

PFAFF

3832-1/03

Instruction Manual

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

2208712 →



This instruction manual applies to all versions and subclasses listed under "**Specifications**".

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1 Safety

1.01 Regulations

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

In addition to this instruction manual, please also observe all generally accepted, statutory and other legal requirements, including those of the user's country, and the applicable pollution control regulations!

The valid regulations of the regional social insurance society for occupational accidents or other supervisory authorities are to be strictly adhered to!

1.02 General notes on safety

- The machine must only be operated by adequately trained operators and only when the instruction manual has been fully read and understood!
- All notices on safety and the instruction manual of the motor manufacturer are to be read before the machine is put into operation!
- All notes on the machine concerning danger and safety must be observed!
- The machine must be used for the purpose for which it is intended and must not be operated without its safety devices; all regulations relevant to safety must be adhered to.
- When part sets are changed (e.g. needle, presser foot, needle plate, feed dog or bob-bin), during threading, when the workplace is left unattended and during maintenance work, the machine must be disconnected from the power supply by turning off the on/off switch or removing the plug from the mains!
- Daily maintenance work must only be carried out by appropriately trained persons!
- Repairs and special maintenance work must only be carried out by qualified technical staff or persons with appropriate training!
- During maintenance or repairs on the pneumatic system the machine must be disconnected from the compressed air supply! The only exception to this is when adjustments or function checks are carried out by appropriately trained technical staff!
- Work on the electrical equipment must only be carried out by technical staff who are qualified to do so!
- Work on parts or equipment connected to the power supply is not permitted! The only exceptions to this are specified in regulations EN 50110.
- Conversion or modification of the machine must only be carried out under observation of all relevant safety regulations!

- Only spare parts which have been approved by us are to be used for repairs! We draw special attention to the fact that spare parts and accessories not supplied by us have not been subjected to testing nor approval by us. Fitting and/or use of any such parts may cause negative changes to the design characteristics of the machine. We shall not accept any liability for damage caused by the use of non-original parts.

1.03 Safety symbols



Danger!
Special points to observe.



Danger of injury to operating or technical staff!



Caution

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

1.04 Important notes for the user

- This instruction manual belongs to the equipment of the machine and must be available to the operating staff at all times.
This instruction manual must be read before the machine is operated for the first time.
- Both operating and technical staff must be instructed on the safety devices of the machine and on safe working methods.
- It is the duty of the user to operate the machine in perfect running order only.
- The user must ensure that none of the safety devices are removed nor put out of working order.
- The user must ensure that only authorized persons operate and work on the machine.

For further information please refer to your PFAFF agency.

1.05 Notes for operating and technical staff

1.05.01 Operating staff

Operating staff are the persons responsible for setting up, operating and cleaning the machine and for removing any disturbances in the sewing area.

The operating staff are obliged to observe the following points, and must:

- always observe the notes on safety in this instruction manual!
- avoid using any working methods which adversely effect the safety of the machine!
- avoid wearing loose-fitting clothing or jewelry such as necklaces or rings!
- also ensure that only authorized persons are allowed near the danger area of the machine!
- immediately report to the user any changes to the machine that may affect its safety!

1.05.02 Technical staff

Technical staff are persons who have been trained in electrical engineering, electronics, pneumatics and mechanical engineering. They are responsible for lubricating, servicing, repairing and adjusting the machine.

The technical staff are obliged to observe the following points, and must:

- always observe the notes on safety in this instruction manual!
- switch off the on/off switch before carrying out adjustment and repair work and ensure it cannot be switched on again unintentionally!
- never work on parts or equipment still connected to the power supply! Exceptions to this are only permissible according to regulations EN 50110;
- disconnected the machine from the compressed air supply when carrying out maintenance or repair work on pneumatic equipment!
Exceptions to this are only permissible for function checks;
- replace all safety covers after carrying out maintenance or repair work!

1.06

Danger warnings



A working area of 1 m must be kept free both in front of and behind the machine, so that easy access is possible at all times.



Never put your hands in the sewing area during sewing!
Danger of injury by the needle!



While setting or adjusting the machine do not leave any objects on the table nor in the needle plate area! Objects may be trapped or slung out of the machine!

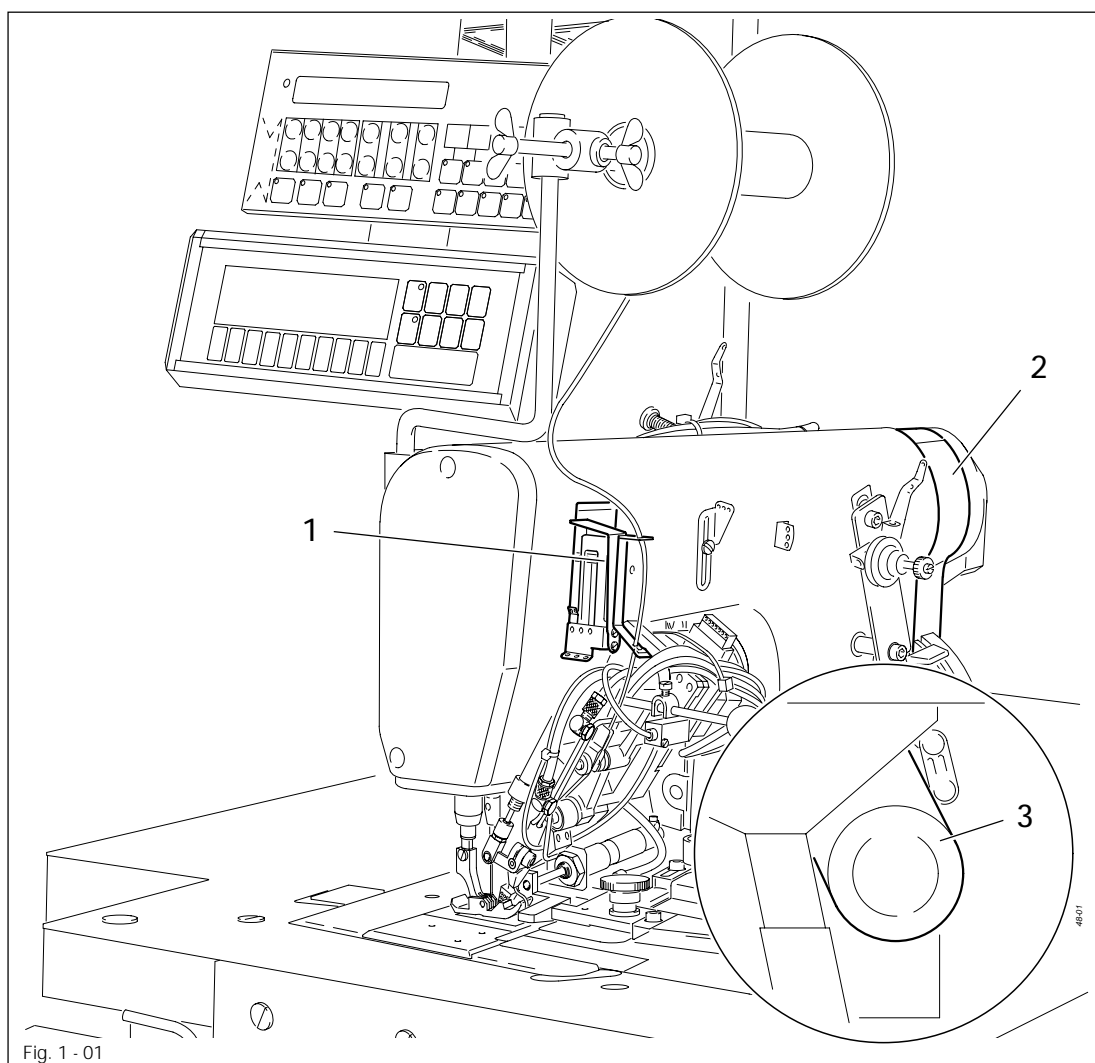


Fig. 1 - 01



Do not operate the machine without take-up lever guard 1!
Danger of injury by movement of take-up lever!



Do not operate the machine without belt guards 2 and 3!
Danger of injury by rotating drive belt!

2

Proper use

The PFAFF 3832-1/03 is an integrated workplace for bridle-taping back, front and side parts of jackets with simultaneous application of fullness.



Any use of these machines which is not approved by the manufacturer shall be considered as improper use! The manufacturer shall not be liable for any damage arising out of improper use! Proper use shall also be considered to include compliance with the operation, adjustment, service and repair measures specified by the manufacturer!

3 Specifications[▲]

Sewing head:	5489-814/01-900/71
Stitch type:	401
Max. speed.:	3800 s.p.m.
Stitch length:	2.5 mm
Needle system:	4463
Needle size (Nm) in $\frac{1}{100}$ mm:	80
Bridle tape width:	2 - 3 mm
Presser foot clearance:	5 mm
Sewing motor:	See motor service manual
Power requirement:	0.8 kW
Connection voltage:	E 230 V, 50/60 Hz
Working air pressure:	6 bar
Air consumption:	5 l/cycle
Working noise level:	
Emission level at workplace at a speed of 2400 s.p.m.:	75 dB(A)
(Noise measurement in accordance with DIN 45 635-48-A-1)	
Machine dimensions:	
Length:	approx. 1280 mm
Width:	approx. 735 mm
Height (with reel stand):	approx. 1700 mm
Net weight:	approx. 140 kg

▲ Subject to alteration

◆ Dependent on material, operation and stitch length

4 Disposal of Machine

- Proper disposal of the machine is the responsibility of the customer.
- The materials used for the machine are steel, aluminium, brass and various plastic materials.
The electrical equipment comprises plastic materials and copper.
- The machine is to be disposed of according to the locally valid pollution control regulations; if necessary, a specialist is to be commissioned.



Care must be taken that parts soiled with lubricants are disposed of separately according to the locally valid pollution control regulations!

5 Transportation, packing and storage

5.01 Transportation to customer's premises

Within the Federal Republic of Germany, complete machines (with table and motor) are delivered without packing.

Machines without table (only sewing heads) and machines intended for exports are packed.

5.02 Transportation inside the customer's premises

The manufacturer cannot be made liable for transportation inside the customer's premises nor to other operating locations. It must be ensured that the machines are only transported in an upright position.

5.03 Disposal of packing materials

The packing materials of this machine comprise paper, cardboard and VCE fibre. Proper disposal of the packing material is the responsibility of the customer.

5.04 Storage

If the machine is not in use, it can be stored as it is for a period of up to six months, but it should be protected against dust and moisture.

If the machine is stored for longer periods, the individual parts, especially the surfaces of moving parts, must be protected against corrosion, e.g. by a film of oil.

Explanation of symbols

6 Explanation of symbols

In this instruction manual, work to be carried out or important information is accentuated by symbols. These symbols have the following meanings:



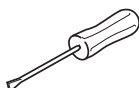
Note, information



Cleaning, care



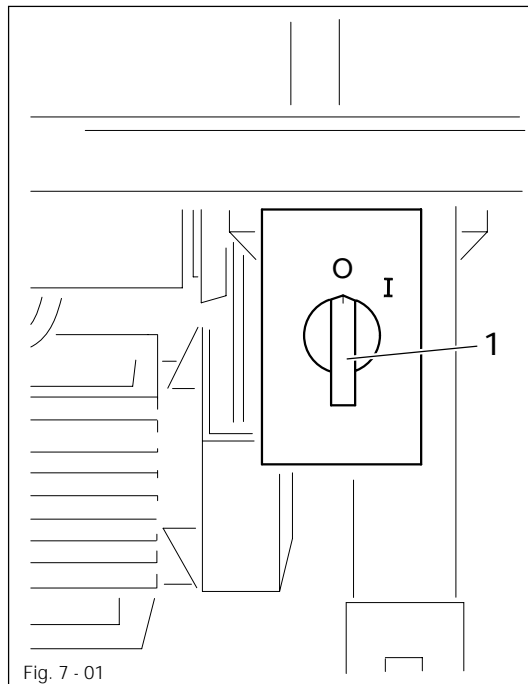
Lubrication



Maintenance, repairs, adjustment, service work
(only to be carried out by technical staff)

7 Controls

7.01 Main switch

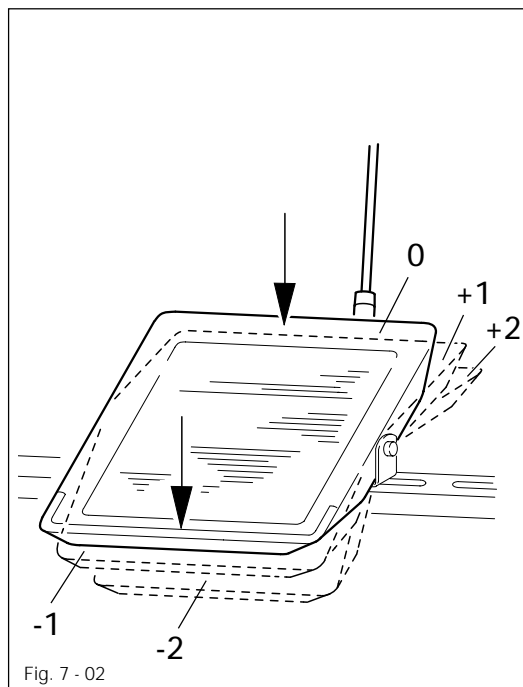


- The machine is switched on or off by turning main switch 1.



The illustrated main switch is fitted to machines with Quick motors. If other motors are used, different switches may be fitted.

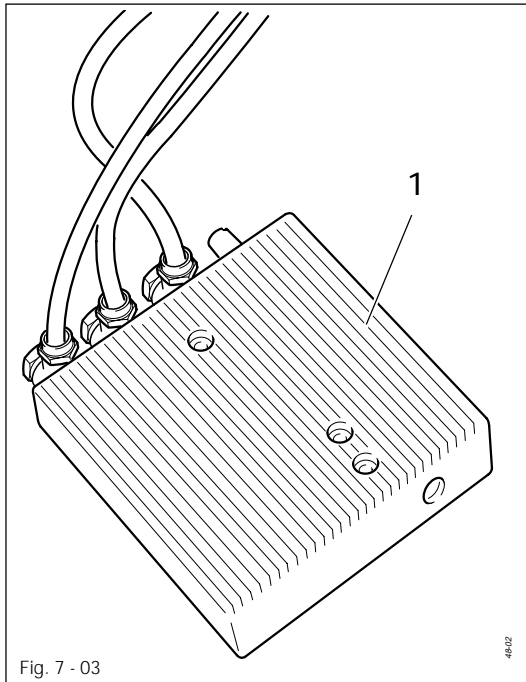
7.02 Pedal



- 0 = Neutral position
- +1 = Lower presser foot
- +2 = Sewing
- 1 = Raise presser foot
- 2 = Trim threads

7.03

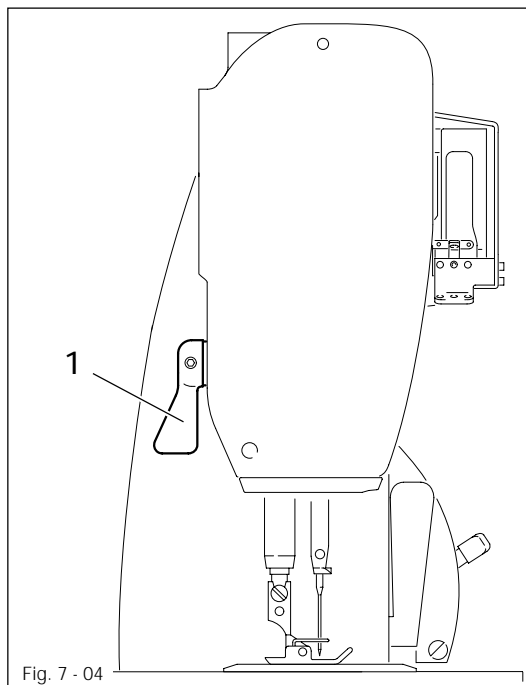
Foot switch



- By operating foot switch 1, the bundle clamp can be opened or closed.

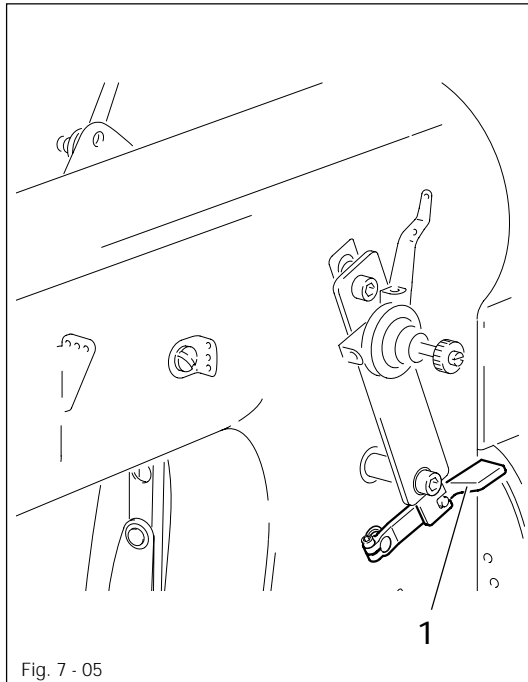
7.04

Reverse-feed key



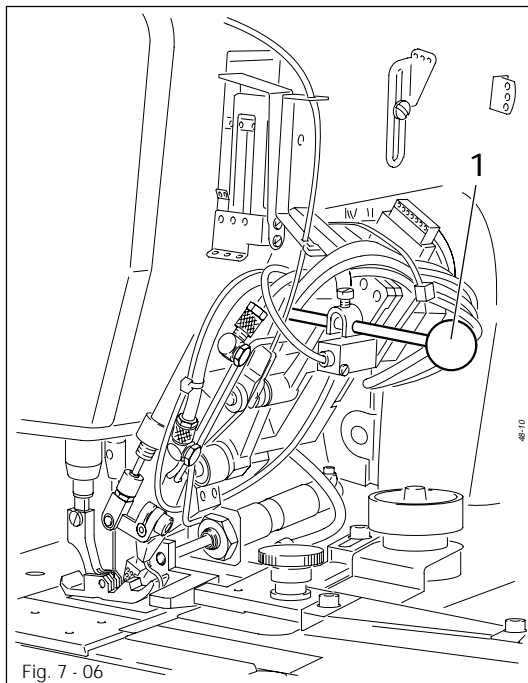
- The machine sews in reverse as long as the reverse-feed key 1 is pressed.

7.05 Reverse-feed control lever



- To sew condensed stitches, press lever 1 down.

7.06 Lever for retracting the tape dispensing device



- The tape dispensing device can be retracted with lever 1.

7.07 Motor control panel

Using control panel 1 parameters and programs can be changed on the motor.
For further information about this control panel, please see the Motor Service Manual.

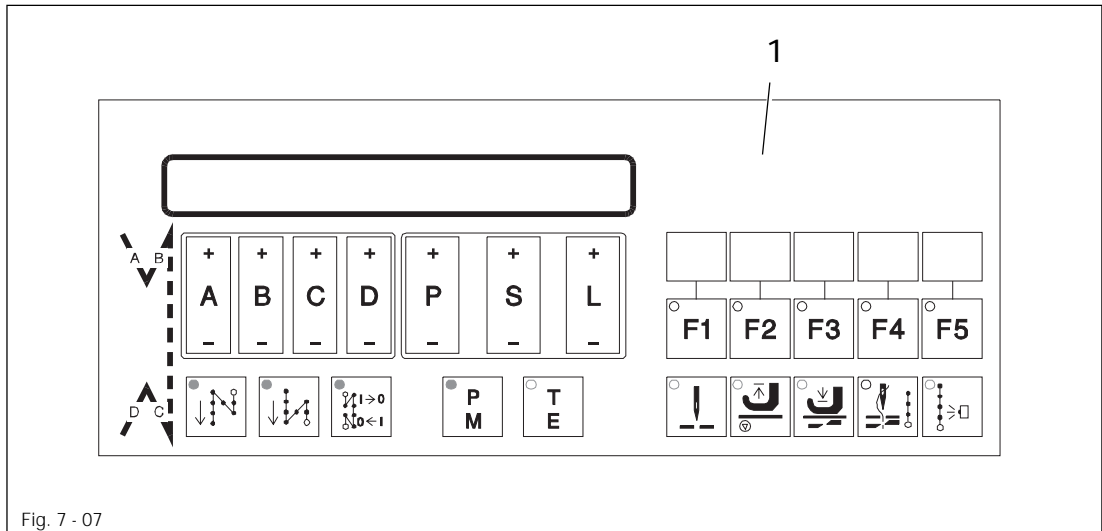


Fig. 7 - 07

7.08 Graphics operating panel

The graphics operating panels consists of the display screen and 2 key zones.

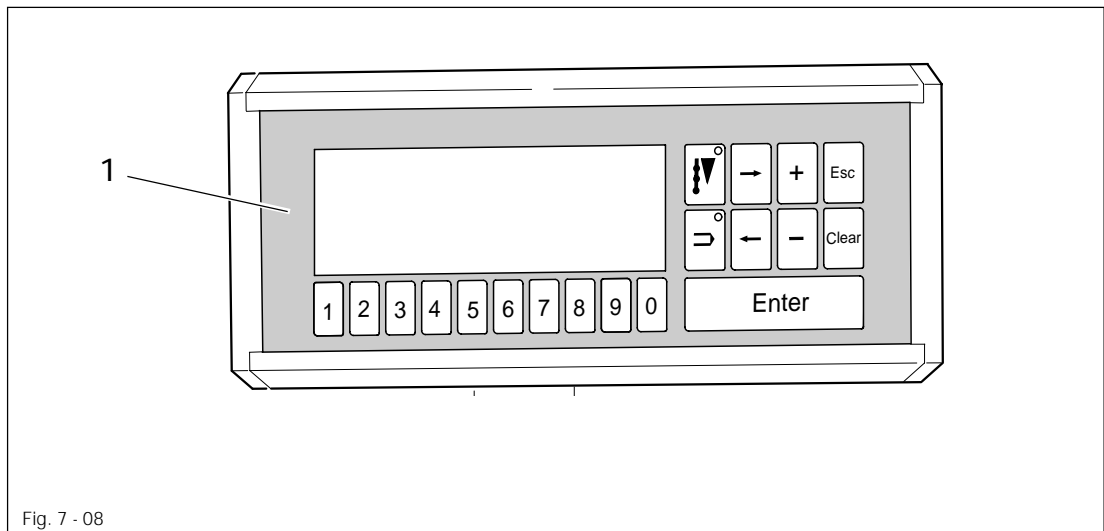


Fig. 7 - 08

7.08.01 Display

In its basic condition the displays on the screen are divided into 2 part sections:

Status line

In the top section of the display screen there is a status line, where up to 5 pictographs with their corresponding values can be displayed (e.g. program number, number of seam sections etc.).

Pictograph strip

In the bottom section there is the pictograph line. The functions of the symbols, which appear here, can be called up using the **number keys**. Activated functions are displayed by an inverse symbol.

7.08.02 Operational mode keys

There are two different modes of operation. The selected mode is shown by the diode of the respective key.



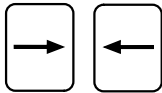
- Operational mode **SEWING** has been selected



- Operational mode **ENTER** has been selected

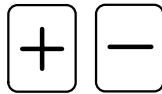
- If the operational mode **ENTER** has already been selected, the standard condition is selected.

7.08.03 Function keys



Arrow keys (right/left)

- Positioning of cursor if several values are entered in one line
- Turning over menu pages
- Changing zones during programming and seam interruption



Plus/Minus keys

- Increasing or reducing input values
- Selection of sign for sign-dependent inputs
- Selection of program number



Esc-key

- Interruption of functions without taking over the input value
- Return to superior menu functions



Clear key

- Setting input values at 0



Enter key

- Confirmation of an input value / finishing an input
- Switching to another zone when programming or interrupting a seam
- Confirmation of error correction after error alarm

7.08.04 Number keys



Beneath the display there is a strip with number keys.

Depending on the operating condition, the keys have the following functions:

- Executing a function illustrated by the symbol of the corresponding key
- Input of a numerical value (if no symbol is entered with a number key)
- Selection of functions or of the next menu level

8 Installation and commissioning

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



If the machine is delivered without a table, be sure to use a stand and table top that can bear the weight of the machine and the motor reliably.

It is very important to ensure that support of the machine on its stand is firm and steady, also during sewing.

8.01 Installation

The site where the machine is installed must be provided with power connections (see **Chapter 3, Specifications**).

It must be ensured that the standing surface of the machine site is firm and horizontal, and that sufficient lighting is provided for.



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

8.01.01 Adjusting the table height

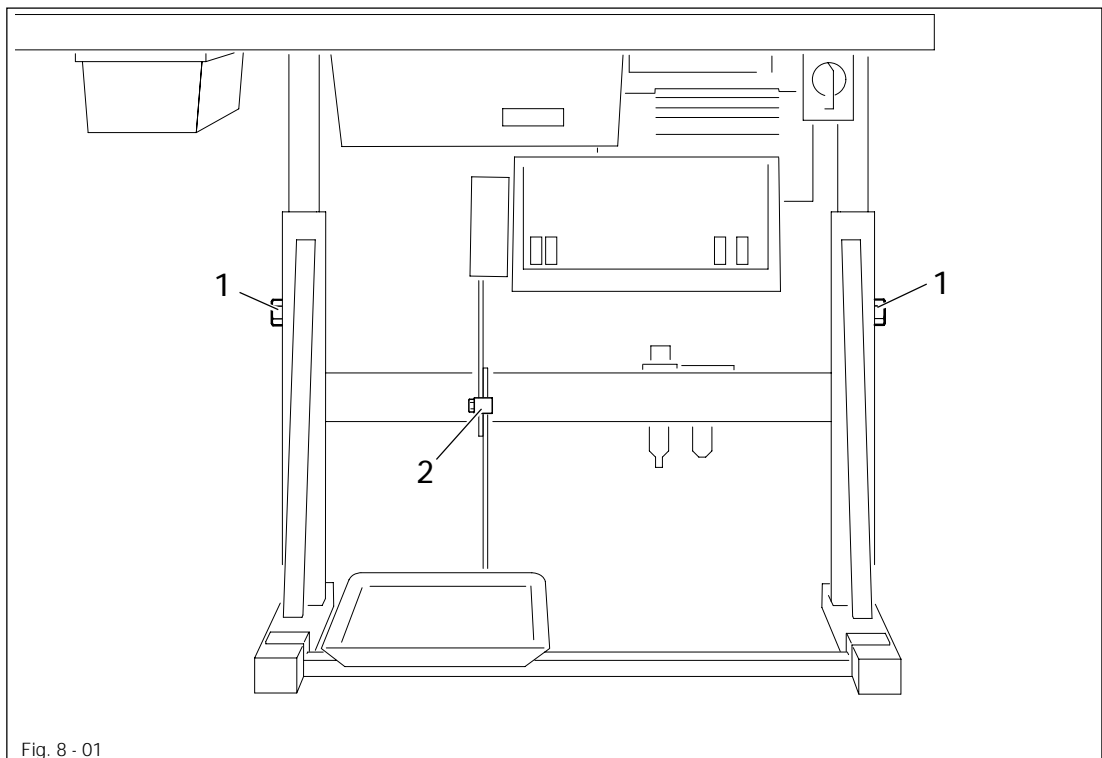
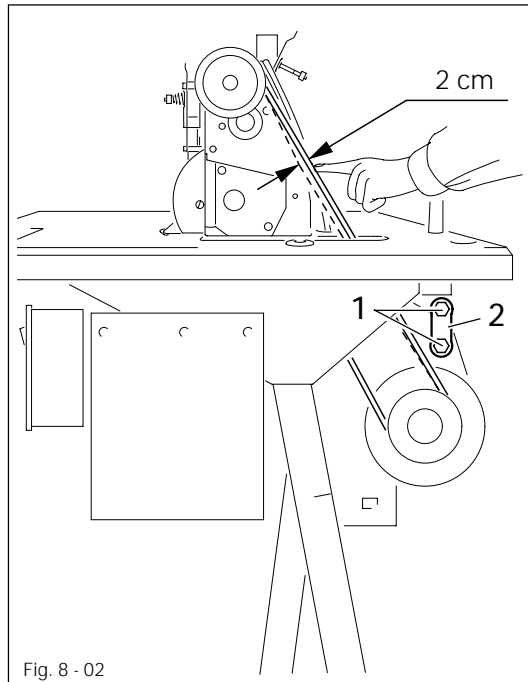


Fig. 8 - 01

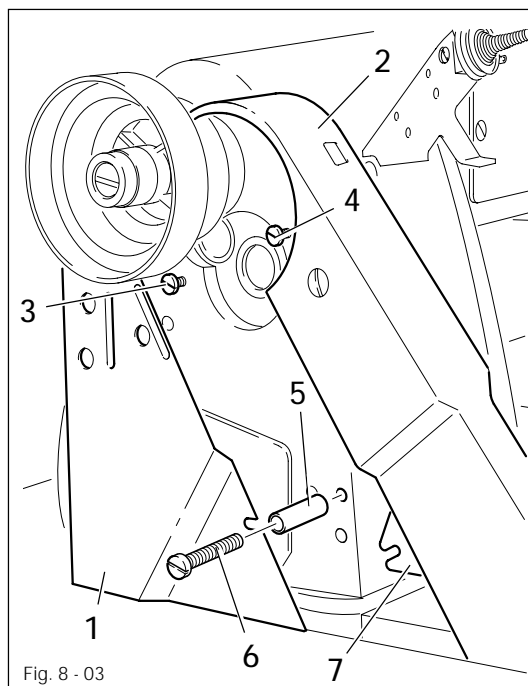
- Loosen screws 1 and 2 and set the table height as required.
- Firmly tighten screws 1.
- Set the required pedal position and tighten screw 2.

8.01.02 Tensioning the v-belt



- Loosen nuts 1.
- Tension the v-belt with motor bracket 2.
- Tighten nuts 1 firmly.

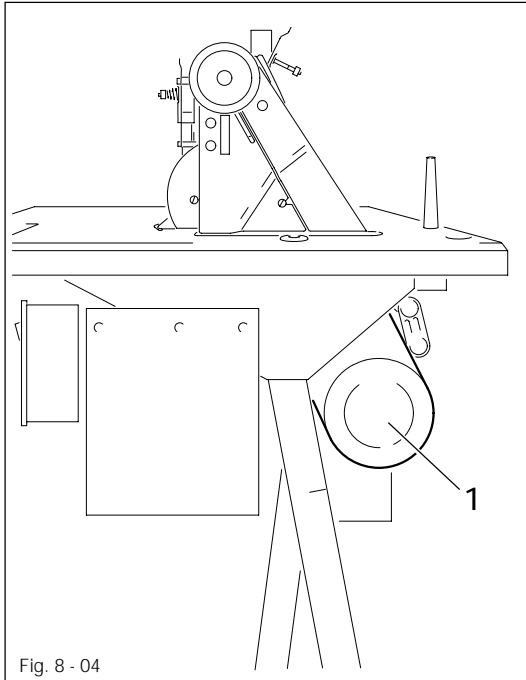
8.01.03 Fitting the upper belt guard



- Push belt guard halves 1 and 2 with their slots behind the heads of screws 3 and 4.
- Fit spacing sleeve 5 on screw 6 and wind screw 6 in a few turns.
- Making sure that the lug on belt guard half 2 is between belt guard half 1 and spacing sleeve 5, position the belt guard and tighten screws 3, 4 and 6.

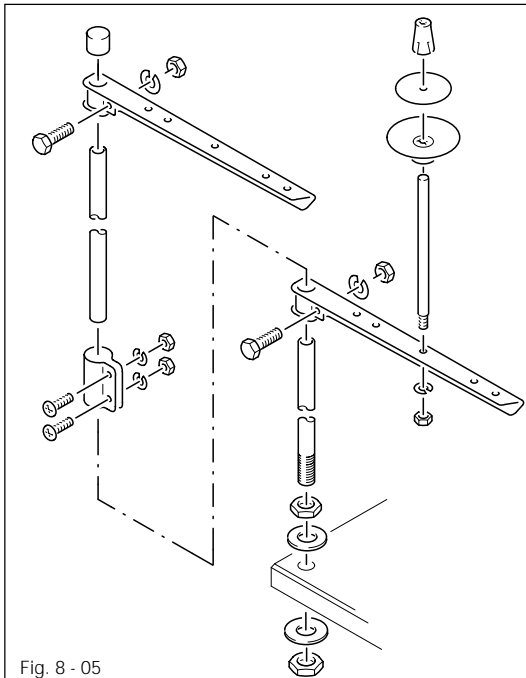
Installation and commissioning

8.01.04 Fitting the lower belt guard



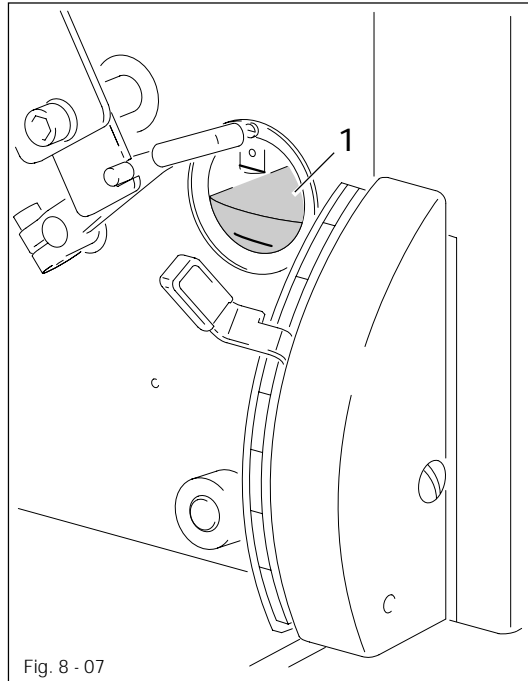
- Position belt guard 1 so that motor pulley and v-belt can run freely.

8.01.05 Assembling and fitting the reel stand



- Assemble the reel stand as shown in Fig. 8-05.
- Fit the reel stand in the holes in the table top and secure it with the nuts provided.

8.02 Commissioning



Before the machine is commissioned, remove the protective foil from inspection window 1!

- Clean the machine thoroughly and then check the oil level (see **Chapter 12 Care and maintenance**).
- Check the machine, especially the electrical leads, for any damage.
- Have specialists check that the machine can be operated with the available mains voltage, and whether it is connected correctly in the terminal box.



If there are any irregularities, do not operate the machine under any circumstances!



The machine may only be connected to a grounded socket.

- When the machine is running, the balance wheel must turn towards the operator. If this is not the case, have the machine converted by specialist personnel (see **Motor Service Manual**).
- Connect the machine to the compressed air system. The manometer must display a pressure of **6 bar**. If necessary, set to the correct value (see **Chapter 12.03 Checking/regulating air pressure**).

8.03 Switching the machine on/off

- Switch the machine on or off, see **Chapter 7.01 On/off switch**.
- Carry out a test run.

Setting up



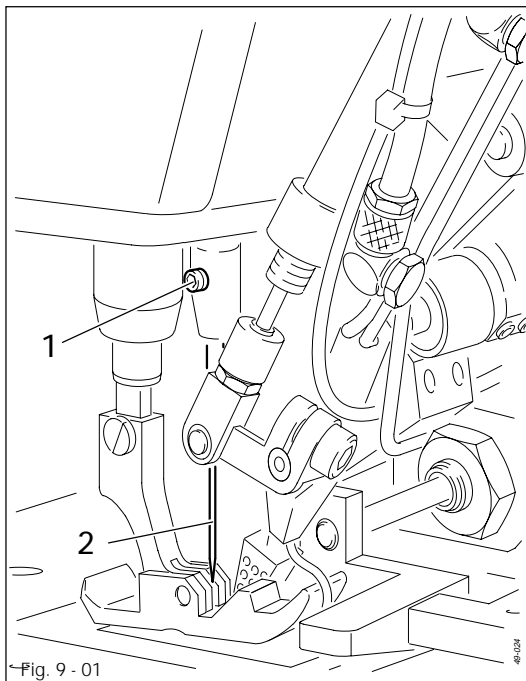
All instructions and regulations in this instruction manual must be observed. Special attention must be given to all safety regulations!



All setting-up work must only be done by personnel with the necessary training. For all setting-up work the machine must be isolated from its power supply by turning off the main switch or removing the machine plug from the electric power socket!

9.01

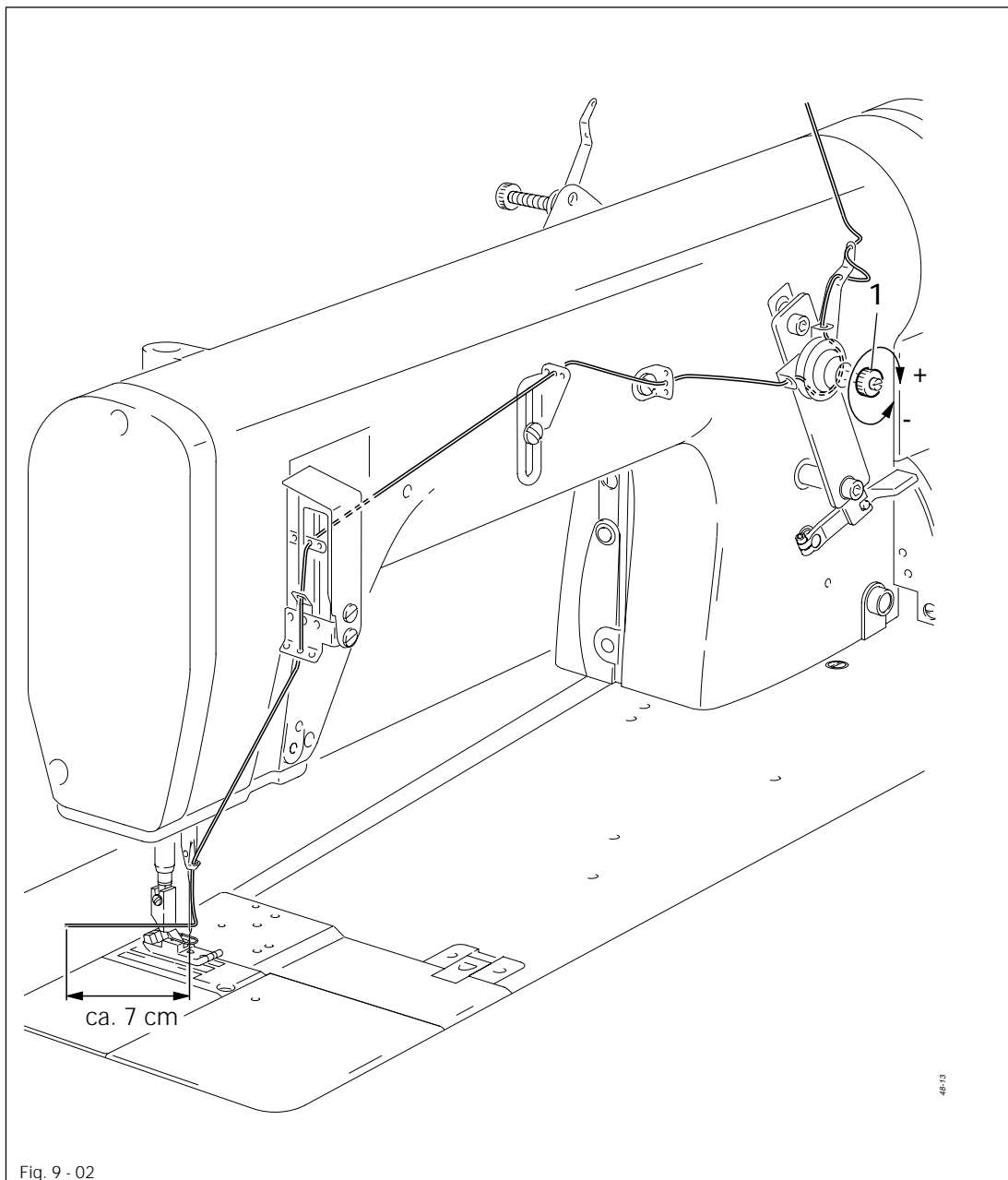
Inserting the needle on single-needle machines



Switch off the machine!
Danger of injury by unintentional starting of the machine!

- Set the needle bar at its highest point.
- Loosen screw 1.
- Push needle 2 fully into the needle bar (Seen in the direction of sewing, the long groove of the needle must be pointing forwards).
- Tighten screw 1.

9.02 Threading the needle thread and regulating its tension on single-needle machines

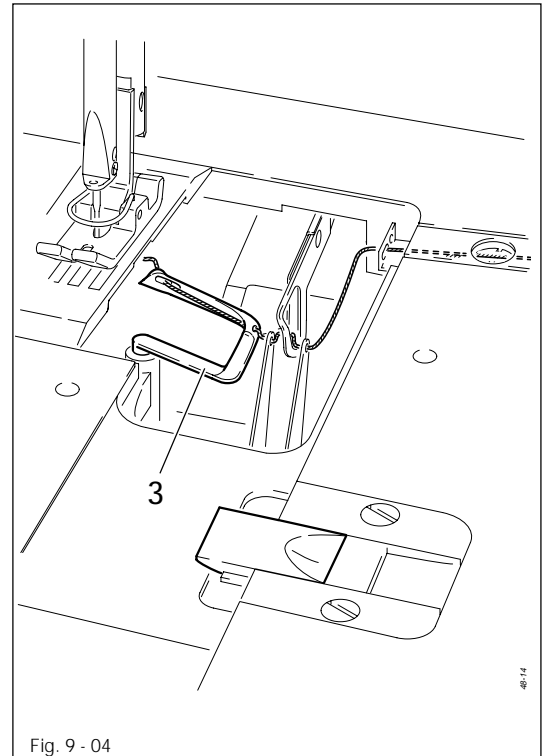
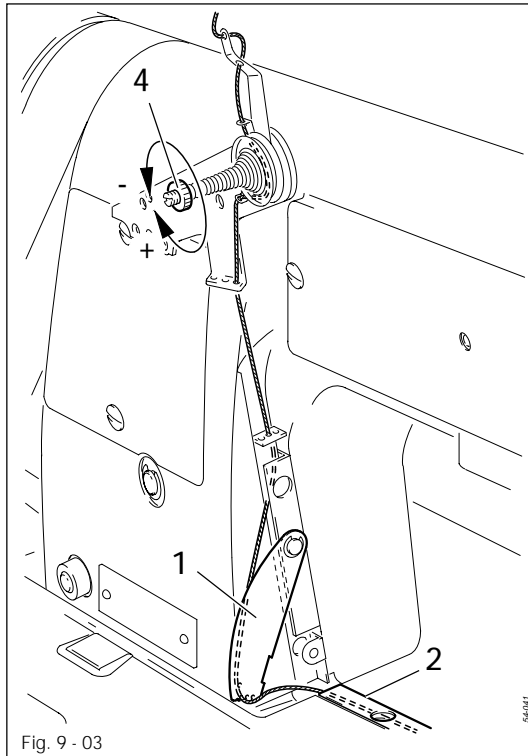


Switch off the machine!
 Danger of injury by unintentional starting of the machine!

- Thread the needle thread as shown in Fig. 9-02.
- Regulate the needle thread by turning knurled screw 1.

9.03

Threading the looper thread and regulating its tension on single-needle machines



Switch off the machine!

Danger of injury by unintentional starting of the machine!

- Open the looper cover and swing out thread guide plate 1.
- Thread the looper thread as shown in Figs. 9-03 and 9-04 and pull it under guide plate 2.
- Thread looper 3 using tweezers.
- Regulate the looper thread by turning knurled screw 4.



To pull the thread through, release thread tension (see Chapter 7.05)

9.04 Threading the bridle tape

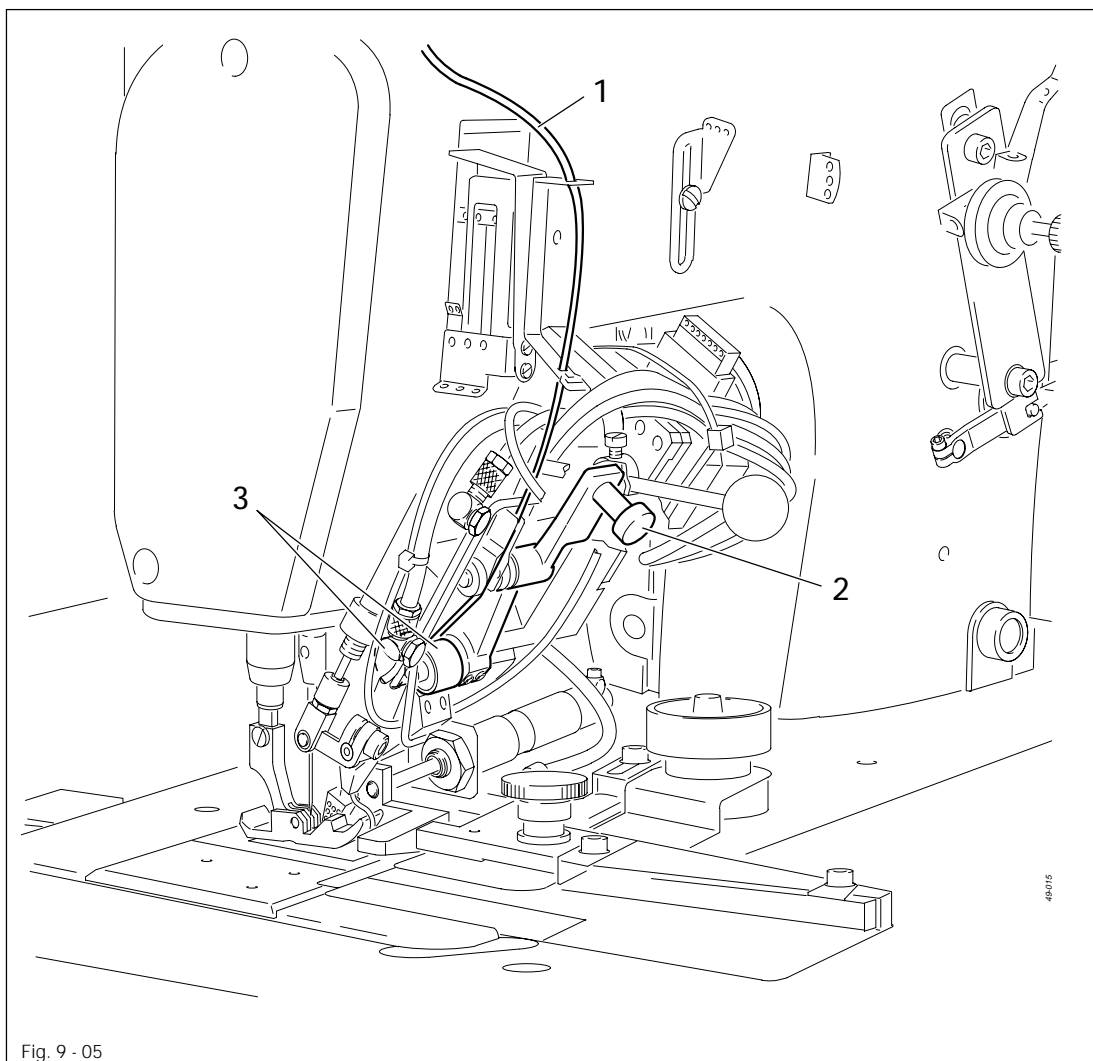


Fig. 9 - 05



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

- Thread bridle tape 1 as shown in the above illustration.
- Operate lever 2 and guide bridle tape 1 between feed rollers 3.
- Switch on the machine and select **Thread tape** function (number key 3).



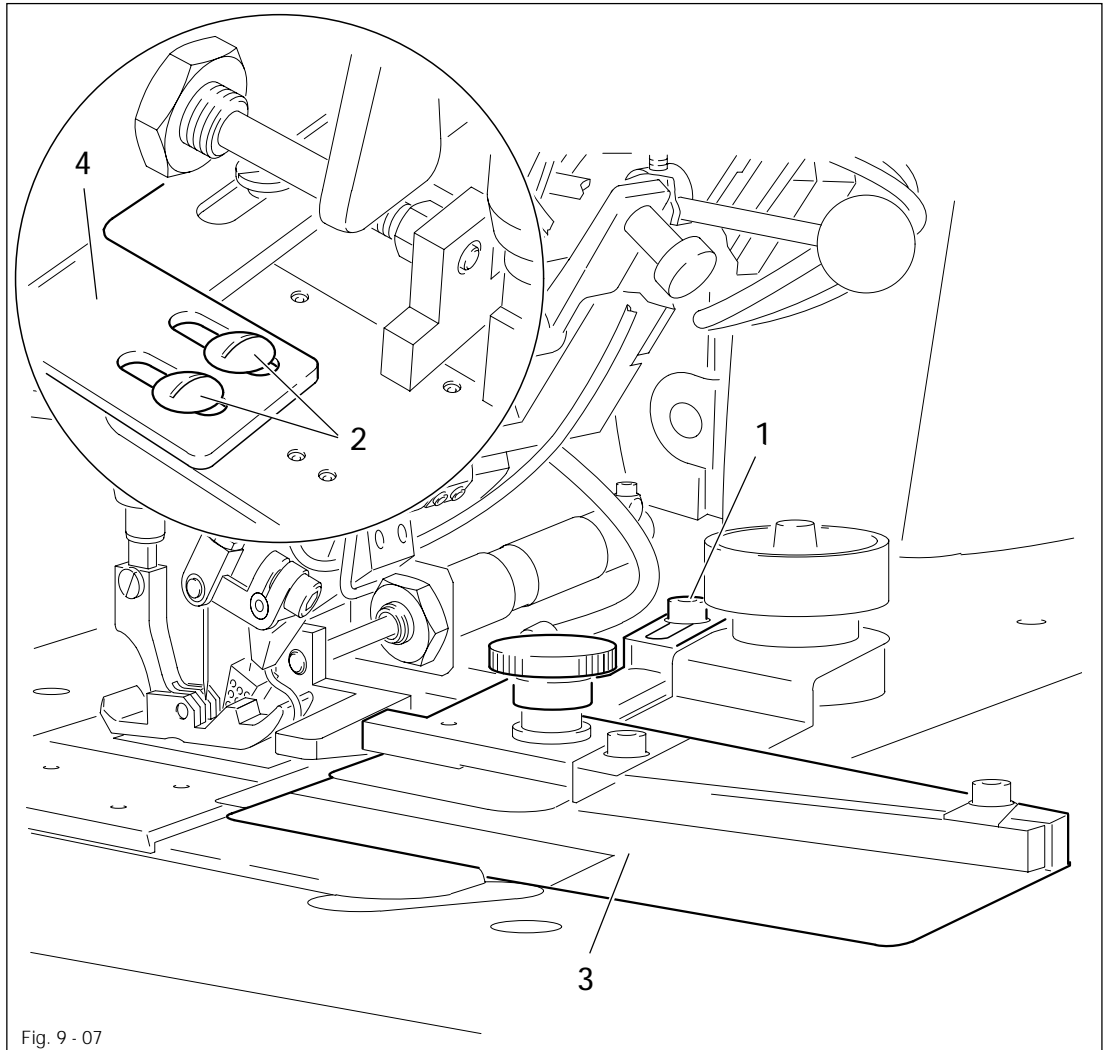


Fig. 9 - 07



Switch off the machine!

Danger of injury if the machine is started accidentally!

- Loosen screws 1 and 2.
- Adjust guide units 3 and 4 according to the edge margin required and tighten screws 1 and 2.

9.06 Entering the sewing parameters

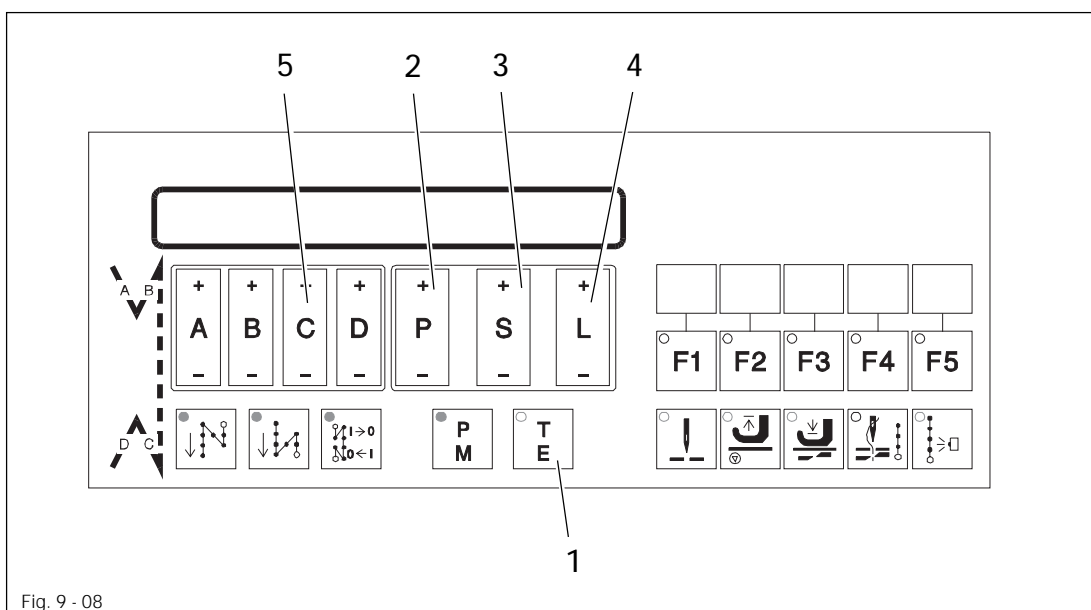
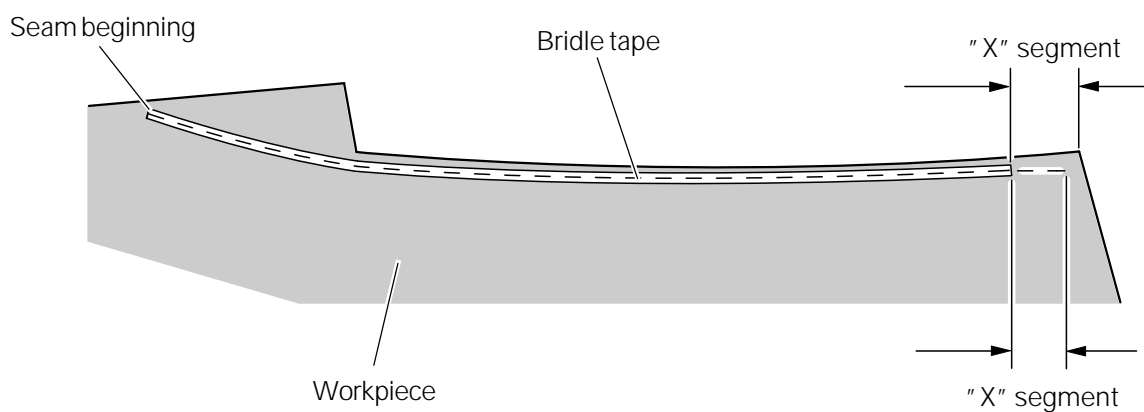


Fig. 9 - 08

- Switch the machine on.
- "X" segment (photoelectric barrier compensating stitches)
 - Press key 1 (LED in key 1 must light up when pressed).
 - With key 2 and 3 select parameter "111".
 - Set the required value by pressing key 4.
 - Press key 1 again (LED off).
- "Y" segment
 - Set the required value by pressing key 5.



48-26

9.07 Selecting a program

- Switch on the machine.

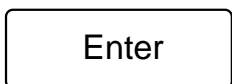


- Select **SEWING** mode.

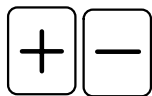


- Select **program selection** function (number key 1).

- Enter the desired program number with the **number keys**.



- Confirm the input with **Enter**.



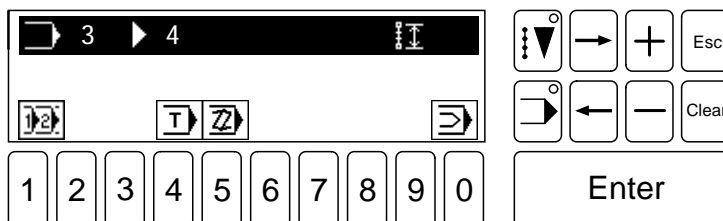
- The desired program can also be selected with the **plus/minus keys**. To do so press the key to move through the seam programs already entered.

9.08 Selecting the language

- Switch on the machine.



- Select mode **INPUT**.



- With number key 0 call up the function **input menu**.



- With number key 1 call up the function **LANGUAGES**.



to



- Select the desired language with the **number keys**:

1 = (D)

2 = (GB)

3 = (F)

4 = (E)

- After the corresponding number has been entered, the language is taken over immediately.

10 Sewing

Following steps must be carried out before work begins, irrespective of how the machine is equipped.

- Check the oil level of the machine, see **Chapter 12.02 Oil level of the machine**.
- Check the air pressure, see **Chapter 12.03 Checking/adjusting the air pressure**.
- Switching on the machine, see **Chapter 7.01 On/off switch**.

10.01 Manual sewing

Manual sewing can be selected with program numbers 0 and 1. Manual sewing only plays a subordinate role, the machine is mainly used in the programmed sewing mode, see **Chapter 10.02 Programmed sewing (program numbers 2 – 200)**.

- Select **SEWING** mode.
- Select **program selection** function (number key 1).
- Enter program number 0.
- Confirm input with **Enter**.

Displays in the status bar:



Program number

The number of the selected seam program appears next to this symbol.

"Manual sewing with one amount of fullness" is selected with program number **0**.



Fullness

The current fullness value is shown next to this symbol.

Functions in the pictogram bar:



Program selection

This function opens a direct menu for selecting the desired seam program.



Fullness

This function opens a direct menu for the input/alteration of the desired fullness.

Type of material

To achieve the same results (amounts of fullness) when working with different types of materials, with this function 3 types of material can be selected directly.



Light material



Medium weight material



Heavy material

10.02 Programmed sewing (program numbers 2 – 200)

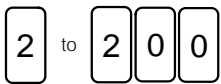
With program numbers 2 – 200 seam programs programmed **beforehand** can be selected.



- Select SEWING mode.



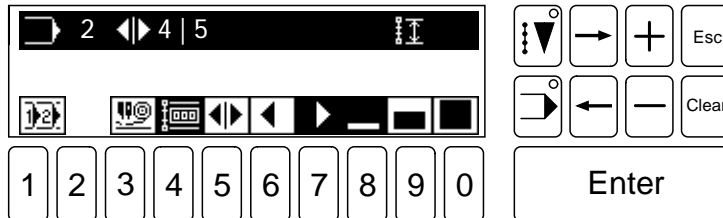
- Select program selection function.



- Enter desired program number from 2 – 200.



- Confirm input with Enter.



- The programmed amounts of fullness (seam areas) are processed consecutively dependent on the programmed number of stitches.

Displays in the status bar:



Program number

The number of the selected seam program appears next to this symbol.



Seam areas left/right

The number of the seam areas for left and right parts is shown next to this symbol.







Number of stitches

The number of stitches for the present seam area is shown next to this symbol.

If no value is shown next to the symbol, switch to the next seam area using the knee switch.

Text displays:

-  Beginning of seam
-  Seam area sewn
-  Current seam area (with seam area number)
-  End of seam



Display presentation is not true to scale.

Functions in the pictogram bar:



Program selection

This function opens a direct menu for selecting the desired seam program.



Thread tape

This function is used to start the threading device on the tape control unit.



Stitch counter on/off

With this function the stitch counter can be switched on or off.



Alternate sewing

When this function is activated, the left and right parts are processed alternately. The function is activated, when the symbol is displayed on a dark background. If only one part is programmed, this symbol is not displayed.



Left part/right part

The symbol illustrated on a dark background shows which part is being worked on currently. By selecting the corresponding function, it is possible to switch over to the desired part. The symbols are only displayed, if both parts are programmed.



Type of material

To achieve the same results (amounts of fullness) when working with different types of materials, with these functions 3 types of material can be selected directly.

10.03 Error messages

In case of an error message, the text and pictogram bars in the display are written over. An error message is caused by false settings, defective elements or seam programs as well as by overload conditions.

- Before the operation of the machine can continue, the error must be corrected.

How to correct the error:

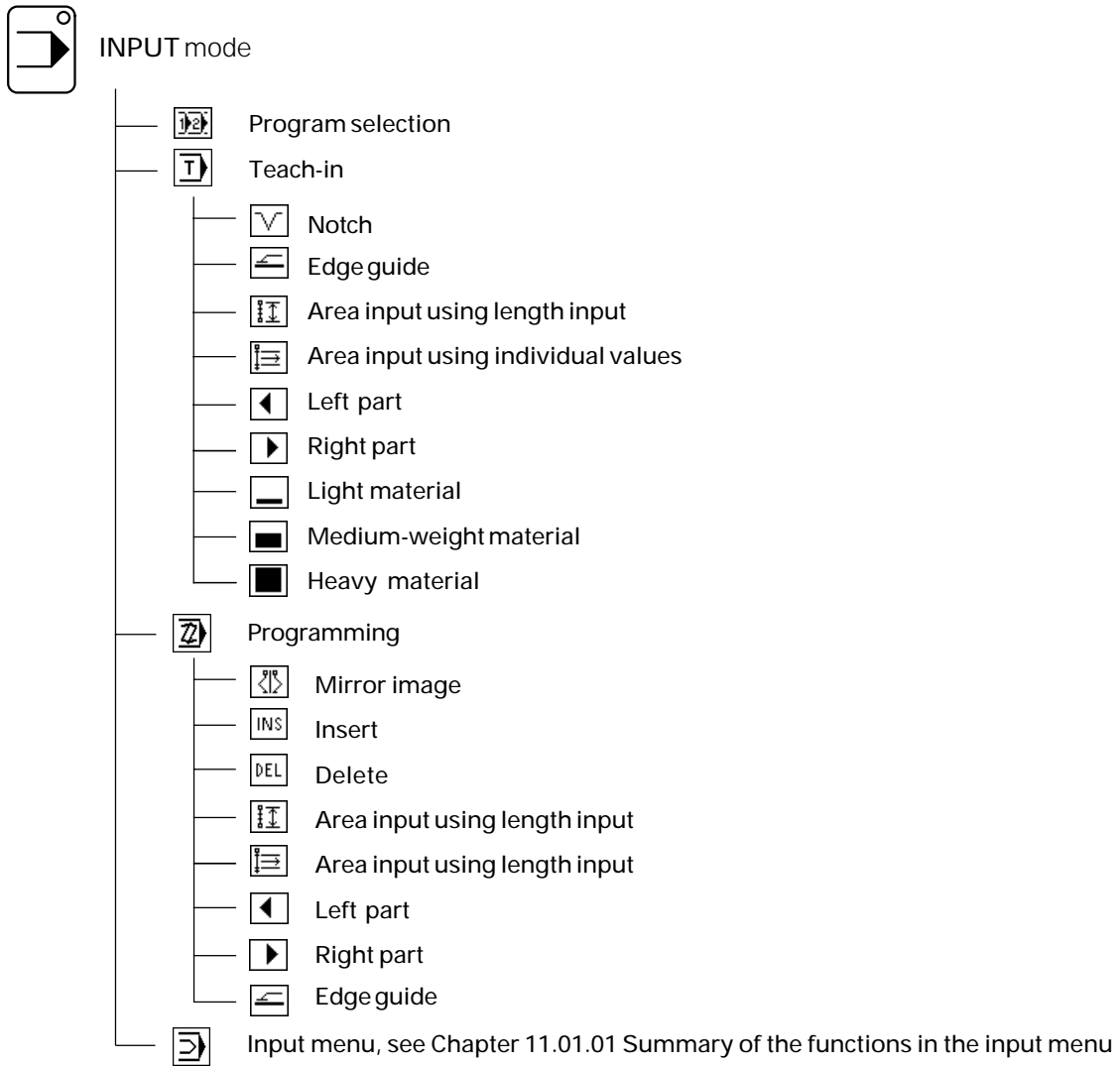
Enter

- A move back to an incorrect input is effected by pressing **Enter**.
- Correct the input.

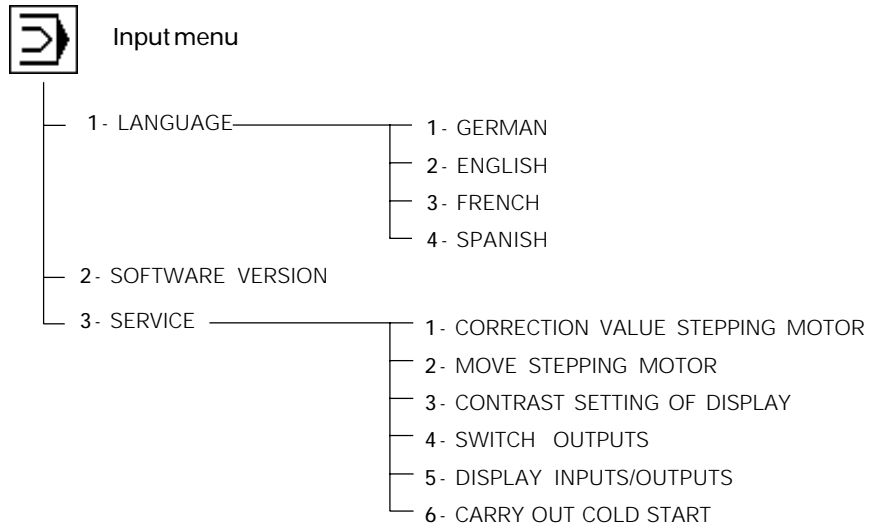
11 Input

The input mode is used to enter parameters and programs.
In the **Service** function help for error search is offered. Functions for direct selection and functions for selection using a menu are available.

11.01 Summary of the functions in the INPUT mode



11.01.01 Summary of the functions in the input menu



11.01.02 Selecting functions from the input menu

For example, the display contrast can be adjusted as follows:

● Select INPUT mode

The first screenshot shows a control panel with a display showing '3' and '4'. Below the display are buttons for '1' through '0' and an 'Enter' button. To the right are navigation buttons: a vertical arrow with a circle, a right arrow with a plus sign, and an 'Esc' button; a left arrow with a minus sign, and a 'Clear' button.

● Select input menu function (number key 0).

The second screenshot shows the display with a list of menu items: '1 - LANGUAGE', '2 - SOFTWARE VERSION', and '3 - SERVICE'. The '0' key is highlighted on the keypad.

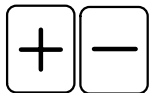
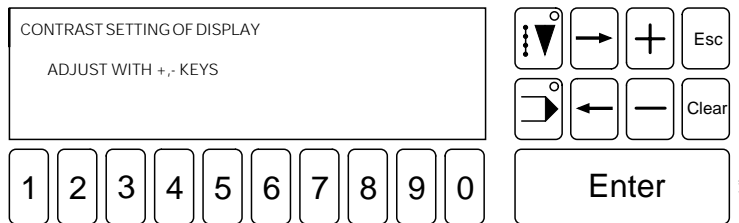
3 ● Select SERVICE function:

The third screenshot shows the display with a list of service functions: '1 - CORRECTION VALUE STEPPING MOTOR', '2 - MOVE STEPPING MOTOR', '3 - CONTRAST SETTING OF DISPLAY', '4 - SWITCH OUTPUTS', '5 - DISPLAY INPUTS/OUTPUTS', and '6 - CARRY OUT COLD START'. The '3' key is highlighted on the keypad.

- 3 ● Select CONTRAST SETTING OF DISPLAY function



On no account may the display be changed to such an extent, that it is impossible to read it!

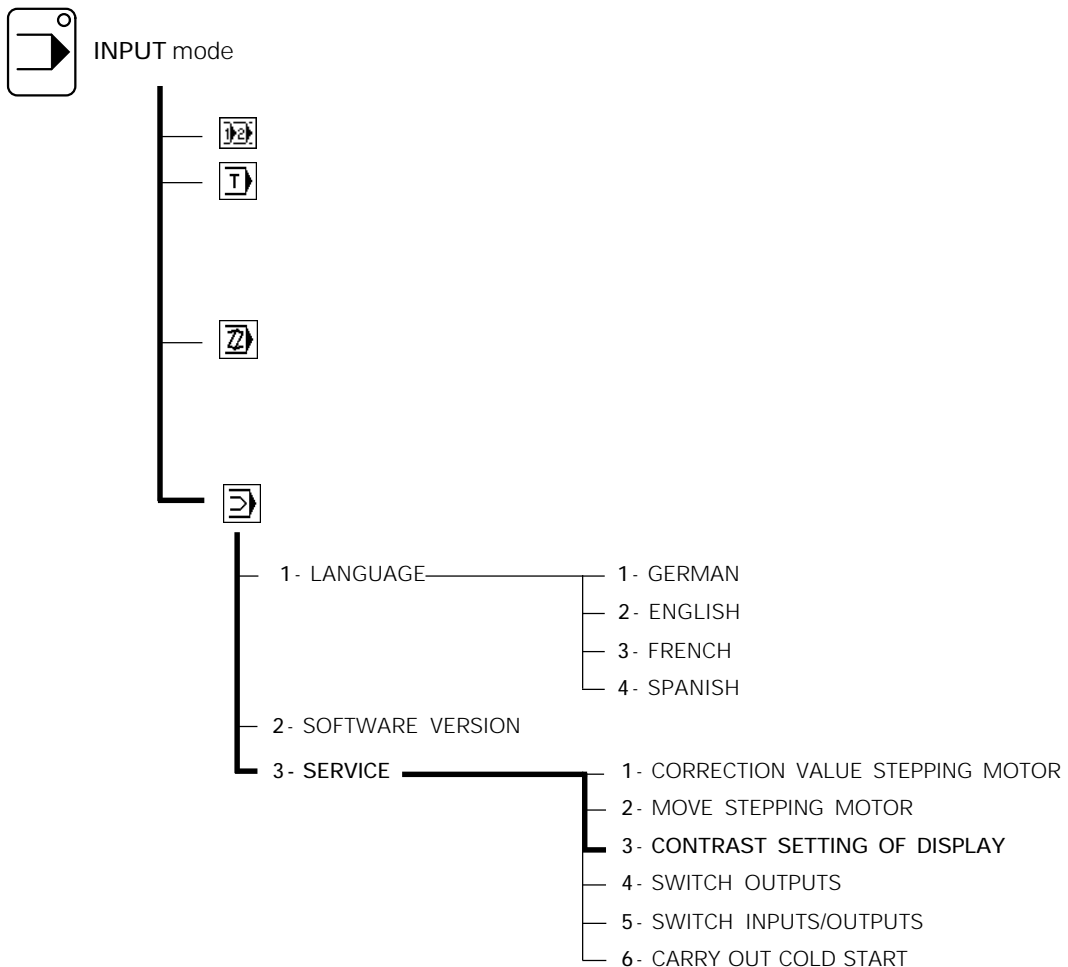


- The desired contrast can be set using the Plus/Minus keys.



- The input is confirmed by pressing Enter.

Summary of the input steps



11.01.03 Explanation of the functions in input menu



After selecting the **input menu** function, following additional functions are available:

1 - LANGUAGE 2 - SOFTWARE VERSION 3 - SERVICE										⏴	⏵	+	Esc
										⏴	⏵	-	Clear
1	2	3	4	5	6	7	8	9	0	Enter			

- 1 LANGUAGE
This function opens a menu for selecting the language on the display.
(see Chapter 9.08 Selecting the language):

LANGUAGE : 1 - GERMAN 2 - ENGLISH 3 - FRENCH 4 - SPANISH										⏴	⏵	+	Esc
										⏴	⏵	-	Clear
1	2	3	4	5	6	7	8	9	0	Enter			

- 2 SOFTWARE VERSION
After selecting this function, the current software versions for the control unit and the control panel are displayed.
- 3 SERVICE
This function opens a menu for the selection of service functions.

1 - CORRECTION VALUE STEPPING MOTOR 2 - MOVE STEPPING MOTOR 3 - CONTRAST SETTING OF DISPLAY 4 - SWITCH OUTPUTS 5 - DISPLAY INPUTS/OUTPUTS 6 - CARRY OUT COLD START										⏴	⏵	+	Esc
										⏴	⏵	-	Clear
1	2	3	4	5	6	7	8	9	0	Enter			

- 1 CORRECTION VALUE STEPPING MOTOR
With this function the neutral position of the stepping motor for adjusting the fullness can be corrected.
- 2 MOVE STEPPING MOTOR
With this function the stepping motor can be moved.
- 3 CONTRAST SETTING OF DISPLAY



Clockwise direction



Anti-clockwise direction



On no account may the display be changed to such an extent, that it is impossible to read it!

With this function the display contrast can be altered.

4

SWITCHOUTPUTS

With this function the outputs can be set or reset,
See **Chapter 13.10 Table of inputs and outputs**



Output on



Output off

5

DISPLAY INPUTS/OUTPUTS

After selecting this function, the states of the inputs and outputs are displayed:

1 = input actuated / output switched

0 = input not actuated / output not switched

6

COLD START

With this function all the inputs and parameters are reset and the programs deleted.

11.02 Input and alteration of seam programs

11.02.01 Teach-in

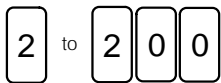
With the function **Teach-in** the seam program can be entered during sewing. The desired fullness can be selected and then, when the seam is sewn, the number of stitches to the end of this seam area is saved.



● Select INPUT mode.



● Select program selection function.



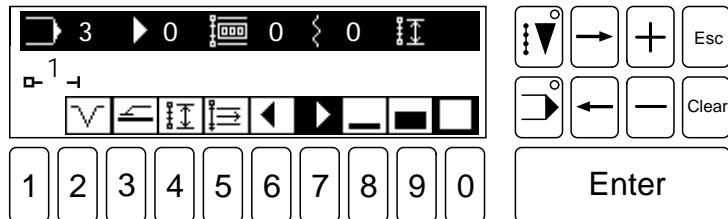
● Enter desired program number from 2 – 200.



● Confirm input with Enter.



● Select Teach-in function.



Display in the status line:



Program number

The number of the selected seam program appears next to this symbol.



Right seam areas

The number of seam areas for right parts is displayed next to this symbol.



Number of stitches

The number of stitches in the current seam area is shown next to this symbol.



Fullness

The amount of fullness in the current area is shown next to this symbol.



Given seam length

The given seam length of the current area is shown next to this symbol.

Text displays:



Beginning of seam



Seam area being entered at present



End of seam

Explanation of the functions in the pictogram bar:



Notch

With this function the end of the seam area is defined. The number of stitches is saved and the given seam length calculated.

The same function can be carried out by pressing **Enter**.



Edge guide

This function switches on the edge guide.

The number of stitches sewn up to this point are taken over into the seam program.



Seam area input using length input

By entering the initial length and the given length, with this function the required seam area values for number of stitches, fullness and given length are calculated and saved.



Area input using individual values

After selecting this function, each individual parameter can be entered and changed.

If number of stitches = 0, the seam area is sewn without counting the stitches, and the given seam length is deleted.

If the number of stitches is 1 – 999, the number of stitches specified are sewn.



Left part/Right part

These functions are used for the selection of the part to be programmed or altered. The selection is shown by a symbol on a dark background.

Type of material

To achieve the same results (amounts of fullness) when working with different types of materials, with these functions 3 types of material can be selected directly.



Light material



Medium weight material



Heavy material

The pictogram of the selected type of material is shown on a dark background.



By operating a mode key (SEWING or INPUT) the values entered are taken over and the teach-in is completed.

11.02.02 Programming / Alterations

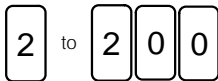
With the function programming, seam programs, which have already been written, can be altered. However, new seam programs can also be written.



- Select INPUT mode.



- Select program selection function.



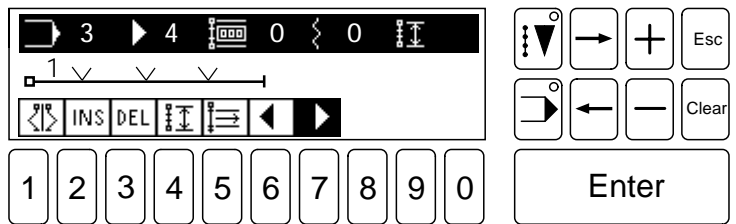
- Enter desired program number from 2 – 200.



- Confirm input with Enter.



- Call up Programming function.



Display in the status bar:



Program number

The number of the selected seam program appears next to this symbol.



Right seam areas

The number of seam areas for right parts is displayed next to this symbol.



Number of stitches

The number of stitches in the current seam area is shown next to this symbol.



Fullness

The amount of fullness in the current area is shown next to this symbol.



Given seam length

The given seam length of the current area is shown next to this symbol.

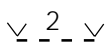
Text displays:



Beginning of seam



Current seam area



Seam area being inserted at present



End of seam

Explanation of the functions in the pictogram bar:



Mirror image

With this function it is possible to see the currently entered seam program as a mirror image. After the function has been selected, programming ends.



Insert

This function inserts a seam area at the current position. The contents of the current seam area are first taken over into the inserted seam area and can be changed if required. The following seam areas are moved one step back.



Delete

This function deletes the current seam area. Following seam areas are moved forward. If all seam areas are deleted, the program is quitted.



Area input using length input

By entering the initial length and the given length, with this function the seam area values for number of stitches, fullness and given length are calculated and saved.



Area input using individual values

After this function has been selected, each individual parameter can be entered and changed. If number of stitches = 0, the seam area is sewn without counting the stitches, and the given seam length is deleted.

If the number of stitches is 1 – 999, the number of stitches specified are sewn.



Left part/Right part

These functions are used for the selection of the part to be programmed or altered. The selection is shown by a symbol on a dark background



Edge guide

This function is used to enter the number of stitches for edge guide on/off.

When the number of stitches = 0 the edge guide is always switched on.

When the number of stitches is 1 – 998, the edge guide is switched on after the number of stitches entered have been sewn.

When the number of stitches = 999 the edge guide is always switched off.



By operating a mode key (SEWING or INPUT) the values entered are taken over and the teach-in is completed.

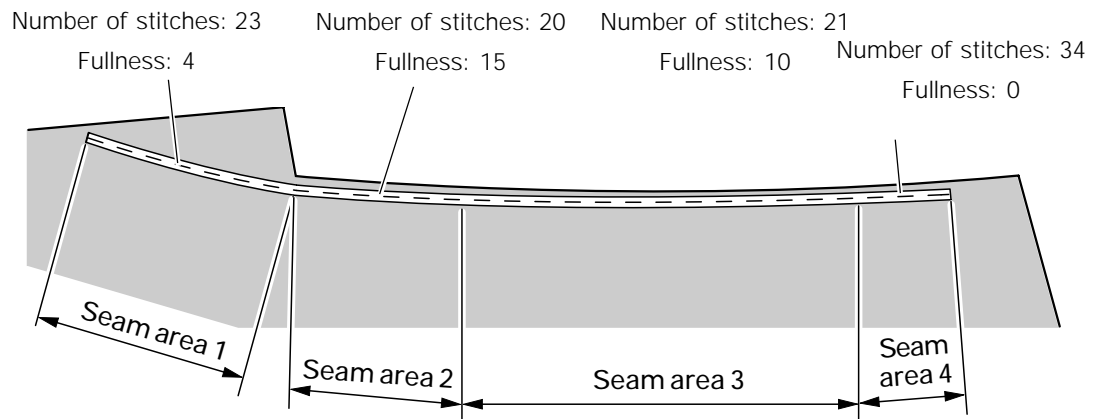
11.03 Examples for programming a seam

The required values can be entered as follows:

1. By direct input of the number of stitches and value for the fullness,
2. By entering the given length-start length value
3. By using the teach-in method (see Chapter 11.03.01 – 11.03.03)

11.03.01 Programming by direct input of number of stitches and fullness

The seam to be programmed for the front part of a jacket consists of 4 seam areas and is saved under program number 3.



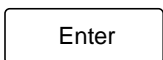
- Select INPUT mode.



- Select program selection function.



- Enter program number 3.



- Confirm input with Enter.

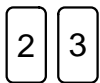


- Select programming function.

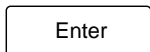
Seam area 1



- Select area input using individual values function.



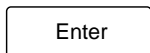
- Enter number of stitches.



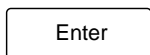
- Confirm with Enter.



- Enter fullness.



- Confirm by pressing Enter twice.



- Switch to the next seam area by pressing the Enter or arrow key.

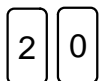
or



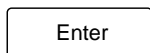
Seam area 2



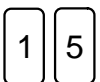
- Select area input using individual values function.



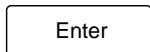
- Enter number of stitches.



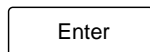
- Confirm with Enter.



- Enter fullness.



- Confirm by pressing Enter twice.



- Switch to the next seam area by pressing the Enter or arrow key.

or



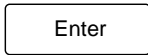
Seam area 3



- Select **area input using individual values** function.



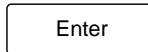
- Enter number of stitches.



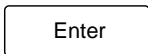
- Confirm with **Enter**.



- Enter fullness.



- Confirm by pressing **Enter** twice.



- Switch to the next seam area by pressing the **Enter** or **arrow** key.



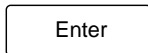
Seam area 4



- Select **area input using individual values** function.



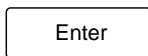
- Enter number of stitches.



- Confirm with **Enter**.



- Enter fullness.



- Confirm by pressing **Enter** twice.

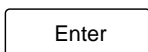
Programming the edge guide



- Select **edge guide** function.



- Enter number of stitches.



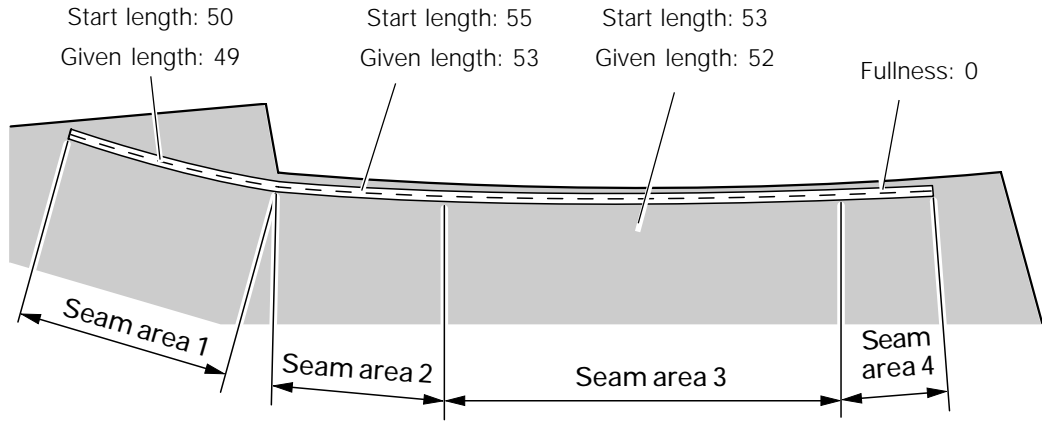
- Confirm by pressing **Enter** twice.



- Press **operational mode** key.
Programming is completed and the program saved.

11.03.02 Programming by entering the given-start value

The seam to be programmed for the front part of a jacket consists of 4 seam areas and is saved under program number 4.



- Select **INPUT** mode.



- Select **program selection** function.



- Enter program number 4.



- Confirm input with **Enter**.



- Select **programming** function.

Seam area 1



● Select given-start input.



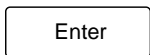
● Enter start length.



● Confirm with Enter.



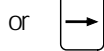
● Enter given length.



● Confirm with Enter.



● Switch to the next seam area by pressing the Enter or arrow key.



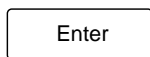
Seam area 2



● Select given-start input.



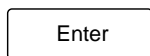
● Enter start length.



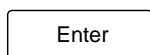
● Confirm with Enter.



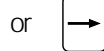
● Enter given length.



● Confirm with Enter.



● Switch to the next seam area by pressing the Enter or arrow key.



Seam area 3



- Select given-start input.



- Enter start length.



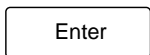
- Confirm with **Enter**.



- Enter given length.



- Confirm with **Enter**.



- Switch to the next seam area by pressing the **Enter** or arrow key.

or



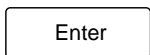
Seam area 4



- Select given-start input.



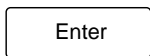
- Enter start length.



- Confirm with **Enter**.



- Enter given length.



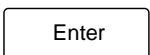
- Confirm with **Enter**.



- Select edge **guide** function.



- Enter number of stitches.



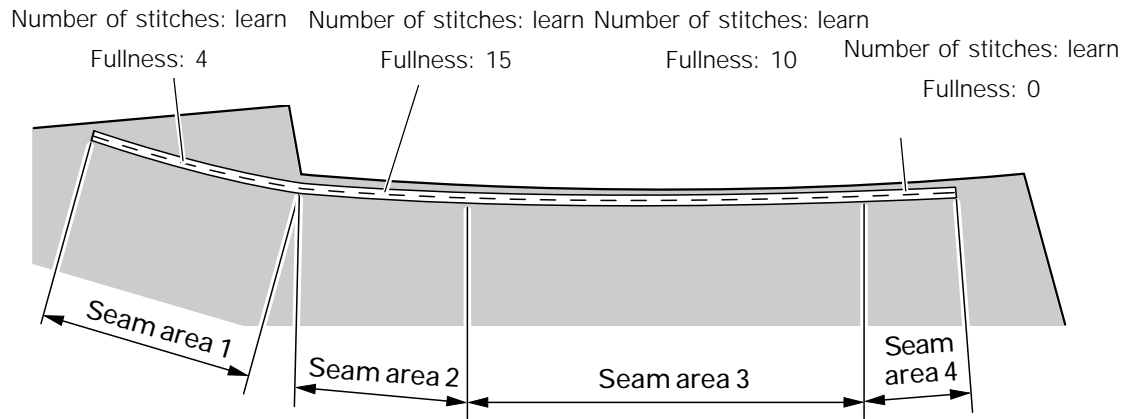
- Confirm with **Enter**.



- Press **operational mode** key.
Programming is completed and the program saved.

11.03.03 Programming using the teach-in method

The seam to be programmed for the front part of a jacket consists of 4 seam areas and is saved under program number 5.



● Switch off photoelectric barrier on OC-Top control panel.



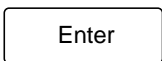
● Select INPUT mode. Select INPUT mode.



● Select program selection function.



● Enter program number 5.



● Confirm input with Enter.



● Select teach-in function.

Seam area 1



- Select area input using individual values function.



- Enter fullness.

Enter

- Confirm by pressing Enter twice.

- Sew seam area 1 until the edge guide can be switched on.



- Select edge guide function.

- Finish sewing seam area 1 (the number of stitches up to the edge guide is taken over).



- By pressing the notch key, the number of stitches sewn in seam area 1 is taken over and a switch is made to the next seam area.



Seam area 2

- Select area input using individual values function.



- Enter fullness.

Enter

- Confirm by pressing Enter twice.

- Sew seam area 2.



- By pressing the notch key, the number of stitches sewn in seam area 2 is taken over and a switch is made to the next seam area.

Seam area 3



- Select **area input using individual values** function.



- Enter fullness.



- Confirm by pressing **Enter** twice.

- Sew seam area 3.



- By pressing the **notch key**, the number of stitches sewn in seam area 3 is taken over and a switch is made to the next seam area.

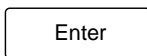
Seam area 4



- Select **area input using individual values** function.



- Enter fullness.



- Confirm by pressing **Enter** twice.

- Sew seam area 4.

(By operating the pedal in position "-2" the "Teach-in" is completed.)



- Press **operational mode key**.
Programming is completed and the program saved.



- Switch photoelectric barrier back on on the OC-Top control panel.



When the photoelectric barrier is switched on, this initiates the end of the seam.
When the photoelectric barrier is switched off, the seam end is initiated by operating the pedal in position "-2" -

12 Care and Maintenance

Clean looper compartment	daily, several times if in continuous use
Clean the entire machine	once a week
Check the oil level	daily, before use
Check/adjust the air pressure	daily, before use
Clean air filter of air filter/regulator	as required



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

12.01 Cleaning the machine

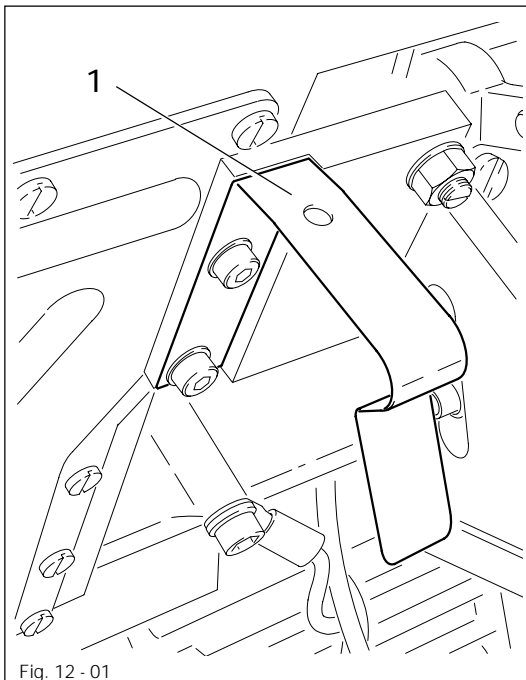


Fig. 12 - 01



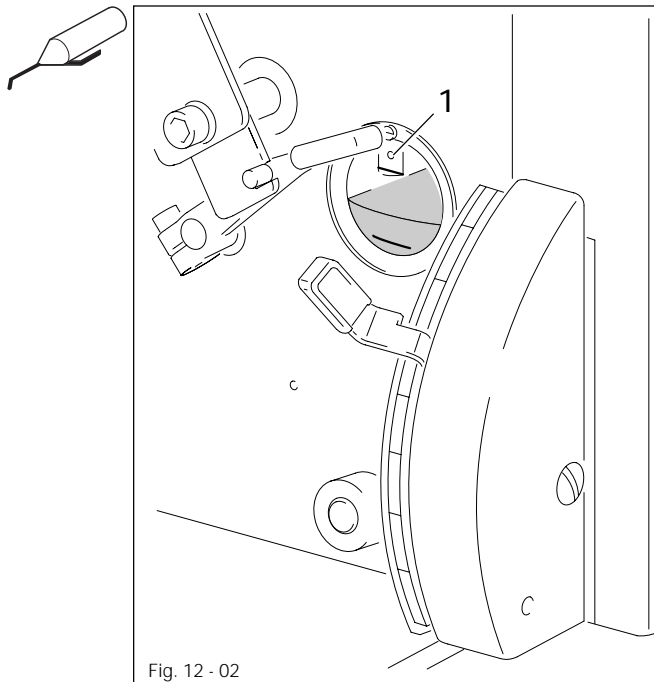
Switch off the machine!
Danger of injury if the machine is started accidentally!

- Tilt sewing head backwards.
- Clean the entire hook and hook compartment daily, more often if the machine is in continuous use.
- When returning the machine to an upright position, make sure that tilt lock 1 is pressed.



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

12.02 Oil level of the machine



Check the oil level before each use!

- The oil level must be between the markings on the inspection window.
- If necessary refill oil through hole 1.

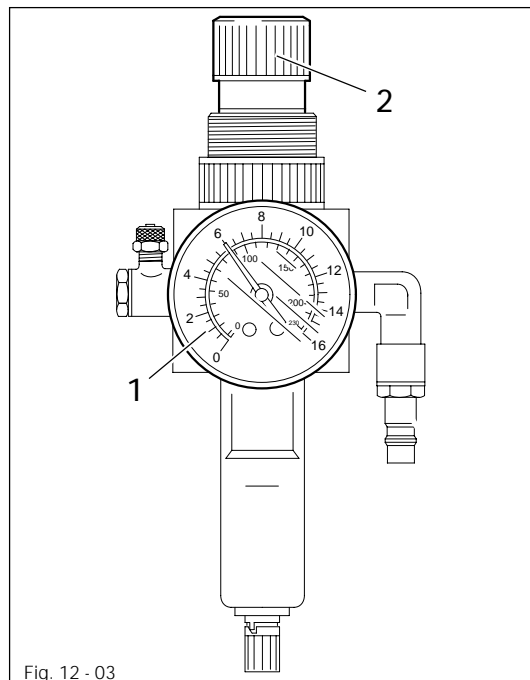


Only use oil with a medium viscosity of 22.00 mm²/s at 40°C and a density of 0.865 g/cm³ at 15°C.



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

12.03 Checking the air pressure



- Check the air pressure on the gauge 1 before every use of the machine.
- The gauge 1 must show a pressure of approx. 6 bar.
- Adjust to this value if necessary.
- To do so lift button 2 and turn it until the gauge shows approx. 6 bar.

12.04 Emptying/cleaning the water container of the air filter/regulator

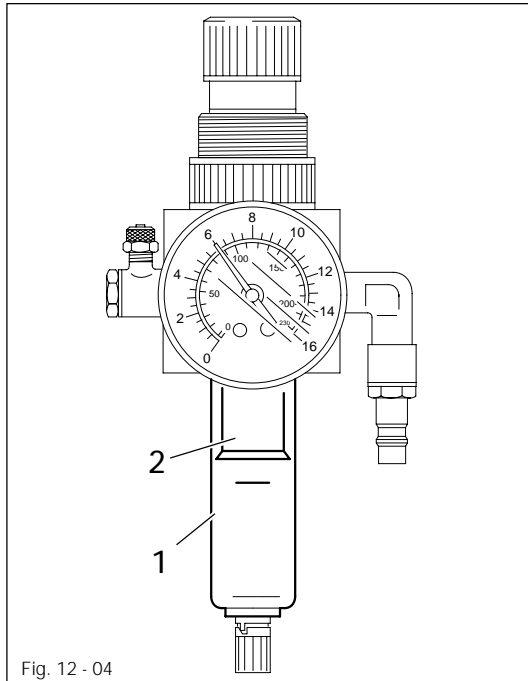


Fig. 12 - 04



Turn the machine off!
Disconnect the compressed air
hose from the air filter/regulator.

Emptying water container 1

- Water container 1 empties itself automatically when the compressed air hose is removed from the air filter/regulator.
- Unscrew water container 1.
- Screw out filter 2.
- Clean filter 2 with compressed air or isopropyl alcohol (Part No. 95-665 735-91)
- Screw filter 2 back in and screw on water trap 1.

13 Adjustment

13.01 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.

13.02 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 14 mm
- 1 set of Allan keys from 1.5 to 6 mm
- 1 metal ruler (part no. 08-880 218-00)
- 1 adjustment pin, \varnothing 5 mm (part no. 13-030 341-05)
- 1 screw clamp, part no. 61-111 600-35/001
- 1 adjustment gauge, part no. 61-111 642-19
- 1 looper adjustment gauge, part no. 61-111 643-06
- Needles
- Sewing thread and test material

13.03 Abbreviations

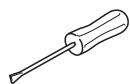
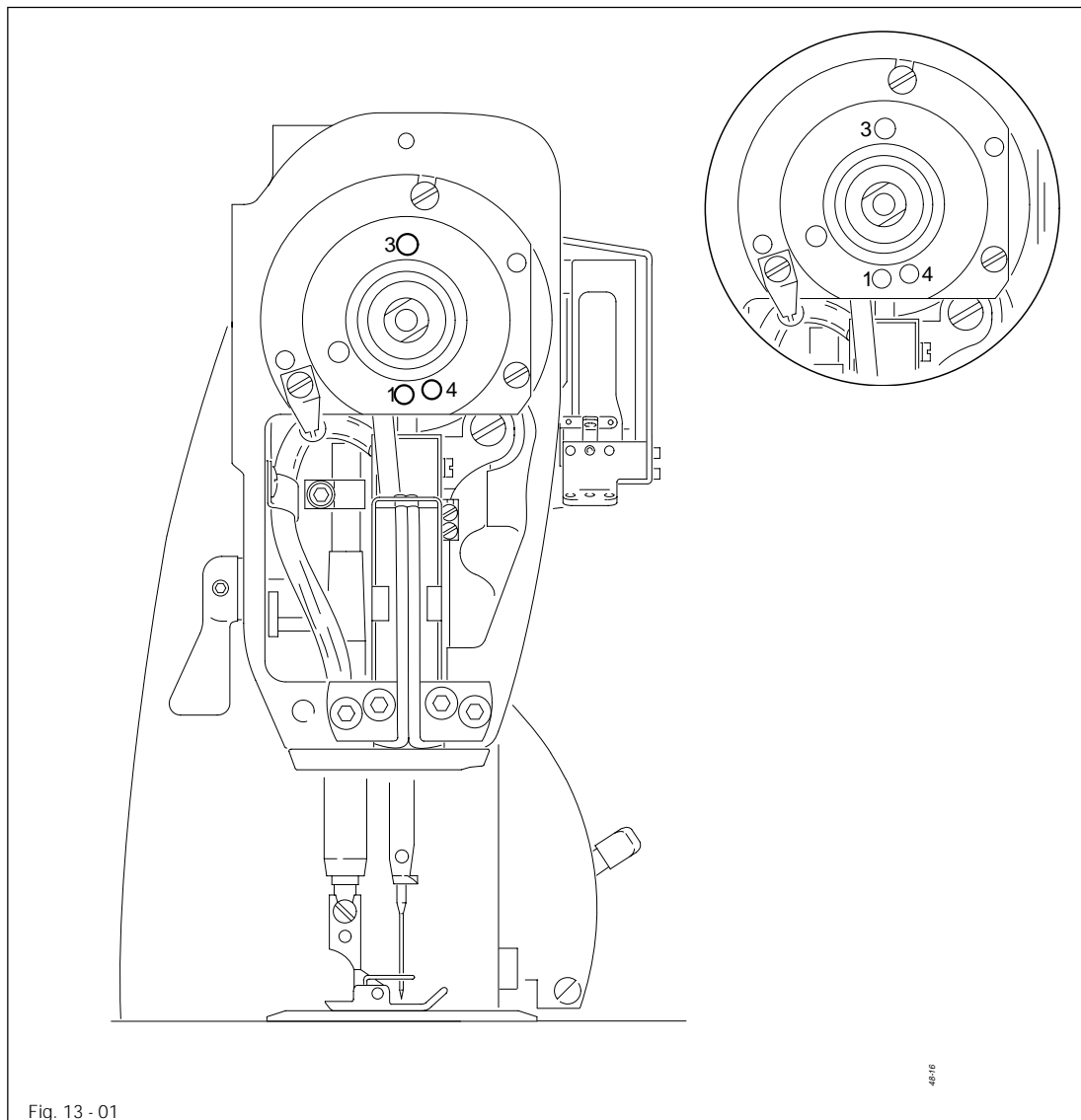
t.d.c. = top dead centre

b.d.c. = bottom dead centre

13.04 Control and adjustment aids



By adjusting the holes 1, 3 and 4 with the adjustment pin ($\varnothing 5$ mm) the required needle bar positions can be set exactly.



- Turn the balance wheel until the needle bar is approximately in the required position.
- Insert the adjustment pin into the appropriate adjustment hole and apply pressure.
- Turn the balance wheel slightly backwards and forwards, until the adjustment pin slips into the rear crank recess, blocking the machine.

Adjustment hole 1 = top dead center of the needle bar (TDC)

Adjustment hole 3 = bottom dead center of the needle bar (BDC)

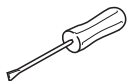
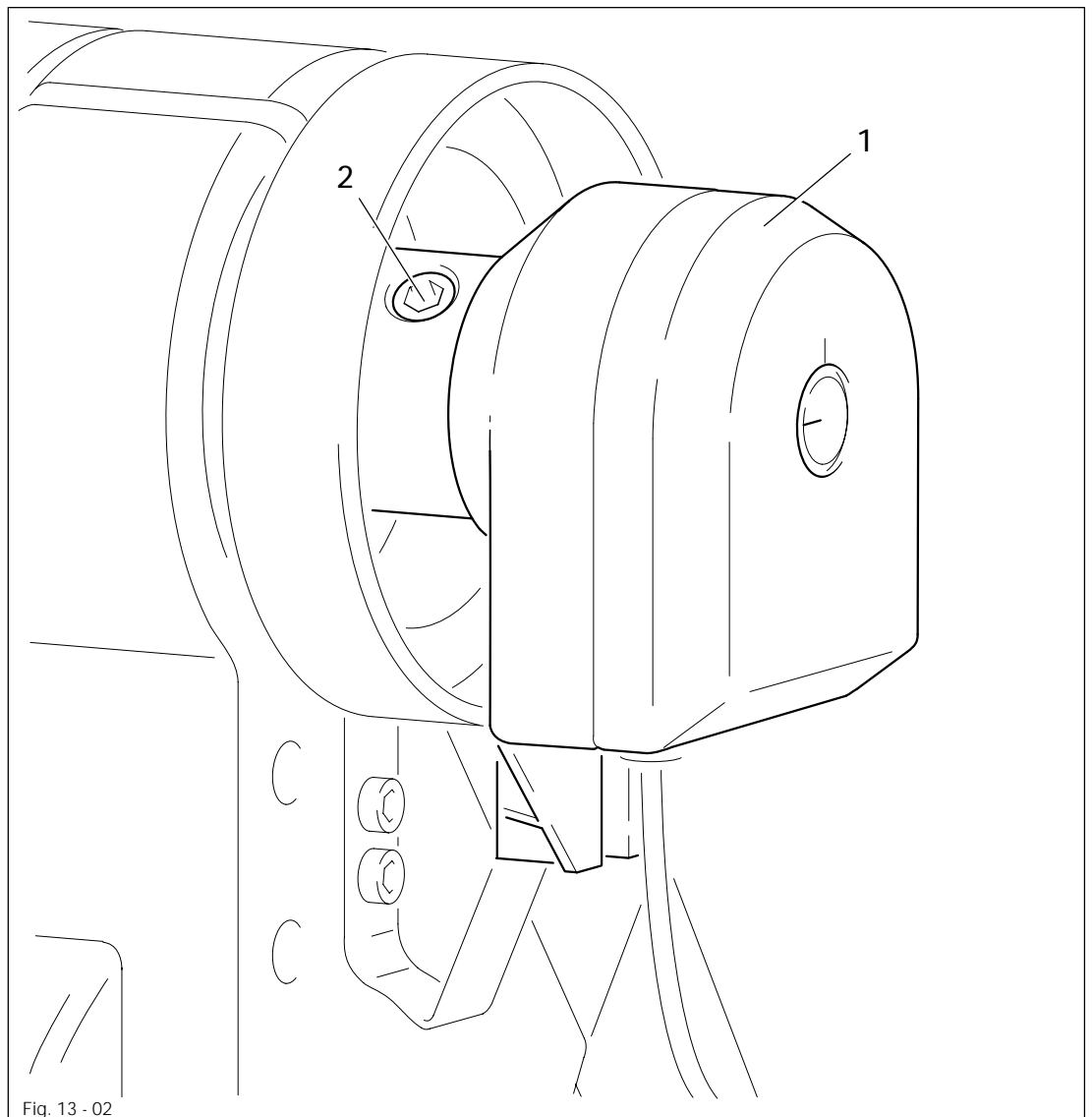
Adjustment hole 4 = 0.8 mm before the top dead center of the needle bar (0.8 before TDC)

13.05 Adjusting the basic machine

13.05.01 Adjusting the synchronizer

Requirement

After the thread has been trimmed, the machine should be positioned 0.3 - 0.4 mm after TDC.

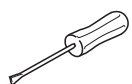
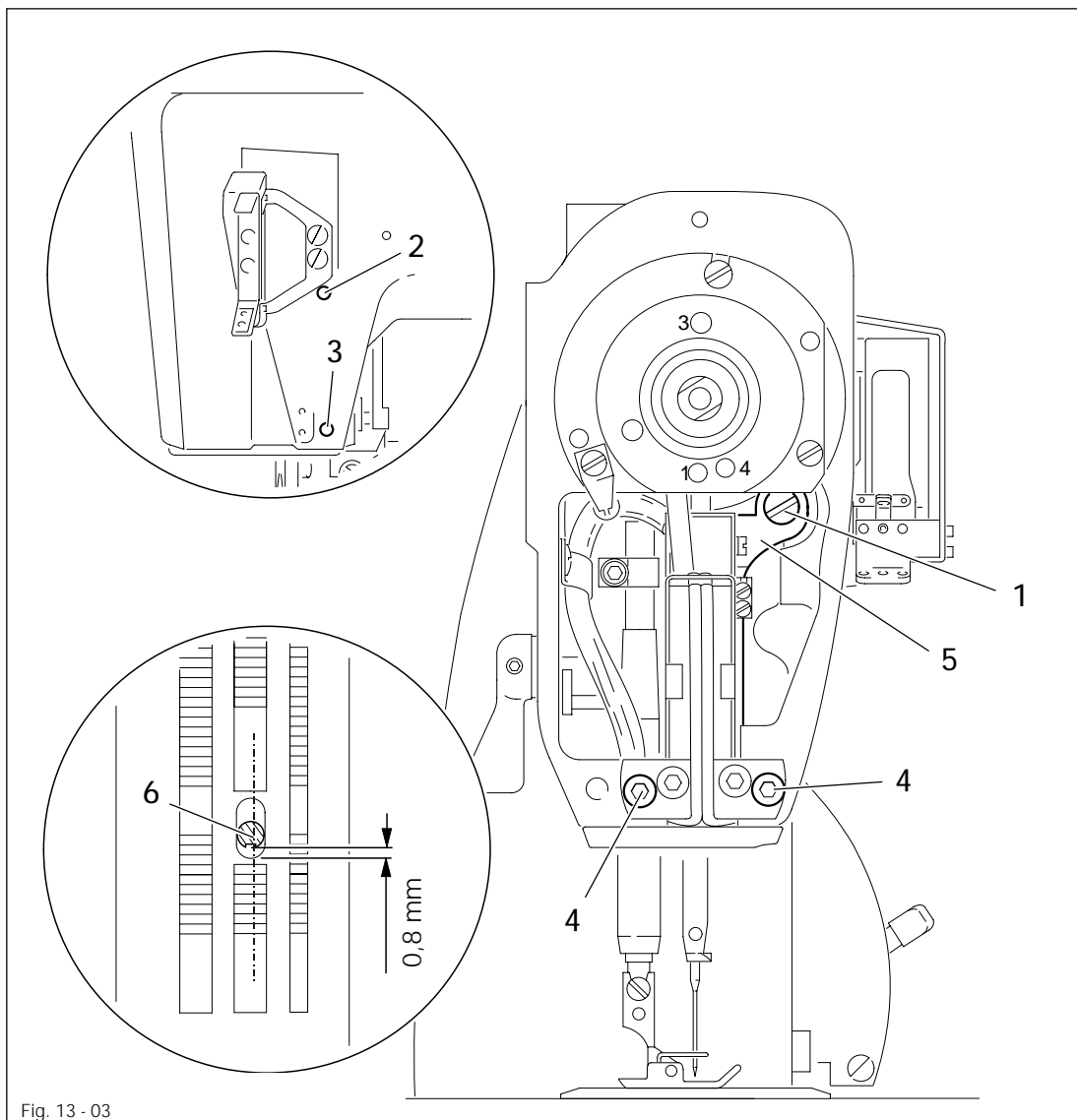


- Adjust synchronizer 1 (screw 2) according to the operating instructions for the motor. Also see Chapter 13.09 Parameter settings.

13.05.02 Position of the needle in the needle hole

Requirement

1. The needle **6** must be centered in the needle hole in a crosswise direction.
2. The distance between needle **6** and the front edge of the needle plate must be approx. **0.8 mm**.

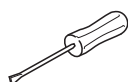
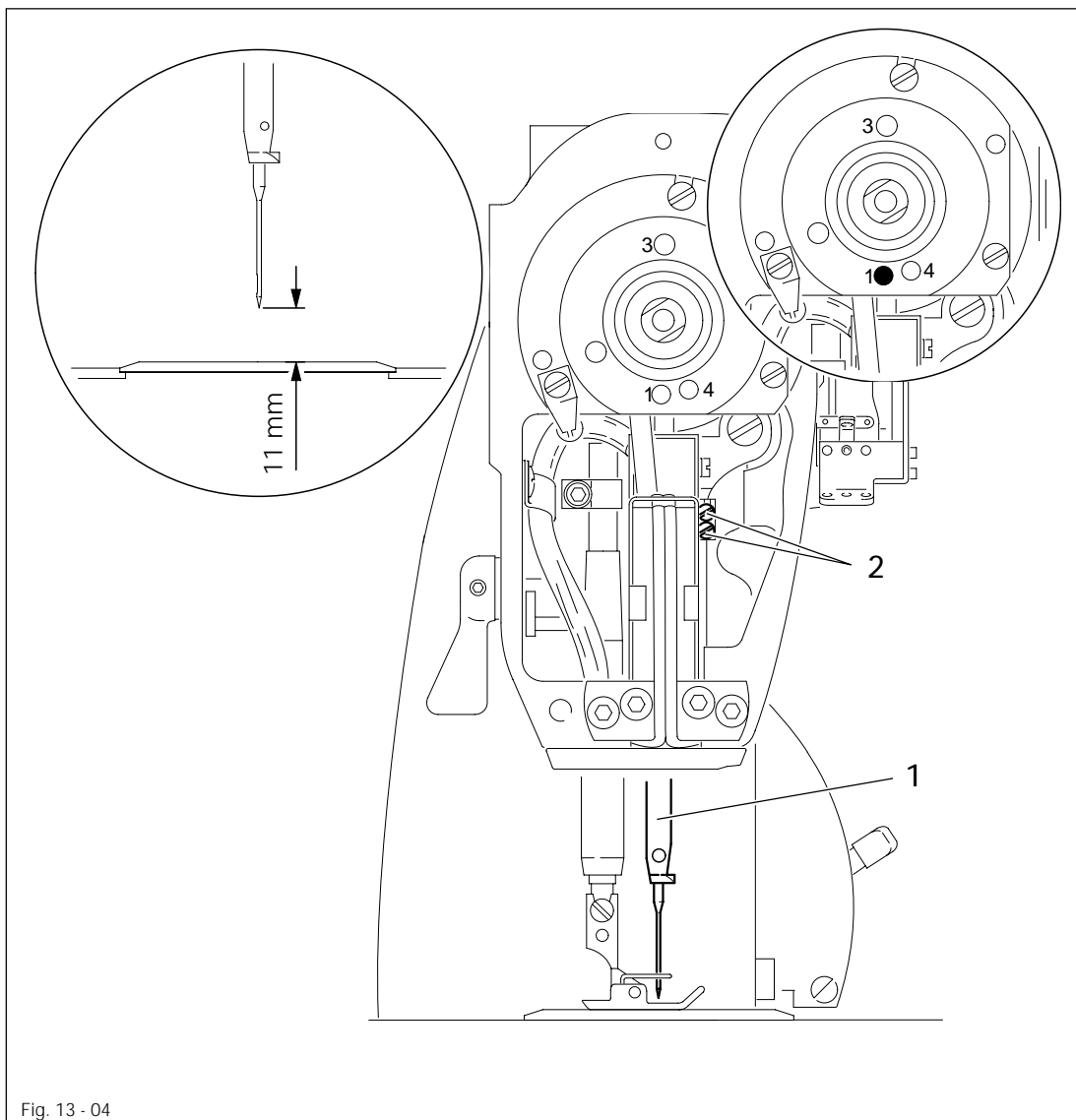


- Loosen screws **1**, **2**, **3** and **4**.
- Shift needle bar frame **5** according to the **requirements**.
- Tighten screw **3** securely and slightly tighten screw **2**.
- Using screw **1**, pull the guide stud behind it against the eye of the needle bar frame **5** and tighten it.
- Loosen screw **2** and turn the balance wheel a few times (this helps to avoid the occurrence of any tension).
- Tighten screw **2**.
- Tighten screw **4**, making sure that the slotted guide **6** is parallel to the needle bar.

13.05.03 Pre-adjusting the needle height

Requirement

At needle bar position t.d.c. (adjustment hole 1), the distance between the needle plate and the needle point must be **11 mm**.



- Bring the needle bar 1 to t.d.c.
- Adjust needle bar 1 (screws 2) according to the requirement.

13.05.04 Neutral position of the main feed dog

Requirement

When the stitch length is set at "0" there should be no feeding motion of the main feed dog 7.

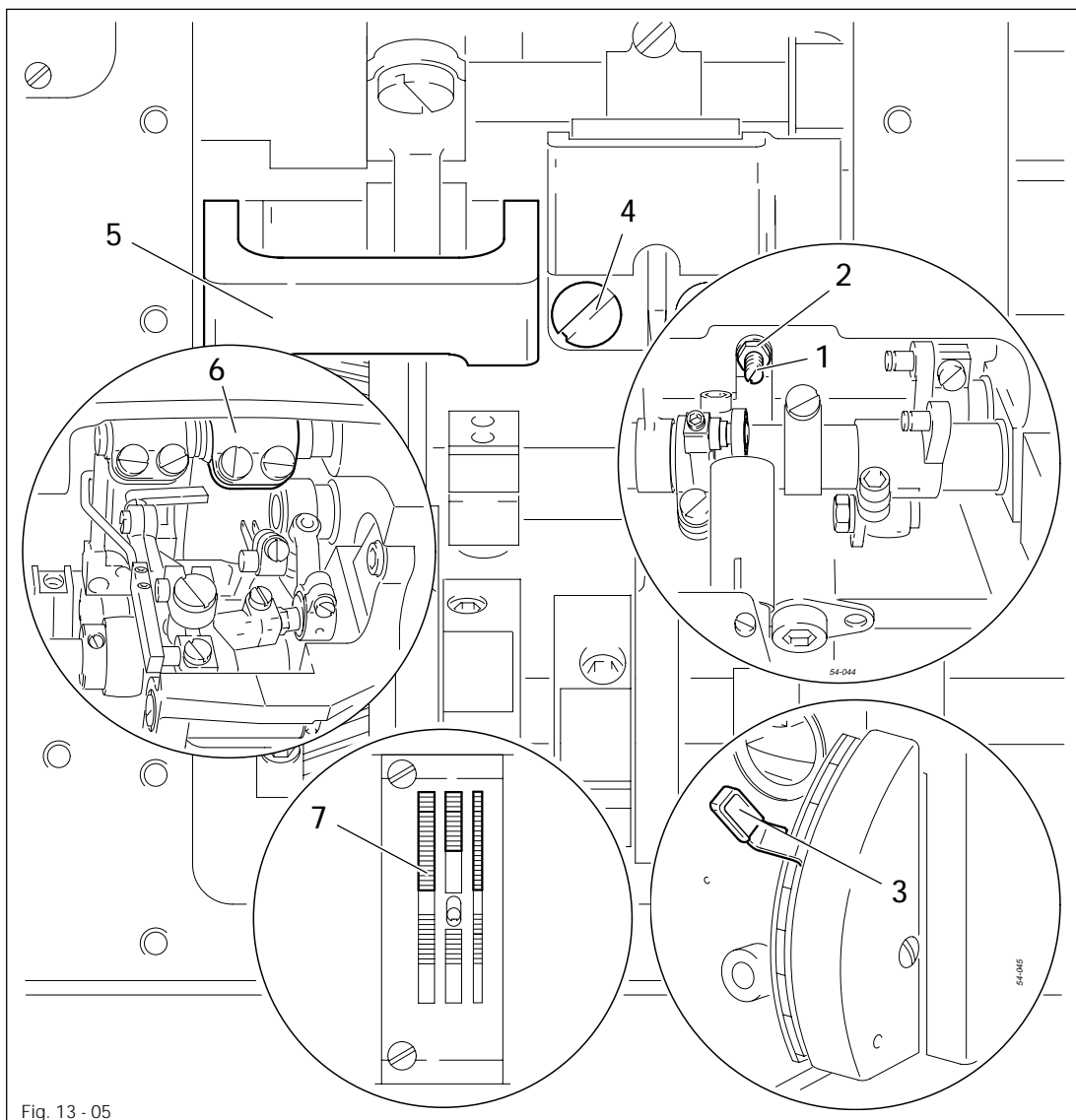
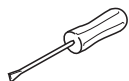


Fig. 13 - 05



- Remove screw 1 (nut 2) (deactivate stitch length limitation).
- Set stitch length to "0" with adjustment lever 3.
- Loosen screw 4 until the crank 5 can only be turned on the shaft with difficulty.
- While continuously turning the balance wheel, turn crank 5 so that crank 6 does not move.
- Tighten screw 4.



Screw 1 (nut 2) remains loosened for further adjustments.
(The stitch length limitation is still deactivated.)

13.05.05 Neutral position of the differential feed dog

Requirement

When the stitch length is set at "0", and adjustment gauge 1 is fitted, the differential feed dog 5 should not move.

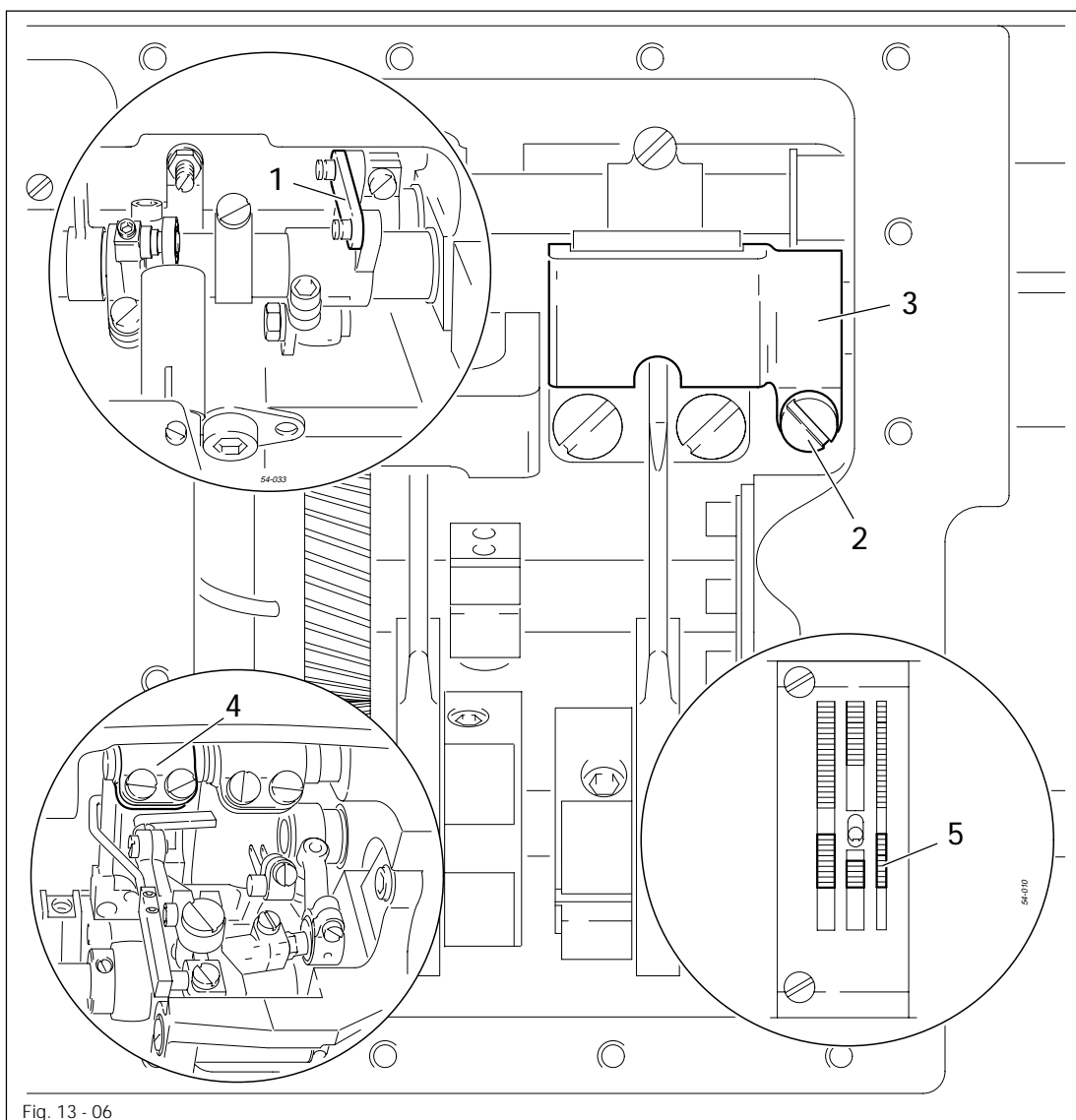
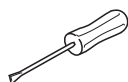


Fig. 13 - 06



- Set stitch length at "0".
- Fit adjustment gauge 1.
- Loosen screw 2 until the crank 3 can only be turned on the shaft with difficulty.
- While continuously turning the balance wheel, turn crank 3 so that crank 4 does not move.
- Tighten screw 2.

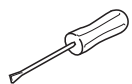
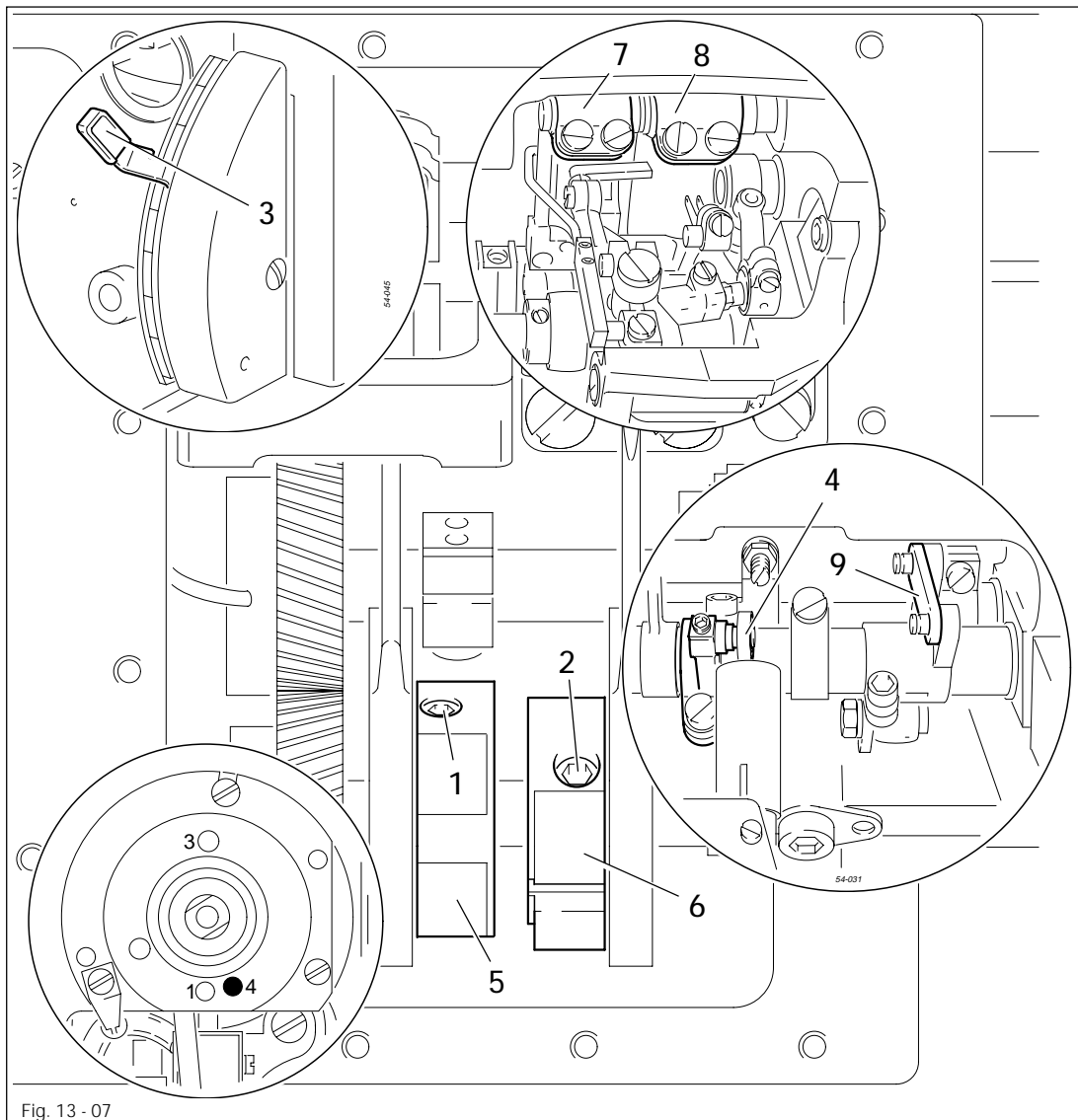


Adjustment gauge 1 remains fitted for further adjustments.

13.05.06 Feeding motion of the main and differential feed dogs

Requirement

With the maximum stitch length set, the needle bar positioned 0.8 mm before t.d.c. (adjustment hole 4), and adjustment gauge 9 fitted, the main and differential feed dogs should not move when roller 5 is operated.



- Slightly loosen screws 1 and 2 (4 screws).
- Bring needle bar to 0.8 before t.d.c.
- Set the maximum stitch length (lever 3).
- While continuously moving roller 4 up and down, turn eccentrics 5 and 6 so that the cutout is visible and cranks 7 and 8 do not move.
- Tighten screws 1 and 2.

13.05.07 Lifting motion of the main and differential feed dogs

Requirement

With the needle bar positioned at t.d.c. (adjustment hole 1), the cutouts of eccentric 3 and 4 should be pointing straight down.

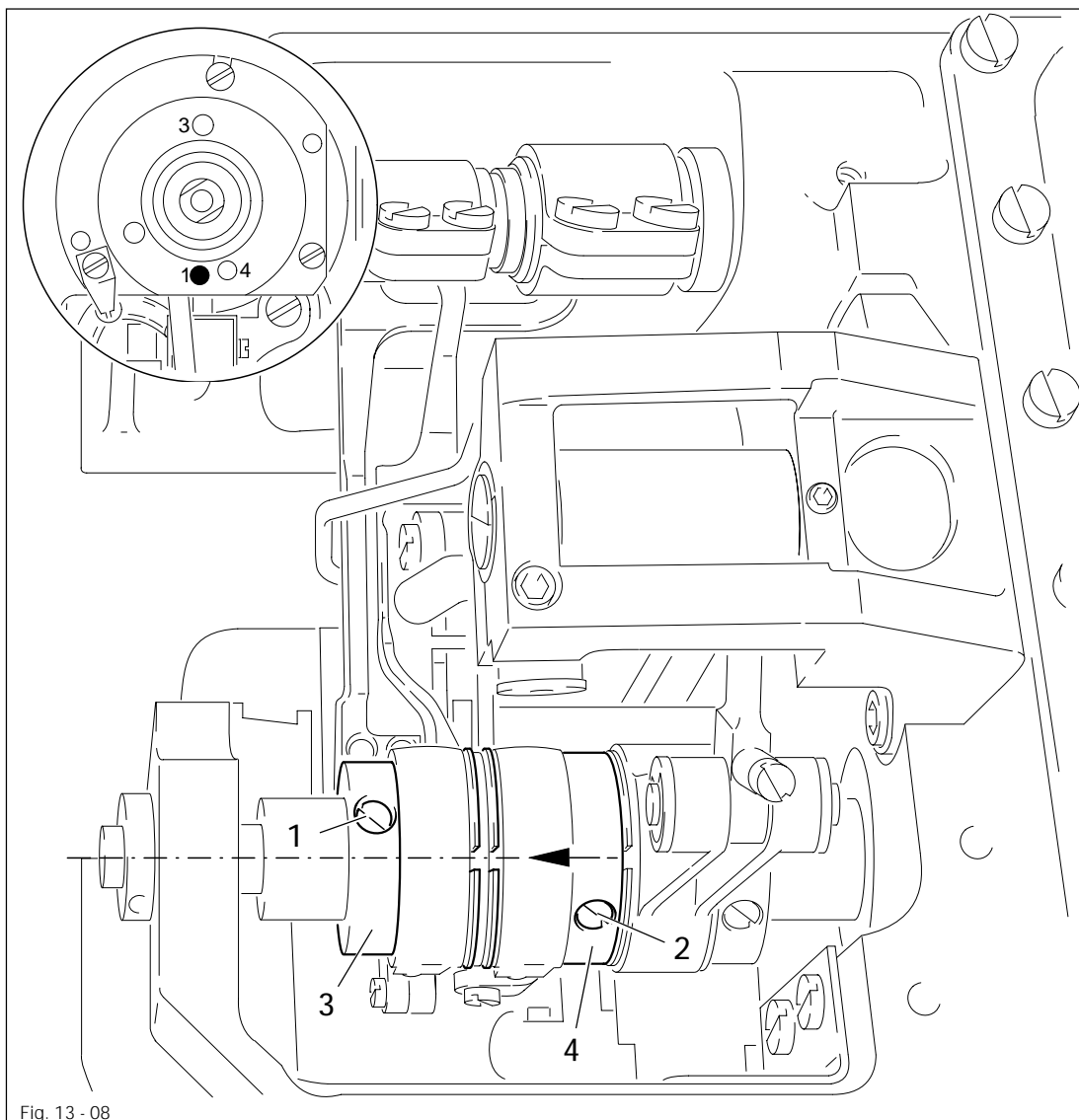
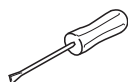


Fig. 13 - 08



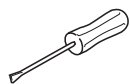
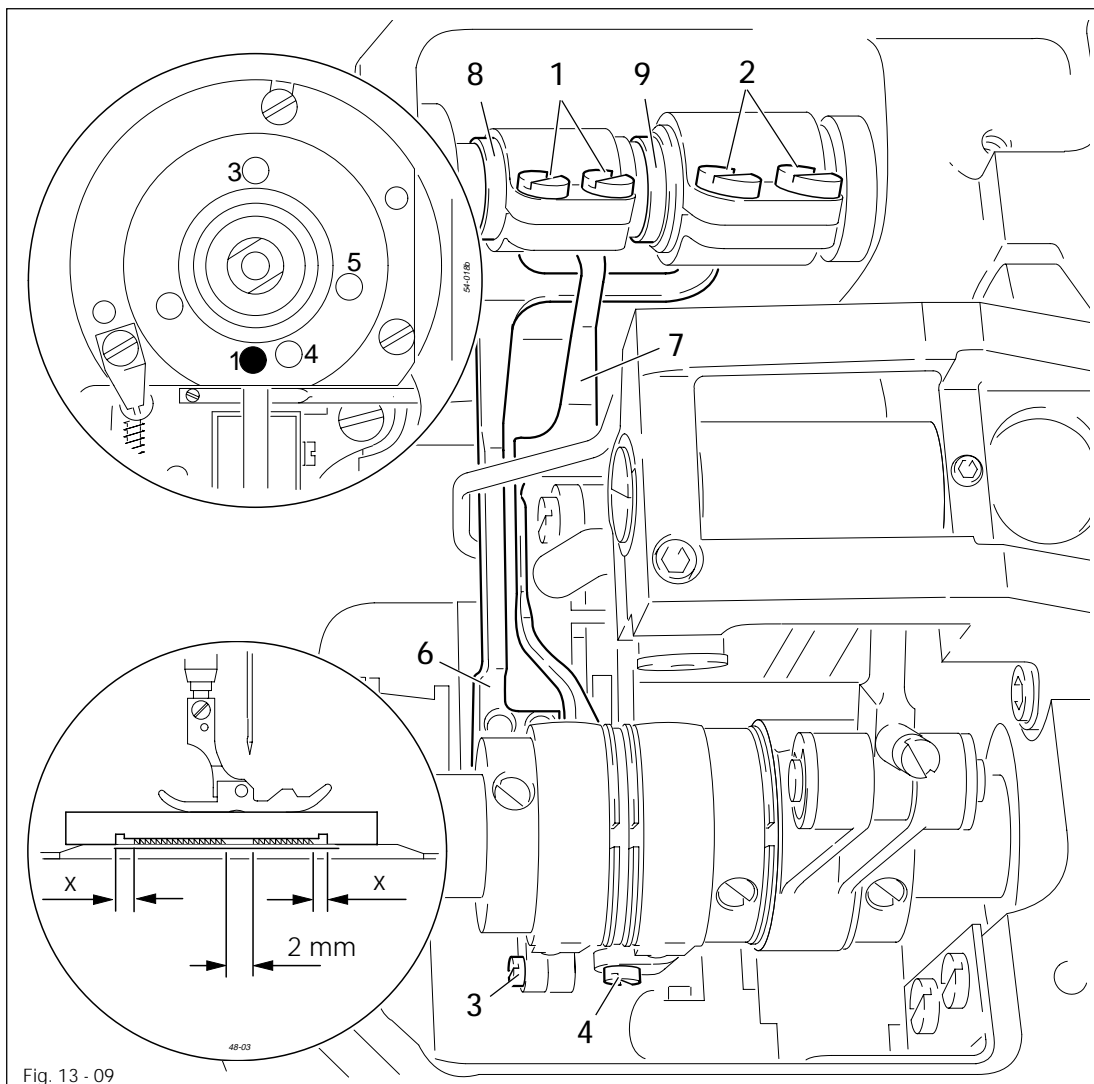
- Loosen screws 1 and 2 (4 screws).
- Bring needle bar to its t.d.c.
- Turn eccentric 3 and 4 according to the **requirement** and tighten accessible screws 1 and 2.
- By turning the balance wheel, provide access to the other screws 1 and 2 and tighten them.

13.05.08 Positioning the main and the differential feed dogs

Requirement

With the needle bar at t.d.c (adjustment hole 1) and the longest stitch length set

1. The main and differential feed dogs should be touching the adjustment gauge 5,
2. Both feed dogs should be in the centre of the needle plate cutout and
3. be 2 mm apart.



- Bring needle bar to t.d.c. and set the longest stitch length.
- Loosen screws 1, 2, 3 and 4.
- Place adjustment gauge 5 (part no. 61-111 642-19) with the cutout in the centre of the needle plate cutout (arrow in feed direction).
- Lower presser foot.
- Adjust feed dog carriers 6 and 7 according to requirement 1.
- Slightly tighten screws 1 and 2.
- Turn eccentric bushes 8 and 9 according to requirement 2 and 3.
- In this position tighten screws 3 and 4.
- In compliance with requirement 1 tighten screws 1 and 2.

13.05.09 Basic setting of the differential adjustment device

Requirement

With the fullness set at "0", the stitch length set at "2.5" and the adjustment gauge 3 fitted, the roller 1 should be touching pressure sleeve 4.

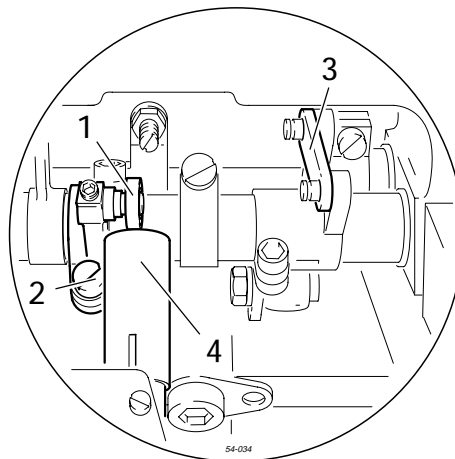
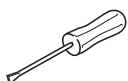


Fig. 13 - 10

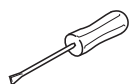
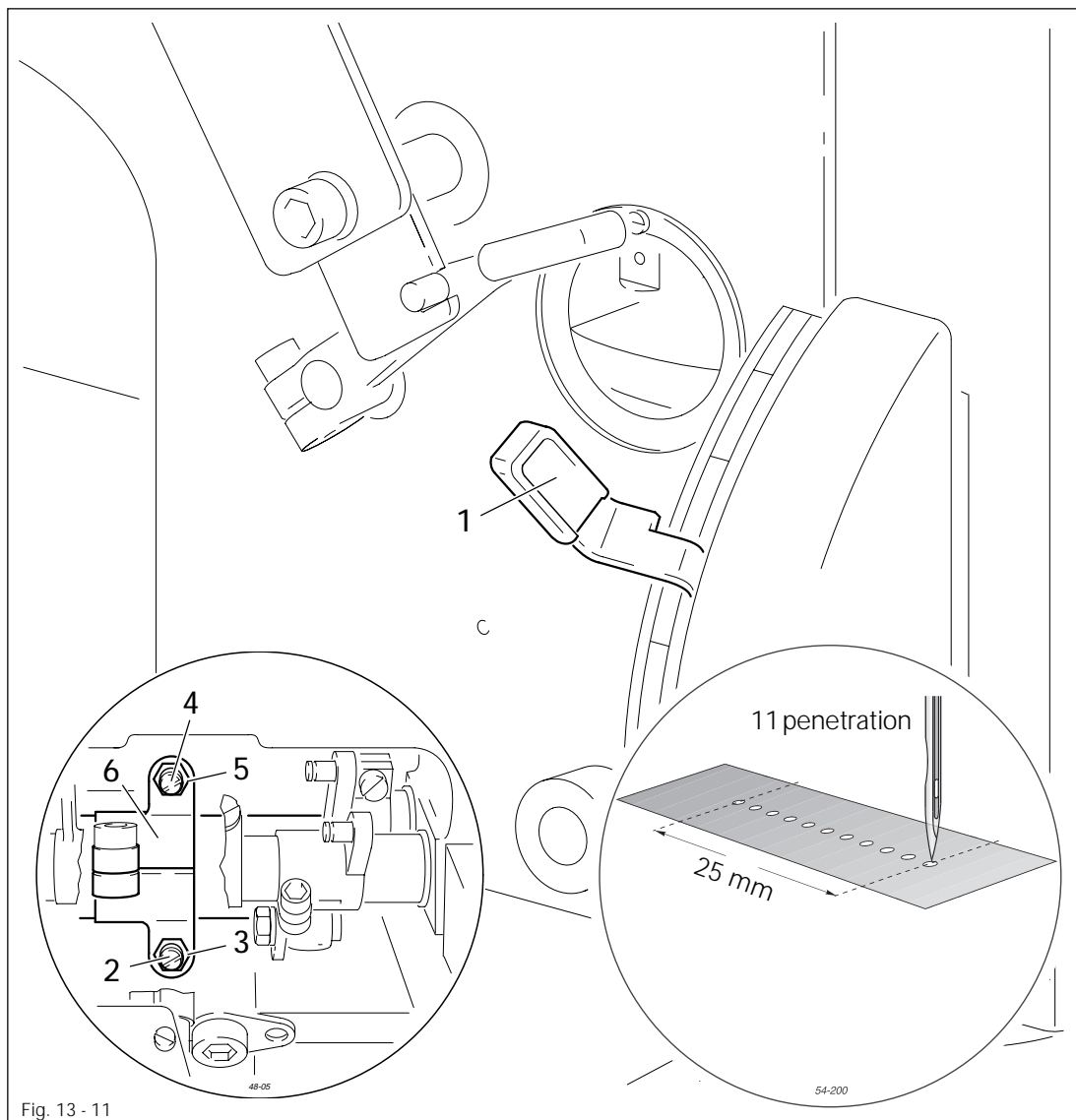


- Switch on the machine.
- Set fullness at "0" on graphics control panel.
- Switch off the machine.
- Adjust roller 1 (screw 2) according to the requirement.
- Remove adjustment gauge 3.

13.05.10 Stitch length limitation

Requirement

1. The bottom stroke of rocking bar **6** should be set so that the stitch length is **2.5 mm**.
2. With the same stitch length set, screw **4** should rest lightly on the casting. (It should no longer be possible to move rocking bar **6**.)



- Set the stitch length on lever **1** according to requirement 1.
- Adjust screw **2** (nut **3**) according to requirement 1.
- Set the stitch length on lever **1** according to requirement 2.
- Adjust screw **4** (nut **5**) according to requirement 2.

13.05.11 Clearance between presser foot and needle plate

Requirement

When hand lever 1 is raised there should be a clearance of 5 mm between the presser foot and the needle plate.

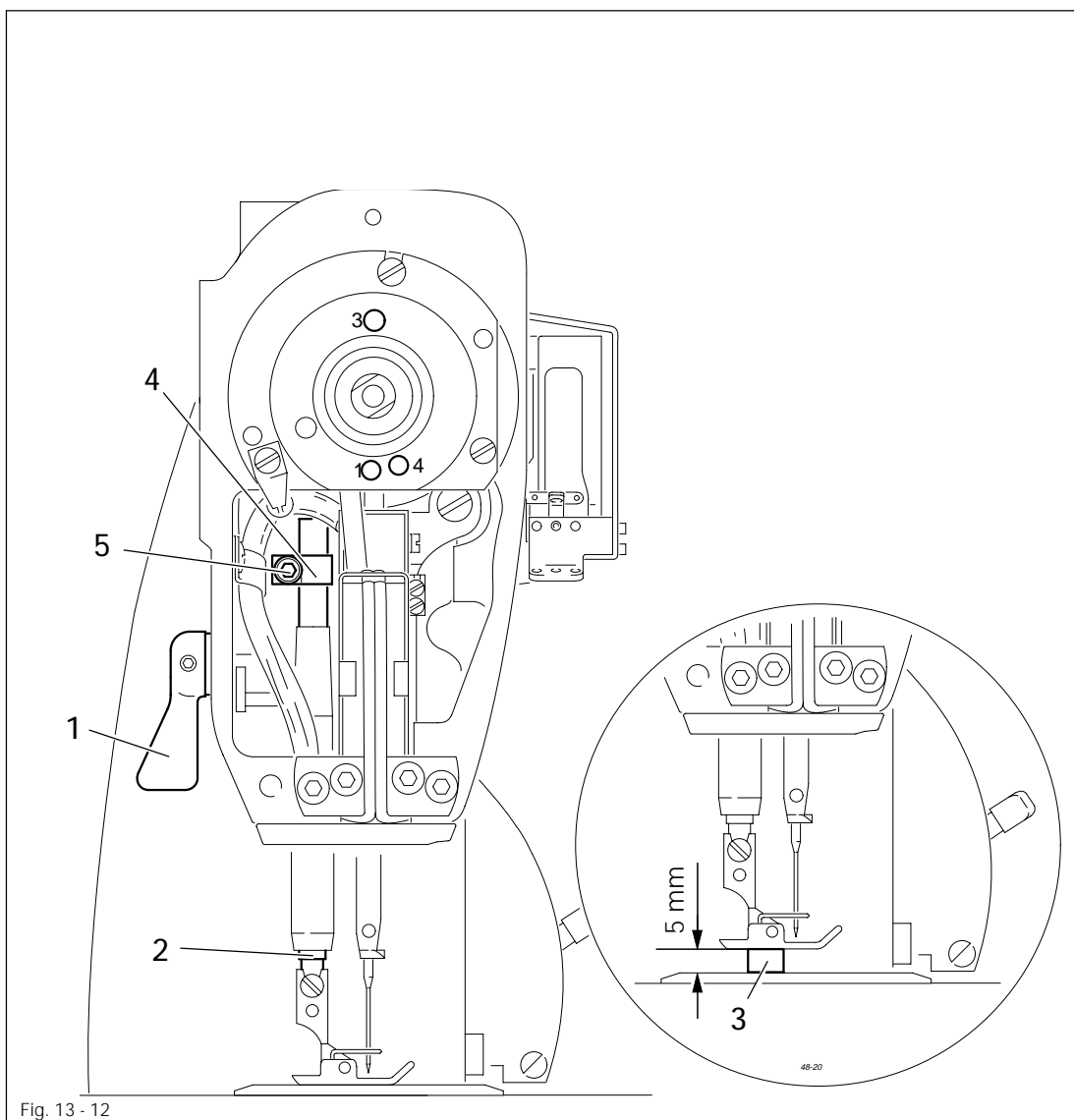
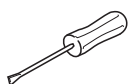


Fig. 13 - 12



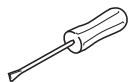
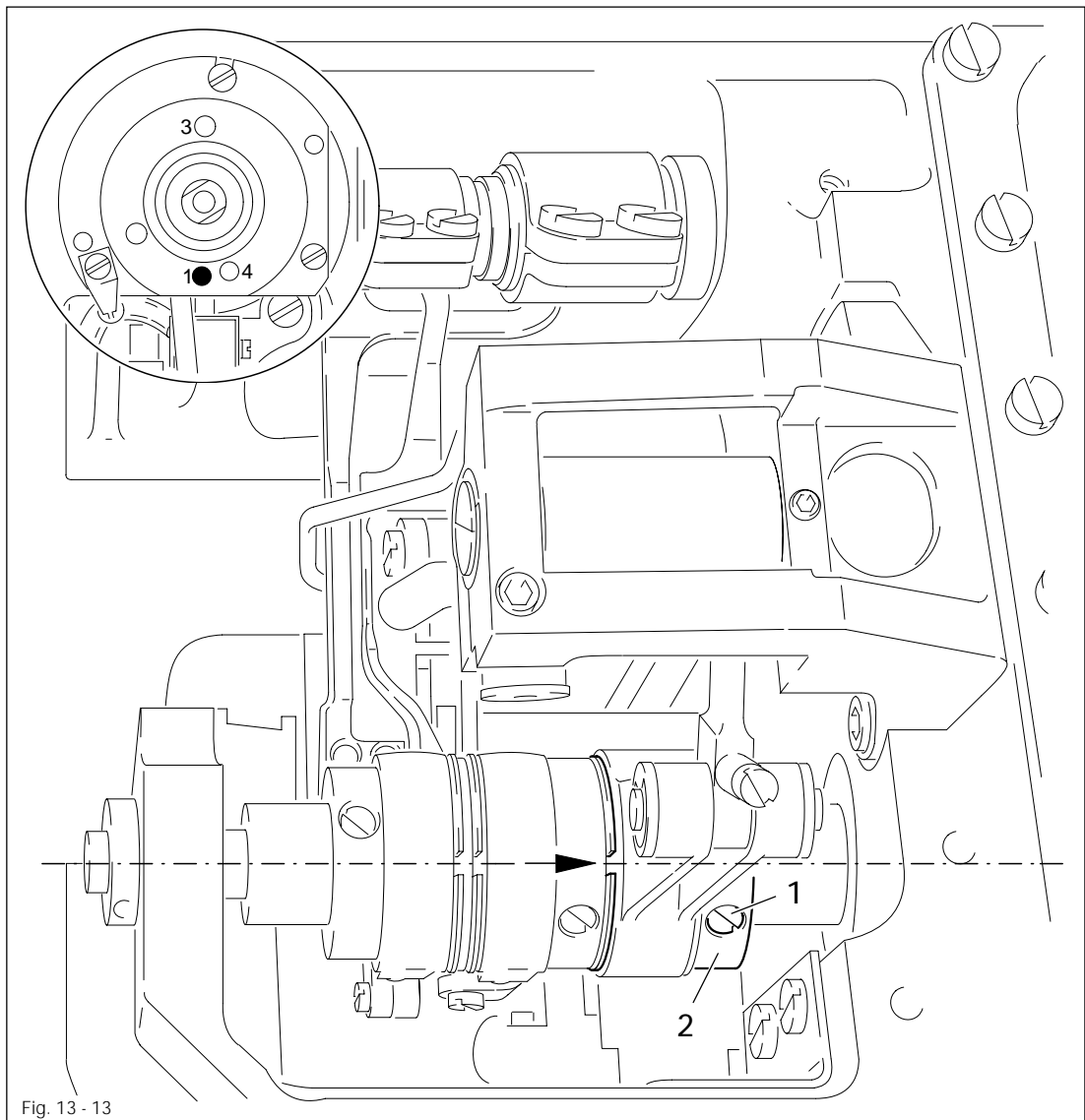
- Raise hand lever 1.
- Raise presser rod 2 and slide the 5 mm thick part of the adjustment gauge 3 (part no. 61-111 642-19) under the presser foot.
- Lower presser rod lifting piece 4 (screw 5).

Adjustment

13.05.12 Looper avoiding motion

Requirement

With the needle bar at t.d.c. (adjustment hole 1) the cutout of eccentric 2 should be positioned vertically below the centre of the axis.



- Loosen both screws 1.
- Bring needle bar to t.d.c.
- Adjust eccentric 2 according to the requirement.
- Tighten screws 1.

13.05.13 Looper motion

Requirement

When the needle bar reaches its bottom dead center (BDC), the looper must be at its **right** point of reversal.

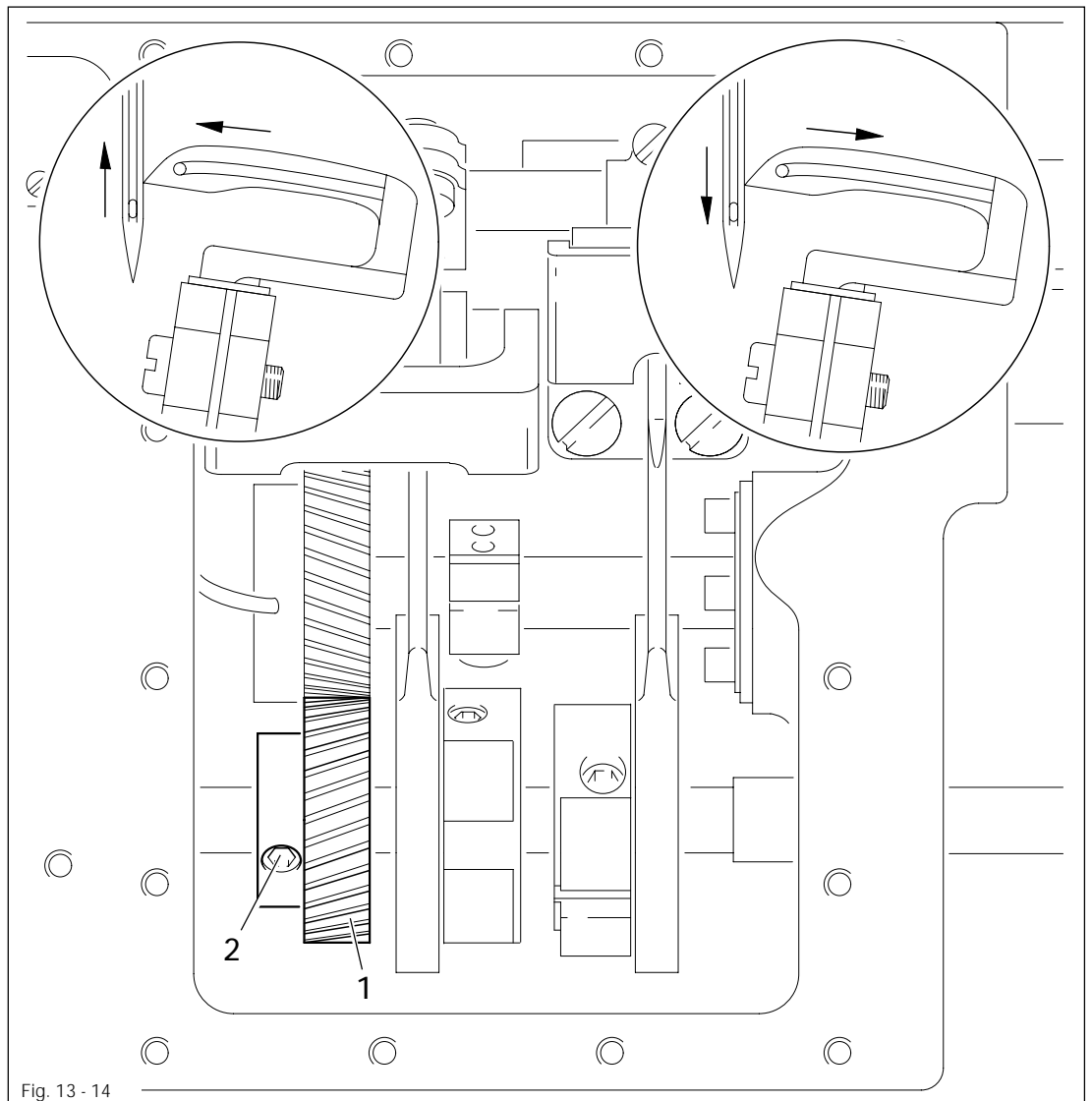
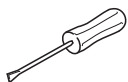


Fig. 13 - 14

**Checking the exact right point of reversal:**

- Turn the balance wheel until the point of the looper advancing from the right is at the right-hand side of the needle.
- In this position attach C-clamp (order No. 61-111 600-35/001) to the needle bar so that the upward motion of the needle bar is blocked.
- Turn the balance wheel in the opposite direction until the C-clamp regains contact. In this position the looper point must be at the right-hand side of the needle again.
- If the looper point is not positioned at the right-hand side of the needle, turn gearwheel 1 (screw 2) accordingly.
- Repeat control procedure.

13.05.14 Looper height and looper angle

Requirement

When the looper carrier 2 is in a vertical position there should be

1. a distance of 3.2 mm between the highest point of the looper back and the needle plate rest and
2. looper 7 should be resting on looper adjustment gauge 9.

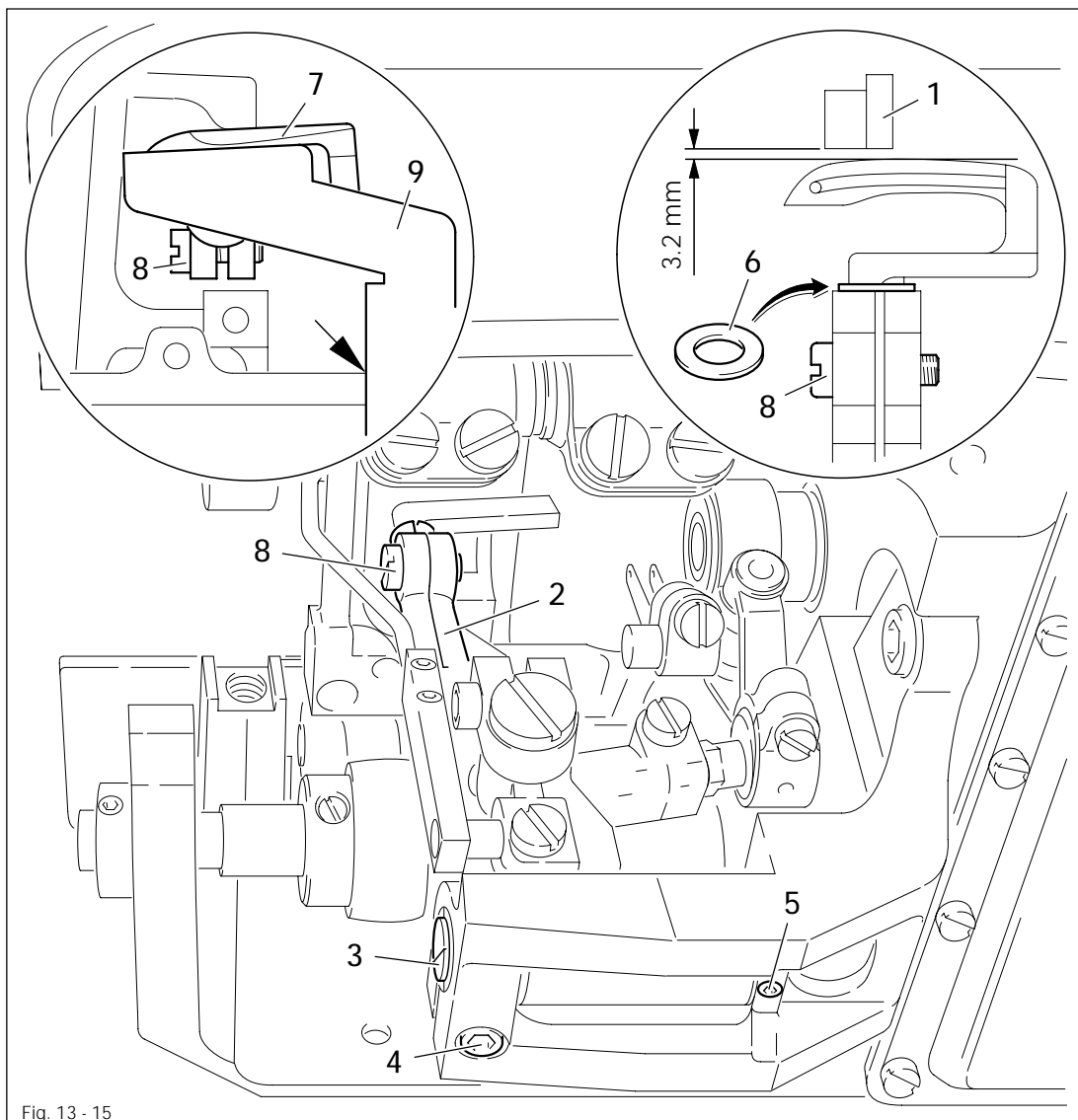
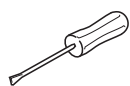


Fig. 13 - 15



- Remove needle plate and bottom feed dog.
- Place gauge 1 (Order No. 61-111 642-19) on the needle plate rest.
- Place looper holder 2 in a vertical position.
- Twist eccentric bearing stud 3 (screws 4 and 5) according to requirement 1.
- Check the adjustment.



If the required clearance is not obtained, replace spacer 6. In order to do so, looper 7 (screw 8) has to be removed.

- Place looper gauge 9 (Order No. 61-111 643-06) on the left edge of the cover plate support (see arrow) and move it towards the looper 7.
- Bring looper 7 (screw 8) into contact with looper gauge 9 (requirement 2.).

Spacer	Order-No.
0.3 mm	91-170 693-05
0.5 mm	91-169 614-05
0.8 mm	91-169 615-05
1.2 mm	91-170 694-05

13.05.15 Looper-to-needle clearance in sewing direction

Requirement

In sewing direction there must be a clearance of approx. **0.1 mm** between looper point and needle.

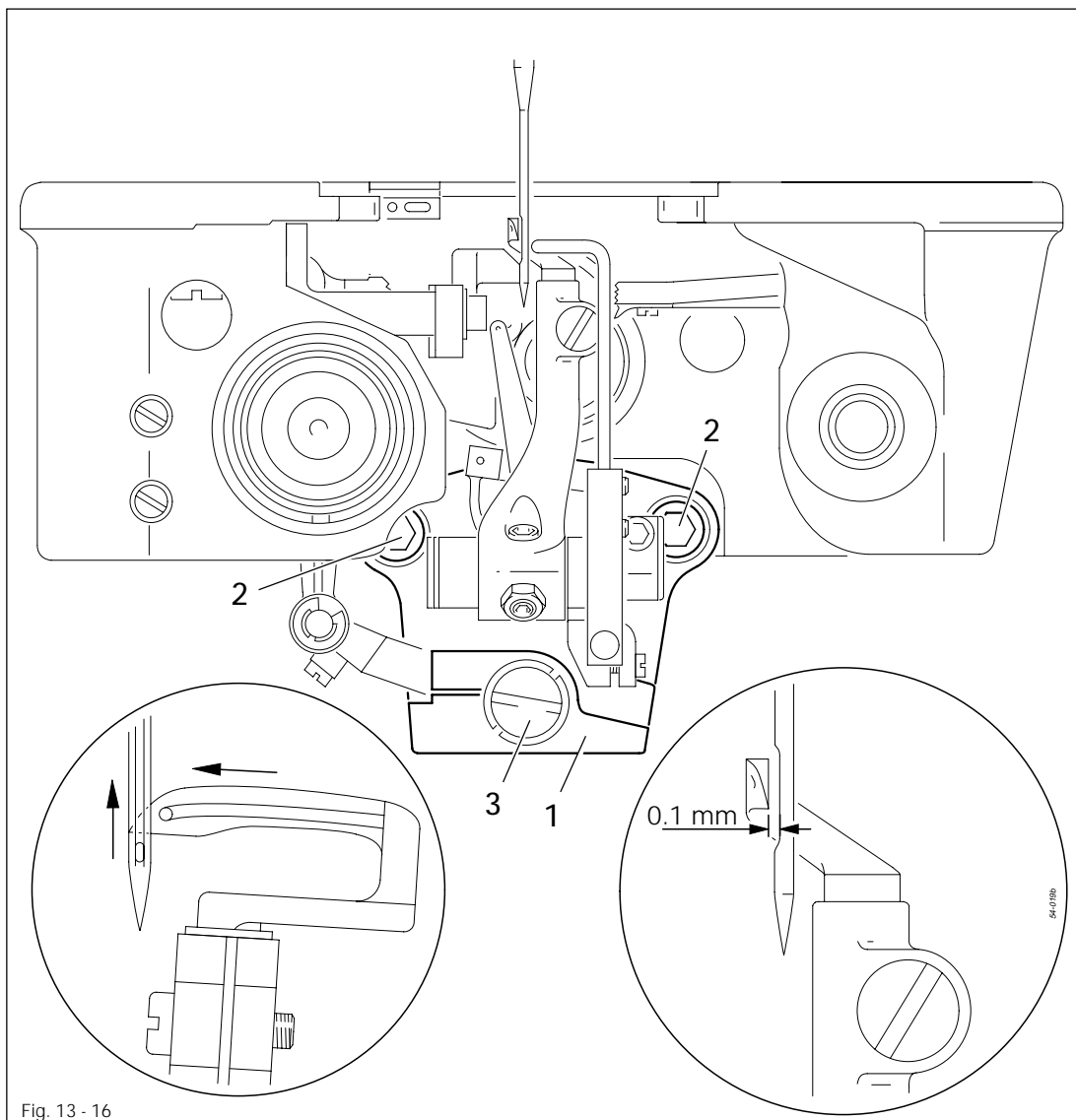
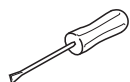


Fig. 13 - 16



- Turn the balance wheel until the looper point coming from the right reaches the left side of the needle.
- Align looper unit 1 (screw 2) according to the requirement.



If a clearance of **0.1 mm** cannot be obtained, the setting of the eccentric bearing stud 3 can be corrected. In this case the looper height and angle must be checked, see **Chapter 13.05.14 Looper height and looper angle**.

13.05.16 Looper-to-needle clearance crosswise to sewing direction

Requirement

When the looper 1 is at its right point of reversal, there must be a clearance between the looper point crosswise to the sewing direction and the needle center of 3.2 mm.

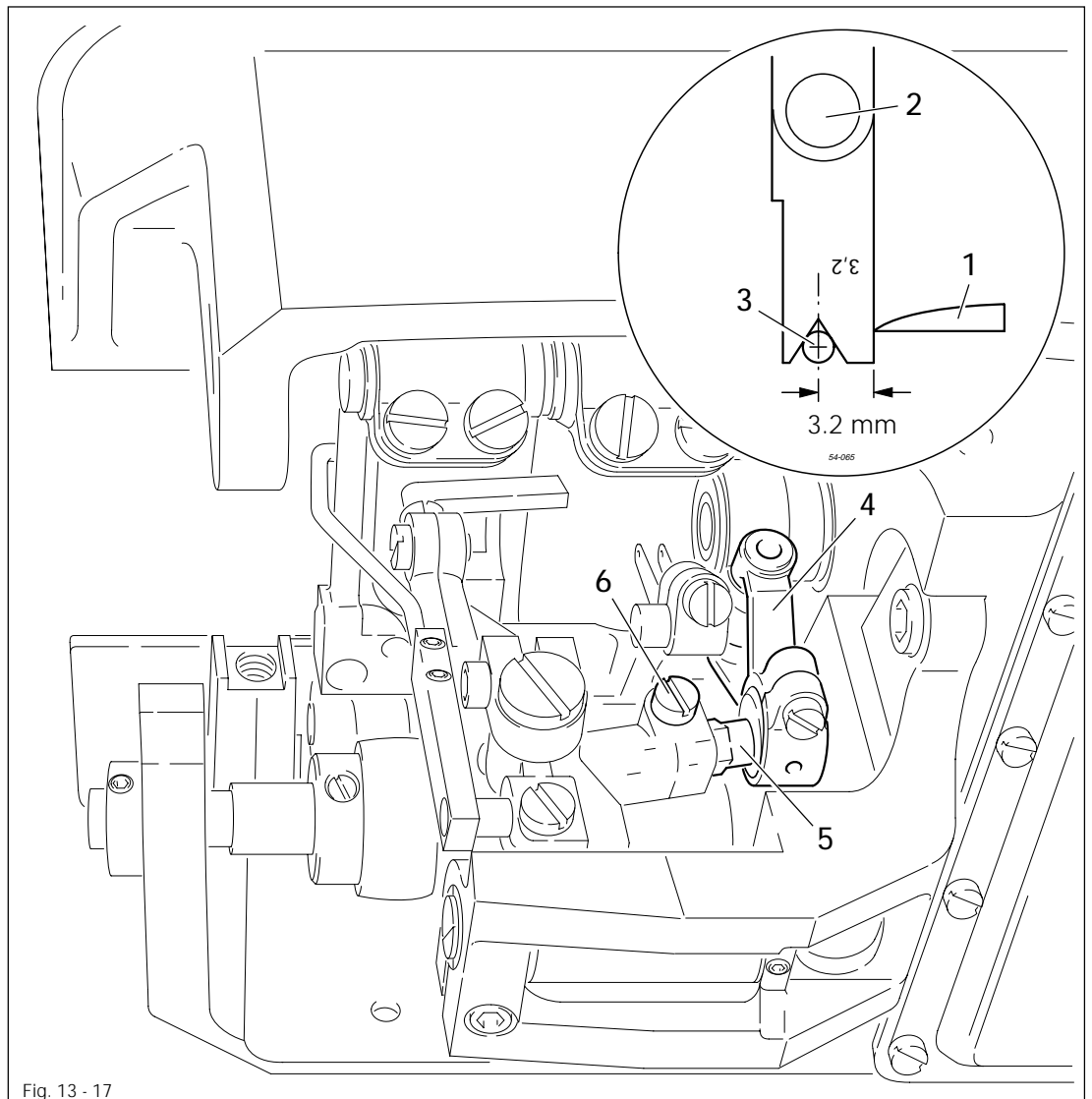
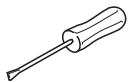


Fig. 13 - 17



- By turning the balance wheel bring the looper 1 to its right point of reversal.
- Place the "3.2" blade of looper gauge 2 (Order No. 61-111 643-06) against the needle 3 with its notch facing the direction of feed.
- Make sure that the driving link 4 is vertical and turn the ball pin 5 (screw 6) with the aid of an open-ended spanner (size 6), until the looper point 1 contacts the blade.

13.05.17 Final adjustment of the needle height

Requirement

When the point of the looper advancing from the right reaches the left side of the needle, the top edge of the needle eye must be 1.0 - 1.2 mm below the bottom edge of the looper.

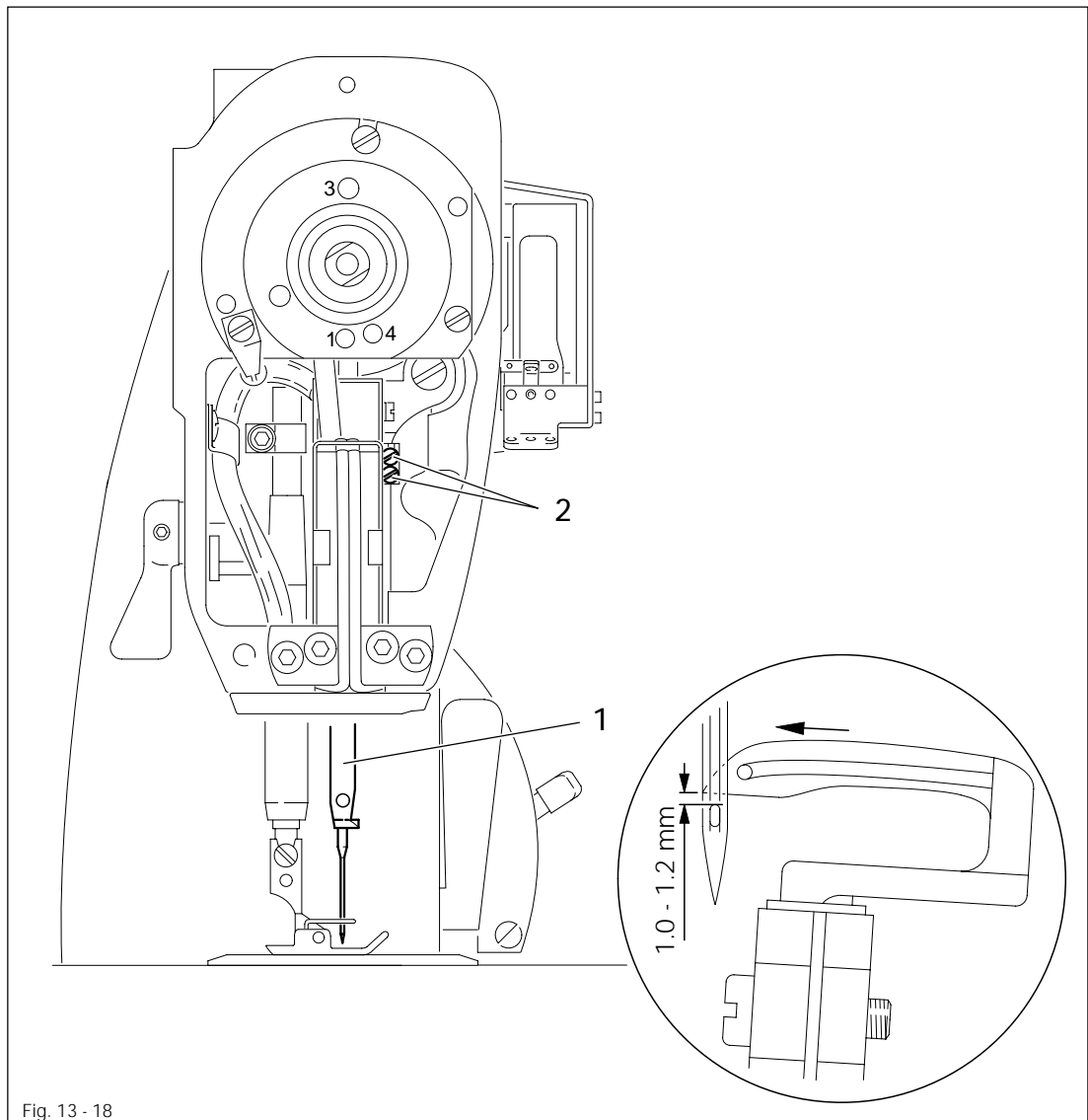
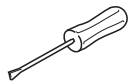


Fig. 13 - 18

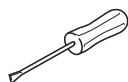
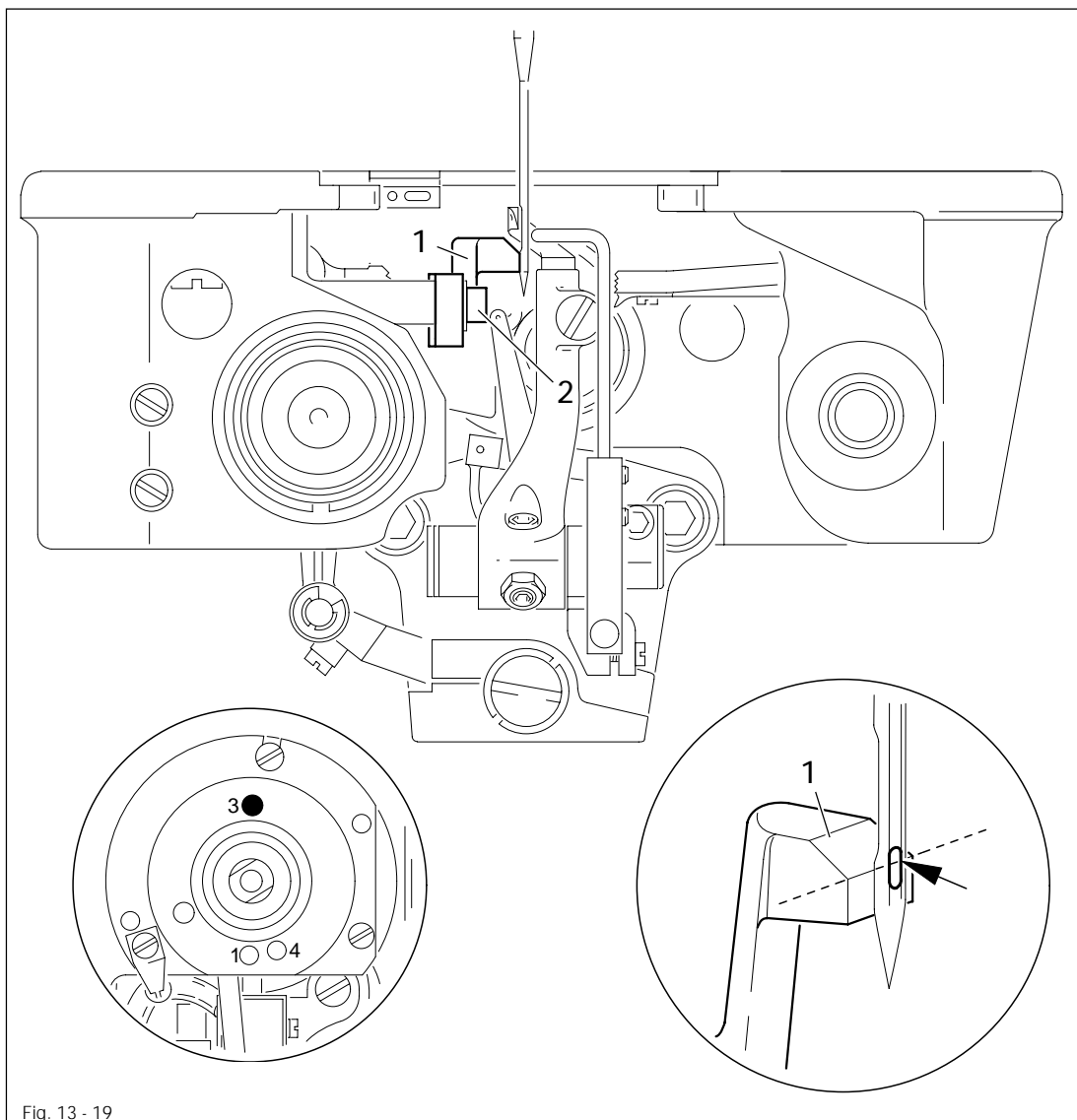


- Turn the balance wheel until the looper point, which is coming from the right, reaches the left side of the needle.
- Without turning the needle bar 1 (screw 2) adjust it according to the requirement.

13.05.18 Height of rear needle guard

Requirement

When the needle bar is at bottom dead center (pin in hole 3), the vertical surface of the needle guard 1 must cover **about 2/3** of the needle eye.

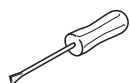
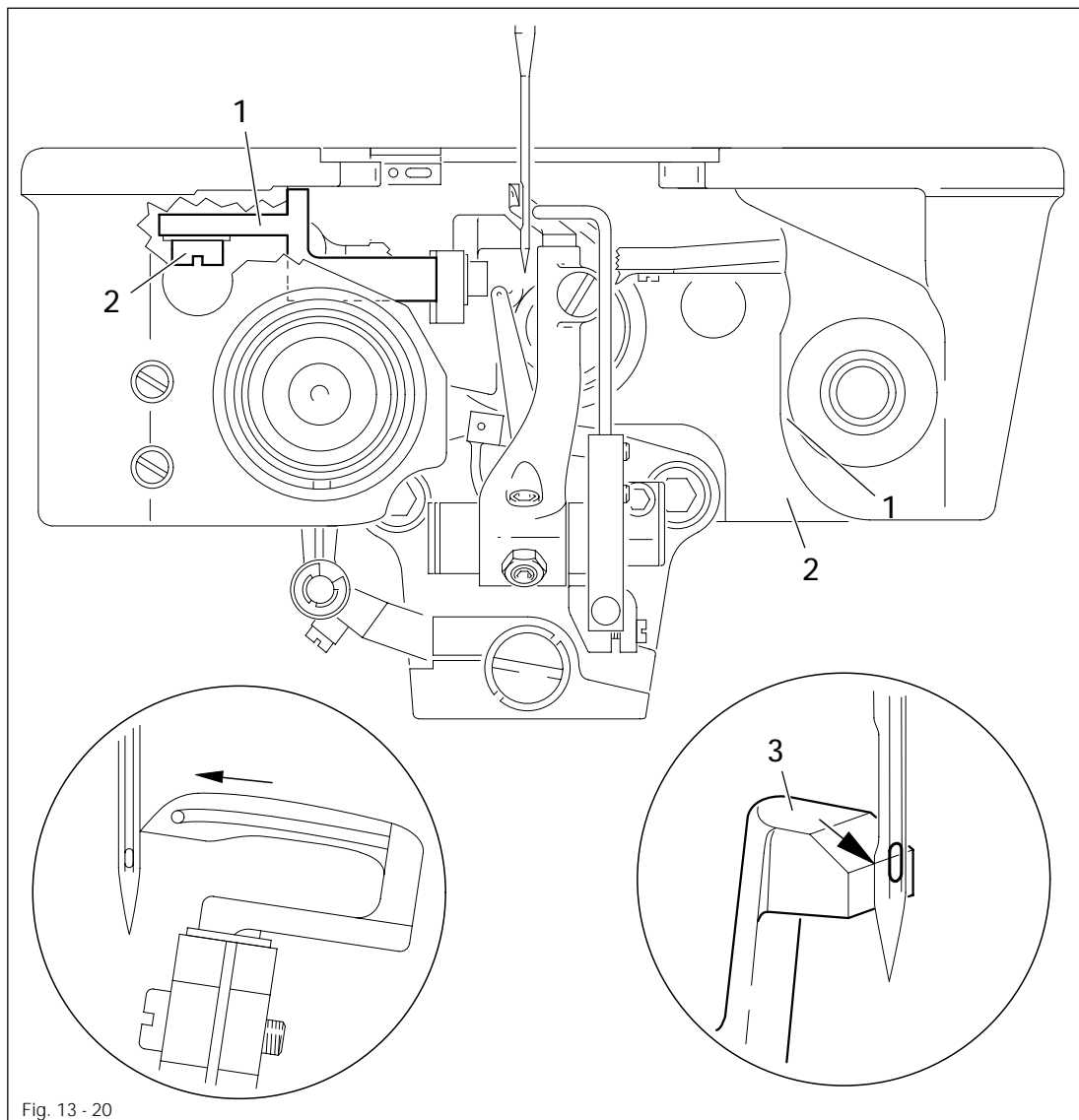


- Bring the needle bar to BDC.
- Adjust needle guard 1 (screw 2) according to the requirement.

13.05.19 Clearance between rear needle guard and needle

Requirement

When the point of the looper, which is advancing from the right, reaches the right side of the needle, the needle guard 3 must still be in slight contact with the needle.



- Turn the balance wheel until the looper point is located at the right side of the needle.
- Adjust bracket 1 (screw 2) according to the requirement.



Under no circumstances should the needle be deflected by the needle guard 3!

13.05.20 Position of the front needle guard (does not apply to all machines)

Requirement

When the point of the looper 1, which is advancing from the right, is positioned in the center of the needle, the needle guard clip 4 must

1. have a side clearance to the needle of 0.3 - 0.5 mm
2. be parallel to the looper blade
3. have its top edge at the same height as the point of looper 1.

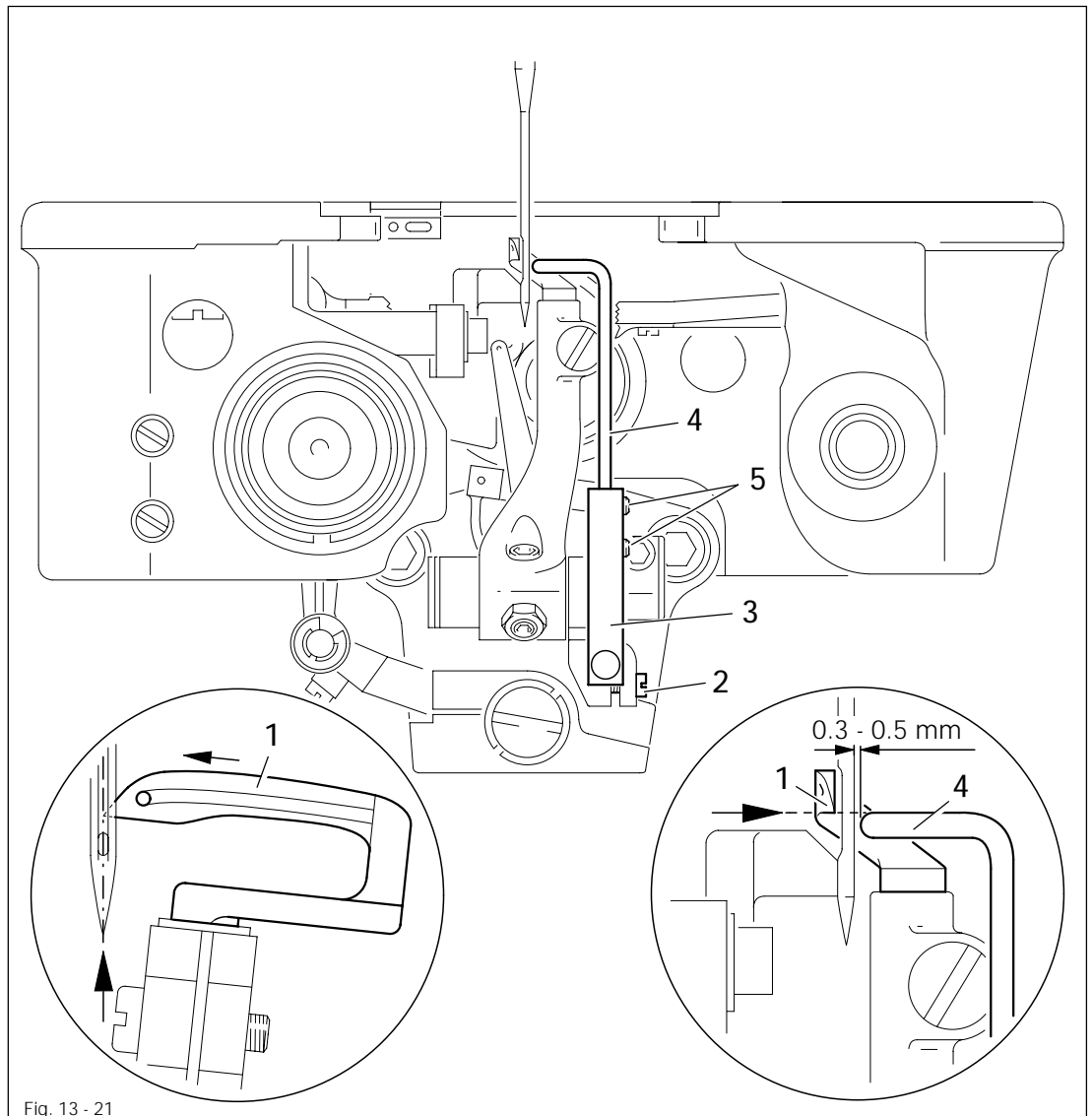
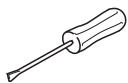


Fig. 13 - 21



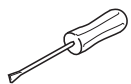
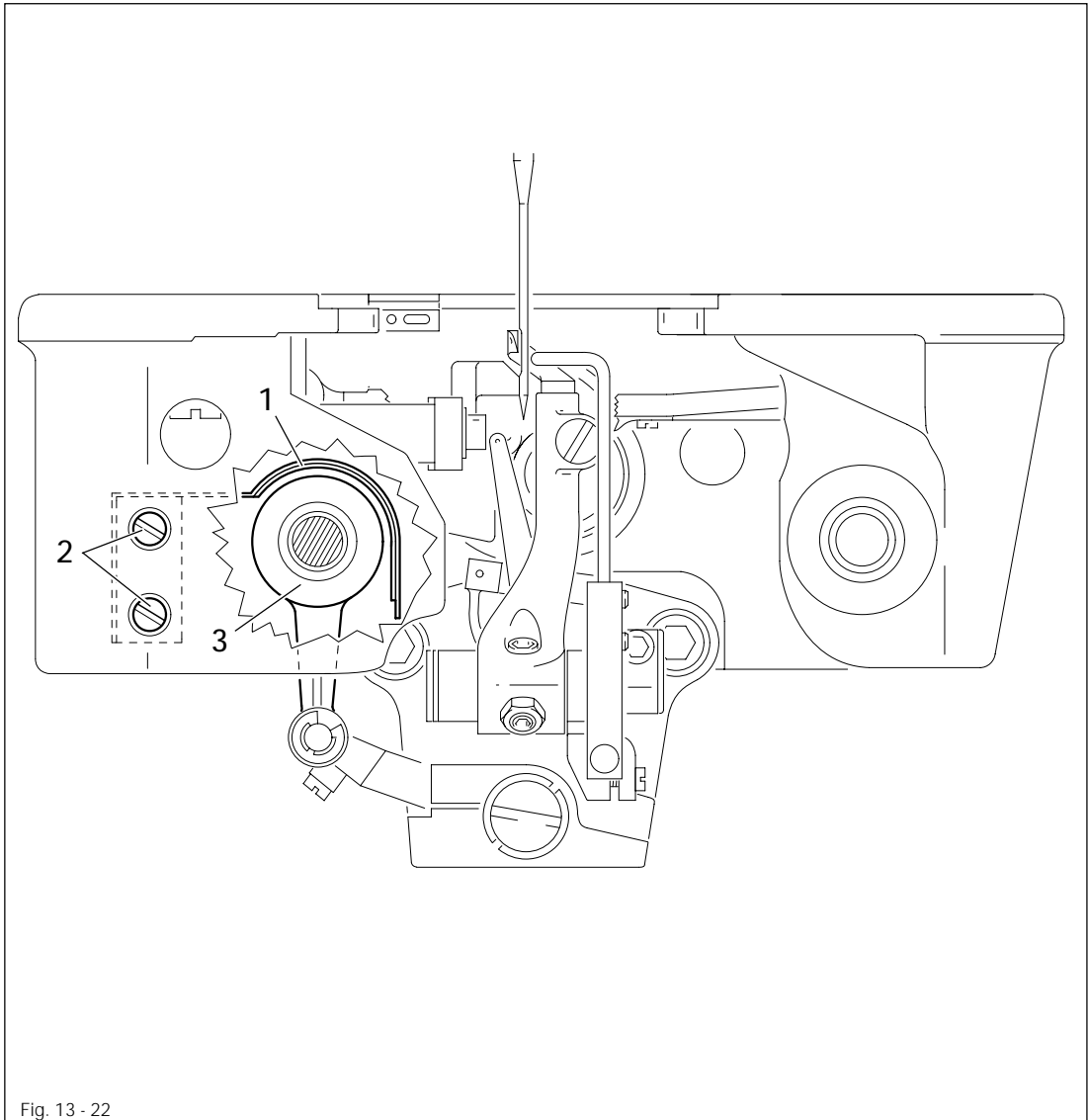
- By turning the balance wheel bring looper 1 to its left point of reversal.
- Loosen screws 2.
- Adjust needle guard bracket 3 so that in this position the needle guard clip 4 is not in contact with looper 1.
- Slightly tighten screws 2.
- Turn the balance wheel until the point of the looper 1, when coming from the right, is positioned in the center of the needle.
- Adjust needle guard bracket 3 according to requirement 1.
- Align needle guard clip 4 (screws 5) according to requirement 2 and 3.

Adjustment

13.05.21 Guard of looper-avoiding-motion eccentric

Requirement

During motion the eccentric 3 must not touch guard 1.

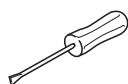
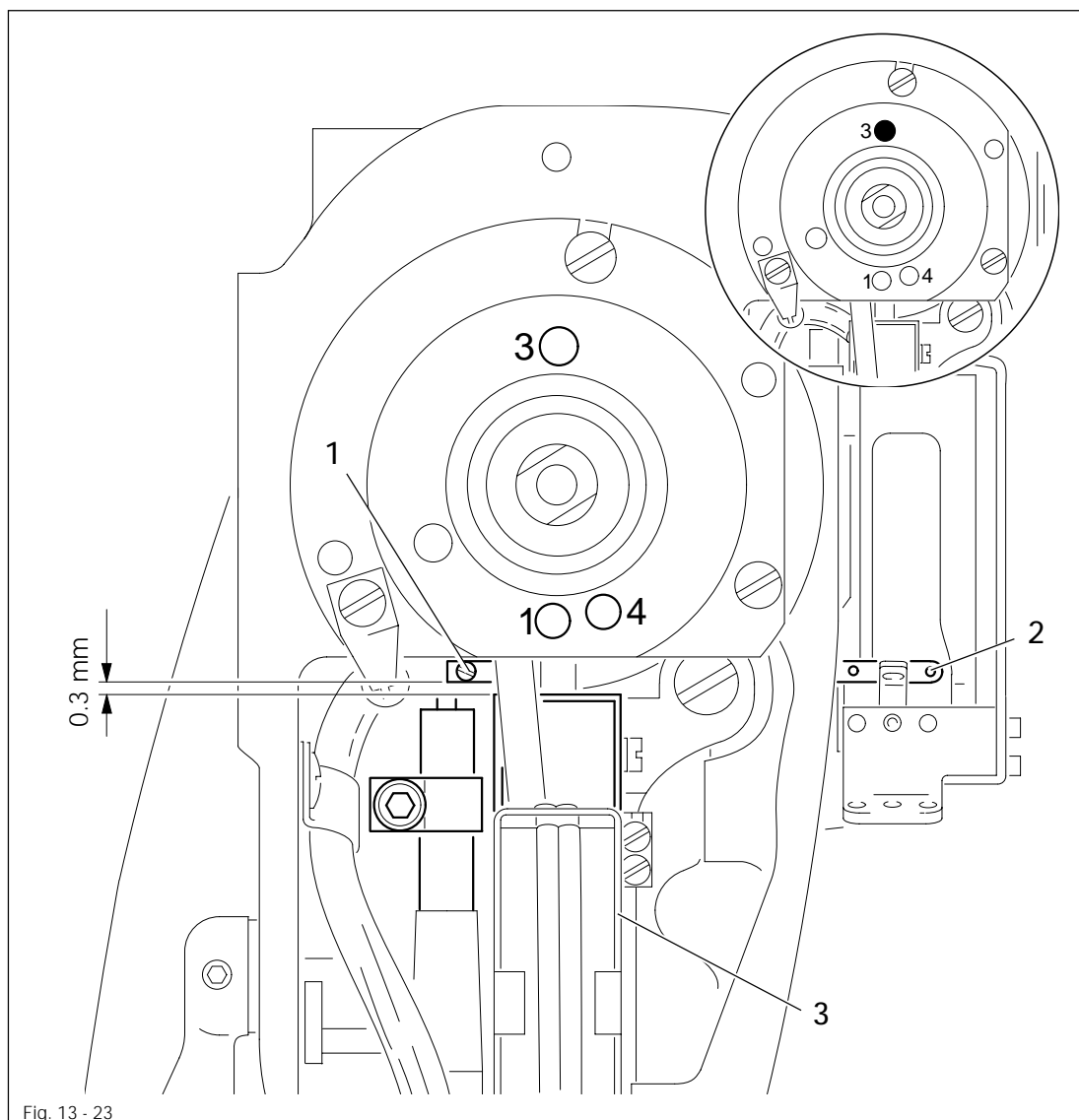


- Adjust guard 1 (screws 2, accessible through adjustment holes) according to the requirement.

13.05.22 Take-up lever

Requirement

1. When the needle bar is at BDC (pin in hole 3) there must be a clearance of about 0.3 mm between the take-up lever 2 and the needle bar frame 3.
2. The take-up lever 2 must be able to move freely in the center of the needle head slot, and must not have any contact either at TDC or BDC.

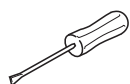
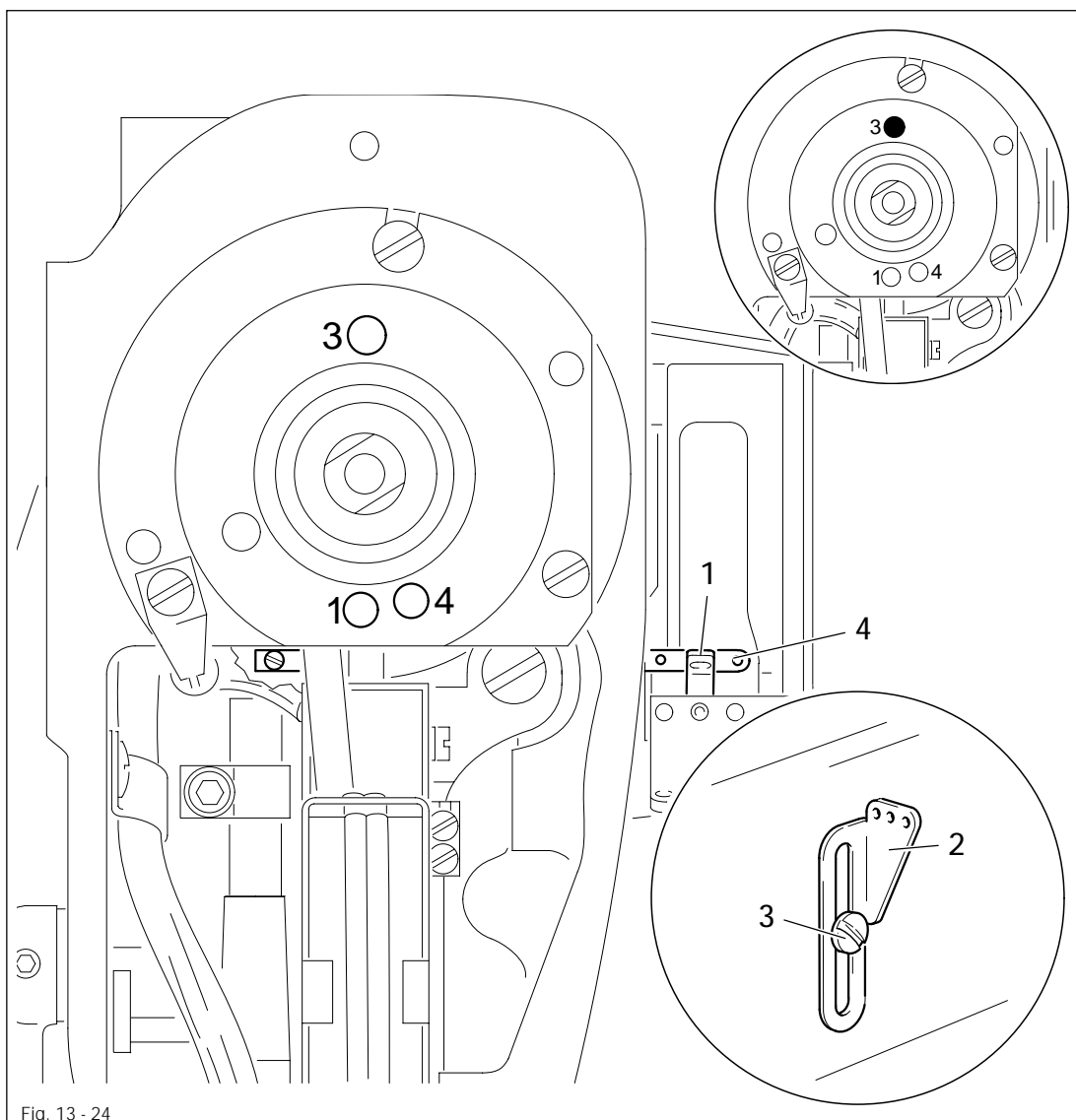


- By turning the handwheel make screw 1 accessible and loosen it slightly.
- Bring needle bar to BDC.
- Adjust take-up lever 2 according to requirement 1.
- Tighten screw 1 in compliance with requirement 2.

13.05.23 Basic setting of the needle thread regulator and the thread guide

Requirement

1. With the needle bar at BDC (pin in hole 3) the eye of the needle thread regulator 1 and the adjustment hole of the take-up lever 4 must be in line.
2. The thread guide 2 must be vertical and attached with a screw in the center of the elongated hole.



- Bring the needle bar to bottom dead center.
- After loosening the screw, adjust the needle thread regulator 1 according to **requirement 1**.
- Tighten the screw of the needle thread regulator.
- Align thread guide 2 (screw 3) according to **requirement 2**.



Depending on the type of material and thread used, the basic setting may have to be modified.

13.05.24 Looper thread regulator and looper thread take-up

Requirement

1. The distance between the front edge of looper thread regulator 1 and the rear needle plate edge guide must be **29 mm**.
2. The front edges of the thread take-up device 3 and the thread regulator 1 must be about **8 mm** apart.

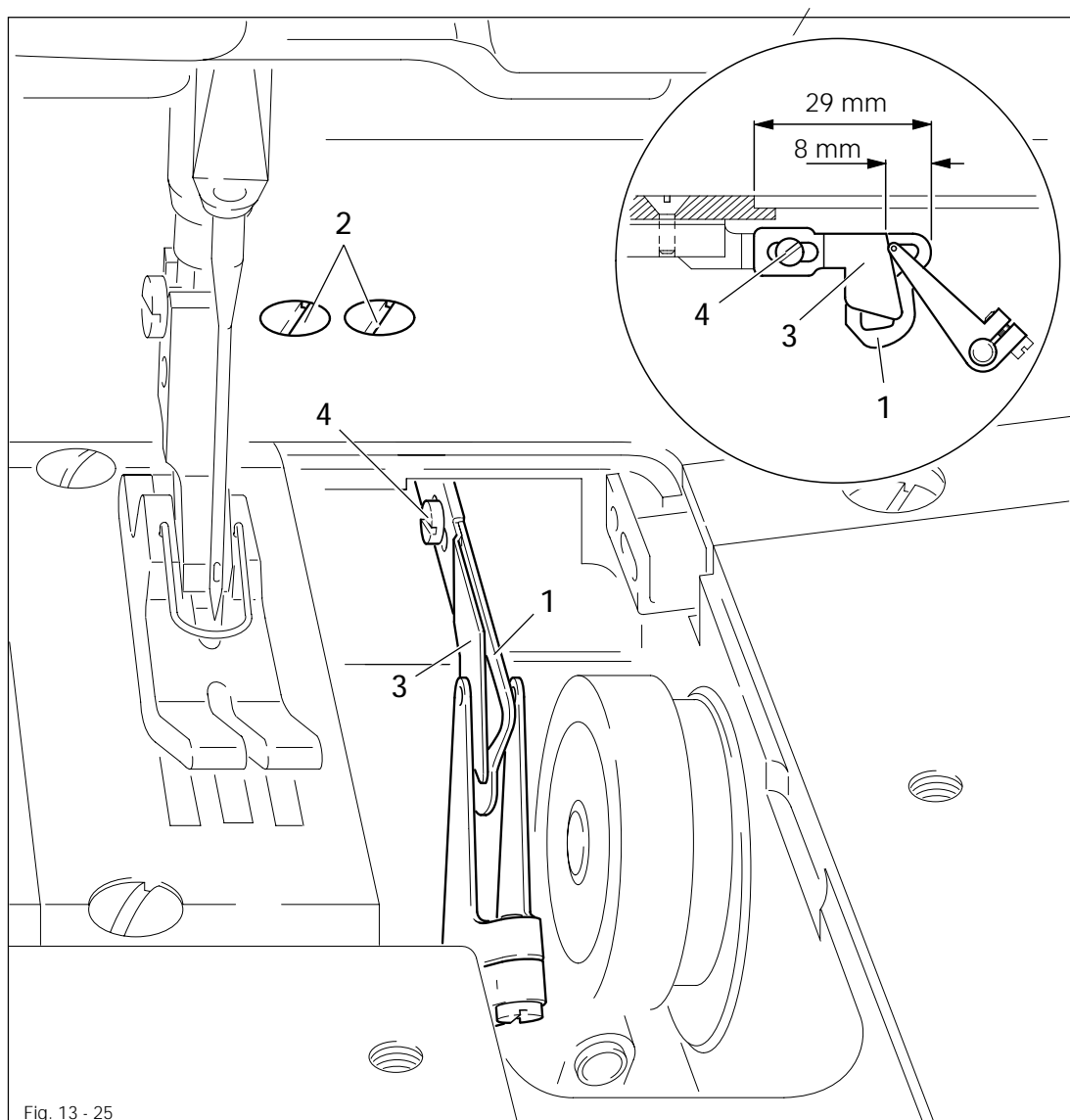
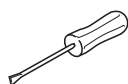


Fig. 13 - 25



- Adjust thread regulator 1 (screws 2) according to **requirement 1**.
- Adjust thread take-up device 3 (screw 4) according to **requirement 2**.



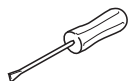
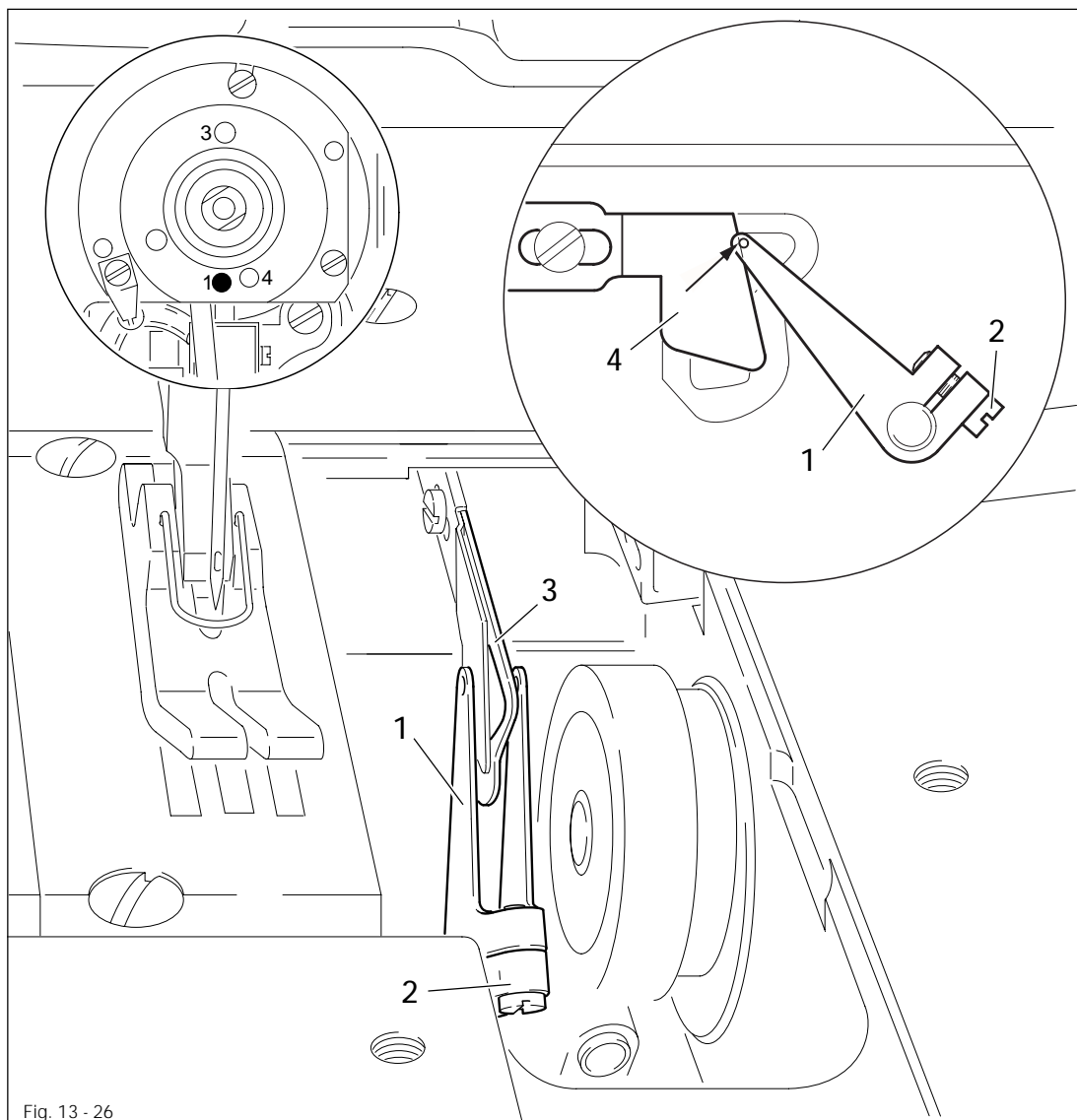
Depending on the type of material and thread used, the basic setting may have to be modified.

Adjustment

13.05.25 Looper thread puller

Requirement

With the needle bar in top dead center (pin in hole 1) both eyes of looper thread puller 1 must be at the front edge of the thread take-up device 4.



- Bring needle bar to top dead center.
- Turn thread puller 1 (screw 2) according to the **requirement**, making sure that the prongs of thread puller 1 are in the middle of the thread regulator 3.

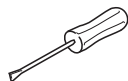
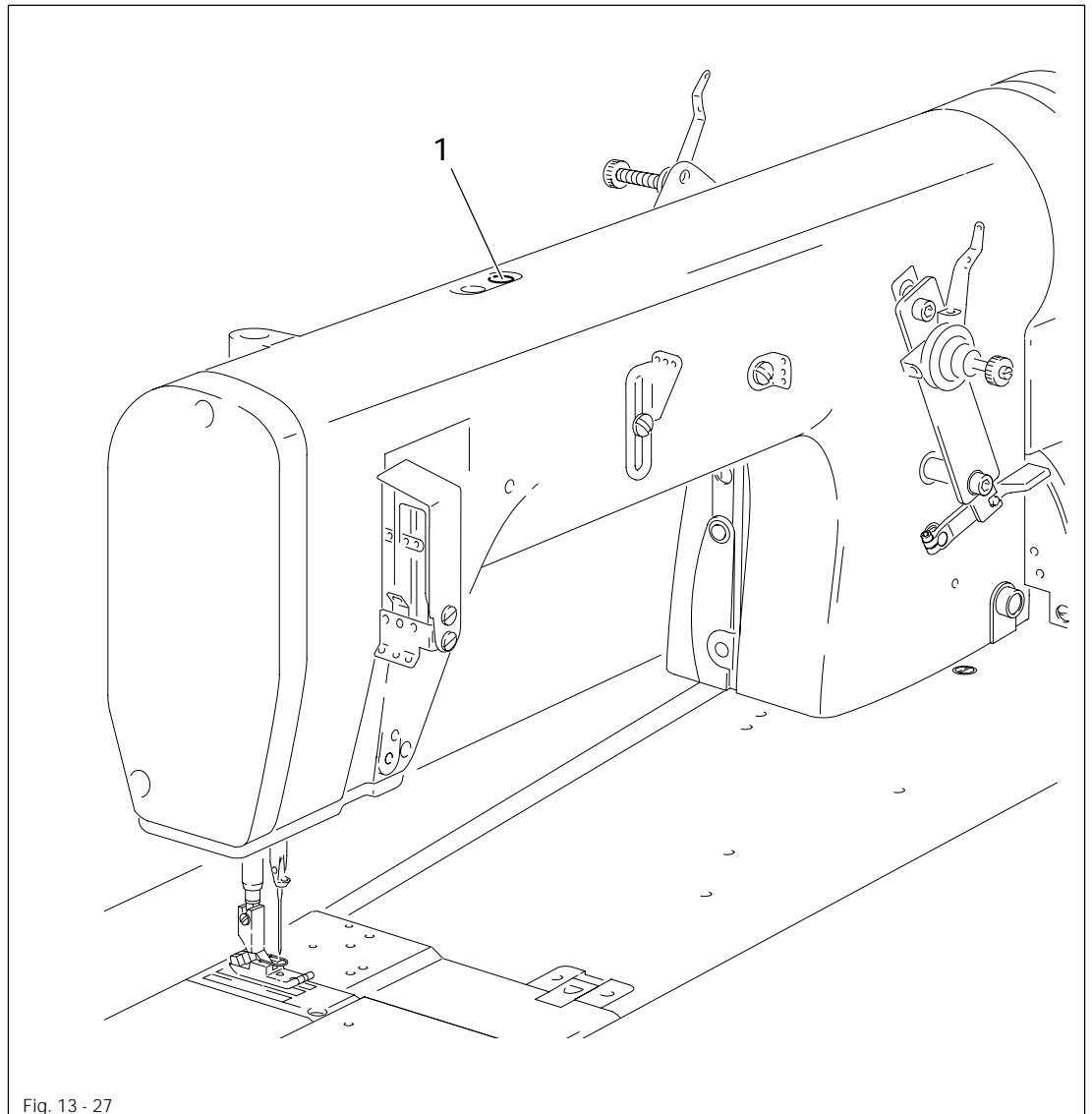


Depending on the type of material and thread used, the basic setting may have to be modified.

13.05.26 Presser foot pressure

Requirement

The material feed should function perfectly at all times without any pressure marks occurring on the fabric.



- Turn screw 1 according to the requirement.

13.06 Adjusting the thread-trimming device

13.06.01 Pre-adjust the thread catcher

Requirement

1. Between the point of the thread catcher 4 and the front edge of the mounting plate 1 there must be a clearance of 32.5 - 33 mm.
2. The guide plates 5 must be parallel to the mounting plate 1.
3. The thread catcher 4 should move freely and with little play.

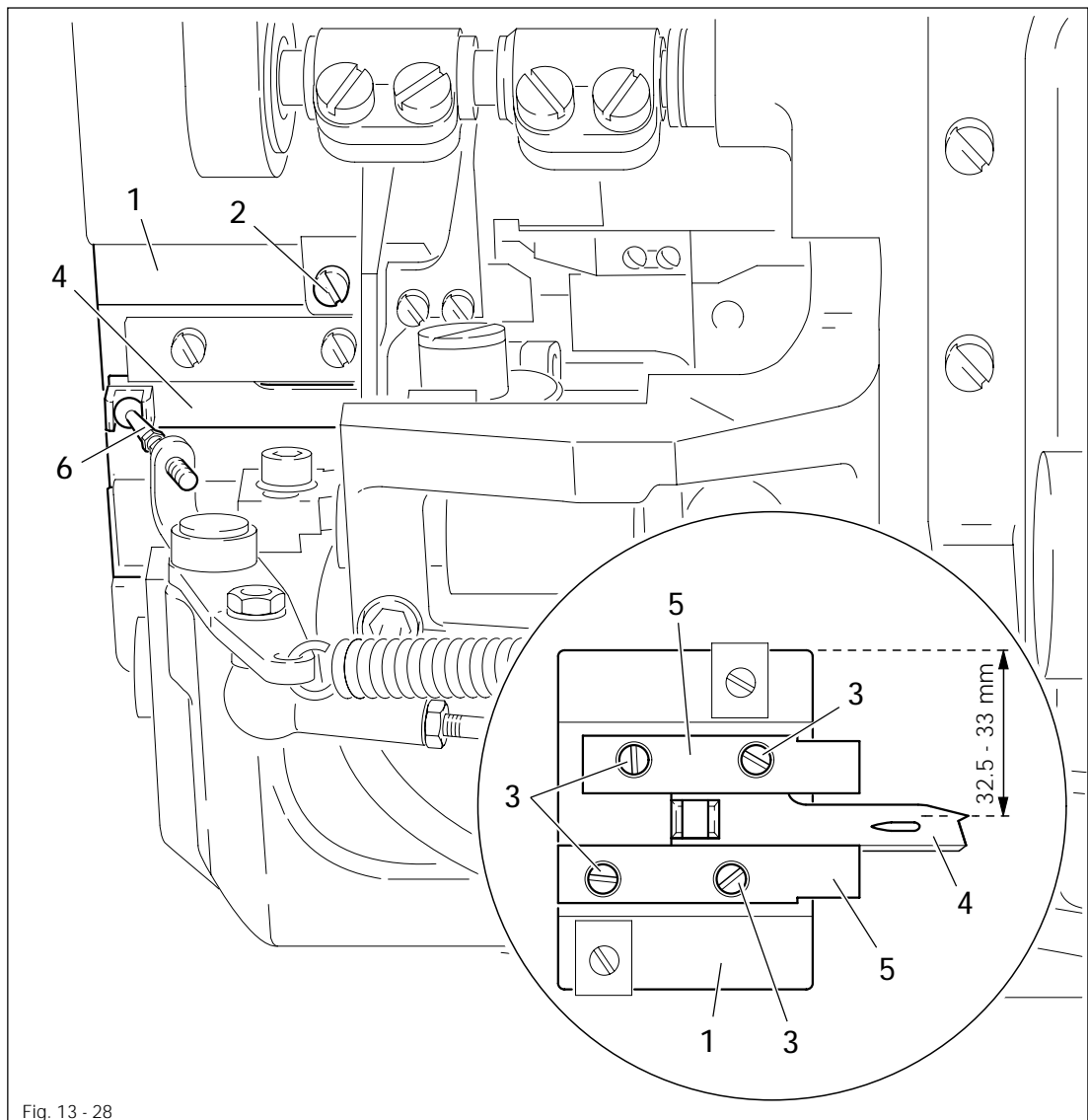
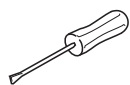


Fig. 13 - 28



- Remove mounting plate 1 (screws 2).
- Loosen screws 3.
- Adjust thread catcher 4 according to requirement 1.
- Align guide plates 5 according to requirements 2 and 3 and tighten screws 3.
- Making sure that the ball stud 6 engages in the actuator of thread catcher 4, unscrew the mounting plate 1.

13.06.02 Positioning the ball stud

Requirement

In a vertical position the ball stud 1 must

1. be located in the middle of actuator 5 and
2. have a clearance of 0.5 mm to the bottom of actuator 5.

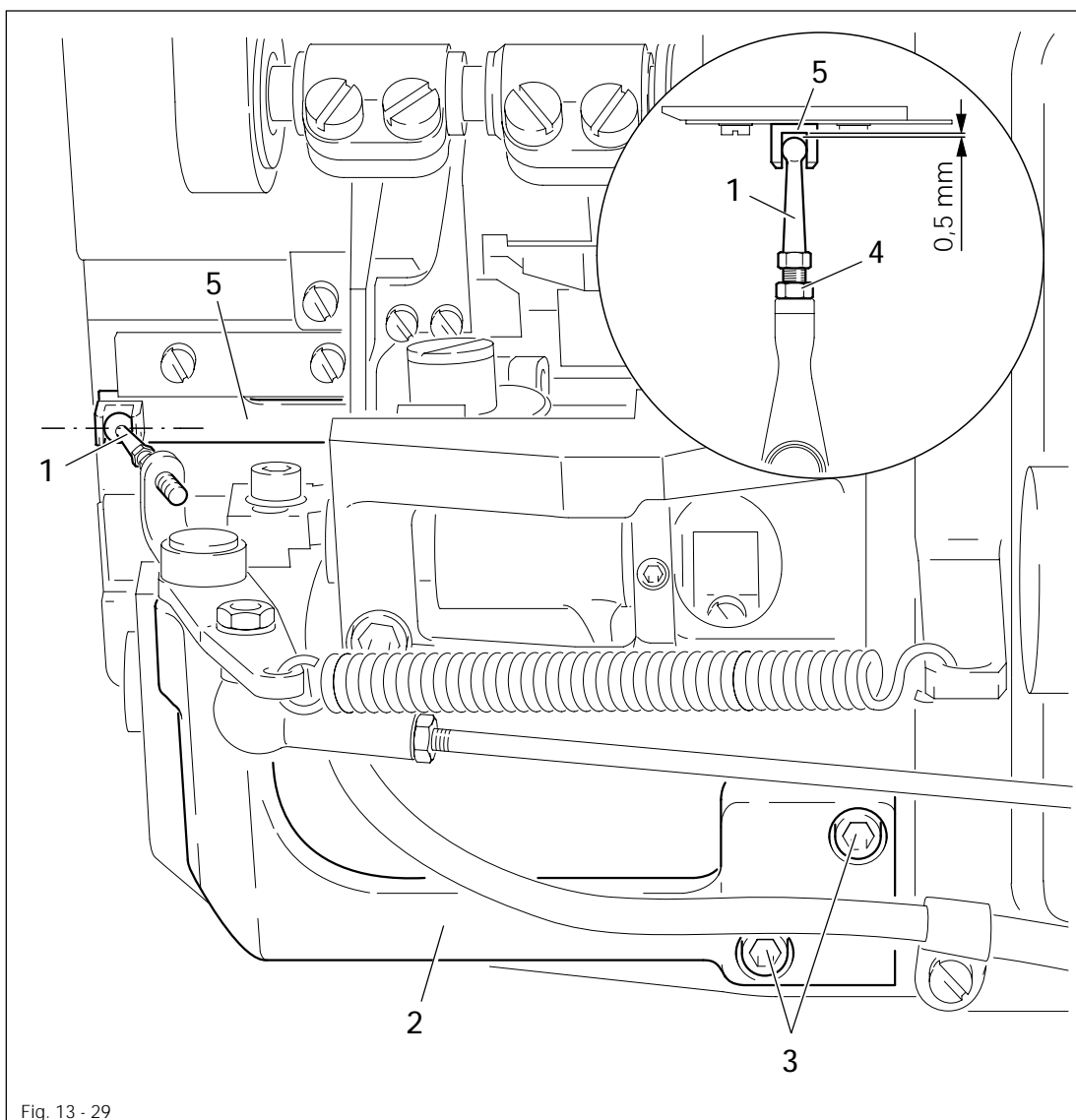
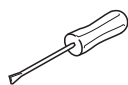


Fig. 13 - 29

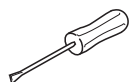
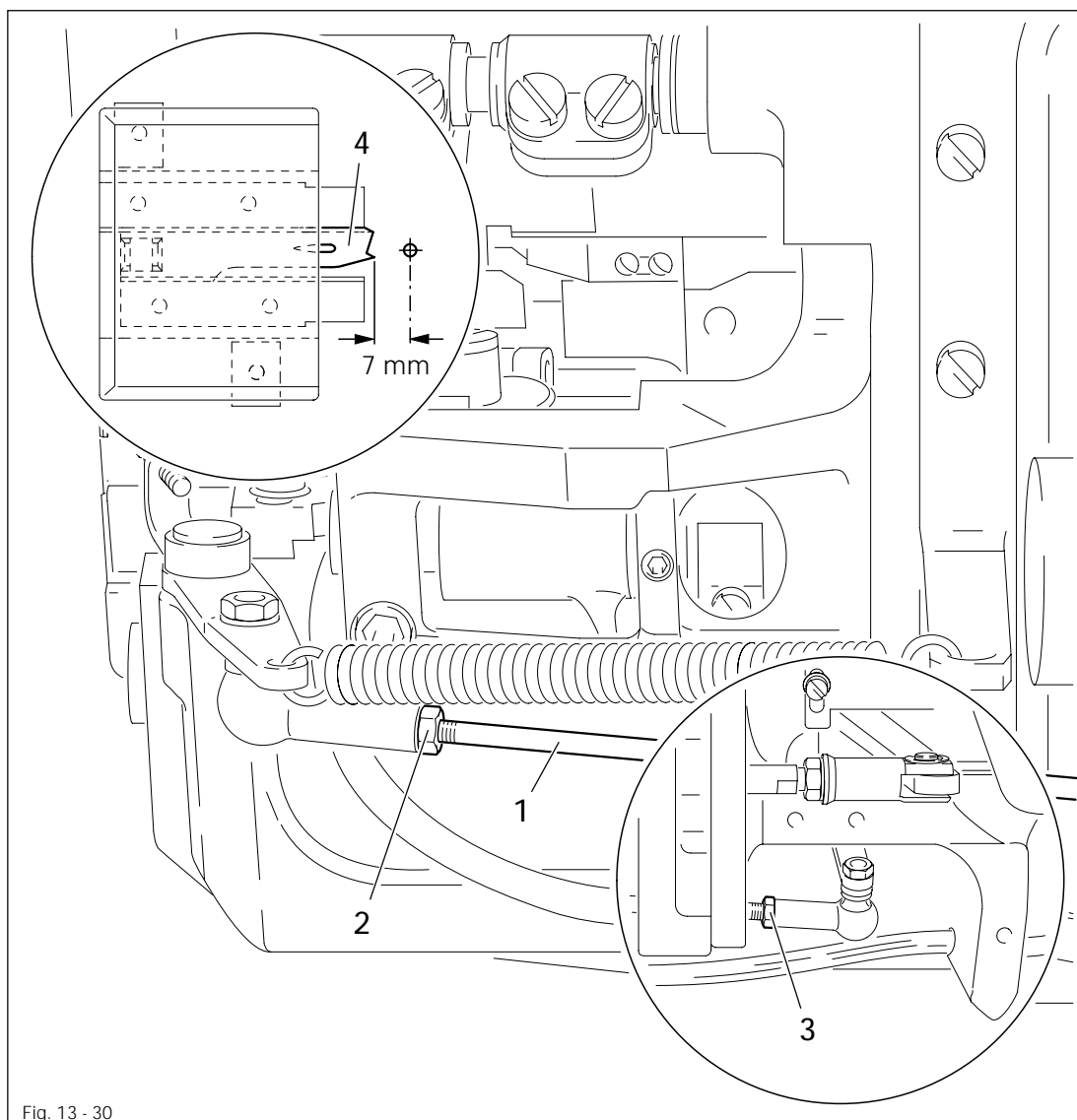


- Set ball stud 1 in a vertical position.
- Adjust bracket 2 (screws 3) according to requirement 1.
- Turn ball stud 1 (nut 4) according to requirement 2.

13.06.03 Position of thread catcher to needle

Requirement

When the thread-trimming device is in a neutral position, there must be a clearance of 7 mm between the point of the thread catcher 4 and the needle center.

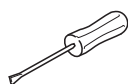
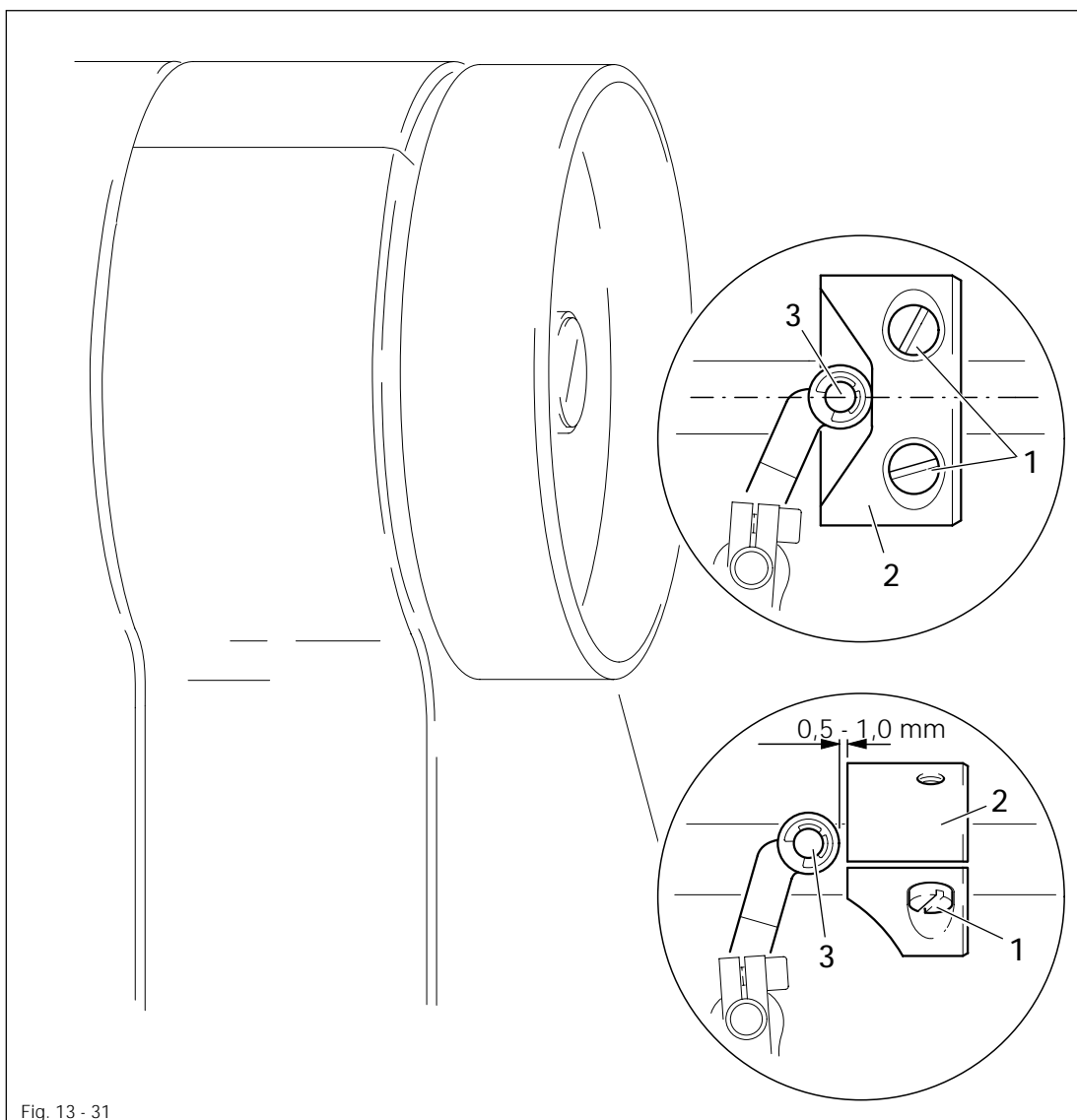


- Bring the thread-trimming device into its neutral position.
- Turn linkage rod 1 (nut 2, nut 3 with left-handed thread) according to the requirement.

13.06.04 Thread catcher interlock

Requirement

1. When the needle bar is at TDC, the roller 3 must be located in the center of the cutout of the interlocking cam 2.
2. When the thread-trimming device is in a neutral position and the needle bar is at BDC, there must be a clearance of 0.5 - 1 mm between the interlocking cam 2 and the roller 3.



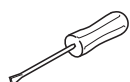
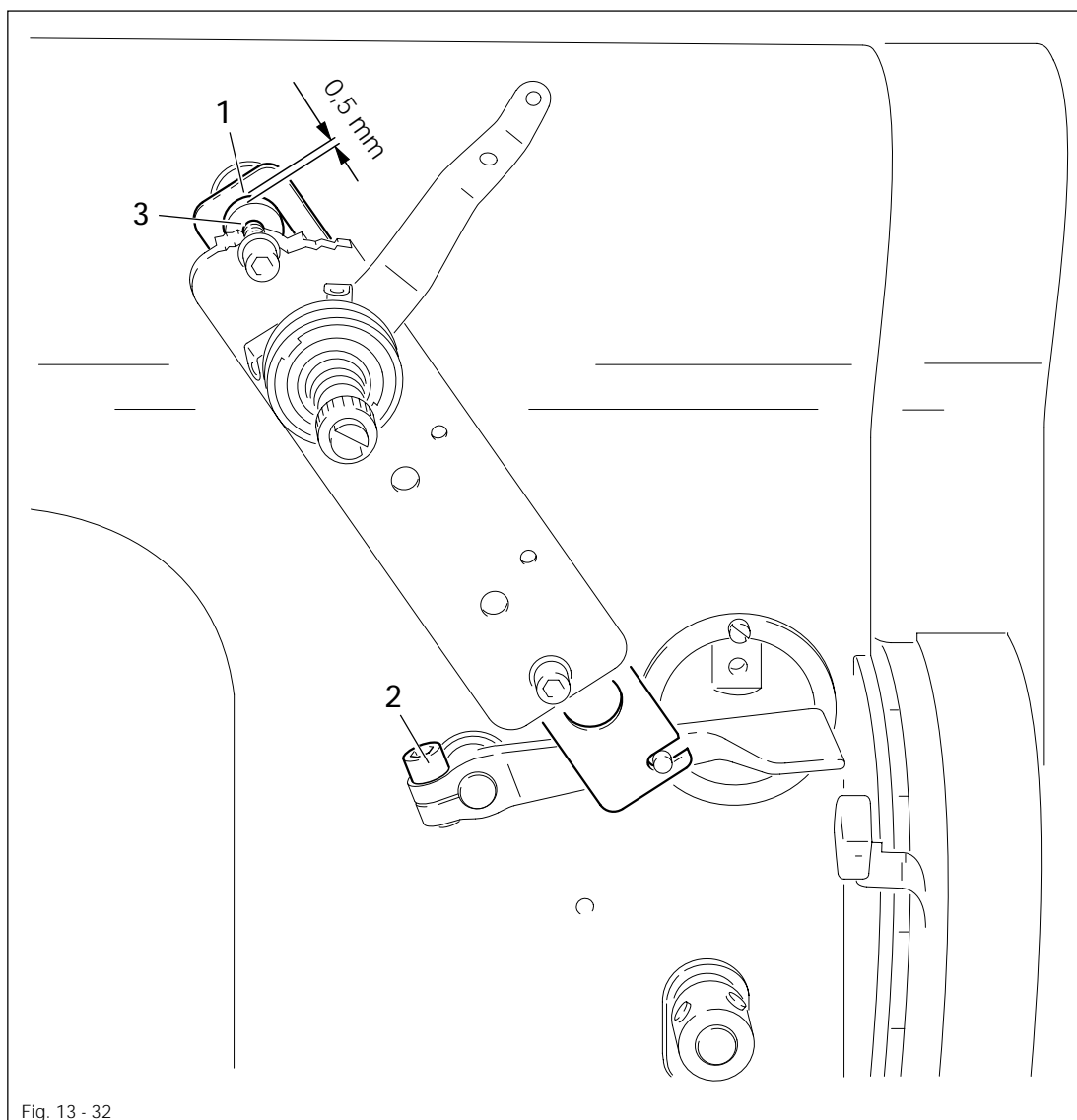
- Loosen screws 1 so that the interlocking cam can be turned on its shaft with resistance.
- Bring the needle bar to TDC.
- In this position turn the interlocking cam 2 according to **requirement 1**.
- Bring the thread-trimming device to its neutral position and the needle bar to BDC.
- Adjust interlocking cam 2 according to **requirement 2** and tighten screws 1.

Adjustment

13.06.05 Tension release

Requirement

When the cylinder is fully actuated, there must be a clearance of about **0.5 mm** between the top end of the elongated hole in plate 1 and the guide pin 3.



- Fully actuate the cylinder of the thread-trimming device.
- Adjust plate 1 (screw 2) according to the **requirement**.

13.06.06 Cutting test

Requirement

1. The point of the thread catcher 2 must pick up the looper thread and the rear part of the needle thread loop reliably.
2. When the cover plate 1 is removed, the threads must remain undamaged.
3. When the cover plate 1 is in position, the thread catcher 2 must move between the knife 3 and the clamp springs 5, during which the threads are properly cut and bound.

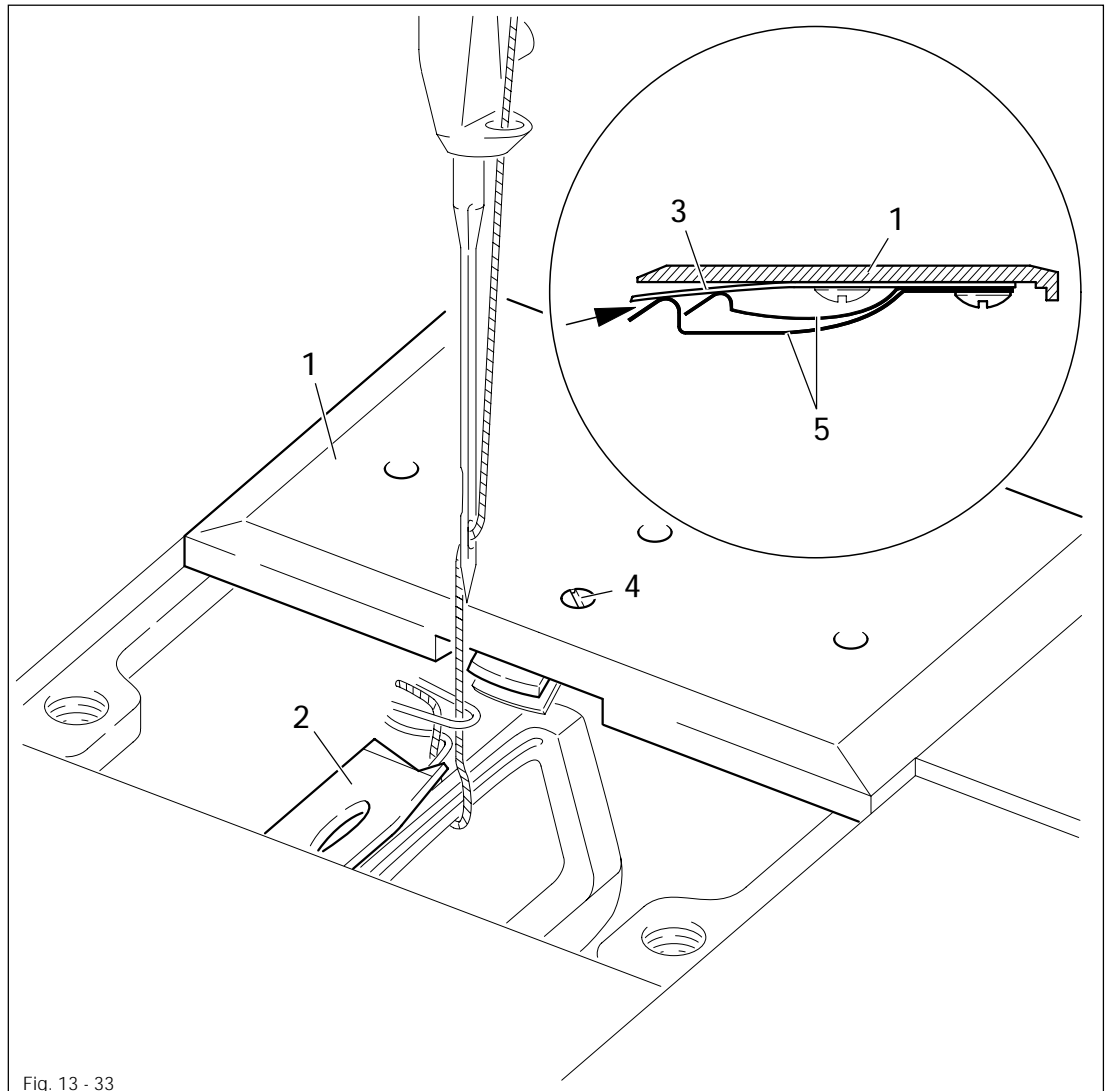
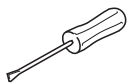


Fig. 13 - 33

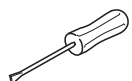
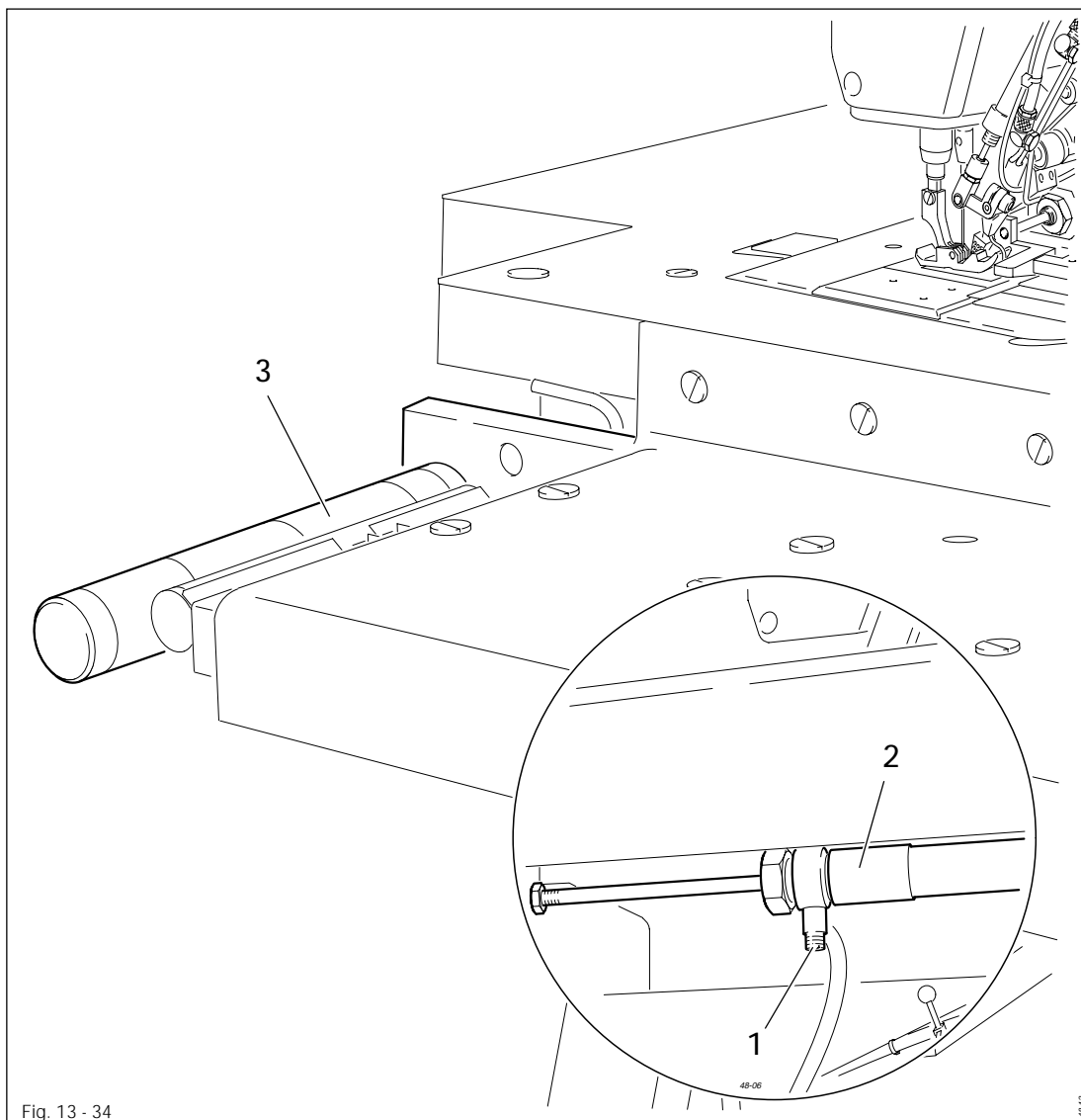


- Place material under the presser foot and sew a few stitches.
- Remove cover plate 1.
- Position the needle as in **Chapter 13.06.04 Thread catcher interlock**.
- Operate the cutting cylinder manually, checking **requirements 1 and 2**.
- If necessary, readjust thread catcher 2 accordingly.
- Screw on cover plate 1.
- Operate cutting cylinder again, checking **requirement 3**.
- If necessary, carefully turn screw 4 according to **requirement 3**.

13.07 Adjusting the bundle clamp

Requirement

The pressure of cylinder 2 should be set so that the material can be held reliably without bundle clamp 3 exerting excessively high pressure.

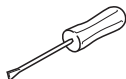
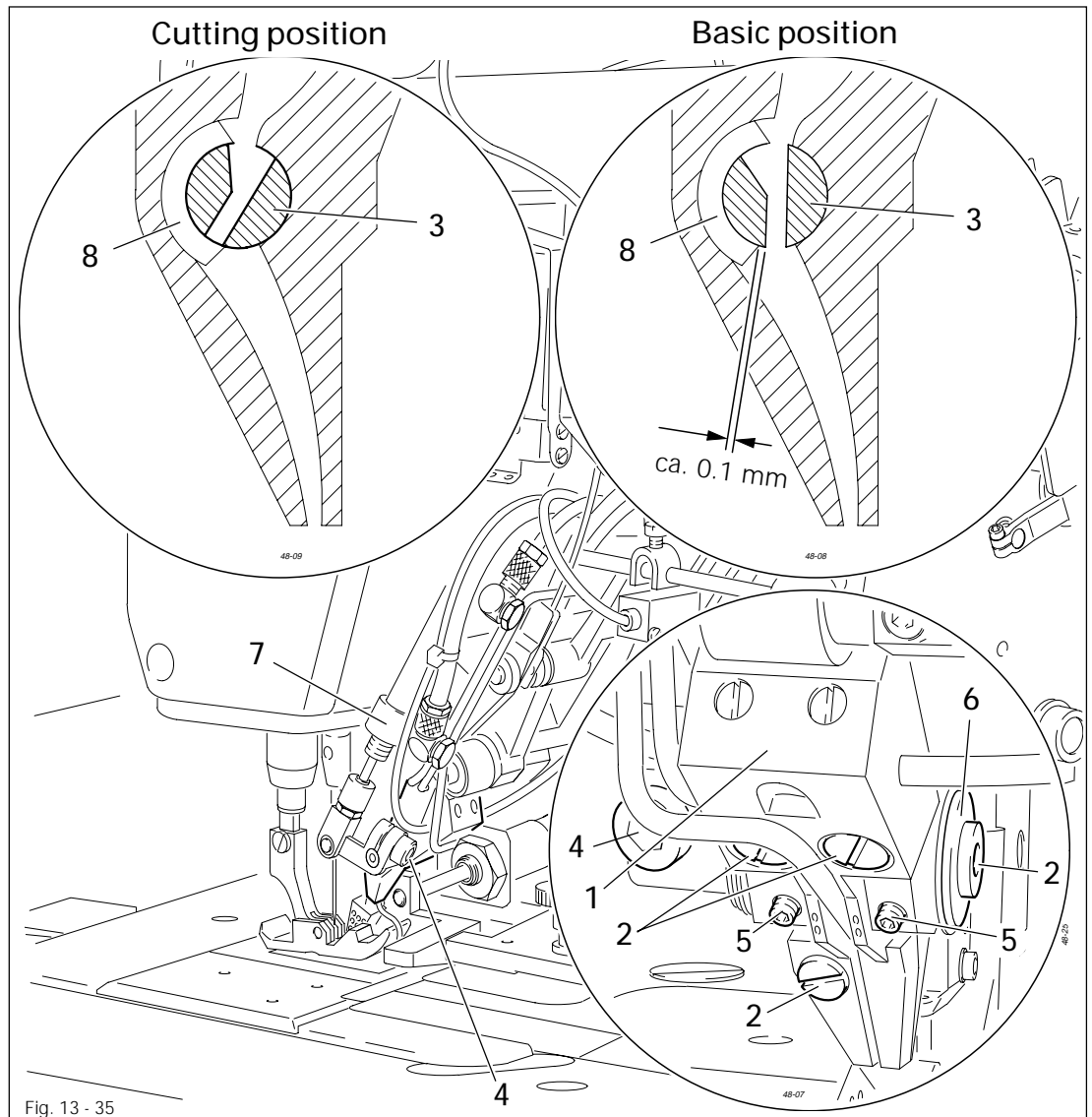


- Turn adjustment screw 1 according to the requirement.

13.08 Adjusting the tape feed device

Requirement

When cylinder 7 is extended, the edge of inside knife 3 must be approx. 0.1 mm above the edge of outside knife 8.



- Remove cover 1 (screws 2)
- Adjust inside knife 3 (screw 4) according to the requirement.

Replacing the knife:

- Loosen screw 5.
- Remove retaining ring 6 and pull out the complete knife towards the left.
- To reassemble the knife follow the instructions in the reverse order.

13.09 Parameter settings

Group	Parameter	Description	Adjustment range	Standard value
1	110	Speed for condensing end stitch		max. 2000
	113	Only start when photoelectric barrier is not lit		I
	199	Speed for photoelectric barrier compensation stitches		max. 4200
2	206	Stop seam segment at constant speed		I
	208	Speed constant		I
	221	Speed for sewing program 1		max. 4200
	222	Speed for sewing program 2		max. 4200
5	572	Number of stitches for stitch condensation at end of seam		20
	585	Speed limitation N1		3600
	586	Speed limitation N2		3200
	587	Speed limitation N3		1200
	591	Speed limitation		I
6	605	Speed display		I
	607	Max. speed level 12	100 - 10000	max. 4200
	651	Automatic lowering of the presser foot when the machine stops I = yes, II = no	I - II	II
7	700	Needle position 0 Needle reference position	0 - 239	
	702	Needle position 1 (needle lowered)	0 - 239	
	703	Needle position 2 (take-up lever raised)	0 - 239	
	714	Switch-on time for cutting chainstitch/reversing		80
	721	Phase output A5 100% switched		0
	723	Brake ramp steep		50
	799	Machine class chainstitch		I
8	800	Rotating direction of motor		I



For more information see the motor instruction manual.

13.10 Table of inputs and outputs

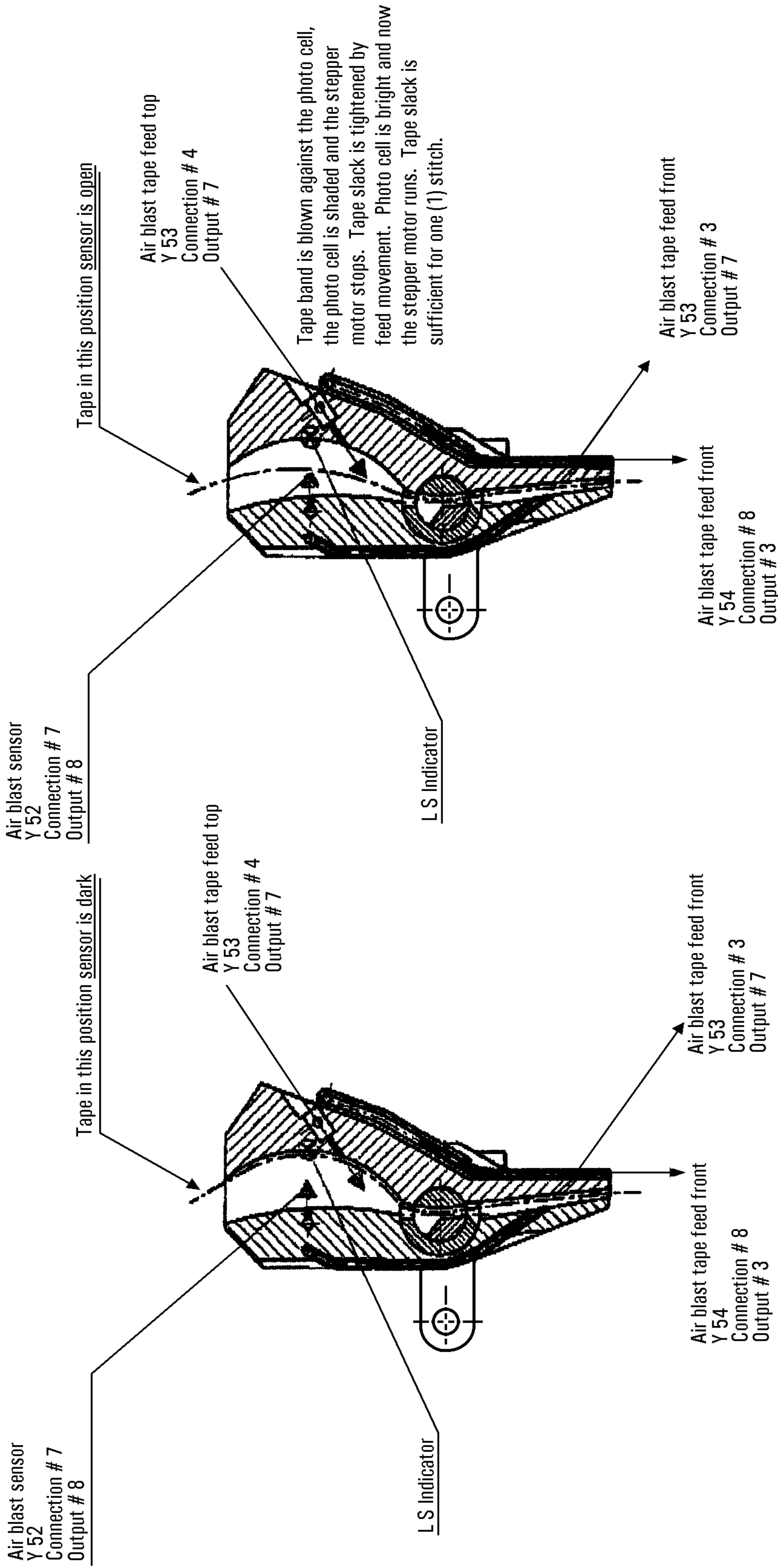
Inputs				
Input	Signal	Terminal M-DX-6	Connection	Terminal
E1	Counting signal	1	Quick-Motor A16	X1/21
E2	Switch to next area	2		
GND		3		
E3	Thread wiper	4	Quick-Motor A3	X1/7
E4	GST-stepping motor	5	Initiator B200	X20/2
GND		6	Initiator B200	
E5	Motor running	7	Quick-Motor A8	X1/4
E6	Tape control	8	Tape control A4	18
GND		9	Tape control	3
E7	Error tape control	10	Tape control A6	21
E8	Stitch condensation	11	Quick-Motor A5	X1/11
GND		12	Quick-Motor 0 V	X1/24

Outputs					
Output	Code number	Signal	Terminal PFAFF	Connection	Terminal
+ 24 V			13	Initiator B200	X20/1
A1	1	Start inhibitor	14	Quick-Motor E6	X1/6
A2	2	Speed limiter	15	Quick-Motor E13	X1/20
+ 24 V			16	Y19	
A3	3	Speed limiter	17	Quick-Motor E1	X1/3
A4	4	Air blast sewing	18	Y25	
+ 24 V			19	Y25	
A5	5	Edge guide	20	Y19	
A6	6	Cut tape	21	Tape control E2	2
+ 24 V			22	Valve Y24	
A7	7	Adjust tape	23	Tape control E1	1
A8	8	Air blast stacker	24	Y24	
Special orders					
A8	9	Air blast stacker	24	Y24, with time reset	

3811-14/71

B - RSV - G1 Position and adjustments of the air blast for tape feed.

3801-10/071



Layout of the check return valves
(valve block assembly as seen from above)



* = number of pneumatic connection

Adjustments of the check return

1. Y 52 - Valve 52.2 manually thread the tape, close valve. Open valve just enough to ensure illumination of the diode (see FS-M1 on LS indicator) reliably indicating switching status. (pull tape forward and release, output 8 is on)
2. Y 54 - Valve 54.2 open valve only as far as necessary to insure sewing - on.
3. Y 53 - Valve 53.3 open valve only as far as necessary to insure a safe withdrawal of the tape.
4. Y 53 - Valve 53.4 open valve only as far as necessary to insure the tape is moved out of the detection position during feed forward.

Just - 30117
TEM/34-57
11.06.2001
Rahm

PFAFF

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