BEISLER NÄHAUTOMATION

ADVANCED SEWING EQUIPMENT

1265/5

Single-head sewing unit for serging and overlocking for trousers with knee lining

Operating Instructions

Installations Instructions

Service Instructions

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Foreword

This instruction manual is intended to help the user to become familiar with the machine and take advantage of its application possibilities in accordance with the recommendations.

The instruction manual contains important information on how to operate the machine securely, properly and economically. Observation of the instructions eliminates danger, reduces costs for repair and down-times, and increases the reliability and life of the machine.

The instruction manual is intended to complement existing national accident prevention and environment protection regulations.

The instruction manual must always be available at the machine/sewing unit.

The instruction manual must be read and applied by any person that is authorized to work on the machine/sewing unit. This means:

– Operation, including equipping, troubleshooting during the work cycle, removing of fabric waste,
– Service (maintenance, inspection, repair and/or
– Transport.

The user also has to assure that only authorized personnel work on the machine.

The user is obliged to check the machine at least once per shift for apparent damages and to immediatly report any changes (including the performance in service), which impair the safety.

The user company must ensure that the machine is only operated in perfect working order.

Never remove or disable any safety devices.

If safety devices need to be removed for equipping, repairing or maintaining, the safety devices must be remounted directly after completion of the maintenance and repair work.

Unauthorized modification of the machine rules out liability of the manufacturer for damage resulting from this.

Observe all safety and danger recommendations on the machine/unit! The yellow-and-black striped surfaces designate permanend danger areas, eg danger of squashing, cutting, shearing or collision.

Besides the recommendations in this instruction manual also observe the general safety and accident prevention regulations!

General safety instructions

The non-observance of the following safety instructions can cause bodily injuries or damages to the machine.

1. The machine must only be commissioned in full knowledge of the instruction book and operated by persons with appropriate training.

2. Before putting into service also read the safety rules and instructions of the motor supplier.

3. The machine must be used only for the purpose intended. Use of the machine without the safety devices is not permitted. Observe all the relevant safety regulations.

4. When gauge parts are exchanged (e.g. needle, presser foot, needle plate, feed dog and bobbin) when threading, when the workplace is left, and during service work, the machine must be disconnected from the mains by switching off the master switch or disconnecting the mains plug.

5. Daily servicing work must be carried out only by appropriately trained persons.

6. Repairs, conversion and special maintenance work must only be carried out by technicians or persons with appropriate training.

7. For service or repair work on pneumatic systems, disconnect the machine from the compressed air supply system (max. 7-10 bar). Before disconnecting, reduce the pressure of the maintenance unit.
   Exceptions to this are only adjustments and functions checks made by appropriately trained technicians.

8. Work on the electrical equipment must be carried out only by electricians or appropriately trained persons.

9. Work on parts and systems under electric current is not permitted, except as specified in regulations DIN VDE 0105.

10. Conversion or changes to the machine must be authorized by us and made only in adherence to all safety regulations.

11. For repairs, only replacement parts approved by us must be used.

12. Commissioning of the sewing head is prohibited until such time as the entire sewing unit is found to comply with EC directives.

It is absolutely necessary to respect
the safety instructions marked by these signs.

Danger of bodily injuries !

Please note also the general safety instructions.

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Preface and general safety instructions

Part 1: Operating instructions cl.1265/5

Index Page:

1. Description of product

1.1 Description of proper use

The 1265/5 is a sewing unit which can properly be used for sewing light to medium-weight material. Such material is, as a rule, made of textile fibres. These materials are used in the garment industry.

In general only dry material must be sewn on this machine. The material must not contain any hard objects.

The seam is generally made with core thread, polyester fibre or cotton threads.
The dimensions for needle and hook threads can be taken from the table in chapter 4.2.

Before using any other threads it is necessary to estimate the consequential dangers and to take the respective safety measures, if required.

This sewing unit must only be installed and operated in dry and well-kept rooms. If the sewing unit is used in other rooms, which are not dry and well-kept, further measures to be agreed upon may become necessary (see EN 60204-31 :1999).

We, as manufacturer of industrial sewing machines, assume that at least semi-skilled operating personnel will be working on our products so that all usual operations and, where applicable, their risks are presumed to be known.

1.2 Brief description

The Beisler 1265/5 is a single-head sewing unit for serging of trousers parts with and without knee lining. The overlocking of the seat and fly bow as well as of the trousers hem can be integrated.

Optionally you can work with or without a hot fusing station (lining on top / lining below).

All sewing unit components are mounted on a stand welded of square steel tubes and controlled by a microprocessor system.

The sewing unit is operated via a control panel. Here it is possible to call up various control programs, to define new programs and to check all inputs and outputs for maintenance and repair purposes.

Machine head

- Pegasus two- or three-thread overlock machine EXT 5204-02 with top feed
- Separate step motor control for top feed and differential feed, for setting the desired lining fullness, also for stretch fabrics
- Microprocessor control, freely programmable
- Sewing drive Efka DC 1500
- Automatic fullness distribution at the side seam and crotch seam, programmable
- Height-adjustable edge guide for different material thicknesses
- Automatic contour guide, controlled via step motor
- Ejector via step motor for precise chain separating and positioning the trousers before stacking

- Step motor control with auxiliary feed for wide and difficult materials
- Processing of knee lining without fusing device for cut-to-size knee lining
- Optional fusing unit
- Light barrier for recognizing the seam beginning and seam end for automatic sewing start and stop
- Vertical cutter with suction for overlocking and serging in one operation
- Chain separating device with suction, programmable
- Adjustable blowing nozzles in the table top for supporting the material feed
- Height-adjustable stand, infinitely variable from 850 mm to 1200 mm
- Integrated stacking device

1.3 Technical data

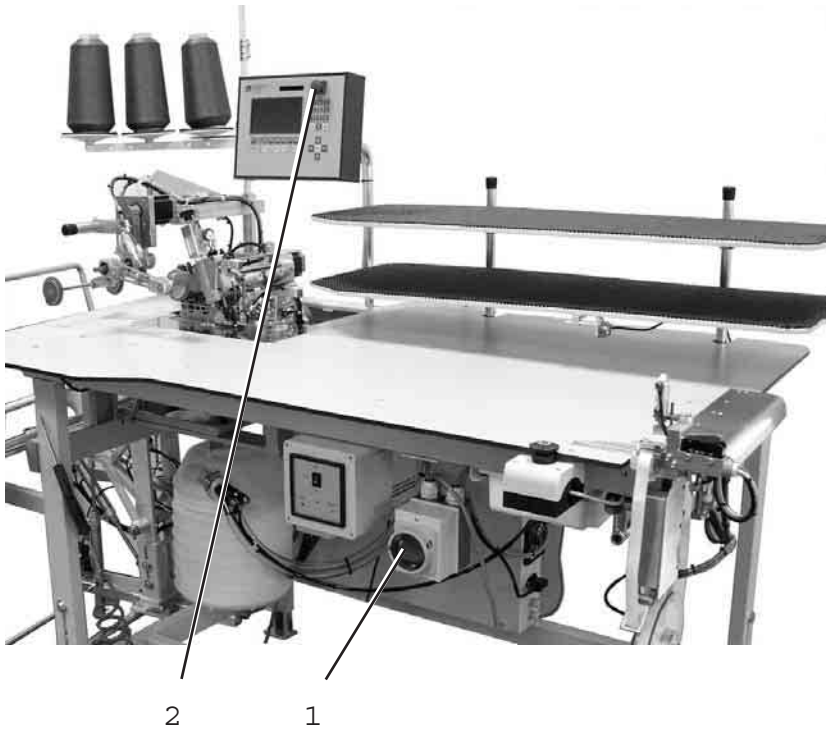
Machine head:	Pegasus EXT 5204-02
Stitch type:	504/505
Number of needles:	1
Needle system:	B27
Needle size:	Nm 80 to Nm 110
Threads:	see table chapter 4.2
Speed:	7000 r/min without lining 6500 r/min with lining
Speed upon delivery:	6500 r/min
Stitch length: min.	1.0 mm
max.	5.0 mm
Seam width:	6 mm
Material:	Light to medium-weight material
Operating pressure:	6 bar
Air consumption:	20 NL per working cycle
Rated voltage:	1 x 230 V 50/60 Hz
Rated load:	0.9 kVA
Dimensions:	1500 x 900 x 1400 mm (L x W x H)
Working height:	850...1200 mm (upper table top edge)
Weight:	120 kg

Noise value:	LC = 81dB (A)
Workstation-specific emission value according to DIN 45635-48-B-1	
Stitch length:	3 mm
Seam length:	1160 mm
Speed:	7000 r/min
Material G1 DIN 23328:	1 layer
Measuring point according to DIN 4895 part 1	X = 600 mm Y = 350 mm Z = 600 mm X-axis = at right angles to the feeding direction Y-axis = main feeding direction Z-axis = height

2. Optional equipment

See annex.

3. Switching on - Switching off - Program stop



3.1 Switching on

- Switch on main switch 1 (turn in clockwise direction).
  The control loads the machine program.
  The start screen appears in the display of the control panel and shows the following message:

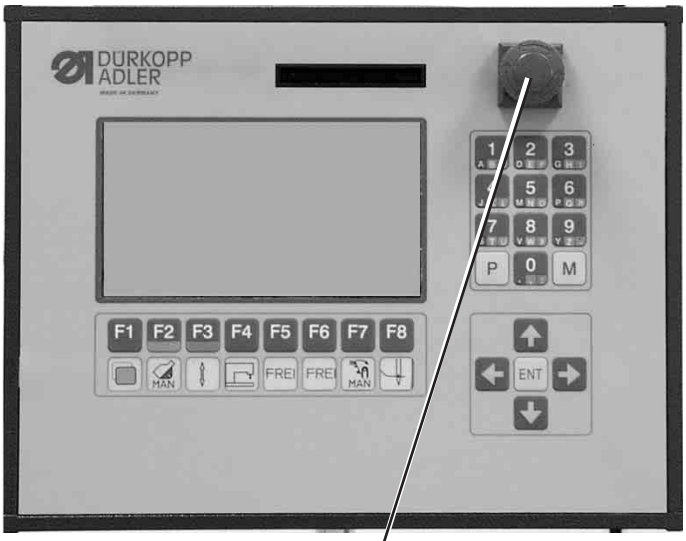
  WAITING FOR RESET

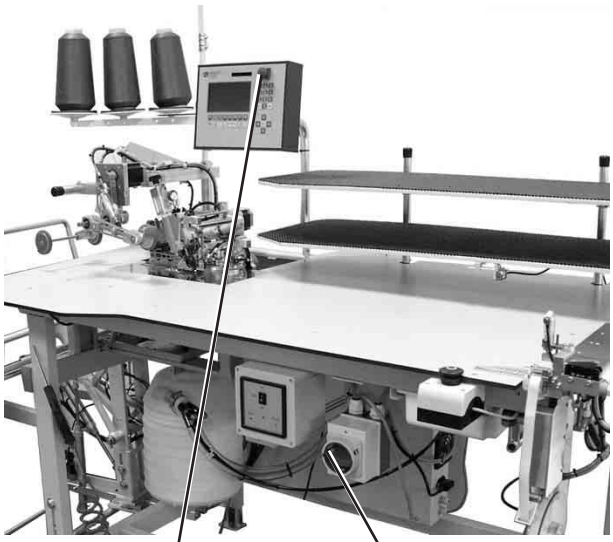
- Unlock the program stop key 2 at the control panel.

3.2 Switching off

- Press program stop key 2 at the control panel until it locks.
- Switch off main switch 1 (turn counter-clockwise).

3.3 Program stop





For an immediate stop in case of operating errors, needle breakage etc. the safety system of the 1265/5 provides the following measures:

- Press program stop switch 2 at the control panel.
  The running operations are stopped immediately.
- Turn main switch 1 counter-clockwise.
  The sewing unit drops out immediately;
  all movements of the sewing unit stop immediately.

3.4 Restart after program stop

Caution: Risk of injury!

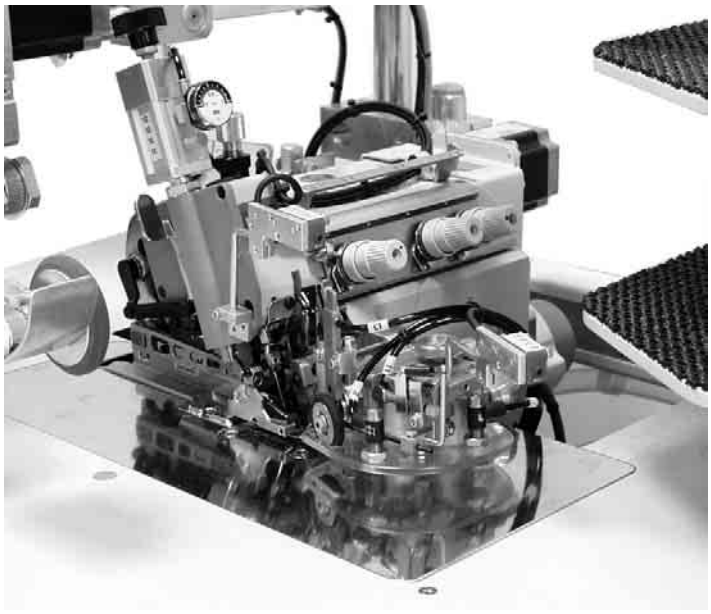
Switch the main switch off.
Clear the fault only with the sewing unit switched off.

Only restart the sewing unit after the fault has been cleared.

- Switch on main switch 1 (turn in clockwise direction).
- Unlock the program stop switch.
  The control loads the machine program.
  The main screen appears in the display of the control panel.
  The sewing unit is ready for operation again.

4. Operation of the sewing machine head

4.1 General notes



The operation of the sewing machine head (needle insertion, threading of needle thread and hook thread etc.) is described in the separately attached Pegasus operating instructions.

The instruction manual is included in the accessories of the sewing unit.

Attention: Risk of injury!

Please read the operating instructions of the sewing machine head carefully and observe all safety instructions.

4.2 Recommended threads

Needle system: B27

Recommended needle size: Nm 80 for very thin material
Nm 90 for thin material
Nm 100 for medium-weight material

High sewing security and good sewability are achieved with the following core threads:

- Two-ply polyester endless polyester core-spun (e.g. Epic Poly-Poly, Rasant x, Saba C, ...)
- Two-ply polyester endless cotton core-spun (e.g. Frikka, Koban, Rasant, ...)

If these threads are not available, the polyester fibre or cotton threads listed in the table can also be sewn.

Often two-ply core threads are offered by the thread manufacturers with the same designation as three-ply polyester fibre threads (3cyl.-spun). This causes uncertainty with regard to twisting and thread thickness.

When in doubt, unravel the thread and check whether it is twisted 2- or 3-ply.
The label no. 120 on the thread reel of a core thread corresponds e.g. to the thread size Nm 80/2 (see table values in brackets).

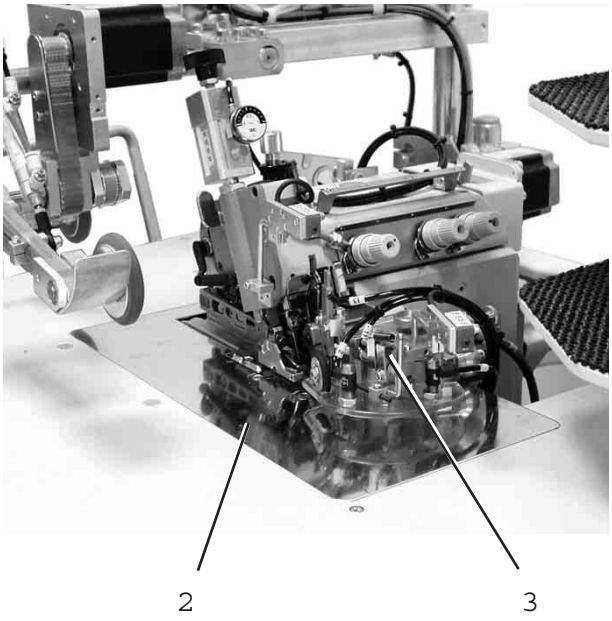
In case of monofilament threads you can use needle threads and hook threads of the same thickness. The best results are achieved with soft and elastic threads (software) of the thread thickness 130 Denier.

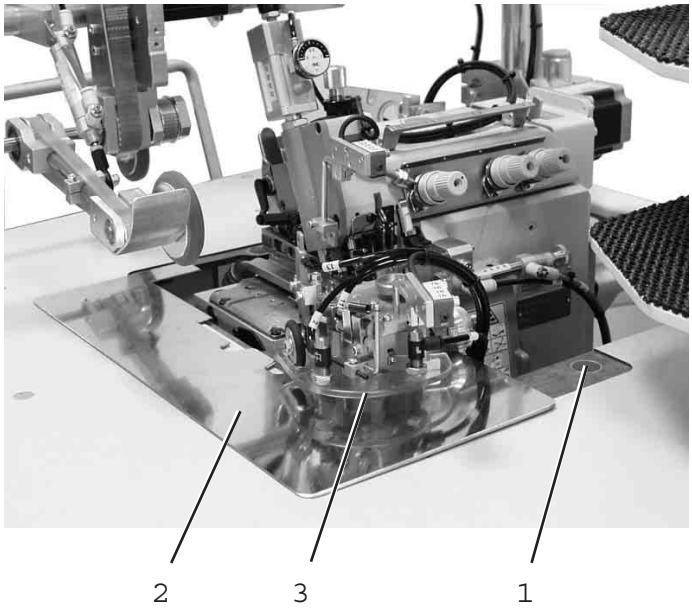
Recommended thread thicknesses:

Needle size Nm	Core thread		Core thread	
	Needle thread Polyester endless Label No.	Hook thread Polyester core-spun Label No.	Needle thread Polyester endless Label No.	Hook thread Cotton core-spun Label No.
80				
90	120 (Nm 80/2)	120 (Nm 80/2)	120 (Nm 80/2)	120 (Nm 80/2)
100	100 (Nm 65/2)	100 (Nm 65/2)	100 (Nm 65/2)	100 (Nm 65/2)

Needle size Nm	Polyester fibre thread (3cyl.-spun)		Cotton thread	
	Needle thread	Hook thread	Needle thread	Hook thread
80	Nm 120/3	Nm 120/3	Ne_B 60/3-80/3	Ne_B 60/3-80/3
90	Nm 80/3-120/3	Nm 80/3-120/3	Ne_B 50/3-70/3	Ne_B 50/3-70/3
100	Nm 70/3-100/3	Nm 70/3-100/3	Ne_B 40/3-60/3	Ne_B 40/3-60/3

4.3 Removing /Putting on the fabric sliding sheet





The fabric sliding sheet 2 is held in the gap of the table top by the magnets 1.
The edge guide 3 is fastened on the fabric sliding sheet.

Removing the fabric sliding sheet

- Carefully remove the fabric sliding sheet 2 from the magnets in upward direction.
- Remove the fabric sliding sheet 2 sidewards.
  The lower section of the sewing machine head is accessible now.

Putting on the fabric sliding sheet

- Push the fabric sliding sheet 2 into the gap of the table top and insert it in downward direction.

5. Operation of the sewing unit

5.1 Footswitch machine sequence

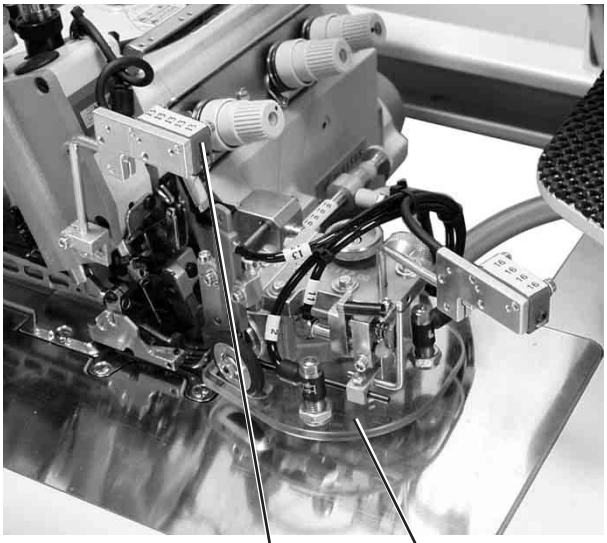
In some sewing programs the footswitch serves for starting various functions.

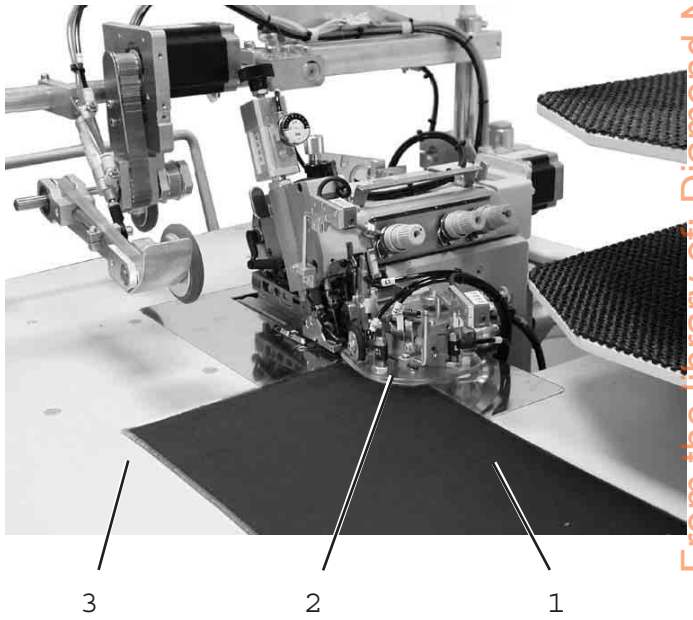
The footswitch is equipped with two contacts.
One contact is located in the rear area and is released by stepping back.
The other one is located in the front area and is released by mechanical bad.

5.2 Feeding the trousers parts and starting the sewing operation

The overlock unit 1265/5 works semi-automatically.
The operator of the sewing unit has to proceed as follows:

- call up the desired seam program
- feed the material accurately
- supervise the sewing process
- remove the finished parts from the stacker



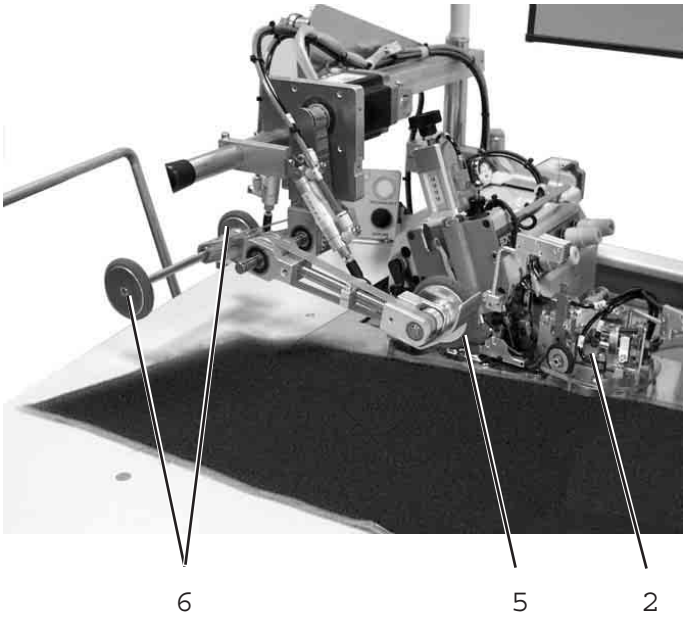


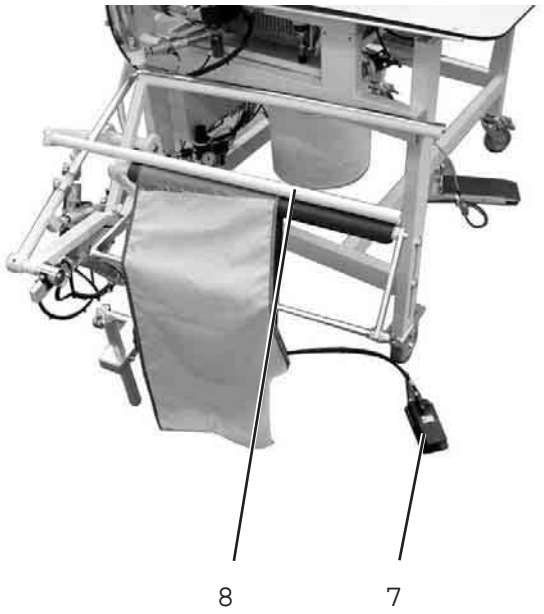
Feeding the trousers part and starting the sewing operation

1) Select the seam program at the control panel (see chapter 6.4.2).
2) Place the trousers part 1 on the table top 3 from the right and position it precisely underneath the contour guide 2.

ATTENTION!

As soon as the trousers part is pushed underneath the light barrier 4, the sewing operation starts automatically and the contour guide 2 lowers.





3) The trousers part is sewn.

4) The puller 5 lowers, too, and supports the feeding of the trousers part.

5) As soon as the material has passed the light barrier, the seam is finished and the ejector 6 lowers.

6) The contour guide 2 and the puller 5 move upwards.

7) The ejector 6 transports the material out of the sewing area.

8) The stacker clamp 8 moves to the front.

9) The ejector 6 moves upwards again.

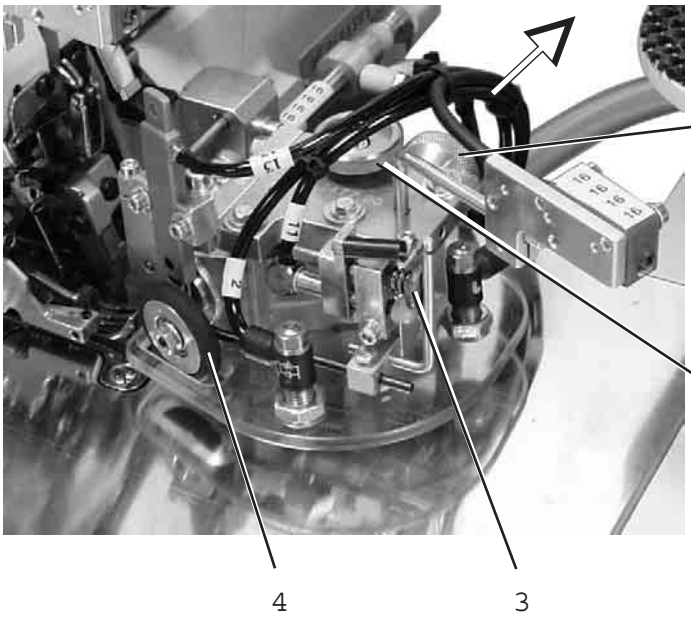
10) The trousers part is stacked.

11) Actuate foot switch 7 for removing the workpieces.

Note

In order to facilitate the material feed in the area of the sewing head the table blowing and the ejector 6 can be engaged at the seam beginning.
(see chapter 5.4)

5.3 Adjusting the edge guide



The height-adjustable edge guide ensures a precise positioning of the trousers part in front of the sewing head. The height of the edge guide can be adjusted depending on the thickness of the material to be processed.

The draw roll 4 guarantees a precise material feed under the sewing foot.

Adjusting the height of the edge guide

- Draw the dial 1 in the direction of arrow.
- Set the dial 1 to one of the four lock-in positions.
  Position 1 = minimum height
  Position 4 = maximum height

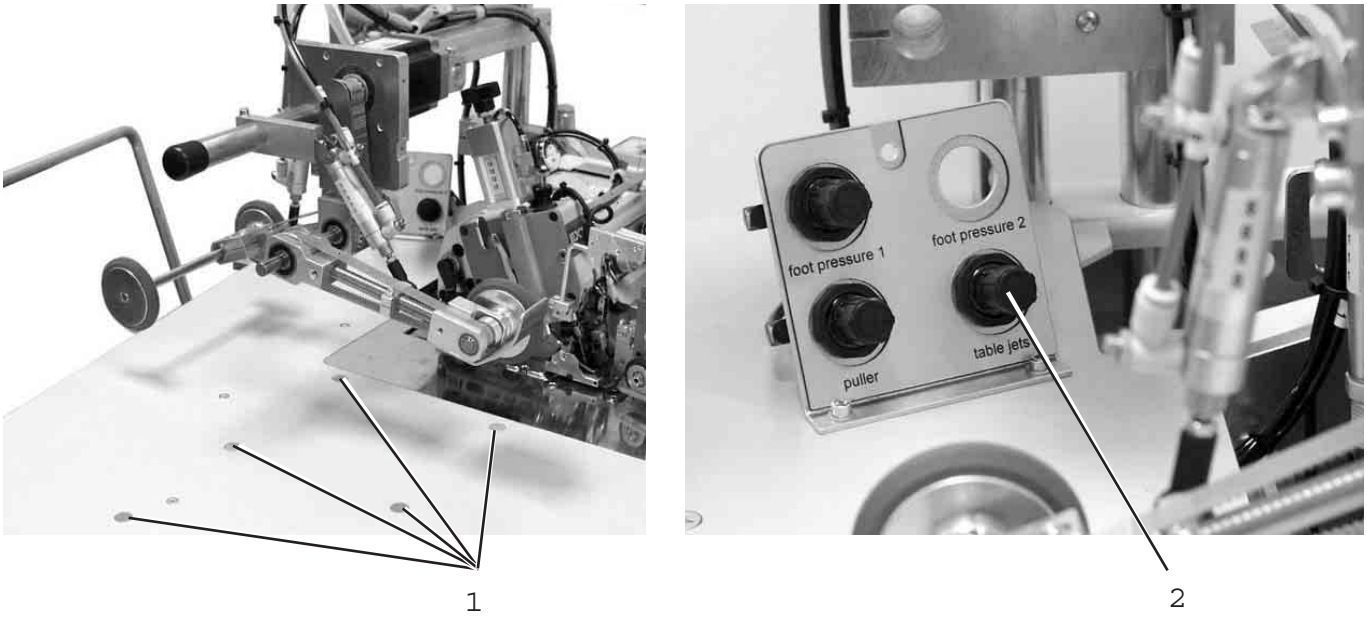
Fine adjustment of the height of the edge guide

- Turn the dial 2 correspondingly.

Setting the contact pressure of the roller 4

- Turn the dial 3 in clockwise direction.
  The contact pressure of the roller is reduced.
- Turn the dial 3 counter-clockwise.
  The contact pressure of the roller is increased.

5.4 Adjusting the blowing air for the nozzles in the table top

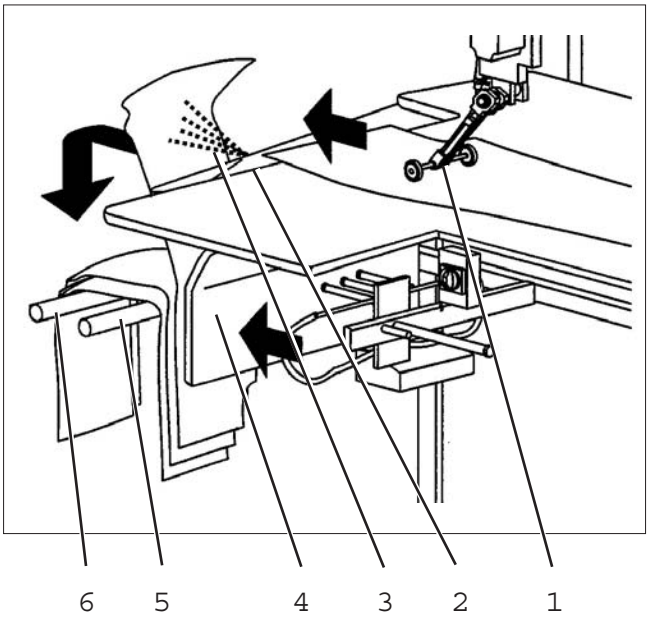


The blast nozzles 1 in the table top support the precise stacking of the workpieces.

- Set the intensity of the air blast with the dial 2 at the control panel.
  Turn dial to the right = increased intensity of air blast
  Turn dial to the left = reduced intensity of air blast

5.5 Stackers

5.5.1 Standard stacker



On the standard stacker the finished workpieces are bundled.

As soon as the balance point of the trousers part has been pushed beyond the table top edge 2 by the ejector 1, the shield 4 of the stacker extends and presses the trousers part against the front bundle bar 5.

The blowing device 1 of the stacker blows the trousers part on the stacker over the two bundle bars 5 and 6.

The stacker is activated by a control pulse. The pneumatic functions can be taken from the pneumatic wiring diagram.

Caution: Risk of injury!

Do not reach into the working area of the standard stacker during the stacking operation.

Manual stacking

- Press key F7 at the control panel.
  A stacking process is carried out.

5.5.2 Throw-over stacker

2 1

F7

The finished workpieces are stacked on the throw-over stacker 2.

The stacked and clamped workpieces can be removed by actuating the footswitch 1.

The stacker is activated by a control pulse. The pneumatic functions can be taken from the pneumatic wiring diagram.

Caution: Risk of injury!

Do not reach into the working area of the throw-over stacker during the stacking operation.

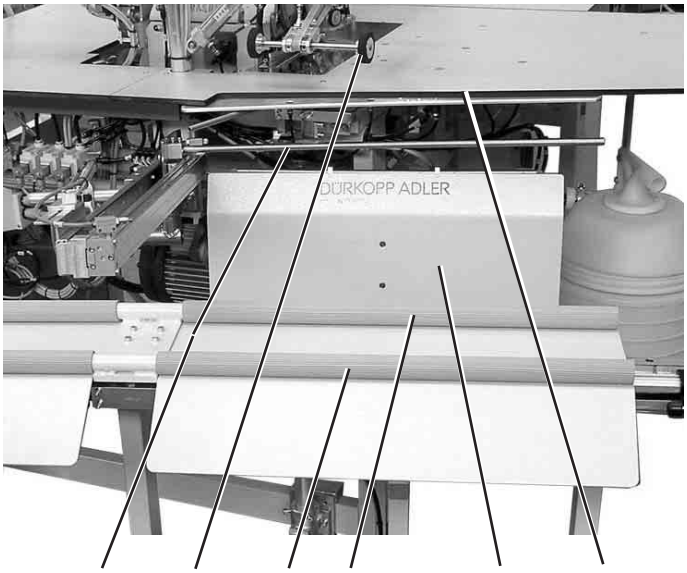
Manual stacking

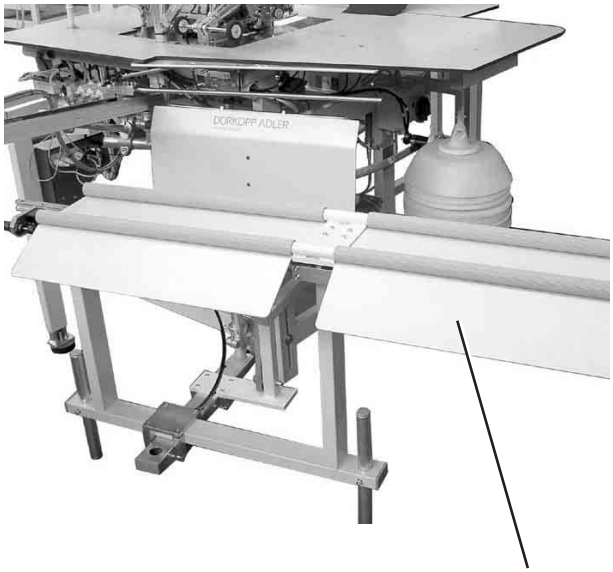
- Press key F7 at the control panel.
  A stacking process is carried out.

Removing stacked parts

- Actuate footswitch 1 and keep it actuated.
- Remove the stacked parts.

5.5.3 Alternating stacker





On the alternating stacker the right and left finished workpieces are stacked separately.
For this purpose the table 7 of the stacker is moved from one side to the other after every sewing operation.

As soon as the balance point of the trousers part has been pushed beyond the table top edge 1 by the ejector 5, the shield 2 of the stacker extends and presses the trousers part against the front bundle bar 3.

The ejector 6 and the blowing device at the shield 2 position the trousers part accurately over the two bundle bars 3 and 4.

The stacker is activated by a control pulse. The pneumatic functions can be taken from the pneumatic wiring diagram.

Caution: Risk of injury!

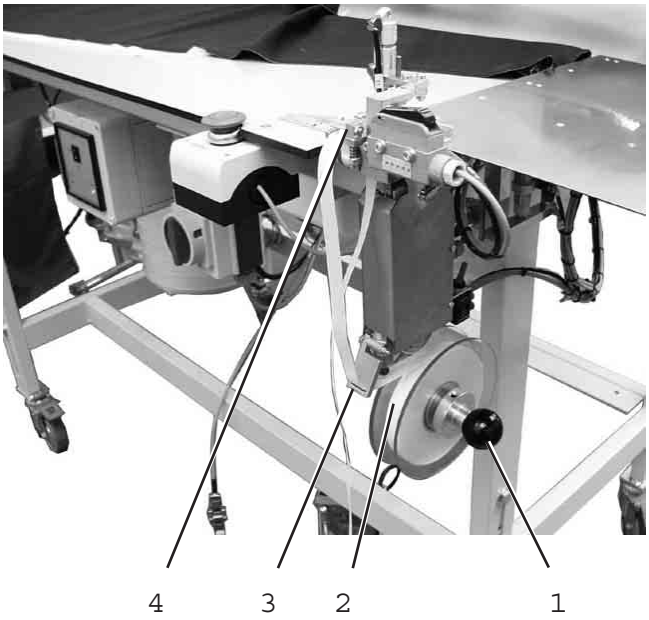
Do not reach into the working area of the alternating stacker during the stacking operation.

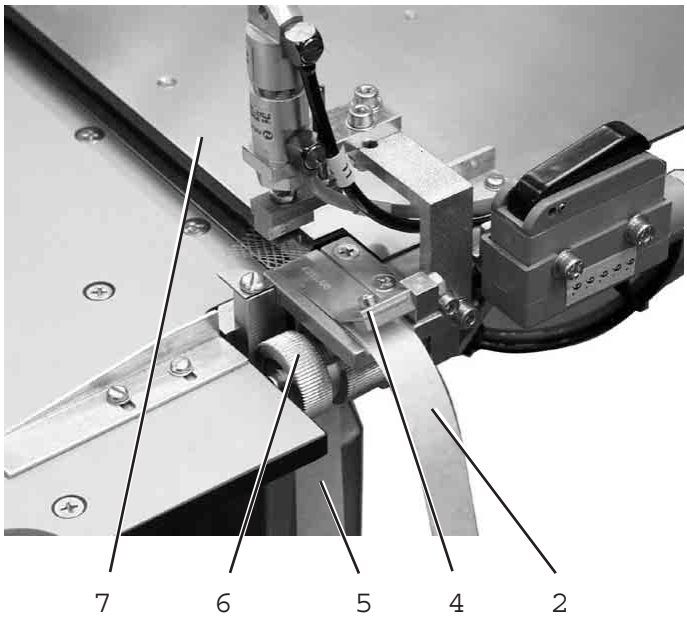
Manual stacking

- Press key F7 at the control panel.
  A stacking process is carried out.

5.6 Fusing station (optional)

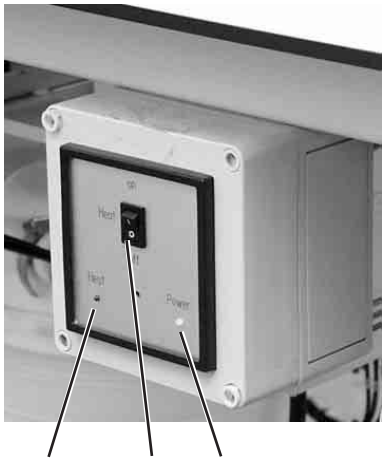
5.6.1 Inserting adhesive tape





- Remove the right supporting disk by pulling the handle 1 strongly.
- Insert a new roll of adhesive tape 2.
  The full roll must rotate counter-clockwise when unwinding.
- Push the right supporting disk with handle 1 on the shaft again until it catches.
- Guide the adhesive tape through guide 3.
- Open flap 4 upwards.
- Separate the adhesive tape 2 from the carrier material 5.
- Guide the adhesive tape 2 under the flap 4 and draw it under the clamp 7.
- Guide the carrier material 5 downwards behind the transport roller 6.
- Close flap 4.

5.6.2 Switching the fusing station on and off

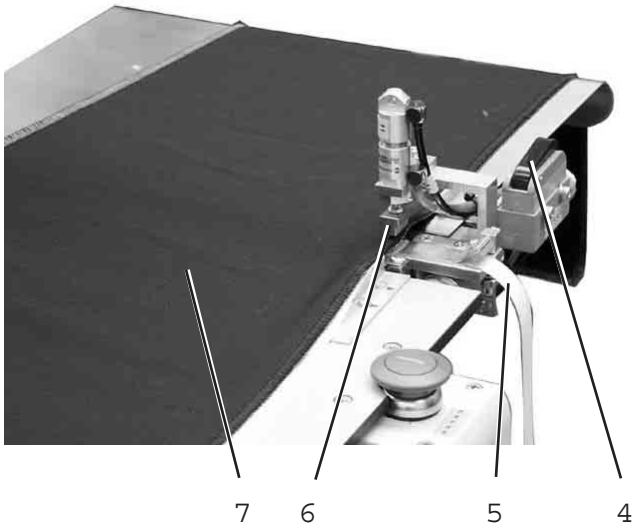


- The yellow signal lamp 1 "Power" lights up after the main switch has been switched on.
- Press the toggle switch 2 in position "ON".

Note

As long as the signal lamp 3 "Heat" flashes, the lower stamp is being heated up and has not yet reached the necessary temperature.

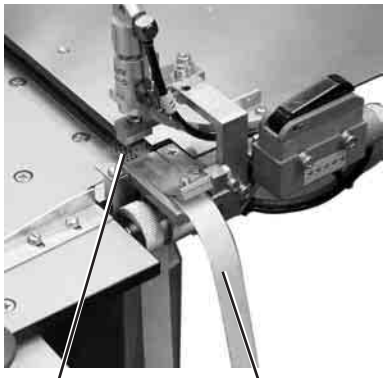
5.6.3 Fusing of knee lining and front trousers



Caution: Risk of burn!

Do not touch the area around the fusing station.

The lower stamp is very hot.

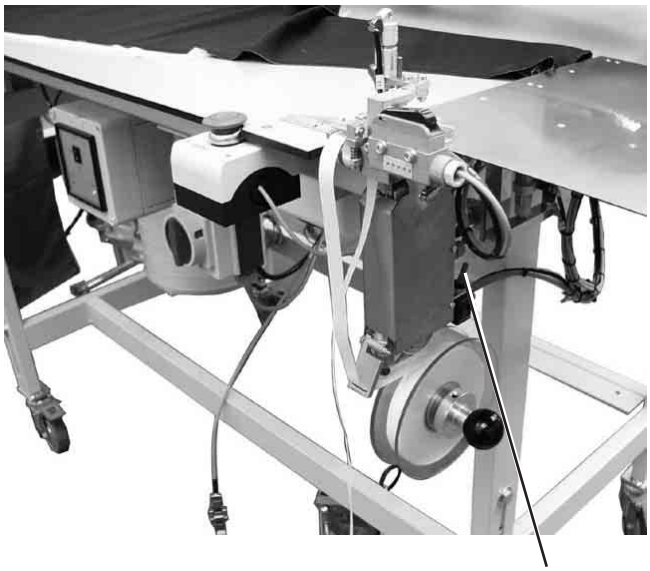


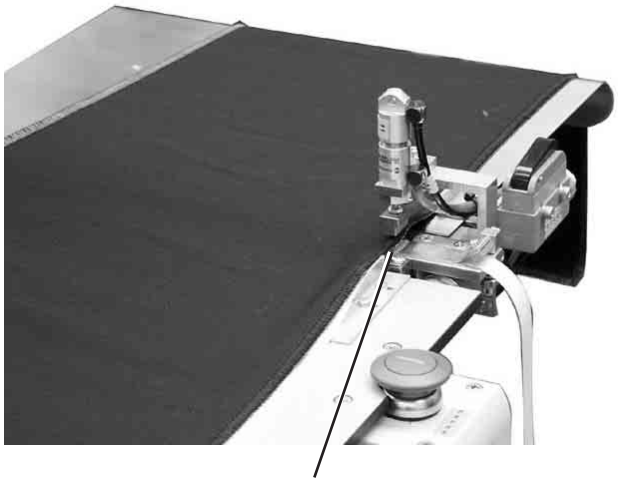
Sewing start of the hem

To avoid a displacement of the knee lining during the sewing process a glue dot fusing the lining at the correct position has to be set with the fusing station.

- Position knee lining 3 under clamp 2.
- Press clamp key 1.
  The clamp 2 lowers and clamps the knee lining.
  The fusing tape 5 is pushed forward simultaneously and the net-like fusing tape 8 is separated from the release paper.
- Position trousers part 7 and align it as per the lining.
- Press the fusing key 4.
  The upper stamp 6 moves downwards, the lower heated stamp moves upwards so that trousers part and lining are pressed with the fusing tape lying in between.
  After the preset fusing time the upper stamp 6 and the clamp 2 are lifted automatically and the lower stamp is lowered.
  Lining and trousers part are fused now and can be positioned for overlocking.

5.6.4 Cleaning the stamp





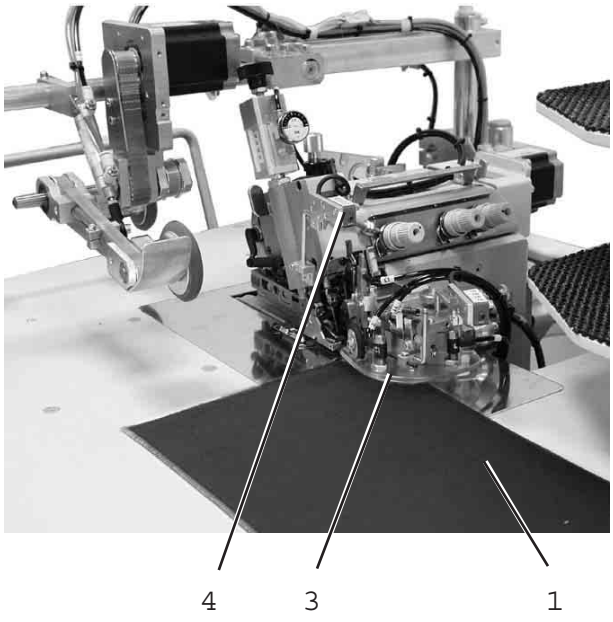
Caution: Risk of burn!
Clean the stamp only when it is cold.

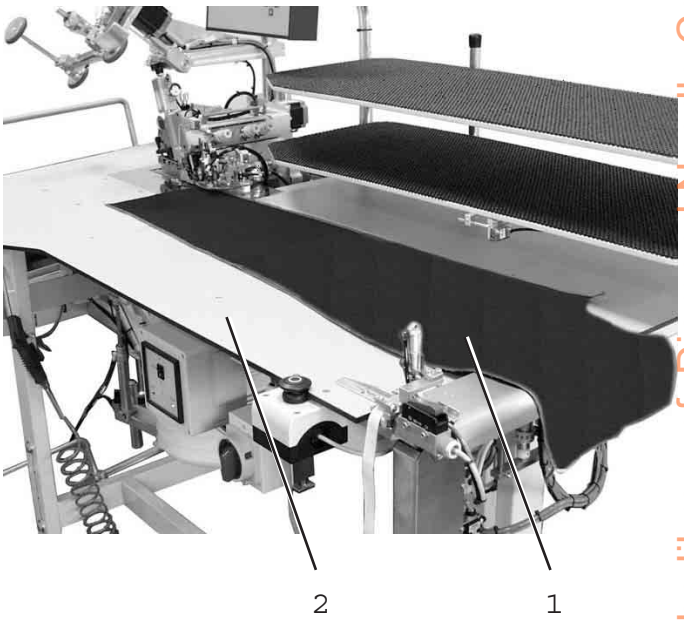
- Actuate the toggle switch 1.
  The lower stamp 2 moves upwards.
- Clean the stamp.
- Actuate the toggle switch 1 again.
  The lower stamp 2 moves downwards.

5.7 Feeding the trousers parts and starting the sewing operation in conjunction with the fusing station

The overlock unit 1265/5 works semi-automatically.
The operator of the sewing unit has to proceed as follows:

- call up the seam program "Lining below, sewing start at the waistband"
- fuse upper fabric and knee lining at the fusing station
- feed the workpiece accurately
- supervise the sewing process
- remove the finished parts from the stacker
- change the program and call up the seam program "Lining below, sewing start at the hem"
- feed the workpiece accurately
- supervise the sewing process
- remove the finished parts from the stacker





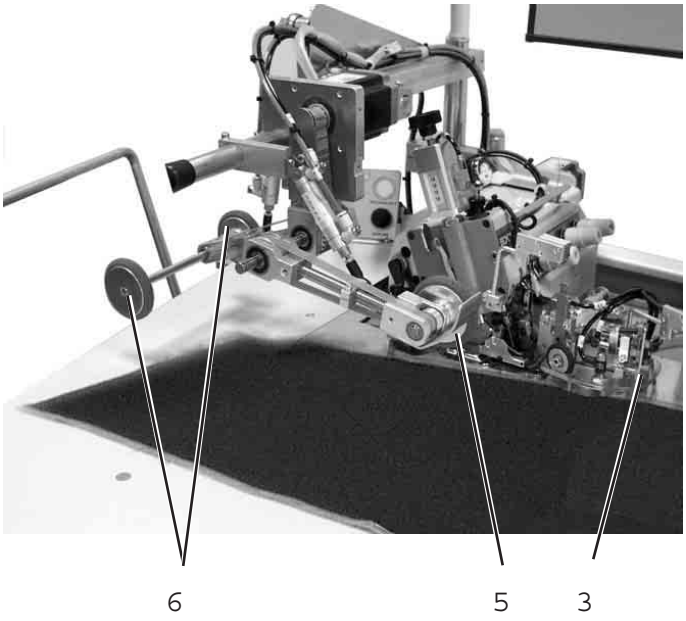
Feeding the trousers part and starting the sewing process

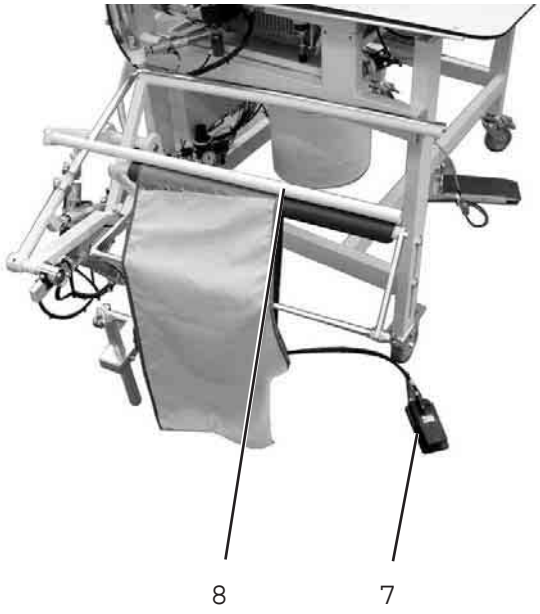
1) Select the seam program at the control panel (see chapter 6.4.2).

2) Place the trousers part 1 from the right on the table top 2 and straight under the contour guide 3.

ATTENTION!

As soon as the trousers part is pushed under the light barrier 4, the sewing process starts automatically and the contour guide 3 lowers.





3) The trousers part is sewn. During the sewing process the puller 5 lowers and supports the material feed.

4) As soon as the workpiece has passed the light barrier, the seam is finished and both ejectors 6 lower.

5) The contour guide 3 moves upwards.

6) The ejector 6 transports the material out of the sewing area.

7) The stacker clamp 8 moves to the front.

8) The ejector 6 moves upwards again.

9) The trousers part is stacked.

10) Actuate foot switch 7 for removing the workpieces.

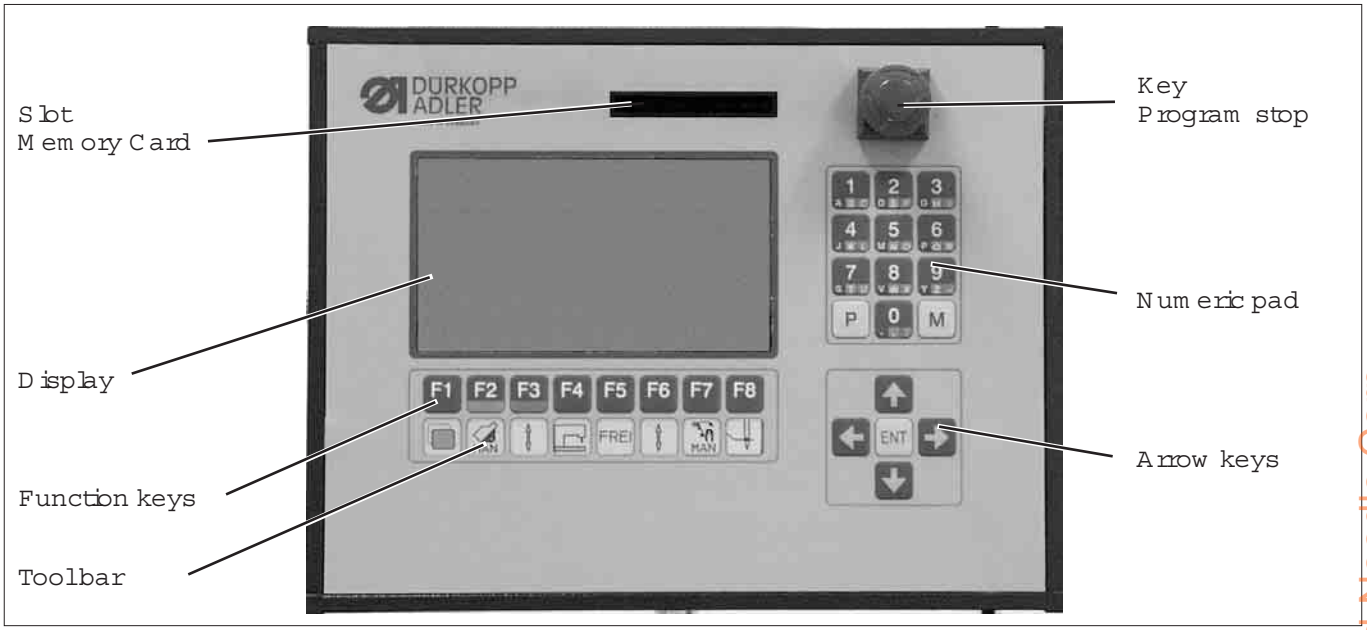
Note

In order to facilitate the material feed in the area of the sewing head the table blowing and the ejector 6 can be engaged at the seam beginning. (see chapter 5.4)

6. Operation of the control

6.1 Operator terminal

The operator terminal is the display and input medium of the machine control. In the operator terminal the microprocessor for the control of the sewing unit and the storage media (EPROM) for securing the program control are installed.



Key	Function
F1	Call up access level 2 of the user menu
F2	Switch on manual sewing
F3	Select seam parameters / machine functions
F4	Select machine parameters
F5	free
F6	Select seam parameters / machine functions
F7	Activate stacking process
F8	Switch on threading mode
ENT	Enter key
P	Select programming mode
M	Call up memory (programs M 10 - 20)
0 ... 9	Direct program selection / Input of numerical values

6.2 User interface

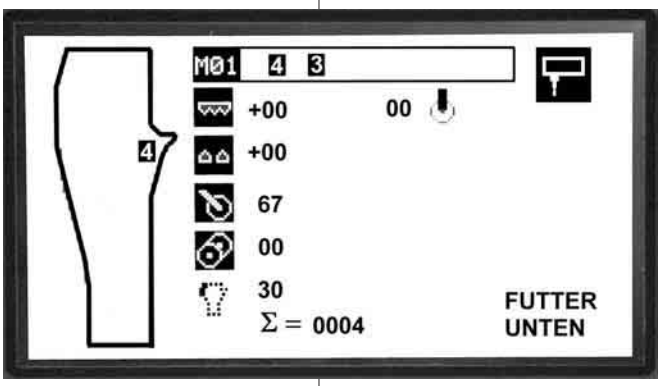
6.2.1 Menu structure of the sewing and setting programs

main switch
Switch on

Start screen

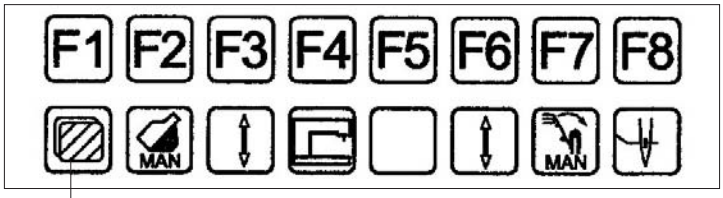
Waiting for reset

key program stop
Unlock



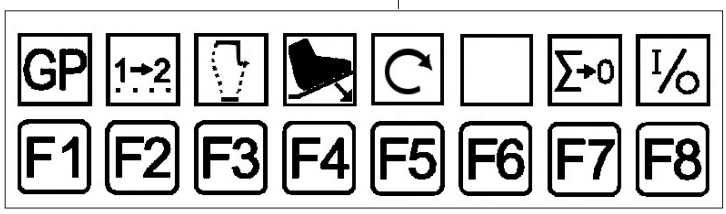
Main screen

Access level1
see page 23



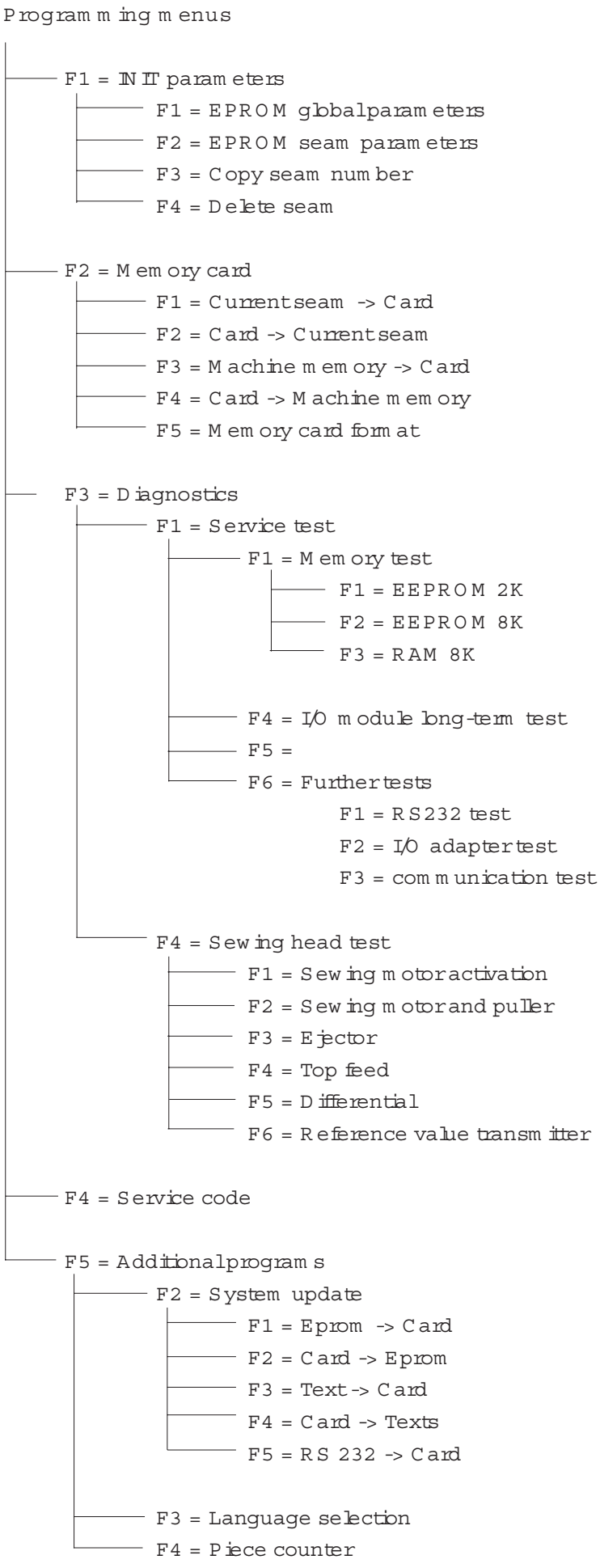
P

Access level2



F1 = Global parameters
F2 = Seam sequences
F3 = Parameters for preseams
F4 = Manual sewing start/Automatic sewing start
F5 = Machine running at low speed
F6 = free
F7 = Daily piece counter
F8 = Inputs/Outputs machine control

Programming menus
see next page

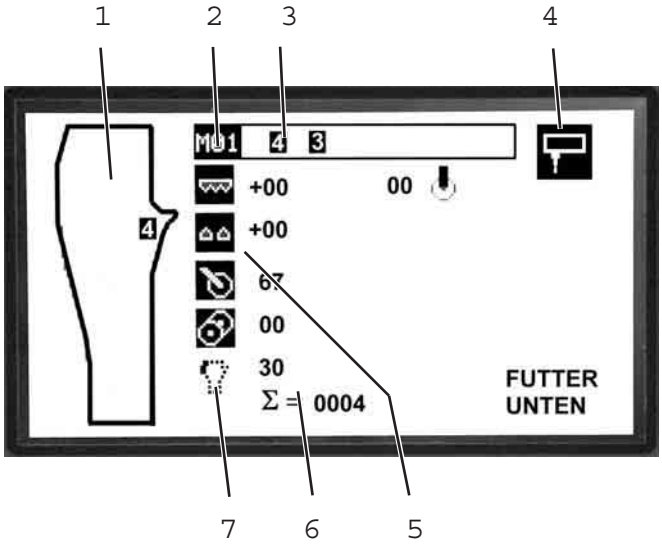


6.3 Main screen

- Switch on main switch 1 (turn in clockwise direction).
  The control loads the machine program.
  The start screen appears in the display of the control panel and shows the following message:

  WAITING FOR RESET

- Press the program stop key 2 at the control panel and unlock again.
  The main screen appears with the following display:



1 = Seam pattern of the current seam in the program

2 = Designation of the program
A program can consist of several seams

3 = Seam number of the program

4 = Starting mode of the sewing unit (manual/via light barrier)

5 = Symbols of seam functions (active)

6 = Daily piece counter

7 = Symbol of a seam function (inactive)

Note:

Black-shadowed symbols, e.g. 5 = active function

Symbols which are not black-shadowed, e.g. 7 = inactive function

6.4 Seam programs

In the program control memory up to 20 programs (M 01 - M 20) can be programmed. Up to 8 seams with the corresponding seam number can be assigned to every program.

The seams differ by the control parameters assigned during the programming process as well as by the control functions engaged.

6.4.1 Factory-set programs

The sewing unit is provided with ten programs preprogrammed by the manufacturer.

Progr. No	Seam No.	Sequence
M 01	4	Hind trousers: crotch seam - sewing start at the waistband
M 02	5	Hind trousers: side seam - sewing start at the waistband
M 03	6 / 7	Front trousers: crotch and side seam alternately lining on top - sewing start at the waistband
M 04	5 / 4	Front trousers: side and crotch seam alternately lining below - sewing start at the waistband
M 05	4 / 5	Front trousers: crotch and side seam alternately lining below - sewing start at the waistband (Program for sewing units with fusing station and photocell 15)
M 06	5 / 4	Front trousers: side and crotch seam alternately lining below - sewing start at the hem (Program for sewing units with fusing station and photocell 15)
M 07	7 / 5	Front trousers: side seam with pocket bag lining on top and below alternately (with movable stop)
M 08	4 / 6	Front trousers: crotch seam, lining below and on top alternately
M 09	1	Follow-up sewing
M 10	134135	Program with preseams
M 11 - 20		free

Preseams

Waistband seams, fly seams and hem seams can be overlocked separately.

The features of the preseams are set in an own parameter list. These settings become only effective if "preseams" are activated in the seam program.

Crotch and side seams

Crotch and side seams can either be overlocked in individual separate sewing operations or processed as combined sewing operation with seam alteration.

The preprogrammed seams are activated at the control panel by rapid access.

Identical stitch pattern

If it is required that the crotch seam and the side seam have an equal stitch pattern, the knee lining has always to be fed in the same position (always below).
The trousers part is first positioned at the waistband and then at the hem (only possible with fusing station).

6.4.2 Selecting the program

1) Selecting the program via the numeric pad

The programs M 01 - M 09 are selected in direct access.

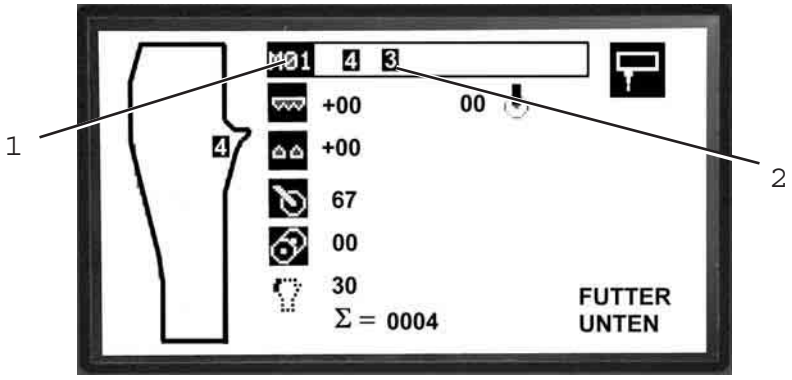
- Enter the number of the desired program via the numeric pad, e.g. program M 04

  - Press key "4".

The programs M 10 - M 20 are selected via the memory.

- Press key "M".
- Select the number of the program, e.g. 15
  - Press key "1" and then key "5".

2) Select the seam number of a seam in direct access (in case of seam sequences)



- Move the cursor with the keys "⇦" or "⇨" to the desired seam number 2.

6.4.3 Manual sewing, controlled via foot pedal

The function "manual sewing" serves for testing the sewing head and the sewing equipment as well as for improvement of faulty sewing. "Manual sewing" can be called up in direct access.

1) Switching the function on

- Press key "F2".

The display shows the symbol for "manual seam".

- Control the sewing speed by stepping on the pedal (if available).

2) Switching the function off

- Press key "F2" once again.
  The main screen appears in the display.

6.4.4 Altering the function of the seam programs

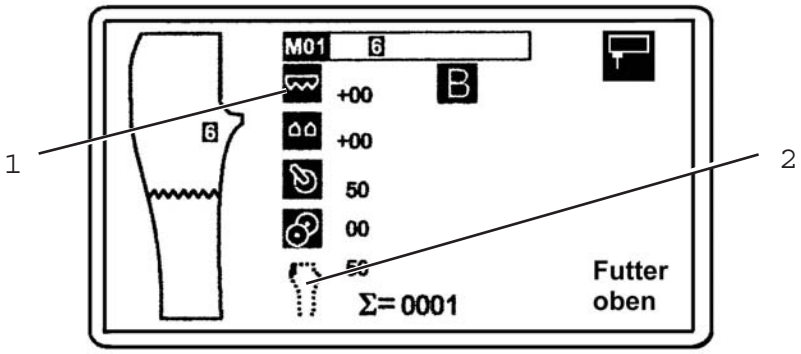
The parameters of a program can be altered in three steps:

1) Quick adjustment of the main parameters via the input fields.

2) Access to the entire parameter list.

3) Switching a seam or machine function on or off.

6.4.4.1 Quick adjustment of the main parameters via the input fields



The following functions of a seam program can be altered as to the values or switched on or off completely:

Top feed
Increasing or reducing the value

Differential feed
Increasing or reducing the value

Puller
Parameter 14, speed

Ejector
Parameter 30, ejecting line

Puller speed, Parameter 20
low speed at the hip bow

Black-shadowed symbols, e.g. 1 = function active.

Symbols which are not black-shadowed, e.g. 2 = function inactive.

Altering values

- Press key "F3" or "F6", until the input field allocated to the icon is black-shadowed.
- Increase or reduce the parameters directly with the keys "⇦" or "⇨ ".
- Press key "P".
  The new value is taken over.

6.4.4.2 Access to the entire parameter list of a seam function

- Press key "F3" or "F6", until the input field allocated to the icon is black-shadowed.
- Press key "ENT".
  The parameter list belonging to the seam is opened.
- Scroll to the desired parameter with the keys "⇧ " or "⇩" .
- Alter the value with the keys "⇦ " or "⇨ ".

or

- Enter the two- or three-digit value via the numeric pad.
- Press key "P".
  The altered parameter value is taken over.

6.4.4.3 Switching a machine function on or off

- Press key "F3" or "F6", until the input field allocated to the icon is black-shadowed.
- Press key "ENT".
  The parameter list belonging to the seam is opened.
- Press key "F8".
  The function is activated or deactivated respectively.
- Press key "P".
  The new value is taken over.

Top and differential feed

In order to achieve a correct fullness distribution the feeding features of the differential feed and the top feed have to be adapted to the knee lining material.

This adaptation is necessary if the lining is processed with fullness.

Top feed

In the program a correction of the fullness distribution can be made by means of the top feed quick adjustment.
For this purpose it is possible to alter the position of the top feed-dog as to the main feed-dog.
This adjustment becomes only effective for the seam line which has been activated for a fullness distribution.

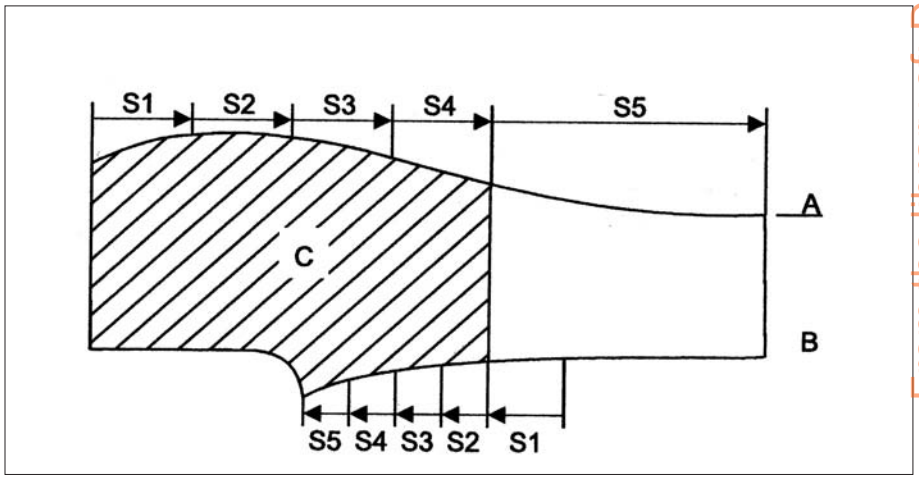
Range of values: -59 to +59

Differential feed

The position of the differential feed-dog as to the main feed-dog is altered.
This adjustment becomes only effective for the seam line which has been activated for a fullness distribution.

Range of values: -59 to +59

Subdivision of the seam in seam sections



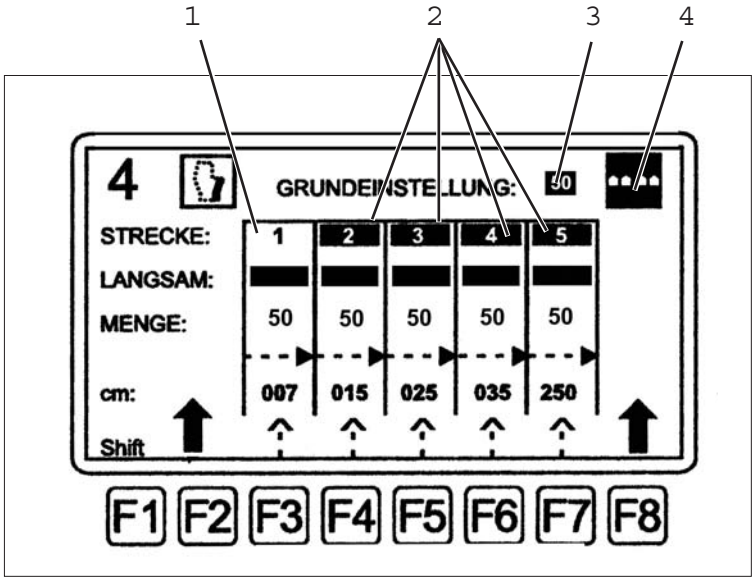
In the sewing area the trousers part is subdivided into seam sections.

- Seam A with the basic setting S1 - S4 with each 15, 30, 45 and 60 cm.
  S5 is the remaining length of the trousers with 255 cm
- Seam B with the basic setting S5 - S2 with each 10, 20, 30 and 40 cm.
  S1 is the remaining section from the photocell 15 to the knee lining (normally 2 - 7 cm).
  This section has to be determined by trial for every workpiece.
- The knee lining C reaches over four of the five sections.

For every of these seam sections the length of the seam line can be varied and the corresponding fullness (quantity) can be preset via the control.

Alteration of fullness

- Press key "F3", until the cursor points on the program .
- Press key "ENT".
  The parameter list belonging to the seam is opened.



When opening the menu the input field 2 of the parameter "basic setting" is black-shadowed and can be altered.

The individual sections and the basic value 3 (quantity: or cm : resp.) can be selected with the keys "⇧" or "⇩ ". If they are black-shadowed, they can be altered with the keys "⇦" or "⇨ " or the numeric pad.

If the symbol 4 is black-shadowed with the key "F8", the five seam sections (quantity: and cm :) are active.

If the symbol 4 is deactivated with the key "F8" (not black-shadowed), the value set in symbol 3 is active over the whole seam .

Seam sections

The seam sections 1 to 5 can be actived or deactivated respectively. If a seam section is active (black-shadowed), the value altered in the main menu

e.g. ⌂⌂ + 10 is taken over in this activated seam section only.

Example:
Quantity: 50 + ⌂⌂ + 10 = quantity 60.

If a seam section is inactive (not black-shadowed), the value altered in the main menu

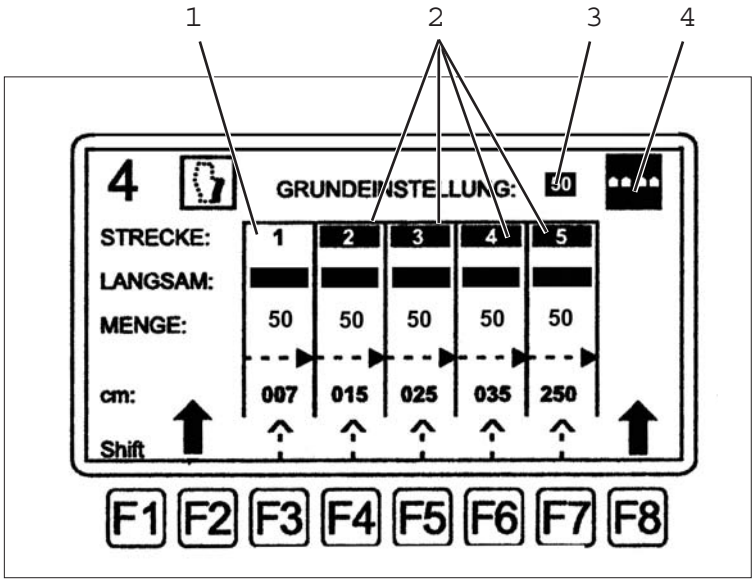
⌂⌂ + 10 is not taken over in this seam section.
Only the value set in quantity: (e.g. 50) is active.

Low speed

You can choose between "Max. speed" and "Reduced speed".

If at LOW SPEED: a black bar has been chosen in a seam section, the sewing speed is reduced in this section.

If the bar is hidden, Max. speed is active.



Example

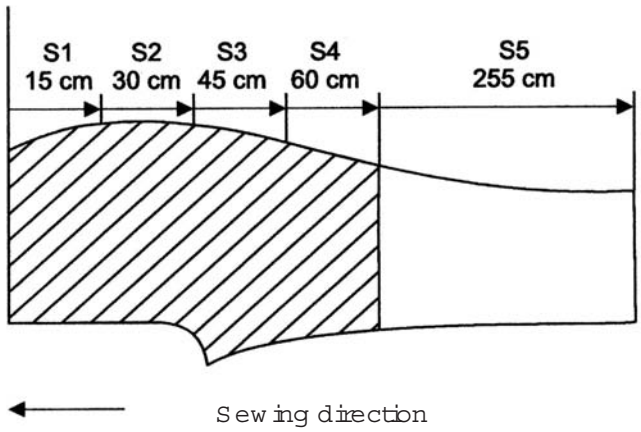
The first seam section 1 is inactive, the four remaining sections 2 are active (sections 2 - 5 are black-shadowed and marked as active).

Functions

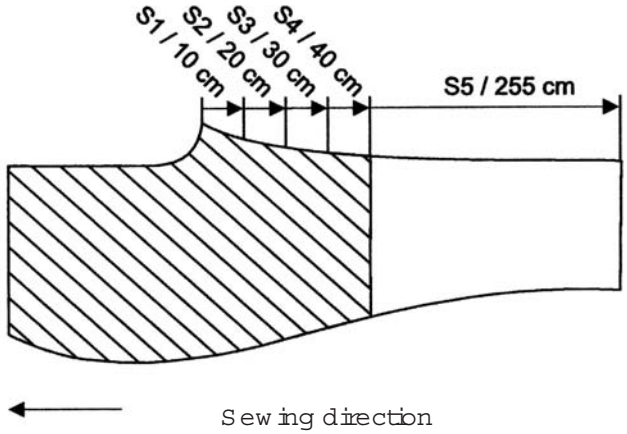
- Activate or deactive an individual section by the function key "F3" - "F7" underneath.
- Function LOW SPEED for differential feed
  or
  function PRESSURE for top feed
  - Activate the respective section 1 to 5 at the numeric pad with key "F1" and the corresponding number.
    Example: Press "F1" + "2"
- Alter the seam scheme with key "F2" (only in case of differential feed).
  Change between sewing start at the hem and sewing start at the waistband.

Examples for subdivisions of seam sections

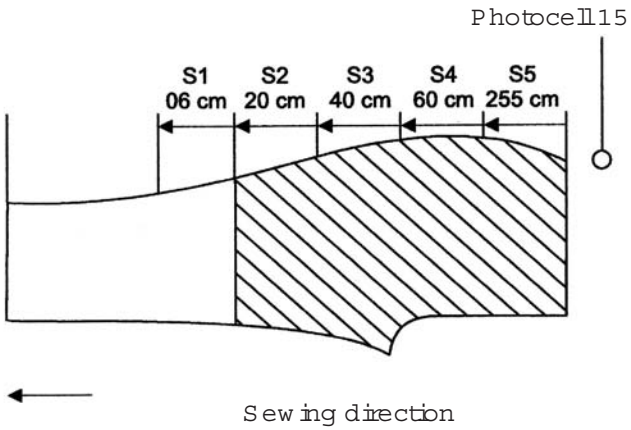
1) Side seam, sewing start at the waistband



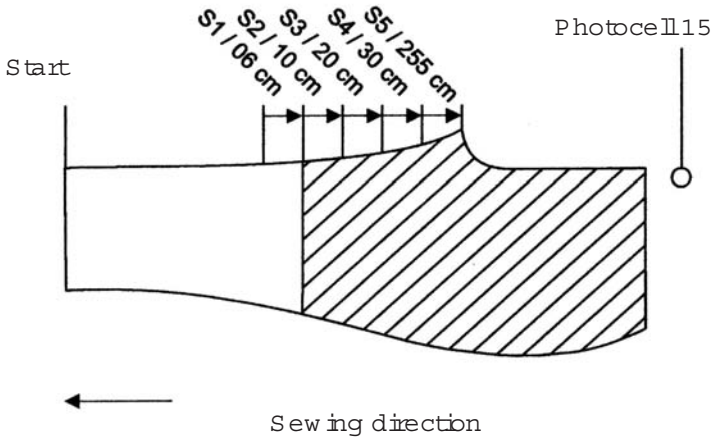
2) Crotch seam, sewing start at the waistband/fly



3) Side seam, sewing start at the hem.
Feeding position when using the optional fusing station



4) Crotch seam, sewing start at the hem.
Feeding position when using the optional fusing station



Alteration of fullness

For the fullness the value ranges can be set as follows (separately for differential feed and top feed):

1) Basic setting of fullness if the function Top Feed is switched on.
2) Fullness (quantity) for an individual section to be set separately. The individual section has to be activated so that the setting becomes effective.
3) The length of an individual section where a fullness is to be distributed.
4) The function SEW AT LOW SPEED (differential feed only)
5) The function SLIGHT FOOT PRESSURE (top feed only)

Puller speed

The photocell identifies the deviation of the fabric contour from the ideal contour and regulates the speed of the puller, if required.

- If the trousers parts are shifted aside from the stop during the feed, the speed is too high.
- If the trousers parts curl up at the stop, the speed is too low.

The basic speed of the puller can be altered via the input field.

Parameter Puller

14 PULLER SPEED

Main parameter/Basic setting of the speed for the main seam.

15 HIGHER PULLER SPEED

Increasing the speed steps with blocked photocell 16, if the workpiece curls up at the stop.

16 LOWER PULLER SPEED

Reducing the speed steps with unblocked photocell 16, if the workpiece is shifted aside from the stop.

17 SEAM SECTION UNTIL PULLER DOWN

The seam section until the puller lowers after the sewing start.

18 SEAM SECTION WITH PULLER DOWN

The length of the seam section during which the puller is lowered.

19 SEAM SECTION PULLER LIFTING

The length of the seam section during which the puller is lifted to release the fabric.

33 UNTIL AUXILIARY ROLLER DOWN

The seam section after the sewing start after which the contour roller lowers
Start at the waistband = photocell 13
Start at the hem = photocell 15

34 DURATION AUXILIARY ROLLER DOWN

The length of the seam section under the guidance of the lowered contour roller.

Ejector

The parameter alters the length of the seam section over which the ejector transports the trousers part on the worktable from the sewing head to the stacker.

Body Text fett=

Parameter ejector

25 SEAM SECTION UNTIL ROLLER DOWN

The seam section after the sewing start until the ejector lowers; only required for heavy-weight material

26 SEAM SECTION WITH ROLLER DOWN

The length of the seam section over which the ejector is lowered at the sewing start.

27 UNTIL ROLLER STOP/KETTUP

The seam section over which the ejector transports to stop the material and to separate the chain.

28 DURATION OF ROLLER STOP/KETTUP

The time the ejector stops for separating the chain.

30 EJECTOR TRANSPORT LENGTH

Main parameter/Basic setting of the ejector transport length until the workpiece is delivered to the stacker.

31 UNTIL STACKER START

The time until the stacker starts after the ejector has lifted.
(Fix the workpiece until the stacker has taken it over safely)

32 STACKER MODE

Setting of the different stacking operations (stacker types)
00 = Function switched off
01 = Switch function on
02 = free
03 = alternating stacker

10 CLOSING THE FEED

Function of the feeding unit (puller and ejector)
00 = the feeding unit always remains in its lower position

01 -99 = the feeding unit lowers after the seam section which has been set here

Note - Pneumatic stop

The sewing unit can optionally be equipped with a pneumatic stop. With this equipment a pocket bag can be placed between trousers part and lining and overlocked. The seam section up to the pocket end is sewn manually; the remaining seam section is sewn fully automatically.

The seam course sewn manually is determined by parameter 10 of the seam function CLOSING THE FEED.

At the end of this seam section the feeding unit lowers, the pneumatic stop moves to the sewing foot and the seam control is taken over by the contour guide.

Low puller speed at the hip bow

The parameter alters the basic value of the puller speed when sewing off the hip bow.
The puller speed can be adapted to the shape of the hip bow.
(in conjunction with photocell 15).

Parameter Low puller speed at the hip bow

20 LOW SPEED AT HIP BOW

Main parameter/Basic setting of the puller speed for the hip bow.

21 LOW SPEED UP TO HIP BOW

The seam section sewn with the puller speed of the main seam until the speed is reduced at the hip bow. (Reference point = photocell 15)

22 DURATION OF LOW SPEED AT HIP BOW

The seam section sewn at low speed in the hip bow.

35 UP TO FLY BLOWING

The length of the seam section after unblocked photocell 13, until the fly is blown.

36 DURATION OF FLY BLOWING

Duration of the blowing operation.

11 UNTIL BLADE SWIVELS OUT

Transport length from the photocell 13 or 15 until the blade swivels out.

44 SWIVELLING THE PULLER

This function is only required for the crotch seam.
01 = Function on
00 = Function off

45 PULLER AFTER HIP BOW

The section the puller remains lowered after DURATION OF LOW SPEED AT HIP BOW (parameter 22).
Puller speed as set in parameter 14.

<u>Fly roller</u>

37 UNTIL FLY ROLLER DOWN

Required for preseam 3 for a better guidance of the fly bow.

38 DURATION OF FLY ROLLER DOWN

The time for which the fly roller is lowered.

Selection of machine parameters

The sewing behaviour of the sewing unit is determined by the settings.

01 SEWING AT LOW SPEED

Reduced sewing speed during the sewing start (softstart).

02 SEWING AT HIGH SPEED

Main sewing speed.

03 SEWING START AT LOW SPEED

Section of decelerated sewing start (softstart).

05 SEAM SECTION UNTIL CONTOUR GUIDE DOWN

Seam section sewn from the sewing start until the contour guide is lowered.

06 UNTIL TABLE BLOWING ON

Seam section sewn from the sewing start until the blowing nozzles of the worktable are provided with compressed air.

07 DURATION OF TABLE BLOWING

The section over which a workpiece is additionally transported by compressed air.

09 REDUCED SPEED

Reduced speed of the sewing head switched on with the function SEWING AT LOW SPEED for difficult seam sections (S1 - S5). Reference point = lightbarrier F13 or F15).

Global parameters

Global parameters are values controlling the basic functions of the sewing unit.

Note

If global parameters are altered, the alteration will influence all seam programs stored.

Alteration of global parameters

The global parameters of the sewing unit are optimally set and coordinated by the manufacturer.
By inappropriate alteration of the values the working quality can be affected; at worst machine components can be damaged.

- Press key "F1".
  You get to the user level 2.
- Press key "F1".
  The parameter list is opened.
- Scroll to the desired parameter with the keys "⇧" or "⇩".
- Press key "ENT".
- Alter the value with the keys "⇦" or "⇨".

or

- Enter the two- or three-digit value at the numeric pad.
- Press key "ENT".
  The altered parameter value is taken over.
- Press key "P".
  You quit the menu and return to the access level 2.
- Press key "P".
  You return to the access level 1.

01 FZ BEGINNING OF DOWN TIME

Time delay between feeding operation (light barrier recognizes "blocked") and sewing start

02 FZ BLOCKED -> FOOT DOWN

The time until the sewing foot is lowered and the sewing operation starts
(setting depends on the material).

03 THREAD LIFTING SEAM BEGINNING

Number of stitches with released needle thread before it is tensioned again.

04 DURATION OF KETTUP AT THE BEGINNING

Length of the kettup function at the seam beginning in cm.
In case of three-thread heads a longer suction process is necessary.
Switch off to save energy.

05 SEAM SECTION TO BE RESTITCHED

Seam section where follow-up stitches are sewn if the workpiece is manually removed from the sewing equipment while sewing (e.g. in order to separate the chain).

06 DURATION OF KETTUP AT THE SEAM END

Duration of the kettup function at the seam end.
Switch off to save energy.

07 THREAD LIFTING AT THE SEAM END

The number of stitches until the needle thread is released at the seam end.

08 FZ BLOCKING TIME AT THE END

Time delay for feeding a new workpiece (blocking time after light barrier unblocked).

09 PHOTOCELL 15 ON/OFF

Switching status of photocell F15 only available with optional fusing station.
01 = Function on
00 = Function off
If no light barrier is mounted, an error message appears.

10 STACKER -> EJECTOR DOWN

The time the ejector is lowered and fixes the workpiece until it is taken over by the stacker.

11 CONTOUR SCANNING TIME

Response time for altering the puller speed (photocell 16)

12 THREAD MONITOR SENSITIVITY

Setting of the thread monitor
00 = Function off
01 = High sensitivity
99 = Low sensitivity

(the setting depends on the sewing thread used)

13 EFKA POSITION UP

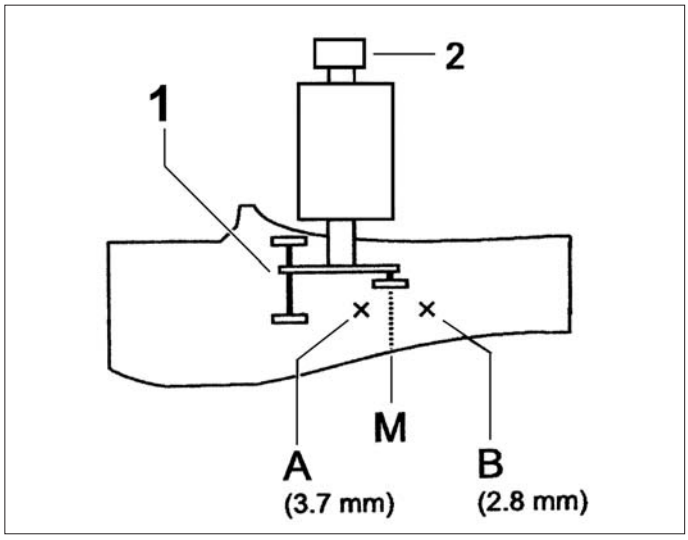
Needle position down at the sewing start, needle position up when threading.

14 STITCH LENGTH

Synchronisation of the lowering position of the puller and the stitch length of the sewing unit.

ATTENTION !

A stitch length alteration has an effect on all seam sections.



- Set the stitch length at the handwheel 2 of the machine head (e.g. step 6 corresponds to a stitch length of approx. 3.2 mm)
- Mark the desired lowering position M of puller 1 on the workpiece.
- Setting of parameter 14 as to the lowering position of the puller (range of tolerance 2 cm)
  If the puller lowers too early (Pos A) = the set value is too high
  If the puller lowers too late (Pos. B) = the set value is too low

15 TOP FEED MAX POS:

Maximum fullness.
Security value.
The value must not be altered.

16 DIFFERENTIAL MAX POS:

Maximum fullness.
Security value.
The value must not be altered.

20 MAX SPEED

Safeguard of the maximum sewing speed

29 C-HEAD OFF/ON MODE

Refers to the fusing station.
00 = Fusing station off
01 = Fusing station on

37 CLAMP CLOSED

Time stamp fusing station

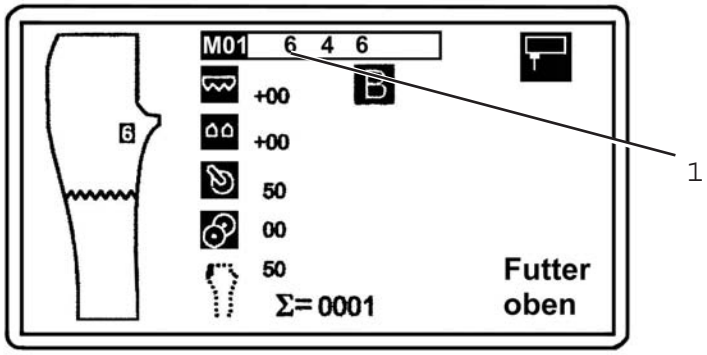
6.5 Seam sequences

In a program individual seams can be deactivated or the seam sequence can be altered respectively.

A deactivated seam is not deleted, but can be called up and activated again at any time.
This function becomes only effective in the current program.

Determining the seam sequence

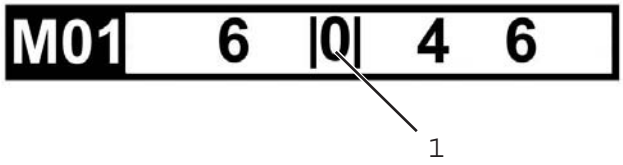
- Select program.
  Example: M 01
- Press key "F1".
  You get to the user level 2.
- Press key "F2".



- Enter the number of the first seam via the numeric pad.
- Place the cursor on the next position with the key "⇨ ".
- Enter the number of the second seam.

Adding a seam between two positions

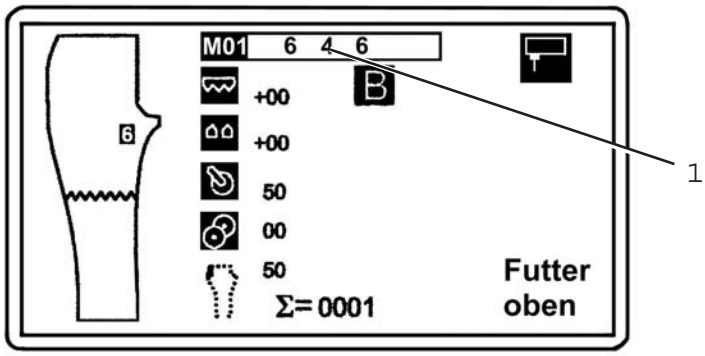
- Place the cursor on the seam number in front of which a new seam is to be added with the keys "⇦ " or "⇨ ".
  For example on seam number 4
- Press key "ENT".
  A free position 1 is added between the seam numbers already available.



- Enter the number of the new seam.
- Press key "P".
  The seam sequence is taken over.

Deleting a seam from a seam sequence

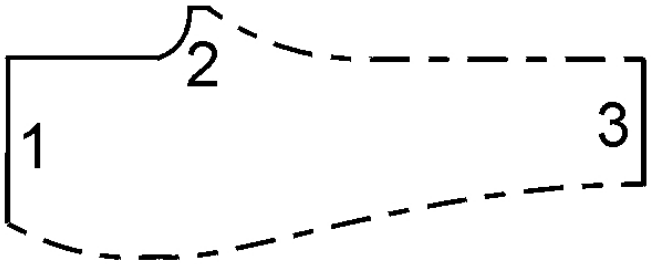
- Select program.
  Example: M 01
- Press key "F1".
  You get to the user level 2.
- Press key "F2".



- Place the cursor on the seam number to be deleted from the seam sequence with the keys "⇦" or "⇨".
- Press key "0".
  The seam is deleted.
- Press key "P".
  The seam sequence is taken over.

6.6 Preseams

With the sewing unit 1265/5 also the preseams (waistband seam 1, crotch seam 2 and hem seam 3) can be sewn.



Calling up the parameter list for preseams

- Press key "F1".
  You get to the user level 2.
- Press key "F3".

1. PRESEAM SPEED
   Sewing speed
   PRESEAM TOP FEED
   Basic setting of fullness
   PRESEAM DIFFERENTIAL
   Basic setting of fullness
   PRESEAM WITH ROLLER
   Length in cm until the auxiliary roller lowers, max. 99 cm

2. PRESEAM SPEED
   Sewing speed
   PRESEAM TOP FEED
   Basic setting of fullness
   PRESEAM DIFFERENTIAL
   Basic setting of fullness
   PRESEAM WITH ROLLER
   Length in cm until the auxiliary roller lowers, max. 99 cm

3. PRESEAM SPEED
   Sewing speed
   PRESEAM TOP FEED
   Basic setting of fullness
   PRESEAM DIFFERENTIAL
   Basic setting of fullness
   LINKED WITH SEAM NUMBER
   The third preseam can be linked with a main seam in order to access the seam parameters of same.

Note
The linked main seam must not be used anywhere else in the program.

6.7 Seam starting mode

Two starting modes of the sewing sequence are available:

Start by photocell (automatic sequence)

Start by footpedal

Altering the starting mode

- Press key "F1".
  You get to the user level 2.
- Press key "F4".

Pedal start for seam off

Pedal start for seam on

6.8 Activating the sewing motor

For testing the machine head the sewing motor can be activated.

- Press key "F1".
  You get to the user level 2.
- Press key "F5" and keep it pressed.
  The sewing motor runs as long as the key "F5" is pressed.

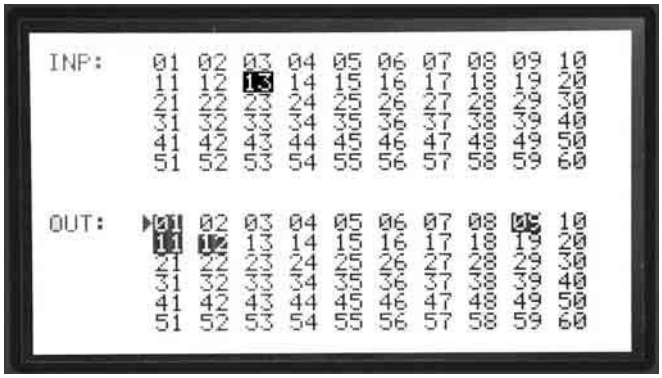
6.9 Resetting the daily piece counter

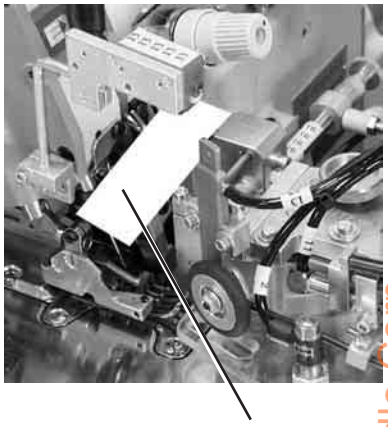
- Press key "F1".
  You get to the user level 2.
- Press key "F7".
  The daily piece counter is reset to "0".

6.10 Input-Output test

Via the input-output-test it it possible to select the inputs and outputs of the sewing unit control for trouble shooting and for checking individual machine steps.

The outputs (Out) are called up and tested separately. The corresponding inputs (Inp) are indicated with the active output. Activated inputs / outputs are marked by highlighted identification numbers.





Input test

The inputs are tested directly.
Example: Photocell 13

- Push a piece of paper 1 between photocell 13 and support sheet.
  Input No. 13 is black-shadowed.

Output test

- Press key "F1".
  You get to the user level 2.
- Press key "F8".
- Select the column of numbers with the keys "⇧ " or "⇩" .
- Select the identification number with the keys "⇦ " or "⇨ ".
- Press key "ENT".
  The identification number is black-shadowed and the output is activated.
- Press key "ENT" once again.
  The output is deactivated.

Input elements

Signal	Input No.	
S02	02	GND bridge on photocell 15, if without hem recognition "FZ 15"
S04	04	Push-button lining clamp
S05	05	Push-button fusing start
S09	09	Thread monitor
S13	13	Photocell program start
S15	15	Photocell hem recognition
S16	16	Photocell contour control

Output elements

Valve	Output No.		
Y01	01	Sewing foot	lifting
Y02	02	Contour guide blowing	on
Y03	03	Contour guide	up/down
Y04	04	Fly blowing	on
Y05	05	Puller	down/up
Y06	06	Ejector	down/up
Y07	07	Swivelling the puller	on
Y08	08	Feeding unit	up/down
Y09	09	Swivelling the blade	on
Y10	10	Tension lifting	on
Y11	11	Auxiliary roller	down/up
Y12	12	Sewing foot: high pressure	on
Y13	13	Fly roller (optional)	down/up
Y14	14	Fusing stamp	down/up
Y15	15	Lining clamp	down/up
Y16	16	Movable guide	backwards/forwards
Y26	26	Move stacker (optional)	on
Y27	27	Stacker start	impulse
Y30	30	Table blowing	on
Y31	31	Kettup suction	on
Y32	32	Dirt suction	on

6.11 Programming menus

6.11.1 General notes

The programming menus allow the generation of programs and the corresponding seams.

In principal it is possible to generate a complete new program. An easier way is:

- to copy a program provided by the manufacturer to a free storage location in the memory and to adapt it to the conditions of your production.
- to copy an already modified program to a free storage location in the memory and to further adapt it.

In order to generate a new program the following steps are required:

1) Allocate a free storage location

2) Add seams or copy existing seams
   to a program

3) Configurate seams (adapt them to the production)

Scrolling down the programming levels

When the programming menus are called up, the menu dealt with last is always indicated.
The number preceding the functions shows which programming level has been called up.

In order to call up a certain function you have to scroll down the programming menus and service menus.

Calling up a programming menu

- Press key "P".

Scrolling down a programming menu

- Press key "⇦".

6.11.2 Allocating a free storage location

The storage locations M 01 - M 10 have been provided with programs by the manufacturer. The storage locations M 11 - M 20 are free.

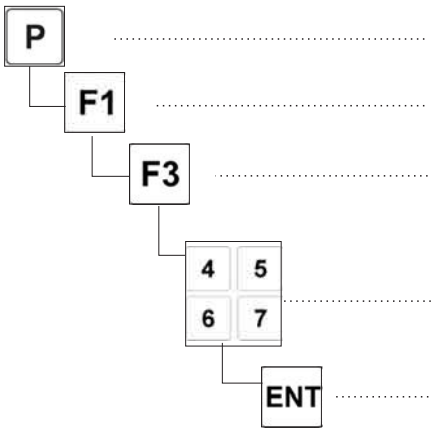
- Press key "M".
- Enter the two-digit number via the numeric pad.

6.11.3 F1 = INIT Parameter

Functions in the menu Init Parameter:

- F1 = EPROM global parameter
- F2 = EPROM seam parameter
- F3 = copy seam number
- F4 = delete seam

F3 = Copying the seam number (program number)



ATTENTION!

The current program is overwritten.

- Press key "P".
  The programming level is called up.
- Press key "F1".
  The function INIT PARAMETER is called up.
- Press key "F3".
  The function COPYING OF SEAM NUMBER is called up.
- Enter the number of the program to be copied via the numeric pad.
- Press key "ENT".
  Confirm the copying.

  The display indicates *OK PLEASE WAIT!*. This is a hint that the copying is being carried out.

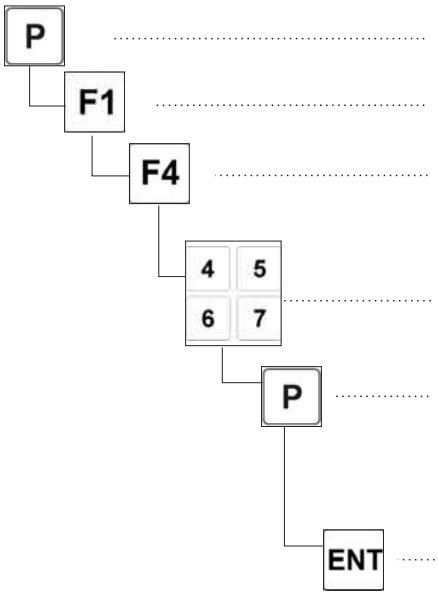
  Finally the display of the program shows the program number with the seams.

F4 = Deleting a seam program

A program consists of several seams.

The contents of these seams, the seam parameters, can be deleted completely.

The current program cannot be deleted.



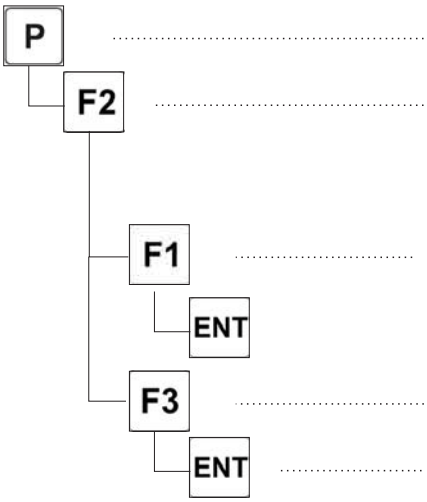
- Press key "P".
  The programming level is called up.
- Press key "F1".
  The function INIT PARAMETER is called up.
- Press key "F4".
  The function DELETE SEAM is called up.
- Enter the number of the seam to be deleted with one of the keys "1" to "9".
- Press key "P".
  Start the deleting procedure.
  The display indicates a checkback
  "ARE YOU SURE ?*
- Press key "ENT".
  The new setting is stored and you return to the selection menu.
  The display indicates *OK PLEASE WAIT!*. This is a hint that the deleting procedure is being carried out.

6.11.4 F2 = Memory card

- F1 = Current seam -> Card
- F2 = Card -> Current seam
- F3 = Machine memory -> Card
- F4 = Card -> Machine memory
- F5 = Memory card format

F1 = Current seam -> Card (storing the data on the memory card)

The memory function optionally allows the securing of only one selected program or the securing of all programs.



- Push the memory card into the slot of the operating terminal.
- Press key "P" .The programming menus are called up.
- Press key "F2" .The function MEMORY CARD is called up.

Securing a selected program

- Press key "F1". The function Current seam -> Card is called up.

oder

Securing all programs

- Press key "F3". The function MACHINE MEMORY -> Card is called up.
- Press key "ENT". The checkback is confirmed.

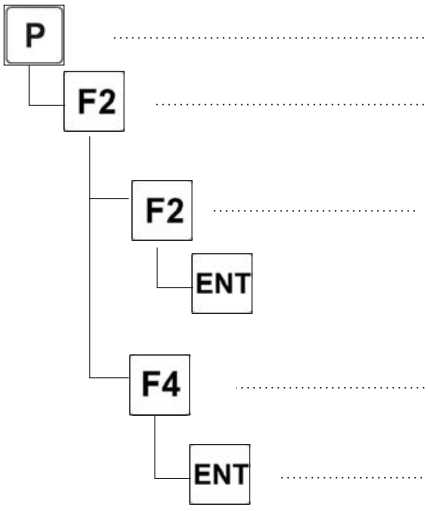
  The display indicates *OK PLEASE WAIT!*. This is a hint that the data transfer is being carried out.

F2 = Card -> Current seam (data transfer from the memory card to the control)

Data secured on the memory card can optionally be transferred to the control as individual program or as complete data pool of all programs.

Note

If the complete data pool of all programs is transferred to the control, all data are overwritten, even seams which had been altered in the meantime.
Therefore alterations of seams should always be immediately stored as individual data protection on the memory card.



- Push the memory card into the slot of the operating terminal.
- Press key "P".
  The programming menus are called up.
- Press key "F2".
  The function MEMORY CARD is called up.

Transfer the selected program to the control

- Press key "F2".
  Transfer the selected program indicated on the display.
  The function CARD -> CURRENT SEAM is called up.

or

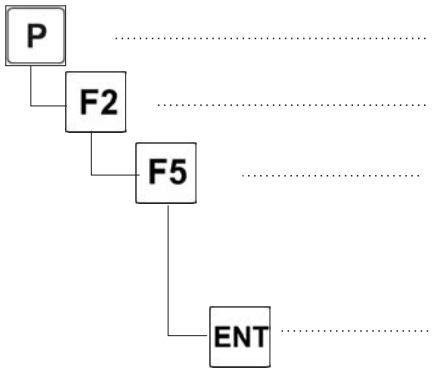
Transfer all programs to the control

- Press key "F4".
  Transfer the complete data pool of all programs.
  The function CARD -> MACHINE MEMORY is called up.
- Press key "ENT".
  The checkback is confirmed.

  The display indicates *OK PLEASE WAIT!* This is a hint that the data transfer is being carried out.

F5 = Memory Card Format

If additional memory cards (optionally available) are used for data back-up, the storage medium has to be formatted before being used for the first time.



- Push the memory card into the slot of the operating terminal.
- Press key "P".
  The programming menus are called up.
- Press key "F2".
  The function MEMORY CARD is called up.
- Press key "F5".
  The function MEMORY CARD FORMAT is called up.

  The display indicates the checkback *ARE YOU SURE ?*

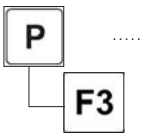
- Press key "ENT".
  The checkback is confirmed.

  The display indicates *OK PLEASE WAIT!*. This is a hint that the formatting is being carried out.

6.11.5 F3 = Diagnostics

The menu DIAGNOSTICS includes service functions for testing sewing units, aggregates as well as the initiators for activating the aggregates.

- F1 = Service test
  - F1 = Memory test
    - F1 = EEPROM 2K
    - F2 = EEPROM 8K
    - F3 = RAM 8K
  - F4 = I/O Module long-term test
  - F5 = I/O Analog output
  - F6 = Further tests
    - F1 = RS232 Test
    - F2 = I/O Adapter test
    - F3 = Communication test
- F4 = Sewing head test
  - F1 = Activating the sewing motor
  - F2 = Sewing motor and puller
  - F3 = Ejector
  - F4 = Top feed
  - F5 = Differential
  - F6 = Reference value transmitter



- Press key "P".
  The programming level is called up.
- Press key "F3".
  The function DIAGNOSTICS is called up.
- Call up the test functions.

Note

These service functions should only be carried out under the guidance of the Beisler service department or in cooperation with experienced service personnel.

Attention: Risk of breakage!

During the tests individual machine aggregates or machine sequences are started. If components have been disassembled completely or partially or if they are not operational, machine components may be damaged.
Make a test only when the machine is ready for operation.

F1 = Service test/F1 = Memory test

ATTENTION !

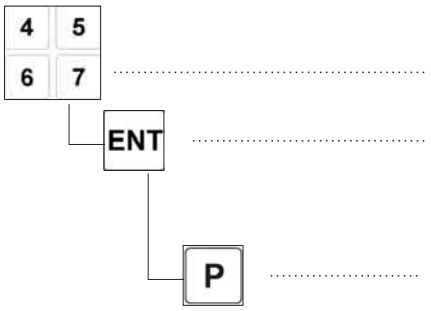
All data in the memories are deleted.

F1 = EEPROM 2K
F2 = EEPROM 8K
F3 = RAM 8K

F1 = Service test/F4 = I/O MODULE LONG-TERM TEST

Attention: Risk of injury!
All outputs are automatically switched one after the other.

F4 = Sewing head test/F1 = ACTIVATING THE SEWING MOTOR



The current speed is compared with the ideal speed of the sewing motor.

- Enter the speed at the numeric pad.
- Press key "ENT".
  The motor starts, the current speed is measured and indicated.
-

The measured speed can be compared with the test speed.

- Press key "P".
  The test is finished.

F4 = Sewing head test/F2 = SEWING MOTOR AND PULLER

Test of the step motors.

F4 = Sewing head test/F3 = EJECTOR

Test of the ejecting section.

F4 = Sewing head test/F4 = Top feed

Test of the top feed function

F4 = Sewing head test/F5 = Differential

Test of the differential feed function

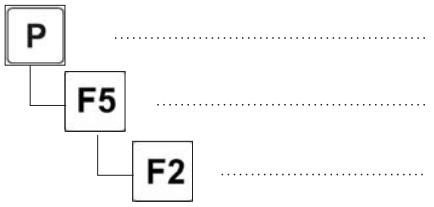
F4 = Sewing head test/F6 = Reference value transmitter

Test of the reference value transmitter

6.11.6 F5 = Additional programs

F2 = System update

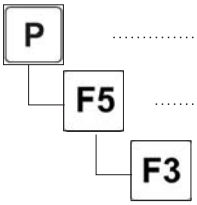
A system update can be carried out.



- Press key "P".
  The programming menus are called up.
- Press key "F5".
  The function ADDITIONAL PROGRAMS is called up.
- Press key "F2".
  The function "system update" is called up.
- Select the requested function.
  F1 = Eprom -> Card
  F2 = Card -> Eprom
  F3 = Text -> Card
  F4 = Card -> Texts
  F5 = RS 232 -> Card

F3 = Language selection

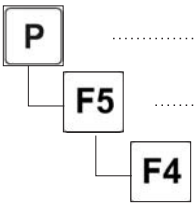
The language of the menu navigation and of the hints indicated in the display can be altered.



- Press key "P".
  The programming menus are called up.
- Press key "F5".
  The function ADDITIONAL PROGRAMS is called up.
- Press key "F3".
  The function LANGUAGE SELECTION is called up.
- Select the requested language.

F4 = Piece counter

The total quantity of workpieces sewn with the sewing unit is registered by means of a counting function. This counting function cannot be reset to zero.



- Press key "P".
  The programming menus are called up.
- Press key "F5".
  The function ADDITIONAL PROGRAMS is called up.
- Press key "F4".
  The function PIECE COUNTER is called up.
- Read the meter.

7. Maintenance

7.1 Cleaning and checking

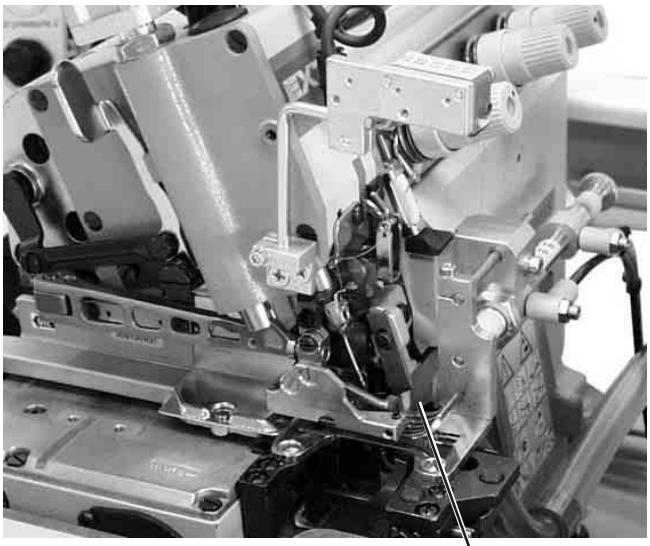
Caution: Risk of injury !

Switch the main switch off.
The maintenance of the sewing unit must only be carried out with the machine switched off.

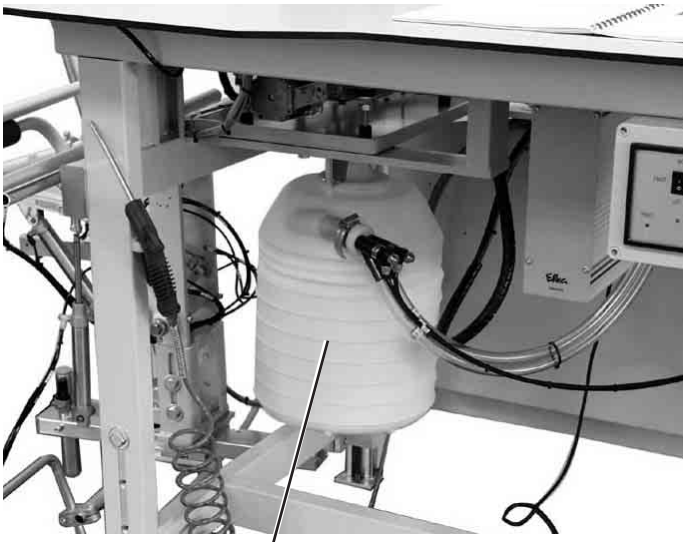
Maintenance work has to be done after the intervals indicated in the tables at the latest (see column "Operating hours").

The processing of fluffy material may require shorter maintenance intervals.

A clean sewing unit protects from disturbances.

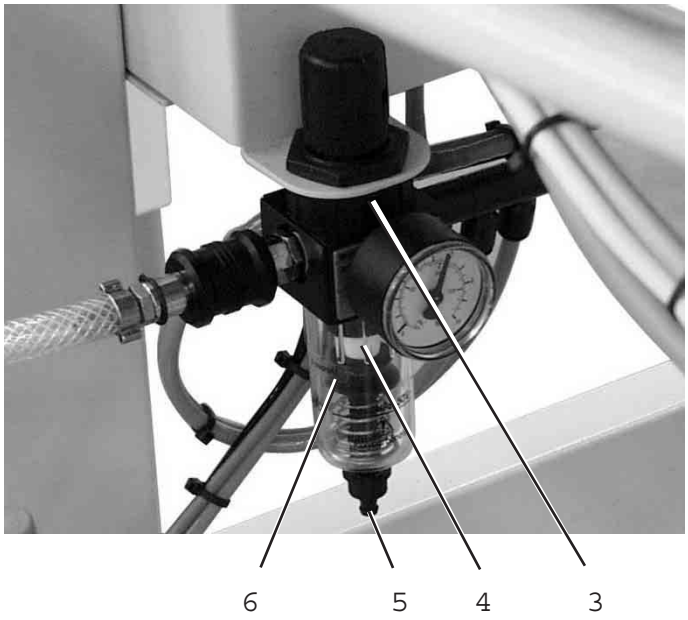


1



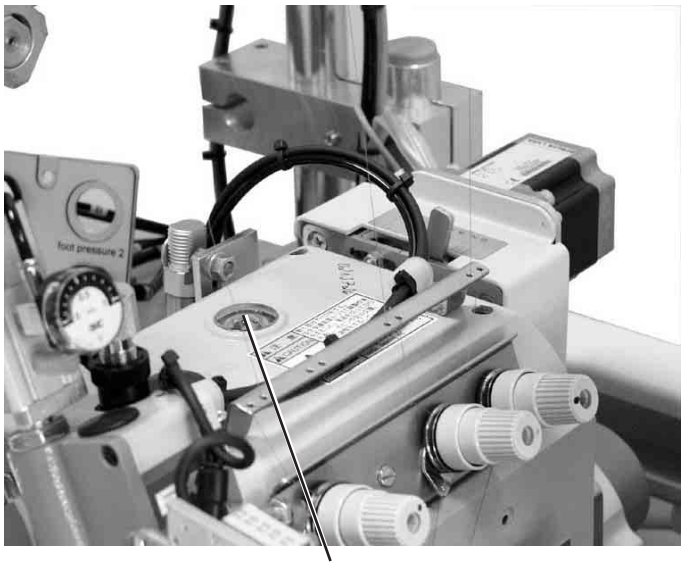
2

Maintenance work to be done	Explanation	Operating hours
Machine head - Remove sewing dust and thread remainders. (e.g. with compressed air pistol)	Clean the entire area 1 of the thread guides under the fabric sliding sheet	8
Suction device	Empty container 2 of the suction device - Turn the bottom part of the container to the left and remove it - Empty the container - Screw the bottom part on again in clockwise direction	8



Maintenance work to be done	Explanation	Operating hours
Pneumatic system		
- Check the water level in the pressure regulator 3	The water level must not rise up to the filter insert 4. - Let the water run out of the water separator under pressure after pressing the drain plug 5.	40
- Clean the filter insert 4 R	The filter insert 4 separates dirt and condensed water. - Separate the sewing unit from the compressed air net. - Push in drain plug 5. The pneumatic system of the sewing unit has to be pressureless. - Screw the water separator 6 off - Remove filter insert 4. Wash the dirty filter tray and the filter insert with benzine (no solvent!) and blow them clean. - Reassemble the water separator and connect the maintenance unit.	500
- Make leak test of the system		500

7.2 Oil lubrication



1

Caution: Risk of injury !

Oil may cause skin eruption.
Avoid a longer contact with the skin.
Wash yourself thoroughly after a contact.

ATTENTION !

The handling and disposal of mineral oils is subject to legal regulations.
Deliver used oil to an authorized collecting station.
Protect your environment.
Be careful not to spill any oil.

Oil the head of the sewing unit exclusively with lubricating oil DA-10 or an equivalent oil with the following specification:

- Viscosity at 40° C: 10 mm²/s
- Ignition point: 150° C

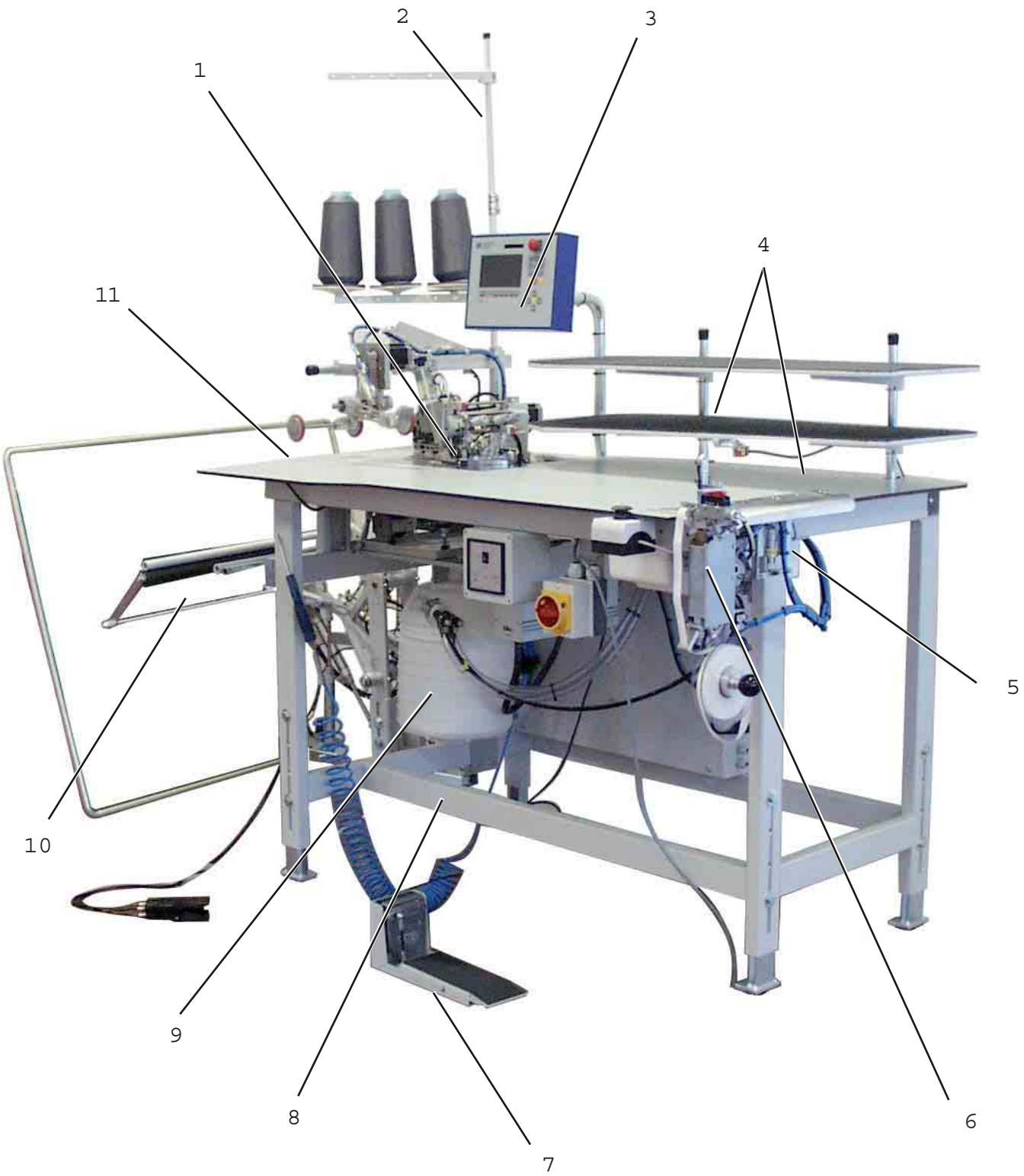
DA-10 can be bought at the sales points of DÜRKOPP ADLER AG under the following parts numbers:

Container 250 ml: 9047 000011
Container 1 litre: 9047 000012
Container 2 litres: 9047 000013
Container 5 litres: 9047 000014

Maintenance work to be done	Explanation	Operating hours
Lubrication	Check the oil level at the sewing machine head regularly (inspection glass 1). Please take further details from the enclosed operating instructions of the sewing machine head.	8

Index Page:

Part 2: Assembly instructions cl. 1265/5



1. Scope of delivery

The scope of delivery is dependent on your order.
The sewing unit consists of:

- 1 Sewing machine head (as per order)
- 2 Thread reel holder
- 3 Control with control panel
- 4 Material tray
- 5 clamp for knee lining (optional)
- 6 Fusing station for knee lining (optional)
- 7 Foot switch
- 8 Stand and table top
- 9 Suction device with suction container
- 10 Stacker (as per order)
- 11 Ejector
- Compressed air maintenance unit with compressed air pistol

2. General

ATTENTION !

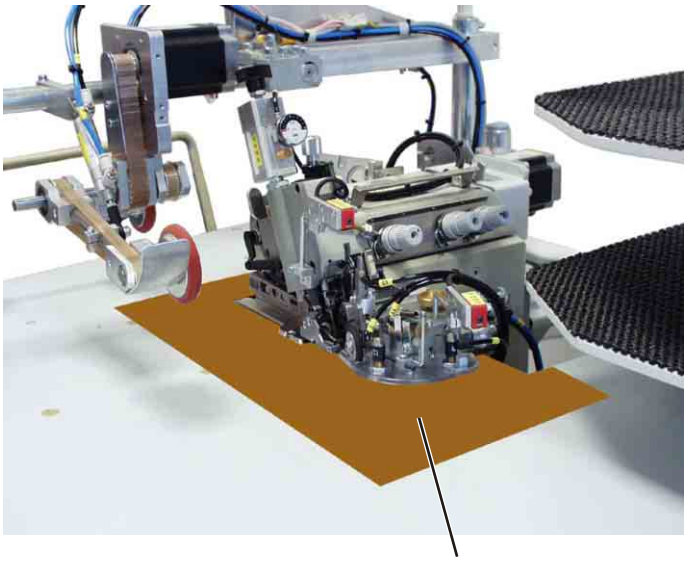
The sewing unit must only be installed by trained specialist staff.

Any work on the electrical equipment of the sewing unit must only be carried out by electricians or correspondingly instructed persons.
The mains plug must be pulled out.

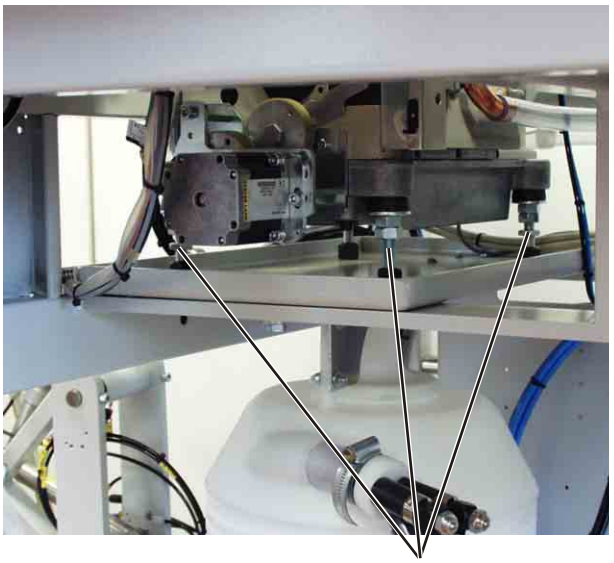
The enclosed operating instructions of the drive motor manufacturer have to be observed.

3. Installing the sewing unit

3.1 Transport protections



1



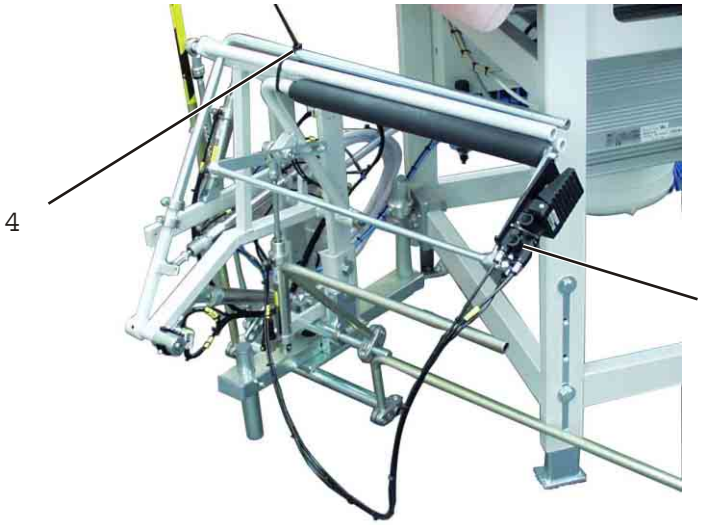
2

Before installing the sewing unit all transport protections have to be removed.

Transport protections at the sewing unit

- Remove the protective foils 1.
- Remove the security tapes from the thread reelholder, the machine table etc.
- Remove the machine head fastenings 2 (2 x)

Transport protections at the throw-over stacker



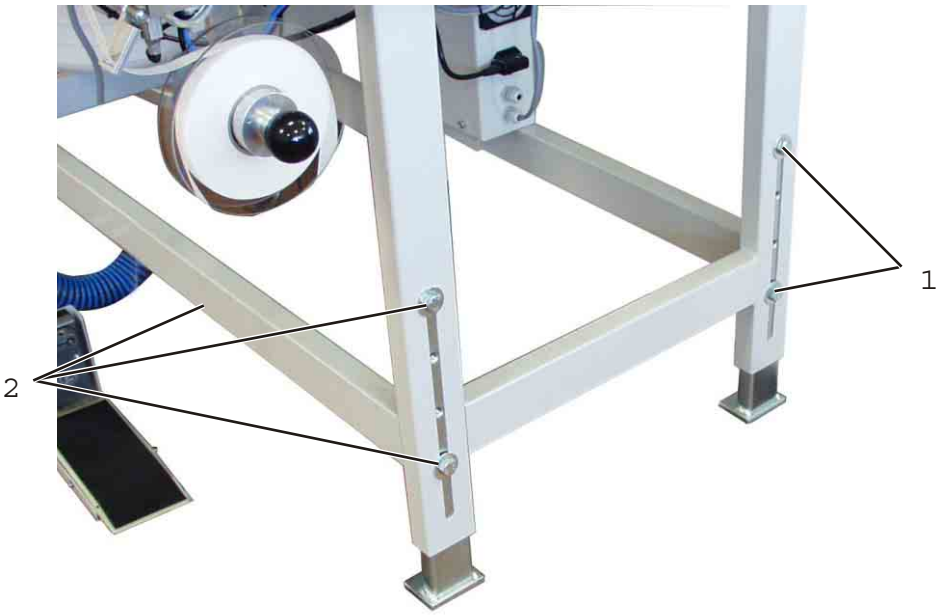
4

3

- Remove the security tape 4 from the stacker.
- Remove the security tape 3 and put the footpedal down.

- Remove the security tapes from the stacker.

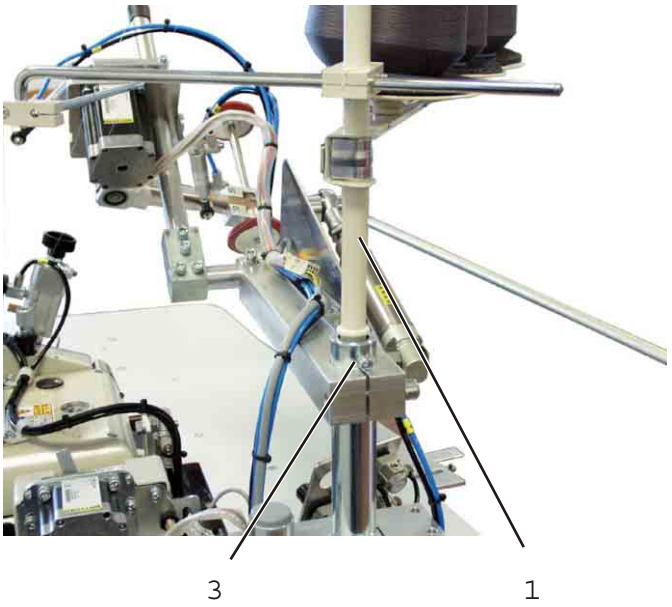
3.2 Setting the working height



The working height is adjustable between 850 and 1200 mm (measured up to the top edge of the table top).

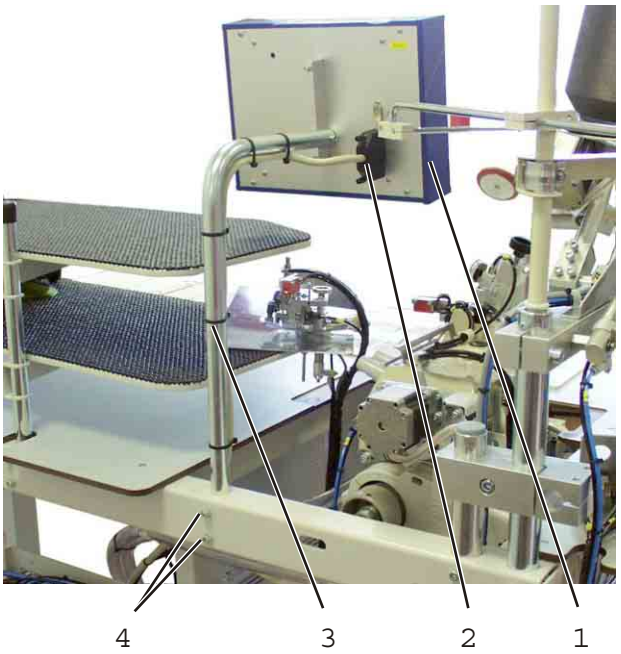
- Loosen screws 1 and 2 on all four spars.
- Set the desired working height with the help of suitable auxiliary means.
  In order to avoid jamming lift the table top equally on both sides.
- Retighten screws 1 and 2 on all four spars.

3.3 Mounting the thread reelholder



- Insert the thread reelholder 1 in retainer 2.
- Tighten the thread reelholder 1 with the screw 3.

3.4 Mounting the controlpanel

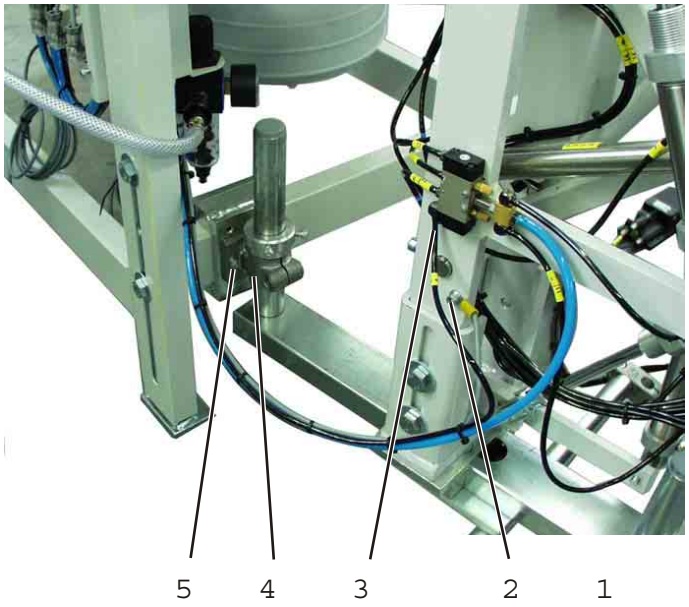


The controlpanel 2 has been removed for transportation and the tube 3 has been lowered.

- Loosen screws 4.
- Pull the tube 3 right to the top.
- Retighten screws 4.
- Screw the controlpanel 1 on the tube.
- Push plug 2 into the controlpaneland secure with the two screws.

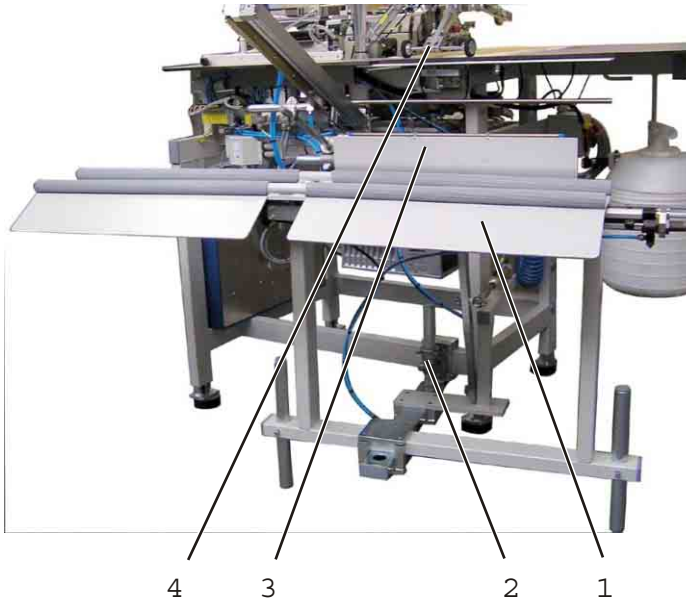
3.5 Mounting and aligning the stacker

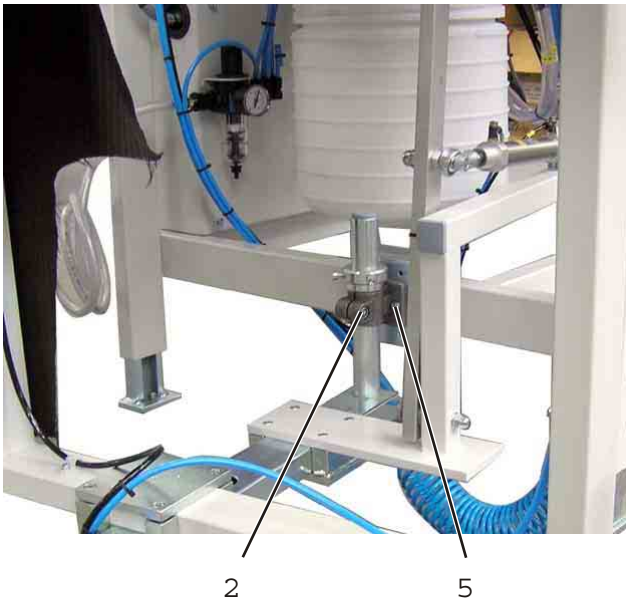
3.5.1 Mounting the throw-over stacker



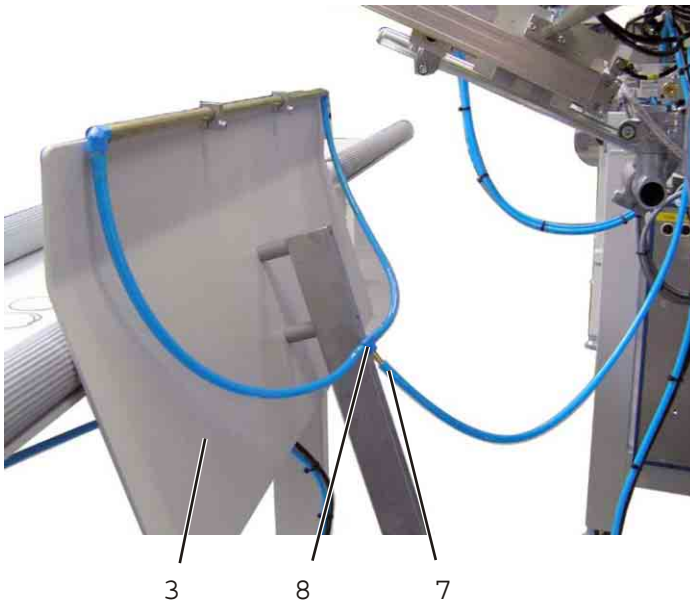
- Approach the stacker with the holder 4 to the sewing unit.
- Screw the holder 4 on the sewing unit with two screws 5.
- Align the stacker in such a way that the smoother 6 is in parallel position to the edge of the table top 7.
- Tighten screws 5.
- Screw earth wire 2 on the stacker.
- Attach the compressed air lines 1 and 3 to the distributor.

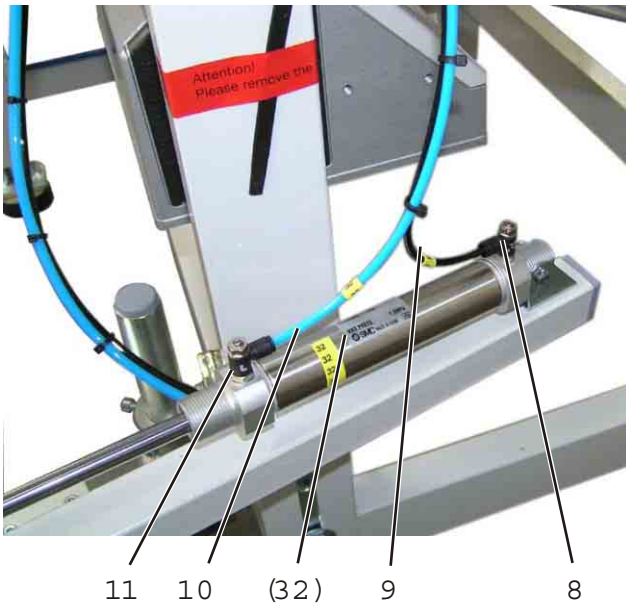
3.5.2 Mounting the alternating stacker





- Approach the stacker 1 with the holder 2 to the sewing unit.
- Screw the holder 2 on the sewing unit with two screws 5.
- Align the stacker in such a way that the shield 3 is in parallel position to the edge of the table top 4.
- Tighten screws 5.

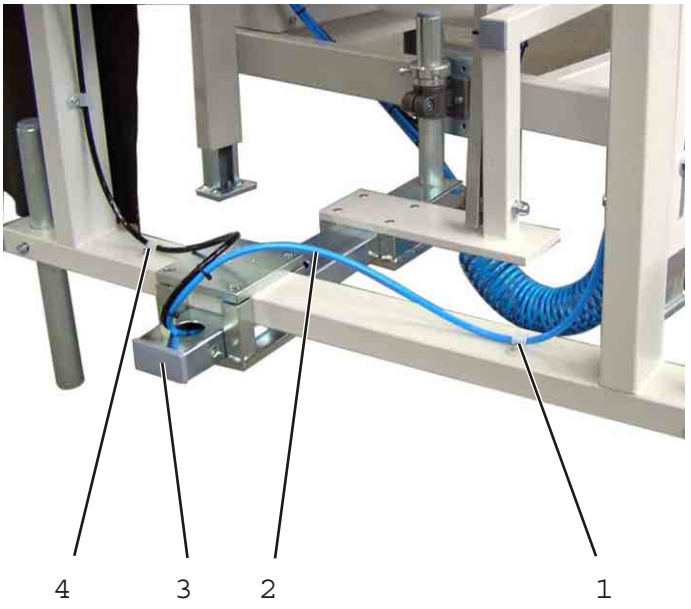


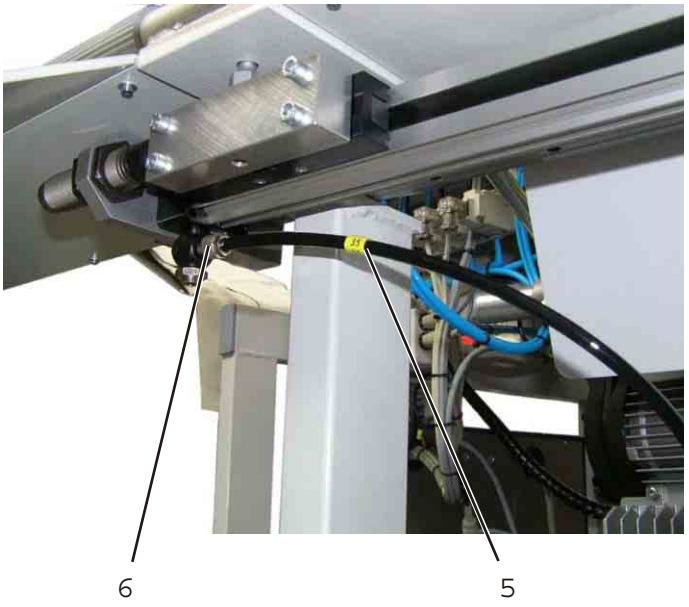


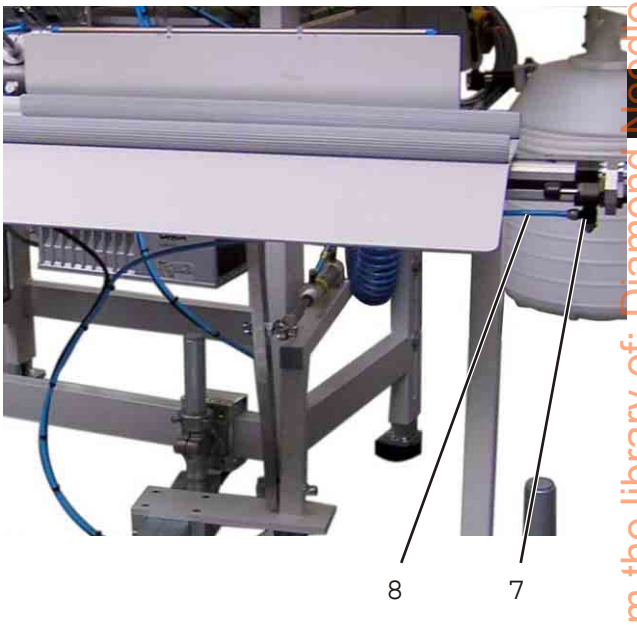
Pneumatic connections for the shield 3

- Push the compressed air line 7 on the compressed air distributor 8 of shield 3.
- Push compressed air lines (32) on cylinder (32)
  Push black cable 9 on valve 8.
  Push blue cable 10 on valve 11.

Pneumatic connections for the table

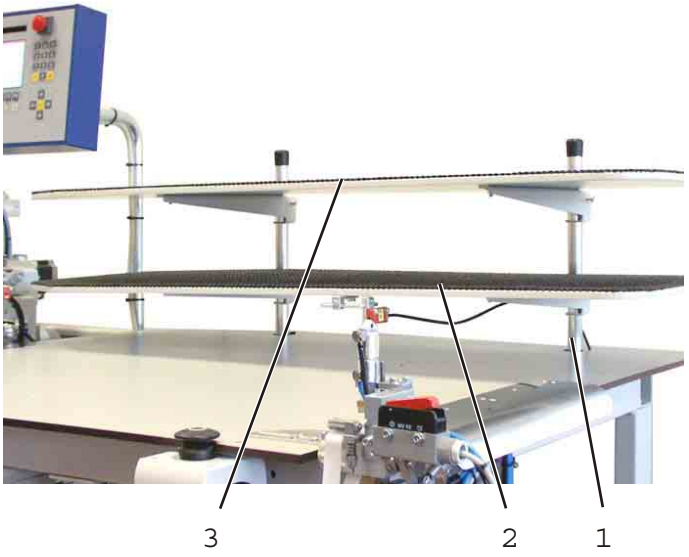


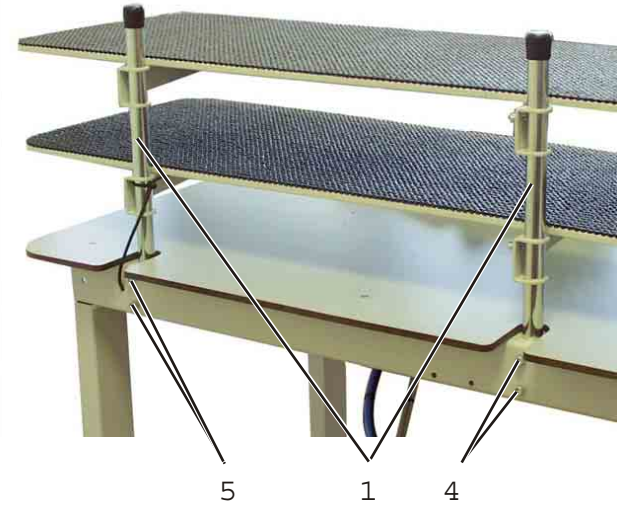




- Guide the compressed air lines 2 through the spar 2.
- Lay the blue cable to the right and secure with clamp 1.
- Lay the black cable to the left and secure with clamp 4.
- Push the black cable 5 (35) on valve 6.
- Push the blue cable 8 (35) on valve 7.

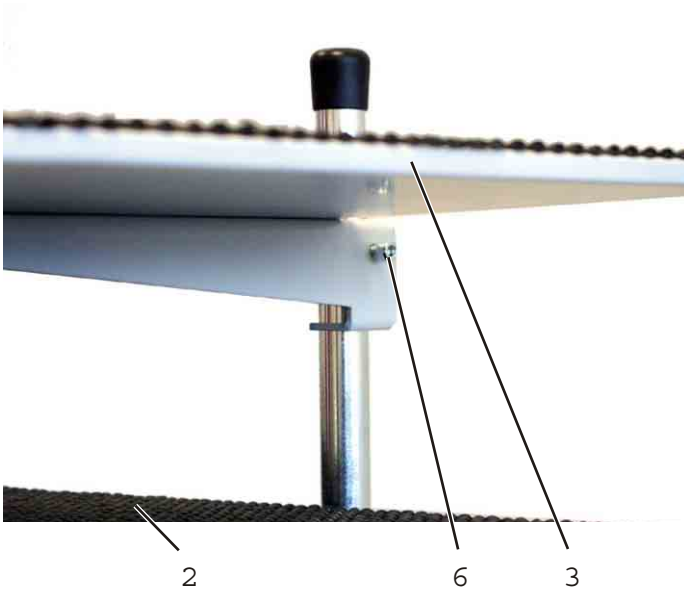
3.6 Mounting the tray





The trays 2 and 3 have been removed for transportation.

- Loosen screws 4 and 5.
- Push the spars 1 right to the top.
- Retighten screws 4 and 5.
- Put the trays 2 and 3 on the spars 1 and draw them to the corresponding working height.
- Tighten screws 6.



4. Electrical connection

ATTENTION !

Any work on the electrical equipment of the sewing unit must only be carried out by electricians or correspondingly instructed persons.
The mains plug must be pulled out.

4.1 Checking the nominal voltage

ATTENTION !

The nominal voltage indicated on the type plate of the sewing machine control and the mains voltage must correspond.

Nominal voltage = 190 - 240 V, 50/60 Hz

4.2 Making the mains connection

- Connect the mains plug.

5. Pneumatic connection

For the operation of the pneumatic components the sewing unit has to be provided with anhydrous compressed air.

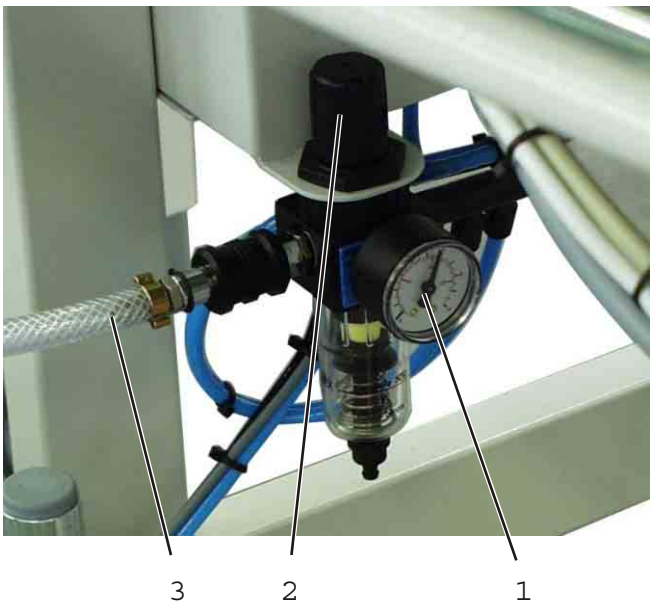
ATTENTION!

For a trouble-free function of the pneumatic control processes the compressed air net has to be rated as follows:

Even in the moment of maximum air consumption the minimum operating pressure must not drop below 6 bar.

In case of a too high air pressure decrease:

- Increase the compressor output.
- Increase the diameter of the compressed air supply line.



Connecting the compressed air maintenance unit

- Connect the connecting hose 3 to the compressed air net.

Setting the operating pressure

- The operating pressure amounts to 6 bar.
  It can be read off at the manometer 1.
- For setting the operating pressure pull up and turn the rotary handle 2.
  - Turn in clockwise direction = increase the pressure
  - Turn counter-clockwise = reduce the pressure

ATTENTION !

No oil-bearing compressed air must be fed from the compressed air net.

Behind the filter cleaned compressed air is withdrawn as blowing air for cleaning machine parts and for blowing workpieces out.
Oil particles contained in the blowing air lead to malfunction and stains on the workpieces.

6. Putting into operation

6.1 Sewing test

After completion of the installation work a sewing test should be made.

- Plug in the mains plug.

Caution: Risk of injury!
Switch the main switch off.
Thread needle and hook thread only with the sewing unit switched off.

- Thread needle and hook thread
  (see operating instructions of the sewing machine head).
- Switch the main switch on.
  The control is initialized.
- Select the sewing program.
- For feeding and operating see part 1:
  Operating instructions 1265/5

Note:

Part 3: Service instructions class 1265/5

Index Page:

1. Generalnotes

The service instructions on hand describe the adjustment of the single-head overlock unit 1265/5.

The manual consists of:

- Brief instructions for the sewing head
- Service instructions for the sewing unit

ATTENTION !

The brief instructions are a summary of the detailed operating instructions of the sewing head. In any case these operating instructions have to be carefully read and all regulations have to be observed. The Beisler company does not guarantee the accuracy of the following specifications.

ATTENTION !

The operations described in the service instructions must only be executed by qualified staff or correspondingly instructed persons respectively!

Caution: Risk of injury !

In case of repair, alteration or maintenance work switch the main switch off.

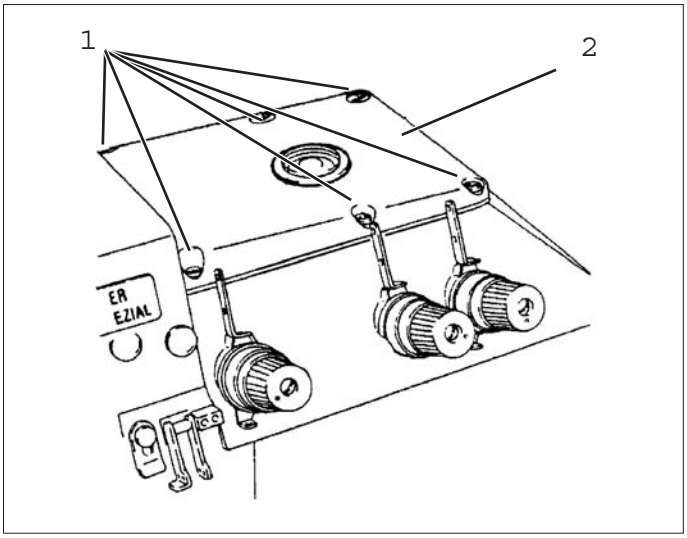
Carry out adjusting operations and functional tests of the running machine only under observation of all safety measures and with utmost caution.

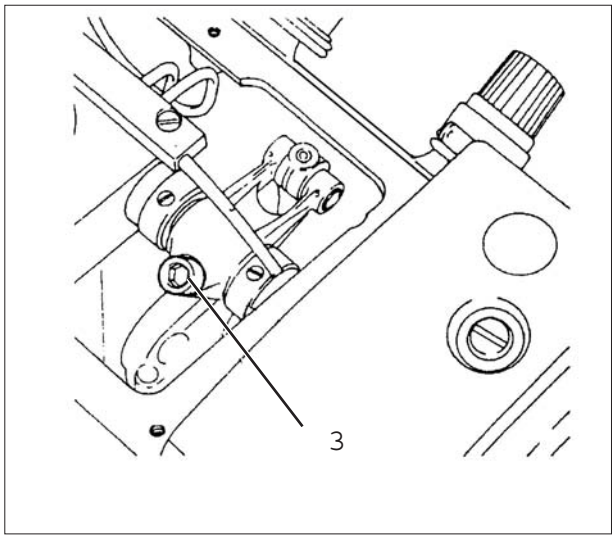
The instruction manual on hand describes the adjustment of the sewing unit in an appropriate sequence.
Please observe in this connection that various setting positions are interdependent.
Therefore it is absolutely necessary to do the adjustment following the described order.

For all setting operations of parts involved in the stitch formation a new needle without damage has to be inserted.

2. Brief instructions for the sewing head

2.1 Adjusting the needle bar height

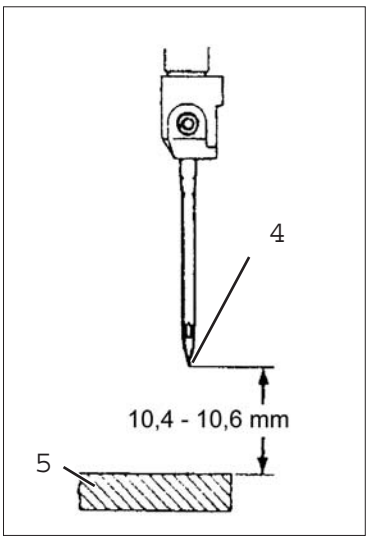




Caution: Risk of injury!

Switch the main switch off.

Check and adjust the height of the needle bar only with the sewing unit switched off.



Standard and checking

In the top dead centre of the needle bar the distance between the needle point 4 and the throat plate should amount to 10.4 - 10.6 mm.

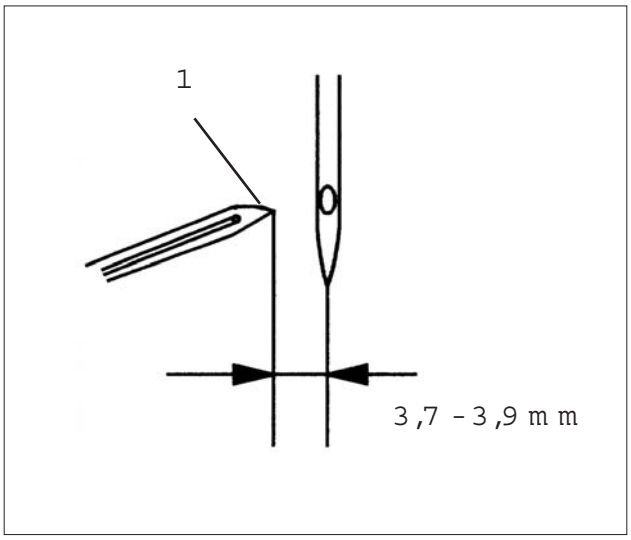
- Move the needle bar in its top dead centre.
- Check whether the distance between needle point 4 and throat plate 5 amounts to 10.4 - 10.6 mm.

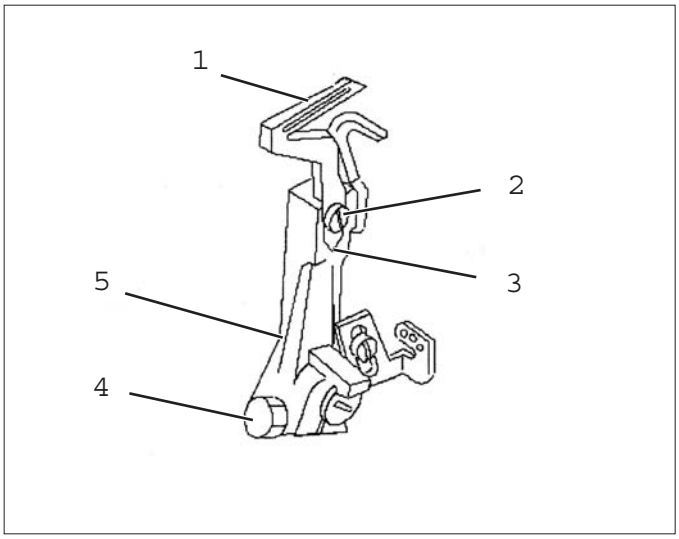
Correction

- Unscrew screws 1 and remove cover 2.
- Move the needle bar in its top dead centre.
- Swivel the sewing foot out.
- Loosen screw 3 until the needle bar can just be pushed.
- Shift the needle bar in such a way that the distance between needle point 4 and throat plate 5 amounts to 10.4 - 10.6 mm.
- Tighten screw 3.
- Screw cover 2 on again.

2.2 Adjusting the hook

2.2.1 Distance between overlock hook and needle





Caution: Risk of injury!

Switch the main switch off.

Check and adjust the hook only with the sewing unit switched off.

Cross-line adjustment

Standard and checking

In the left reverse point of the overlock hook 1 the distance between the middle of the needle and the hook tip should amount to 3.7 - 3.9 mm.

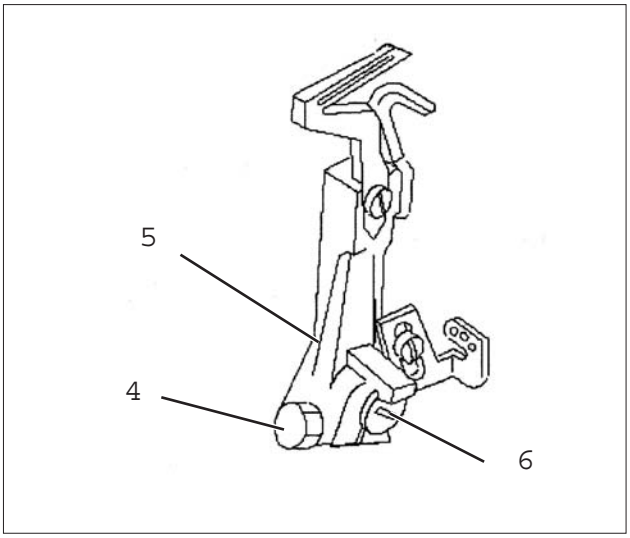
- Move the overlock hook in its left reverse point by handwheel.
- Check whether the distance between the middle of the needle and the hook tip amounts to 3.7 - 3.9 mm.

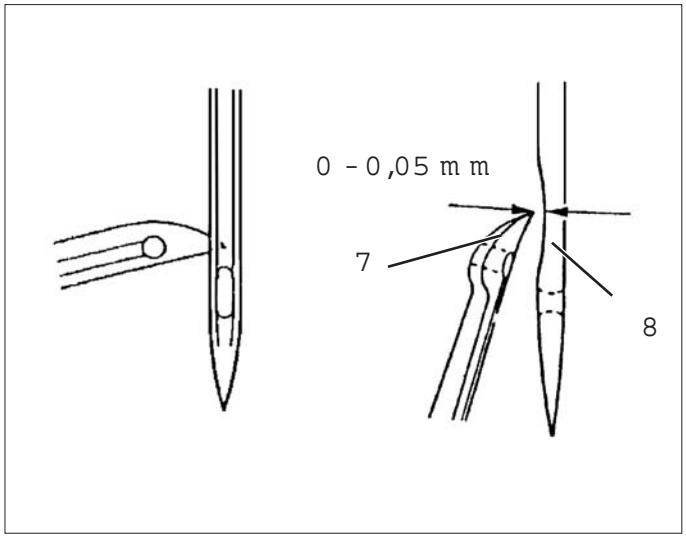
Correction

- Unscrew the throatplate, the front feed-dog as well as the front and hind needle protection.
- Move the overlock hook in its left reverse point by handwheel.
- Loosen screw 2 and take care that the hook abuts on stop 3.
- Tighten screw 2 again.
- Loosen screw 4 until the hook support 5 can just be turned.
- Turn the hook support in such a way that the distance between the middle of the needle and the hook tip amounts to 3.7 - 3.9 mm.

Note

Do not yet tighten screw 4.





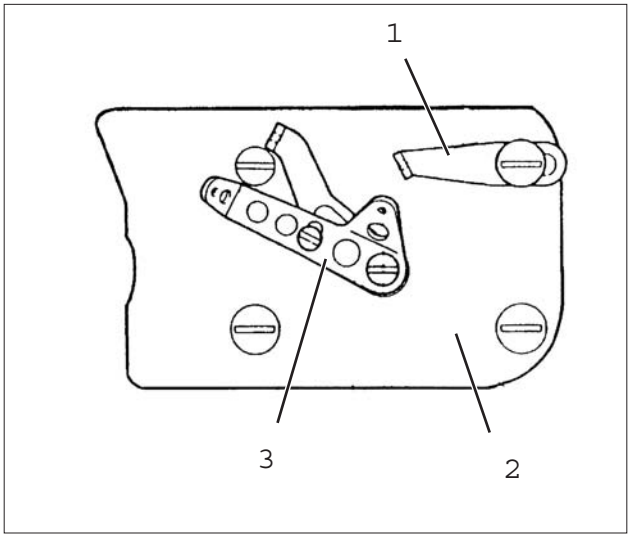
Adjustment in sewing direction

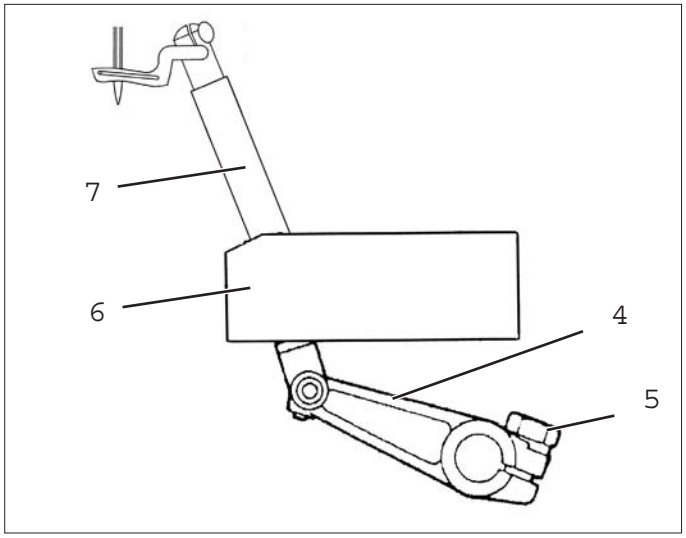
Standard and checking

The distance between hook tip 7 and needle 8 should amount to 0.0 - 0.05 mm.

- Turn handwheel in direction of rotation until the hook tip is exactly at the level of the middle of the needle.
- Adjust the hook support 5 with the screw 6 in such a way that the distance between hook support and needle amounts to 0.0 - 0.05 mm.
- Check the cross-line adjustment once again and readjust, if necessary.
- Tighten screw 4.

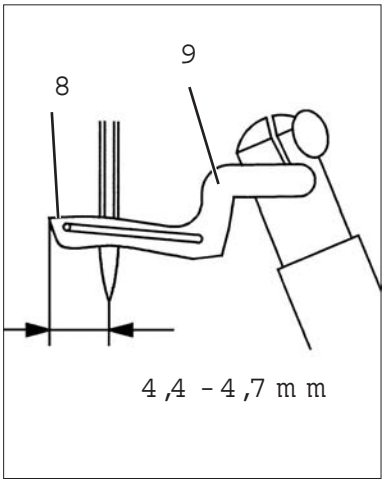
2.2.2 Distance between the upper overlock hook and the needle





Caution: Risk of injury!
Switch the main switch off.
Check and adjust the hook only with the sewing unit switched off.

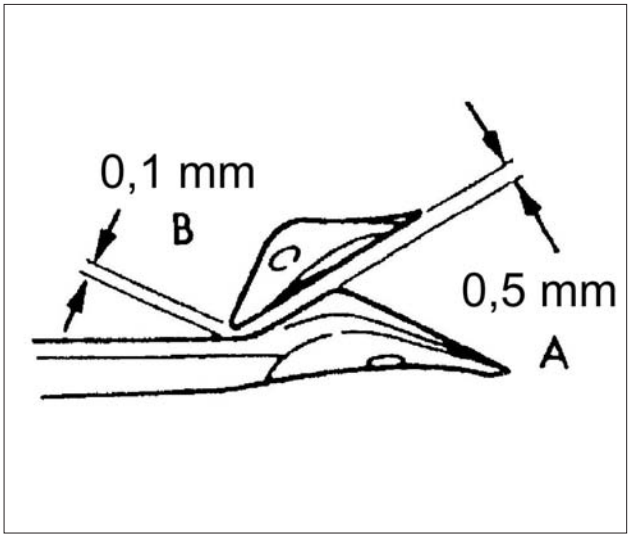
Cross-line adjustment

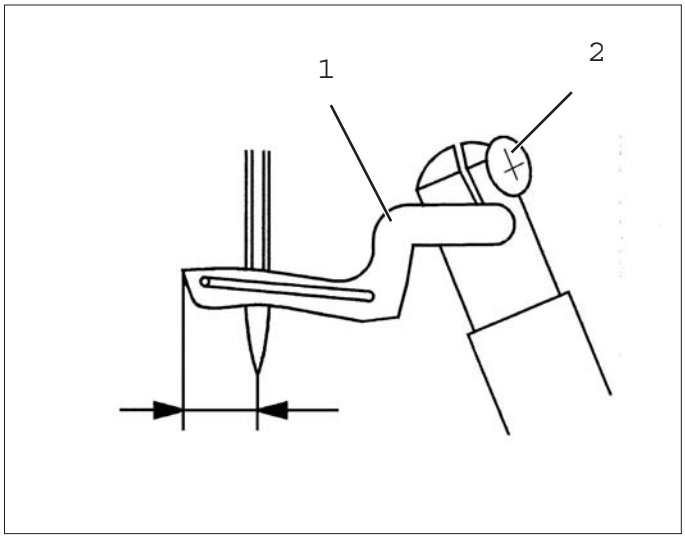


Standard and checking

In the left reverse point of the upper hook 9 the distance between the middle of the needle and the hook tip 8 should amount to 4.4 - 4.7 mm.

- Unscrew thread guides 1 and 3 as well as cover 2.
- Move the hook 9 in its left reverse point by handwheel.
- Loosen screw 5.
- Turn lever 4 in such a way that there is a distance of 4.4 - 4.7 mm between hook tip 8 and the middle of the needle.
  Take care that the bar 7 in the bearing 6 is not rough-running.
- Tighten screw 5.





Adjustment in sewing direction

Standard and checking

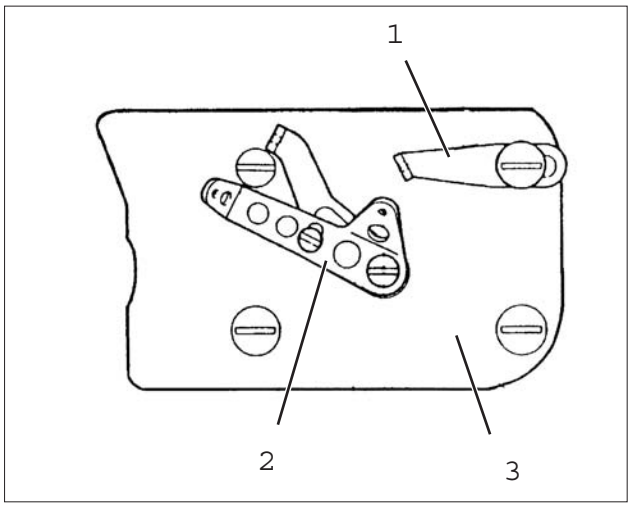
When the right hook crosses the left hook, the distance "A" should amount to 0.5 mm and the distance "B" to 0.1 mm.

Correction

- Turn handwheel in direction of rotation until the right hook crosses the left hook.
- Loosen screw 2.
- Turn and shift the right hook in such a way that the distance "A" amounts to 0.5 mm and the distance "B" to 0.1 mm.
- Tighten screw 2.
- Check all adjustments once again and readjust, if necessary.
- Remount thread guides 1 and 2 as well as cover 3.
- Adjust thread guides according to chapter "thread regulation of the overlock hooks".

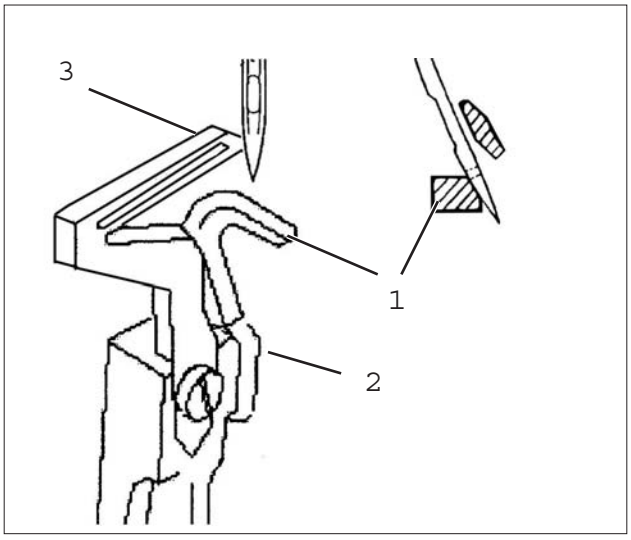
Note

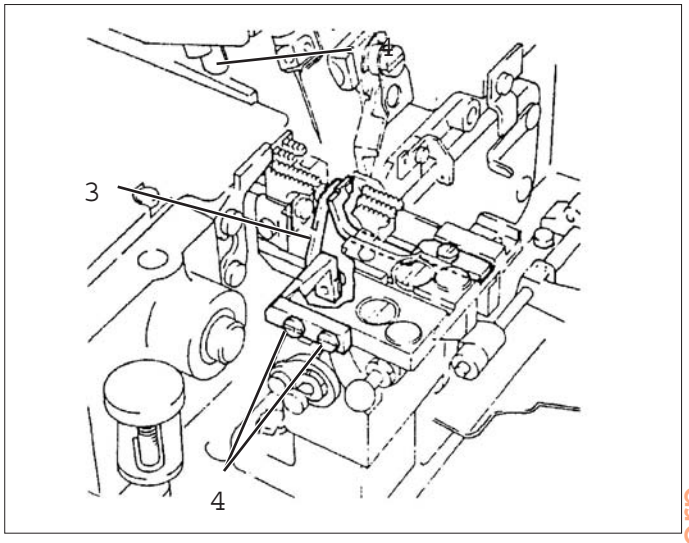
The right overlock hook is dependent on the needle size.
Use hook No. 28 for needles Nm 60 - 80 and hook No. 22 for needles Nm 80 - 100.



2.3 Adjusting the needle protection

2.3.1 Hind needle protection





Caution: Risk of injury!

Switch the main switch off.

Check and adjust the needle protection only with the sewing unit switched off.

Standard and checking

When the tip of the left hook 3 is at the level of the middle of the needle, the hind needle protection 1 should abut on the needle.

- Turn handwheel in direction of rotation until the hook tip is at the level of the middle of the needle.
- Check whether the needle protection abuts on the needle.

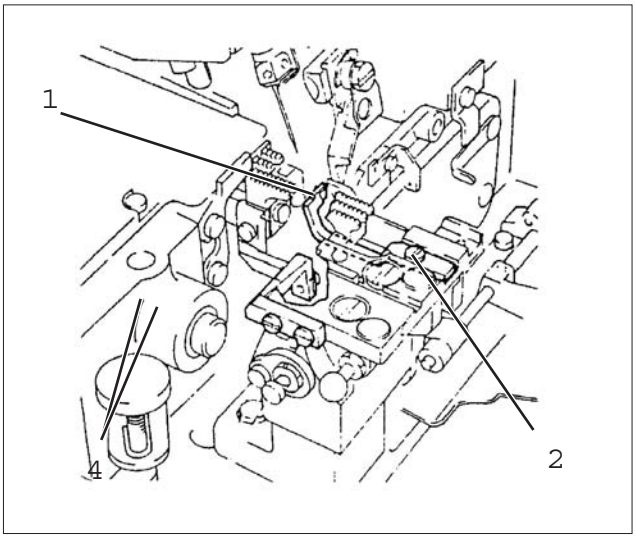
Correction of the mobile version

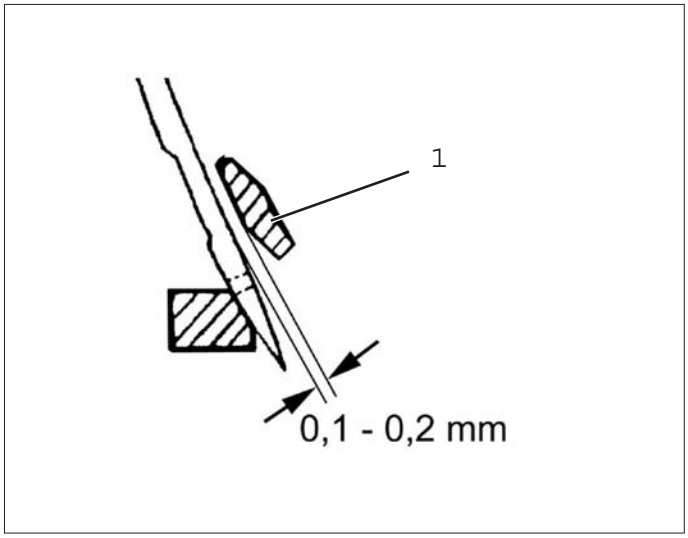
- Turn handwheel in direction of rotation until the hook tip is at the level of the middle of the needle.
- Loosen screw 2.
- Shift the needle protection 1 in such a way that it abuts on the needle.
- Tighten screw 2.

Correction of the stationary version

- Turn handwheel in direction of rotation until the hook tip is at the level of the middle of the needle.
- Loosen screws 4.
- Shift the needle protection 3 in such a way that it abuts on the needle.
- Tighten screws 4.

2.3.2 Front needle protection





Caution: Risk of injury!

Switch the main switch off.

Check and adjust the needle protection only with the sewing unit switched off.

Standard and checking

When the tip of the left hook is at the level of the middle of the needle, the distance between the front needle protection 1 and the needle should amount to 0.1 - 0.2 mm.

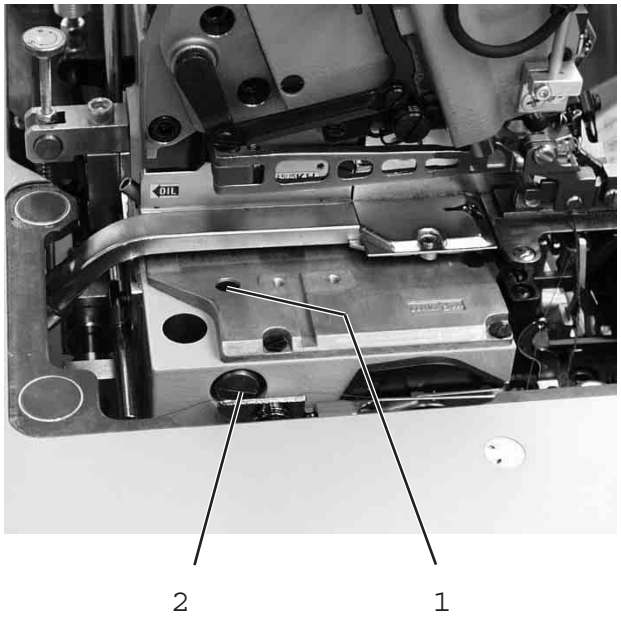
- Turn handwheel in direction of rotation until the needle is in its lower dead centre.
- Check the position of the front needle protection.

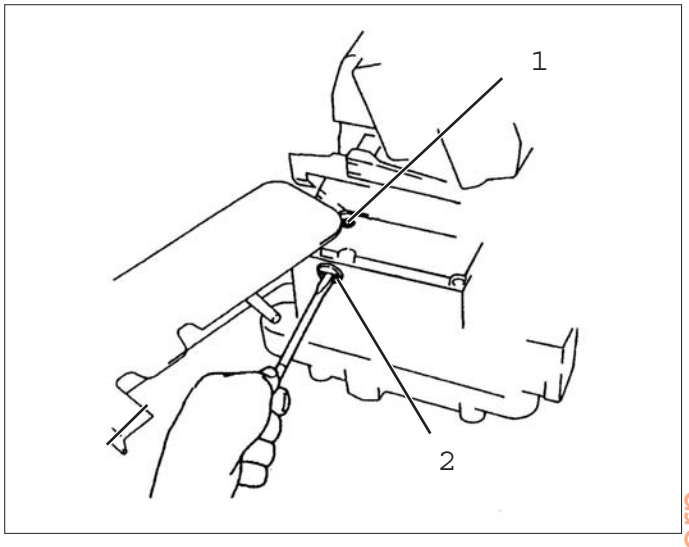
Correction

- Turn handwheel in direction of rotation until the needle is in its lower dead centre.
- Loosen screw 2.
- Shift the needle protection 1 in such a way that there is a distance of 0.1 - 0.2 mm between needle protection and needle.
- Tighten screw 2.

2.4 Adjusting the feed-dog

2.4.1 Feed-dog inclination





Caution: Risk of injury!

Switch the main switch off.

Check and adjust the feed-dog inclination only with the sewing unit switched off.

Standard and checking

In their highest position the feed-dogs should be horizontal.

- Turn handwheel in direction of rotation until the feed-dogs are in their highest position.
- Check the position of the feed-dogs.

Correction

- Turn handwheel in direction of rotation until the feed-dogs are in their highest position.
- Loosen screw 1.
- Turn screw 2.

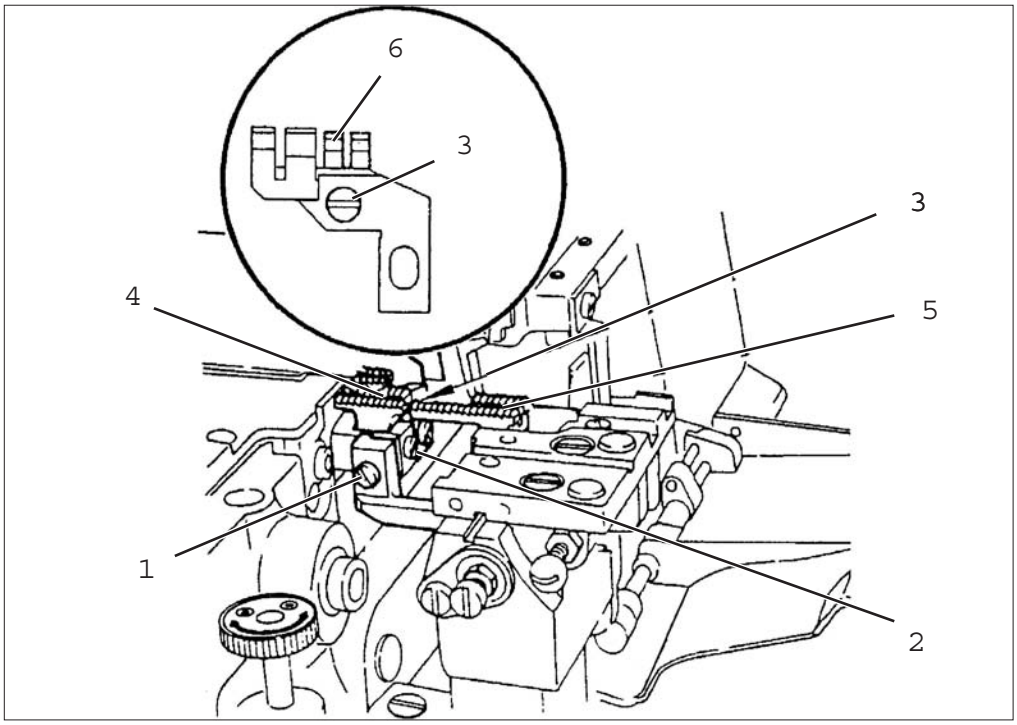
 Feed-dogs are horizontal

 Feed-dogs are inclined backwards

 Feed-dogs are inclined forwards

- Tighten screw 1.

2.4.2 Feed-dog height



Caution: Risk of injury!

Switch the main switch off.

Check and adjust the feed-dog height only with the sewing unit switched off.

Standard and checking

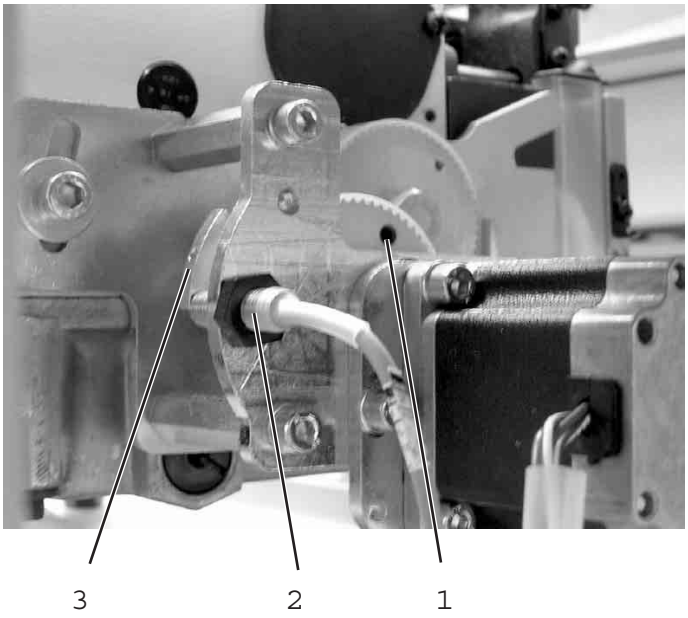
When the feed-dogs are in their highest position, the teeth of the main feed-dog 4 should be 0.8 mm above the top edge of the throatplate, the teeth of the differential feed-dog 5 0.9 to 1.0 mm and the teeth of the auxiliary feed-dog 6 0.6 to 0.7 mm.

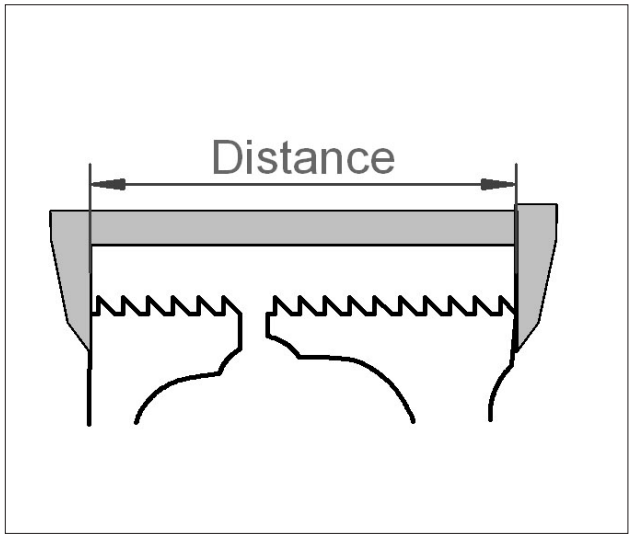
- Turn the handwheel in direction of rotation until the feed-dogs are in their highest position.
- Check the position of the feed-dogs to the throatplate.

Correction

- Unscrew the throatplate.
- Loosen screws 1, 2 and 3 a little.
- Put the throatplate on again.
- Set the height of the feed-dogs.
- Remove the throatplate.
- Tighten screws 1, 2 and 3.
- Put the throatplate on again and tighten.

2.4.3 Synchronous run of differential feed-dog and main feed-dog





Standard

The zero position of the step motors is determined by the reference disk 3. It covers the proximity switch 2 when referencing.

Correction

- Set the value 50 for the basic position of the differential feed in the program.
- Actuate the reset switch.
- Move the bottom feed to the front reversal point by turning the handwheel.
- Measure the distance from the front edge of the front feed-dog to the hind edge of the hind feed-dog.
- Move the bottom feed to the rear reversal point by turning the handwheel.
- Measure the distance again.

  The difference between the front and hind distance must not exceed 0 mm to + 0.02 mm at the rear reversal point.

  Should the difference exceed + 0.02 mm, this means that the feed stretches the material.
  The adjustment of the differential feed has to be changed to "plus".

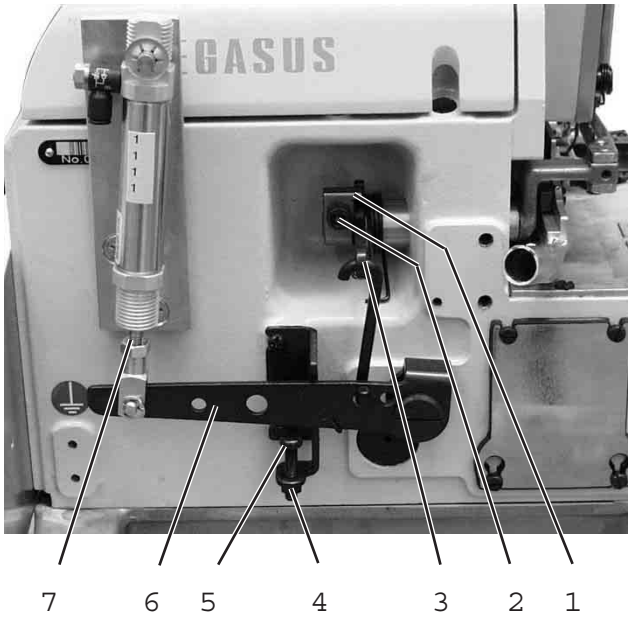
  After opening the clamping screw 1 the reference disk 3 has to be turned downwards (towards the proximity switch) and fixed again by the clamping screw 1.

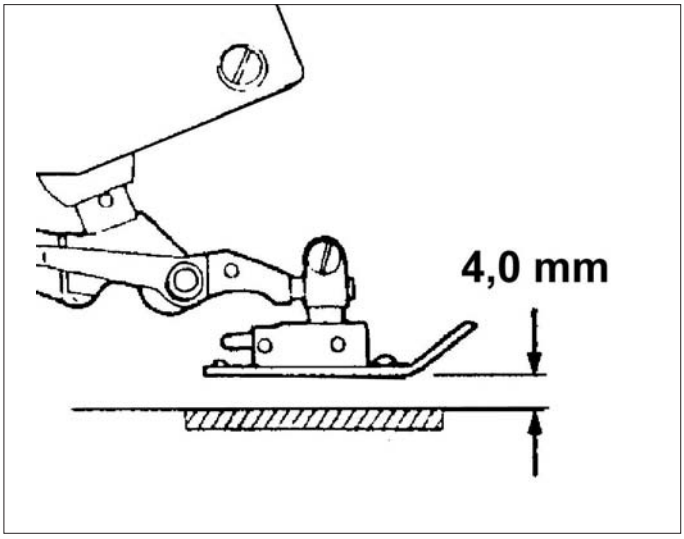
  Should the difference be below 0 mm, this means that the feed distributes fullness. Thus the adjustment of the differential feed has to be changed to "minus".

  After opening the clamping screw 1 the reference disk 3 has to be turned upwards (away from the proximity switch) and fixed again by the clamping screw 1.
- Measure the distance again.
- Repeat the setting, if required.

2.5 Adjusting the sewing foot

2.5.1 Sewing footheight





Caution: Risk of injury!

Switch the main switch off.

Check and adjust the sewing foot lift only with the sewing unit switched off.

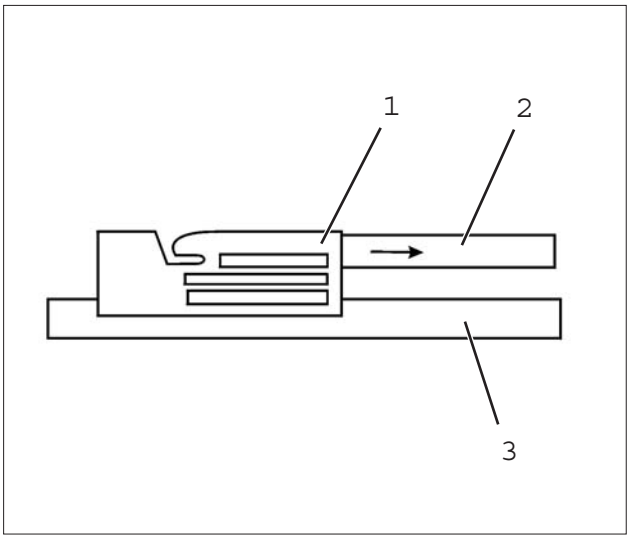
Standard

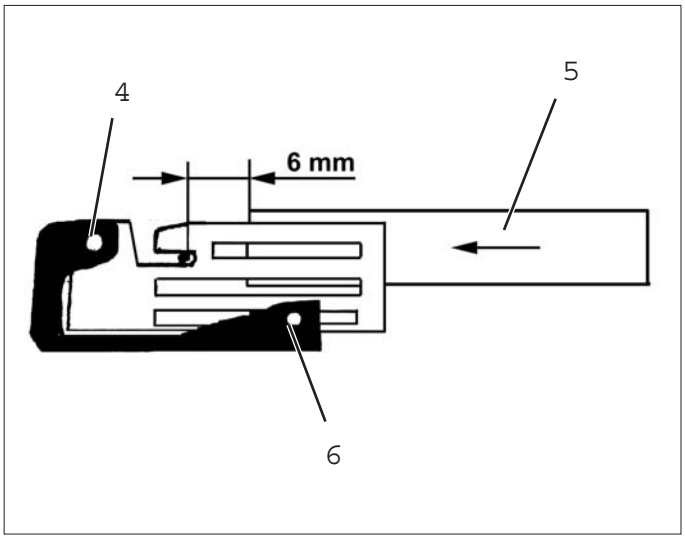
When the piston rod 7 is extended, the lever 6 should abut on screw 5 and the clearance under the sewing foot should amount to 4 mm.

Correction

- Loosen counternut 4 and screw the screw 5 down completely.
- Swivel the sewing foot in.
- Turn handwheel in direction of rotation until the teeth of the feed-dog are underneath the top edge of the throatplate.
- Loosen screw 2 and press ring 1 backwards until it nearly reaches the stop. There must be a slight clearance so that the foot safely rests on the throatplate.
- Tighten screw 2 in this position.
  Take care that ring 1 and lever 3 have no axial backlash.
- Press lever 6 down until there is a distance of approx. 4 mm between sewing foot and throatplate.
- Let screw 5 abut on lever 6 in this position and fix it by a locknut.

2.5.2 Sewing foot inclination





Caution: Risk of injury!

Switch the main switch off.

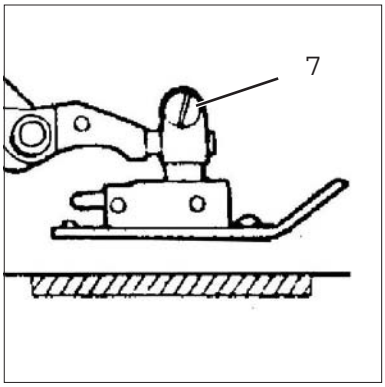
Check and adjust the sewing foot only with the sewing unit switched off.

Standard and checking

Sewing foot inclination (cross-line)

It should be possible to pull a 0.025 mm thick brass foil 2 from under the right part of sewing foot 1 with a slight clamping effect.
On the left side 3 the brass foil must be clamped.

- Place the brass foil under the sewing foot.
- Move the feed-dogs in position "down".
- Check the sewing foot position with the brass foil 2.



Correction

- Loosen screw 7 at the sewing foot.
- Adjust the sewing foot inclination.
- Tighten screw 7.

Sewing foot inclination (in sewing direction)

Screw 4 should lift the sewing foot at the front in such a way that the brass foil can be pushed 5 to 6 mm in front of the needle.

Screw 6 must abut on the sewing foot in this position.

- Place the brass foil under the sewing foot.
- Move the feed-dogs in position "down".
- Check the sewing foot position with the brass foil 5.

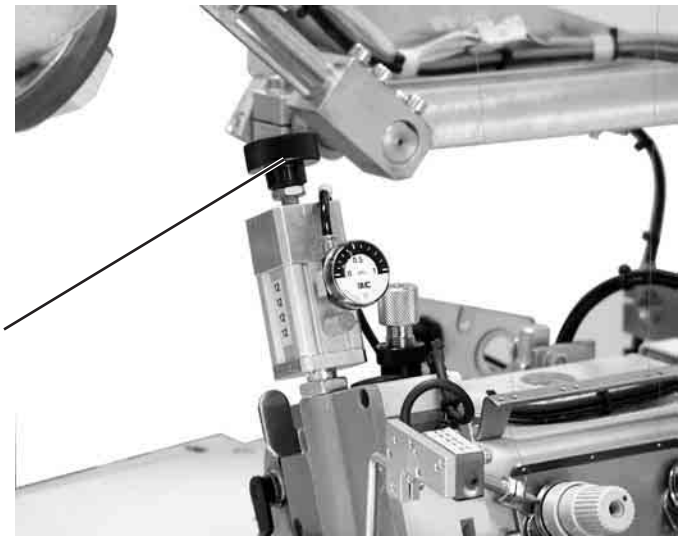
Correction

- Turn screw 4 correspondingly.
- Let screw 6 abut on the sewing foot.

Note

After the adjustment the sewing foot inclination has to be checked once again.

2.5.3 Sewing footpressure (slightpressure)



Standard and checking

The sewing footpressure of the spring (slightpressure) must be as high as to guarantee a constant stitch length over the whole seam course when sewing without top feed.

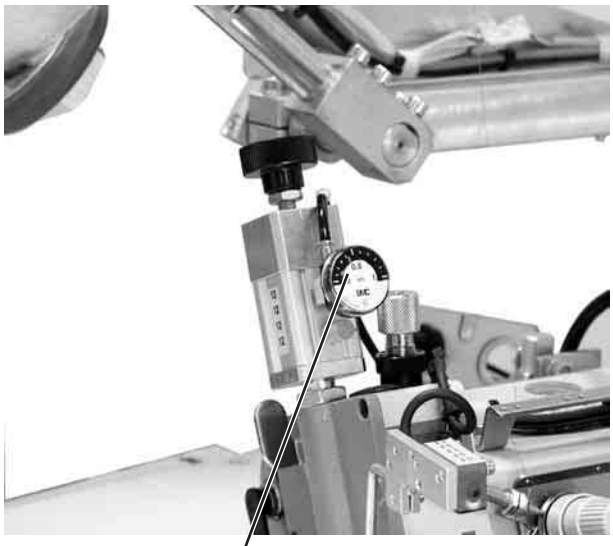
- Sew a test seam .
- Check the stitch length of the whole seam course.

Correction

- Turn the setting wheel 1 correspondingly.
  In clockwise direction = higher sewing footpressure
  Counter-clockwise = lower sewing footpressure

2.5.4 Sewing footpressure (high pressure)

2



3

The high sewing footpressure is set via setting wheel 2 and can be read off at the manometer 3.

- Turn the setting wheel 2 correspondingly.
  In clockwise direction = higher sewing footpressure
  Counter-clockwise = lower sewing footpressure

2.6 Setting the top feed

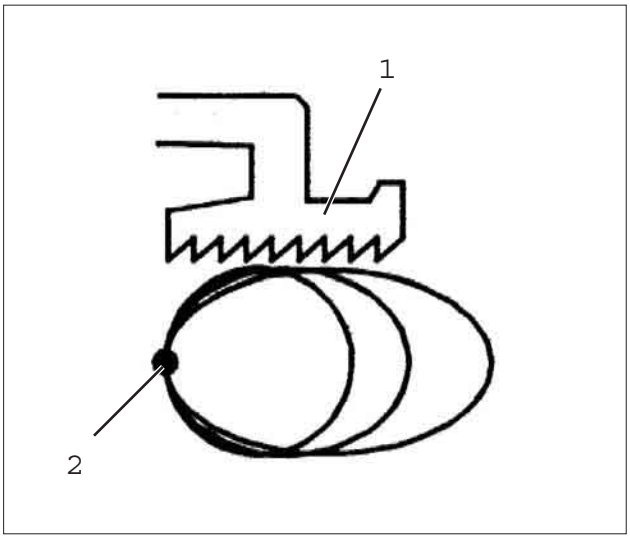
2.6.1 General notes

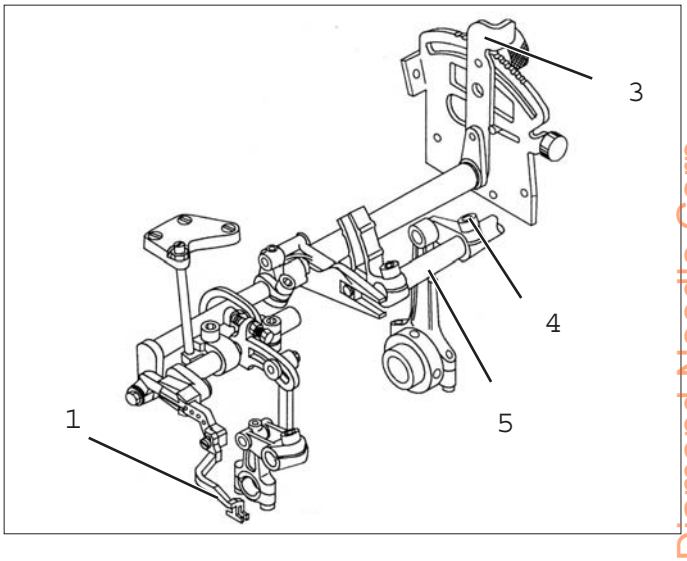
The top feed drive is independent of the bottom feed and does not change automatically when the stitch length is changed.

Therefore the stitch length has to be determined before the top feed can be set.

The average value for overlock units is 2.8 mm per stitch resulting in 3.5 stitches per cm.

2.6.2 Top feed-dog - Zero point





Caution: Risk of injury!

Switch the main switch off.

Check and adjust the top feed only with the sewing unit switched off.

Standard and checking

The zero point should be at the rear reversal point 2 of the top feed-dog 1.

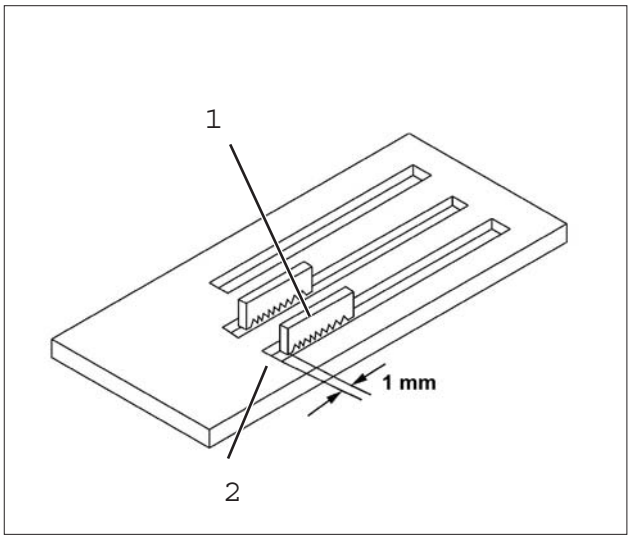
When the needle (coming from the top) is 5 mm above the throatplate top, the top feed-dog 1 should not move when shifting the stitch regulator 3.

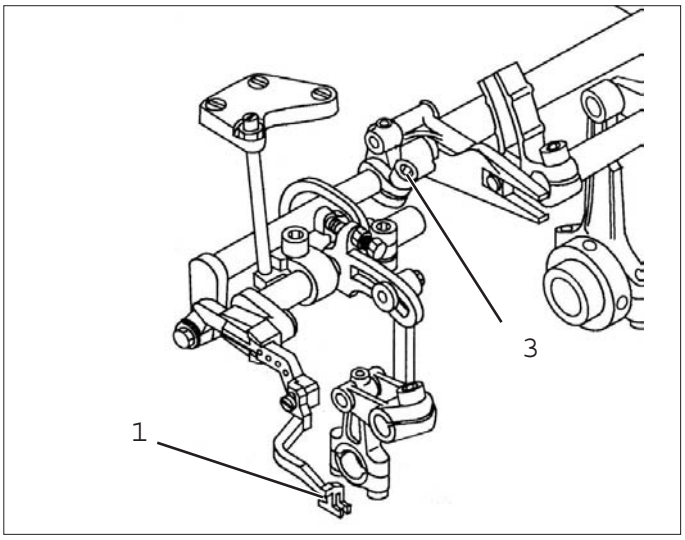
- Turn the handwheel until the needle is 5 mm above the throatplate top.
- Move the stitch regulator lever and check whether the top feed does not move.

Correction

- Loosen screw 4.
- Turn block 5 on the shaft correspondingly.
- Tighten screw 4.
- Move the stitch regulator lever 3 and check whether the top feed-dog 1 does not move.

2.6.3 Top feed-dog - Position





Caution: Risk of injury!

Switch the main switch off.

Check and adjust the top feed only with the sewing unit switched off.

Standard and checking

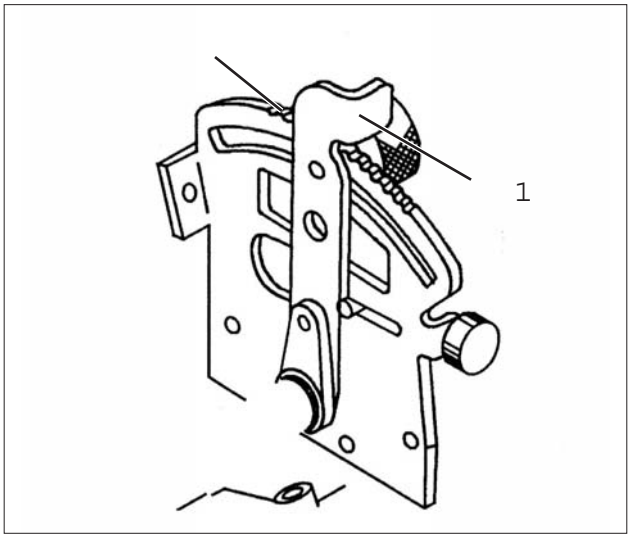
Even with the largest stitch length the top feed-dog 1 must not hit the throatplate cut-out 2 of the sewing foot at the rear reversal point.

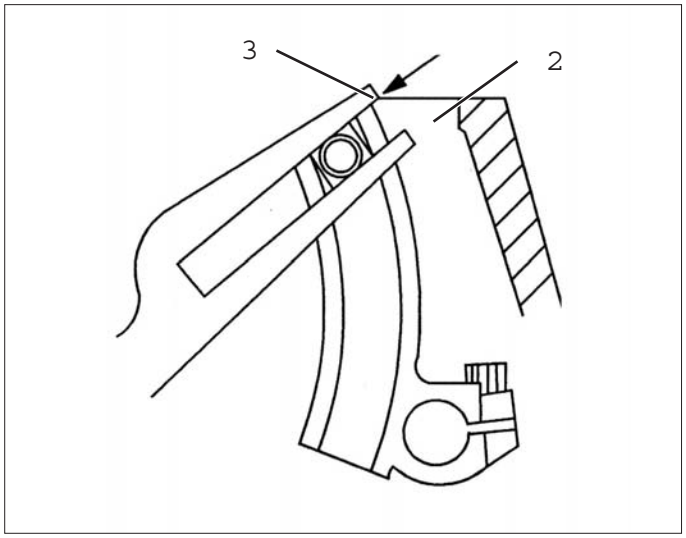
- Turn the handwheel and check whether the top feed-dog 1 hits the throatplate cut-out 2.

Correction

- Move the top feed-dog in its rear reversal point by handwheel.
- Loosen screw 3.
- Shift the feed-dog in such a way that there is a distance of 1 mm between the hind edge of the feed-dog and the throatplate cut-out.
- Tighten screw 3.

2.6.4 Top feed-dog - Stitch regulator lever





Caution: Risk of injury!

Switch the main switch off.

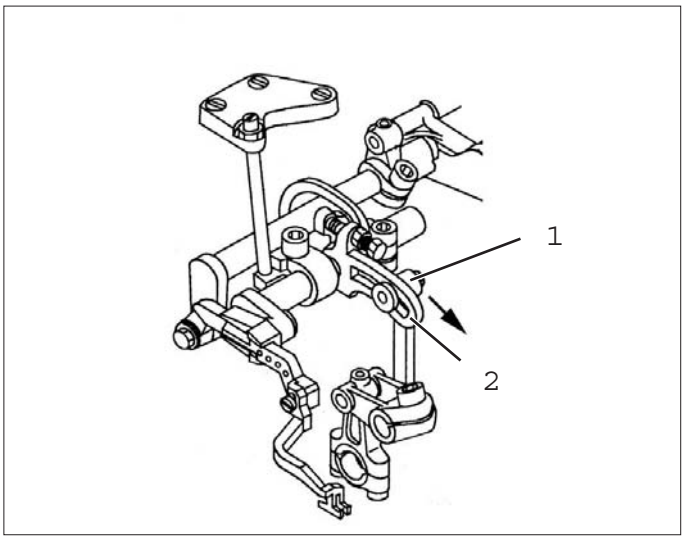
Check and adjust the top feed only with the sewing unit switched off.

Standard and checking

When the stitch regulator lever 1 is positioned on the notch 12 after removing the limit and swivelling out the sewing foot, the top edge of casing 2 and the corner 3 of the slotted lever must be at the same level.

- Turn the handwheel and check the position of the slotted lever 3.

2.6.5 Top feed-dog - Stroke



Caution: Risk of injury!

Switch the main switch off.

Check and adjust the top feed only with the sewing unit switched off.

Standard and checking

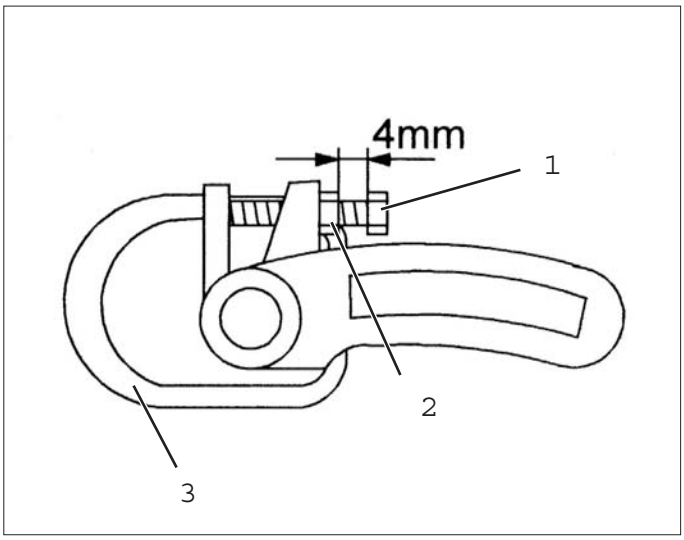
The stroke of the top feed-dog is dependent on the thickness of the material to be processed.
To reduce the running noise the lowest possible stroke should be set.

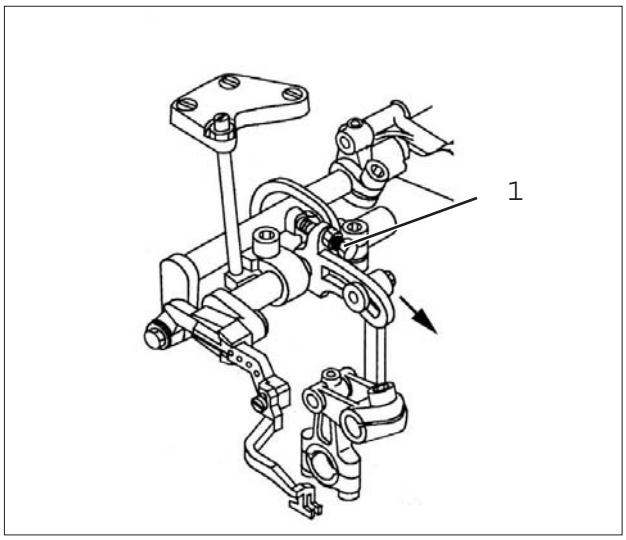
The lever 1 should be fixed at the extreme position of the slotted lever 2.

Correction

- Loosen screw at lever 1.
- Swivel the lever until it abuts on the front of the slotted lever 2.
- Retighten screw 1.

2.6.6 Spring tension of the U-shaped spring





Caution: Risk of injury!
Switch the main switch off.
Check and adjust the top feed only with the sewing unit switched off.

Standard and checking

The spring tension can be set individually or on a fixed value.

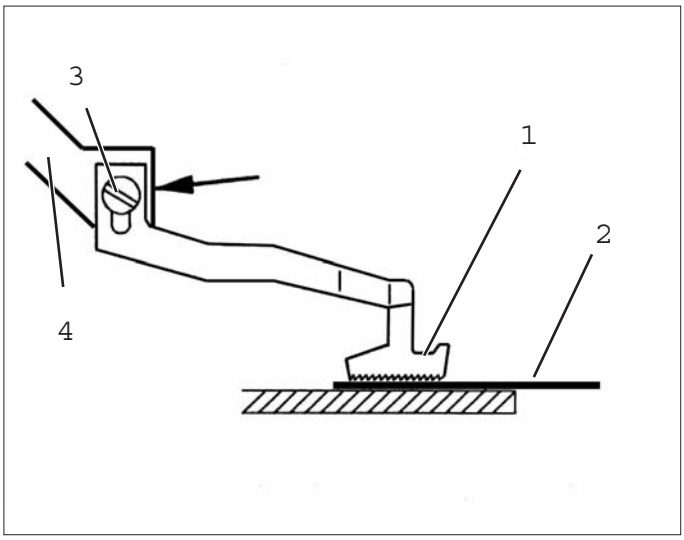
Correction with a fixed value

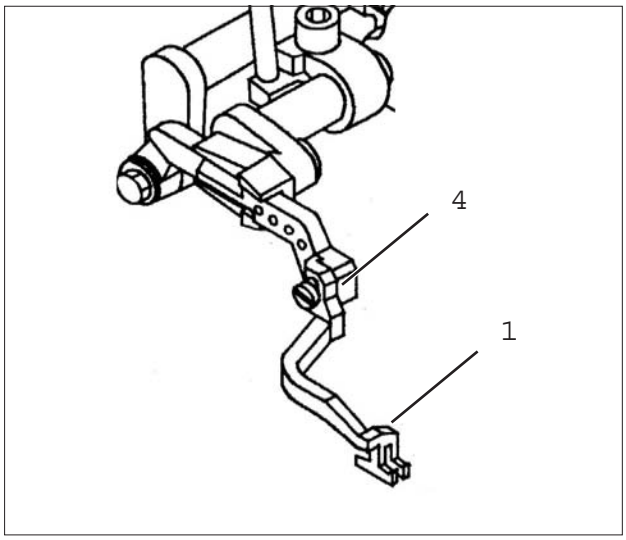
- Loosen counternut 2.
- Turn screw 1 in such a way that there is a distance of 4 mm between the lower edge of the screw head and the counternut.
- Tighten counternut 2.

Individual correction

- Remove pressure spring 3.
- Measure the spring tension with a spring balance.
- Loosen counternut 2.
- Turn screw 1 correspondingly.
- Tighten counternut 2.
- Mount pressure spring 3 again.

2.6.7 Top feed-dog -Height

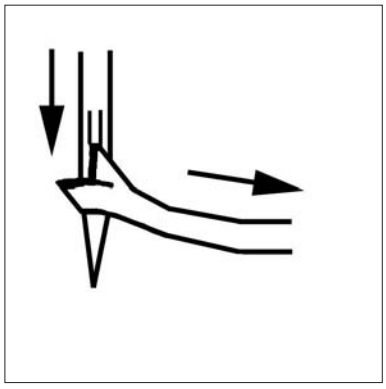




Caution: Risk of injury!

Switch the main switch off.

Check and adjust the top feed only with the sewing unit switched off.



2-thread

Standard and checking

Basic position

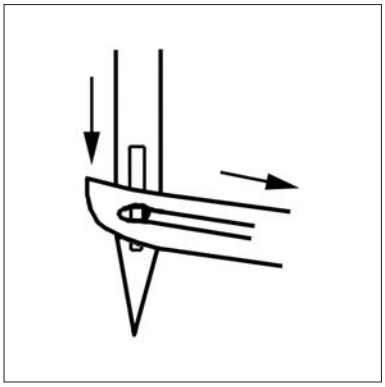
The feed-dog 1 should be fastened in the upper third of the slotted hole at the feed-dog support 4.
In this position the feed-dog bends down in sewing direction.

Height

When the needle is moved downward until it takes over the hook thread, a 0.025 mm thick brass foil 2 placed under the top feed-dog 1 should not be clamped by the top feed-dog.

Correction of basic position

- Loosen screw 3.
- Pull the feed-dog downwards.
- Tighten screw 3.

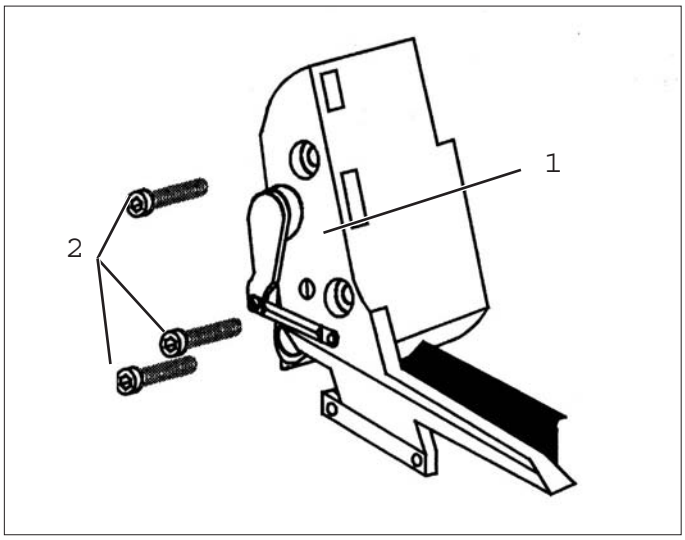


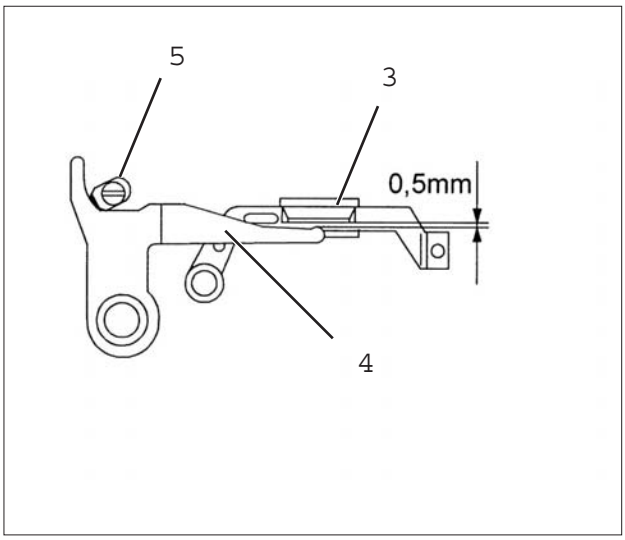
3-thread

Correction of height

- Clamp the brass foil 2 (0.025 mm) under the top feed-dog.
- Turn the handwheel until the needle is behind the back of the hook (see ill. on the left for 2- and 3-thread machine heads).
- Loosen screw 3.
- Adjust the feed-dog in such a way that the brass foil is no longer clamped.
- Tighten screw 3.

2.6.8 Lifting lever





Caution: Risk of injury!

Switch the main switch off.

Check and adjust the top feed only with the sewing unit switched off.

Standard and checking

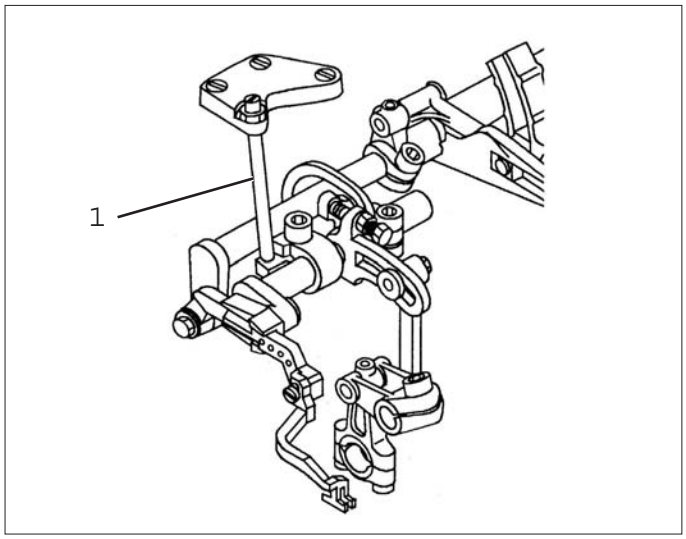
In the lowest position of the top feed-dog there should be a distance of 0.5 mm between the top edge of the lifting lever 4 and the lower edge of the feed-dog support 3.

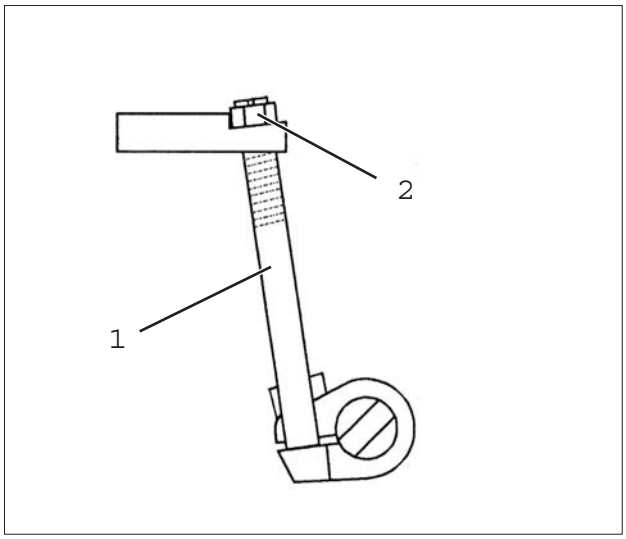
- Screw out screws 2 and remove cover 1.
- Turn the handwheel until the top feed-dog is in its lowest position.
- Check whether there is a distance of 0.5 mm between the top edge of the lifting lever 4 and the lower edge of the feed-dog support 3.

Correction

- Loosen screw 5.
- Turn the lifting lever 4.
- Tighten screw 5.
- Mount cover 1 and tighten with screws 2.

2.6.9 Adjustment of the stopper





Caution: Risk of injury!

Switch the main switch off.

Check and adjust the top feed only with the sewing unit switched off.

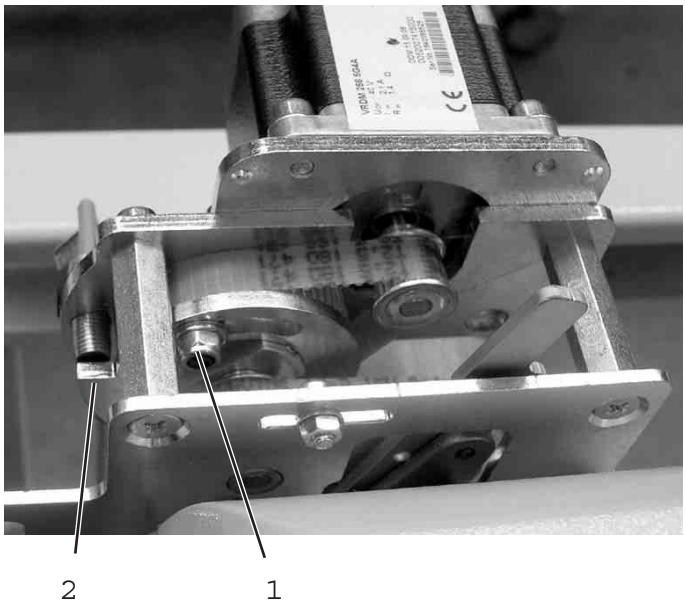
Standard and checking

When the needle point (coming from below) is 5 mm above the throat plate, turn the stopper 1 downwards until the top feed-dog starts moving upwards.

- Move the needle in its lower reversal point by handwheel and then upwards again until it is 5 mm above the throat plate.
- Check whether the top feed starts moving upwards now.

Correction

- Move the needle in its lower reversal point by handwheel and then upwards again until it is 5 mm above the throat plate.
- Loosen counternut 2.
- Turn the stopper 1 downwards until the top feed-dog starts moving upwards.
- Tighten counternut 2.



Standard

The zero position of the top feed-dog step motor is determined by the reference disk 2 which covers the proximity switch when referencing.

Correction

- Set the value 50 for the basic position of the top feed in the program.
- Actuate the reset switch.
  Now the feed of the top and the bottom feed-dog should be equal during a machine revolution.
- In order to check this setting carefully a test seam with two equally long material plies is sewn.

  When the seam is finished the fabric should be precisely flush at the beginning and at the end.

If the upper material ply is too short, the feed of the top feed-dog is more intensive than that of the bottom feed-dog.
The feed of the top feed-dog has to be reduced.

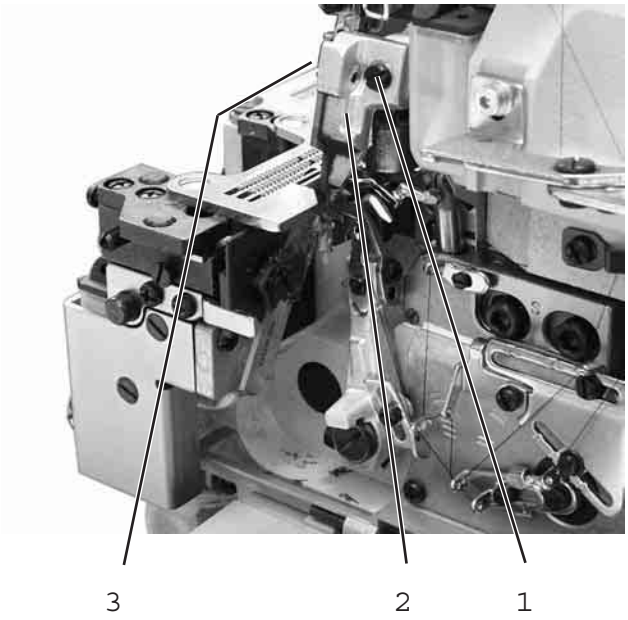
- After opening the clamping nut 1 the reference disk 2 has to be turned downwards (away from the proximity switch) and fixed again by the clamping nut 1.

If the upper material ply is longer than the lower one, the feed of the top feed-dog is insufficient.
The feed of the top feed-dog has to be increased.

- After opening the clamping nut the reference disk has to be turned downwards and fixed again by the clamping nut.

2.7 Upper and lower knife

2.7.1 Changing and adjusting the upper knife



	Caution: Risk of injury! Switch the main switch off. Exchange and adjust the upper knife only with the sewing unit switched off.

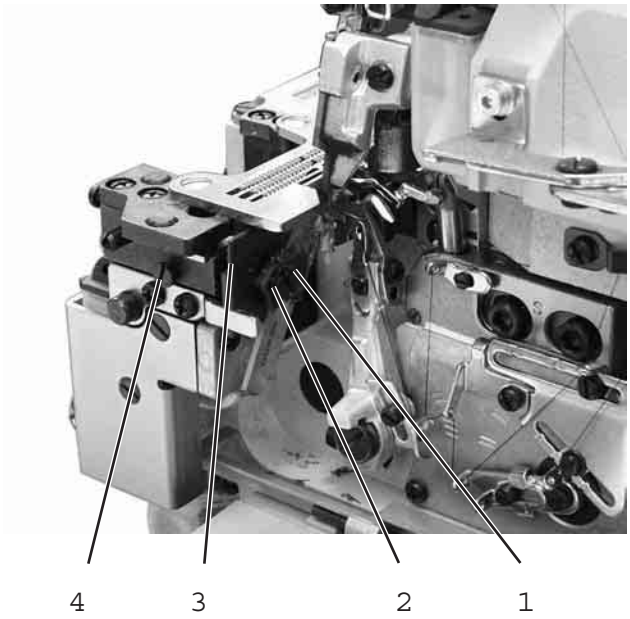
Standard

In the lowest position of the upper knife the front edge of the blade should be 0.5 to 1.0 mm underneath the top edge of the throat plate.

Correction

- Remove the fabric sliding sheet.
- Swivel the sewing foot out.
- Turn the handwheel until the needles are in their top reversal point and swivel the sewing foot out.
- Screw off screw 1.
- Remove the knife holder 2 with the knife.
- Loosen screw 3 and remove the knife.
- Insert a new, sharp knife and tighten with screw 3.
- Insert knife holder 2 and tighten slightly with screw 1.
- Turn the handwheel until the knife is in its lowest position.
- Shift the knife in such a way that it slightly abuts on the lower knife and the front edge of the blade is approx. 0.5 to 1.0 mm underneath the top edge of the throat plate.

2.7.2 Changing and adjusting the lower knife



Caution: Risk of injury!

Switch the main switch off.

Exchange and adjust the lower knife only with the sewing unit switched off.

Standard

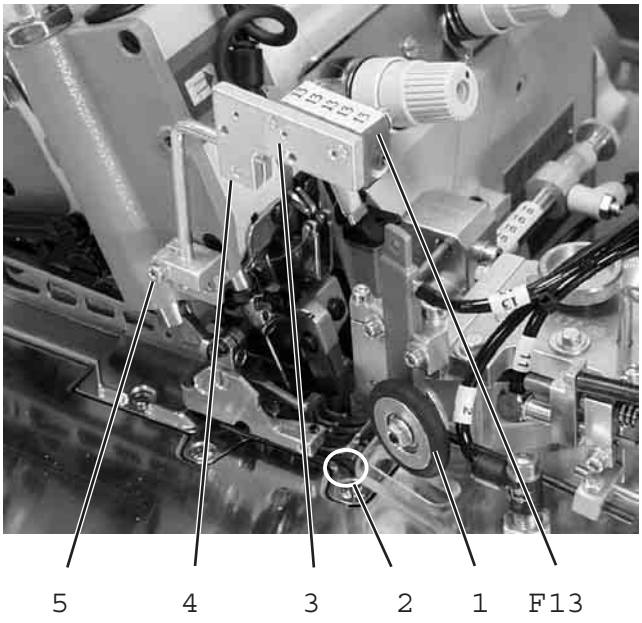
The blade of the lower knife has to be flush with the top edge of the throat plate.

Correction

- Remove the fabric sliding sheet.
- Swivel the sewing foot out.
- Loosen screw 4.
- Draw the holder of the lower knife 3 to the left as far as it will go and tighten screw 4 slightly.
- Loosen screw 2 and remove the old knife.
- Insert a new, sharp knife in guide 1 in such a way that the blade is flush with the top edge of the throat plate.
- Tighten screw 2.
- Turn the handwheel until the upper knife is in its highest position.
- Loosen screw 4 and let the holder of the lower knife 3 spring against the upper knife.
- Tighten screw 4.

3. Adjusting the sewing unit

3.1 Adjusting the lightbarriers



Caution: Risk of injury!

The adjustment of the lightbarriers is done with the sewing unit switched on.

Carry out adjustment and function test with utmost caution.

Lightbarrier F13, sewing start at the waistband

Control of the auxiliary roller contour guide 1, control of the fullness distribution, swivelling the swivel blad

Lightbarrier F15, sewing start at the hem

Control of the auxiliary roller contour guide 1, control of the hip bow, control of the fullness distribution, swivelling the swivel blade

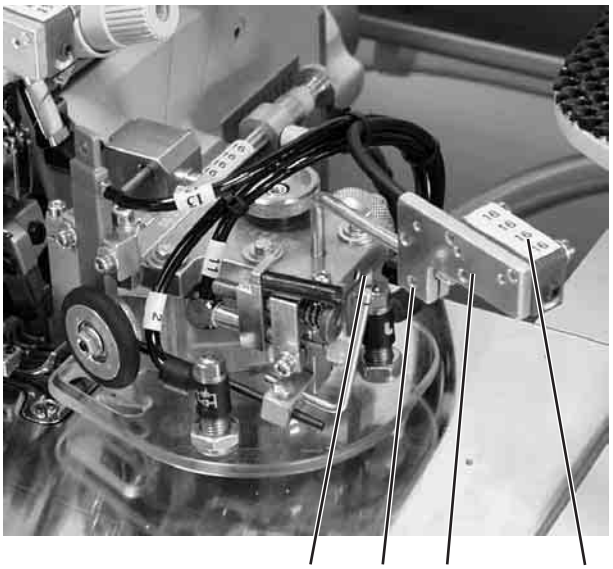
Lightbarrier F16,

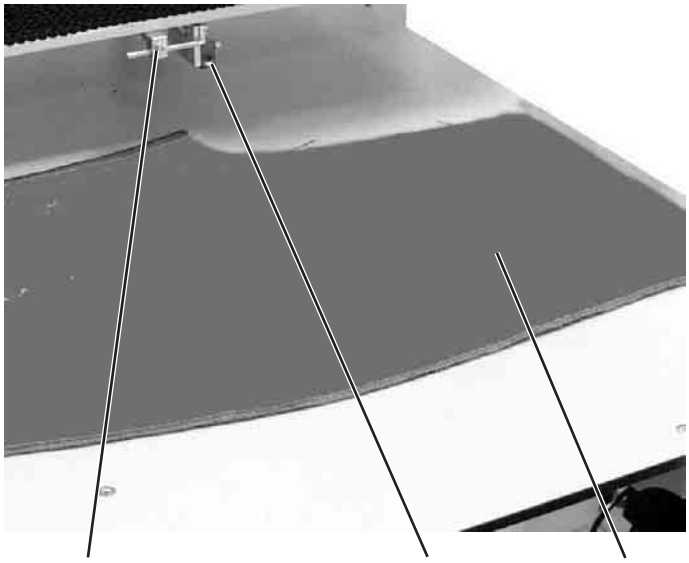
contour control

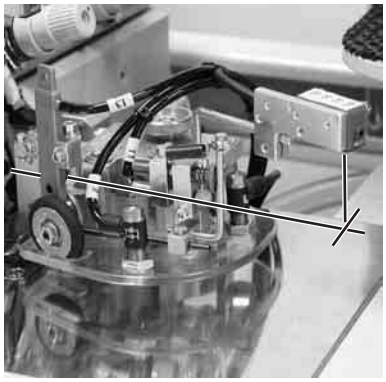
Aligning the lightbarrier F13

The lightbarrier F13 has to be aligned to the area 2 of the machine head.

- Loosen screws 4 and 5.
- Align the lightbarrier support 3 correspondingly.
- Tighten screws 4 and 5.







Aligning the lightbarrier F16

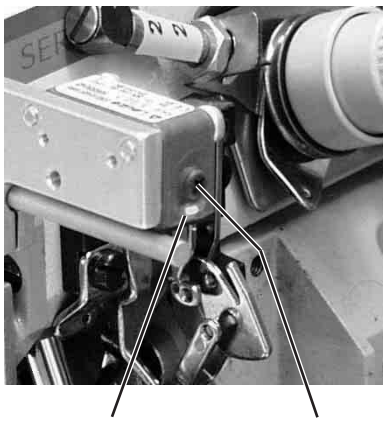
The lightbarrier F16 has to be aligned in such a way that it is in line with the edge of the contour guide (material stop).

- Loosen screws 6 and 7.
- Align the lightbarrier support 5 correspondingly.
- Tighten screws 6 and 7.

Aligning the lightbarrier F15

The lightbarrier F15 has to be aligned in such a way that there is a distance of approx. 770 mm between the needle and the lightbarrier (basic adjustment).
If the knee lining has excess length, the lightbarrier has to be shifted to the right.

- Loosen screw 9.
- Align the lightbarrier support correspondingly (approx. 770 mm to the needle).
- Tighten screw 9.

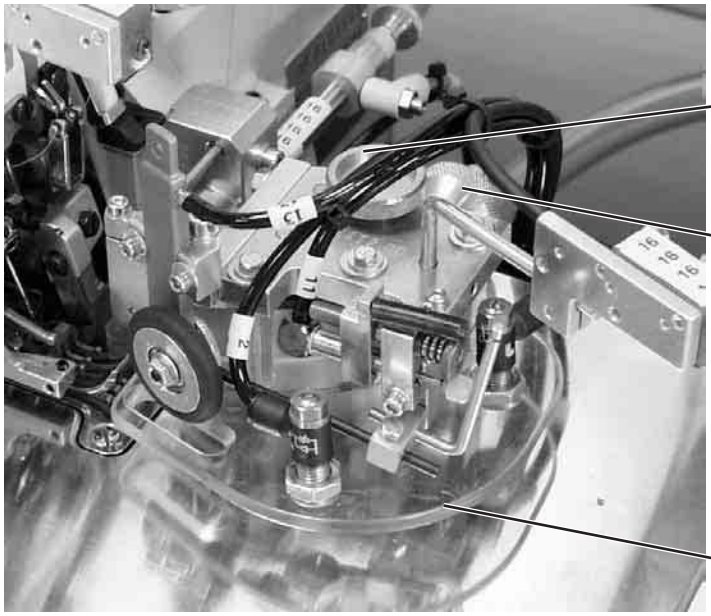


Adjusting the lightbarrier intensity

- Turn the sensitivity potentiometer 10 at the front above the light-emitting diode 11 to the left stop (minimum sensitivity).
- Turn the potentiometer in clockwise direction until the light-emitting diode 11 switches on.
- For a safe lightbarrier function turn the potentiometer once again in clockwise direction (one revolution).

If the light-emitting diode does not shine, the lightbarrier should be cleaned, reset or exchanged.

3.2 Adjusting the contour guide



Caution: Risk of injury!

Switch the main switch off.

Adjust the contour guide only with the sewing unit switched off.

1. Quick adjustment of height

The rough setting of the material thickness is set and read off at the setting wheel 2. 4 steps are available.

Step 1 = 0.8 mm

Step 2 = 1.6 mm

Step 3 = 2.4 mm

Step 4 = 3.2 mm

- Set the desired material thickness at the setting wheel 2.

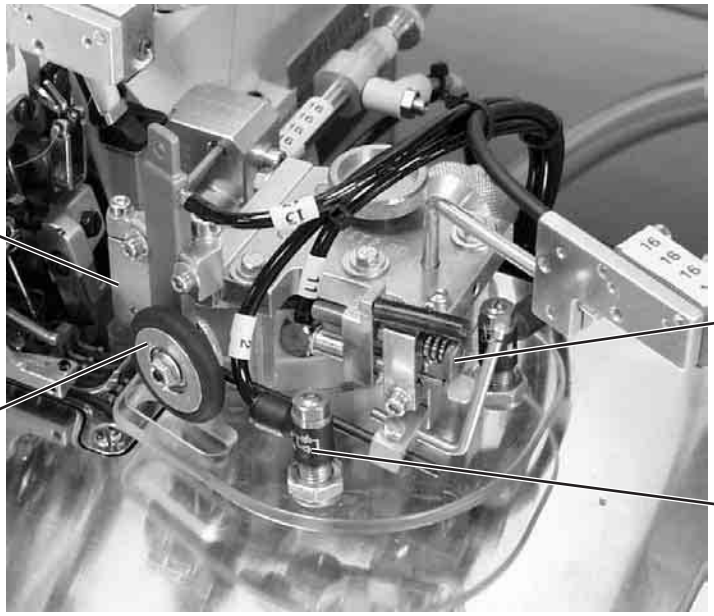
2. Fine adjustment of height

The presetting via the quick adjustment of height 2 is readjusted by the fine adjustment of height 1.

Standard

The sliding plate 3 of the contour guide should be lowered as much as possible. The fabric should slide underneath the sliding plate as easily as possible.

- Push the fabric under the sliding plate.
- Actuate output Y3 to lower the sliding plate.
- Turn the setting screw 1 counter-clockwise until the sliding plate rests on the fabric.
- Check whether the fabric is easy-gliding. For this purpose guide the fabric underneath the sliding plate.



3. Contact pressure of the auxiliary roller

The contact pressure of the auxiliary roller 6 is decisive for the constant fabric guide along the stop 7.

The contact pressure has to be individually set according to the material to be processed.

- Feed the material and start the sewing operation.

If the material is shifted aside from the stop 7 during the feed, the contact pressure is too low.

If the material curls up at the stop 7, the contact pressure is too high.

Increasing the contact pressure

- Turn the setting screw 4 counter-clockwise.

Reducing the contact pressure

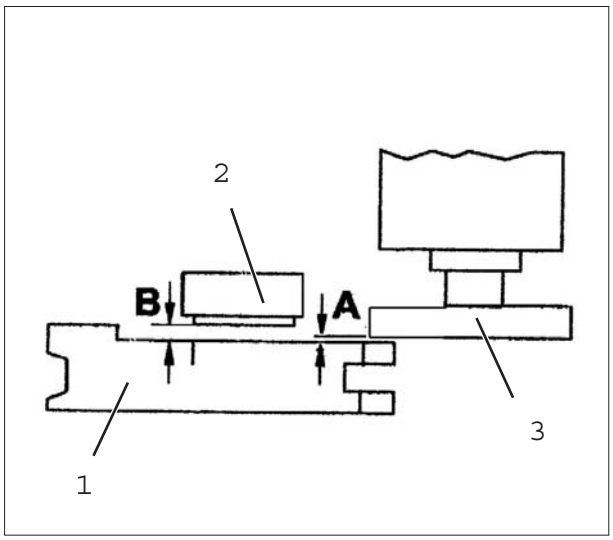
- Turn the setting screw 4 in clockwise direction.

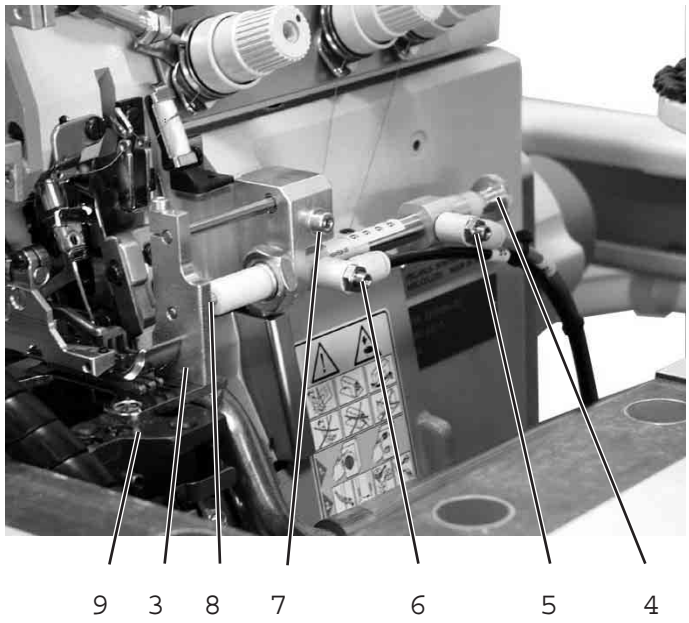
Note

The pressure of the blowing device 5 should not be altered.

3.3 Adjusting the stop guide for the edge trimmer

3.3.1 Pneumatic stop (optional)





Caution: Risk of injury!

Switch the main switch off.

Adjust the stop only with the sewing unit switched off.

Correction of height position

- Loosen screw 7.
- Put stop 3 on throatplate 9.
- Tighten screw 7.

Correction of the lateral distance to the sewing foot 1

The distance A to the stop 3 should amount to approx. 0.2 - 0.3 mm.

- Loosen counternut 8.
- Turn knurl 4 correspondingly.
- Tighten counternut 8.

Correction of the edge trimmer 2 as to the sewing foot

The distance B between the sewing foot and the edge trimmer should be approx. 0.5 mm. The edge trimmer has to be aligned correspondingly.

- Shift the upper and lower knife laterally.

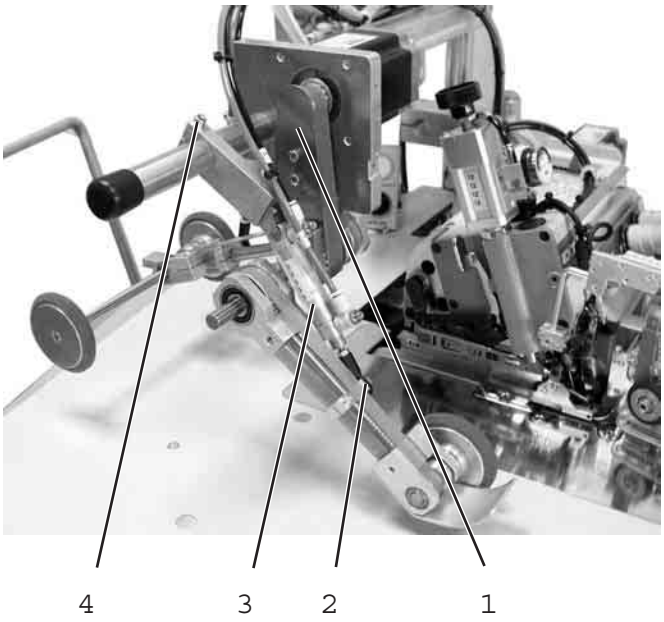
Correction of the speed of the forward and backward feeding motion

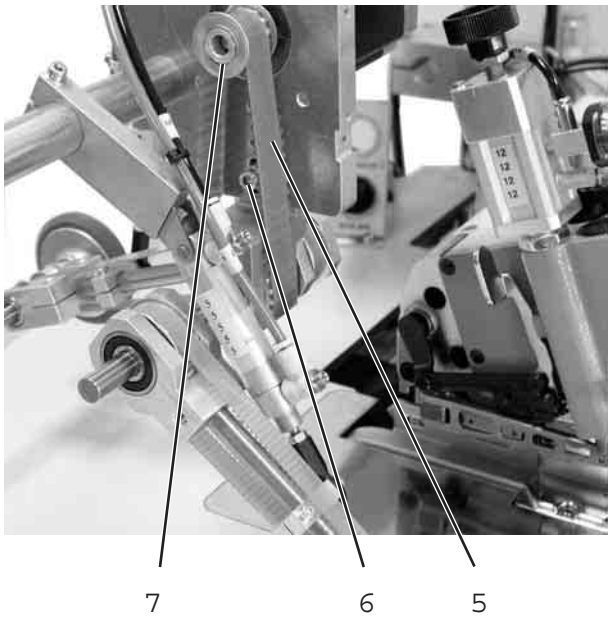
The speed of the forward and backward feeding motion is altered at the throttles 5 and 6.

- Set the speed of the forward feeding motion with throttle 6.
- Set the speed of the backward feeding motion with throttle 5.

3.4 Puller and ejector

3.4.1 Changing the toothed belt of the step motor



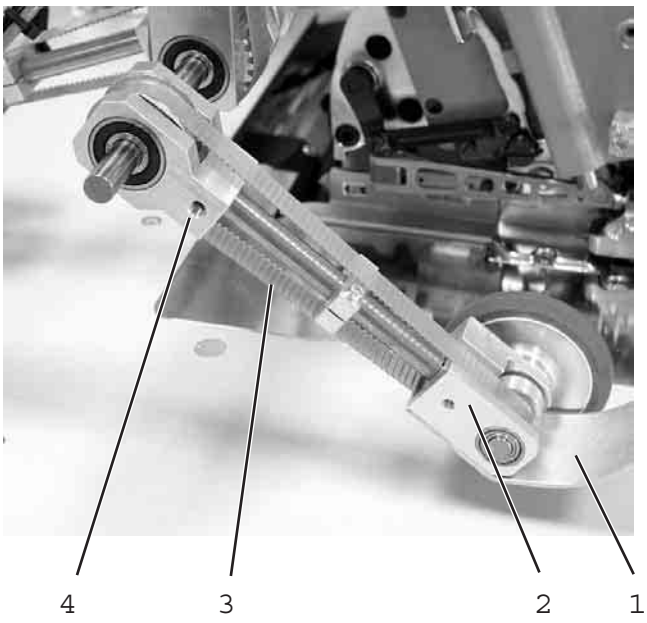


Caution: Risk of injury!
Switch the main switch off.
Change the toothed belt only with the sewing unit switched off.

- Lower the feeding unit onto the table top manually.
- Switch the sewing unit off.
- Screw off coverplate 1.
- Screw out the screw 2.
- Loosen screw 4 and swivel cylinder 3 to the rear.
- Loosen screw 6 and release the tension of the toothed belt 5.
- Remove the toothed belt first from the drive roll 7 and then from the feed roller of the puller.

- Fit the new toothed belt in reverse order.
- Tension toothed belt 5 and tighten screw 6.
  If the tension is correct, it must be possible to bend the toothed belt 5 in the middle by approx. 5 mm with sensible counter pressure.
- Swivel the cylinder 3 to the front again and screw it on the puller with screw 2.
- Tighten screw 4.
- Screw coverplate 1 on again.

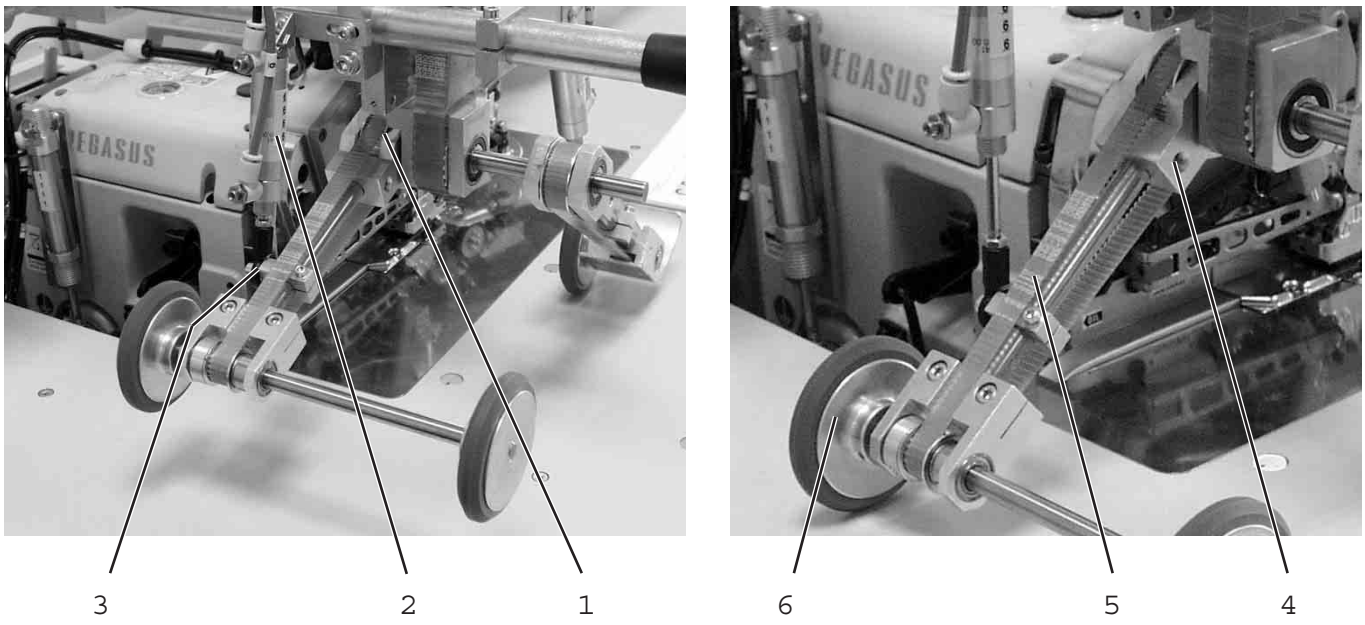
3.4.2 Changing the toothed belt of the puller



Caution: Risk of injury!
Switch the main switch off.
Change the toothed belt only with the sewing unit switched off.

- Screw off sheet 1.
- Lower the feeding unit onto the table top manually.
- Switch the sewing unit off.
- Loosen screw 4.
- Push block 2 upwards and release the tension of the toothed belt 3.
- Remove the toothed belt 3 to the front.
- Put on the new toothed belt.
- Pull block 2 down for tensioning and tighten screw 4.
  If the tension is correct, it must be possible to bend the toothed belt 3 in the middle by approx. 10 mm with sensible counter pressure.
- Mount sheet 1 again.

3.4.3 Changing the toothed belt of the ejector



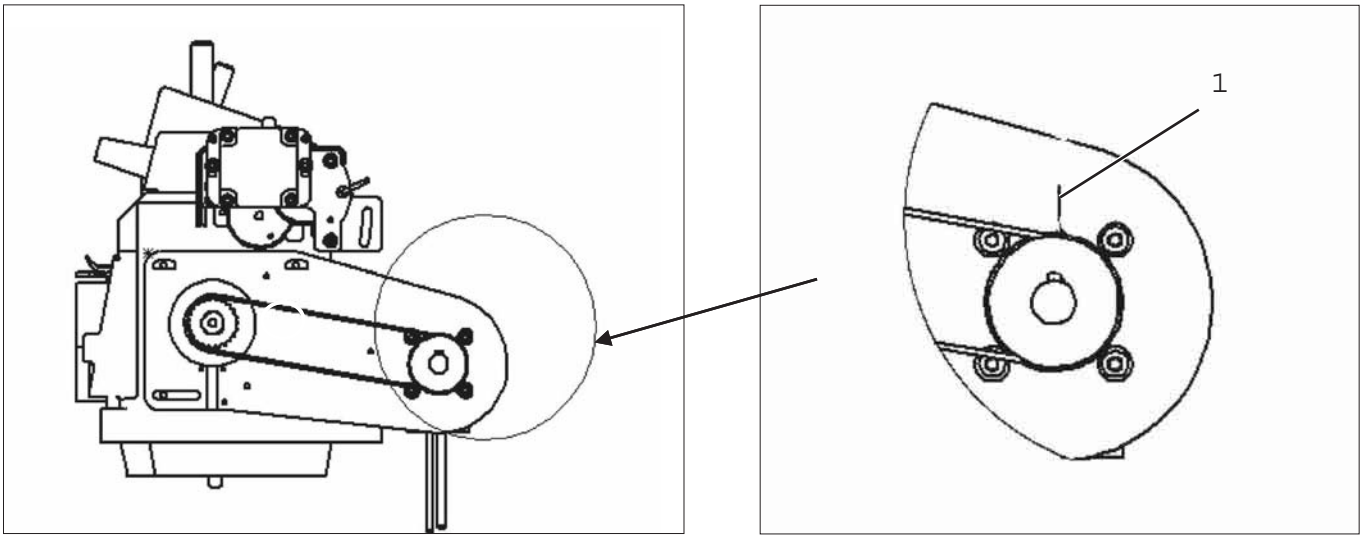
Caution: Risk of injury!
Switch the main switch off.
Change the toothed belt only with the sewing unit switched off.

- Lower the feeding unit onto the table top manually.
- Switch the sewing unit off.
- Screw the screw 3 out of the cylinder 2.
- Loosen screw 4 and release the tension of the toothed belt 5.
- Remove the toothed belt first from the drive roll and then from the feed roller 6 of the ejector.

- Fit the new toothed belt in reverse order.
- Tension toothed belt 5 and tighten screw 4.
  If the tension is correct, it must be possible to bend the toothed belt 5 in the middle by approx. 10 mm with sensible counter pressure.
- Swivel the cylinder 2 to the front again and screw it on the ejector with screw 3.

3.5 Direct sewing drive

3.5.1 Setting the reference



Caution: Risk of injury!

Switch the main switch off.

Check and adjust the hook only with the sewing unit switched off.

Standard

When the needle is in the position "7 mm after the bottom dead centre", the drive belt has to be put on in such a way that the feather key 2 in the motor shaft points to the marking 1 in the motor casing.

Correction

- Remove the toothed belt.
- Move the needle bar in the position "7 mm after the bottom dead centre" by handwheel.
- Turn the motor shaft in such a way that the feather key 2 in the motor shaft points to the marking 1 in the motor casing.
- Put the toothed belt on again.

4. Maintenance

Caution: Risk of injury !

Switch the main switch off.

The maintenance of the sewing unit must only be done with the machine switched off.

The daily or weekly maintenance work (cleaning and oiling) to be carried out by the operators of the sewing unit is described in the operating instructions (chapter 8). This is listed in the following table for the sake of completeness only.

Maintenance work to be carried out	Operating hours			
	8	40	160	500
Machine head				
- Remove sewing dust and thread remainders	X			
- Check the oil level		X		
- First oil change			X	
- Subsequent oil change			every 2 years	
Control box				
- Remove sewing dust and thread remainders	X			
- Keep the fan grill clean	X			
Suction device				
- Empty the container	X			
- Clean the zone under the fabric sliding sheet from sewing dust and thread remainders		X		
Pneumatic system				
- Check the water level in the pressure regulator	X			
- Clean the filter insert in the maintenance unit				X
- Make leak test of the system				

Note: