

# PFAFF

1193

1194

Service manual



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

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## 1 Safety

### 1.01 Regulations

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

In addition to this instruction manual, please also observe all generally accepted, statutory and other legal requirements, including those of the user's country, and the applicable pollution control regulations!

The valid regulations of the regional social insurance society for occupational accidents or other supervisory authorities are to be strictly adhered to!

### 1.02 General notes on safety

- The machine must only be operated by adequately trained operators and only when the instruction manual has been fully read and understood!
- All notices on safety and the instruction manual of the motor manufacturer are to be read before the machine is put into operation!
- All notes on the machine concerning danger and safety must be observed!
- The machine must be used for the purpose for which it is intended and must not be operated without its safety devices; all regulations relevant to safety must be adhered to.
- When part sets are changed (e.g. needle, presser foot, needle plate, feed dog or bobbin), during threading, when the workplace is left unattended and during maintenance work, the machine must be isolated from the power supply by turning off the on/off switch or removing the plug from the mains!
- Daily maintenance work must only be carried out by appropriately trained persons!
- Repairs and special maintenance work must only be carried out by qualified technical staff or persons with appropriate training!
- During maintenance or repairs on the pneumatic system the machine must be isolated from the compressed air supply! The only exception to this is when adjustments or function checks are carried out by appropriately trained technical staff!
- Work on the electrical equipment must only be carried out by technical staff who are qualified to do so!
- Work on parts or equipment connected to the power supply is not permitted! The only exceptions to this are specified in regulations EN 50110.
- Conversion or modification of the machine must only be carried out under observation of all relevant safety regulations!

- Only spare parts which have been approved by us are to be used for repairs! We draw special attention to the fact that spare parts and accessories not supplied by us have not been subjected to testing nor approval by us. Fitting and/or use of any such parts may cause negative changes to the design characteristics of the machine. We shall not accept any liability for damage caused by the use of non-original parts.

## 1.03 Safety symbols



Danger!  
Special points to observe.



Danger of injury to operating or technical staff!

## 1.04 Important notes for the user

- This instruction manual belongs to the equipment of the machine and must be available to the operating staff at all times.  
This instruction manual must be read before the machine is operated for the first time.
- Both operating and technical staff must be instructed on the safety devices of the machine and on safe working methods.
- It is the duty of the user to operate the machine in perfect running order only.
- The user must ensure that none of the safety devices are removed nor put out of working order.
- The user must ensure that only authorized persons operate and work on the machine.

For further information please refer to your PFAFF agency.

## 1.05 Notes for operating and technical staff

### 1.05.01 Operating staff

Operating staff are the persons responsible for setting up, operating and cleaning the machine and for removing any disturbances in the sewing area.

The operating staff are obliged to observe the following points, and must:

- always observe the notes on safety in this instruction manual!
- avoid using any working methods which adversely effect the safety of the machine!
- avoid wearing loose-fitting clothing or jewelry such as necklaces or rings!
- also ensure that only authorized persons are allowed near the danger area of the machine!
- immediately report to the user any changes to the machine that may affect its safety!

### 1.05.02 Technical staff

Technical staff are persons who have been trained in electrical engineering, electronics, pneumatics and mechanical engineering. They are responsible for lubricating, servicing, repairing and adjusting the machine.

The technical staff are obliged to observe the following points, and must:

- always observe the notes on safety in this instruction manual!
- switch off the on/off switch before carrying out adjustment and repair work and ensure it cannot be switched on again unintentionally!
- never work on parts or equipment still connected to the power supply! Exceptions to this are only permissible according to regulations EN 50110;
- isolate the machine from the compressed air supply when carrying out maintenance or repair work on pneumatic equipment!  
Exceptions to this are only permissible for function checks;
- replace all safety covers after carrying out maintenance or repair work!

## 1.06

### Danger warnings



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 while adjusting the machine settings! Objects can become trapped or be hurled out! Danger of injury by flying objects!!

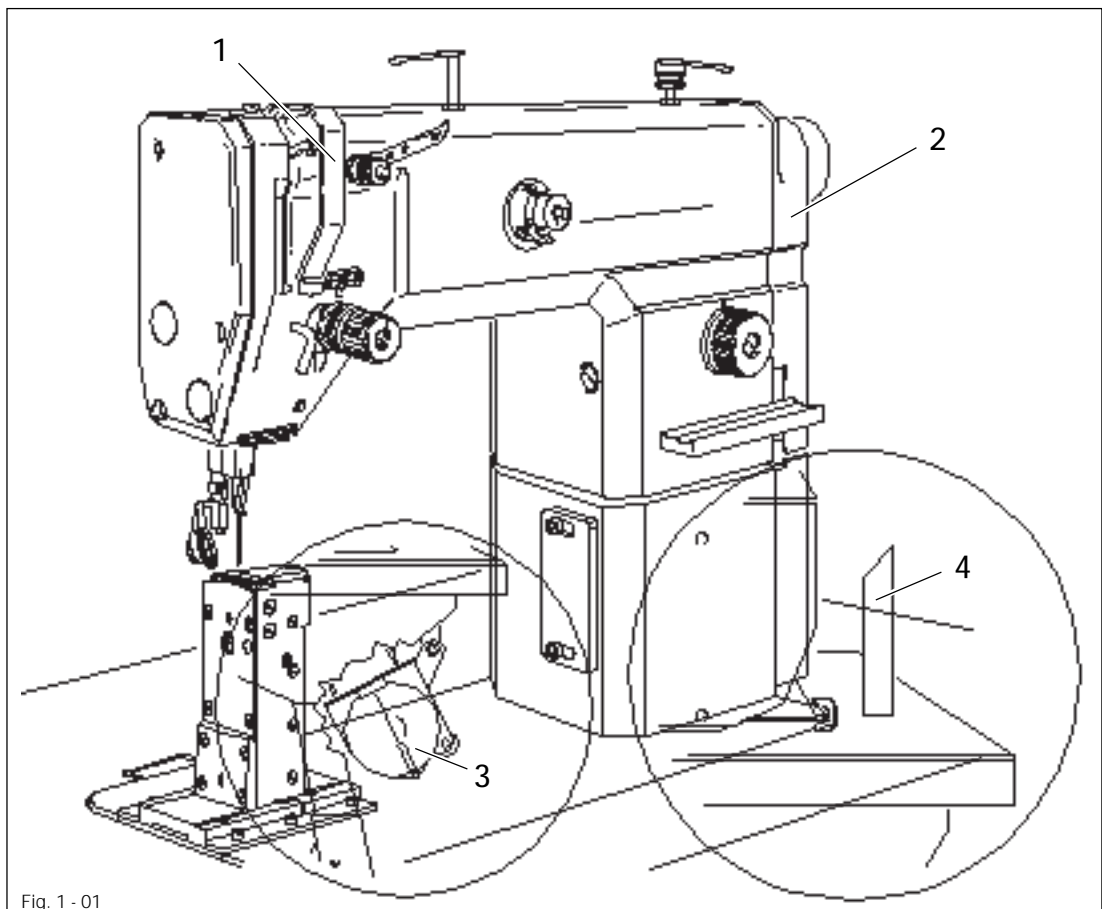


Fig. 1 - 01



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 belt guards 2 and 3!  
Danger of injury by the revolving drive belt!



Do not operate the machine without sewing head support 4!  
Danger of sewing head falling backwards when tilted!



2

**Proper use**

The **PFAFF 1193** is a single-needle lockstitch post-bed sewing machine with bottom feed and roller presser.

The **PFAFF 1194** is a two-needle lockstitch post-bed sewing machine with bottom feed and roller presser.

The machines are used for producing lockstitch seams in industry.



Any use of this machine which is not approved by the manufacturer shall be considered as improper use! The manufacturer shall not be held 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<sup>▲</sup>

Stitch type: .....	301 (lockstitch)
Needle system: .....	134
Needle thickness in 1/100 mm: .....	80 - 120
Balance wheel eff. dia.: .....	65 mm
Fabric clearance under roller presser .....	9 mm
Clear workspace width: .....	260 mm
Clear workspace height: .....	120 mm
Height of post-bed .....	180 mm
Dimensions of the bed plate: .....	476 x 177 mm
Dimensions of the sewing head: .....	
Length: .....	approx. 550 mm
Width: .....	approx. 180 mm
Height (above table): .....	approx. 450 mm
Max. stitch length: .....	5 mm
Max. speed: .....	2500 spm <sup>♦</sup>
Needle bar stroke: .....	32 or 36 mm
Power supply: .....	see motor instruction manual
Max. power consumption: .....	see motor instruction manual
Fuse protection: .....	see motor instruction manual
Working noise level:	
Emission at workplace	
At a speed of 2000 spm: .....	78 dB(A)
Noise measurement in accordance with DIN 45 635-48-A-1	
Net weight of the sewing head:	
PFAFF 1193 .....	approx. 47 kg
PFAFF 1194 .....	approx. 49 kg

<sup>▲</sup> Subject to technical alterations

<sup>♦</sup> Dependent on the material, operating cycle and stitch length

### 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!

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## *Transportation, packing and storage*

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### 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 exports 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.

#### 5.03 Disposal of packing materials

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

#### 5.04 Storage

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

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

### 6 Explanation of symbols

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



Note, information



Cleaning, care



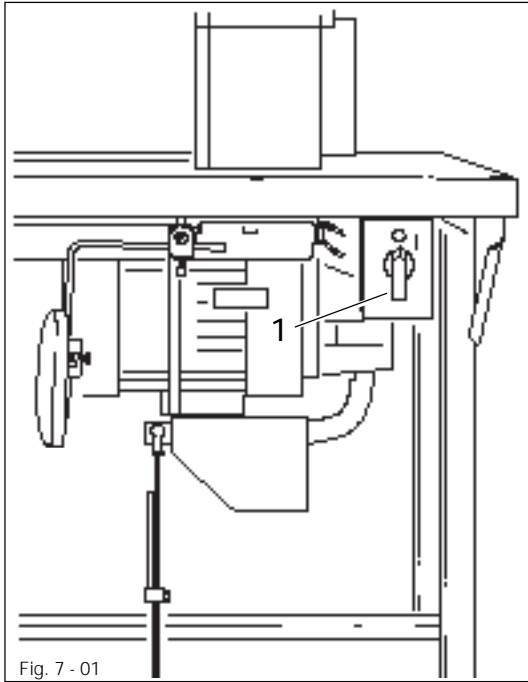
Lubrication



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

## 7 Controls

### 7.01 On/off switch

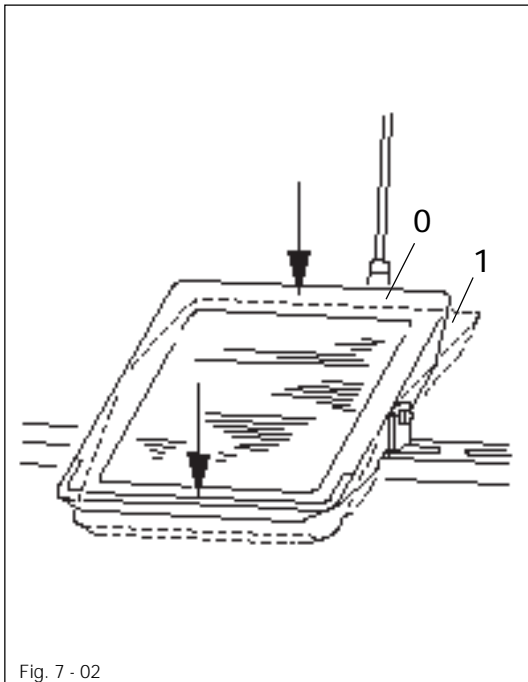


- Turn the machine on and off by turning the on/off switch 1.



The switch in the illustration can be found on machines with Quick motors. When other motors are used, other switches may be fitted.

### 7.02 Pedal



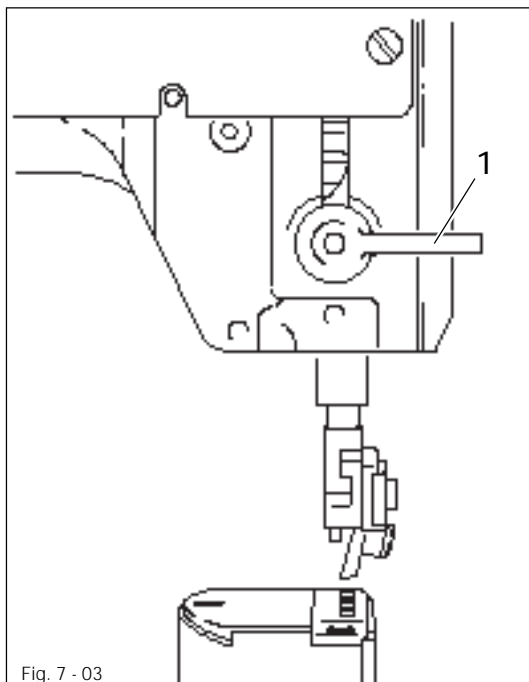
0 = Neutral position

1 = Sew



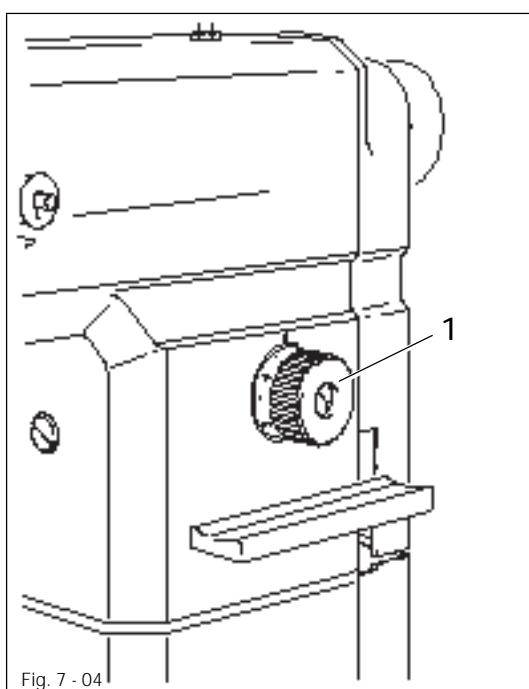
For other pedal functions see the motor instruction manual.

7.03 Lever for lifting the roller presser



- The roller presser is lifted by raising lever 1.

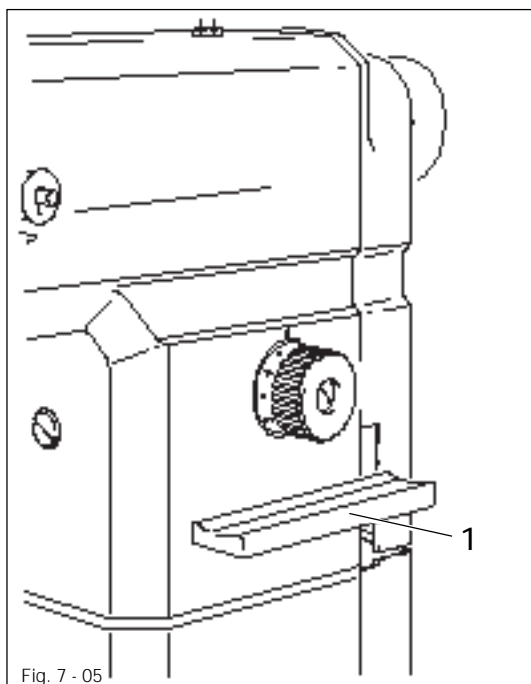
7.04 Knob for adjusting the stitch length



- The stitch length can be adjusting by applying pressure to the adjustment knob 1, while at the same time turning it as required.

7.05

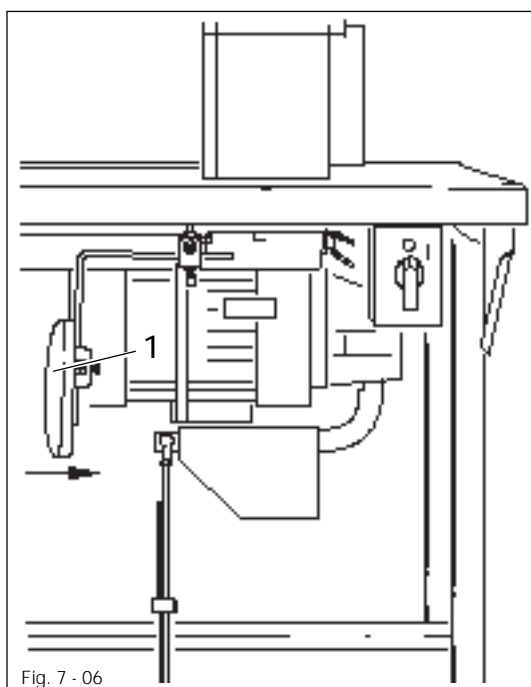
## Reverse key



- For reverse sewing key 1 must be pressed.

7.06

## Knee lever



- The roller presser is lifted by moving lever 1 in the direction of the arrow.



## 8 Installation and commissioning



The machine must only be installed 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 stand and the table top which you intend to use can hold the weight of the machine. Adequate stability of the base must be guaranteed - during sewing too.

### 8.01 Installation

The necessary connections for electricity and compressed air, a level and stable surface and sufficient lighting must be available at the machine's location.



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

#### 8.01.01 Adjusting the table-top height

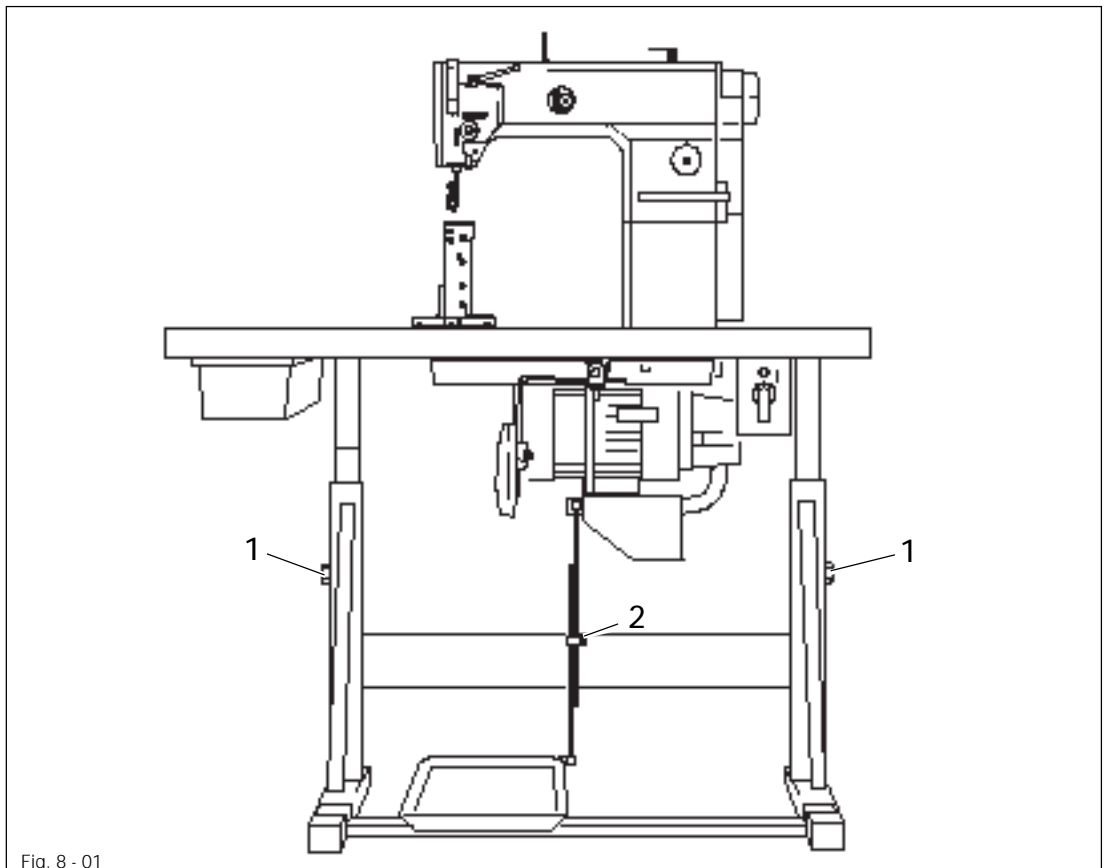
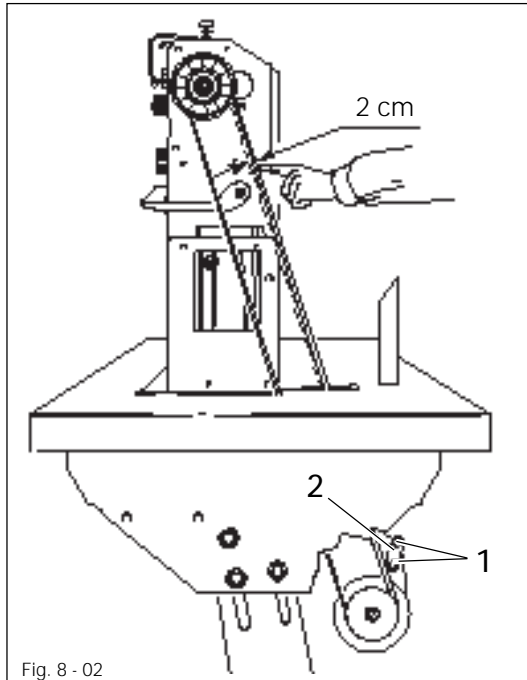


Fig. 8 - 01

- Loosen screws 1 and 2 and adjust the table top to the required height.
- Tighten screws 1.
- Adjust the pedals to the required setting and tighten screw 2.

## Installation and commissioning

### 8.01.02 Adjusting the V-belt tension

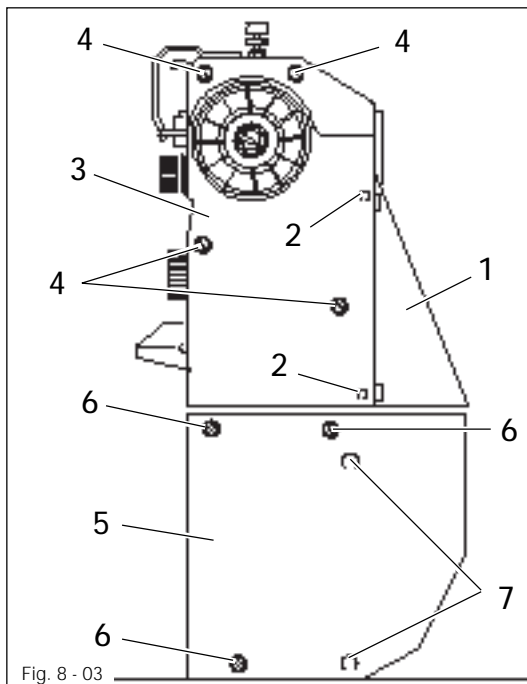


- Loosen nuts 1.
- Tighten the V-belt with belt take-up hanger 2.
- Tighten nuts 1.



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

### 8.01.03 Fitting the upper V-belt guard



- With screws 2 attach belt guard section 1 to belt guard section 3 from the inside.
- Attach belt guard section 3 to the machine housing with the screws 4.
- Attach belt guard section 5 to the machine housing with screws 6 and screws 7 (accessible through the drill holes).

## 8.01.04 Fitting the lower V-belt guard

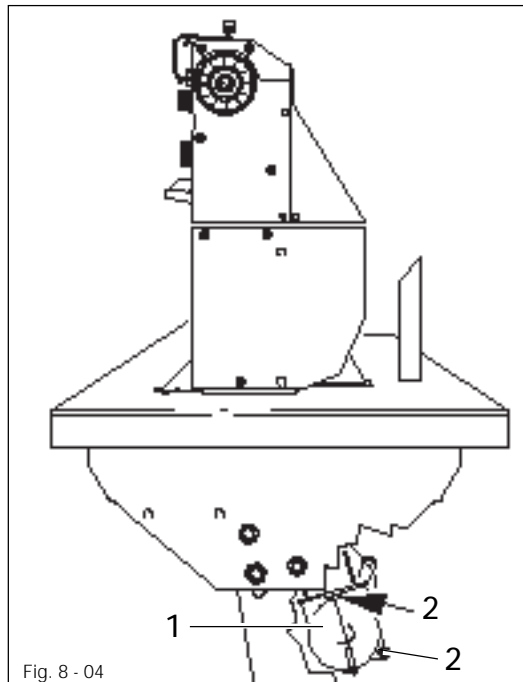


Fig. 8 - 04

- Align belt guard 1 in such a way that both the motor pulley and the V-belt run freely.
- Tighten screws 2.



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

## 8.01.05 Fitting the reel stand

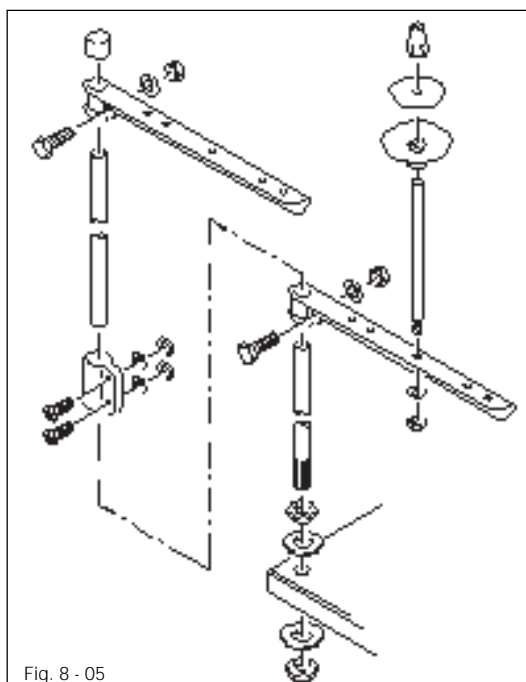


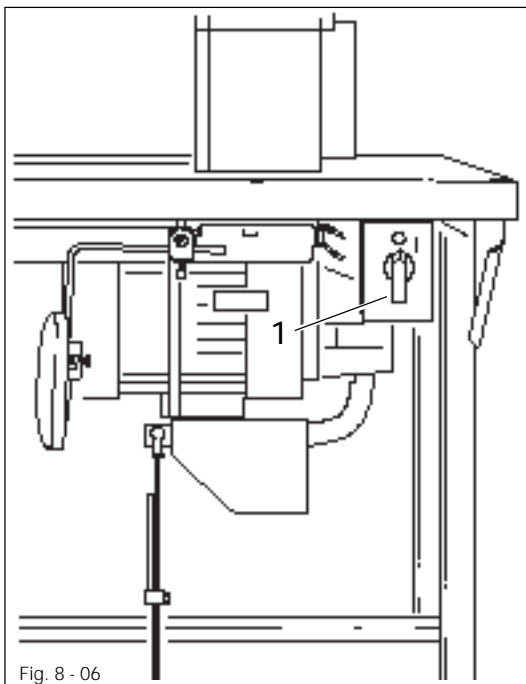
Fig. 8 - 05

- Fit the reel stand as shown in Fig. 8-05.
- Insert reel stand in the table-top hole and fasten it with the included nuts.

## 8.02 Commissioning

- Check the machine, in particular the electrical leads, for any damage.
- Clean the machine thoroughly, also see **Chapter 10 Care and Maintenance**.
- Have mechanics ensure that the machine's motor can be operated with the available electricity supply and that it is connected correctly. If not, the machine must **not** be operated **under any circumstances**.
- The balance wheel must rotate towards the operator when the machine is running. If not, have the motor connection changed by a mechanic.

## 8.03 Switching the machine on / off



- Switch the machine on or off by turning the on/off switch 1.



The on/off switch shown in the illustration is found on machines with Quick motors. If another motor is used, other switches may be fitted.

## 9 Setting up



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



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

## 9.01 Inserting the needles in the PFAFF 1193

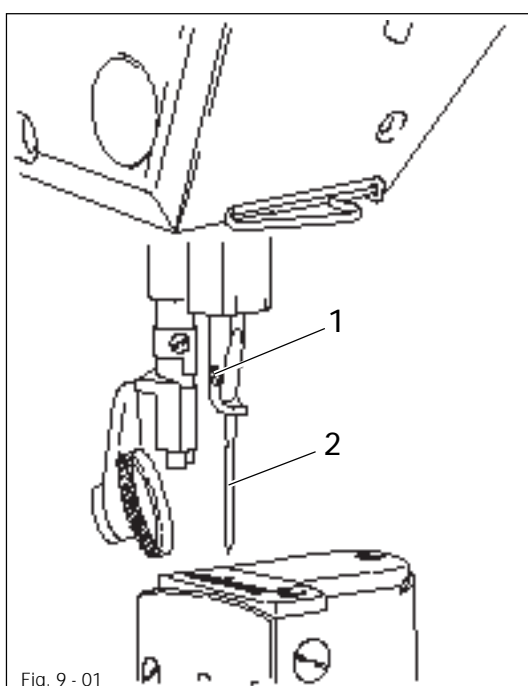


Fig. 9 - 01



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

Use only system **134** needles.

- Raise the roller presser and swing it out.
- Raise the needle bar as far as possible and loosen screw 1.
- Insert the needle 2 as far as possible (the long needle groove must be facing left).
- Tighten screw 1.



The selection of the needle depends on the machine model and the materials and threads being used (see Chapter 3 Specifications).

## Inserting the needles in the PFAFF 1194

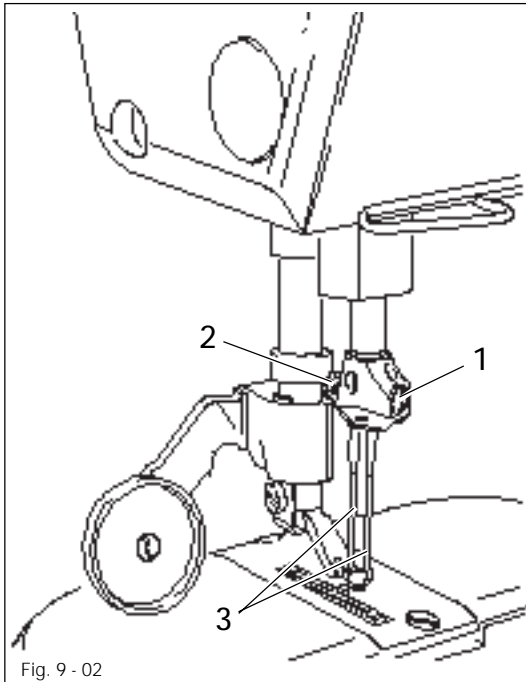


Fig. 9 - 02



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

Use only system **134** needles.

- Raise the roller presser and swing it out.
- Raise the needle bar as far as possible.
- Loosen screws **1** and **2** and insert the needles **3** as far as possible. (The long needle groove of the left needle must be facing right and that of the right needle must be facing left).
- Tighten screws **1** and **2**.



The selection of the needle depends on the machine model and the materials and threads being used (see **Chapter 3 Specifications**).

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

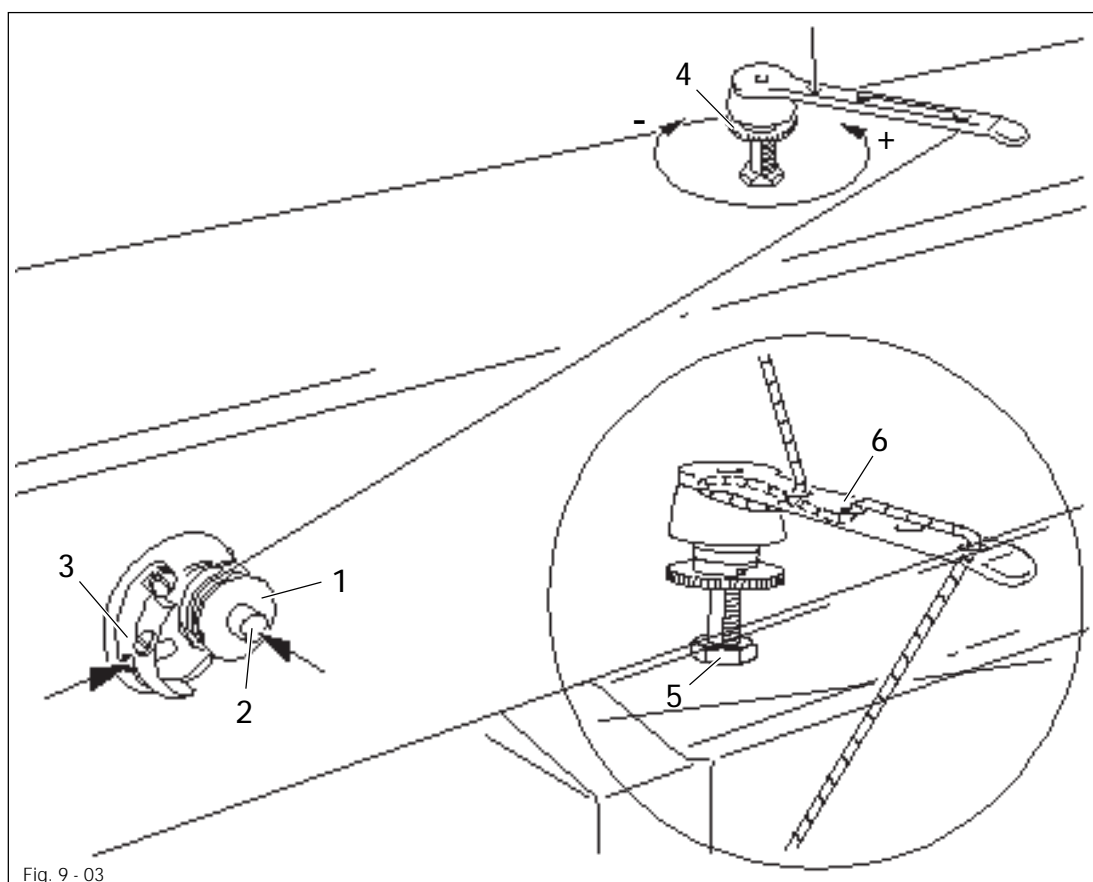


Fig. 9 - 03

- Place an empty bobbin 1 onto bobbin spindle 2.
- Thread the bobbin in accordance with Fig. 9-03 and wind it clockwise around the bobbin 1 a few times.
- Engage on the bobbin winder by pressing bobbin winder shaft 2 and lever 3 at the same time.



The bobbin fills up during sewing.

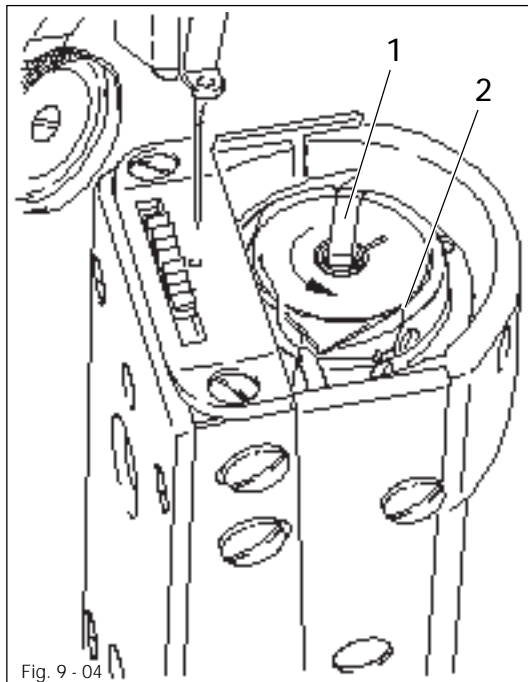
- The tension of the thread on bobbin 1 is adjusted with knurled screw 4.
- The bobbin winder stops automatically when there is enough thread on bobbin 1.

If the thread is wound unevenly:

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

## 9.04

### Changing the bobbin / threading the bobbin thread



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

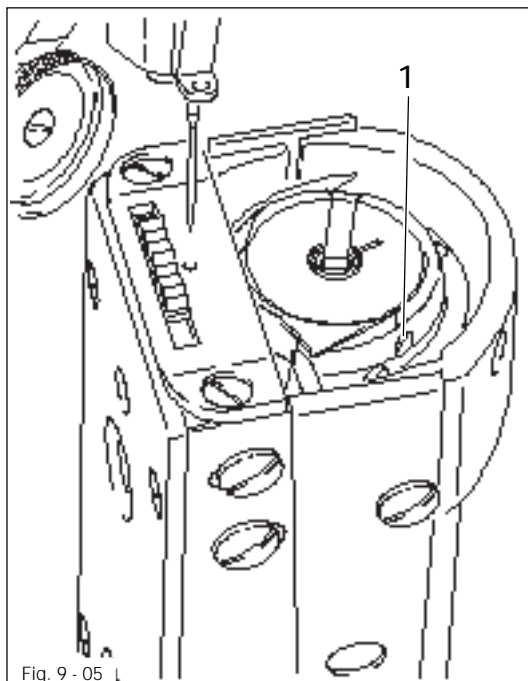
- Raise take-up lever as far as possible.
- Open the post cap, raise latch 1 and remove bobbin.
- Insert the full bobbin into the hook drive in such a way that the bobbin rotates in the direction of the arrow when the thread is pulled.
- Close latch 1.
- Pull the thread under the spring into the hole through slot 2.
- Close the post cap.



Do not operate the machine when the post cap is open!  
Danger of injury by the hook!

## 9.05

### Adjusting the bobbin thread tension



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

- Open the post cap.
- Adjust the bobbin thread tension by turning screw 1.
- Close the post cap.



Do not operate the machine when the post cap is open!  
Danger of injury by the hook!



9.06 Threading the needle thread / adjusting the needle thread tension  
(on the PFAFF 1193)

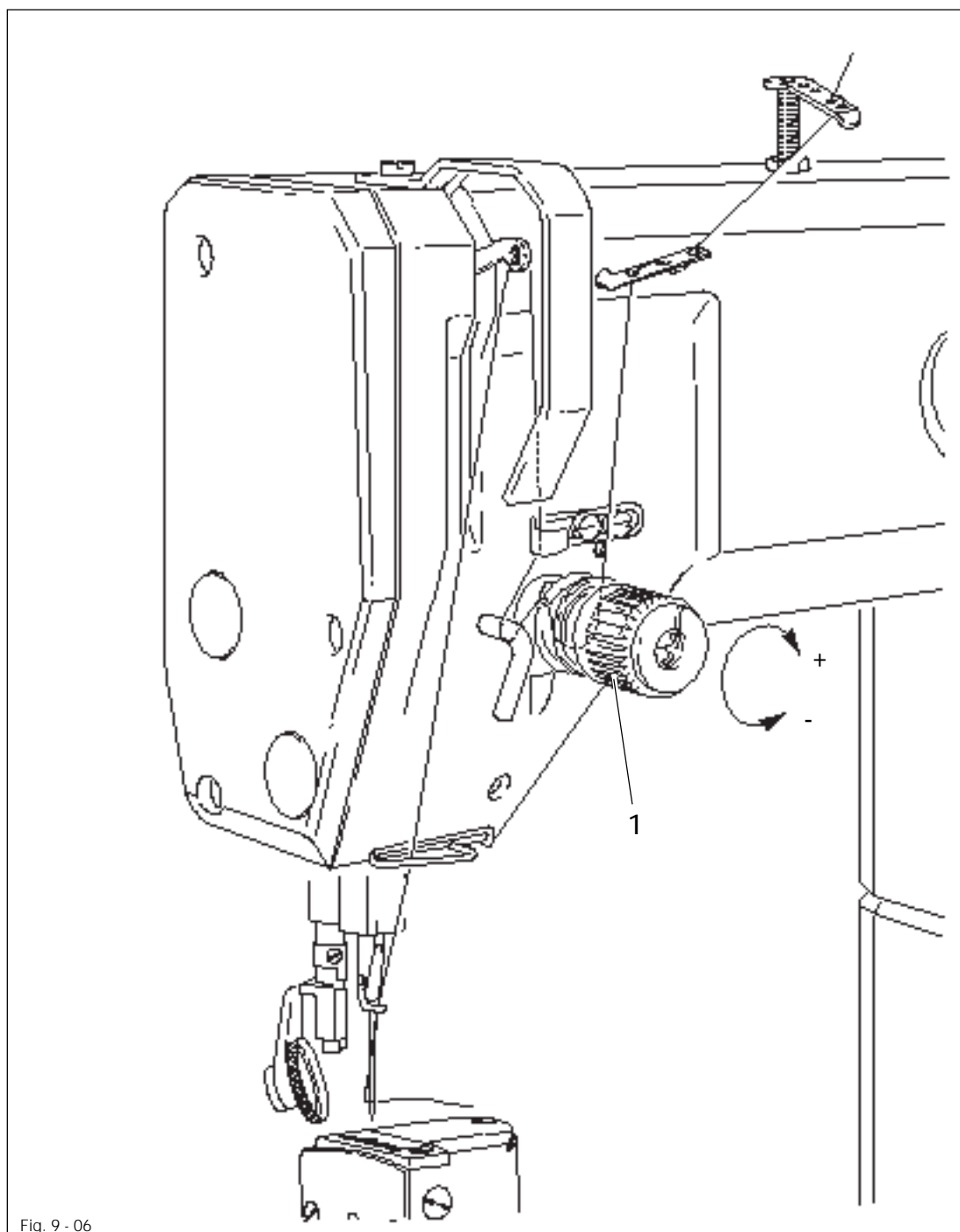


Fig. 9 - 06

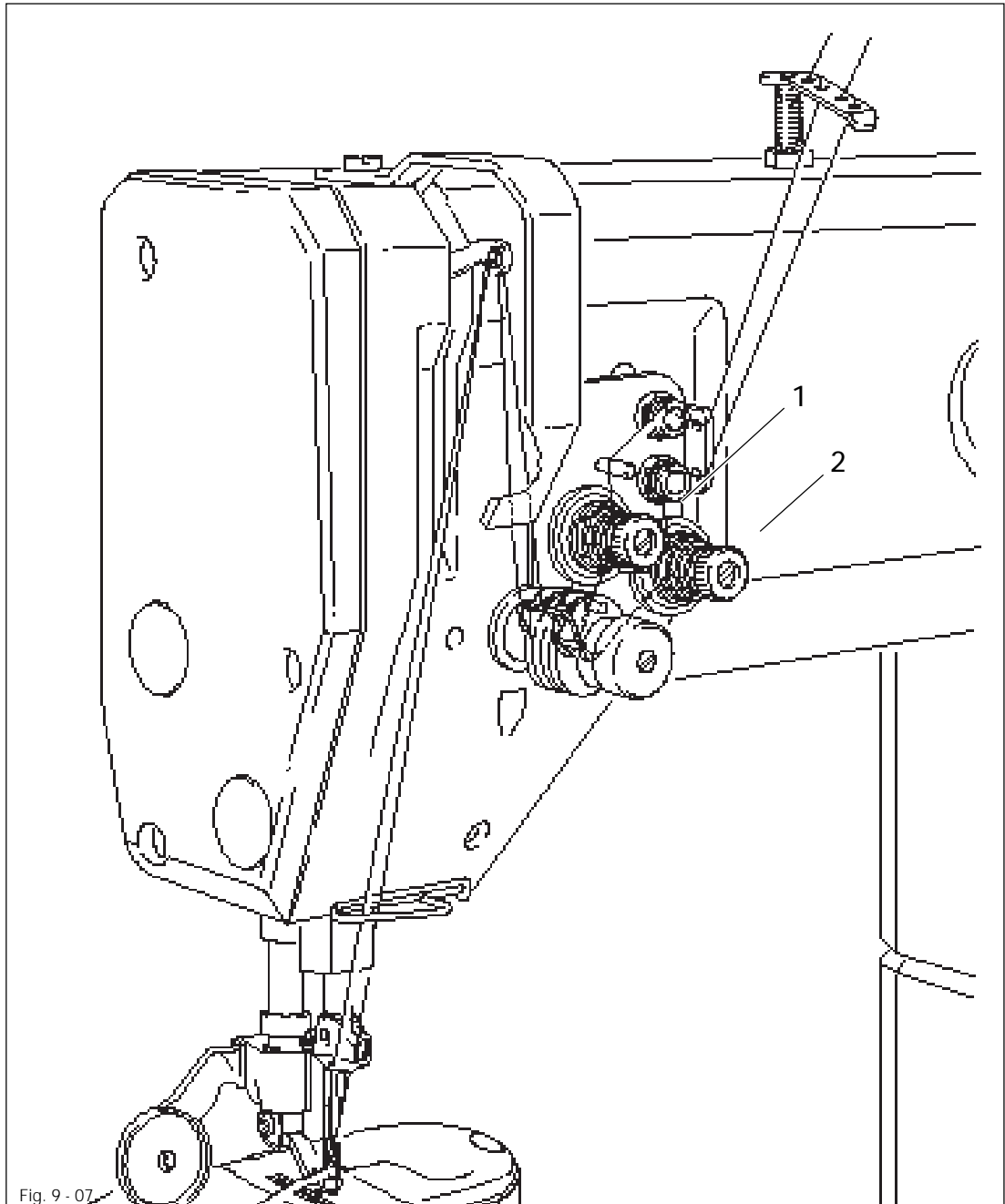


Turn the machine off!  
Danger of injury if the machine is started accidentally!

- Thread the needle thread as shown in Fig. 9-06.
- Adjust the needle thread tension by turning the adjustment knob 1.

9.07

Threading the needle thread / adjusting the needle thread tension  
(on the PFAFF 1194)



Turn the machine off!

Danger of injury if the machine is started accidentally!

- Thread the needle thread as shown in Fig. 9-07.
- Adjust the needle thread tension by turning the adjustment knobs 1 and 2.

10 Care and maintenance

10.01 Cleaning and maintenance intervals

Clean the hook compartment .....	daily, several times if in continuous operation
Lubricate the hook .....	daily, before use
Clean the hook .....	once a week
Lubricate the post .....	twice a week
Grease the bevel gears .....	every year



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

10.02 Cleaning the hook compartment and the hook

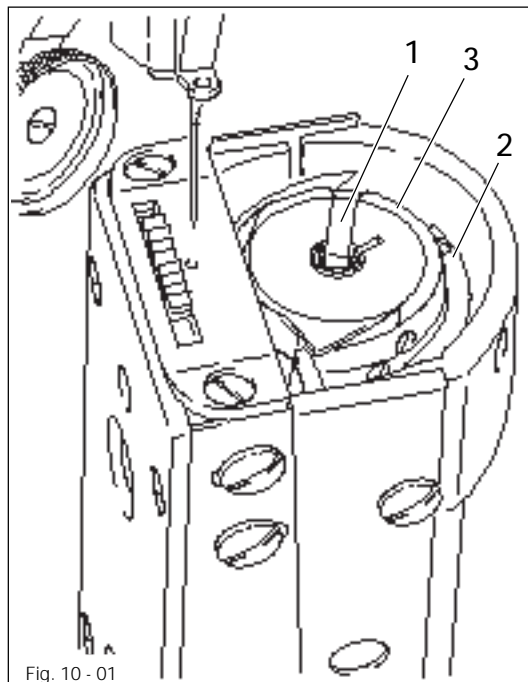


Fig. 10 - 01



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

- Clean the hook compartment daily with a brush, several times if in continuous operation.
- Clean the hook thoroughly once a week.
- Open the post cover.
- Raise the needle bar as far as possible.
- Raise latch 1 and remove the bobbin.
- Unscrew hook jib 2 and remove the bobbin case 3.
- Clean the hook race with paraffin.
- Insert the bobbin case 3, ensuring that horn of the bobbin case fits into the groove of the needle plate.
- Screw hook jib 2 back on.
- Insert the bobbin and close the latch 1.
- Close the post cover.

### 10.03 Lubricating the post

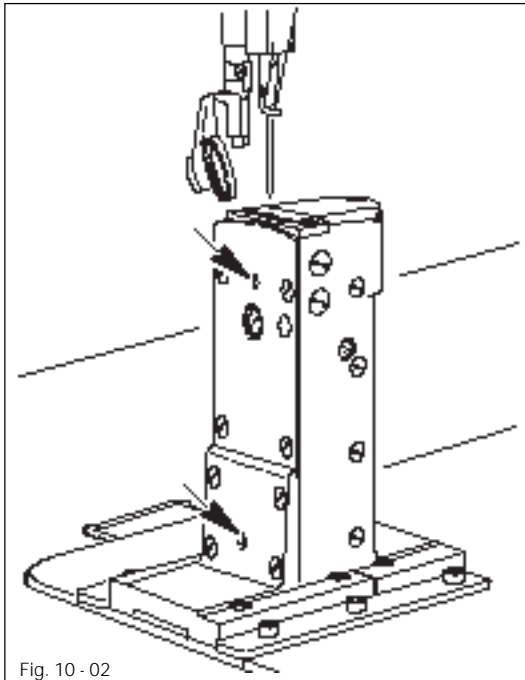


Fig. 10 - 02

- Fill a few drops of oil into the holes in the post twice a week (see arrows)



Only use oil with a mean viscosity of 10.0 mm<sup>2</sup>/s at 40° C and a density of 0.847 g/cm<sup>3</sup> at 15° C!



We recommend PFAFF sewing machine oil, order-No. 280-1-120 105.

### 10.04 Lubricating the hook

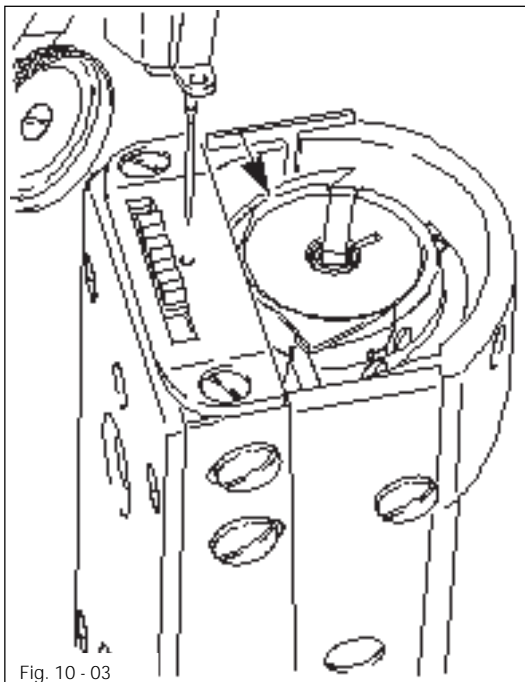


Fig. 10 - 03

- Insert **1 - 2 drops** into the hook race daily, see arrow.



Only use oil with a mean viscosity of 10.0 mm<sup>2</sup>/s at 40° C and a density of 0.847 g/cm<sup>3</sup> at 15° C!



We recommend PFAFF sewing machine oil, order-No. 280-1-120 105.

10.05 Greasing the bevel gears

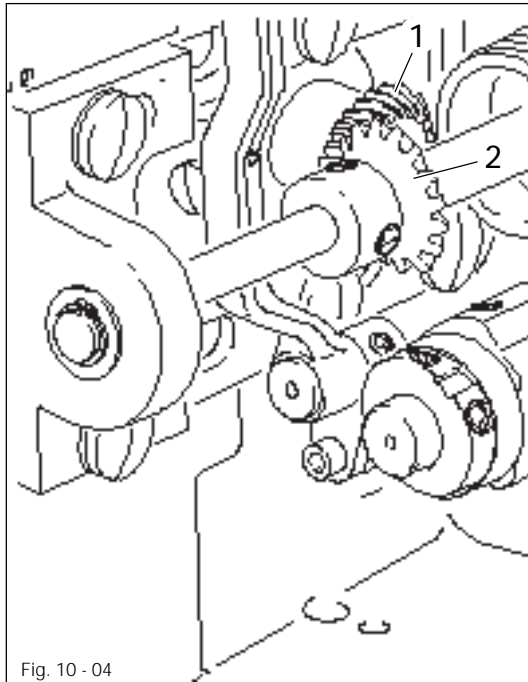


Fig. 10 - 04



Turn the machine off!  
Danger of injury if the machine  
is switched on accidentally!

- Disengage the knee lever.
- Tilt the machine backwards onto the support.
- Apply new grease to the bevel gears 1 and 2 once a year.



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

## 11 Adjustment



No adjustable clamp may be fastened to the needle bar of the **PFAFF 1193** and the **PFAFF 1194**.

This could cause damage to the special surface of the needle bar.



The illustrations in this section show the **PFAFF 1193** single-needle machine. On the **PFAFF 1194** it may be necessary to make mirror-inverted adjustments to the second post.

### 11.01 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 mechanics. 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 for securing machine parts which are to be loosened before making the adjustment and tightened again after the adjustment has been carried out.

### 11.02 Tools, gauges and other accessories

- 1 set of screwdrivers with blade widths from 2 to 10 mm
- 1 set of spanners with opening size from 7 to 14 mm
- 1 set of Allen keys from 1.5 to 6 mm
- 1 metal rule, part No. 08-880 218-00
- 1 adjustment pin (5 mm diameter), part No. 13-033 346-05
- Sewing thread and test material

### 11.03 Abbreviations

TDC = top dead center

BDC = bottom dead center

## 11.04 Control and adjusting aids



With the help of the adjustment pin 1 (Part no. 13-033 346-05) the required needle rise position, needle bar 1.8 mm after BDC, can be fixed.

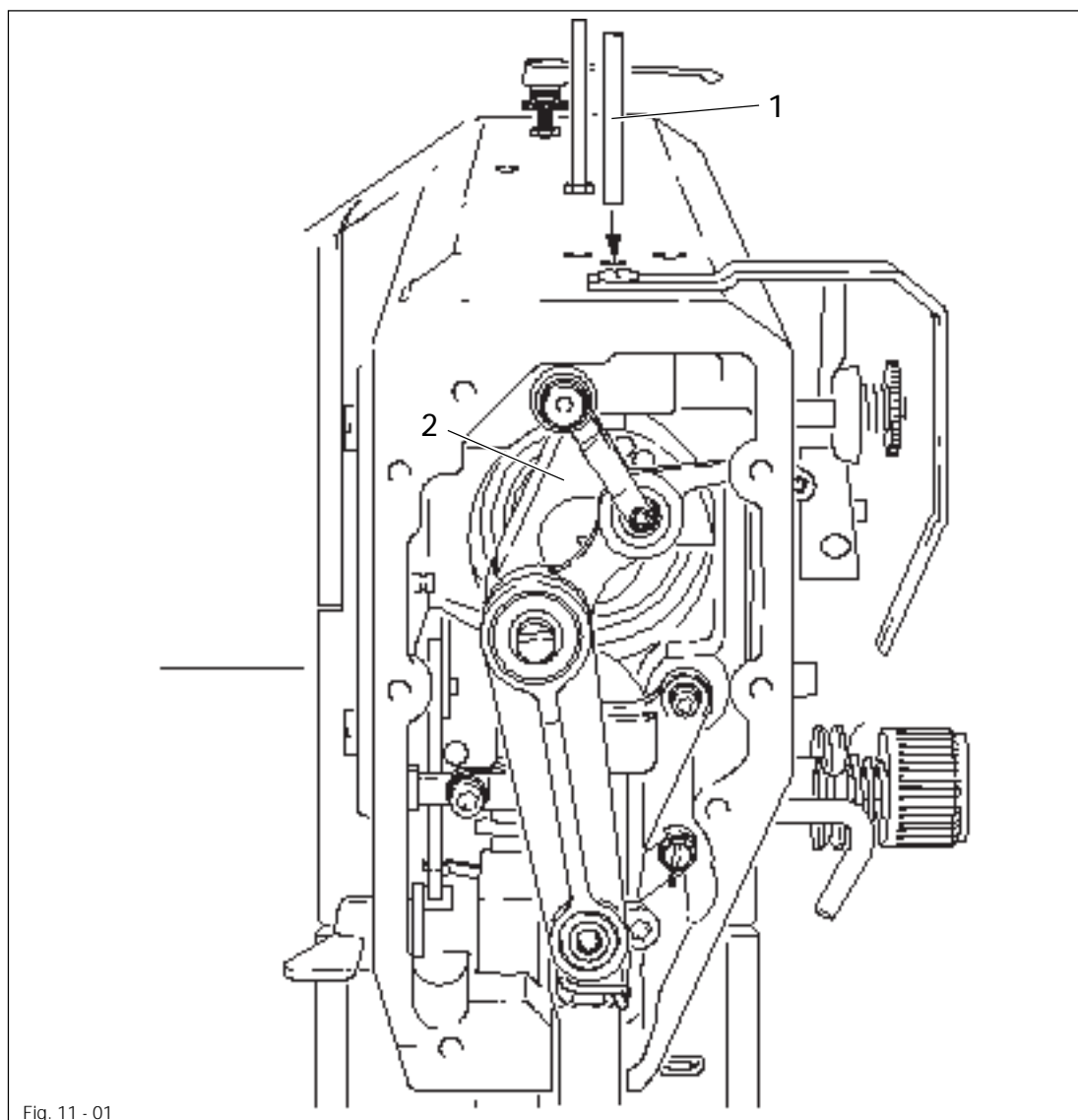


Fig. 11 - 01



- Turn the balance wheel until the needle bar is approximately in the required position.
- Insert adjustment pin 1 into the hole.
- Turn the balance wheel fractionally to and fro until the adjustment pin 1 clicks into crank 2.

## 11.05 Pre-adjusting the needle height

### Requirement

With the needle bar at BDC, the distance between the needle bar 1 and the needle plate must be 15 mm.

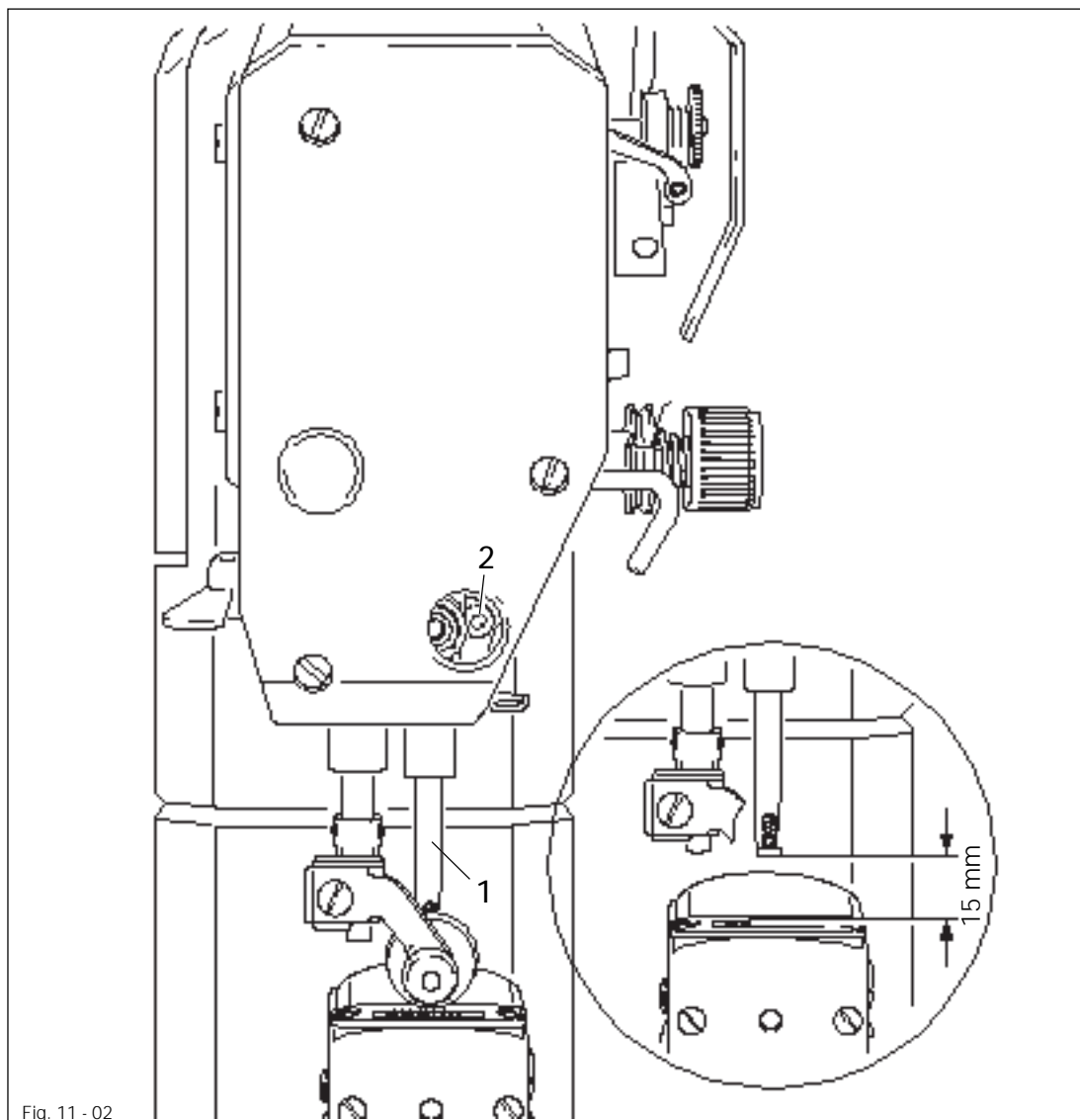


Fig. 11 - 02



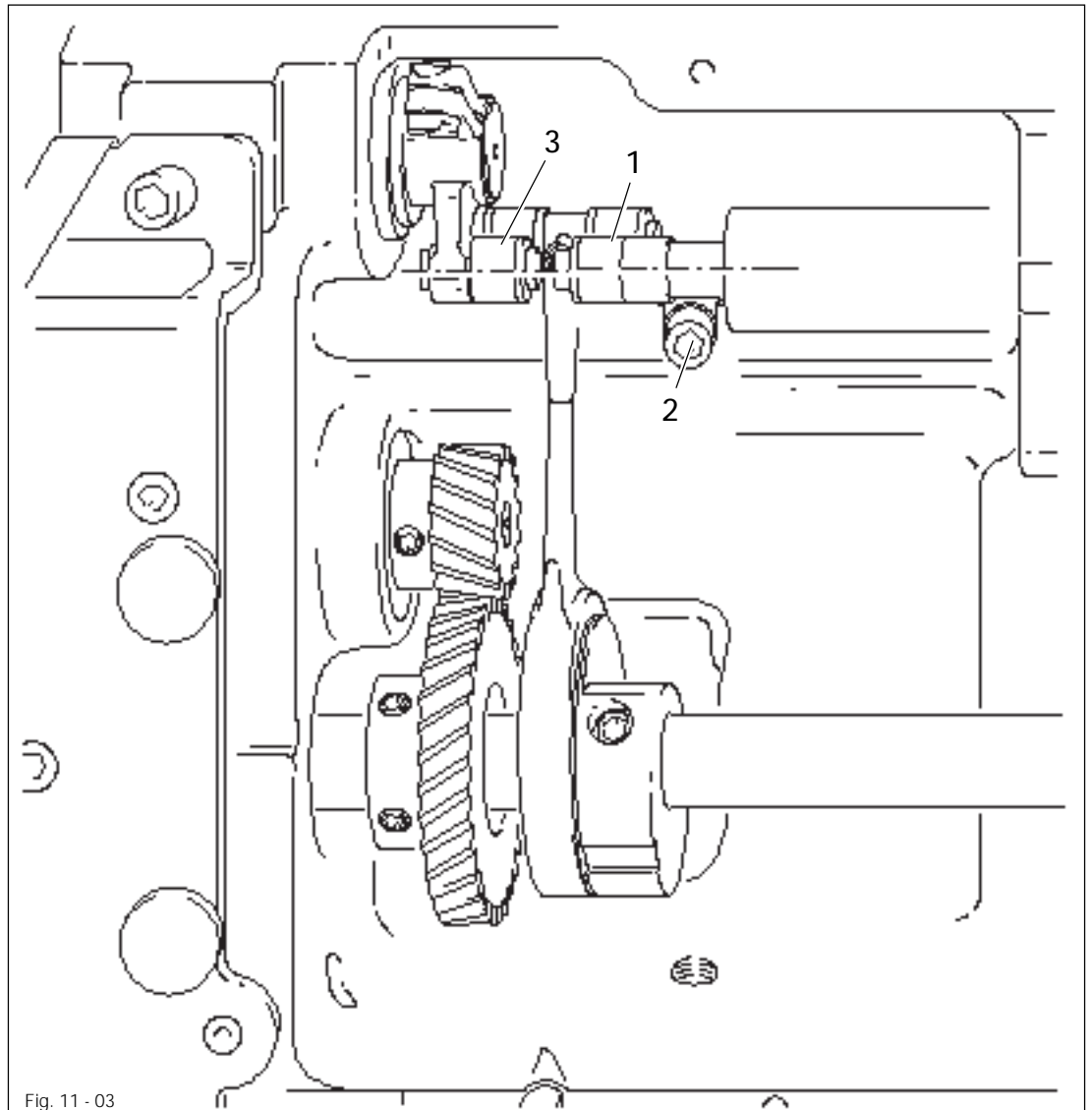
- Bring needle bar 1 to BDC.
- Position needle bar 1 (screw 2) in accordance with the **requirement**, without twisting it.



## 11.06 Setting the feed dog at the neutral position

### Requirement

With the stitch length set at "0", the cranks 1 and 3 must be in alignment, and there should be no driving motion of the feed dog when the balance wheel is turned.



- Raise the roller presser and set the stitch length at "0".
- Turn crank 1 (screw 2) in accordance with the requirement.

## 11.07 Lifting motion of the feed dog

### Requirement

With the stitch length set at "0" and the needle bar at its TDC

1. the feed dog must be at its top point of reversal,
2. the control cam 3 must be touching the feed lifting eccentric 1 and
3. the surface of the control cam 3 must be parallel to the bedplate.

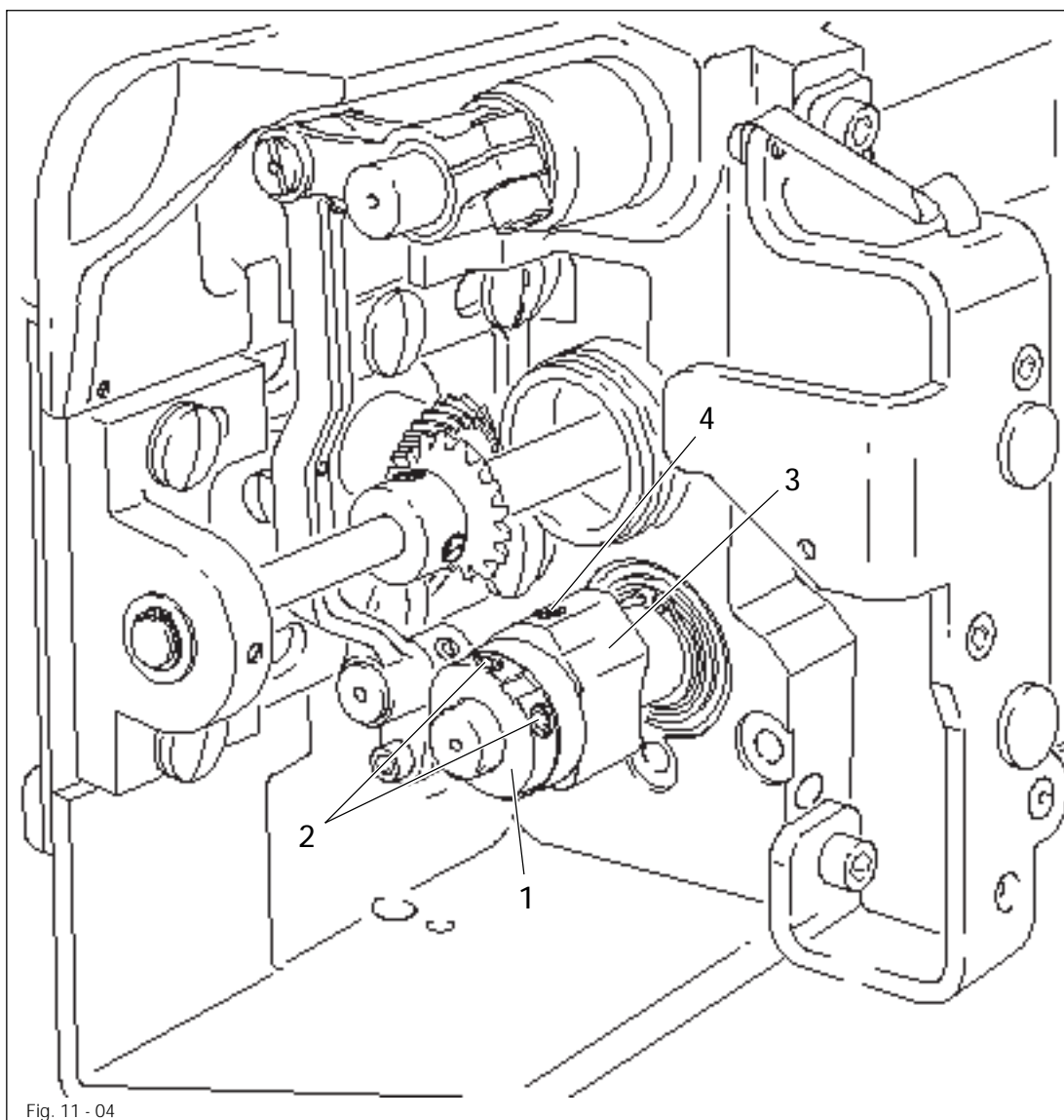


Fig. 11 - 04



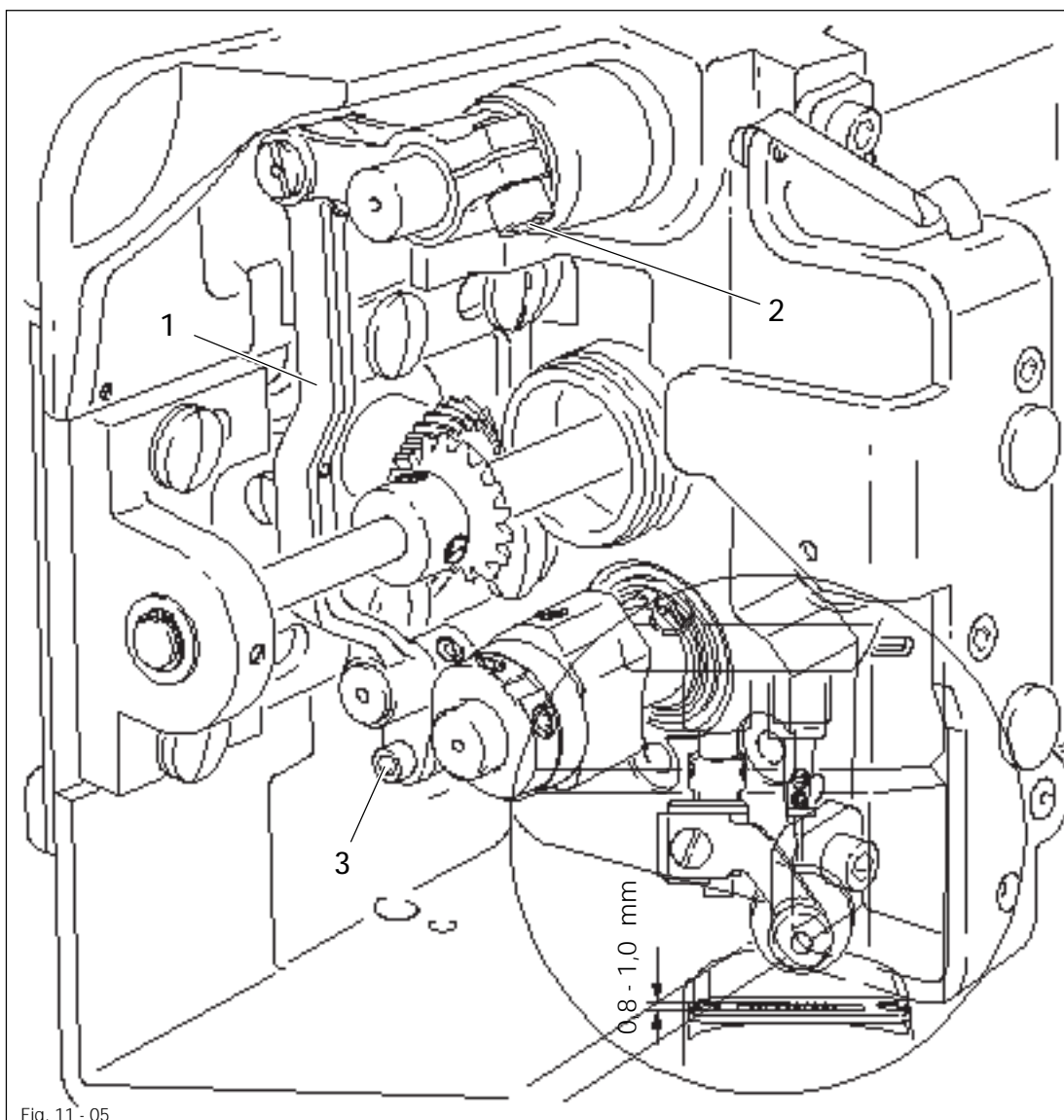
- Set the stitch length at "0" and bring the needle bar to its TDC.
- Turn eccentric 1 (screws 2) in accordance with requirement 1.
- Turn control cam 3 (screws 4) in accordance with requirement 2.

## 11.08 Feed dog height

**Requirement**

With the stitch length set at "0" and the needle bar at its TDC, the feed dog should

1. be positioned in the centre of the needle plate cutout and
2. protrude 0.8 - 1.0 mm from the needle plate.

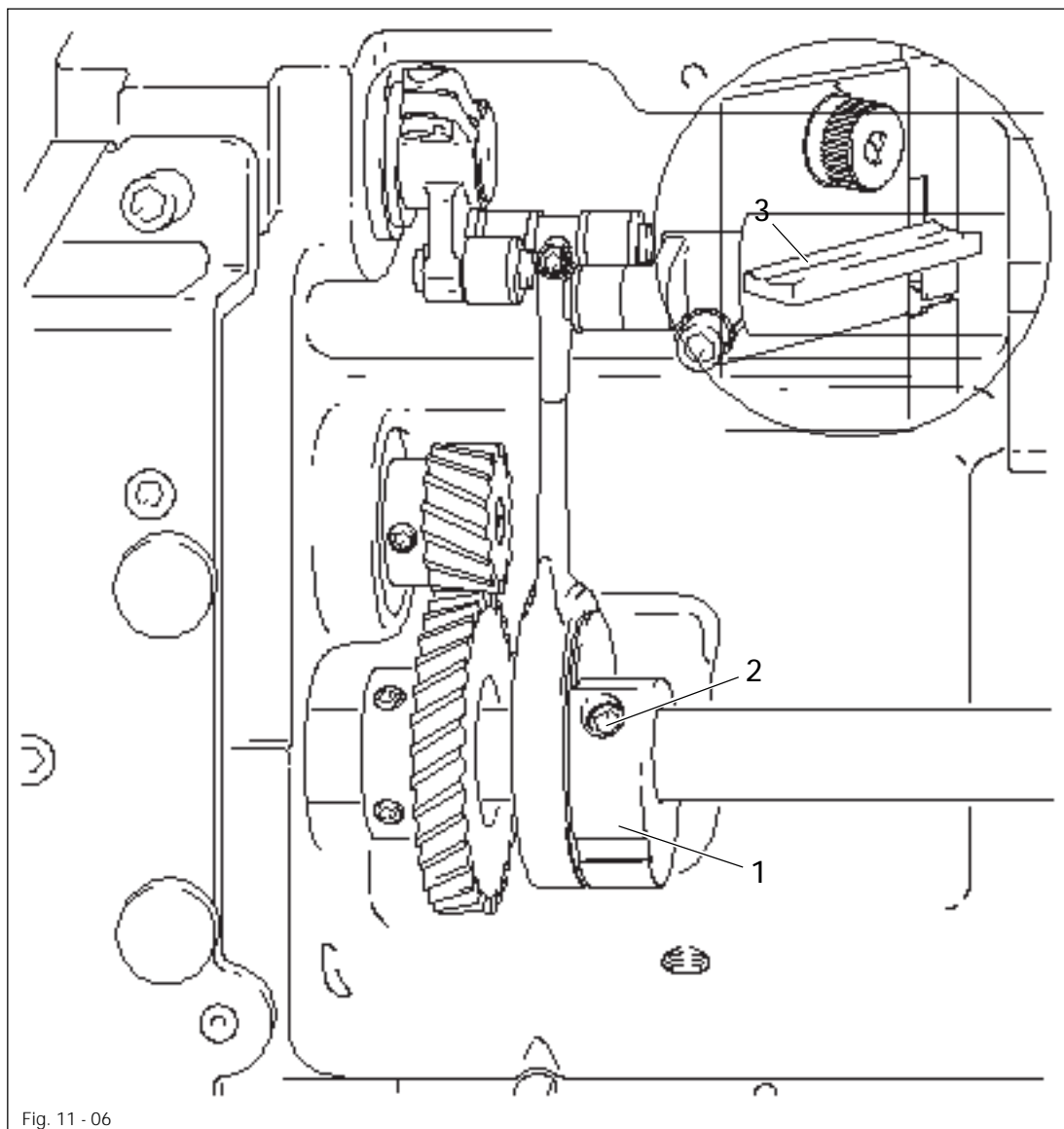


- Set the stitch length at "0" and bring the needle bar to its TDC.
- Raise the roller presser.
- Adjust the feed bar 1 (screw 2) in accordance with **requirement 1**.
- Adjust the feed bar 1 (screw 3) in accordance with **requirement 2**.

## 11.09 Driving motion of the feed dog

### Requirement

With the longest stitch set and the needle bar positioned at TDC, the feed dog should not move when the reverse-feed lever 3 is operated.

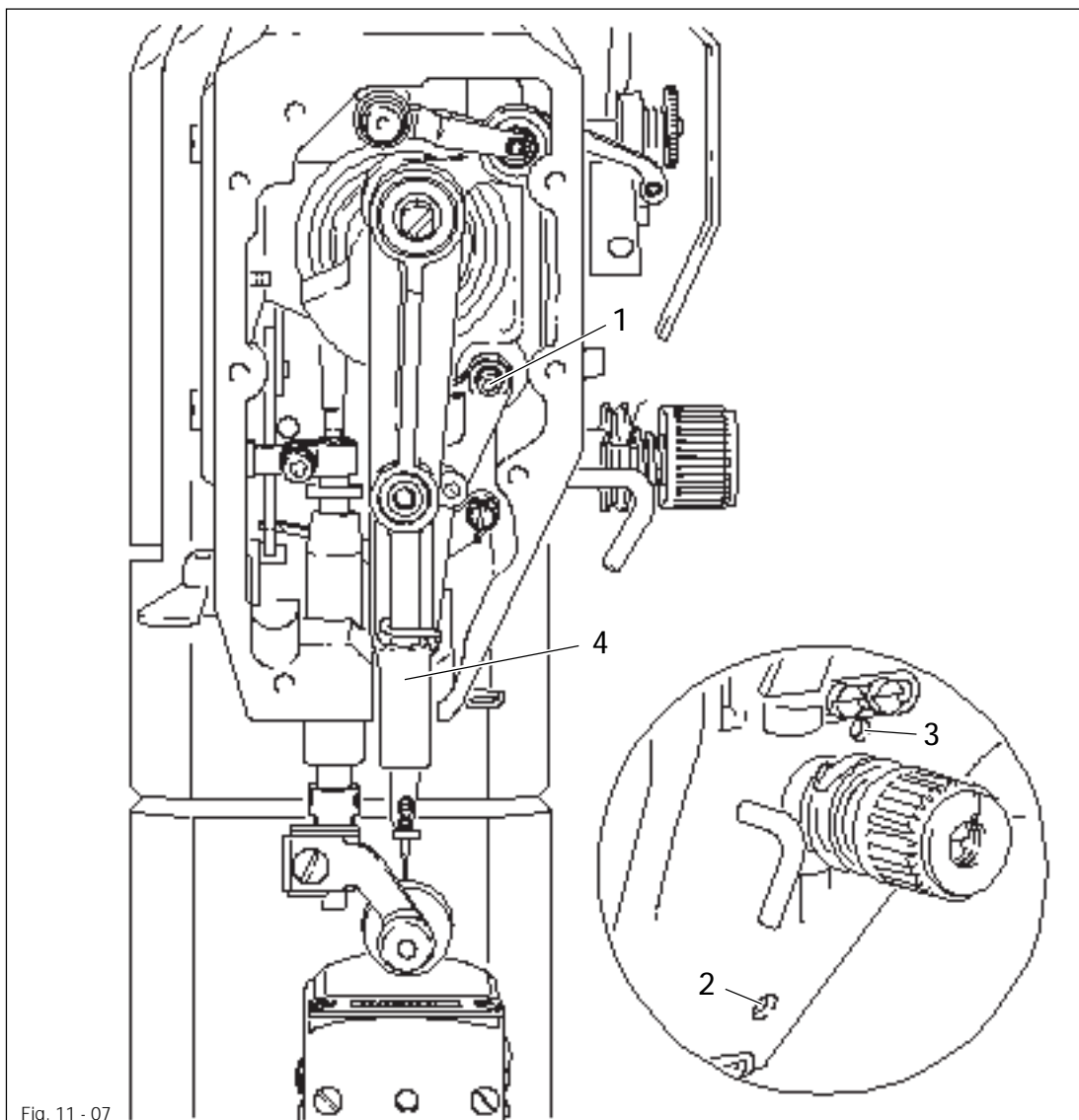


- Set the longest stitch.
- Bring the needle bar to its TDC.
- Turn eccentric 1 (slightly loosen screws 2) in accordance with the requirement, without moving it sideways.

## 11.10 Centering the needle in the needle hole

**Requirement**

The needle should enter the needle hole exactly in the centre.

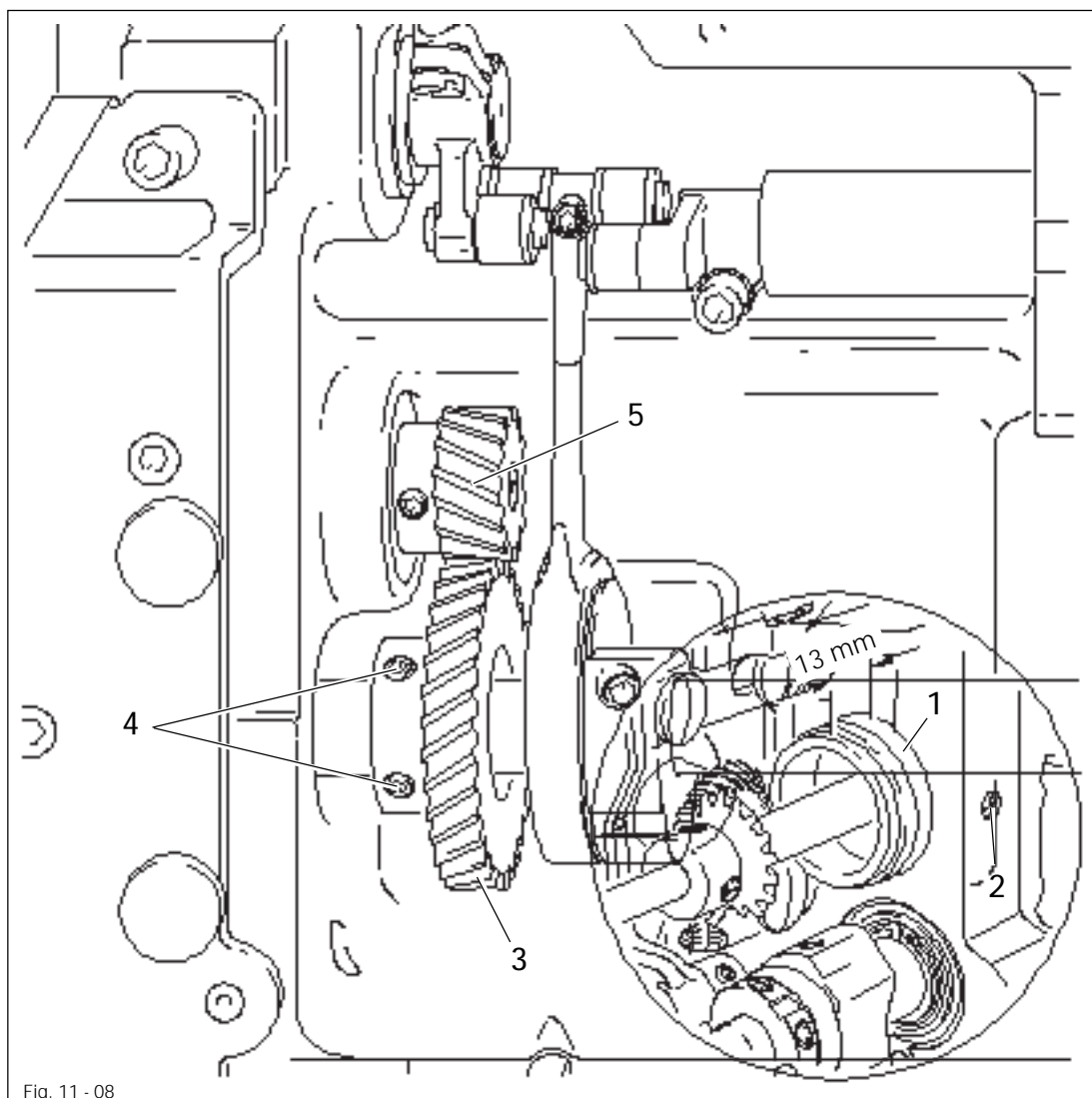


- Position the needle directly above the needle hole.
- Loosen screws 1, 2 and 3.
- Position the needle bar frame 4 in accordance with the **requirement**.
- Tighten screw 2 and slightly tighten screw 3.
- By tightening screw 1 draw the inner guide stud towards the eye of the needle bar frame 4.
- Turn the balance wheel a few times to avoid a distortion of the needle bar frame 4.
- Tighten screw 3.

## 11.11 Hook shaft bearing and gearwheel backlash

### Requirement

1. The front edge of the hook shaft bearing should have a clearance of 13 mm to the cast-iron edge.
2. There should be a slight backlash between the gearwheels 3 and 5.



- Adjust hook shaft bearing 1 (screw 2) in accordance with requirement 1.
- Adjust gearwheel 3 (screws 4) on the shaft in accordance with requirement 2.

## 11.12 Needle rise, hook-to-needle clearance, needle height and needle guard

**Requirement**

With the needle bar positioned 1.8 mm after BDC

1. The hook point must be at the needle centre position and clear the needle groove by 0.05 - 0.10 mm.
2. The top edge of the eye of the needle must be 0.8 mm below the hook point.
3. The needle guard must lightly touch the needle.

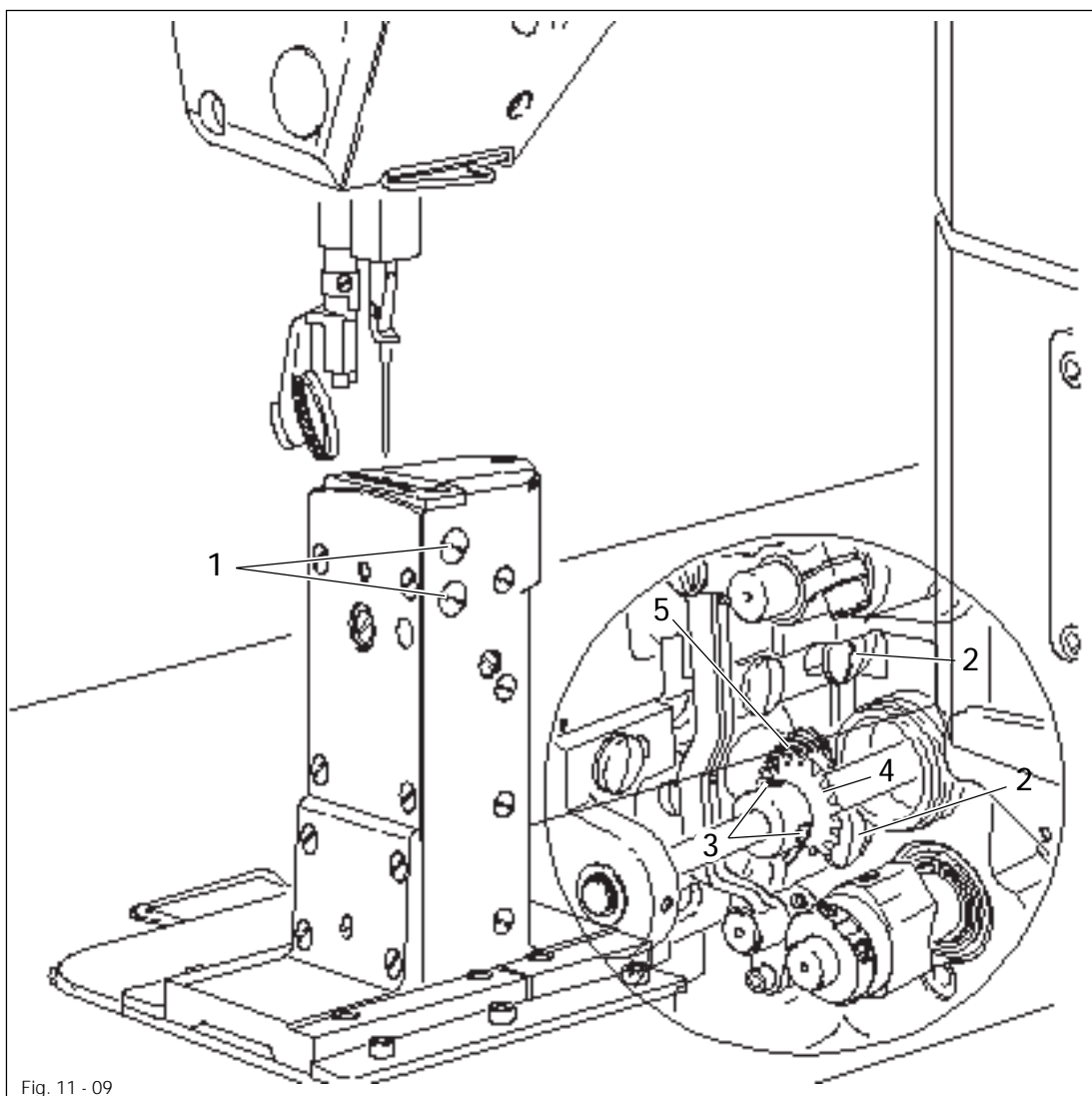


Fig. 11 - 09



- Position the needle bar 1.8 mm after BDC (needle rise position).
- Loosen screws 1 (on both sides of the post), 2 and 3.
- Position the hook point at the needle centre, taking care to ensure that the needle is not deflected by needle guard.
- Position post in accordance with requirement 1.
- Tighten screws 1 and 2.
- While ensuring that bevel gear 4 is not too close to bevel gear 5, and that the hook does not have too much play, tighten screws 3.
- Adjust the needle height in accordance with requirement 2, see Chapter 11.05 Pre-adjusting the needle height.

## 11.13 Bobbin-case opener

### Requirement

The needle thread must not be clamped between the bobbin-case opener **1** and the bobbin-case **3**, nor may it be clamped between projection **4** and the retaining trip of the needle plate.

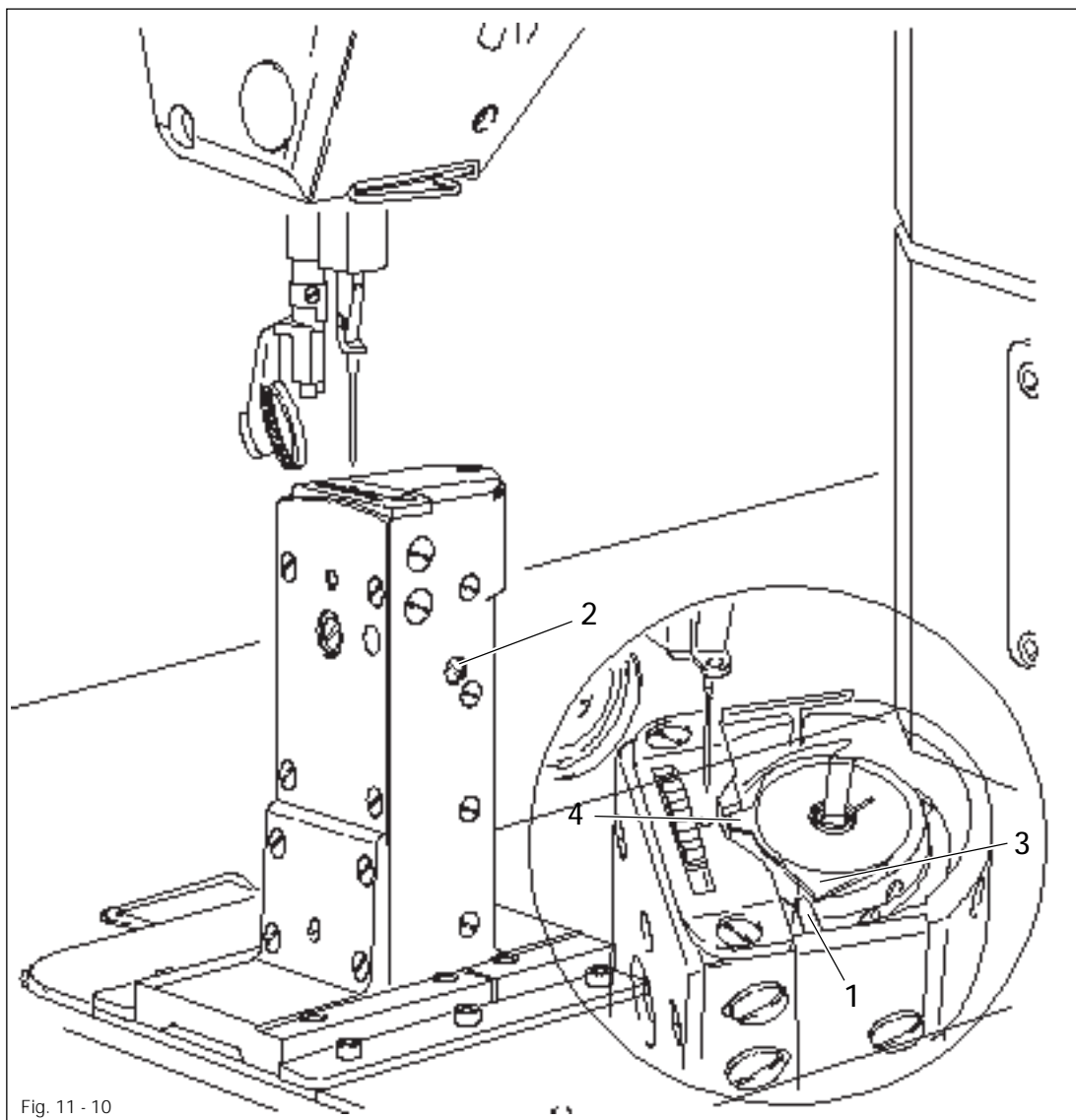


Fig. 11 - 10



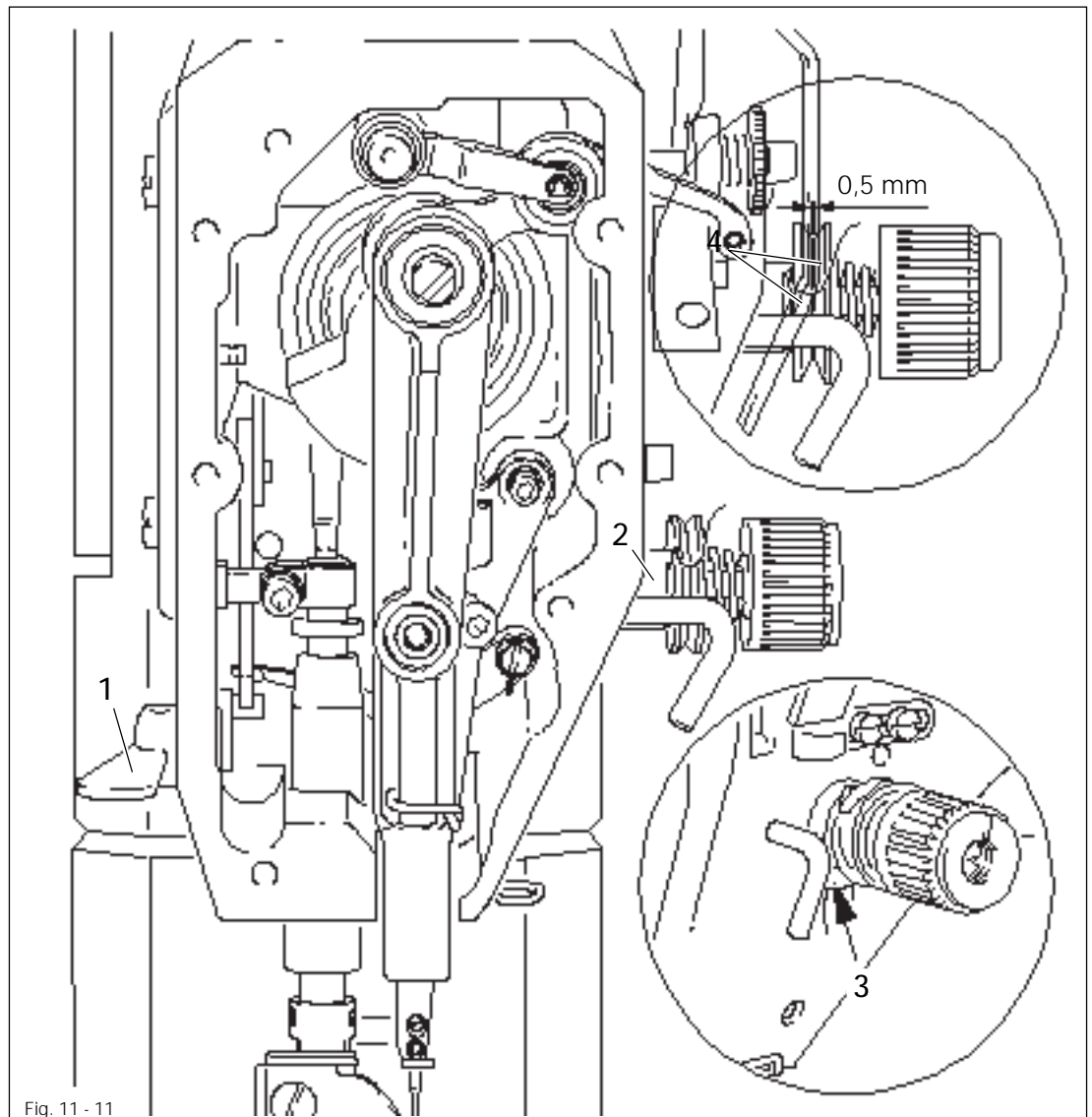
- Adjust the bobbin-case opener **1** (screws **2**) in accordance with the requirement.



## 11.14 Needle thread tension release (on the PFAFF 1193)

### Requirement

With the presser bar lifter **1** raised, the tension discs **4** must be at least **0.5 mm** apart.

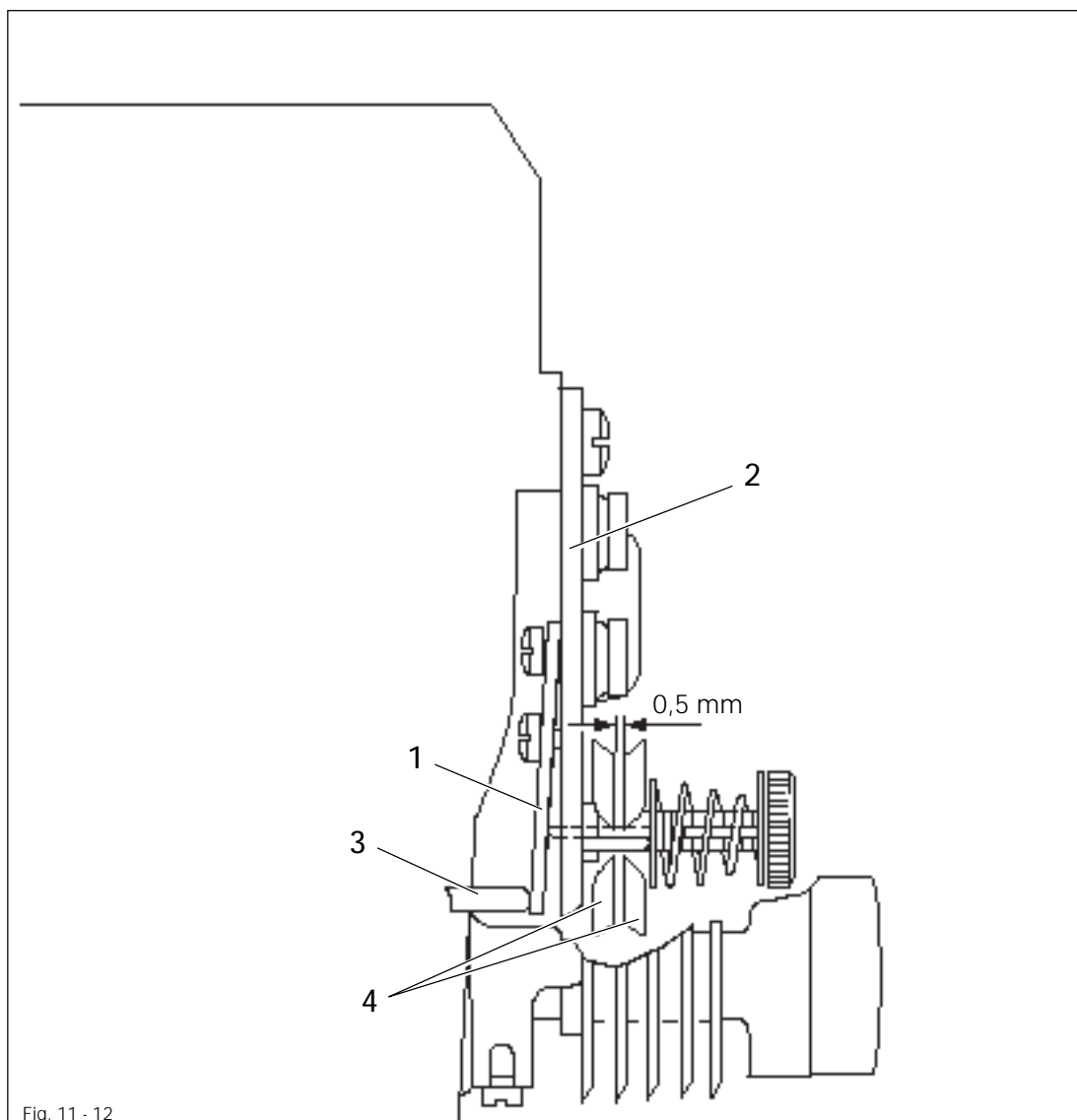


- Raise the presser bar lifter 1.
- Adjust the thread tension 2 (screw 3) in accordance with the requirement.

## 11.15 Needle thread tension release (on the PFAFF 1194)

### Requirement

With the presser bar lifter 1 raised, the tension discs 4 must be at least 0.5 mm apart.



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



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



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

## 11.16 Thread check spring and thread regulator (on the PFAFF 1193)

**Requirement**

1. The motion of the thread check spring should have ceased when the needle point enters the material (spring stroke approximately **7 mm**).
2. If the largest possible thread loop is formed when the thread is passed around the hook, the thread check spring should have moved approximately **1 mm**.

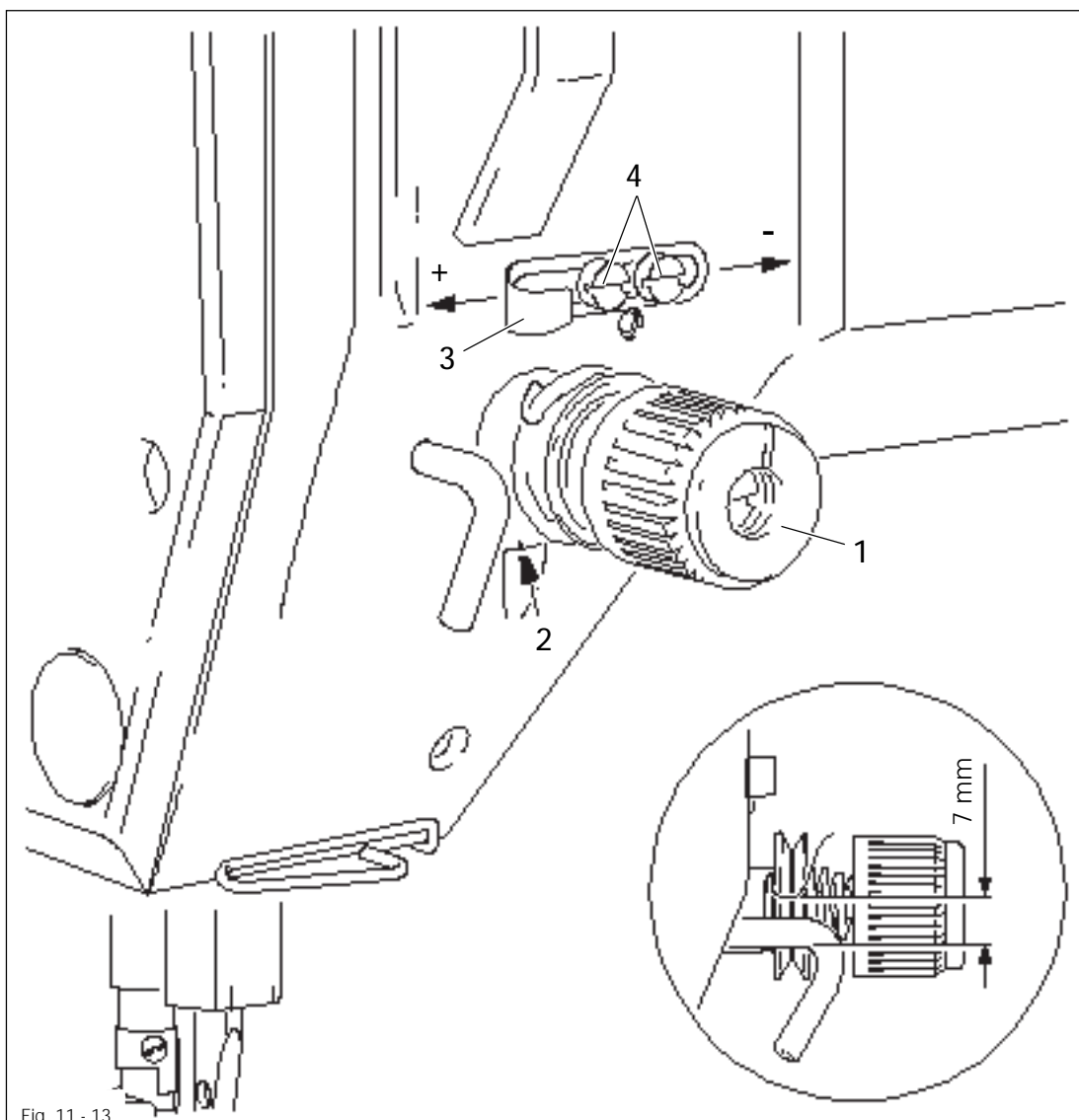


Fig. 11 - 13



- Adjust thread tension 1 (screw 2) in accordance with the requirement.
- Check the needle thread tension, see **Chapter 11.15 Needle thread tension release**, and re-adjust it if necessary.
- Adjust thread regulator 3 (screws 4) in accordance with **requirement 2**.



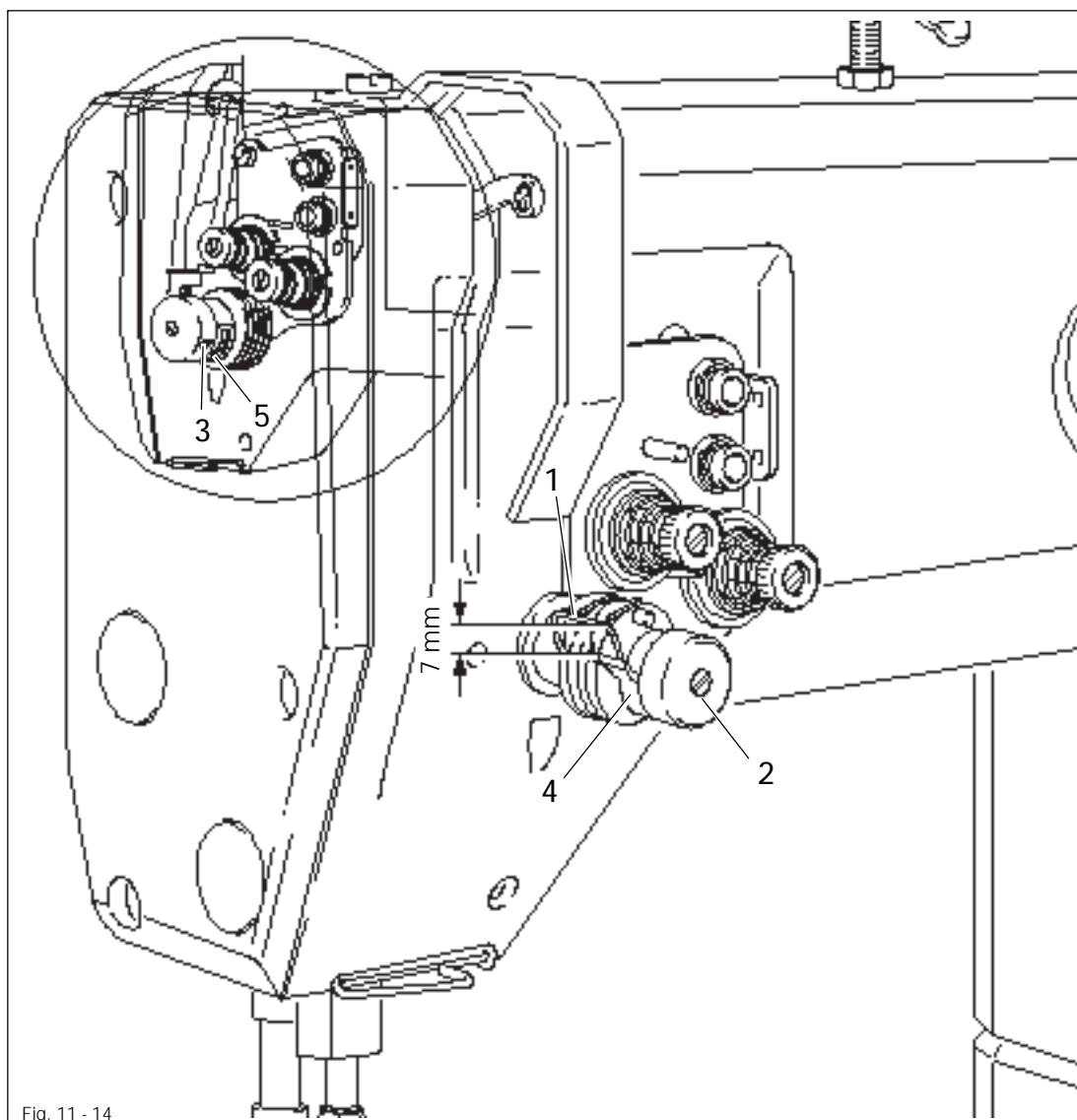
Due to technical reasons, it may be necessary to alter the specified spring stroke.

Slide thread regulator 3 (screw 4) towards " + " (= more thread) or " - " (less thread).

### 11.17 Thread check spring and thread regulator (on the PFAFF 1194)

#### Requirement

The motion of the thread check spring 1 should have ceased when the needle points enter the material (= approx. 7 mm spring stroke).



- Turn screw 2 (screw 3) to adjust the tension of thread check spring 1.
- Turn retainer 4 (screw 5) in accordance with the requirement.

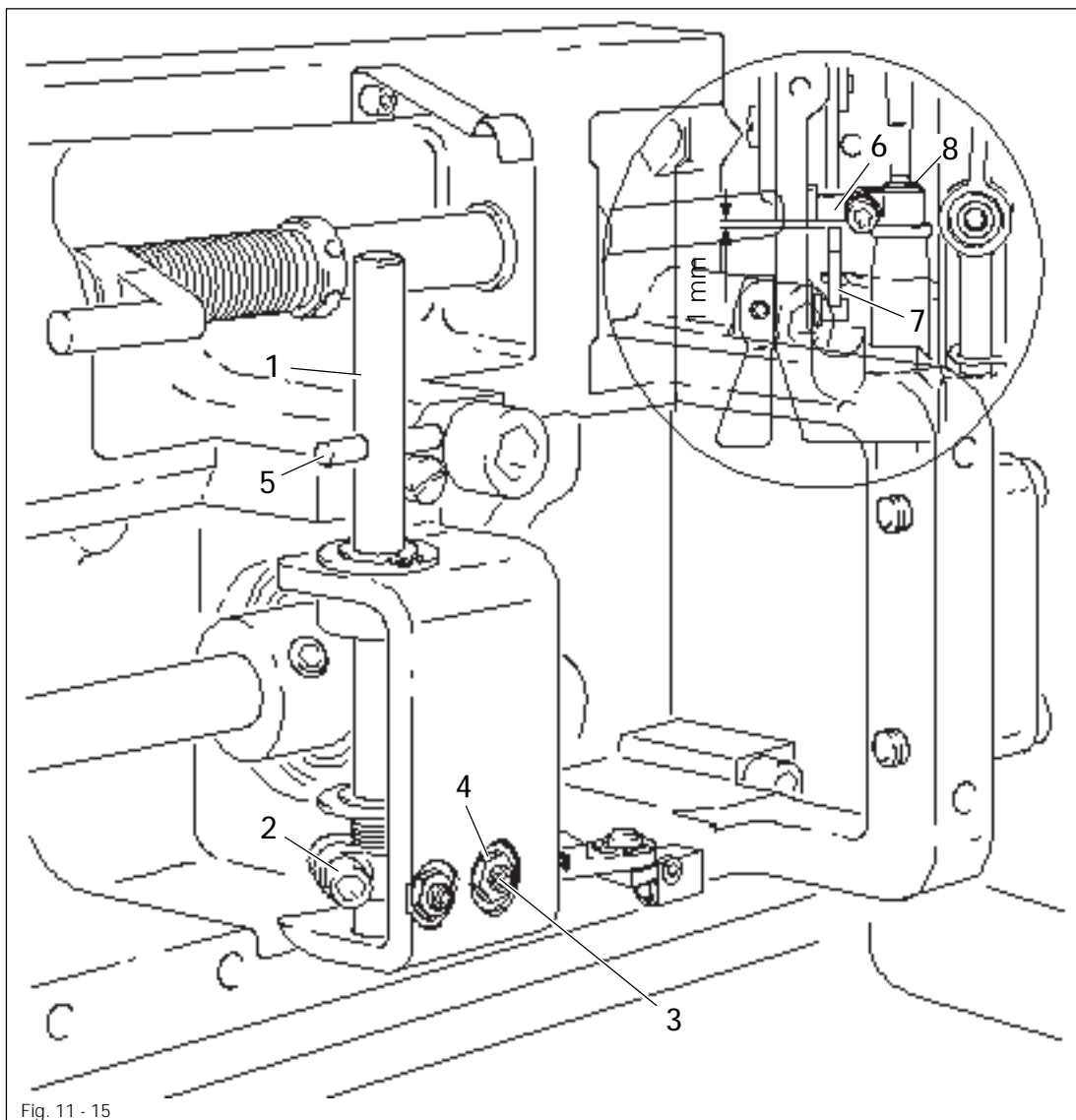


Due to technical reasons, the length of the thread-check spring stroke can vary a little in either direction.

## 11.18 Setting the knee lever

## Requirement

1. When the knee lever is in its resting position, axis **5** should be parallel to the bedplate.
2. When the roller presser rests on the needle plate, the presser bar lifting lever **6** should touch the safety ring **8** and clear the lifting piece **7** by approximately **1 mm**.

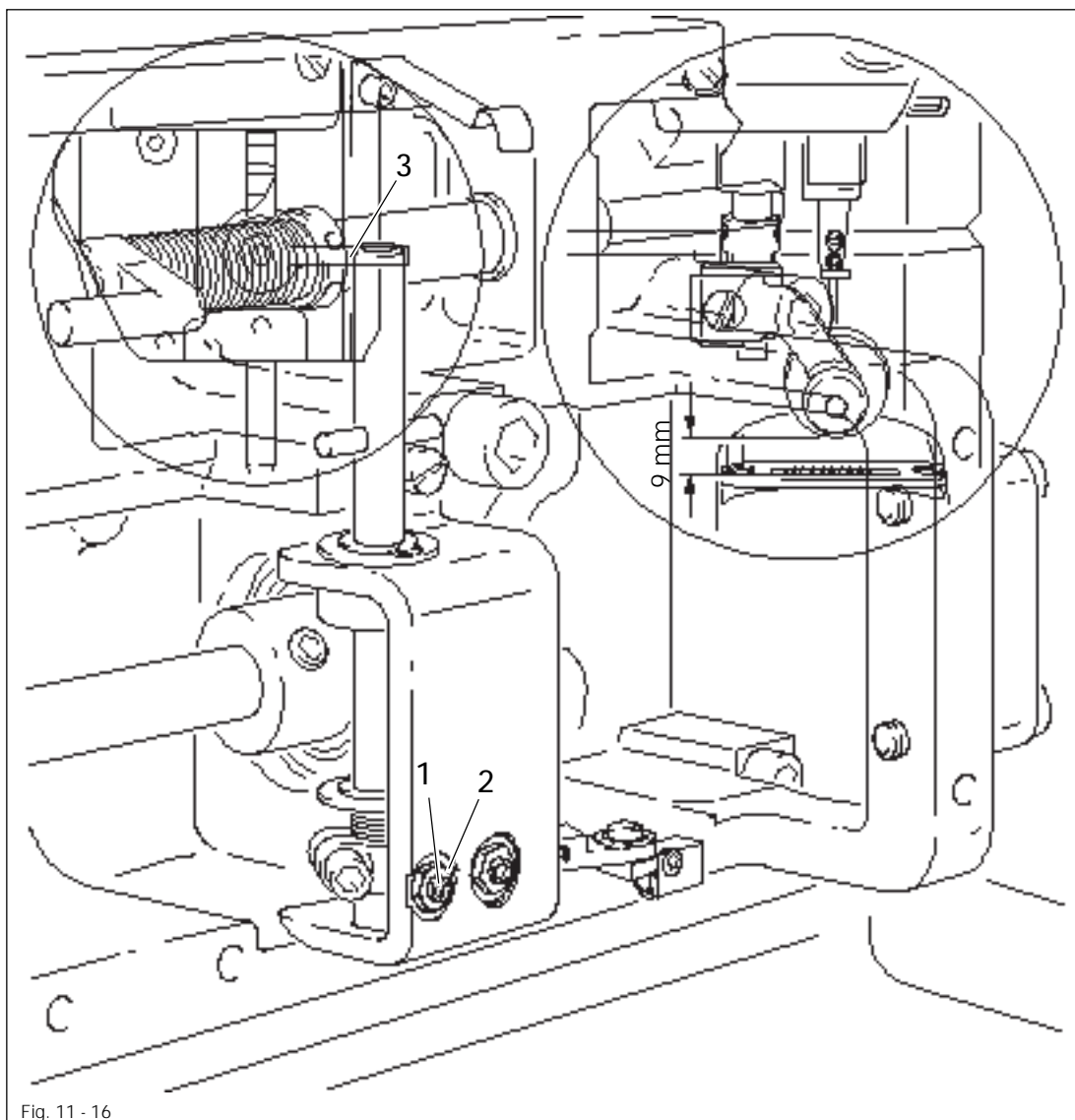


- Adjust shaft **1** (screw **2**) in accordance with requirement 1.
- Position the needle bar at BDC and let the roller presser rest on the needle plate.
- Adjust screw **3** (nut **4**) in accordance with requirement 2.

## 11.19 Knee lever stop

### Requirement

When the knee lever has been moved as far as possible, the roller presser should rise approximately 9 mm above the needle plate, and lever 3 should swing down automatically.



- Schraube 1 ( Mutter 2 ) entsprechend der Requirement verdrehen.

## 11.20 Bobbin winder

## Requirement

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

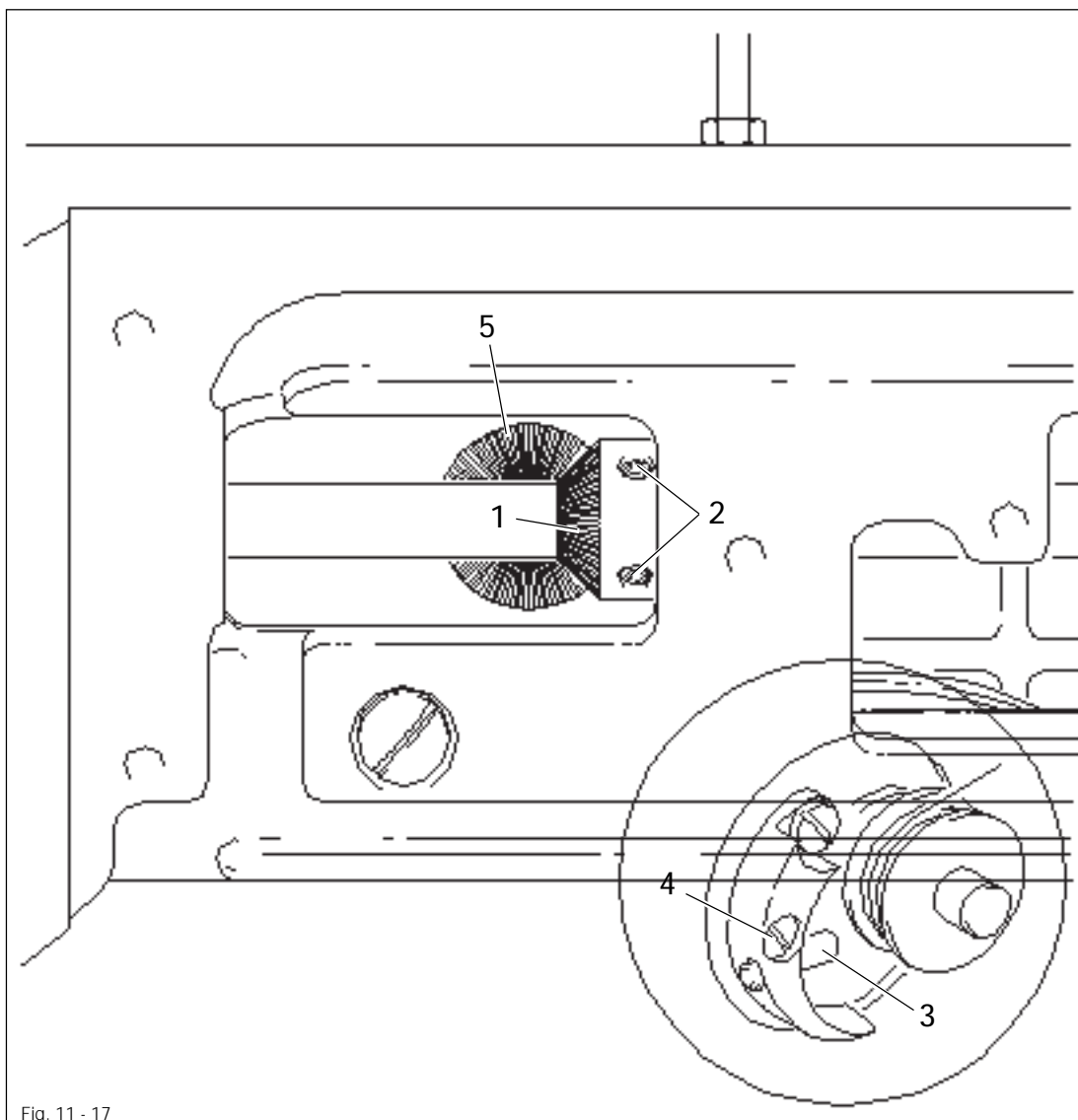


Fig. 11 - 17



- Move drive wheel 1 (screws 2) in accordance with requirements 1 and 2.
- Move pin 3 (screw 4) in accordance with requirement 3.

## 11.21 Limiting the stitch length



The maximum stitch length can be limited mechanically.

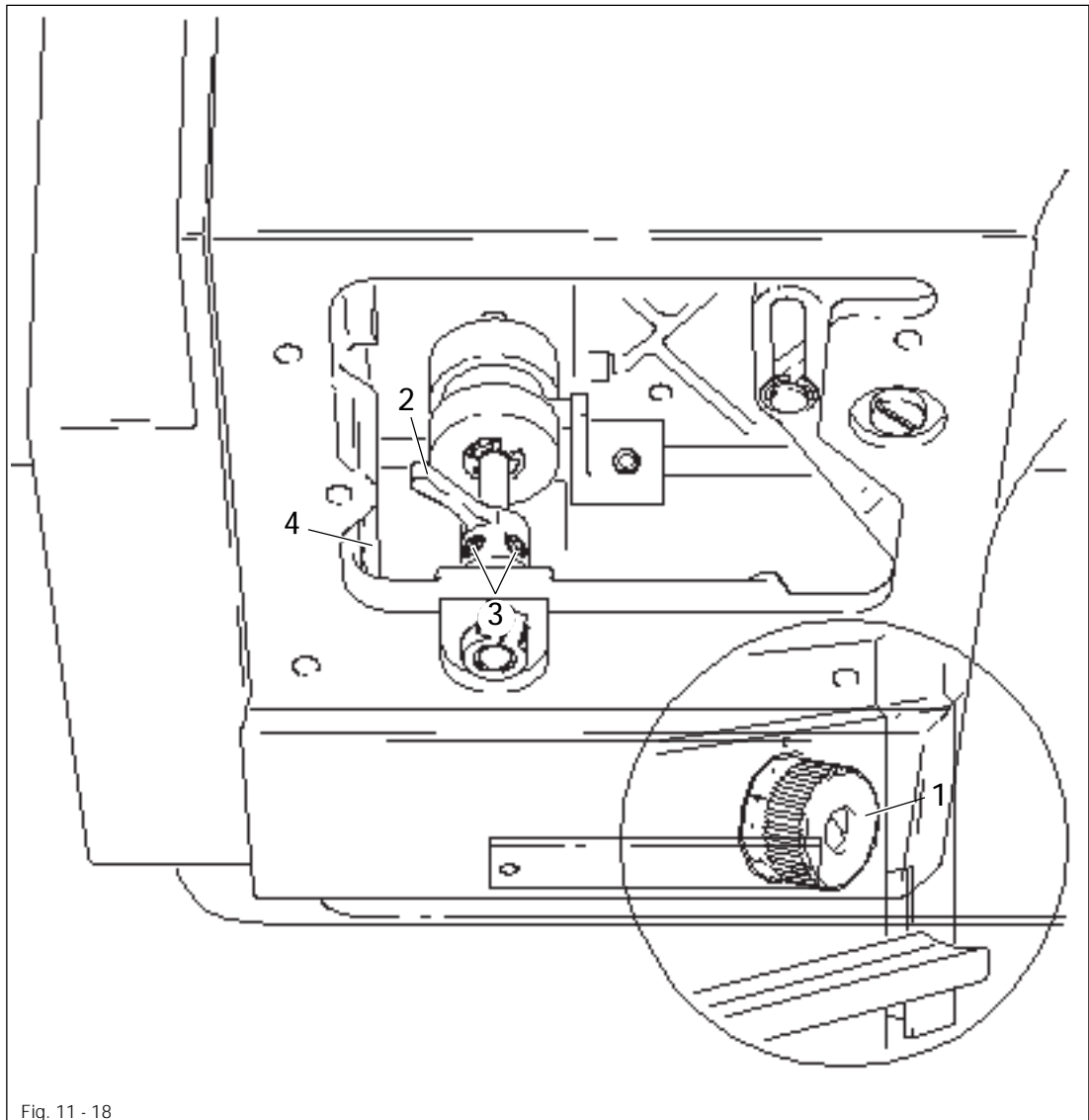


Fig. 11 - 18



- Set the required maximum stitch length on the adjustment knob 1.
- Move crank 2 (screws 3) from above to rest on stop 4.



11.22 Pressure of the roller presser

Requirement  
Pressure of the roller presser

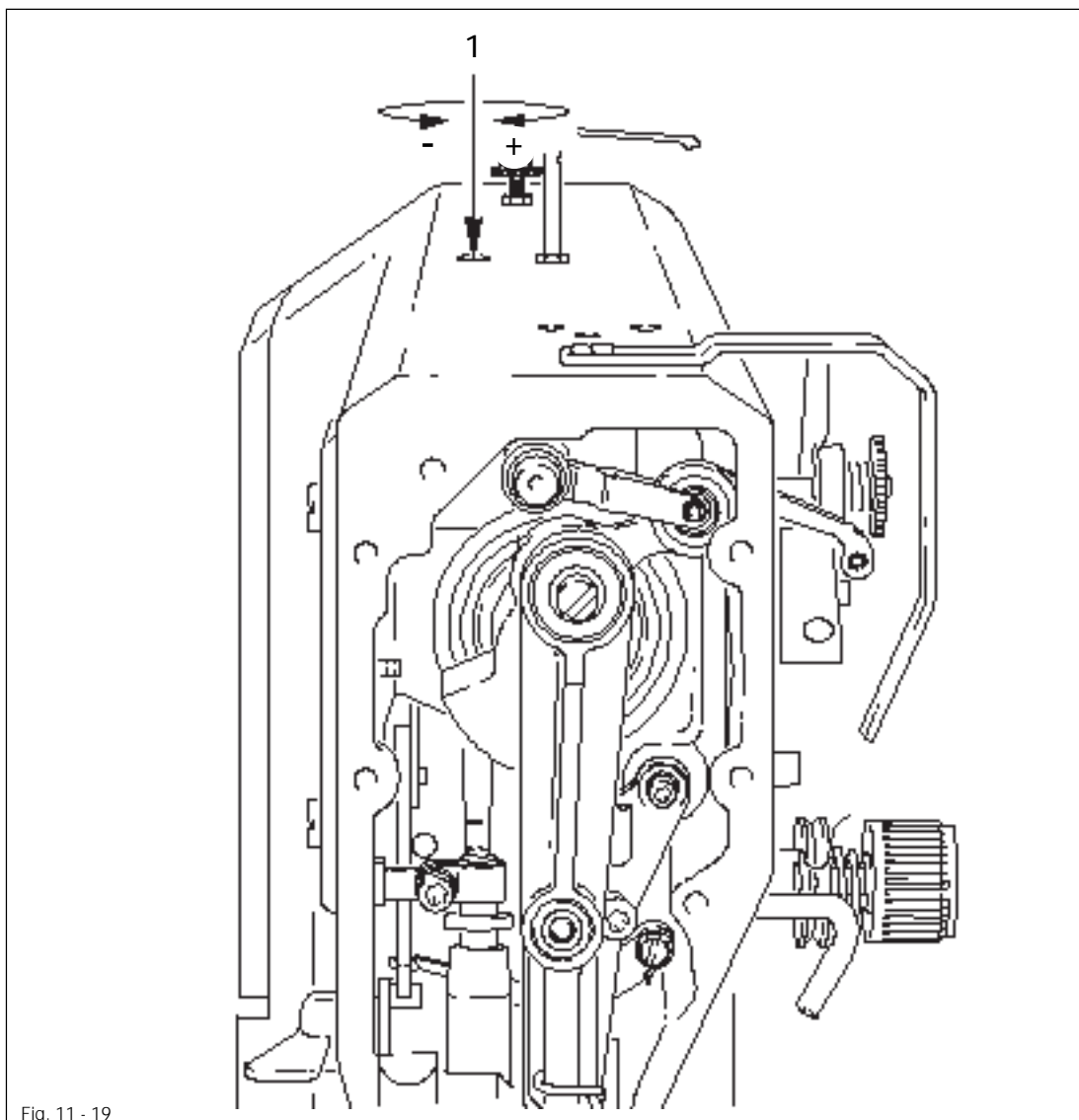


Fig. 11 - 19



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

## 11.23 Changing the needle bar stroke



The manufacturer sets the needle bar stroke as required.  
If the operating conditions make it necessary, the needle bar stroke can be changed.

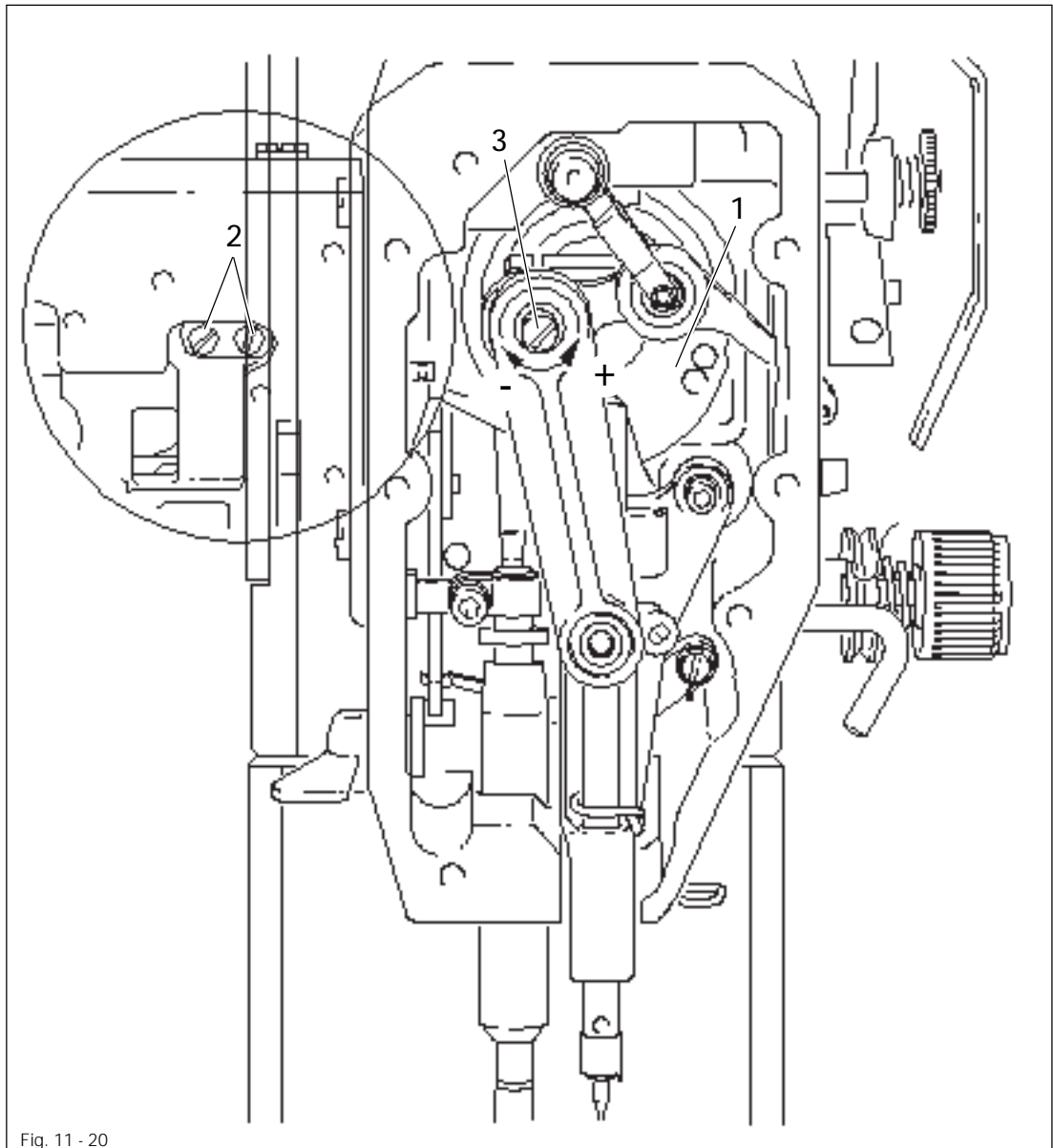


Fig. 11 - 20



After the needle bar stroke has been changed, it is absolutely necessary to readjust the needle height!



- Using the balance wheel, turn crank 1 until the screws 2 become accessible from the side opening of the housing.
- Turn eccentric 3 (screws 2) as far as possible towards "+" (= longer needle bar stroke) or towards "-" (= shorter needle bar stroke).
- Adjust the needle height, see Chapter 11.05 Pre-adjusting the needle height.



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