PFAFF

335

Instruction manual

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

2432978 →

296-12-18 393/002
Betriebsanleitung engl. 06.05

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 has been made according to 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 valid pollution control regulations! The locally valid regulations of the social insurance institution responsible for occupational accidents, or other supervisory authorities, must be strictly adhered to!

1.02 General notes on safety

- The machine must only be operated when the instruction manual has been fully read and understood, and only by operators who have had the necessary training!
- All notes on safety and the instruction manual of the motor manufacturer must be read before the machine is put into operation!
- All notices on the machine referring to danger and safety must be observed!
- The machine must be used for the purpose it is intended for 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 and needle plate), during threading, when the workplace is left unattended and during maintenance work, the machine must be isolated from the power supply by pressing 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 the appropriate training! Exceptions to this are only allowed for adjustment and function checks by appropriately trained personnel!
- Repair work and special maintenance work must only be carried out by technical personnel or by persons with the appropriate training!
- 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 properties 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!

Caution

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

1.04 Important notes for the user

- This instruction manual is part of the equipment of the machine and must be available to the operating staff at all times.
- The 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 must be sure to observe the following items:

- always observe the notes on safety in this instruction manual in their work!
- refrain from any working methods which adversely effect the safety of the machine!
- avoid wearing loose clothing or jewelry such as necklaces or rings!
- also make sure that only authorised 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 must be sure to observe the following items:

- always observe the notes on safety in this instruction manual in their work!
- press the on/off switch before carrying out adjustment and repair work, and ensure it cannot be switched on again unintentionally, or isolate the machine from the power supply by removing the mains plug!
- never work on parts or equipment still connected to the power supply! Exceptions to this are only permissible according to regulations EN 50110;
- replace all safety covers after carrying out maintenance or repair work and, if applicable, close the electrical control box again!

1.06 Danger symbols

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 mechanical clutch-motors without an actuating lock, wait until the motor comes to a standstill before working on the machine! Danger of injury!

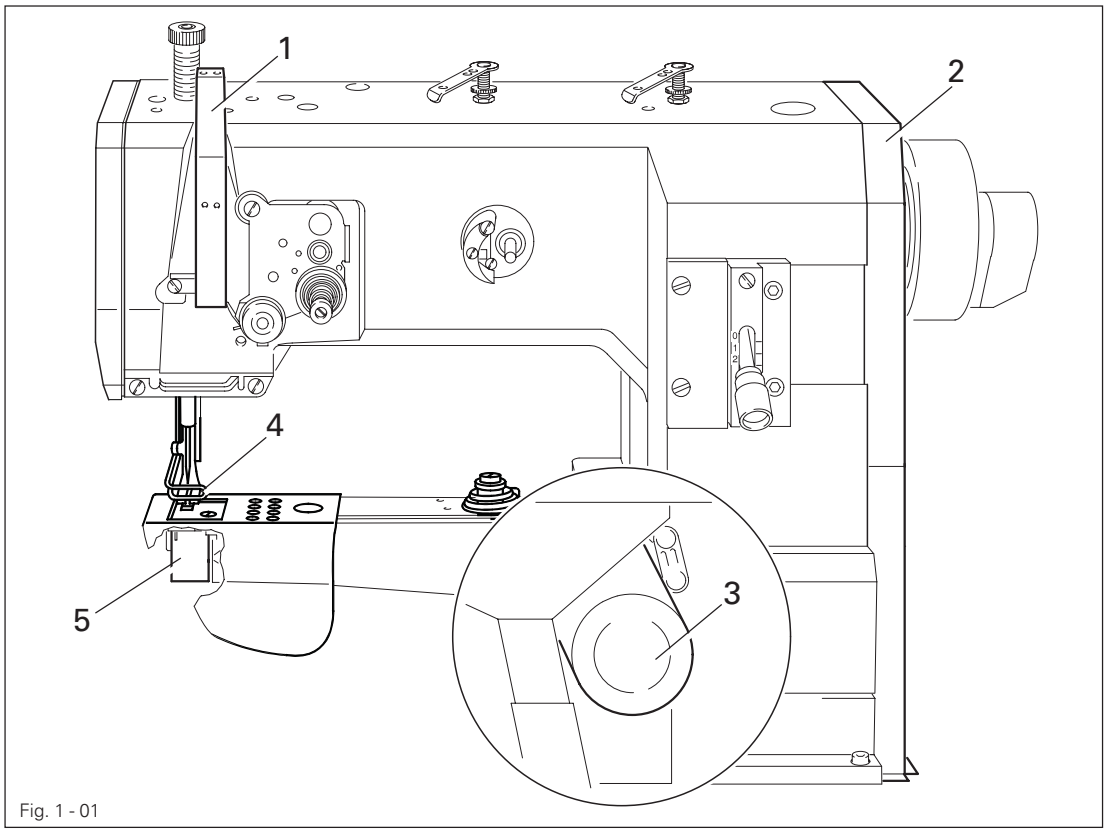


Fig. 1 - 01

Do not run the machine without take-up lever guard **1**!
Danger of injury by moving take-up lever!

Do not run the machine without belt guards **2** and **3**!
Danger of injury by rotating v-belt!

Do not run the machine without finger guard **4**!
Danger of injury by up and down movement of needle!

Do not run the machine without cylinder-bed cap **5**!
Danger of injury by rotating hook!

2 Proper use

The PFAFF 335 is a single needle, free-arm sewing machine with bottom, top and needle feeds for sewing lockstitch seams.

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

3.01 PFAFF 335◆

Stitch type: ..... 301 (lockstitch)
Model: ..... B
Needle system: ..... 134 - 35
Needle thickness (Nm) in 1/100 mm: ..... 80 - 100

Max. stitch length:
on sub classes -940/01-6/01 ..... 4,5 mm
on sub classes -2/27; -6/01; -17/01; -39/21 ..... 6,0 mm

Handwheel effective dia.: ..... 80 mm
Max. speed: ..... 2800 spm

Dimensions of the machine:
Free-arm head dia.: ..... 51 mm
Free-arm size: ..... approx. 165 mm
Length: ..... approx. 770 mm
Width: ..... approx. 380 mm
Height: ..... approx. 630 mm

Width of fabric clearance: ..... 265 mm
Height of fabric clearance: ..... 115 mm
Clearance under the sewing foot: ..... 7 mm

Net weight (sewing head): ..... approx. 40 kg
Working air pressure: ..... 6 bar
Air consumption: ..... ~0.8 l / work cycle

Motor data: ..... see motor specification plate

Noise data:
Emission sound level at workplace at a speed of 1800 spm: ..... L_{pa} = 81.0 dB(A)■
(Noise measurement in accordance with DIN 45 635-48-B-1, ISO 11204, ISO 3744, ISO 4871)

3.02 Versions and subclasses

Version B: ..... for sewing medium-weight materials
Version P: ..... additional lifting phase of the bottom feed dog

Additional equipment:
Subclass -900/52 ..... Thread trimmer
Subclass -911/97 ..... Backtacking device

◆ Subject to alterations

■ K_{pA} = 2,5 dB

4 Disposal of the machine

- The proper disposal of the machine is the responsibility of the user.
- The materials used for the machine are steel, aluminium, brass and various plastics. The electrical equipment consists of plastics and copper.
- The machine must be disposed of in accordance with applicable local pollution control regulations. If necessary, a specialist is to be consulted.

Special care is to be taken that parts soiled by lubricants are separately disposed of in accordance with the applicable local environmental pollution control regulations!

5 Transportation, packing and storage

5.01 Transport zum Kundenbetrieb

Die Maschinen werden komplett verpackt geliefert.

5.02 Transportation to customer's premises

The machines are delivered completely packed.

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.

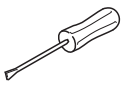
6 Explanation of the symbols

In this Instruction Manual, work to be carried out and important information are drawn to your attention by symbols. The symbols have the following meanings:

Note, information

Cleaning, care

Lubrication



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

7 Controls

7.01 On/off switch

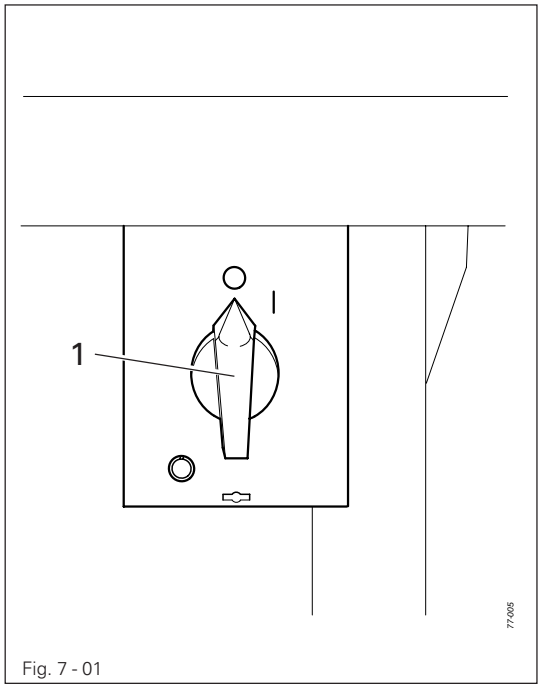


Fig. 7 - 01

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

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 Pedal

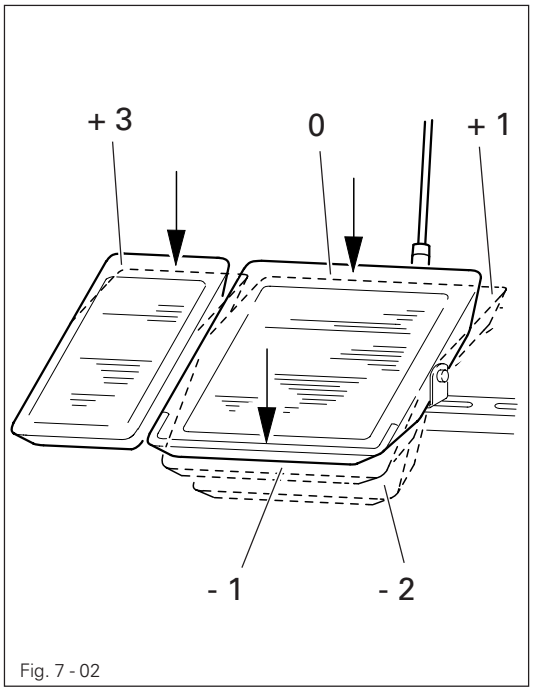


Fig. 7 - 02

0 = Machine stop

+1 = Sew

- 1 = Raise presser foot (on machines with -911/97)

- 2 = Trim thread (on machines with thread trimmer -900/52)

+ 3 = Raise presser foot (on machines without automatic presser-foot - 911/97)

Other pedal functions can be found in the Motor Instruction Manual.

7.03 Lever for lifting the presser foot

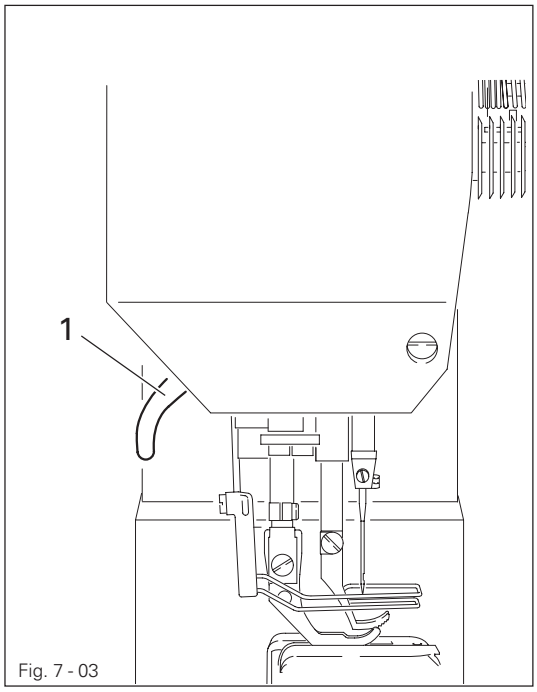


Fig. 7 - 03

- To lift the presser foot, raise lever **1**.

7.04 Stitch-length adjustment lever / reverse sewing

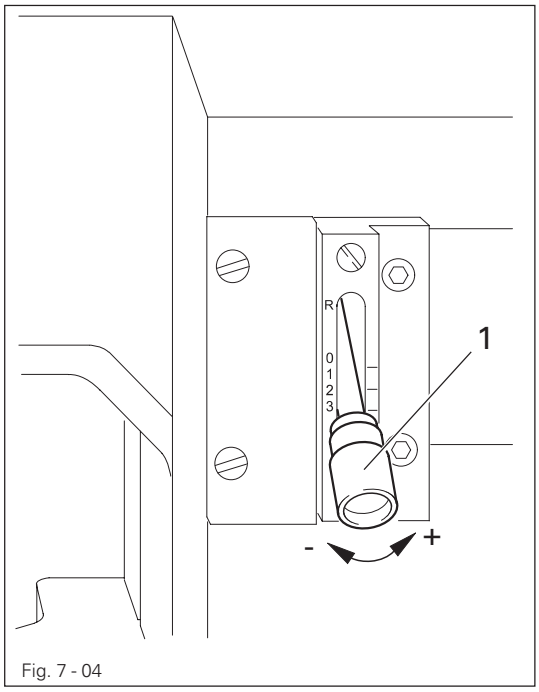


Fig. 7 - 04

- Adjust the stitch length by turning the milled nut **on lever 1 as required**.

Reverse sewing

- For reverse sewing, push lever **1** up during sewing.

7.05 Adjustment nut for the top feed lift

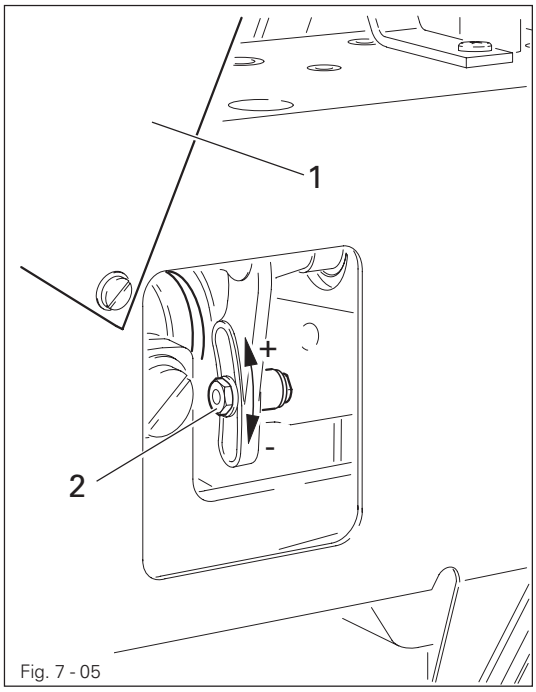


Fig. 7 - 05

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

- Open cover 1 on the back of the machine, loosen nut 1 and move it 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, be sure that the frame and the table top which you intend to use can hold the weight of the machine and the motor.
It must be ensured that the supporting structure is sufficiently sturdy, even during sewing operations.

8.01 Installation

The site where the machine is installed must be provided with suitable connections for the electric current, see **Chapter 3 Specifications**.
It must also be ensured that the standing surface of the machine site is firm and horizontal, and that sufficient lighting is provided.

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

8.01.01 Adjusting the table height

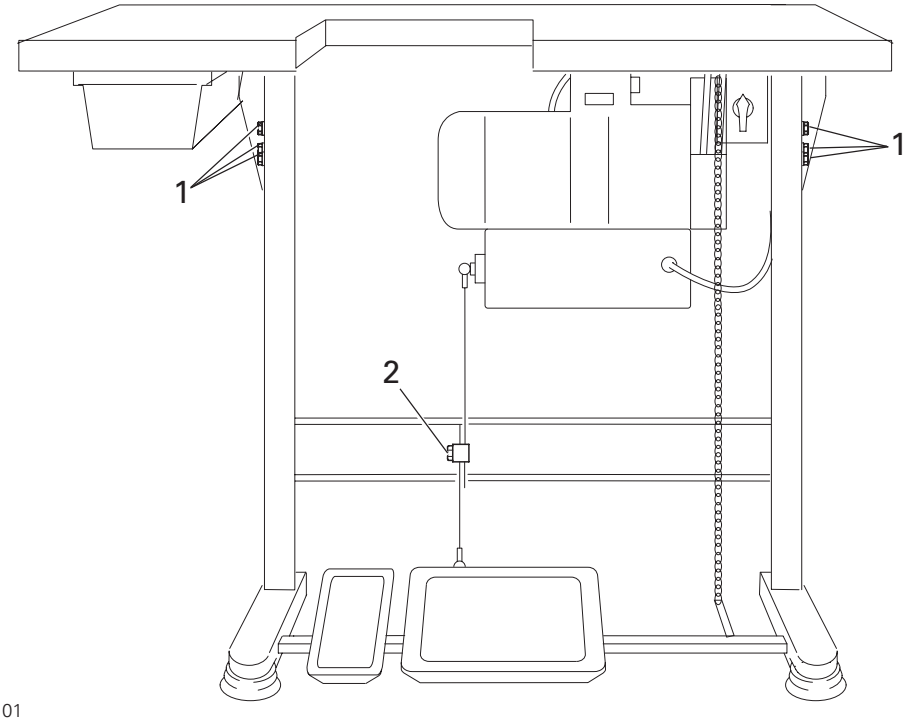


Fig. 8 - 01

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

8.01.02 Tightening the V-belt

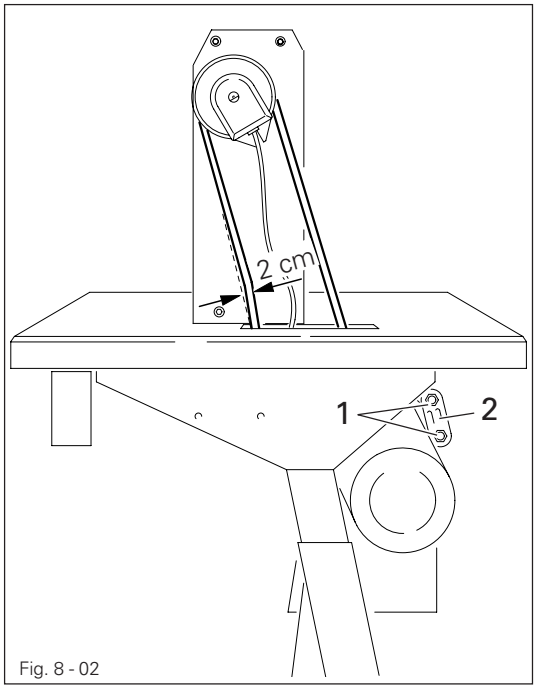


Fig. 8 - 02

- Loosen nuts **1**.
- Tighten the V-belt using the dolly switch **2**.
- Tighten nuts **1**.

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

8.01.03 Fitting the upper belt guard

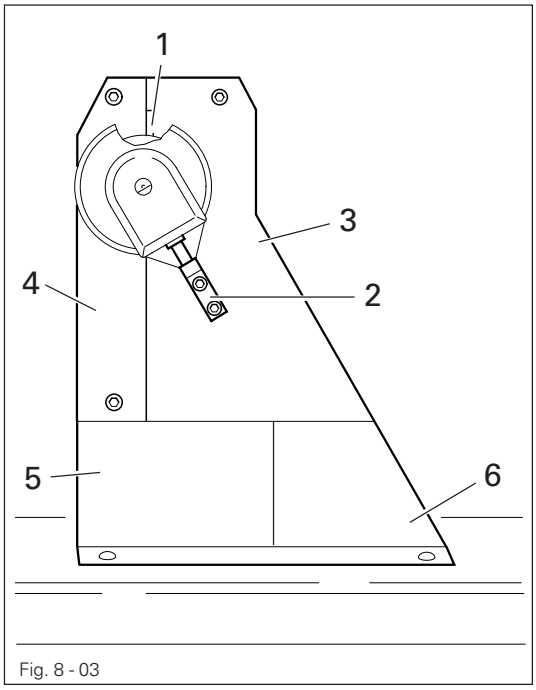


Fig. 8 - 03

If a large balance wheel is in use, break off corner **1** of belt guard part **3**.

- Screw stop piece **2** onto belt guard part **3**.
- Screw on belt guard part **3** onto the housing.
- Screw on belt guard part **4** onto the housing.
- Secure belt guard parts **5** and **6** onto the table top.

8.01.04 Mounting the lower V-belt guard

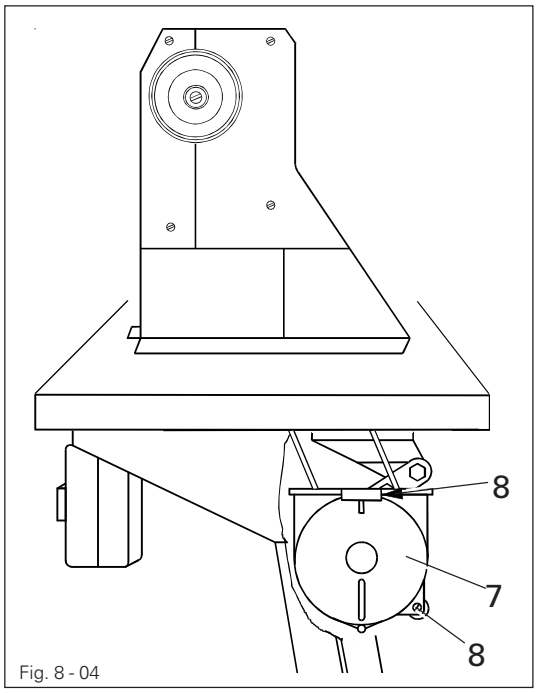


Fig. 8 - 04

- Align the V-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 instruction manual!

8.01.05 Fitting the reel stand

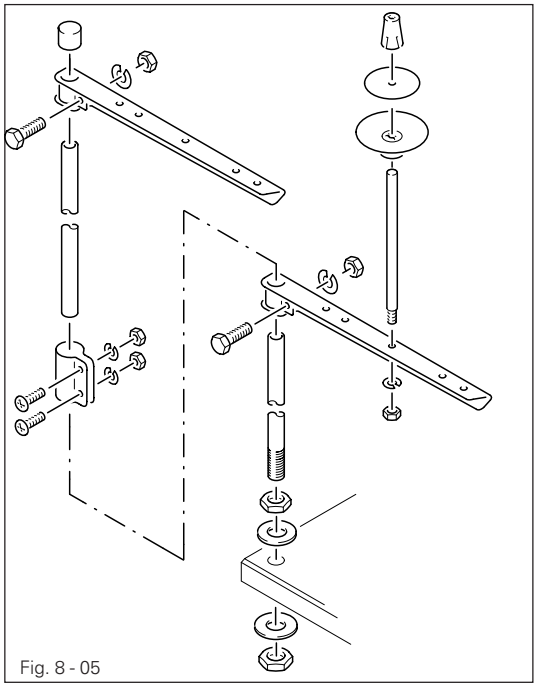


Fig. 8 - 05

- Fit the reel stand as shown in **Fig. 8 - 05**.
- Afterwards insert the stand in the hole in the table top and secure it with nuts provided.

8.01.06 Fitting the synchronizer

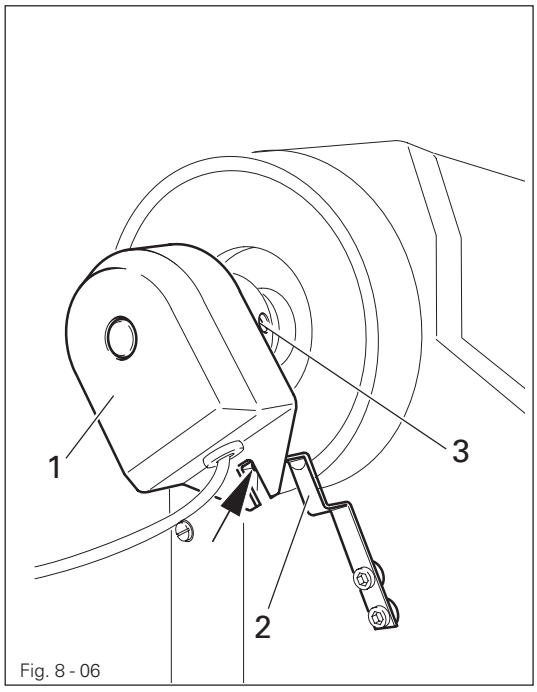


Fig. 8 - 06

- Slide synchronizer **1** onto the shaft, so that the position stop **2** is positioned in the groove of the synchronizer (see arrow).
- Tighten screws **3**.
- Connect and adjust synchronizer **1** (see Motor Instruction Manual and **Chapter 11.05.12 Adjusting the synchronizer**).

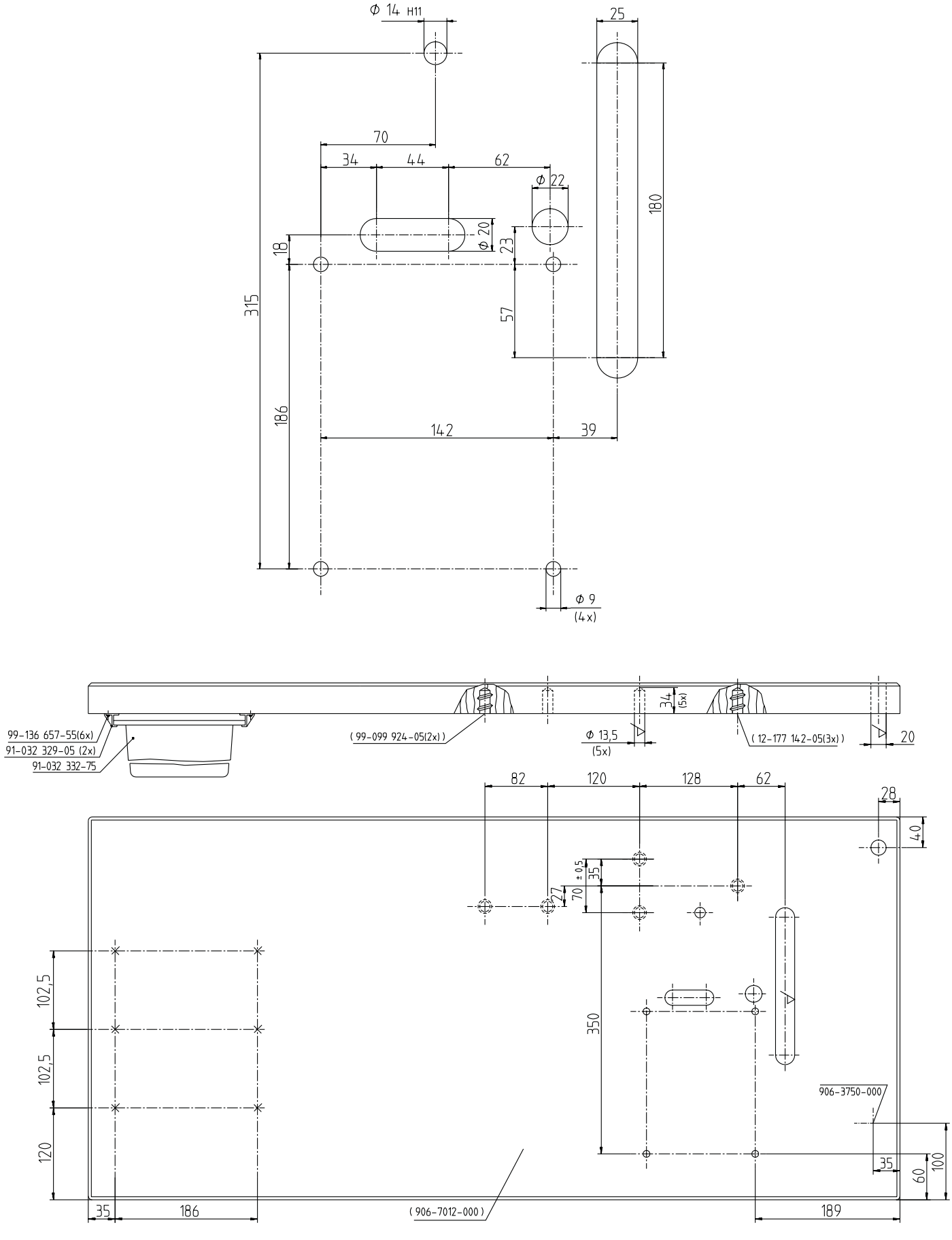
8.02 Commissioning

- Check the machine for any damage, particularly its electrical wiring and pneumatic tube connections.
- Clean the machine thoroughly and afterwards fill it with oil and oil the machine (see **Chapter 10, Care and maintenance**).
- Have a mechanic check whether the motor of the machine can be used with the available power supply and that the motor is correctly connected to the junction box. **Do not run the machine** if there is any discrepancy.
- When the machine is running, the balance wheel must turn towards the operator. If it does not, have the motor connection changed by a mechanic.
- Connect the machine to the compressed air supply. When it is connected, the gauge should show a pressure of **approx. 6 bar**. If necessary, have this reading correctly set (see **Chapter 10.07, Checking/adjusting the air pressure**).

8.03 Switching the machine on/off

- Switch the machine on/off (see **Chapter 7.01, On/off switch**).
- Carry out a running test.

8.04 Table top cutout



9 Preparation

All regulations and instructions in this Instruction Manual are to be observed! Special attention is to be paid to the safety regulations!

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

9.01 Inserting the needle

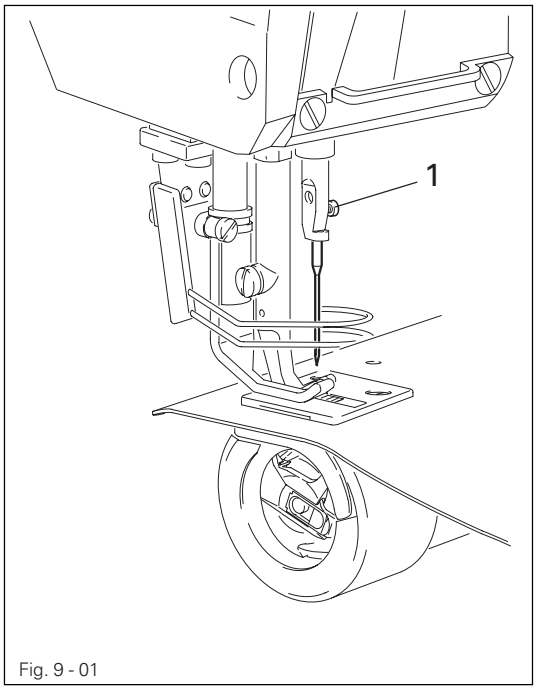


Fig. 9 - 01

Switch off the machine! Danger of injury due to unintentional starting of the machine!

Only use needles from the system intended for the machine, see **Chapter 3 Specifications.**

- Raise needle bar.
- Loosen screw **1** and insert needle until you feel it stop.
- The long needle groove must be aligned in the direction of the machine head.
- Tighten screw **1**.

9.02 Winding the bobbin thread, adjusting the thread tension

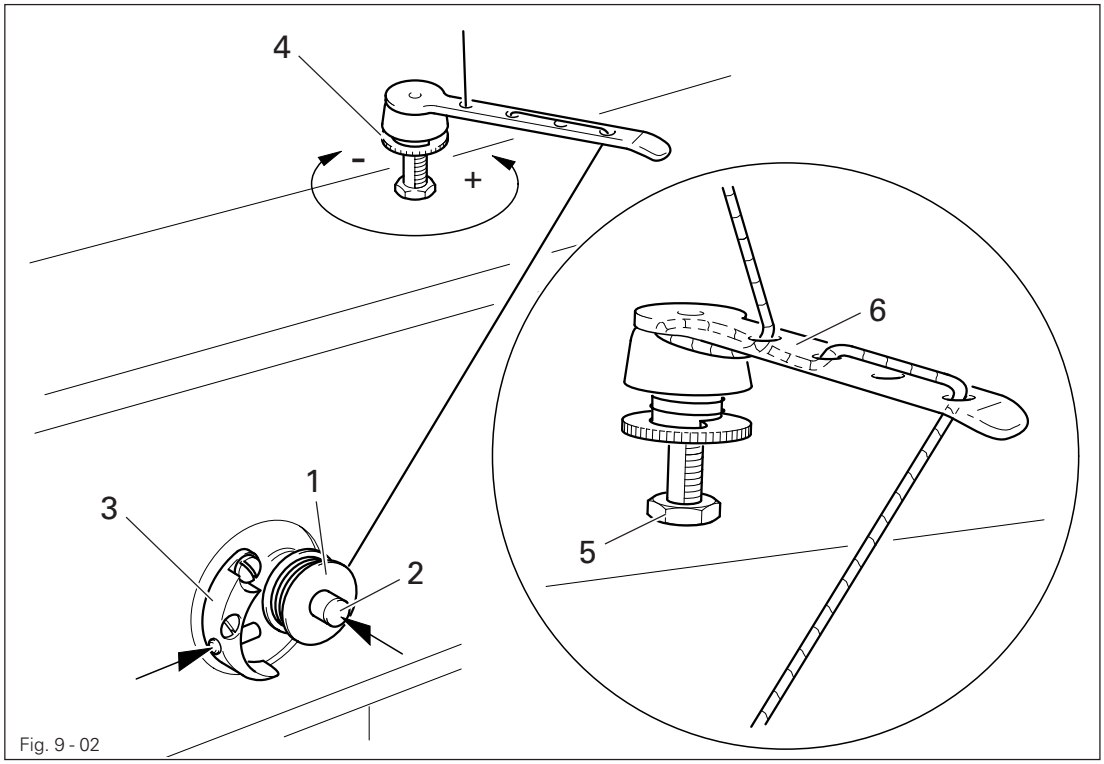


Fig. 9 - 02

- Place an empty bobbin 1 onto bobbin shaft 2.
- Thread the bobbin in accordance with Fig. 9-02 and wind it anti-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 during 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 thread guide 6 accordingly.
- Tighten nut 5.

9.03 Removing / Inserting the bobbin case

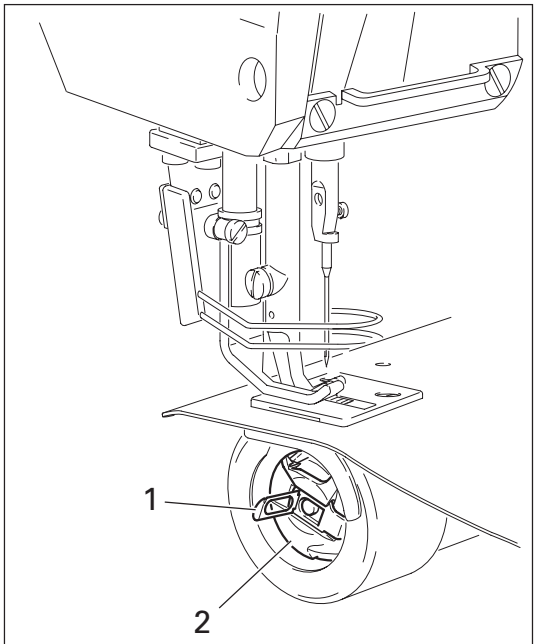


Fig. 9 - 03

Switch off the machine!
Danger of injury due to unintentional starting of the machine!

Removing the bobbin case:

- Lift latch 1 and take out bobbin case 2.

Inserting the bobbin case:

- Insert full bobbin case 2 so that you feel it snap in place.

9.04 Threading the bobbin thread and regulating the bobbin thread tension

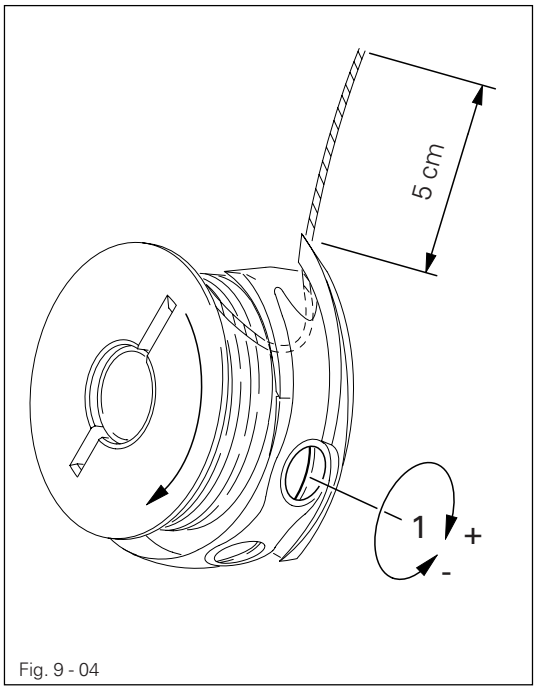


Fig. 9 - 04

- Thread the bobbin as shown in Fig. 9-04.
- When the thread is pulled, the bobbin must rotate as shown by the arrow.
- Regulate the bobbin thread tension on srew 1.

9.05 Threading needle thread/adjusting needle thread tension

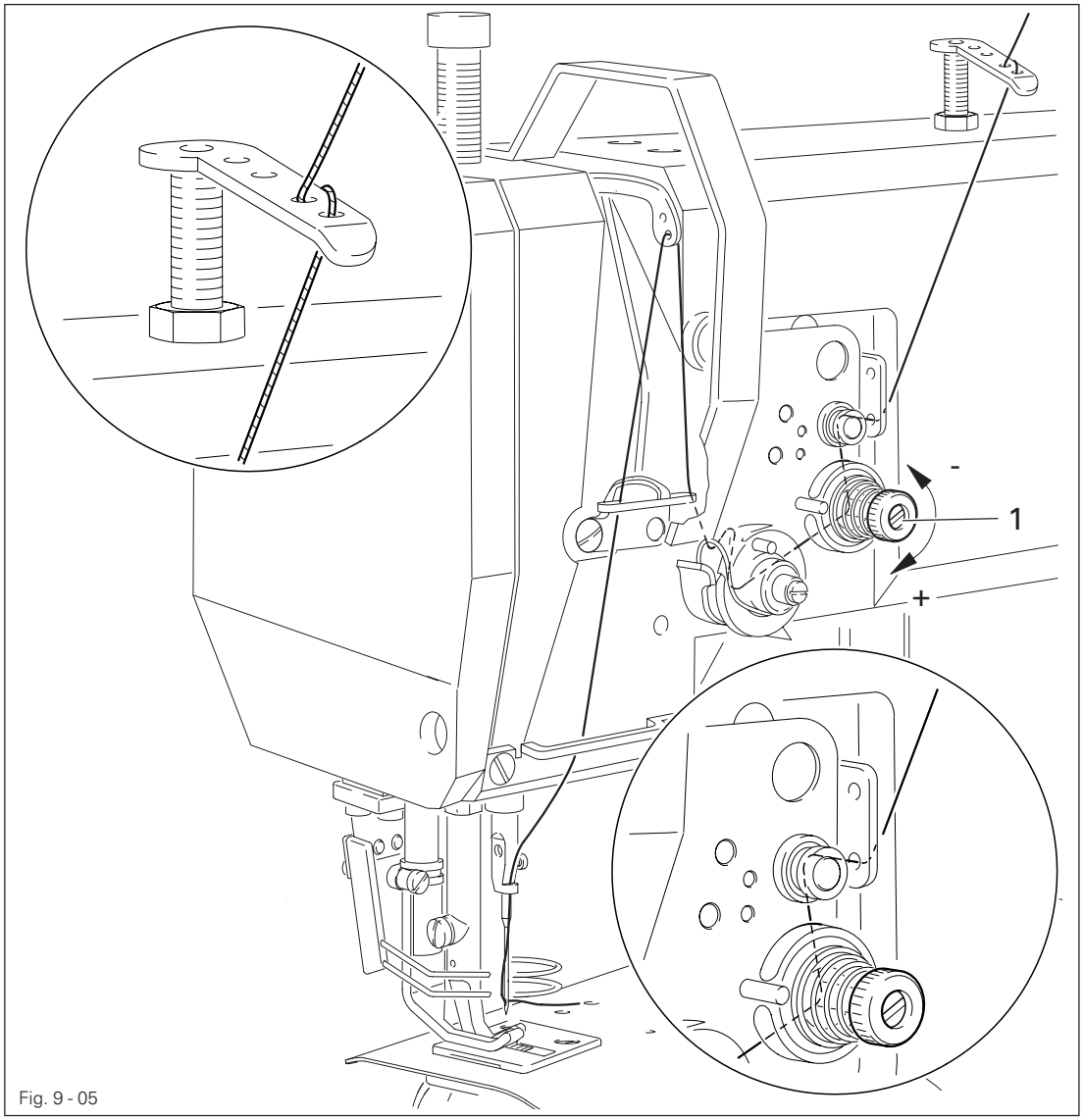


Fig. 9 - 05

Switch off the machine!
Danger of injury due to unintentional starting of the machine!

- Thread needle thread as shown in **Fig. 9-05**.
  Be sure to thread the needle from the left.
- Regulate the needle thread tension by turning knurled screw **1**.

10 Care and maintenance

10.01 Care and maintenance intervals

Cleaning	daily, in continuous operation several times
General oiling	twice a week
Oil the hook	daily, before putting into operation
Oil needle-head parts	twice a week
Lubricate the bevel gears	once a year
Check/adjust air pressure	daily, before putting into operation
Check water bowl of air filter/regulator	daily, before putting into operation

The maintenance intervals in the table refer to the average machine running time in single-shift operation.
If the machine running time is longer than this, it is advisable to shorten these intervals.

10.02 Cleaning

Switch off the machine!
Danger of injury due to unintentional starting of the machine!

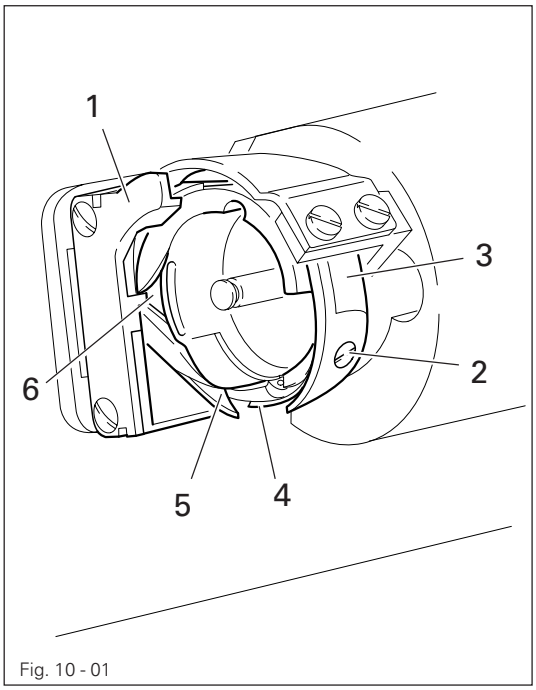


Fig. 10 - 01

Cleaning the hook area

- Clean hook area with a brush daily, in continuous operation several times daily.

Cleaning the hook

- Open cylinder-bed cap.
- Set needle bar at its highest position.
- Remove top of bobbin case together with bobbin
- Unscrew and remove bobin case position stop **1**.
- Remove screw **2** and take off hook gib **3**.
- Turn balance wheel until point **4** is aligned with point **5**.
- Take out bobbin case and clean hook race with petroleum spirit.
- When inserting the bobbin case, make sure that the lug on the rear side of bobbin case position stop **1** enters into groove **6**.
- Screw on hook gib **3**.
- Insert bobbin case and close cylinder-bed cap

10.03 General oiling

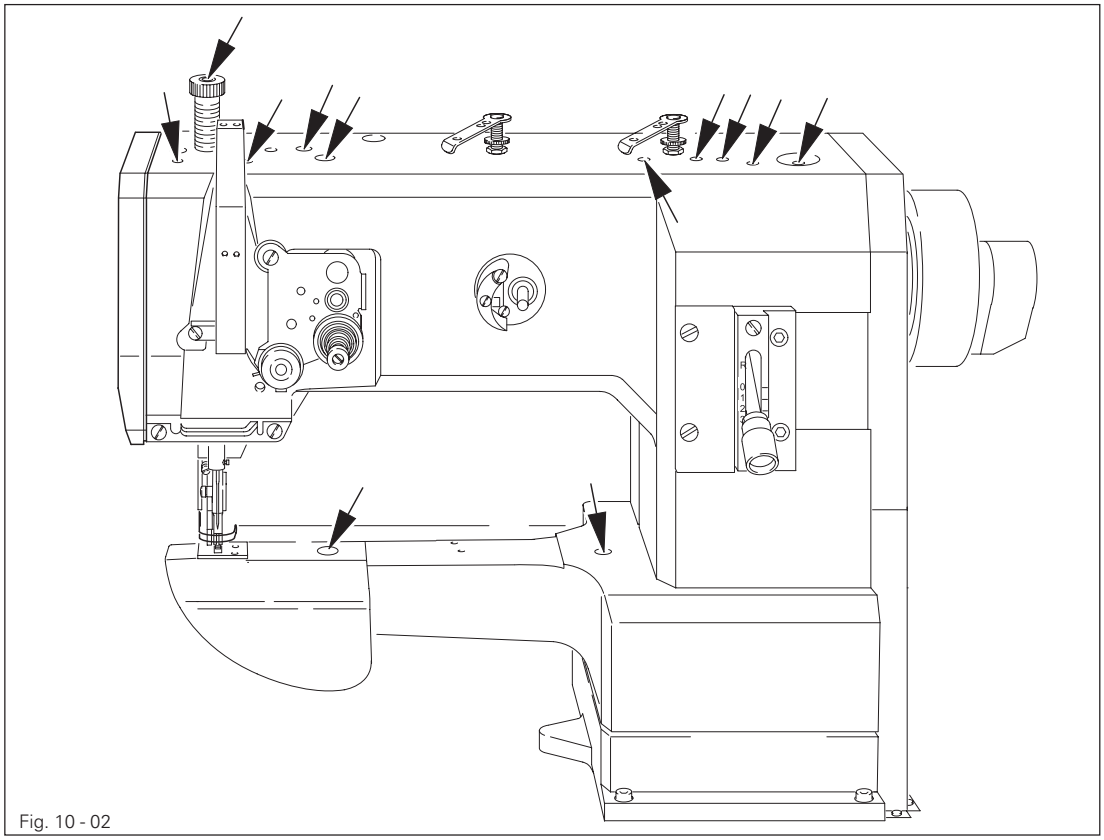


Fig. 10 - 02

Switch off the machine!
Danger of injury due to unintentional starting of the machine!

- Oil all bearing parts above the table top twice a week

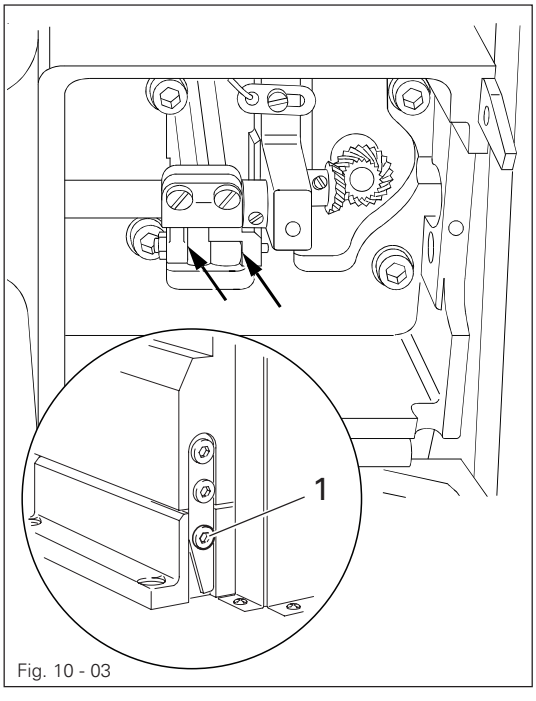


Fig. 10 - 03

- Remove screw **1** and tilt machine backwards.
- Apply oil at all bearing points beneath the table (see arrows) twice a week.

Set the machine upright with both hands! Danger of crushing between sewing head and table!

- Tighten screw **1** again.

Only use oil with a viscosity of 22.0 mm^2/s at 40° C and a density of 0.865 g/cm^3 at 15°C!

We recommend PFAFF sewing-machine oil, part No. 280-1-120144.

10.04 Oiling the sewing hook

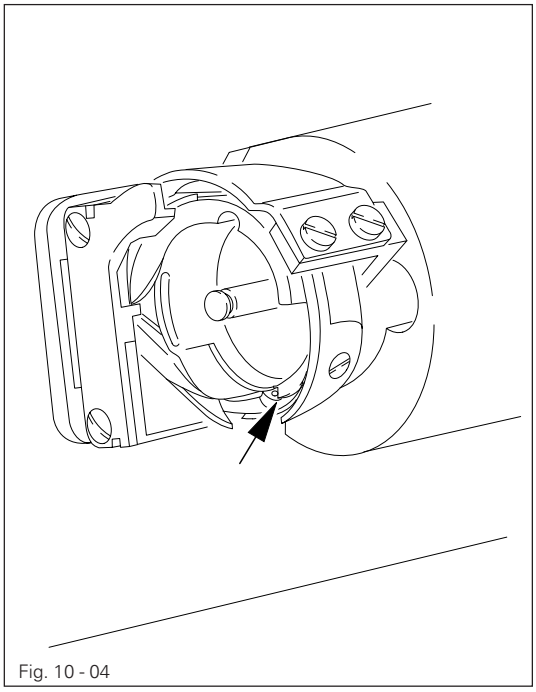


Fig. 10 - 04

Switch off the machine!
Danger of injury due to unintentional starting of the machine!

- Remove the bobbin case.
- Apply 1 - 2 drops of oil to the hook race daily (see arrow).
- Replace the bobbin case.

Only use oil with a viscosity of 22.0 mm^2/s at 40° C and a density of 0.865 g/cm^3 at 15°C!

We recommend PFAFF sewing-machine oil, part No. 280-1-120144.

10.05 Oiling the needle-head parts

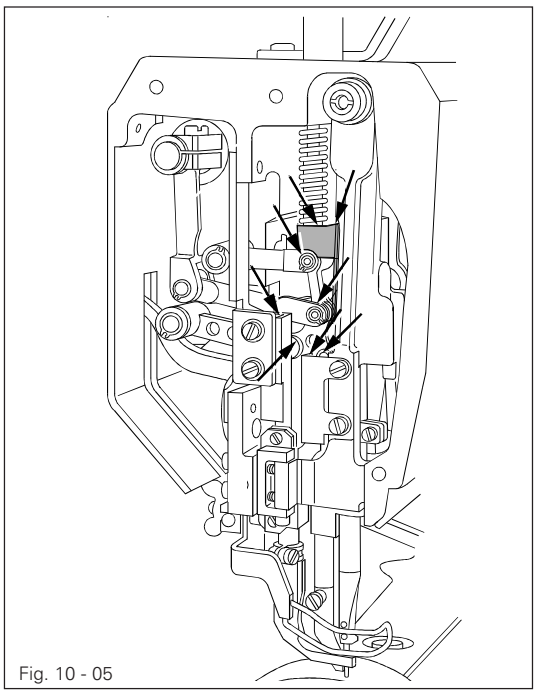


Fig. 10 - 05

Switch off the machine!
Danger of injury due to unintentional starting of the machine!

- Remove the faceplate.
- Oil all moving parts and bearing points (see arrows) twice a week.
- Refit the faceplate.

Only use oil with a viscosity of 22.0 mm^2/s at 40° C and a density of 0.865 g/cm^3 at 15°C!

We recommend PFAFF sewing-machine oil, part No. 280-1-120144.

10.06 Lubricating the bevel gears

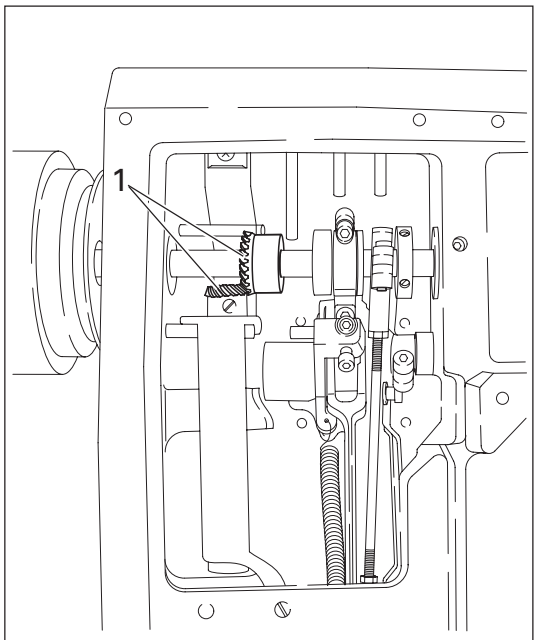


Fig. 10 - 06

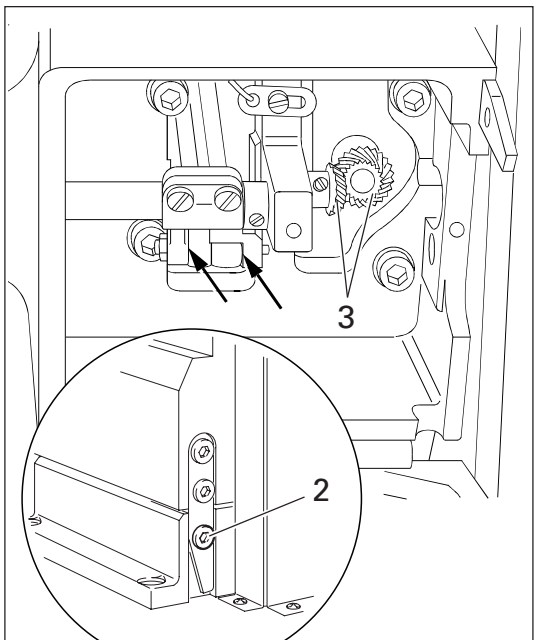


Fig. 10 - 07

Switch off the machine!
Danger of injury due to unintentional starting of the machine!

All bevel gears must be supplied with new grease once a year.

Top bevel gears

- Unscrew the cover on the rear side of the machine.
- Apply fresh grease to the top bevel gears **1**.
- Screw the cover to the rear side of the machine again.

Bottom bevel gears

- Remove screw **2** and tilt the machine back.
- Apply fresh grease to the bottom bevel gears **3**.

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

- Retighten screw **2**.

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

10.07 Checking/adjusting the air pressure

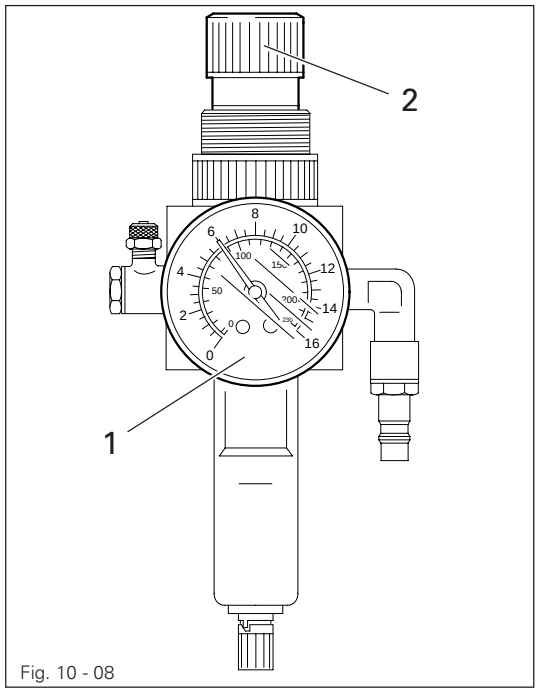


Fig. 10 - 08

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

10.08 Cleaning the air filter of the air-filter/lubricator

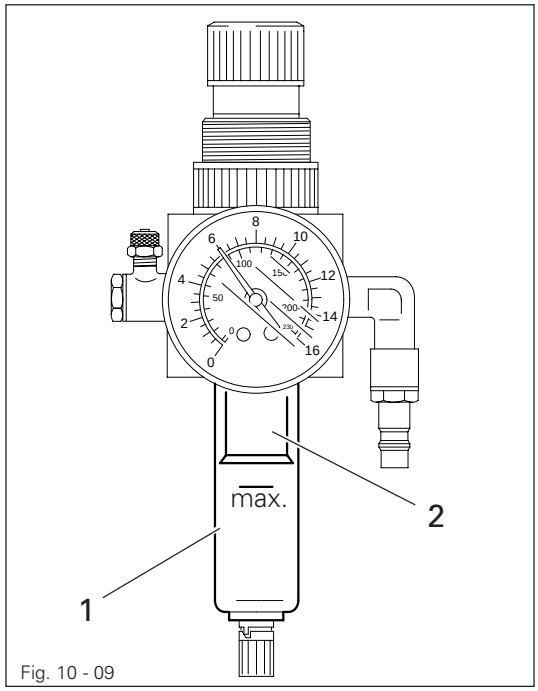


Fig. 10 - 09

Switch the machine off!
Disconnect the air hose at the air-filter/lubricator.

To drain water bowl **1**:

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

Cleaning filter **2**:

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

11 Adjustment

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

11.01 Notes on adjustment

All following adjustments are based on a fully assembled machine and may only be carried out by expert staff trained for this purpose.
Machine covers, which have to be removed and replaced to carry out checks and adjustments, are not mentioned in the text.
The order of the following chapters corresponds to the most logical work sequence for machines which have to be completely adjusted. If only specific individual work steps are carried out, both the preceding and following chapters must be observed.
Screws, nuts indicated in brackets ( ) are fastenings for machine parts, which must be loosened before adjustment and tightened again afterwards.

11.02 Tools, gauges and other accessories

- Screwdrivers with blade width from 2 to 10 mm
- Spanners (wrenches) with jaw width from 7 to 14 mm
- Allan keys from 2 to 6 mm
- Metal rule, Part No. 08-880 218-00
- Adjustment gauge, Part No. 08-880 218-00
- Terminal screw, Part No. 08-880 137-00
- Gauge, (top feed lift 7 mm), Part No. 61-111 630-14

11.03 Abbreviations

TDC = top dead center
BDC = bottom dead center

11.04 Adjusting the basic machine

11.04.01 Lateral positioning of the feed dog

Requirement
The clearances from the left and right of the bottom feed dog **1** to the needle plate cutout must be the the same size.

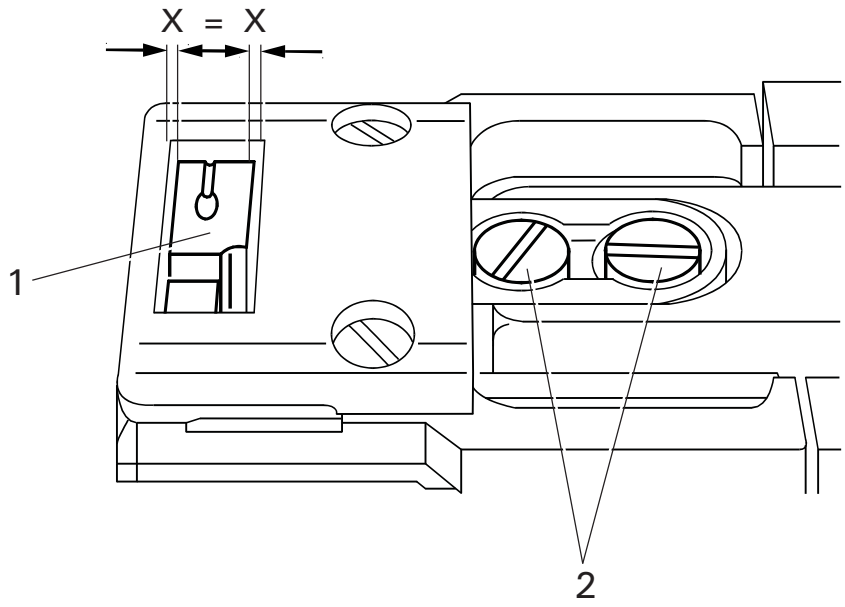
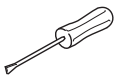


Fig. 11 - 01



- Move the bottom feed dog **1** (screws **2**) in accordance with the **requirement.**

11.04.02 Lengthwise positioning of the feed dog

Requirement
With the stitch length set at its longest the clearances behind and in front of the bottom feed dog **5** to the needle plate cutout must be the same.

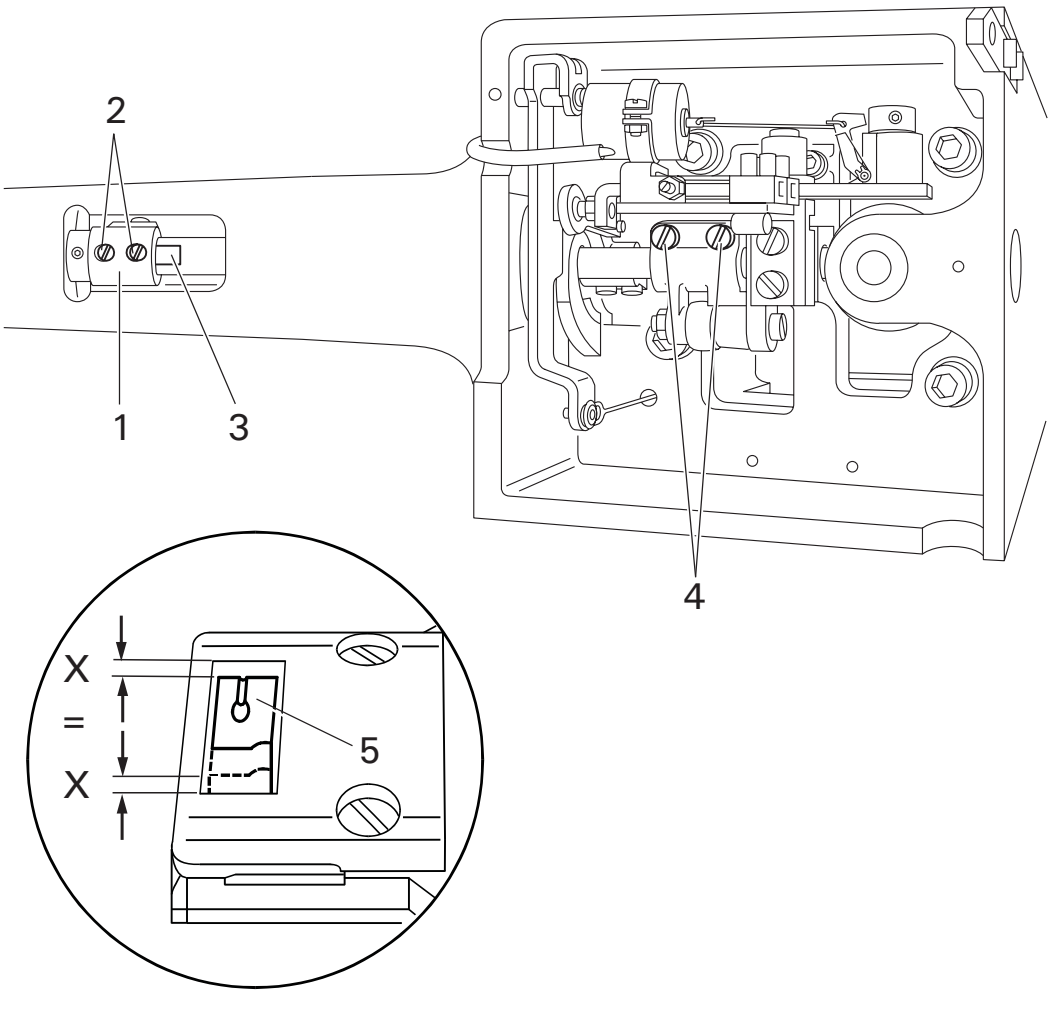


Fig. 11 - 02

- Set the longest stitch length.
- Move the clamp piece **1** (screws **2**) as far to the left as possible on the clamp surface **3** of the rock shaft. The left screw must still be on the clamp surface.
- Loosen screws **4**.
- Move the bottom feed dog **5** in accordance with the **requirement.**
- Tighten screws **4**.

11.04.03 Height of the bottom feed dog (only on machines with lifting phase – P-version)

Requirement
When the stitch length is set at „0", in its highest position the bottom feed dog **4** should be **0.8 – 1.1 mm** above the top edge of the needle plate.

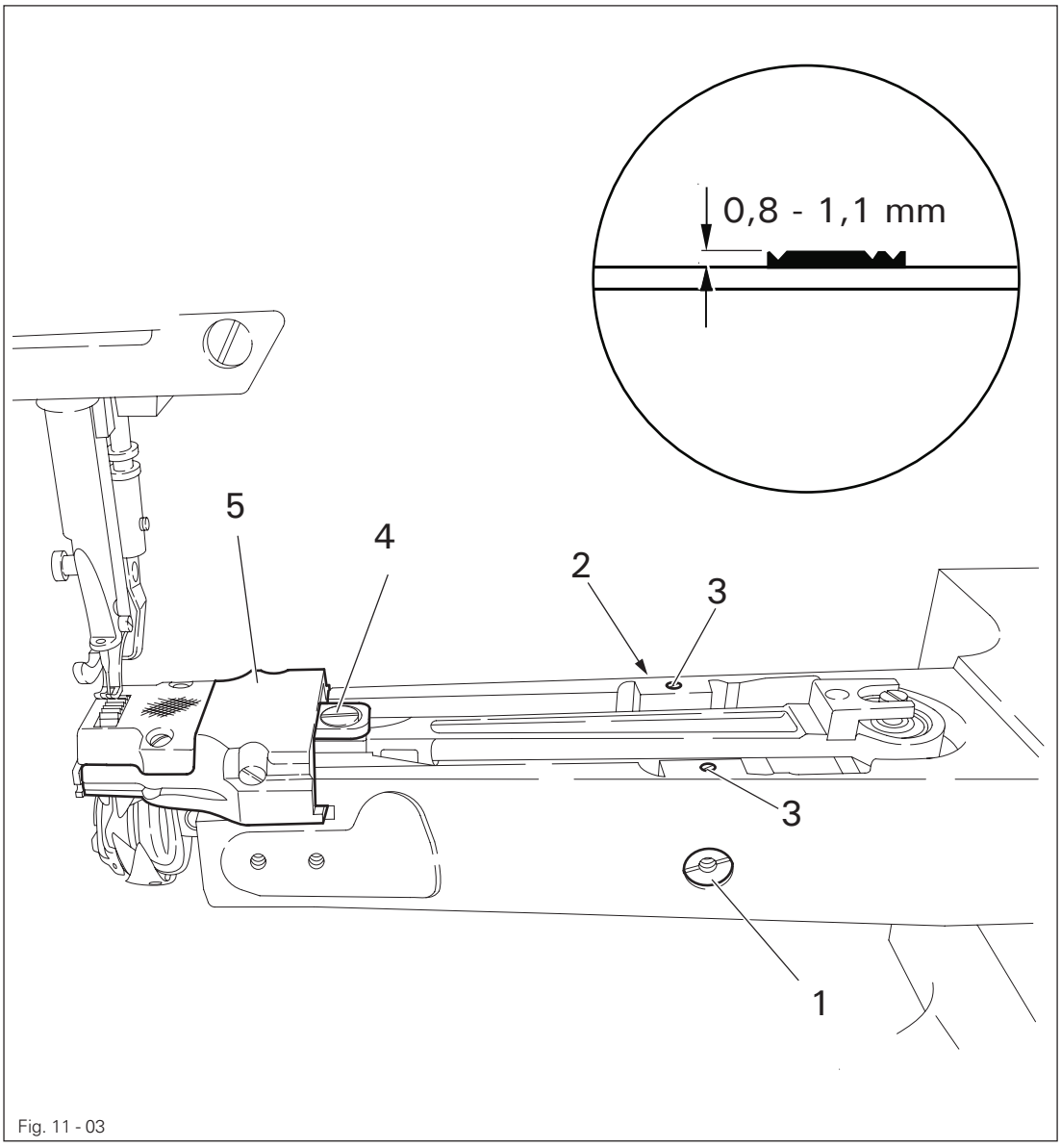


Fig. 11 - 03

- Set the stitch length at „0".
- Adjust eccentric **1** and **2** (screws **3**) in accordance with the **requirement**.

The bottom feed dog **4** should not touch cloth plate **5**.

11.04.04 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.

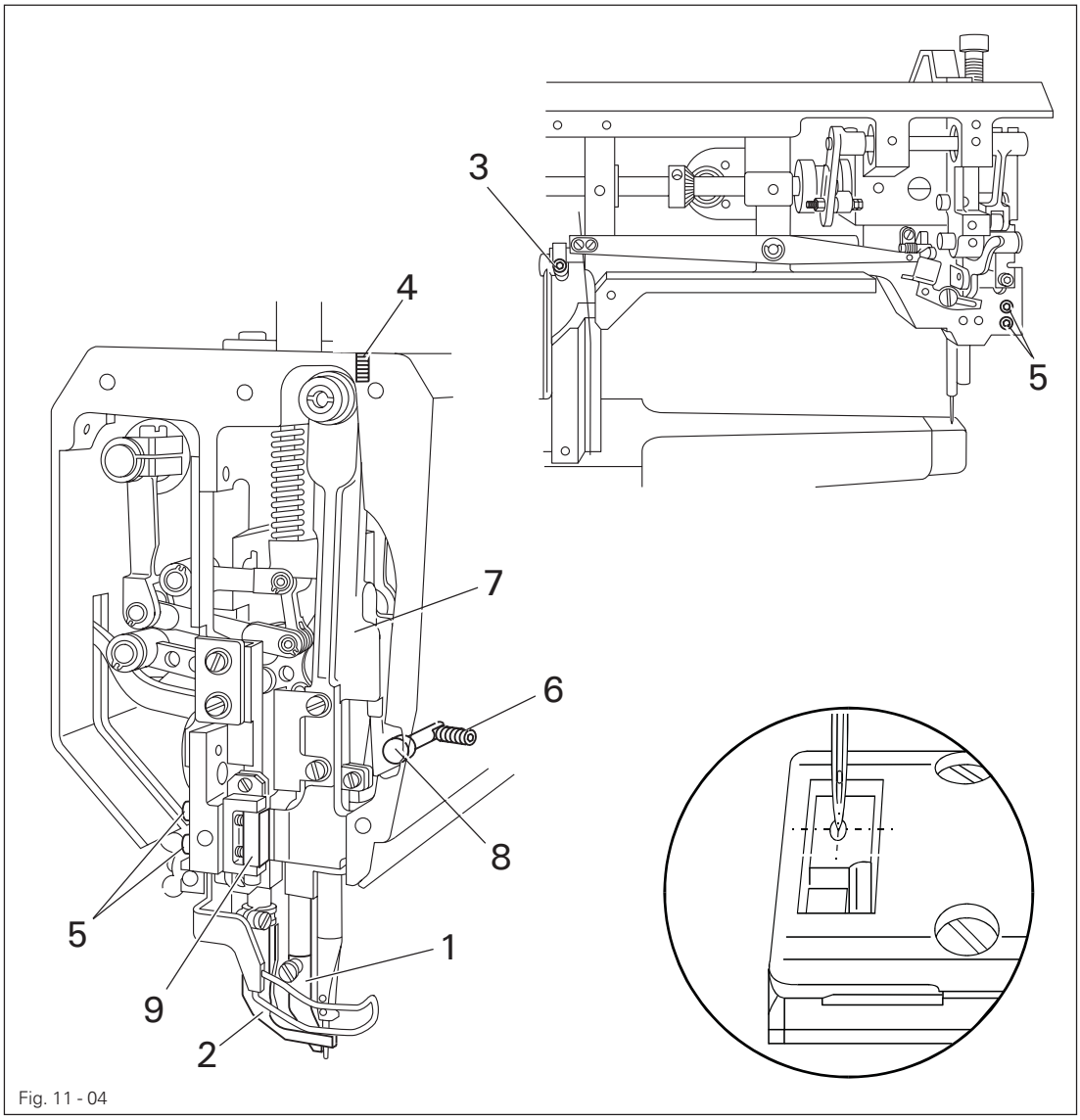


Fig. 11 - 04

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

The needle bar frame 7 in guide 9 and the vibrating presser drive shaft must move freely.

11.04.05 Pre-adjusting the needle height

Requirement
With the needle bar at its bdc the distance between the needle bar and the needle plate must be **15 mm.**

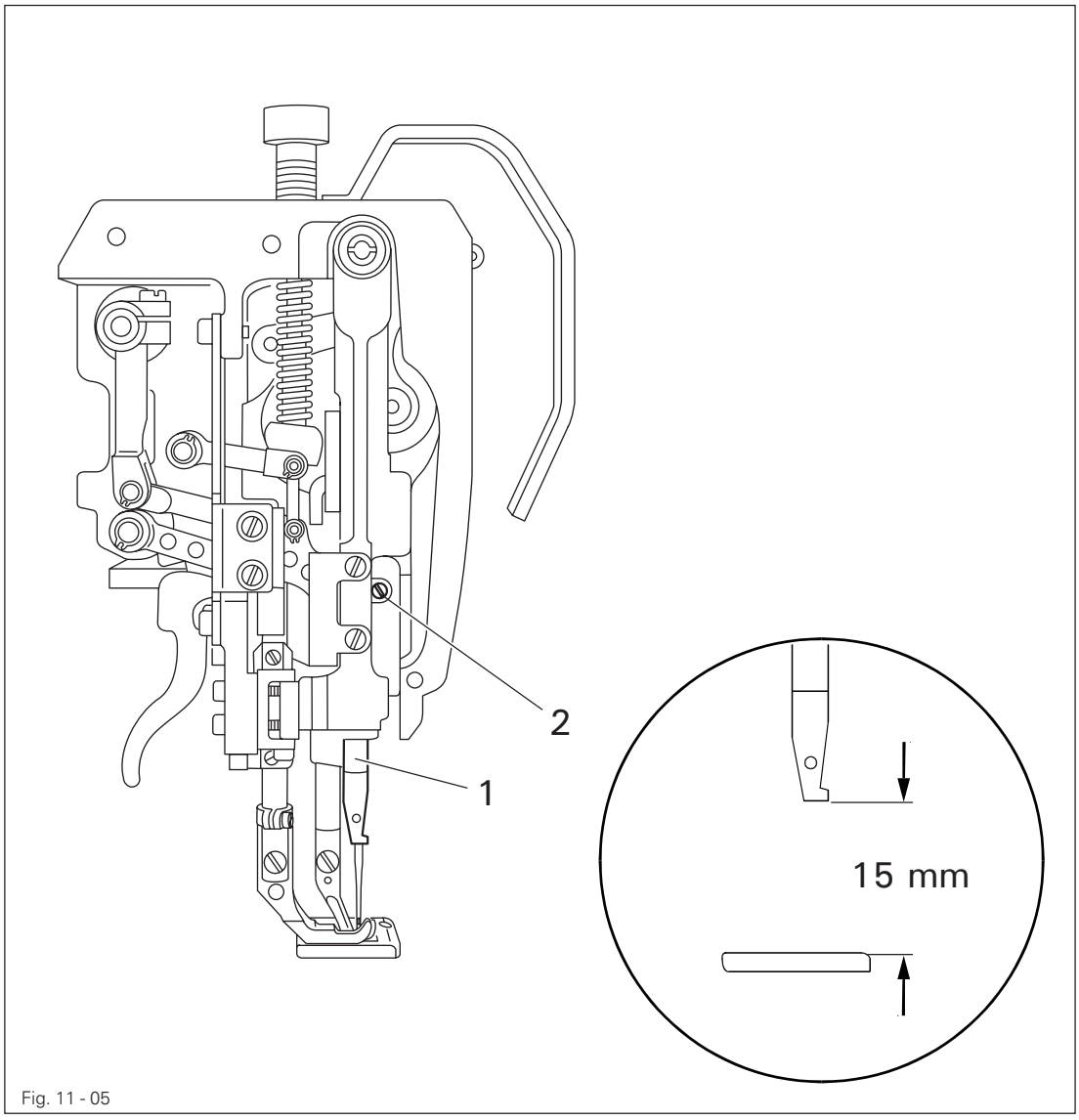


Fig. 11 - 05

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

11.04.06 Driving motion of the top and bottom feed dogs

Requirement
With the longest stitch length set and the needle bar at its bdc the top and bottom feed dogs should not move when the reverse feed lever is activated.

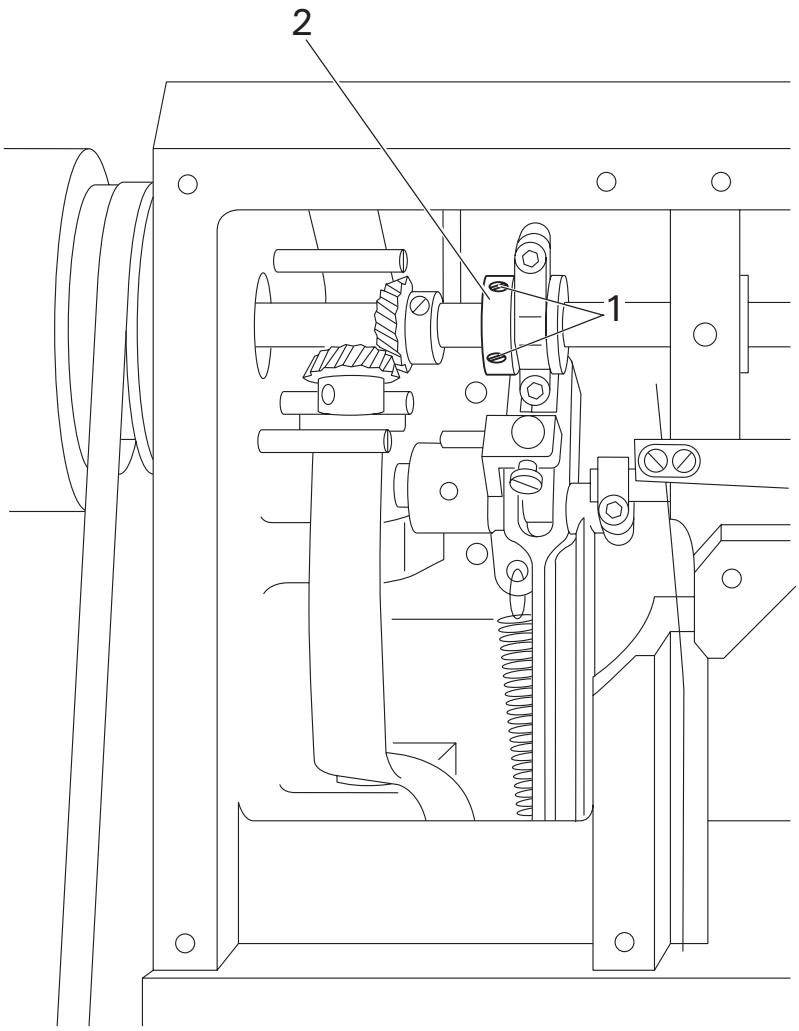
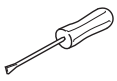


Fig. 11 - 06



- Set the longest stitch length.
- Loosen screw 1 far enough so that the feed driving eccentric 2 can be turned on the shaft with some difficulty.
- Bring the needle to its bdc.
- While keeping this position, move the feed driving eccentric 2 to the top and then move it slightly so that the **requirement** is fulfilled when the reverse feed lever is activated.
- Tighten screws 1.

11.04.07 Lifting motion of the bottom feed dog

(only on machines with lifting phase – P-version)

Requirement

1. With the needle bar positioned at b.d.c., the bottom feed doc should be in the t.d.c. position.
2. With the maximum stitch length set, when the balance wheel is turned the bottom feed dog should reach the needle plate surface at the same time as the needle point.

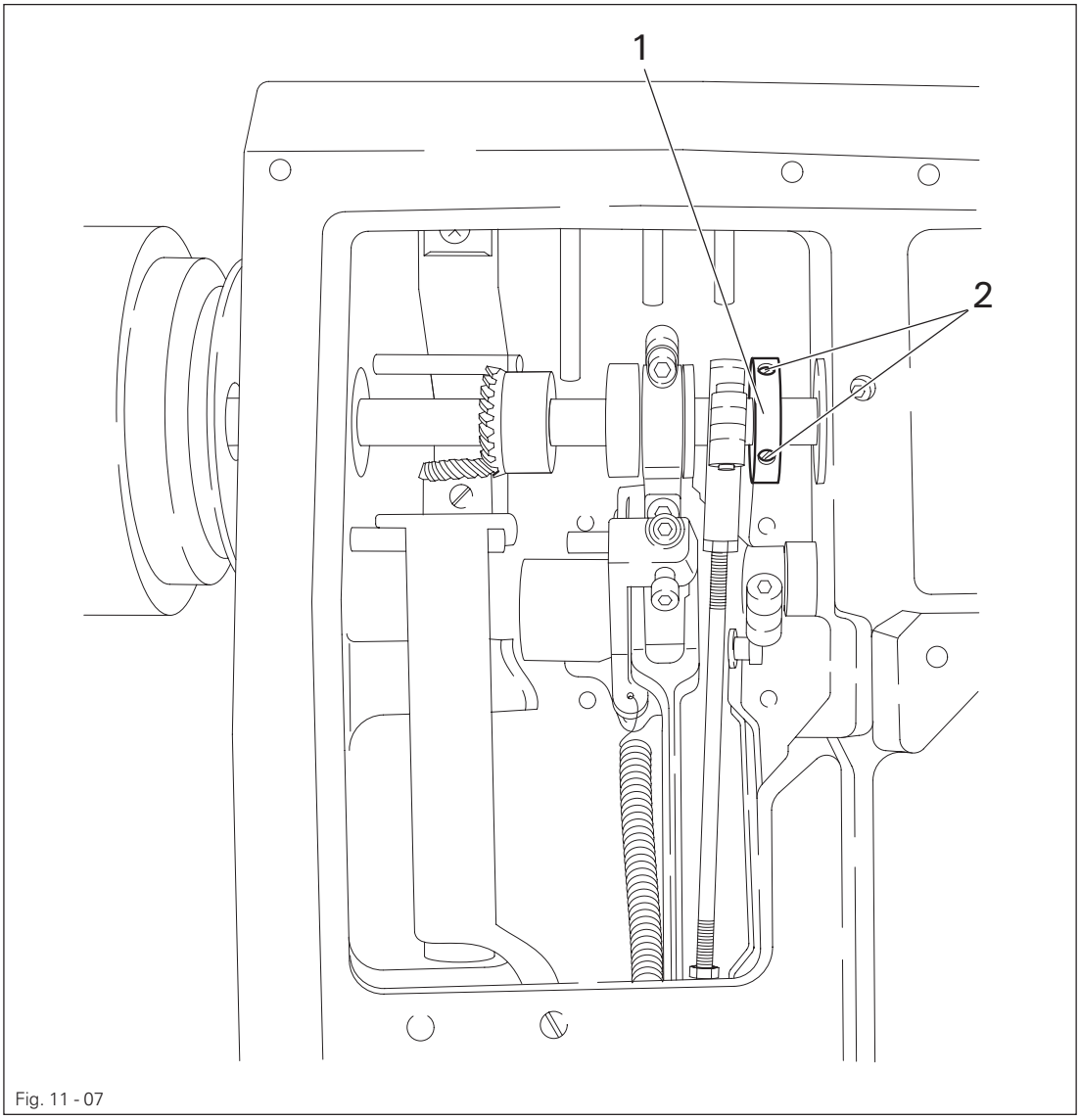
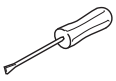


Fig. 11 - 07



- Adjust eccentric **1** (screws **2**) in accordance with the **requirements**.

11.04.08 Needle rise, hook-to-needle clearance and needle height

Requirement
With the stitch length set at "0" (1.8 mm after the bdc of the needle bar) the following must be correct:
1. The hook point must be opposite the middle of the needle and the distance to the needle must be 0.05 - 0.1 mm.
2. The top edge of the needle eye must be 0.8 mm from the hook point.

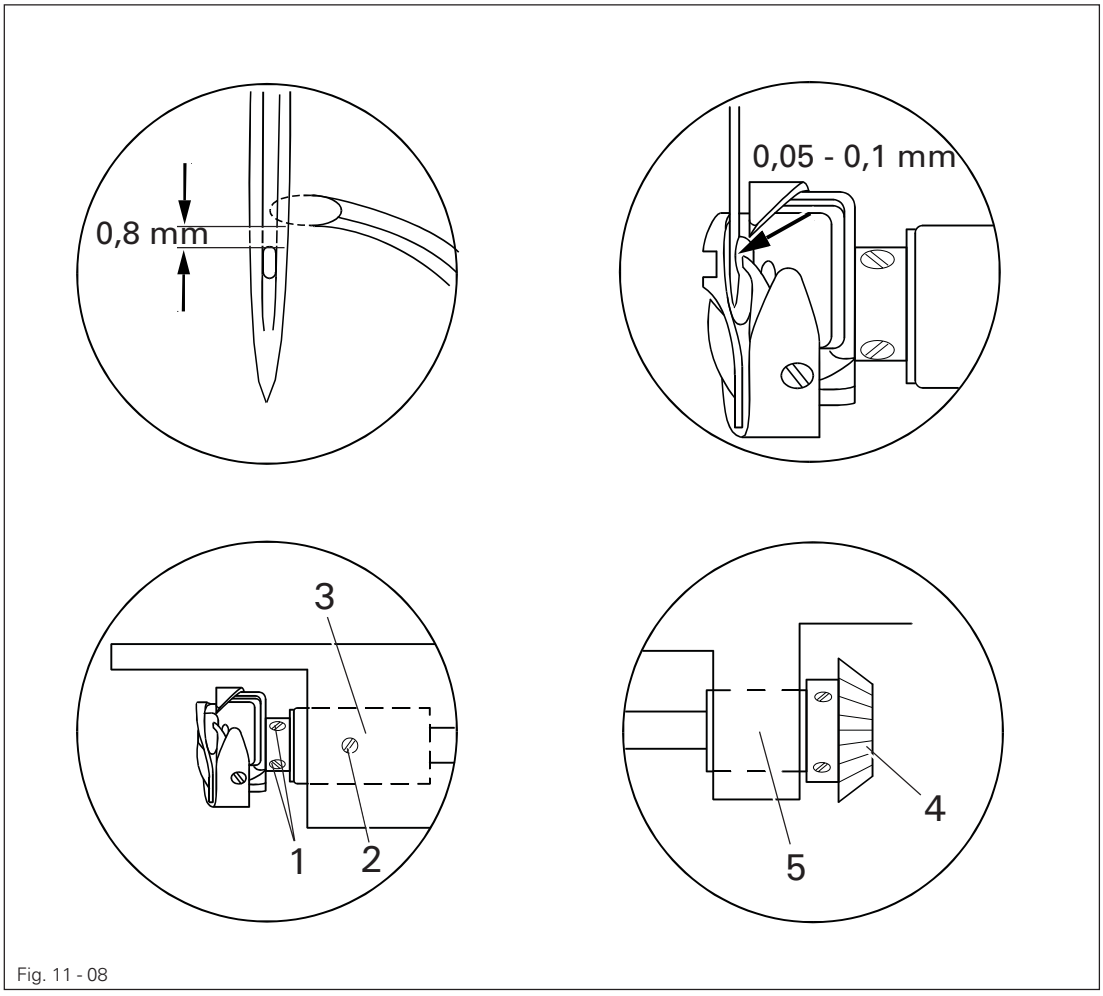


Fig. 11 - 08

- Set the stitch length at "0" and loosen screws 1 and 2 (screw 2 is on the back of the machine).
- Bring the needle to its bdc and slide the 1.8 mm measuring plate with its slot directly under the needle bar bearing. Position the screw clamp so that it rests on the measuring plate and screw it tight.
- Remove the measuring plate and turn the handwheel in its direction of rotation until the screw clamp is touching the needle bar bearing.
- Move the hook on the hook shaft in accordance with **requirement 1**.
- Rotate the hook in accordance with **requirement 2** (adjust needle height if necessary).
- Bring the hook shaft bearing 3 to rest on the hook and tighten screw 2.
- Taking care to ensure that the bevel gear 4 is resting on the bearing, tighten screws 1.

On machines with a thread trimmer the adjustment of the axial play on the hook shaft and the adjustment of the hook shaft bearing 3 are not necessary.

11.04.09 Vibrating presser lift

Requirement
With the vibrating presser lift at maximum and the stitch length set at "0", presser foot 1 and vibrating presser foot 2 must lift 7.0 mm from the needle plate when the handwheel is rotated.

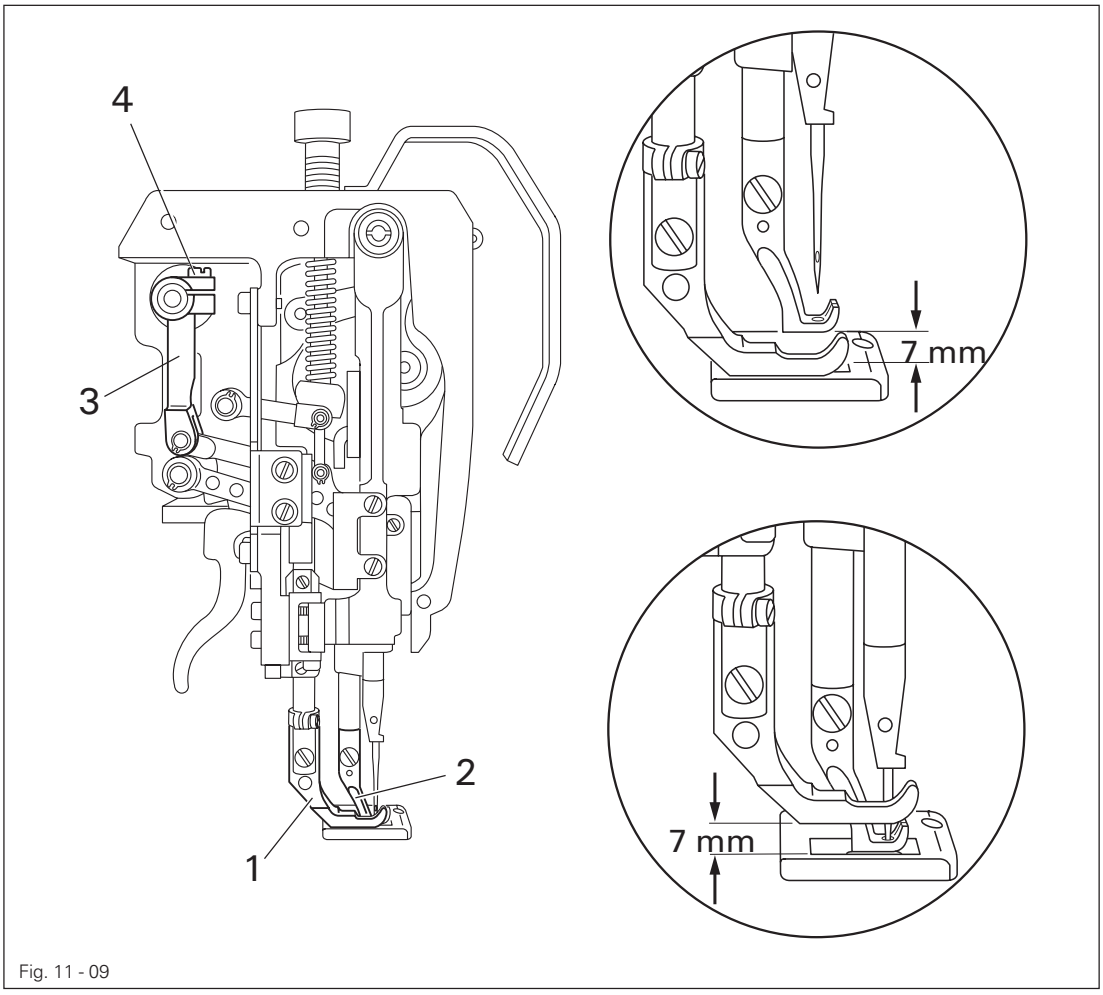


Fig. 11 - 09

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

11.04.10 Vibrating presser feeding motion

Requirement
With the presser foot **3** resting on the needle plate the vibrating presser **6** and the needle point must both reach the needle plate at the same time with the vibrating presser stroke at maximum.

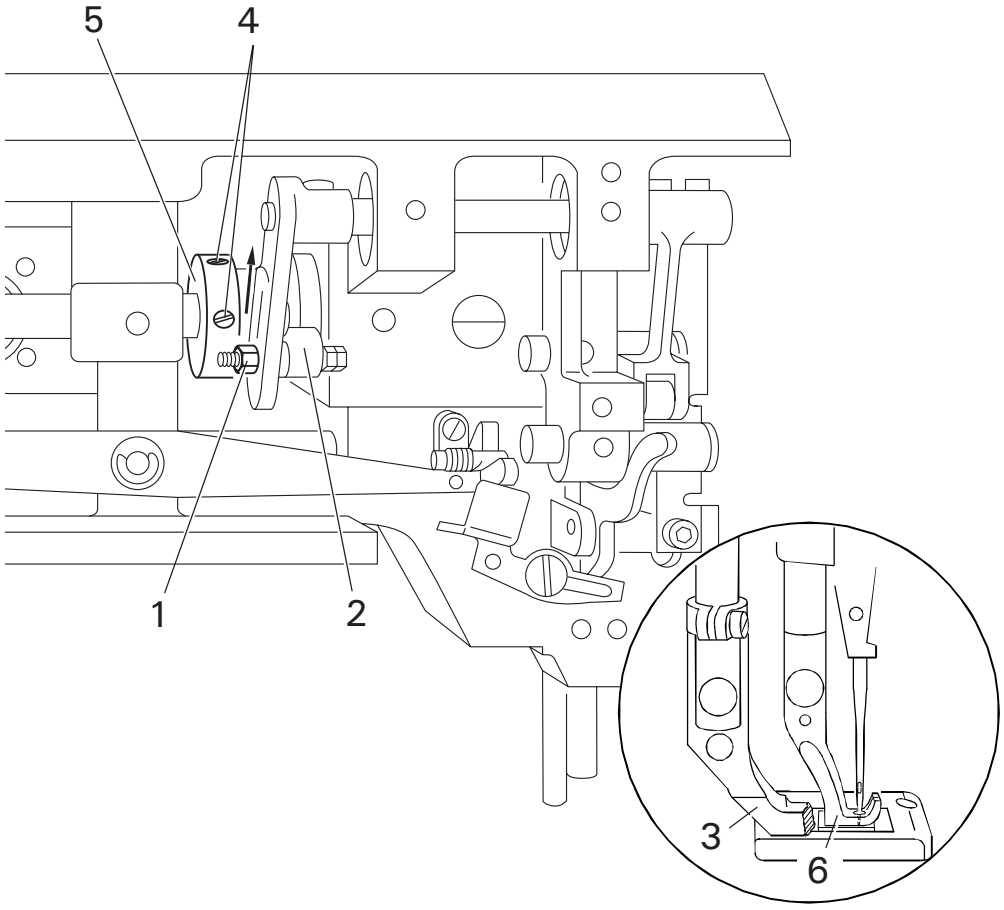
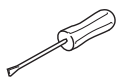


Fig. 11 - 10



- Loosen nut **1**.
- Slide bolt **2** upwards in the elongated hole and tighten nut **1**.
- Allow the presser foot **3** to rest on the needle plate.
- Loosen screws **4** enough so that the feed lifting eccentric **5** can be rotated with difficulty.
- Rotate the lifting eccentric **5** in accordance with the **requirement.**
- Tighten screws **4**.
- Carry out a check.

11.04.11 Needle thread tension release

Requirement
With the presser foot lifted, the two tension disks must be at least **0.5 mm** apart.

The distance of **0.5 mm** is the minimum clearance. The clearance can range up to more than **1 mm** with thick threads.

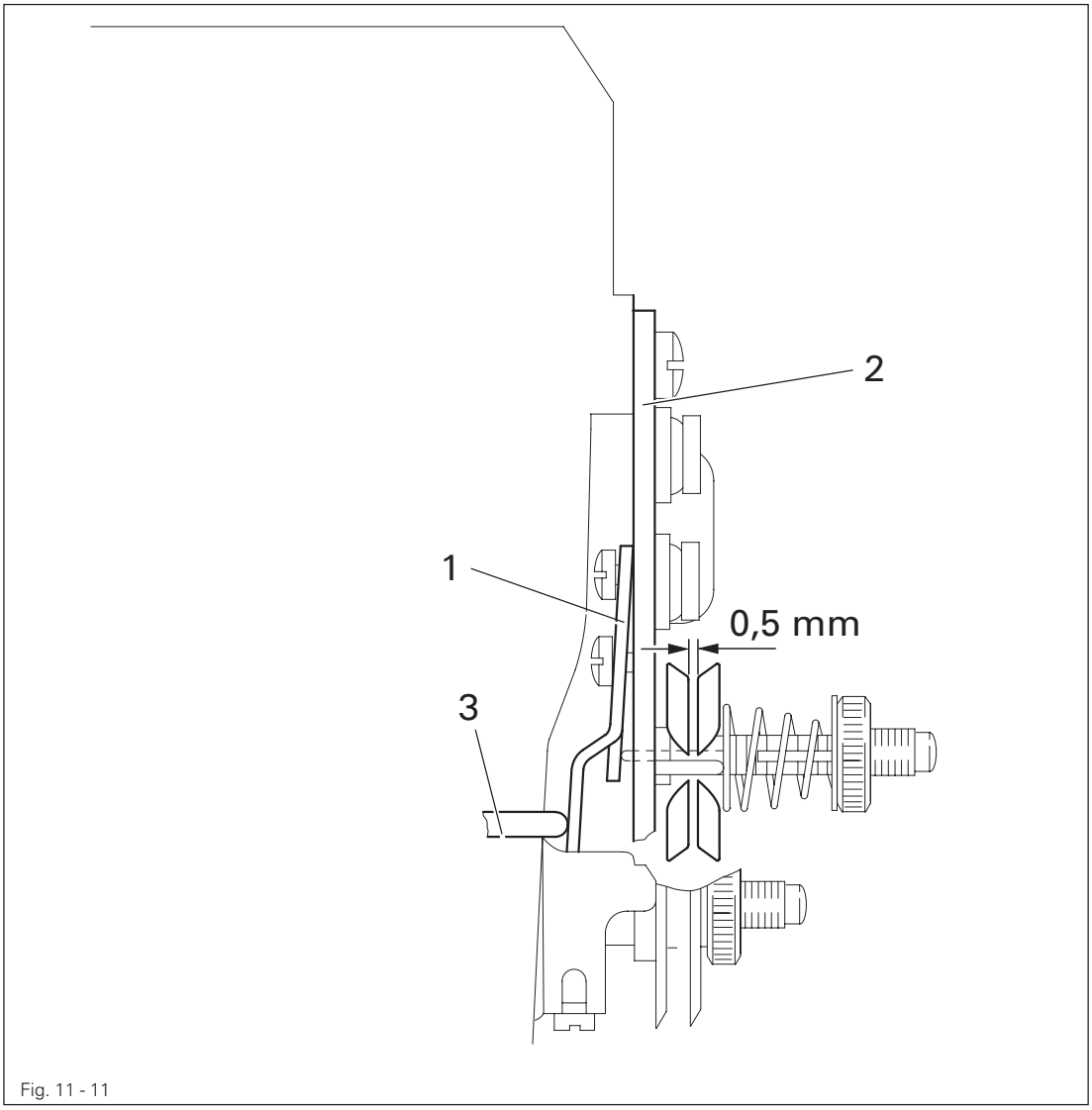


Fig. 11 - 11

- Raise the presser foot using the hand lever.
- Align the compression plate **1** behind the tension bearing board **2** in accordance with the **requirement**.

When the tension is correct the release pin must not be under pressure.

11.04.12 Thread check spring

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

The length of the spring movement can vary a little upwards or downwards due to changes in the sewing parameters.

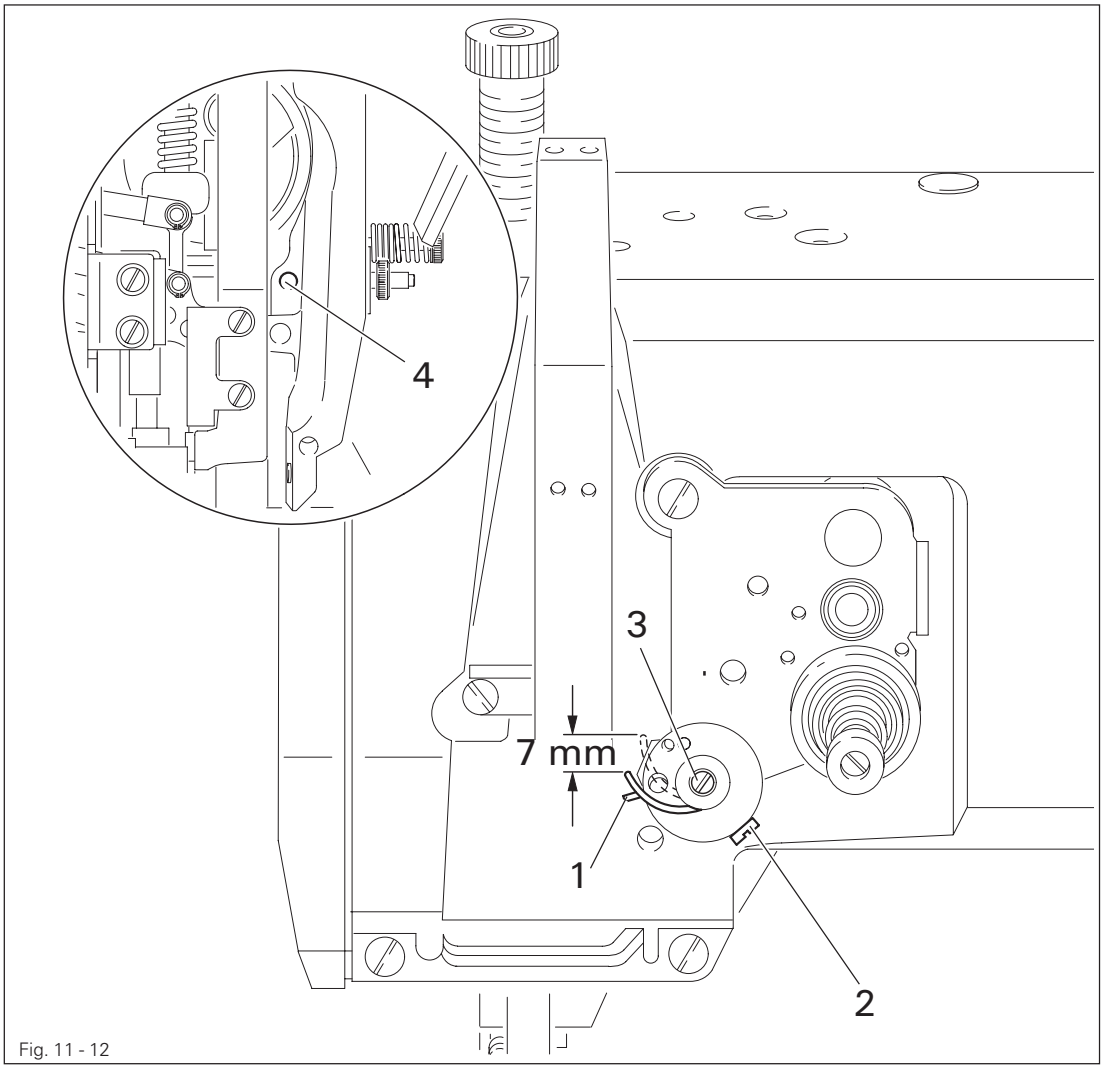


Fig. 11 - 12

- Adjust stop **1** (screw **2**) according to **Requirement.**
- To adjust the pressure of the spring, turn screw **3** (screw **4**).

11.04.13 Bobbin winder

Requirement

1. With the bobbin winder engaged the winder spindle must be driven reliably. With the bobbin winder disengaged, however, the friction wheel **5** must not touch the drive wheel **1**.
2. The bobbin winder must stop automatically when the thread wound on the bobbin has reached a point approx. **1 mm** below the bobbin rim.

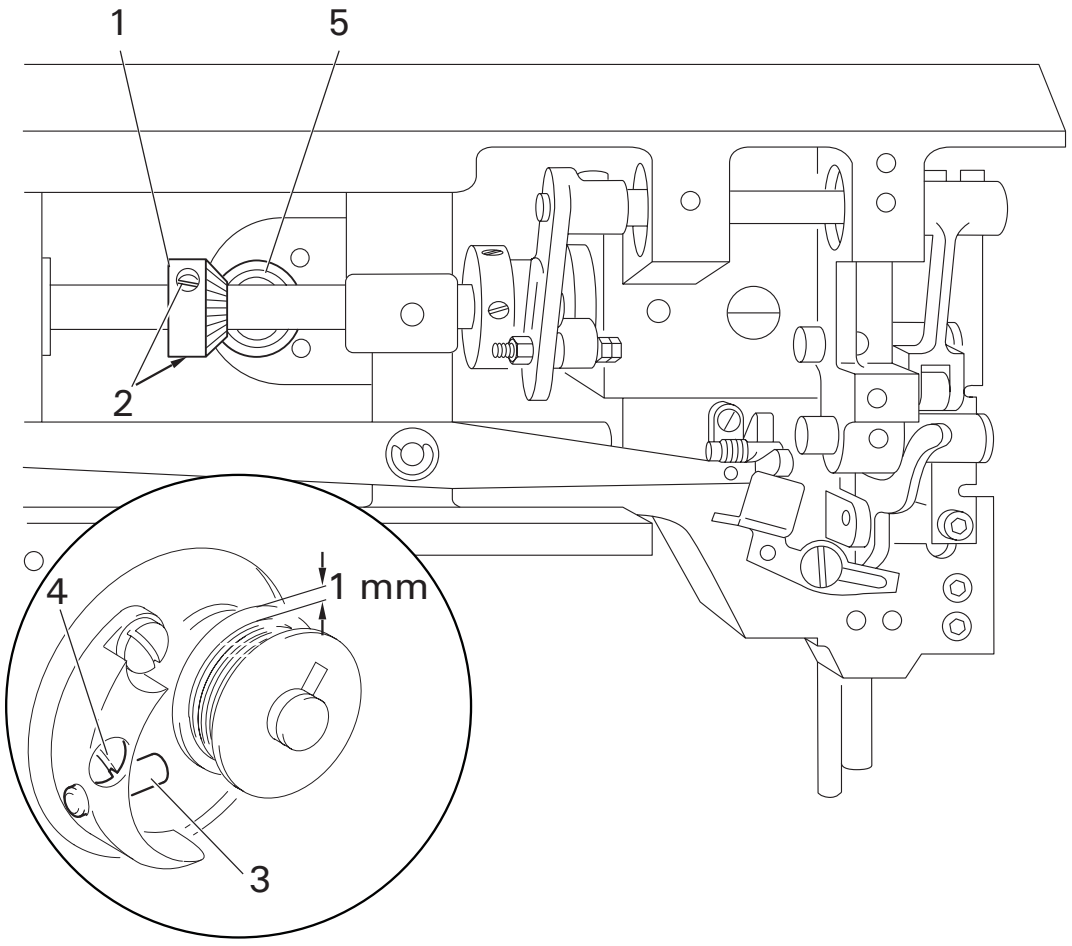
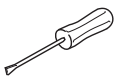


Fig. 11 - 13



- Adjust the drive wheel **1** (screws **2**) in accordance with **requirement 1**.
- Place a bobbin on the winder spindle, thread the bobbin and switch on the bobbin winder.
- Shift the regulating pin **3** (screws **4**) in accordance with **requirement 2**.

11.04.14 Regulating the pressure on the presser foot

Requirement
The material must be fed perfectly even at top sewing speed. There must not be any pressure marks on the material.

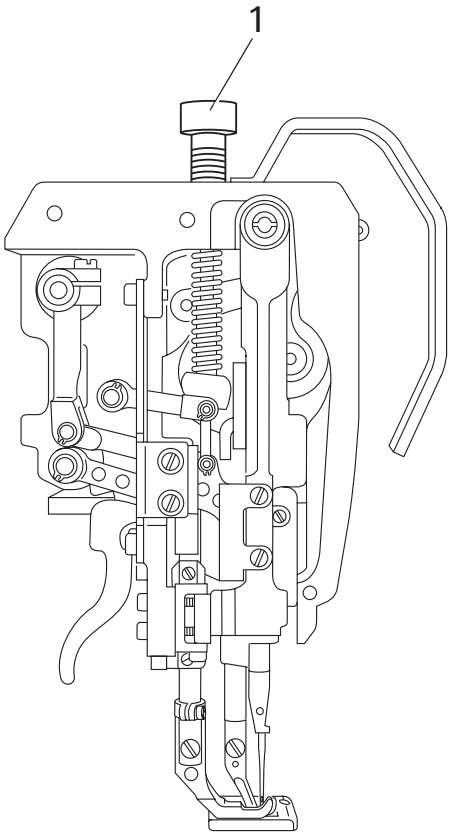
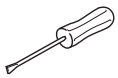


Fig. 11 - 14



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

11.05 Adjusting the thread trimmer -900/52 (optional)

11.05.01 Preadjusting the control cam

Requirement
With the take-up lever at its bdc, projection **4** on the control cam **2** must be directly underneath the cam follower **5**.

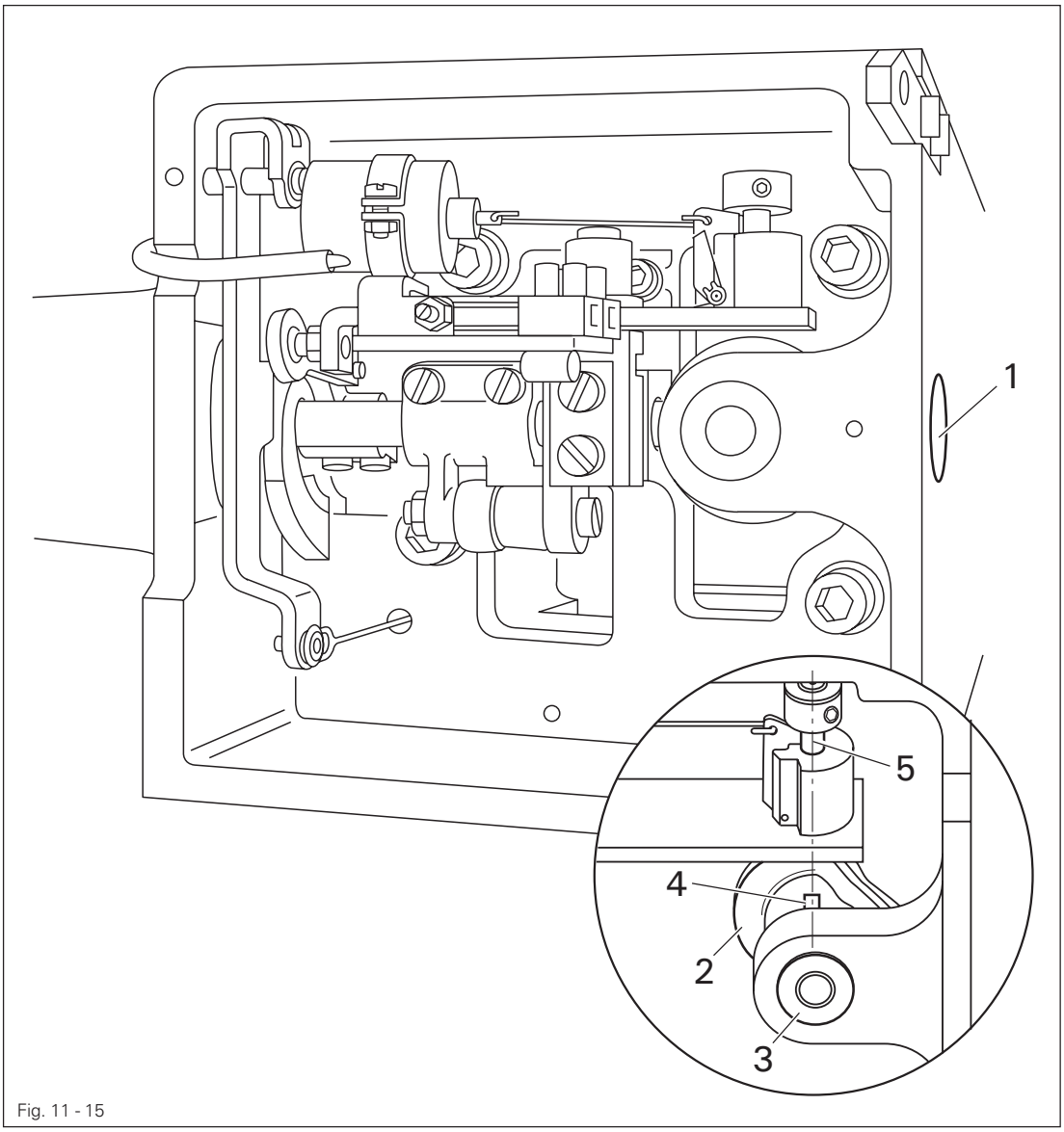
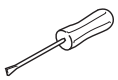


Fig. 11 - 15



- Loosen the two screws on the control cam **2** through the assembly hole **1**.
- Bring the take-up lever to its bdc by turning the handwheel .
- Turn the control cam **2** on its shaft in accordance with the **requirement**.
- In this position, and taking care to ensure that the control cam **2** is touching the bearing **3** below it, tighten the accessible screw on the control cam **2**.
- Make the second screw on the control cam **2** accessible and tighten it.
- Carry out a check.

11.05.02 Tripping lever height

Requirement
With the needle bar at its bdc there must be a distance of 1.0 mm between the tripping lever 3 and the control cam 4.

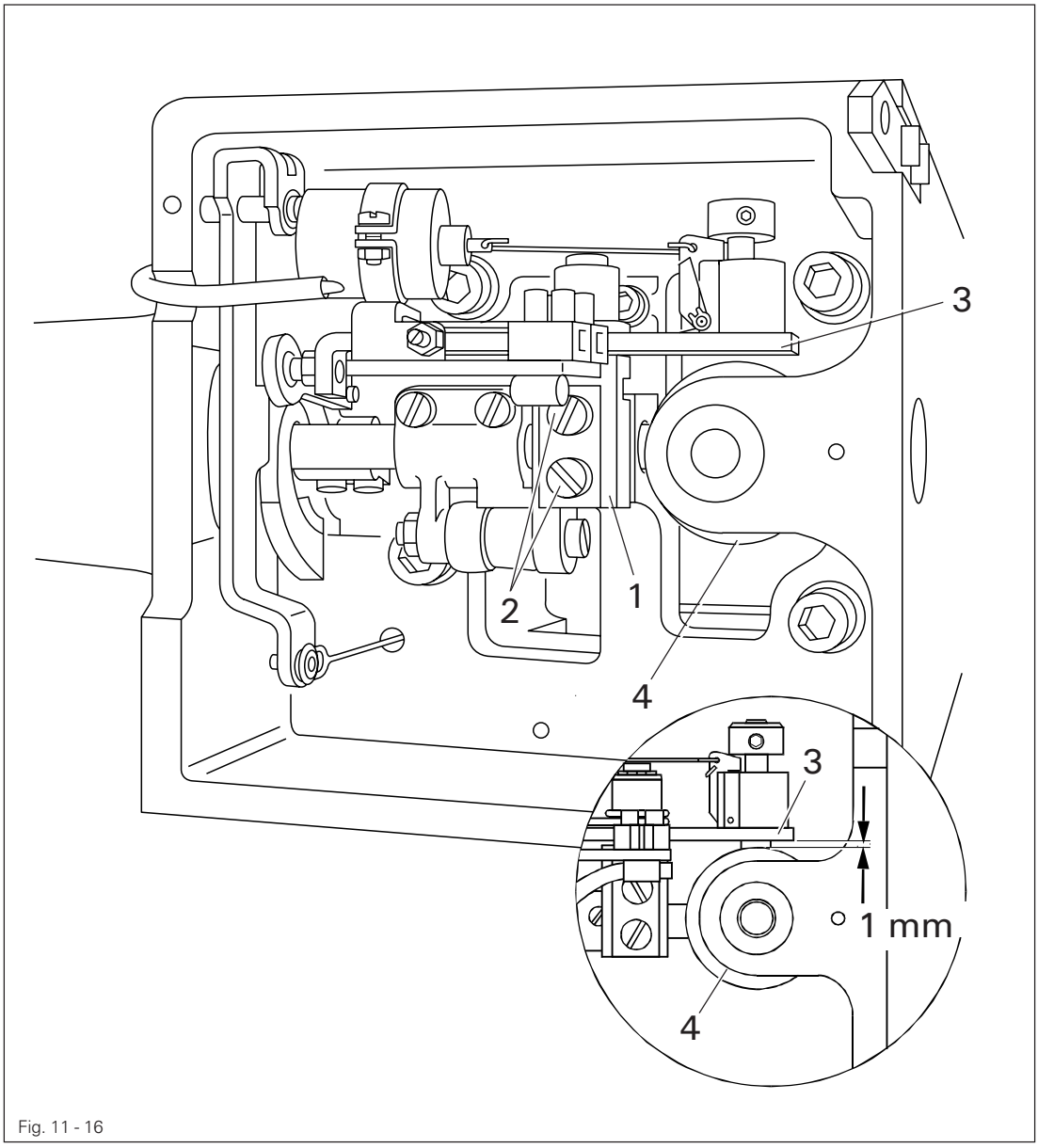


Fig. 11 - 16

- Bring the needle bar to its bdc by turning the handwheel.
- Move the carrier 1 (screws 2) of the tripping lever 3 in the elongated hole in accordance with the requirement.

11.05.03 Feed regulator pin

Requirement
With the needle bar at its bdc, the feed regulator pin **5** must be able to fall lightly into the path of the control cam **7** when the engaging solenoid **6** is activated.

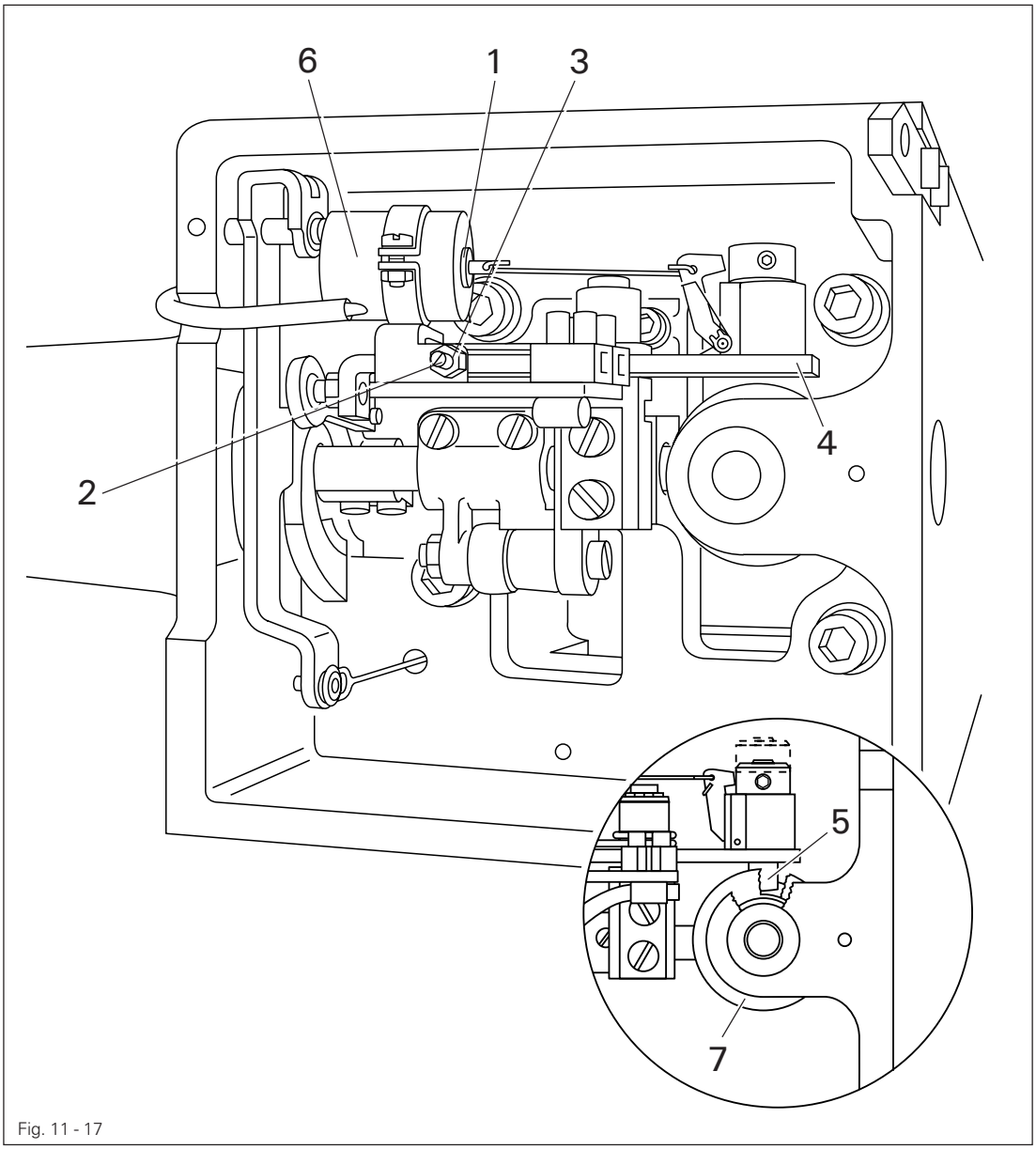
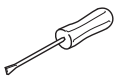


Fig. 11 - 17



- Bring the needle bar to its bdc by turning the handwheel.
- Activate the magnet core **1** manually.
- Tighten locking screw **2** (nut **3**) far enough so that it just touches the tripping lever **4**.
- Loosen locking screw **2** approx. 1/2 a turn until the movement of the feed regulator pin **5** is in accordance with the **requirement.**
- Carry out a check.

11.05.04 Engaging solenoid

Requirement
With the needle bar at its bdc and with the magnet core **1** fully activated, there must be a clearance of approx. **0.5 mm** between the pawl **7** and the retaining collar **6**.

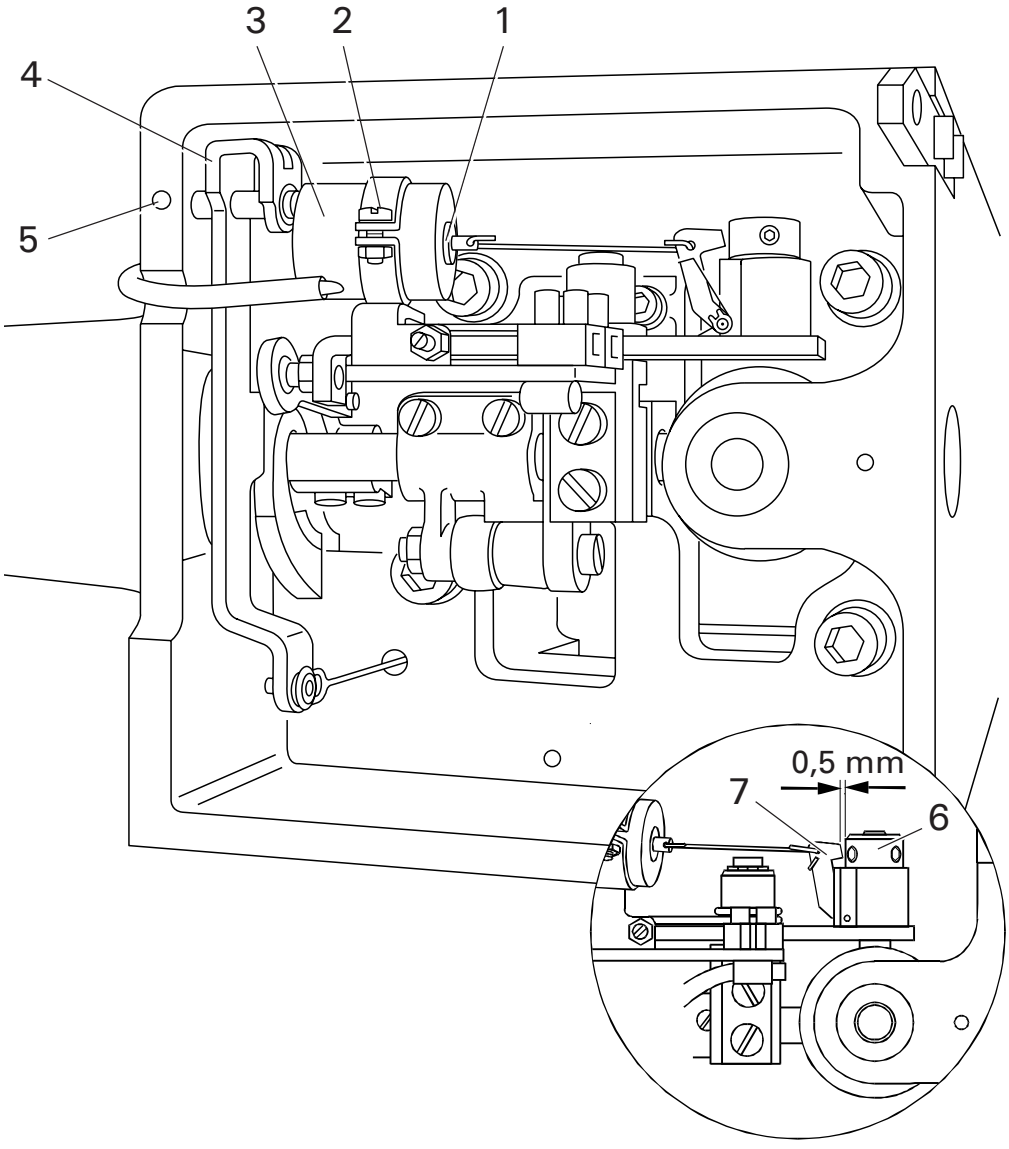
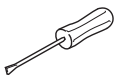


Fig. 11 - 18



- Bring the needle bar to its bdc by turning the handwheel.
- Push the magnet core **1** in as far as it will go and leave it in this position.
- Loosen screws **2**.
- Move the magnet housing **3** axially in accordance with the **requirement.**
- In this position, tighten screws **2**.
- Carry out a check.

If the magnet housing **4** touches lever **4**, move lever **4** (screw **5**) a little to the left.

11.05.05 Adjusting the height of the feed regulator pin

Requirement
With the thread trimmer in resting position and the pawl **4** clicked in place there must be a clearance of **0.3 mm** between the highest point of the control cam **5** and the feed regulator pin.

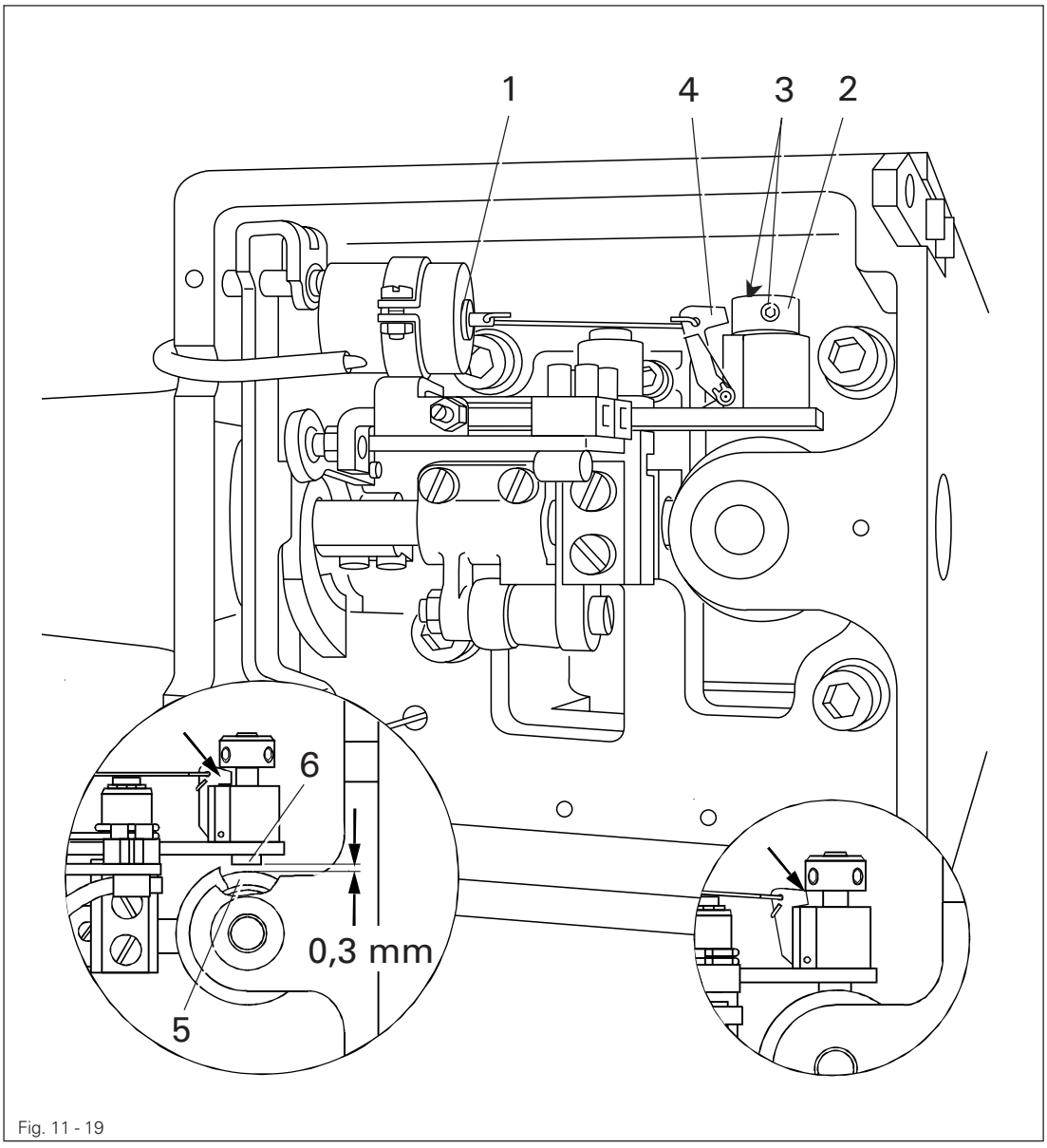
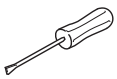


Fig. 11 - 19



- Bring the needle bar to its tdc by turning the handwheel.
- Activate the magnet core **1**.
- Allow the retaining collar **2** (screws **3**) to lightly touch pawl **4** (see arrow in small circle).

With the pawl **4** clicked into place, this adjustment procedure fulfills the requirement (see large circle).

- Carry out a check.

11.05.06 Thread catcher, front point of reversal

Requirement
With the thread catcher **3** at its front point of reversal, the rear edge of the thread catcher cutout must still be **1 mm** over the front edge of the bobbin case position-finger **6**.

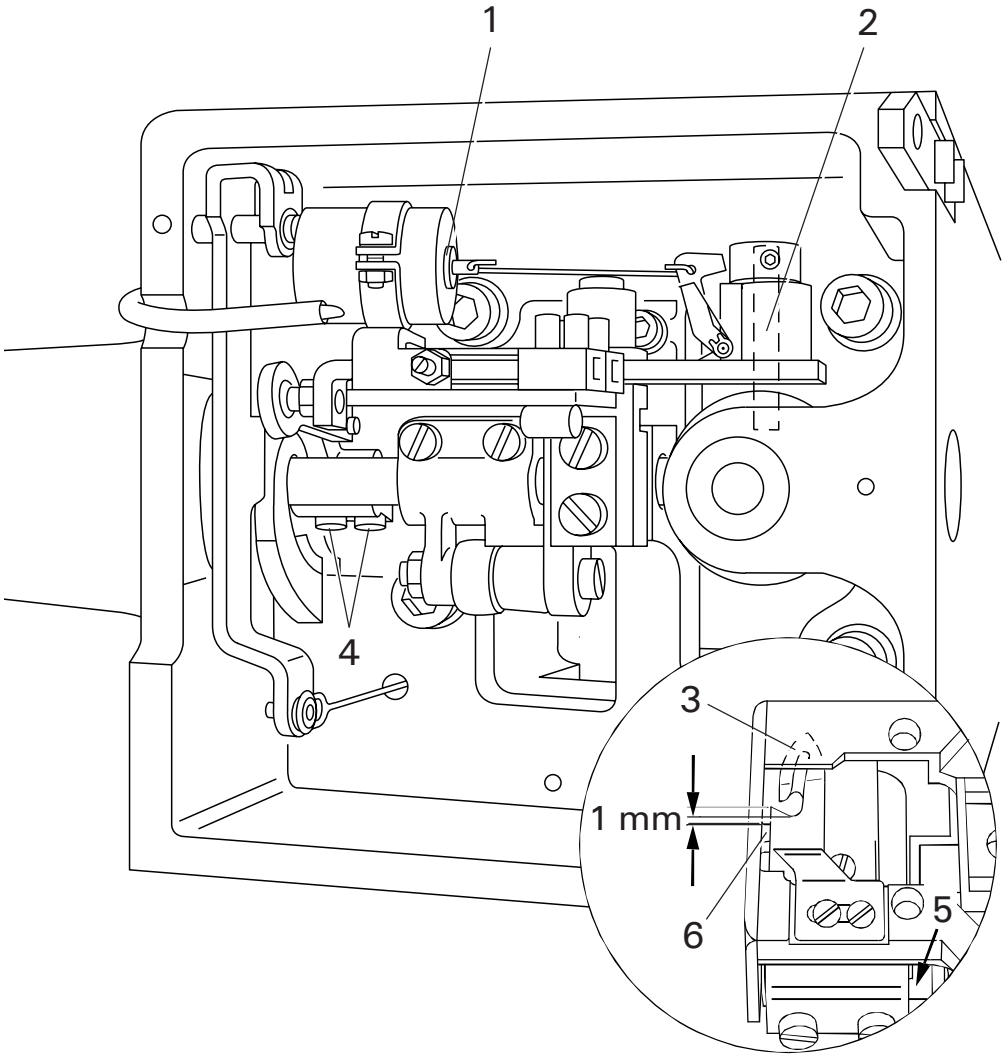
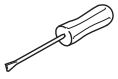


Fig. 11 - 20



- Bring the needle bar to its bdc by turning the handwheel.
- Activate the magnet core **1** allowing the feed regulator pin **2** to fall into the path of the cam.
- Bring the thread catcher **3** to its front point of reversal by turning the handwheel in its direction of rotation.
- Loosen screws **4**.
- Adjust the thread catcher **3** in accordance with the **requirement** by turning the thread catcher carrier **5**.
- Tighten screws **4**.

11.05.07 Lateral adjustment of the thread catcher

Requirement
With the needle bar at its bdc, the tip of the thread catcher **3** must point exactly at the middle of the needle.

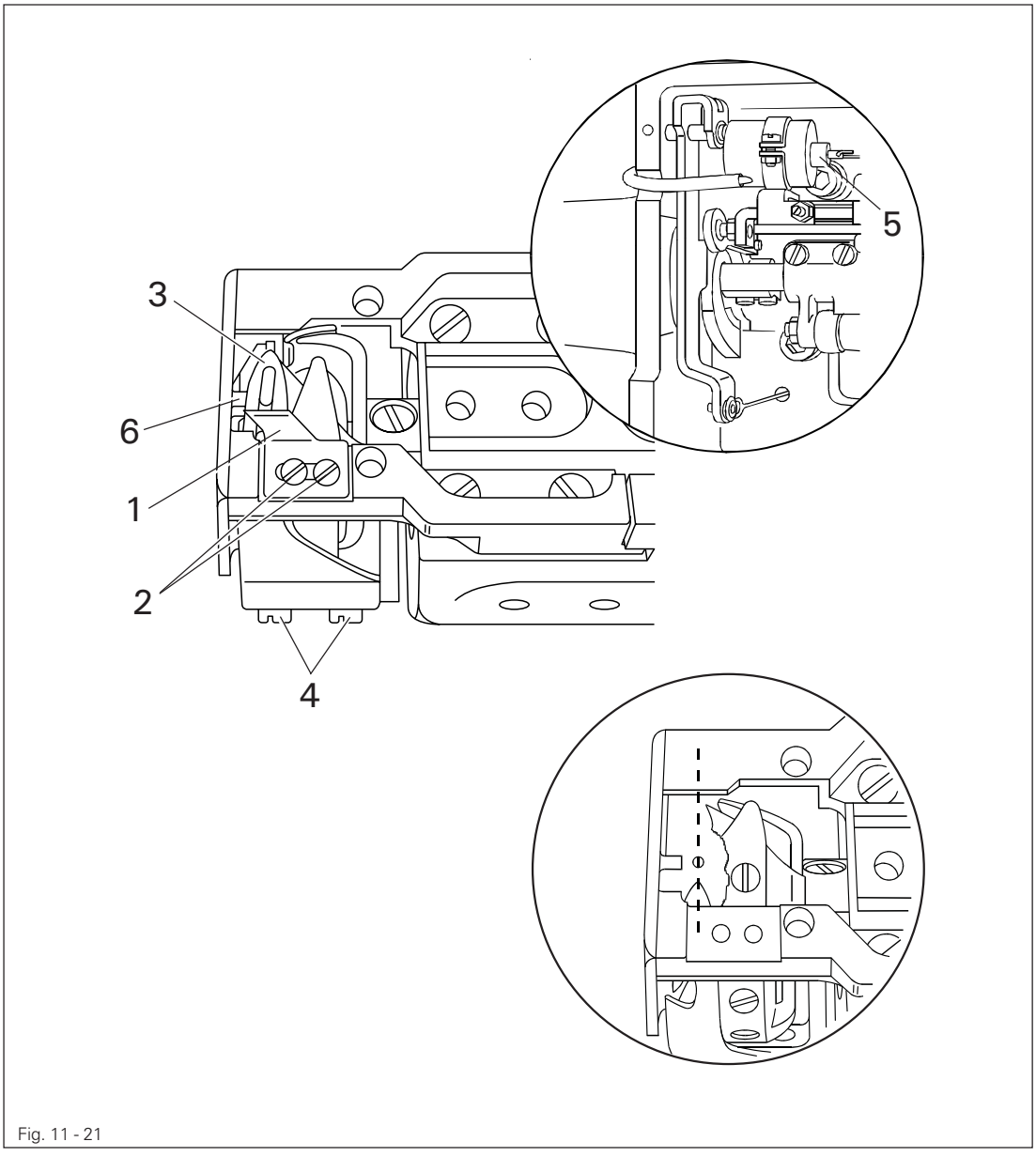


Fig. 11 - 21

- Remove knife **1** (screws **2**).
- Bring the needle bar to its bdc by turning the handwheel.
- Align the thread catcher **3** (screws **4**) laterally in accordance with the **requirement**.
- Activate the magnet core manually and turn the handwheel until the needle bar is at its tdc. Take care to ensure that the thread catcher **3** does not come into contact with the thread bobbin case position-finger **6** during its course of movement.
- Screw on knife **1** (screws **2**).

11.05.08 Control cam, final adjustment

Requirement
With the end of the thread guard **2** **mm** behind the middle of the bobbin case position-finger **3**, the clearance between the thread catcher point **4** and the thread guard **2** must be approx. **4** **mm** as viewed in the direction of feed.

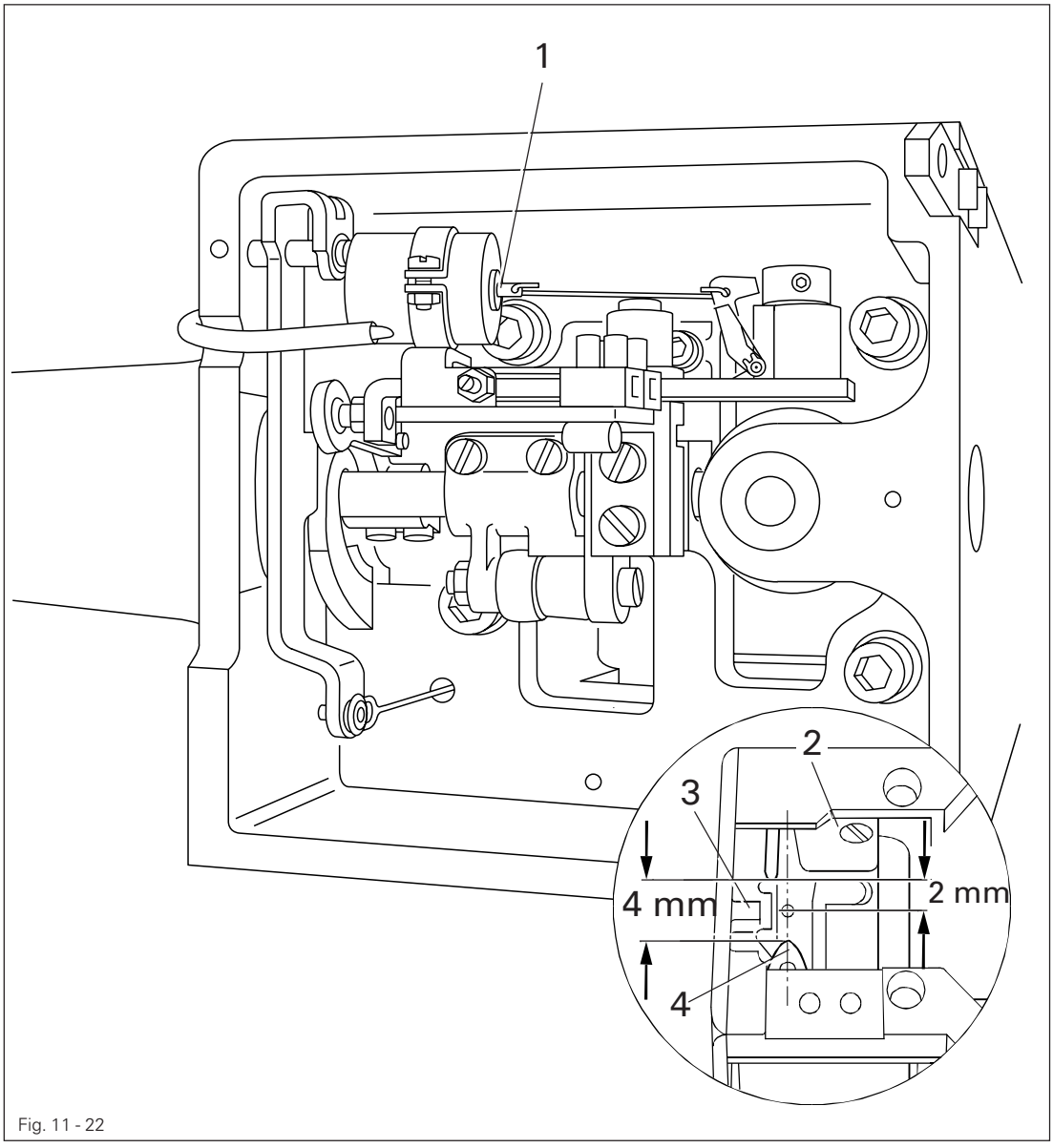


Fig. 11 - 22

- Bring the needle bar to its bdc by turning the handwheel.
- Activate the magnet **1** core manually.
- Continue turning the handwheel (direction of rotation) until the end of the thread guard **2** is **2** **mm** behind the middle of the bobbin case position-finger **3** as viewed in the direction of feed.
- In this position the position of the thread catcher point **4** must be in accordance with the requirement.
- If necessary, adjust the control cam accordingly (see **cap. 11.05.01 Preadjusting the control cam**).

11.05.09 Knife

Requirement
With the left edge of the thread catcher notch **1 mm** in front of the knife edge, the left knife edge must be flush with the edge of the thread catcher (see arrow in circle).

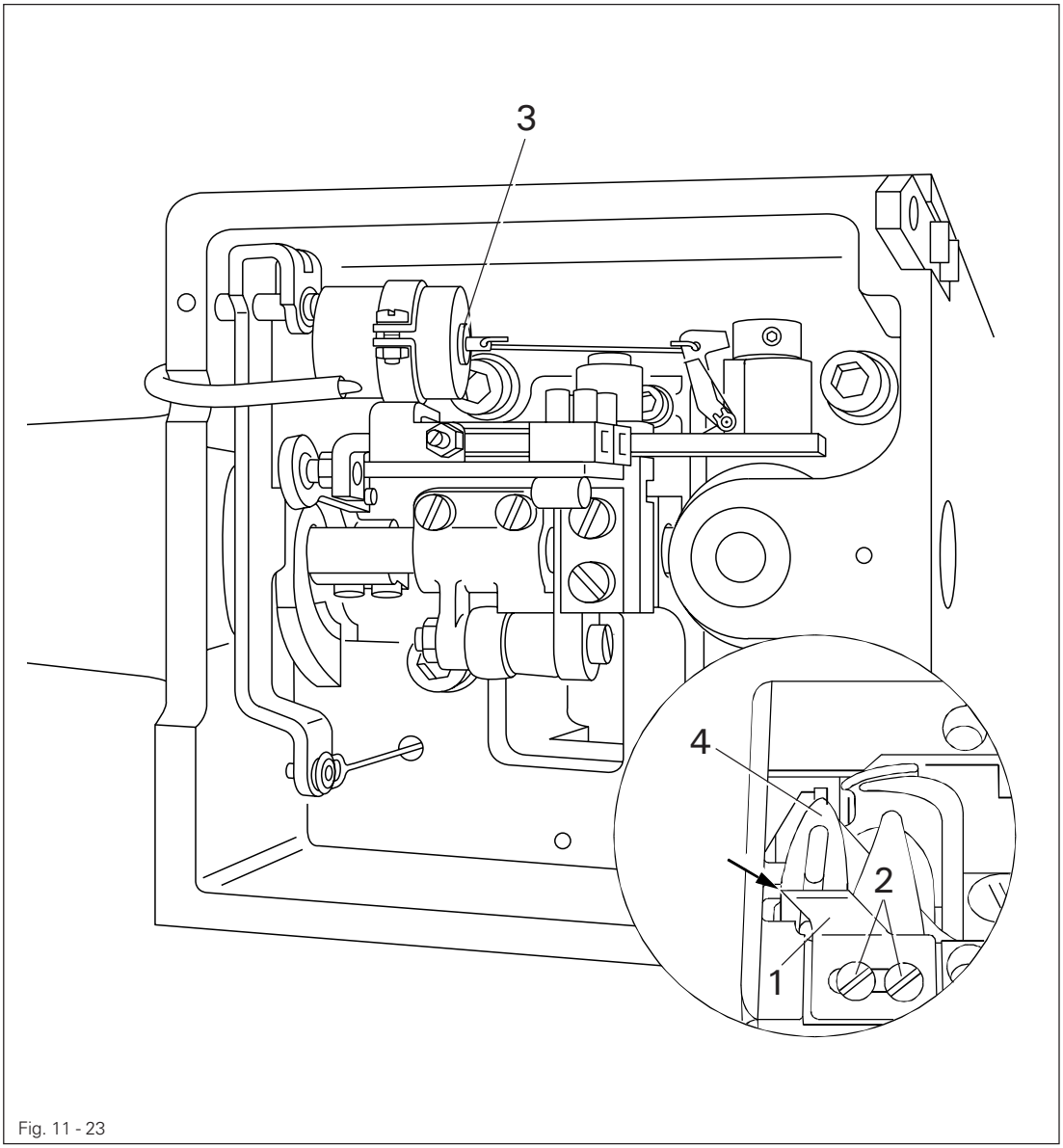
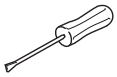


Fig. 11 - 23



- Loosen screws **2** on knife **1**.
- Bring the needle bar to its bdc by turning the handwheel and activate the magnet core **3**.
- Turn the handwheel in its direction of rotation until the point of the thread catcher **4** is at the same level as the knife blade.
- Laterally align knife **1** in accordance with the **requirement** (see arrow).
- Tighten screws **2**.
- By turning the handwheel, check that the back of the thread catcher does not catch on the knife blade. Re-adjust the thread catcher **4** if necessary (see cap. 1**1.05.07 Lateral adjustment of the thread catcher**).

11.05.10 Triggering the needle thread tension

Requirement
With the tip of the release lever **5** at the highest point of the tension release cam **4**, the tension disks must be at least **5 mm** apart.

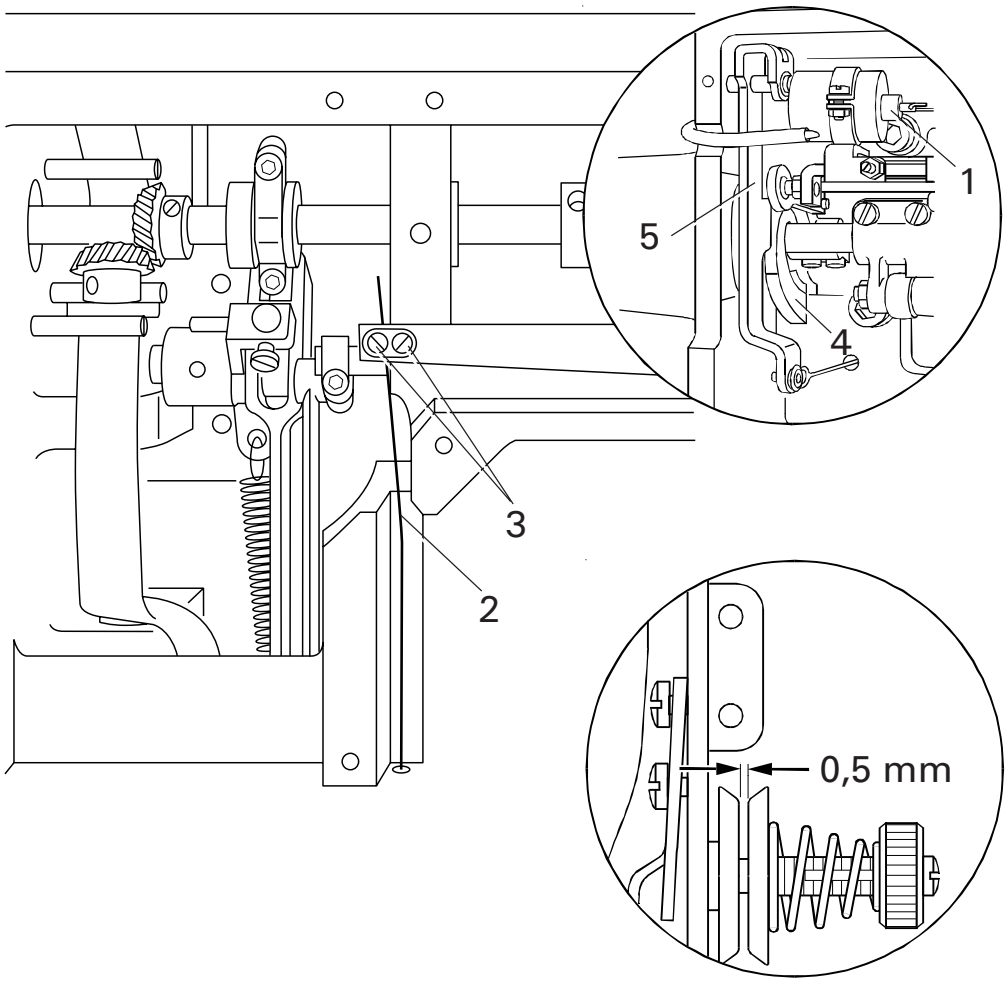


Fig. 11 - 24

- Bring the sewing foot to rest on the needle plate using the hand lever.
- Bring the needle bar to its bdc by turning the handwheel and activate the magnet core **1**.
- Turn the handwheel in its direction of rotation until the thread catcher has reached its front point of reversal.
- Adjust the height of the transmission bar **2** (screws **3**) so that the distance between the tension disks is in accordance with the requirement.
- Finish the thread trimming process by turning the handwheel and bring the take up lever to its tdc. In this position the needle thread tension must be fully activated.

- Finally, apply a light coat of grease to the surface of the release cam **4** and the tip of the release lever **5**.

11.05.11 Cutting test

Requirement
Both threads must be trimmed perfectly.

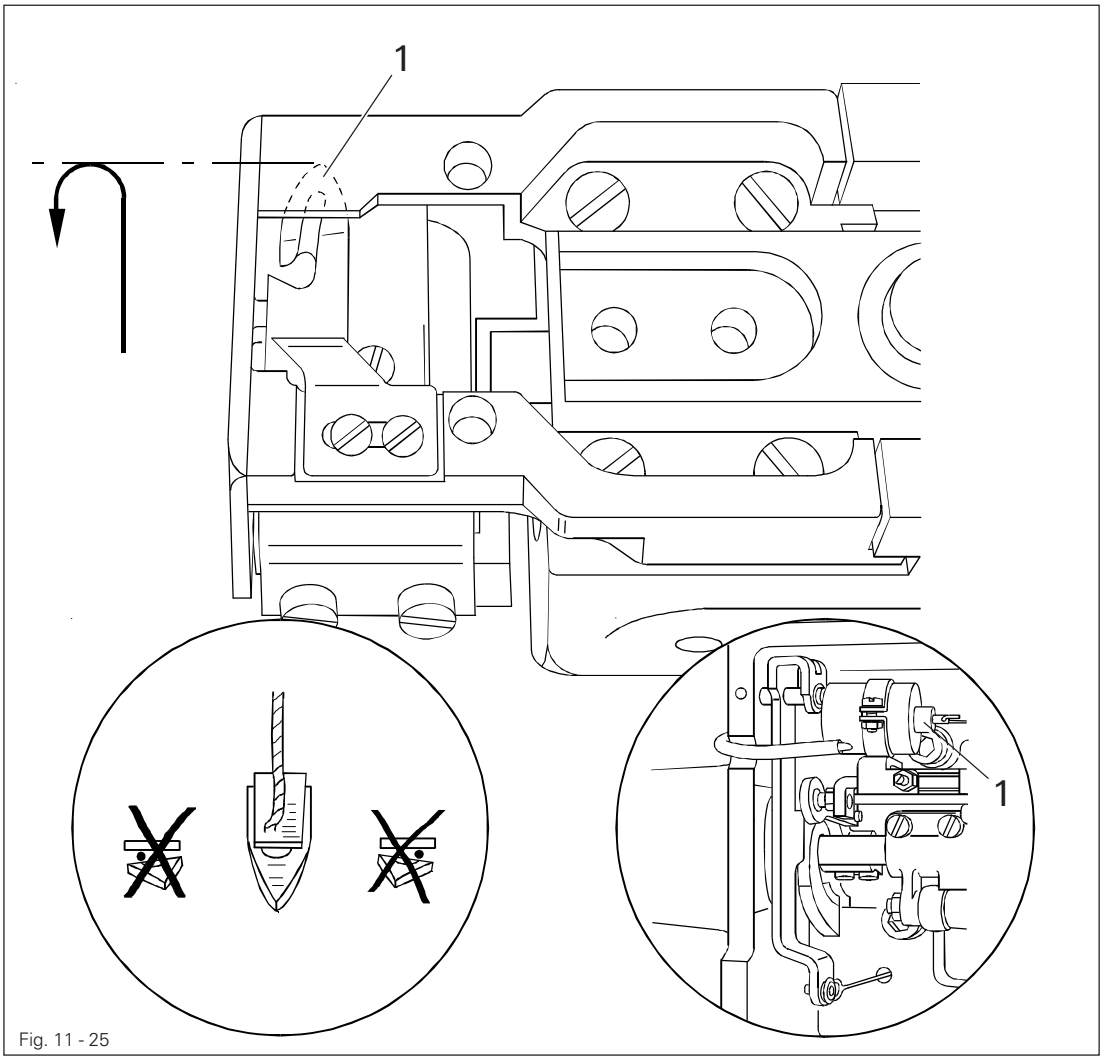
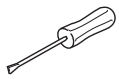


Fig. 11 - 25

- Bring the needle bar to its bdc by turning the handwheel and activate the magnet core 1.
- Turn the handwheel in its direction of rotation until the thread catcher 2 is at its front point of reversal.
- Take one thread doubled and pull it into the cutout of the thread catcher 2. Carry out a cutting test by continuing to turn the handwheel.
- If one of the threads is not cut properly, adjust the relationship of the thread catcher to the knife (see cap. **11.05.06Thread catcher, front point of reversal**).

11.05.12 Positioner

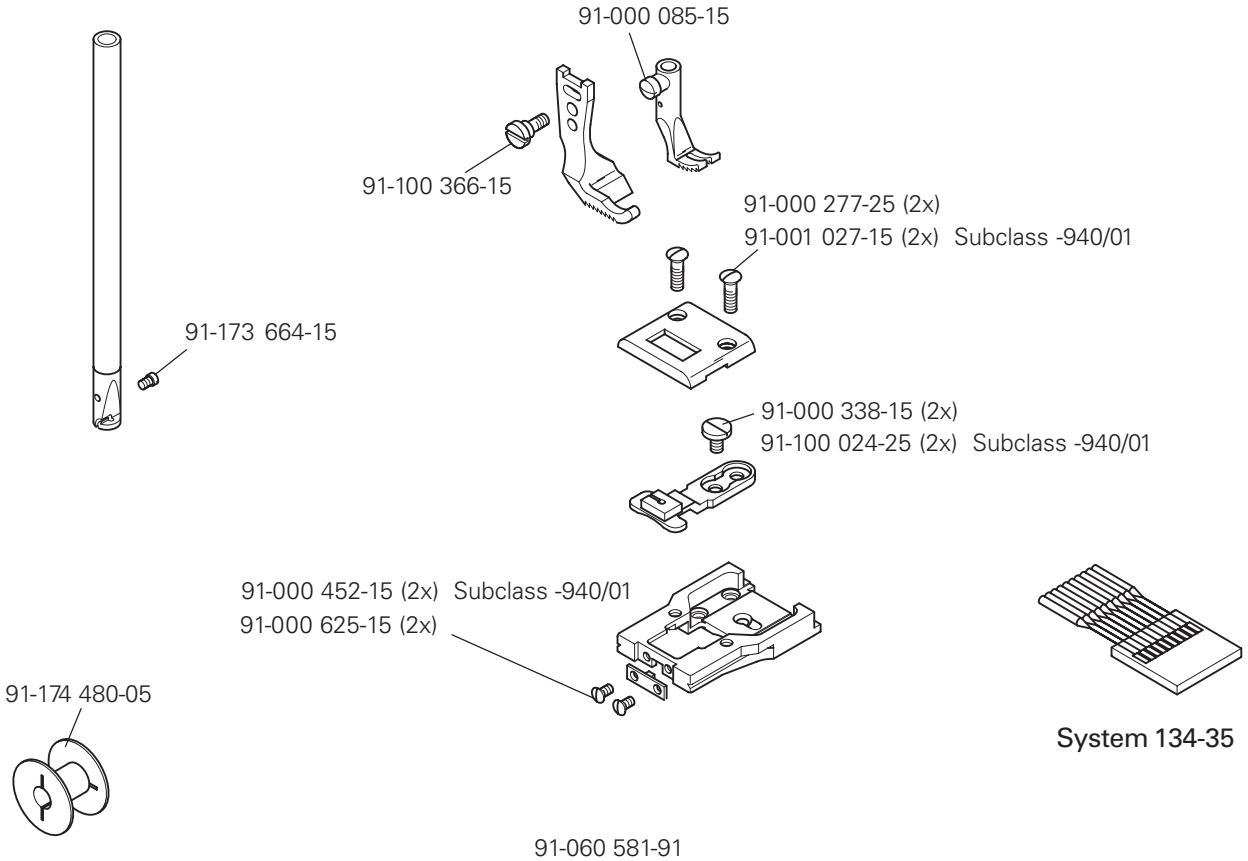
Requirement
When interrupting the sewing procedure the machine must position itself at **4 mm** after the bdc of the needle bar. After trimming the thread, the machine must position itself at the tdc of the take-up lever.

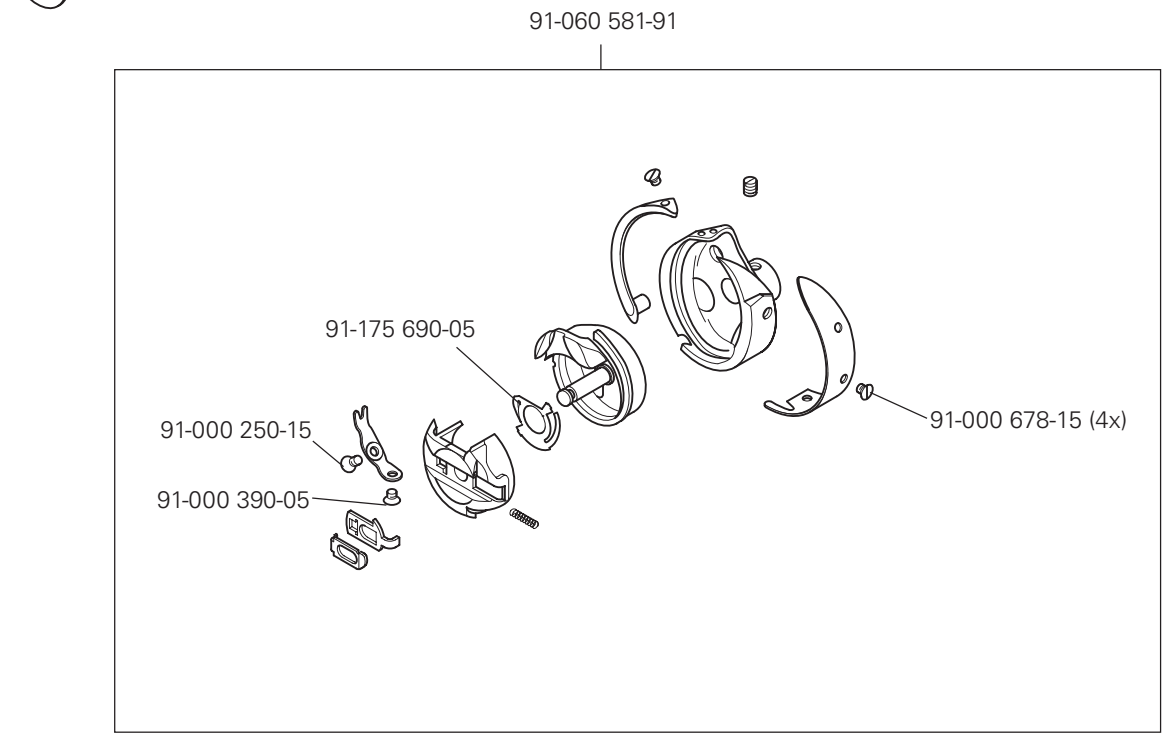


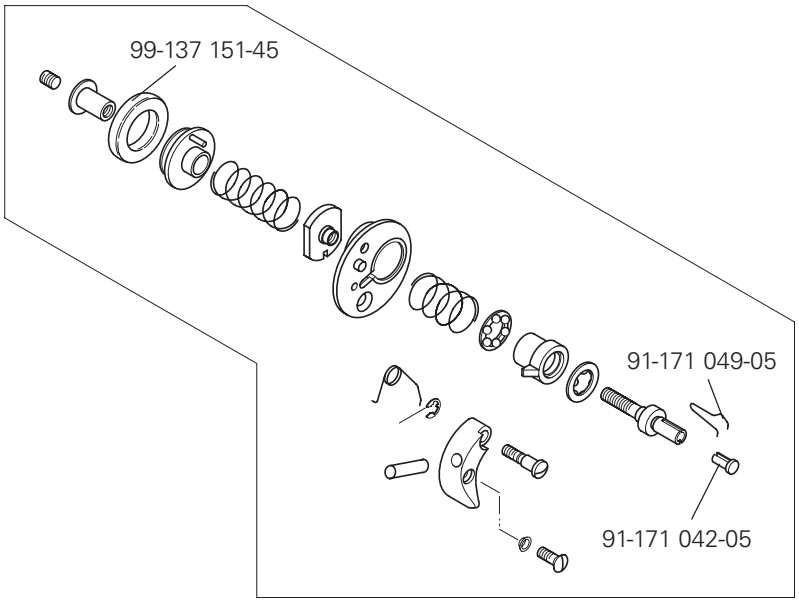
- Carry out the adjustment in accordance with the instruction manual of the motor.

12 Wearing parts

This is a list of the most important wearing parts.
A detailed parts list for the complete machine can be downloaded from the internet address **www.pfaff-industrial.com/de/service/download/index.php3.**
As an alternative to the internet download, the parts list can also be ordered as a book under No. 269-12-18 284.







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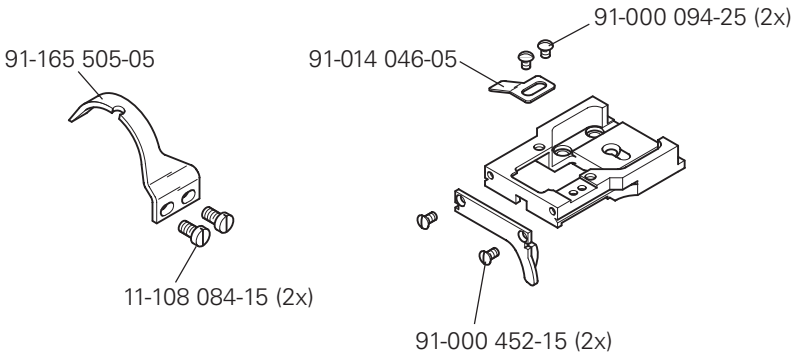

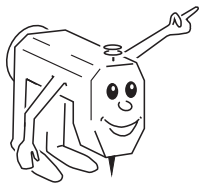

Notes

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