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Description of proper use or proper application:

The **805** is a sewing unit which can be used for sewing light to medium heavy sewing material. In general, such sewing material is made up of textile fibres. Such sewing materials are used by the clothing industry. It would also be possible to make so called technical seams with these sewing units. However, for this application the operator of the machine(s) must have the possible dangers assessed (cooperation with Dürkopp Adler would be welcomed), as such applications are, on the one hand, relatively rare and, on the other hand, have an immensely wide range of possibilities. Depending on the results of this assessment suitable safety measures might have to be implemented.

In general, only dry sewing material may be used on this machine. The material must not exceed 10 mm in thickness when compressed by the lowered needle butt. The material must not contain any hard objects as eye shields would otherwise have to be worn when operating the machine. However, such eye shields are currently not available.

In general, the seam will be sewn with sewing threads made of textile fibres in sizes of up to 15/3 Nm (synthetic thread), or 15/3 Nm (covering twists). Using other threads would also require an assessment of the related possible dangers and risks in advance, and the implementation, where necessary, of suitable safety measures.

This sewing unit may only be put up and used in dry and clean rooms. Should the sewing unit be used in other rooms which are not dry and clean, further measures may have to be taken which have to be agreed (see EN 60204-3-1: 1990).

As a manufacturer of industrial sewing machines we assume that operators who are at least semi-skilled will work at our products, so that it can be assumed that all standard operations and, where applicable, the dangers are known.

Noise level Lc

Workstation related emission according to DIN 45635-48-B-1

Subclasse:	-111103	- 121103	-310
Number of stitches:	3.700 min-1	4.000 min-1	2.700 min-1
Stitch length:	3,2 mm	2,3 mm	3,0 mm
Sewing material:	2-play Jeans 509 g/m ²	G1 DIN23328	2xAirbag-Polyamid 6,6
Measuring point to DIN 4895 Part 1	x = 500 mm y = 500 mm z = 600 mm		X=500 y=1000 z=600
Lc =	82 dB (A)	80 dB (A)	79 dB (A)

Part 1: Operation manual

1. Product description

1.1 Technical data

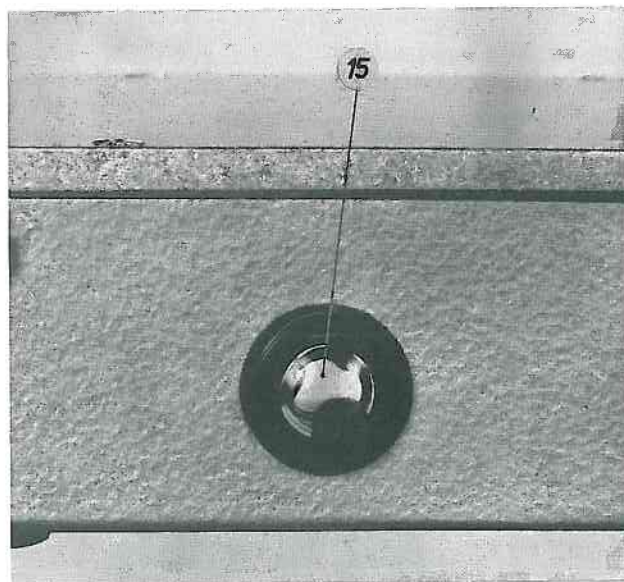
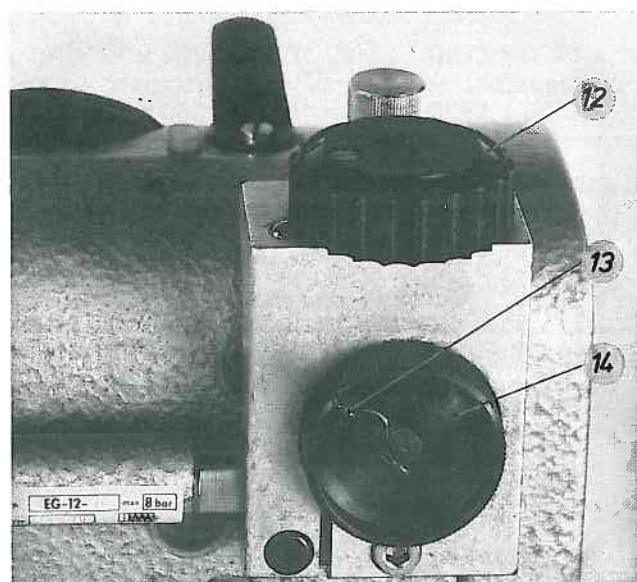
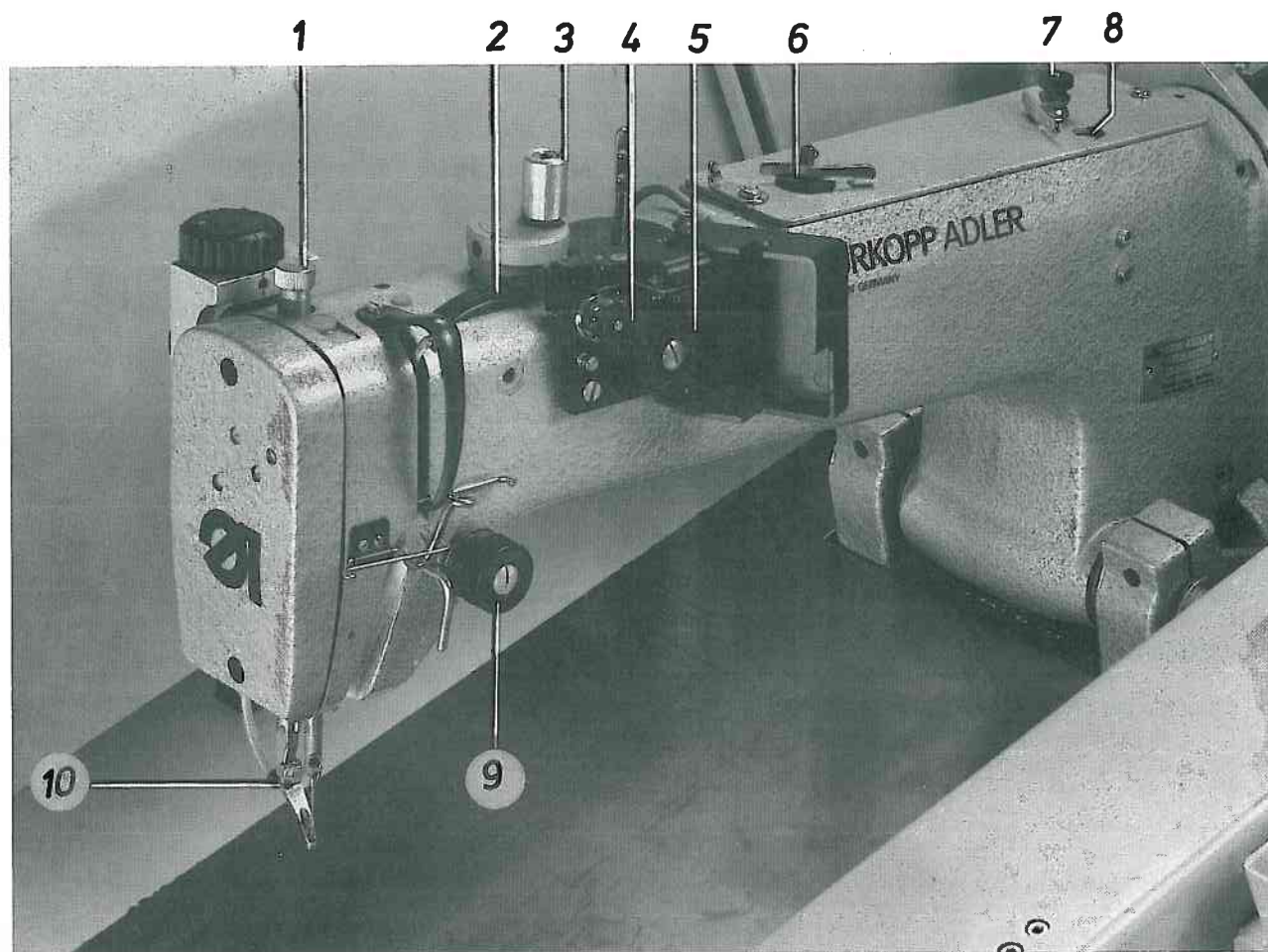
Technical data	805-111100	805-121100
Sewing field size (mm) (Width x depth)	200 x 220	200 x 220
Needle system	134 or Sy 1955-01MR	134
Needle size	80 - 140 MR3 - MR6	70 - 110
Needle thread size	15/3	50/2
Max. number of stitches (1/min)	3700	4000
Stitch length (mm)	0,8 - 3,5	0,8 - 3
Max. transfer plate speed during sewing (m/min) during transfer (m/min)	12 60	12 60
Transfer path (mm)	550	550
Operating pressure (bar)	6	6
Air consumption (NL/cycle)	30	28
Weight (kg)	755	745
Outer dimensions (mm) (Width x depth x height)	1880 x 1720 x 1750 For despatch: 1880 x 1360 x 1370	1880 x 1720 x 1750 For despatch: 1880 x 1360 x 1370

1.2 Patents

The following patents and registered designs apply:

Date: November 12, 1991

- | | | | | | |
|----|---------|---------|----|---------|---------|
| 1) | DE - PS | 3709232 | 5) | DE - PS | 2607279 |
| | IT - PS | 1216156 | | IT - PS | 1077767 |
| | US - PS | 4819572 | | JP - PS | 1231614 |
| | US - PS | 4869185 | | US - PS | 4073251 |
| 2) | DE - PS | 3709210 | 6) | IT - PS | 1161637 |
| | IT - PS | 1216158 | | JP - PS | 1572448 |
| | US - PS | 4793272 | | US - PS | 4502398 |
| 3) | DE - PS | 3724002 | 7) | DE - PS | 3212543 |
| | IT - PS | 1226344 | | IT - PS | 1151267 |
| | US - PS | 4809627 | | JP - PS | 1335713 |
| | | | | US - PS | 4478162 |
| 4) | DE - GM | 8807180 | | | |

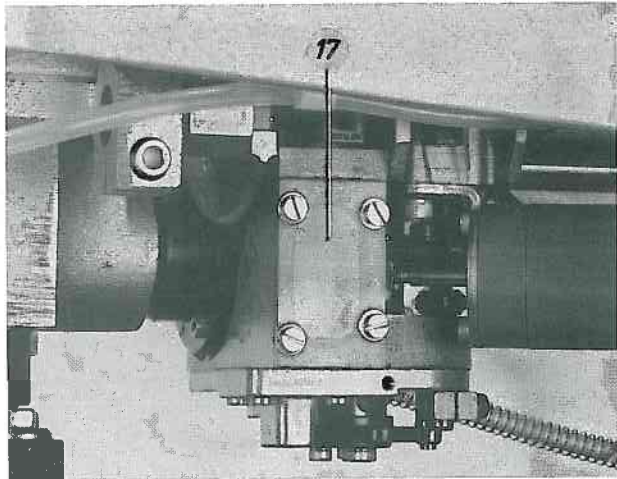
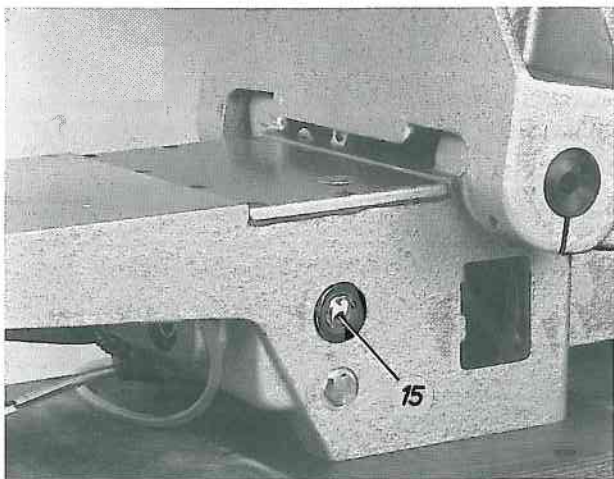
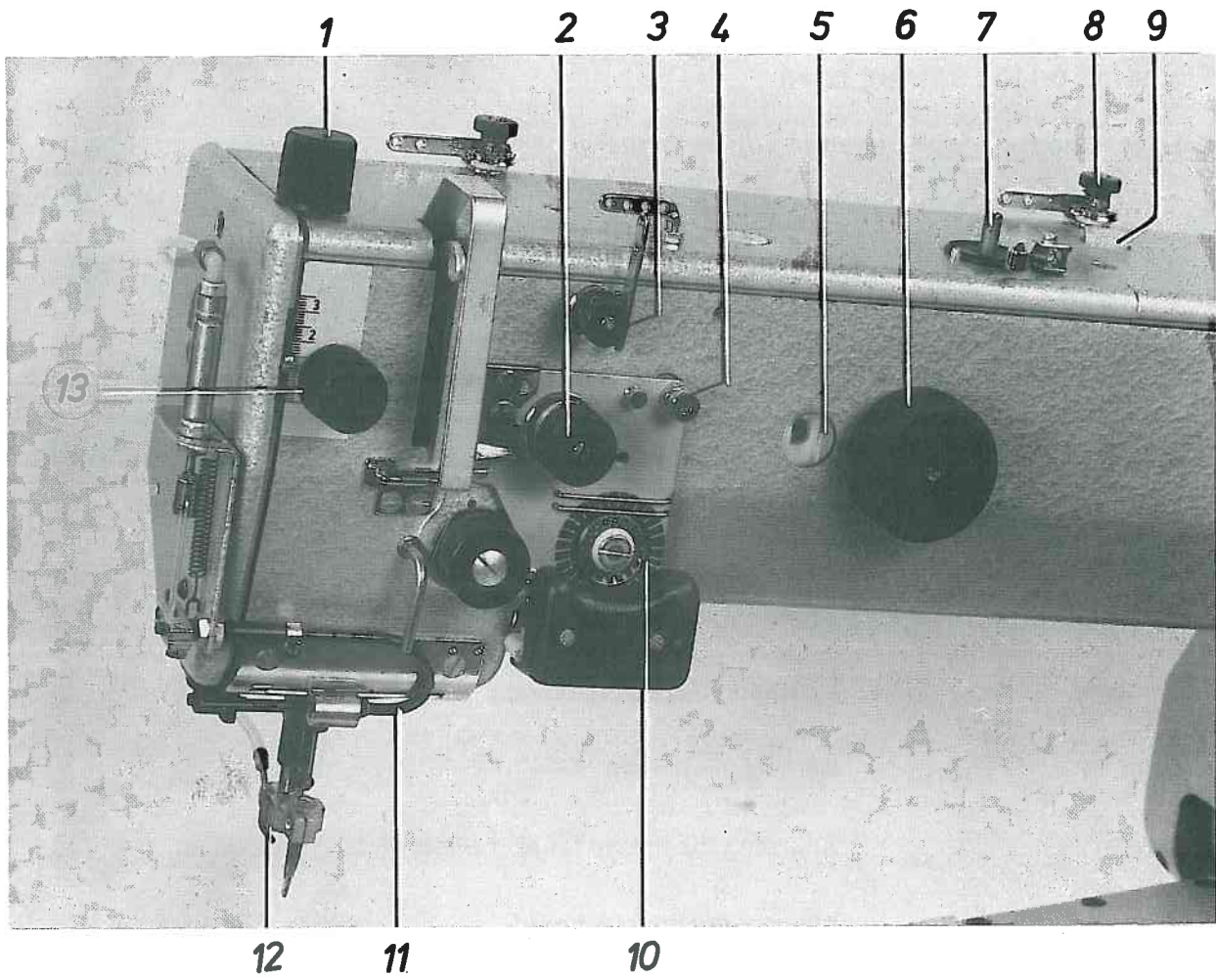


2. Operating elements and functional elements

2.1 Elements on the sewing head

2.1.1 Elements on the sewing head of subclass 121















Element	Function
Dial 14	– Adjusting the bottom stroke position of the sewing foot
Dial 12	– Adjusting the top stroke position of the sewing foot
Knurled screw 1	– Regulating the sewing foot pressure
Turning knob 9	– Adjusting the main needle thread tension
Turning knob 4	– Adjusting the needle thread pre-tension
Thread monitor 5	– Indicating thread breakage
Needle cooler 10	– Cooling the needle
Turning knob 7	– Adjusting the thread tension when winding the bobbin
Bobbin winder 6	– Winding the bobbin thread
Crank 3	– To move the needle bar into the desired position after the lamp "Safety stop of motors" is turned on - see 5.5
Oil check tube 2	– Checking the oil supply to the sewing head
Inlet pipe 8	– To pour oil into the oil sump
Oil sight window 15	– Checking the oil level in the oil sump



2.1.2 Elements on the sewing head of subclass 111

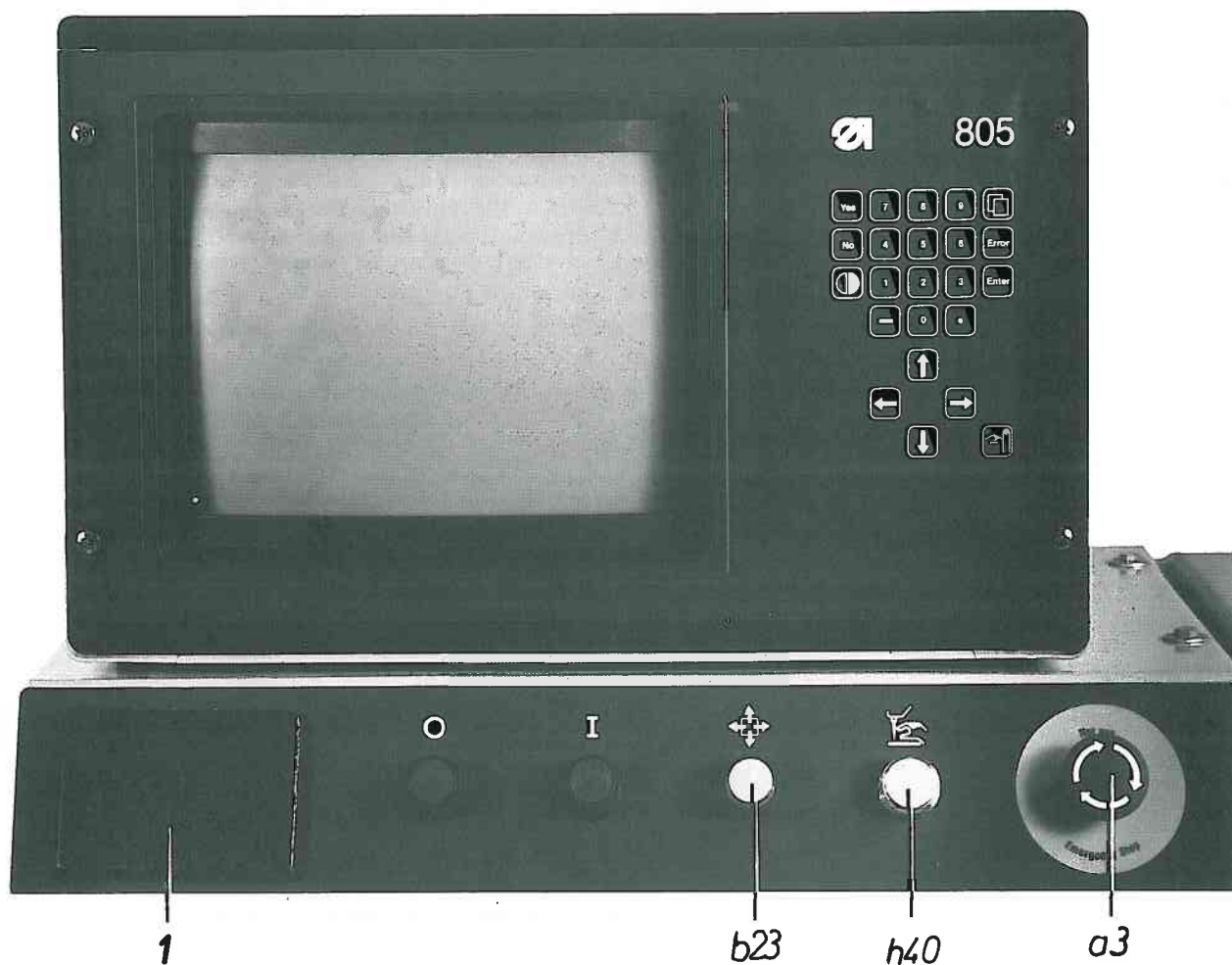
Element	Function
Turning knob 13	– Adjusting the bottom stroke position of the sewing foot
Turning knob 1	– Adjusting the top stroke position of the sewing foot
Turning knob 2	– Adjusting the main needle thread tension
Turning knob 3	– Adjusting the needle thread pre-tension
Push button 4	– Releasing the thread tension
Turning knob 8	– Adjusting the thread tension for bobbin winding
Dial 6	– To move the needle bar into the desired position after lamp "Safety stop of the motors" is turned on - see 5.5
Bobbin winder 7	– Winding the bobbin thread
Oil sight window 5	– Checking the oil supply to the sewing head
Oil sight window 17	– Checking the oil level in the hook box
Oil sight window 15	– Checking the oil level in the oil sump
Inlet pipe 9	– To pour oil into the oil sump
Needle cooler 12	– Cooling the needle after machine start
Thread monitor 10	– Indicating thread breakage
Thread puller 11	– To "pull forward" the thread while the thread trimmer is activated until it has the length needed to assure secure first stitches
Bobbin thread monitor	– The light barrier of this optional equipment detects by reflection of the light beam on the polished bobbin core that only a certain thread quantity is remaining on the bobbin. When the sewing cycle is completed, "Bobbin thread not enough" appears.

2.2 Elements on the monitor control panel

Key	Function
	<ul style="list-style-type: none"> – Entry of numerals
	<ul style="list-style-type: none"> – Answering a question on the screen with "Yes"
	<ul style="list-style-type: none"> – Answering a question on the screen with "No"
	<ul style="list-style-type: none"> – This "menu key" enables "to page forward or backward" to eg call up the desired menu
	<ul style="list-style-type: none"> – When "Stop" appears on the screen, to question the error causes
	<ul style="list-style-type: none"> – Completion of the data entry
	<ul style="list-style-type: none"> – Entry of a negative numerical value
	<ul style="list-style-type: none"> – Entry of fractions (eg 0.8)
	<ul style="list-style-type: none"> – Regulating the brightness of the screen
	<ul style="list-style-type: none"> – Calling up one of 2 selectable processes – Running the sewing machine after activating the process "manual operation" – Moving the cursor up
	<ul style="list-style-type: none"> – Calling up one of 2 selectable processes – Moving the cursor down
	<ul style="list-style-type: none"> – Increasing the shown numerical values – Moving the cursor to the right
	<ul style="list-style-type: none"> – Reducing the shown numerical values – Moving the cursor to the left
	<ul style="list-style-type: none"> – Enabling to remove the bundle from the stacker

2.3 Elements below the monitor

Element	Function
Key "0"	<ul style="list-style-type: none"> – Interrupting the sewing cycle – For work on the sewing machine - eg threading, needle change and bobbin change - disable the motors and thus bring them into "Safety stop"
Key "I"	<ul style="list-style-type: none"> – Enabling to start the selected process
Key b23	<ul style="list-style-type: none"> – Repeating the folding process in the cycle "Automatic" and "Service"
Lamp h40	<ul style="list-style-type: none"> – Displaying the status "Safety stop of the motors"
"Emergency stop" switch	<ul style="list-style-type: none"> – To turn off all motors of the machine in an emergency
Disk drive 1 with micro disk	<ul style="list-style-type: none"> – Enabling data transfer between machine and disk



2.4 Elements of the folding station

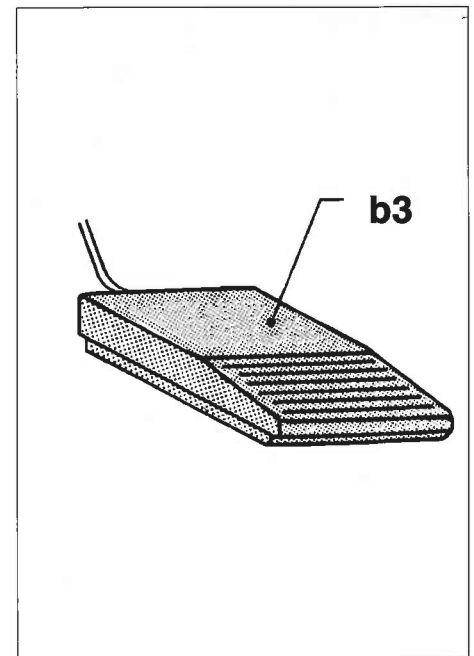
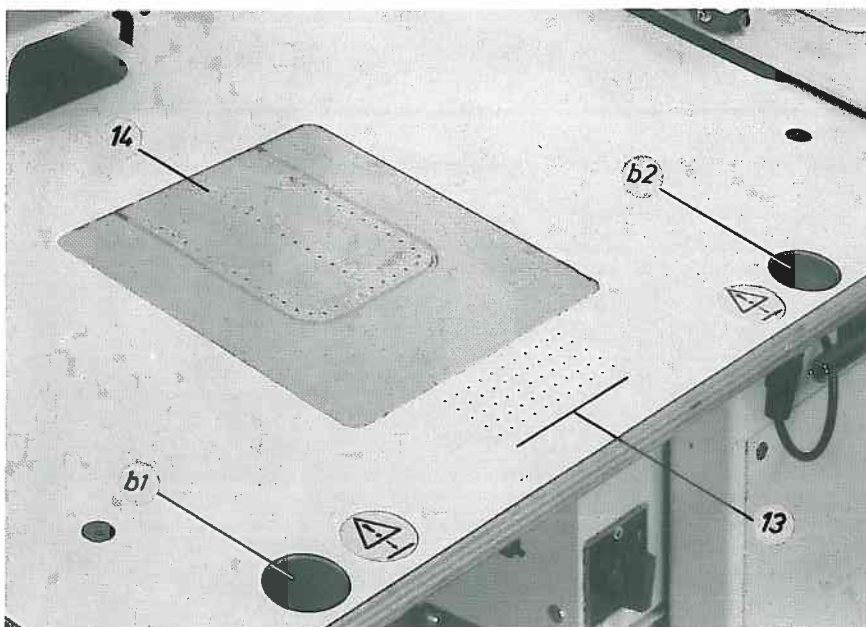
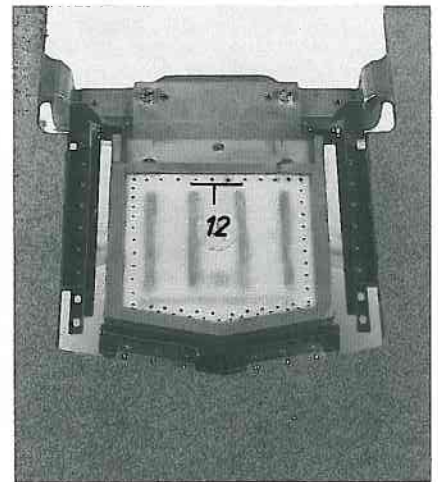
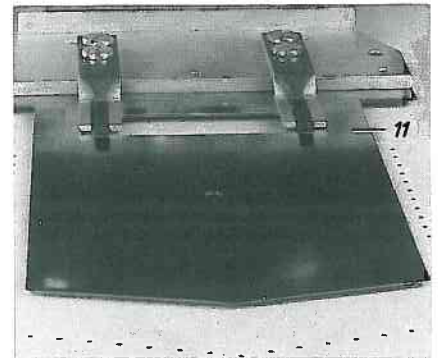
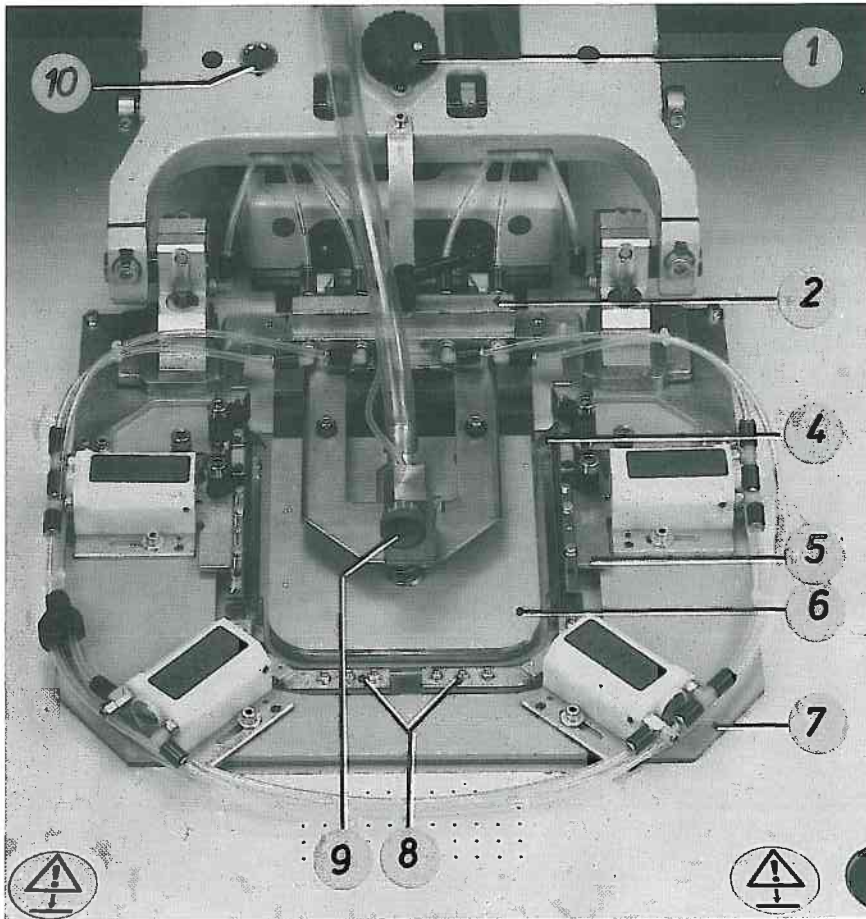
Element	Function
Dial 9	<ul style="list-style-type: none"> - Determining the "folding position" of the centre slider in the "front" area
Dial 1	<ul style="list-style-type: none"> - Determining the "folding position" of the centre slider in the "rear" area
Key b2	<ul style="list-style-type: none"> - Lowering the centre slider into its "alignment position" to enable the accurate alignment of striped and checked pieces - Bringing the centre slider 11 from the "alignment position" into its previous position - After thread breakage, transporting the material with the carriage in the direction of sewing
Key b1	<ul style="list-style-type: none"> - Activating the folding process in the "Automatic" cycle - After thread breakage, lowering the sewing head and transporting the material with the carriage back to the thread breakage point - Calling up steps in the process "single step"
Foot switch b3	<ul style="list-style-type: none"> - Activating or deactivating the vacuum field 13 to fix the lower material piece or to remove it from its position
Plug connection 10	<ul style="list-style-type: none"> - To connect a light barrier that should sense whether the "left" or "right" pocket is in the centre slider. This sensing is required when 2 different pockets are to be sewn onto one lower material piece - using a folding kit. Then, depending on what has been sensed, either the program for the "right" or "left" pocket is activated
Centre slider 11	<ul style="list-style-type: none"> - Determining the outer contour of the pocket
Side slider 5	<ul style="list-style-type: none"> - Folding the cut pocket around the centre slider
Front slider 8	<ul style="list-style-type: none"> - Folding the cut pocket around the centre slider
Corner slider	<ul style="list-style-type: none"> - Folding the cut pocket around the centre slider
Corner tucker 4	<ul style="list-style-type: none"> - Place the area of the pocket opening of the folded cut pocket around the 30 edge of the side slider
Outer frame 7	<ul style="list-style-type: none"> - Carries the side slider, front slider, corner slider and inner frame
Inner frame 6	<ul style="list-style-type: none"> - Fixing the cut pocket during the folding process
Vacuum field 12 at the inner frame	<ul style="list-style-type: none"> - Pulling the centre slider up into its "folding position"

Vacuum field 13 on the table

– Fixing the material on the table top during the folding process

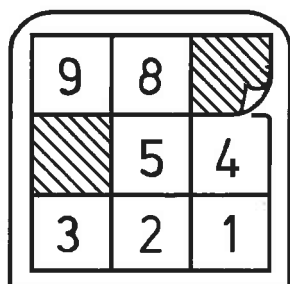
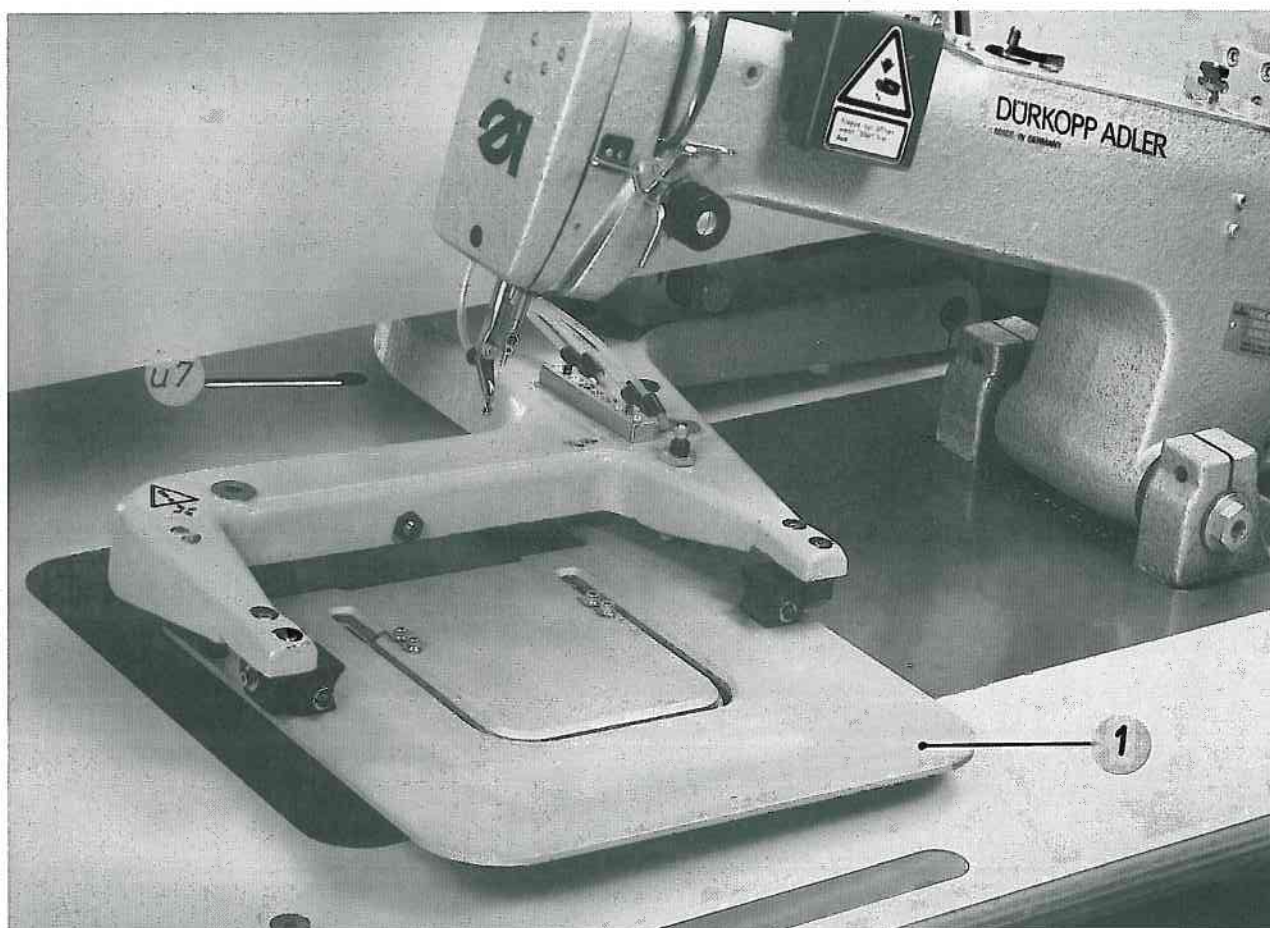
Insert with hose 14
(only on 805-121)

– The hose of this insert in the table top fixes the folded part of the cut pocket while the "outer" sliders are moving back



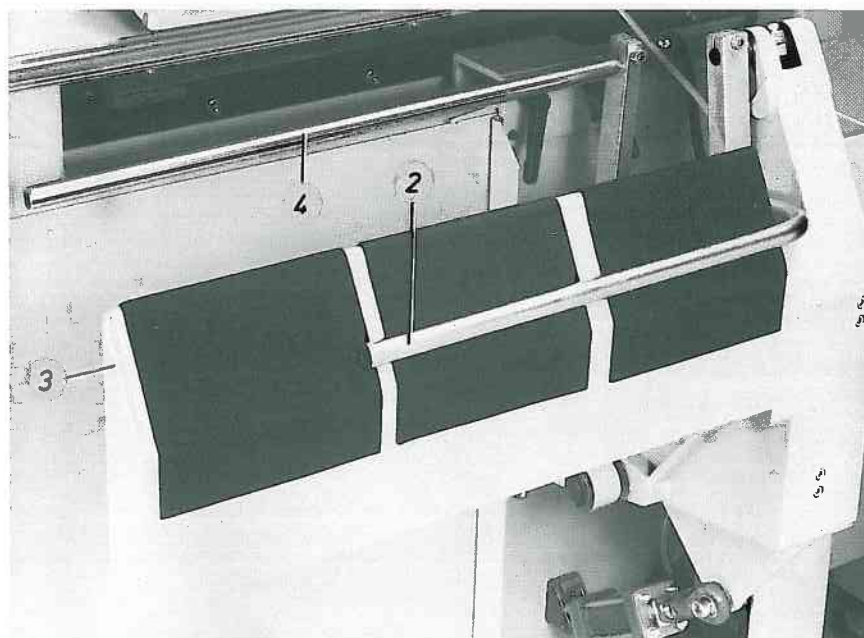
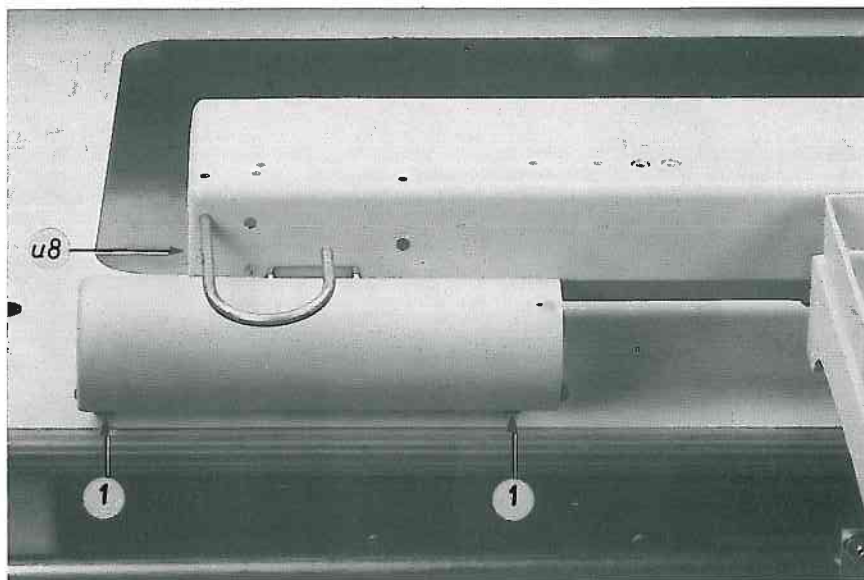
2.5 Elements of the two transfer carriages

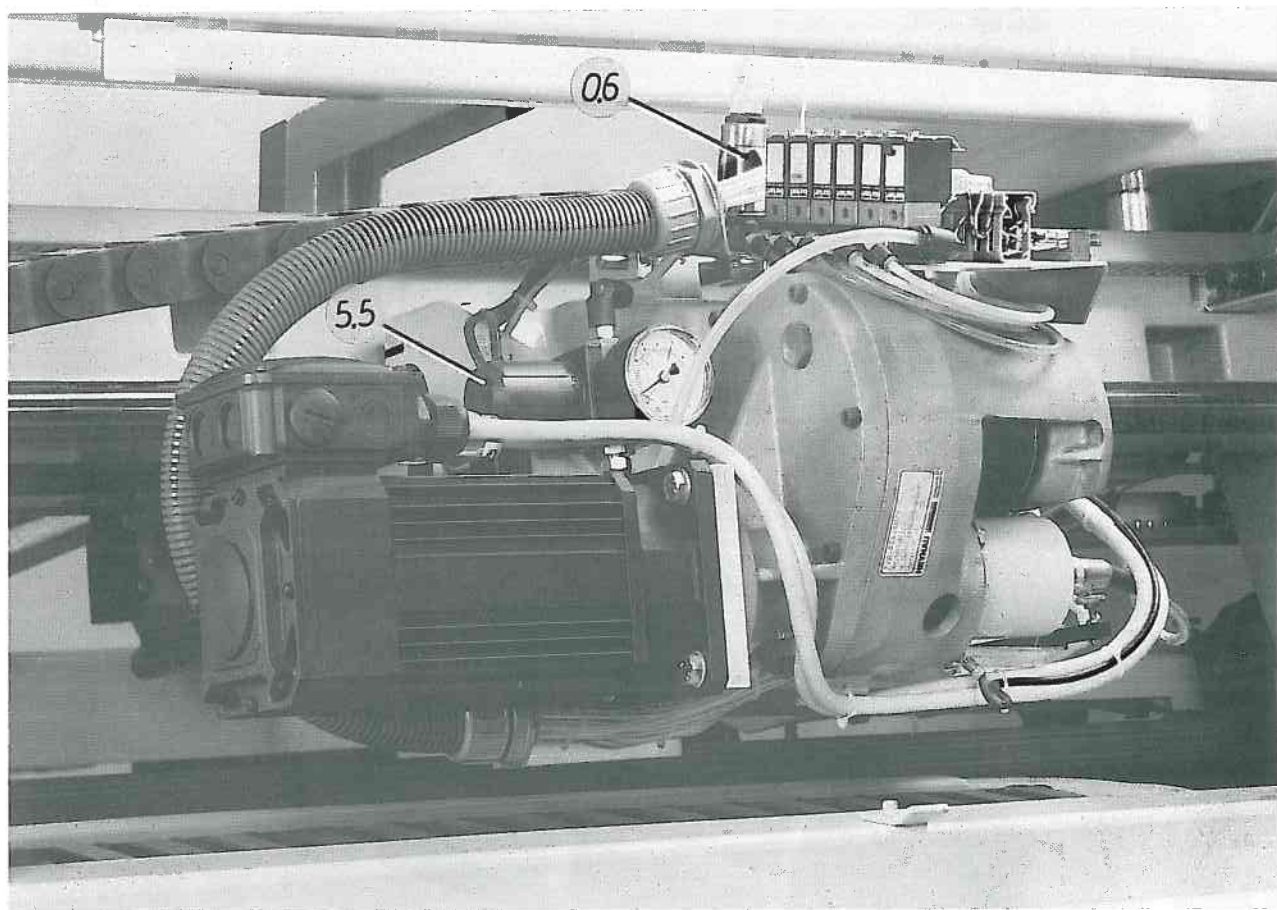
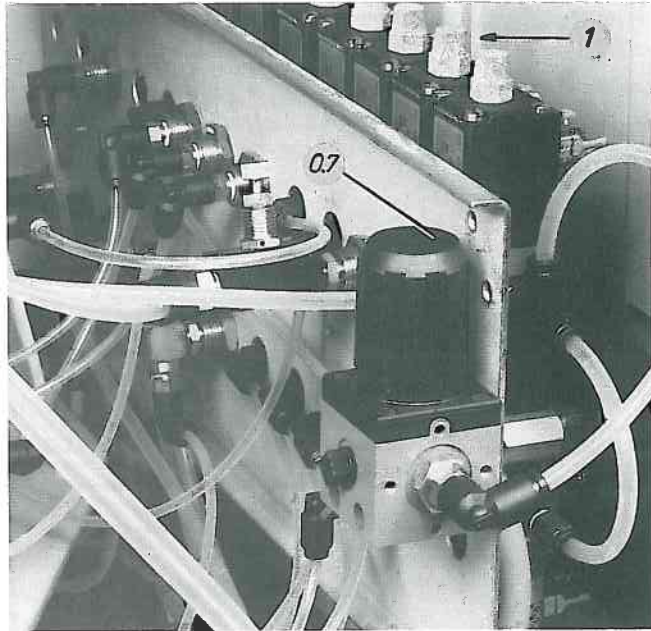
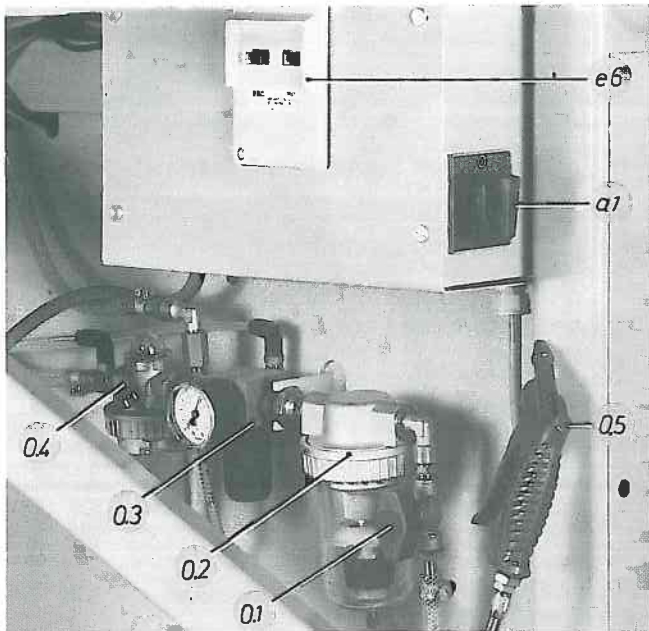
Element	Function
Transfer plate 1	<ul style="list-style-type: none">– Transporting the pieces from the folding station to the sewing head– Moving the pieces during sewing according to the seam contour
Light barrier u7	<ul style="list-style-type: none">– Sensing the code of the transfer plate
Code label	<ul style="list-style-type: none">– The code label below the transfer plate enables the control to sense the style kit and thus call up the respective pocket program



2.6 Elements of the ejector and stacker

Element	Function
Ejector rollers 1	– Transporting the material from the table top to the stacker
Light barrier u8	– Triggering the signal "material ejected"
Inner bracket 4	– Clamping the pieces before they are ejected
Outer bracket 2	– Clamping the stacked pieces when the inner bracket is open
Support 3	– To place the material



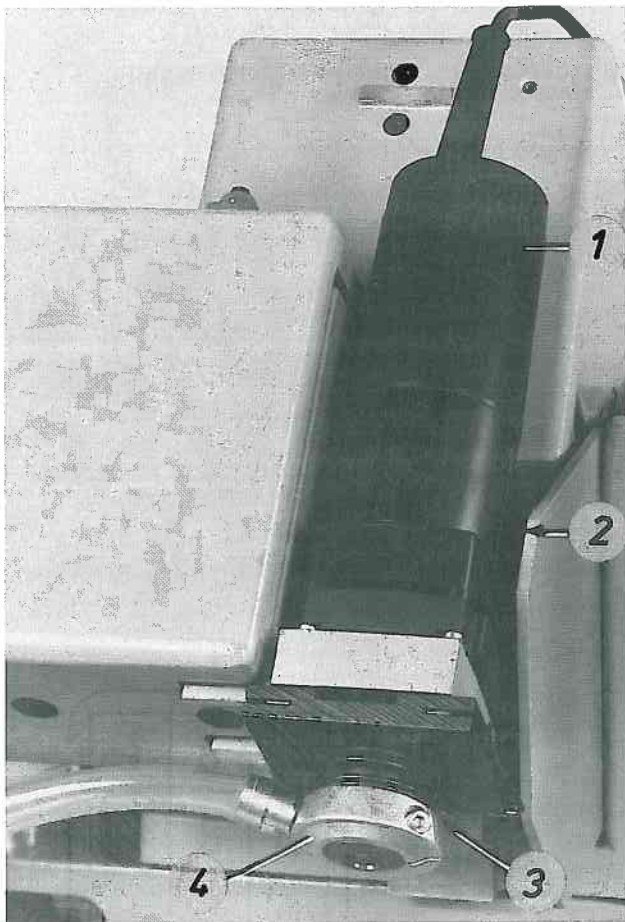


2.7 Elements on the stand

Element	Function
Main switch a1	– Turning the machine on and off
Motor protection switch e6	– Separating the machine from the current supply in the case of overloads
Shut-off valve 0.1	– Stopping the compressed air supply to the pneumatic system
Pressure regulator with manometer 0.7	– Pressurizing the cylinder for the functions "Outer frame and centre slider down" with approx. 2 bar
Pressure regulator with manometer 5.5 (only 805-121)	– Pressurizing the cylinder for the function "Transfer plate down" with approx. 0.8 bar
Pressure regulator with manometer (1 at the valve block)	– Setting the pressure in the hose in the table top insert for fixing the folded cut pocket to approx. 3 bar
Air filter and water separator 0.2	– Eliminates clogging and rust formation on the pneumatic elements
Pressure regulator with manometer 0.3	– Reducing the line pressure to the desired service pressure of 6 bar
Mist lubricator 0.4	– Lubricating all moving parts of the pneumatic system
Pressure monitor 0.6	– Indicating a pressure loss below 4 bar
Air pistol 0.5	– Removing lint, dust and other particles

2.8 Elements of the milling device

Element	Function / Remarks
Main switch 2 of the milling machine 1	– This switch must always be turned on so that the control can activate the milling machine
Lever 3	– To loosen the suction head 4 or the gauge for the height adjustment of the milling bit or centre drill
Milling machine 1	– Milling all shape-related parts of the style kit
Main switch of the vacuum unit 6	– This switch must always be turned on so that the control can activate the vacuum unit
Vacuum unit 6	– Removing milling and drilling chips from the milling machine
Suction head 4	– The suction head with the springy ring should enable to remove all chips



3. Turning on, zeroing, starting and turning off the machine

3.1 Turning on the machine and zeroing the carriages

Before turning on the machine, the folding elements are positioned as follows:

Outer frame at the rear and lowered.

Centre slider lowered and in front.

Sequence of operations

Remarks / On-screen text (BT)

Prerequisites:

- The motor protection switch e6 is turned on
- The transfer plate is not in the area of the folding station

- The transfer plate can be pushed away by hand

1. Turning on the machine:

- Open the shut-off valve 0.1
- Turn on the main switch a1

- BT:
Move to reference point with "I" and "Enter"

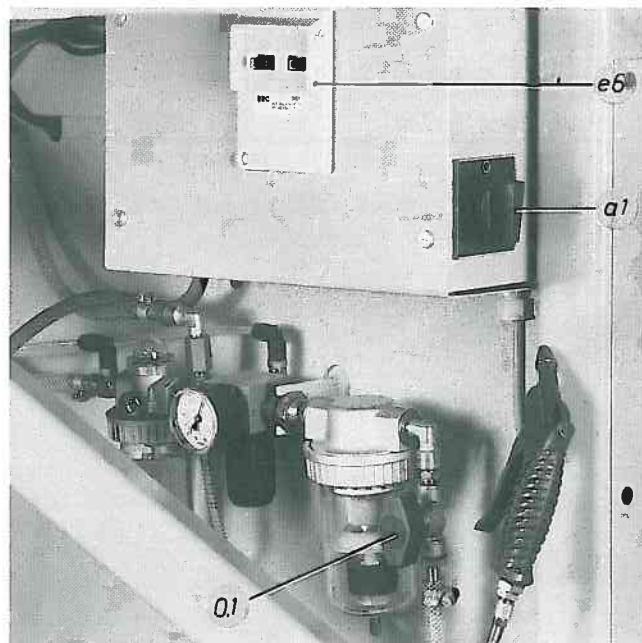
2. Zeroing the transfer carriage

- Press key "I"

- Centre slider moves back
- Outer frame rises
- Outer frame moves back
- Transfer plate rises
- The lamp in key "I" is luminous
- Zeroing the "Z-axis" and the X- and Y-carriage
- Centre slider moves to the front

- Press key "Enter"

- BT:
Read identity code
Proceed with "Enter"



3.2 Reading the identity code and calling up the "Automatic" menu

Sequence of operations

Remarks / On-screen text (BT)

Prerequisite:

- Machine turned on and carriages zeroed

- See subject 3.1

1. Reading the code of the transfer plate:

- Press key "Enter"

- The carriages move to the light barrier. Here, the code on the transfer plate is read so that the corresponding pocket program can be called up. During this, the code appears on the screen for a short moment. Then, the carriages are transported to the pocket zero point.
- Centre slider rises
- If this pocket program does not contain program variants, the following BT appears besides the pocket and tack shape and the parameter values:
Proceed with "Enter".
- If program variants exist besides the basic program, all programs that belong to the identification number are listed, as shown in the following example:
Pocket selection

Count.. no.	Ident. no.	Pocket family	Variant
0001	001	3000	00
0002	001	3000	01
0003	001	3000	02

Enter the counting number of the desired pocket

2. If several program variants belong to one identification number:

- Enter the counting number of the variant
- Press key "Enter"

- Besides the pocket and tack shape and the parameter values the following BT appears:
Proceed with "Enter"

3. Calling up the "Automatic" menu:

- Press key "Enter"

- BT:
Automatic
Number of bobbin stitches XXXXXX
Piece counter XXXXXX
Bobbin change
Folding control ON or OFF
Thread monitor ON or OFF
Needle cooler ON or OFF
Prepositioning ON or OFF
Stacker X Length X ON or OFF

Speed 100%
Pocket identification number eg 1
for variant eg 01
To service with the "menu key"

- Explanation of the BT:
"Number of bobbin stitches" only appears on units without bobbin thread monitor.
Needle cooler only appears on units of subclass 121

3.3 Changing the entries in the "Automatic" menu

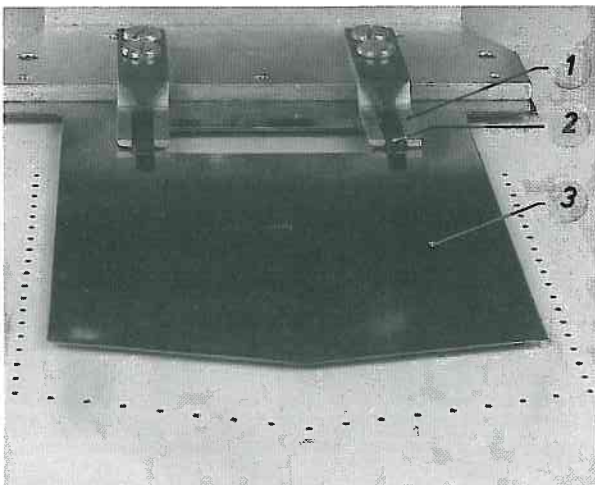
The entries - with the exception of the "Speed" - will remain memorized even after turning off the machine.

Entry/Process	Function / Remarks
"Bobbin stitches"	– On sewing units without bobbin thread monitor reset the number of the bobbin stitches to the max. value - eg after a bobbin change
"Piece counter"	– Restart counting of the sewn pieces at "0"
"Bobbin change"	– Opening the inner bracket and on the subcl. 111 sewing machine also swivelling sideways the hook box to enable a bobbin change. When the message "Bobbin thread not enough" appears, these functions will be automatic
"Folding control"	– When this function is entered, the automatic sequence is interrupted after the folding is completed. Following the check, the sequence can be either continued by pressing key "1" or the folding process is repeated by moving the folding device into the zero position using key b23.
"Thread monitor"	– Enabling and disabling the thread monitor
"Needle cooler"	– Enabling and disabling the needle cooler of subcl. 121 units
Stacker 1, 2 or 3 Length 1, 2, 3 or 4	– Enabling and disabling the stacker – Sensing the activated stacker system and the activated "advance length"
"Speed"	– Changing the sewing and transfer speed within the values from 0-100% in steps of 5% using the keys ← →. Different changes of the speeds can be made in the process "Speed" in the "Service" menu. See subject 4.5.

3.4 Loading the cut pieces and starting the automatic sequence

3.4.1 Loading the cut pieces and activating the folding process

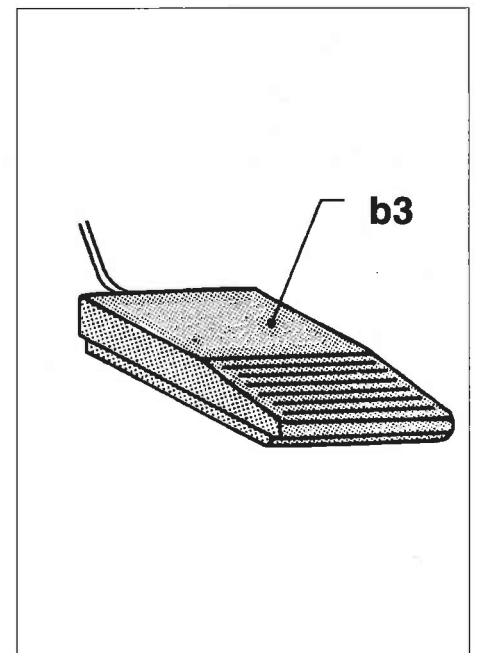
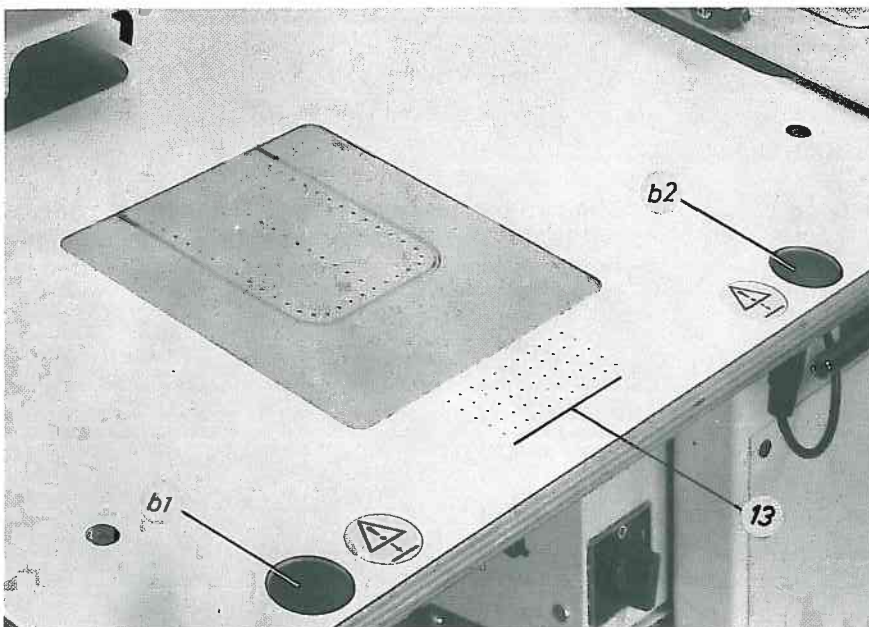
Sequence of operations	Remarks
Prerequisites:	
<ul style="list-style-type: none">– "Automatic" menu is called up– Correct "Stacker system" and correct "Advance length" are selected	<ul style="list-style-type: none">– See subject 4.7
1. <u>Positioning the cut pocket on the centre slider</u>	<ul style="list-style-type: none">– For this, pull the cut piece under the clamps 2 up to the stopper 1 to the rear and centre it with respect to the centre slider 3
2. <u>Positioning the lower material piece, fixing it and activating the folding process:</u>	
<u>Method 1:</u>	<ul style="list-style-type: none">– For pocket setting "without respect to the pattern"
<ul style="list-style-type: none">– Position the piece according to the marks on the table– Press key b1 "Start"	<ul style="list-style-type: none">– The lower material piece is fixed by activating the vacuum field 13– The folding process is activated
<u>Method 2:</u>	<ul style="list-style-type: none">– For pocket setting "with respect to the pattern"
<ul style="list-style-type: none">– Place the lower material piece under the centre slider– Press key b2– Position the lower material piece with respect to the pocket pattern– Actuate the foot switch b3– Press the key b1 "Start"	<ul style="list-style-type: none">– The centre slider is lowered into the "alignment position"– The lower material piece is fixed by activating the vacuum field 13– The folding process is activated



3.4.2 Loading the cut pieces in mode "Prepositioning" and activating the folding process

Select this mode in the "Automatic" menu, if the lower material piece must be positioned according to marks in the upper area of the vacuum field before the cut pocket is loaded. When "Prepositioning" is entered, the centre slider moves to the rear so that the marks needed for positioning the lower material piece are no longer covered.

Sequence of operations	Remarks
Prerequisites:	
<ul style="list-style-type: none">– "Automatic" menu is called up– Correct "Stacker system" and correct "Advance length" are selected– "Prepositioning" is entered	<ul style="list-style-type: none">– Assures that the centre slider is in its rear position when the lower material piece is positioned
1. Positioning the lower material piece with respect to the marks	
2. Actuating the foot switch b3	<ul style="list-style-type: none">– The lower material piece is fixed by activating the vacuum field 13– The centre slider 3 moves to the front. Keep a sufficient distance to its area of motion
3. Positioning the cut pocket on the centre slider	<ul style="list-style-type: none">– For this, pull the cut piece under the clamps 2 up to the stopper 1 to the rear and centre it with respect to the centre slider 3
4. When the pocket must be set "with respect to the pattern":	
<ul style="list-style-type: none">– Press key b2	<ul style="list-style-type: none">– Centre slider is lowered into the "alignment position"
<ul style="list-style-type: none">– Actuate foot switch b3 and position the lower material piece with respect to the pattern of the pocket– Actuate foot switch b3– Press key b1 "Start"	<ul style="list-style-type: none">– The lower material piece is fixed again– The folding process is activated



3.5 Automatic sequence

This description is based on the following assumptions:

- Single seam program is activated
- The hose insert is contained in the table top

Sequence of functions

Remarks

Prerequisite:

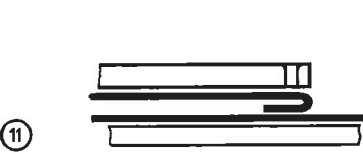
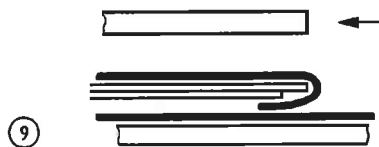
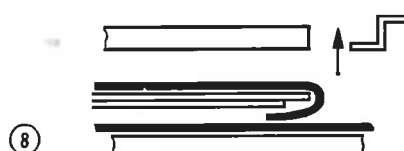
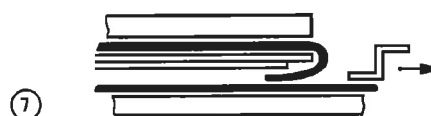
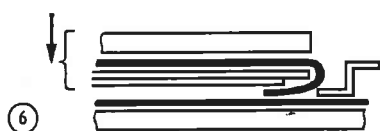
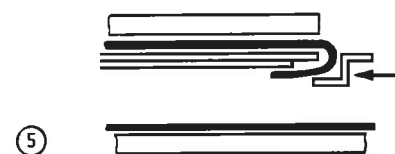
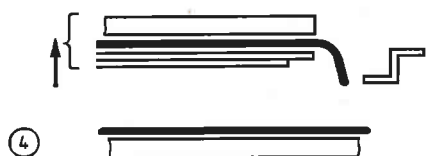
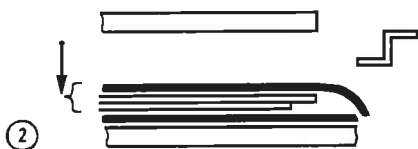
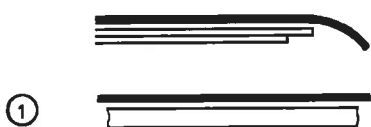
- Folding process is activated

FOLDING THE CUT POCKET

- | | |
|---|--|
| 1. Activating the vacuum fields in the table top | – To fix the lower material piece |
| 2. The outer frame moves to the front and the centre slider lowers | – See phase 2 |
| 3. The centre slider rises and the vacuum field of the inner frame is activated | – The vacuum field pulls the centre slider against the inner frame.
See phase 3 |
| 4. Raise the inner frame into the folding position | – The pulled up centre slider follows the movement of the inner frame.
See phase 4 |
| 5. Side, front and corner slider move to the front | – The cut pocket is folded around the centre slider. The sliders are actuated in a sequence that depends on the pocket style.
See phase 5 |
| 6. Outer frame and centre slider lower | – The cylinders "Outer frame and centre slider down" are pressurized with approx. 2 bar.
See phase 6. |
| 7. Pressurize the hose in the insert with compressed air | – The hose presses the folded part of the cut pocket against the centre slider |
| 8. Deactivate the vacuum field of the inner frame | |
| 9. Side, front and corner slider back | – See phase 7 |
| 10. Raise the outer frame and vent the hose in the insert | – The two pieces are just held by the centre slider that is pulled to the table top by the vacuum field.
See phase 8 |
| 11. Outer frame moves back. | |

TRANSPORTING THE MATERIAL TO THE SEWING MACHINE

1. The transfer plate moves to the folding station – See phase 9
2. The transfer plate lowers – The cylinder for this plate is pressurized with approx. 0.8 bar. See phase 10
3. The vacuum field in the table top is deactivated
4. Centre slider moves back – See phase 11
5. Transfer plate moves to the sewing machine – See phase 12
6. Centre slider moves to the front – The folding station can be loaded again



SEWING

1. Sewing head lowers
2. The motors for the sewing machine and the carriages are activated
 - Apart from the first stitches at low speed, the speed is only reduced in "corners". All other seam sections are sewn at maximum speed, provided that the speed in the seam sections "Tack" and "Pocket" is 100%
3. The thread trimmer is activated
 - After the signal "Seam end"
4. The motors for the sewing machine and the carriages are deactivated
5. Transfer plate rises
6. Sewing head rises

STACKING THE MATERIAL

- See also subject 7.2 in the service manual and the corresponding figures

3.6 Turning off the machine

Sequence of operations

Remarks / On-screen text (BT)

Prerequisites:

- Machine in initial position

1. Turn off the main switch
 - The cylinders of the folding station are being completely depressurized, thereby triggering the following functions:
 - Outer frame lowers
 - Outer frame locks into place mechanically in its rear position
 - Centre slider lowers
 - Sewing head locks into place mechanically in its upper position
2. Closing the shut-off valve

4. Processes in the "Service" menu

4.1 Process "Max. number of bobbin stitches"

4.1.1 Determining the maximum number of bobbin stitches

- This number of stitches needs only to be determined for sewing units without bobbin thread monitor.
- The number of stitches that can be sewn with the thread of one full bobbin mainly depends on the following factors:
 1. Stitch length
 2. Thread size
 3. Material thickness
 4. Thread tension during bobbin winding

Sequence of operations	Remarks / On-screen text (BT)
Prerequisite:	
– "Automatic" menu called up	– BT: 3: Bobbin change
1. <u>Installing the bobbin:</u>	
– Press key "3"	– To enable the bobbin change
– Install the full bobbin	
2. <u>Entering the number of stitches "99999":</u>	
– Press the menu key	– "Service" menu is called up
– Press key "1"	– The displayed number of stitches is erased
– Enter 99999	
– Press key "Enter"	
3. <u>Setting pockets:</u>	
– Press the menu key	– "Automatic" menu is called up
– Press key "1"	– BT: Max. number of bobbin stitches 99999
– Start the automatic sequence as often as required	– Until the bobbin is empty
4. <u>Determining the sewn number of stitches</u>	<div> – Entered number of stitches 99999 minus displayed number of stitches eg 45999 <hr/> 54000 </div>
5. <u>Determining the max. number of stitches</u>	<div> – Sewn number of stitches eg 54000 minus reserve stitches eg 1000 <hr/> 53000 </div>

4.1.2 Changing the maximum number of bobbin stitches

On sewing units without bobbin thread monitor the number of bobbin stitches is changed as follows:

Sequence of operations	Remarks / On-screen text (BT)
Prerequisites:	
– The maximum number of bobbin stitches has been determined	– See 4.1.1
– The "Service" menu is called up	– With the menu key
1. <u>Entering the max. number of stitches:</u>	
– Press key "1"	– The displayed number of stitches is erased
– Enter the max. number of stitches	– A number of stitches up to 99999 can be entered
– Press "Enter" key	
2. <u>Resetting the "bobbin stitches" to the new value:</u>	
– Press the menu key	– The "Automatic" menu appears
– Press key "1"	– The previously entered number of stitches appears on the screen

4.2 Process "Service technician"

The processes in this menu are described in subject 9 of the service manual.

4.3 Process "Variant change"

To sew different types of fabric the corresponding program variants can be formed under the same identification number. Thus, when the type of fabric is changed, the corresponding variant can be chosen as follows:

Entry sequence	Remarks / On-screen text (BT)
Prerequisite:	
– "Service" menu is called up	– With the menu key
1. <u>Calling up the process "Variant change":</u>	
– Press the corresponding key	– Press the corresponding key Besides the listing of all variants belonging to the identification number the following BT appears: Enter the counting number of the selected pocket
2. <u>Entering the counting number</u>	
– Enter the no.	
– Press the key "Enter"	– The "Service" menu reappears

4.4 Process "Style change"

The style kit consists of the following components:

Outer frame 1 with inner frame 2

Centre slider 3

Transfer plate 4

Hose insert 5 (only on the 805-121)

Process

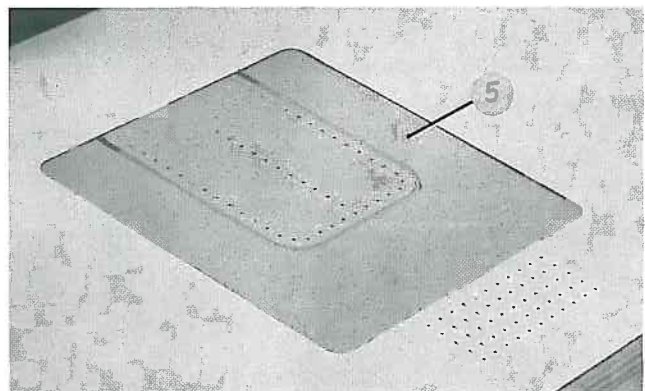
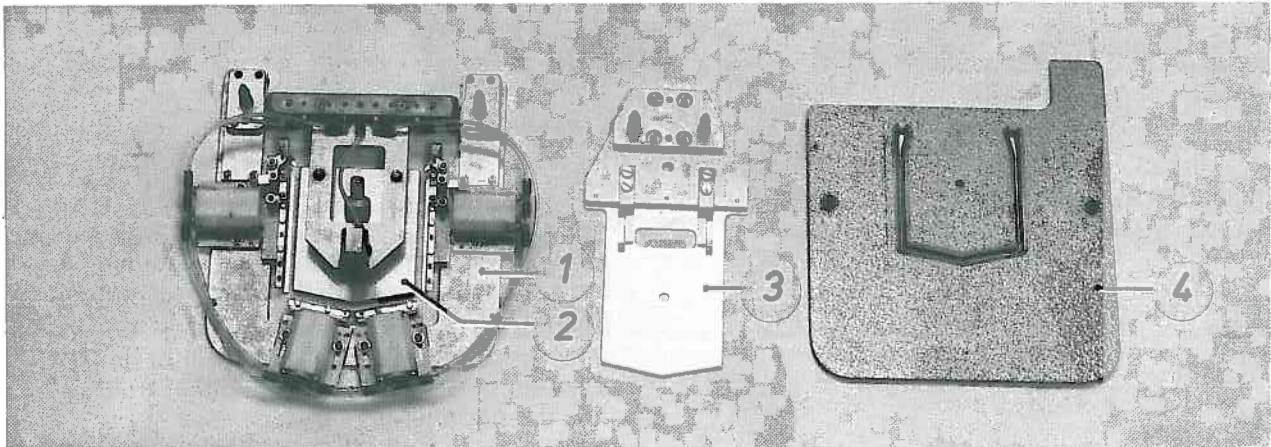
Remarks / On-screen text (BT)

Prerequisites:

- "Service" menu is called up
- The lamp in key b22 "I" is on

1. Selecting the process "Style change":

- Press the corresponding key
- The outer frame moves to the front and lowers
- Centre slider lowers
- Transfer plate lowers
- Outer frame and centre slider are released



2. Removing the "old" folding kit:
 - Remove the vacuum hose 3 from the connection piece of the inner frame carrier
 - Separate the coupling bar 2
 - Remove the outer frame 4 and the centre slider
 - Remove the hose insert
 - To do this, actuate the hand valve and separate the quick coupling

3. Installing the "new" folding set:
 - Install the hose insert
 - Install the centre slider
 - Install the outer frame
 - Connect the coupling bar
 - Connect the vacuum hose to the connection piece of the inner frame carrier

4. If necessary, change the position of the two dials:
 - Turn the dials 1 and 5 into the correct position
 - As shown on the adhesive label of the transfer plate

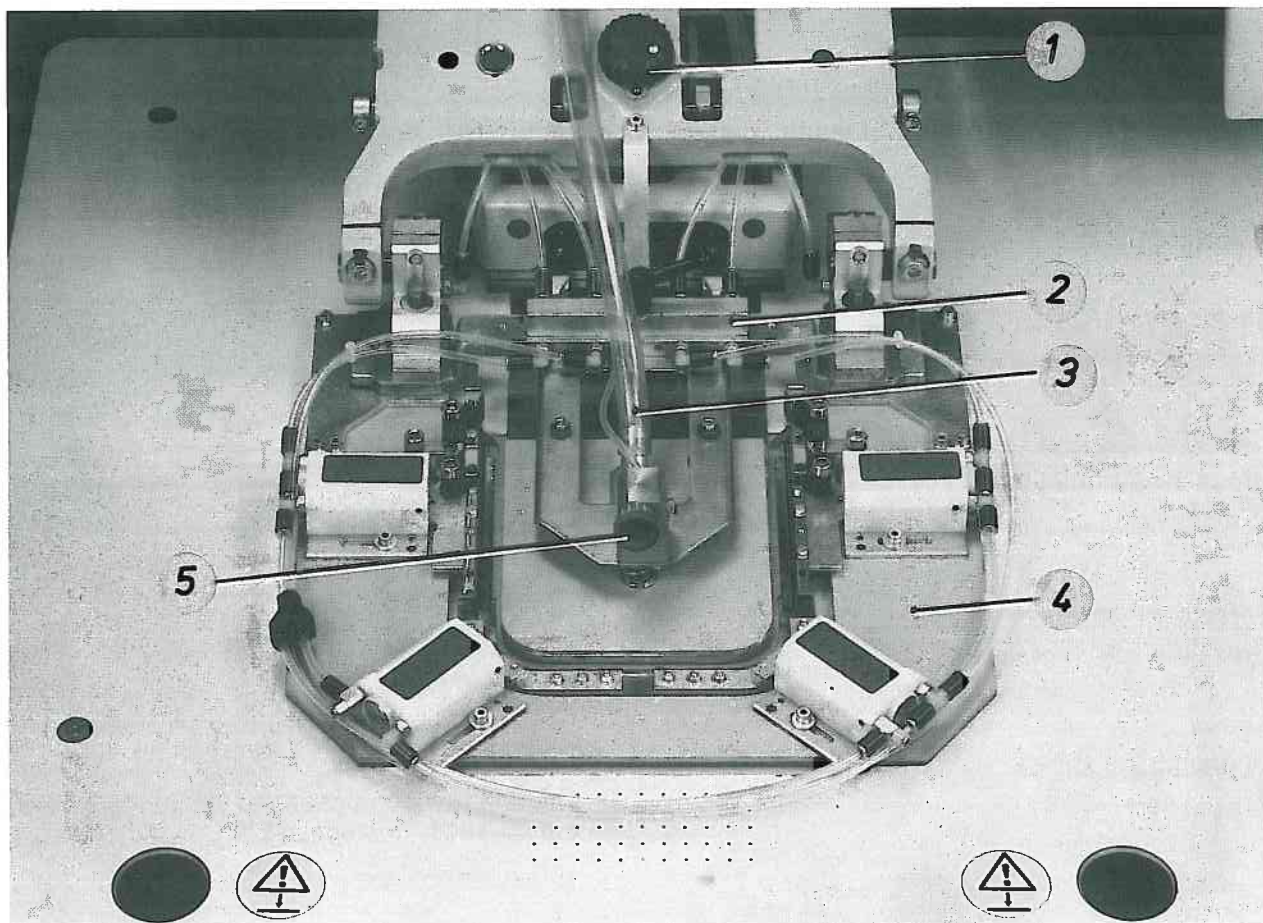
5. Move the parts of the style kit into the 0-position:
 - Press key "1"
 - Outer frame rises and moves back
 - Centre slider rises
 - Transfer plate rises

6. Changing the transfer plates
 - BT:
Read identity code
Proceed with Enter

7. Reading the code:
 - Press key "Enter"
 - The transfer plate moves up to the light barrier so that the code on the transfer plate can be read. Then the transfer plate is transported to the pocket zero point.
 - If no program variants exist, the following BT appears besides the pocket and tack shape and the parameter values:
Proceed with Enter
 - If program variants exist, the following BT appears besides the listing of all programs that belong to the identification number:
Enter the counting no. of the desired pocket

8. If several program variants belong to one identification no.:
 - Enter the counting number of the variant
 - Press the key "Enter"
 - The following BT appears besides the pocket and tack shape and the parameter values:
Proceed with Enter

9. If necessary, modify the lateral position of the ejector and stacker
 - Proceed according to subject 7.3 of the service manual



4.5 Process "Speed"

This process enables to separately adjust different values for the "Transfer speed", "Sewing speed pocket" and "Sewing speed tack". In the "Automatic" menu it is only possible to enter one %-value for all three speeds.

Entry sequence	Remarks / On-screen text (BT)
Prerequisite:	
– "Service" menu is called up	– With the menu key
1. <u>Calling up the process "Speed":</u>	
– Press the corresponding key	– BT: Transfer speed pocket Sewing speed tack
2. <u>Selecting the transfer or sewing speed:</u>	
– Press the key ↓ or key ↑	– The "bright" or inverted field shows the selected speed type
3. <u>Changing the speed:</u>	
– Press key ← or key →	– The speed can be changed within the values from 0-100% in steps of 5%

4.6 Process "Stitch length"

This process enables to change the stitch length within the following ranges:

On subclass 121: 0.8 - 3.0 mm

On subclass 111: 0.8 - 3.5 mm

Entry sequence	Remarks / On-screen text (BT)
Prerequisite:	
– "Service" menu called up	
1. <u>Calling up the process "6":</u>	
– Press the corresponding key	– The displayed stitch length value is erased
2. <u>Entering the desired stitch length:</u>	
– Enter the value	
– Press the key "Enter"	

4.7 Process "Stacker select"

This process offers the following possibilities:

- Choice between "Stacker system 1" or "Stacker system 2".
When using the stacker version with the 2nd pair of ejector rollers, "Stacker system 3" can also be activated.
- Choice between 4 different advance lengths for "Stacker system 2" or "Stacker system 3"
- The stacker is activated only every 2nd machine cycle

Entry

Remarks / On-screen text (BT)

Prerequisite:

- "Service" menu called up

- With the menu key

1. Calling up the process "Stacker select":

- Press the corresponding key

- BT:
1: Stack every 2nd part
2: Stacker 1
3: Stacker 2
4: Stacker 3

2. If the stacker must only be activated every 2nd cycle:

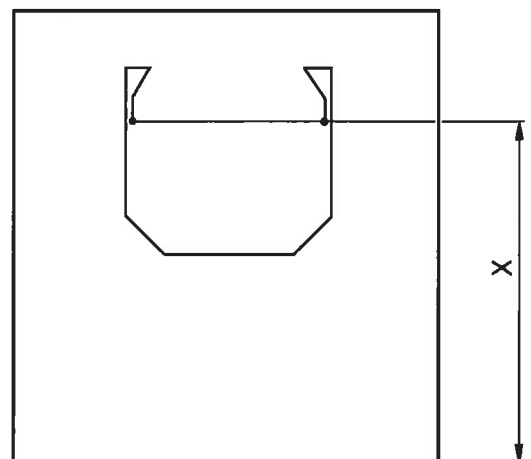
- Press key "1"

- If eg two pockets are set on one lower material piece one after the other

3. For stacking "long" pieces:

- Press key "2"

- Such as eg trousers, where the minimum distance X between the bottom edge and the seam end is 470 mm
- BT:
Service



X (mm)	System
> 470	1
310-470	2
100-310	3

4. For stacking pieces with a "medium" length:

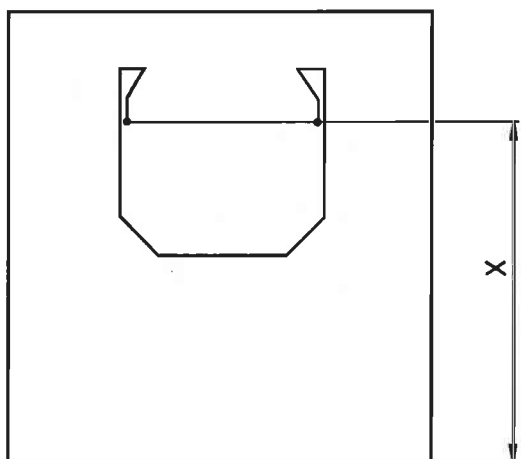
- Press key "3"
- Press the key 1,2,3 or 4 depending on the "Advance length"

- Such as eg shirts, where the distance X between the bottom edge and the seam end may vary between 310 and 470 mm
- BT:
 - 1: Length 1
 - 2: Length 2
 - 3: Length 3
 - 4: Length 4
- The "Advance length" is correct, when the lower material piece hangs down with equal length on both sides of the support
- BT:
 - Service

5. For stacking "special" pieces:

- Press the key "4"
- Press the key 1, 2, 3 or 4 depending on the "Advance length"

- Where the distance X between the bottom edge and the seam end may vary between 100 and 310 mm
- BT:
 - 1: Length 1
 - 2: Length 2
 - 3: Length 3
 - 4: Length 4
- The "Advance length" is correct, when the lower material piece hangs down with equal length on both sides of the support
- BT:
 - Service



X (mm)	System
> 470	1
310-470	2
100-310	3

4.8 Process "Alternate mode"

In this mode a decorative stitch program and a pocket setting program that are linked together, can be alternately sewn.

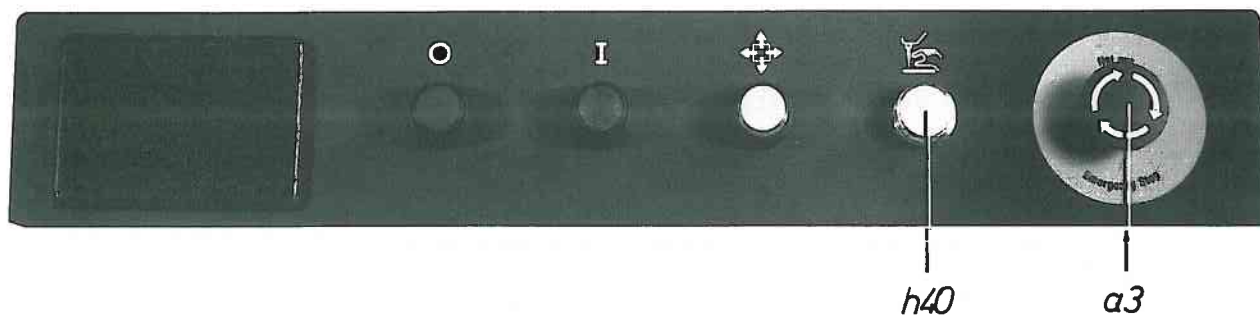
The entry sequence for this process can be found in the on-screen text.

5. Miscellaneous processes

5.1 Interrupting the sequence using the key "0"

Key "0" enables to interrupt the folding process, sewing process and the motion of the transfer carriages.

Sequence of operations	Remarks
1. Press key "0"	<ul style="list-style-type: none">- The sequence is interrupted. When the sewing cycle is interrupted the needle bar stops in any position- The lamp h40 is luminous and thus shows "Safety stop of the motors"
2. Press key "1"	<ul style="list-style-type: none">- The sequence is being continued



5.2 Repairing of a thread breakage

- If the electronic thread monitor detects a thread breakage during sewing, the following functions are triggered:
 - Thread trimmer On
 - Sewing machine rises
 - Lamp in key "I" off
 - "Error" appears on the screen
 - Lamp h40 for "Safety stop" on
- When questioning the error cause using the key "Error", the on-screen text "Thread breakage" appears

Sequence of operations	Remarks
Prerequisite:	
– Lamp h40 On	
1. Threading the thread	– See adhesive label on the machine
2. Press key "I"	<ul style="list-style-type: none">– Lamp h40 Off– Lamp in key "I" On– Motors operational again
3. Press key b1	<ul style="list-style-type: none">– Proceed to press the key until the sewing head lowers and the transfer carriages did move the material back to the thread breakage point– With key b2 the carriages can move the material in the opposite direction
4. Press key "I"	– Proceeding with the sewing cycle

5.3 Changing the bobbin when "Bobbin thread not enough" appears

- This message appears immediately after the sewing cycle, when the remaining bobbin thread does not suffice to sew another pocket.
At the same time the inner bracket opens, and on machine version 805-111, the hook box swivels sideways as well. Thus, the prerequisites for changing the bobbin are fulfilled.
- The message may also be ignored by pressing key "I", if another cycle is to follow.

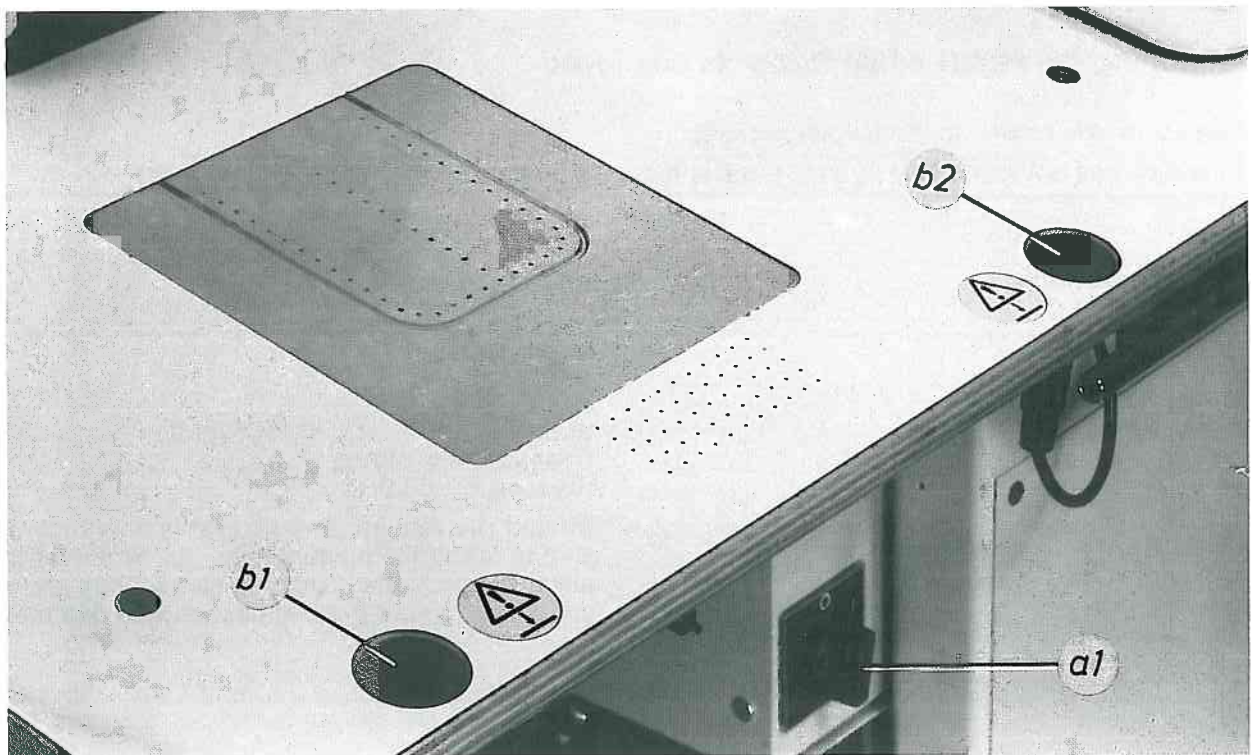
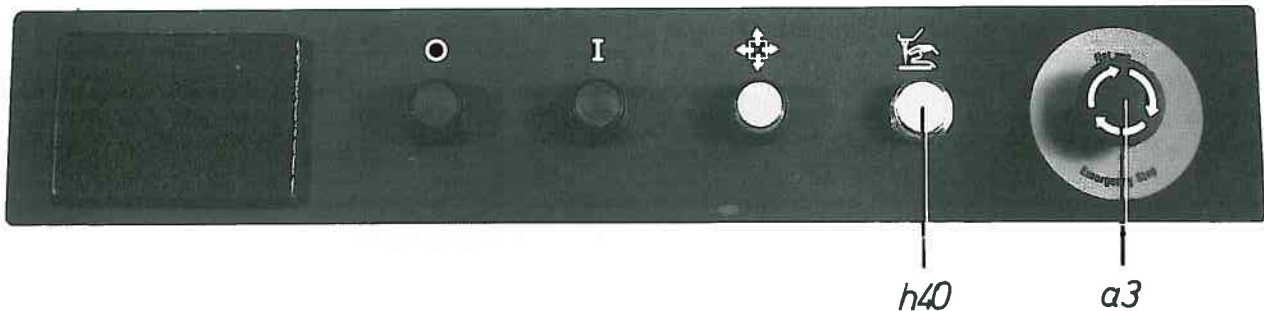
Sequence of operations	Remarks
1. Change the bobbin	– As described under subject 6
2. On machines without bobbin thread monitor: Press key "1"	– The max. number of bobbin stitches appears again on the screen
3. Press key "I"	– The automatic sequence can be restarted

5.4 Pressing the "Emergency stop" switch in an emergency

Sequence of operations

Remarks / On-screen text (BT)

1. Press switch a3 "Emergency stop"
 - All previously activated motors are immediately stopped. Then the motors are disabled.
 - BT:
Stop
2. Turn off the main switch a1
3. Eliminate the causes of the emergency
4. Unlock the "Emergency stop" switch a3.
 - To do this, turn the pressed button to the right
5. Turn on the machine
 - As described under subject 3.1



5.5 Turning on the lamp "Safety stop of the motors" using key "0" for work on the machine



Prior to needle change, bobbin change, threading, and other work within the range of motion of elements, make sure to always disable all motors using switch "0". When lamp h40 is luminous, this condition is fulfilled.

Sequence of operations	Remarks
Prerequisite: <ul style="list-style-type: none">Automatic cycle completed	
1. With the key "0" turn on lamp h40	<ul style="list-style-type: none">The motors are disabledThe cylinder "Lift and lower the sewing head" is depressurizedThe sewing head is locked into place, provided it is in its upper position
2. Do the desired work	
3. Press key "I"	<ul style="list-style-type: none">The motors are operational again.If the position of the carriages was altered by more than 0.5 mm, the carriages must again be pulled into their initial position. This position has been reached, when the carriages cannot be moved any more.The desired process can be activated.

5.6 Questioning the status when "Stop" is displayed

"Stop" appears on the screen in the following cases:

- When the unit was not loaded for 30 sec. (This is required for safety reasons).
- When the control detects an error.

Sequence of operations	Remarks / On-screen text (BT)
1. <u>Calling up the status:</u> <ul style="list-style-type: none">Press key "Error"	<ul style="list-style-type: none">BT: Status Description of status Step: eg 7 1 63 0Should you require the help of a factory technician to repair the malfunctions, do not forget to always specify the displayed steps. They show the phase, where the malfunction was detected


5.7 Removing the bundle from the stacker

Sequence of operations

Remarks / On-screen text (BT)

Prerequisite:

- "Automatic" or "Service" menu called up

1. Press key 
 - Inner bracket opens
 - The lamp in key "I" is turned off
2. Remove the bundle
3. Press key "I"
 - The inner bracket closes
 - The lamp is turned on again



6. Operation of the sewing machine

6.1 Operation of subclass 121

6.1.1 Threading the needle thread

- With key "0" turn on the lamp h40 "Safety stop".
- Thread the needle thread.
- Press key "I".

6.1.2 Winding the bobbin thread

Wind the bobbin thread.

The bobbin is wound during sewing, and when the bobbin is fully wound, winding is stopped by the bobbin winder lever.

6.1.3 Bobbin change

- As described under subject 5.5, turn on the lamp h40 "Safety stop" using key "0" and change the bobbin as follows:
- Swivel the latch 3 sideways and remove the bobbin case with the bobbin.
- Place the full bobbin into the case and pull the thread through slot 6 under the spring 1 and through the guide 2.
When the thread is unwound, the bobbin should rotate opposite to the direction of thread unwinding.
- Place the bobbin case with the bobbin in the centre part, close the latch and pull out the thread approx. 5 cm.

6.1.4 Adjusting the thread tension

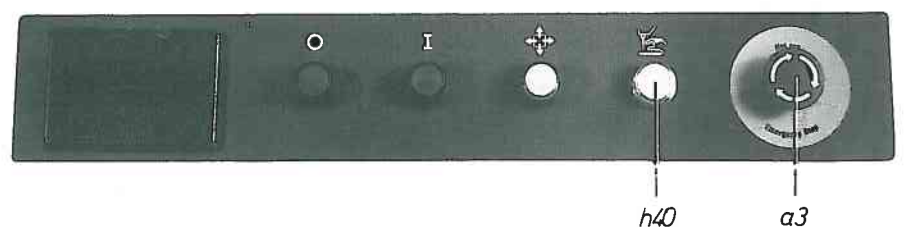
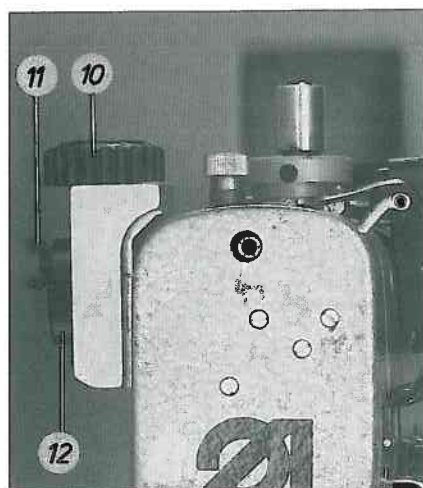
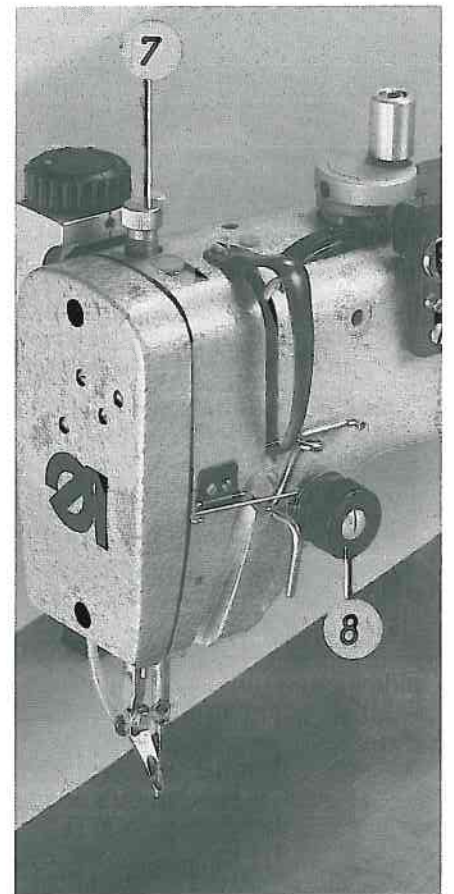
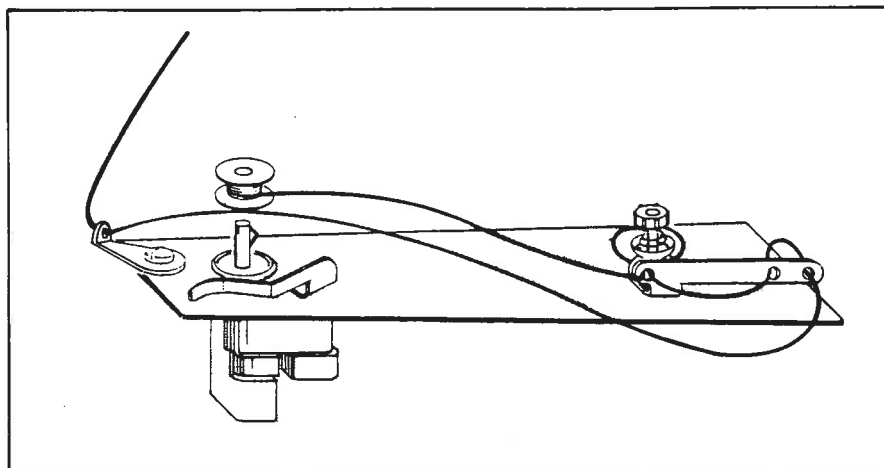
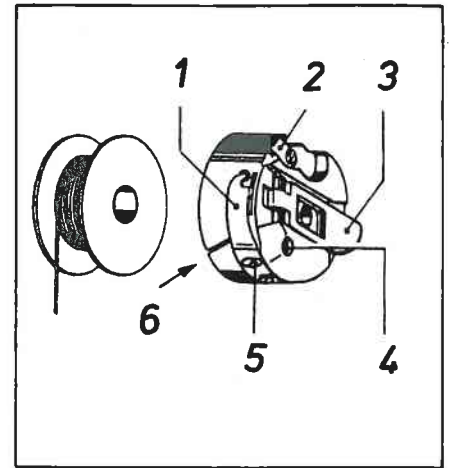
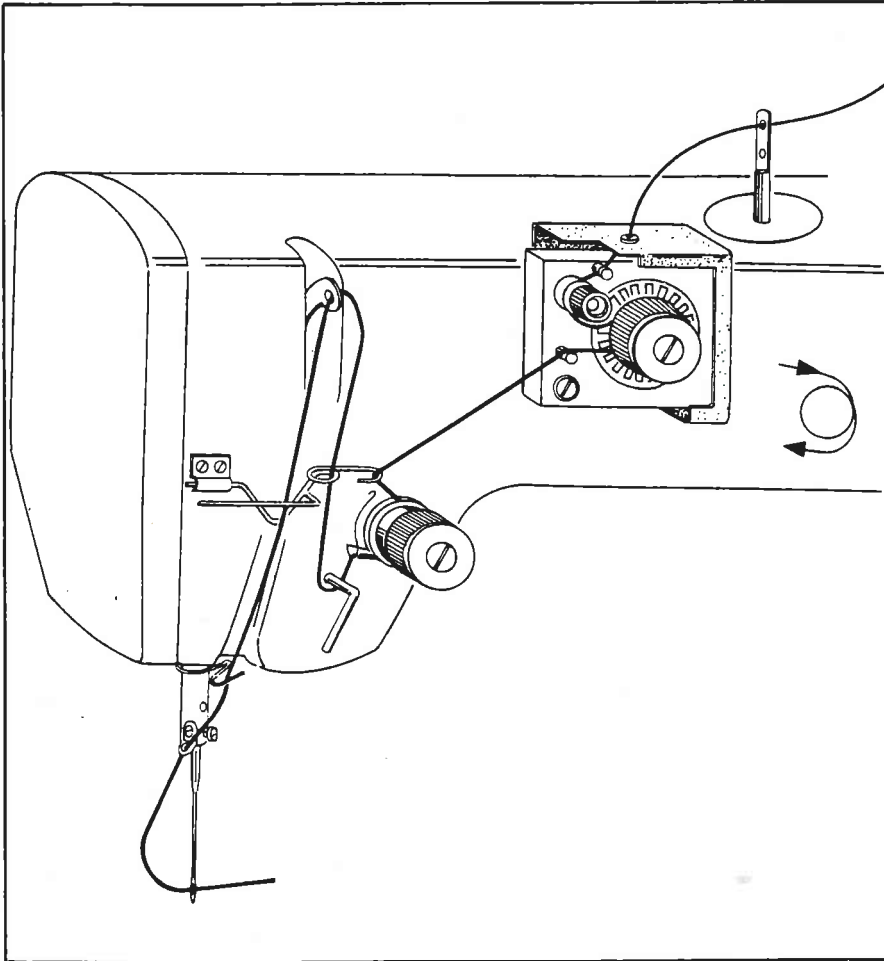
- Needle thread tension:
Turn the turning knob 8 until the desired seam contour is reached.
- Bobbin thread tension:
With the key "0" turn on the lamp h40 "Safety stop".
Turn screw 5 on the bobbin case accordingly.
Press key "I".

6.1.5 Changing the needle

- With the key "0" turn on the lamp h40 "Safety stop".
- Align the scarf of the needle with the hook, push the needle right up and tighten the screw on the needle bar.
- Press key "I".

6.1.6 Adjusting the sewing foot

- Sewing foot pressure:
Adjust it with respect to the material to be sewn using the knurled screw 7.
- Sewing foot height or bottom stroke position:
The sewing foot should lightly touch the material or the Delrin of the transfer plate.
To check this, sew with 5% of the speed in the "Automatic" menu.
To correct, loosen the wing-nut 11 and turn the dial 12.
- Top stroke position:
This stroke position is only activated with the corresponding program variants. The sewing foot should touch the higher level material lightly.
To check, sew with 5% of the speed in the "Automatic" menu.
To correct, turn the dial 10.



6.2 Operation of subclass 111

6.2.1 Threading the needle thread

- With key "0" turn on the lamp h40 "Safety stop".
- Thread the needle thread as shown on the adhesive label on the machine.
- Press key "I".

6.2.2 Winding the bobbin thread

- Thread the bobbin thread as shown in the figure and wind it around the bobbin core.
- Press lever 1 against the bobbin.
- The bobbin is being wound during sewing, and when the bobbin is fully wound, winding is stopped by the bobbin winder lever.

6.2.3 Changing the bobbin

- With key "0" turn on the lamp h40 "Safety stop".
- Activate the process "Bobbin change" in the "Automatic" menu.
- Spring out the latch 7 and remove the bobbin 3, which is raised by a spring.
- Install the bobbin such that it rotates opposite to the hook motion, when thread is being unwound.
- Pull the thread through slot 6 and under spring 5.
- Close the latch and pull out approx. 5 cm thread.
- Press key "I".

6.2.4 Adjusting the thread tension

Adjusting the needle thread tension:

- Adjust with the turning knob 10 such that the desired seam contour is sewn with a minimum of the tension.

Adjusting the bobbin thread tension:

- With key "0" turn on the lamp h40 "Safety stop".
- Select the process "Bobbin change" in the "Automatic" menu to swivel the hook box sideways.
- With the screw 4 adjust the minimum tension.
- Press key "I".

6.2.5 Changing the needle

- With the key "0" turn on the lamp h40 "Safety stop".
- Accordingly align the scarf of the needle with the hook, push the needle right up and tighten the screw on the needle bar.
- Press key "I".

6.2.6 Adjusting the sewing foot

– Bottom stroke position

At its lower dead point the sewing foot should lightly touch the material or the Delrin of the transfer plate.

To check, sew with 5% of the speed in the "Automatic" menu.

To correct, turn the turning knob 12 accordingly.

– Top stroke position

To sew seam sections on higher level material, eg in the tack area, the sewing foot can be brought into the top stroke position. This, however, is only possible with program variants that include a corresponding entry.

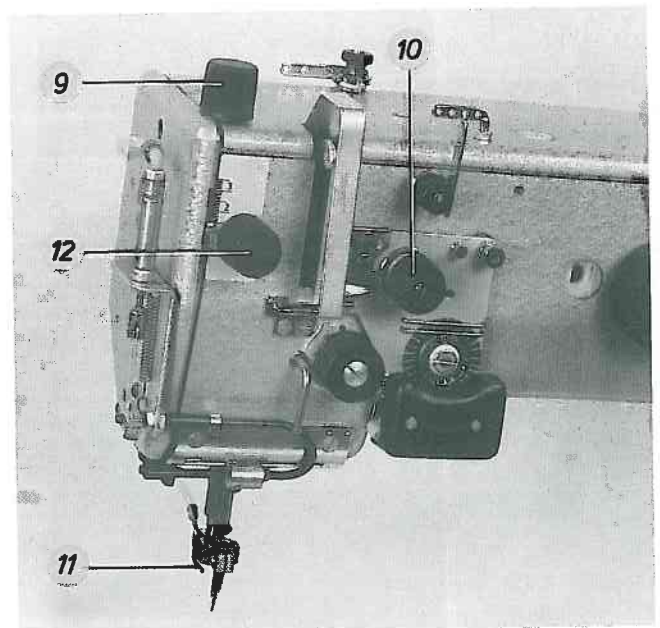
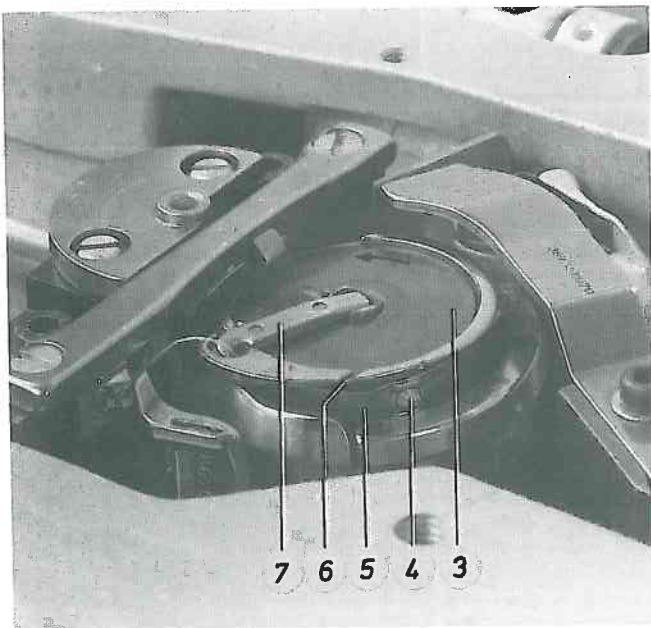
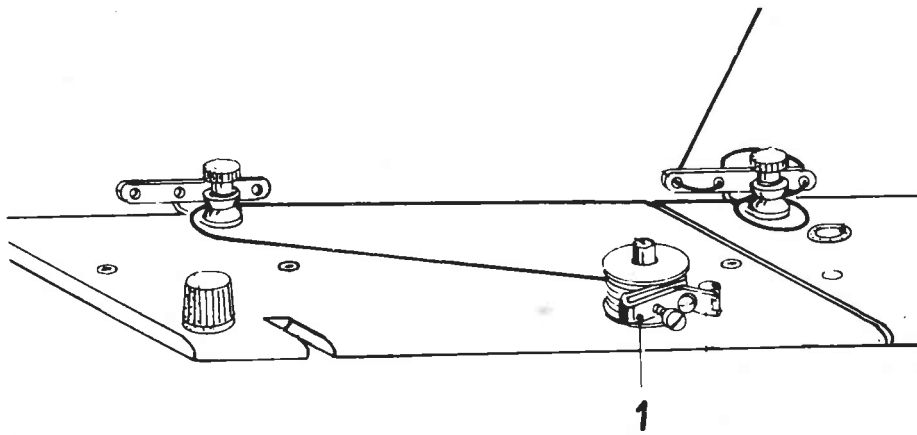
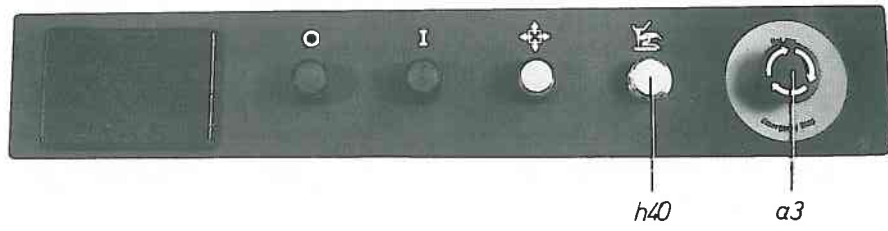
In seam sections on higher level material the sewing foot at its lower dead point should lightly touch the material or the Delrin of the transfer plate.

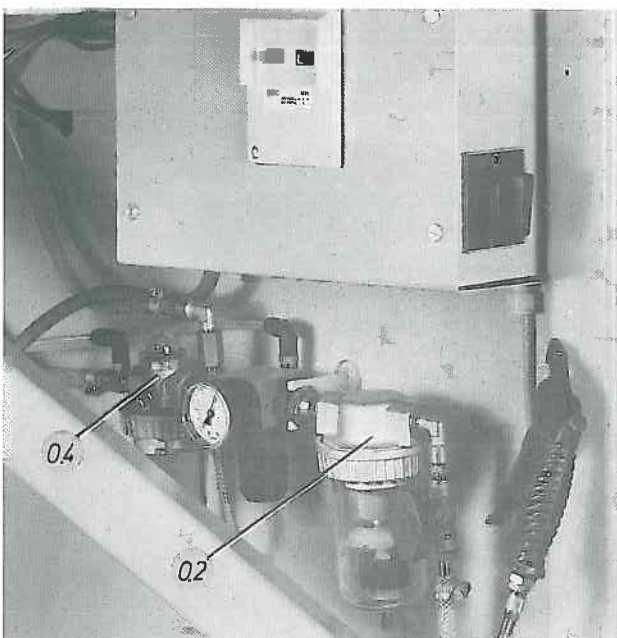
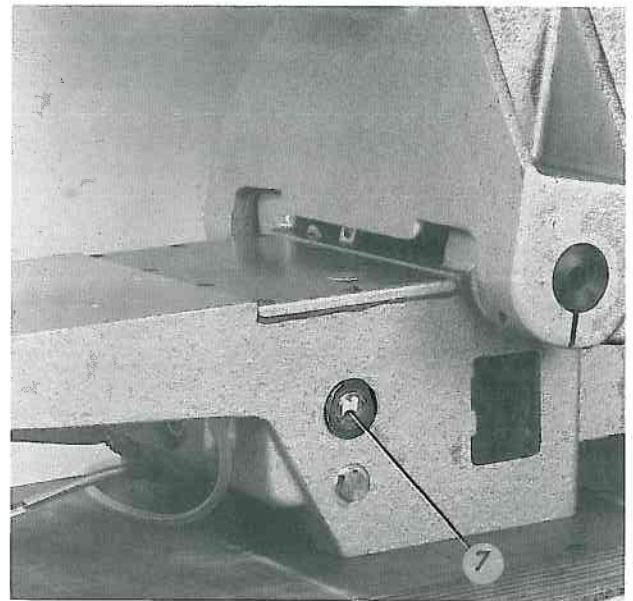
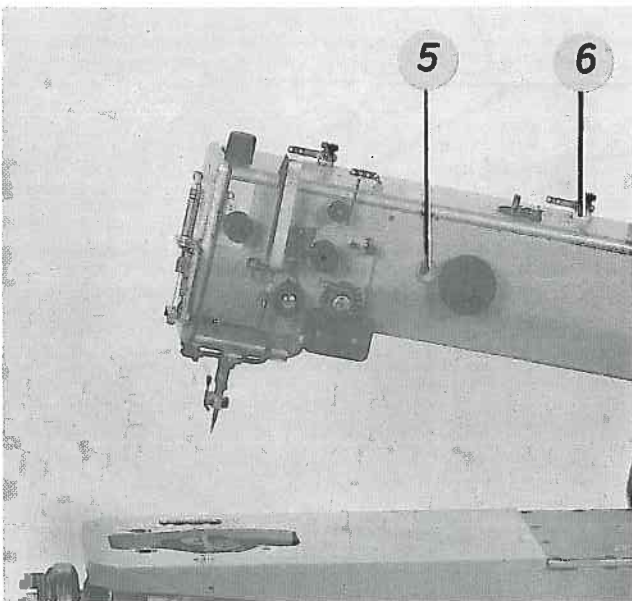
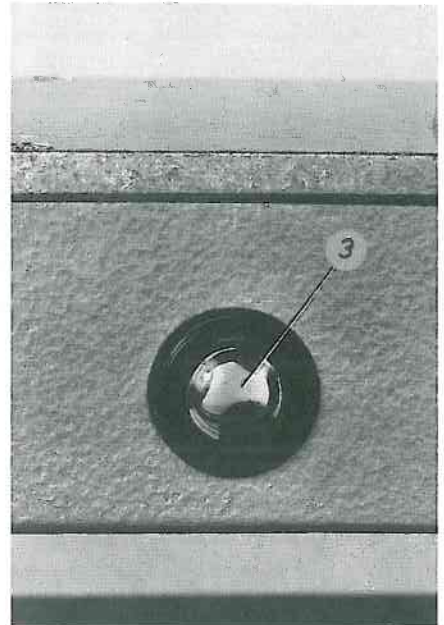
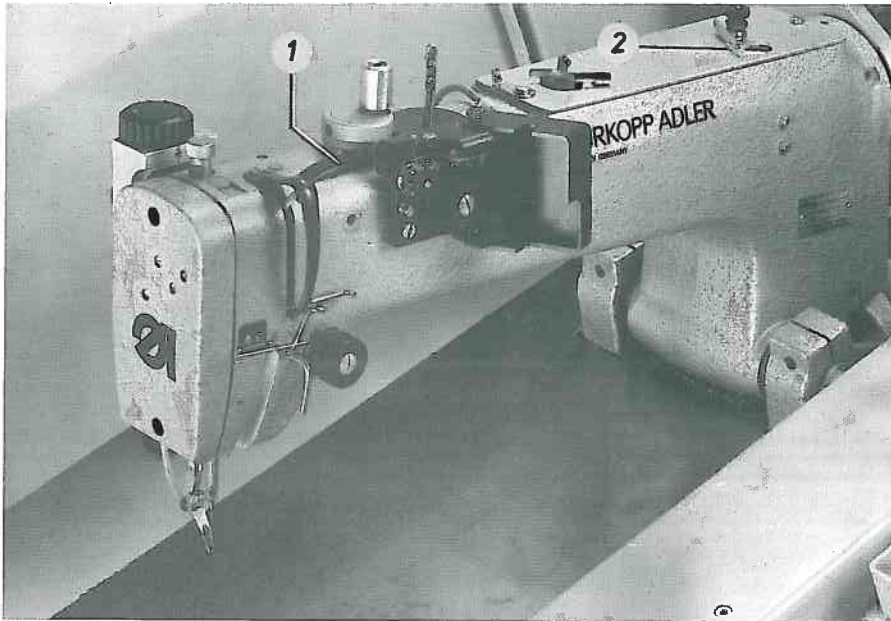
Sew with 5% of the speed in the "Automatic" menu.

Turn the dial 9 accordingly.

6.2.7 Adjusting the needle cooler or blower

- The needle cooler or blower should cool the needle sufficiently with a minimum of air.
- To correct, adjust the dial or throttle accordingly.





7. Maintenance

The maintenance work listed below should be done not later than after the hours specified in the column "Intervals".

Process	Intervals	Remarks
Sewing machine (cl. 805-121)		
– Removing accumulated lint	8	
– Checking the oil level in the oil sump	40	– When the machine is not running, the oil level must be between the centre and the upper edge of the sight window 3. Refill "ESSO SP-NK10" oil through the inlet pipe 2.
– Checking the oil supply at sight window 1	40	– Check when the machine is running.
– Checking the belt	500	– Let a mechanic check the condition and tension
– Checking the hook lubrication	160	– Let a mechanic check, and if necessary, correct (see service manual)
Sewing machine (cl. 805-111)		
– Removing accumulated lint	8	
– Checking the oil level in the oil sump	40	– When the machine is not running the oil level must be in the upper third of the sight window 7. Refill "ESSO SP-NK10" oil through the inlet pipe 6.
– Oil supply at sight window 5	40	– Check when the machine is running
– Checking the belt	500	– Let a mechanic check the condition and tension
– Checking the hook lubrication	160	– Let a mechanic check, and if necessary, correct (see service manual)
Pneumatic system		
– Cleaning the insert in the air filter 0.2	500	– To do this, first close the shut-off valve and vent the system
– Checking the oil level in the mist lubricator 0.4	180	– The oil level must not drop below the opening of the suction pipe. Refill "Esso NUTO H68" oil up to the mark "max." after venting the system
– Checking the oil supply of the mist lubricator 0.4	180	– After every 5th cycle one drop of oil should fall into the air current. Turn the set screw accordingly.
– Check the tightness of the pneumatic system	500	
Transfer carriage		
– Cleaning and oiling the guide rods	160	
– Cleaning the timing belts with an air pistol	160	

