



1051

1053

Instruction Manual

1181

1183

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

PFAFF	1051	#	2232500	→
PFAFF	1053	#	2232222	→
PFAFF	1181	#	2232501	→
PFAFF	1183	#	2232224	→



This Instruction Manual is valid for all models and subclasses listed in the chapter "**Specifications**".

The reprinting, copying or translation of PFAFF Instruction Manuals, whether in whole or in part, is only permitted with our previous authorization and with written reference to the source.

G.M. PFAFF KAISERSLAUTERN
INDUSTRIEMASCHINEN AG

Postfach 3020
D-67653 Kaiserslautern
Königstr. 154
D-67655 Kaiserslautern

Editing / Illustrations
HAAS-Publikationen GmbH
D-53840 Troisdorf

	Contents	Chapter - Page
1	Safety	1 - 1
1.01	Directives	1 - 1
1.02	General notes on safety	1 - 1
1.03	Safety symbols	1 - 2
1.04	Important points for the user	1 - 2
1.05	Operating and specialist personnel	1 - 3
1.05.01	Operating personnel	1 - 3
1.05.02	Specialist personnel	1 - 3
1.06	Danger	1 - 4
2	Proper use	2 - 1
3	Specifications	3 - 1
3.01	PFAFF 1051, PFAFF 1053, PFAFF 1181, PFAFF 1183	3 - 1
3.02	Models and subclasses	3 - 2
4	Disposal of the machine	4 - 1
5	Transport, packaging and storage	5 - 1
5.01	Transport to the customer	5 - 1
5.02	Transport within the customer's premises	5 - 1
5.03	Disposal of the packaging	5 - 1
5.04	Storage	5 - 1
6	Explanation of the symbols	6 - 1
7	Controls	7 - 1
7.01	On/off switch	7 - 1
7.02	Keys on the machine head	7 - 1
7.03	Pedal	7 - 2
7.04	Lever for lifting the presser foot	7 - 2
7.05	Feed regulator disk	7 - 3
7.06	Reverse feed lever	7 - 3
7.07	Knee lever	7 - 4
7.08	Thread trimmer -731/01	7 - 4
7.09	Switch for thread wiper -909/04	7 - 5
8	Mounting and commissioning the machine	8 - 1
8.01	Mounting	8 - 1
8.01.01	Adjusting the table-top height	8 - 1
8.01.02	Adjusting the V-belt tension	8 - 2
8.01.03	Mounting the upper V-belt guard	8 - 2
8.01.04	Mounting the lower V-belt guard	8 - 3
8.01.05	Mounting the spool holder	8 - 3
8.01.06	Start inhibitor (only for machines with integrated sewing motor)	8 - 4
8.01.07	Connecting the plug connections and earth cable	8 - 5
8.02	Commissioning the machine	8 - 5

Contents

	Contents	Chapter - Page
8.03	Switching the machine on/off	8 - 5
8.03	Table top cutout.	8 - 6
9	Preparation	9 - 1
9.01	Inserting the needle	9 - 1
9.02	Winding the bobbin thread/ adjusting the thread tension	9 - 2
9.03	Removing/Inserting the bobbin case	9 - 3
9.04	Inserting the bobbin case / Adjusting the bobbin thread tension	9 - 3
9.05	Threading the needle thread / Adjusting the needle thread tension	9 - 4
9.06	Adjusting the stitch length	9 - 5
10	Care and maintenance	10 - 1
10.01	Cleaning the machine	10 - 1
10.02	Topping up the oil tank (only on PFAFF 1181 and PFAFF 1183)	10 - 2
11	Adjustment	11 - 1
11.01	Notes on adjusting	11 - 1
11.02	Tools, gauges and other accessories for adjusting	11 - 1
11.03	Abbreviations	11 - 1
11.04	Checking and adjusting aids	11 - 2
11.05	Adjusting the basic machine	11 - 3
11.05.01	Basic position of the machine drive	11 - 3
11.05.02	Preadjusting the needle height	11 - 4
11.05.03	Bottom feed neutral position	11 - 5
11.05.04	Neutral position of the needle feed (only on PFAFF 1051 and 1181)	11 - 6
11.05.05	Bottom feed lifting motion	11 - 7
11.05.06	Bottom feed dog height	11 - 8
11.05.07	Feed dog motion of bottom feed dog	11 - 9
11.05.08	Feeding motion of needle feed (only on PFAFF 1051 and 1181)	11 - 10
11.05.09	Needle in needle hole center (only on PFAFF 1053 and 1183)	11 - 11
11.05.10	Needle to needle hole centre (on PFAFF 1051 and PFAFF 1181)	11 - 12
11.05.11	Synchronous strokes of needle- and drop feed (only on PFAFF 1051 and PFAFF 1181)	11 - 13
11.05.12	Hook shaft bearing and backlash	11 - 14
11.05.13	Hook lubrication (only for PFAFF 1181 and 1183)	11 - 15
11.05.14	Needle rise, hook-to-needle clearance, needle height and bobbin case position finger	11 - 16
11.05.15	Thread check spring and slack thread regulator	11 - 17
11.05.16	Position of knee lever	11 - 18
11.05.17	Knee lever stop	11 - 19
11.05.18	Bobbin winder	11 - 20
11.05.19	Limiting the stitch length	11 - 21
11.05.20	Presser foot pressure	11 - 22
11.05.21	Modifying the needle bar stroke	11 - 23
11.06	Adjusting the edge trimmer -731/01	11 - 24
11.06.01	Zero position of the knife	11 - 24
11.06.02	Cutting motion	11 - 25

	Contents	Chapter - Page
11.06.03	Knife height	11 - 26
11.06.04	Knife position in sewing direction	11 - 27
11.06.05	Knife position crosswise to sewing direction	11 - 28
11.07	Adjusting the thread trimmers -900/24	11 - 29
11.07.01	Magnet setting.....	11 - 29
11.07.02	Lateral alignment of the thread catcher	11 - 30
11.07.03	Knife position	11 - 31
11.07.04	Front point of reversal of the thread catcher	11 - 32
11.07.05	Manual trimming check	11 - 33
11.07.06	Thread tension release	11 - 34
11.07.07	Readjusting the control cam	11 - 35
11.08	Adjusting the thread wiper -909/04	11 - 36
11.08.01	Thread wiper movement	11 - 36
11.08.02	Thread wiper position	11 - 37
11.09	Adjusting the automatic presser foot lift -910/06	11 - 38
11.10	Adjusting the backtacking mechanism -911/37	11 - 39
12	Wearing parts	12 - 1

1 Safety

1.01 Directives

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

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

1.02 General notes on safety

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

1.03 Safety symbols



Danger!
Points to be observed.



Danger of injury for operating and specialist personnel!



Caution

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

1.04 Important points for the user

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

Further information can be obtained from your PFAFF agent.

1.05 Operating and specialist personnel

1.05.01 Operating personnel

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

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

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

1.05.02 Specialist personnel

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

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

- always observe the Notes on Safety in the Instruction Manual!
- switch off the On/Off switch before carrying out adjustments or repairs, and ensure that it cannot be switched on again unintentionally!
- wait until the luminous diode on the control box is no longer blinking or on before beginning adjustment or repair work.
- never work on parts which are still connected to the power supply! Exceptions are explained in the regulations EN 50110.
- replace the protective coverings and close the electrical control box after all repairs or maintenance work!

1.06

Danger



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



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



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

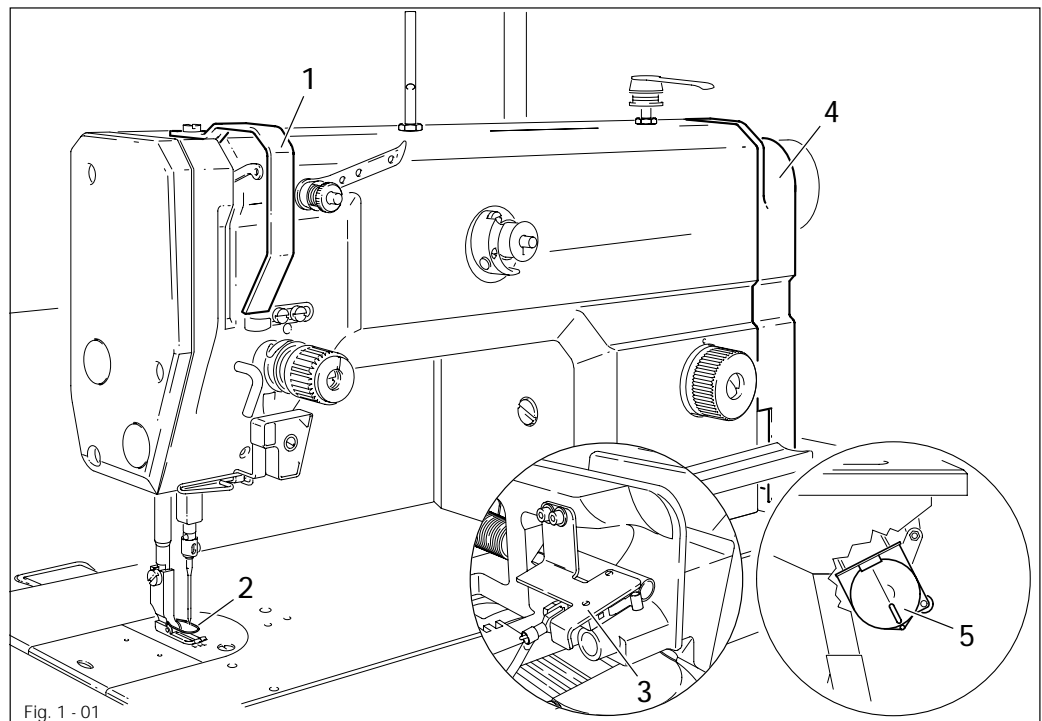


Fig. 1 - 01



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



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



Do not operate machines with integrated motor without start inhibitor **3!**
Danger of injury if the machine is started accidentally!



If an external motor is used, do not operate the machine without the belt guards **4 and 5!**
Danger of injury by the drive belt!

Proper use

The PFAFF 1051 is an oil-free single-needle high-speed seamer with compound feed

The PFAFF 1053 is an oil-free single-needle high-speed seamer with drop feed

The PFAFF 1181 is an oil-free single-needle ultra-high-speed seamer with compound feed

The PFAFF 1183 is an oil-free single-needle ultra-high-speed seamer with drop feed

These machines are used in the industry for sewing lockstitch seams.



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

3 Specifications ▲

3.01 PFAFF 1051, PFAFF 1053, PFAFF 1181, PFAFF1183 ▲

Stitch type: 301 (lockstitch)

Needle system: 134 or 134 KK on subclass -731/01

Needle size in 1/100 mm:

Version A: 60 - 70

Version B: 80 - 100

Effective balance wheel diameter: 65 mm

Fabric clearance: 9 - 13 mm

Clear workspace width: 260 mm

Clear workspace height: 125 mm

Bed-plate dimensions: 476 x 177 mm

Sewing head dimensions:

Length: approx. 550 mm

Width: approx. 180 mm

Height (above table): approx. 300 mm

Max. stitch length:

Version A and B: 4.5 mm

Version CN: 6.0 mm

Max. speed PFAFF 1051 / 1053

Version A and B: 4000 spm ♦

Max. speed PFAFF 1181/ 1183

Version A and B: 5500 spm ♦

Version CN: 4200 spm ♦

Needle bar stroke: 30 or 36 mm

Power connection:

Operating voltage: 190 - 240 V 50/60 Hz, single-phase

Max. input: 400 VA

Fuse: 1 x 16 A, inert

Ambient noise levels:

Workplace noise level at corresponding speeds

(noise measurement according to DIN 45 635-48-A-1, ISO 11204, ISO 3744, ISO 4871)

PFAFF 1051 at 3200 spm: 76 dB(A)

PFAFF 1053 at 3200 spm: 76 dB(A)

PFAFF 1181 at 4400 spm: 81 dB(A)

PFAFF 1183 at 4400 spm: 81 dB(A)

Net weight of sewing head: approx. 30 kg

Gross weight of sewing head: approx. 38 kg

▲ Subject to technical alterations

♦ 3,800 s.p.m. with 36 mm needle bar stroke

3.02 Versions and subclasses

Version A: for sewing light materials

Version B: for sewing medium materials

Version C: for sewing medium-heavy materials

Work aids:

Subclass - 731/01 edge trimmer

Subclass - 900/24 thread trimmer

Subclass - 909/04 thread wiper

Subclass - 910/06 automatic foot lift

Subclass - 911/37 automatic back-tacking mechanism

4 Disposal of machine

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



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

5 Transport, packaging and storage

5.01 Transport to the customer's premises

Within Germany, machines with a table are delivered without packaging. Machines without a table (sewing head only) and machines which are to be exported are packaged.

5.02 Transport within the customer's premises

The manufacturer bears no liability for transport within the customer's premises or to the individual locations of use. Make sure that the machines are always transported upright.

5.03 Disposal of the packaging

The packaging of these machines consists of paper, cardboard and VCE fiber. The proper disposal of the packaging is the responsibility of the customer.

5.04 Storage

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

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

6 Explanation of the symbols

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

The symbols used have the following meanings:



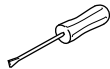
Note, information



Cleaning, care



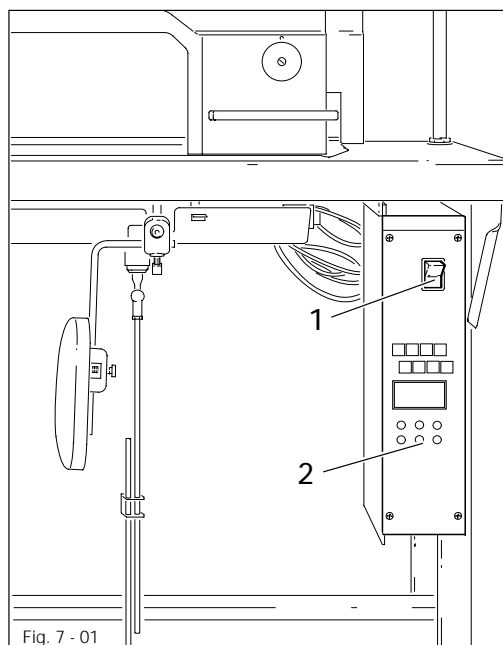
Lubrication, greasing



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

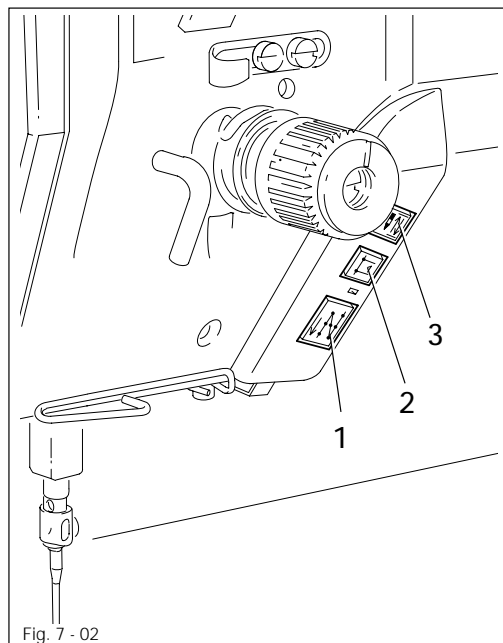
7 Controls

7.01 On/Off switch



- Turn the machine on/off by pressing the On/Off switch 1.
- With the buttons 2 the parameters, such as back-tacking function, raising the presser foot, needle position at sewing stop etc., can be pre-selected (also see the Motor Instruction Manual).

7.02 Keys on the machine head



- The following functions are triggered by pressing the respective key.
- Key 1: reverse sewing
- Key 2: prevention or release of the automatic start back tack or finish back tack.
- Key 3: when sewing is interrupted, the needle can either be raised or lowered as required.

7.03 Pedal

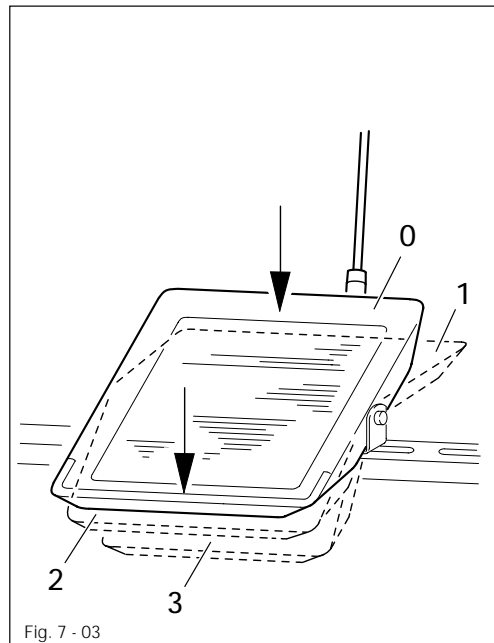


Fig. 7 - 03

- 0 = Machine stop
- 1 = Sew
- 2 = Raise presser foot (for machines with -910/06)
- 3 = Trim thread (for machines with -900/24)

7.04 Lever for lifting the presser foot

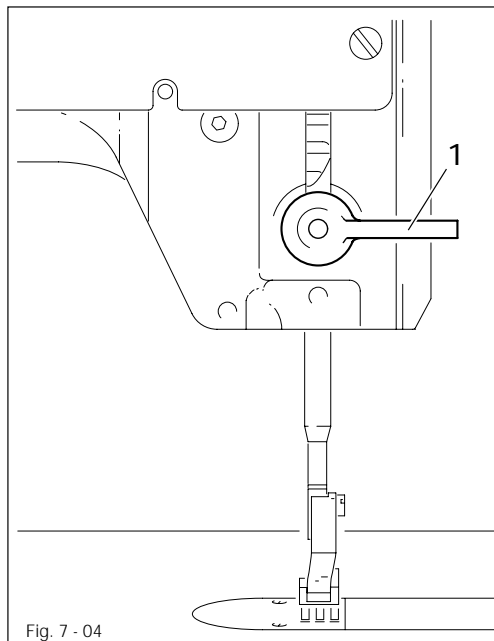
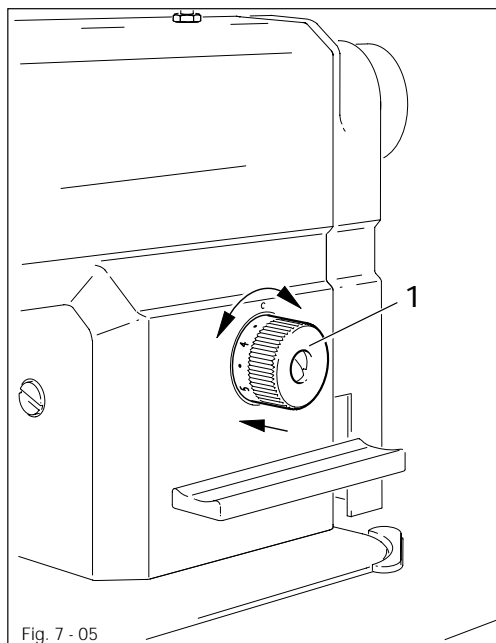


Fig. 7 - 04

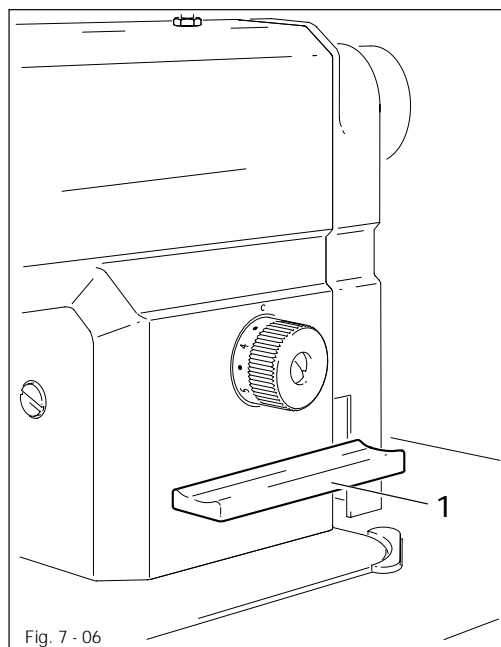
- The presser foot is raised by turning lever 1.

7.05 Feed regulator disk



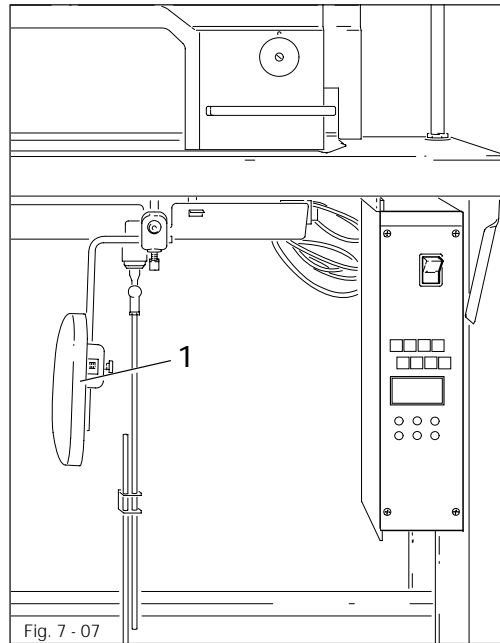
- The stitch length can be set by simultaneously applying pressure to disk 1 and turning it to the desired setting.

7.06 Reverse feed lever



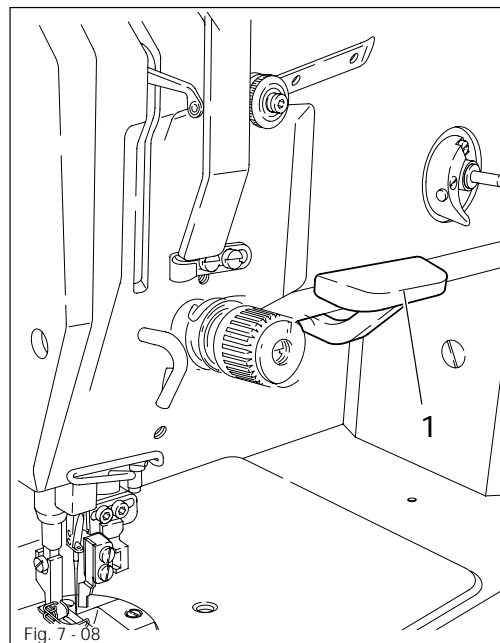
- For reverse sewing press lever 1.

7.07 Knee lever



- By pressing the knee lever 1 in the direction of the arrow, the presser foot is raised.

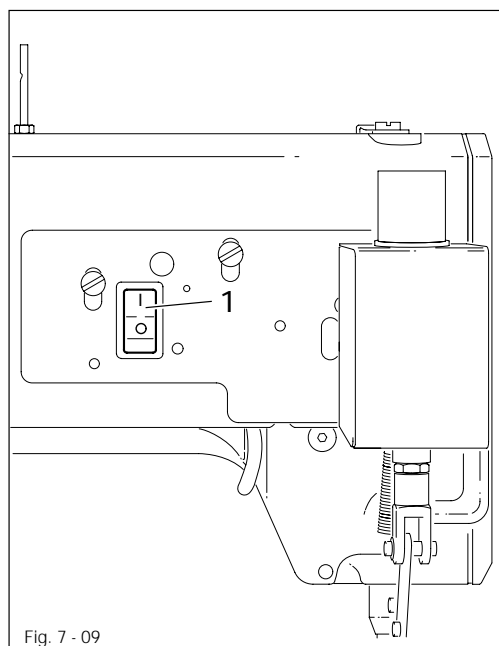
7.08 Thread trimmer - 731/01



Do not touch the running motor! Danger of injury!

- By pressing or raising key 1, the edge trimmer is switched on or off.

7.09 Switch for thread wiper -909/04



● By moving switch 1, the thread wiper can be switched on or off.

Position 1 : aggregate is on

Position 0 : aggregate is off

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 Mounting

The necessary electricity supply must be available at the machine's location. Also, a stable and horizontal surface as well as adequate lighting are required at the location.



Depending on the type of table, the method of packaging used may require that the table top be lowered for transport. The following is a description of how to adjust the height of the table top.

8.01.01 Adjusting the table-top height

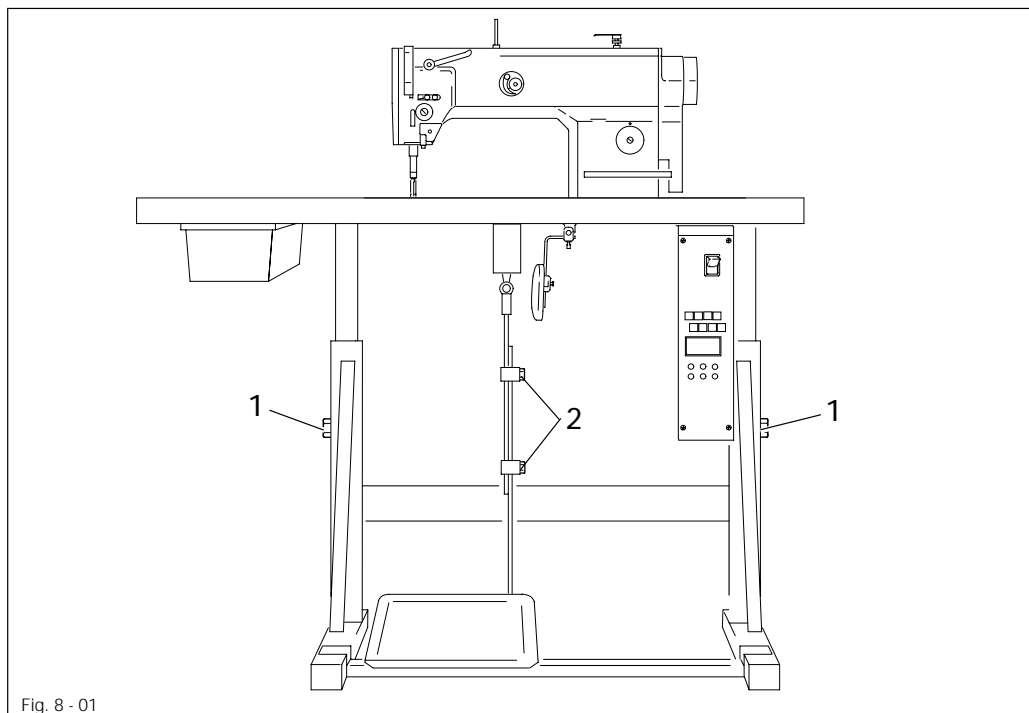


Fig. 8 - 01

- Loosen screws 1 and 2 and set the desired table-top height
- Tighten screws 1 well.
- Adjust the pedal to the desired position and tighten screw 2.

Mounting and commissioning the machine

8.01.02 Adjusting the V-belt tension



This step is eliminated for integrated sewing motors.

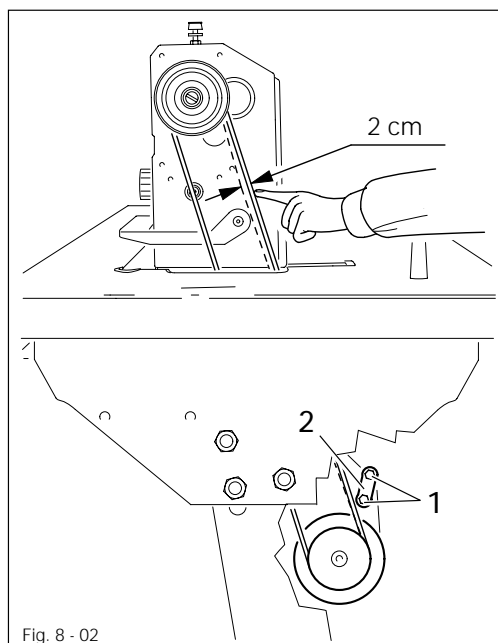


Fig. 8 - 02

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



A quick motor is shown in **Fig. 8-02**. If another motor is used, carry out this step according to the instructions in the motor instruction manual.

8.01.03 Mounting the upper V-belt guard



This step is eliminated for integrated sewing motors.

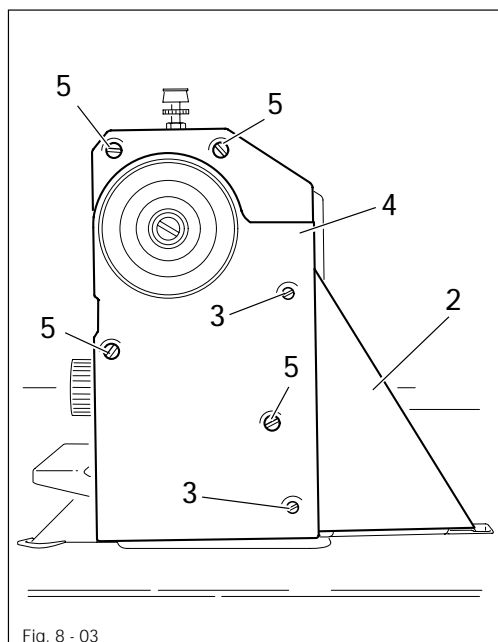
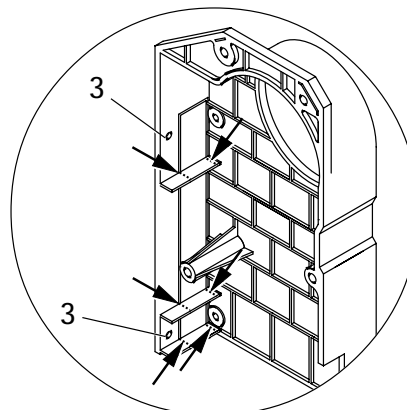


Fig. 8 - 03

- Break out the belt guard case 1 at the points marked by the arrows.
- Fasten belt guard 2 in holes 3.
- Attach belt guard 4 to the machine case with screws 5.



8.01.04 Mounting the lower V-belt guard



This step is eliminated for integrated sewing motors.

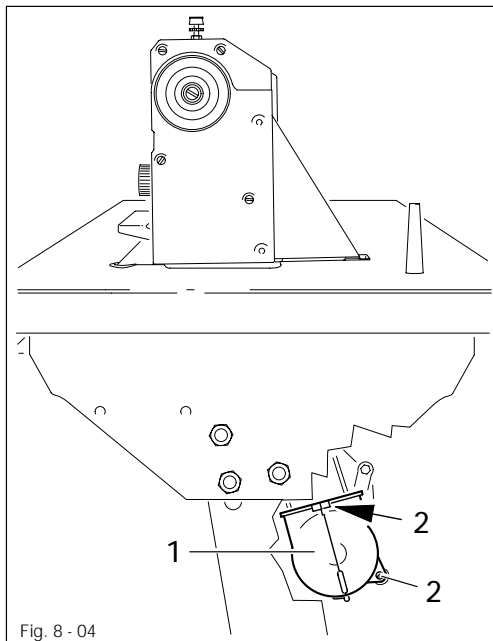


Fig. 8 - 04

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



A quick motor is shown in **Fig. 8-04**. If another motor is used, carry out this step according to the instructions in the motor instruction manual.

8.01.05 Mounting the spool holder

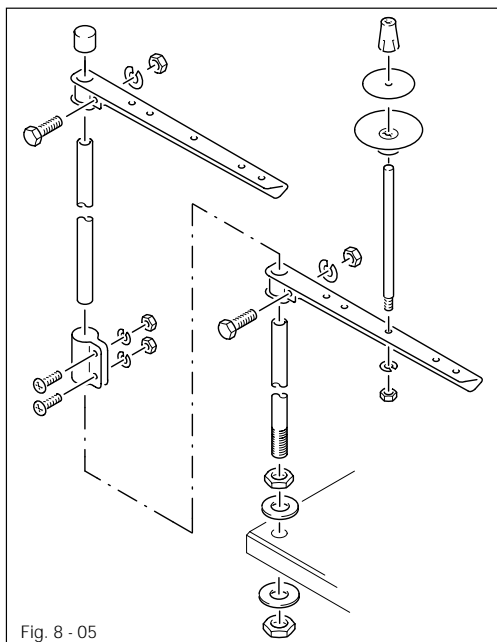
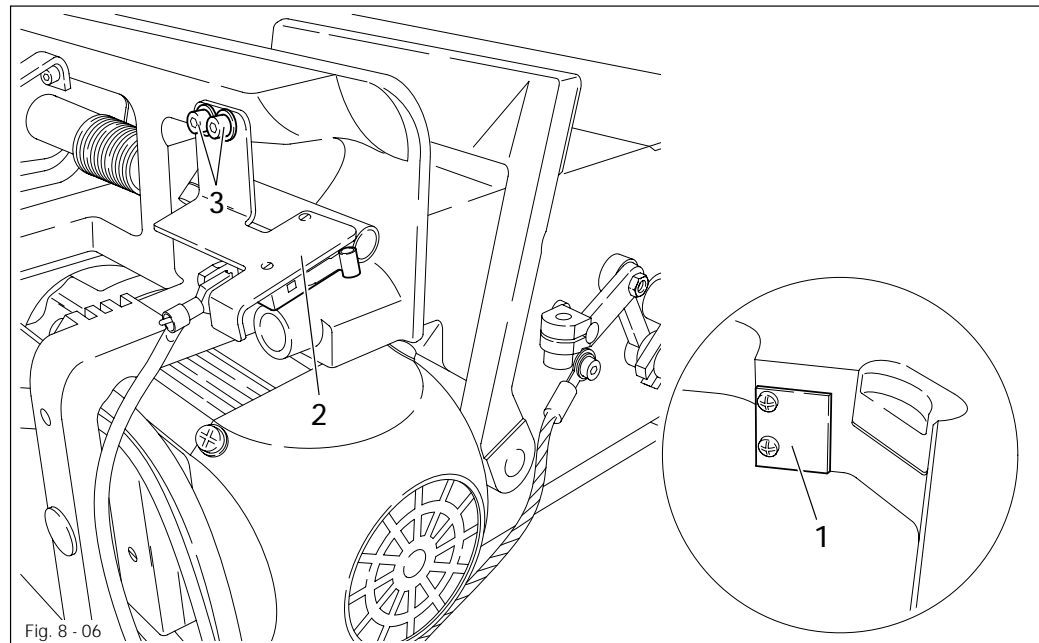


Fig. 8 - 05

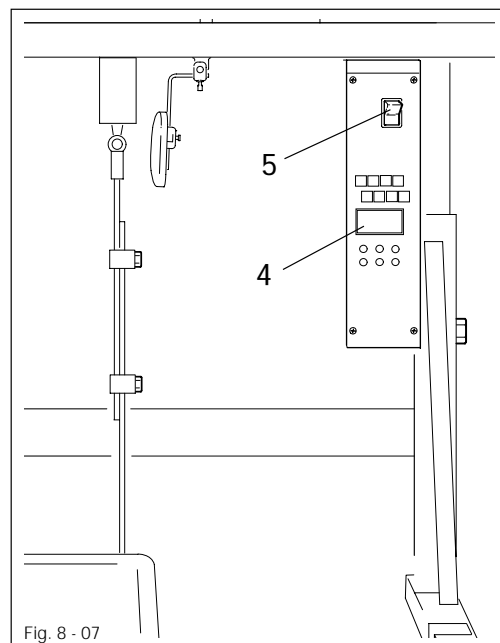
- Mount the spool holder as shown in **Fig. 8-05**.
- Insert the spool holder into the hole in the table top and fasten it with the nuts enclosed.

Mounting and commissioning the machine

8.01.06 Start inhibitor (only for machines with integrated sewing motor)

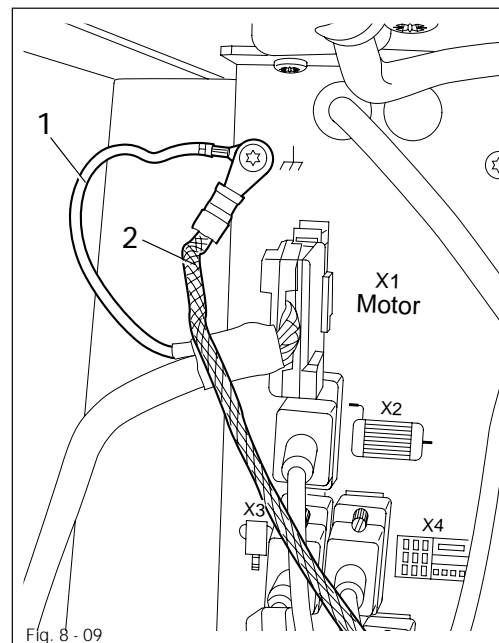
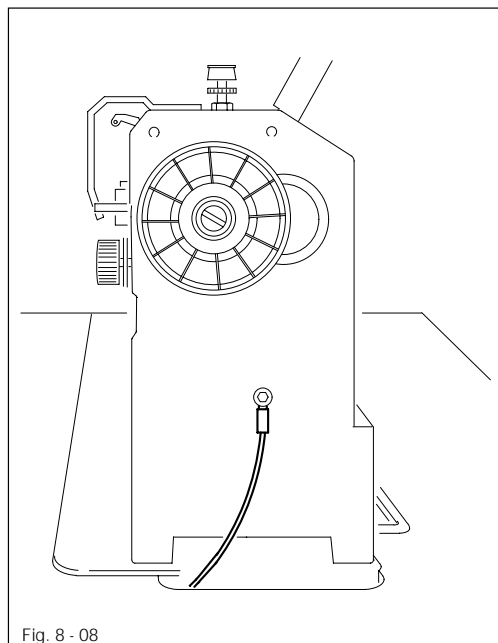


- For machines delivered without a table, the metal plate 1 included with the accessories must be mounted so that it is flush with the lower edge of the table top and with the left edge of the table top cutout (see Fig. 8.0.6).
- Insert the machine in the table top.
- After loosening screws 3, push switch 2 forwards until it touches the plate 1.
- In this position tighten screws 3.



- If the machine is tilted backwards, switch 2 prevents the motor from starting accidentally. "ERROR 92" appears on display 4.
- After the machine has been placed in an upright position, switch off the motor with switch 5.
- When the motor is switched on again with switch 5, the machine is ready for operation.

8.01.07 Connecting the plug connections and earth cable



- Connect all plugs coming from the machine as labelled in the control box.
- Attach earth cables 1 and 2 on the rear side of the control box as shown in Fig. 8-09.

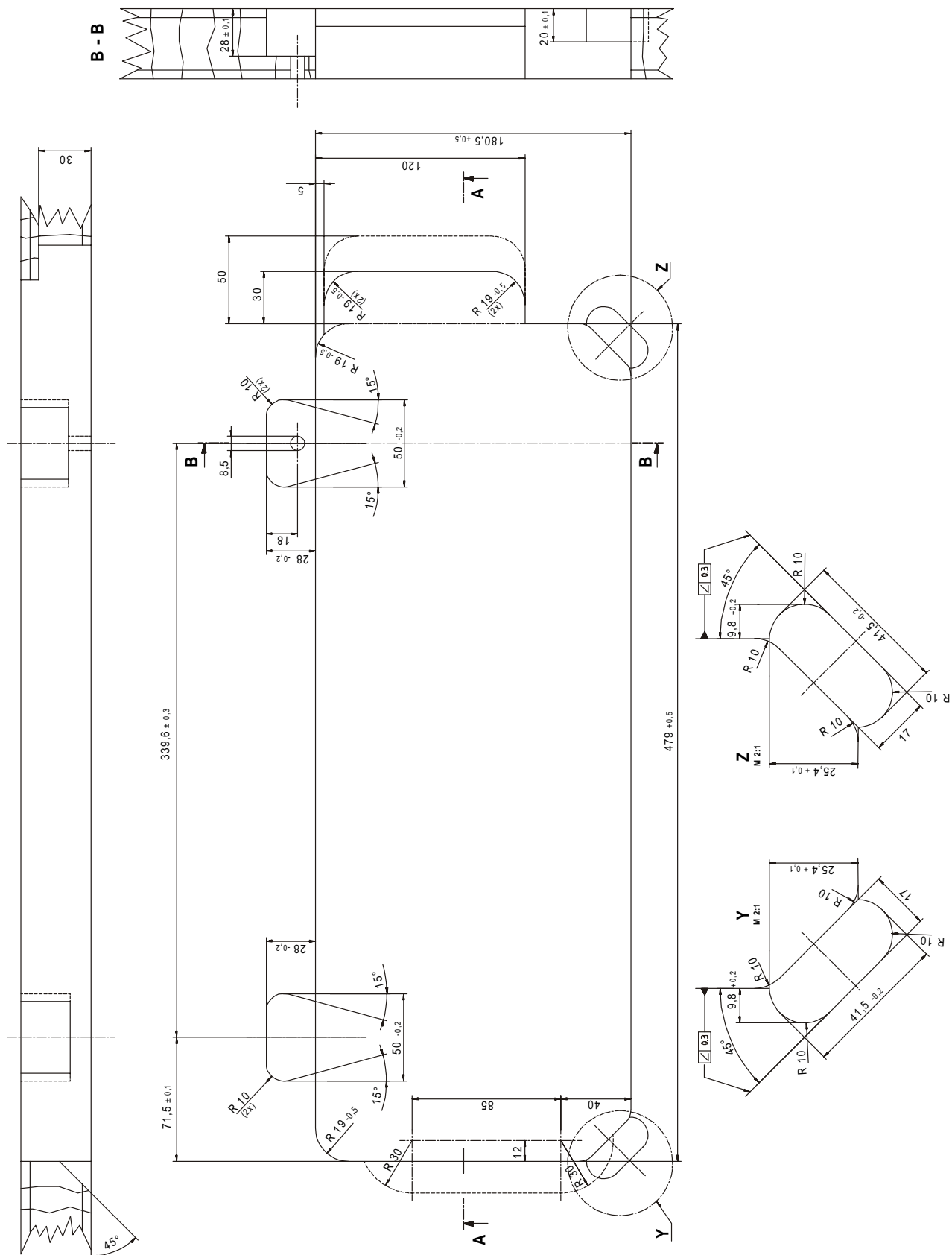
8.02 Commissioning the machine

- Check the machine, especially the electrical leads, for any damage.
- Clean the machine thoroughly (see **chapter 10 Care and maintenance**).
- Have specialists ensure that the machine's motor can be operated with the available electricity supply and that it is connected properly. If not, the machine **must not** be operated.

8.03 Switching the machine on/off

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

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

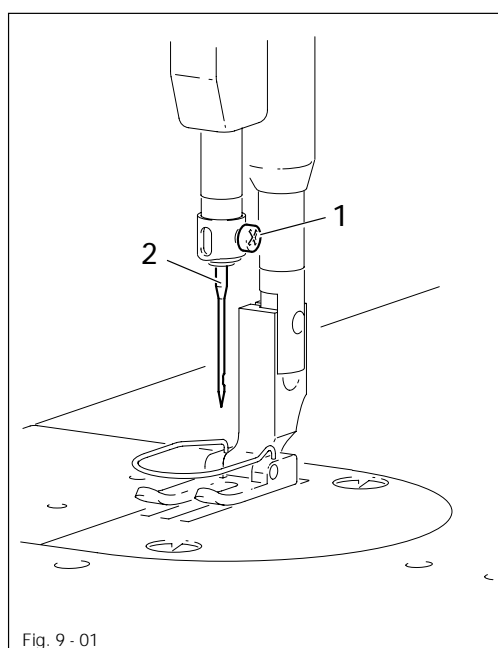


Fig. 9 - 01



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

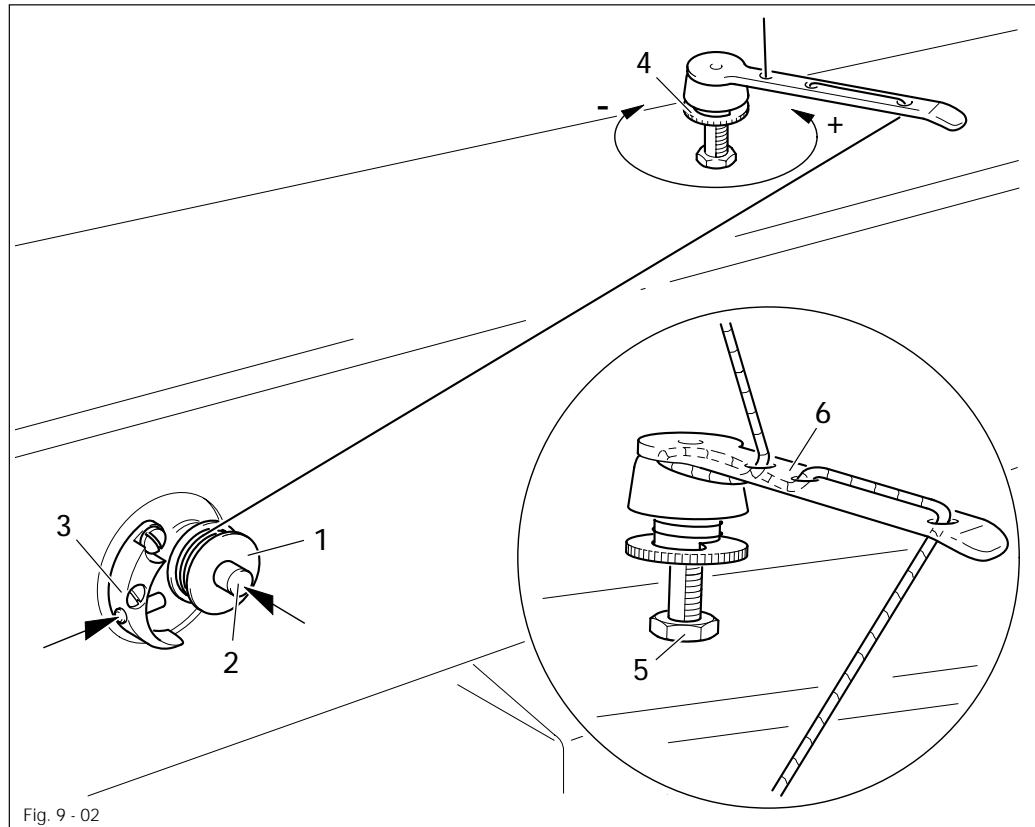


Only use needle system DBx1 or 134R, depending on machine equipment!
Observe sticker on machine!

- Raise needle bar.
- Loosen screw 1 and insert needle 3 until you feel it stop.
- The long needle groove must be aligned in the direction of the machine head.
- Tighten screw 1.



The selection of the correct needle depends on the model of the machine and the material and threads being sewn (see chapter 3 Specifications).



- 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.



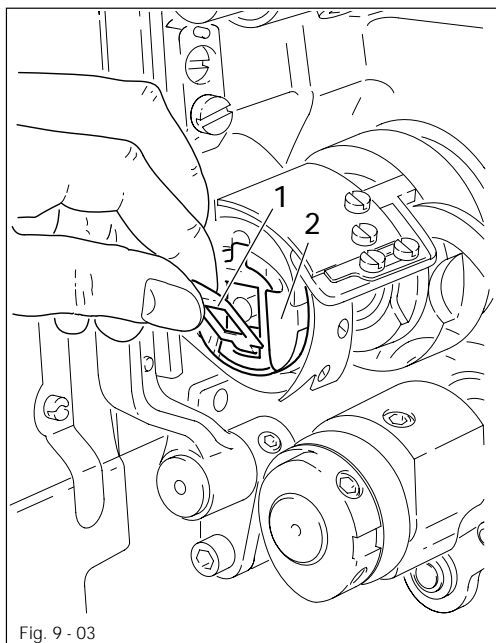
If the machine is only run for bobbin winding (without sewing), a hook base must be fitted in the hook.
Otherwise a jammed thread may damage the hook!

- 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



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

Removing the bobbin case:

- Tilt back the machine.
- Raise latch 1 and remove bobbin case 2.

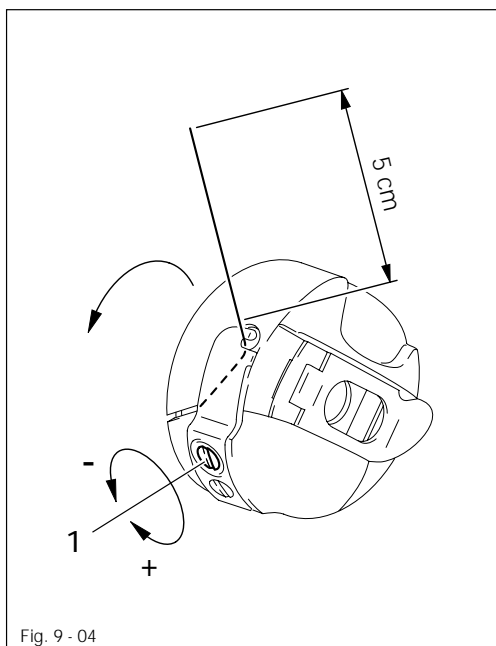
Inserting the bobbin case:

- Press bobbin case 2 until you feel it snap into the bobbin case base.



Return the machine to its upright position using **both** hands!
Danger of injury by crushing between the machine and the table top!

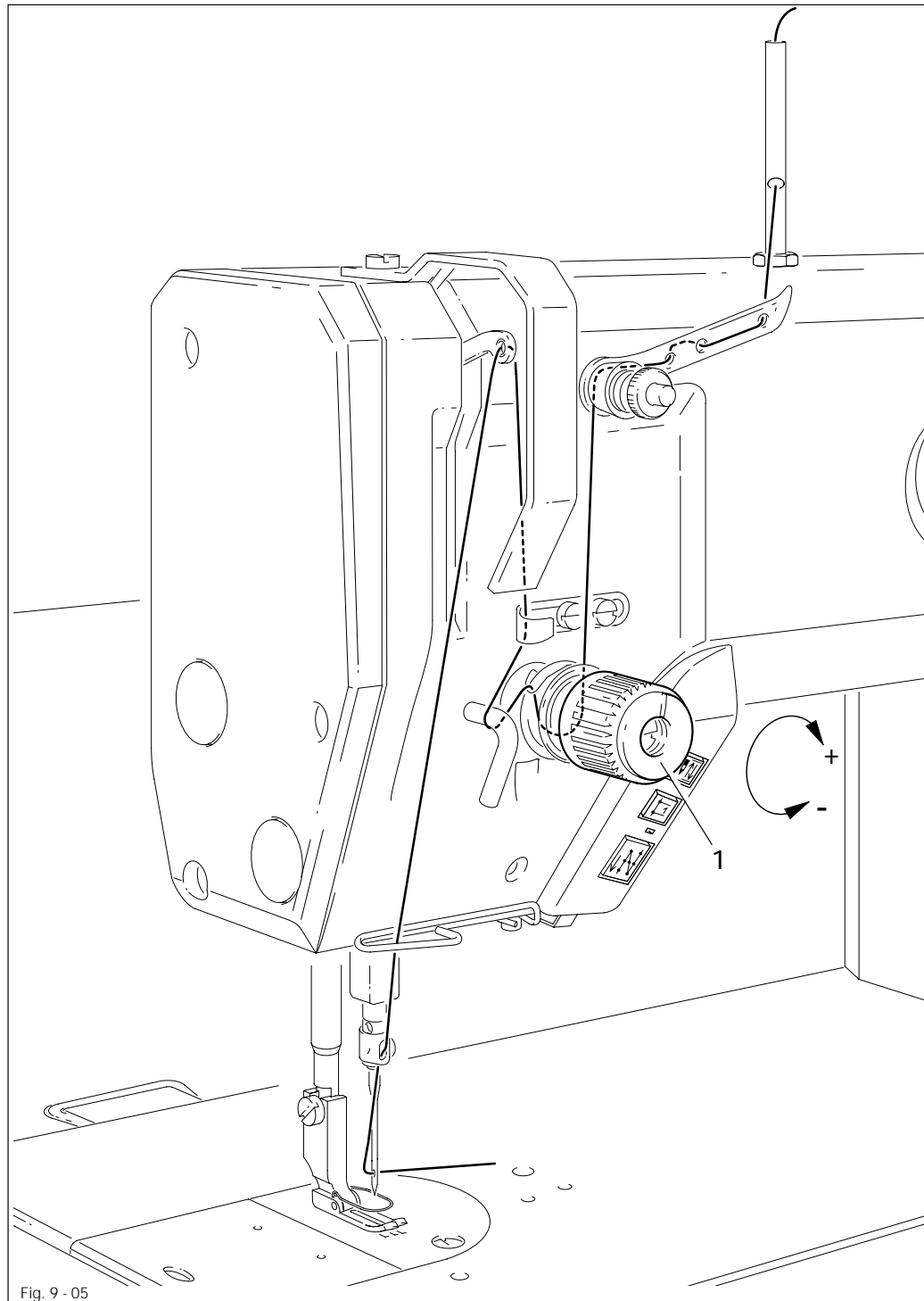
9.04 Inserting the bobbin case / Adjusting the bobbin thread tension



- Insert the bobbin into the bobbin case.
- Pass the thread through the slot under the spring according to Fig. 9-04.
- Pass the thread through the notch.
- Adjust the thread tension by turning screw 1.



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



Switch off the machine!

Danger of injury due to unintentional starting of the machine!

- Thread the machine as shown in Fig. 9-05.
- Adjust the needle thread tension by turning disk 1.

10 Care and maintenance

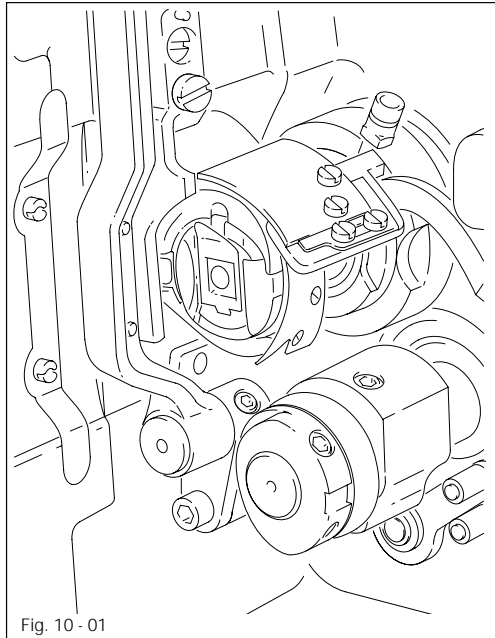
Clean daily, more often if in continuous operation

Check oil level yearly[▲], only on the PFAFF 1181 and PFAFF 1183



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

10.01 Cleaning the machine



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

- Tilt back the machine.
- Clean the hook and hook compartment daily, more often if in continuous operation.

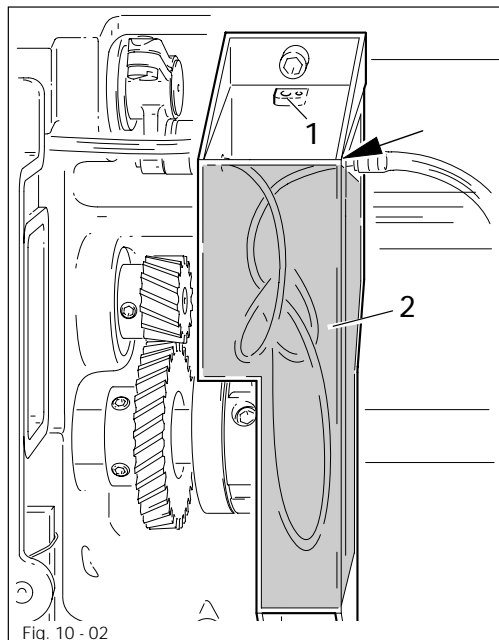


Return the machine to its upright position using **both** hands!
Danger of injury by crushing between the edge of the machine and the table top!

10.02 Topping up the oil tank (only on PFAFF 1181 and PFAFF 1183)



The PFAFF 1051 and 1053 are totally maintenance-free and run without any oil.



The oil reservoir must always have oil in it.

- Whenever it is necessary to refill the reservoir, tilt back the machine and let it rest on the sewing head support.
- Fill oil through hole 1 into the reservoir 2 up to the level of the front edge (see arrow).

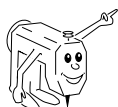


Return the machine to its upright position using **both** hands!

Danger of injury by crushing between the machine and the table top!



Only use oil with a mean viscosity of 10.0 mm²/s at 40°C and a density of 0.847 g/cm³ at 15°C.



We recommend PFAFF sewing machine oil, part no. 280-1-120 105.

11 Adjustment



On the **PFAFF 1051, 1053, 1181 and 1183** do not use a screw clamp on the needle bar! The special coating of the needle bar could be damaged.



The illustrations in this chapter show the **PFAFF 1053**. Special attention is drawn to differences which apply to other machine types.

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 specialists. Covers on the machine which sometimes have to be removed and replaced for checks and adjustment work are not mentioned here. The screws and nuts in brackets () are attachments of machine parts which are to be loosened before making the adjustment and tightened again after the adjustment has been carried out.

11.02 Tools, gauges and other accessories for adjusting

- 1 set of screwdrivers with blade widths from 2 to 10 mm
- 1 set of wrenches with jaw widths from 7 to 14 mm
- 1 set of Allan keys from 1.5 to 6 mm
- 1 metal rule, (Part No. 08-880 218-00)
- 1 feed dog adjustment gauge, Part No. 61-111 639-71
- 1 adjustment pin (5 mm dia.), Part No. 13-033 346-05
- Adjustment gauge, part No. 61-111 639-70
- Sewing thread and test material

11.03 Abbreviations

TDC = top dead center

BDC = bottom dead center

11.04 Checking and adjusting aids



With the aid of blocking pin 1 (part No. 13-033346-05) and if necessary adjustment gauge 3 (part No. 61-111 639-70) the machine can be blocked in the following positions for adjustment

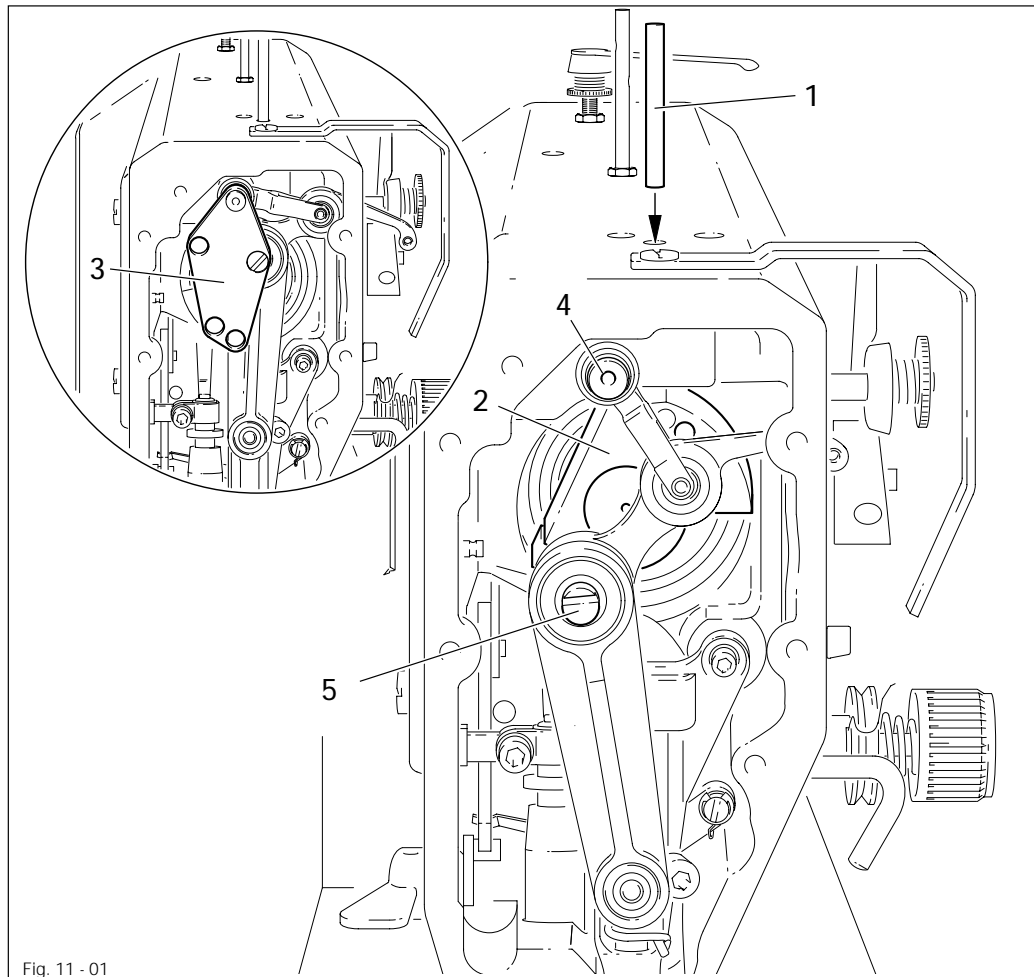
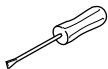


Fig. 11 - 01



Needle bar position 1.8 mm past b.d.c.

- Turn balance wheel until needle bar is roughly in required position
- Insert blocking pin 1 in hole
- Turn balance wheel slightly back and forth until blocking pin engages crank 2

Needle bar position 0.6 mm past t.d.c.

- Set needle bar roughly at required position
- Place adjustment gauge 3 onto pins 4 and 5, making sure right side is used (for 30 or 36 mm needle bar stroke)

Needle bar position 0.6 mm past b.d.c.

- Set needle bar roughly at required position
- Place adjustment gauge 3 onto pins 4 and 5, making sure right side is used (for 30 or 36 mm needle bar stroke)

11.05 Adjusting the basic machine

11.05.01 Basic position of the machine drive



This adjustment is only required if toothed belt 2 has been removed.

Requirement

When the needle bar position is 0.6 mm above the BDC, the marks on the machine housing 3 and toothed belt wheel 1 must be flush with each other.

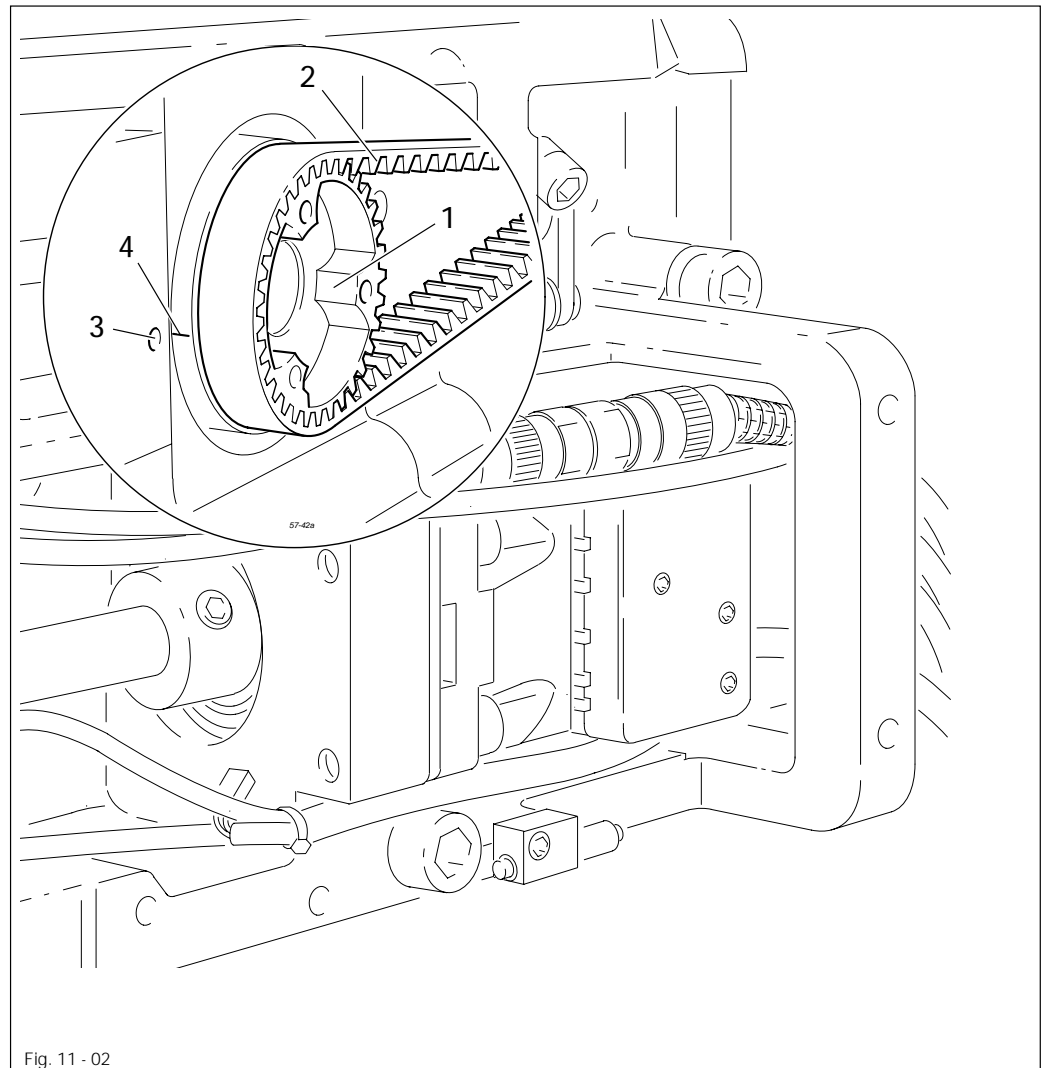
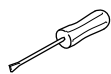


Fig. 11 - 02



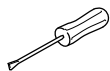
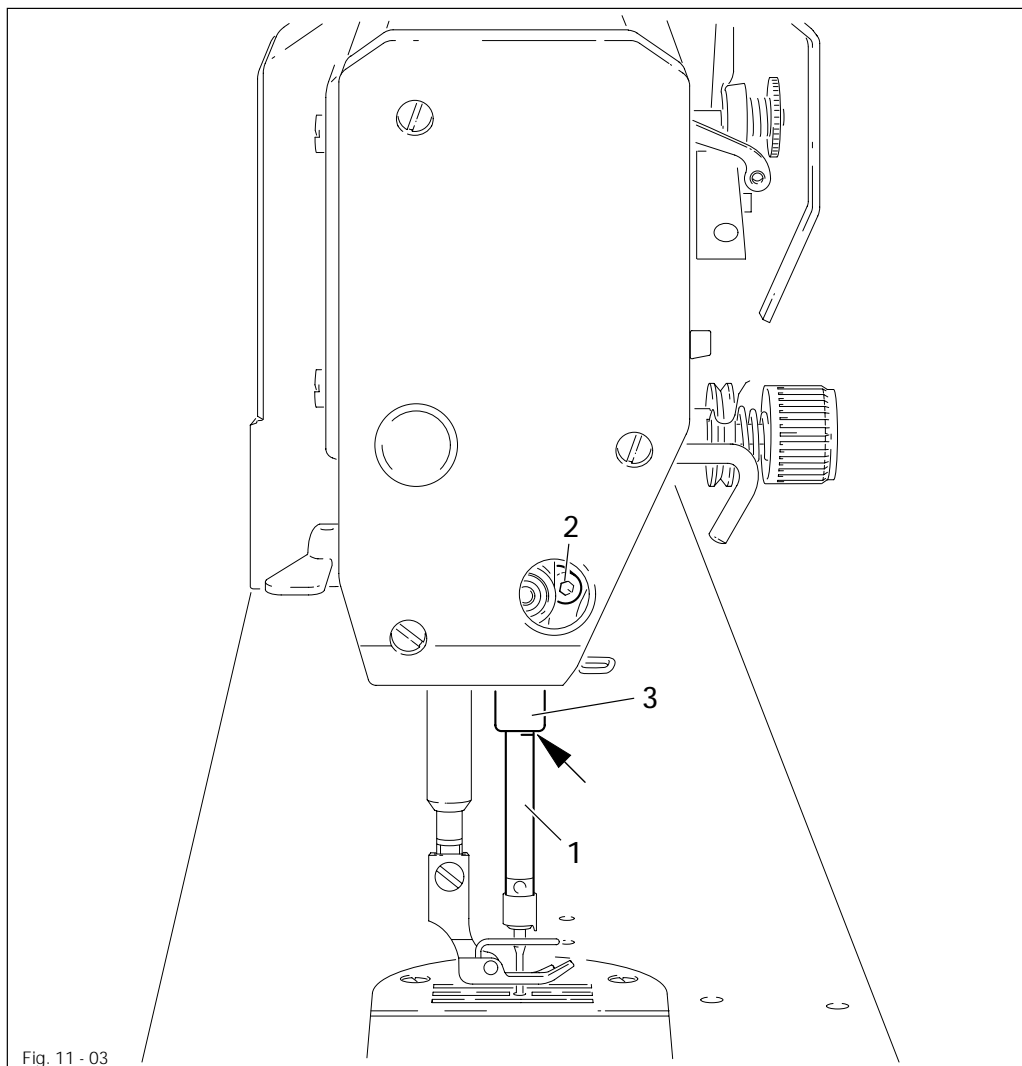
- Set needle bar at 0.6 mm past b.d.c.
- Turn toothed belt sprocket 1 according to **Requirement** and push on toothed belt 2.

Adjustment

11.05.02 Preadjusting the needle height

Requirement

When the needle bar is positioned 1.8 mm above BDC, the mark on the needle bar **1** must be flush with the bottom edge of the needle bar frame **3**.

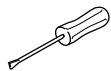
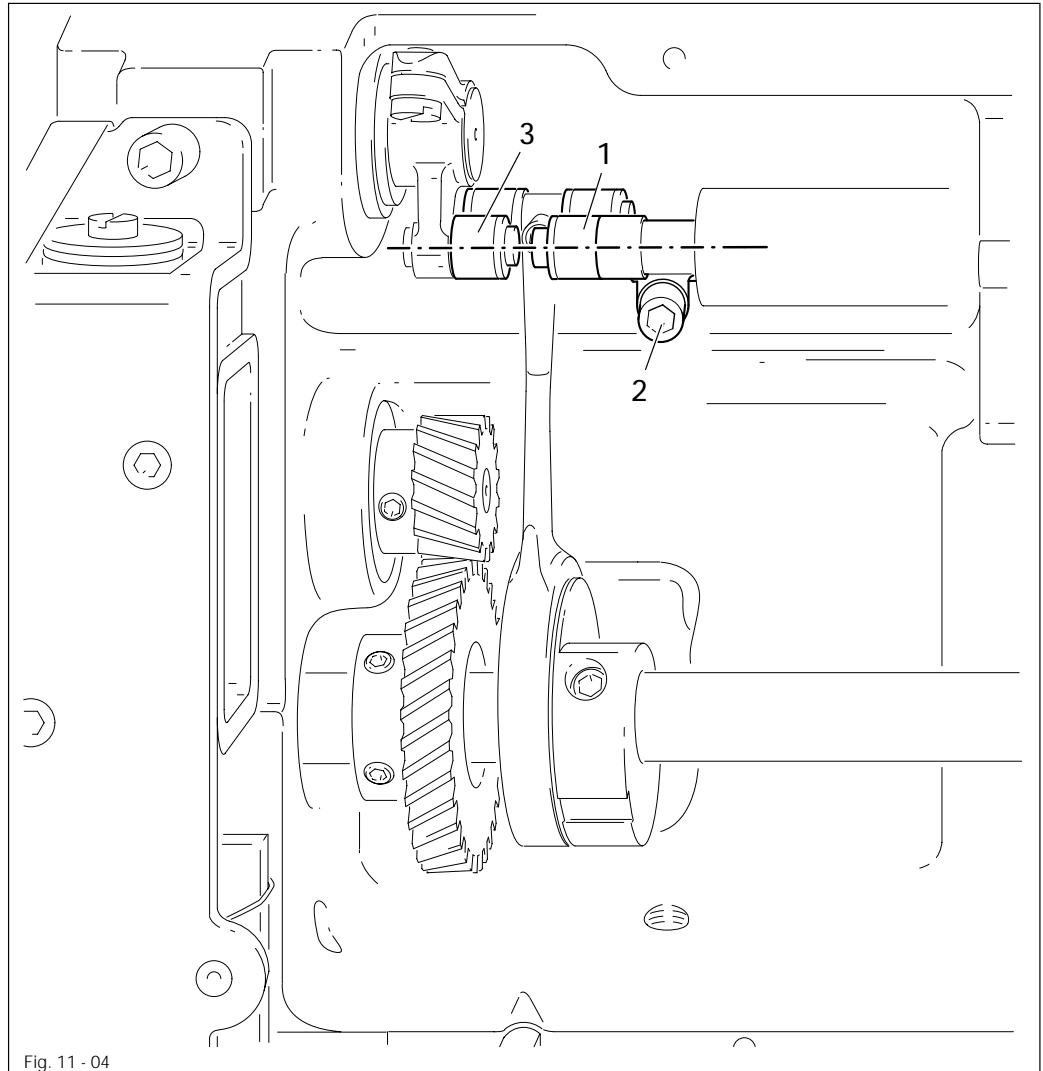


- Set needle bar at 1.8 mm past b.d.c. and block machine with blocking pin, see Chapter 11.04 Checking and adjusting aids.
- Move needle bar **1** (screw **2**), without turning it, according to the requirement.

11.05.03 Bottom feed neutral position

Requirement

At stitch length setting "0", cranks 1 and 3 must be flush and the feed dog must not make any feeding motion when the balance wheel is turned.



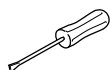
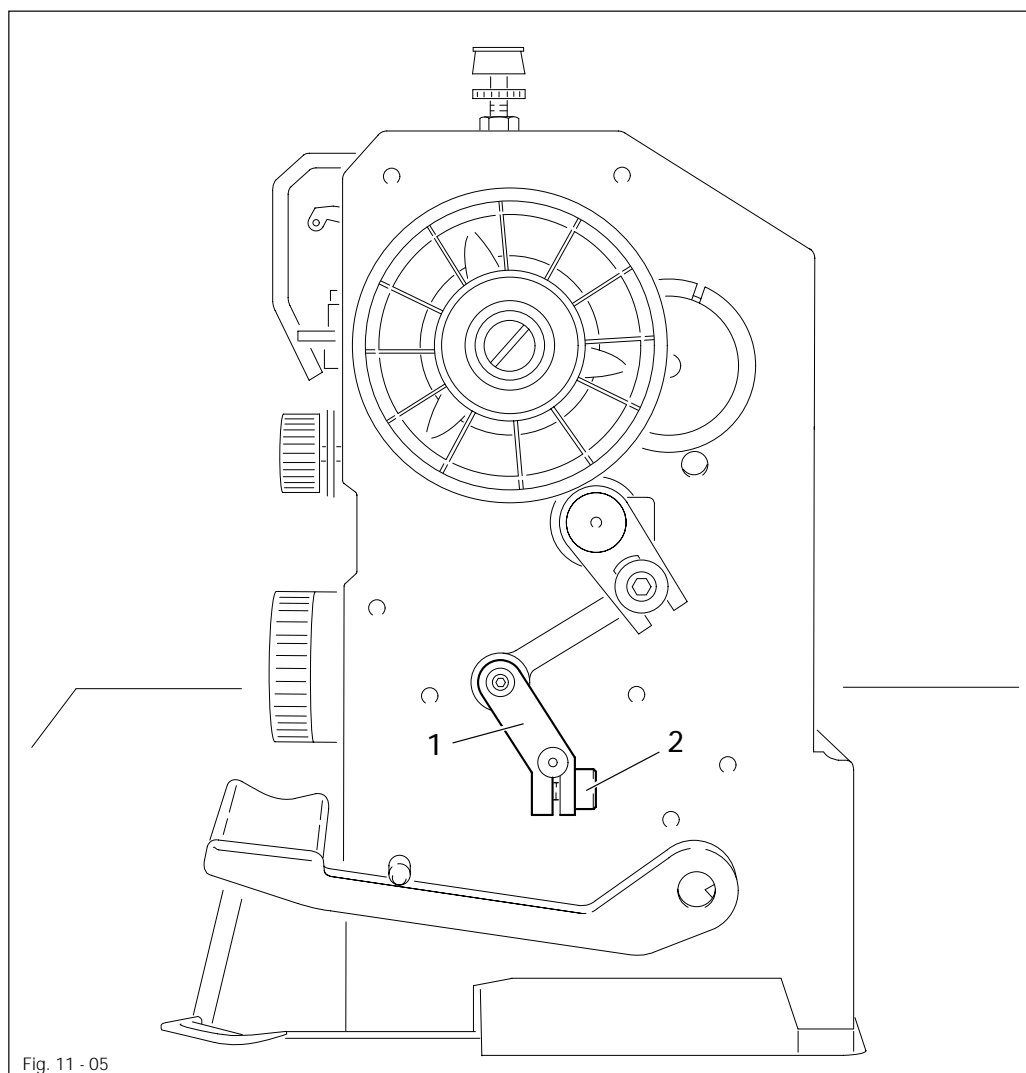
- Raise the presser foot and set the stitch length to "0".
- Turn crank 1 (screw 2) according to the requirement.

Adjustment

11.05.04 Neutral position of the needle feed (only on PFAFF 1051 and 1181)

Requirement

At stitch length setting " 0 " the needle bar must not make any feeding motion when the balance wheel is turned.



- Set stitch length " 0 " .
- Turn crank 1 (screw 2) according to Requirement.

11.05.05 Bottom feed lifting motion

Requirement

At stitch length setting "0" and needle bar position 0.6 past b.d.c. on the PFAFF 1051/1181 and at needle bar position t.d.c. on the PFAFF 1053/1183,

1. the bottom feed dog must be at its highest position,
2. control cam 3 must rest on lifting eccentric 1.

The flat on control cam 3 must be parallel with the bedplate at needle bar position t.d.c. on all machines types.

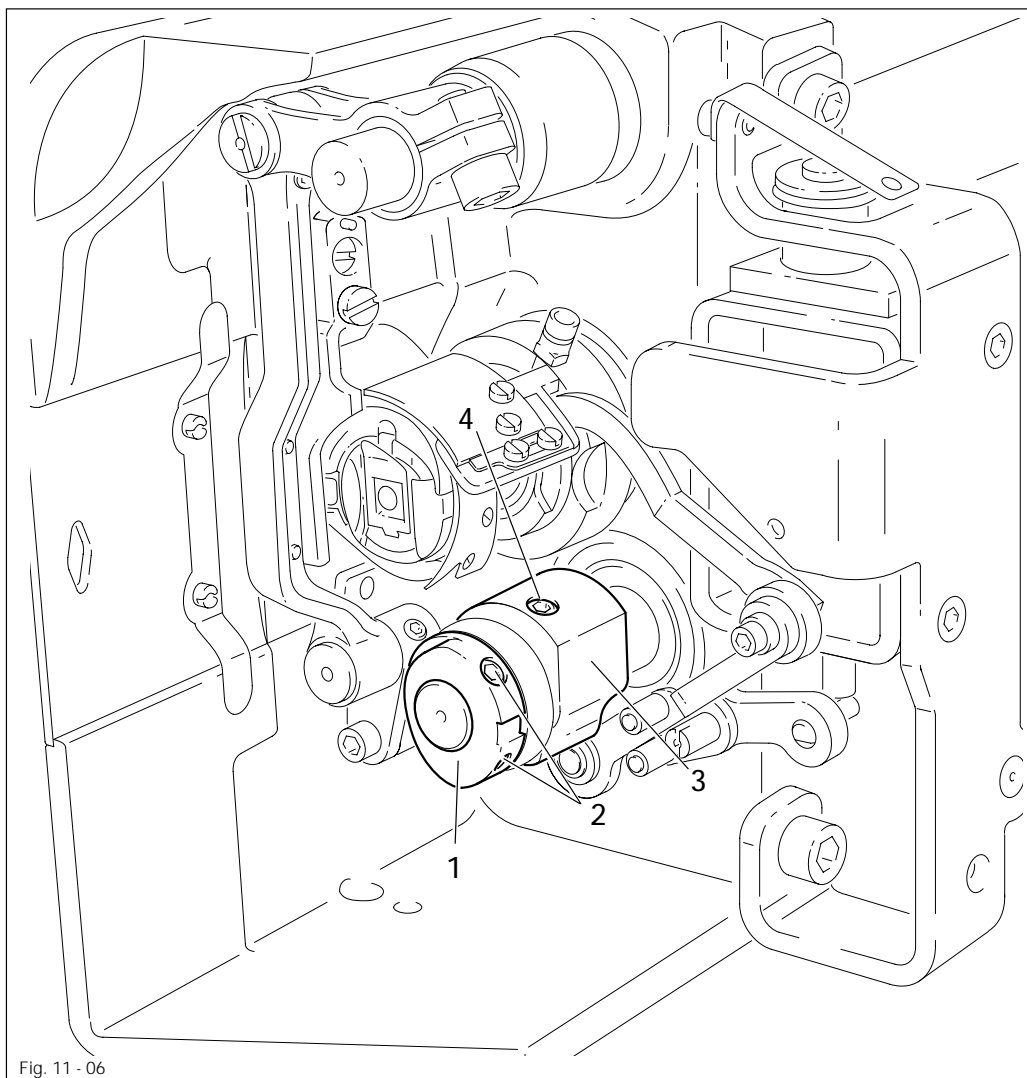
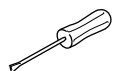


Fig. 11 - 06



- Set stitch length "0" and set needle bar at required position
- Turn eccentric 1 (screws 2) according to **Requirement 1**.
- Adjust control cam 3 (screws 4) according to **Requirement 2**.
- Set needle bar at t.d.c. and adjust control cam 3 (screw 4) according to **Requirement**.



On machines without thread trimmer -900/24, control cam 3 serves as a balance weight eccentric.

Fig. 11-06 shows a machine with thread trimmer fitted.

11.05.06 Bottom feed dog height

Requirement

When feed dog 1 is at its highest point at stitch length setting " 0" it must

1. be centred in the feed slot crosswise and in feeding direction
2. Rest on feed dog adjustment gauge 2 over its entire length.

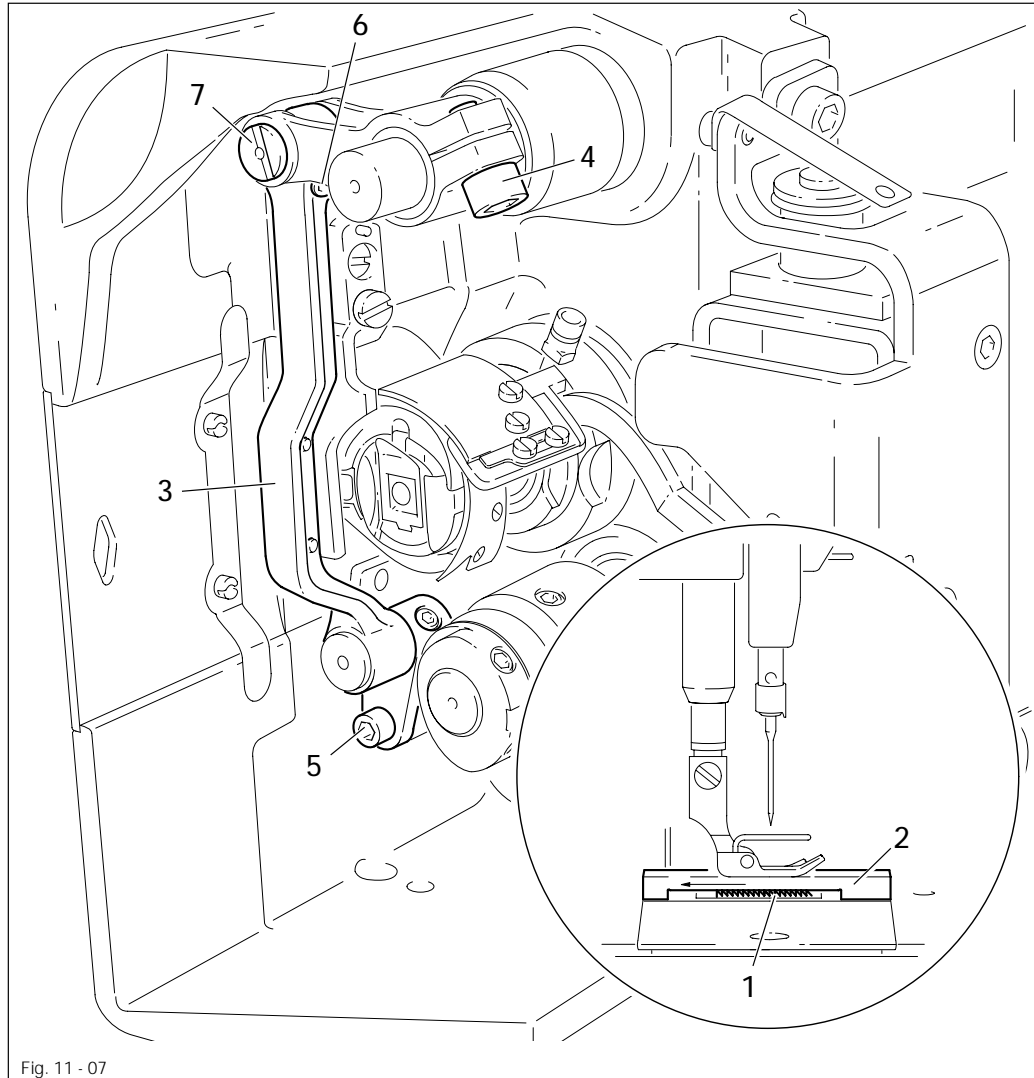
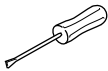


Fig. 11 - 07

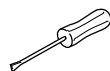
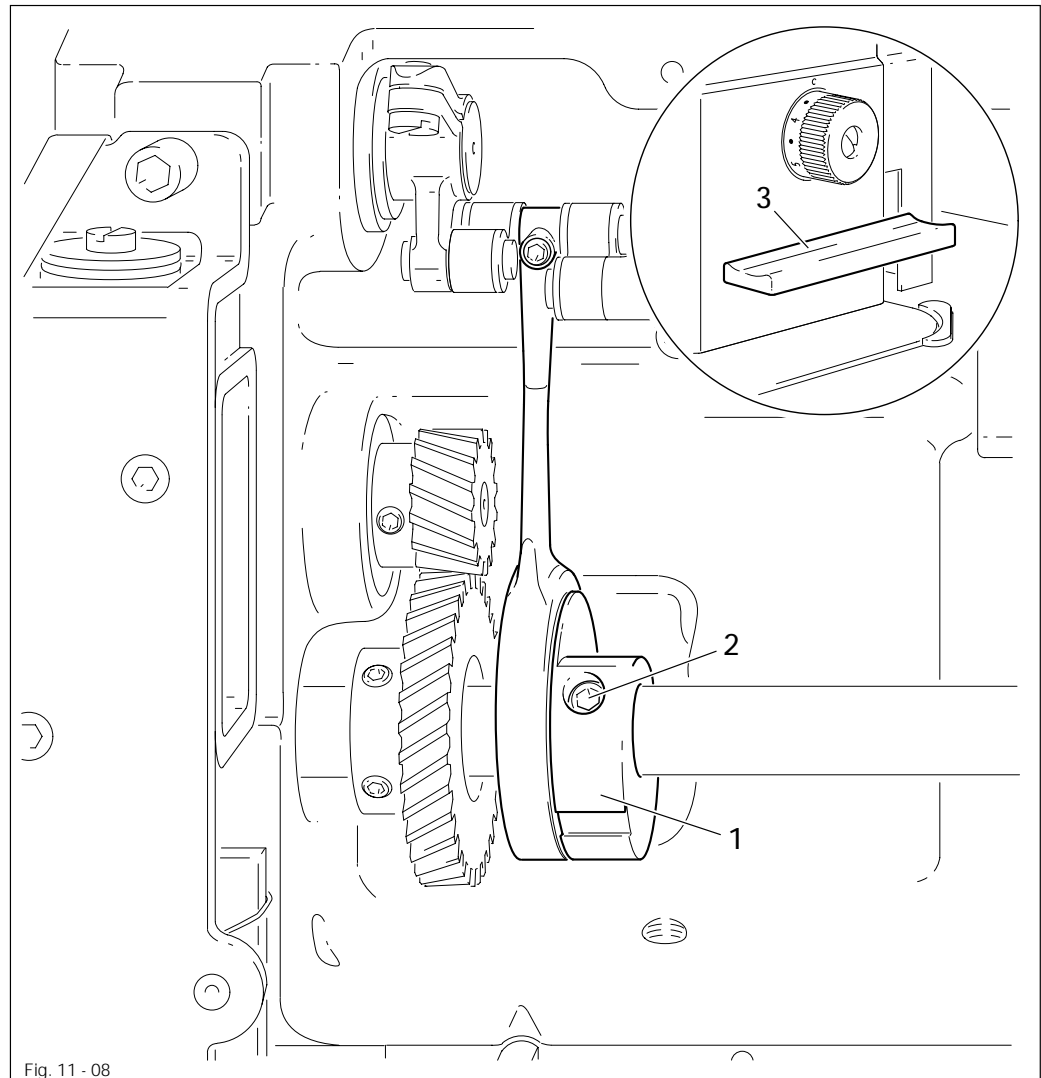


- Set stitch length at " 0" and feed dog 1 at its highest position
- Raise the presser foot.
- Place feed dog adjustment gauge 2 on the needle plate cutout with the arrow in sewing direction so that it is flush with the front edge, and lower the presser foot onto it.
- Adjust feed bar 3 (screws 4) according to Requirement 1.
- Loosen screws 5 and 6.
- Adjust feed bar 3 or eccentric 7 according to Requirement 2.
- Tighten screws 5 and 6 firmly.

11.05.07 Feed dog motion of bottom feed dog

Requirement

With the needle bar at a position **0.6 past b.d.c.** on the **PFAFF 1051/1181** or in position **0.6 past t.d.c.** on the **PFAFF 1053/1183** the feed dog must not make any feeding motion when reverse-feed lever 3 is operated at the longest stitch length setting.



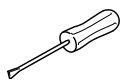
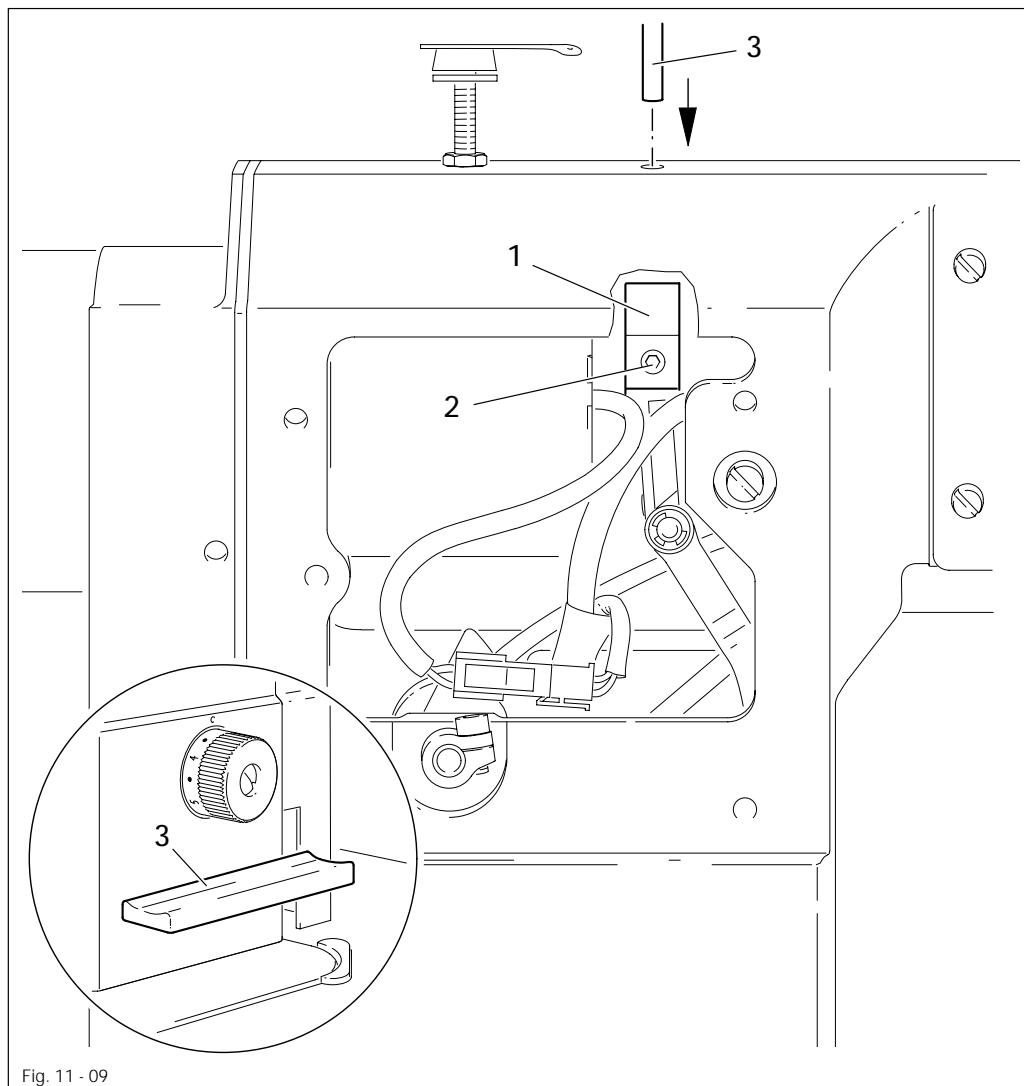
- Set the longest stitch and the needle bar at the corresponding position.
- Adjust eccentric 1 (loosen screws 2 a little) according to Requirement, but make sure it is not moved sideways.

Adjustment

11.05.08 Feeding motion of needle feed (only on PFAFF 1051 and 1181)

Requirement

When the longest stitch length is set and the needle bar is positioned 0.6 mm past b.d.c., the needle should not move when the reverse-feed key 4 is operated.



- Bring the needle bar into the position 0.6 mm past t.d.c.
- Turn eccentric 1 (screws 2) until the adjustment pin 3 locks into place.

11.05.09 Needle in needle hole center (only on PFAFF 1053 and 1183)

Requirement

The needle must penetrate the needle hole exactly in the middle.

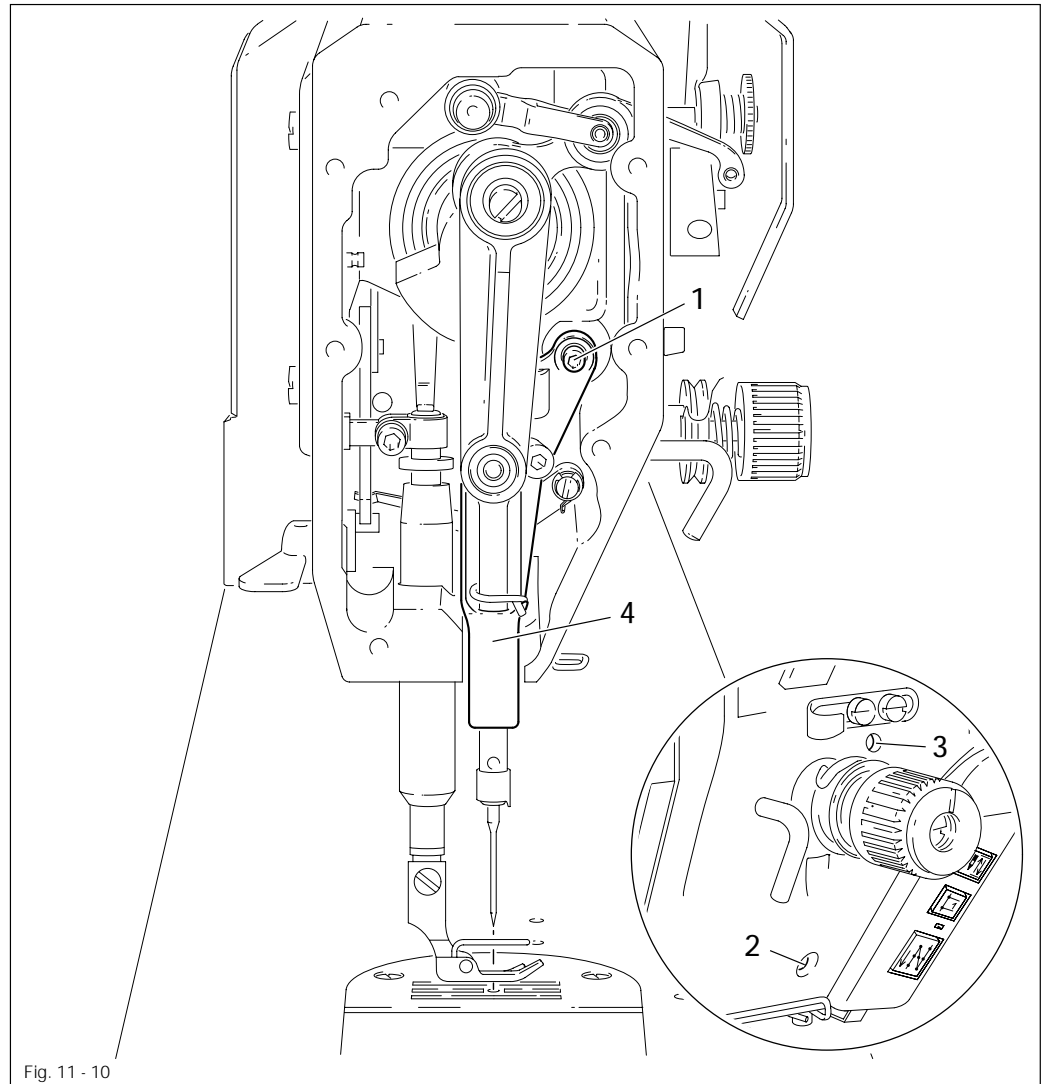
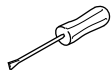


Fig. 11 - 10



- Set the needle in the needle hole.
- Loosen screws 1, 2 and 3.
- Move the needle bar frame 4 according to the **requirement**.
- Tighten screw 2 and turn screw 3 slightly.
- Via screw 1, bring the retracted guide bolt to the eye of the needle bar frame 4 and tighten it.
- Turn the handwheel a few times to prevent distortion to the needle bar frame 4.
- Tighten screw 3.

Adjustment

11.05.10 Needle to needle hole centre (on PFAFF 1051 and PFAFF 1181)

Requirement

The needle must enter exactly in the centre of the needle hole.

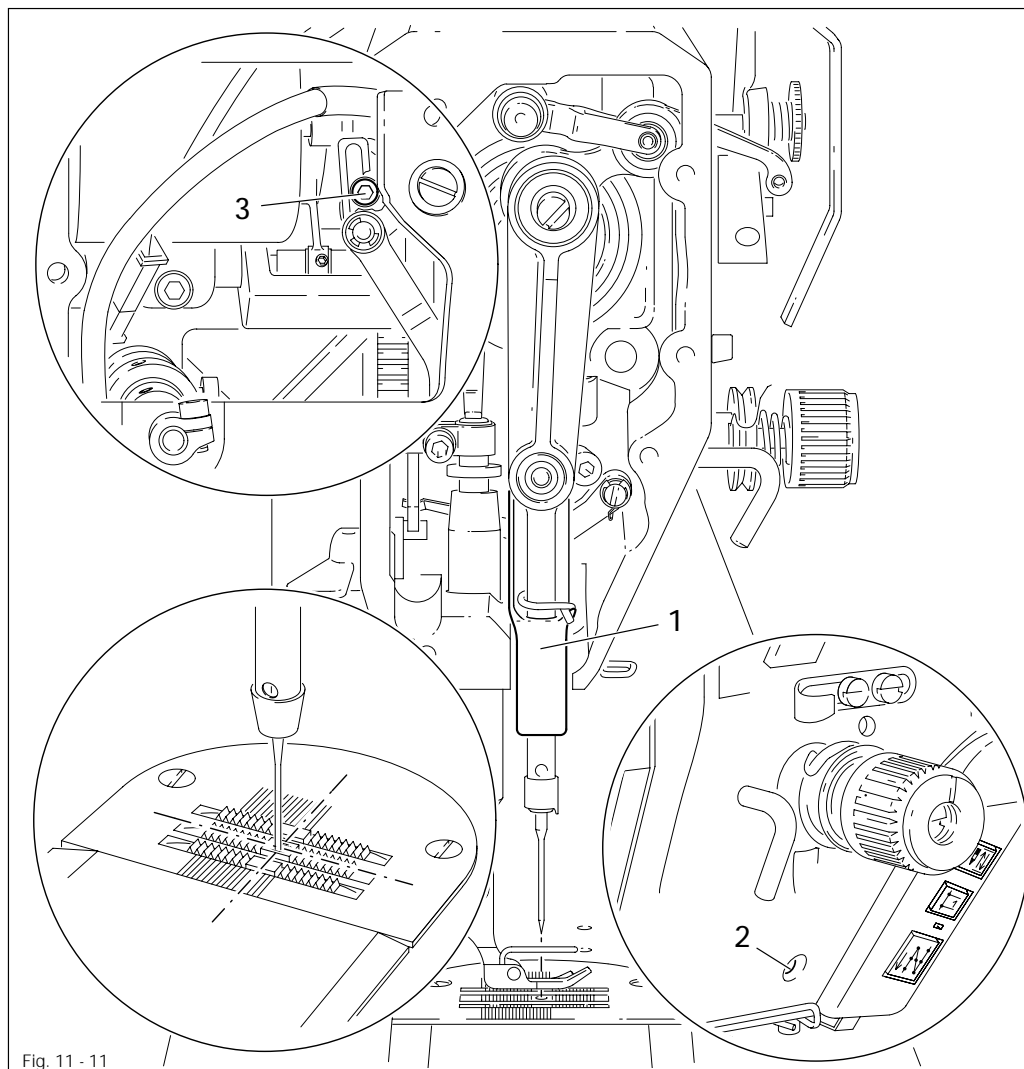
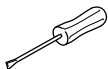


Fig. 11 - 11

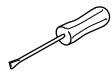
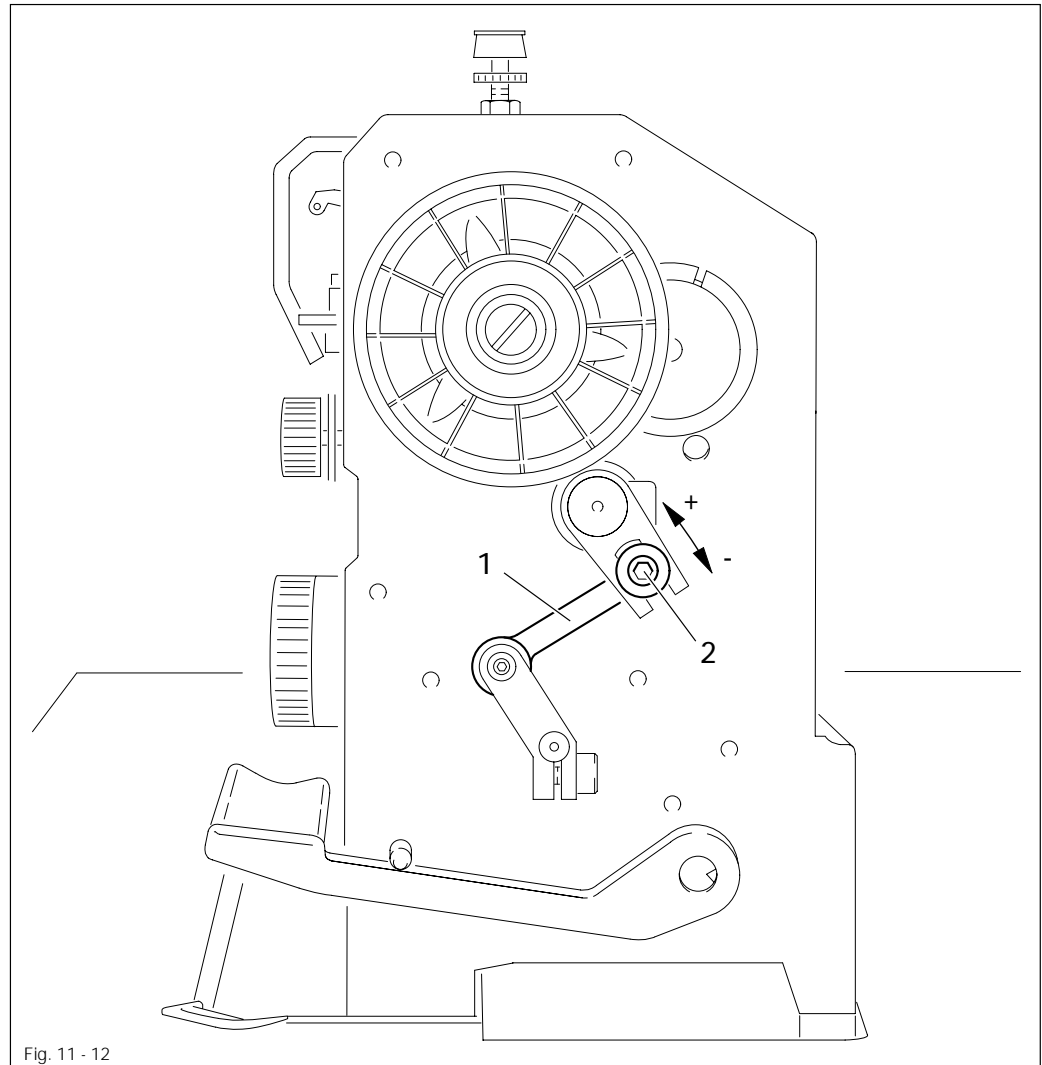


- Set stitch length "0".
- Set the needle in the needle hole by turning the balance wheel
- Turn needle bar frame 1 (screws 2 and 3) according to **Requirement**.

11.05.11 Synchronous strokes of needle- and drop feed (only on PFAFF 1051 and PFAFF 1181)

Requirement

At the longest stitch length setting the needle and feed dog must move by the same stroke when the balance wheel is turned.



- Set the longest stitch.
- Turn crank 1 (screws 2) according to Requirement.

11.05.12 Hook shaft bearing and backlash

Requirement

1. The front edge of the hook shaft **6** must be at a distance of **14.5 mm** to the needle center. At the same time, the slot in the hook shaft bearing **1** (see arrow) must be parallel to the bedplate and pointing opposite to the direction of sewing.
2. There must be a slight amount of play between the gears **3** and **5**.

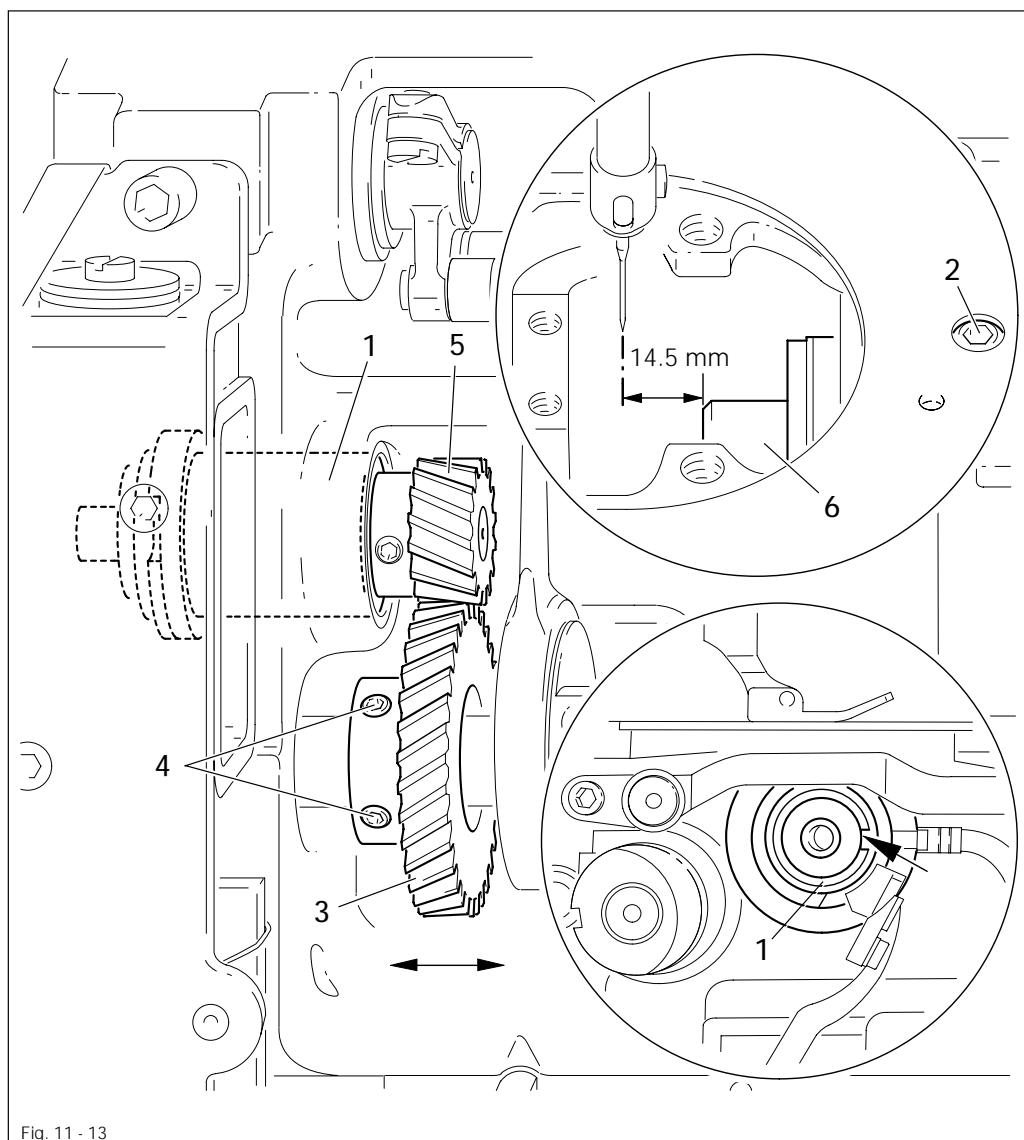
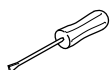


Fig. 11 - 13



- Align hook shaft bearing **1** (screw **2**) according to **requirement 1**.
- Slide gear **3** (screws **4**) on to the shaft according to **requirement 2**.

11.05.13 Hook lubrication (only for PFAFF 1181 and 1183)

Requirement

1. The centrifugal disk **1** must be positioned **1.5 mm** in front of the oil ring **3**.
2. When the machine is running at full speed, **after approx. 10 seconds** a mark should be made by a fine stripe of oil on the strip of paper placed over the needle plate cutout.

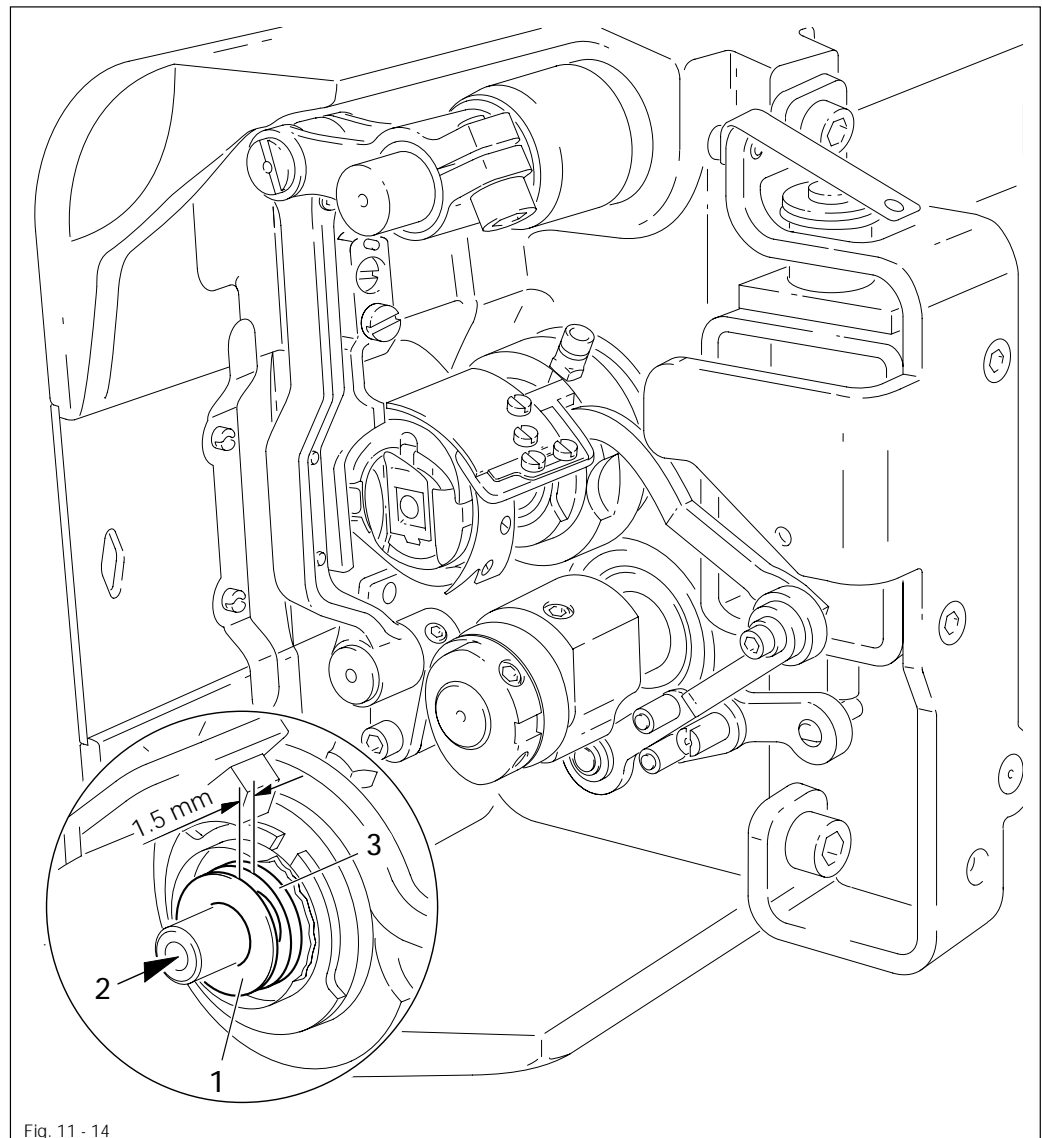
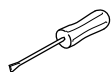


Fig. 11 - 14



The adjustment is only necessary if the wick has been replaced.
When replacing the wick, make sure that the new wick is impregnated with oil.



- Move the centrifugal disk **1** (screw **2**) according to **requirement 1**.
- Check **requirement 2**. If necessary, move centrifugal disk **1**.

11.05.14 Needle rise, hook-to-needle clearance, needle height and bobbin case position finger

Requirement

With the needle at 1.8 mm after BDC,

1. the hook point **6** must point to the middle of the needle and be at a distance of **0.05 mm - 0.1 mm** to the clearance cut of the needle, and
2. the top edge of the needle eye must be **0.8 mm** below the hook point.
3. Between the projection of the bobbin case position finger **4** and the bottom of the retaining groove there should be a distance of **0.5 mm**.

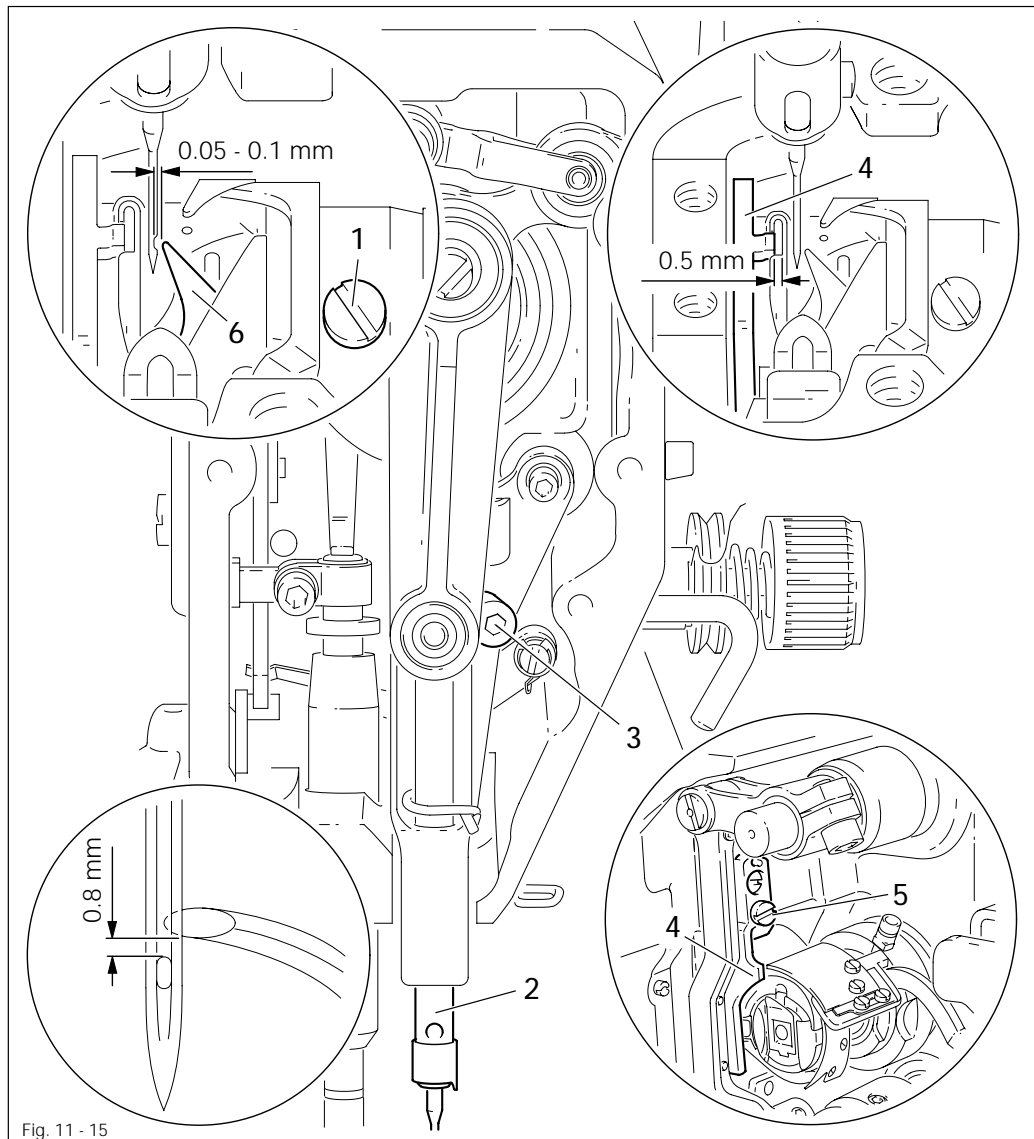
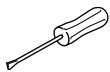


Fig. 11 - 15



- Using the adjustment pin, position the needle bar at 1.8 mm after BDC.
- Adjust the hook according to **requirement 1**.
- Tighten screw 1.
- Move needle bar 2 (screw 3) without turning it according to **requirement 2**.
- Align bobbin case position finger 4 (screw 5) according to **requirement 3**.

11.05.15 Thread check spring and slack thread regulator

Requirement

1. The motion of the thread check spring must be completed when the needle point enters the material (spring stroke approx. **7 mm**).
2. When the thread loop is at its largest when going around the hook, the thread check spring must have moved by approx. **1 mm**.

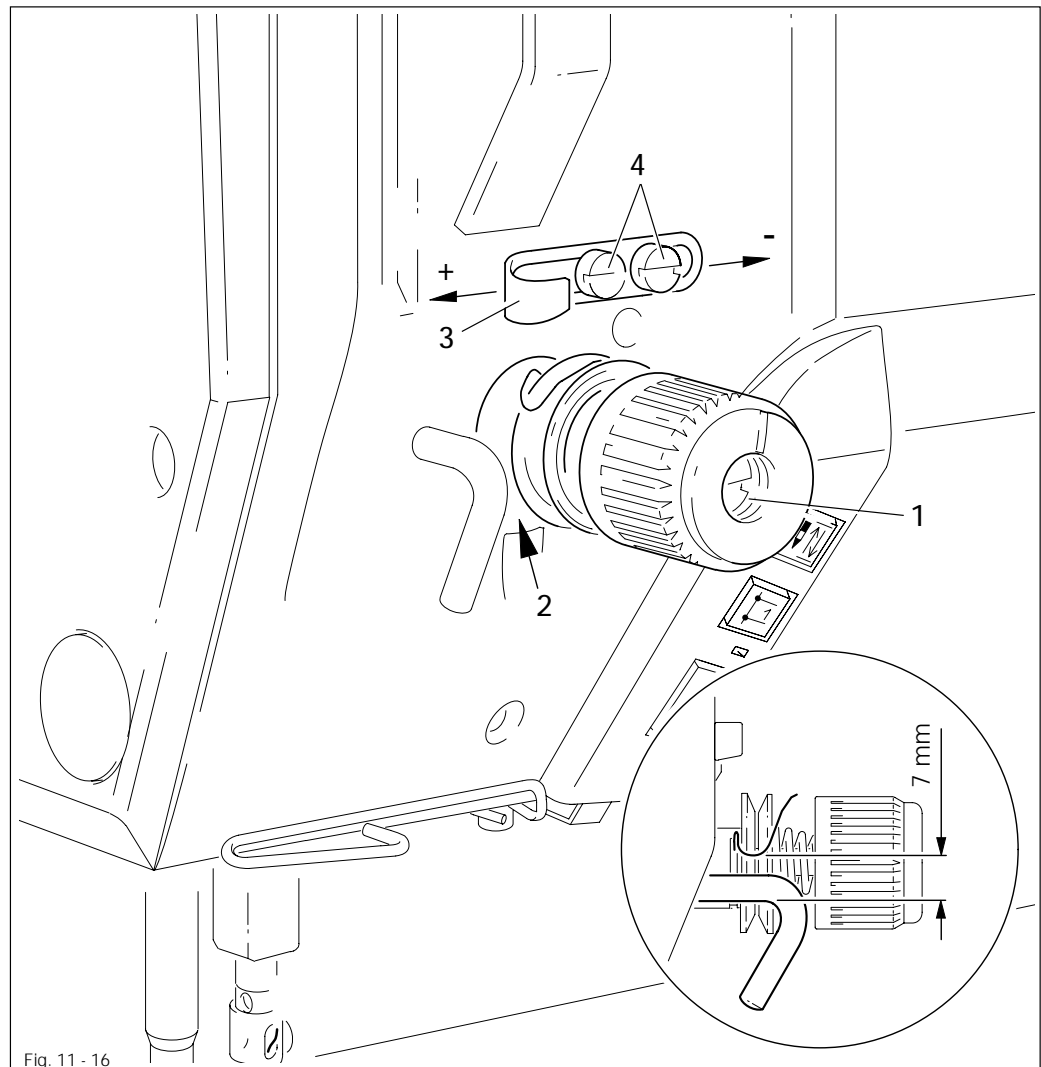
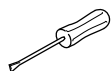


Fig. 11 - 16



- Turn thread tension **1** (screw **2**) according to **requirement 1**.
- Turn thread tension **3** (screw **4**) according to **requirement 2**.



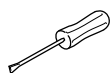
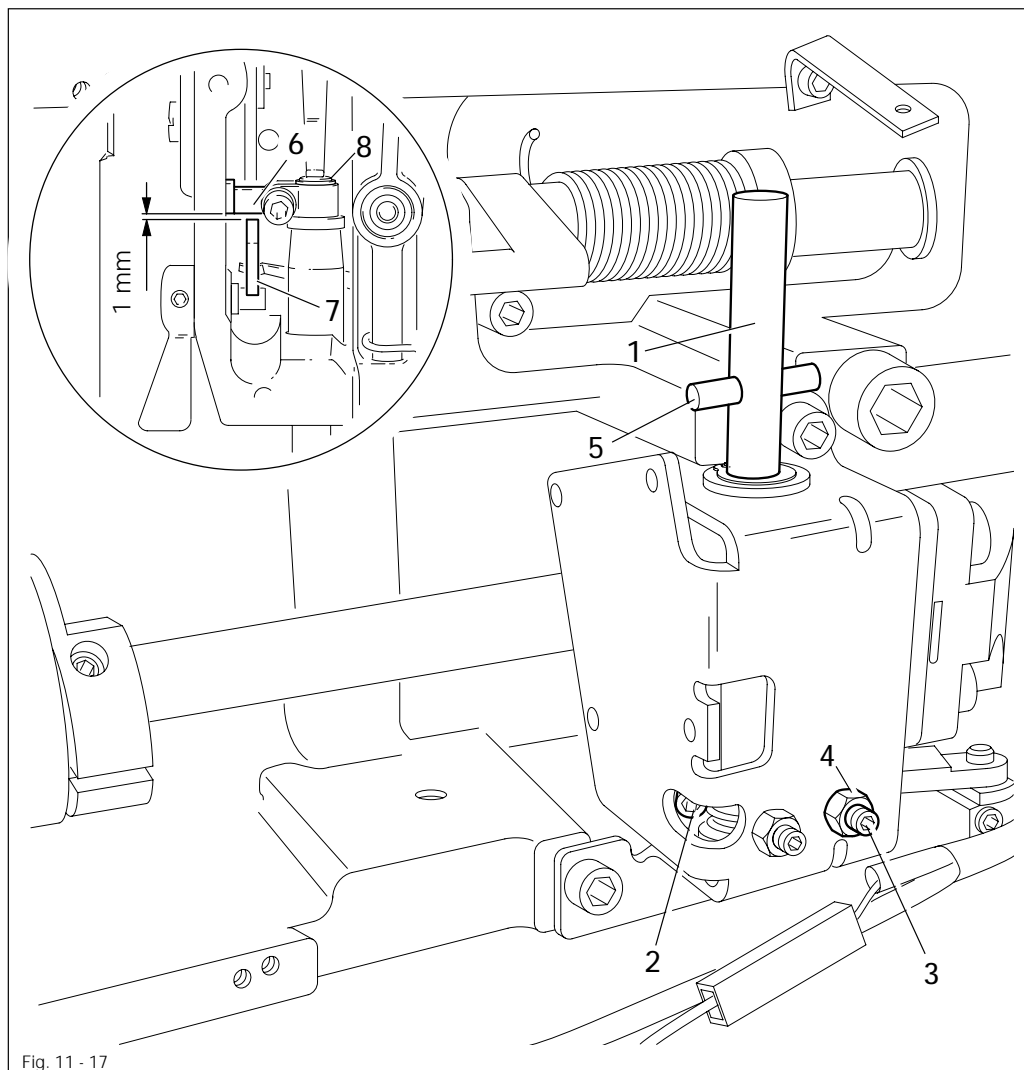
Due to technical sewing reasons it may be necessary to deviate from the spring stroke indicated above.

Move the slack thread regulator **3** (screw **4**) toward the "+" (= more thread) or toward the "-" (= less thread)

11.05.16 Position of knee lever

Requirement

1. When the knee lever is in its resting position, the axle 5 must be parallel to the bedplate.
2. When the presser foot is resting on the needle plate, the presser bar lifting lever 6 must be touching the circlip 8 lightly and be at a distance of approx. 1 mm from lifting piece 7.



- Lower the presser foot onto the needle plate.
- Turn shaft 1 (screws 2) according to Requirement 1.
- Turn screw 3 (nut 4) according to Requirement 2.

11.05.17 Knee lever stop

Requirement

When the knee lever is fully actuated,

1. the presser foot must be raised approx. **9 mm** (or approx. **13 mm** for a large needle bar stroke) above the needle plate, and
2. lever **3** must swing down automatically.

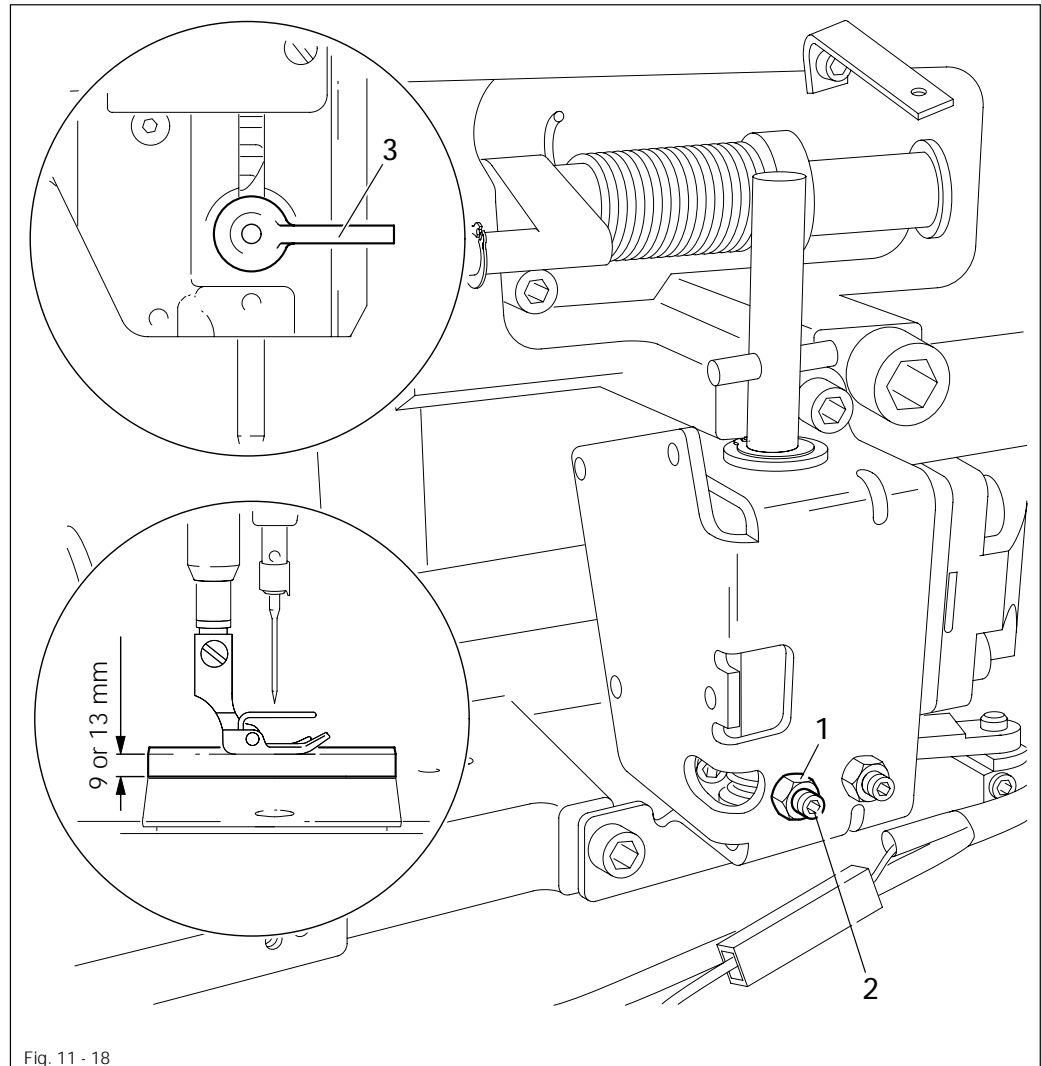
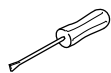


Fig. 11 - 18



- Loosen nut **1** and unscrew screw **2** a few turns.
- Raise the presser foot and slide a **9 mm** (for small needle bar stroke) or **13 mm** (for large needle bar stroke) thick spacer under the presser foot.
- Swing down lever **3**
- Move the knee lever until it is fully actuated. The presser foot must remain on the spacer.
- Now turn screw **2** as far as it will go.
- Turn screw **2** a half turn back and tighten nut **1**.

Requirement

1. With the bobbin winder on, the drive wheel **1** must engage reliably.
2. With the bobbin winder off, the friction wheel **5** must not be driven by the drive wheel **1**.
3. The bobbin winder must turn off automatically when the thread level is approx. **1 mm** from the edge of the bobbin.

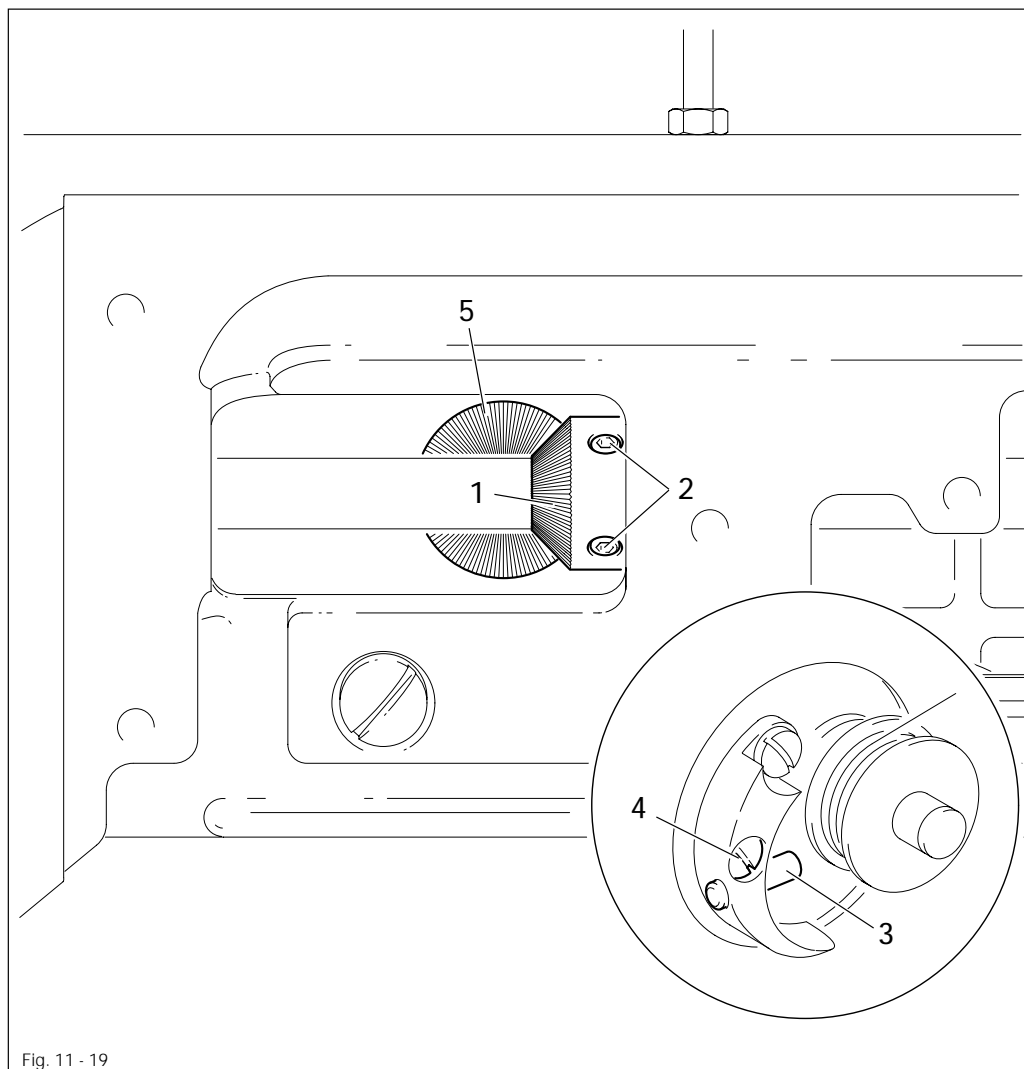
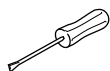


Fig. 11 - 19

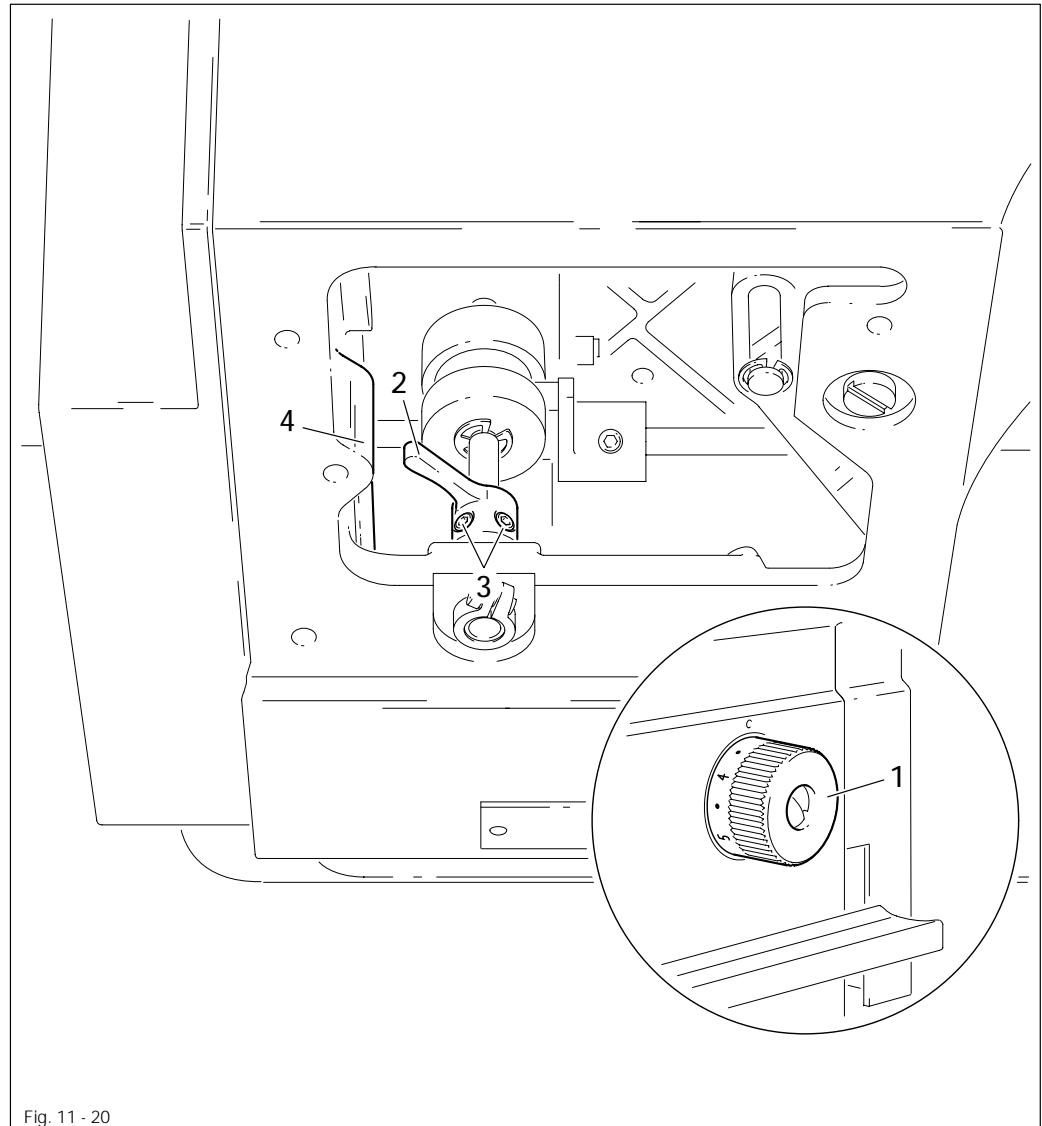


- Move drive wheel **1** (screws **2**) in accordance with **requirement 1 and 2**.
- Move bolt **3** (screw **4**) in accordance with **requirement 3**.

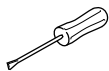
11.05.19 Limiting the stitch length



The maximum stitch length which can be selected can be limited mechanically.



When using Version A and B part sets, the maximum adjustable stitch length must **not** be larger than 4.5 mm!



- Set the desired maximum stitch length with regulator disk 1.
- Move crank 2 (screws 3) down against stop 4.

11.05.20 Presser foot pressure

Requirement

The material must be fed reliably. In the process, pressure marks on the material must not be made.

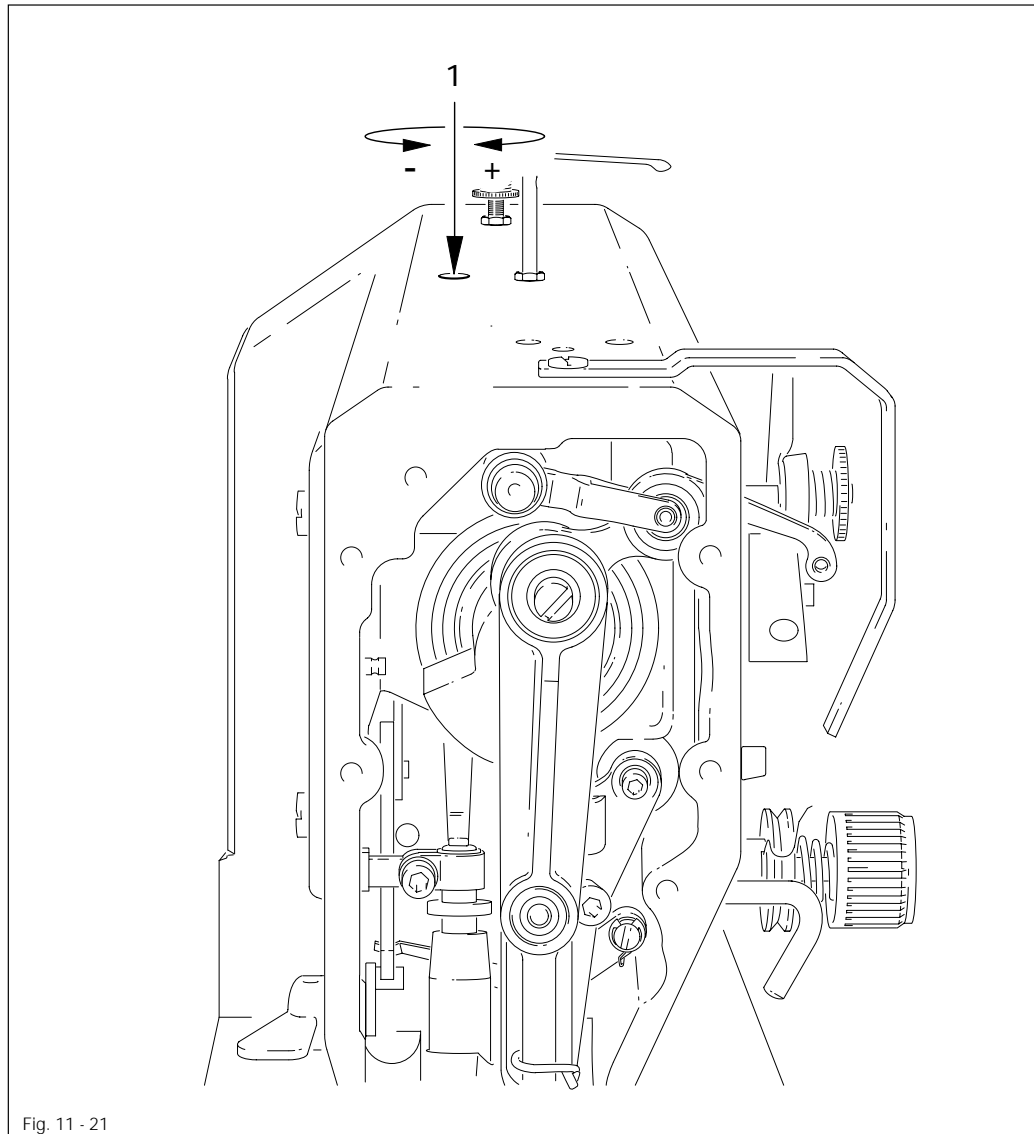
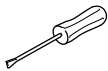


Fig. 11 - 21



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

11.05.21 Modifying the needle bar stroke



The needle bar stroke is preset in the factory according to requirement. The needle bar stroke can be modified later if specific operating conditions make it necessary to do so.

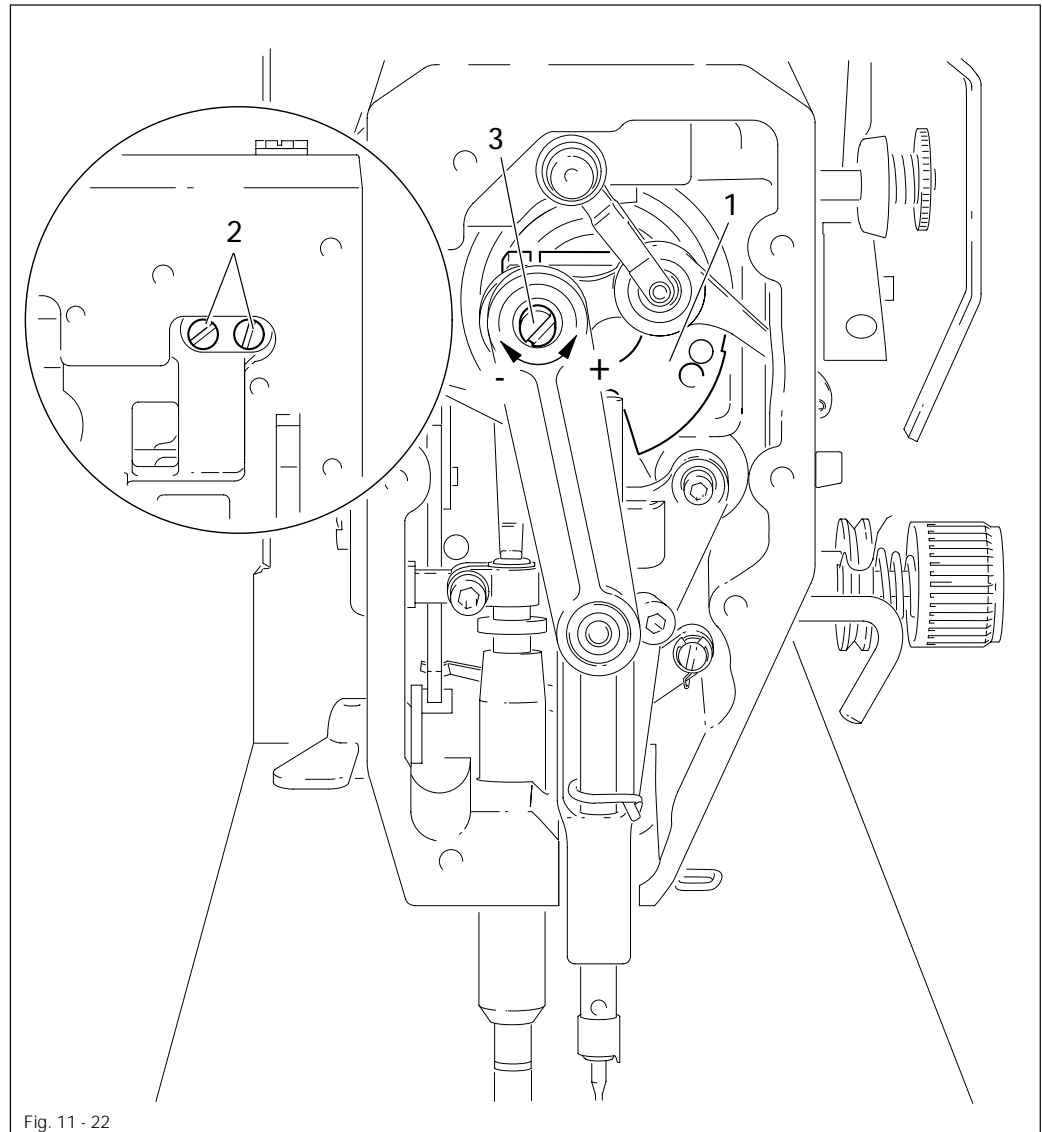
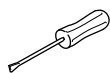


Fig. 11 - 22



When the needle bar stroke is altered, it is absolutely necessary to readjust the needle height! With a 36 mm needle bar stroke, the maximum speed must be limited to 3800 spm.



- Via the hand wheel, turn crank 1 until the screws 2 can be accessed from the side opening of the housing.
- Turn eccentric 3 (screws 2) as far as possible toward "+" (= large needle bar stroke) or toward "-" (= small needle bar stroke).
- Adjust needle height (see chapter 11.05.02 Preadjusting the needle height and/or chapter 11.05.14 Needle rise, hook-to-needle clearance, needle height and bobbin case position finger).

Adjustment

11.06 Adjusting the edge trimmer - 731/01

11.06.01 Zero position of the knife

Requirement

With the edge trimmer switched off, the knife should not move when the balance wheel is turned.

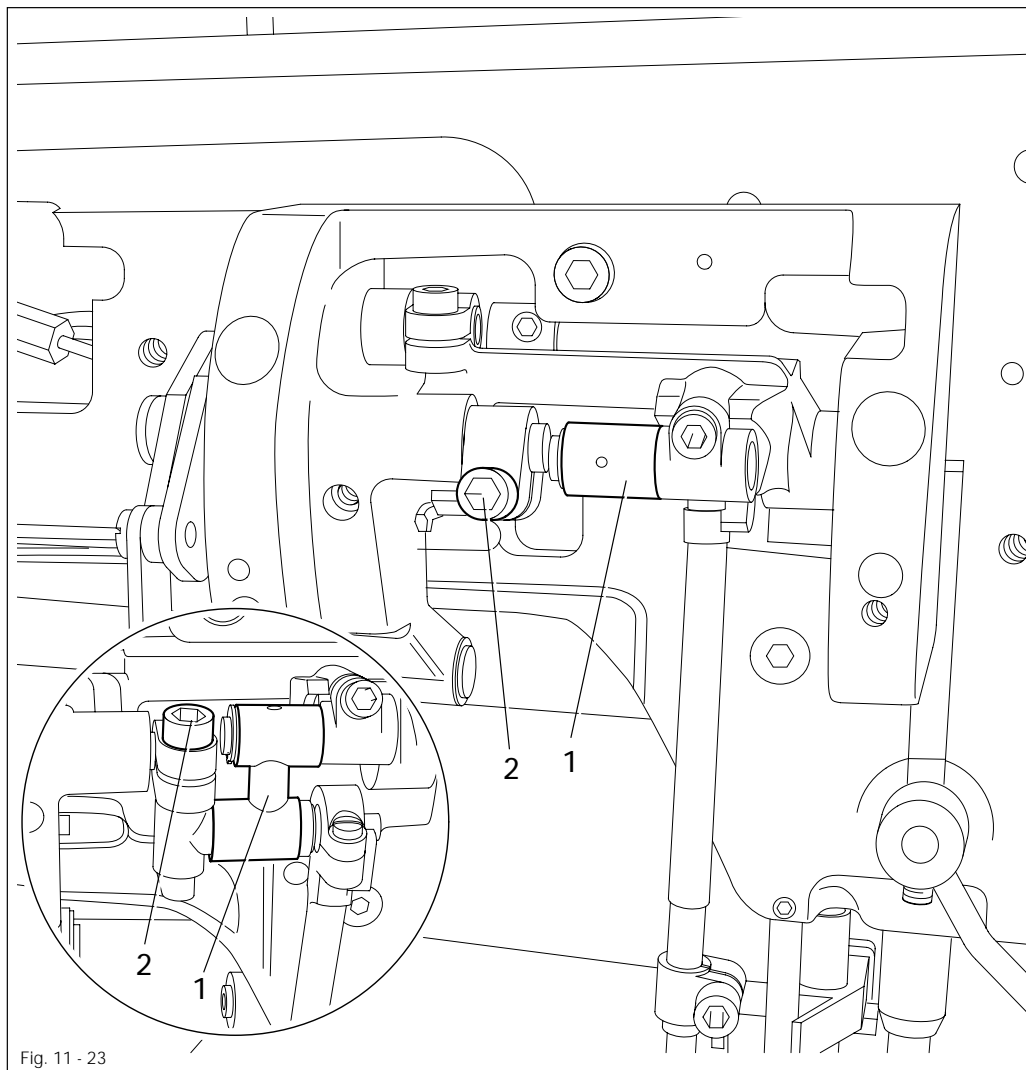
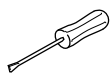


Fig. 11 - 23



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

11.06.02 Cutting motion

Requirement

With the edge trimmer switched on and the needle bar at its t.d.c. on the PFAFF 1053 and 1183, or at its b.d.c. on the PFAFF 1051 and 1181, the knife should be at the top of its stroke.

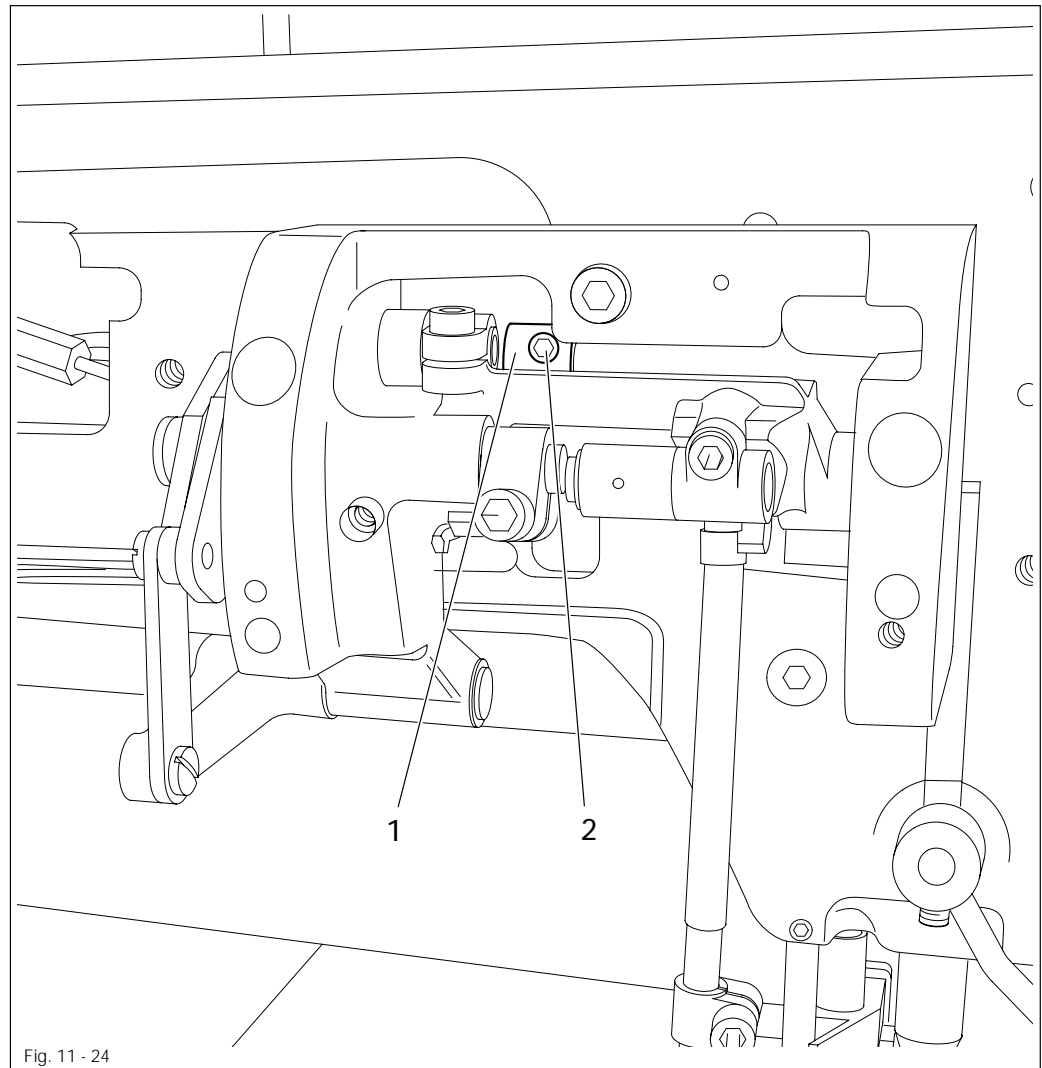
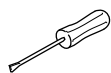


Fig. 11 - 24



- Switch on the edge trimmer and bring the needle bar to t.d.c. or b.d.c. (see **requirement**).
- Turn eccentric 1 (two screws 2) according to the **requirement**.

11.06.03 Knife height

Requirement

When the knife is at the bottom of its stroke, the front edge of the knife blade should be approx. **0.5 mm** below the top edge of the stationary knife.

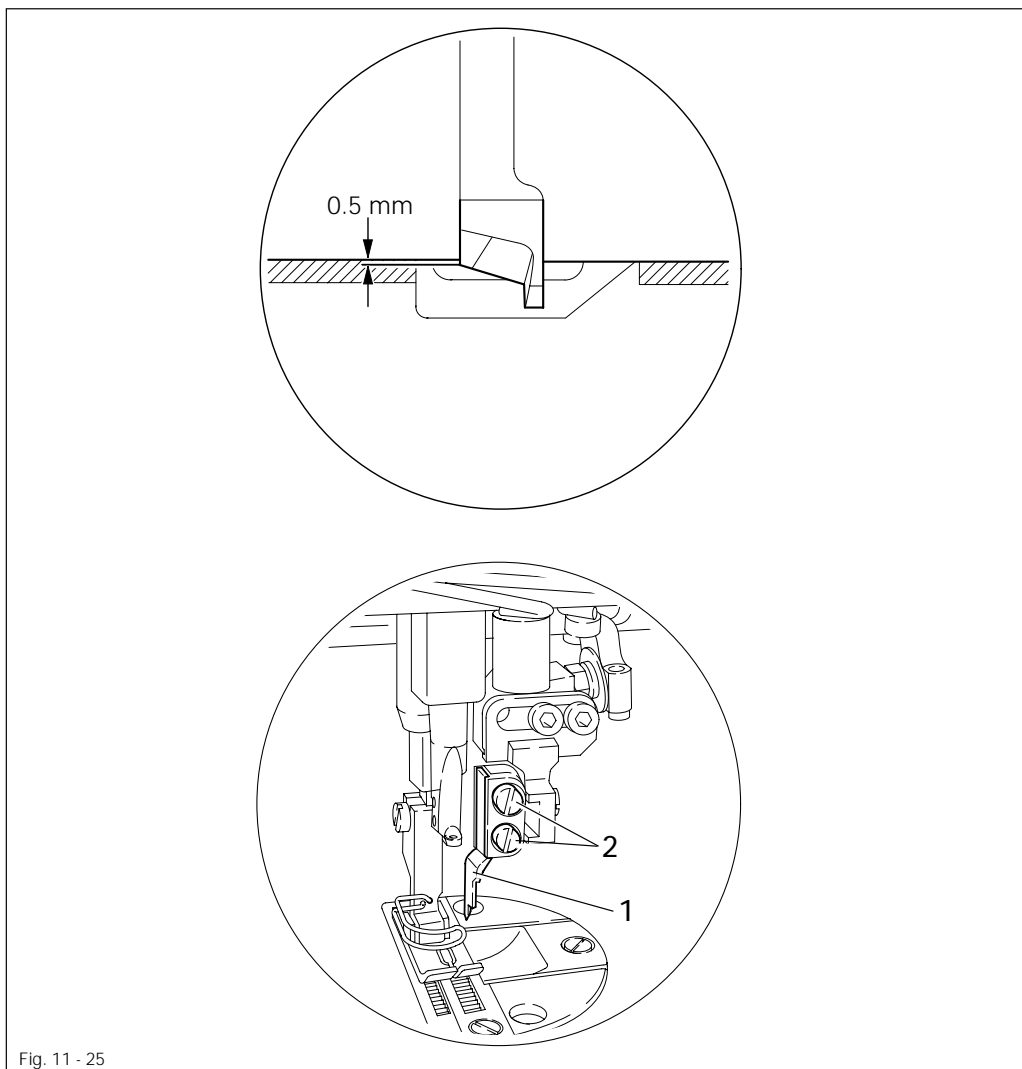
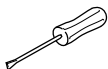


Fig. 11 - 25



- Switch on the edge trimmer and bring the knife to the bottom of its stroke.
- Adjust knife 1 (screws 2) according to the **requirement**.

11.06.04 Knife position in sewing direction

Requirement

When the needle is at its b.d.c., the centre of the knife blade should be positioned at "needle centre".

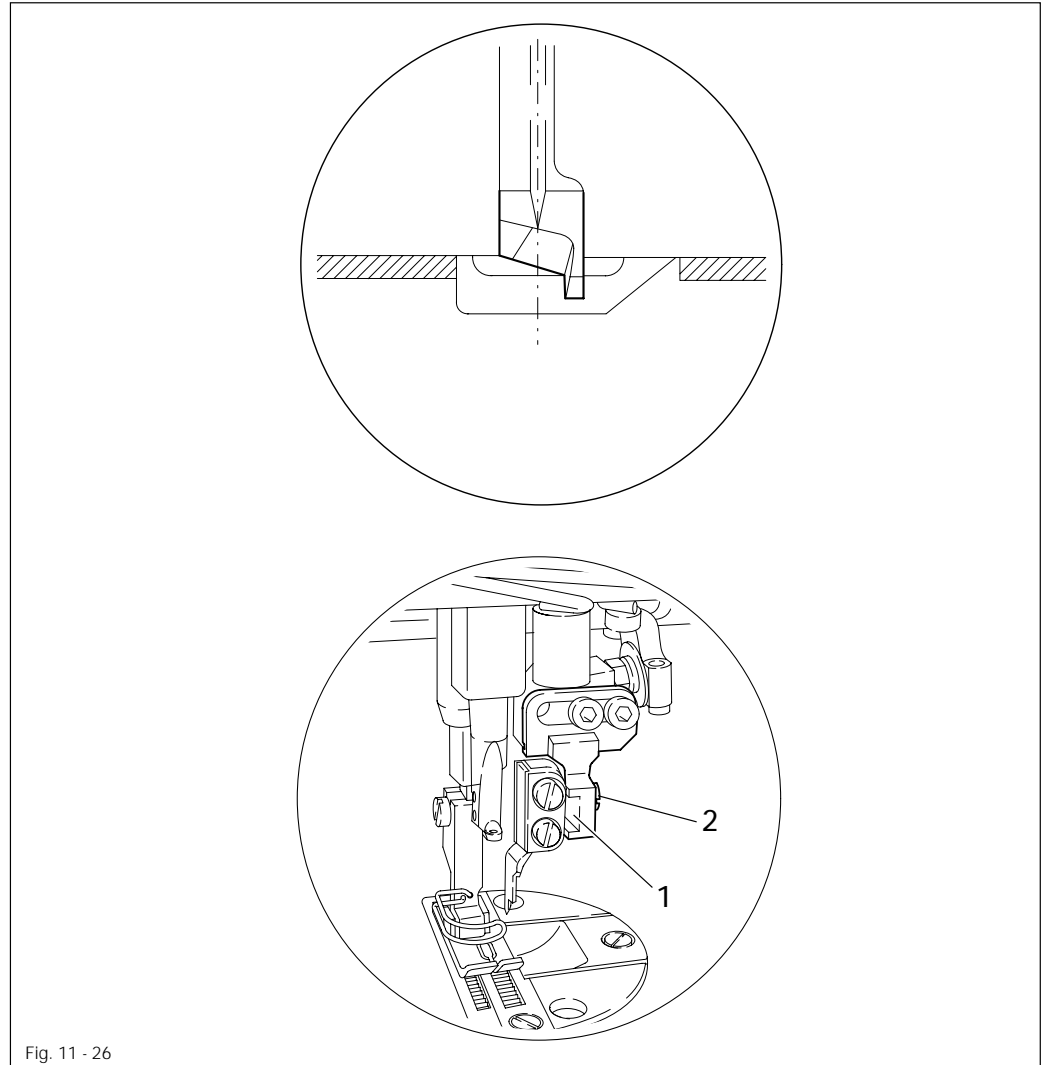
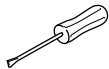


Fig. 11 - 26



- Adjust knife bracket 1 (screw 2) according to the requirement.

Adjustment

11.06.05 Knife position crosswise to sewing direction

Requirement

The knife should be resting on the stationary knife 3 with light pressure.

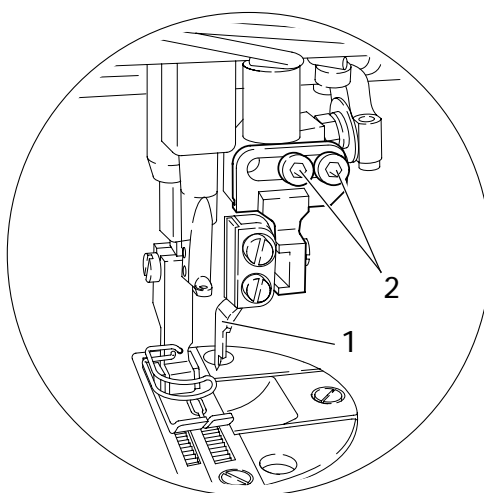
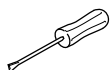


Fig. 11 - 27



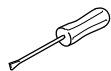
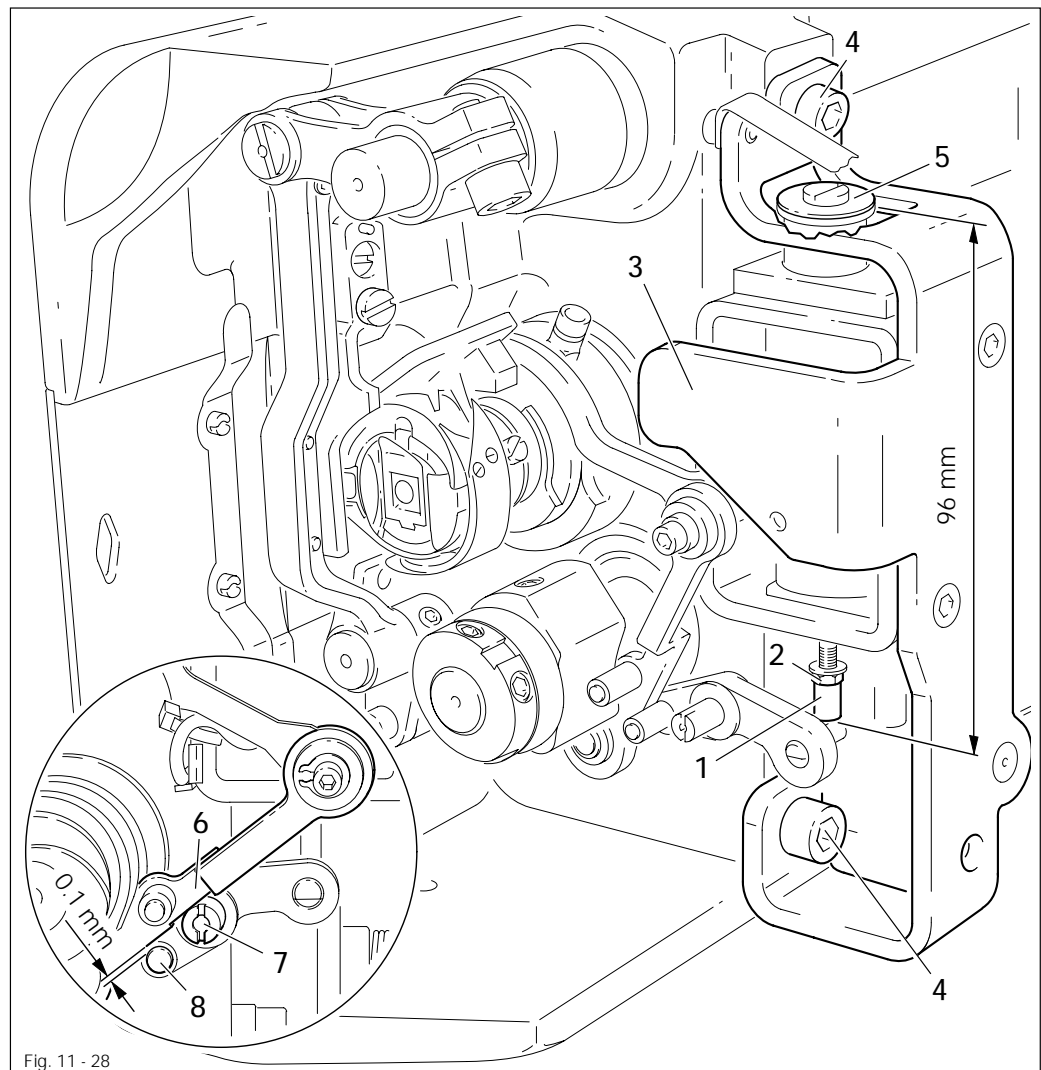
- Adjust knife bracket 1 (screw 2) according to the requirement.

11.07 Adjusting the thread trimmers -900/24

11.07.01 Magnet setting

Requirement

1. The distance between the bottom edge of the plunger and the top edge of the washer 5 must be **96 mm**.
2. When the thread trimmer is in resting position (magnet retracted), the roller lever 6 must rest against bolt 7 and be at a distance of approx. **0.1 mm** from roller 8.



- Turn plunger 1 (nut 2) according to requirement 1.
- Bring thread trimmer into resting position.
- Move magnet holder 3 (screws 4) according to requirement 2.

11.07.02 Lateral alignment of the thread catcher

Requirement

1. The tip of the thread catcher 5 must point exactly to the center of the needle.
2. The thread catcher 5 must be horizontal. It must not graze anything when it is operating.

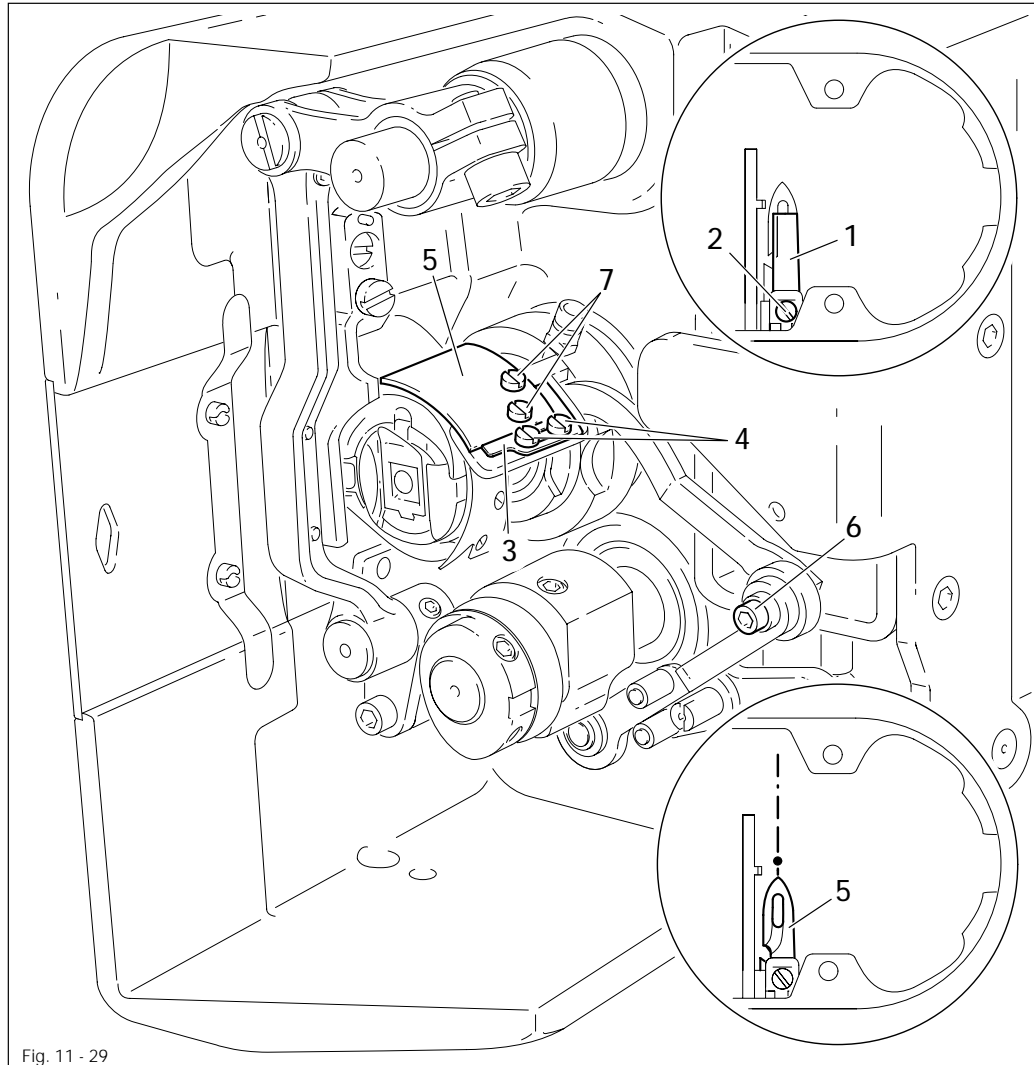
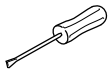


Fig. 11 - 29



- Remove knife 1 (screw 2).
- Move needle bar to its BDC.
- Loosen stop 3 (screws 4).
- Position thread catcher 5 (screw 6) manually in front of the needle.
- Align thread catcher 5 (screws 7) according to the requirements.

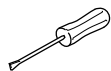
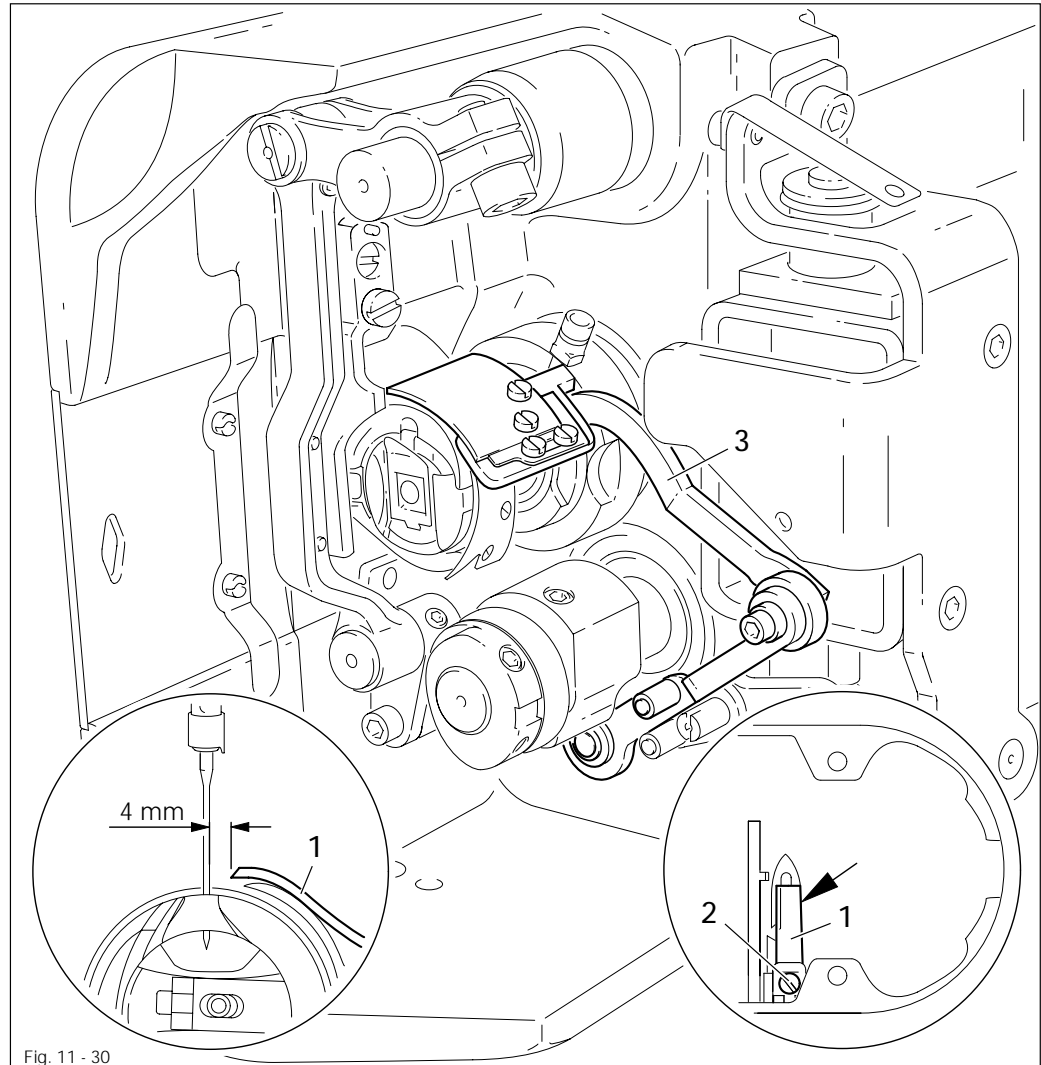


For further adjustments, leave knife 1 removed and stop 3 loosened.

11.07.03 Knife position

Requirement

1. There must be a distance of **4 mm** between the cutting edge of the knife and the needle.
2. The right edge of the knife **1** must not extend beyond the right edge of the thread catcher (see arrow).

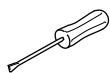
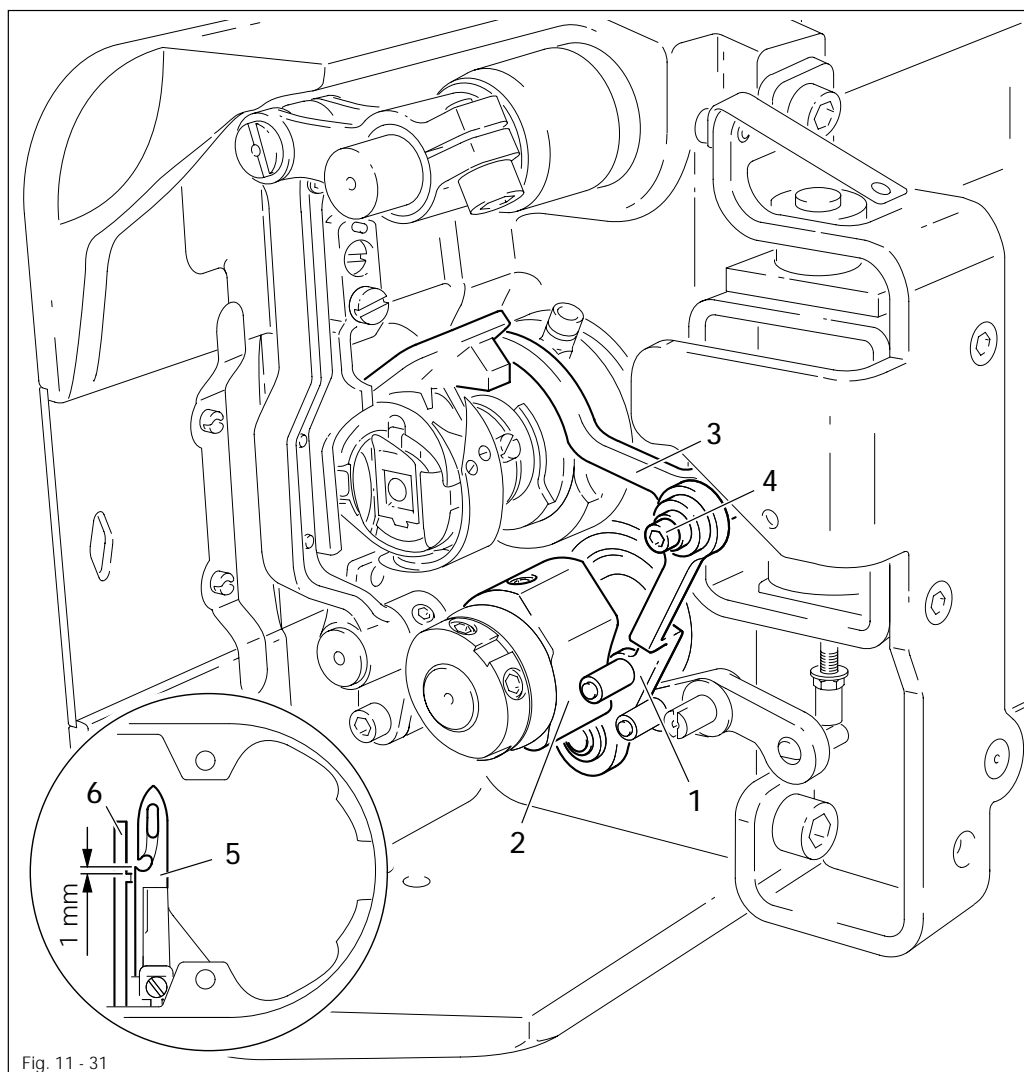


- Bring the needle bar to BDC.
- Slide knife **1** under the locking tab and align according to **requirement 1**.
- Tighten screw **2** lightly.
- Adjust thread catcher carrier **3** by hand until the wedge point in the thread catcher is positioned just in front of the cutting edge of the knife.
- Align knife **1** according to **requirement 2** and tighten screw **2**.

11.07.04 Front point of reversal of the thread catcher

Requirement

When the thread catcher 5 is at its front point of reversal, the rear edge of the thread catcher cutout must be positioned **1 mm** before the bobbin case position finger 6.



- Swing roller level 1 into the lowest point of the control cam 2.
- Move thread catcher carrier 3 (screw 4) according to the **requirement**.

11.07.05 Manual trimming check

Requirement

Two threads must be cut perfectly both left and right in the cutout of thread catcher 1.

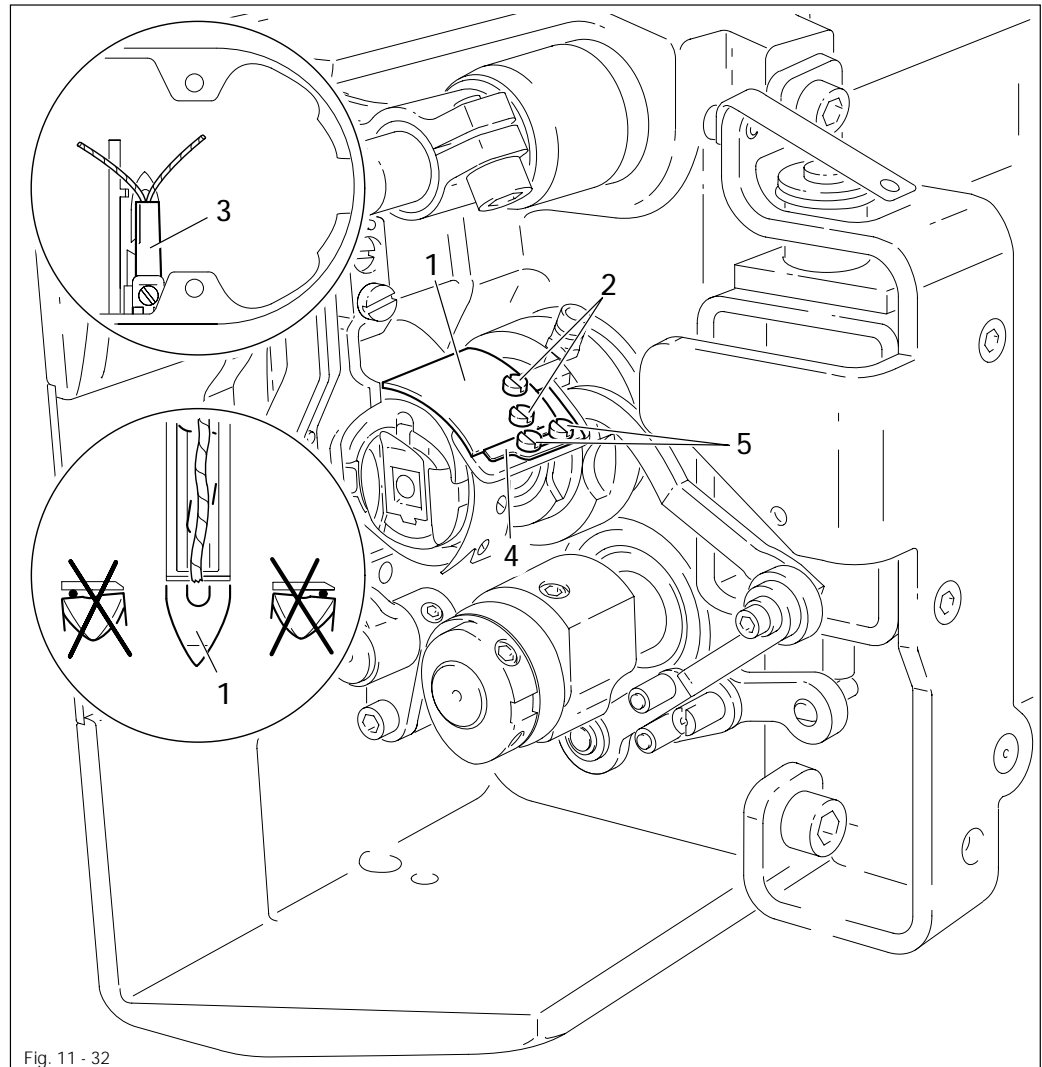
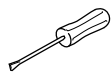


Fig. 11 - 32

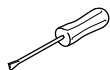
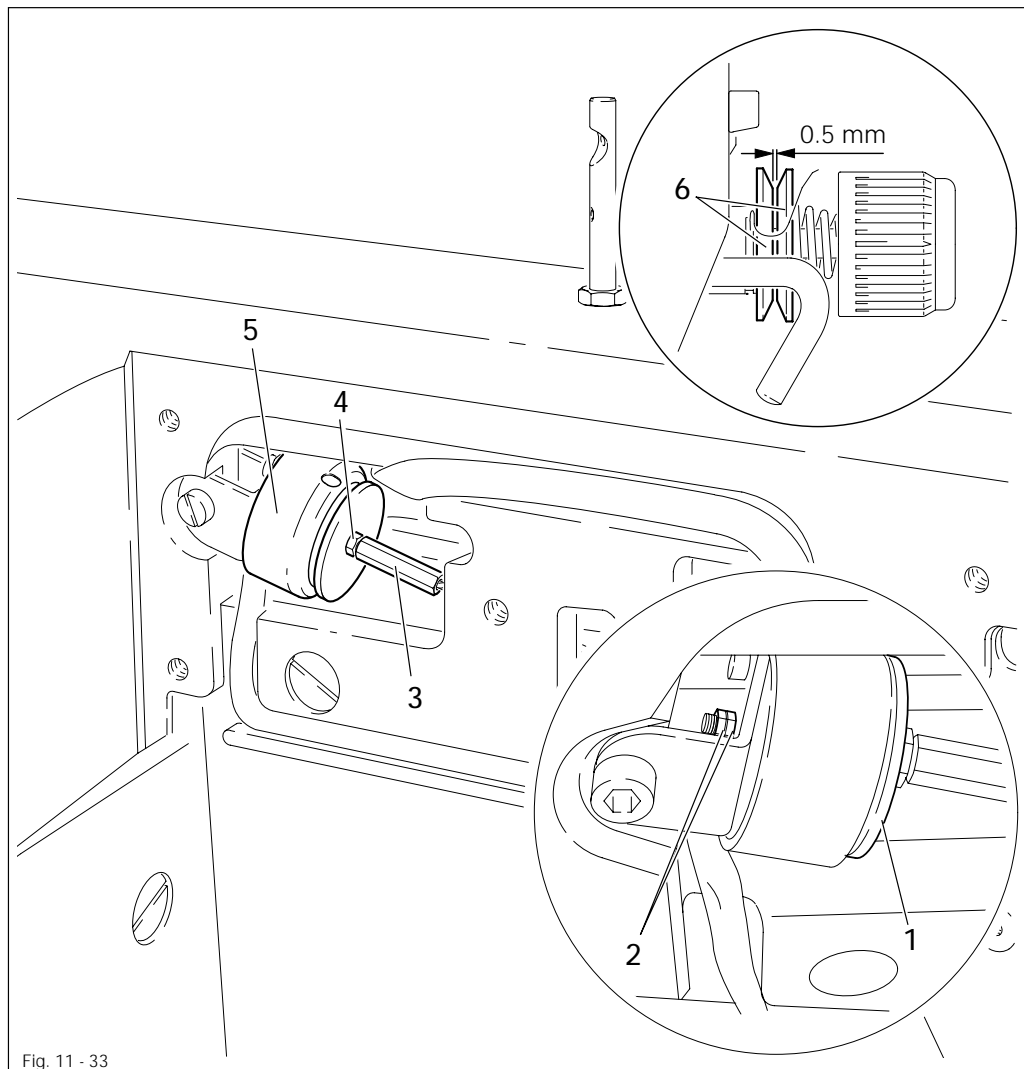


- Move thread catcher 1 by hand to its front point of reversal.
- Double the thread and insert into catcher cutout.
- Carry out trimming operation manually.
- If the threads are not cut according to the **requirement**, align thread catcher 1 (screws 2) with knife 3 accordingly.
- Move stop 4 against thread catcher 1 and tighten screws 5.
- Check chapter 11.06.02 **Lateral alignment of the thread catcher**, and readjust if necessary.

11.07.06 Needle thread tension release

Requirement

1. The magnet lift should be 1.5 mm.
2. When the magnet 5 is operated by hand, there should be a distance of at least 0.5 mm between the tension discs 6.

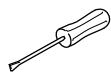
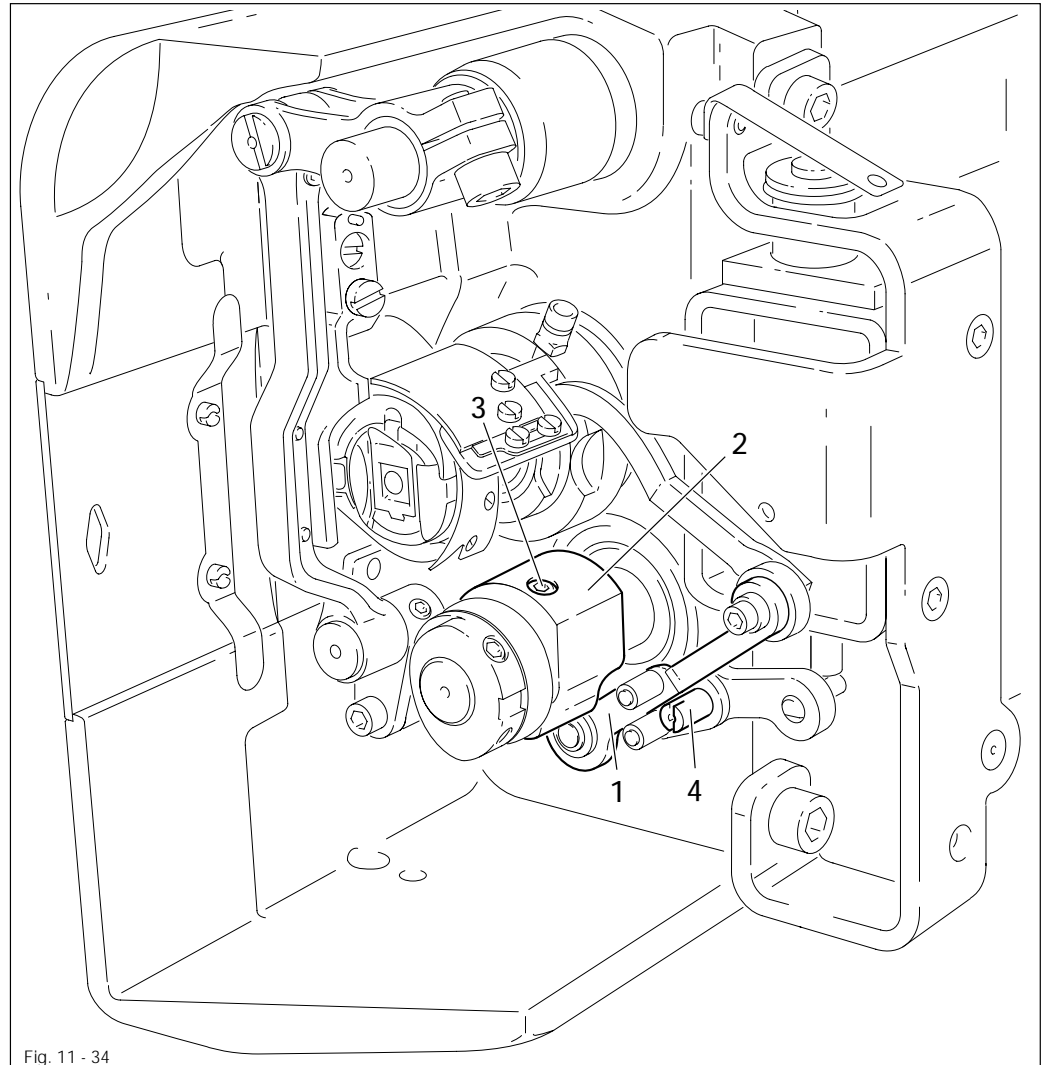


- Adjust disc 1 (nuts 2) according to the requirement.
- Adjust screw 3 (nut 4) according to the requirement.

11.07.07 Readjusting the control cam

Requirement

When the take-up lever is at TDC, the roller lever 1 must be brought from the highest point of the control cam 2 and moved against bolt 4 (basic position).



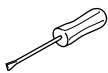
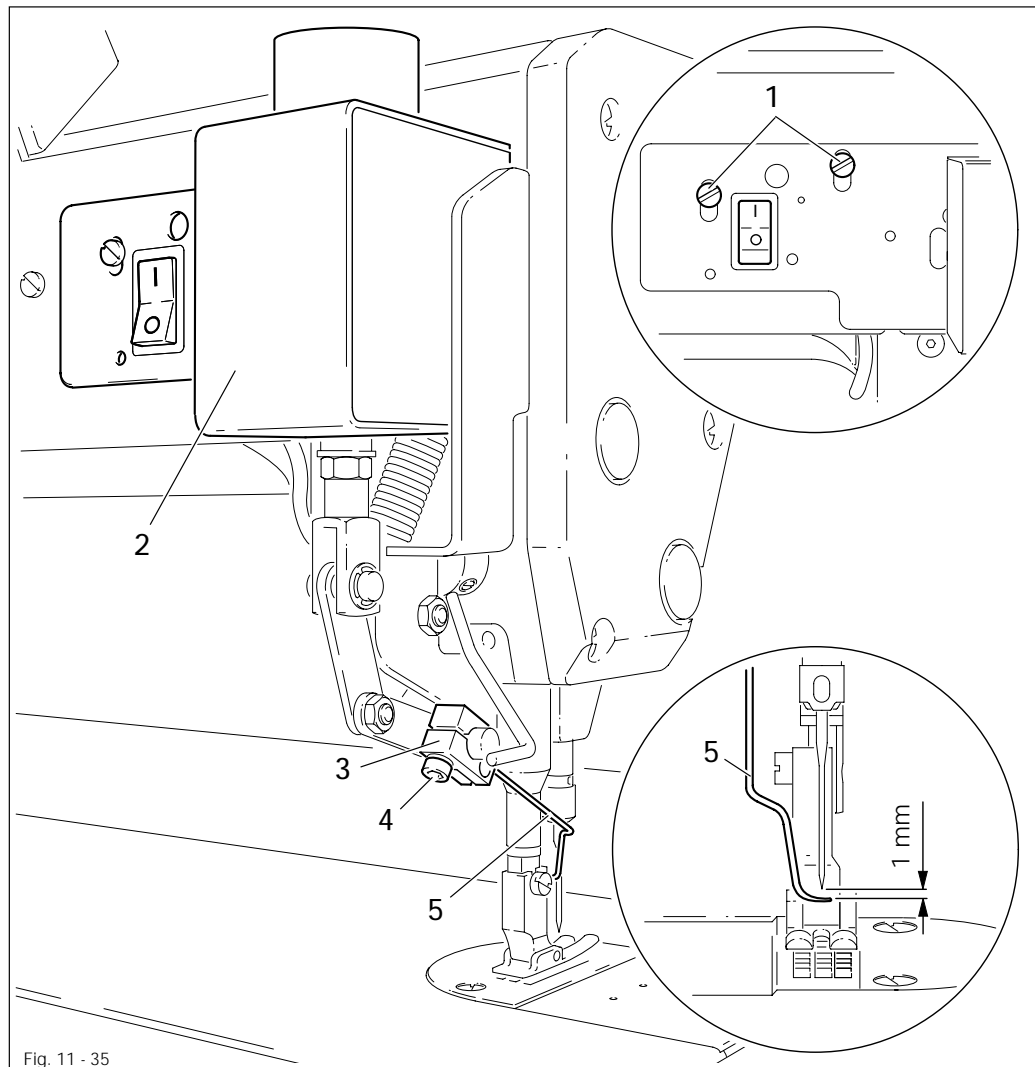
- Switch on machine and sew a few stitches.
- Trigger cutting operation.
- Check to see if the thread was cut cleanly and roller level 1 is in basic position.
- If necessary, turn control cam 2 (screws 3) according to the requirement.

11.08 Adjusting the thread wiper -909/04

11.08.01 Thread wiper movement

Requirement

1. The thread wiper 5 must not strike against anything when it is moving.
2. When the take-up lever is at TDC, the thread wiper 5 is to move under the needle point and clear it by approx. 1 mm when the engaging solenoid 2 is operated.



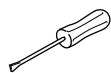
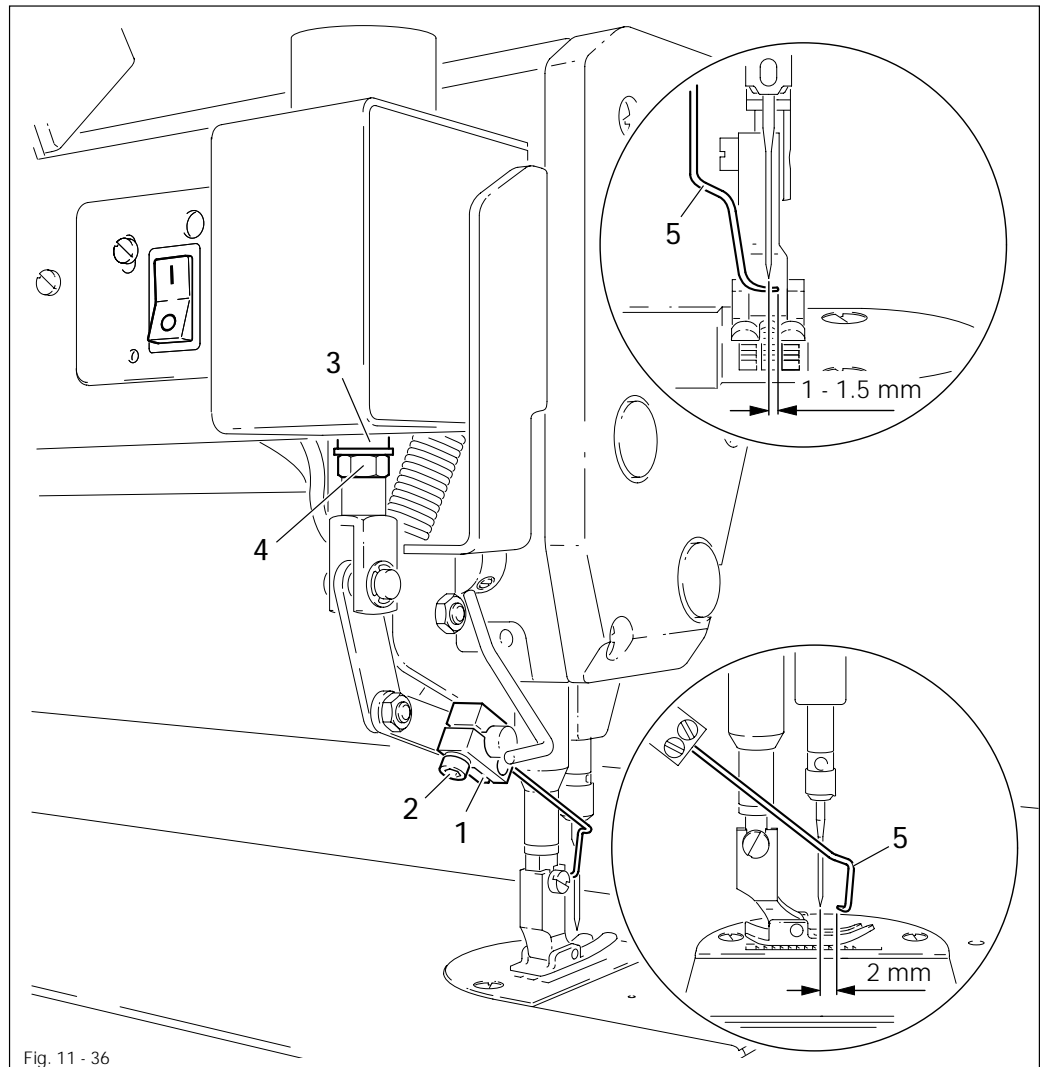
- Bring the take-up lever to TDC.
- Loosen screws 1.
- Push thread wiper 2 parallel to the bedplate to the very top and tighten screws 1 slightly.
- Turn bracket 3 (screw 4) according to **requirement 1**.
- Move thread wiper 2 parallel to the bedplate according to **requirement 2**.
- Tighten screws 1.

11.08.02 Thread wiper position

Requirement

Seen from the direction of sewing

1. The point of the thread wiper 5 must be approx. 1 - 1.5 mm to the right of the needle, and
2. The thread wiper 5 must be approx. 2 mm in front of the needle in its foremost position.

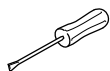
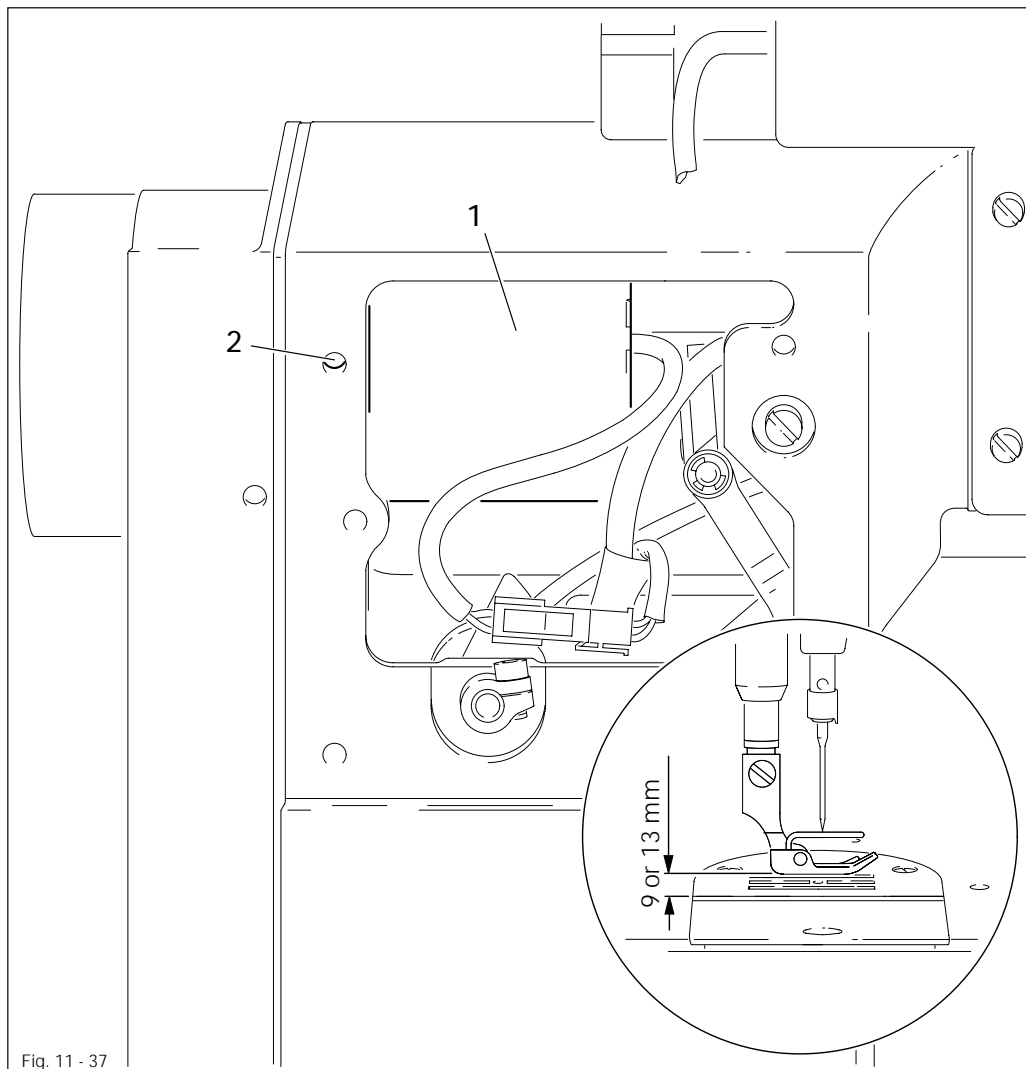


- Slide bracket 1 (screw 2), without turning it, on the shaft according to requirement 1.
- Turn rod 3 (nut 4) according to requirement 2.

11.09 Adjusting the automatic presser foot lift -910/06

Requirement

When the automatic presser foot lift is operated, the clearance between the presser foot and the needle plate must be **9 mm** for a small needle bar stroke and **13 mm** for a large needle bar stroke.

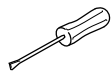
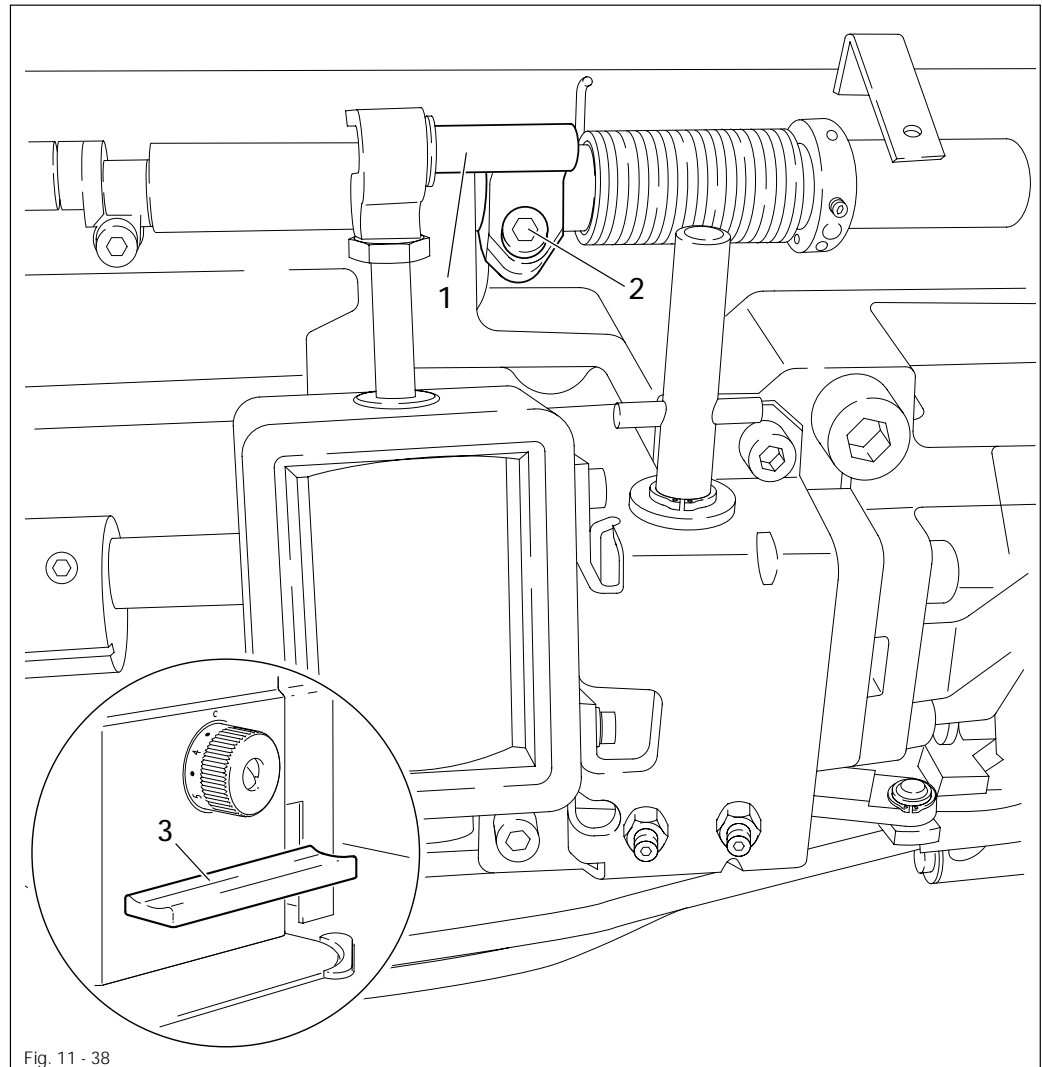


- Move magnet 1 (screw 2) according to the requirement.

11.10 Adjusting the back-tacking mechanism - 911/37

Regel

When the longest stitch length is set, the reverse-feed control switch 3 operated and the plunger extended, lever 1 should not touch the bed-plate.

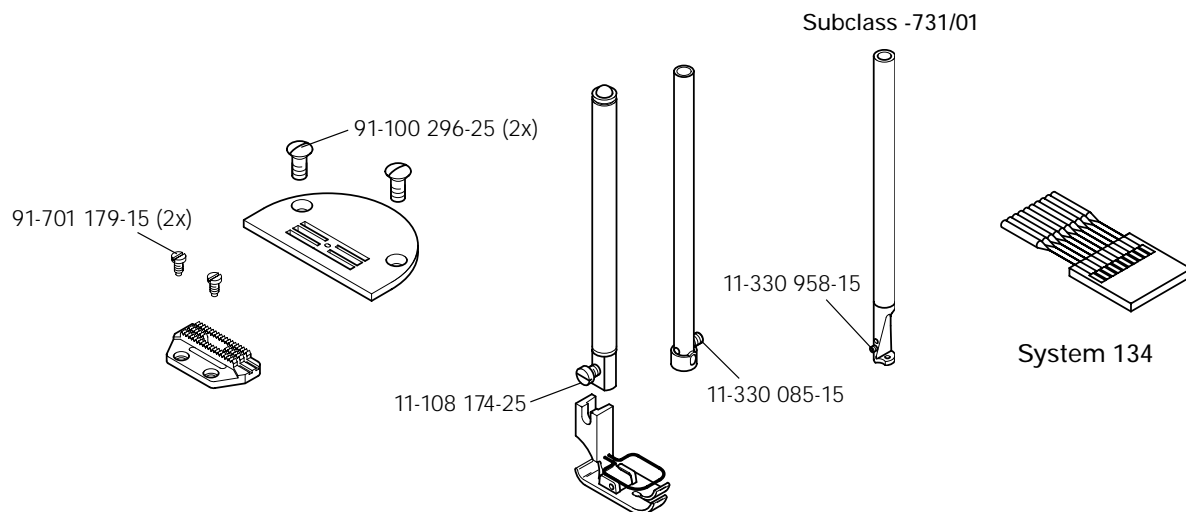


- Adjust lever 1 (screw 2) according to the requirement.



This list indicates the most important wearing parts.

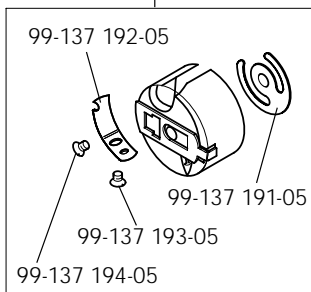
You can request a detailed parts list for the complete machine under parts number 296-12-18 344.



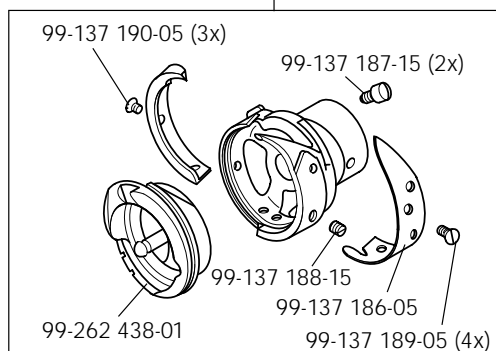
PFAFF 1051; 1053

91-262 417-91

91-262 377-91



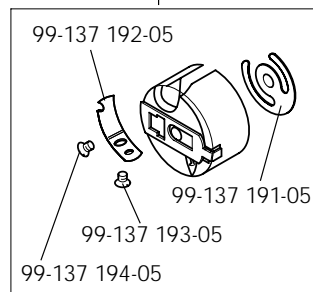
99-262 418-91



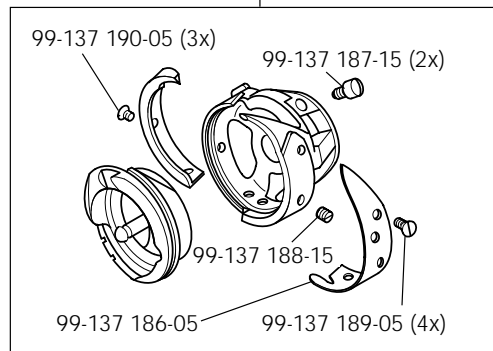
PFAFF 1181; 1183

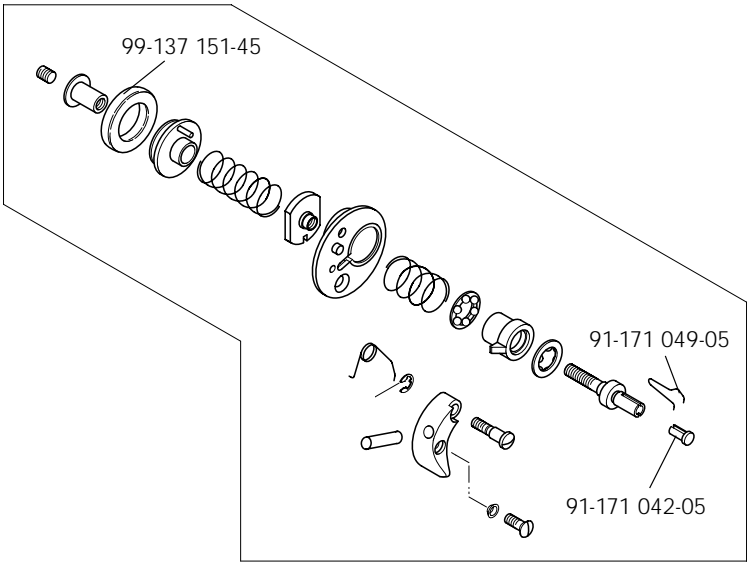
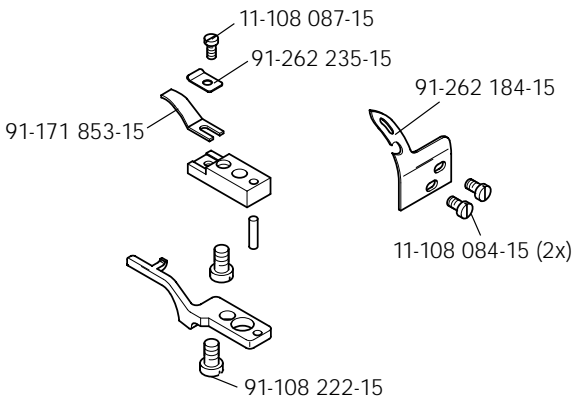
91-262 250-91

91-262 377-91



99-262 376-91





	Subclass	Trimming margin	Partnumber
	-731/01-8/11 A	5,0	91-069 595-04/002
	-731/01-8/11 B	3,5	91-169 395-04/002
	-731/01-8/11 B	4,0 - 7,0	91-069 595-04/002



**G.M. PFAFF KAISERSLAUTERN
INDUSTRIEMASCHINEN AG**

Postfach 3020
D-67653 Kaiserslautern

Königstr. 154
D-67655 Kaiserslautern

Telefon: (0631) 200-0
Telefax: (0631) 17202
E-Mail: info@pfaff-industrial.com

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