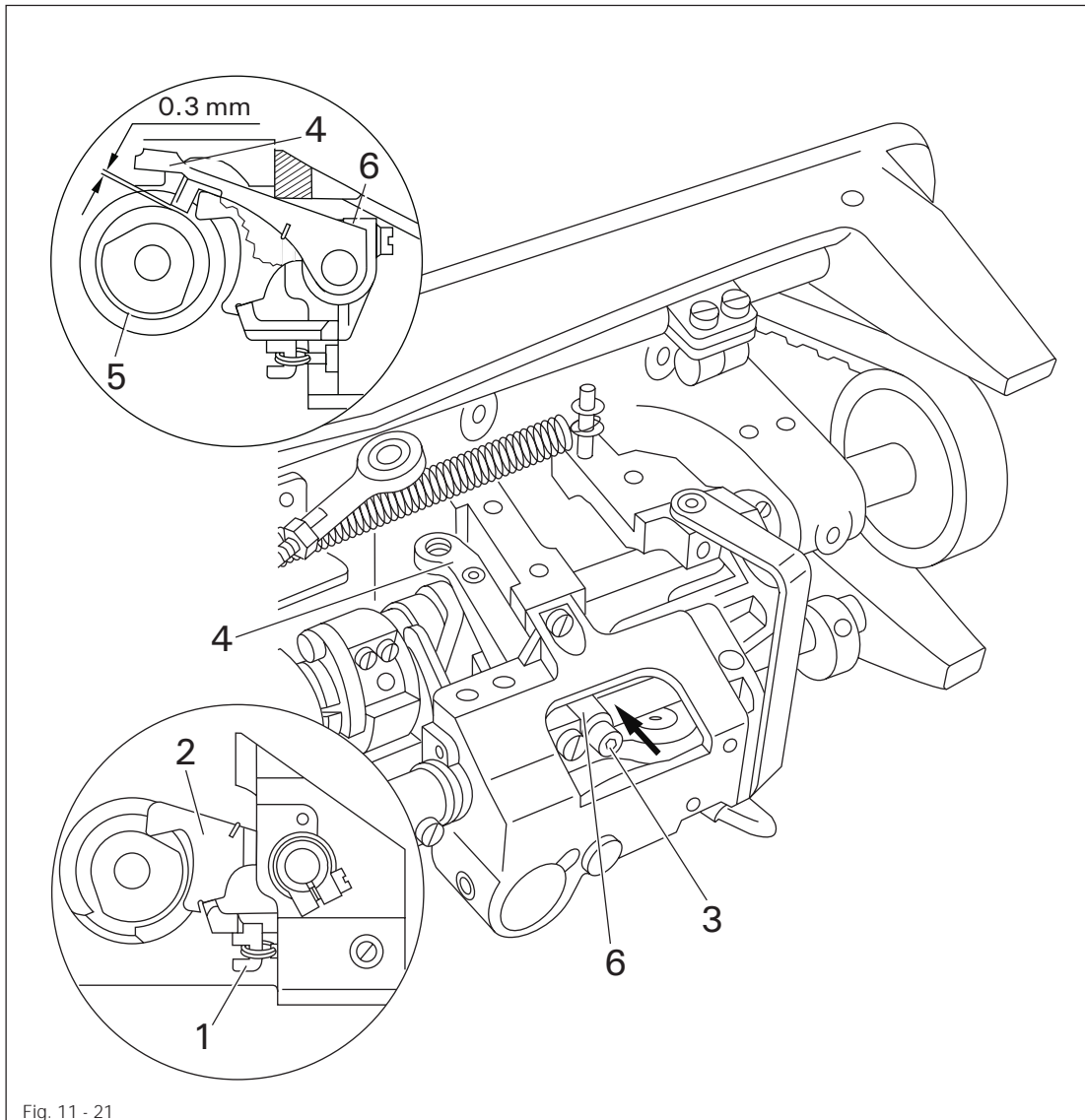


- Bring the machine to needle rise position by turning the handwheel.
- Loosen screw **1** until the engaging solenoid can be turned with difficulty.
- Manually activate engaging lever **2** so that pawl **3** engages.
- Press magneto inductor **4** as far as possible into solenoid housing **5** and move both the solenoid housing and the magneto inductor in accordance with the **requirement**.
- In this position tighten screw **1**.

## 11.05.05 Release trip

### Requirement

In needle rise position and with control lever 4 engaged, there must be a distance of approx. **0.3 mm** between the bolt of the control lever and the base of the cam track.



- Bring the machine to needle rise position by turning the handwheel.
- Manually activate engaging lever 1 so that pawl 2 engages.
- Taking care to ensure that screw 3 is still loose, press control lever 4 down to the base of the track of control cam 5.
- Maintaining this position, lightly tighten screw 3 while bringing release trip 6 into a resting position against engaging lever 1 and laterally against control lever 2 in the direction of the arrow.
- By lightly tapping on release trip 6 in the direction of the arrow, while simultaneously tapping control lever 4, create a distance between the bolt and the base of the cam track which corresponds with the requirement.
- In this position tighten screw 3.
- Carry out a check in accordance with the requirement.

## 11.05.06 Engaging lever

**Requirement**

With the needle bar at TDC and with control lever **3** at starting position, there must be a distance of approx. **0.3 mm** between bolt **4** and the outer diameter of control cam **5**.

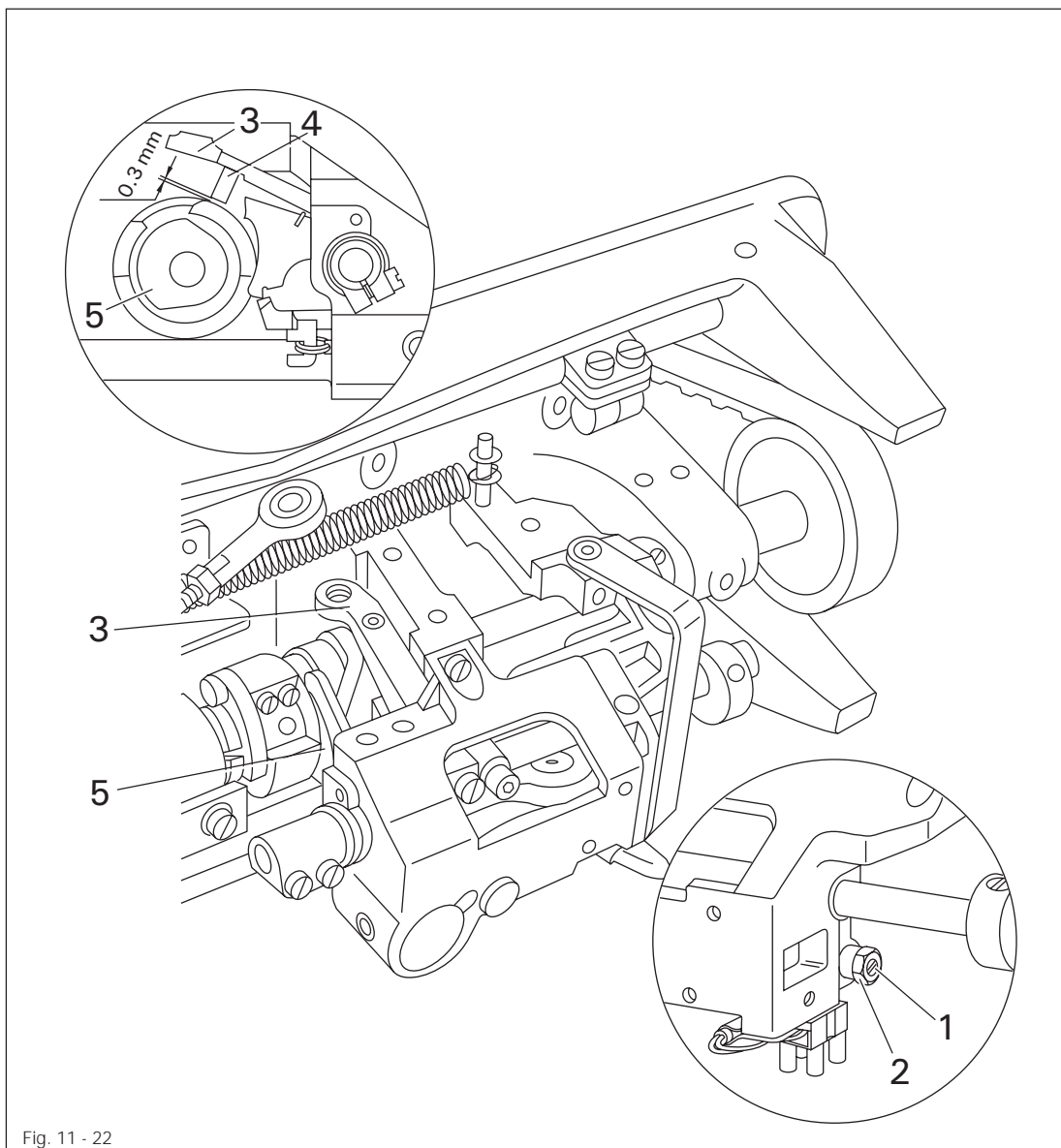
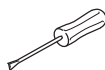


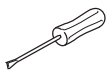
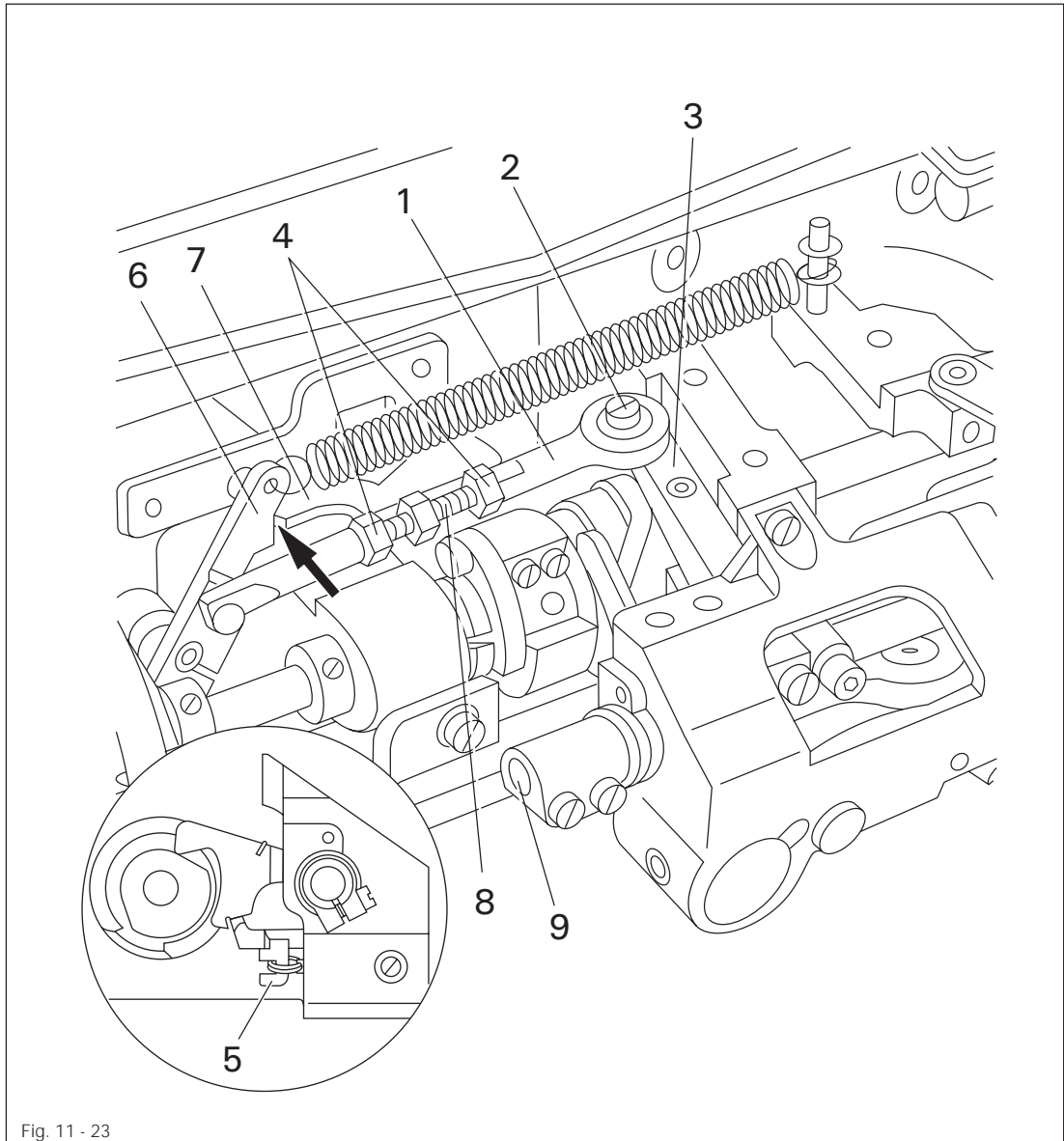
Fig. 11 - 22



- Bring the needle bar to TDC by turning the handwheel.
- Turn screw **1** (nut **2**) in accordance with the **requirement**.
- Carry out a check by tapping control lever **3**.

**Requirement**

When shaft 9 begins its sliding motion, lever 6 must simultaneously lift from stop 7.



- Affix spherical head 1 to control lever 3 using screw 2.
- Loosen nuts 4 (right and left handed thread).
- Bring the machine to needle rise position by turning the handwheel and activate engaging lever 5.
- Taking care to ensure that lever 6 is touching stop 7 (see arrow), turn linkage rod 8 in accordance with the **requirement**.
- In this position tighten both nuts 4.
- Carry out a check in accordance with the **requirement**.



## 11.05.08 Final adjustment of the control cam

**Requirement**

When control lever **3** is engaged and the needle point is **12 mm** above the needle plate coming from its BDC, the motion of the thread catcher **5** must begin.

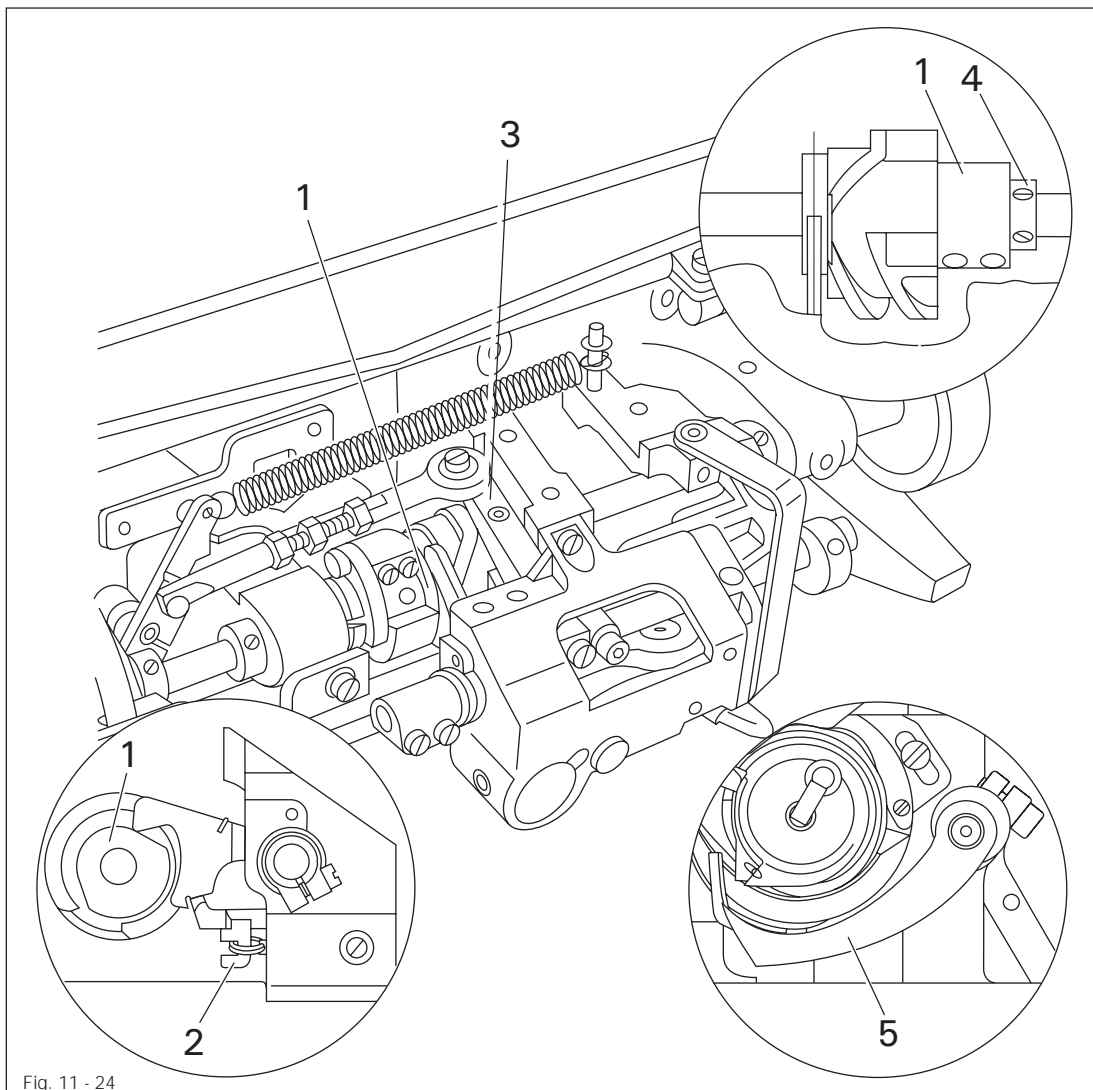


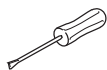
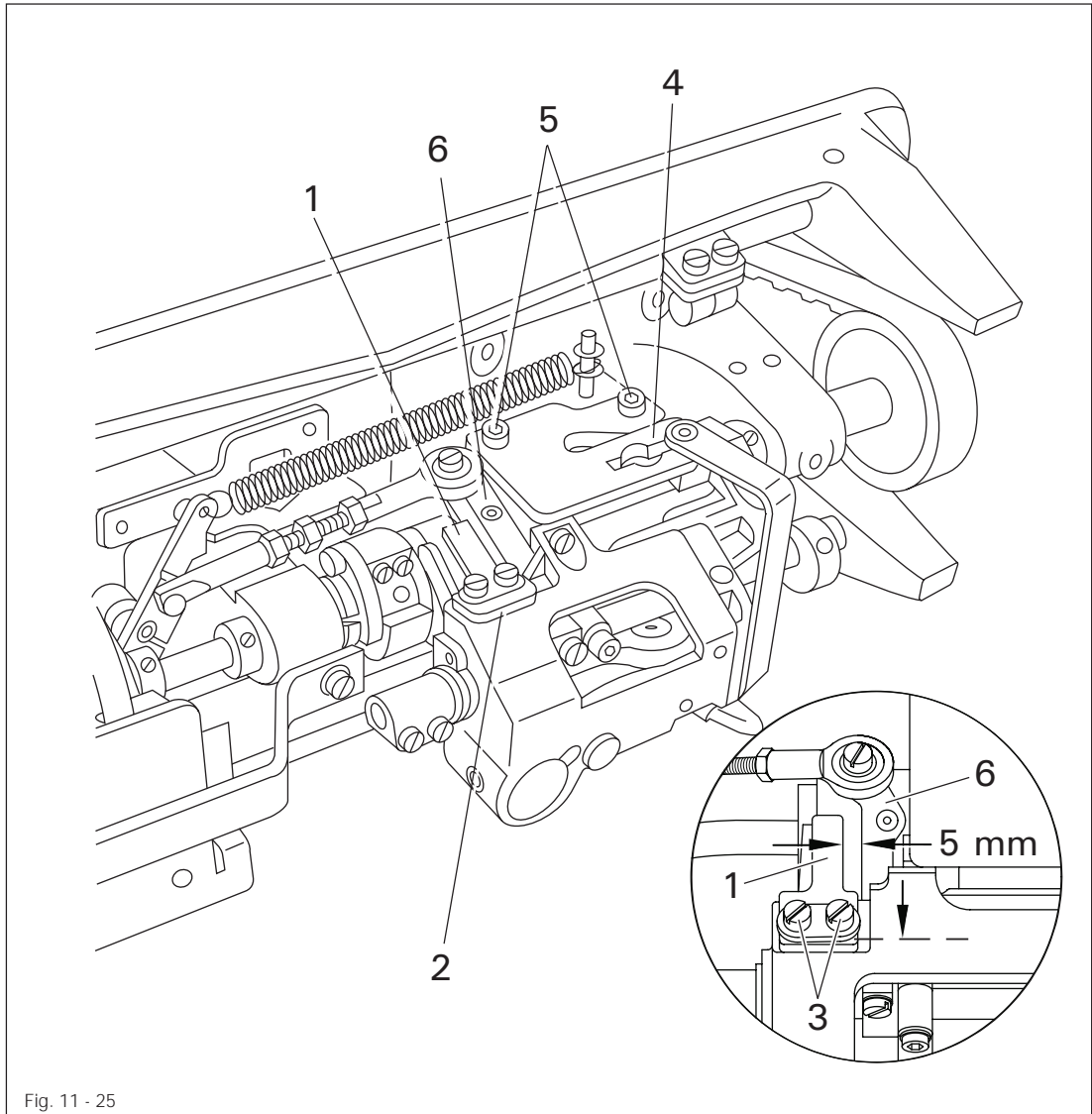
Fig. 11 - 24



- Bring the take-up lever to just past its TDC by turning the handwheel and loosen the accessible screws on control cam **1**.
- Continue turning the handwheel in its direction of rotation until the machine is in needle rise position and then activate engaging lever **2**.
- Taking care to ensure that control lever **3** is engaged, loosen the remaining screws on control cam **1**.
- Continue turning the handwheel in its direction of rotation until the point of the needle is **12 mm** above the needle plate.
- In this position, and taking care to ensure that control cam **1** is touching retaining collar **4**, turn in the direction of rotation until you feel some resistance.
- In this position, tighten the accessible screws on control cam **1**.
- Make the remaining screws on control cam **1** accessible and tighten these as well.
- Carry out a check in accordance with the **requirement**.

**Requirement**

With the cut-off mechanism in resting position, there must be a distance of approx. **5 mm** between catch **1** and control lever **6**.



- Lightly affix catch **1** and cover plate **2** using screws **3**.
- Move catch **1** as far as possible in the direction of the arrow and then move it laterally in accordance with the **requirement**.
- In this position, tighten screws **3**.
- Using screws **5**, screw plate **4** on.

## 11.05.10 Connecting rod (for PFAFF 1246 only)

### Requirement

When the cutting device is in the off-position, the length of spacer rod 4 should be equal to the distance between shafts 2 and 3.

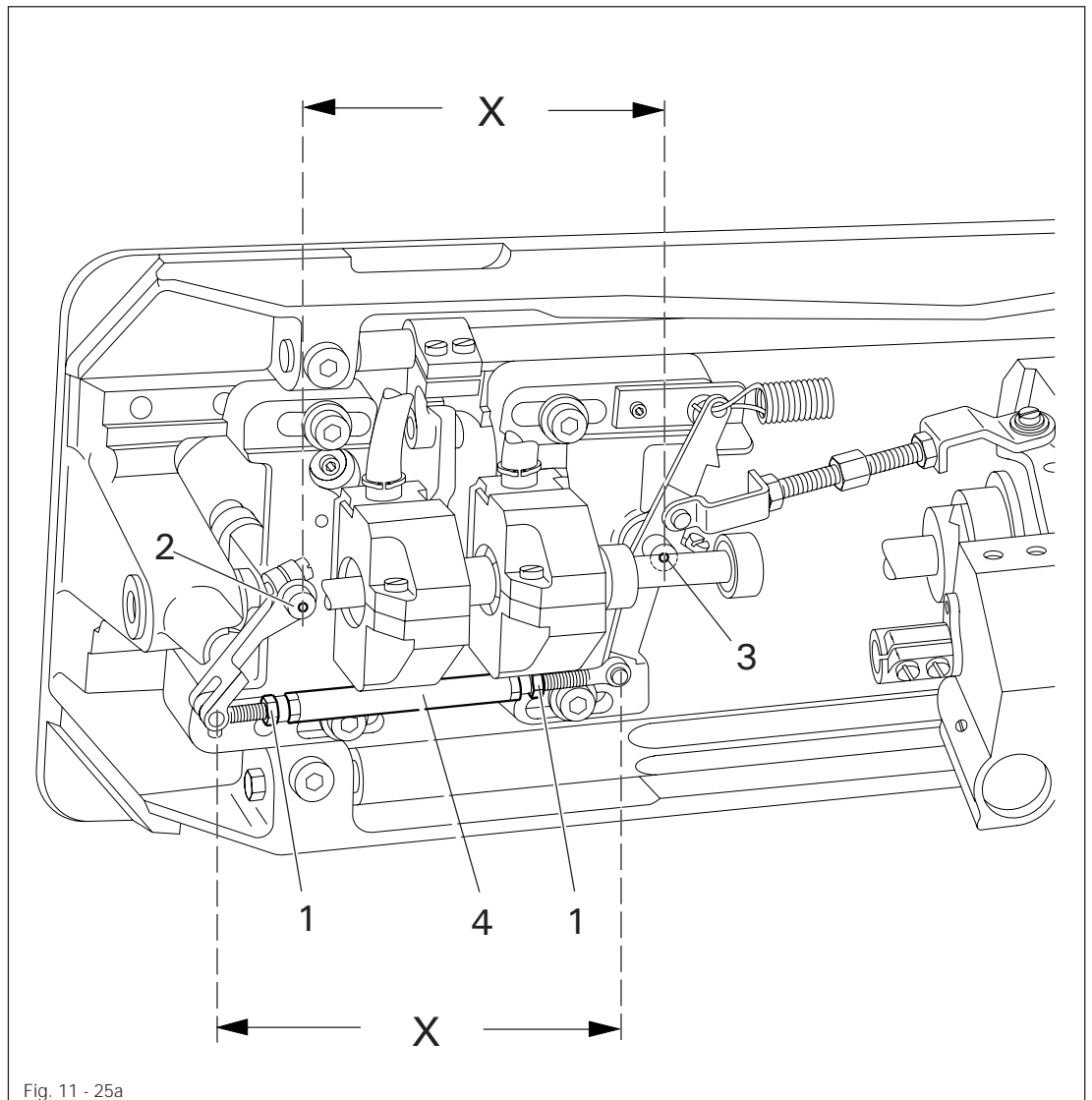
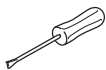


Fig. 11 - 25a



- Loosen nuts 1 (right- and left-hand thread) when the cutting device is in the off-position.
- Measure the distance between shafts 2 and 3.
- Rotate connecting rod 4 according to the requirement.
- Re-tighten nuts 1.

## 11.05.11 Thread-catcher height (On Model 1246 make these adjustments on both thread catchers.)

### Requirement

When thread catcher **2** is pushed forwards manually with the take-up lever at its TDC, the lower point of the thread catcher must pass **1 mm** over the back of hook **4**.

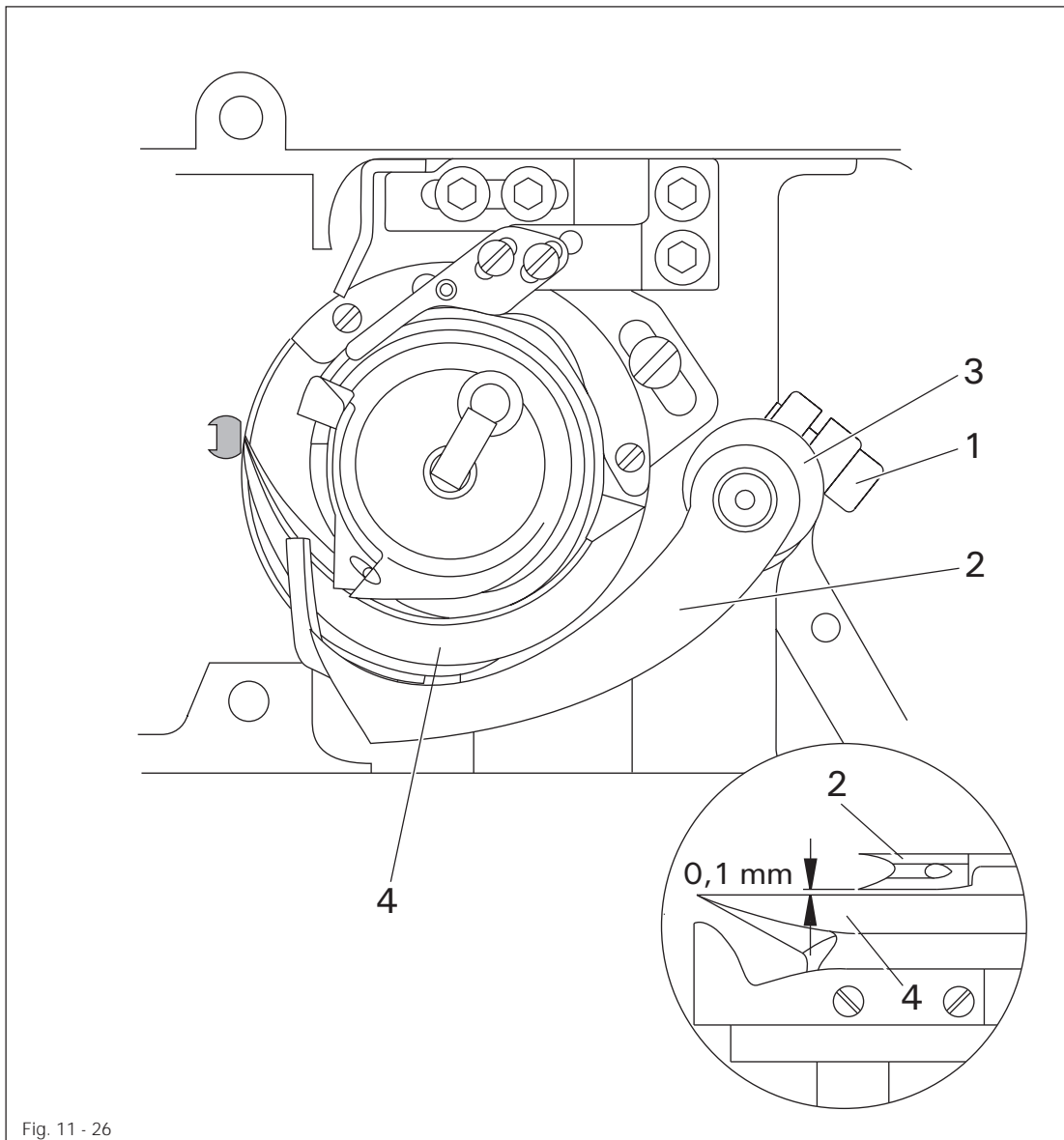
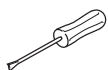


Fig. 11 - 26



- Loosen screw **1** enough so that thread catcher **2** can be turned.
- Loosen the screws in retaining collar **3**.
- Bring the take-up lever to its TDC by turning the handwheel.
- Move thread catcher **2** in accordance with the **requirement**.
- In this position, and taking care to ensure that retaining collar **3** is touching the shaft bushing, tighten screws **3** of the retaining collar.
- Carry out a check in accordance with the **requirement**.
- Screw **1** remains loosened for the following adjustment.

## 11.05.12 Knife

(On Model 1246 make these adjustments on both knives.)

**Requirement**

1. The elongated hole of knife **3** must be parallel to knife carrier **5** and the knife must not be touching the casting (see arrow).
2. When the point of needle catcher **4** protrudes approx. **3 mm** over the cutting edge of the knife, knife **3** must just touch thread catcher **4**.

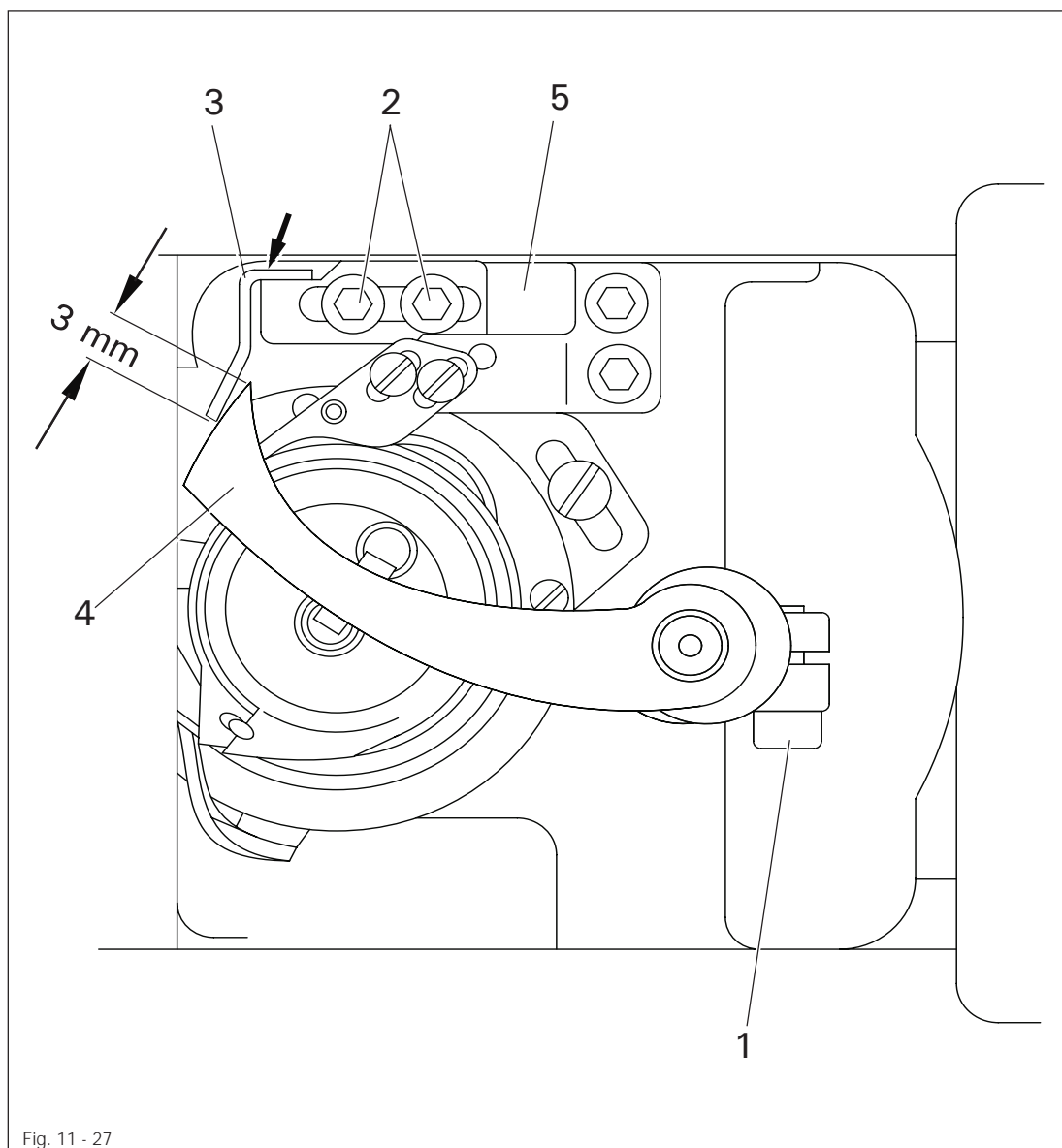
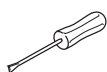


Fig. 11 - 27



- Loosen screws **2**.
- Move knife **3** in such a way that it cannot collide with thread catcher **4**.
- Taking care to ensure that screw **1** is loosened, manually turn thread catcher **4** in accordance with **requirement 2**.
- Bring knife **3** to rest against thread catcher **4** and align it in accordance with **requirement 1**.
- In this position tighten screws **2**.
- Screw **1** remains loosened for the following adjustment.

## 11.05.13 Thread catcher reverse position (On Model 1246 make these adjustments on both thread catchers.)

### Requirement

At the front point of reversal of thread catcher **3**, its rear edge must be flush with the cutting edge of knife **4** (see arrow).

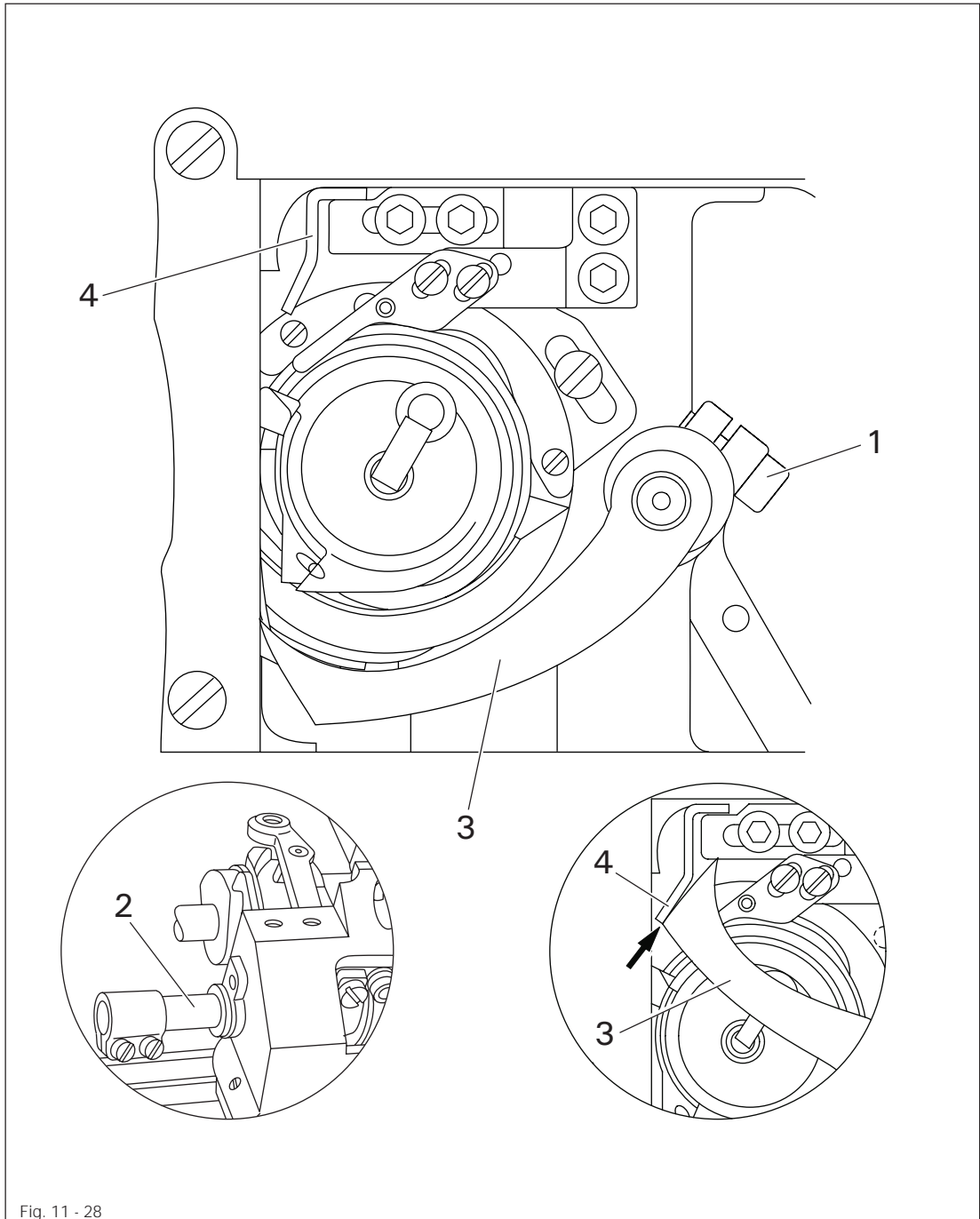
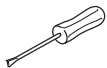


Fig. 11 - 28



- Taking care to ensure that screw **1** is loosened, bring the machine to needle rise position and activate the engaging lever.
- By continuing to turn the handwheel, bring rock shaft **2** to its left point of reversal.
- Maintaining this position, turn thread catcher **3** in accordance with the requirement.

- In this position and taking care to ensure that there is no horizontal play, tighten screw 1.

11.05.14

## Bobbin-thread clamp spring

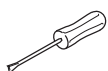
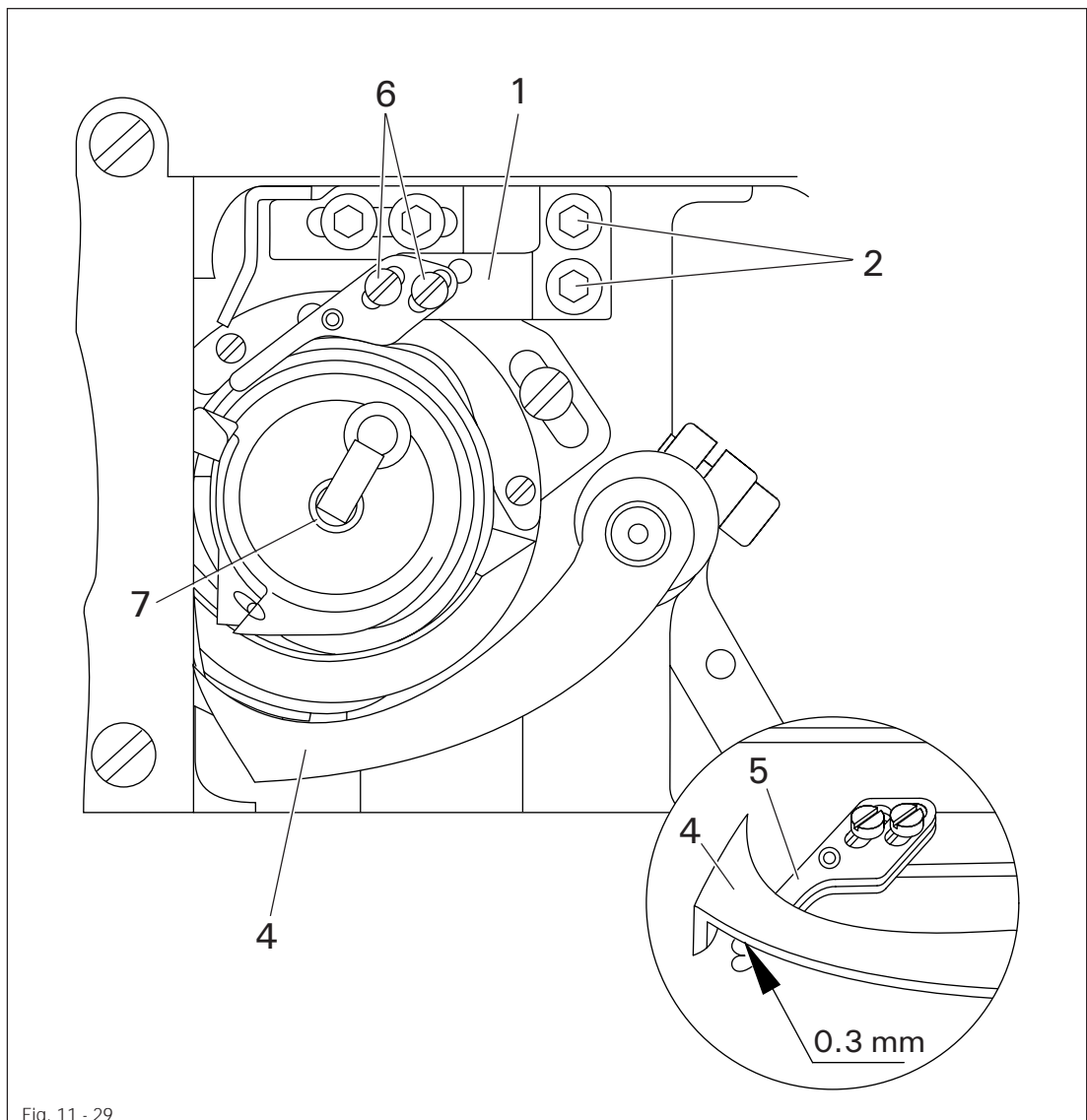
(On Model 1246 make these adjustments on both clamp springs.)

### Requirement

1. Between clamp spring **5** and the bottom of thread catcher **4**, there must be a distance of **0.3 mm**.
2. At the front point of reversal of thread catcher **4**, the points of clamp spring **5** must be flush with the back edge of catcher **4** (see arrow). There must be a distance of approx. **12 mm** between the inner edge of clamp spring **5** and guide sleeve **7**.



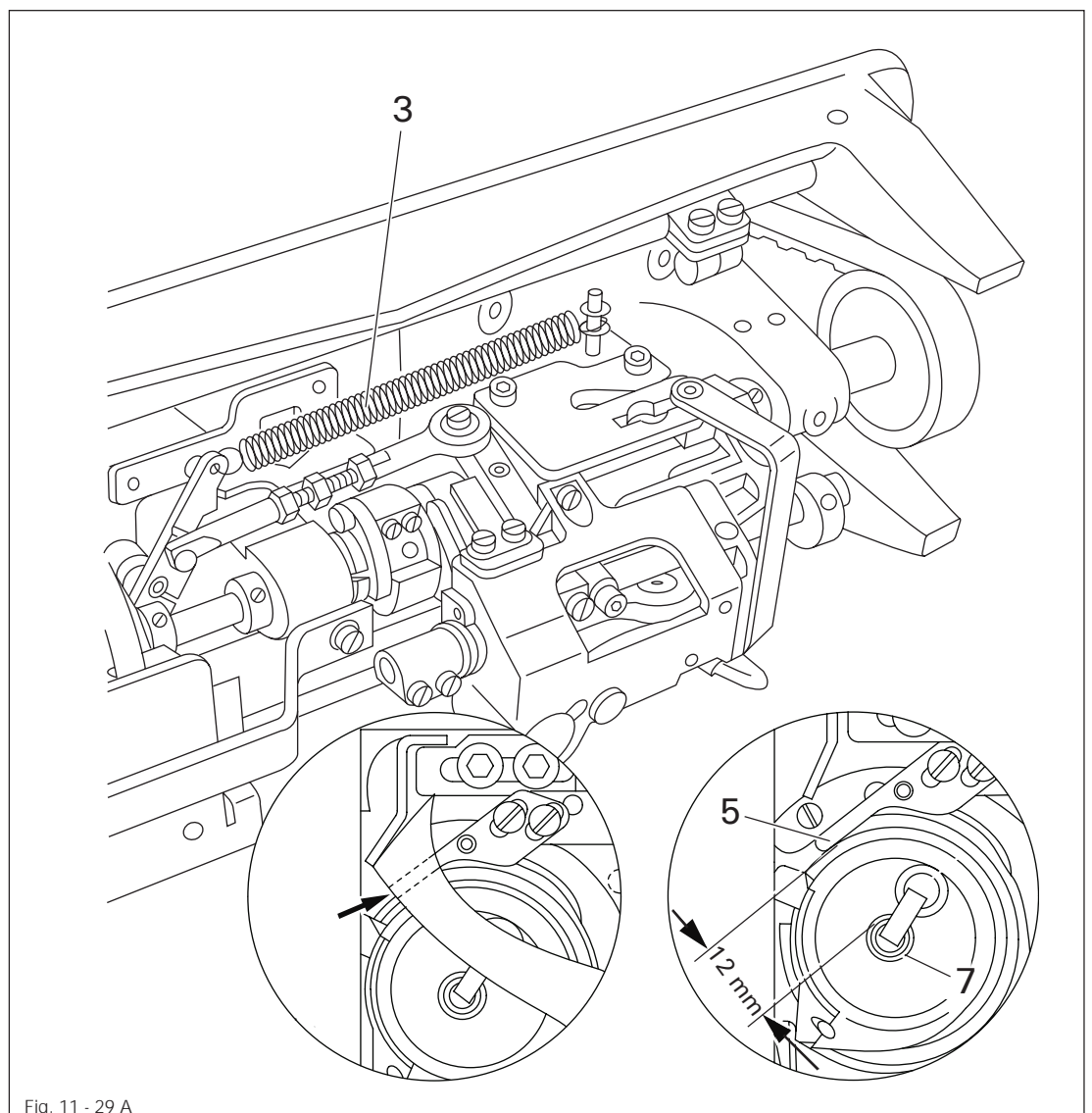
The bobbin-case must be able to be inserted and removed from the hook without any interference..



- Align carrier **1** (screws **2**) in such a way that it is in the middle of its adjustment range and parallel to the bedplate of the machine.
- Unhook spring **3**.
- Manually pivot thread catcher **4** over clamp spring **5**.
- Bend clamp spring **5** in accordance with **requirement 1**.
- Hook spring **3** back in again.



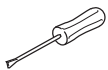
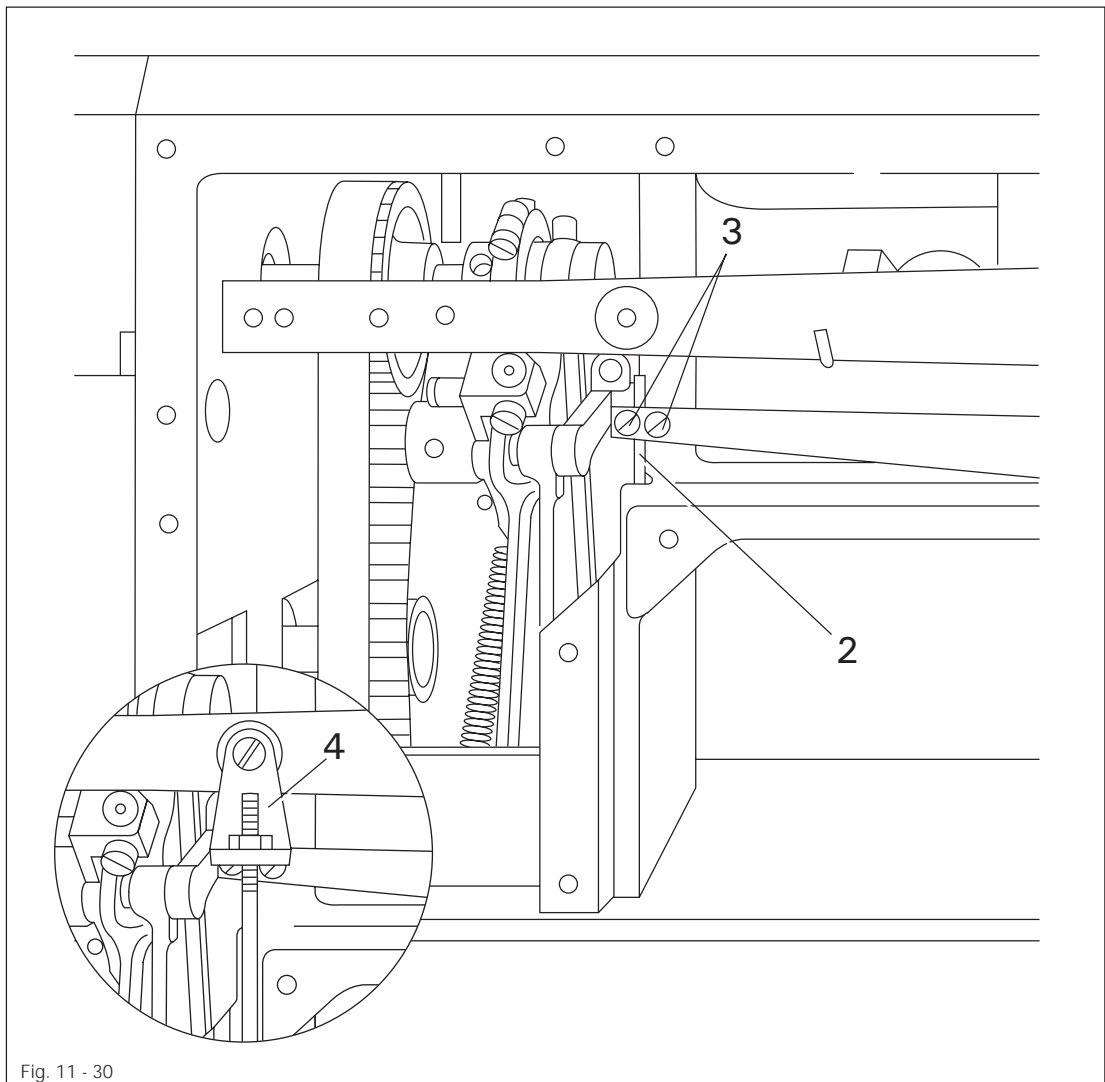
- Bring the machine to needle rise position, activate the engaging lever and bring the thread catcher to its front point of reversal by turning the handwheel.
- Align clamp spring 5 (screws 6) in the elongated hole in accordance with requirement 2 - if necessary carrier 1 (screws 2) as well.
- In this position, and taking care to ensure that carrier 1 is parallel to the machine bedplate, tighten screws 2 and 6.



## 11.05.15 Tension release bar

### Requirement

1. With the cut-off mechanism in resting position and the presser foot raised, there must be a distance of approx. **7 mm** between the left edge of release bar **8** and housing **9**.
2. When the point of thread catcher **5** is at the same height as the rear edge of stop trip **6** of the needle plate (see arrow) with the presser foot resting on the needle plate, the tension discs must be loosened to such an extent that the needle thread can be easily pulled through them.



- Taking care to ensure that the cut-off mechanism is in resting position, raise the presser foot.
- Loosen screws 1.
- Set transmission bar 2 (screws 3) to the height stipulated in **requirement 1**.



On machines without automatic presser-foot lifter (subclass -910/..), bracket 4 must be unscrewed to obtain access to screws 3.

- By turning the handwheel, bring the machine to needle rise position and manually activate the engaging lever.

- Allow the presser foot to rest on the needle plate.
- By continuing to turn the handwheel, position the point of thread catcher 5 at the same height as the edge of rear stop trip 6 of the needle plate and press release bar 8 to the left in accordance with **requirement 2** using retaining collar 7.
- In this position tighten screws 1.



The eccentricity of retaining collar 7 must be pointing downwards.

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

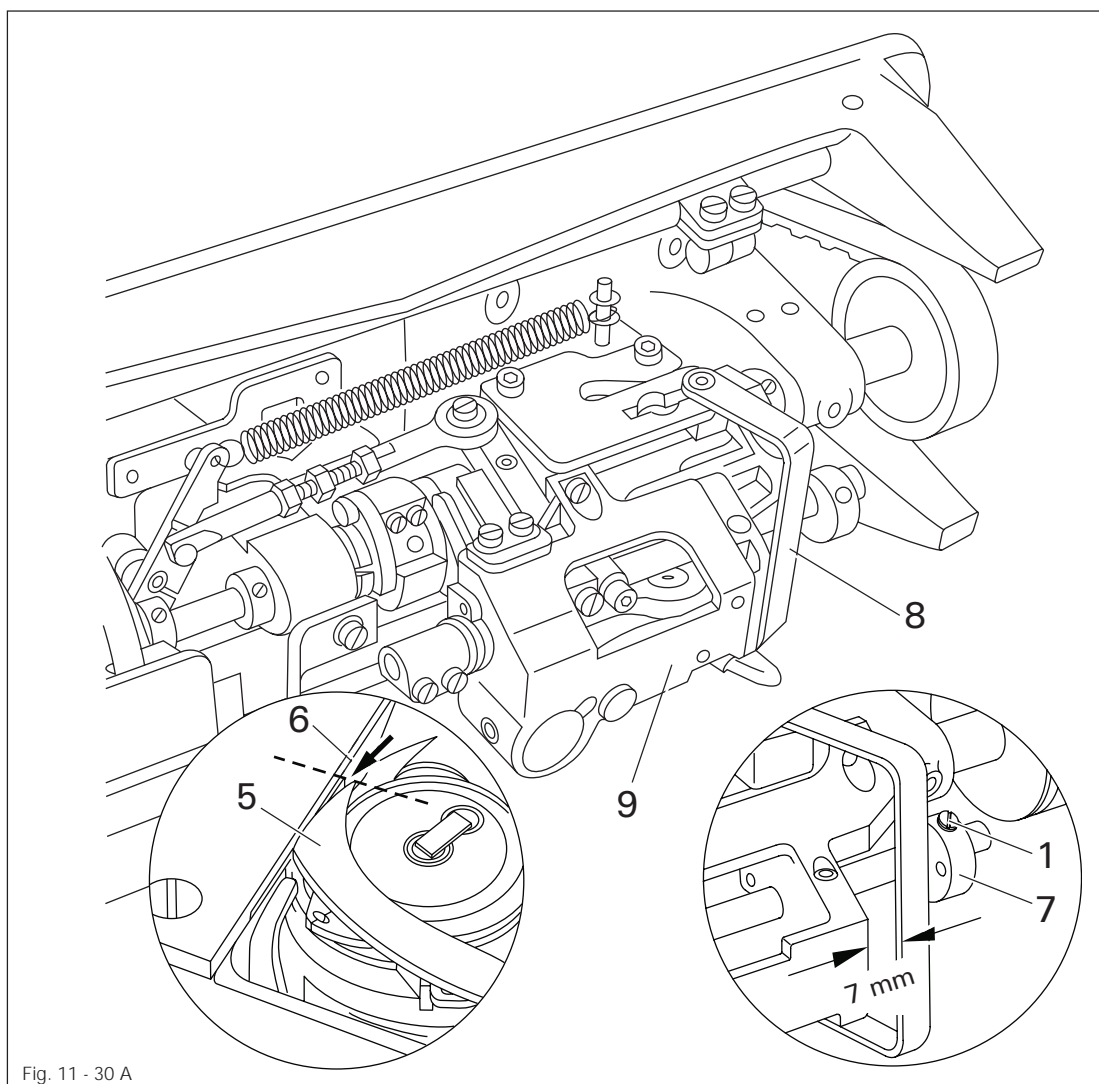


Fig. 11 - 30 A

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## Adjustment

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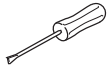
11.05.16 Positioner

**Requirement**

When interrupting the sewing process, the machine must position itself at approx.

**4 mm after the BDC of the needle bar.**

After trimming the thread, the machine must position itself at the **TDC of the take-up lever.**



- Carry out the adjustment as stipulated in the instruction manual of the motor.



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