

# PFAFF

## 1122

## 1122-G

Adjustment Manual

## 1122-720/..

## 1122-G-720/..

This Adjustment Manual is valid for machines from the following serial numbers onwards:

# 6 001 000 →

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Contents .....		Chapter - Page
<b>12</b>	<b>Adjustment .....</b>	<b>12 - 2</b>
12.01	Notes on adjustment .....	12 - 2
12.02	Tools, gauges and other accessories .....	12 - 2
12.03	Abbreviations .....	12 - 2
12.04	Explanation of the symbols .....	12 - 2
12.05	Adjusting the basic machine .....	12 - 3
12.05.01	Basic position of the hook drive unit .....	12 - 3
12.05.02	Positioning the feed dog .....	12 - 4
12.05.03	Height of the feed dog .....	12 - 5
12.05.04	Adjusting the stitch length .....	12 - 6
12.05.05	Preliminary adjustment of the needle height .....	12 - 7
12.05.06	Positioning the needle in centre of the needle hole .....	12 - 8
12.05.07	Hook-to-needle clearance, needle rise, needle height and needle guard .....	12 - 9
12.05.08	Hook to needle plate clearance .....	12 - 11
12.05.09	Bobbin case opener .....	12 - 12
12.05.10	Hook lubrication .....	12 - 13
12.05.11	Presser foot to needle place clearance / presser foot pressure .....	12 - 14
12.05.12	Thread check spring .....	12 - 15
12.05.13	Needle thread tension release .....	12 - 16
12.05.14	Bobbin winder drive wheel and bobbin winder .....	12 - 17
12.05.15	Limiting the knee lever stroke .....	12 - 18
12.06	Adjusting the thread trimmer -900/93 .....	12 - 19
12.06.01	Basic position of the thread trimmer .....	12 - 19
12.06.02	Thread catcher to hook clearance .....	12 - 20
12.06.03	Thread catcher position .....	12 - 21
12.06.04	Manual cutting test .....	12 - 22
12.06.05	Needle thread tension release .....	12 - 23
12.07	Adjusting the thread wiper -909/93 .....	12 - 24
12.08	Parameter settings (only on machines with Quick-motor) .....	12 - 25
12.08.01	Selecting the user level .....	12 - 25
12.08.02	Example of a parameter input .....	12 - 26
12.08.03	List of parameters .....	12 - 27
12.09	Internet update of the machine software .....	12 - 28
12.10	Reset / Cold start .....	12 - 29
<b>13</b>	<b>Circuit diagrams .....</b>	<b>13 - 1</b>

## 12 Adjustment



Please observe all notes from **Chapter 1 Safety** of the instruction manual! In particular care must be taken to see that all protective devices are refitted properly after adjustment, see **Chapter 1.06 Danger warnings** of the instruction manual!



If not otherwise stated, the machine must be disconnected from the electrical power supply.

### 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

- 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 Allen keys from 1.5 to 6 mm
- 1 metal ruler, part no. 08-880 218-00
- Threads and test material

### 12.03 Abbreviations

t.d.c. = top dead centre

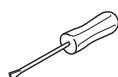
b.d.c. = bottom dead centre

### 12.04 Explanation of the symbols

In this adjustment manual, symbols emphasize operations to be carried out or important information. The symbols used have the following meaning:



Note, information



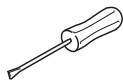
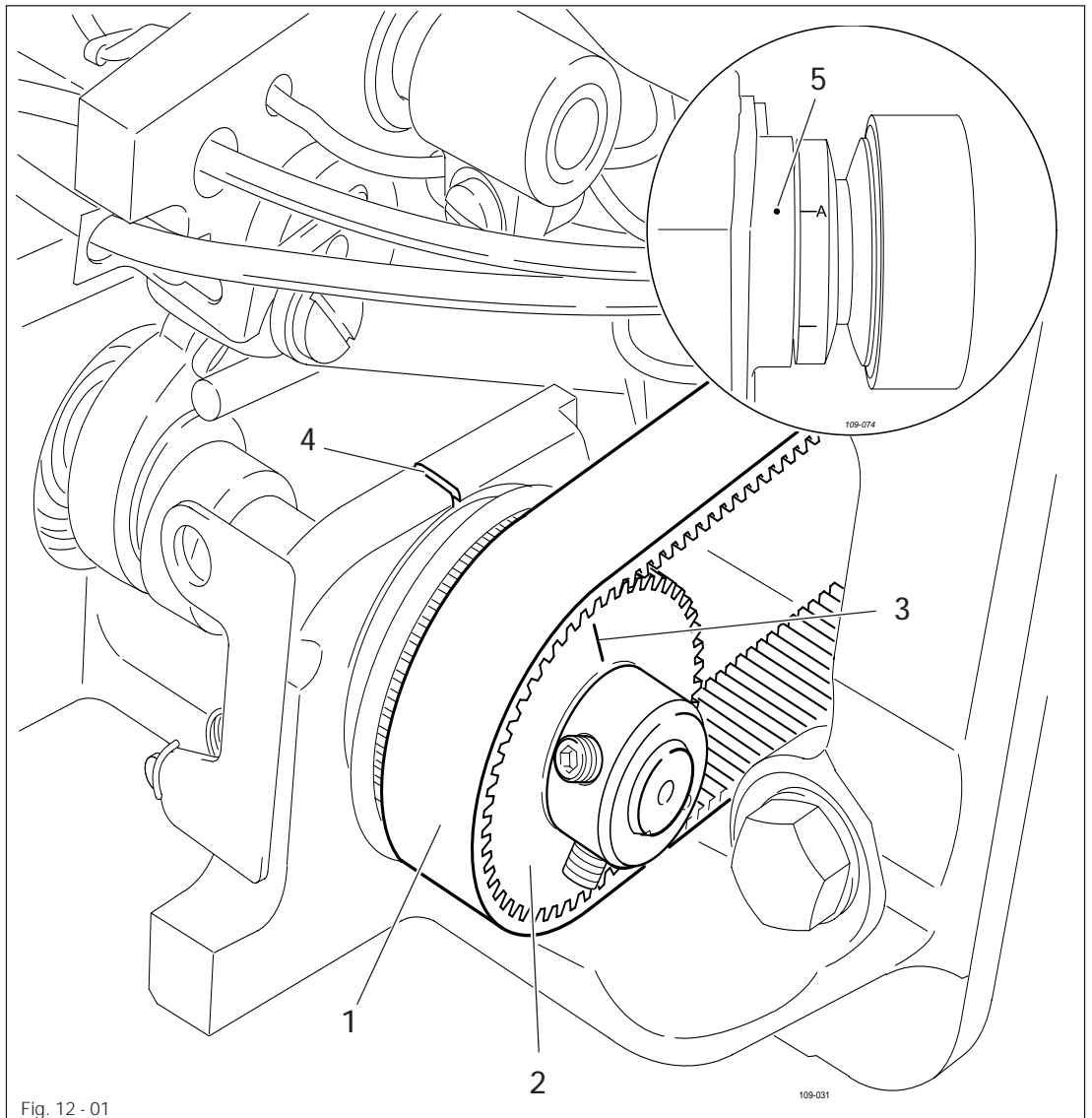
Service, repair, adjustment, maintenance  
(work to be carried out by qualified staff only)

## 12.05 Adjusting the basic machine

## 12.05.01 Basic position of the hook drive unit

**Requirement**

When the marking "A" on the balance wheel is level with marking 5, marking 3 should be level with marking 4.

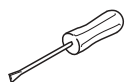
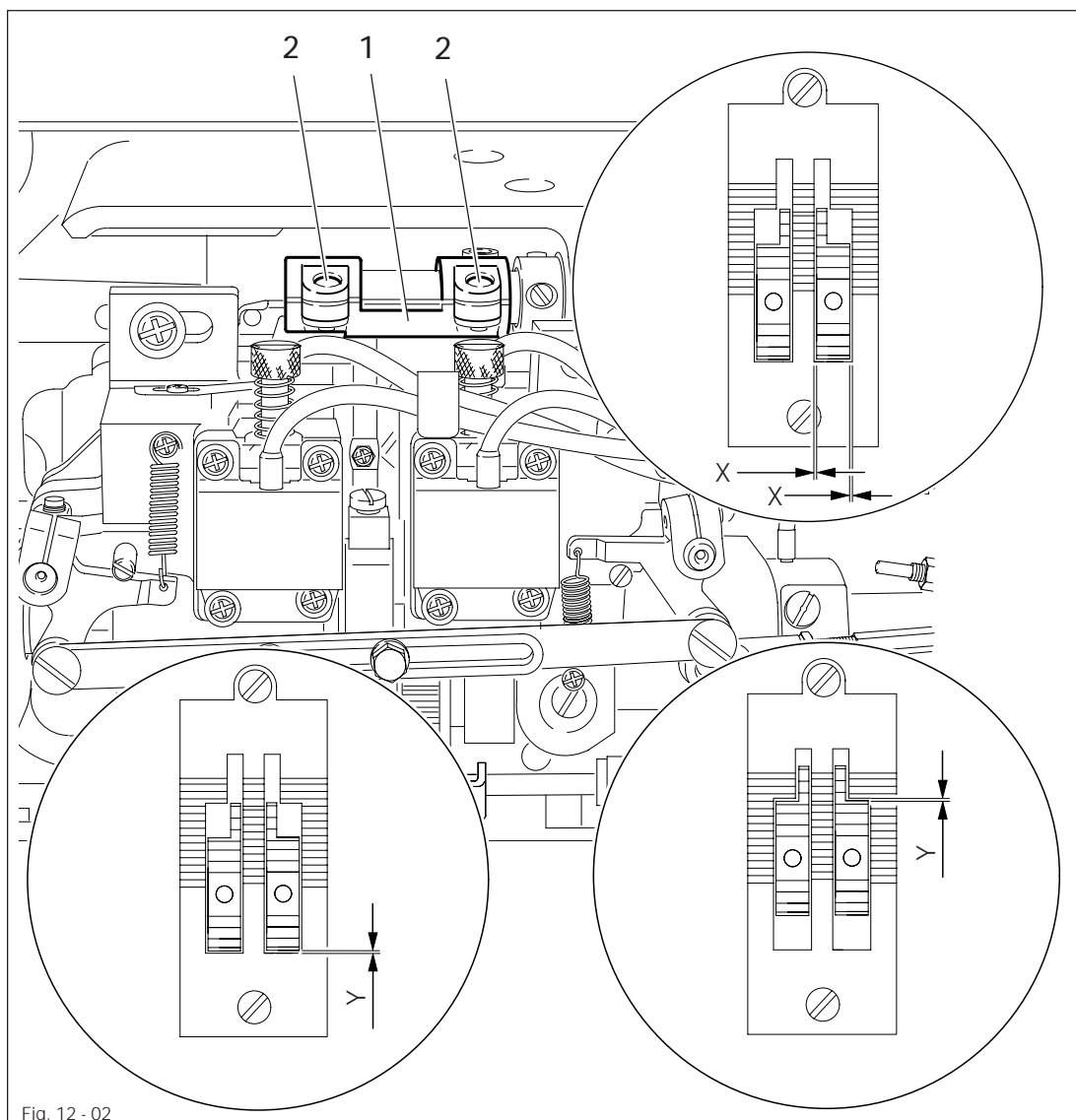


- Remove toothed belt 1.
- Adjust belt wheel 2 in accordance with the **requirement** and fit toothed belt 1.

## 12.05.02 Positioning the feed dog

### Requirement

1. The feed dog must be the same distance  $X$  from the right and left side of the needle plate cutout.
2. With the longest stitch set, in its front and rear point of reversal the feed dog should be the same distance  $Y$  from the needle plate cutout.

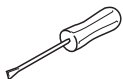
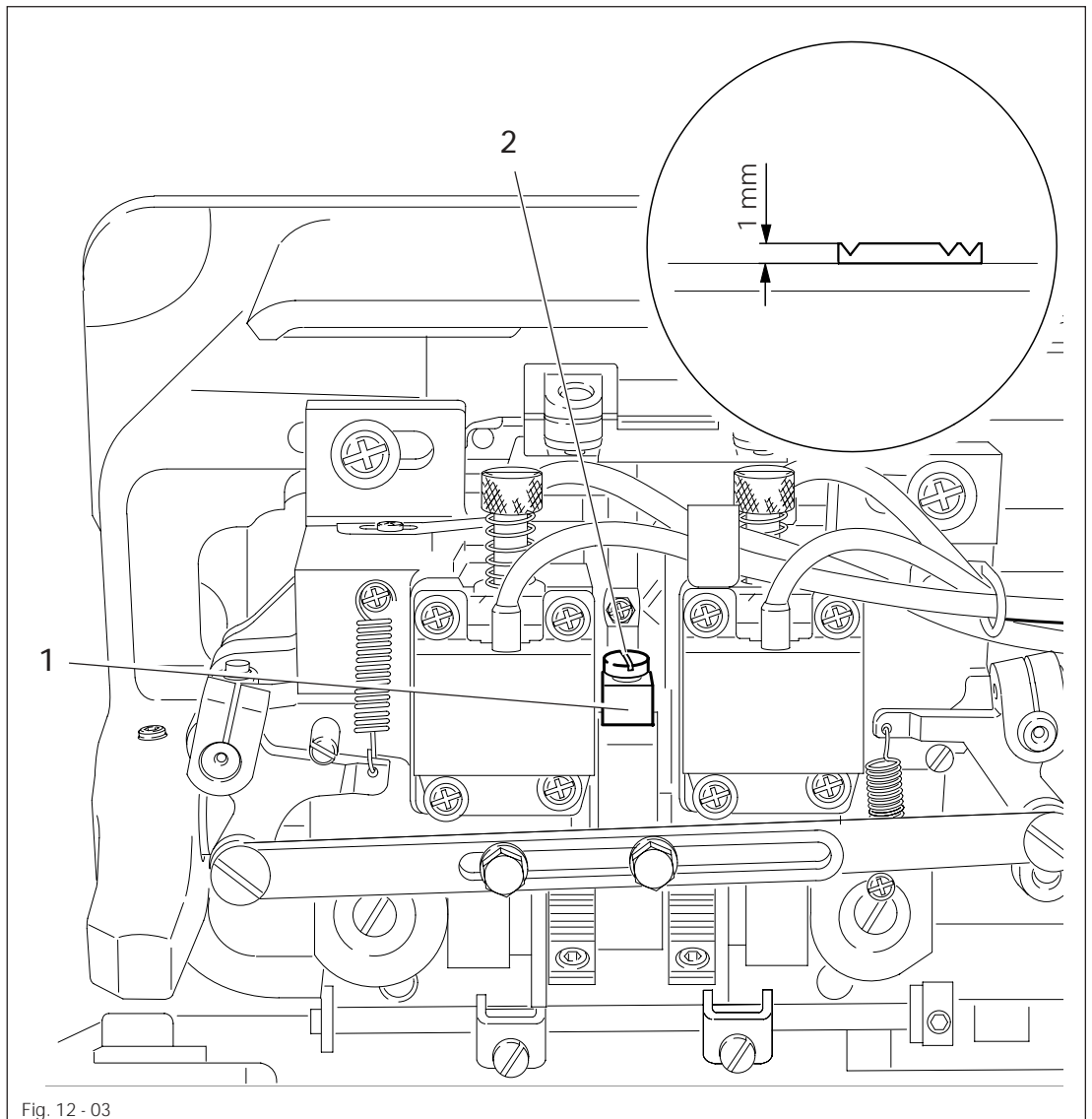


- Adjust holder 1 (screws 2) in accordance with the requirements.

## 12.05.03 Height of the feed dog

### Requirement

With the stitch length set at "0", at t.d.c. the feed dog should protrude ca. 1 mm over the needle plate.



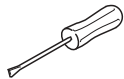
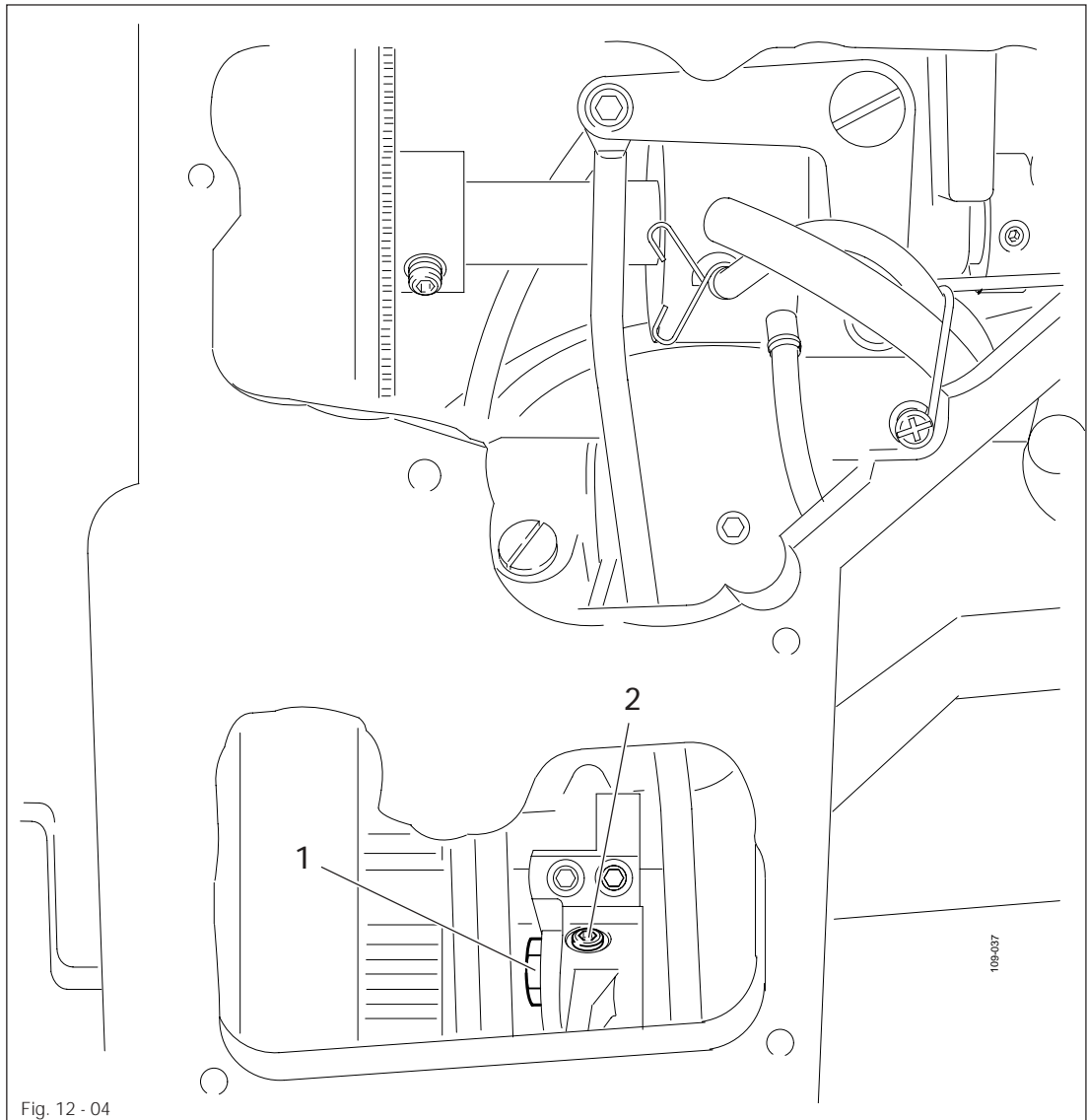
- Adjust holder 1 (screw 2) in accordance with the requirement.

# Adjustment

## 12.05.04 Adjusting the stitch length

### Requirement

The stitch length should be the same when sewing forwards or in reverse.



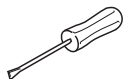
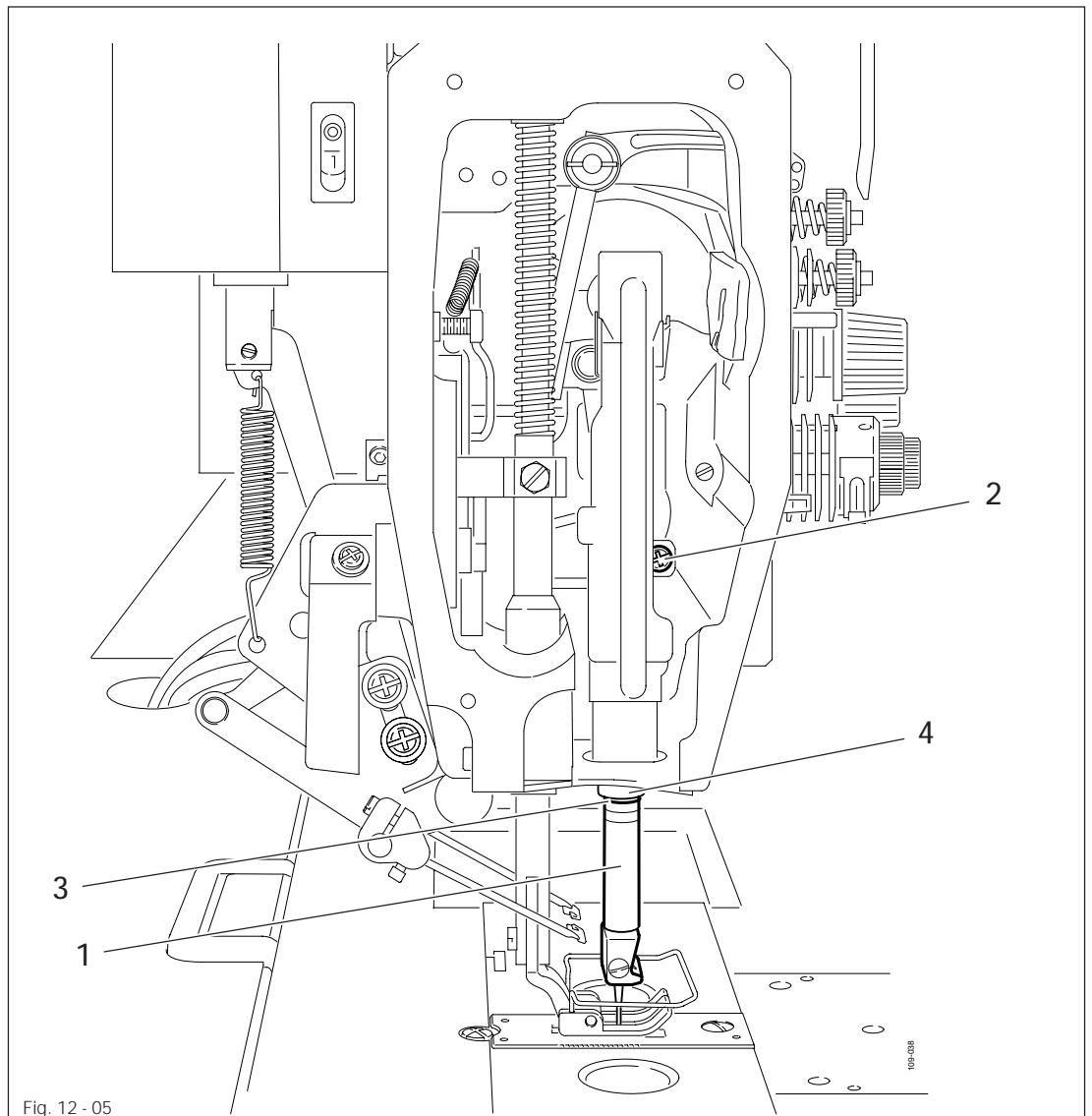
- Adjust eccentric 1 (screw 2) in accordance with the requirement.



## 12.05.05 Preliminary adjustment of the needle height

### Requirement

With the stitch length set at "0", when the needle bar is at its b.d.c., marking 3 should be flush with the lower edge of bushing 4.



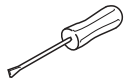
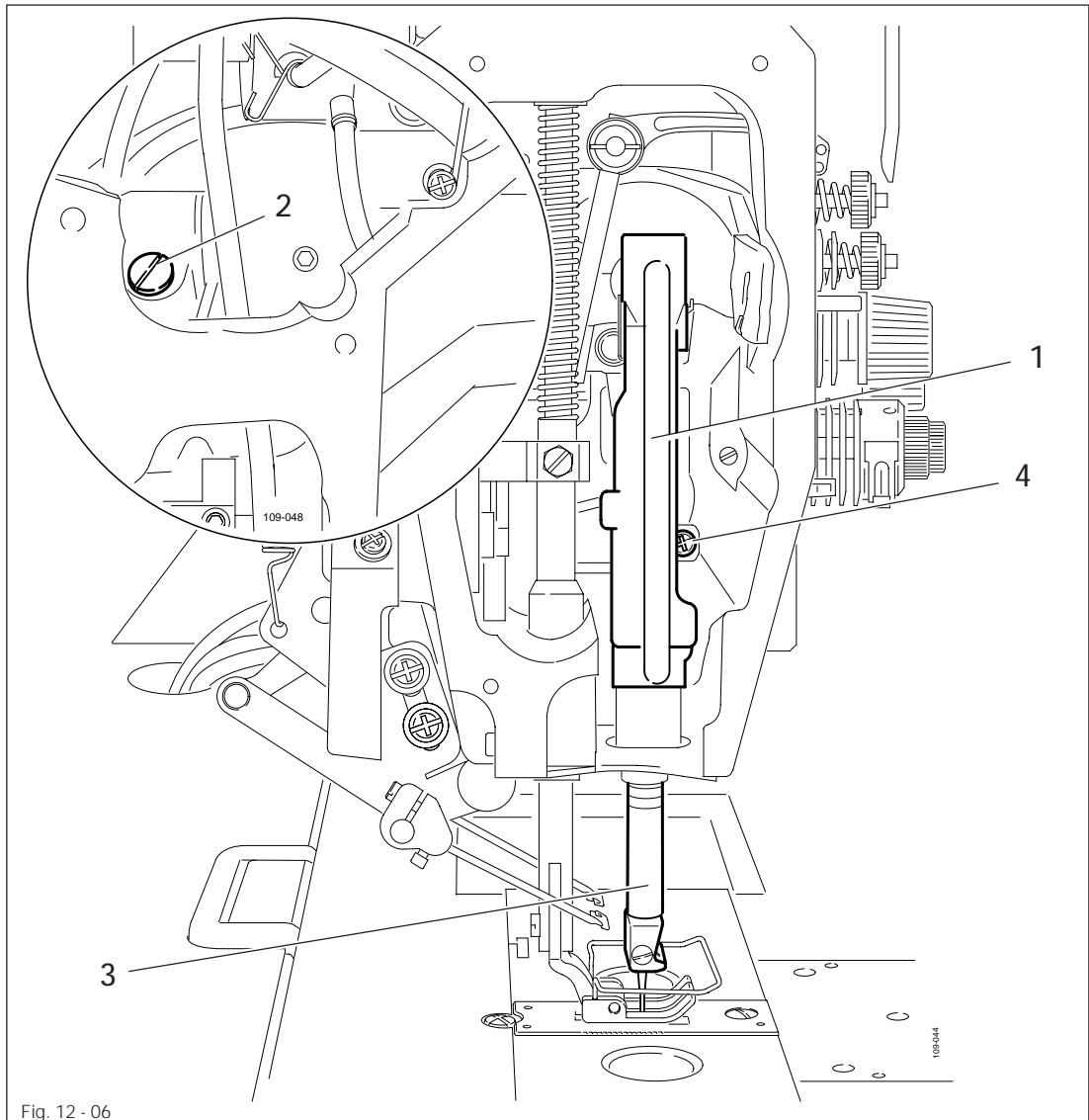
- Adjust needle bar 1 (screw 2) in accordance with the requirement.

## Adjustment

### 12.05.06 Positioning the needle in centre of the needle hole

#### Requirement

With the stitch length set at "0", the needles should enter the needle holes exactly in the centre.



- Adjust needle bar frame 1 (screw 2) in accordance with the requirement.
- Turn needle bar 3 (screw 4) in accordance with the requirement.

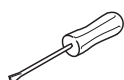
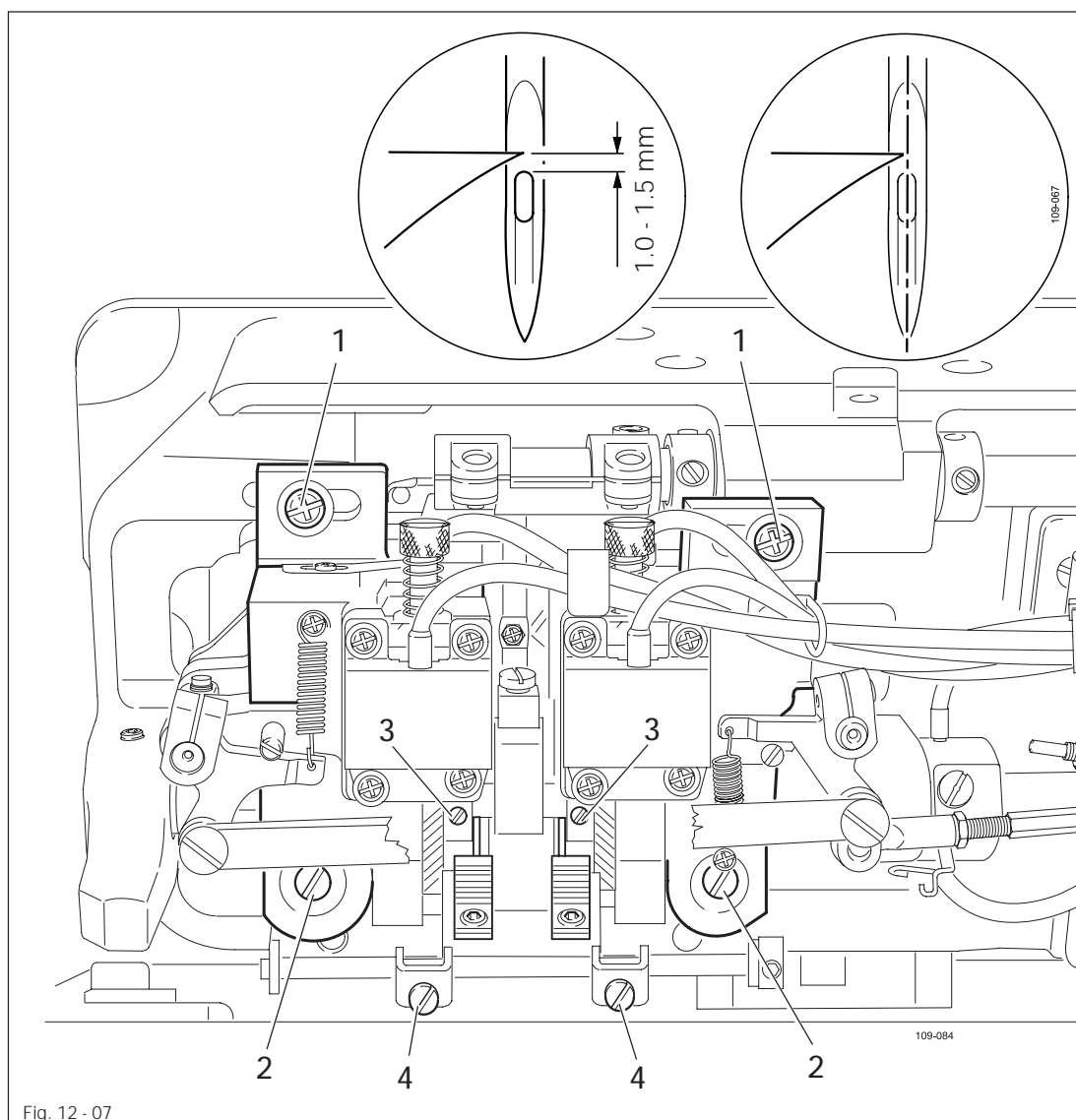
## 12.05.07 Hook-to-needle clearance, needle rise, needle height and needle guard

### Requirement

In needle rise position (see table) and with the stitch length set at x

1. the hook point should be centred to the needle and have a side clearance to the needle of 0.05 – 0.10 mm.
2. the upper edge of the needle eye should be 1.0 – 1.5 mm below the hook point and
3. needle guard 11 should slightly touch the needle.

Machine type	1122 1122-720	1122 1122-720	1122 1122-720	1122-G 1122-G-720	1122-G 1122-G-720
Version	A	B	C	B	C
Stitch length "x" [mm]	2.0	2.0	3.0	3.0	3.0
Needle rise [mm]	1.8	2.0	2.4	2.0	2.4



- Loosen screws 1, 2, 3 and 4.

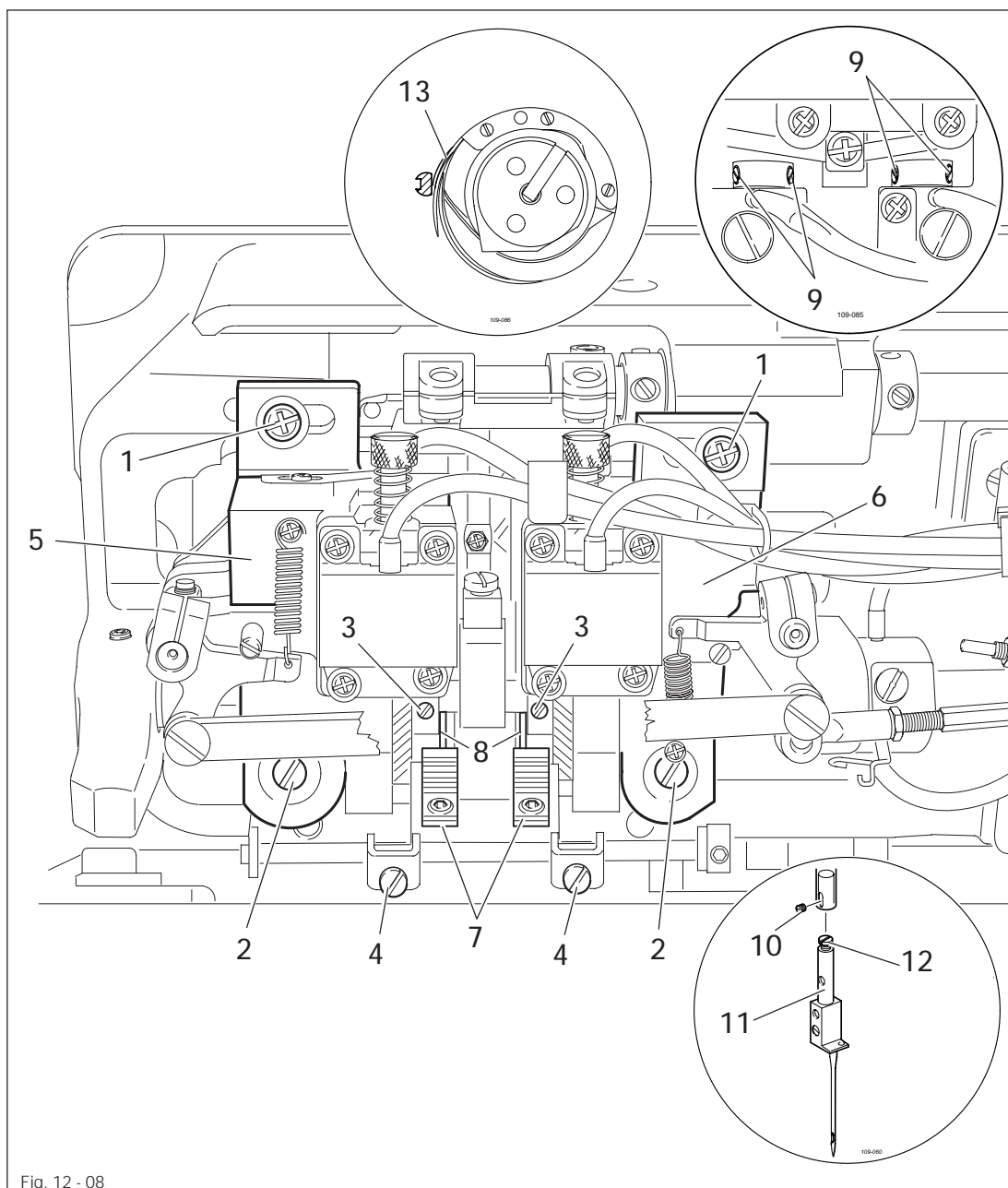
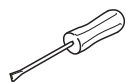


Fig. 12 - 08

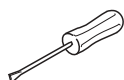
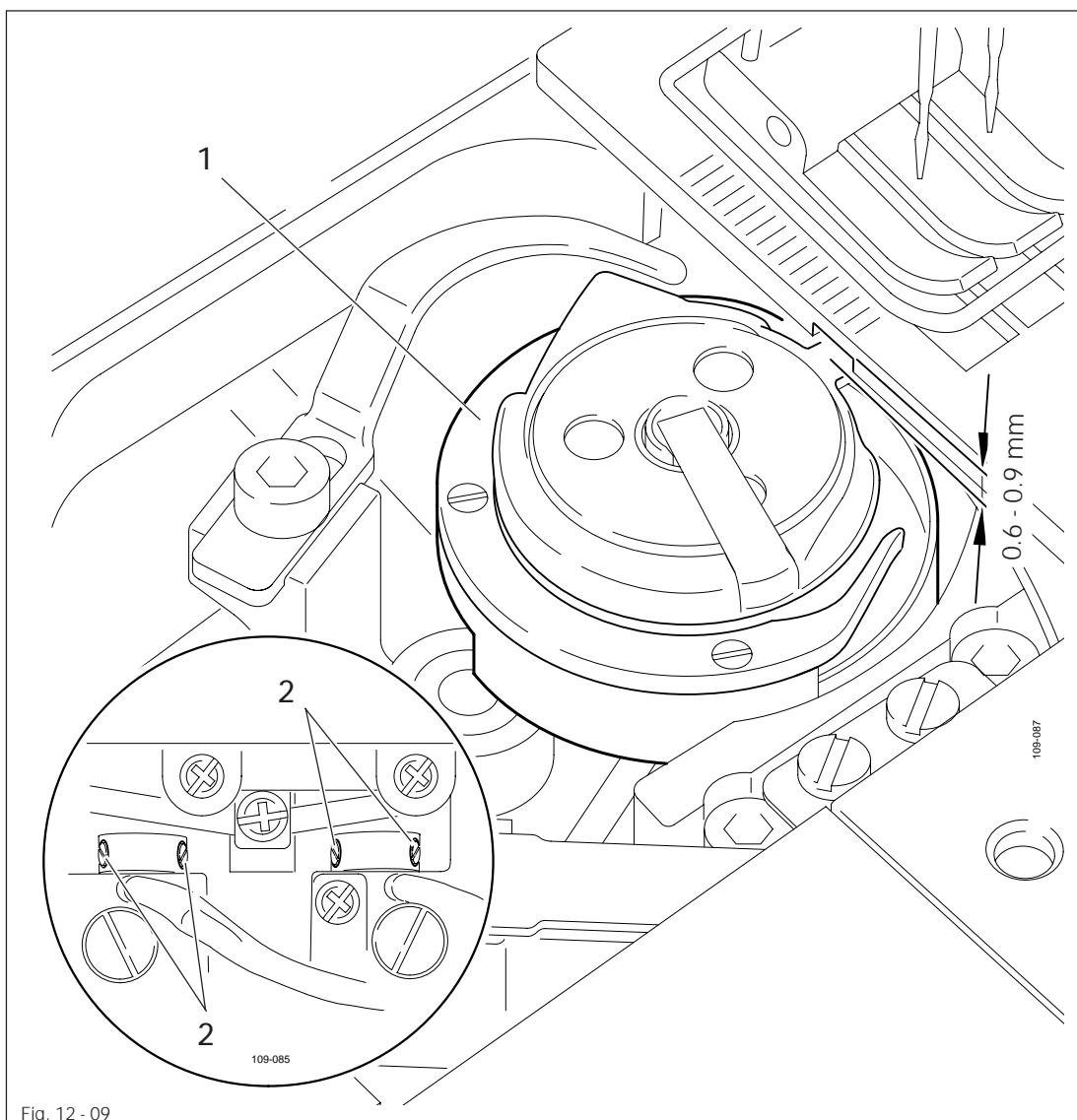


- Move hook bearings 5 and 6 outwards until on each side there is a distance of 1-3 mm between hook point and needle.
- Tighten screws 4.
- Adjust knurled screws 7 in accordance with requirement 1 and tighten screws 1 and 2.
- Push the toothed wheels lightly against plate 8 and tighten screws 3.
- Adjust hook (screws 9) in accordance with requirement 1.  
PFAFF 1122 and 1122-G
- Adjust the needle height in accordance with requirement 2, also see Chapter 12.05.05  
**Preliminary adjustment of the needle height.**  
PFAFF 1122-720/02 and 1122-G-720/02
- Loosen screw 10 and remove needle holder 11.
- Adjust the needle height (screw 12) in accordance with requirement 2.
- Insert the needle holder 11 and tighten screw 10.
- Align needle guard 13 in accordance with requirement 3.

## 12.05.08 Hook to needle plate clearance

**Requirement**

There should be a clearance of **0.6 – 0.9 mm** between the top edge of the bobbin position stop and the bottom edge of the needle plate cutout.



- Adjust hook 1 (screws 2) in accordance with the requirement.

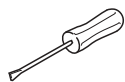
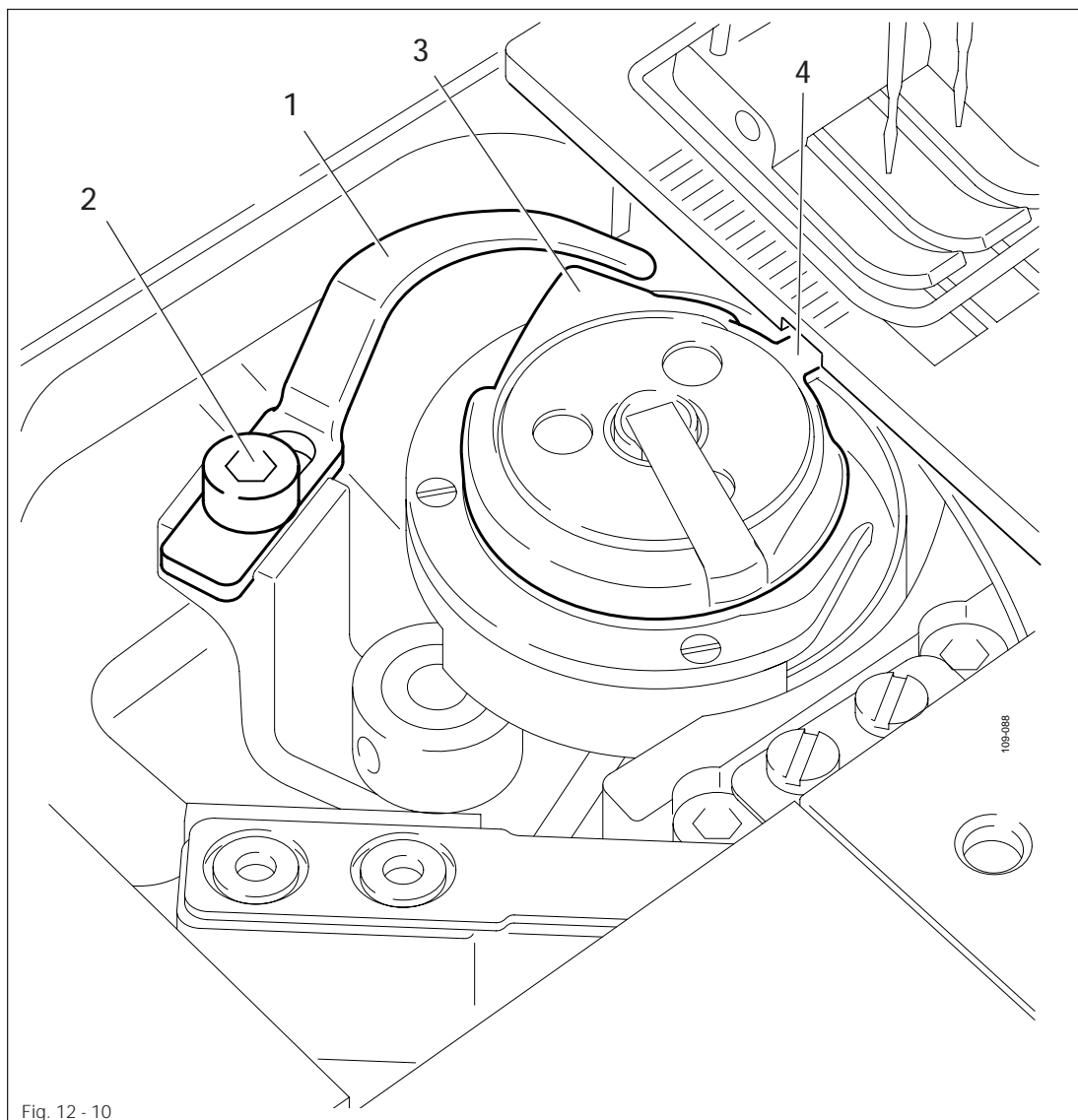


Do not twist hook 1, or the adjustment from Chapter 12.05.07 Hook-to-needle clearance, needle rise, needle height and needle guard will have to be repeated.

## 12.05.09 Bobbin case opener

### Requirement

The needle thread must not be clamped between the bobbin case opener 1 and the bobbin case 3, nor between bobbin case position finger 4 and the retaining trip of the needle plate.

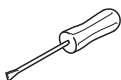
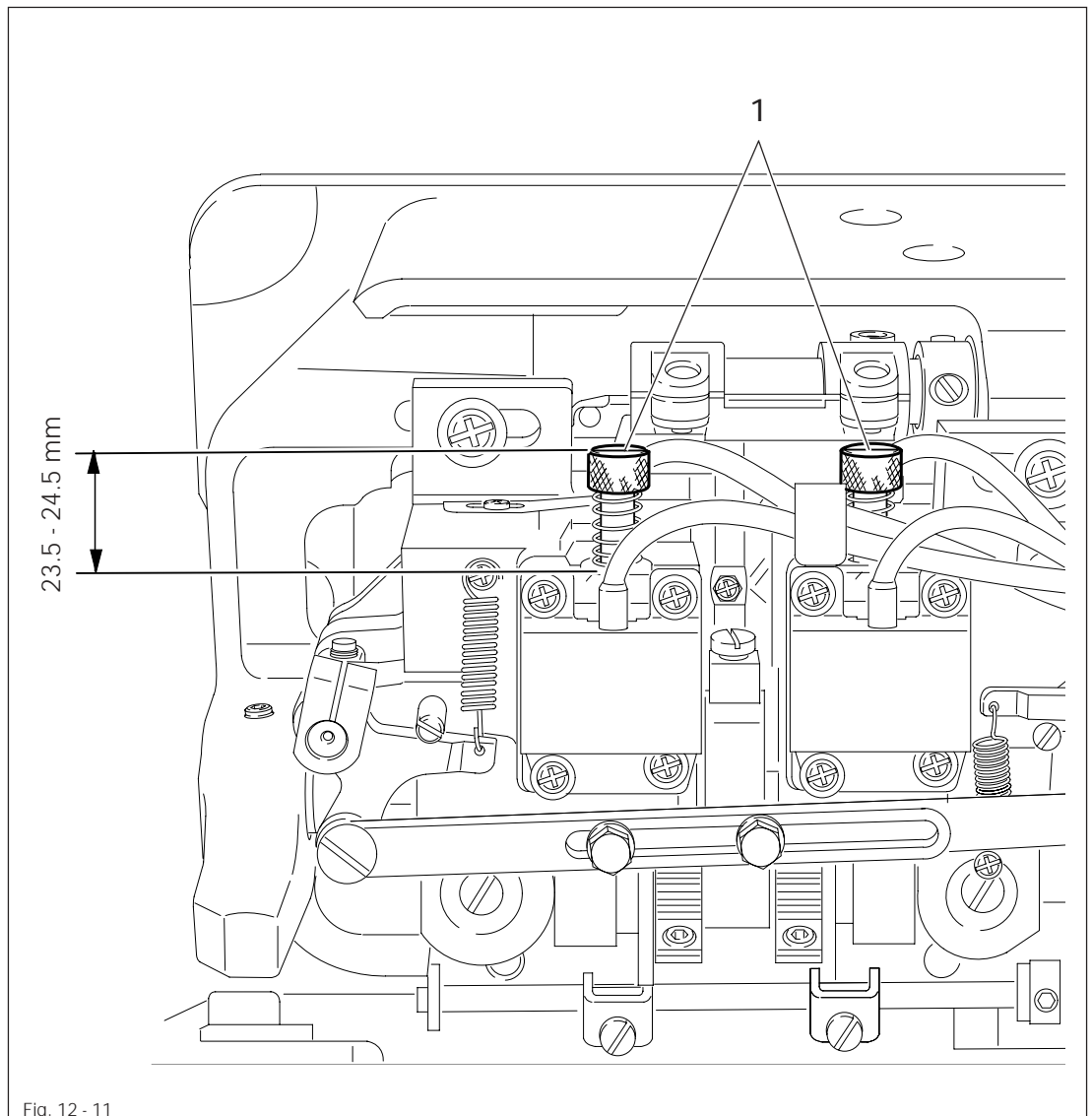


- Thread the machine and insert test material.
- Allow the presser foot to rest on the needle plate.
- Sew a few stitches by turning the balance wheel and carry out a check in accordance with the **requirement**.
- Adjust bobbin case opener 1 (screw 2) in accordance with the **requirement**.

## 12.05.10 Hook lubrication

### Requirement

1. There should be distance of 23.5 – 24.5 mm between the adjustment screw 1 and hook bearing 2.
2. After a running time of 10 seconds a thin oil film should be visible on a strip of paper held next to the hook.

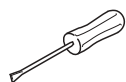
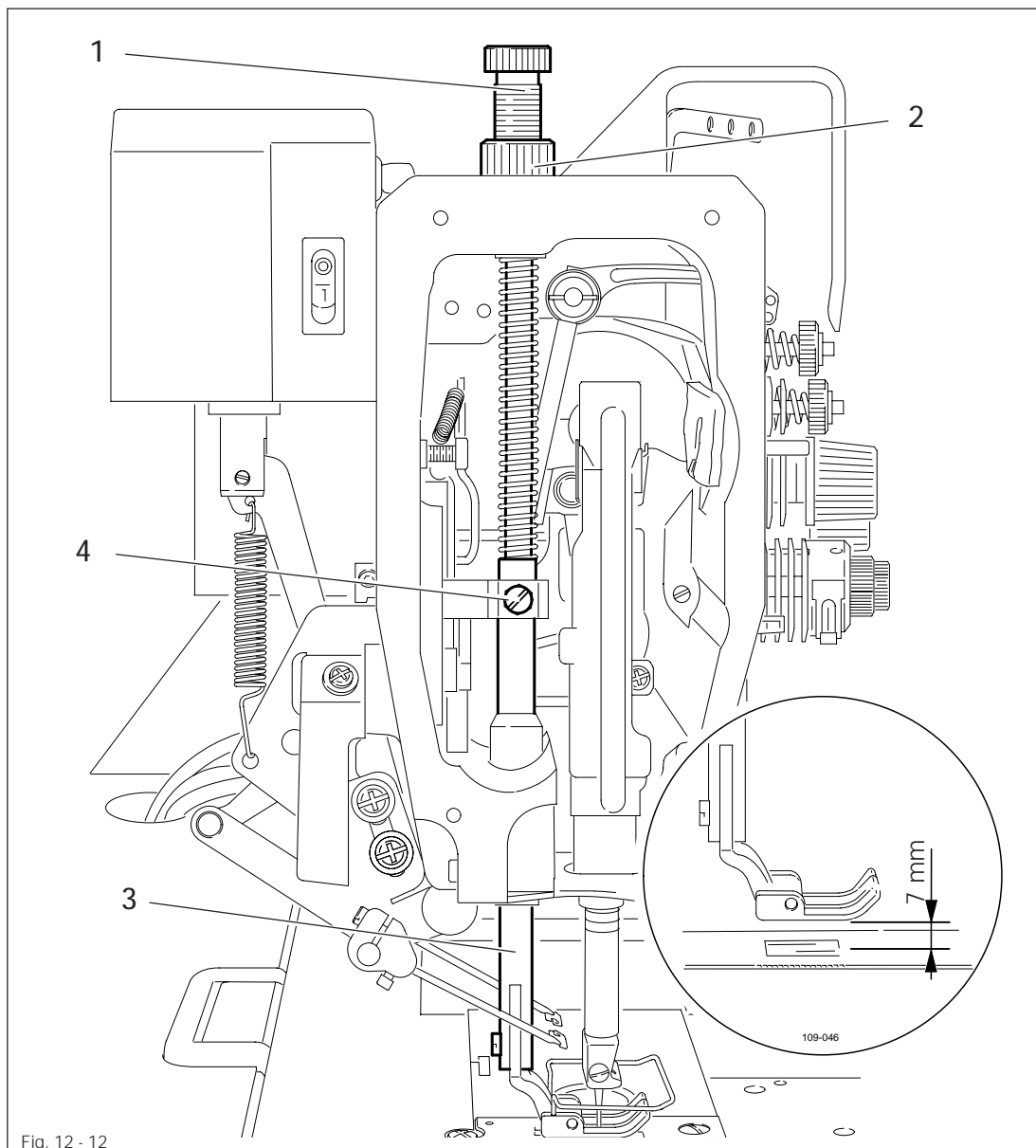


- Pre-adjust screws 1 in accordance with requirement 1.
- Check the adjustment in accordance with requirement 2 and correct it if necessary.

## 12.05.11 Presser foot to needle place clearance / presser foot pressure

### Requirement

1. With the presser foot raised there should be a clearance of **7 mm** to the needle plate.
2. The material should be fed without difficulty, even at top speed.



- Raise the presser foot with the hand lever.
- Reduce the speed on the presser foot using screw 1 (nut 2).
- Without twisting it, adjust presser rod 3 (screw 4) in accordance with requirement 1.
- Turn screw 1 (nut 2) in accordance with requirement 2.



## 12.05.12 Thread check spring

**Requirement**

1. The movement of thread check springs **3** and **6** must be finished when the needle point enters the material ( spring stroke approx. **7 mm**).
2. When the thread loop is at its largest while being passed around the sewing hook, the thread check springs **3** and **6** must rise slightly from rests **1** and **9**.

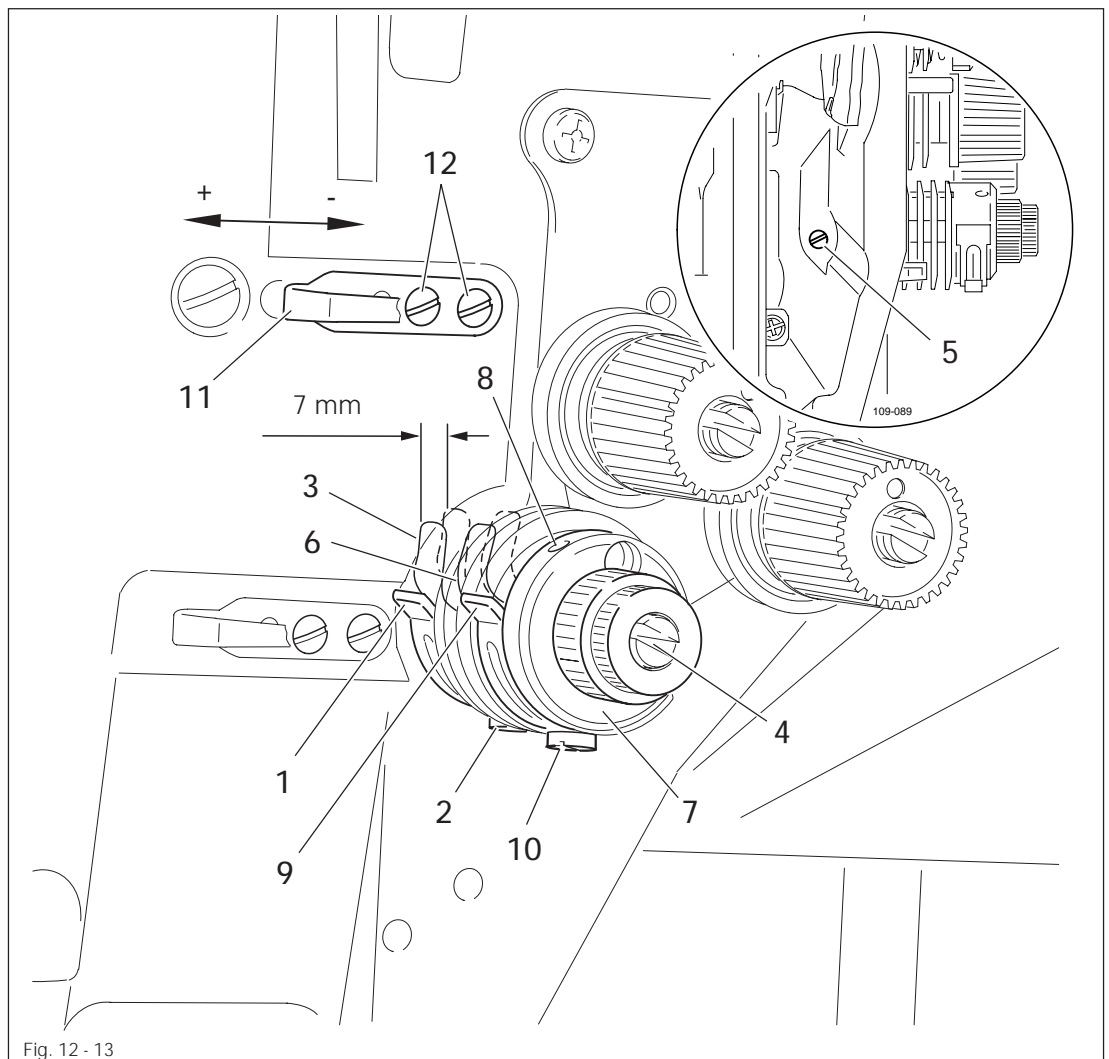
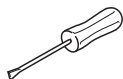


Fig. 12 - 13

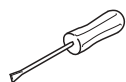
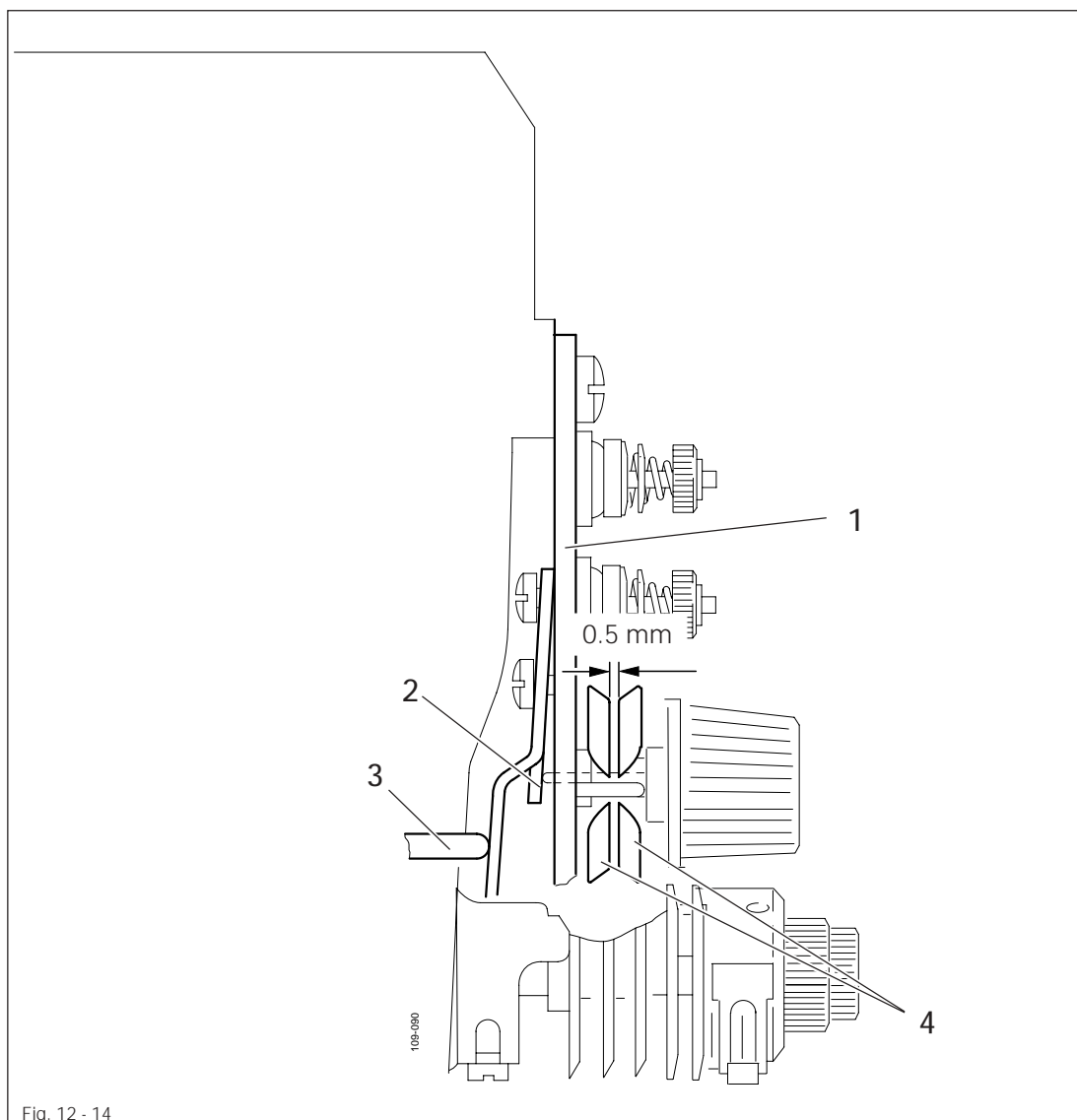


- Adjust rest **1** (screw **2**) in accordance with **requirement 1**.
- To adjust the spring tension of thread check spring **3**, turn screw **4** (screw **5**).
- To adjust the spring tension of thread check spring **6**, turn bush **7** (screw **8**).
- Adjust rest **9** (screw **10**) in accordance with **requirement 1**. (If the adjustment range is too small, rest **9** can be screwed into another opening.)
- Adjust thread regulator **11** (screws **12**) in accordance with **requirement 2**.

## 12.05.13 Needle thread tension release

### Requirement

1. When the hand lever is raised, there should be a distance of at least **0.5 mm** between the tension discs **4**.
2. When the presser foot is touching the needle plate, the tension must be fully effective.



- Unscrew tension carrier plate **1** and align the pressure plate **2** in accordance with the requirement.



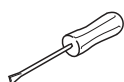
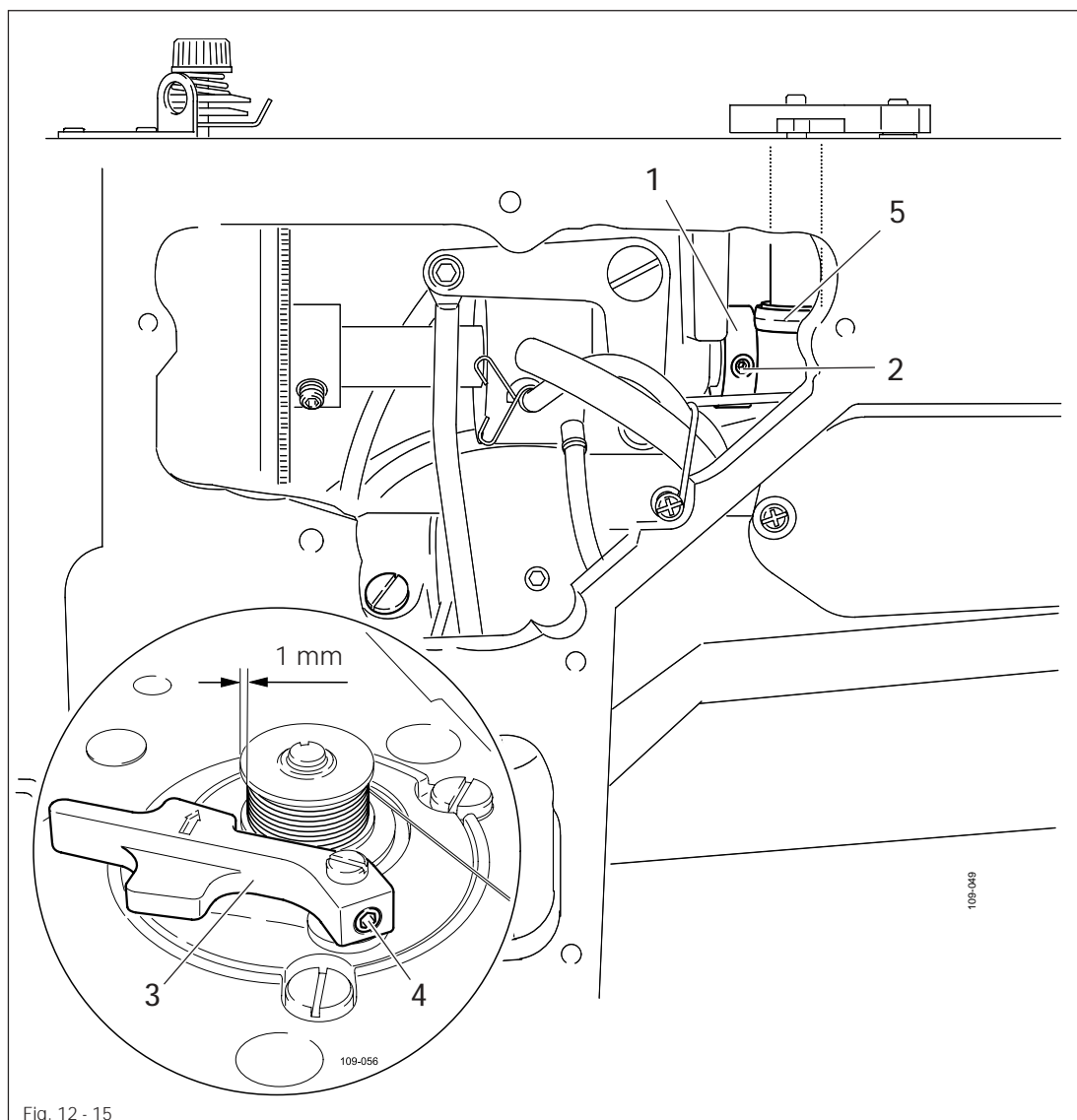
The clearance of **0.5 mm** is a minimum value and can increase to more than **1 mm** when thick threads are being used.

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

## 12.05.14 Bobbin winder drive wheel and bobbin winder

**Requirement**

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



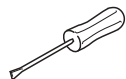
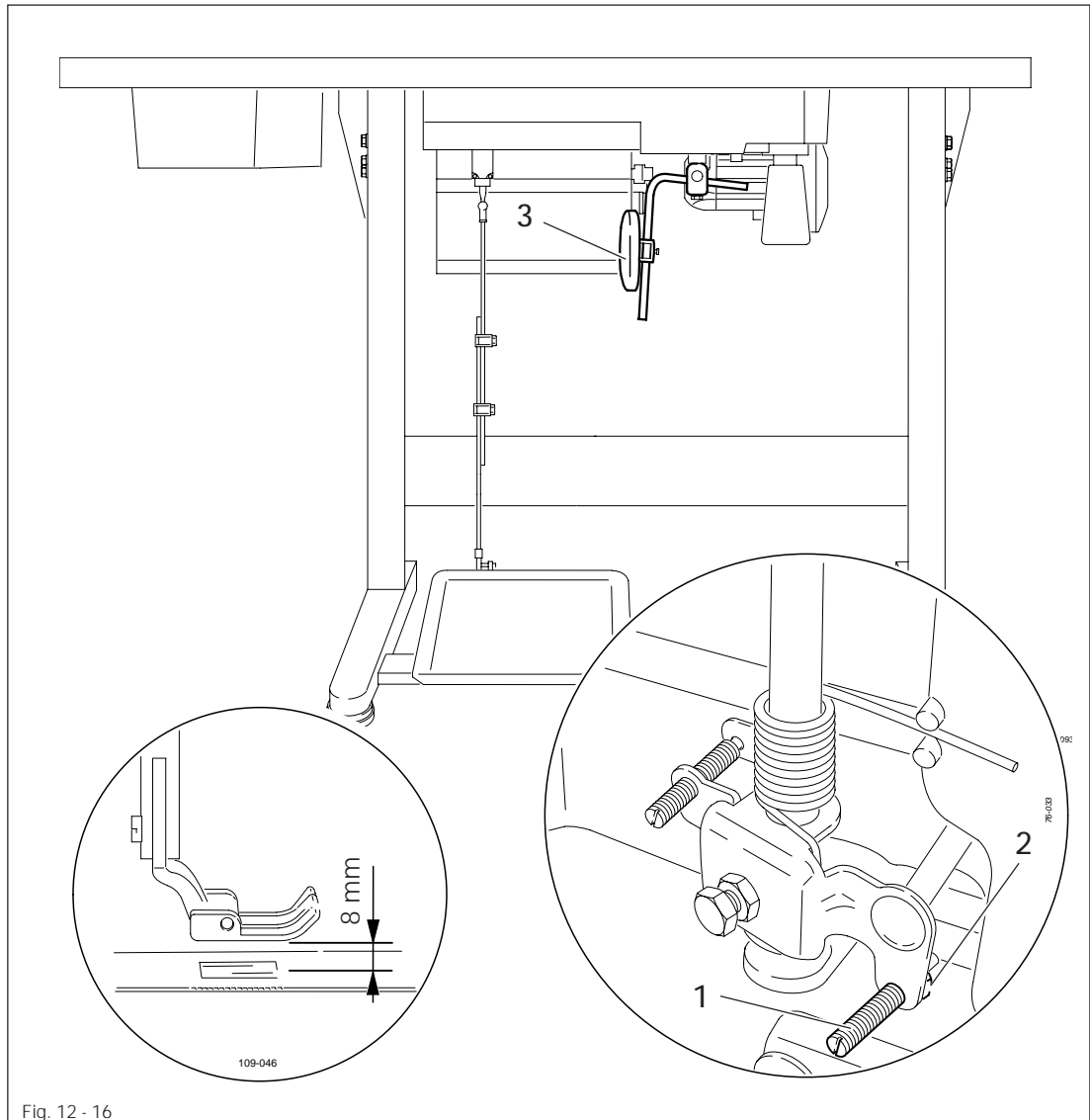
- Adjust drive wheel 1 (screws 2) in accordance with requirement 1.
- Turn lever 3 (screw 4) in accordance with requirement 2.

# Adjustment

## 12.05.15 Limiting the knee lever stroke

### Requirement

When the knee lever 3 is pushed fully, the presser foot should rise **approximately 8 mm** from the needle plate.



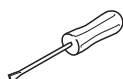
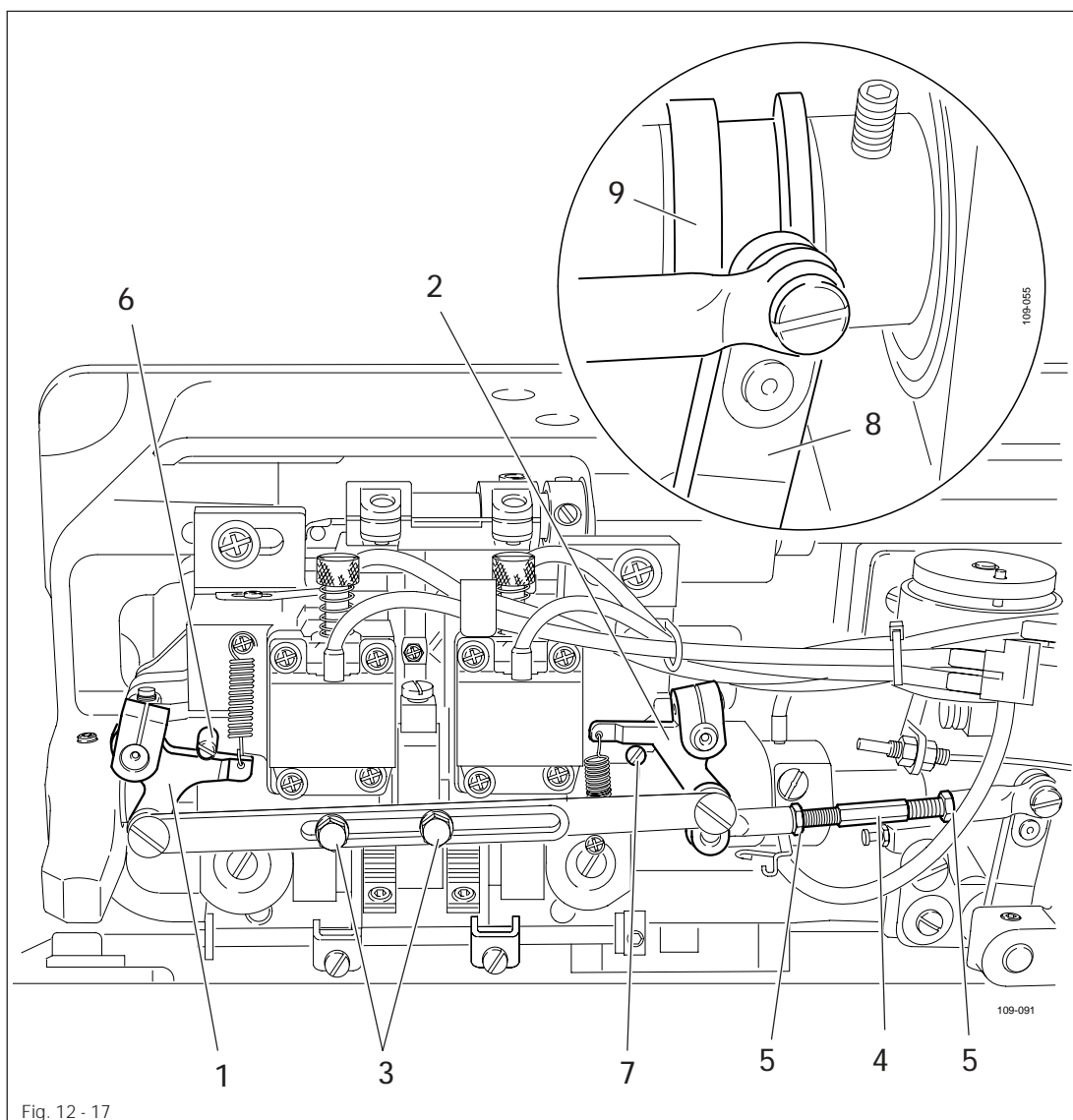
- Adjust screw 1 (nut 2) in accordance with the requirement.

## 12.06 Adjusting the thread trimmer -900/93

## 12.06.01 Basic position of the thread trimmer

**Requirement**

1. When the thread trimmer is in its resting position, levers 1 and 2 should be touching the stops 6 and 7.
2. In needle rise position roller lever 8 should be positioned in the centre of the path of control cam 9.



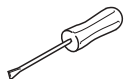
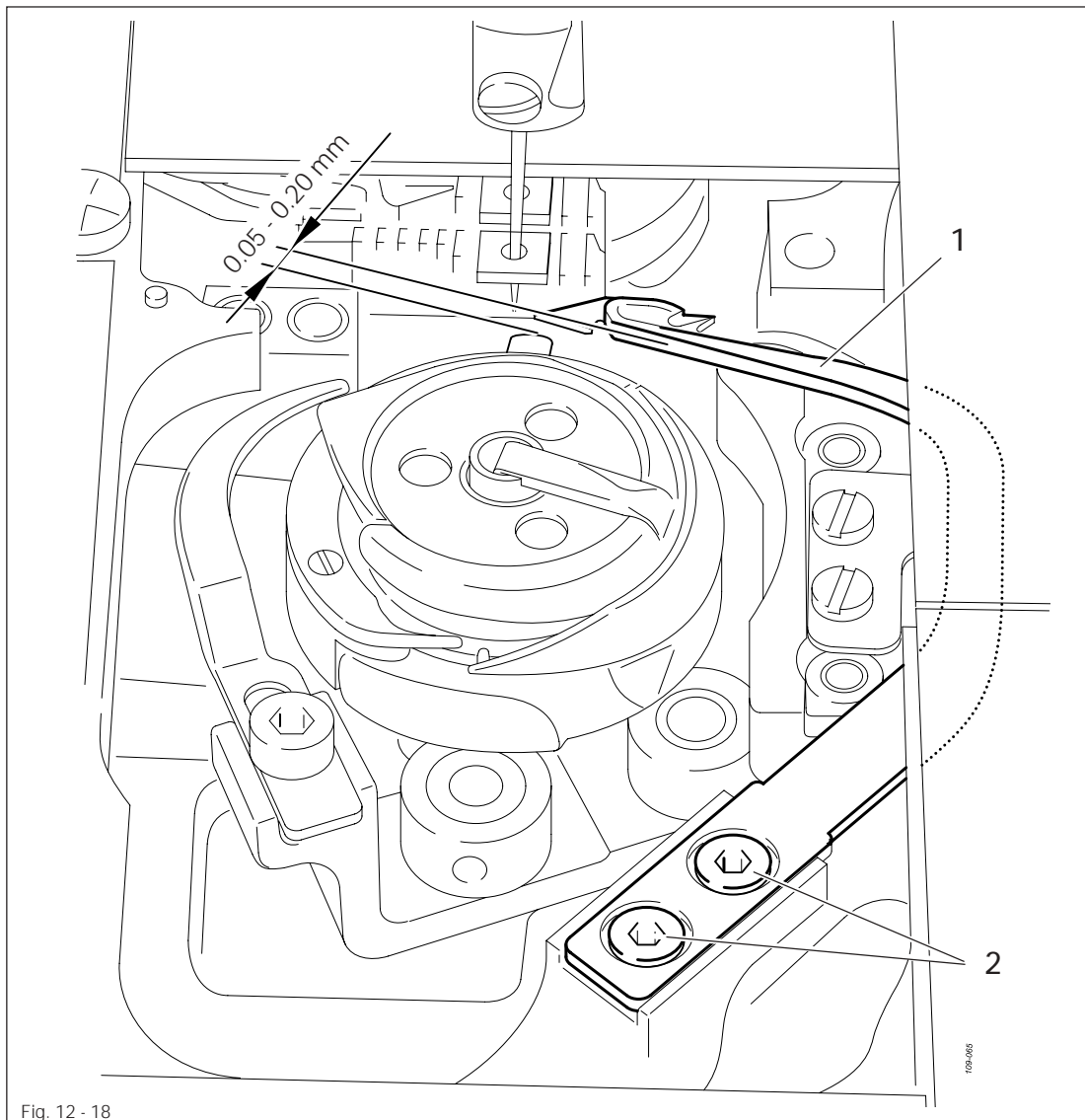
- Adjust levers 1 and 2 (screws 3) in accordance with requirement 1.
- Bring the machine into the needle rise position, see Chapter 12.05.07 Hook-to-needle clearance, needle rise, needle height and needle guard.
- Adjust connection rod 4 (nuts 5, left and right thread) in accordance with requirement 2.

## Adjustment

### 12.06.02 Thread catcher to hook clearance

#### Requirement

When the thread catcher 1 is operated by hand, along the entire path between thread catcher 1 and the bobbin case position finger there should be a clearance of 0.05 – 0.20 mm.



- Adjust thread catcher 1 (screws 2) in accordance with the requirement.

## 12.06.03 Thread catcher position

**Requirement**

When the machine is in its basic position, thread catchers 1 should each have a clearance of 27.2 mm to the corresponding edge of the needle plate cutout.

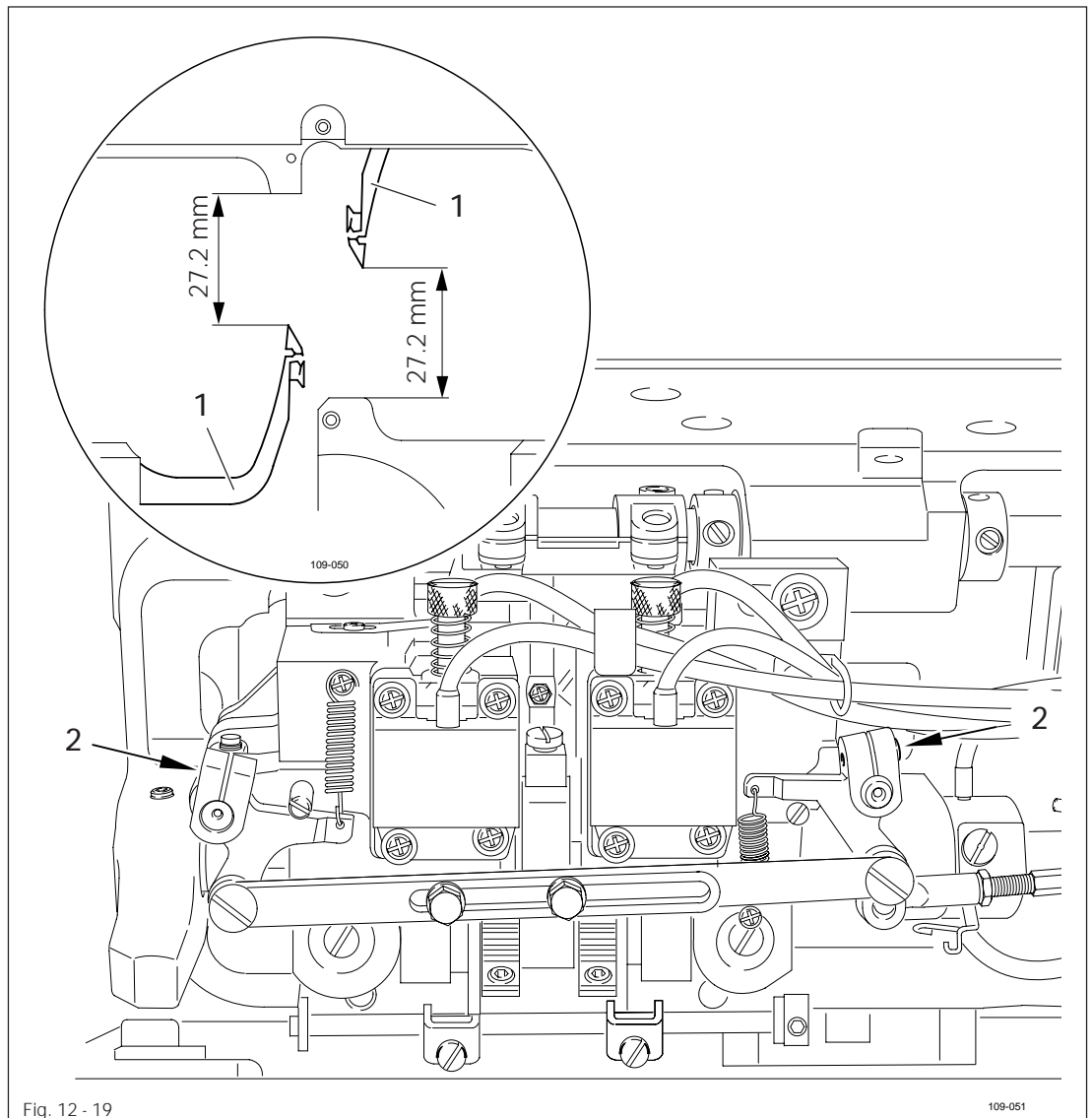
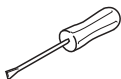


Fig. 12 - 19

109-051



- Adjust thread catcher 1 (screws 2) in accordance with the requirement.

## 12.06.04 Manual cutting test

### Requirement

1. When thread catcher 1 is on its forward stroke, it must not carry the bobbin thread forward too.
2. When thread catcher 1 is in its front position, the bobbin thread should be caught reliably.
3. After the trimming action, both needle and bobbin thread must be perfectly cut.

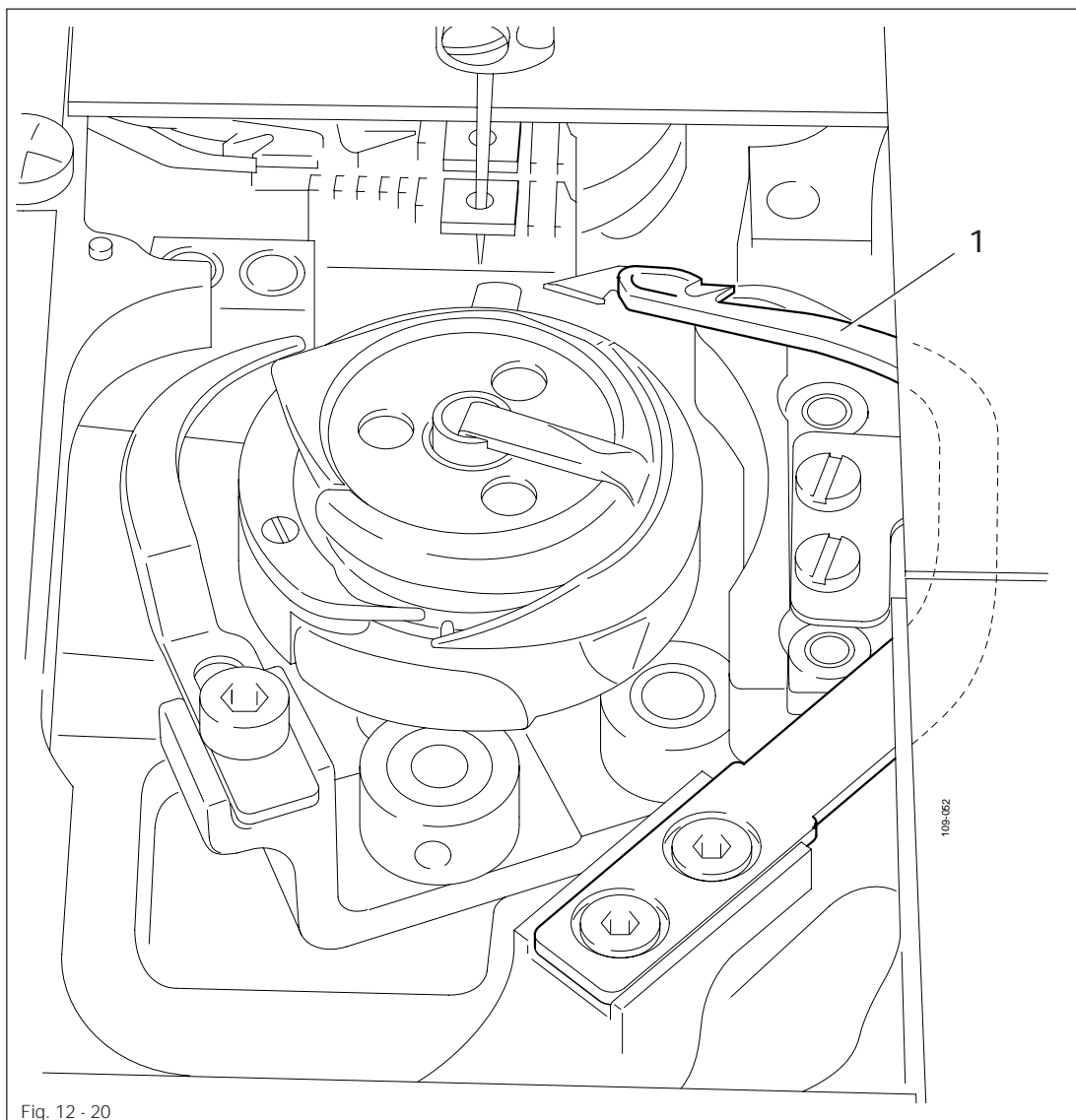
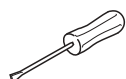


Fig. 12 - 20



- Sew a few stitches.
- Switch off the main switch.
- Carry out the cutting operation manually.
- Check the **requirements**, and if necessary readjust thread catcher 1 in accordance with **Chapter 12.06.02 Thread catcher to hook clearance** and **Chapter 12.06.03 Thread catcher position**.



## 12.06.05 Needle thread tension release

**Requirement**

When solenoid 5 is activated

1. the roller lever 6 should drop into the path of control cam 7 with a small clearance to the bottom of the cam and
2. there should be a distance of at least **0.5 mm** between the tensions discs 8.

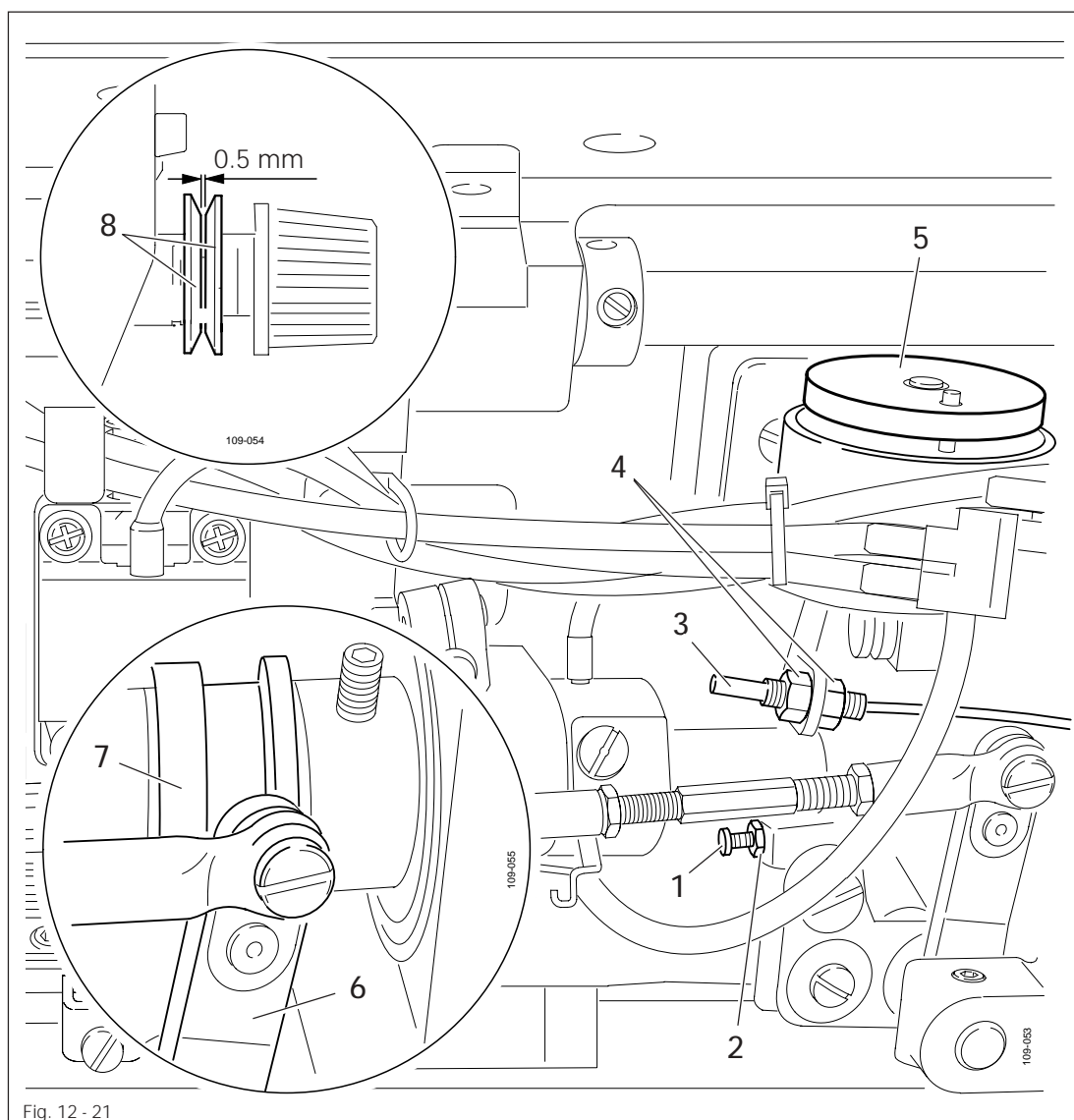
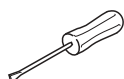


Fig. 12 - 21



- Adjust screw 1 (nut 2) in accordance with requirement 1.
- Adjust cable 3 (nuts 4) in accordance with requirement 2.

## 12.07 Adjusting the thread wiper -909/93

### Requirement

1. When the thread wiper **3** is in its resting position, it should have a clearance of approx. **3 mm** to the presser foot bar.
2. When the thread take-up lever is at t.d.c. and the stitch length is set at "2", with the thread wiping mechanism switched on, thread wiper **3** should pass **0.5** behind and **0.5 – 1.0 mm** below the needle point.
3. The thread wiper **3** should catch the threads reliably.
4. During its movement thread wiper **3** should not bump against anything.

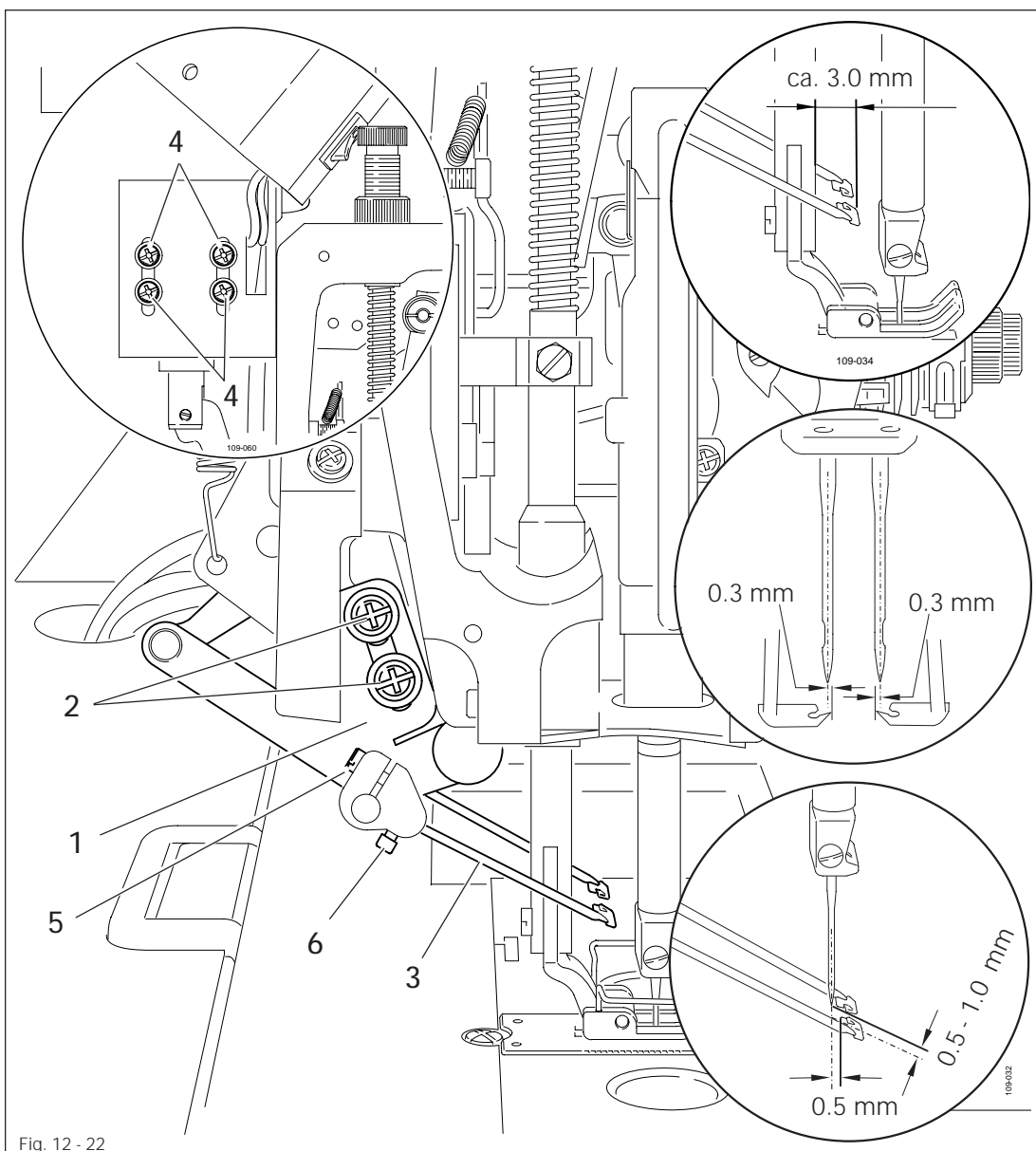
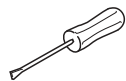


Fig. 12 - 22

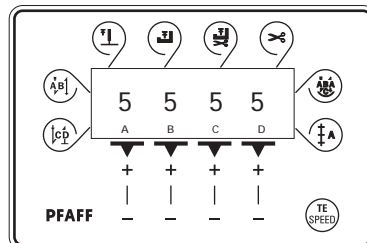


- Adjust stop **1** (screws **2**) in accordance with **requirement 1**.
- Adjust thread wiper **3** (screws **4** and **5**) in accordance with **requirement 2**.
- Adjust thread wiper **3** (screws **6**) in accordance with **requirement 3** (approx. **0.3 mm** clearance to the needle).
- Check **requirement 4** and, if necessary readjust the previous settings.

## 12.08 Parameter settings (only on machines with Quick-motor)

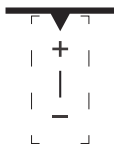
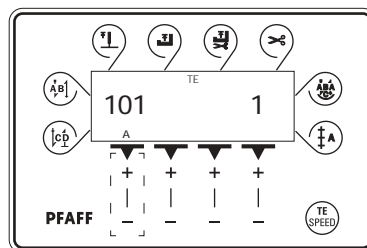
### 12.08.01 Selecting the user level

- Switch on the machine.

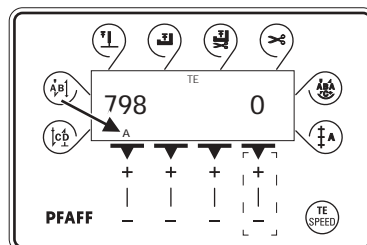


2 x 

- Press the TE/Speed key twice to call up the input mode.



- By pressing the corresponding +/- key select the parameter group "798".



- By pressing the corresponding +/- key select the desired user level:

- "0" = operator level A
- "1" = technician level B
- "11" = service level C

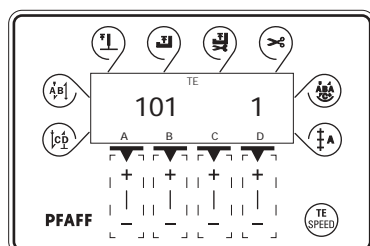
The selected user level is displayed on the screen. (see arrow)

# Adjustment

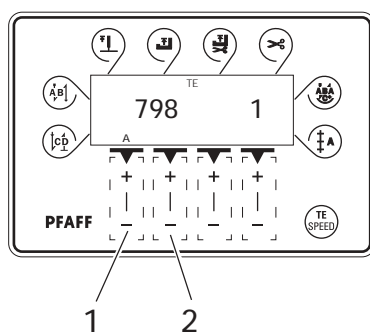
## 12.08.02 Example of a parameter input

- Switch on the machine.
- Press the **TE/Speed** key twice to select the input mode.

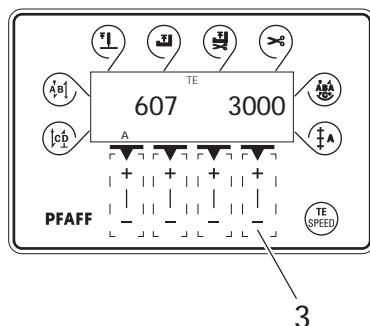
2 x 



- By pressing the corresponding plus/minus key select parameter "798" and the desired user level, see Chapter 12.08.01 Selecting the user level.



- Select parameter "607" by pressing the corresponding +/- key.



- Select the required value for the maximum speed by pressing the corresponding +/- key.
- By pressing the **TE/Speed** key the selected value is taken over and the machine switches to the sewing mode.



## 12.08.03 List of parameters

Group	Parameter	Description	User level	Setting range	Set value
1	101	Control panel key tone (0 = off, 1 = on)	A, B, C	0 – 1	1
6	605	Speed display (1 = yes, 0 = no)	B, C	0 – 1	0
	607	Max. speed	B,C	300 – 3500	3000
	609	Cutting speed 1	B, C	60 – 300	180
7	700	Needle position 0 (needle reference position)	A, B, C	0 – 255	
	702	Needle position 1 (needle lowered)	A, B, C	0 – 255	25
	703	Needle position 2 (take-up lever raised)	A, B, C	0 – 255	215
	705	Needle position 5 (end of cutting signal 1)	A, B, C	0 – 255	180
	706	Needle position 6 (start cutting signal 2)	A, B, C	0 – 255	25
	707	Needle position 9 (start thread tension release)	A, B, C	0 – 255	164
	760	Fixed value multiplier (200) for stitch counting	A,B, C	0-250	5
	797	Hardware test (0 = no, 1 = yes)	C	0 – 1	0
	798	User level 0 = operator level 1 = mechanic level 11 = service level		0, 1, 11	0
	799	Selected machine class	C	1	1
8	800	Direction of motor rotation	C	0 – 1	1



Further parameters are listed in the **Motor Instruction Manual**.

## 12.09 Internet update of the machine software (only on machines with Quick-motor)

The machine software can be updated with PFAFF flash programming. For this purpose the PFP boot program and the appropriate control software for the machine type must be installed on a PC. To transfer the data to the machine, the PC and the machine control unit must be connected with an appropriate null modem cable (part no. 91-291 998-91).



The PFP boot program and the control software of the machine type can be downloaded from the PFAFF-homepage using the following path:  
[www.pfaff-industrial.com/de/service/download/steuerungssoftware.html](http://www.pfaff-industrial.com/de/service/download/steuerungssoftware.html)

To update the machine software carry out the following steps:



While the machine software is being updated, no setting up, maintenance or adjustment work may be carried out on the machine!

- Switch off the machine.
- Connect the PC (serial interface or appropriate USB-adapter) and the machine control unit (RS232).
- Switch on the PC and start the PFP boot program.
- Select the machine type.
- Press the "programming" button.
- An extra program (quick loader) is started.
- Switch on the machine within 60 seconds.
- The software update is carried out, the update progress is shown on the bar display.
- When the update has been completed, the message "**software update successfully completed**" appears.



If this message does not appear, the entire procedure must be repeated!  
The machine is not safe for operation until the programming has been completed successfully and without faults.

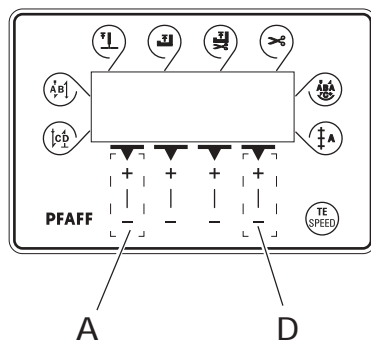
- Switch off the machine and end the quick loader and PFP boot program.
- End the connection between the PC and the machine control unit.
- Switch on the machine.
- A plausibility control is carried out and, if necessary, a cold start.



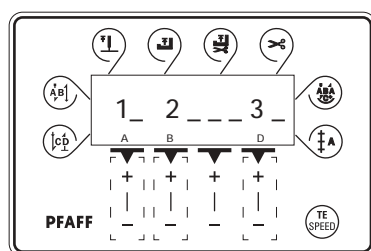
More information and assistance is at your disposal in the file "PFPHILFE.TXT", which can be called up from the PFP boot program by pressing the "help" button.

## 12.10 Reset / Cold start (only on machines with Quick-motor)

After selecting the reset menu, by pressing the corresponding key it is possible to delete seam parameters, delete seam programs and to carry out a cold start.



- Press and hold "+" on keys A and D and switch on the machine, see Chapter 7.01 Main switch.



Resetting the seam parameters

- Press "+" on key "A".

All parameters are deleted, the display "—rE—" appears for a short time on the screen.



Resetting the seam programs

- Press "+" on key "B".

All seam programs are deleted, the display "—rE—nA" appears for a short time on the screen.



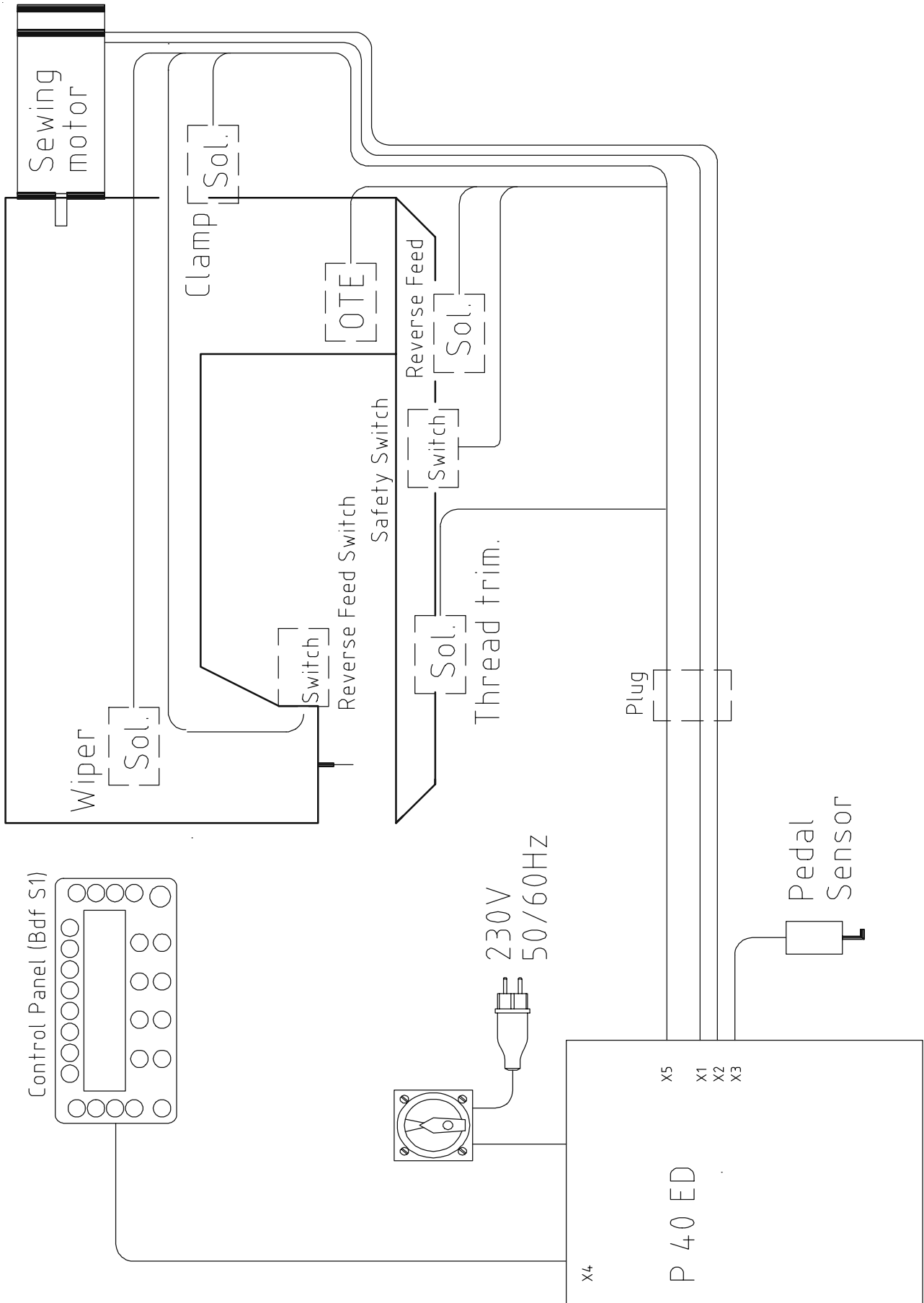
Cold start

- Press "+" on key "D".

With the exception of the value for the machine class, the values of the machine control unit are set back to their basic values, the display "—COLd—" appears for a short time on the screen.



Following the cold start all programmed values are reset to the status at the time of delivery. Parameters "700", "702", "703" and "800" might have to be re-entered after the cold start.







# PFAFF

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