

1181

1183

ADJUSTMENT MANUAL

1181-D

1183-D

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

6 063 202 →

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**PFAFF Industriesysteme
und Maschinen AG**

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13 Adjustment



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



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.

Danger of injury due to unintentional starting of the machine!

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.

13.01 Tools, gauges and other accessories for adjusting

- 1 set of screwdrivers with blade widths from 2 to 10 mm
- 1 set of wrenches with jaw widths from 7 to 14 mm
- 1 set of Allan keys from 1.5 to 6 mm
- 1 metal rule, (Part No. 08-880 218-00)
- 1 feed dog adjustment gauge, Part No. 61-111 639-71
- 1 adjustment pin (5 mm dia.), Part No. 13-033 346-05
- Adjustment gauge, part No. 61-111 639-73
- 1 adjustment gauge for tightening the hook drive belt, Part-No. 61-111 639-76

13.02 Abbreviations

TDC = top dead center

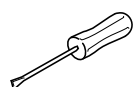
BDC = bottom dead center

13.03 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)

13.04 Checking and adjusting aids



With the aid of blocking pin 1 (part No. 13-033346-05) and if necessary adjustment gauge 3 (part No. 61-111 639-73) the machine can be blocked in the following positions for adjustment

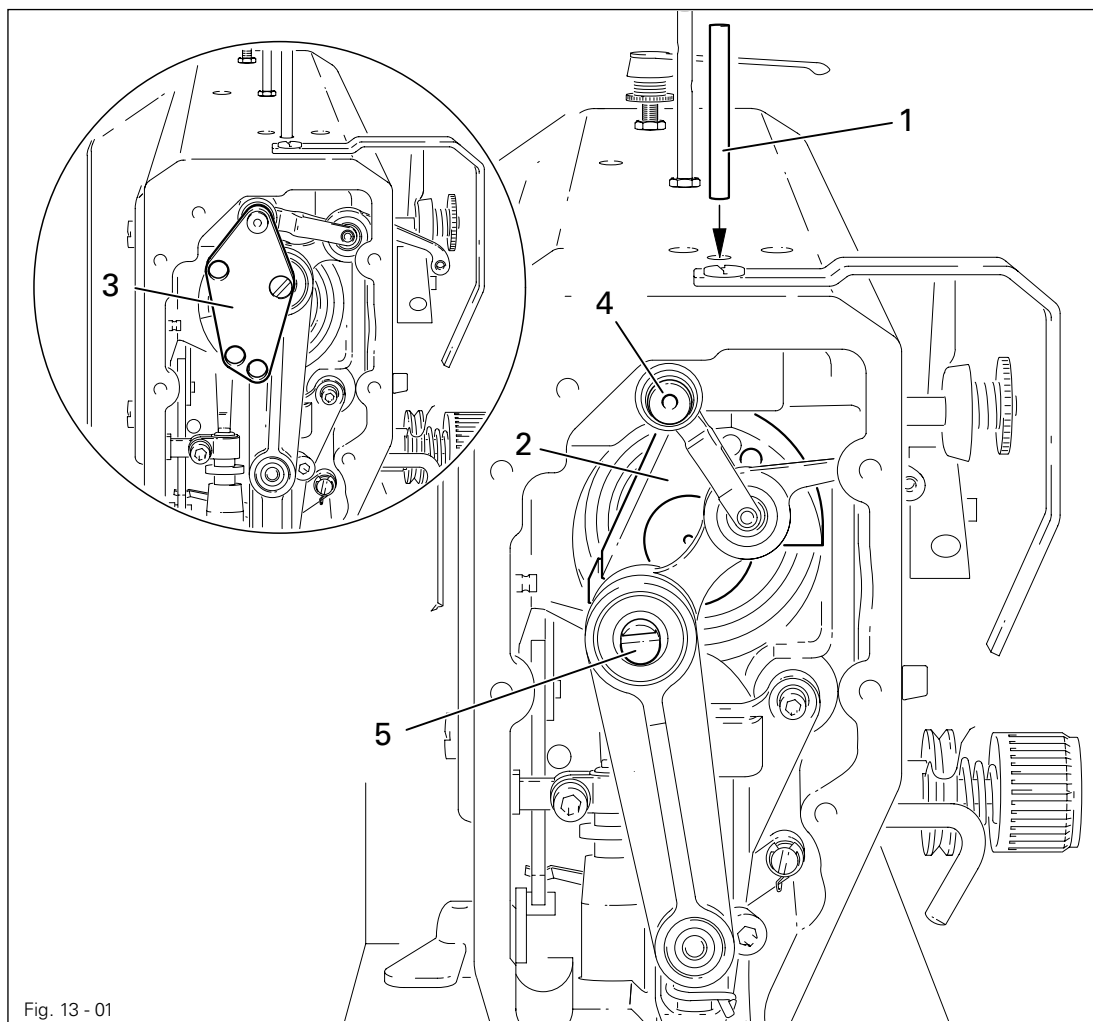
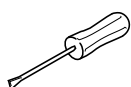


Fig. 13 - 01



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

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

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

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

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

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

13.05 Adjusting the basic machine

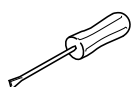
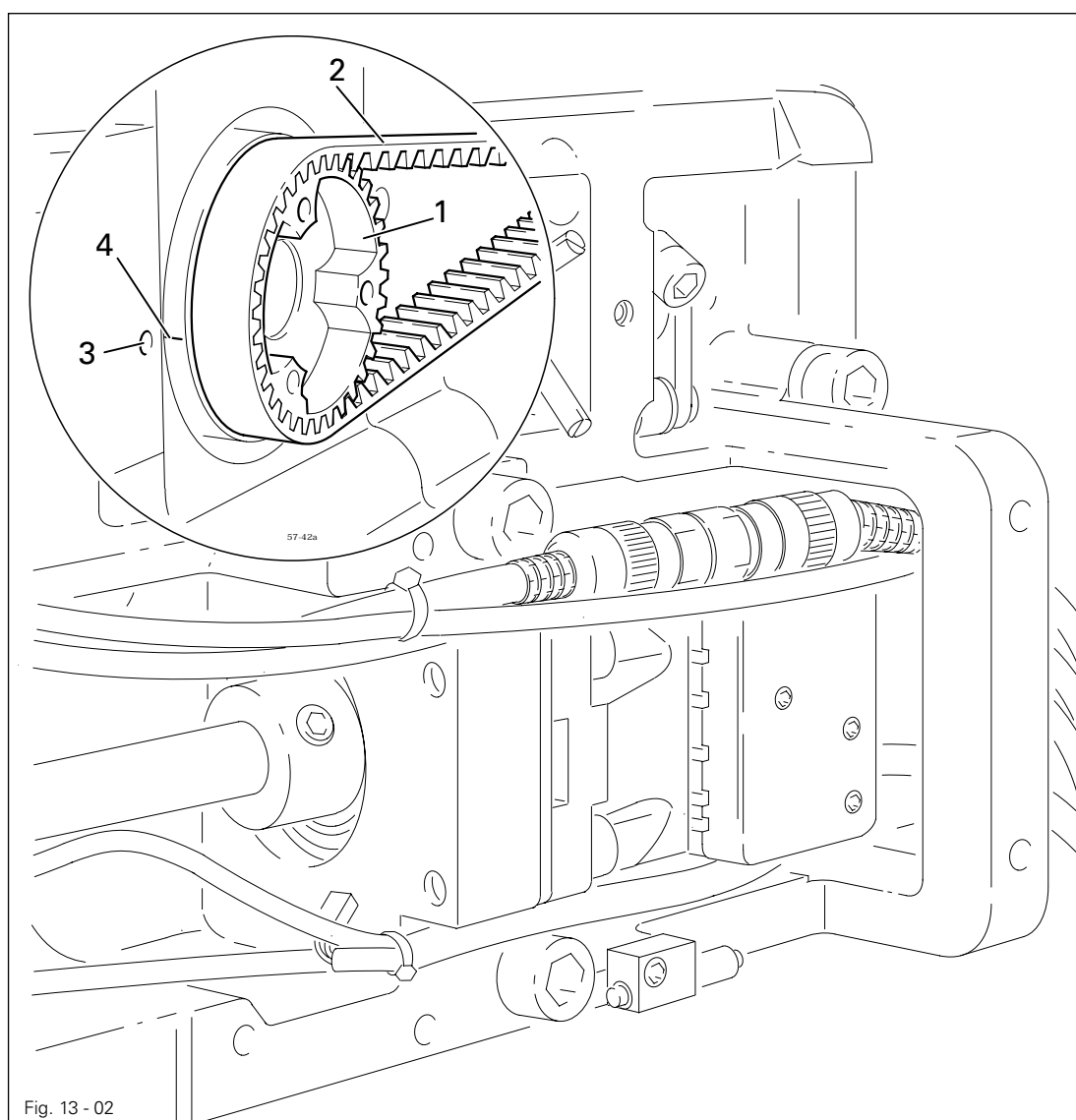
13.05.01 Basic position of the machine drive



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

Requirement

When the needle bar is positioned 0,6 mm past b.d.c., the markings 3 and 4 should be in alignment..



- Turn toothed belt sprocket 1 according to **Requirement** and push on toothed belt 2.



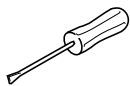
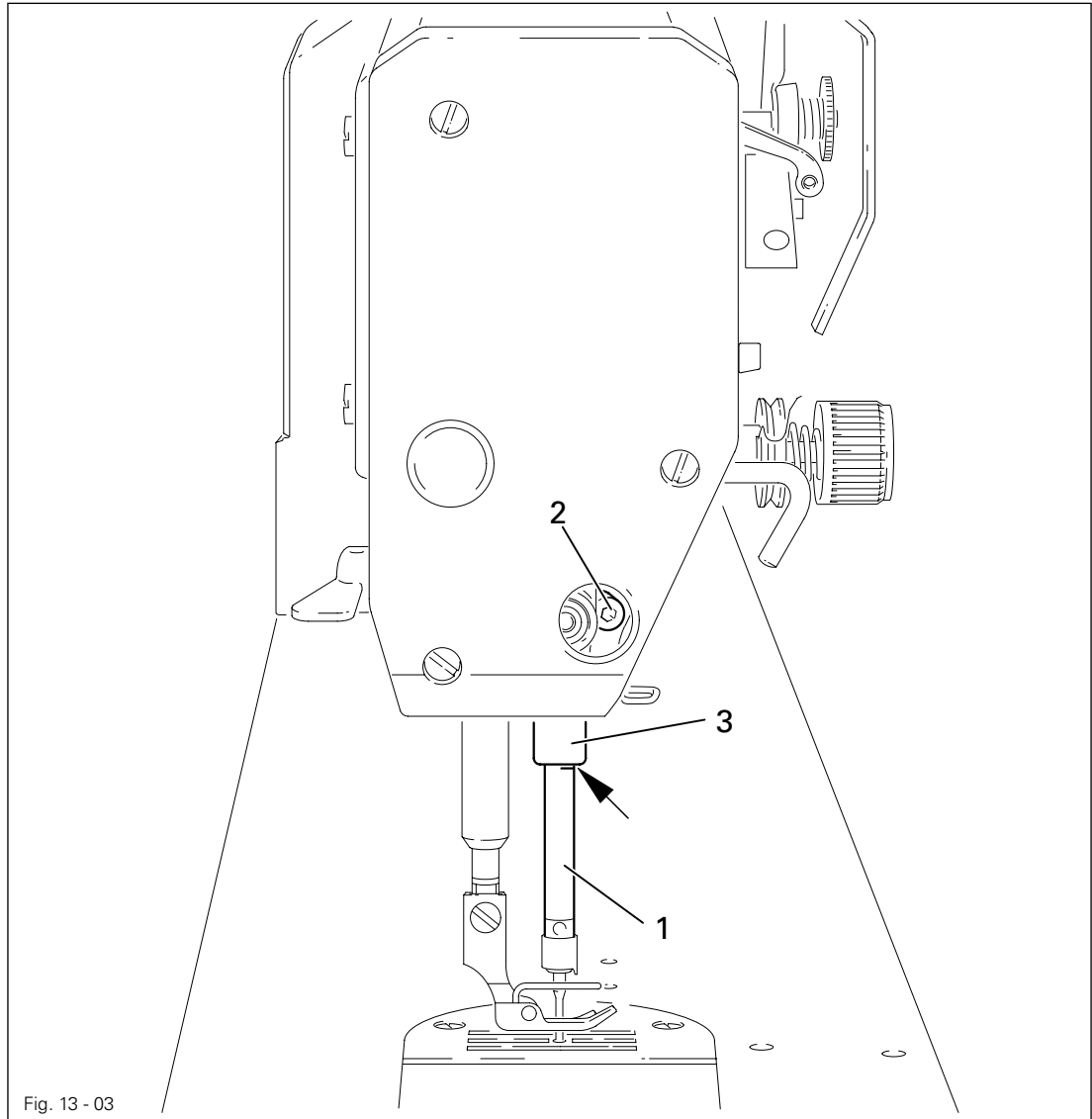
When installing the motor pay attention to the correct position of shaft flange, shock absorber and motor flange!

Adjustment

13.05.02 Preadjusting the needle height

Requirement

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

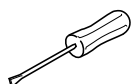
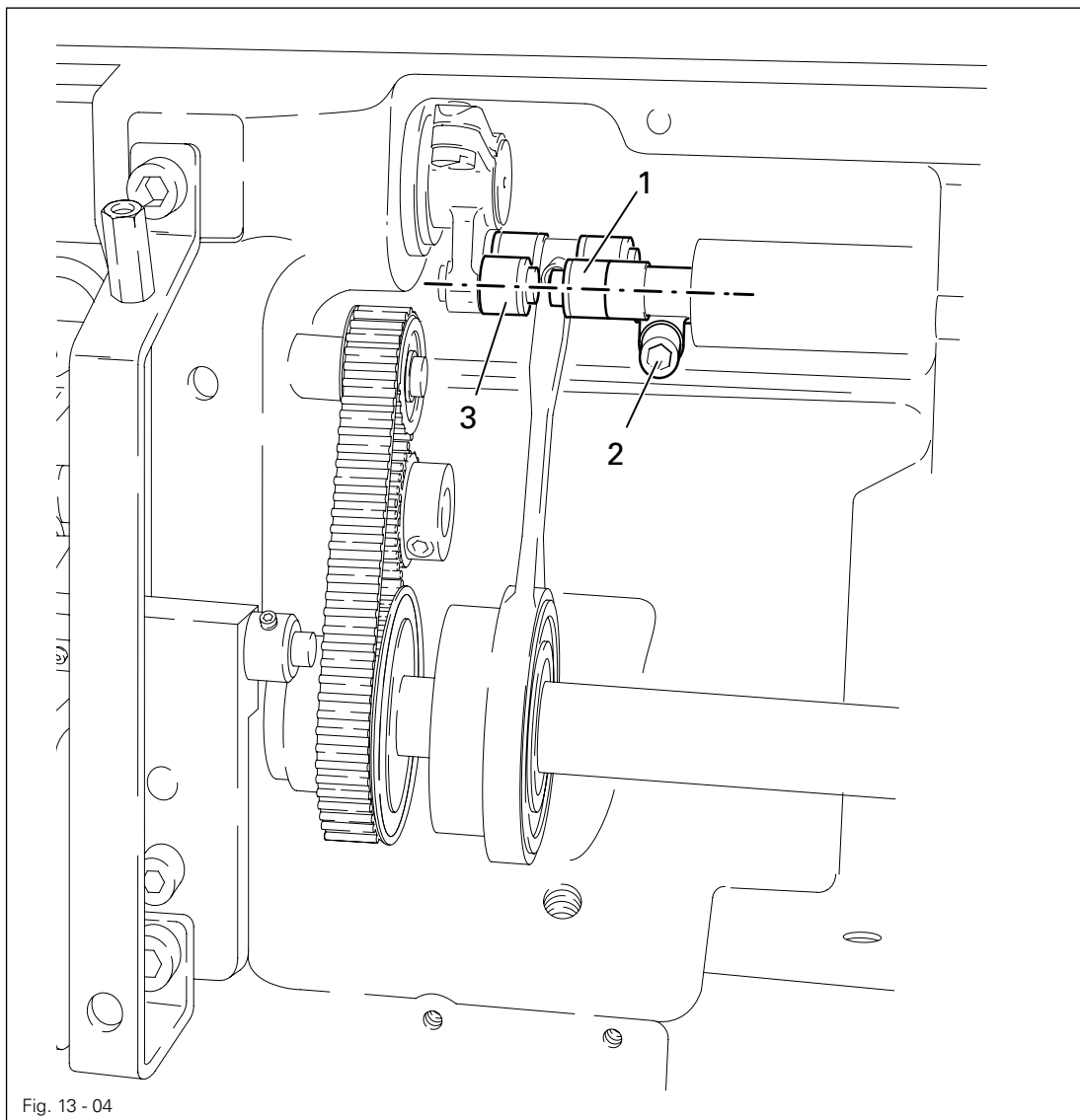


- Set needle bar at **1.8 mm** past b.d.c. and block machine with blocking pin, see Chapter **13.04 Checking and adjusting aids**.
- Move needle bar **1** (screw **2**), without turning it, according to the **requirement**.

13.05.03 Bottom feed neutral position

Requirement

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



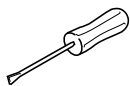
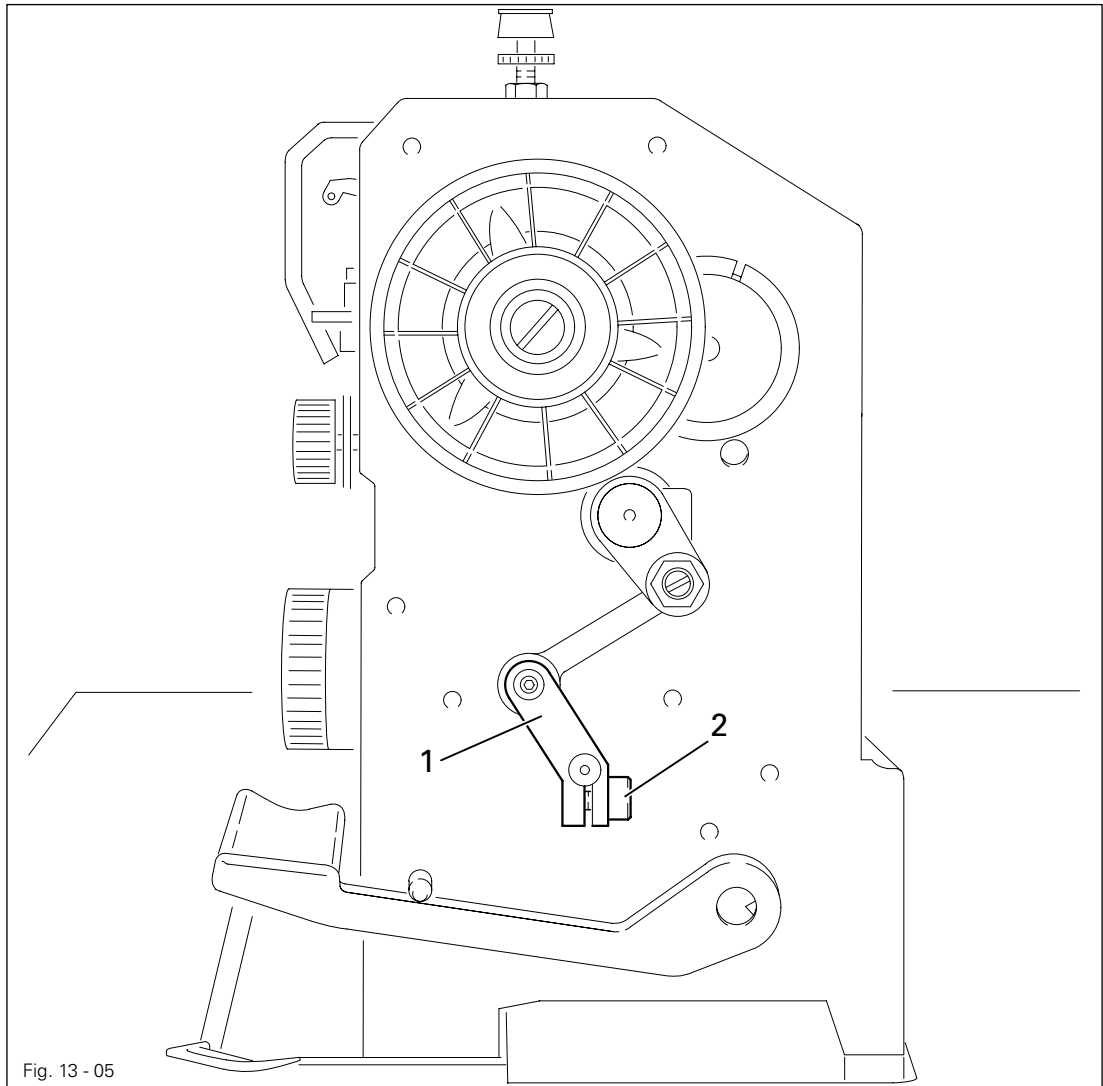
- Raise the presser foot and set the stitch length to "0".
- Turn crank 1 (screw 2) according to the **requirement**.

Adjustment

13.05.04 Neutral position of the needle feed (only on PFAFF 1181)

Requirement

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



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

13.05.05 Bottom feed lifting motion

Requirement

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

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

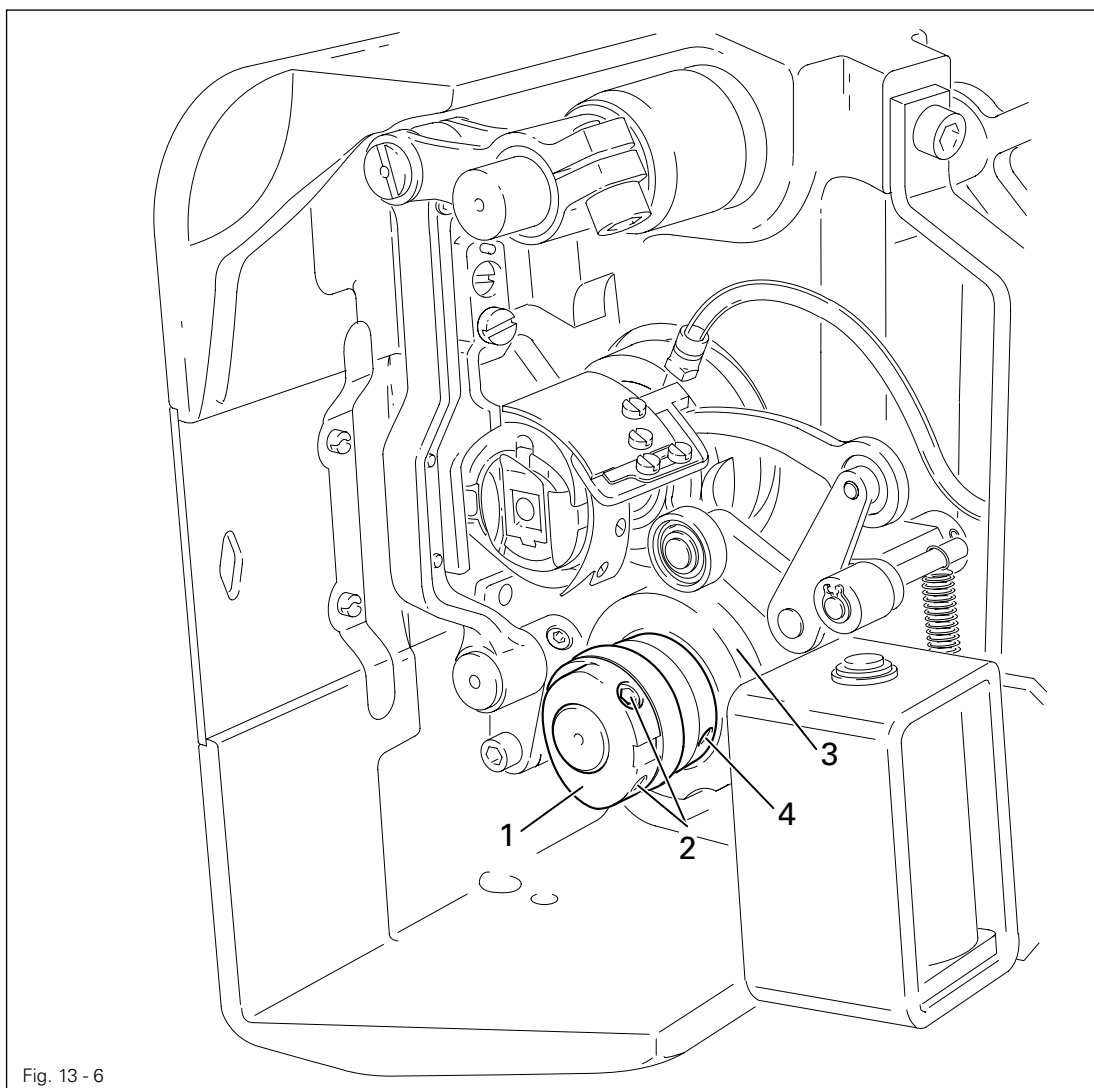
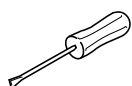


Fig. 13 - 6



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

Adjustment

13.05.06 Bottom feed dog height

Requirement

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

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

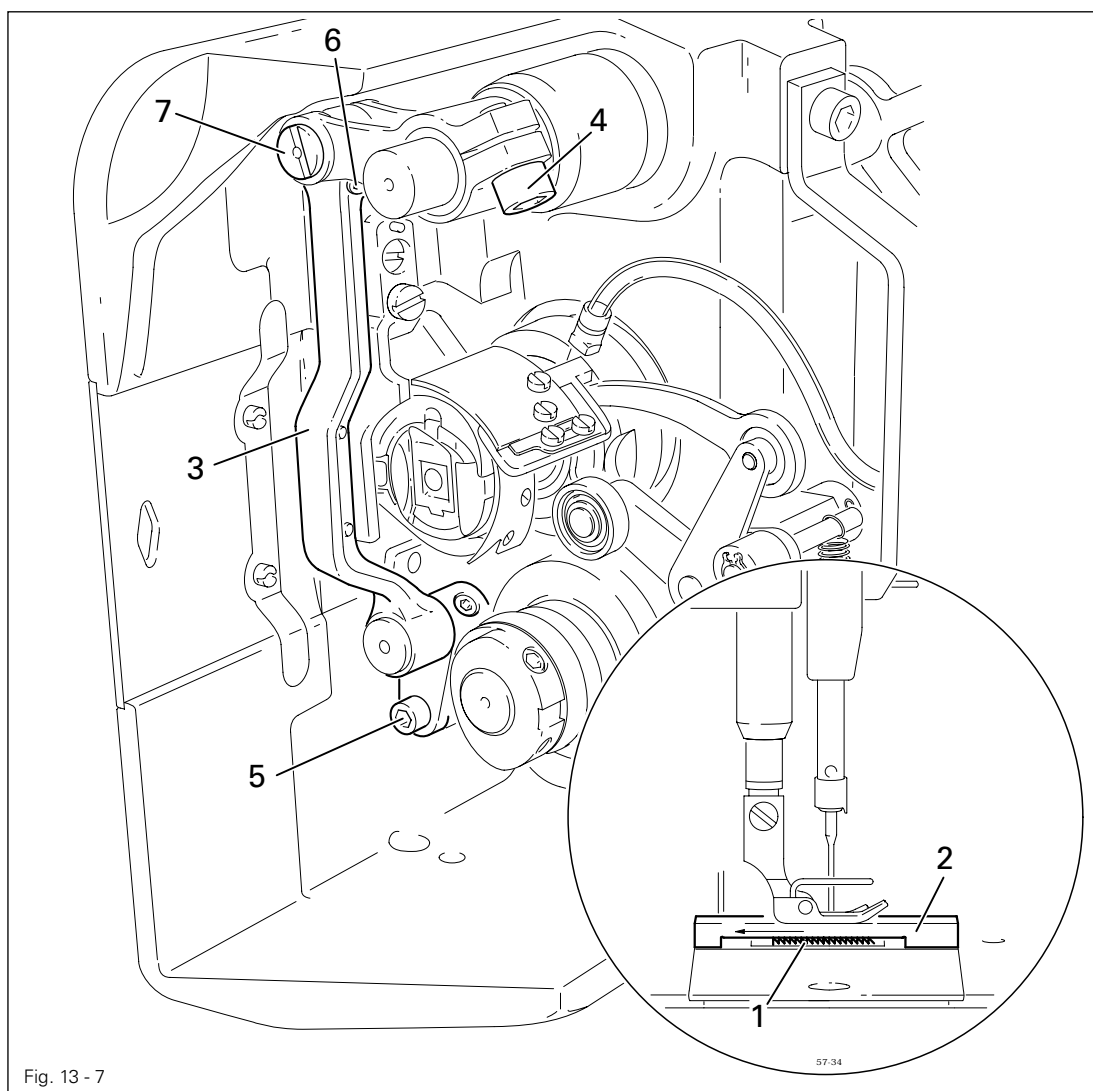
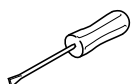


Fig. 13 - 7

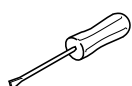
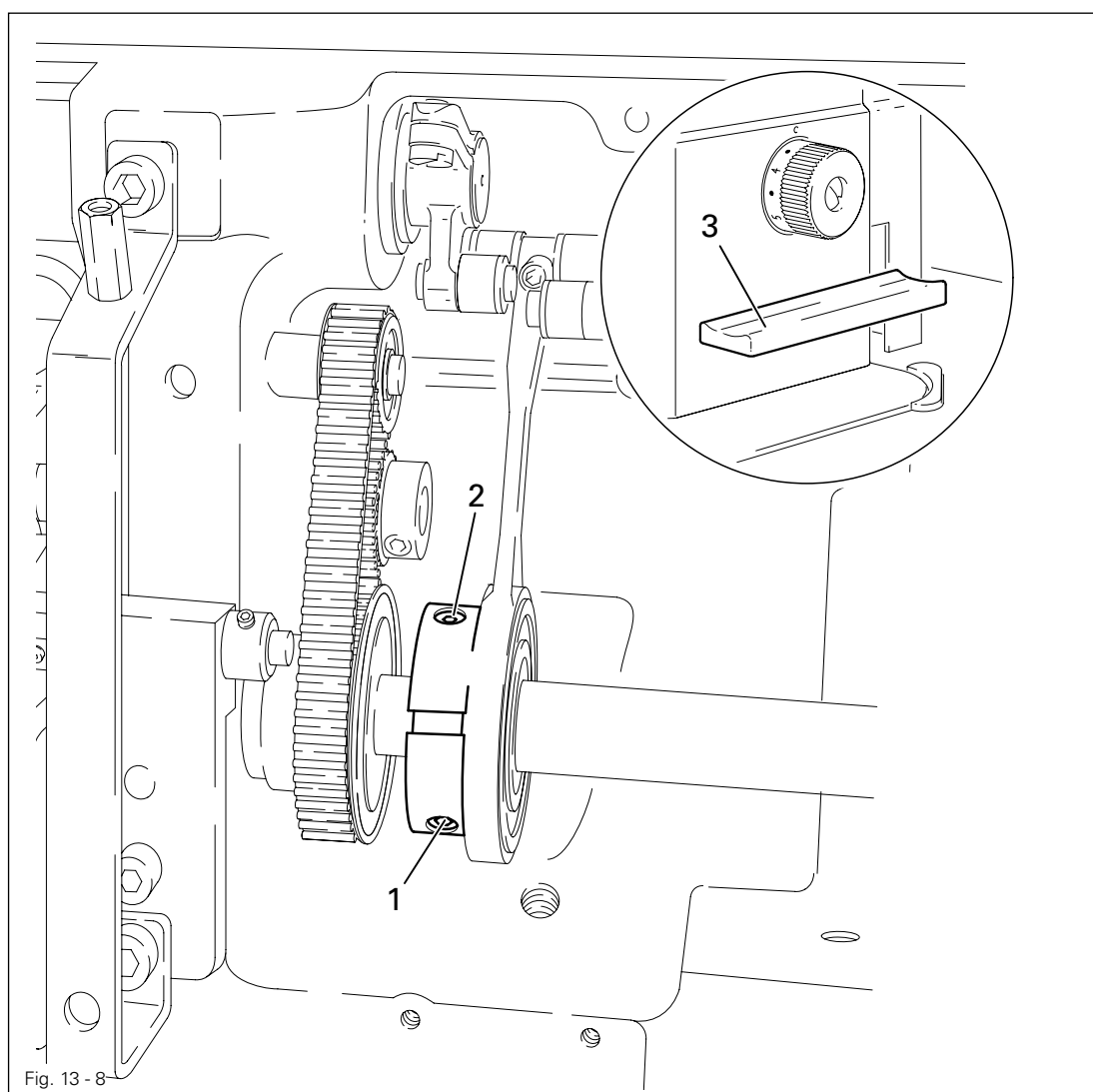


- Set stitch length at "0" and feed dog **1** at its highest position
- Raise the presser foot.
- Place feed dog adjustment gauge **2** on the needle plate cutout with the arrow in sewing direction so that it is flush with the front edge, and lower the presser foot onto it.
- Adjust feed bar **3** (screws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

13.05.07 Feed dog motion of bottom feed dog

Requirement

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



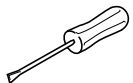
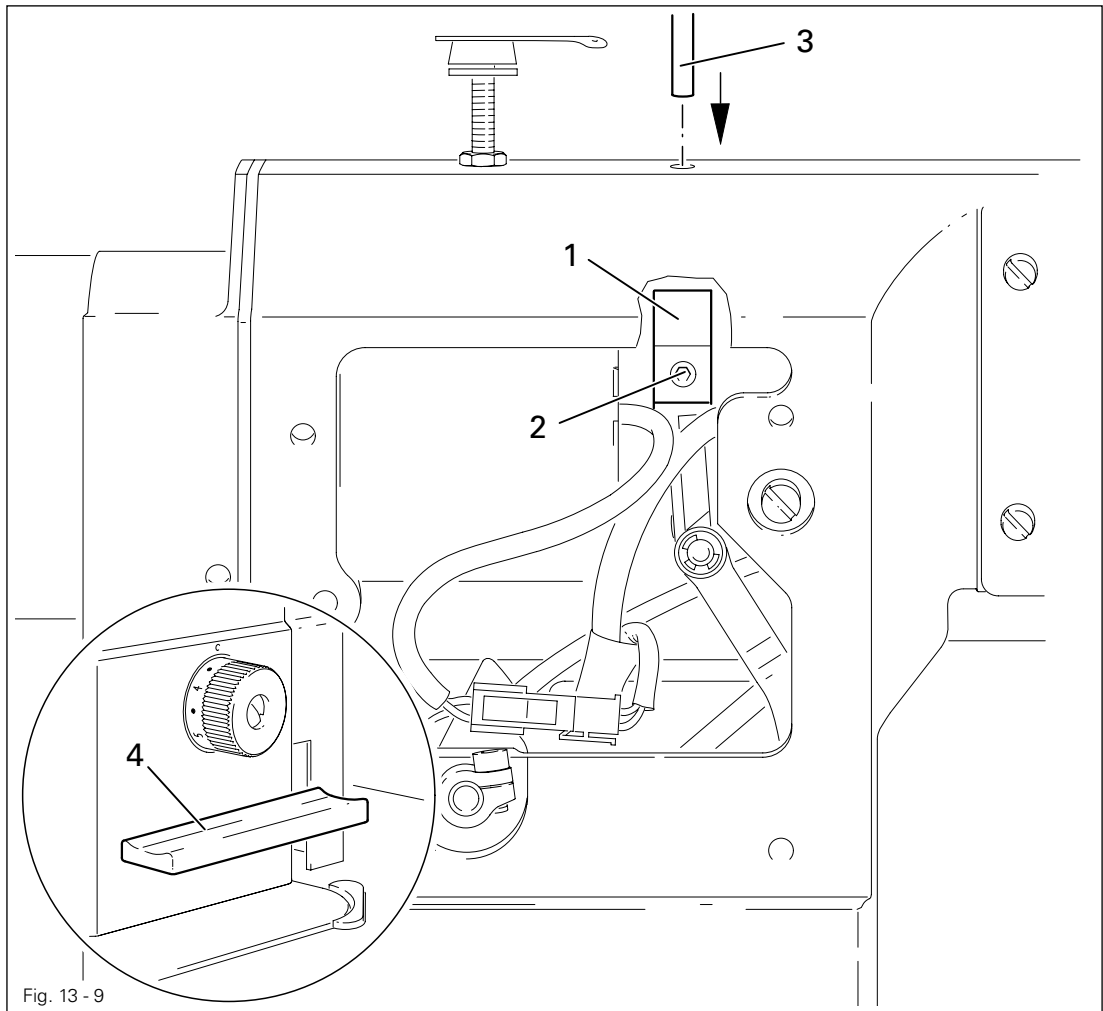
- Set the longest stitch and the needle bar at the corresponding position.
- Adjust eccentric 1 (loosen screws 2 a little) according to **Requirement**, but make sure it is not moved sideways.

Adjustment

13.05.08 Feeding motion of needle feed (only on PFAFF 1181)

Requirement

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

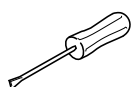
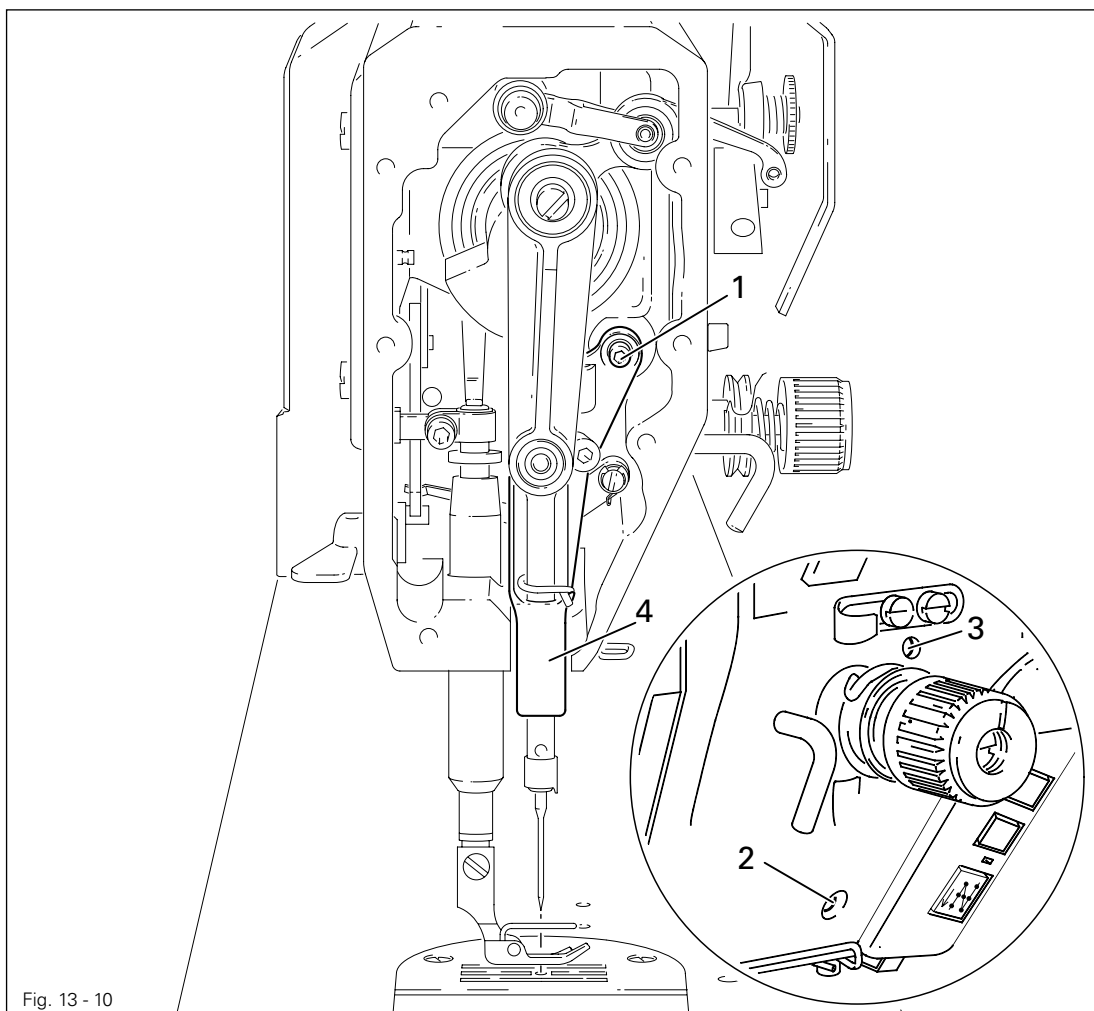


- Bring the needle bar into the position **0.6 mm** past t.d.c.
- Turn eccentric **1** (screws **2**) until the adjustment pin **3** locks into place.

13.05.09 Needle in needle hole center (only on PFAFF 1183)

Requirement

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



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

Adjustment

13.05.10 Needle to needle hole centre (on PFAFF 1181)

Requirement

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

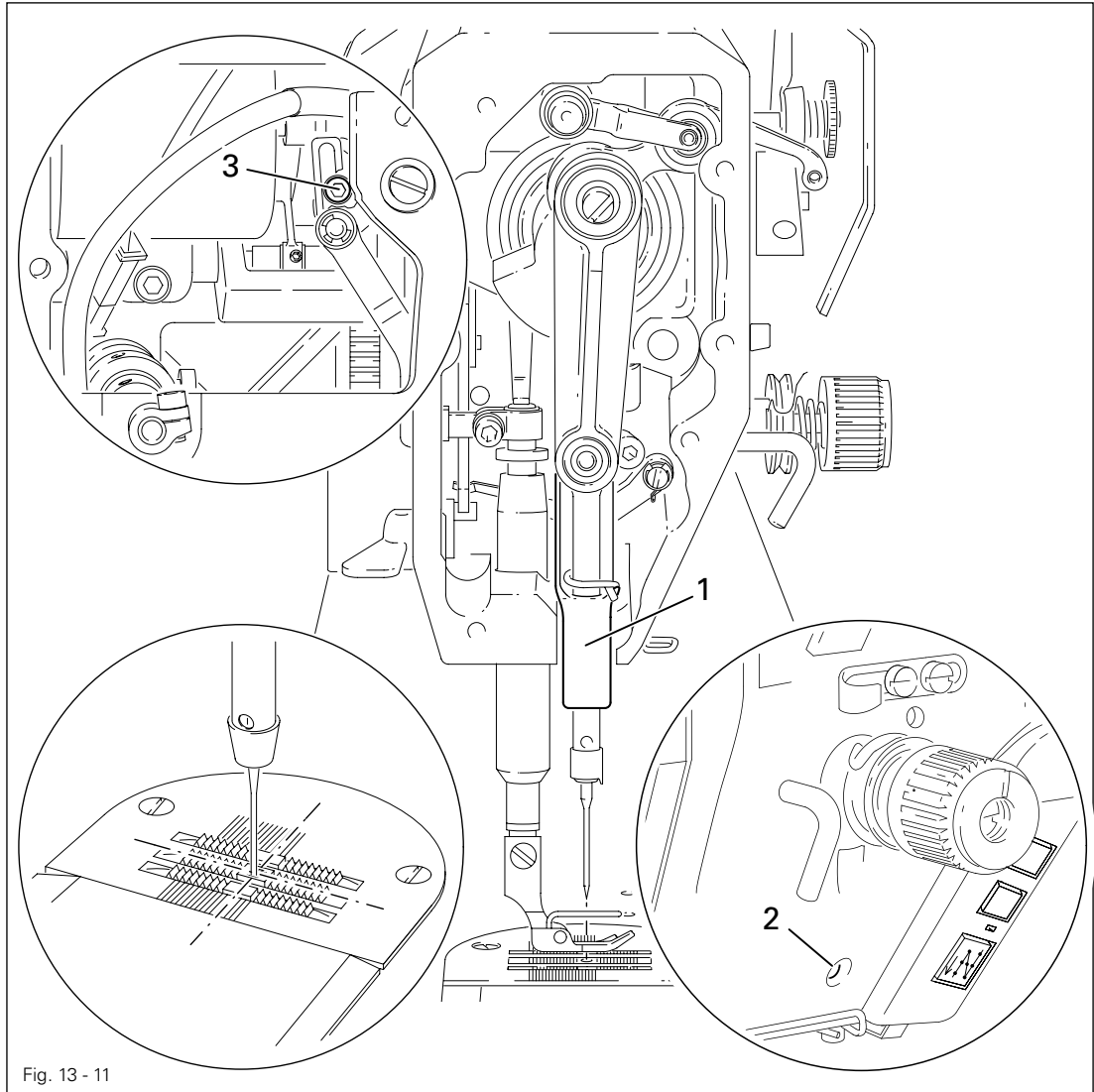
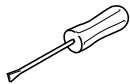


Fig. 13 - 11



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

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

Requirement

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

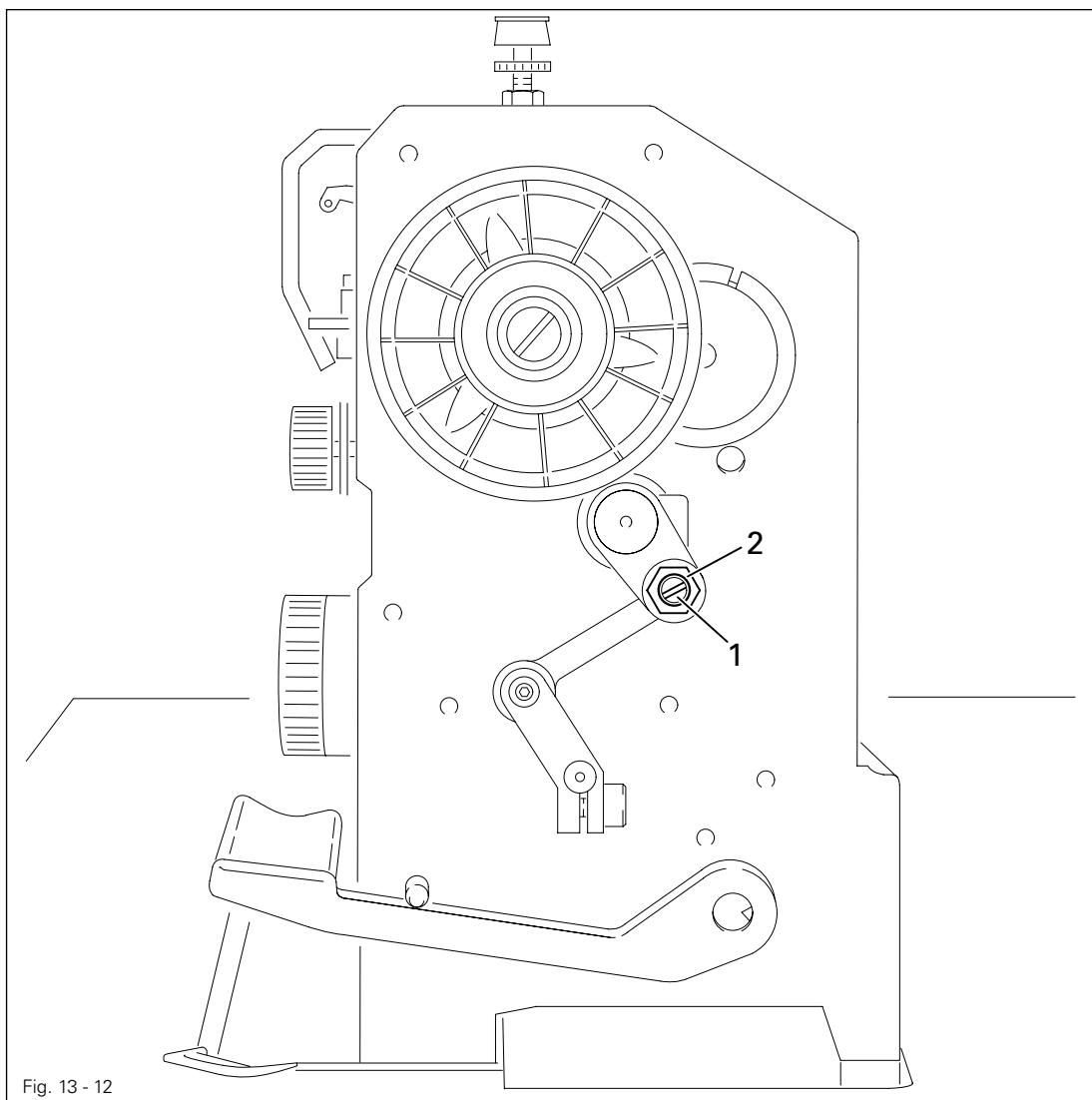
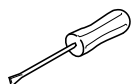


Fig. 13 - 12



- Set the longest stitch.
- Turn eccentric 1 (nut 2) according to Requirement .

13.05.12 Hook shaft bearing and toothed belt tension

Requirement

1. The front edge of the hook shaft **6** must be at a distance of **14.5 mm** to the needle center. At the same time, the slot in the hook shaft bearing **1** (see arrow) must be parallel to the bedplate and pointing opposite to the direction of sewing.
2. The toothed belt should be tightened in such a way that, when the gauge is pushed onto the toothed belt, the marking in the gauge window corresponds to the marking on the bushing.

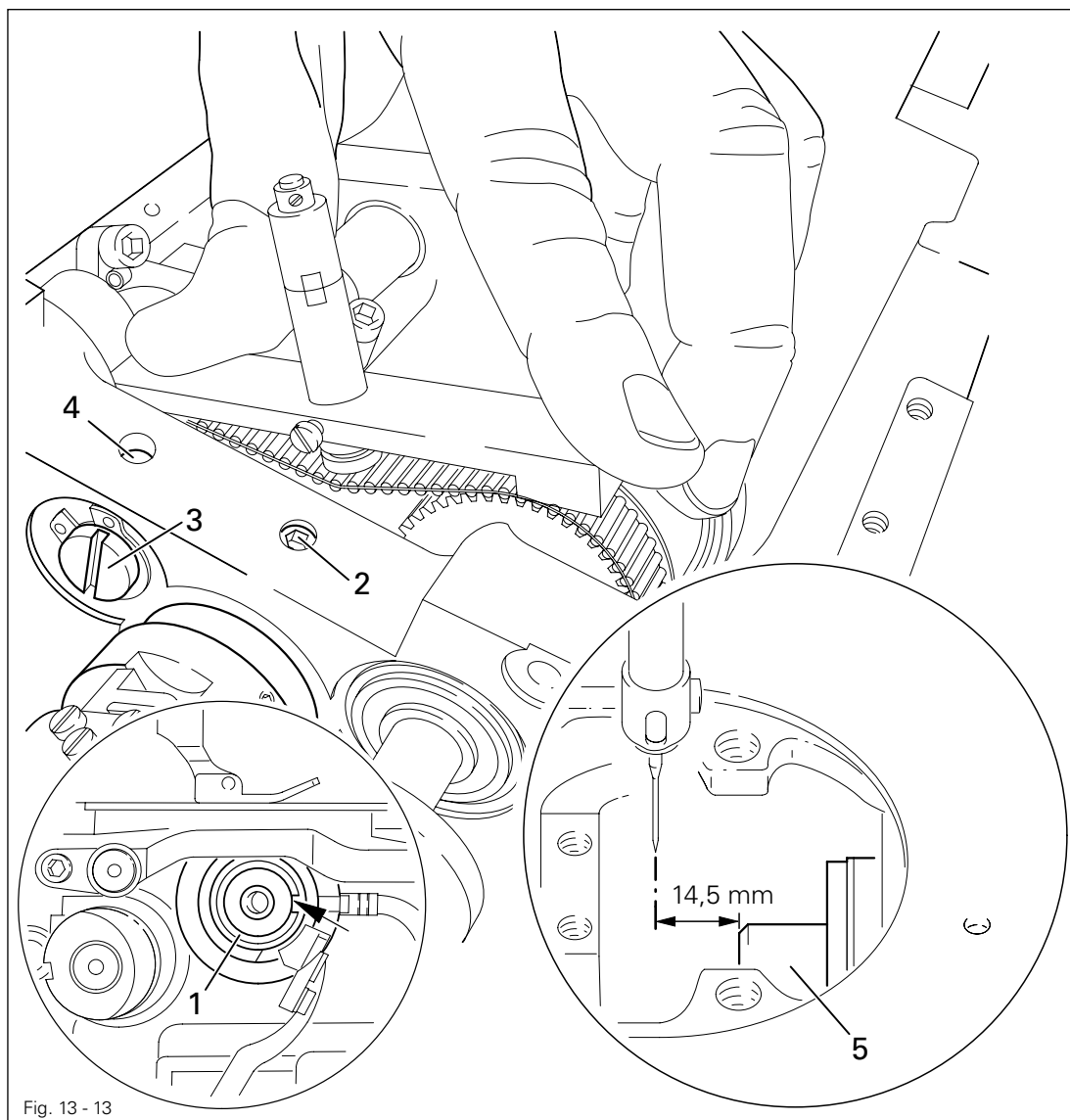
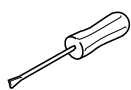


Fig. 13 - 13



- Align hook shaft bearing **1** (screw **2**) according to **requirement 1**.
- Push the gauge (Part-No. **61-111 639-76**) onto the toothed belt so that it is centred to the toothed belt and touching the bearing of the sliding shaft. The gauge window must be facing the hook.
- Eccentric **3** (screw **4**) clockwise in accordance with **requirement 2**, taking care that the axial position of eccentric **3** is not altered.

13.05.13 Hook lubrication

Requirement

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

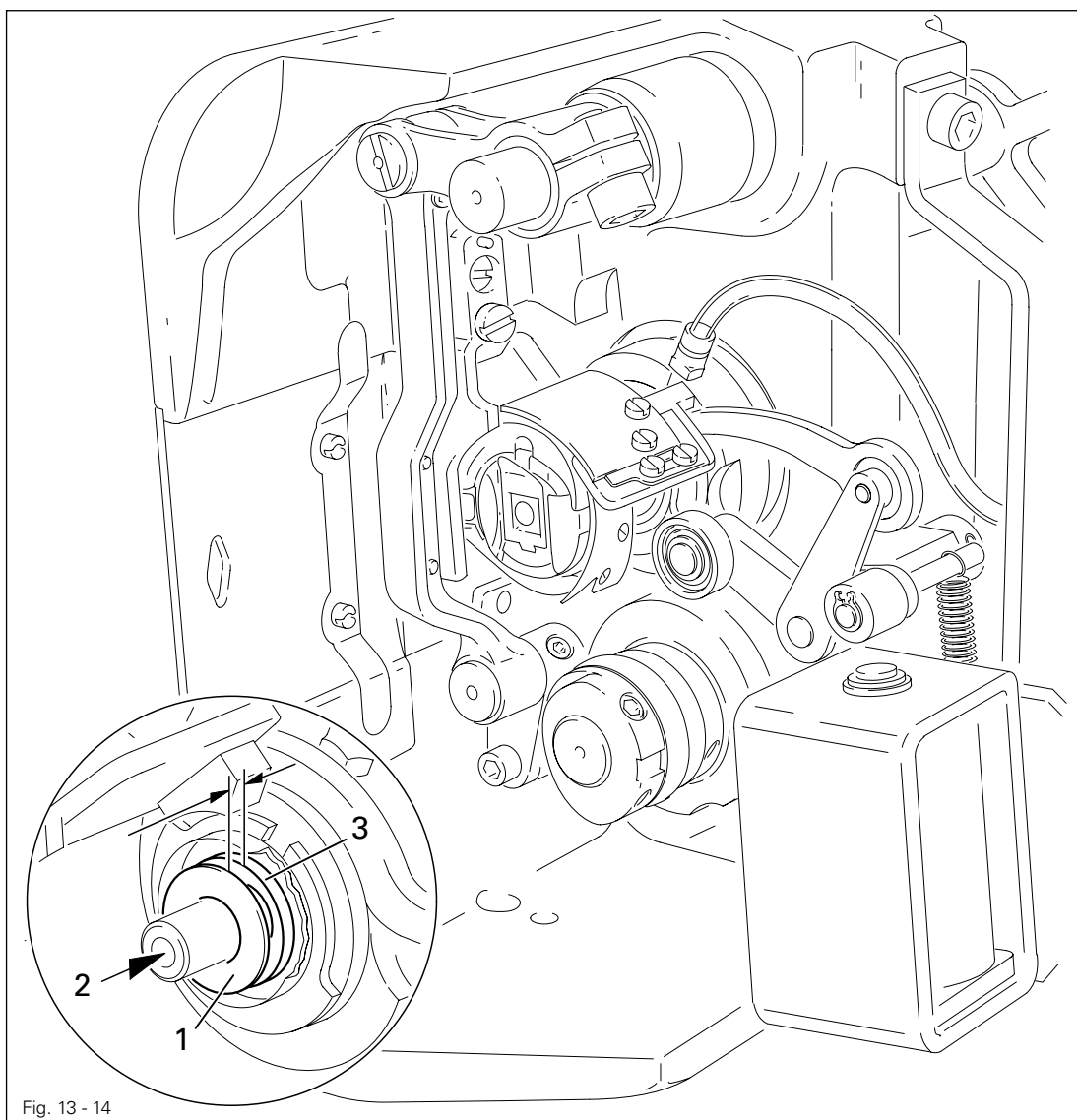
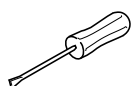


Fig. 13 - 14



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

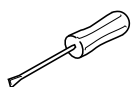
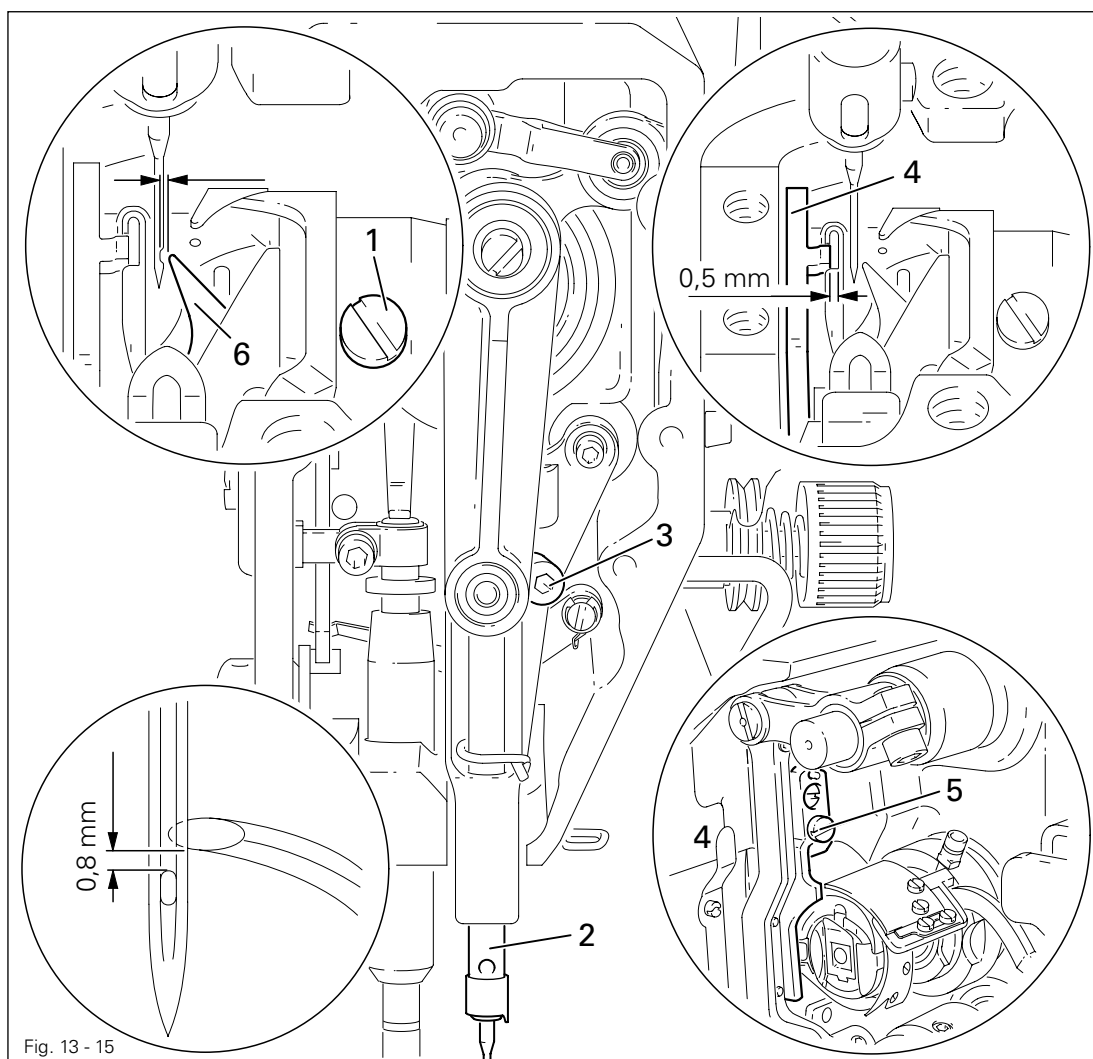


- Move the centrifugal disk **1** (screw **2**) according to **requirement 1**.
- Check **requirement 2**. If necessary, move centrifugal disk **1**.

Requirement

With the needle at **1.8 mm** after BDC,

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



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

13.05.15 Thread check spring and slack thread regulator

Requirement

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

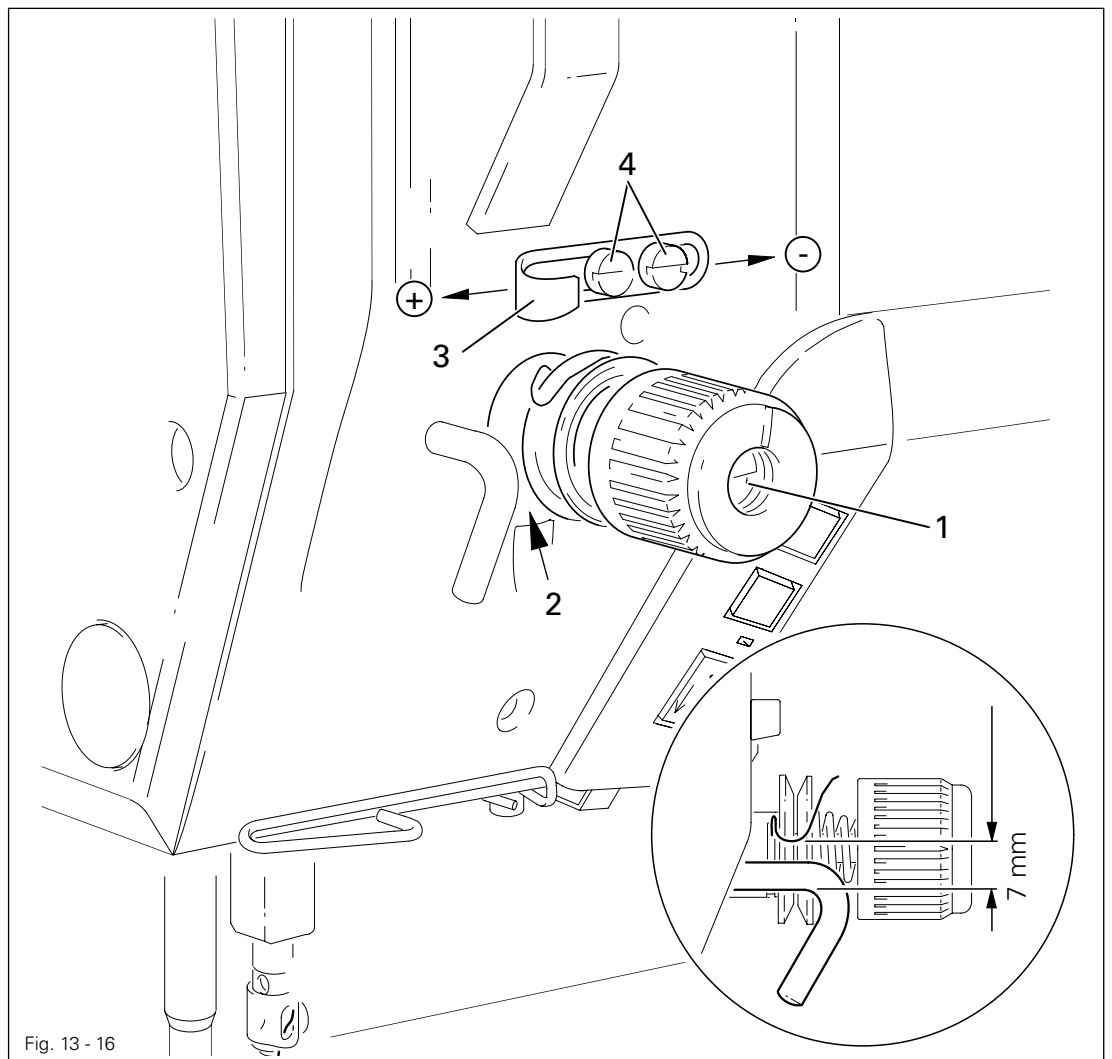
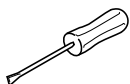


Fig. 13 - 16



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



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

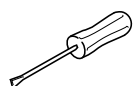
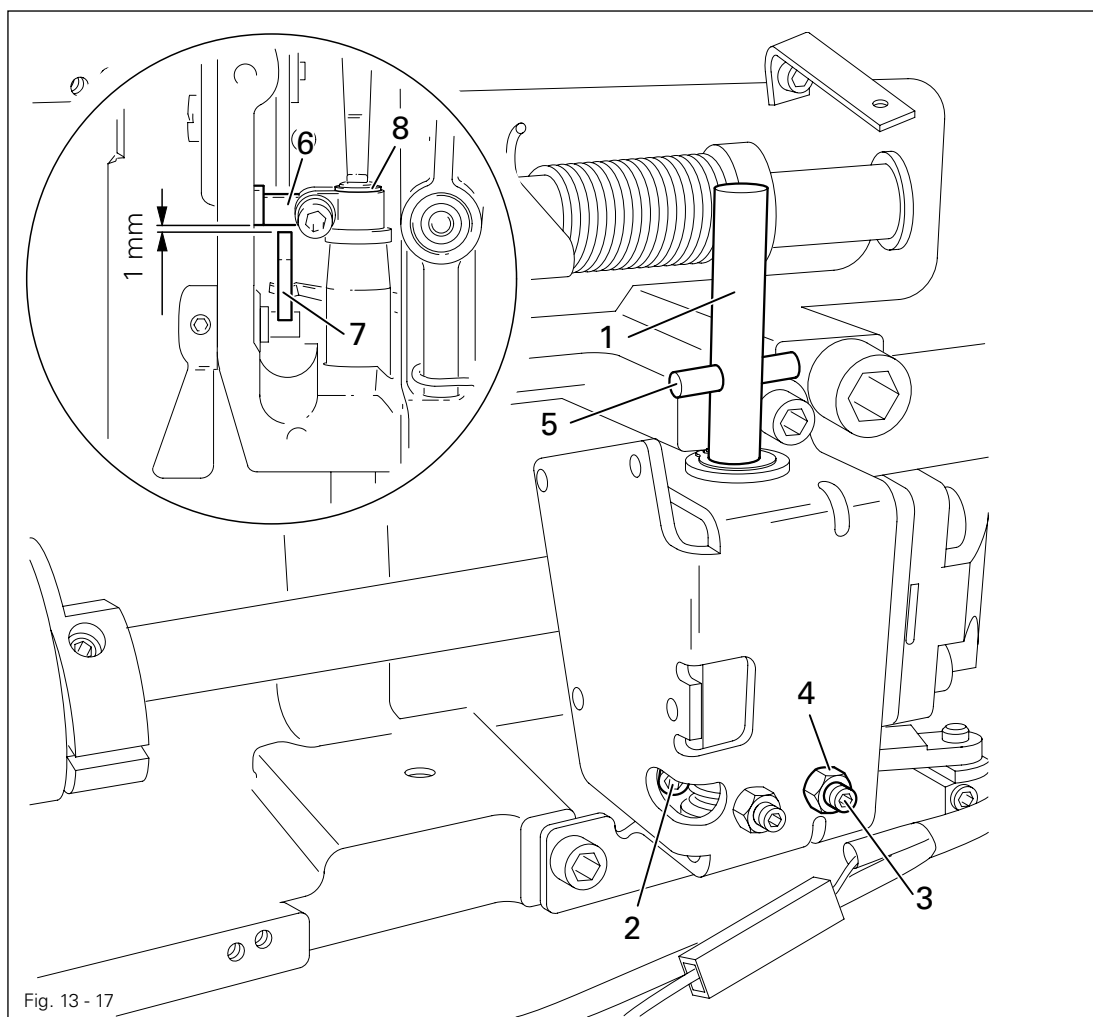
Move the slack thread regulator **3** (screw **4**) toward the "+" (= more thread) or toward the "-" (= less thread)

Adjustment

13.05.16 Position of knee lever

Requirement

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



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

13.05.17 Knee lever stop

Requirement

When the knee lever is fully actuated,

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

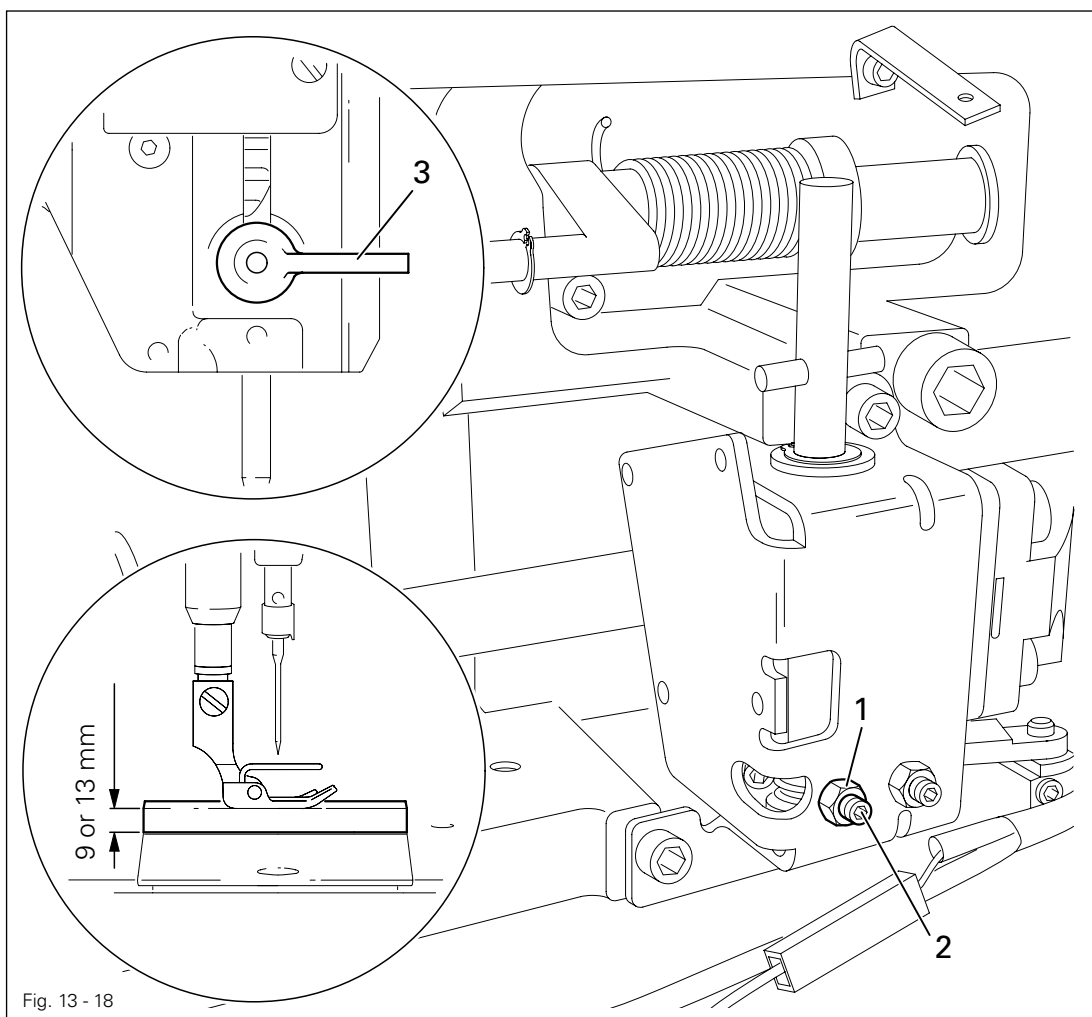
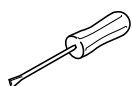


Fig. 13 - 18



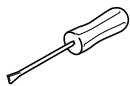
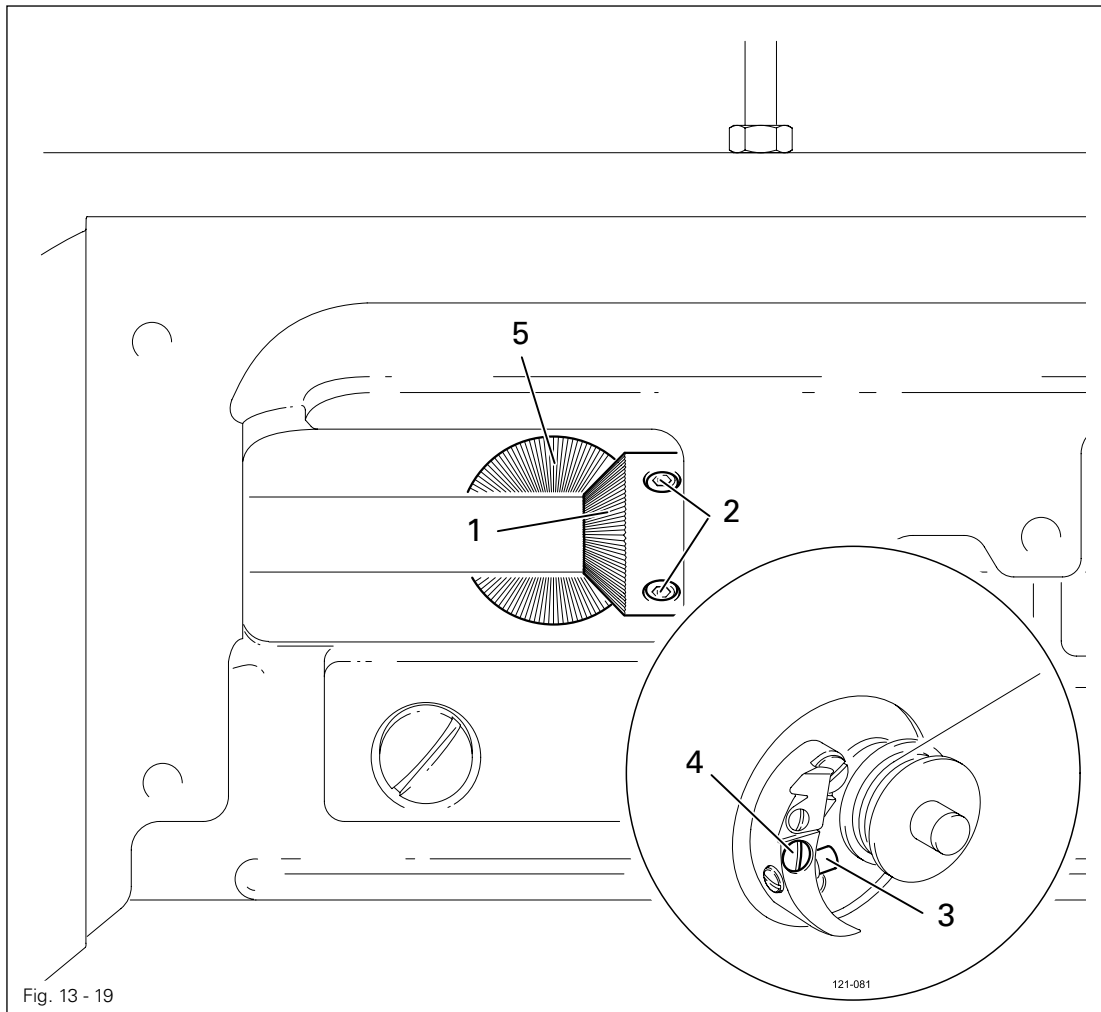
- Loosen nut **1** and unscrew screw **2** a few turns.
- Raise the presser foot and slide a **9 mm** (for small needle bar stroke) or **13 mm** (for large needle bar stroke) thick spacer under the presser foot.
- Swing down lever **3**
- Move the knee lever until it is fully actuated. The presser foot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

Adjustment

13.05.18 Bobbin winder

Requirement

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



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

13.05.19 Limiting the stitch length



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

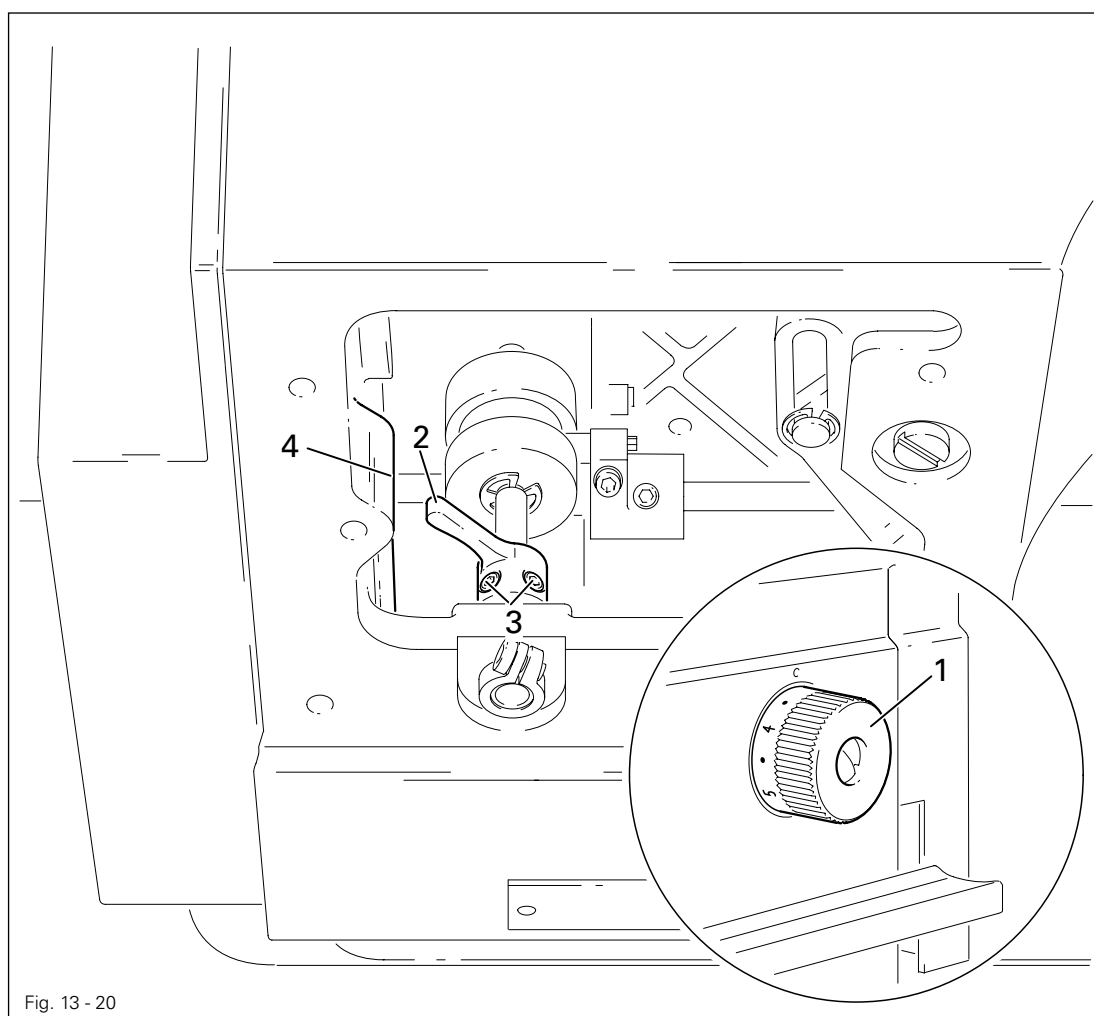
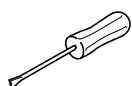


Fig. 13 - 20



When using Version **A** and **B** part sets, the maximum adjustable stitch length must **not be larger than 3.0 or 4.5 mm** (see chapter **3 Specifications**, in the instruction manual)!



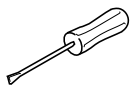
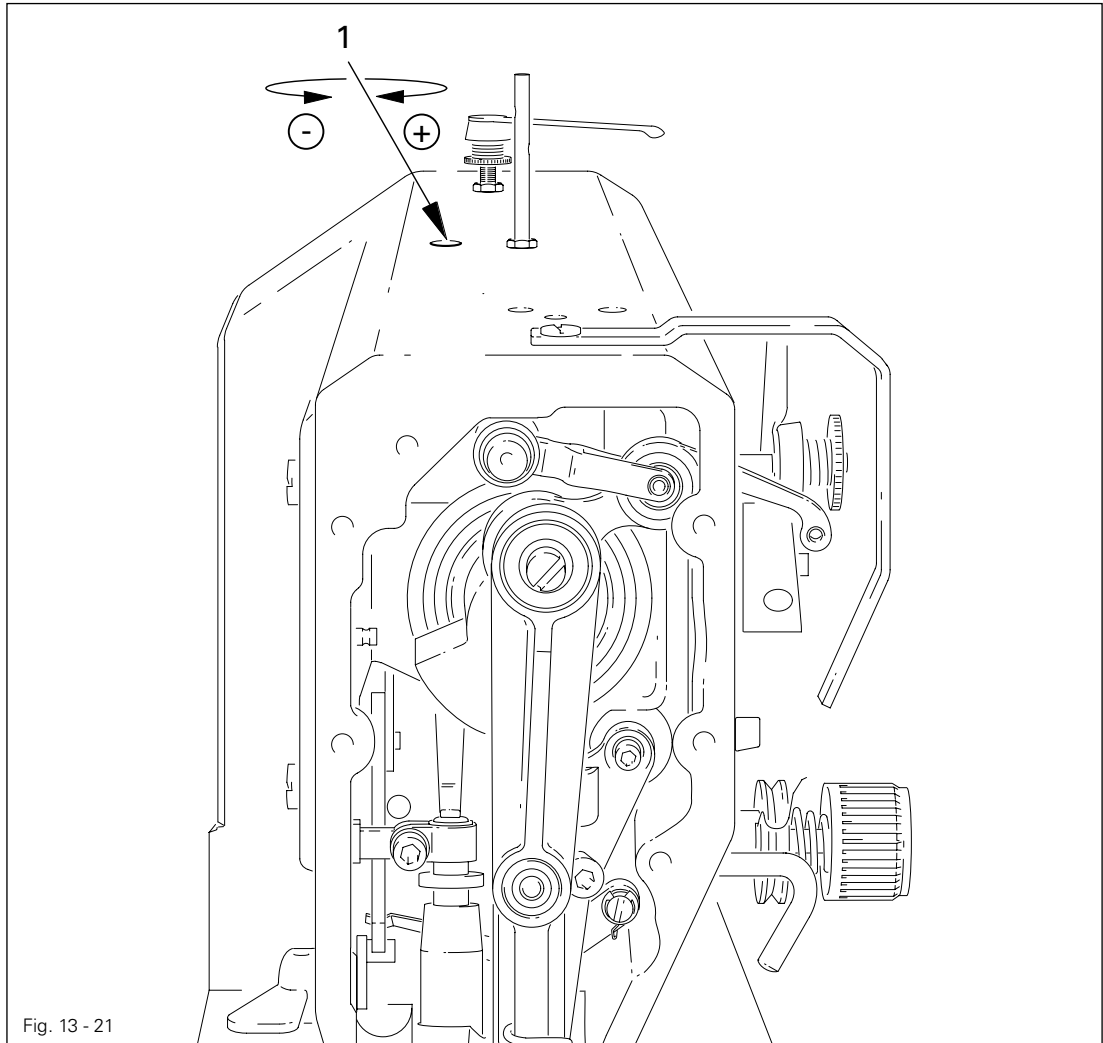
- Set the desired maximum stitch length with regulator disk 1.
- Move crank 2 (screws 3) down against stop 4.

Adjustment

13.05.20 Presser foot pressure

Requirement

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



- Turn screw 1 in accordance with the requirement.

13.05.21 Modifying the needle bar stroke



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

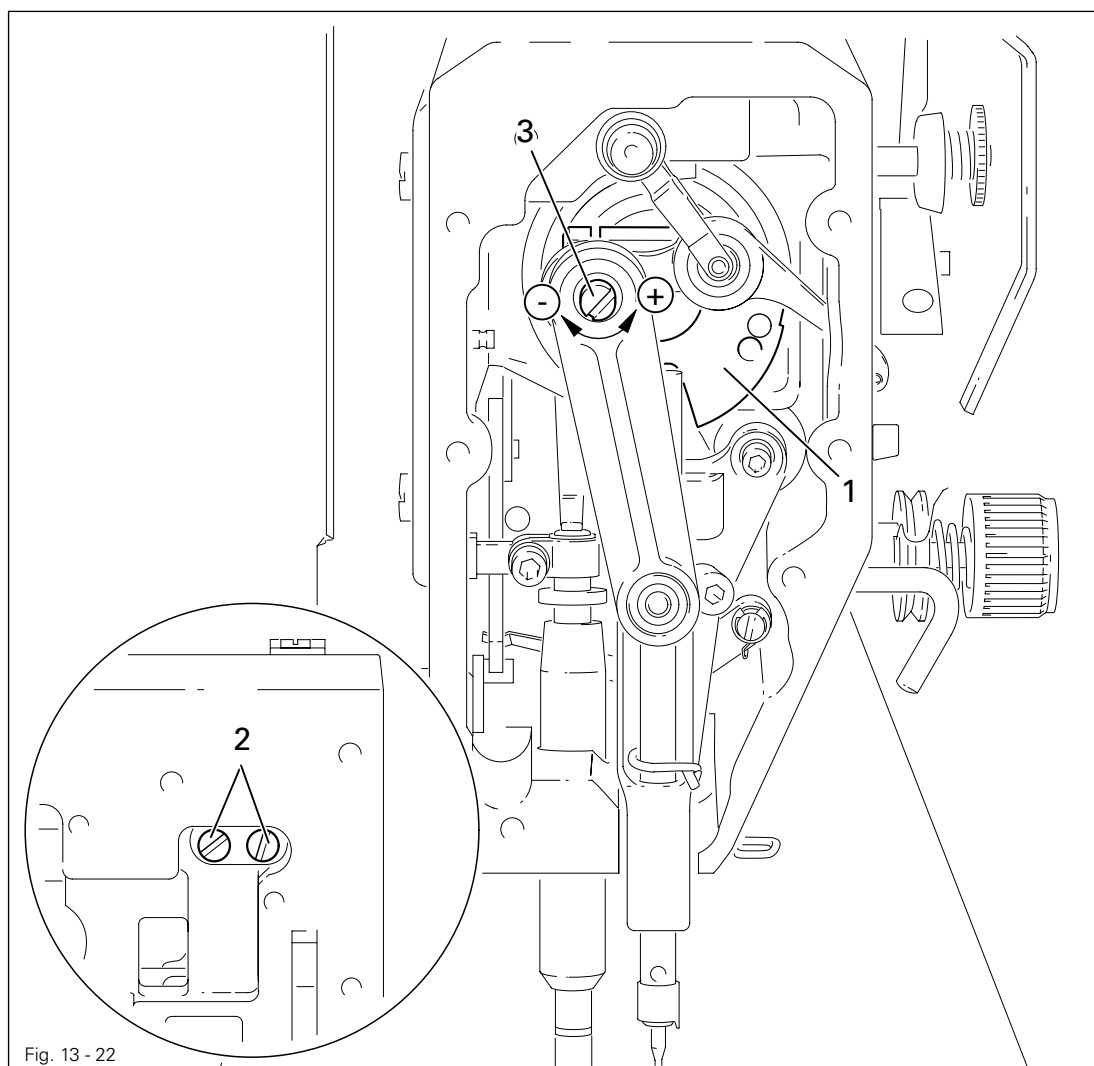
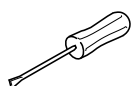


Fig. 13 - 22



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



- Via the hand wheel, turn crank **1** until the screws **2** can be accessed from the side opening of the housing.
- Turn eccentric **3** (screws **2**) as far as possible toward "+" (= large needle bar stroke) or toward "-" (= small needle bar stroke).
- Adjust needle height (see chapter **13.05.02 Preadjusting the needle height** and /or chapter **13.05.14 Needle rise, hook-to-needle clearance, needle height and bobbin case position finger**).

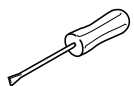
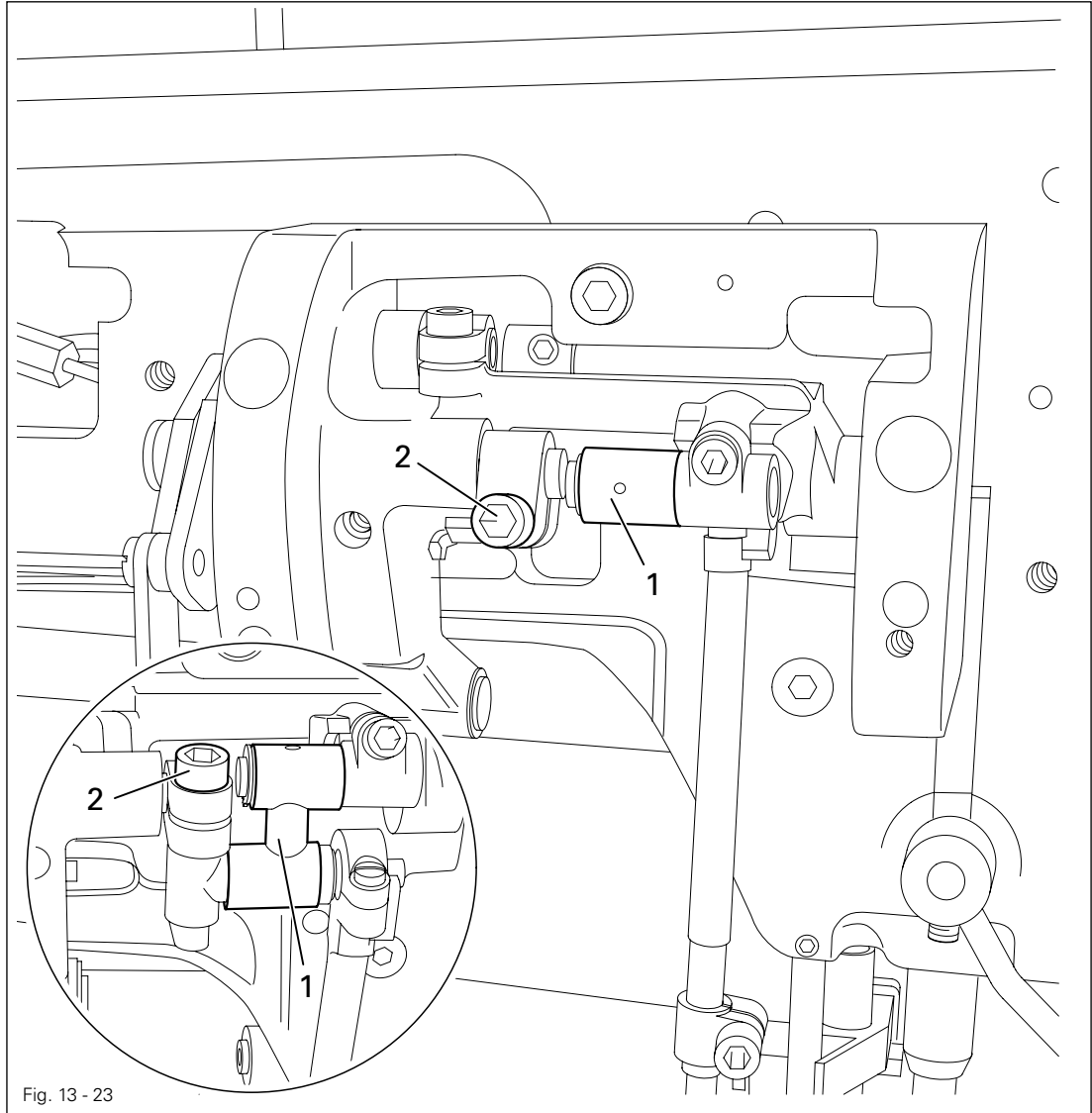
Adjustment

13.06 Adjusting the edge trimmer –731/01

13.06.01 Zero position of the knife

Requirement

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

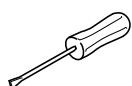
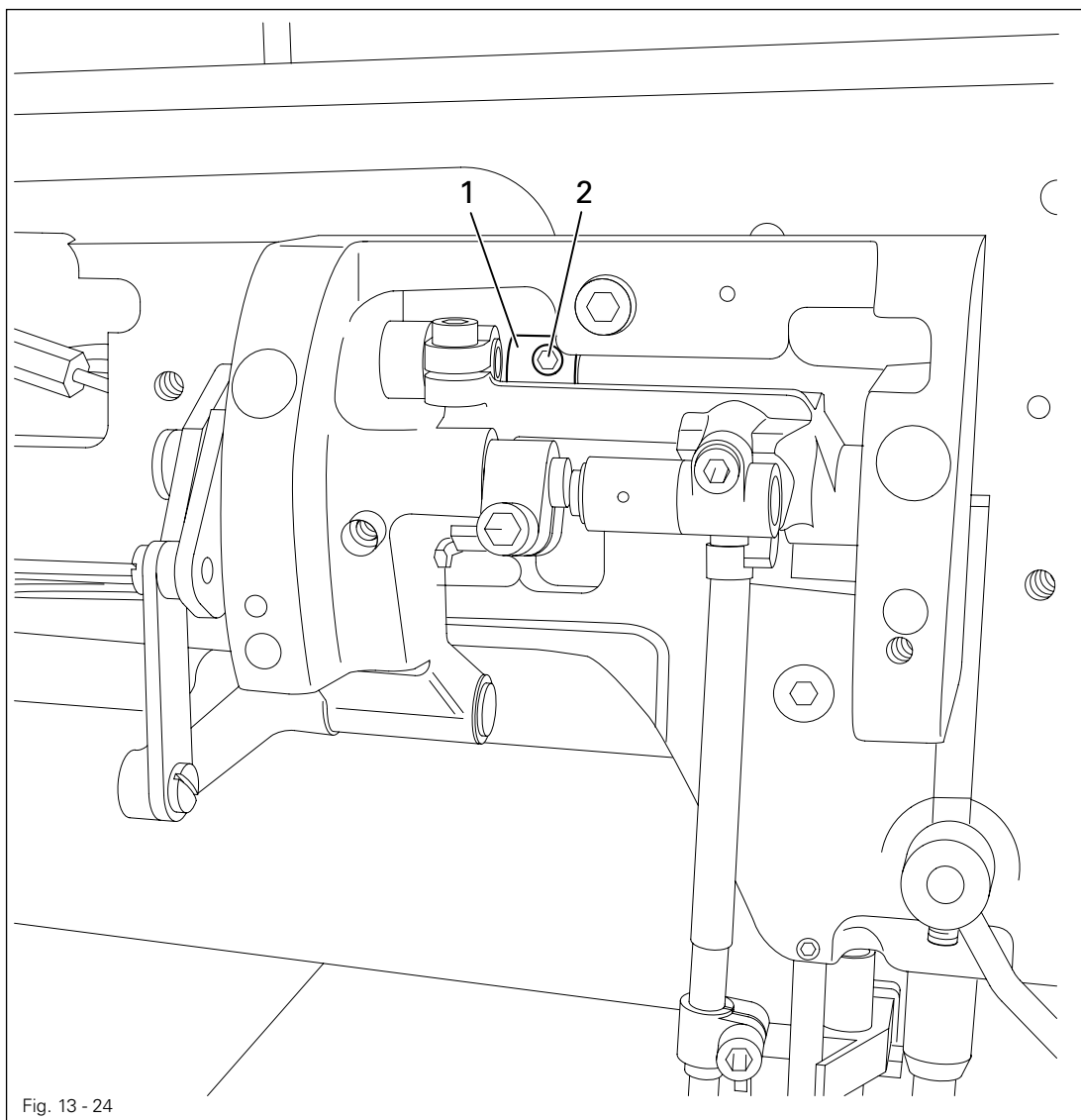


- Turn crank 1 (screw 2) according to the requirement.

13.06.02 Cutting motion

Requirement

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



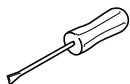
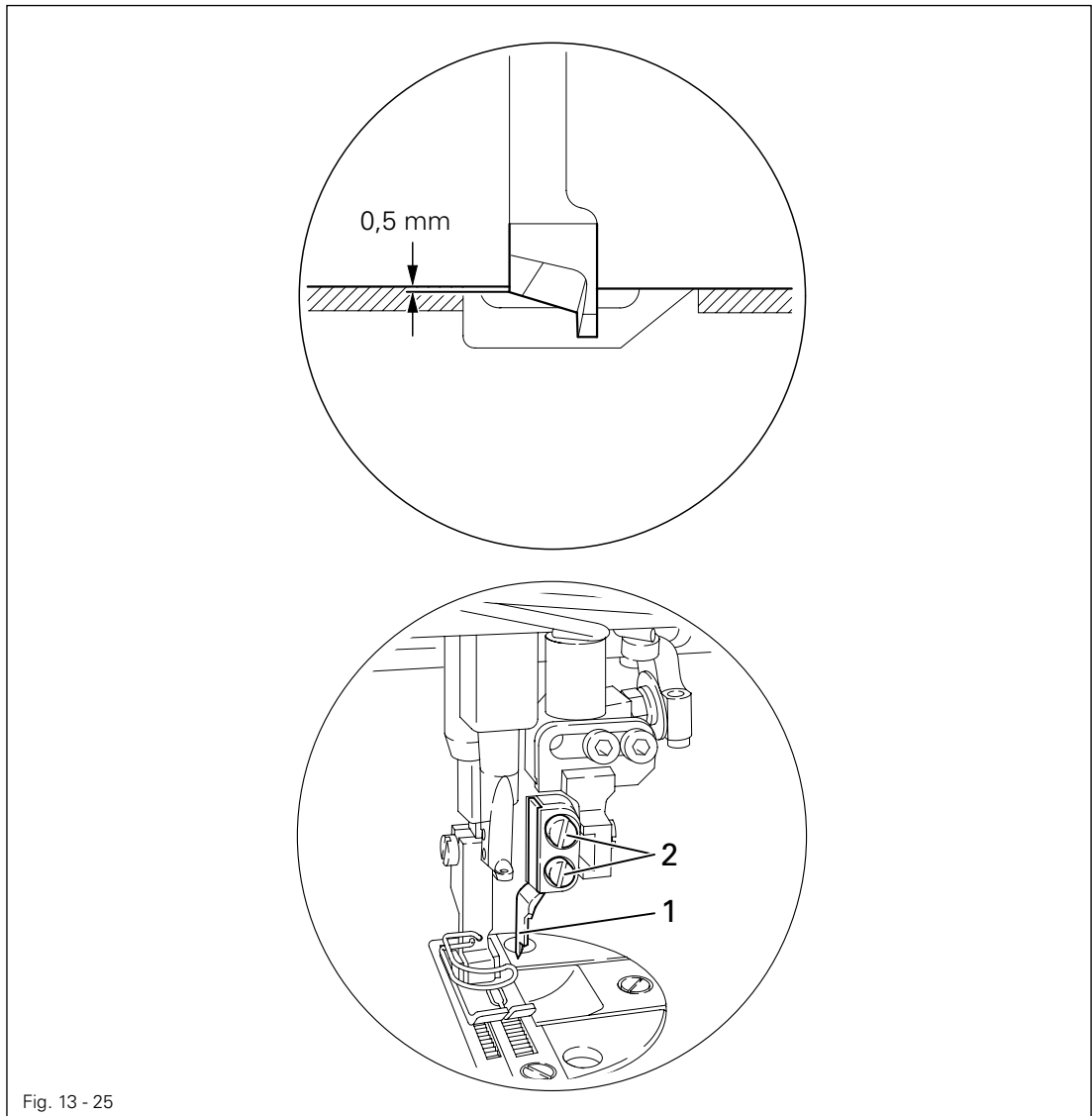
- Switch on the edge trimmer and bring the needle bar to t.d.c. or b.d.c. (see **requirement**).
- Turn eccentric **1** (two screws **2**) according to the **requirement**.

Adjustment

13.06.03 Knife height

Requirement

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



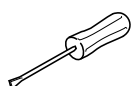
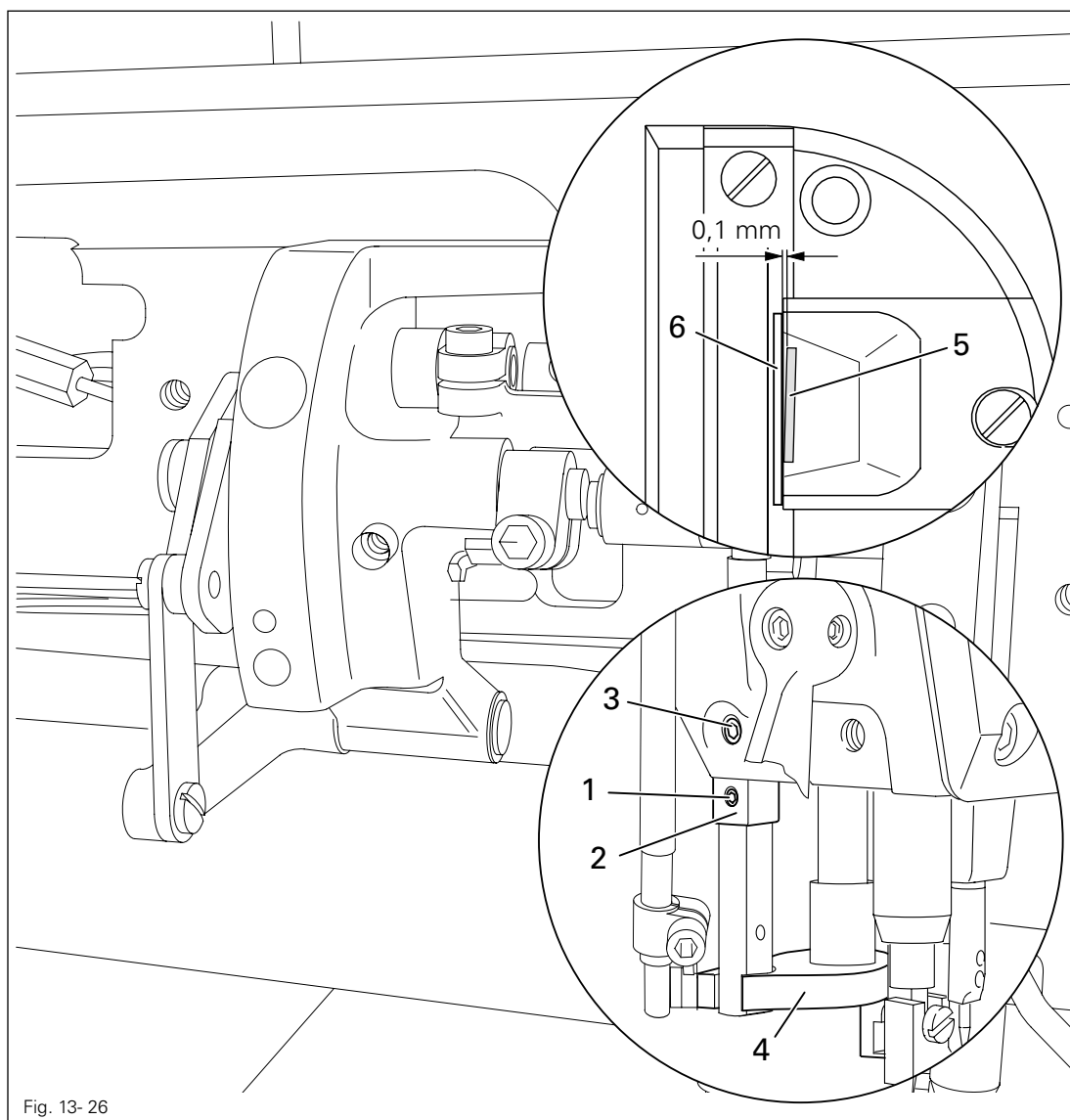
- Switch on the edge trimmer and bring the knife to the bottom of its stroke.
- Adjust knife 1 (screws 2) according to the **requirement**.

13.06.04 Cutting angle of the knife

Requirement

The knife should be

1. Touching the stationary knife **6** without counter pressure and
2. Be at a **0.1 mm** slant to the stationary knife **6**.



- Loosen screws **1**.
- Adjust eccentric **2** (screw **3**) in accordance with the requirements.
- Tighten screws **1**.



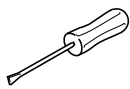
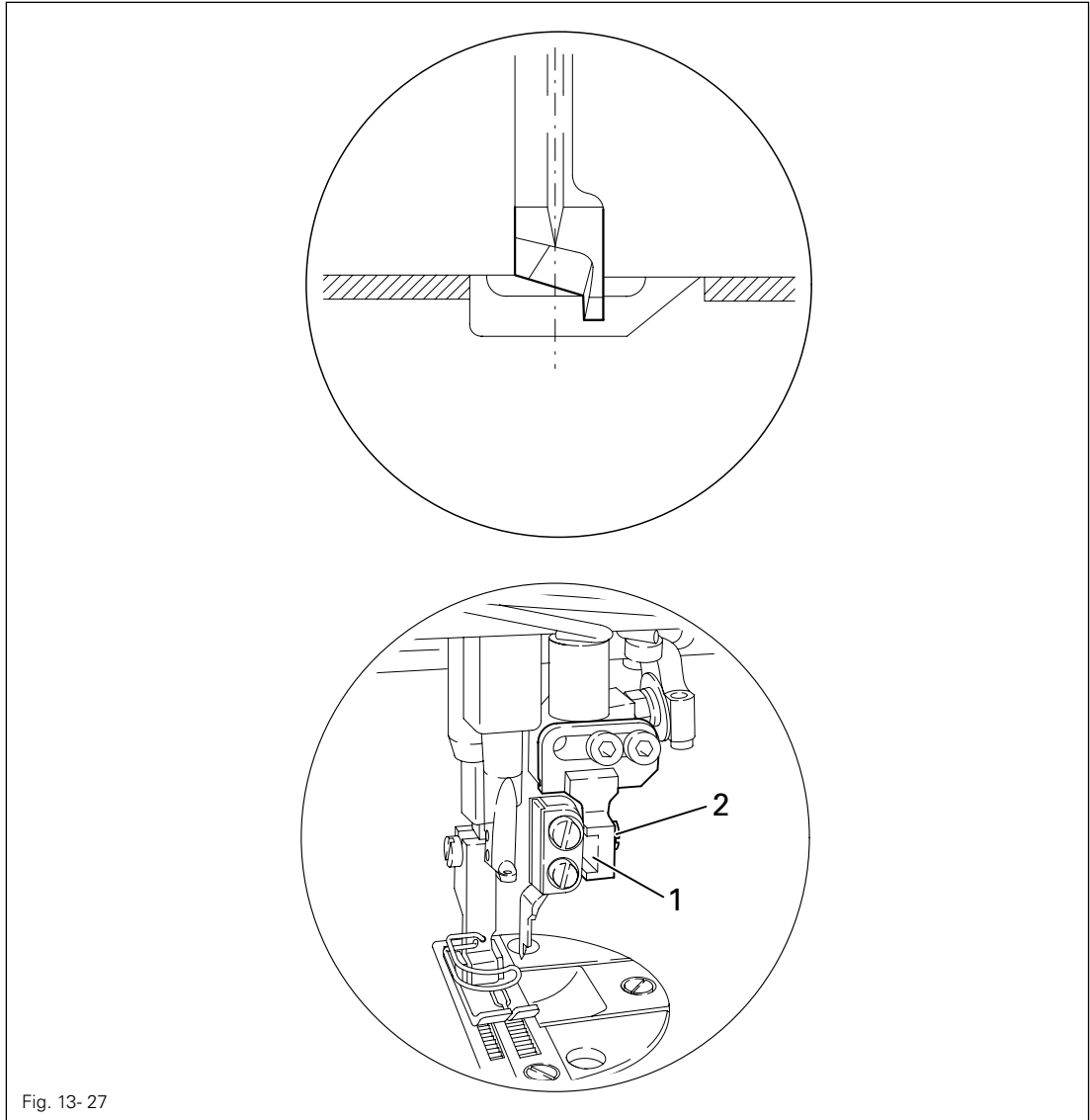
Make sure that knife guide **4** is moving smoothly!

Adjustment

13.06.05 Knife position in sewing direction

Requirement

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



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

13.06.06 Knife position crosswise to sewing direction

Requirement

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

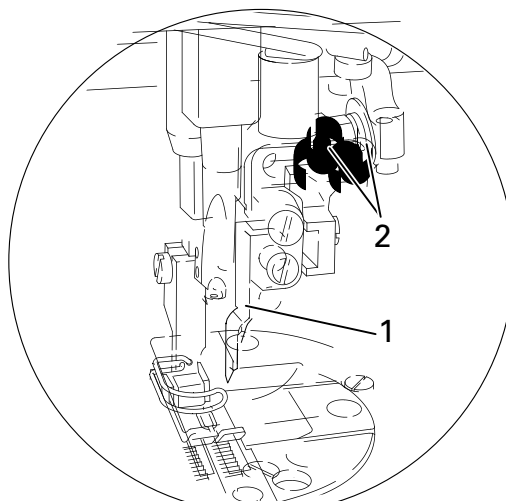
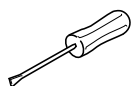


Fig. 13- 28



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

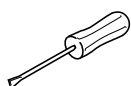
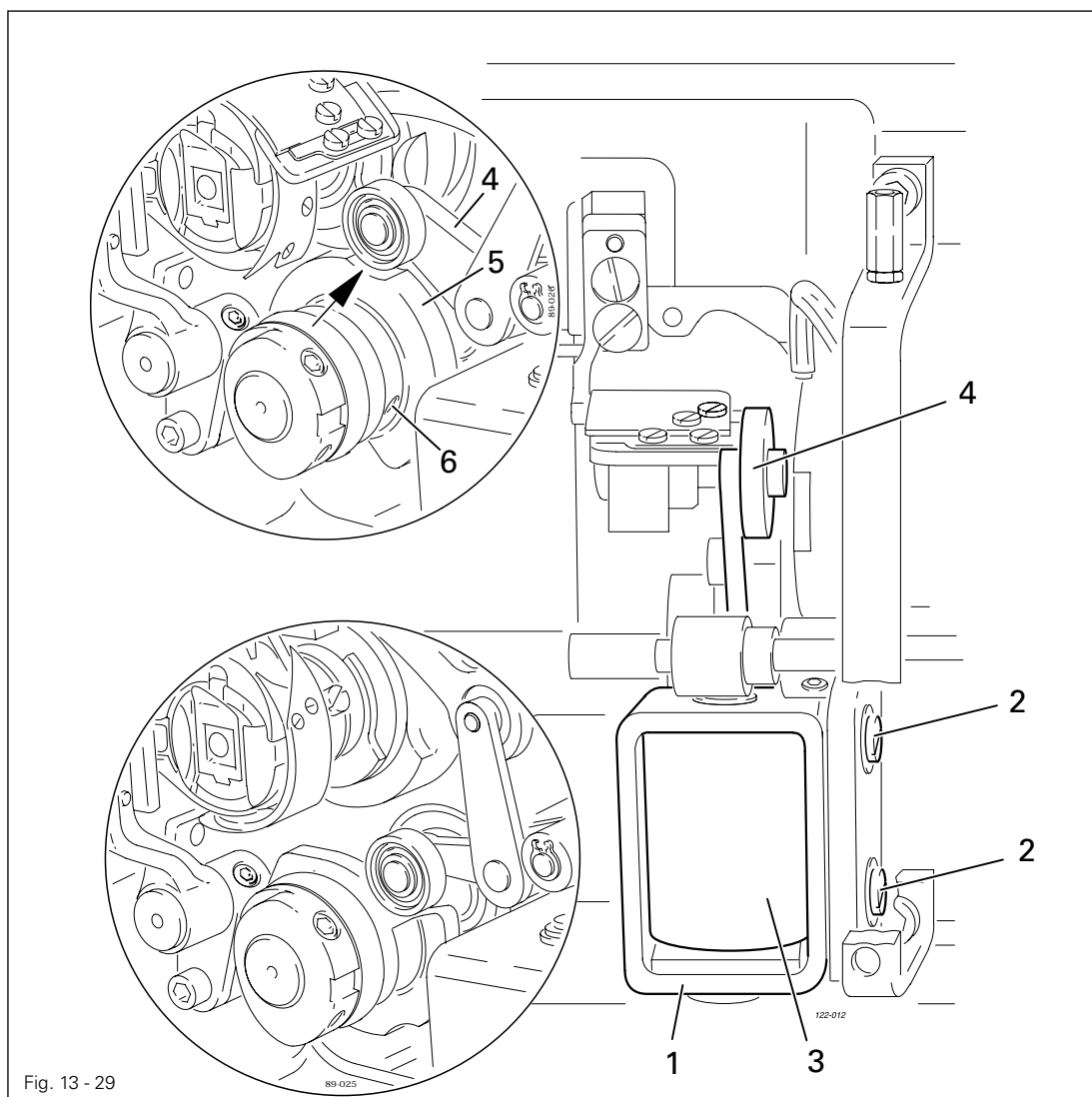
Adjustment

13.07 Adjusting the thread trimming device -900/24

13.07.01 Adjusting the solenoid / preliminary adjustment of the control cam

Requirement

1. When solenoid **3** is completely extended, roller lever **4** should be at the lowest point of the control cam.
2. When the needle bar is positioned at **1.8 mm** after b.d.c. (needle rise position), roller lever **4** should engage in the appropriate recess of the control cam.



- Adjust solenoid holder **1** (screws **2**) in accordance with **requirement 1**.
- Adjust control cam **5** (screws **6**) in accordance with **requirement 2**.

13.07.02 Lateral alignment of the thread catcher

Requirement

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

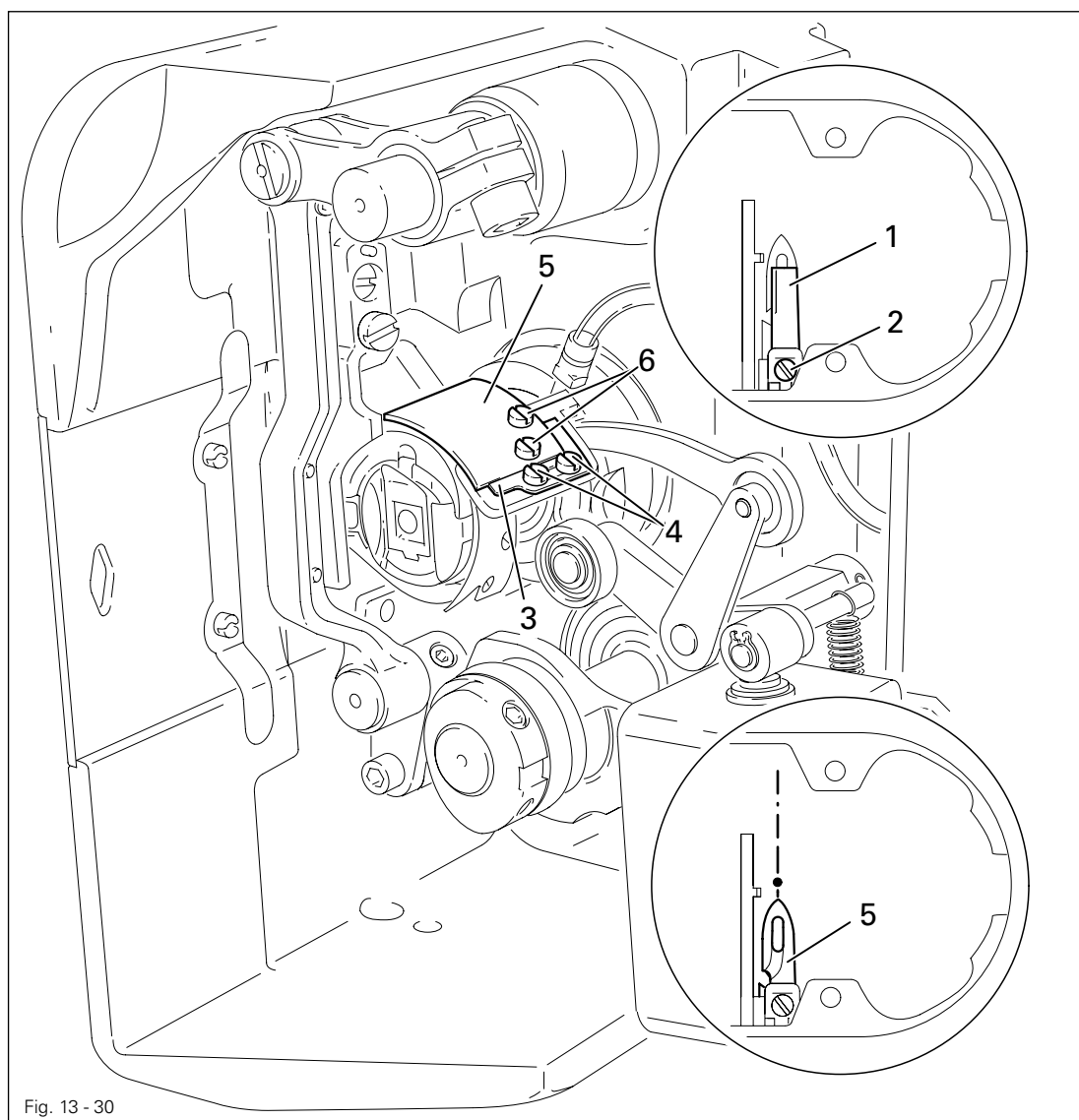
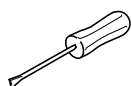


Fig. 13 - 30



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

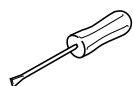
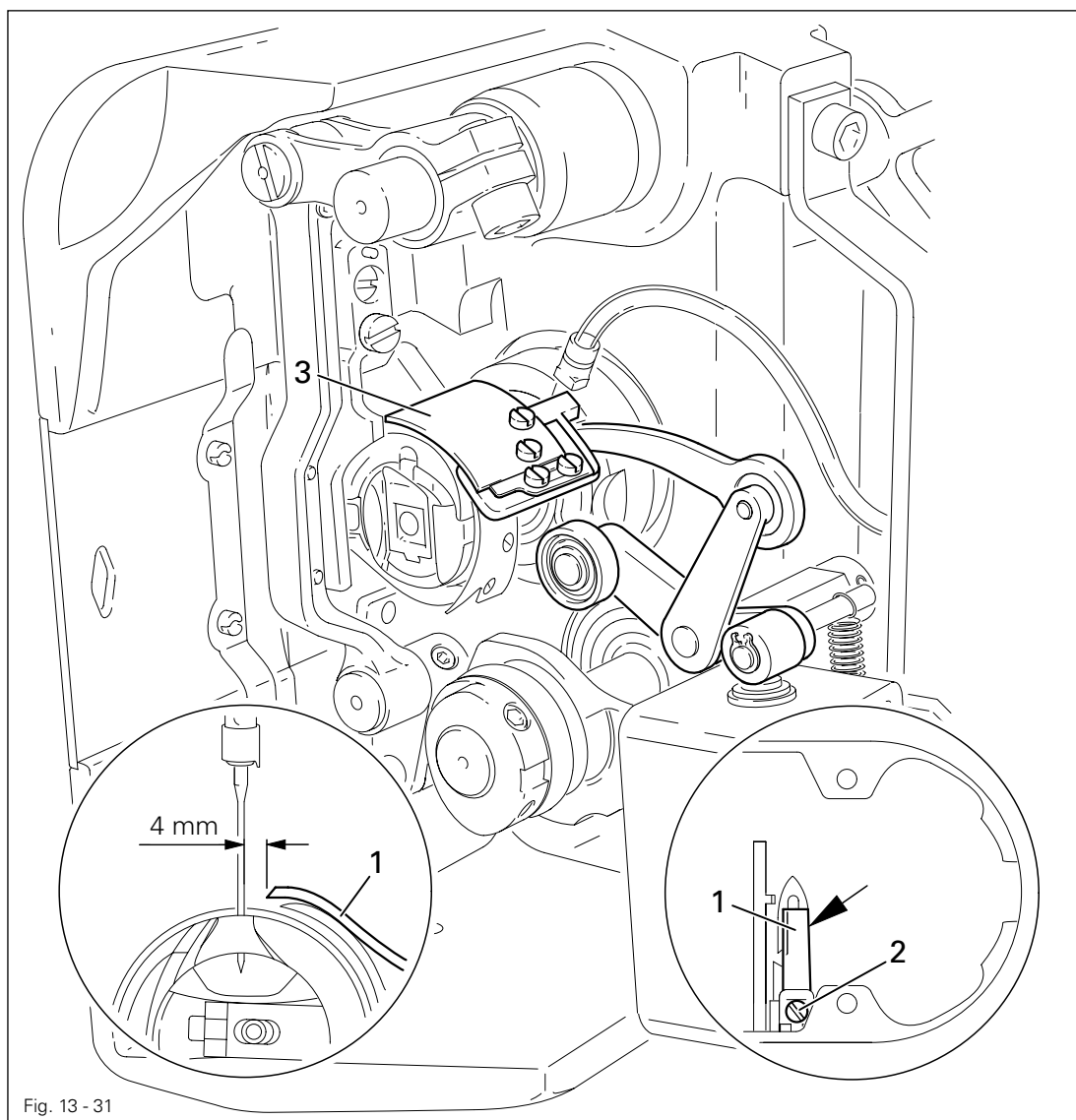


For further adjustments, leave knife **1** removed and stop **3** loosened.

13.07.03 Knife position

Requirement

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

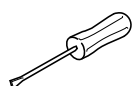
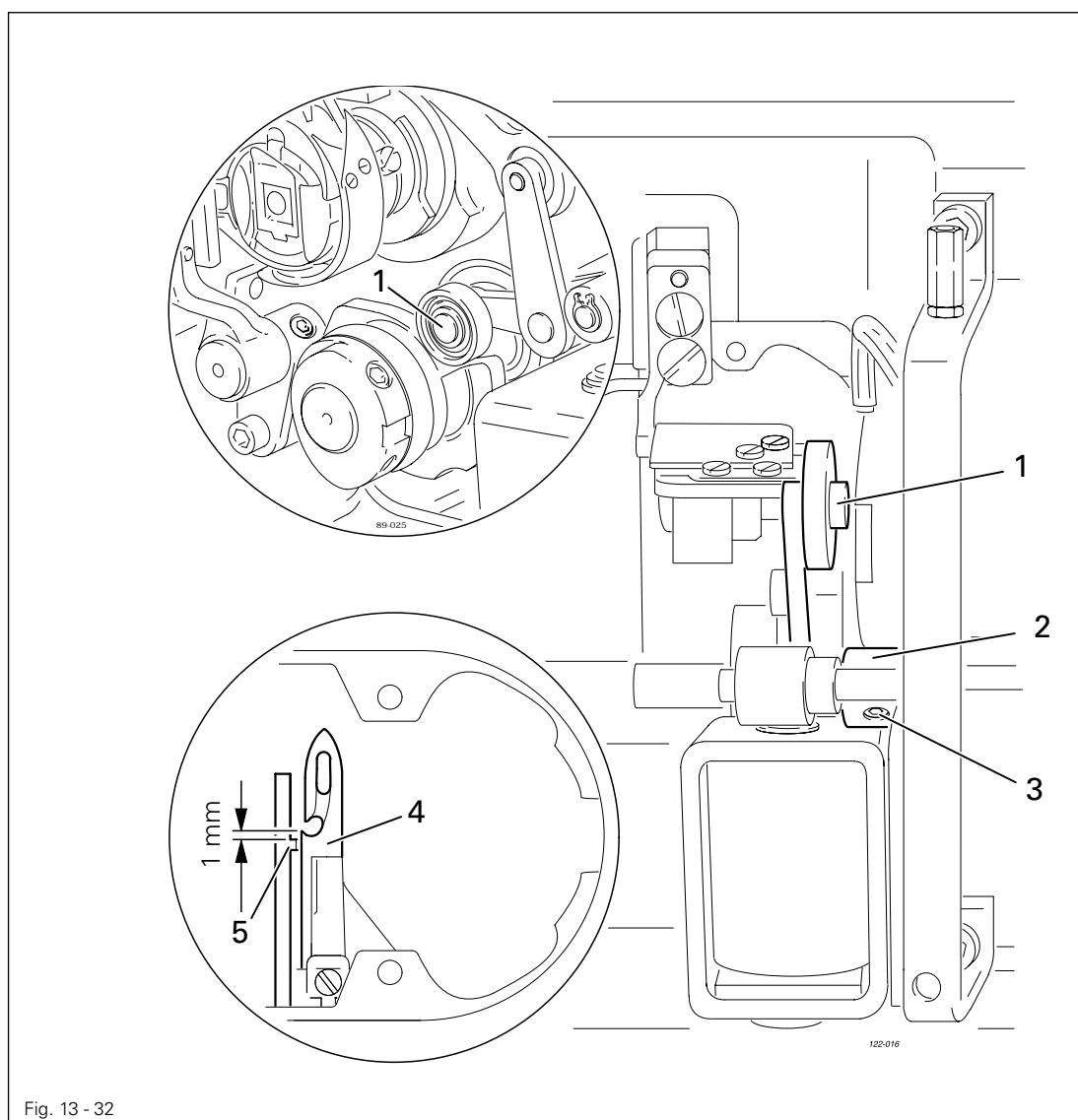


- Bring the needle bar to BDC.
- Slide knife **1** under the locking tab and align according to **requirement 1**.
- Tighten screw **2** lightly.
- Adjust thread catcher carrier **3** by hand until the wedge point in the thread catcher is positioned just in front of the cutting edge of the knife.
- Align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

13.07.04 Front point of reversal of the thread catcher

Requirement

At the front point of reversal of thread catcher 4, the tip of the thread catcher cutout should be 1 mm in front of the bobbin case position finger 5.

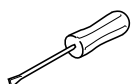
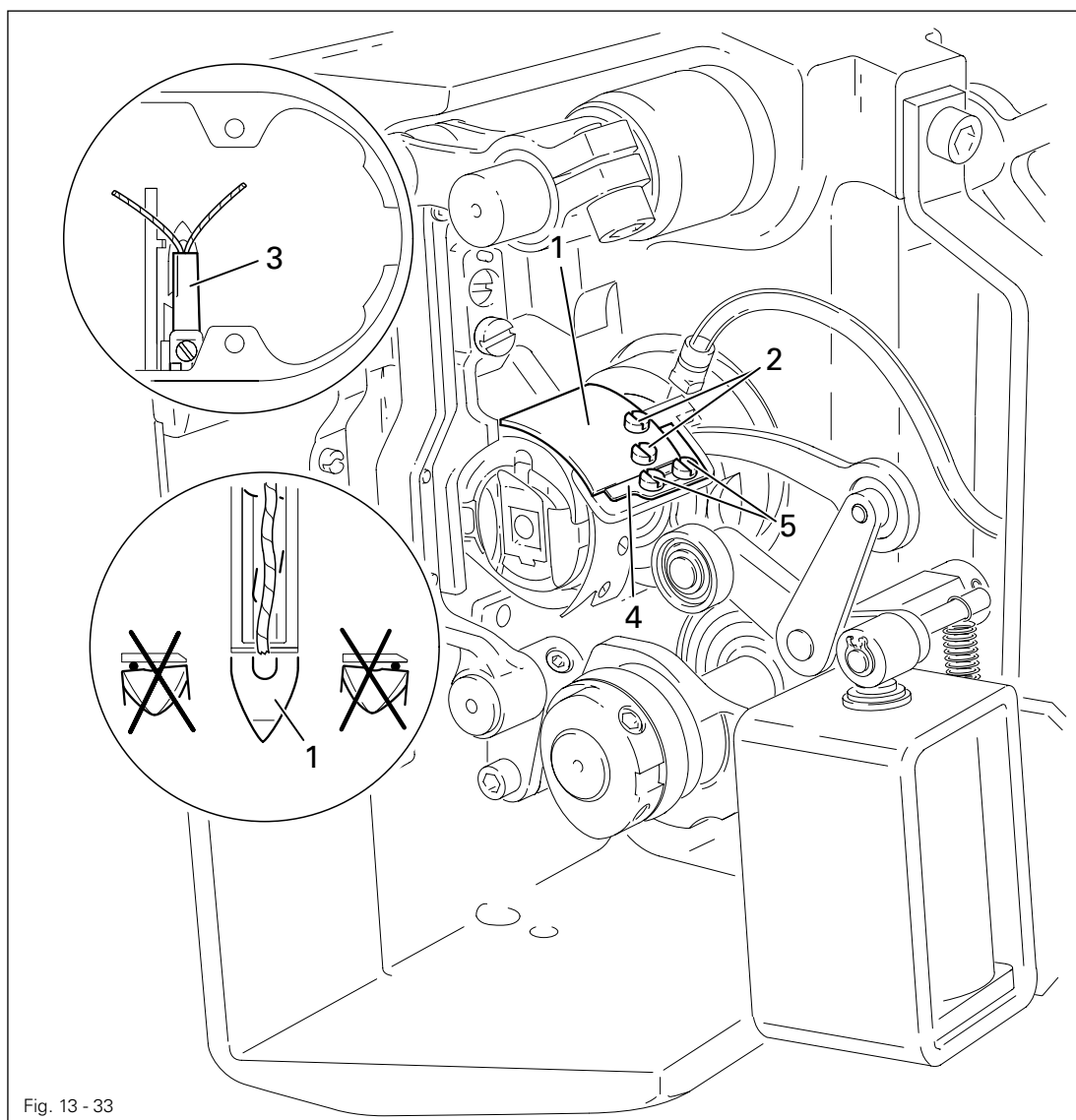


- Position roller lever 1 at the lowest point of the control cam.
- Adjust bush 2 (screws 3) according to the **requirement**.

13.07.05 Manual trimming check

Requirement

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

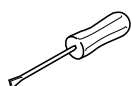
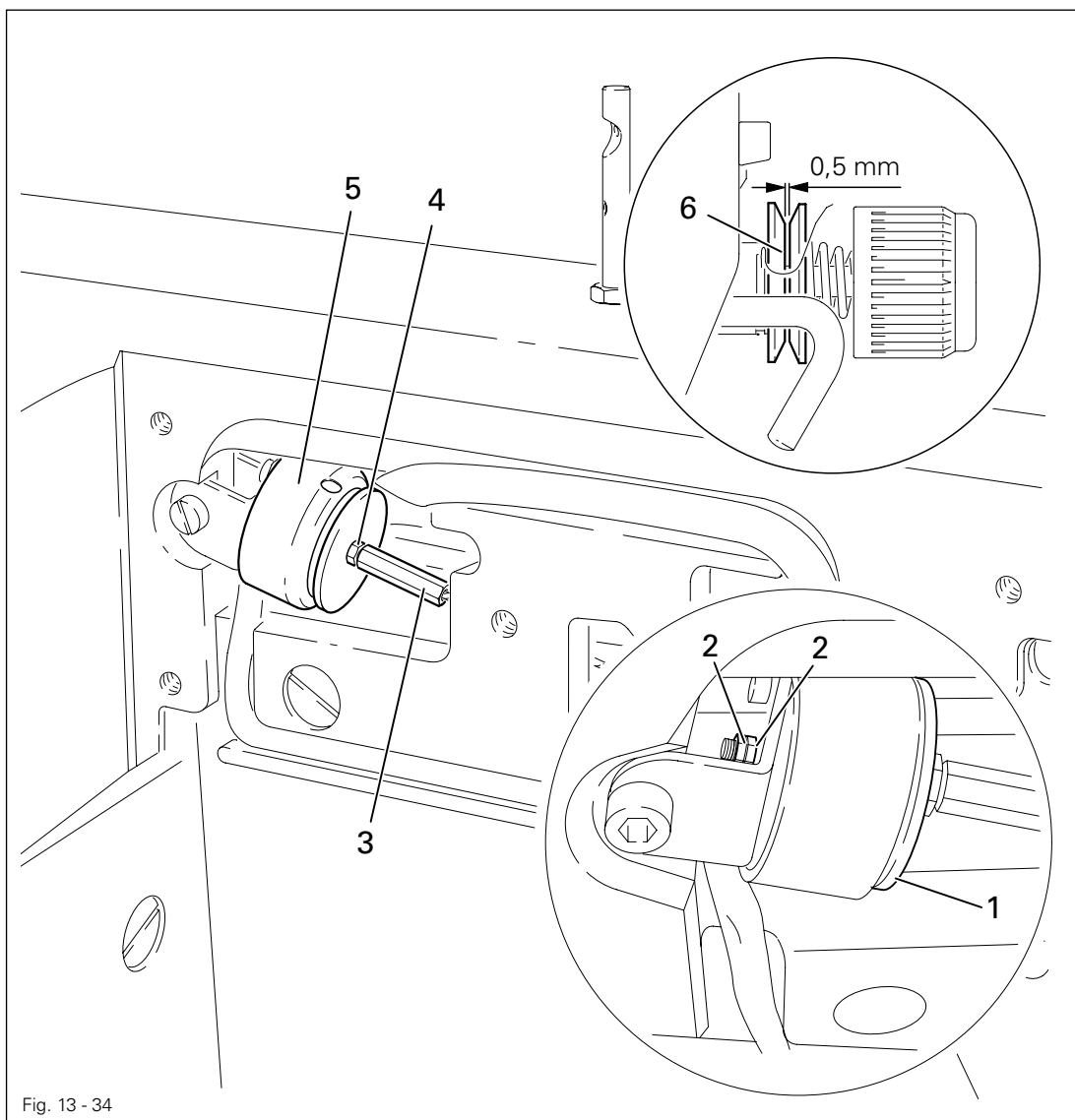


- Move thread catcher 1 by hand to its front point of reversal.
- Double the thread and insert into catcher cutout.
- Carry out trimming operation manually.
- If the threads are not cut according to the **requirement**, align thread catcher 1 (screws 2) with knife 3 accordingly.
- Move stop 4 against thread catcher 1 and tighten screws 5.
- Check chapter 13.07.02 **Lateral alignment of the thread catcher**, and readjust if necessary.

13.07.06 Needle thread tension release

Requirement

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



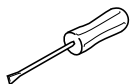
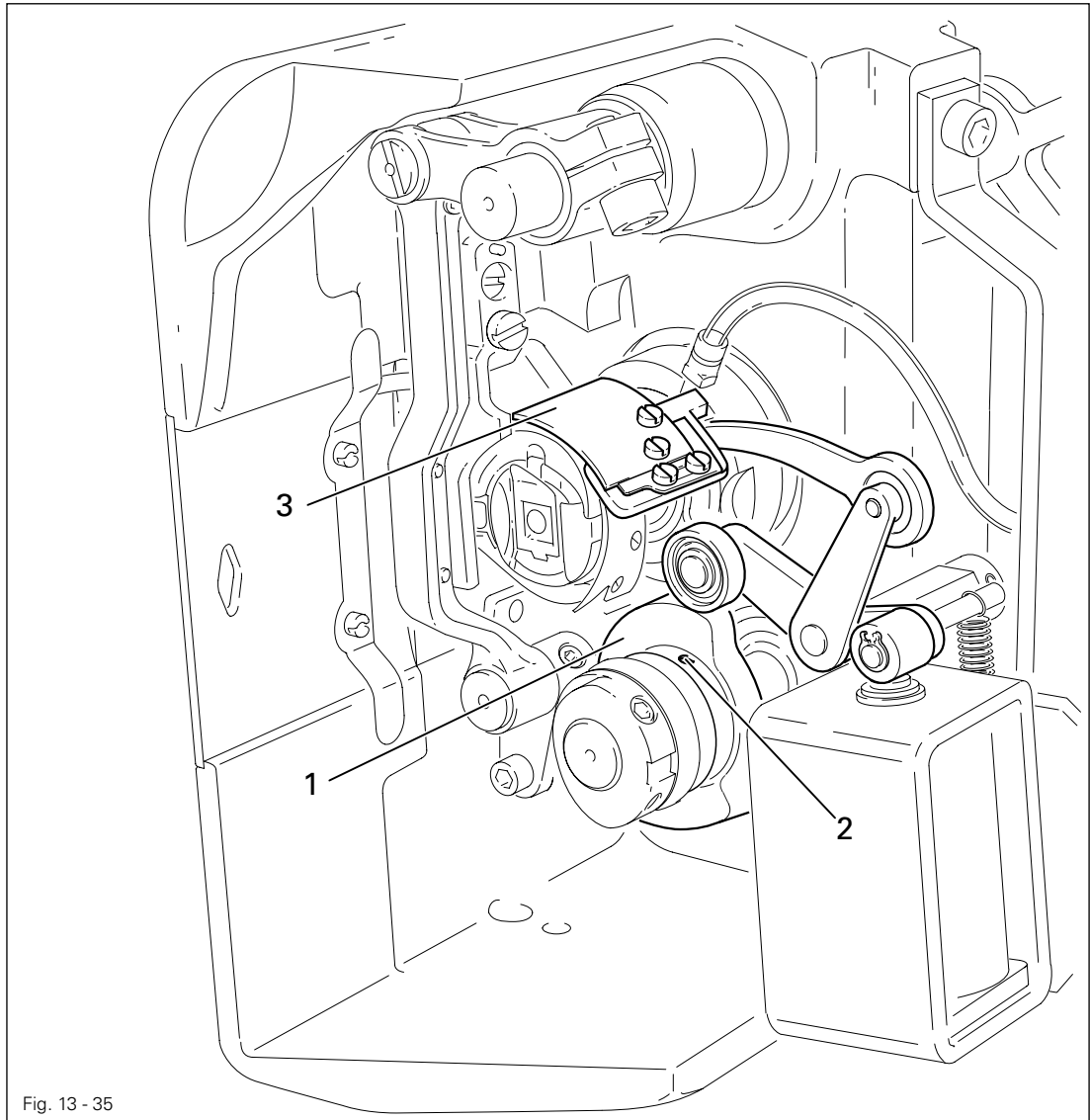
- Adjust disc 1 (nuts 2) according to the requirement.
- Adjust screw 3 (nut 4) according to the requirement.

Adjustment

13.07.07 Readjusting the control cam

Requirement

When the take-up lever is in its t.d.c., control cam 1 should have moved thread catcher 3.

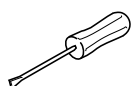
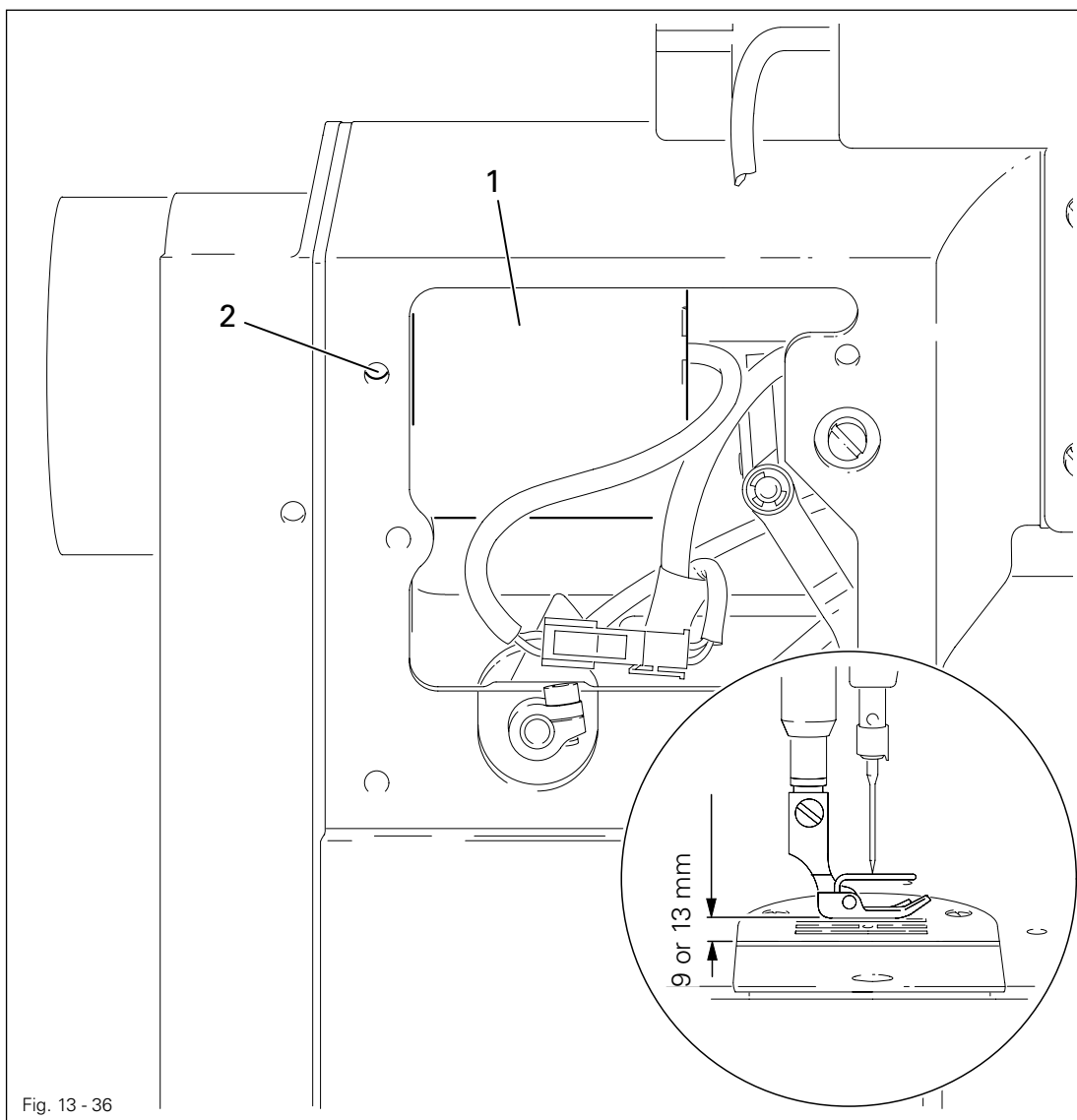


- Adjust control cam 1 (screws 2) according to the requirement.

13.08 Adjusting the automatic presser foot lift -910/06

Requirement

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



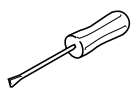
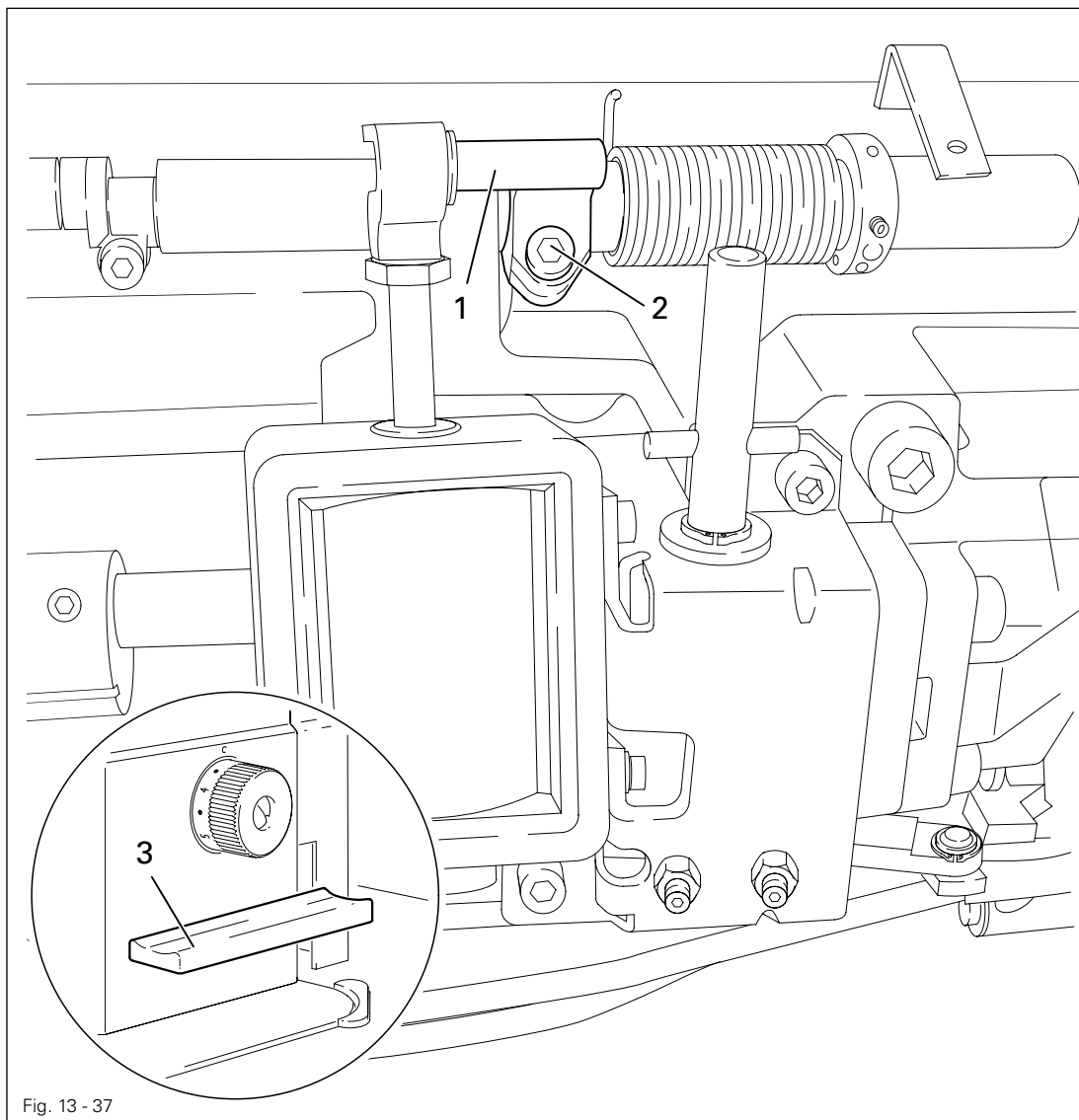
- Move magnet 1 (screw 2) according to the requirement.

Adjustment

13.09 Adjusting the back-tacking mechanism –911/37

Requirement

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



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

13.10 Parameter settings

(only on machines with Quick-EcoDrive and control unit P40ED or Quick-PicoDrive and control unit P40PD)

- The selection of the user level and the alteration of parameters is described in the separate instruction manual for the drive unit.

13.10.01 Parameter list

Group	Parameter	Description	User level	Setting range	Set value P40 ED	Set value P40 PD
1	105	Speed for start backtackl	B, C	300 - 2000	1200	1200
	110	Speed for end backtack	B, C	300 - 2000	1200	1200
6	606	Speed min	B, C	30 - 300	180	180
	607	Speed max.	B, C	300 - 6000	▲	▲
6	609	Cutting speed 1	B, C	60 - 300	180	180
	660	Bobbin thread control 0 = off, 1 = thread monitor, 2 = reverse counter	A, B, C	0 - 2	0	-
	668	Thread wiper/thread blower 1 = on; 0 = off	B, C	0 - 1	0	-
7	700	Needle position 0 (needle reference position	B, C	0 - 255	*	*
	702	Needle position 1 (needle lowered)	B, C	0 - 255	90	90
	703	Needle position 2 (take-up lever raised)	B, C	0 - 255	236	236
	705	Needle position 5 (end cutting signal 1)	B, C	0 - 255	200	200
	706	Needle position 5 (start cutting signal 2)	B, C	0 - 255	136	136
	707	Needle position 9 (start thread tension release/start thread catcher)	B, C	0 - 255	164	164
	760	Multiplier for the fixed value (200) stitch count	A,B, C	0 - 250	5	-
	797	Hardwaretest (OFF / ON),	B, C		OFF	OFF

▲ See Chapter 3 Specifications

* Adjustment see Chapter 8.05 Basic position of the machine drive unit.

Adjustment

Group	Parameter	Description	User lever	Setting range	Set value P40 ED	Set value P40 PD
7	799	Selected machine class	C	1 - 3	1	2
8	800	Rotating direction of the motor	C	0 - 1	0	0
	802	Main drive reduction ratio 0 = 1:1 1 = variable	C	0 - 1	-	0
9	985	Switch on angle for thread trapper	B, C	0 -255	67	67
	986	Switch off angle for thread trapper	B, C	0 -255	206	206
	989	Thread trapper at beginning of seam 1 = yes, 0 = no	B, C	0 - 2	0	0



Further parameters and the description for an internet update of the machine software and reset /cold start of the machine can be found in the instruction manual for the control panel.

14 **Circuit diagrams**

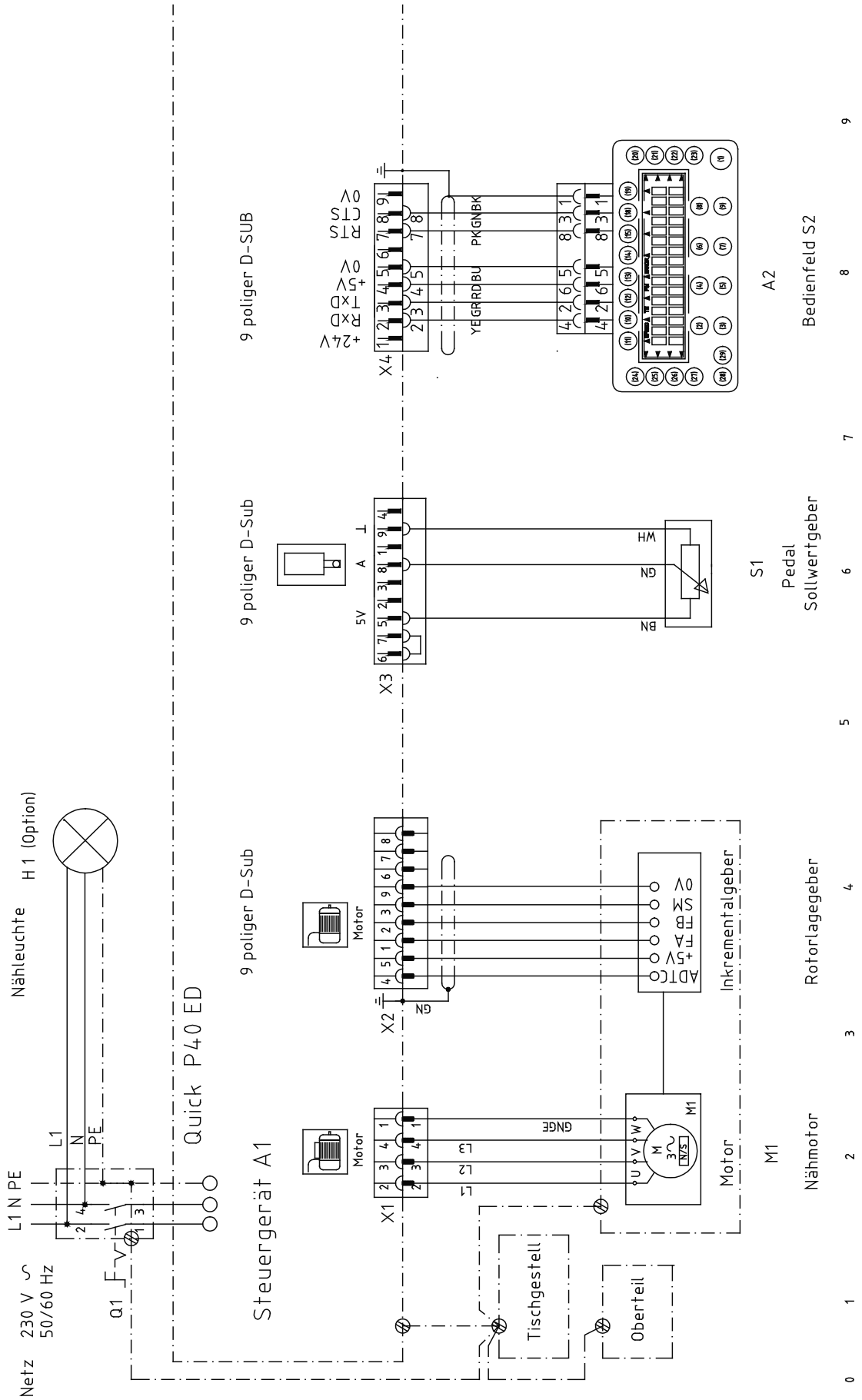
14.01 **Reference list for the Circuit diagrams 91-191 516-95 and 91-191 521-95**

Control package		
	P40 ED	P40 PD
	91-191 516-95	91-191 521-95
A1	Control unit Quick P40ED	Control unit Quick P40PD
A2	S2 control panel	PicoTop control panel
A14	Sewing head recognition	-
H1	Sewing lamp	-
H10	LED reverse stitch counting	-
HQ1	-	Control lamp main switch
M1	Sewing motor with incremental transmitter	
M10	Knife motor	-
PD3	External synchronizer PD3 (sub-cl. -712/..)	-
Q1	Main switch	
S1	Pedal (speed control unit)	
S6	Start inhibitor switch	
S10	Knife motor key	-
S41	Manual backtacking key	
S42	Needle position change / threading key	
S43	Single stitch key	
S44	Suction off	-
X0	RS 232 interface (PC) plug	-
X1	Sewing motor plug	
X2	Incremental transmitter plug	
X3	Pedal (speed control unit) plug	
X4	S2 control panel plug	Pico to control panel/RS232 (PC) plug
X5	Outputs/inputs plug	
X6	Bobbin thread monitor plug (optional)	-
X7	Light barrier plug (optional)	Synchronizer PD3 plug (optional)
X8	-	Light barrier plug (optional)
X21	Motor running	-
X22	Thread trimmer (-900/..) plug	
X23	Thread clamp plug	
X24	Automatic presser foot lift (-910/..) plug	
X25	Backtacking device (-911/..) plug	
X28	Thread tension release plug	
X40	Keyboard plug	
X44	Suction off plug	-
X46	Start inhibitor plug	
X50	Sewing head recognition plug	-

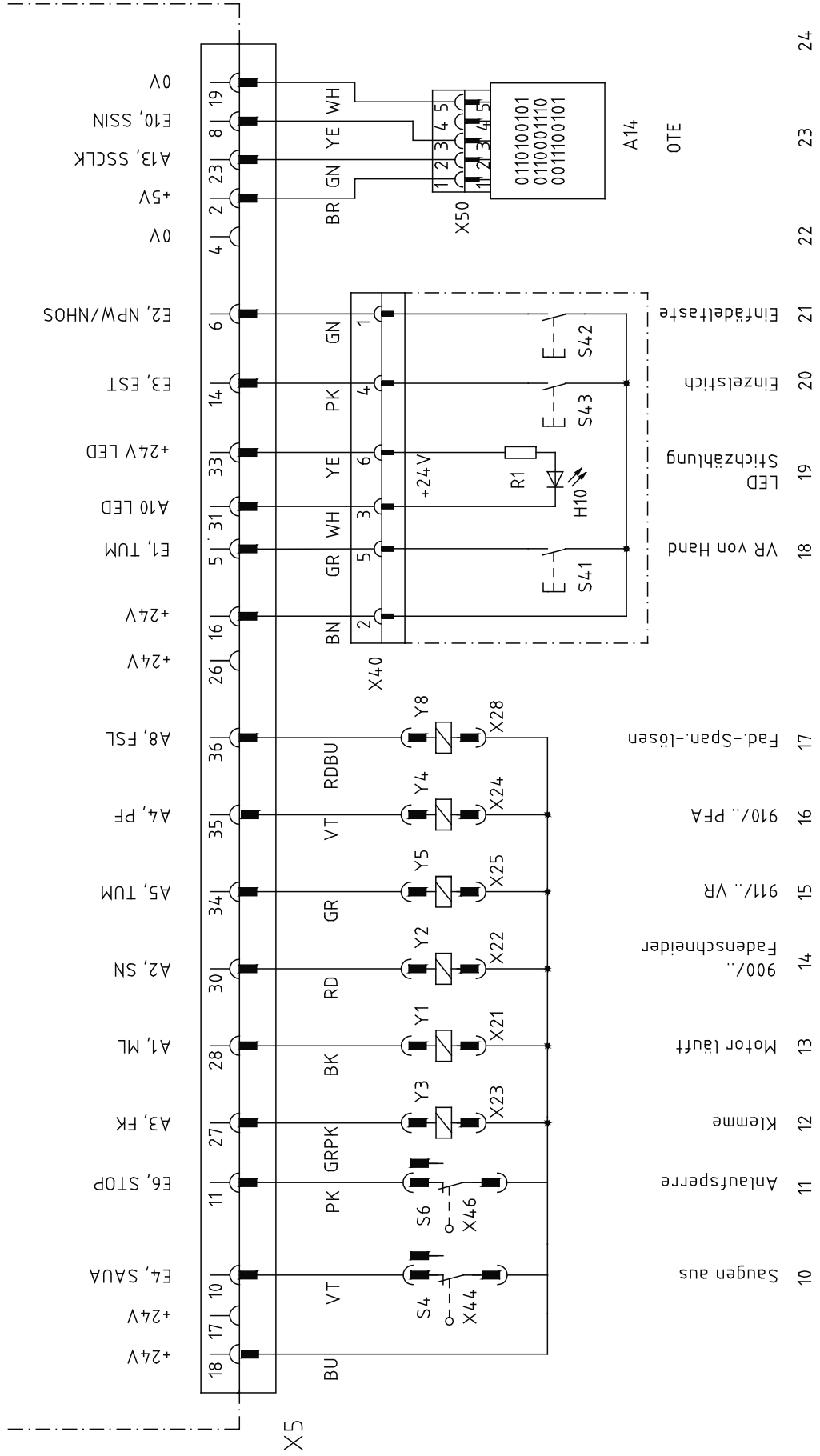
Circuit diagrams

Control package		
	P40 ED	P40 PD
	91-191 516-95	91-191 521-95
Y1	Motor running	-
Y2	Thread trimmer (-900/..)	
Y3	Thread clamp	
Y4	Automatic presser foot lift (-910/..)	
Y5	Backtacking device (-911/..)	
Y8	Thread tension release	

14.02 Circuit diagrams 91-191 516-95

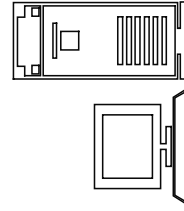
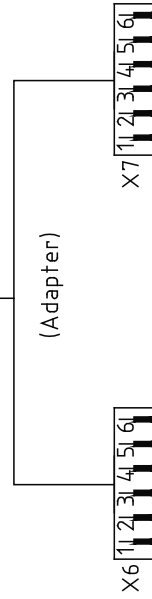


Ausgänge und Eingänge
37 poliger D-Sub
Steuergerät A1
Quick P40 ED



Steuergerät A1 Quick P40 ED

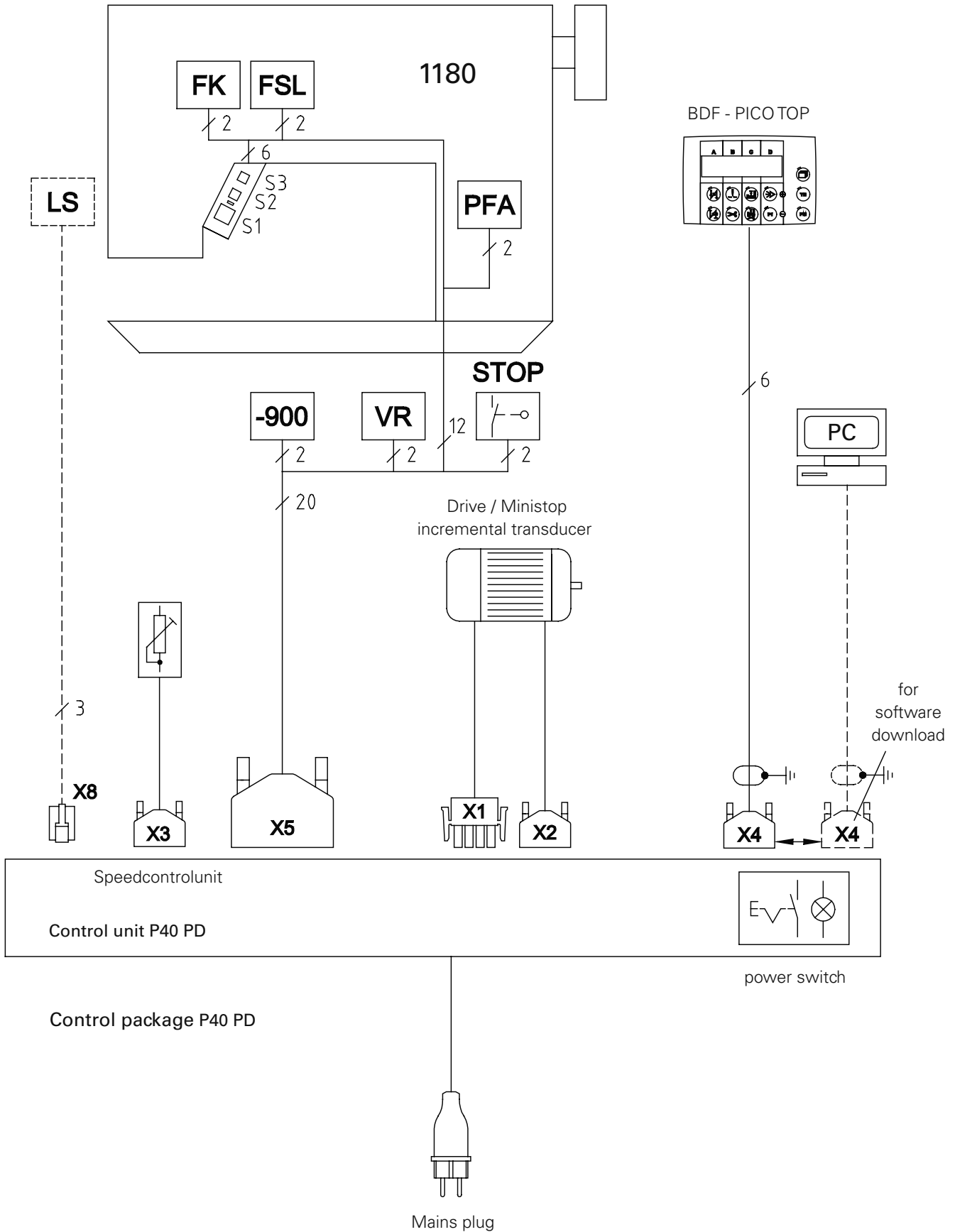
6 poliger Western 9 poliger D-SUB



(Option) Unterfadenwächter 29
 (Option) Lichtschranke 30
 RS232-Schnittstelle 33-35

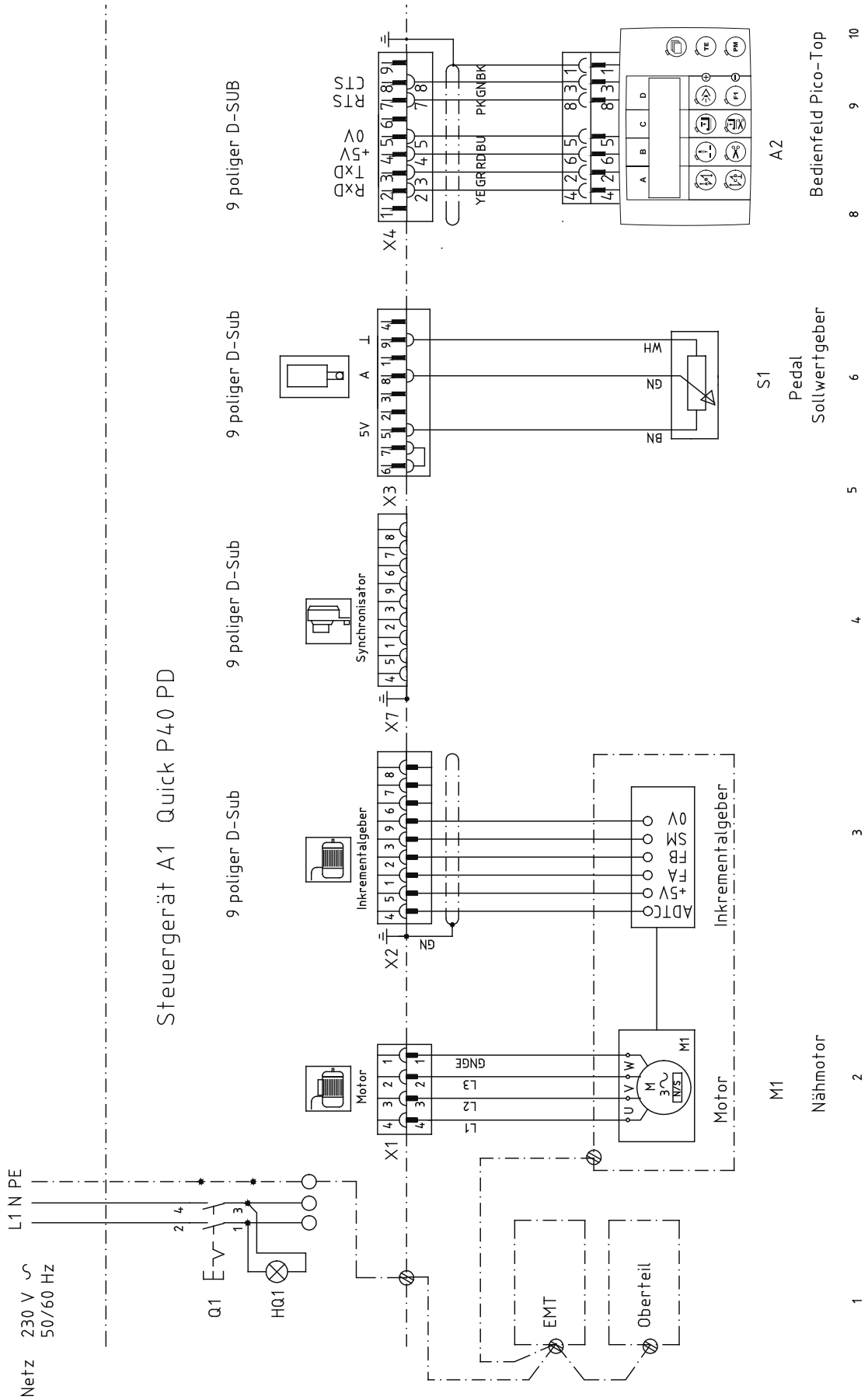
26 27 28 29 30 31 32 33 34 35

14.03 Block diagram PFAFF 1180 with control unit P40 PD



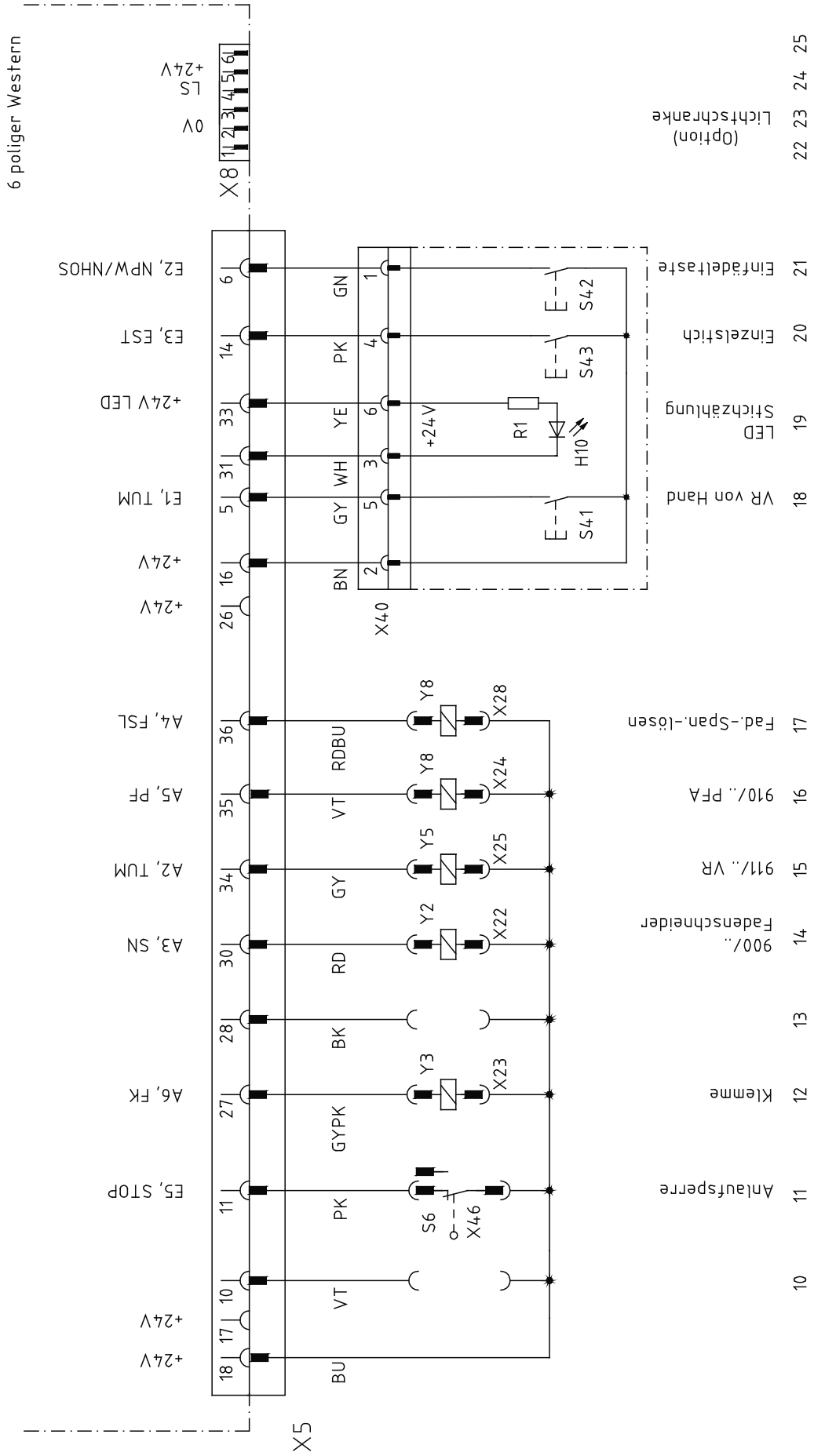
14.04

Circuit diagrams 91-191 521-95



Ausgänge und Eingänge
Steuergerät A1
Quick P40 PD

37 poliger D-Sub





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