

PFAFF

3734 - 2/01

Instruction Manual

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

2207198 →

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

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

Postfach 3020
D-67653 Kaiserslautern

Königstr. 154
D-67655 Kaiserslautern

Redaktion / Illustration
VTD GmbH
D-77901 Lahr

	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 3734-2/01	3 - 1
3.02	Model, needles and threads	3 - 1
4	Disposal of machines	4 - 1
5	Transport packaging and storage	5 - 1
5.01	Transport to the customer's premises	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	Pedal	7 - 1
7.03	Knee switch	7 - 2
7.04	Lever for lifting the roller presser	7 - 2
7.05	Control panel	7 - 3
7.05.01	Displays on the screen	7 - 3
7.05.02	Key functions	7 - 3
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	Fitting the tilt lock	8 - 2
8.01.03	Adjusting the V-belt tension	8 - 2
8.01.04	Mounting the synchronizer	8 - 3
8.01.05	Mounting the spool holder	8 - 3
8.01.06	Attaching the earthing wire / connecting the plug connections	8 - 4
8.02	Commissioning	8 - 4
8.03	Switching the machine on/off	8 - 4

	Contents	Chapter - Page
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	Threading the bobbin case / Adjusting the bobbin thread tension	9 - 4
9.05	Threading the needle thread / adjusting the needle thread tension	9 - 5
9.06	Setting the stitch length / fullness	9 - 6
9.06.01	Entering the standard stitch length / fullness	9 - 6
9.06.02	Entering a second stitch length / fullness	9 - 6
9.06.03	Entering the fullness range for pedal adjustment	9 - 7
9.07	Entering / adjusting the code number.	9 - 8
10	Sewing	10 - 1
10.01	Applying fullness	10 - 1
11	Care and maintenance	11 - 1
11.01	Cleaning	11 - 1
11.02	Lubricating the hook	11 - 2
11.03	Filling the oil reservoir	11 - 2
11.04	Lubricating the bevel gears	11 - 3
12	Adjustment	12 - 1
12.01	Notes on adjusting	12 - 1
12.02	Tools, gauges and other accessories for adjusting	12 - 1
12.03	Abbreviations	12 - 1
12.04	Adjusting the basic machine	12 - 2
12.04.01	Adjusting the synchronizer	12 - 2
12.04.02	Positioning the needle in the direction of sewing	12 - 3
12.04.03	Positioning the needle across the direction of sewing	12 - 4
12.04.04	Preadjusting the needle height	12 - 5
12.04.05	Needle rise, hook-to-needle clearance, needle height and needle guard	12 - 6
12.04.06	Bobbin case opener height	12 - 8
12.04.07	Bobbin case opener stroke	12 - 9
12.04.08	Feed wheel height	12 - 10
12.04.09	Clearance between roller presser and feed wheel	12 - 11
12.04.10	Roller presser	12 - 12
12.04.11	Automatic presser-foot lifter	12 - 13
12.04.12	Retainer	12 - 14
12.04.12	Tension release	12 - 15
12.04.14	Thread check spring	12 - 16
12.04.15	Bobbin winder	12 - 17
12.04.16	Roller presser pressure	12 - 18
12.04.17	Locking the set-value transmitter	12 - 19

	Contents	Chapter - Page
12.05	Adjusting the thread trimmer -900/53	12 - 20
12.05.01	Removing the scissors	12 - 20
12.05.02	Control cam to bobbin opener and tripping lever	12 - 21
12.05.03	Radial position of the tripping lever	12 - 22
12.05.04	Engaging solenoid	12 - 23
12.05.05	Scissor drive lever	12 - 24
12.05.06	Control cams to the bobbin opener and cutter (adjustment with adjustment gauge)	12 - 25
12.05.07	Radial position of the control cam to the bobbin opener (adjustment without adjustment gauge)	12 - 26
12.05.08	Scissor tripping-lever in relation to the control cam of the scissor	12 - 27
12.05.09	Control cam to cutter (adjustment without adjustment gauge)	12 - 28
12.05.10	Scissor return lever	12 - 29
12.05.11	Scissor return control	12 - 30
12.05.12	Installing the scissor	12 - 31
12.05.12	Eccentric sleeve	12 - 32
12.05.14	Scissor drive bar	12 - 33
12.05.15	Scissor function test	12 - 34
12.06	Tension unit control	12 - 36
12.07	Parameter settings	12 - 38
12.08	Error messages	12 - 40
12.09	Carry out cold start	12 - 41
13.01	Wearing parts	13 - 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, observe also all generally accepted, statutory and other regulations and legal requirements and all valid environmental protection regulations! The regionally valid regulations of the social insurance society for occupational accidents or other supervisory organisations are to be strictly adhered to!

1.02 General notes on safety

- This machine may only be operated by adequately trained operators and only after 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, or bobbin), when threading the machine, when leaving the machine unattended and during maintenance work, the machine is to be separated from the power supply by switching off the On/Off switch or by removing the plug from the mains!
- Everyday maintenance work is only to be carried out by appropriately trained personnel!
- Repairs and special maintenance work may only be carried out by qualified service staff or appropriately trained personnel!
- Work on electrical equipment may only be carried out by appropriately trained personnel!
- Work is not permitted on parts and equipment which are connected to the power supply! Exceptions to this are only to be found in the regulations EN 50110.
- Modifications and alterations to the machine may only be carried out under observance of all the relevant safety regulations!
- Only spare parts which have been approved by us are to be used for repairs! We expressly point out that any replacement parts or accessories which are not supplied by us have not been tested and approved by us. The installation and/or use of any such products can lead to negative changes in the structural characteristics of the machine. We shall not be liable for any damage which may be caused by non-original parts.

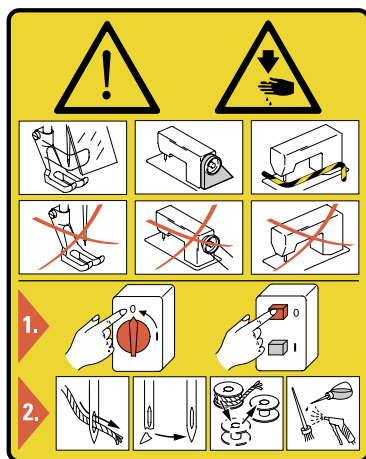
1.03 Safety symbols



Danger!
Points to be observed.



Danger of injury for operating and specialist personnel!



Caution

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

1.04 Important points for the user

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

Further information can be obtained at your PFAFF agent.

1.05 Operating and specialist personnel

1.05.01 Operating personnel

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

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

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

1.05.02 Specialist personnel

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

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

- always observe the Notes on Safety in the Instruction Manual!
- switch off the On/Off switch before carrying out adjustments or repairs and ensure that it cannot be switched on again unintentionally!
- never work on parts which are still connected to the power supply! Exceptions are contained only in the regulations EN 50110.
- replace the protective coverings and close the electrical control box after all repairs or maintenance work!

1.06

Danger



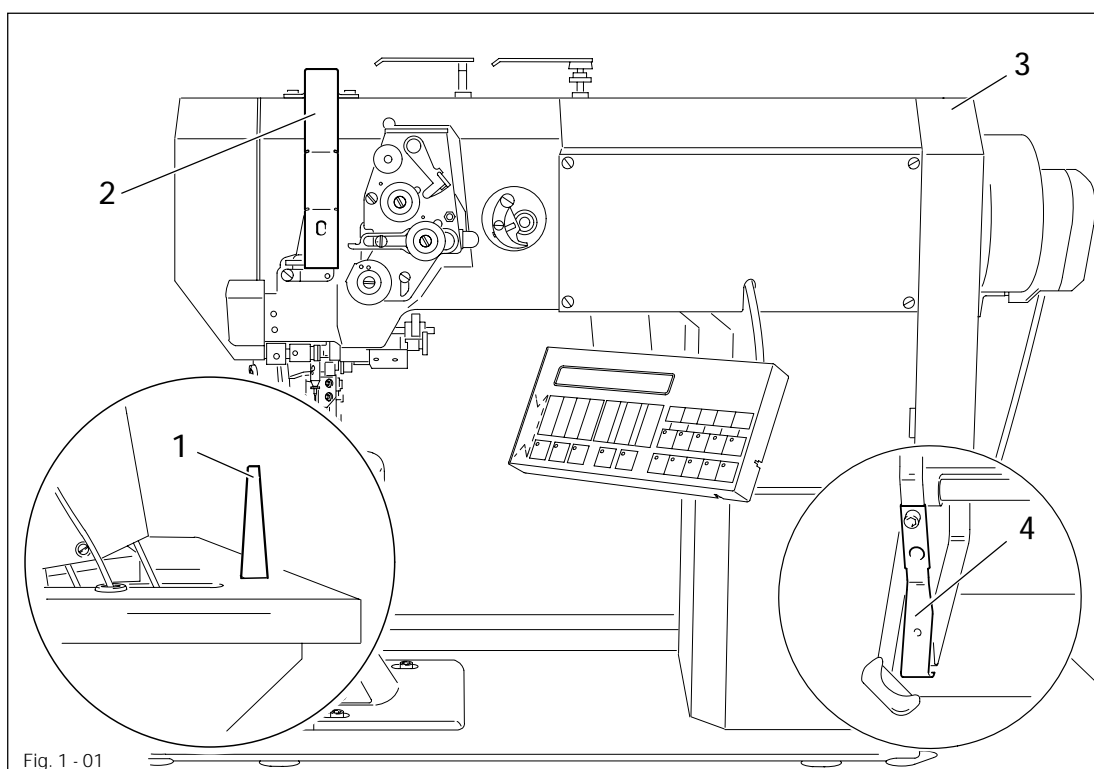
A working area of 1 meter is to be kept free both in front of and behind the machine while it is in operation so that it is always easily accessible.



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



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



Do not operate the machine without support 1!
Danger due to top-heavy sewing head!
Machine can tip over backwards when tilted!



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



Do not operate the machine without belt guards 3!
Danger of injury by the moving V-belt!



Do not operate the machine without tilt lock 4!
Danger of crushing between sewing head and table top!

2 Proper use

The PFAFF 3734-2/01 is a high-speed, single needle, postbed sewing machine (post to the right of the needle) with forwards and reverse feeding feed-wheel and roller presser.

This machine is used for sewing lockstitch seams in the clothing industry.



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 3734-2/01 ▲**

Stitch type: 301 (lockstitch)

Handwheel eff. dia. 65 mm

Roller presser clearance: 9 mm

Clearance width: 245 mm

Clearance height: 115 mm

Post height: 180 mm

Sewing head dimensions:

Length: approx. 615 mm

Width: approx. 240 mm

Height (above table): approx. 500 mm

Bed-plate dimensions: 518 x 177 mm

Max. speed: 2800 s.p.m. ♦

Connection data:

Operating voltage: 230 V ± 10%, 50/60 Hz

Max. power consumption: 1,2 kVA

Fuse protection: 1 x 16 A, inert

Working noise level:

Emission level at workplace at a speed of 2700 spm.: 80 dB(A)

(Noise measurement in accordance with DIN 45 635-48-A-1)

Net weight of sewing head: approx. 61 kg

Gross weight of sewing head: approx. 71 kg

▲ Subject to alteration

♦ Depending on material, operation and stitch length

3.02 Model, needles and threads

Model: A

Needle system: 134-35 R

Needle size in 1/100 mm: 80

Max. thread size (Nm) synthetic *: 60 - 60

* Or comparable thicknesses of other thread types

4 Disposal of machines

- The proper disposal of machines 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, complete machines (with table and motor) are delivered without packaging.

Machines without a table (sewing head with motor only) and machines for export 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.

Always ensure that the machine is only transported upright.

5.03 Disposal of the packaging

The packaging of these machines consists of paper, cardboard and VCE fibre.

The proper disposal of the packaging is the responsibility of the customer.

5.04 Storage

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

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

Explanation of the symbols

6 Explanation of the symbols

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

The symbols used have the following meanings:



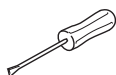
Note, information



Cleaning, care



Lubrication, greasing



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

7 Controls

7.01 On/off switch

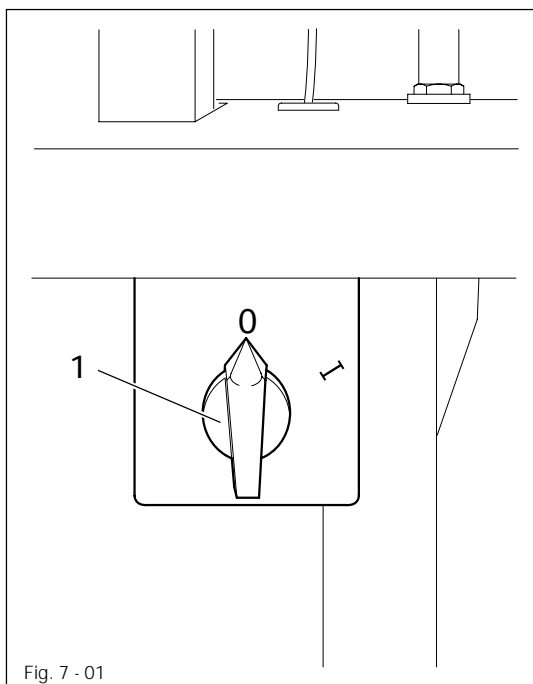


Fig. 7 - 01

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

7.02 Pedal

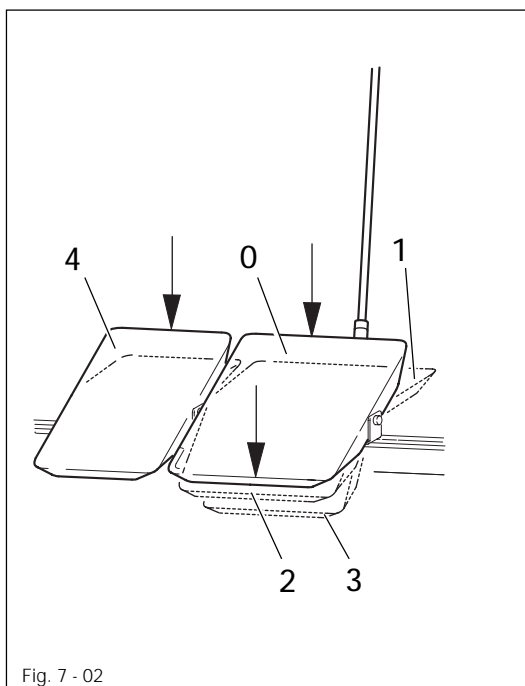
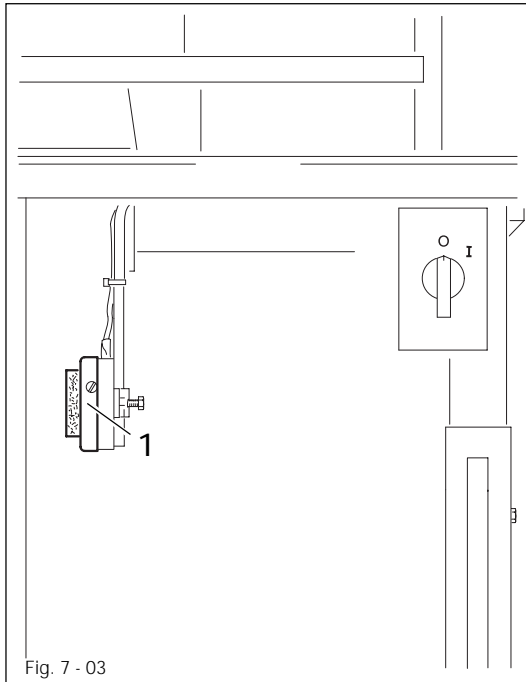


Fig. 7 - 02

- 0 = Neutral position
- 1 = Sewing
- 2 = Raise roller presser
- 3 = Trim thread and raise roller presser
- 1 + 4 = Variable application of fullness

7.03

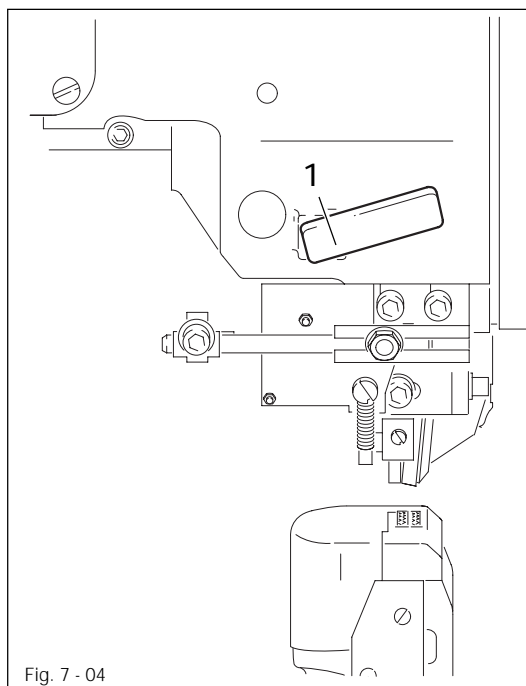
Knee switch



- By operating knee switch 1 it is possible to select 2 pre-set values for fullness.

7.04

Lever for lifting the roller presser



- The roller presser is raised by turning lever 1.

7.05 Control panel

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

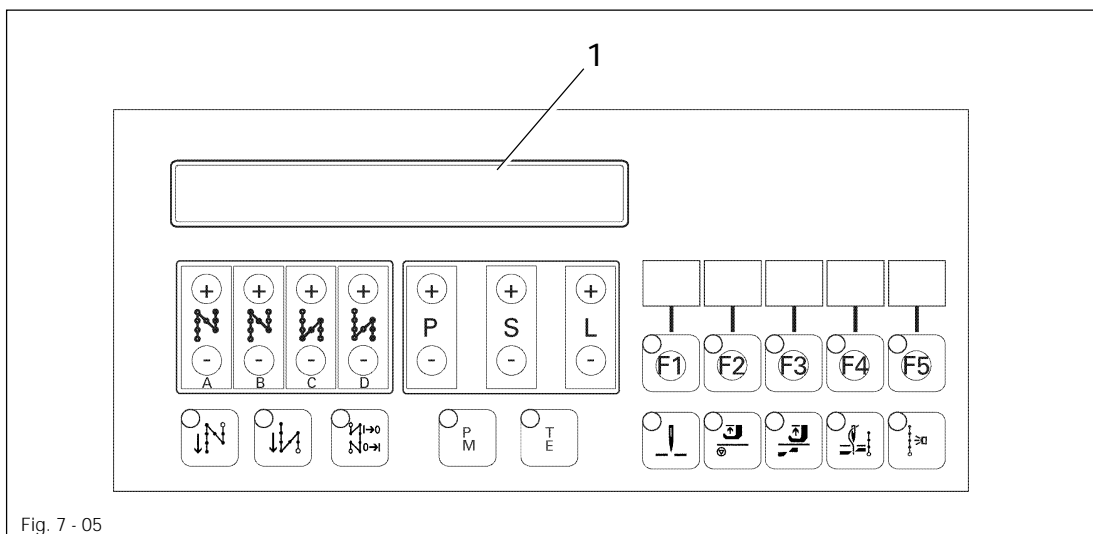


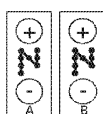
Fig. 7 - 05

7.05.01 Displays on the screen

- In sewing mode (LED in the **Parameter input** key is off) the actual values are shown on the screen when the corresponding function keys are operated.
- When the left pedal is used for applying variable amounts of fullness, the fullness is displayed as a bar diagram on the screen.
- When parameters are entered, the selected parameter with its corresponding value is displayed.

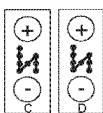
7.05.02 Key functions

The keys described below are used basically to select machine functions for setting-up the machine, for sewing operation and for entering parameters.



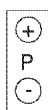
Starttack stitches forwards/in reverse

- In sewing mode the number of forward stitches (key A) or reverse stitches (key B) for the starttack can be changed with these keys. The current value is displayed on the screen when the corresponding key is operated.



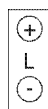
Endtack stitches forwards/in reverse

- In sewing mode the number of reverse stitches (key C) or forward stitches (key D) for the endtack can be changed with these keys. The current value is displayed on the screen when the corresponding key is operated.



Stitch length roller presser

- In sewing mode the stitch length (feed stroke) of the roller presser can be changed with this key. The current value is displayed on the screen when the key is operated.



Stitch length feed wheel

- In sewing mode the stitch length (feed stroke) of the feed wheel can be changed with this key. The current value is displayed on the screen when the key is operated.



Starttack on/off

- With this key the starttacks can be switched on or off.
When the LED is on, starttacks are sewn.



Endtack on/off

- With this key the endtacks can be switched on or off.
When the LED is on, endtacks are sewn.



Backtack suppression

- Press the key **once**: starttacks are not sewn.
- Press the key **twice**: start- and endtacks are not sewn



Program key

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



Parameter input

- After this function has been activated (LED is on) you are in the parameter input function.
After the function has been switched off, you return to sewing mode.



to



Keys F1 – F5

- These keys have no function in sewing mode.
- When the code number is entered, these keys correspond to the numbers 1 – 5.



Needle position

- The needle position can be selected with this key.
When the function is switched on (LED on): The needle positions at t.d.c. when sewing stops.
When the function is switched off (LED off): The needle positions at b.d.c. when sewing stops.
- When the code number is entered, this key corresponds to number 6.



Presser foot position when sewing stops

- The position of the presser foot when sewing stops can be selected with this key.
When the function is switched on (LED on): The presser foot is raised when sewing stops.
When the function is switched off (LED off): The presser foot is lowered when sewing stops.
- When the code number is entered, this key corresponds to number 7.



Presser foot position after thread trimming

- The position of the presser foot after thread trimming can be selected with this key.
When the function is switched on (LED on): The presser foot is raised after thread trimming.
When the function is switched off (LED off): The presser foot is lowered after thread trimming.
- When the code number is entered, this key corresponds to number 8.



Thread trimmer on/off

- With this key the thread trimmer can be switched on or off.
When the LED is on, the thread can be trimmed with the pedal function.
- When the code number is entered, this key corresponds to number 9.



Enter key

- This key has no function in sewing mode.
- When the code number is entered, the number sequence is taken over by pressing this key (enter function).

8 Mounting and commissioning the machine



The machine must only be mounted and commissioned by qualified personnel! All relevant safety regulations are to be observed!



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

8.01 Mounting

The necessary electricity supply must be available at the machine's location. There must be a stable and horizontal surface and adequate lighting at the machine's location.



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

8.01.01 Adjusting the table-top height

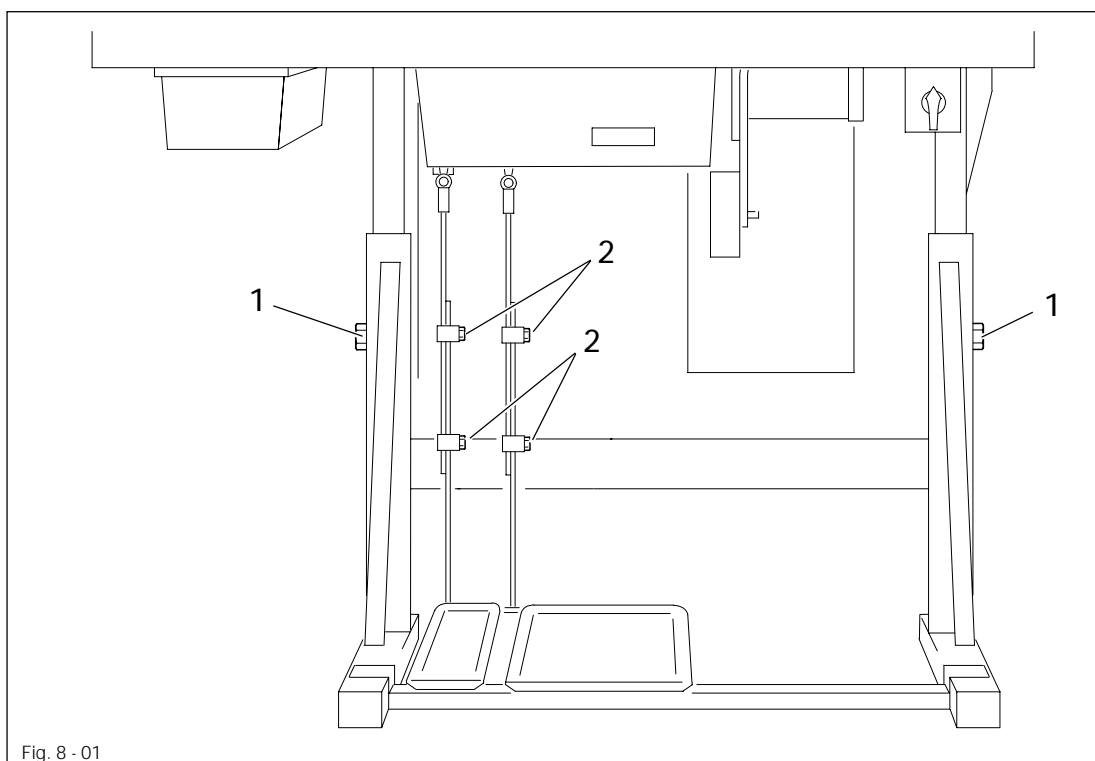
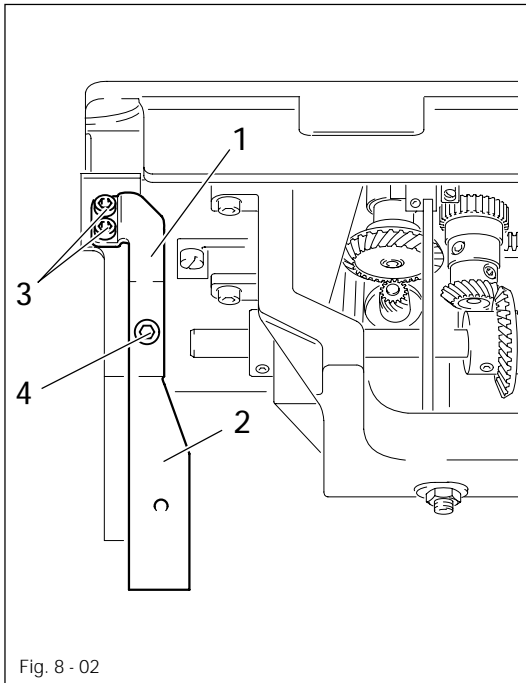


Fig. 8 - 01

- Loosen screws 1 and 2 and set the desired table-top height
- Tighten screws 1 well.
- Adjust the position of the pedal so that you can operate it comfortably and tighten screw 2.

Mounting and commissioning the machine

8.01.02 Fitting the tilt lock

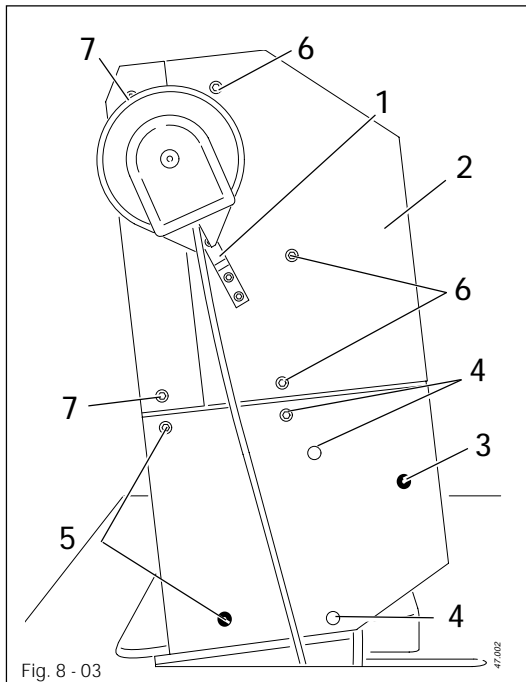


- Screw on tilt lock parts 1 and 2, provided in the accessories, using screws 3 and 4.



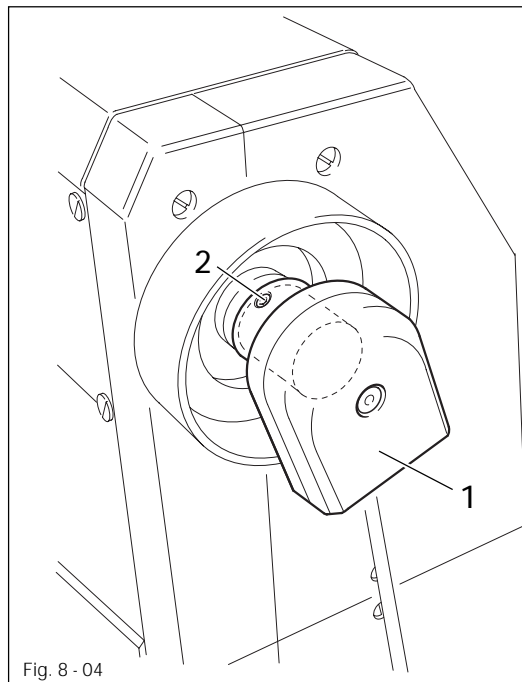
Do not operate the machine without tilt lock 1!
Danger of crushing between sewing head and table top!

8.01.03 Mounting the upper V-belt guard



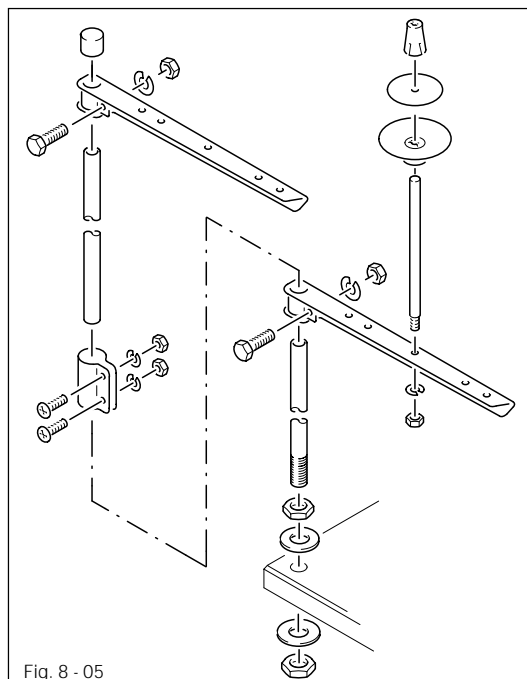
- Screw position stop 1 onto the right half of V-belt guard 2.
- Slide the slots of lower belt guard 3 behind the heads of mounting screws 4 and fasten with screws 5. Then tighten screws 4 through the holes.
- Mount the right and left halves of belt guard with screws 6.

8.01.04 Mounting the synchronizer



- Slide synchronizer 1 onto the shaft.
- Tighten screws 2 slightly.
- Plug the synchronizer plug into the electrical socket of the control box.
- Adjust the synchronizer (see chapter 12.04.01 Adjusting the synchronizer).

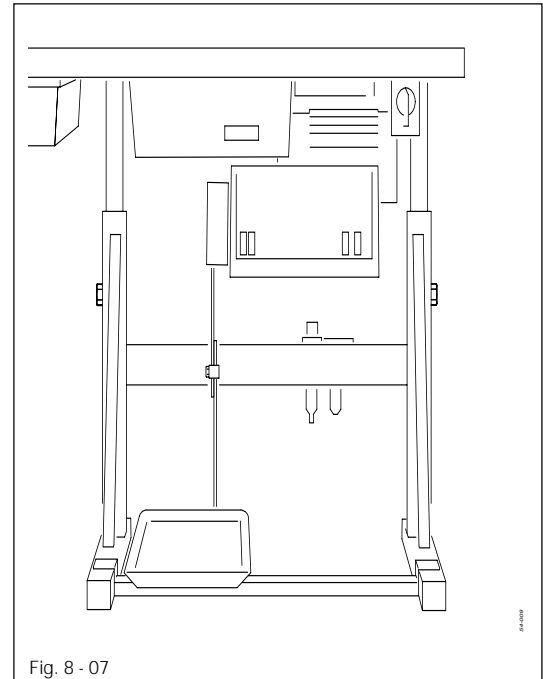
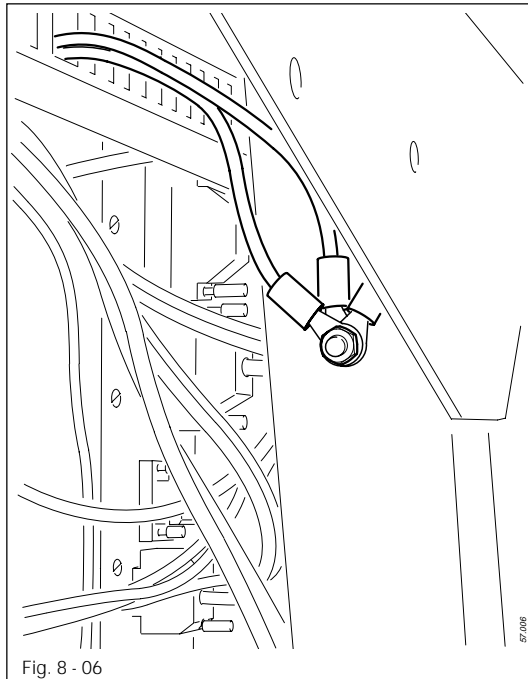
8.01.05 Mounting the spool holder



- Mount the spool holder as shown in Fig. 8 - 07.
- Insert the spool holder into the hole in the table top and affix it with the nuts enclosed.

Mounting and commissioning the machine

8.01.06 Attaching the earthing wire / connecting the plug connections



- Screw the earthing wires from the sewing head, the main switch and the control box to the stand.
- Insert all plug connections in the control box as designated.

8.02 Commissioning

- Check the machine, in particular the electric leads, for any damage.
- Clean the machine thoroughly and oil it, or top up the oil (see **Chapter 11 Care and Maintenance**).
- Have mechanics ensure that the machine's motor can be operated with the available electricity supply and that it is connected correctly to the terminal box. If not, do not operate the machine under any circumstances.

8.03 Switching the machine on/off

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

9

Preparation



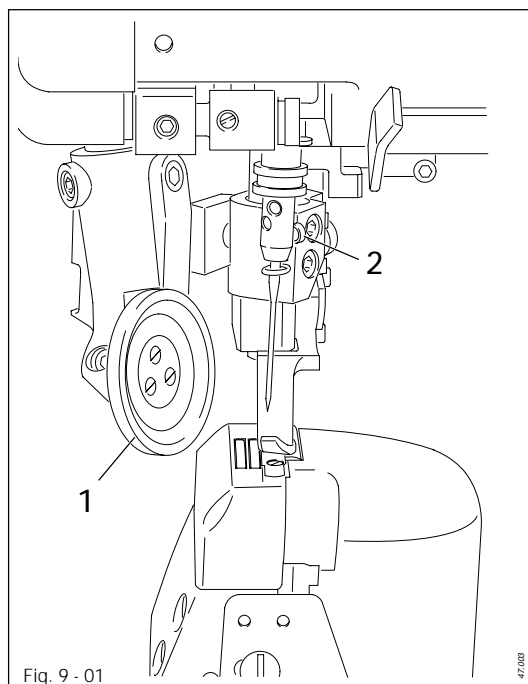
All regulations and instructions in this Instruction Manual are to be observed!
Special attention is to be paid to the safety regulations!



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



Turn the machine off!

Use only system 134-35R needles.

- Raise roller presser 1.
- Swing the eye guard upwards.
- Pull roller presser 1 downwards slightly and swing it out to the left.
- Loosen screw 2 and insert needle 3 until you feel it stop. The long groove must be facing the left.
- Tighten screw 2 and swing the roller presser back.



The selection of the correct needle depends on the model of the machine and the material and threads being sewn (see chapter 3.02 Needle and thread).

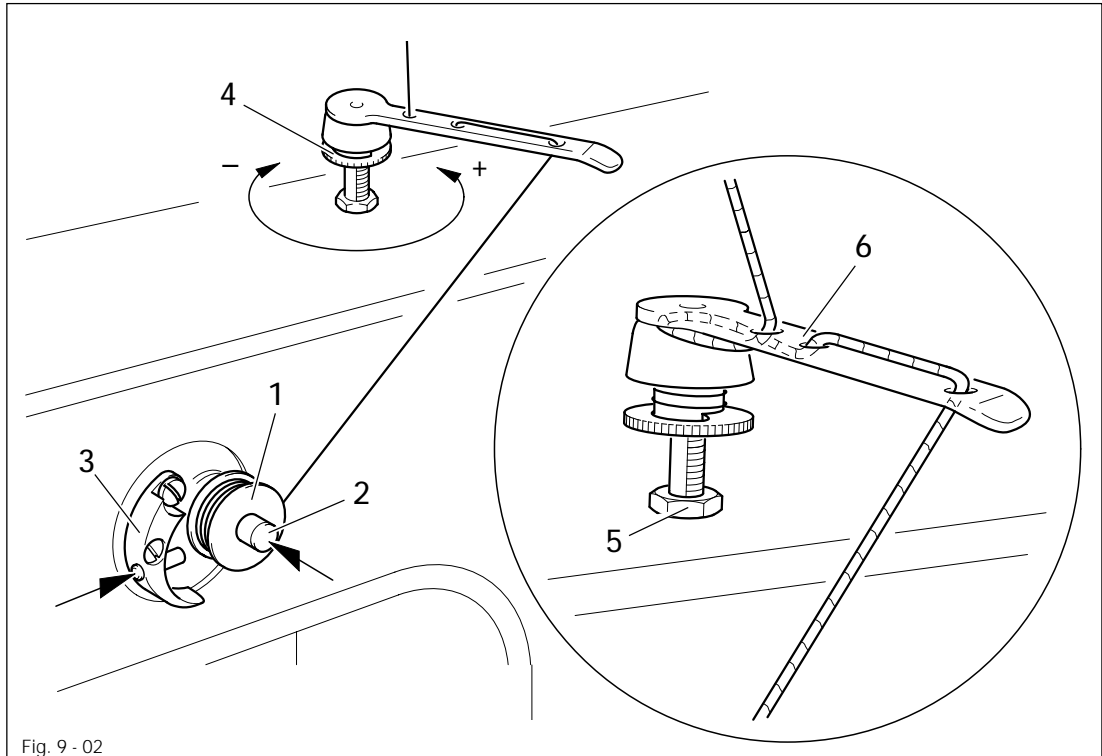


Fig. 9 - 02

- Place an empty bobbin 1 onto bobbin winder spindle 2.
- Thread the bobbin in accordance with Fig. 9 - 02 and wind it clockwise around bobbin 1 a few times.
- Switch on the bobbin winder by pressing the bobbin winder spindle 2 and lever 3 at the same time.



The bobbin fills up while you are sewing.

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

If the thread is wound unevenly:

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

9.03 Removing / Inserting the bobbin case

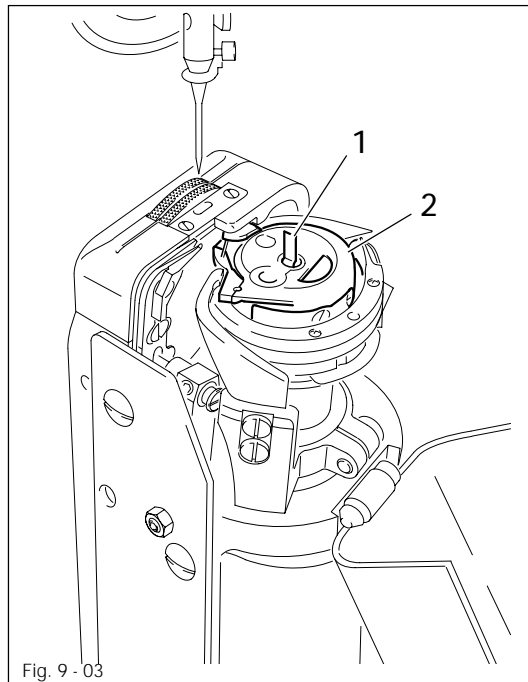


Fig. 9 - 03



Turn the machine off!

Removing the bobbin case:

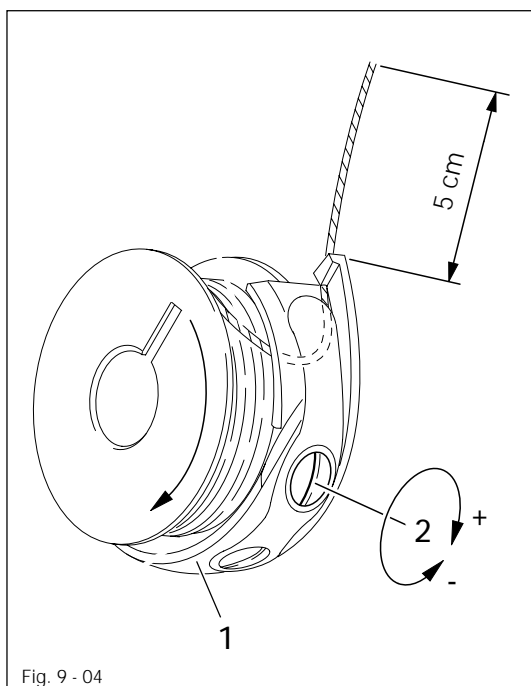
- Open the post cap.
- Raise latch 1 and remove bobbin case 2.

Inserting the bobbin case:

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

9.04

Threading the bobbin case / Adjusting the bobbin thread tension



- Insert the bobbin into the bobbin case 1.
- Pass the thread through the slot under spring 2.
- Pass the thread through the notch.
- Adjust the thread tension by turning screw 3.



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

9.05

Threading the needle thread / adjusting the needle thread tension

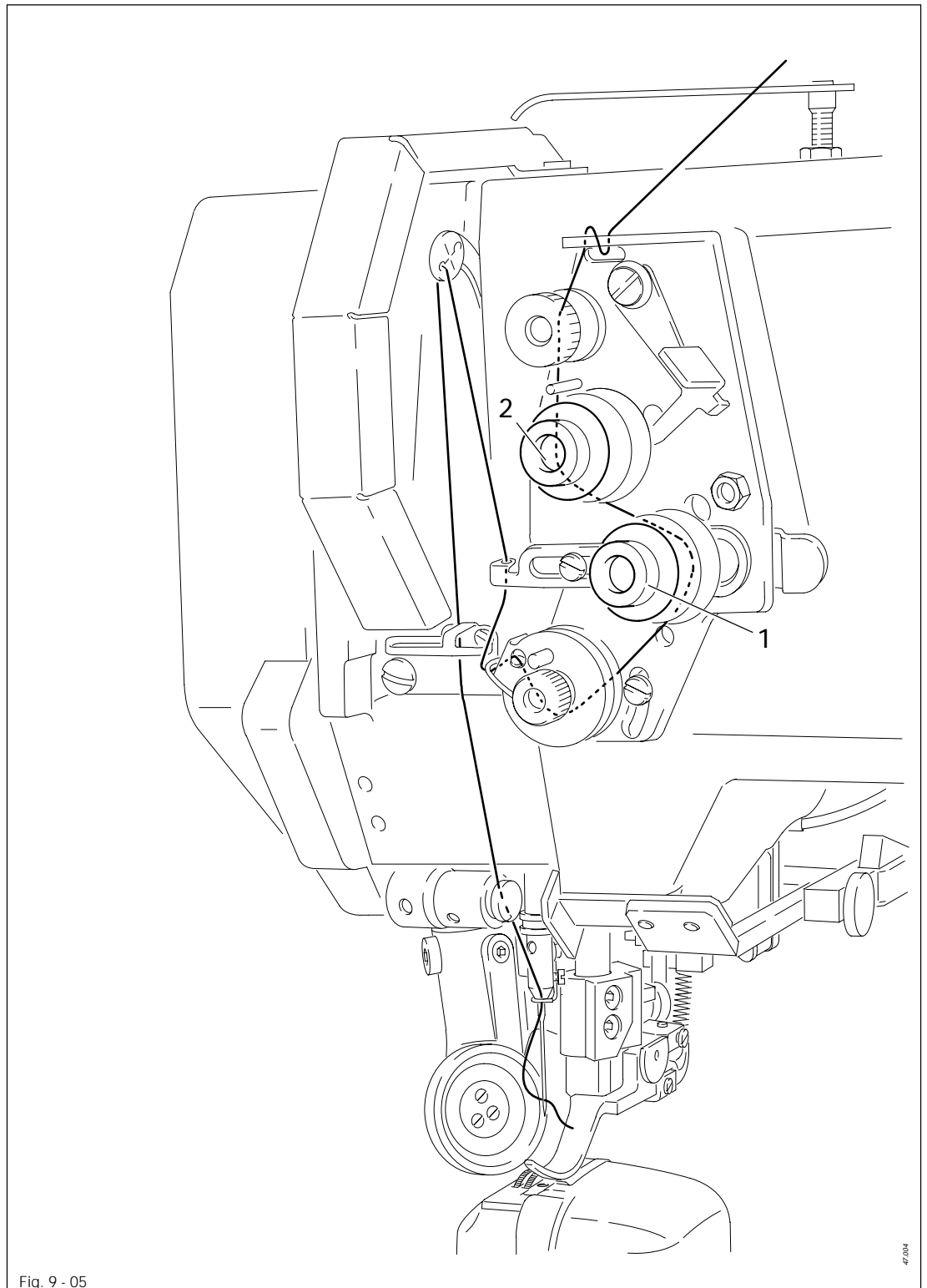


Fig. 9 - 05



Switch off the machine!

- Thread needle thread as shown in Fig. 9-05.
- Adjust the needle thread tension by turning knurled screws 1 and 2.

9.06 Setting the stitch length / fullness

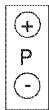
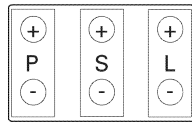
The stitch length is determined by setting the feed strokes of the roller presser and feed wheel. To apply fullness the feed stroke of the roller presser must be larger than that of the feed wheel.

9.06.01 Entering the standard stitch length / fullness

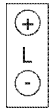
After the machine has been switched on, the current values for the stitch lengths of the roller presser and feed wheel are shown on the display screen.

- Switch on the machine.

2.4 2.4



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



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

9.06.02 Entering a second stitch length / fullness



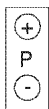
With the **program key** a second fullness setting can be stipulated in addition to the standard setting. When the **program key** is activated, it is possible to switch from one fullness to the other using the knee switch.

- Switch on the machine.

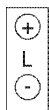


- Press the **program key**.

- Sew 1 – 2 stitches and operate the knee switch.

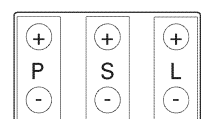
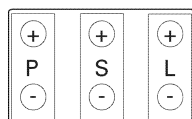


- Set the stitch length (feed stroke) of the roller presser by pressing +/- (key P).



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

3.0 2.0 < Knee switch > 2.4 2.4



9.06.03 Entering the fullness range for pedal adjustment

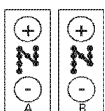
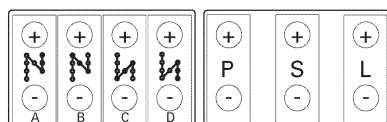
It is possible to pre-set the fullness range which can be selected using the left pedal.

- Switch on the machine



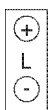
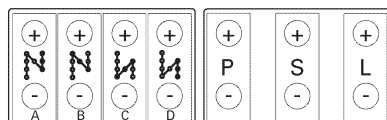
- Press the **Parameter input** key (LED on).

100



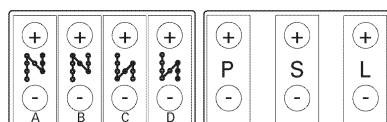
- By pressing **Key A** select the parameter " 100 " with +/-.
- By pressing **Key B** select the parameter " 103 " with +/-.

103 3.5



- By pressing **Key L** enter the required value with +/-.

103 4.0



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

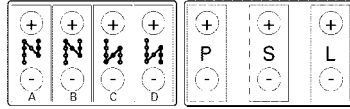
9.07 Entering / adjusting the code number.

- Switch on the machine.



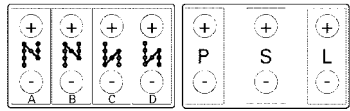
- Press the **Parameter input key** (LED on).

100



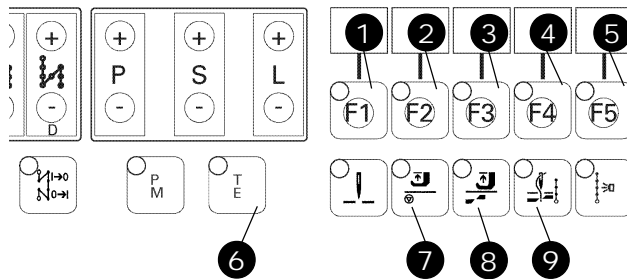
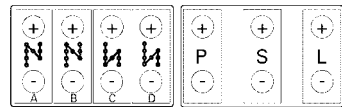
- Select the required parameter by pressing the **plus/minus key**.

801



- Enter the code number (factory code setting is "1493").

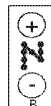
CODE 0



When entering the code number these keys correspond to the number above them!

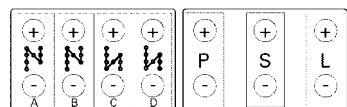


- Confirm input.



- By pressing the key **A+B** select the parameter "809" with +/-.

809



- By pressing the appropriate keys enter the new code number.



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

10 Sewing

10.01 Applying fullness

The machine must be installed and connected in accordance with **Chapter 8 Installation and Commissioning**.

- Set up the machine, see **Chapter 9 Setting up**.
- Switch on the machine, see **Chapter 7.01 On / off switch**.
- If necessary change the amount of fullness, see **Chapter 9.06.01 Standard stitch length / fullness**.



- The second amount of fullness can be selected by operating the knee switch when the **program key** is activated (LED on). Also see **Chapter 9.06.02 Entering a second stitch length / fullness**.
- The sewing functions are selected with the right pedal, see **Chapter 7.02 Pedal**.
- To adjust the variable fullness within a specified range, operate the left pedal accordingly.

11 Care and maintenance

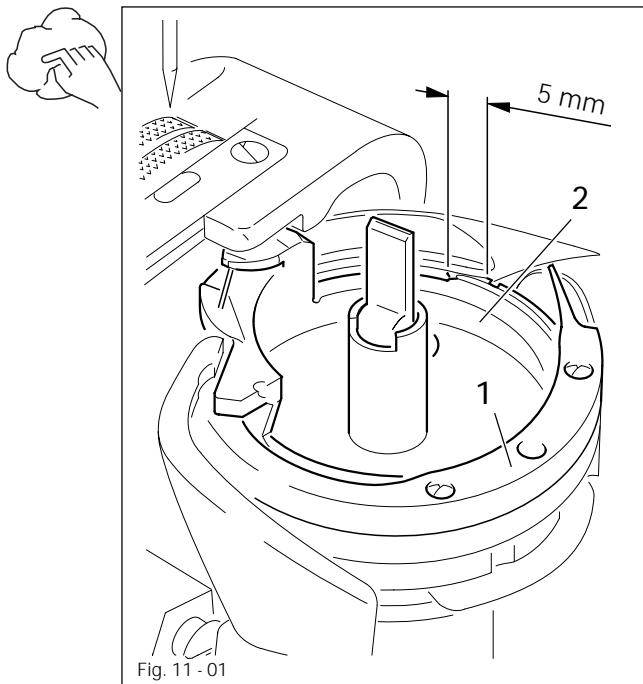
Cleaning	daily, several times if in continuous use
Checking the oil level (lubricating the head parts)	daily before use
Lubricating the hook	daily before use
Lubricating the bevel gears	once a year
Cleaning the air filter	once a week



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

11.01 Cleaning

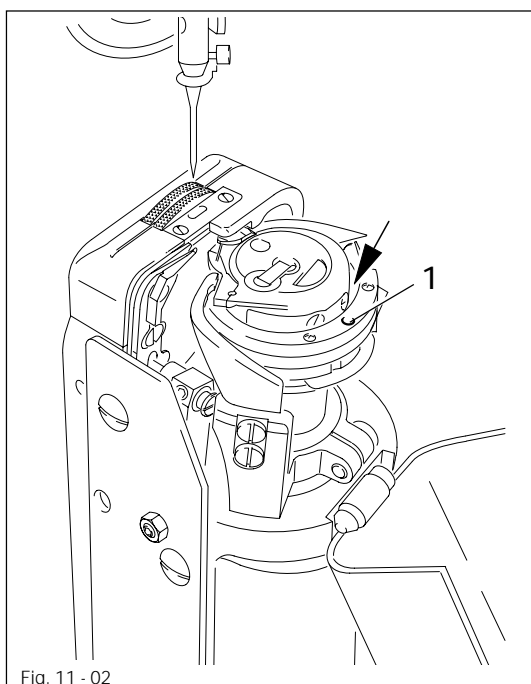
Clean the hook and hook compartment daily, more often if in continuous operation.



Turn the machine off!

- Bring the needle bar to its highest position.
- Open the post cap and remove the bobbin case cap and the bobbin.
- Unscrew hook gib 1.
- Turn the handwheel until the point of bobbin case 2 penetrates into groove approx. 5 mm.
- Remove bobbin case 2.
- Clean the hook race with paraffin.
- When inserting the bobbin case 2, ensure that the horn of the bobbin case 2 meshes in the groove of the needle plate.
- Screw hook gib 1 back on.
- Insert the bobbin case with the bobbin and close the post cap.

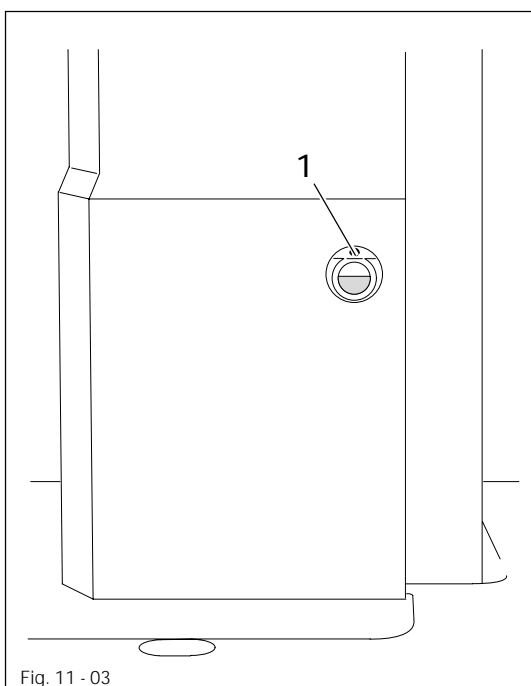
11.02 Lubricating the hook



Turn the machine off!

- Apply 1-2 drops of oil into hole 1 of the hook gib every day.
- Before commissioning and after longer standstill periods, also apply a few drops of oil into the hook race. (see arrow in Fig. 11-02)

11.03 Filling the oil reservoir



Check the oil level before every use.

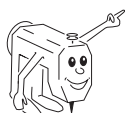
- Fill oil through hole 1 into the reservoir as required.



There must always be oil in the oil reservoir.

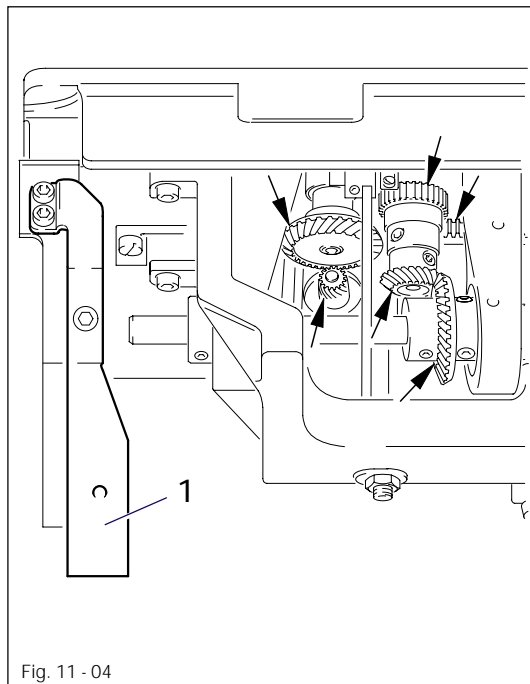


Use only oil with a mean viscosity of 22.0 mm²/s at 40°C and a density of 0.865 g/cm³ at 15°C.



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

11.04 Lubricating the bevel gears

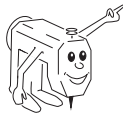


Turn the machine off!

- The bevel gears for driving the hook and the rack are to be greased once a year.
- Lay the machine head backwards onto its support.
- Brush a little grease onto all of the tooth flanks and the rack (see arrows).
- To stand the machine head up again, press safety plate 1 to the rear and stand the machine head up using both hands.



Use both hands to return the machine to an upright position.
Danger of crushing between machine head and table top.



We recommend PFAFF hard soap grease with a drop point of approx. 150°C.
Part no. 280-1-120 243.

12 Adjustment

12.01 Notes on adjustment

All following adjustments are based on a fully assembled machine and may only be carried out by expert staff trained for this purpose.

Machine covers, which have to be removed and replaced to carry out checks and adjustments, are not mentioned in the text.

The order of the following chapters corresponds to the most logical work sequence for machines which have to be completely adjusted. If only specific individual work steps are carried out, both the preceding and following chapters must be observed.

Screws, nuts indicated in brackets () are fastenings for machine parts, which must be loosened before adjustment and tightened again afterwards.

12.02 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 13 mm
- 1 set of Allan keys from 1.5 to 6 mm
- 1 adjustable clamp, (Part No. 08-880 137-00)
- 1 metal rule, (Part No. 08-880 218-00)
- 1 adjustment pin (needle position in sewing direction, Part no. 61-111 641-46)
- 1 adjustment gauge, (Part No. 08-880 136-01)
- 1 adjustment gauge, (Part No. 61-111 643-33)
- 1 adjustment pin for needle bar rinse (Part No. 61-111 641-39)
- Needles, system 134
- Sewing thread and test material

12.03 Abbreviations

TDC = top dead center

BDC = bottom dead center

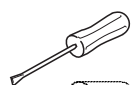
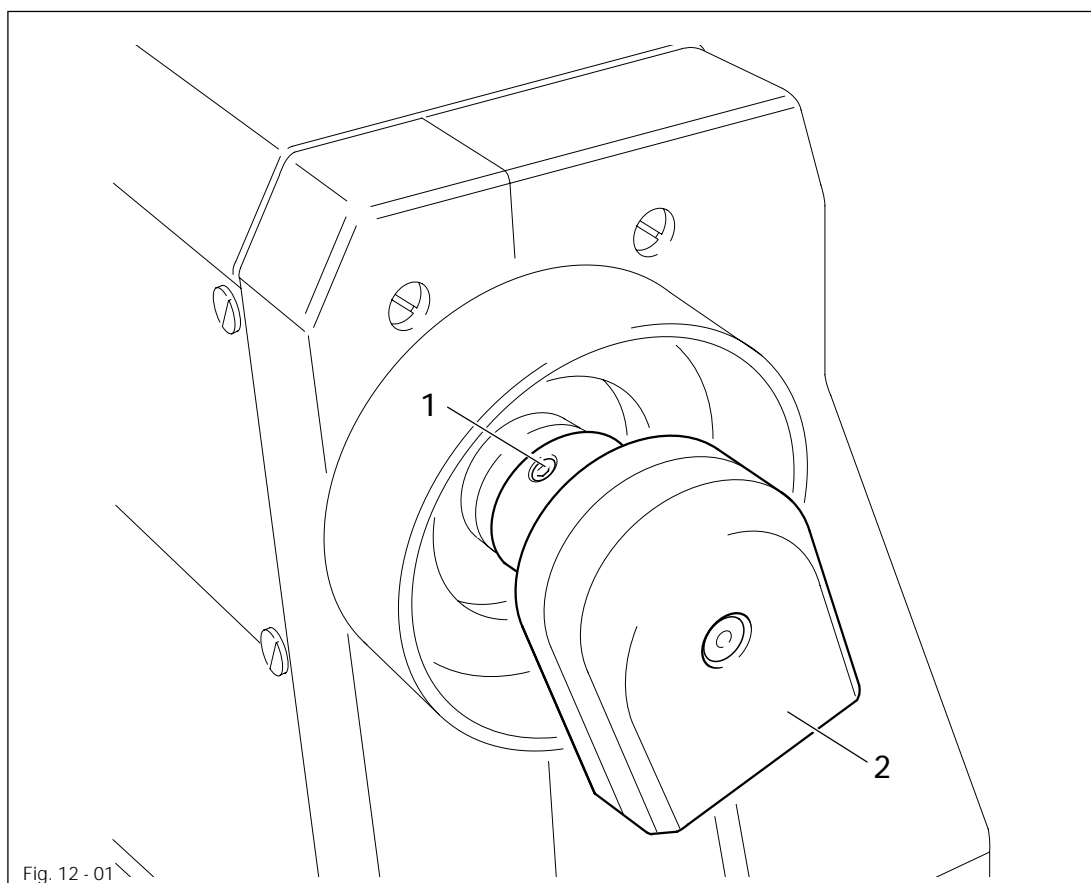
Adjustment

12.04 Adjusting the basic machine

12.04.01 Adjusting the synchronizer

Requirement

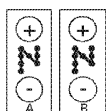
When, in the direction of sewing, the descending needle point is at the top edge of the needle plate, the machine must position.



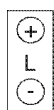
- Switch on the machine and sew a few stitches.



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



- By pressing **Key A** select the parameter " 600 " with +/-.
- Press **Key B** – enter code.
- By pressing **Key B** select the parameter " 603 " with +/-.



- Press +/- on key " L " (machine sews one stitch).

- Loosen screws **1**.
- Secure synchronizer **2** and adjust the needle bar by turning the balance wheel in accordance with the **requirement**.
- Tighten screws **1** and switch off the machine.

12.04.02 Positioning the needle in the direction of sewing

Requirement

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

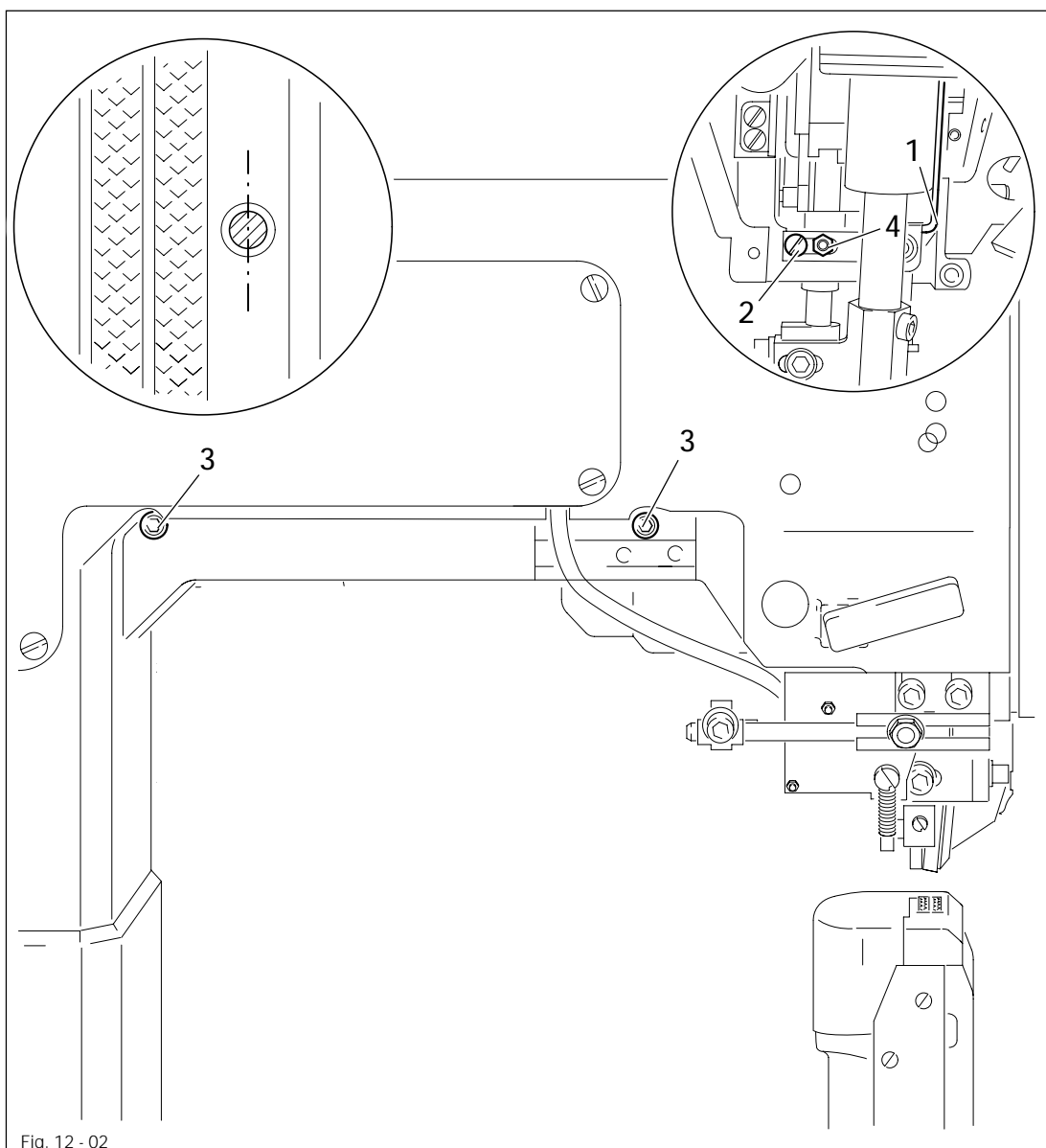
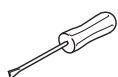


Fig. 12 - 02



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



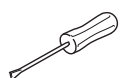
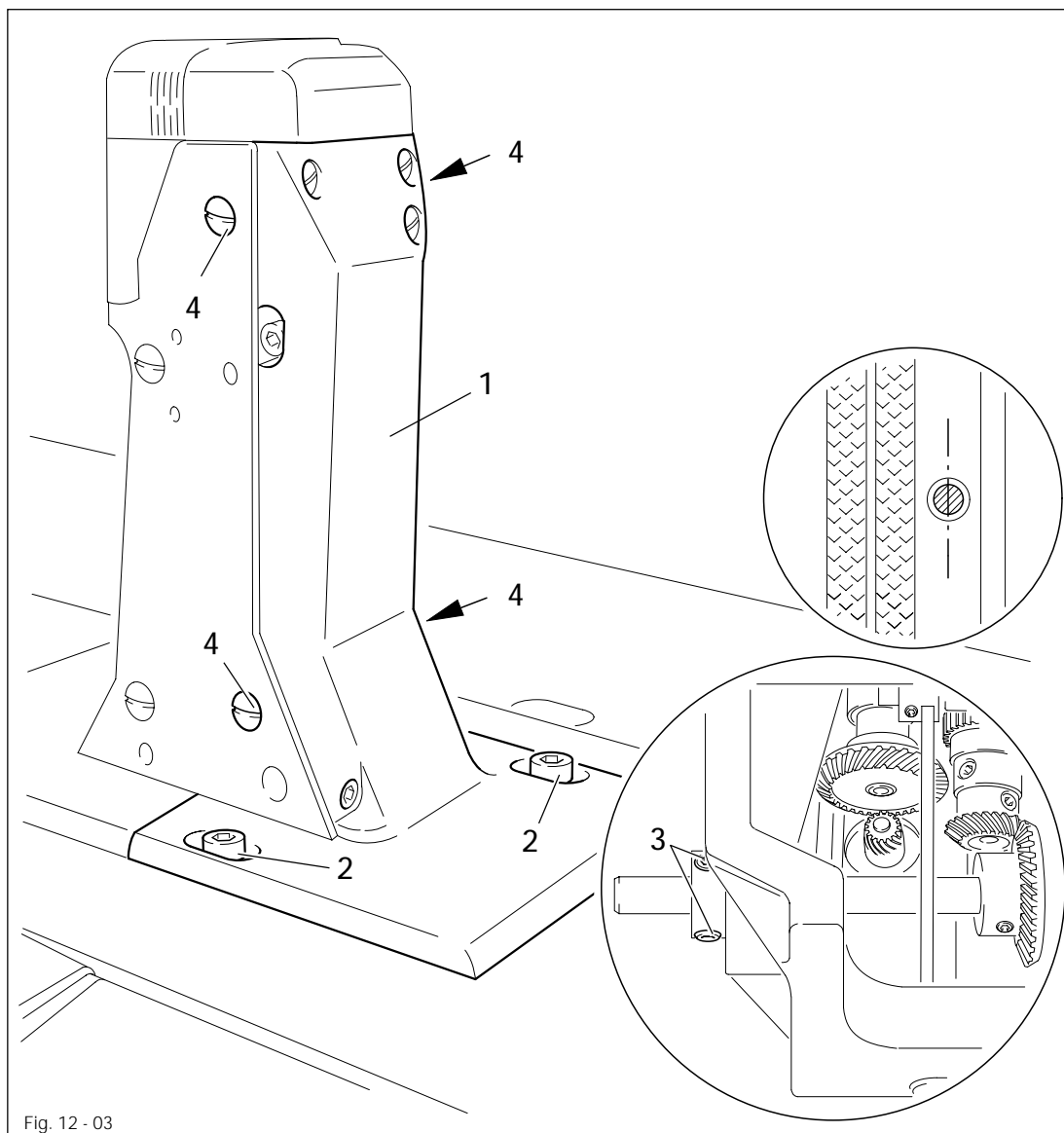
Screws 4 are accessible through the holes on the back of the housing.

Adjustment

12.04.03 Positioning the needle across the direction of sewing

Requirement

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



- Move the feed wheel post 1 (screws 2, 3 and 4) in accordance with the **requirement**.



Screws 4 remain loosened for the following adjustments.

12.04.04 Preadjusting the needle height

Requirement

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

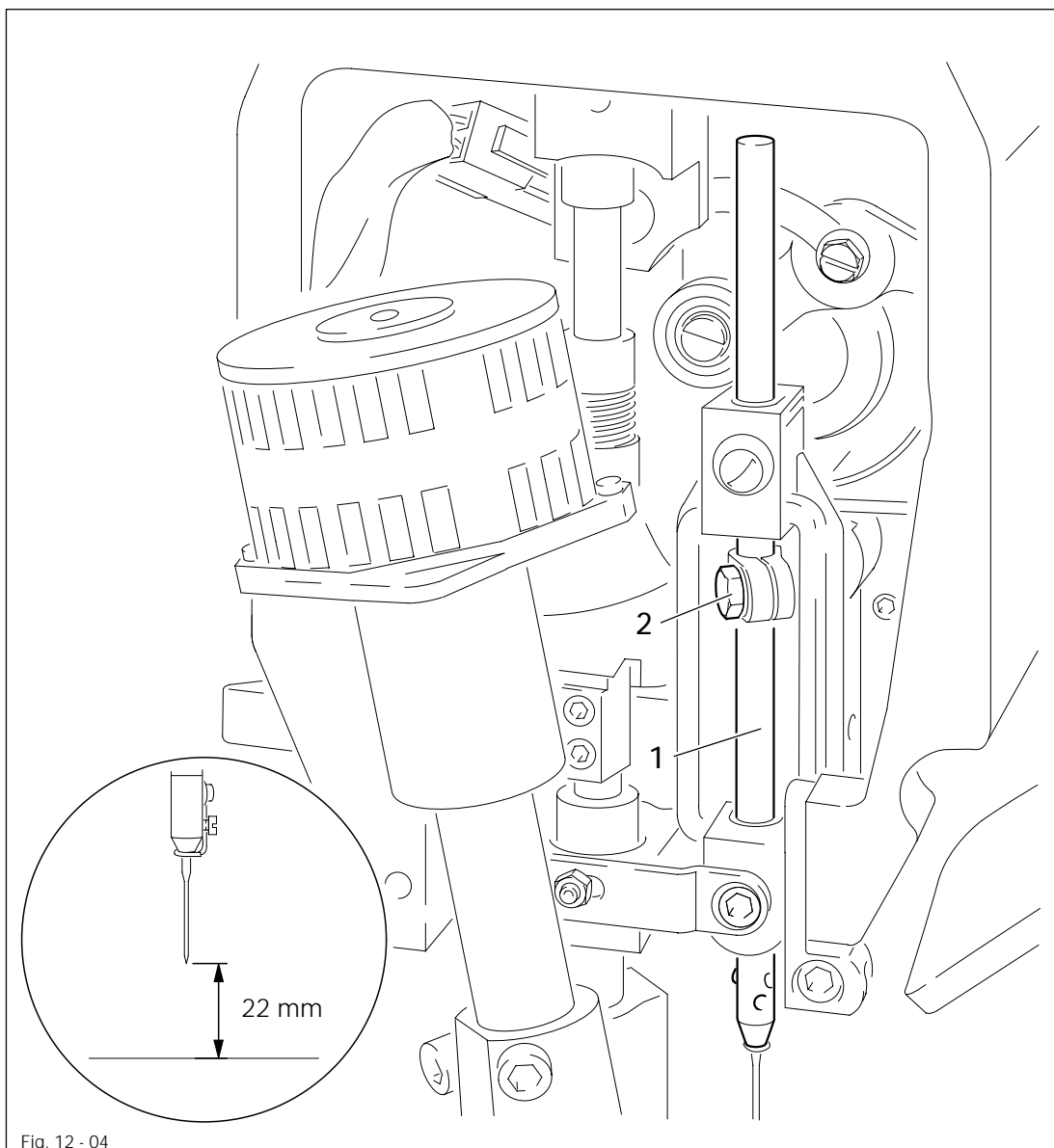
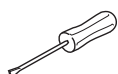


Fig. 12 - 04



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

12.04.05 Needle rise, hook-to-needle clearance, needle height and needle guard

Requirement

When the needle bar is positioned at 1.8 mm after b.d.c.

1. The point of the hook must be pointing to the centre of the needle and have a clearance of 0.05 – 0.1 mm to the needle.
2. The top edge of the needle eye must be 0.8 – 1.00 mm below the hook point and
3. The needle guard 9 must lightly touch the needle.

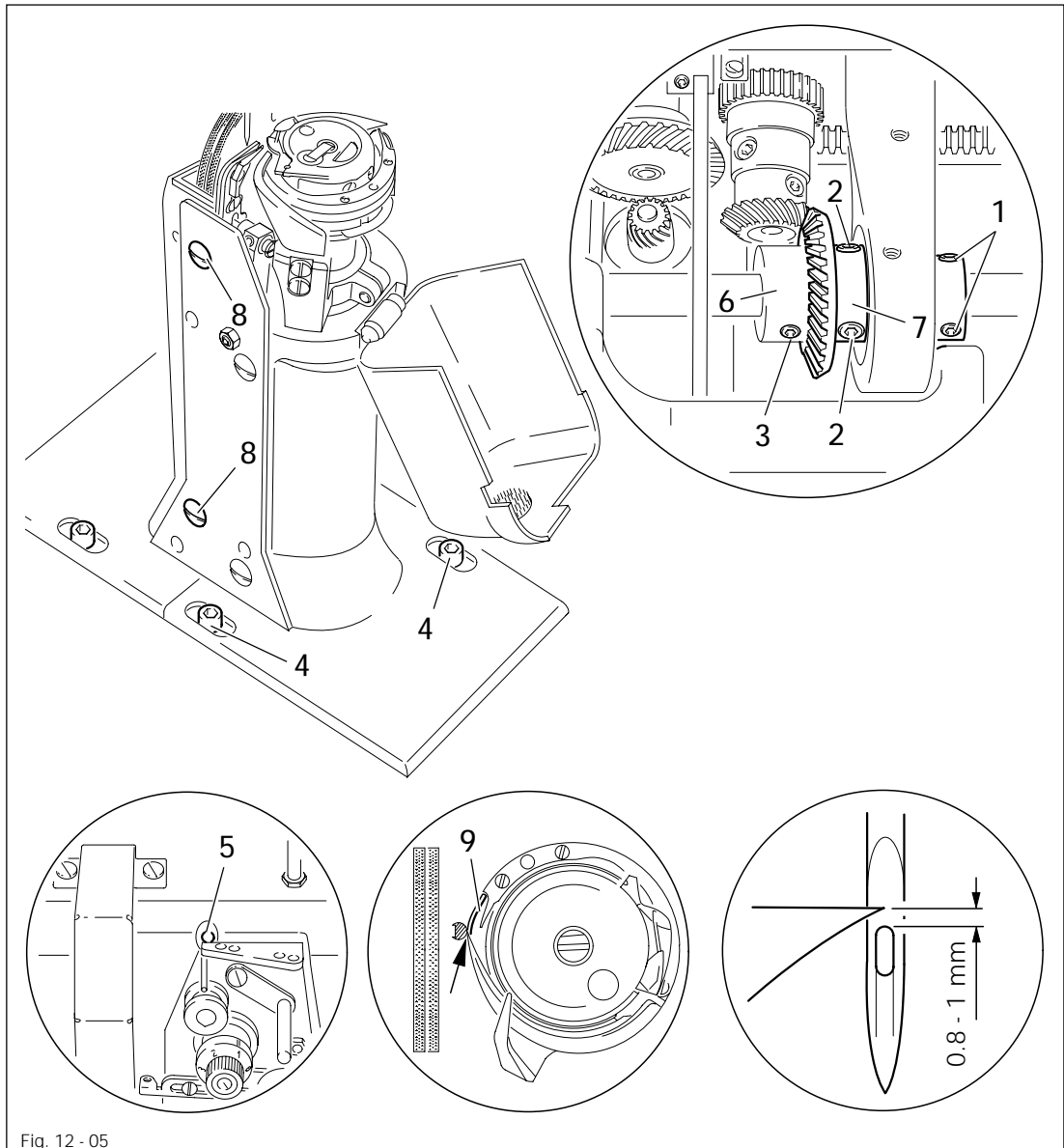
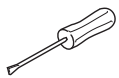


Fig. 12 - 05



- Loosen screws 1, 2, 3 and 4.
- Bring the needle bar to 1.8 after b.d.c.
- Place the adjustment pin in hole 5 and apply pressure.
- Position the hook point towards the centre of the needle, taking care to ensure that the needle is not deflected by needle guard 9.
- Adjust the needle height according to requirement 2.
- Adjust the hook post according to requirement 1 and tighten screws 4.

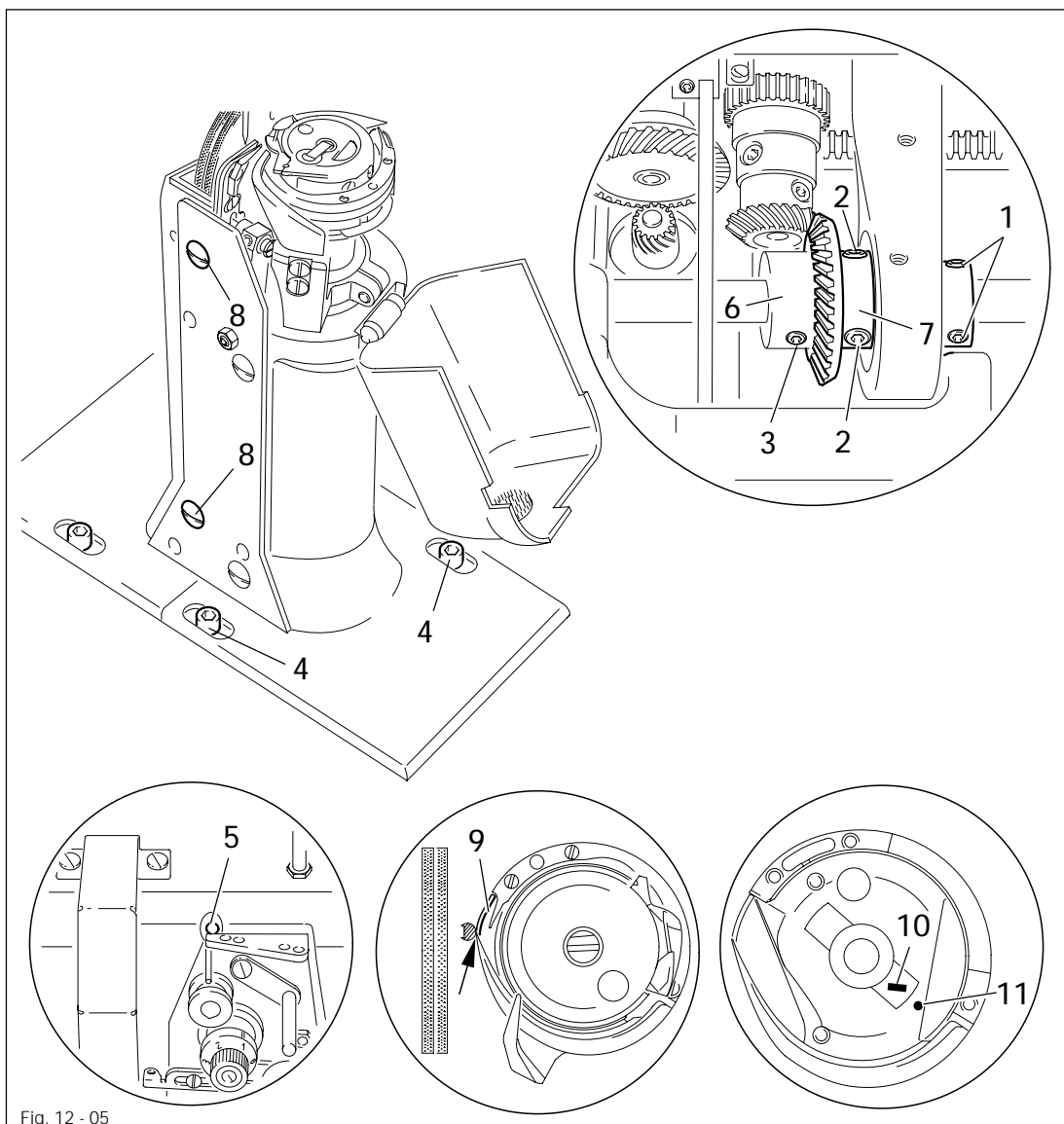


Fig. 12 - 05

- Taking the play of the bevel gear into account, tighten screws 2.
- Remove the adjustment pin from hole 5.
- Install the retaining collar 6 on bevel gear 7 and tighten screws 1 and 3.
- Tighten screws 8 on both sides of the post.
- Align needle guard 9 in accordance with requirement 3.



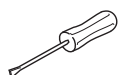
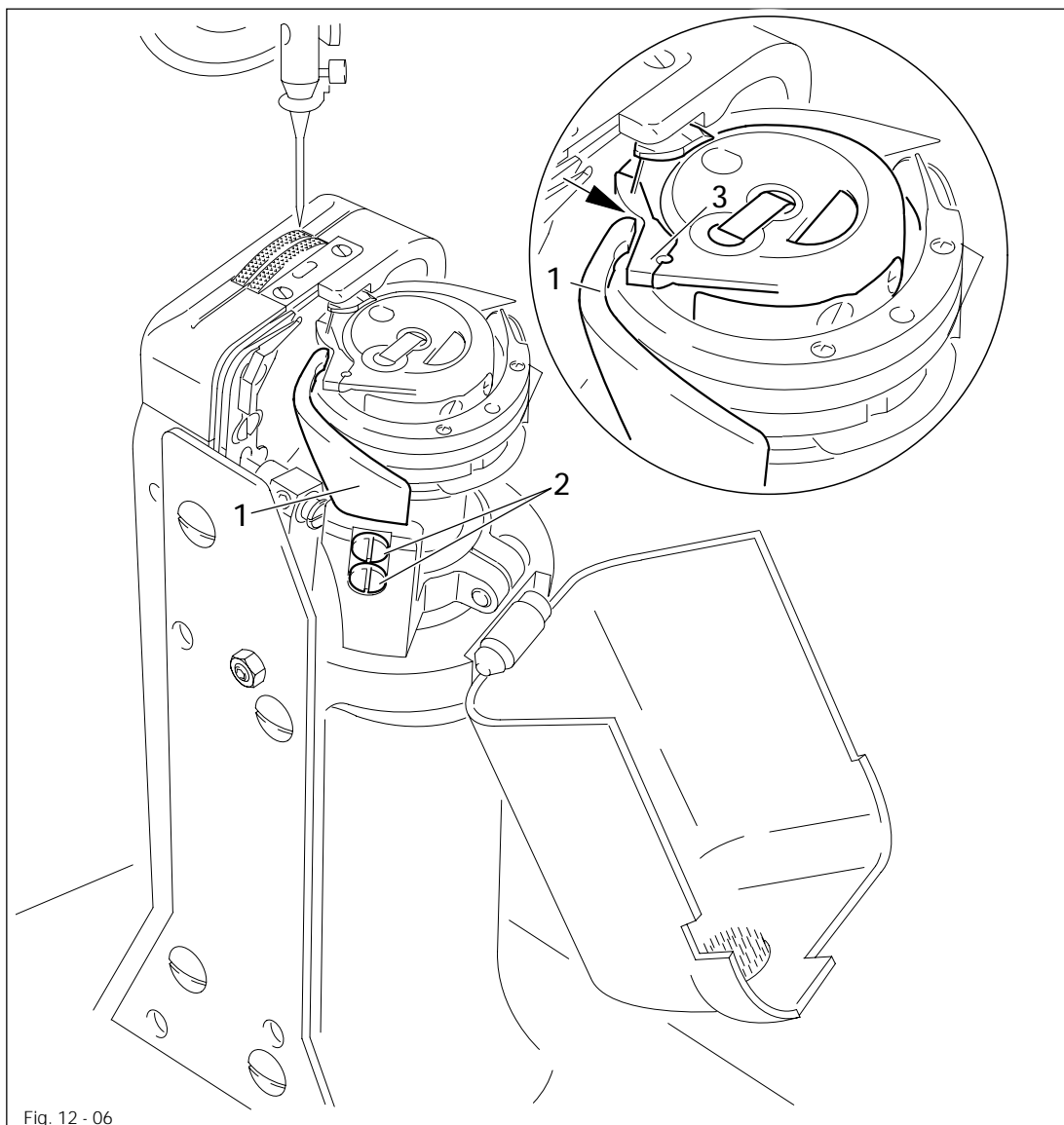
When changing the hook, care must be taken to ensure that the markings 10 and 11 are on one side.

Adjustment

12.04.06 Bobbin case opener height

Requirement

The top edges of the bobbin case opener 1 and the bobbin case base 3 must be at the same height.



- Move the bobbin case base 1 (screws 2) in accordance with the requirement.

12.04.07 Bobbin case opener stroke

Requirement

When the bobbin case opener presses the bobbin case to the furthest extent, the projection of the bobbin case must protrude **0.3 - 0.5 mm** from the rear edge of the needle plate recess.

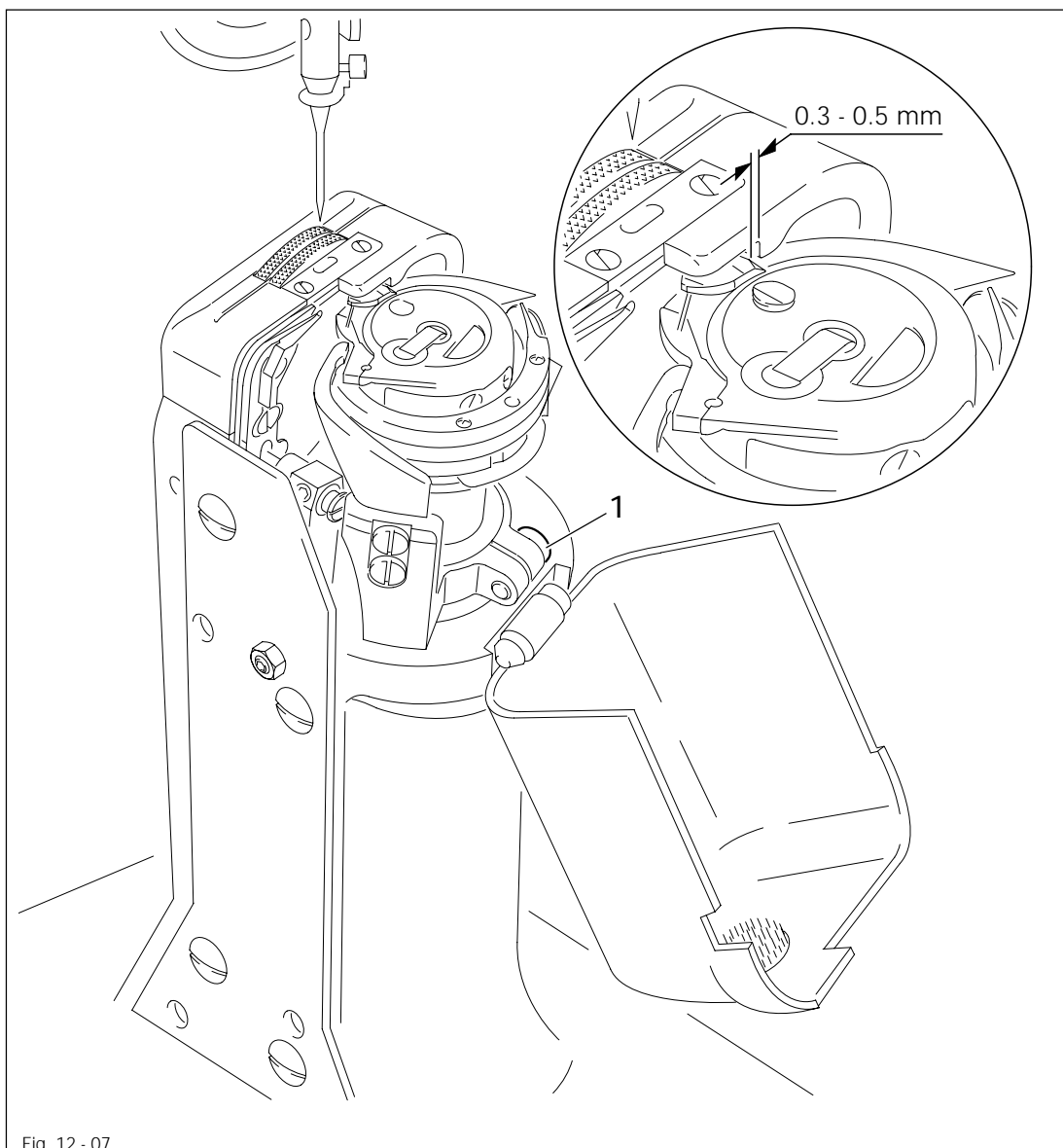
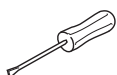


Fig. 12 - 07



- Turn the handwheel until the bobbin case opener presses against the bobbin case to the furthest extent.
- Move the bobbin case base (screw 1, accessible from the rear of the post) in accordance with the **requirement**.



This setting can vary according to the thickness of the thread.

12.04.08 Feed wheel height

Requirement

The feed wheel must protrude above the needle plate by the height of the teeth (approx. 0.8 mm).

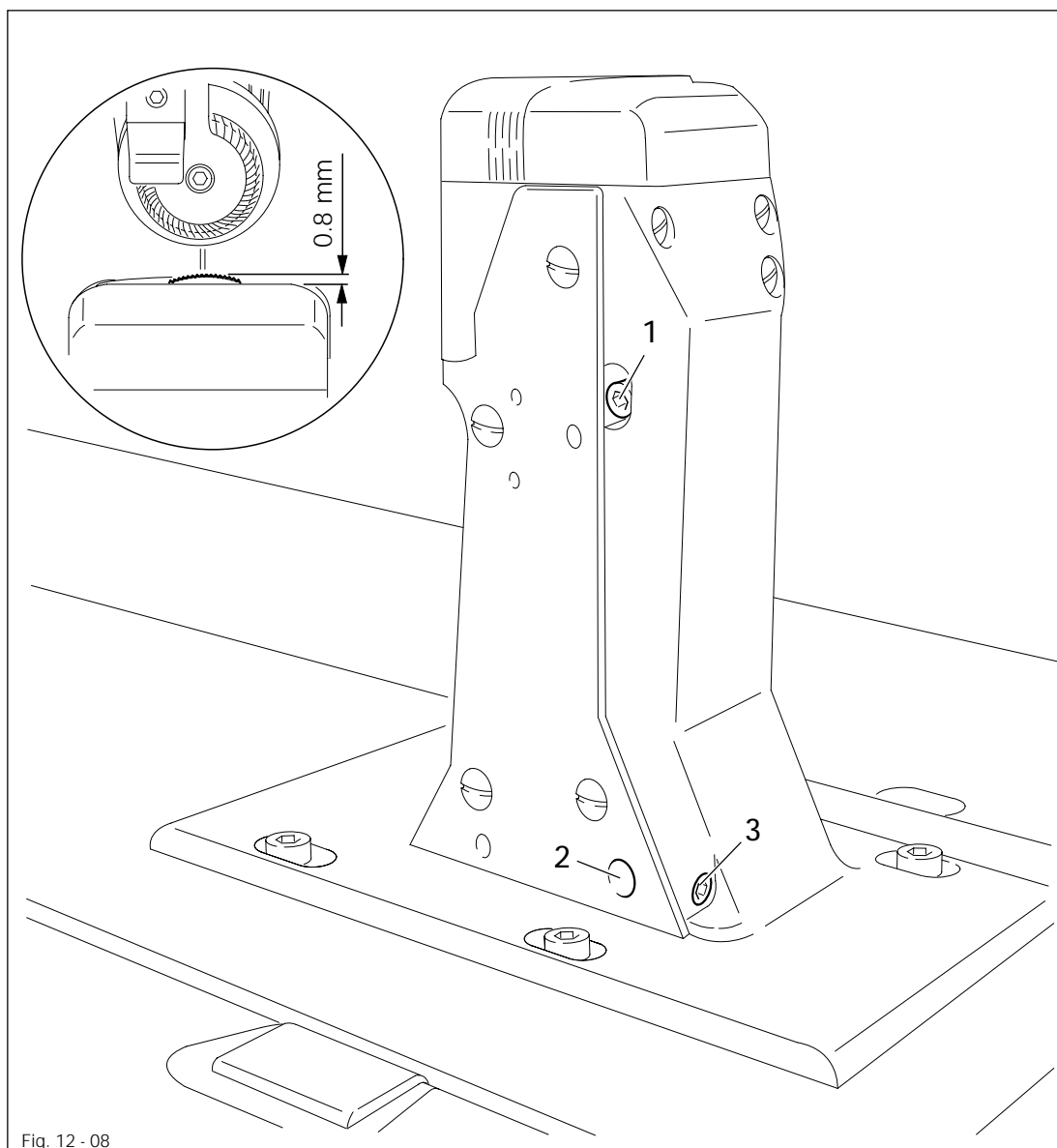
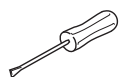


Fig. 12 - 08

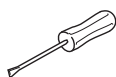
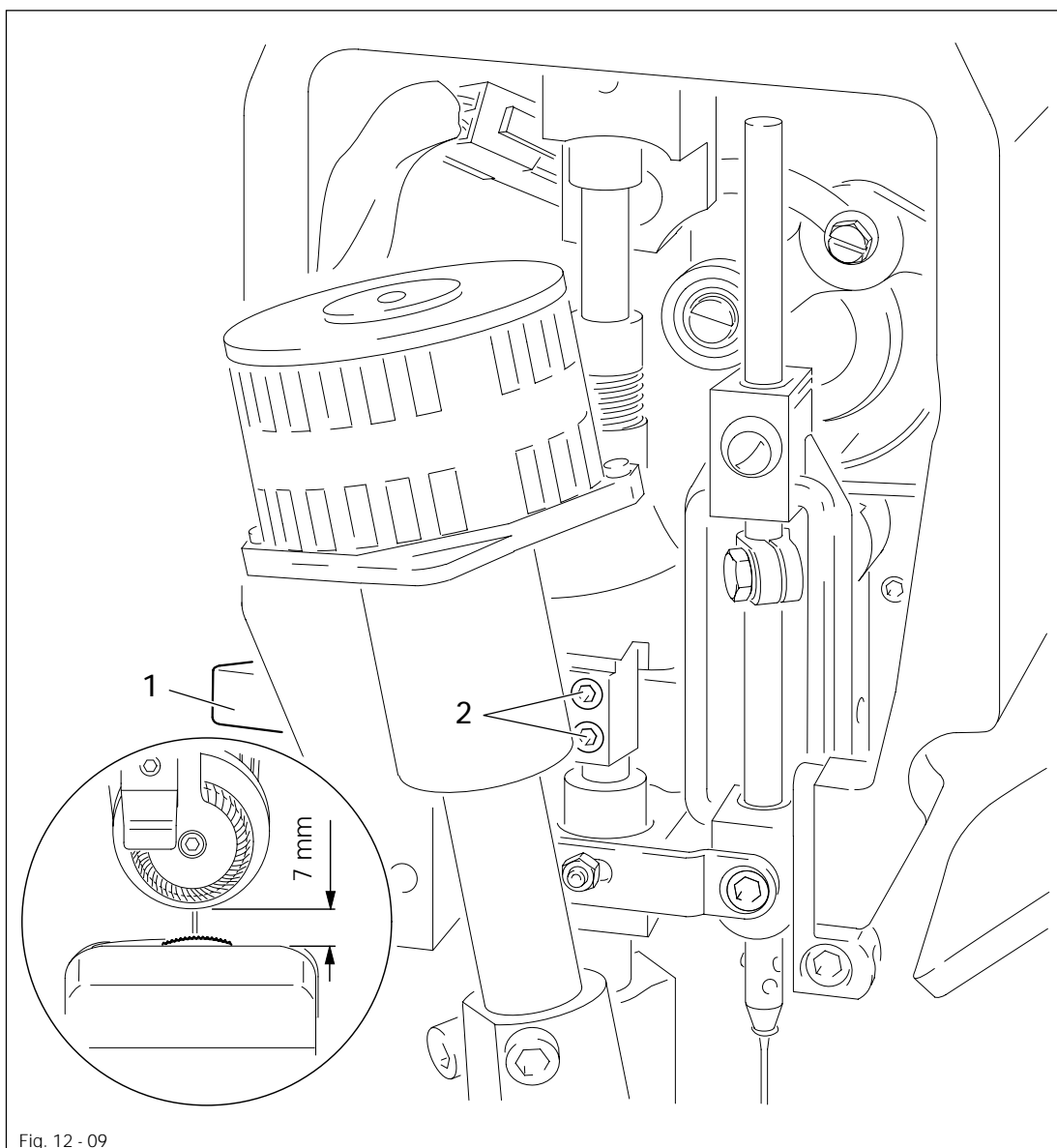


- Swing out the roller presser.
- Loosen screw 1.
- Turn the eccentric (screw 3) which is accessible through hole 2 in accordance with the requirement.
- Tighten screw 1.

12.04.09 Clearance between roller presser and feed wheel

Requirement

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



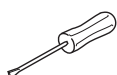
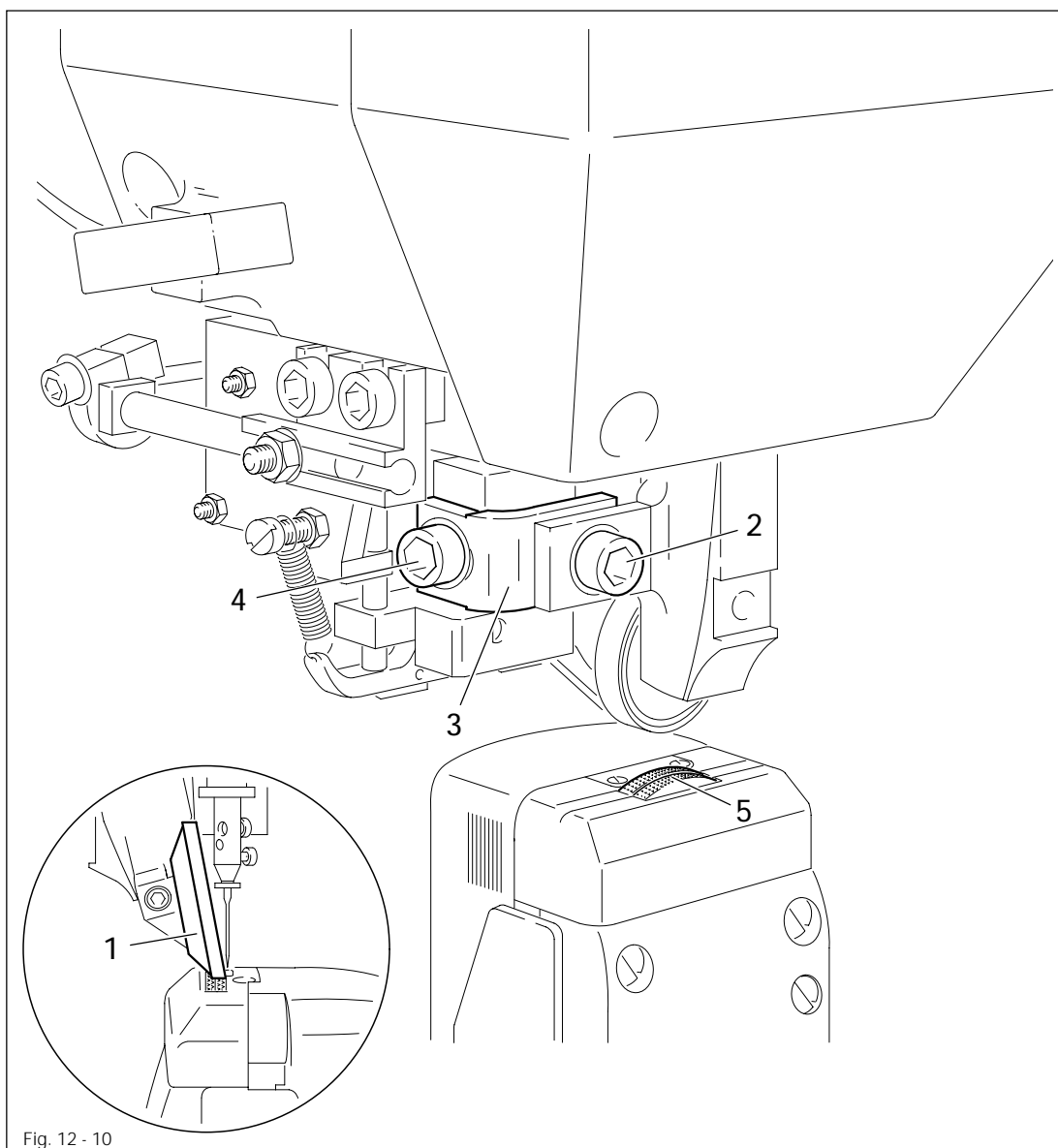
- Raise lever 1.
- Move the presser foot bar (screws 2) in accordance with the **requirement**. Take care to ensure that the roller presser is parallel to the feed wheel.

12.04.10 Roller presser

Requirements

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

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



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



When sewing very tight curves the roller presser 1 should be moved toward the operator a little.

12.04.11 Automatic presser-foot lifter

Requirement

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

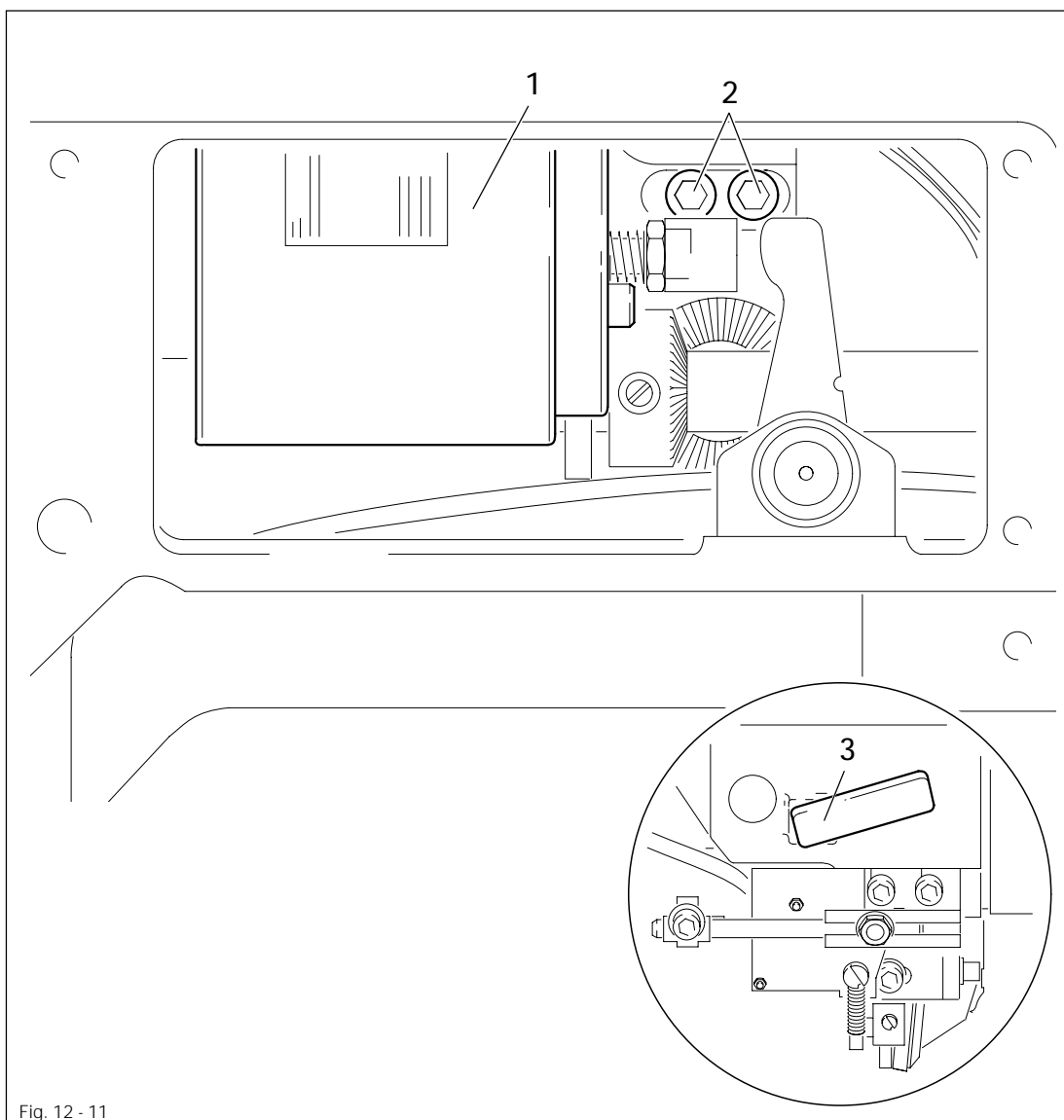
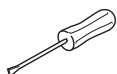


Fig. 12 - 11



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



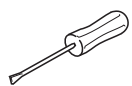
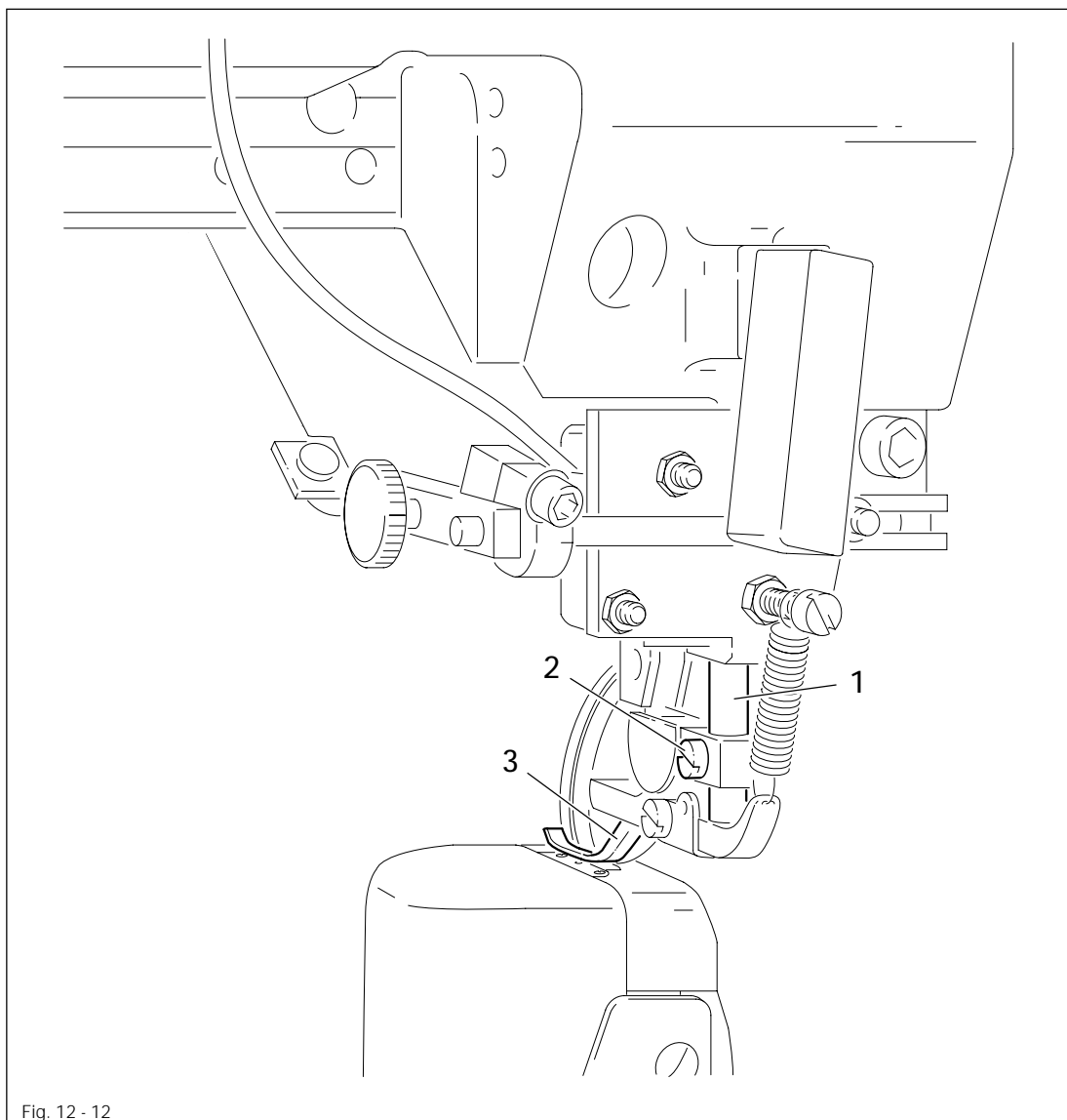
Depending on the thickness of the material, the clearance between the roller presser and the feed wheel can be increased to a maximum of 10 mm by moving the solenoid to the right.

Adjustment

12.04.12 Retainer

Requirement

The retainer 3 should just rest on the material, so that the material does not start fluttering during sewing.



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

12.04.13 Tension release

Requirement

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

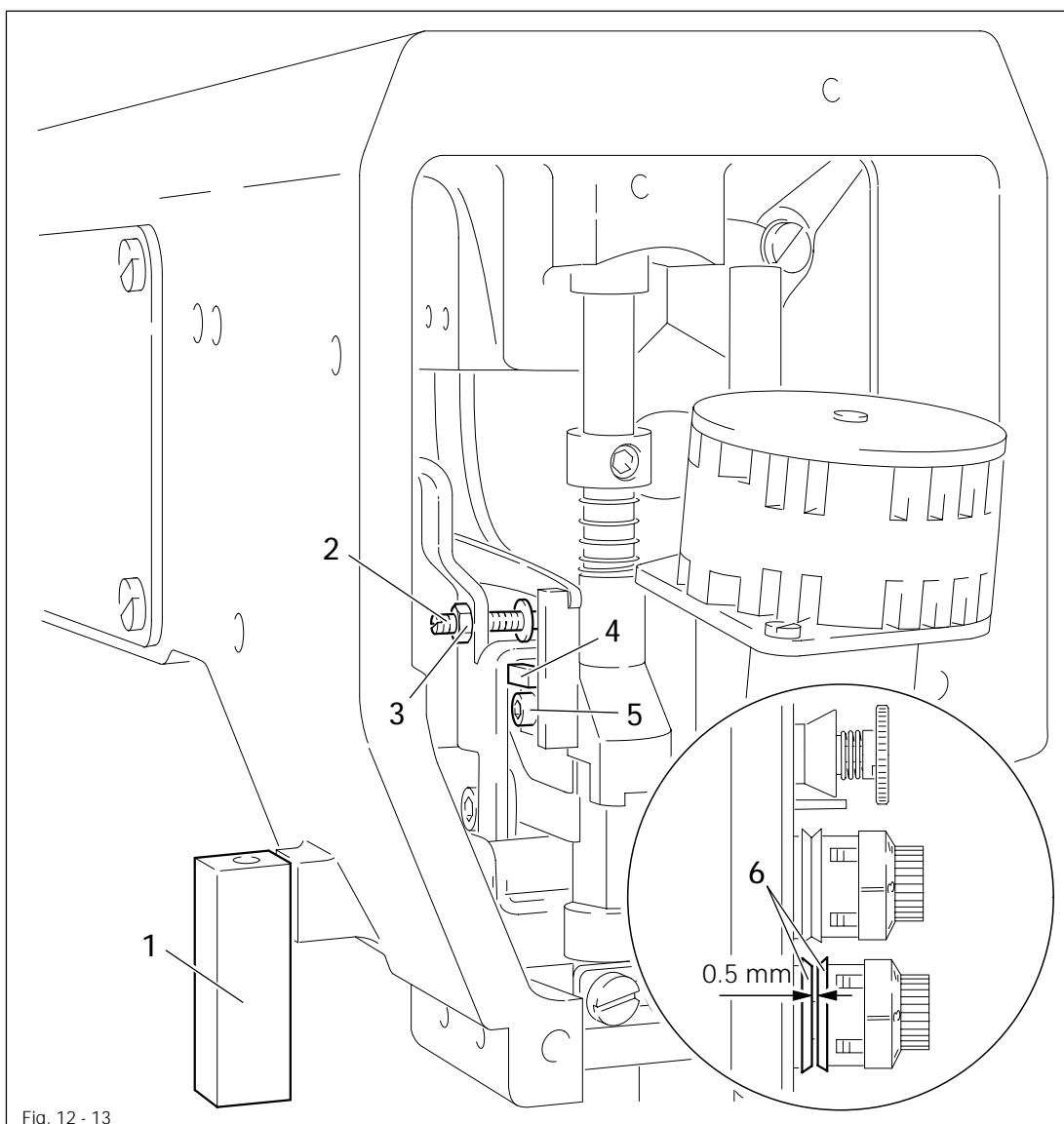
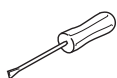


Fig. 12 - 13



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

12.04.14 Thread check spring

Requirements

1. The motion of the thread check spring 7 must be finished when 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 raise slightly from the workpiece rack 1.

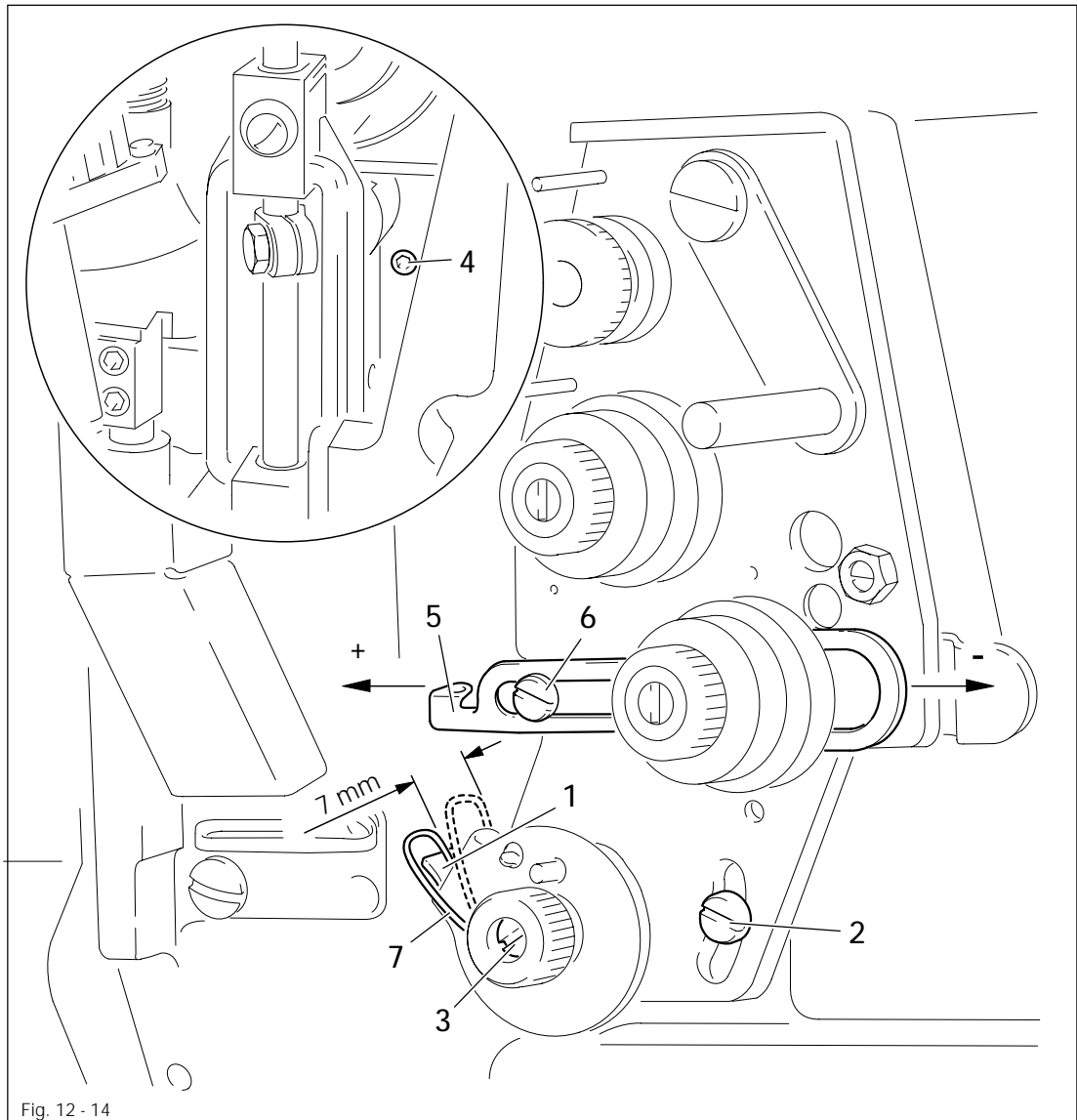
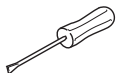


Fig. 12 - 14



- Move workpiece rack 1 (screw 2) in accordance with **requirement 1**.
- Turn screw 3 (screw 4) to adjust the strength of the spring.
- Move the slack thread regulator 5 (screw 6) in accordance with **requirement 2**.



Due to technical sewing reasons it may be necessary to deviate from the spring stroke / spring strength mentioned here. Move the slack thread regulator 5 (screw 6) toward the "+" (= more thread) or toward the "-" (= less thread).

12.04.15 Bobbin winder

Requirements

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

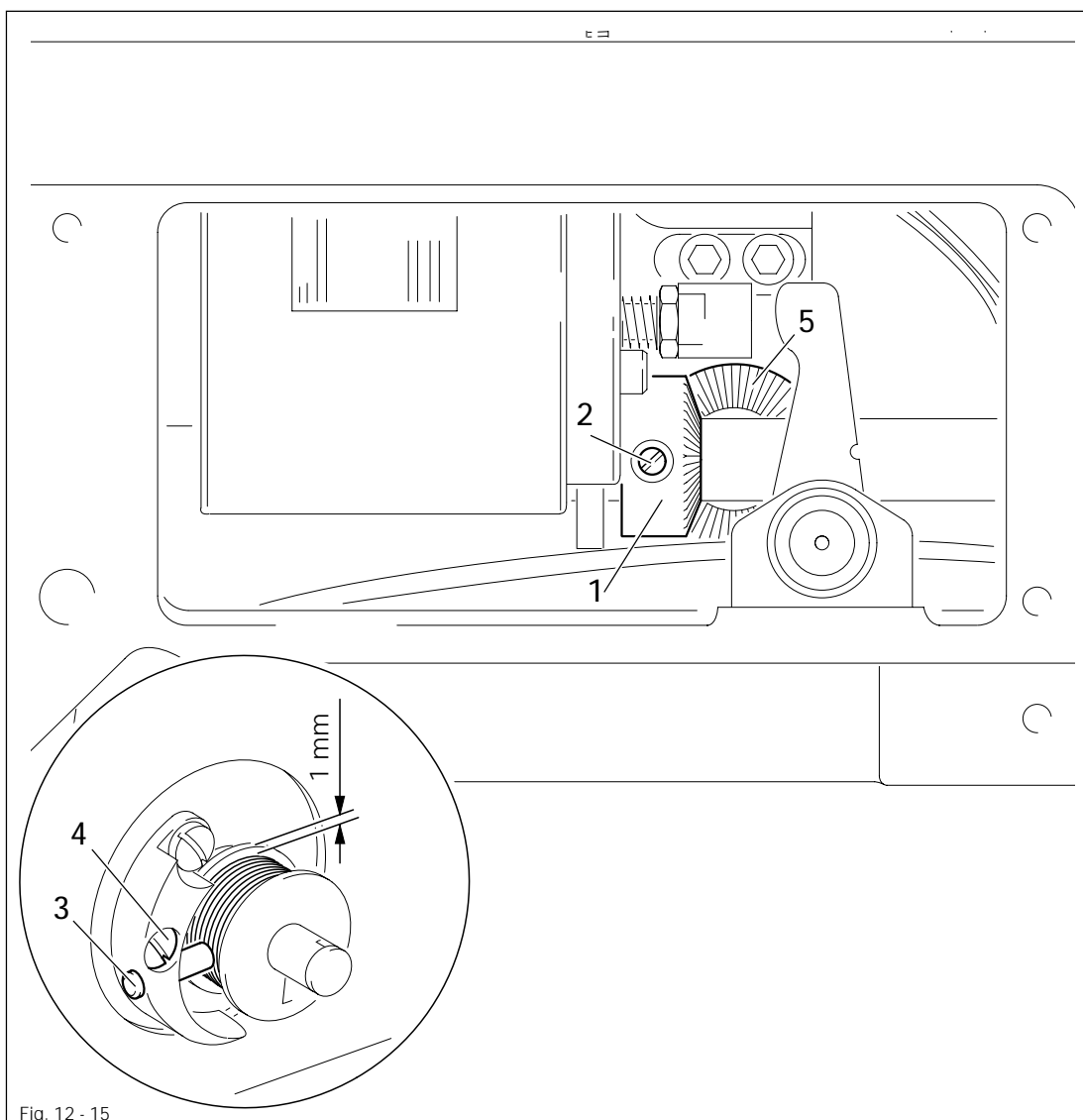
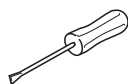


Fig. 12 - 15



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

Adjustment

12.04.16 Roller presser pressure

Requirement

The material must be fed reliably. There must not be any pressure marks on the material.

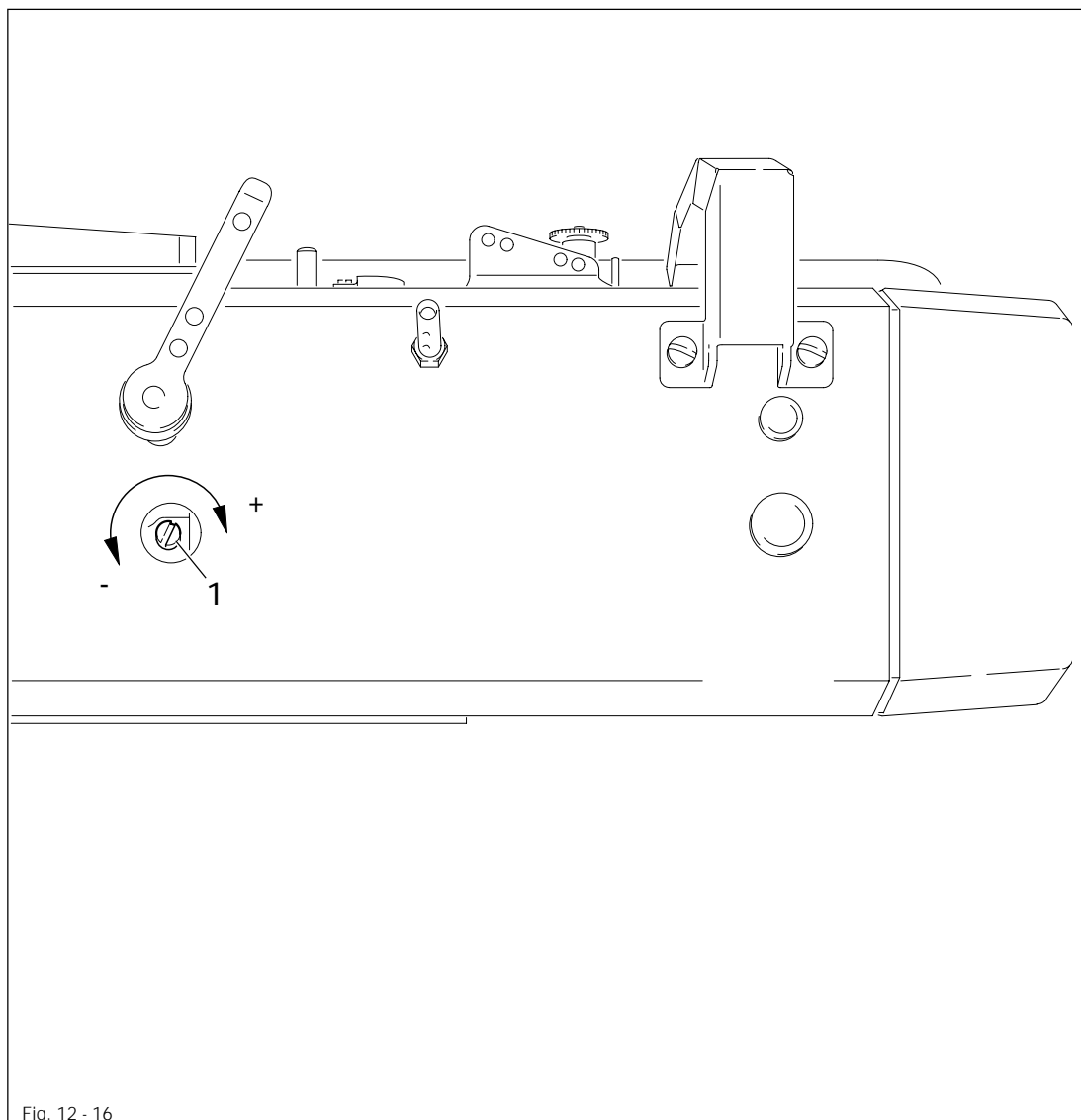
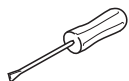


Fig. 12 - 16



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



Screw 1 is underneath a cover.



When the pressure of the roller presser is low, the drop speed of the roller presser can be increased by activating the ROLLER PRESSER DROP SPEED function.

12.04.17 Locking the set-value transmitter

Requirement

The pedal for selecting the fullness should be held reliably in every position without binding too much.

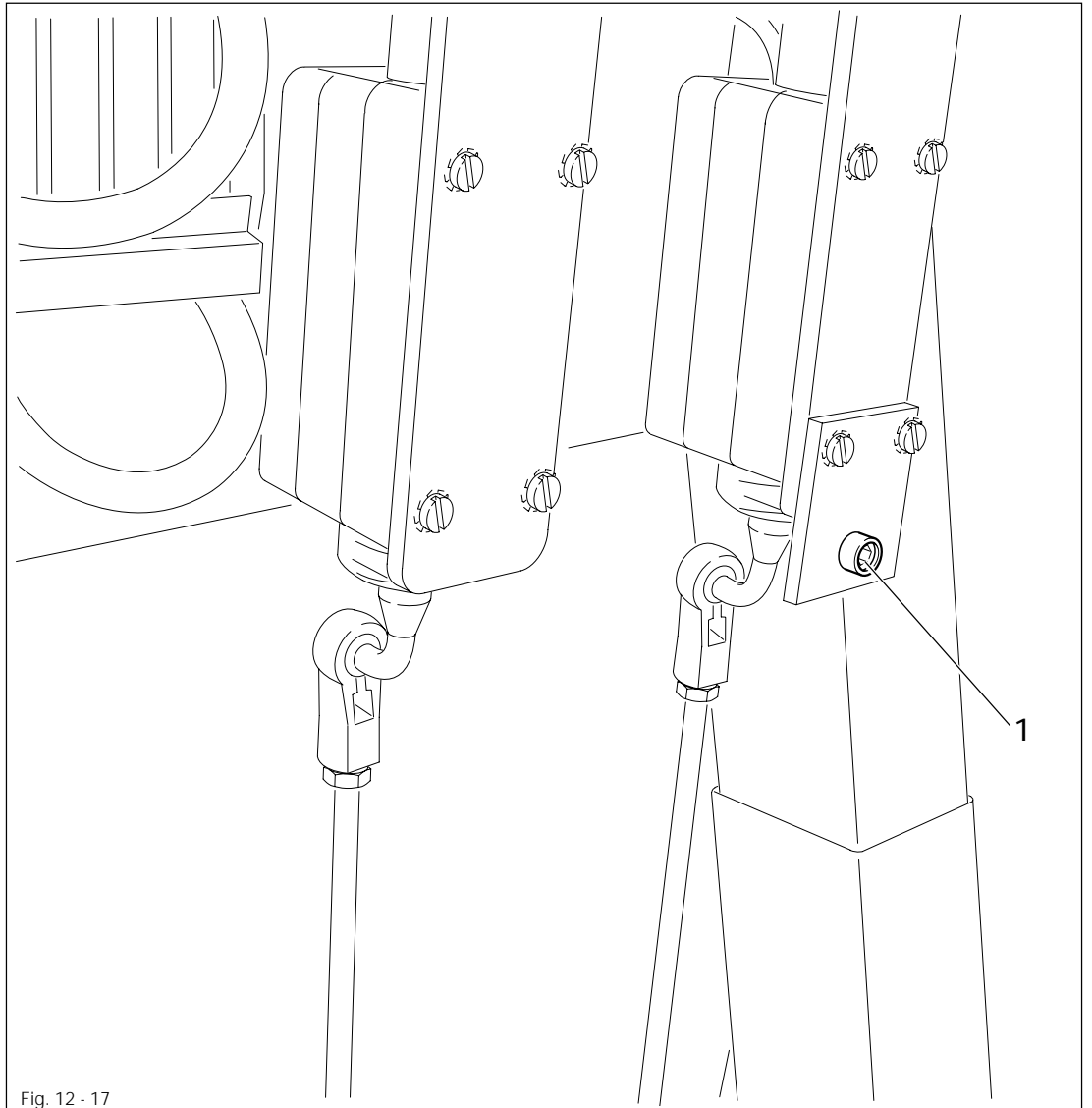
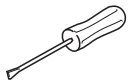


Fig. 12 - 17



- Adjust screw 1 according to the requirement.

Adjustment

12.05 Adjusting the thread trimmer -900/53

12.05.01 Removing the scissors

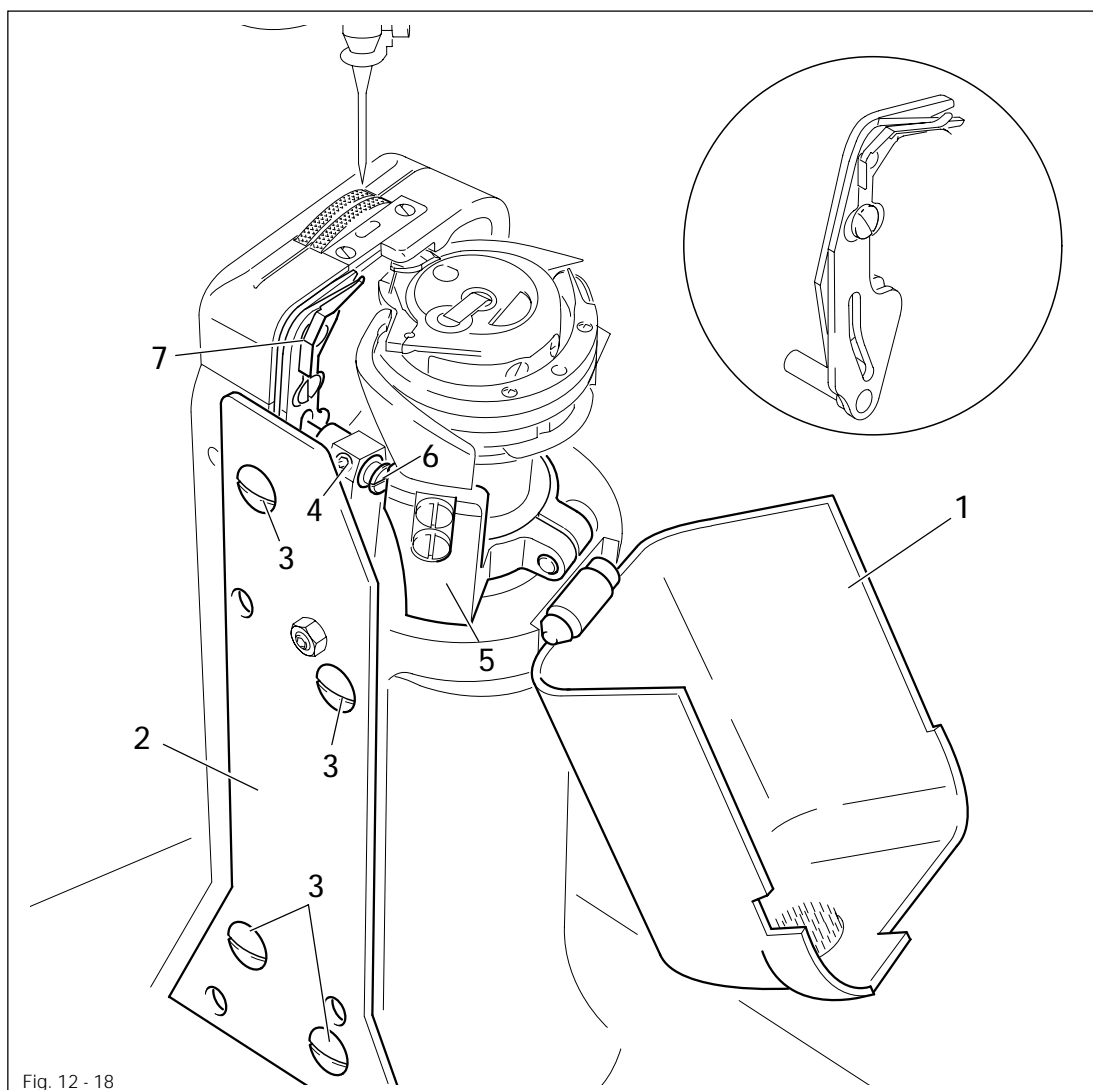
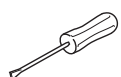


Fig. 12 - 18



- Open post cover 1 and unscrew post cover plate 2 (screws 3).
- Loosen screw 4.
- Swing out bobbin case base 5 by hand and hold it in this position.
- Remove bolt 6.
- Open the scissor drive bar and remove scissor 7.
- Allow bobbin case base 5 to swing in and close the scissor drive bar.

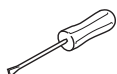
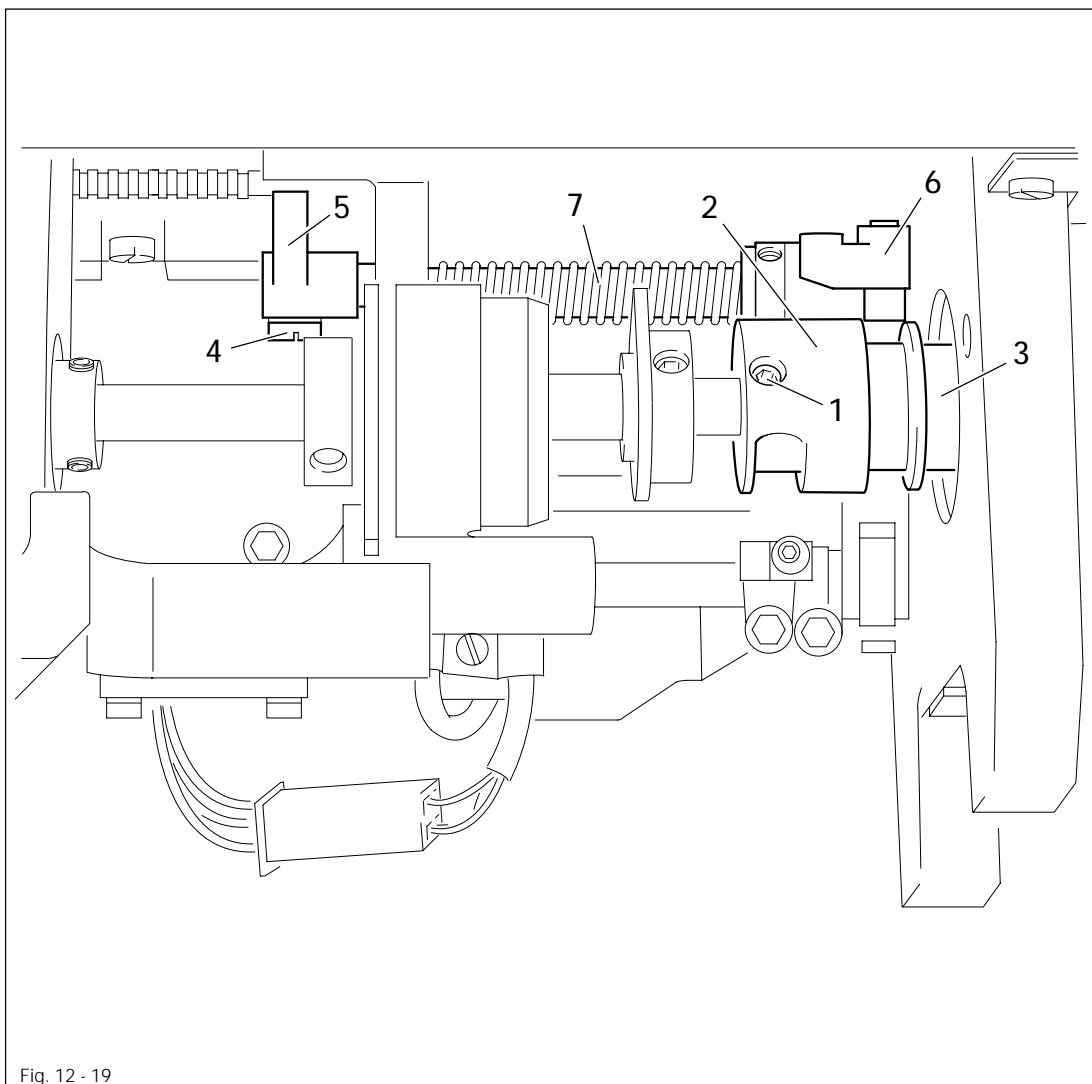


Post cover plate 2 remains dismantled for further adjustments.

12.05.02 Control cam to bobbin opener and tripping lever

Requirements

1. Control cam 2 must be touching bearing collar 3.
2. The roller of tripping lever 6 must fall slightly into the path of control cam 2.



- Loosen screws 1 and bring control cam 2 to rest against bearing collar 3.
- In this position tighten one of the screws 1 slightly so that control cam 2 can still be turned.
- Loosen screw 4.
- Bring the needle bar to BDC and position the straight section of the cam track under the roller of tripping lever 6.
- Activate the engaging lever by hand.
- Move tripping lever 6 together with shaft 7 in accordance with **requirement 2**.
- Taking care to ensure that connecting link 5 engages completely in the groove of the rack, bring connecting link 5 to rest on the right and tighten screw 4.



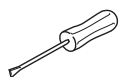
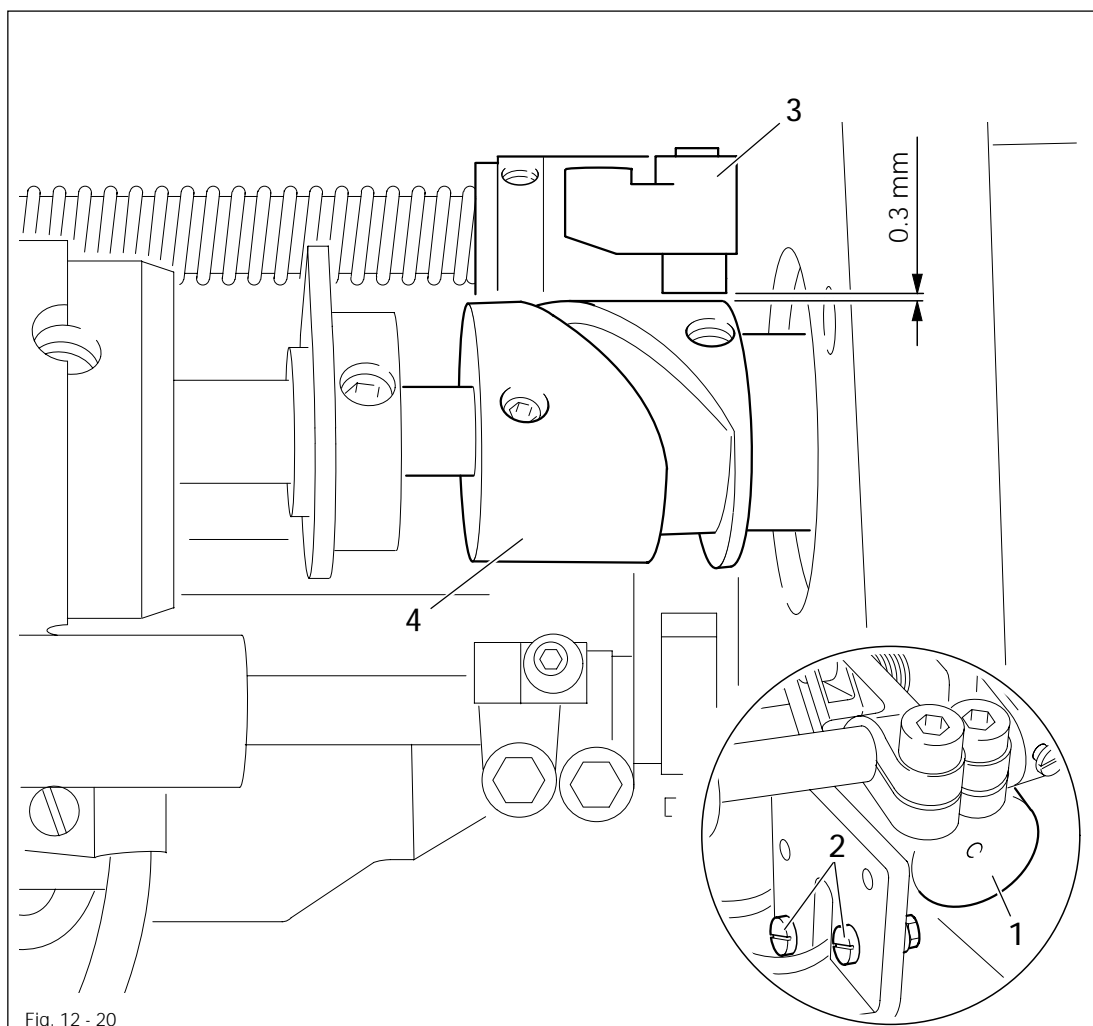
Only tighten screws 1 slightly for the following adjustment.

Adjustment

12.05.03 Radial position of the tripping lever

Requirement

With the tripping lever 3 in resting position, there must be a clearance of 0.3 mm between its roller and the circumference of the control cam 4.



- Bring the needle bar to BDC.
- Move solenoid carrier 1 (nuts of screws 2) in accordance with the requirement.

12.05.04 Engaging solenoid

Requirement

With the trimming device switched on, the field core must still be 1 mm before its lower stop.

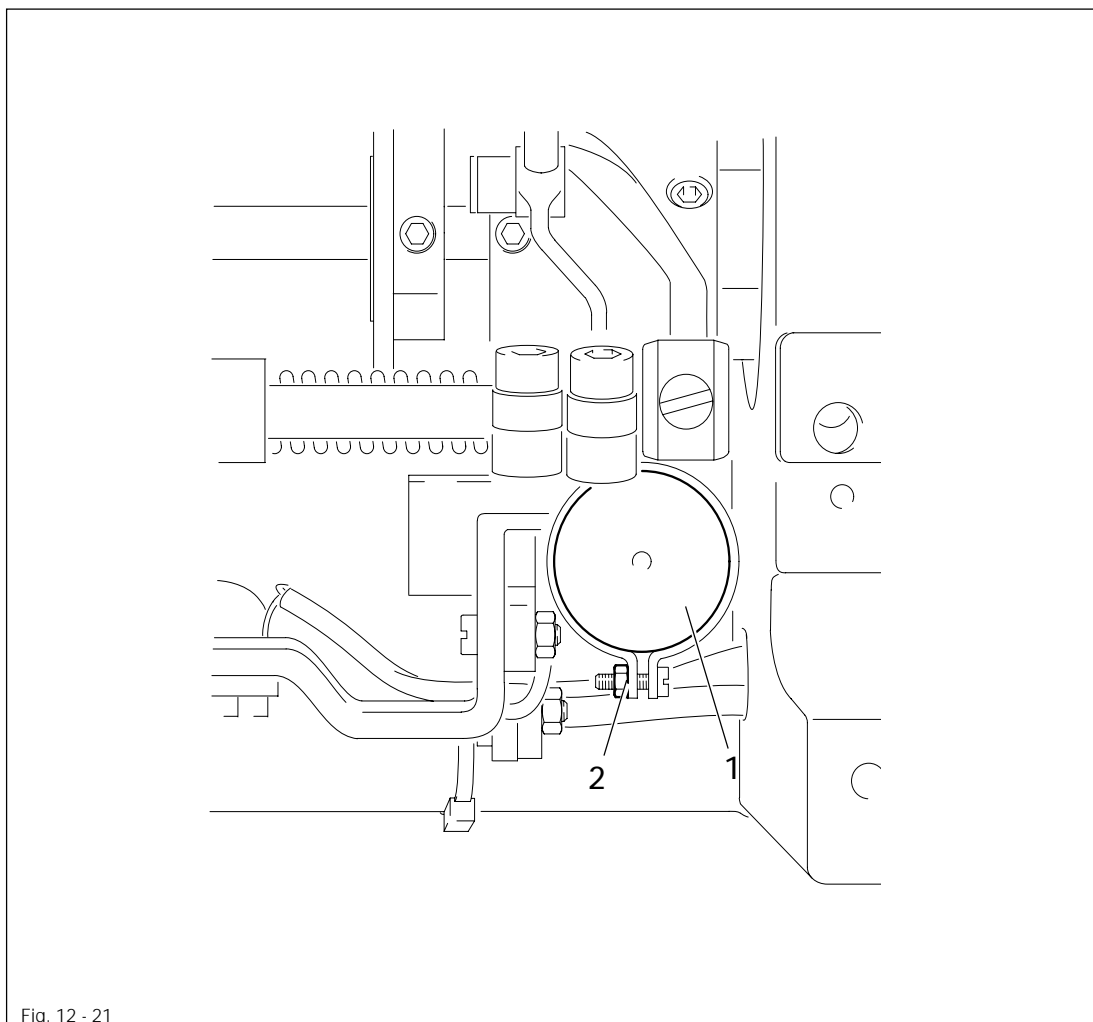
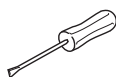


Fig. 12 - 21



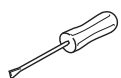
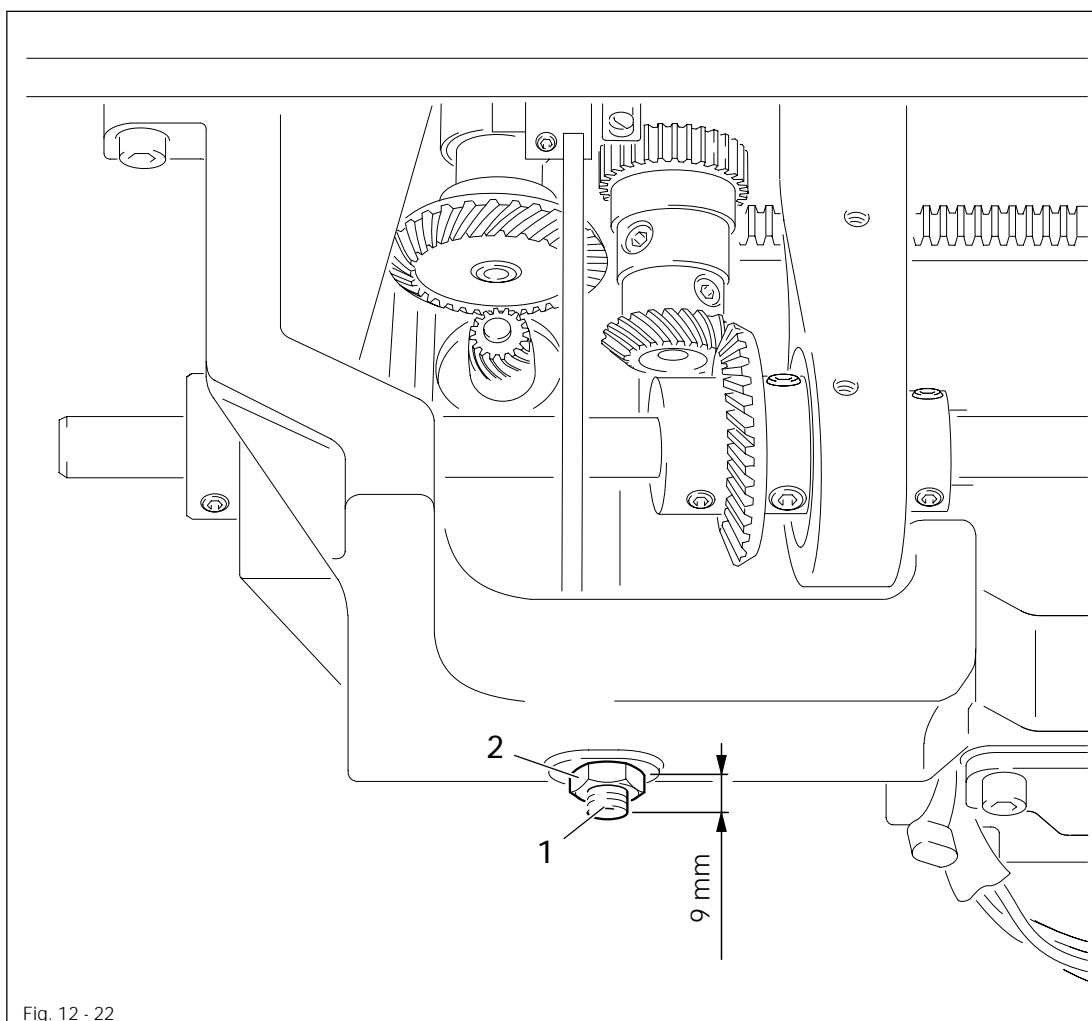
- Bring the needle bar to BDC and activate the tripping lever by hand.
- Push solenoid housing 1 (screw 2) up as far as possible and then move it in accordance with the requirement.
- Lift the tripping lever out of the control cam by hand.

Adjustment

12.05.05 Scissor drive lever

Requirement

The top edge of screw 1 must protrude approx. 9 mm from the recess on the housing.



- Turn screw 1 (nut 2) in accordance with the requirement.

12.05.06 Control cams to the bobbin opener and cutter (adjustment with adjustment gauge)

Requirements

With the needle bar at BDC, both control cams must be positioned in such a way that

1. adjustment gauge 5 can be slid into the grooves of both control cams,
2. both cams are on the rests of adjustment gauge 5 and
3. the bent section of adjustment gauge 5 is touching roller 3.

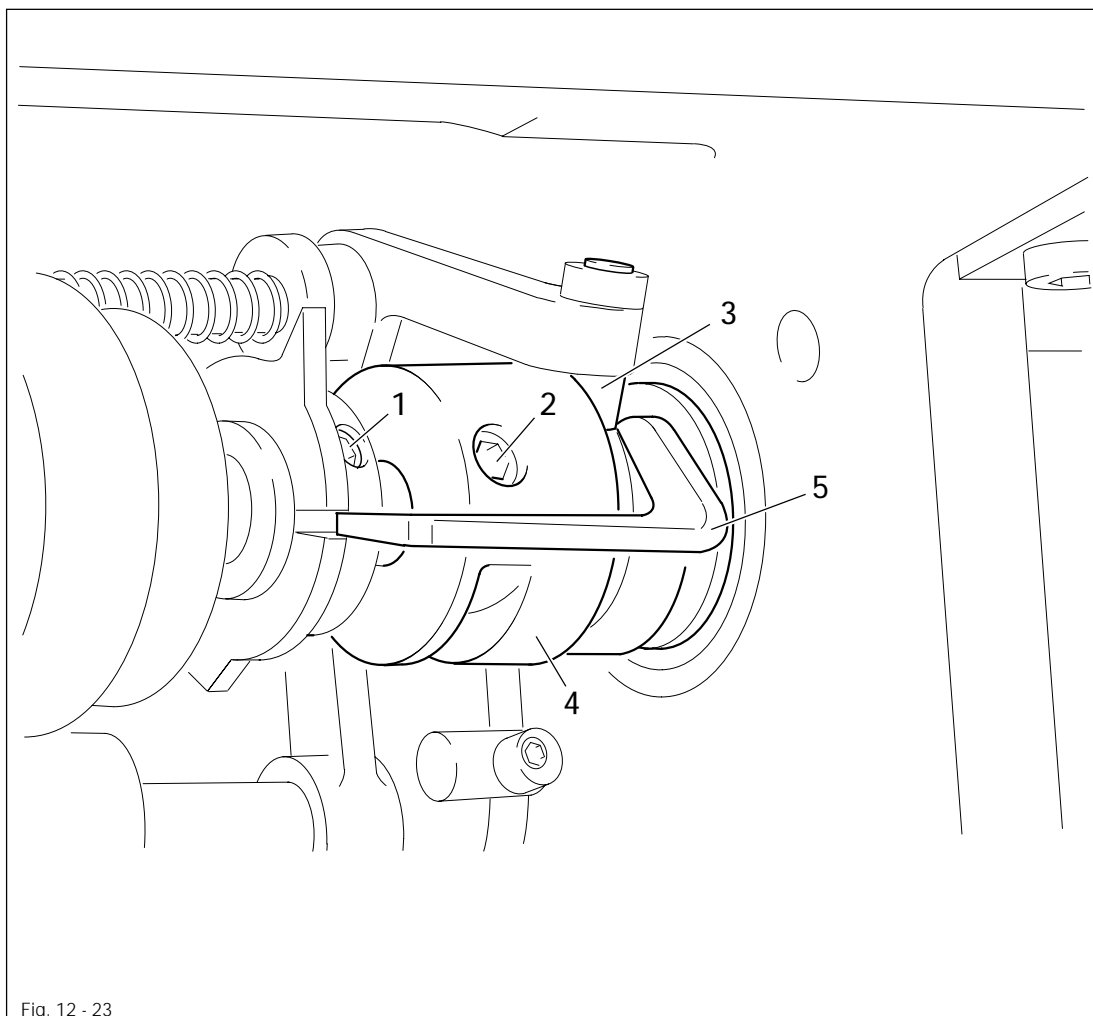
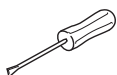


Fig. 12 - 23



- Loosen screws 1 and 2.
- Bring the needle bar to BDC and activate the tripping lever by hand (roller 3 engaged).
- Adjust the control cams in accordance with the **requirement** and insert adjustment gauge 5.
- Turn control curve 4 in accordance with the **requirement**.
- Taking care to ensure that control cam 4 is touching the bearing collar, tighten the accessible screws 1 and 2.
- Remove adjustment gauge 5 and tighten the remaining screws 1 and 2.



For adjustment without the gauge see chapter 12.05.07 Radial position of the control cam in relation to the bobbin opener and chapter 12.05.08 Control cam in relation to scissor.

Adjustment

12.05.07 Radial position of the control cam to the bobbin opener (adjustment without adjustment gauge)

Requirement

The retracting motion of the bobbin opener must begin when the needle bar is 4 mm after BDC.

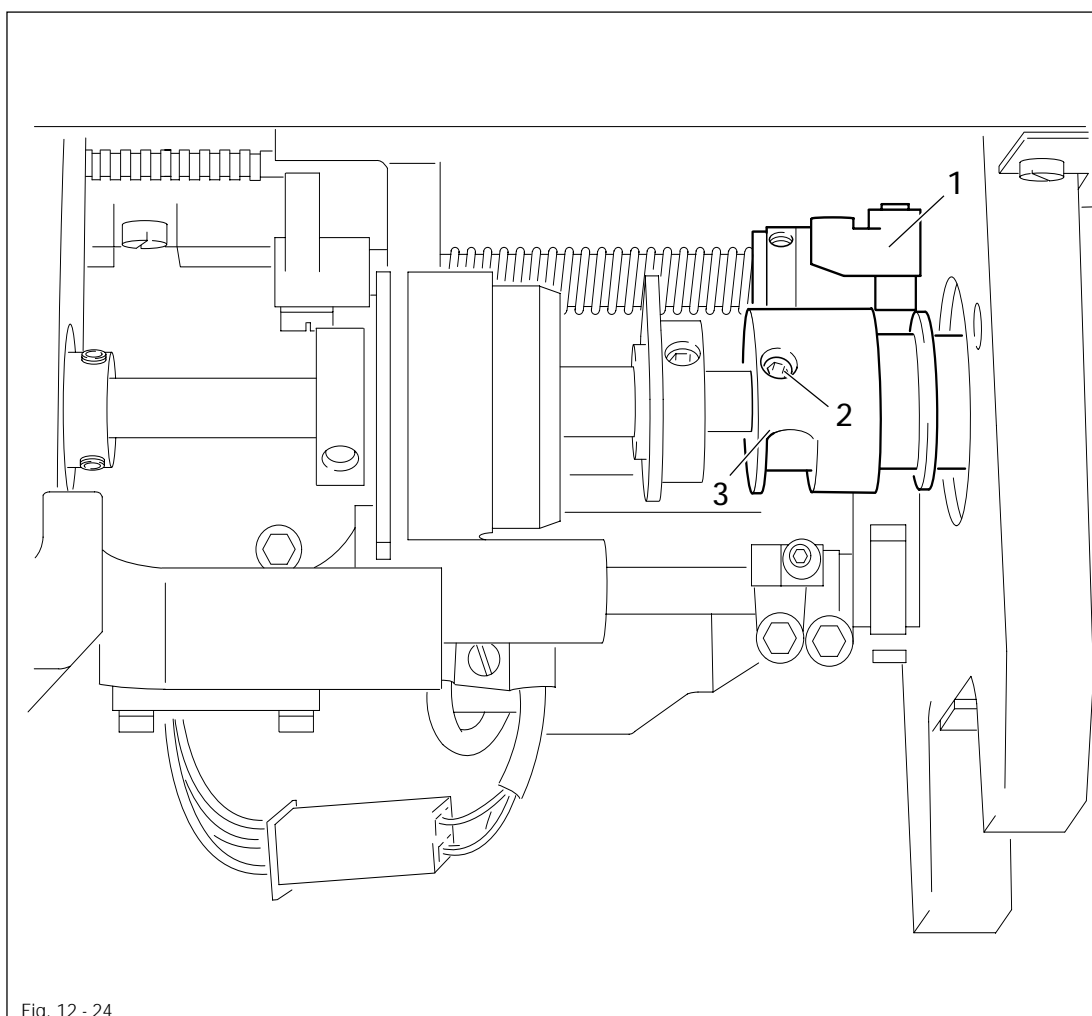
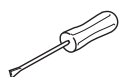


Fig. 12 - 24



- Operate the engaging lever by hand. While doing so the roller of the tripping lever 1 must drop into the cam track easily and without any impediment.
- Bring the needle bar to 4 mm past b.d.c. (use the adjustment gauge and C-clamp).
- Turn control cam 3 in the sewing direction until you feel a resistance (beginning of the retracting motion).
- In this position tighten the accessible screw 2.
- Lift tripping lever 1 out of the control cam 3 by hand.
- Remove the C-clamp and tighten the remaining screws 2.

12.05.08 Scissor tripping-lever in relation to the control cam of the scissor

Requirements

At the left point of reversal of the rock shaft 3

1. the roller of tripping lever 4 and the roller of back-racking lever 5 must be in the middle of control cam 6 and
2. there must be a distance of 0.3 mm between the roller of tripping lever 4 and the external circumference of control cam 6.

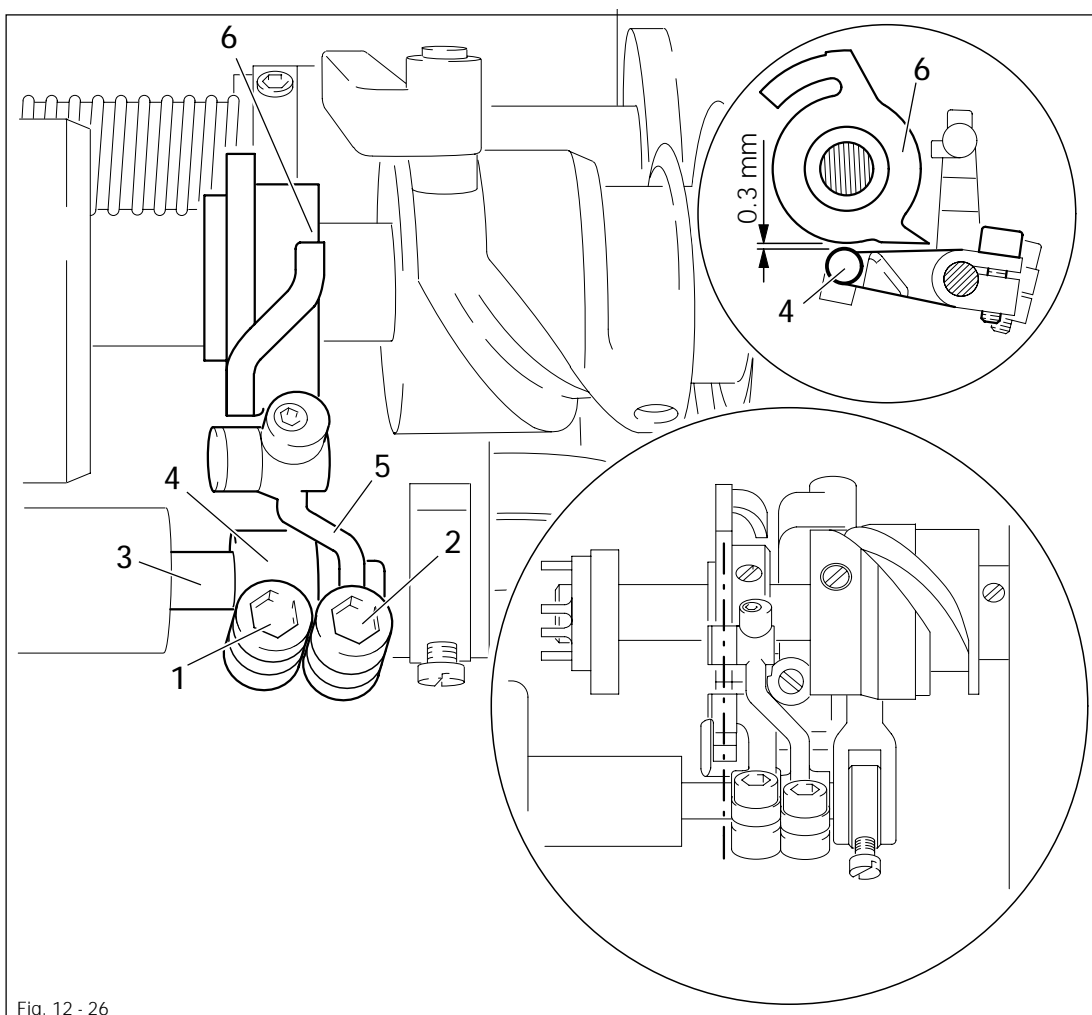
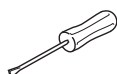


Fig. 12 - 26



- Bring the needle bar to BDC and activate the tripping lever by hand.
- Loosen screws 1 and 2.
- Turn the handwheel in the direction of rotation until rock shaft 3 is at its left point of reversal.
- Move tripping lever 4 and back-racking lever 5 in accordance with requirement 1.
- Turn tripping lever 4 in accordance with requirement 2.
- In this position and observing requirement 1, tighten screw 1.

Adjustment

12.05.09 Control cam to cutter (adjustment without adjustment gauge)

Requirements

1. The cutting motion must begin when the needle bar is 0.6 mm after TDC.
2. There must be a clearance of **9 mm** between control cam 2 and 4.

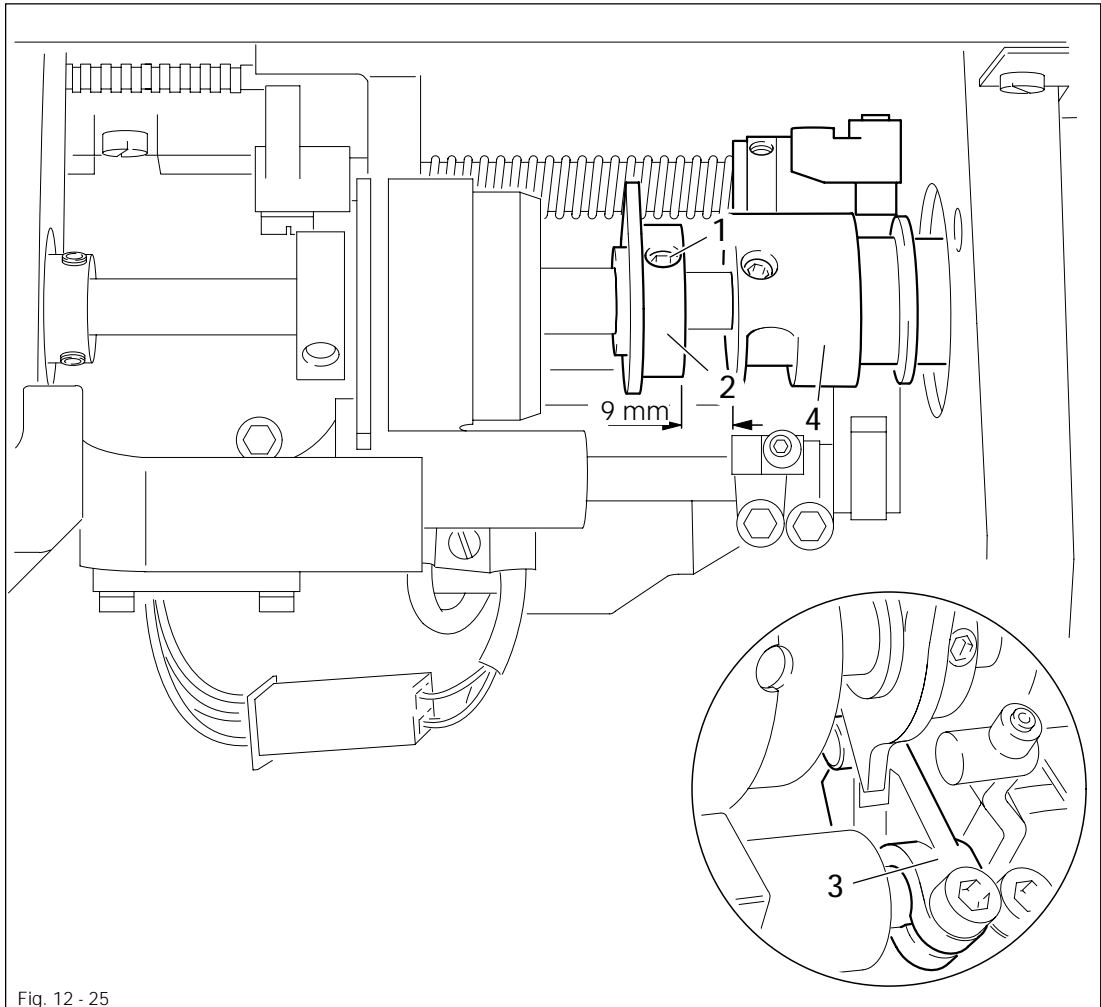
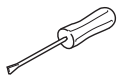


Fig. 12 - 25



- Loosen screws 1.
- Bring the needle bar to BDC and activate the engaging lever by hand.
- Bring the needle bar to 0.6 mm after TDC (use adjustment gauge and C-clamp).
- Turn control cam 2 until the trip is touching the roller of the tripping lever 3.
- Taking care that control cam 2 is **9 mm** from retractor cam 4, tighten one of the screws 1.
- Remove the C-clamp, make the second screw 1 accessible and tighten it.

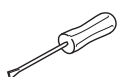
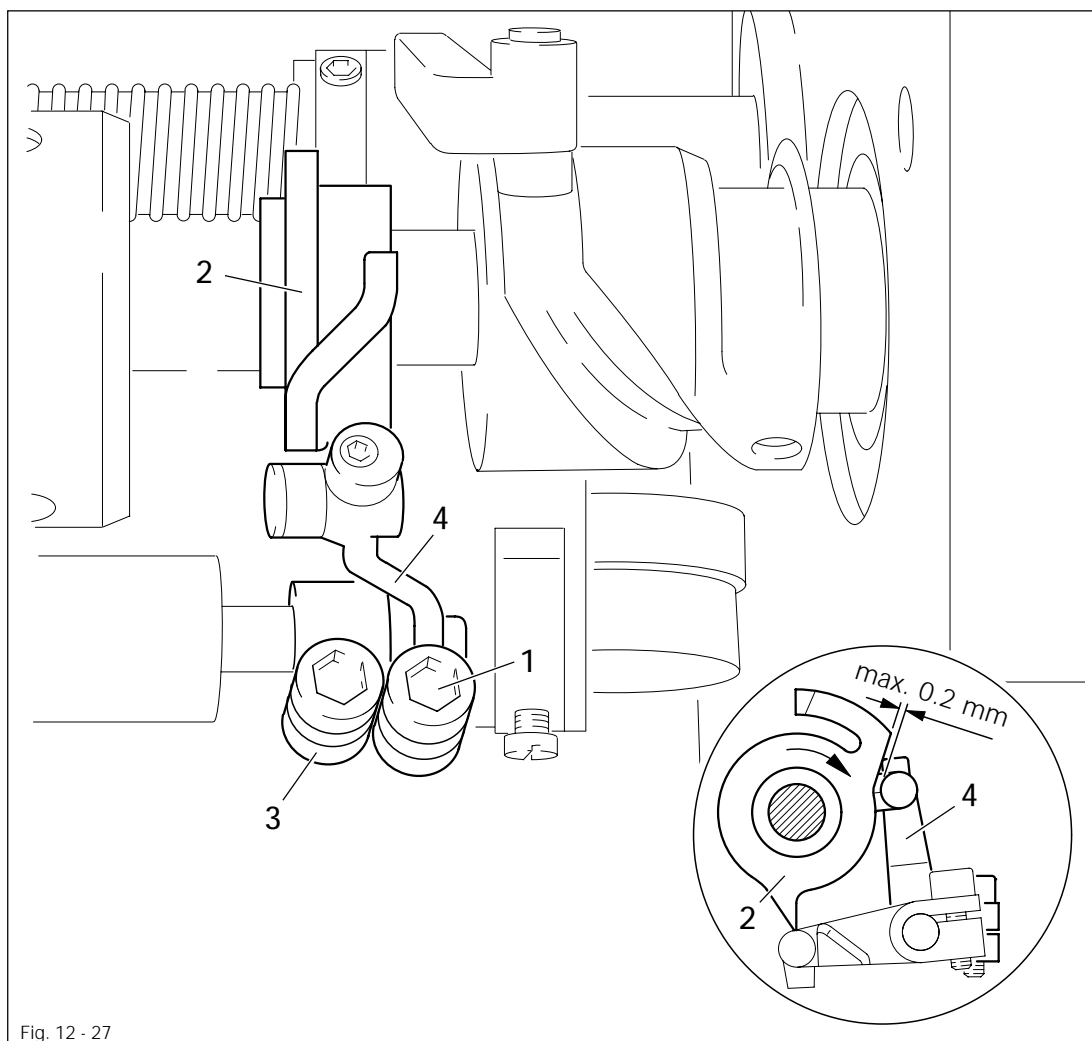


When using elastic sewing threads it can be necessary to set the relationship between the control cam and the bobbin opener and the scissors a little „later“ . A thread tension control (subclass 906/10) is available for automatic tension-release with highly elastic sewing threads.

12.05.10 Scissor return lever

Requirement

When the roller of tripping lever 3 is exactly at the point of the trip of control cam 2 the maximum distance between the roller of return lever 4 and control cam 2 must be 0.2 mm.



- Loosen screw 1.
- Bring the needle bar to BDC and activate the engaging lever by hand.
- Position the point of the trip of control cam 2 exactly at the middle of the roller of tripping lever 3 by turning the handwheel in the direction of sewing.
- Maintaining this position, bring the return lever 4 to rest against the side of tripping lever 3 and turn it radially in accordance with the **requirement**.
- Tighten screw 1.

12.05.11 Scissor return control

Requirements

When the point of the trip of control cam 1 is exactly at the roller of tripping lever 2 and trip 3 is touching the beginning of the angular edge of guide plate 5 (see arrow) there must be a clearance of approx. **0.6 mm** between trip 3 and guide plate 5.

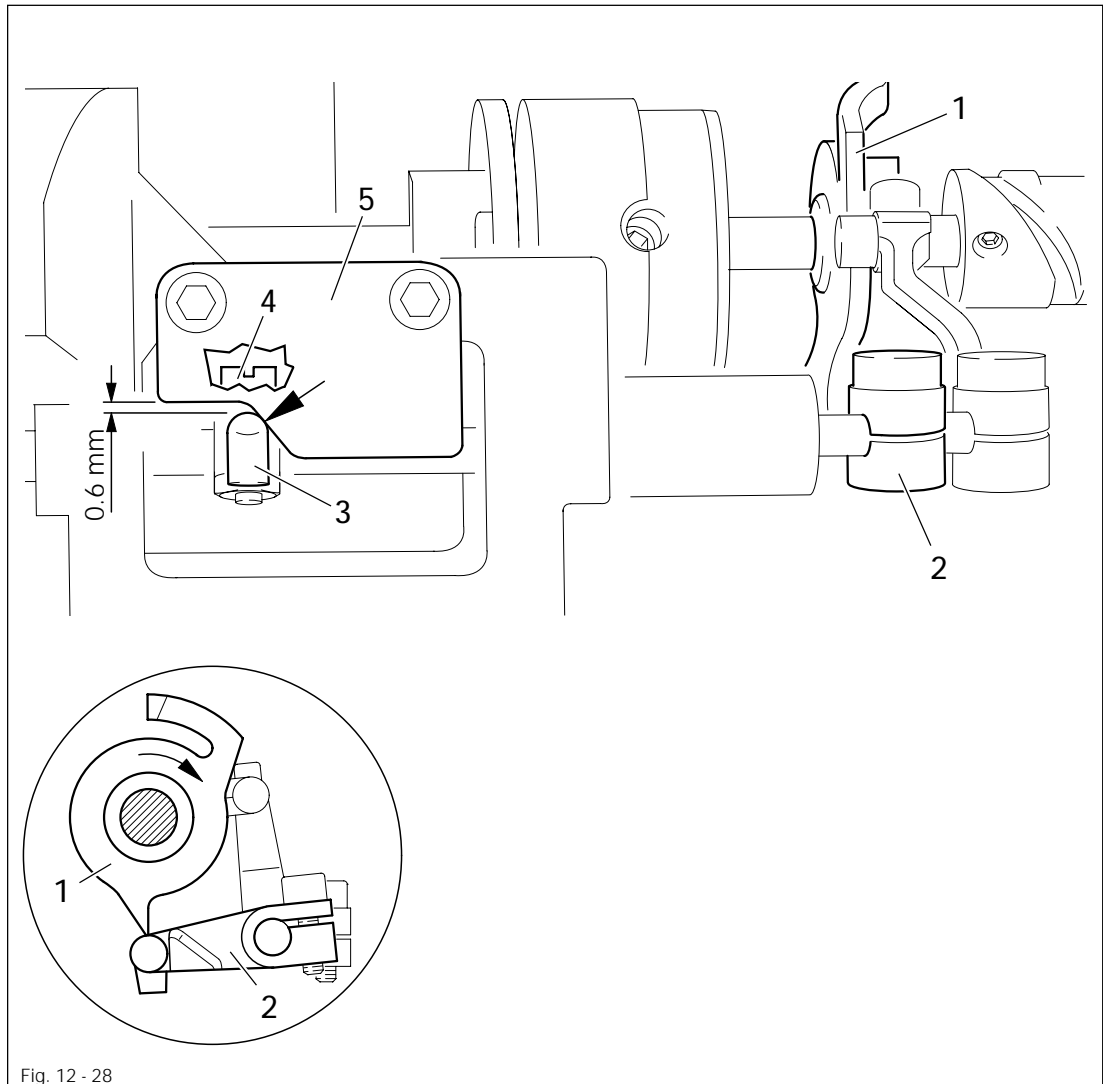
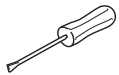


Fig. 12 - 28



- Position the point of the trip of control cam 1 exactly at the roller of tripping lever 2 by turning the handwheel.
- Move trip 3 (screw 4) in accordance with **requirement 1**.
- Bring rock shaft back to its starting position.

12.05.12 Installing the scissor

Requirements

1. The pin of bolt 4 must protrude into the cam tracks of the scissor halves.
2. The scissor must work with as little lateral play as possible.

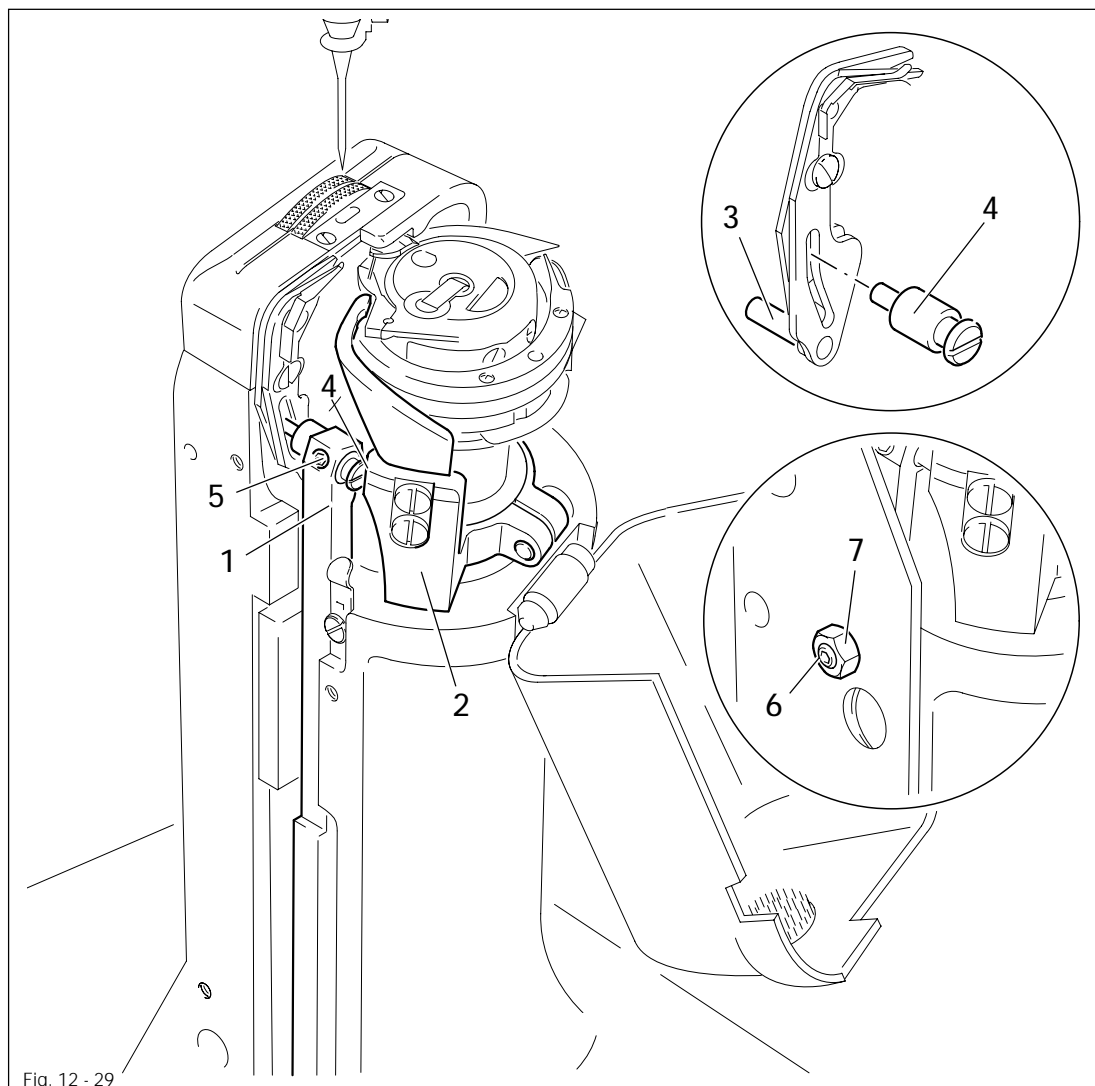
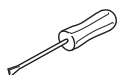


Fig. 12 - 29



- Swing out drive bar 1.
- Swing out bobbin opener 2 by hand and hold it.
- Insert the scissor with its bearing pin 3 into the bearing bushing of the feed wheel post.
- Swing in drive bar 1 and insert pin 4 in accordance with **requirement 1**.
- Position the eccentricity of pin 4 so that it faces upwards.
- Tighten screw 5 and screw on the post cover plate.
- Check drive bar 1 for play and friction free running. If necessary, adjust with screw 6 (nut 7).

12.05.13 Eccentric sleeve

Requirements

1. In its starting position the scissor must be flush with the contour of the needle plate.
2. The scissor must lightly touch the needle plate and the eccentric sleeve 2.

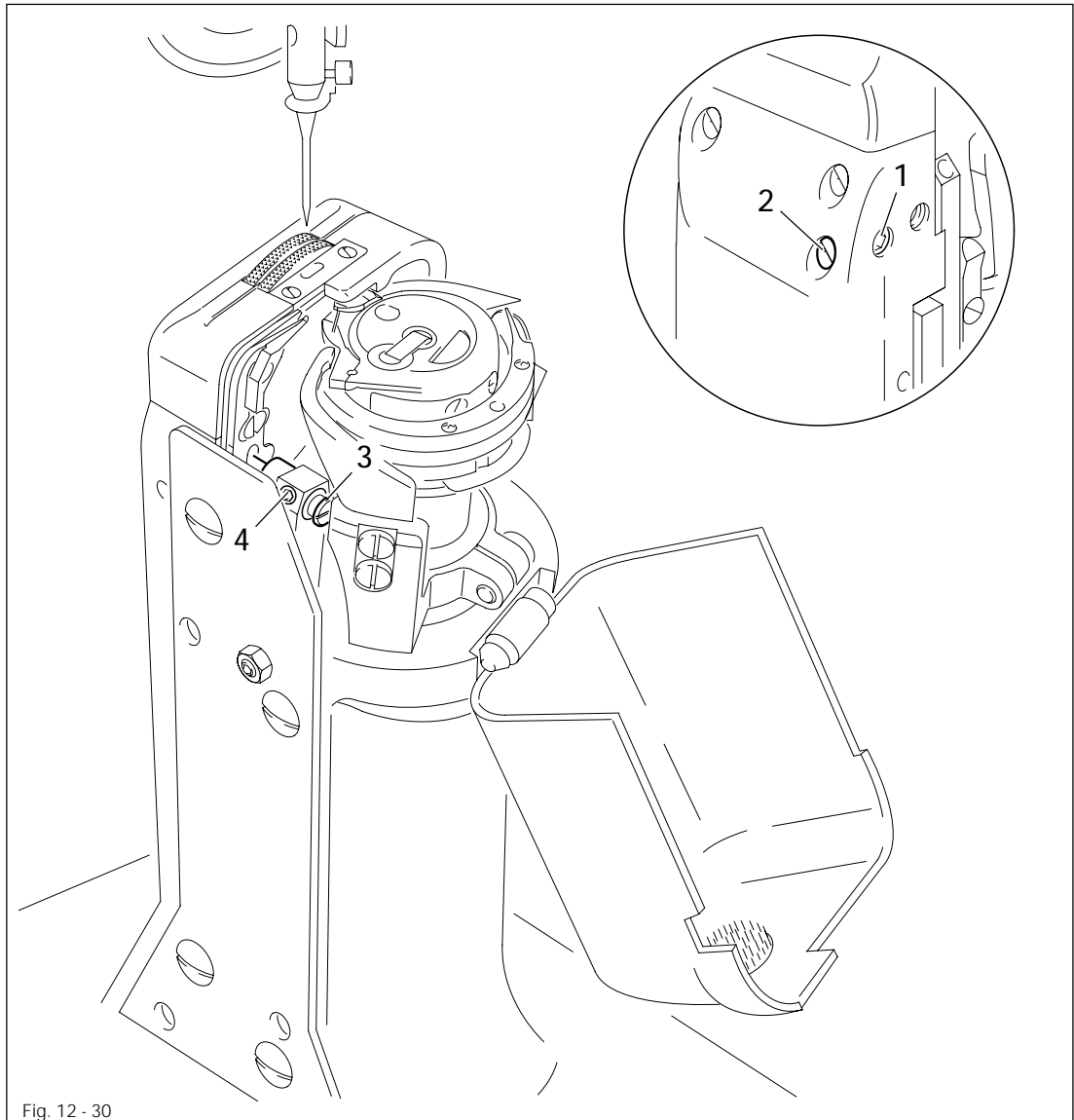
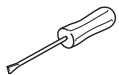


Fig. 12 - 30



- Loosen screw 1 enough so that eccentric sleeve 2 can still be turned.
- Turn eccentric sleeve 2 until the scissor is flush with the needle plate.
- Maintaining this position move eccentric sleeve 2 laterally in accordance with the requirement.
- Tighten screw 1.
- Press pin 3 (screw 4) lightly against the scissor.

12.05.14 Scissor drive bar

Requirements

1. In its starting position the scissor must be flush with the needle plate contour.
2. At the TDC of the drive bar 2 there must be a safety clearance of at least 0.3 mm between pin 5 and the top end of the cam guide.

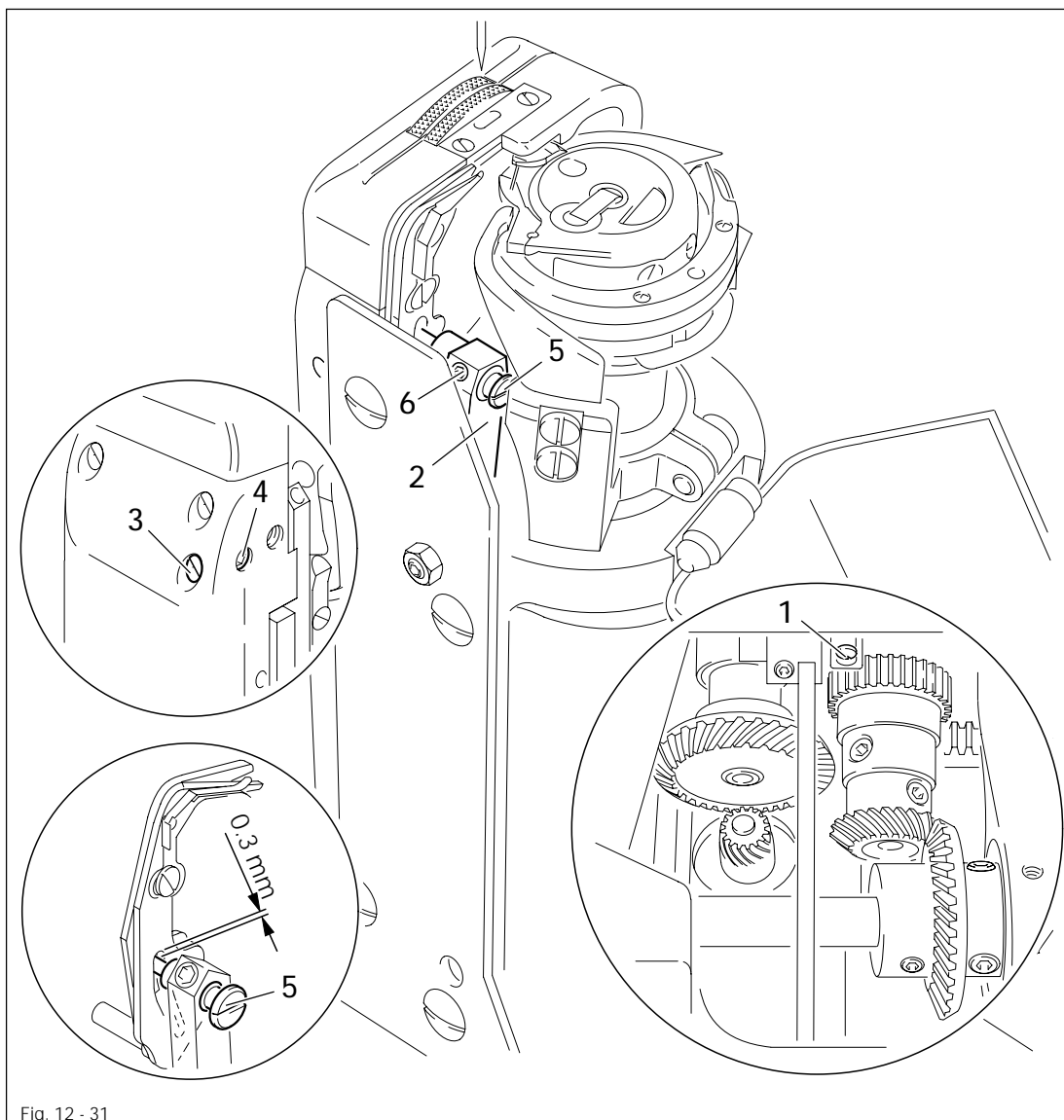


Fig. 12 - 31

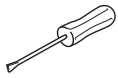
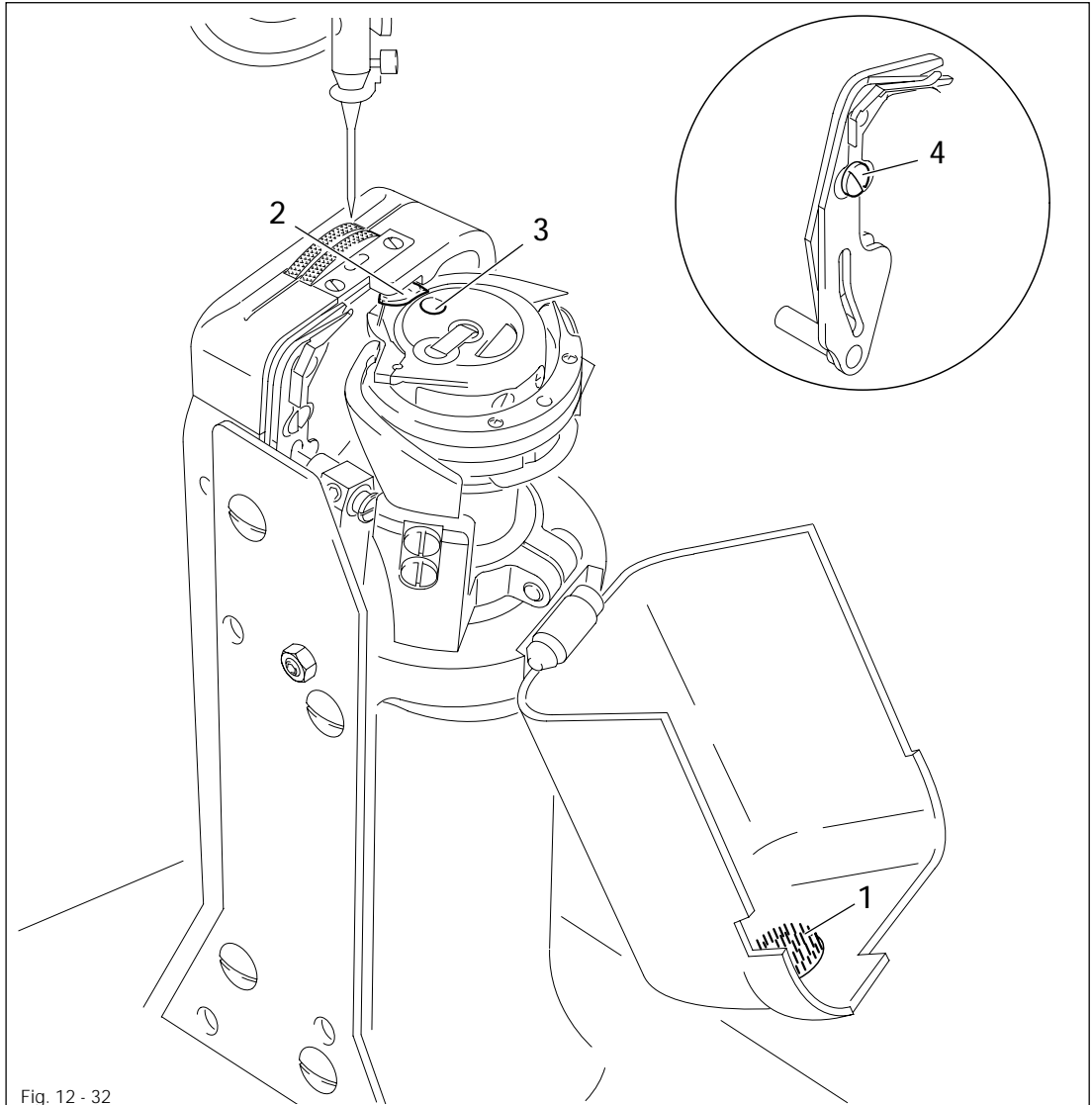


- Bring the needle bar to BDC and activate the engaging lever by hand.
- Bring drive bar 2 to its top point of reversal by turning the handwheel.
- Carry out the alteration on the drive bar 2 (screw 1), the eccentric sleeve 3 (screw 4) and/or the eccentric pin 5 (screw 6) in accordance with the **requirement**.
- Check the **requirement** from chapter 12.05.13 Eccentric sleeve.
- Bring the trimming device to its starting position using the handwheel.

12.05.15 Scissor function test

Requirements

1. The threads must be cut neatly.
2. After being trimmed, the bobbin thread must be held securely by the thread trapper.



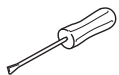
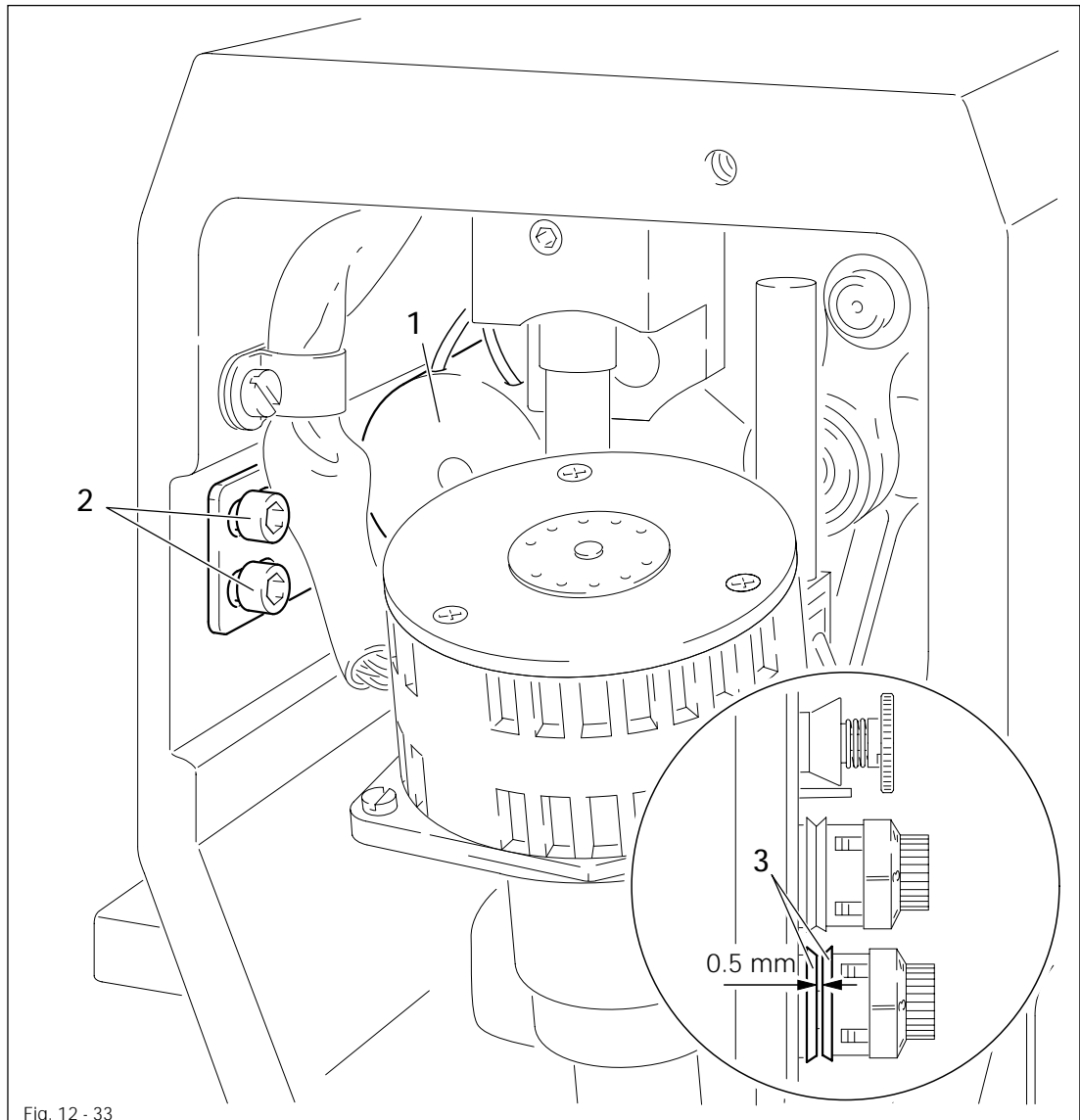
- Turn the machine on.
- Sew a few stitches and turn the on/off switch off.
- Activate the engaging lever by hand and close the post cover while ensuring that pressure disk 1 is stuck into the post cap.
- Bring the needle bar to TDC by turning the handwheel and open the post cover.
- In this position the needle and bobbin threads must be held by the catching lug of bobbin case 2 and the needle thread must be held by the catching lug of bobbin 3.
- If the needle thread is not held, stick in a new pressure disk 1 (part no. 91-119 492-91).
- Turn the handwheel and observe the cutting process.
- When the scissor is advancing, the thread trapper must first trap and hold the threads on the scissor (if necessary adjust the thread trapper as required after loosening retaining screw 4).

- As the process continues, both the bobbin thread and the part of the thread loop closest to the scissor which is held by the catching lug must be cut reliably.
- If the threads are not cut or not cut cleanly check **chapter 12.05.14 Scissor drive bar** again.
- Carry out a check in accordance with the requirements.

Requirement

When the roller presser touches the material

1. For materials up to 2 mm one tension unit should be active (magnet activated)
2. For materials over 2 mm the second tension unit should be connected (magnet drops out)



- Activate magnet 1.
- Adjust magnet 1 (screws 2) according to requirement 1.
- Adjust switch lug 4 (screw 5) according to requirement 2.



This is a basic setting and can be changed depending on the material thickness.

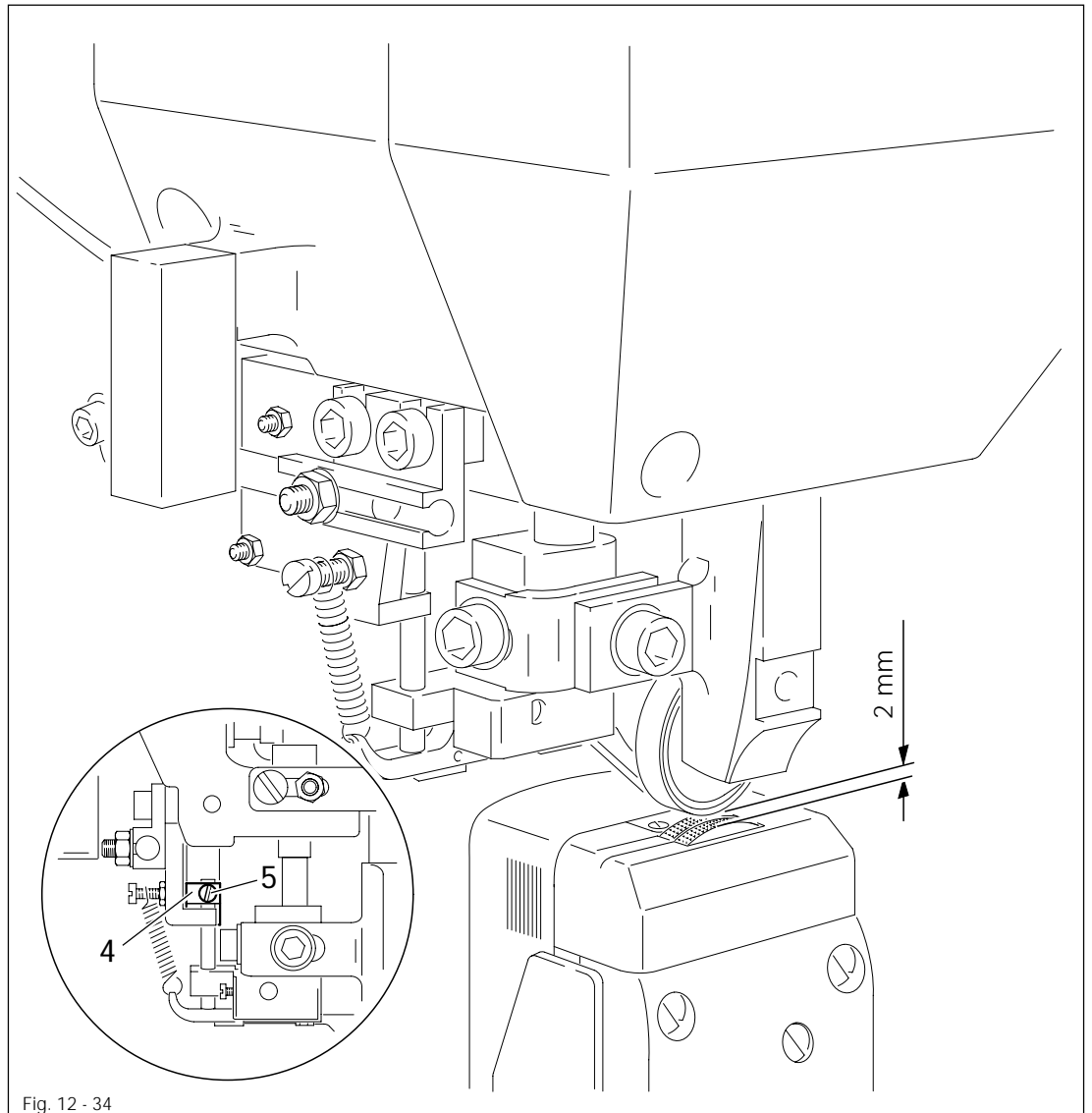


Fig. 12 - 34

12.07 Parameter settings

Group	Parameter	Meaning	Setting	Standard value
1	101	Pedal-controlled starttacks (I = OFF, II = ON)		I
	102	Reverse (I = OFF, II = ON)		I
	103	Max. stitch length of fullness pedal	0.8 – 6.5 mm	4.0mm
	104	Display software version		
2	201	Machine class 1: 1493M 2: 3734		2
	202	Roller presser drop speed OFF = I, ON = II;		I
3	301	Take-up lever position TDC	0 – 191	170
	302	Needle position lowered (5 mm before BDC)	0 – 191	17
	303	Cutting magnet position	0 – 191	17
	304	Reverse position	0 – 191	130
4	401	Delay time raise presser foot	0.01 – 1.50s	0.02s
	402	Start delay after presser foot lowered	0.01 – 1.50s	0.15s
	403	Set raise presser foot	0.01 – 1.50s	0.03s
5	501	Maximum speed	100 – 2700	2700
	502	Starttack speed	100 – 1500	700
	503	Endtack speed	100 – 1500	700
	504	Softstart speed	100 – 2700	1500
	505	Soft starting stitches	0 – 15	0



The operator has free access to the " 100" parameters.
Parameters " 200" – " 800" may only be changed after the code number has been entered by authorised qualified personnel.

Group	Parameter	Meaning	Setting	Standard value
6	601	Move stepping motor roller presser and feed wheel		
	602	Display inputs 0123456789ABCDEF 0: Not assigned 1: Knee switch 2: Sewing motor reference position 3: Material thickness 4: Not assigned (E12) 5: Not assigned (E11) 6: Not assigned (E10) 7: Not assigned (E9) 8: Not assigned (E8) 9: Not assigned (E7) A: Not assigned (E6) B: Not assigned (E5) C: Not assigned (E4) D: Not assigned (E3) E: Not assigned (E2) F: Not assigned (E1)		
	603	Adjust sewing motor on sewing head (See Chapter 12.04)		
	604	Carry out cold start (see Chapter 12.09)		
7	701	P-quota speed controller	1 – 50	30
	702	I-quota speed controller	0 – 100	50
	703	P-quota position controller	1 – 50	20
	704	D-quota position controller	1 – 100	30
	705	Time for position controller	0 – 100	25
	706	P-quota position controller for rest brake	1 – 50	25
	707	D-quota position controller for rest brake	1 – 50	15
	708	Maximum moment for rest brake	0 – 100	0
	709	Minimum machine speed	3 – 64	6
	710	Maximum machine speed	1 – 30	30
	711	Maximum motor speed	1 – 90	90
	712	Positioning speed	3 – 25	18
	713	Acceleration ramp	1 – 50	35

Group	Parameter	Meaning	Setting	Standard value
7	714	Brake ramp	1 – 50	30
	715	Reference position	0 – 191	17
	716	Time-out	0 – 255	40
	717	Starting current motor	3 – 10	8
	718	Antivibration filter	1 – 10	6
	719	Rotation direction allocation	0 – 1	0
8	720	Reference position correction	0 – 191	64
	801	Right of access function group 100	0 – 1	0
	802	Right of access function group 200	0 – 1	1
	803	Right of access function group 300	0 – 1	1
	804	Right of access function group 400	0 – 1	1
	805	Right of access function group 500	0 – 1	1
	806	Right of access function group 600	0 – 1	1
	807	Right of access function group 700	0 – 1	1
	808	Right of access function group 800	0 – 1	1
	809	Enter access code	0 – 9999	1493

12.08 Error messages

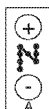
Error 1:	System fault
Error 2:	Sewing motor
Error 3:	Area
Error 4:	End of area
Error 5:	Pedal activated at start
Error 7:	Ramp end
Error 11:	Stepping frequency
Error 21:	Power unit overload
Error 22:	Mains voltage
Error 23:	24V too low

12.09 Carry out cold start

- Switch on the machine.

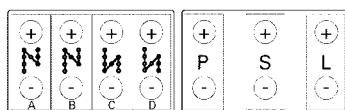


- Press **Parameter input** key (LED on).



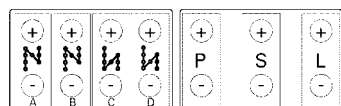
- Select the required parameter by pressing the **plus/minus** key.

600



- Enter the code number (factory code setting is " 1493")

CODE 0

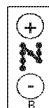
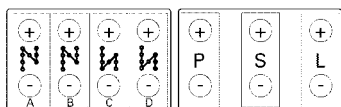


- Confirm input.



- By pressing +/- on the **A+B** key select parameter " 604" .

604



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

- Switch off the machine.



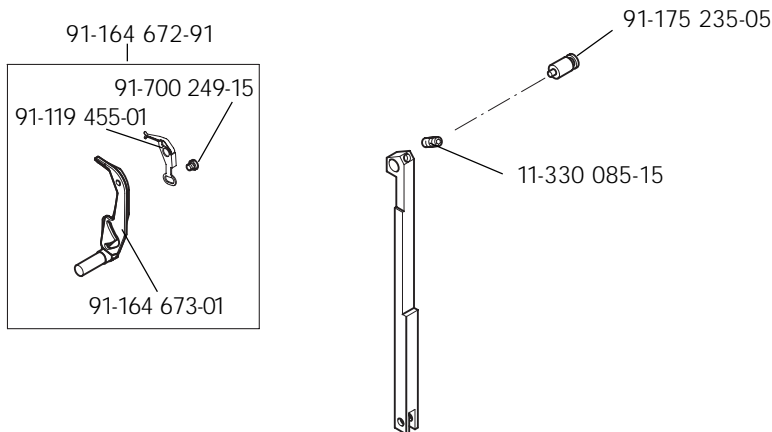
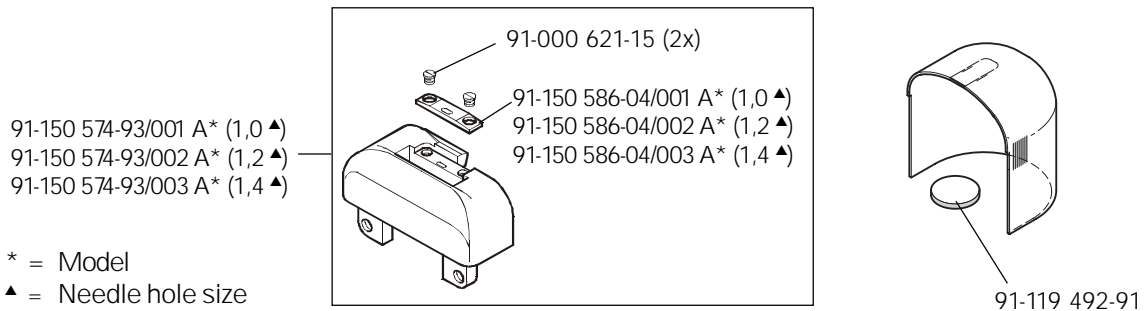
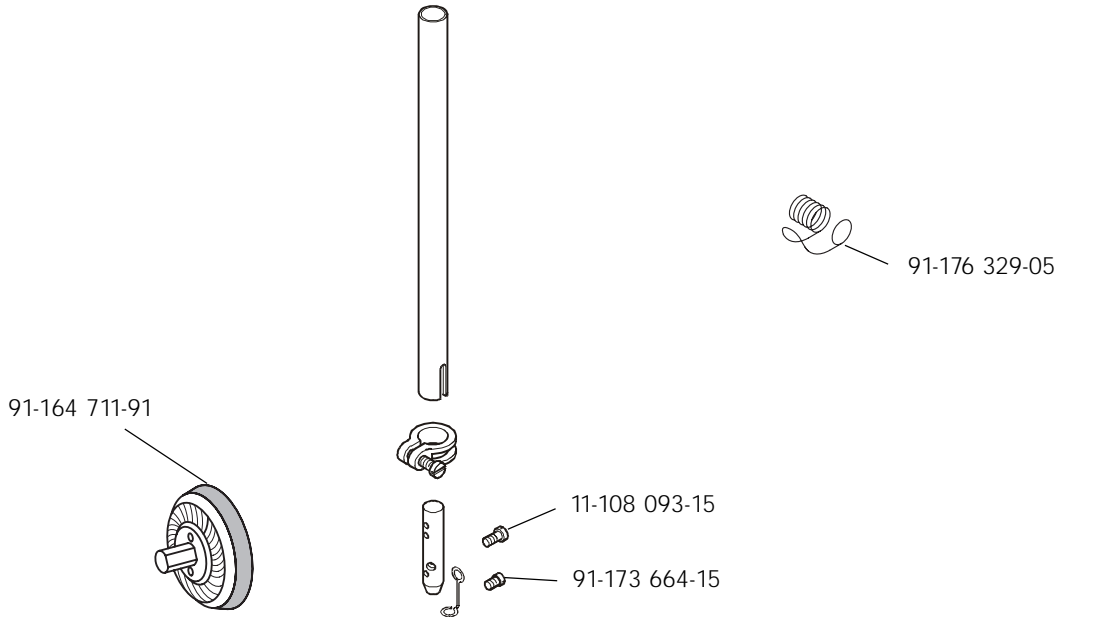
Following a cold start all programmed values are reset to their condition on delivery.

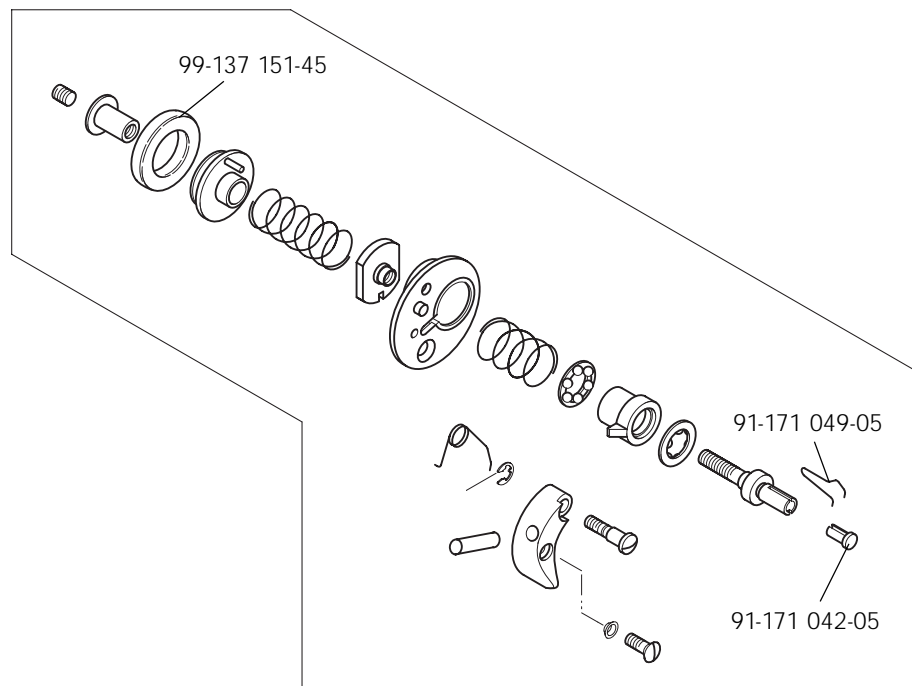
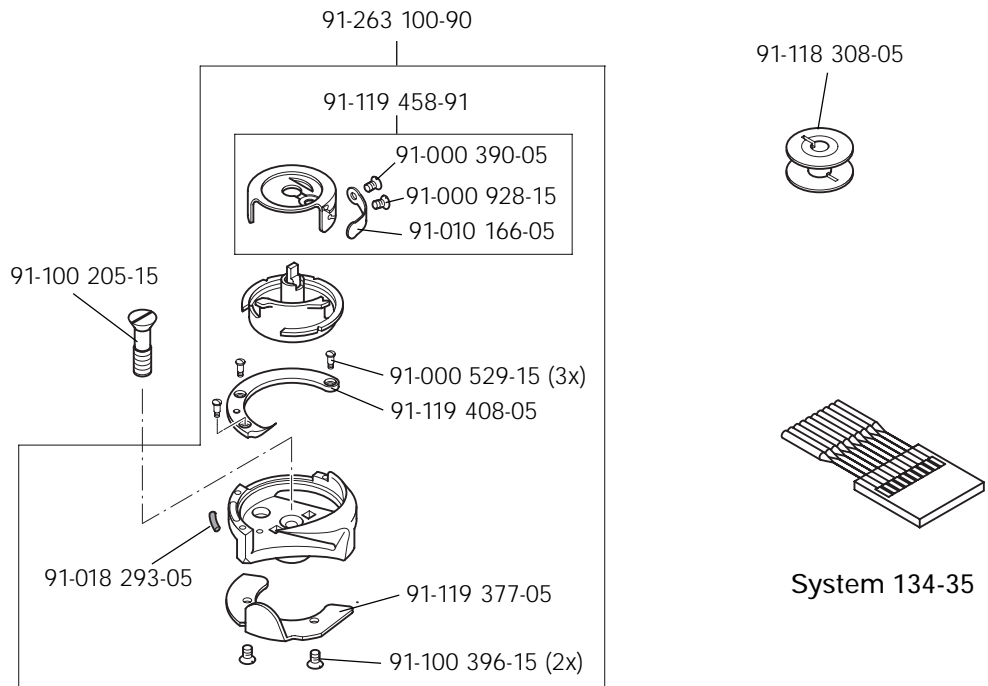
Wearing parts

13.01 Wearing parts



This list indicates the most important wearing parts.
 You can request a detailed parts list for the complete machine under parts number 296-12-17816.





PFAFF

**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.