

PFAFF

3834-3/11

Instruction manual

For adjustment of the sewing machine use
service manual Pfaff 1493 E.

Notes on safety

- The machine must only be commissioned in full knowledge of the instruction manual and operated by persons with appropriate training.
- Before putting into service also read the safety notes and the instruction manual of the motor supplier.
- The machine must be used only for the purpose intended.
Use of the machine without the safety devices belonging to it is not permitted.
- When gauge parts are exchanged (e.g. needle, presser foot, needle plate, feed dog and bobbin) during threading, when the workplace is left, and during service work, the machine must be isolated from the mains by switching off the main switch or disconnecting the mains plug.
- On mechanically operated clutch motors without start inhibitor it is necessary to wait until the motor has stopped.
- General servicing work must be carried out only by appropriately trained persons.
- Repairs, conversion and special maintenance work must only be carried out by technicians or persons with appropriate training.
- For service or repair work on pneumatic systems the machine must be isolated from the compressed air supply system.
Exceptions to this are only adjustments and function checks made by appropriately trained technicians.
- Work on the electrical equipment must be carried out only by electricians or appropriately trained persons.
- Work on parts and systems under electric current is not permitted, except as specified in regulations EN50110.
- Conversions or changes to the machine must be made only on adherence to all safety regulations.
- For repairs, only replacement parts approved by us must be used.
- Commissioning of the sewing head is prohibited until such time as the entire sewing unit is found to comply with EC regulations.

Meanings of the symbols:



Danger spot!
Items requiring special attention.



Danger of injury to operative
service staff.

Be sure to observe and adhere to these notes!

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Starting up

- Before the machine is put into operation for the first time, clean it thoroughly and oil it (see page 8).
- Check whether the belt guard is mounted (see page 7).
- Before the machine is switched on, connect compressed air and check air filter/lubricator (see page 8).
- Ask a technician to check if the motor may be operated with the available mains voltage and if it is properly connected in the junction box.
Never operate the machine if this is not the case.
- The encoder adjustment must only be carried out by persons with appropriate training (see page 6).
- The maximum sewing speed is 3200 s.p.m.

Encoder adjustment




This work should only be carried out by a qualified technician.

- 1 Preliminary work**
 - Plug the 6 channel plug of the encoder into the motor control box.
 - Turn master switch on.

- 2 Setting**

The settings on the input panel are as follow:


press  -LED off.

INPUT


appears in the display

press 


SERVICE

press 

PARAMETER 618

press  - until display is at 700.

PARAMETER 700

press 

Turn the hand wheel slowly in the direction of rotation (at least one turn!) until the point of the needle is directly above the needle hole.

press 

Switch to sewing mode.

press  -LED on.

Operate pedal. The reference position (parameter 700) and the positions needle bottom dead centre (b.d.c) (702) and needle top dead centre (t.d.c.) (703) have now been set.

Further parameter settings can be carried out in the main menu " **6 SERVICE** ", sub function " **2 SEW. MOTOR** " as described above (see also "Menu functions - overview" page 19).

The following parameters of the part function "SEWING MOTOR" are possible

- Parameter 618, reverse on/off.
- Parameter 700, reference position of the needle with automatic generation of the needle position down (parameter 702) and needle position up (parameter 703).
- Parameter 702, needle position down.
- Parameter 703, needle position up.
- Parameter 718, after-brake of the sewing drive.
- Parameter 722, acceleration ramp of the sewing drive.
- Parameter 723, brake ramp of the sewing drive.
- Parameter 800, direction of rotation of the sewing drive.
- Parameter 801, reverse rotation angle.

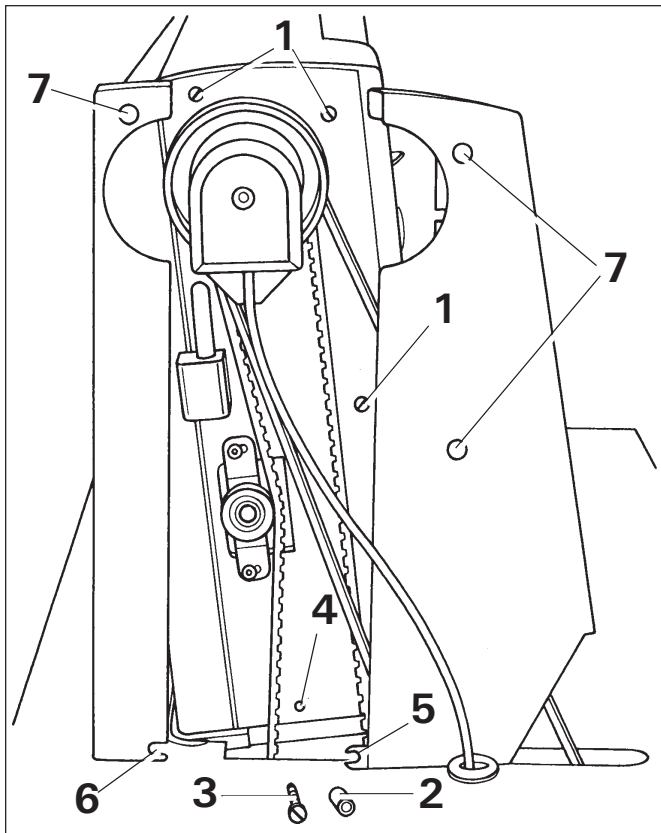


Fig.1

Belt guard



Switch off the machine.

Above the table top

Slide the left and right hand part of the guard with their slots behind the heads or rubber washers of the retaining screws 1.

Attach spacer 2 onto the retaining screw 3 and screw into the threaded hole 4.

Making sure that the lug 5 is behind the slot 6 and in front of the spacer 2, adjust the belt guard and tighten up screw 3.

Finally tighten up the screws 1 in the holes 7.

Beneath the table top

Adjust the belt guard so that both the motor disk and the V belt run free and tighten up in this position.



Do not operate the machine without the belt guard. Danger of accident!

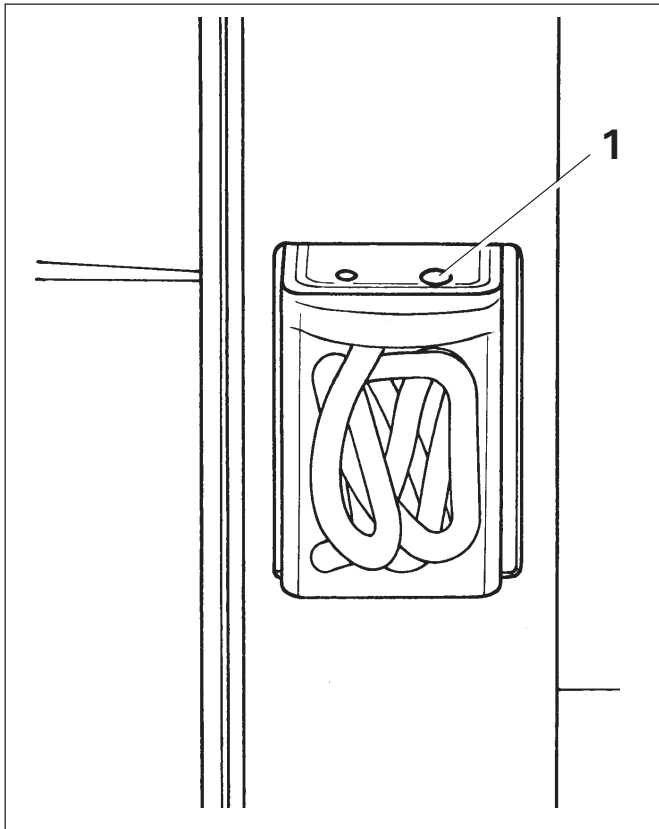


Fig.2

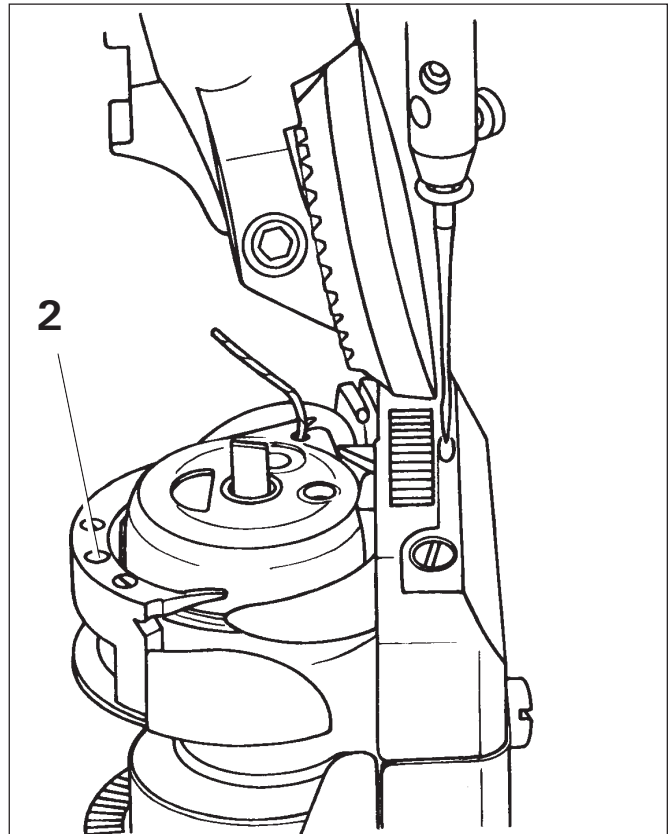


Fig.3

Oiling



Switch off the machine.

Put a few drops of oil in hole 1 of the oil reservoir each day.

Put 1 to 2 drops of oil in the hole 2 of the hook gib each day.

Please note! Only use oil with a mean viscosity of 22.0 mm²/sec. at 40 °C and a density of 0.865 g/m³ at 15 °C.

Pfaff sewing machine oil no. 280-1-120 144.

Greasing the bevel gears

The bevel gears of the hook drive must be freshly greased once a year.

Tilt the machine over backwards and apply a little grease to the tooth flanks.

We recommend sodium grease with a drip-point of about 150 °C (part no. 280-1-120 243).

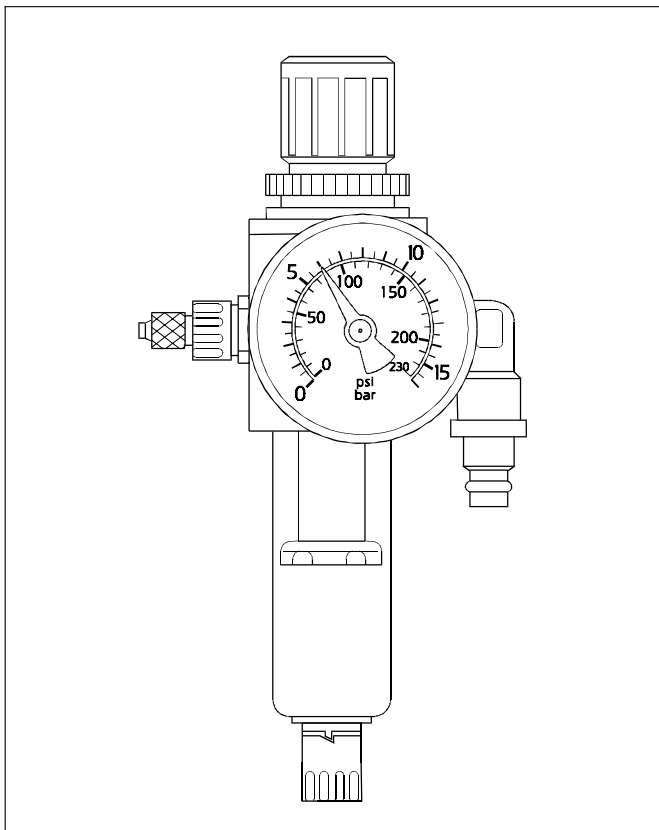


Lift the sewing head up with both hands. Risk of crushing between the sewing head and table top.

Air filter/lubricator

The pressure gauge must show a pressure of 6 bar. If necessary have pressure set correctly.

Fig.4



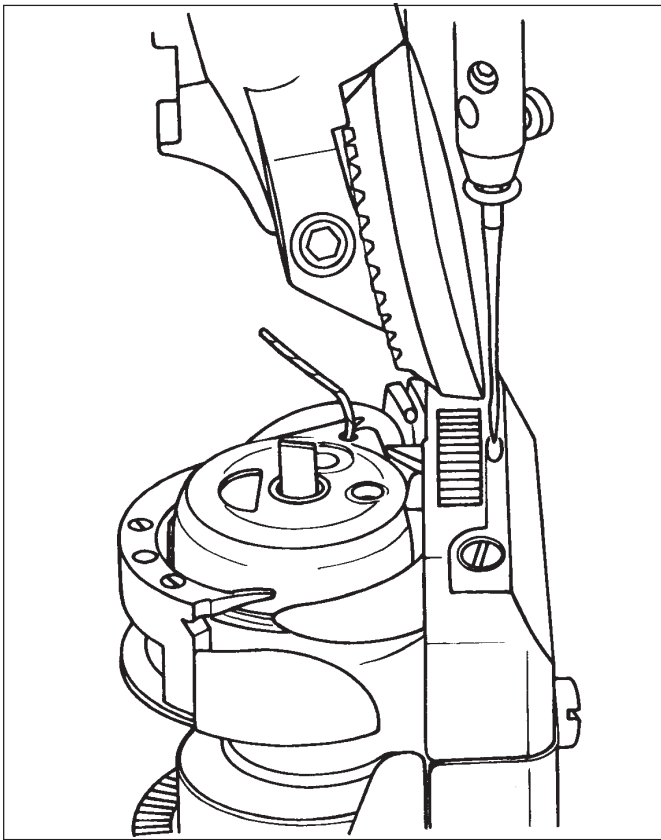


Fig.5

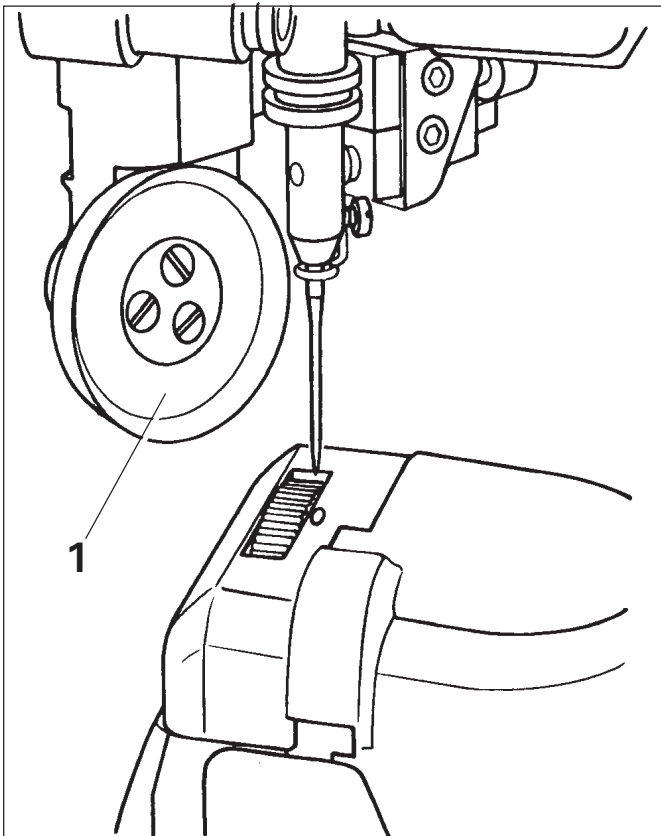
Care



Switch off the machine.

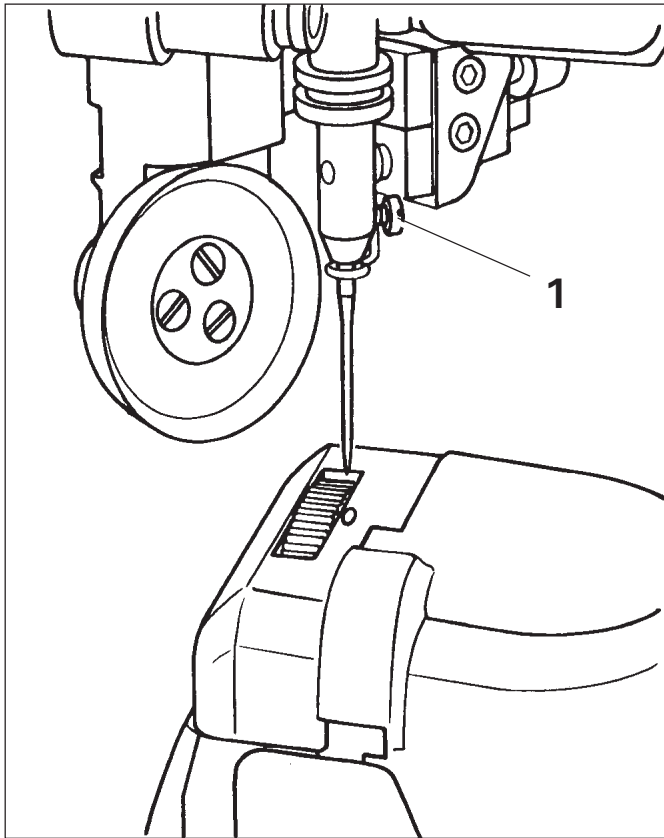
■ Clean the hook and surrounding area each day - more often when in continuous use.

Fig.6



Raising and disengaging the roller presser

Raise the hand lever at the back of the needle head. Pull roller presser 1 lightly down and disengage it to the left.



Inserting the needle



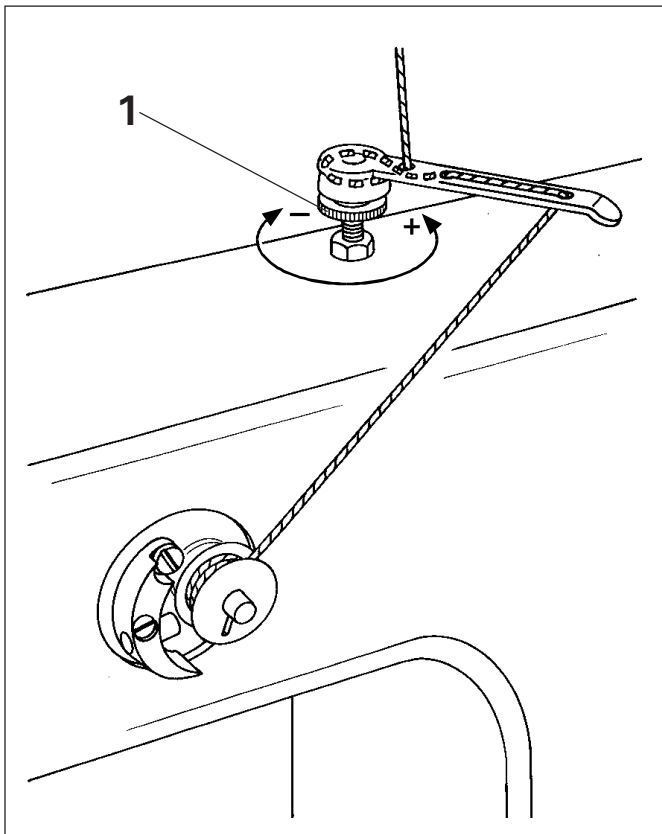
Switch off the machine.

■ Only use needle system 134-35.

Raise and disengage roller presser (see page 9).
Loosen needle retaining screw 1 and push needle right in (the long groove must face to the left).
Tighten needle retaining screw 1 and re-engage the roller presser.

Fig. 7

Fig.8



Winding the bobbin thread

Thread the bobbin thread as shown in fig. 8.
Thread tension (knurled screw 1).

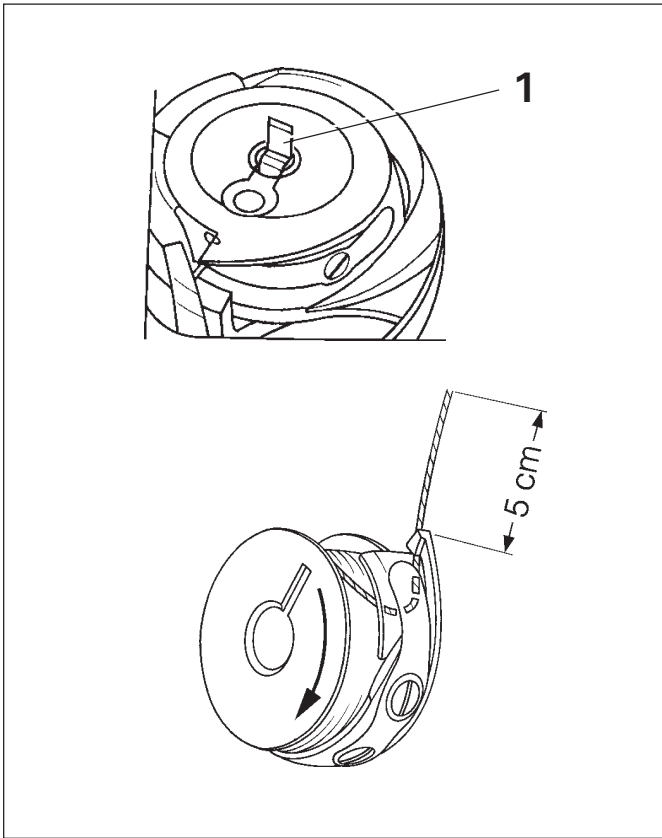


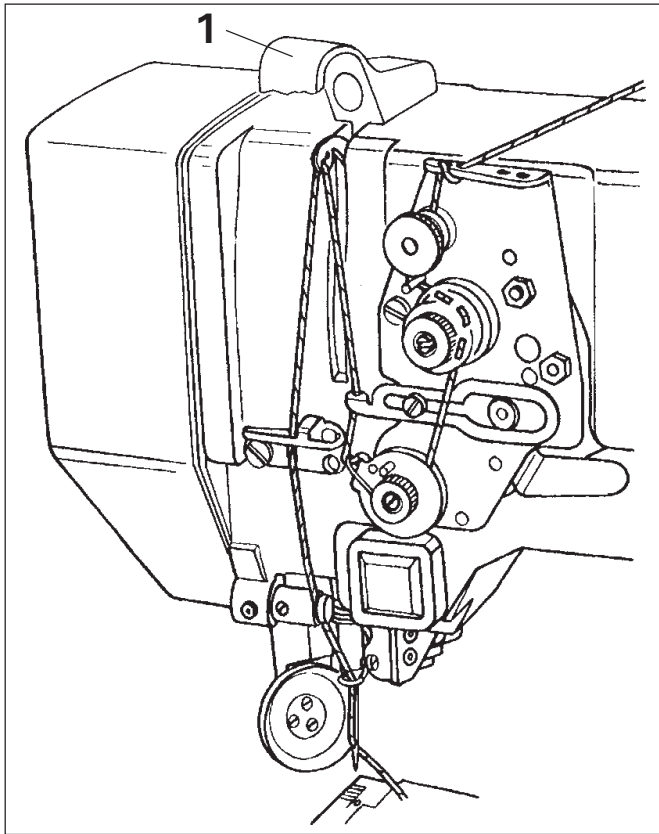
Fig.9

Changing the bobbin and threading the bobbin thread



Switch off the machine.

Open the bed cap, lift retainer 1, remove bobbin case and thread as shown in fig. 9. Insert bobbin case, return retainer 1 and close bed cap.



Threading the needle thread



Switch off the machine.

Thread the needle thread as shown in fig. 10.

Fig. 10



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

Regulating the needle thread tension

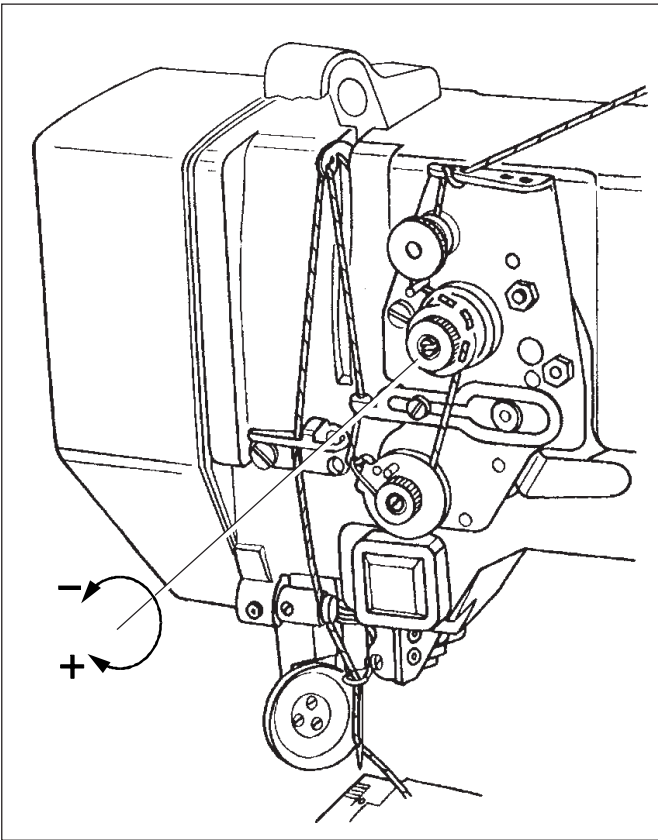


Fig. 11

Regulating the bobbin thread tension

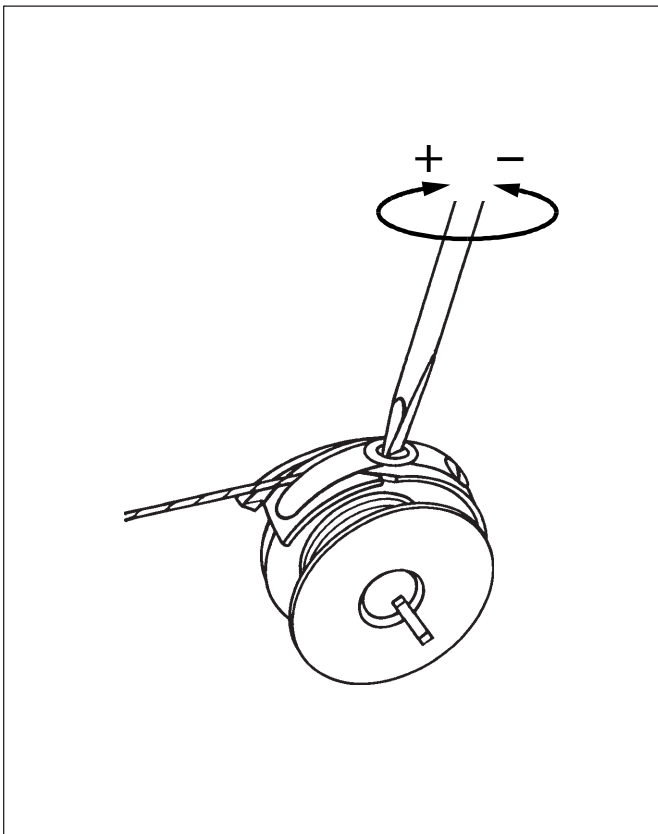


Fig. 12

Switching the machine on / off

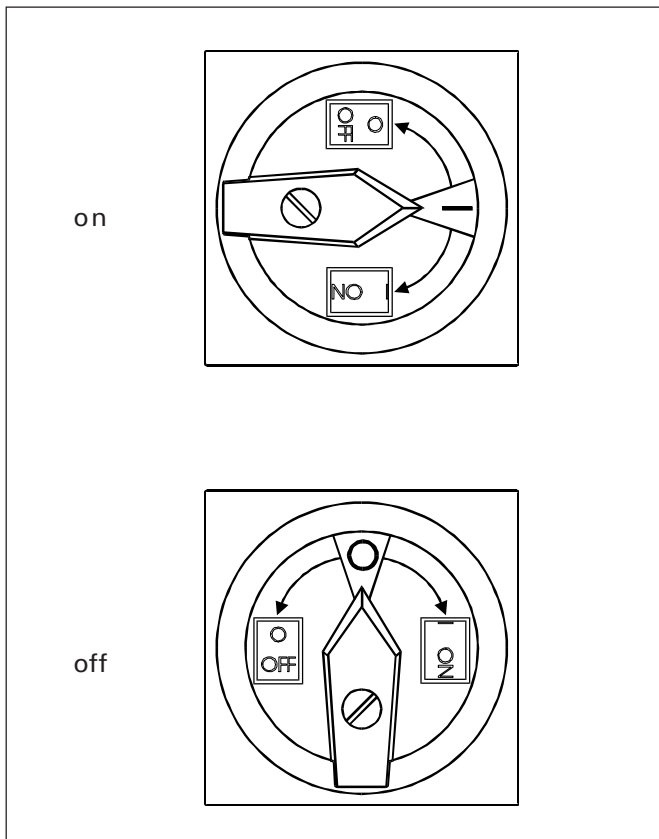
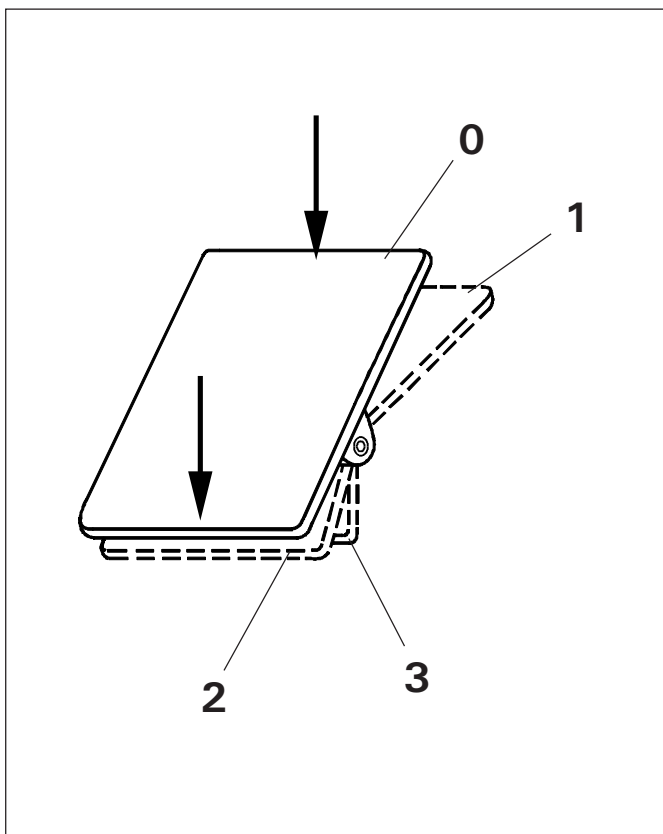


Fig. 18

Fig. 19



Pedal functions

- 0 =inoperative position
- 1 =sewing
- 2 =to raise roller presser
- 3 =to trim sewing threads and to raise roller presser

Application of PFAFF 3834-3/11

Single needle lockstitch post-bed high-speed seamer (post to the right of the needle) with wheel feed and roller presser for insertion of pre-gathered and not pre-gathered sleeves.

Specification PFAFF 3834-3/11

Stitch type:	301 (Lock stitch)
Model:	A
Hand wheel eff. diameter:	65 mm
Needle system:	134-35 R
Workspace width:	245 mm
Workspace height:	115 mm
Fabric clearance:	9 mm
Post height:	180 mm
Bed plate dimensions:	518 x 177 mm
Maximum speed:	3200 s.p.m.*
Workplace-related noise level at a speed of 2700 s.p.m.:	$L_{pA} = 80 \text{ dB (A)}$ Noise measurement according to DIN 45635-48-A-1
Net weight (head only):	about 61 kg
Gross weight:	about 71 kg

*depending on stitch length

Subject to modifications in design, weight and dimensions.

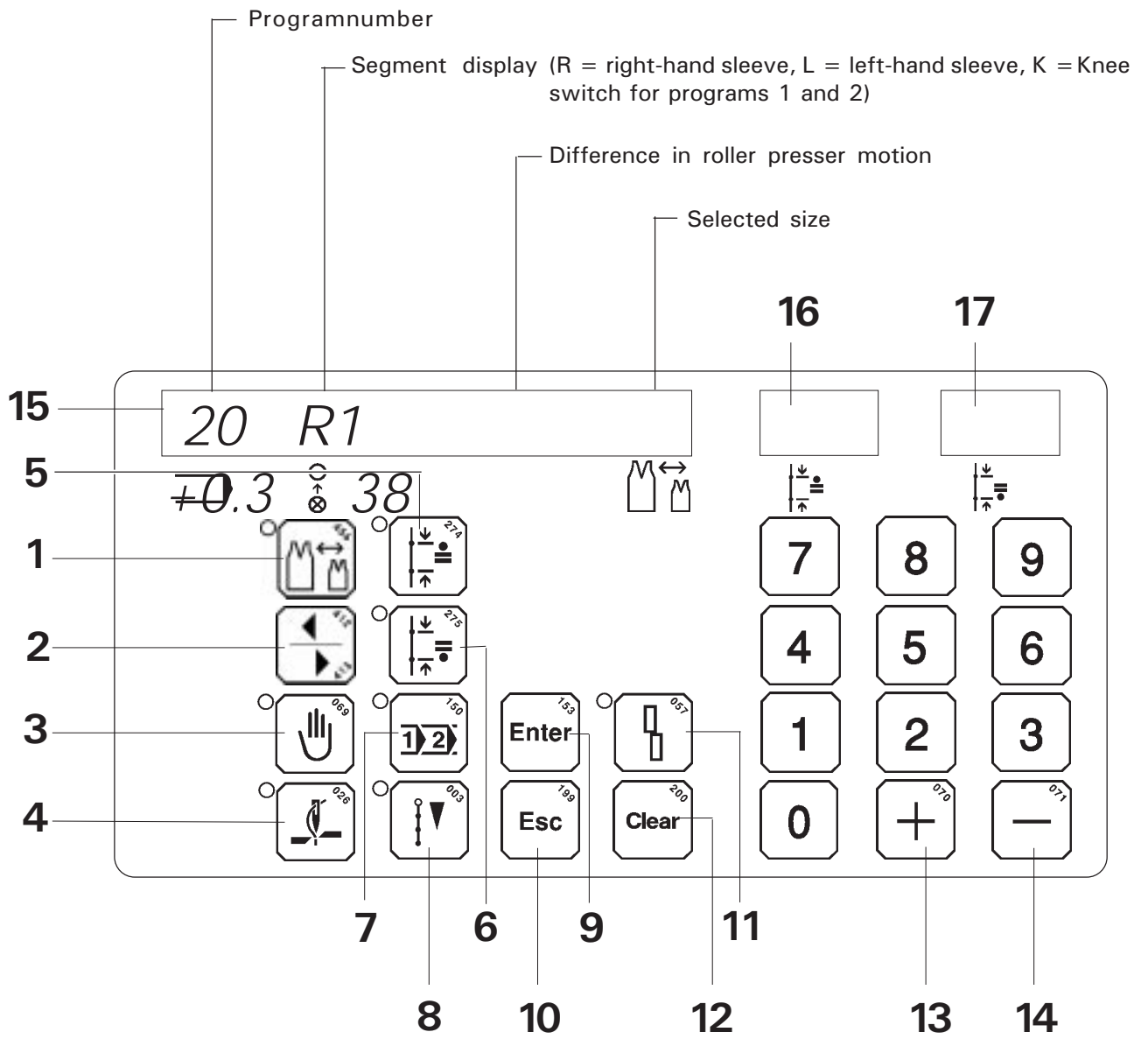
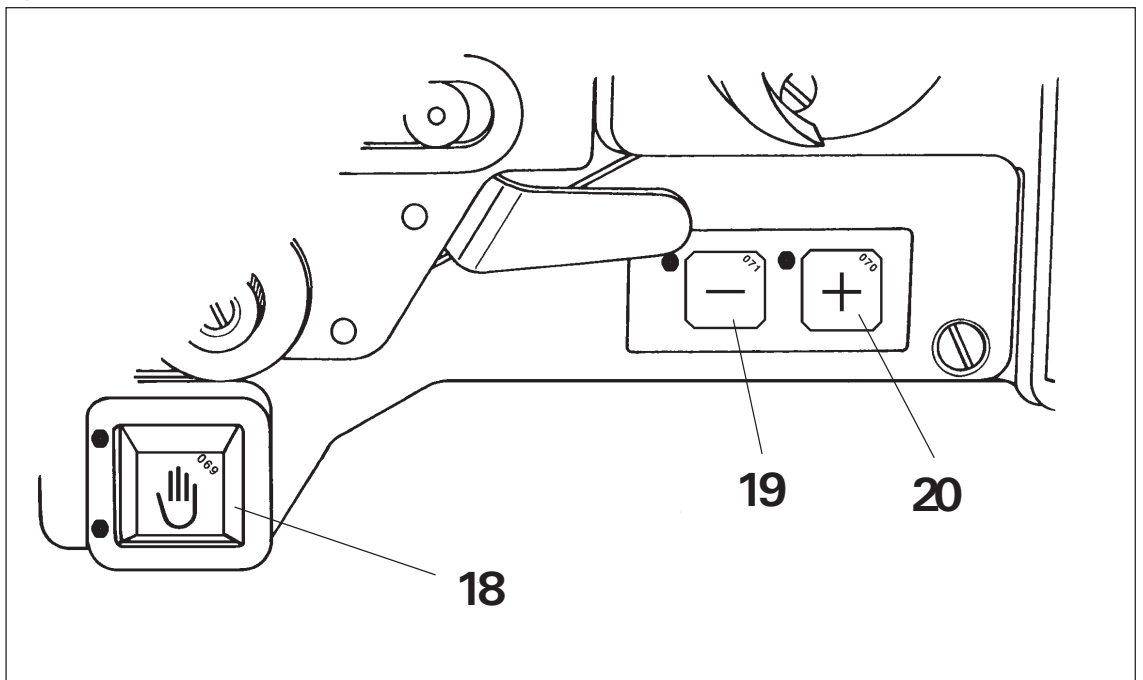


Fig. 20



Functions of keys on the control panel

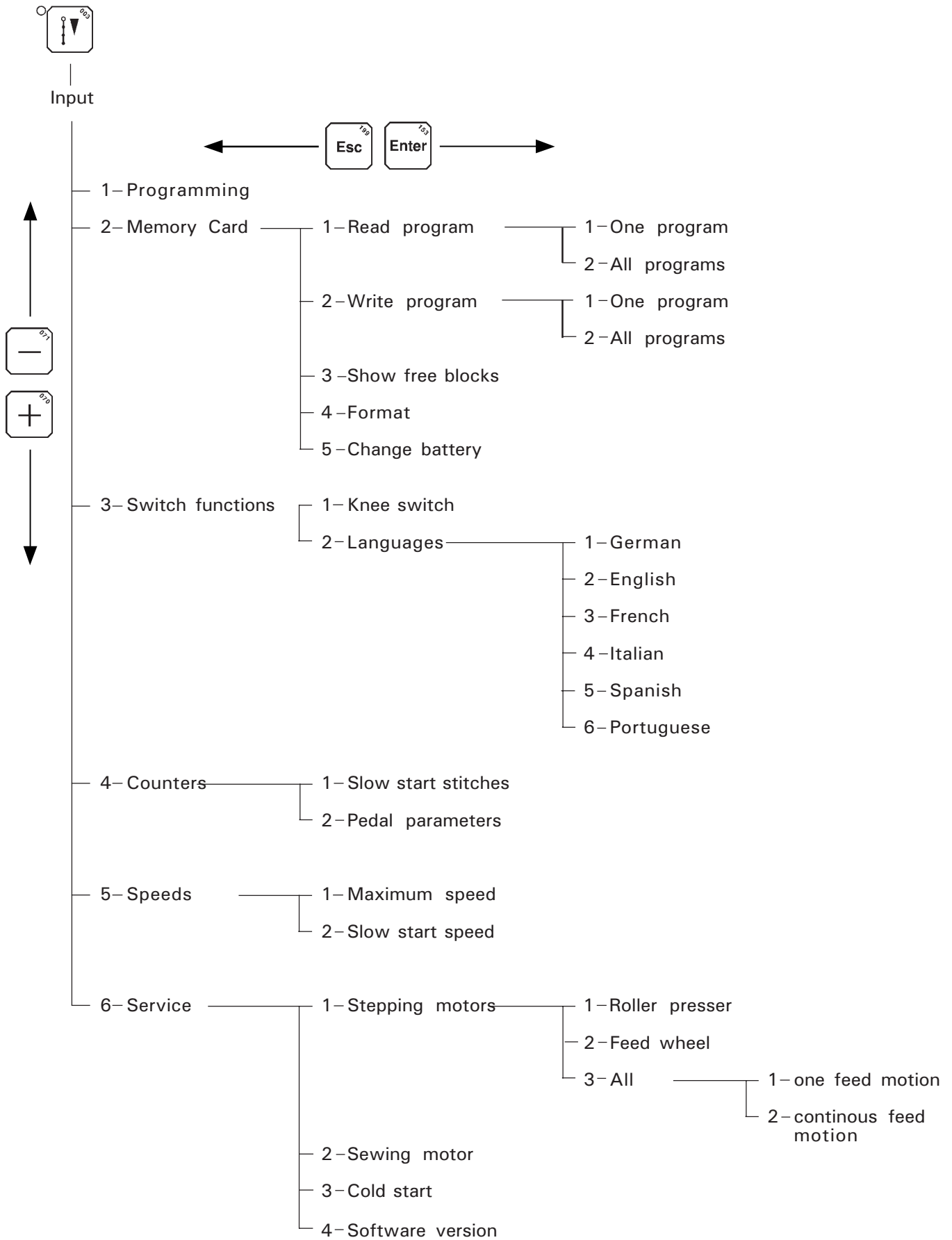
- 1 = Size selection (only possible in programs 3 to 24 with knee switch switched off).*
- 2 = To switch between right and left hand sleeve (only possible in programs 3 to 24 and when program is set at sewing segment 1).
- 3 = To interrupt programmed sewing* (e.g. in order to trim the sewing threads in case of thread breakage, possible in programs 1 to 24, see also pages 34 and 36).
- 4 = Thread trimmer ON*/OFF
- 5 = Direct input of roller presser feed motion (only possible in program 0)
- 6 = Direct input of wheel feed (only possible in program 0)
- 7 = To select a program number
- 8 = To select INPUT* or SEWING mode
- 9 = To verify the inputted program data
- 10 = ESC key
When actuated within menu, the program goes to the next higher level; when programming, it moves one step back.
- 11 = To verify an error message and continue input.
- 12 = To recall default state or to cancel values when inputting numbers (only in INPUT mode).
- 13 = a) To increase roller presser feed motion by steps of 0.1 mm when program number 0 is selected.
= b) To select the following sewing segment when program interruption is selected (LED on key is on).
= c) To browse forwards in menu when INPUT mode is selected (LED on key is on).
= d) To increase roller presser feed motion by steps of 0.1 mm for **all** segments of a program when program number 1 to 24 is selected and control is at program start.
- 14 = a) To decrease roller presser feed motion in steps of 0.1 mm when program number 0 is selected.
= b) To select previous sewing segment when program interruption is selected (LED on key is on).
= c) To browse backwards in menu when INPUT mode is selected (LED on key is on).
= d) To decrease roller presser feed motion in steps of 0.1 mm for **all** segments of a program when program number 1 to 24 is selected and control is at program start.
- 15 = Dialog display
- 16 = Display for roller presser feed motion
- 17 = Display for wheel feed

Functions of keys on machine head

- 18 = To interrupt programmed sewing* (e.g. in order to trim the sewing threads in case of thread breakage, possible in programs 1 to 24, also see pages 34 and 36).
Upper LED lights up when function is selected; lower LED lights briefly up when control switches to the next sewing segment
- 19 = To decrease roller presser feed motion by steps of 0.1 mm for **one** segment of a program when program number 1 to 24 is selected and the control is at the desired program segment. All other functions same as **key 13** item a to c.
- 20 = To increase roller presser feed motion by steps of 0.1 mm for **one** segment of a program when program number 1 to 24 is selected and the control is at the desired program segment. All other functions same as **key 14** item a to c.

*) LED lights up

Menu functions - overview



Brief description of display texts

<i>INPUT</i>	Input function
<i>1 PROGRAMMING</i>	Program menu
<i>PROGRAM NO. --</i>	Program number input
<i>SIZE --</i>	Size input
<i>STITCH LENGTH</i>	Wheel feed input
<i>SEGMENT --</i>	Segment number input
<i>FEED ROLL.PR.</i>	Roller presser feed motion input
<i>SEAMLENGTH _ _ _MM</i>	Seam length input
<i>GRADING VAL. _ _MM</i>	Grading value input
<i>END OF SEAM</i>	Seam end selection
<i>CONTINUE SEAM</i>	Selection seam continuation
<i>END OF PROGRAM</i>	Program end selection
<i>TEACH</i>	Teach-in function
<i>TEACH SEAM LE.</i>	Learn seam length selection
<i>2 MEMORYCARD</i>	Menu memory card
<i>1 READ PROGRAM</i>	Read program function
<i>1 ONE PROGRAM</i>	Read one program
<i>2 ALL PROGRAMS</i>	Read all programs
<i>2 WRITE PROGRAM</i>	Memory card sub-function "write program"
<i>1 ONE PROGRAM</i>	Write one program
<i>2 ALL PROGRAMS</i>	Write all programs
<i>OVERWRITE PROG. ?</i>	Query - overwrite program?
<i>OVERWRITE BLOCK ?</i>	Query - overwrite block?

<i>3 BLOCK NUMBER</i> _ _	Block number input
<i>DISPLAY FR. BL.</i>	Memory card sub-function "show free blocks"
<i>ALL BLOCKS FREE</i>	Display - all blocks free
<i>ALL BLCK. OCCUP.</i>	Display - all blocks occupied
<i>FR. BLK.</i> _ _ _ _ _	Display - free blocks
<i>FR. BLK. END</i>	Display - last free block
<i>4 FORMAT</i>	Memory card sub-function "format"
<i>ARE YOU SURE</i>	Safety query before formatting the memory card and before "cold start"
<i>FORMATTING</i>	Display - memory card is formatted
<i>3 DISPLAY FR. BL</i>	Memory card part function "show free blocks"
<i>5 BATTERY CHANGE</i>	Memory card part function "battery change"
<i>COMPLETED</i> ?	Query - battery change finished?
<i>3 SWITCH FUNCT.</i>	Menu switch functions
<i>1 KNEE SWITCH</i>	Sub-function - knee switch
<i>KN. SW. OFF-0 ON-1</i>	Knee switch OFF/ON
<i>2 LANGUAGES</i>	Sub-function - Language selection
<i>1 GERMAN</i>	Language selection German
<i>2 ENGLISH</i>	Language selection English
<i>3 FRENCH</i>	Language selection French
<i>4 ITALIAN</i>	Language selection Italian
<i>5 SPANISH</i>	Language selection Spanish
<i>6 PORTUGUESE</i>	Language selection Portuguese
<i>4 COUNTER</i>	Counter menu
<i>1 SL. ST. STITCHES</i>	Sub-function - slow start stitches

<i>SL. ST. STITCH.</i> _	Slow start stitches input
<i>2 PEDAL PARAM.</i>	Sub-function - pedal parameters
<i>PEDAL PARAM.</i> _	Pedal parameter input
<i>5 SPEEDS</i>	Speed menu
<i>1 MAX. SPEED</i>	Sub-function - maximum speed
<i>MAX. SPEED</i> _ _ _ _	Maximum speed input
<i>2 SL. ST. SPEED</i>	Sub-function - slow start stitches speed
<i>SL. ST.SPEED</i> _ _ _ _	Slow start stitches speed input
<i>6 SERVICE</i>	Service menu
<i>1 STEPPING MOTORS</i>	Sub-function stepping motors
<i>1 ROLLER PRESSER</i>	Move roller presser stepping motor
<i>2 WHEEL FEED</i>	Move feed wheel stepping motor
<i>3 ALL</i>	Sub-function - move all stepping motors
<i>1 ONE FD. STROKE</i>	Carry out one feed motion
<i>2 CT. FEED STROKE</i>	Carry out continuous feed motion
<i>2 SEWING MOTOR</i>	Sub-function sewing motor
<i>PARAM.</i> _ _ _	Parameter selection
<i>PARAM.</i> _ _ _ _ _	Parameter input
<i>3 COLD START</i>	Sub-function cold start (apart from programs 1 and 2 all programs are cancelled)
<i>4 SOFTWARE VERS.</i>	Sub-function software version
<i>VERSION</i> _ _ _ / _ _ _	Version number display
<i>MANUAL</i>	Manual sewing

Programming - input

With regard to the operation of the machine a distinction is made between "sewing" and "input". Input is divided into functions for direct selection and functions selected from the menu.

Functions for direct selection

Functions for direct selection can be selected with the keys illustrated below.



- Thread trim ON/OFF



- Increase roller presser feed motion by steps of 0.1 mm if program number 0 is selected.

- Increase roller presser feed motion by steps of 0.1 mm for all segments of a program if program number 1 to 24 is selected and control is at program start.

- Increase roller presser feed motion by steps of 0.1 mm for individual segments of a program (only via key on machine head).



- Decrease roller presser feed motion by steps of 0.1 mm if program number 0 is selected.

- Decrease roller presser feed motion by steps of 0.1 mm for all segments of a program if program number 1 to 24 is selected and control is at program start.

- Decrease roller presser feed motion by steps of 0.1 mm for individual segments of a program (only via key on machine head).

Functions selected with the menu

(also see menu functions - overview page 19)

Other functions can be selected with menus. To recall the menu, select "input" mode.

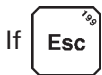


Press - INPUTS appears in the display.

By operating keys (to browse forwards) or (to browse backwards) you move on the main functions level. By means of the numeric keys the main functions can also be selected directly.



Press to verify a selected function and to start the input or to select a sub-function.



If is pressed you return to the previous function. If is pressed you return to the default state of the input.

Main functions

- 1 - Programming**
- 2 - Memory card**
- 3 - Switch functions**
- 4 - Counter**
- 5 - Speeds**
- 6 - Service**

1. Programming

Under the main function "Programming" the programs for programmed seams are inputted (for programming options see page 25).

2. Memory card (optional)

Functions:

- To save programs
- To transfer programs from one machine to another

For sub-functions see menu functions - overview page 19.

3. Switch functions

Function "knee switch ON/OFF" is selected with sub-function KNEE SWITCH. If "ON" is selected, all freely programmable programs (program number 3 to 24) will be converted for knee switch. If "OFF" is selected, all freely programmable programs (program number 3 to 24) are converted for grading.

Via sub-function LANGUAGES the language for the dialog in the display is determined.

4. Counter

With sub-function SLOW START STITCHES the number of stitches is inputted that will be performed at a reduced speed in sewing mode.

With sub-function PEDAL PARAMETERS the degree of pedal delay (0 = little delay, 9 = large delay) is inputted.

5. Speeds

With the sub-functions it is possible to input the maximum speed and the speed for the slow start stitches.

6. Service

With this main function the user can check some of the hardware functions and the control. In addition, he can carry out some settings on the sewing drive.

Programming options

The following programs/sewing procedures are possible:

Program 0 = Manual sewing

Program 1 = Sewing with two different seam segments

Program 2 = Sewing with three different seam segments

Note: Programs 1 and 2 are fixed programs. The seam segments (different roller presser feed motions) are incremented by operating the knee switch and repeated until the treadle is actuated to the 2nd backwards position. The knee switch is automatically enabled.

Program 3 to 24 = Freely programmable with up to 15 seam segments each for right and left hand sleeve. In the segment display an R indicates the right hand sleeve and an L the left hand sleeve. In addition the current segment (1 to 15) is indicated. The programs can be programmed so that it is possible to increment the sewing segments either via the knee switch (knee switch must be enabled) or via measurement of seam length (seam lengths are learned, knee switch must be disabled). Grading, however, is only possible when incrementing via measurement of seam length.

In order to be able to input programs you have to be in "IN




PUT" mode (press  key).

Program 0 (manual sewing)




With display, say,

 3 R1 0 50  






 PROGRAM NO. 3  





 MANUAL  

Changing the stitch length (e.g. to 2.5 mm)



 STITCH LENGTH  

 2 and  5




 STITCH LENGTH   2.5








 MANUAL  

Changing the roller presser feed motion (e.g. to 2.8 mm)

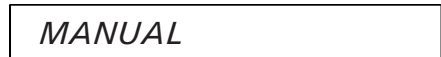




 FEED ROLL. PR.  

 2 and  8




 FEED ROLL. PR.  2.5 








 MANUAL  2.8 

The stitch length and the roller presser feed motion can also be changed together. To this end press

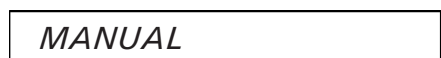


both key  and key .

 STITCH LENGTH  

 2 and  5

 STITCH LENGTH  2.5 



 MANUAL  2.5 

Programming procedure program 1

Sewing two sewing segments with two different roller presser feed motions.
Incrementing the sewing segments via knee switch.

Example:

Stitch length 2.5 mm

Roller presser feed motion 1st sewing segment - 2.6 mm

Roller presser feed motion 2nd sewing segment - 2.8 mm



PROGRAM NO. -- .-

1

PROGRAM NO. 1 .-

Enter

1 K1 0 .-



INPUT .-

1

PROGRAM NO. 1 .-

Enter

STITCH LENGTH .-

2 and 5

STITCH LENGTH .- 2.5

Enter

SEGMENT K1 .- 2.5

Enter

FEED ROLL. PR. .- 2.5

2 and 6

FEED ROLL. PR. 2.6 2.5

Enter

SEGMENT K2 .- 2.5

Enter

FEED ROLL. PR. .- 2.5

2 and 8

FEED ROLL. PR. 2.8 2.5

Enter

1 K1 0 2.6 2.5

The machine is back to "sewing" mode.
By operating the knee switch it is possible to alternate between the two sewing segments.

K1 = knee switch segment 1
K2 = knee switch segment 2

Programming procedure program 2

Sewing of three seam segments with three different roller presser feed motions.
Programming sequence same as in program 1.

Programming procedure of programs 3 to 24

Programs 3 to 24 are freely programmable with up to 15 seam segments each for the right and left hand sleeve.

There are two possibilities of incrementing the seam segments:

1. Via knee switch (knee switch must be enabled)
The operator sews the seam segment right up to the mark (pink) and increments by means of the knee switch to the following seam segment. Grading is not possible in this case.
2. Via measurement of length (knee lever must be disabled)
The control increments automatically to the following seam segment as soon as the programmed seam segment is finished. In this case grading is possible.

Programming example "Incrementing with knee switch"



INPUT

3

SWITCH FUNCT.

1

KN. SW. OFF-0 ON-1

1

INPUT

1

PROGRAM NO.

3

PROGRAM NO. **3**

Enter

STITCH LENGTH

2 and **5**

STITCH LENGTH **2.5**

Enter

SEGMENT **R1** **2.5**

Enter

FEED ROLL. PR. **2.5**

2 and **7**

FEED ROLL. PR. **2.7** **2.5**

Enter

+ or **-** until:

CONTINUE SEAM **2.7** **2.5**

Enter

SEGMENT **R2** **2.7** **2.5**

Enter

FEED ROLL. PR **2.7** **2.5**

2 and **9**

FEED ROLL. PR. **2.9** **2.5**

Enter

+ or **-** until:

CONTINUE SEAM **2.9** **2.5**

Enter

SEGMENT R3 2.9 2.5



This sequence can be continued freely until seam segment R 15 is reached. If a sleeve has, say, only 5 seam segments, the seam end must be programmed after display SEAM CONTINUATION.



until:

Press or until

END OF SEAM .- .-



CONTINUE SEAM 2.7 2.5



The control is set to the first seam segment of the left hand sleeve and this can now be programmed. Display:

SEGMENT L1 .- 2.5



SEGMENT L3 2.7 2.5

This sequence can be continued freely until seam segment R 15 is reached. If a sleeve has, say, only 5 seam segments, the end of the program must be programmed after display SEAM CONTINUATION.



until



FEED ROLL. PR. .- 2.5



END OF PROGRAM .- .-

2 and 9

FEED ROLL. PR. 2.9 2.5



PROGRAMMING 2.7 2.5



Old status line appears, say:

or until:

CONTINUE SEAM 2.9 2.5

9 R1 0 .- .-

Recall program number 3



SEGMENT L2 2.9 2.5



PROGRAM NO. 9 .- .-



FEED ROLL. PR. 2.9 2.5



PROGRAM NO. 3 .- .-

2 and 7

FEED ROLL. PR 2.7 2.5



3 R1 0 2.7 2.5

Machine is operational, seam start of right hand sleeve.

Programming example: Incrementing via measurement of length (learn seam length) with grading



INPUT

3

3 SWITCH FUNCT.

1

KN. SW. OFF-0 ON-1

0

INPUT

1

PROGRAM NO.

3

PROGRAM NO. 3

Enter

SIZE

Input basic size according to table on page 29 (e.g. 50 for German men's sizes).

5 and **0**

SIZE 50

Enter

STITCH LENGTH

2 and **5**

STITCH LENGTH 2.5

Enter

SEGMENT R1 2.5

Enter

FEED ROLL. PR. 2.5

2 and **6**

FEED ROLL. PR. 2.6 2.5

Enter

SEAMLENGTH MM 2.6 2.5

Press **+** or **-** until

TEACH SEAM LE. 2.6 2.5

Enter

TEACH 2.6 2.5

Position workpiece underneath the roller presser and sew first seam segment.

Enter

GRADING VAL. MM 2.6 2.5

Grading values from 0 to 50 mm are possible. If in the current seam segment no grading is desired, input 0.

0

GRADING VAL. 0 MM 2.6 2.5

Enter

SEGMENT R2 2.5

Enter

FEED ROLL. PR _. 2.5

2 and 8

FEED ROLL. PR 2.8 2.5

Enter

SEAMLENGTH _ _ MM 2.8 2.5

Press + or - until

TEACH SEAM LE. 2.8 2.5

Enter

TEACH 2.8 2.5

Sew desired length of second seam segment.

Enter

GRADING VAL. _ _ MM 2.8 2.5

Input desired grading for second seam segment, say, 2 mm.

2

GRADING VAL. 2MM 2.8 2.5

Enter

SEGMENT R3 _. 2.5

Enter

FEED ROLL. PR _. 2.5

3 and 0

FEED ROLL. PR. 3.0 2.5

Enter

This sequence can be continued freely up to seam segment R 15.

With display in last desired seam segment

SEAMLENGTH _ _ MM _. _.

Press + or - until

END OF SEAM _. _.

Enter

TEACH _. _.

After seam start is reached continue sewing for a few stitches, then actuate pedal to second position backwards - sewing threads will be trimmed. Bring pedal to resting position (position 0) - the control switches to the first seam segment of the left hand sleeve. Display:

SEGMENT L1 _. 2.5

Enter

FEED ROLL. PR. _. 2.5

2 and 7

FEED ROLL. PR. 2.7 2.5

Enter

SEAMLENGTH _ _ MM 2.7 2.5

Press + or - until

TEACH SEAM LE. 2.7 2.5

Enter

TEACH 2.7 2.5

Position workpiece underneath roller presser and sew first seam segment.

Enter

GRADING VAL. _ _ MM 2.7 2.5

Input desired grading value, say, 0

0

GRADING VAL. 0 MM 2.7 2.5

Enter



SEGMENT L2 .- 2.5

Enter

This sequence may be continued freely up to seam segment L 15.

With the following display in the last desired seam segment

SEAMLENGTH .- MM .-

Press  or  until

END OF PROGRAM .- .-

Enter

TEACH .- .-

After seam start is reached continue sewing for a few stitches, then actuate pedal to 2nd position backwards - sewing threads will be trimmed. Bring pedal to resting position (position 0) - the control switches to program start. Display:

PROGRAMMING .- .-



The old status line appears, say:

9 R1 0 50 .- .-

Recall program number 3.



PROGRAM NO. 9 .- .-

3

PROGRAM NO. 3 .- .-

Enter

3 R1 0 50 2.6 2.5

Machine is operational, seam start on right hand sleeve.

If another ready-made garment size is to be selected, make sure that only a size is selected which is derived from the programmed basic size (see tables on page 29).

Change ready-made garment sizes, say, to 48:



SIZE 50 .- .-

4 and 8

SIZE 48 .- .-

Enter

3 R1 0 48 2.6 2.5

Determine the roller presser feed motion for fullness application

Example: seam segment 2 (fig. 20)

Length of seam segment 2, measured at sleeve hole = 100 mm
Selected stitch length (feed wheel) = 2.5 mm
Number of stitches in seam segment 2 = 40 stitches
(100 mm : 2.5 mm stitch length)

Length of seam segment 2, measured at sleeve = 112 mm
Roller presser feed motion: 112 mm : 40 stitches = 2.8 mm

Note:

Depending on the feed behaviour of the material used in the process and on the location of the seam in relation to warp and weft threads it may be necessary to edit the determined value a little bit.

Basic sizes and size tables for grading

Grading means the gradual derivation of smaller and larger sizes from a certain basic size (see fig. 21). The basic sizes that are indicated in the relevant tables constitute the basis for the creation of sewing programs with grading.

Based on these basic sizes the control increases or decreases the seam segments with grading by the factor indicated in the table when another size is selected. Grading values from 0 to 50 mm can be inputted.

Example: 1 mm grading in seam segment 1
4 mm grading in seam segment 2

Length of seam segments in basic size 50 (factor 0)
Seam segment 1 = 35 mm
Seam segment 2 = 100 mm

Length of seam segments in size 48 (factor -1)
Seam segment 1 = 34 mm
Seam segment 2 = 96 mm

Length of seam segments in size 56 (factor 3)
Seam segment 1 = 38 mm
Seam segment 2 = 112 mm

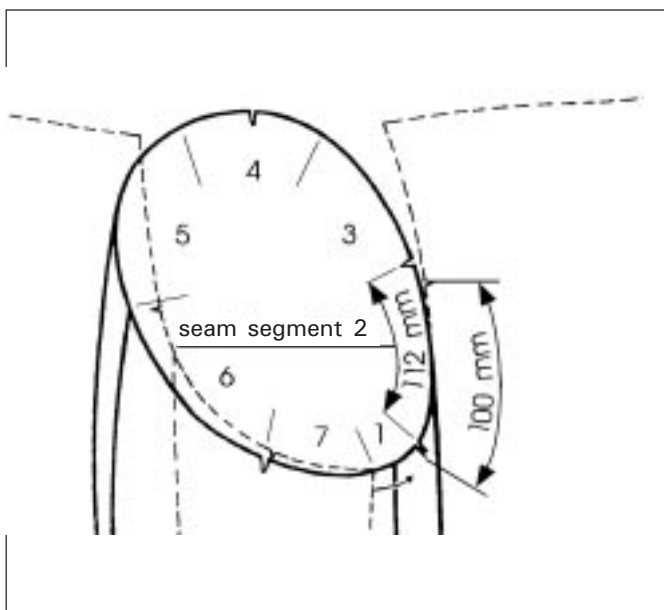


Fig. 20

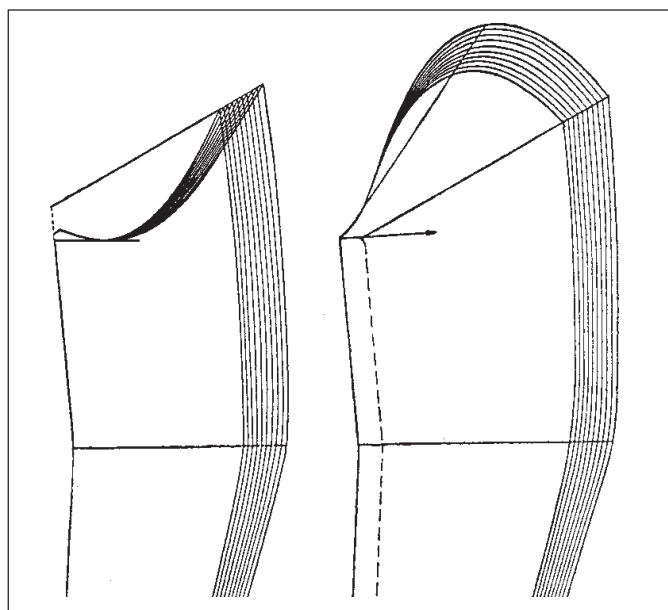


Fig. 21

German ladies' sizes (Basic size 38)	
Size	Factor
34	-2
36	-1
38	0
40	1
42	2
44	3
46	4
48	5
50	6
52	7

American ladies' size (Basic size 6)	
Size	Factor
2	-2
4	-1
6	0
8	1
10	2
12	3
14	4
16	5
18	6
20	7

American ladies' oversizes (Basic size 20W)	
Size	Factor
18W	-2
19W	-1
20W	0
21W	1
22W	2
23W	3
24W	4
25W	5
26W	6

Note:
In case of American ladies' oversizes the size must be inputted without the letter "W".

German men's sizes (Basic size 50)	
Size	Factor
44	-3
46	-2
48	-1
50	0
52	1
54	2
56	3
58	4
60	5
90	-2
94	-1
98	0
102	1
106	2
110	3
23	-2
24	-1
25	0
26	1
27	2
28	3
29	4
30	5

American men's sizes (Basic size 40)	
Size	Factor
34	-6
35	-5
36	-4
37	-3
38	-2
39	-1
40	0
41	1
42	2
43	3
44	4
45	5
46	6
47	7
48	8
49	9
50	10
51	11
52	12
53	13
54	14
55	15
56	16
57	17
58	18
59	19
60	20

Select program number

With programmed sewing (program number 1 to 24)

This is possible only if the control is at the sewing program start and the sewing procedure has not been started yet.

Display, say:

10 R1 0 50 2.6 2.5



PROGRAM NO. -- .-

Select desired program number with the numeric keys, say 2.



PROGRAM NO. 2 .-





The status line of the selected program appears, say:

2 R1 0 50 2.7 2.5

The machine is operational.

Note:

If a sewing program has been interrupted (e.g. after thread breakage) and key  has been pressed so that the LED is on, a new program number can only be selected after key  is actuated again and the LED is off.

With manual sewing (program number 0)

Pedal in resting position (position 0)



PROGRAM NO. -- .-

Select desired program number with numeric keys, say 12.



PROGRAM NO. 12 .-



The status line of the selected program appears, say:


12 R1 0 .-

The machine is operational.

Sleeve selection

Note:

- Sleeve selection is possible only
- in program numbers 3 to 24
- when control is at seam program start and the sewing procedure has not been started yet.

By pressing key  the control switches from the right hand to the left hand sleeve and vice versa.

Example:

Display, say:

4 R1 0 50 .-




4 L1 0 50 .-

Size selection

Note:

Size selection is possible only

- with program numbers 3 to 24 when "sewing" mode is selected
- if seam segment are incremented by means of length measurement and grading is used (knee switch disabled)
- if the control is at the start of the sewing program and the sewing procedure has not been started yet.

By actuating key  it is possible to select

another size with the numeric keys.

It is only possible to select sizes that are derived from the basic size (see table page 33).

Example:

German men's size 56 is to be selected.

Display, say:

3 R1 0 50



SIZE 50

and

SIZE 56



3 R1 0 56

Changing the programmed roller presser feed motion

In order to avoid inputting a new sewing program when using different material with the same program it is possible to increase or decrease the roller presser feed motion by steps of 1/10 mm.



In the display the seam segment indication is followed by the selected difference. With an increase of 0.3 mm e.g.:

10 R1 +03 50 2.5



With a decrease of the roller presser feed motion the difference is preceded by a minus sign.

There are two options:

1. Increase or decrease the roller presser feed motion for all seam segments of a program.



To this end press keys  or  on the **control panel before** sewing is started with the control being at the start of the selected program.

2. Increase or decrease the roller presser feed motion for individual seam segments of a program.

As soon as the control is at the desired seam segment, press keys  or  on the **machine head.**

After incrementing to the following seam segment the selected increase or decrease of the roller presser feed motion will no longer be valid.

Note:

If keys  or  are pressed when "Manual" is selected (program number 0), the roller presser feed motion is changed immediately and the new feed motion is displayed.

Changing the roller presser feed motion within a certain seam segment

Example:

Changing the roller presser feed motion of 2.7 mm to 3.2 mm in seam segment R3.



INPUT . _ 2.5

1

PROGRAM NO. _ _ . _ 2.5

Select desired program number with numeric keys and press enter key.

If desired program number is already displayed, just press enter key.

SIZE _ _ . _ 2.5

Enter until

SEGMENT R1 . _ . _

3

SEGMENT R3 . _ . _

Enter

FEED ROLL. PR. 2.7 . _

3 and 2

FEED ROLL. PR. 3.2 . _



The old status line appears, say:

4 R1 0 50 . _ . _

Reworking beginning with a certain sewing segment

In case of a sewing disturbance whilst sewing a certain seam segment (e.g. thread breakage) seam segments can be reworked as follows:


Pedal in restin position (position 0)


Press  - LED on

- the sewing program is interrupted
- the control is set at the beginning of the current seam segment

Note:

If necessary you can cycle backwards or forwards by several seam segments - the current seam segment is always displayed in the status line.

 to cycle forwards

 to cycle backwards

Actuate pedal to the second position backwards

- sewing threads are trimmed
- needle in high position, roller presser is lifted.

Position the workpiece so that the beginning of the current seam segment is directly beneath the needle.

Press  -LED off

- the current sewing program is enabled again
- the sewing procedure can be continued.

Editing the length of a learned seam segment

If within a programmed sewing program the learned seam length of a certain seam segment is to be increased or decreased, the following seam segment must be decreased or increased by the same amount.

Example:

Seam segment *R2* with a length of 53 mm is to be decreased by 3 mm.

Seam segment *R3* has a length of 112 mm.



INPUT

1

PROGRAM NO.

Select desired program number with numeric keys and press enter key.

If desired program number is already displayed, just press enter key.

Enter ¹⁰⁰

until

SEGMENT *R1*

2

SEGMENT *R2*

Enter ¹⁰⁰

until

SEAMLENGTH *53 MM*

5 and **0**

SEAMLENGTH *50 MM*

Enter ¹⁰⁰

until seam segment *R3* is reached and display shows:

SEAMLENGTH *112MM*

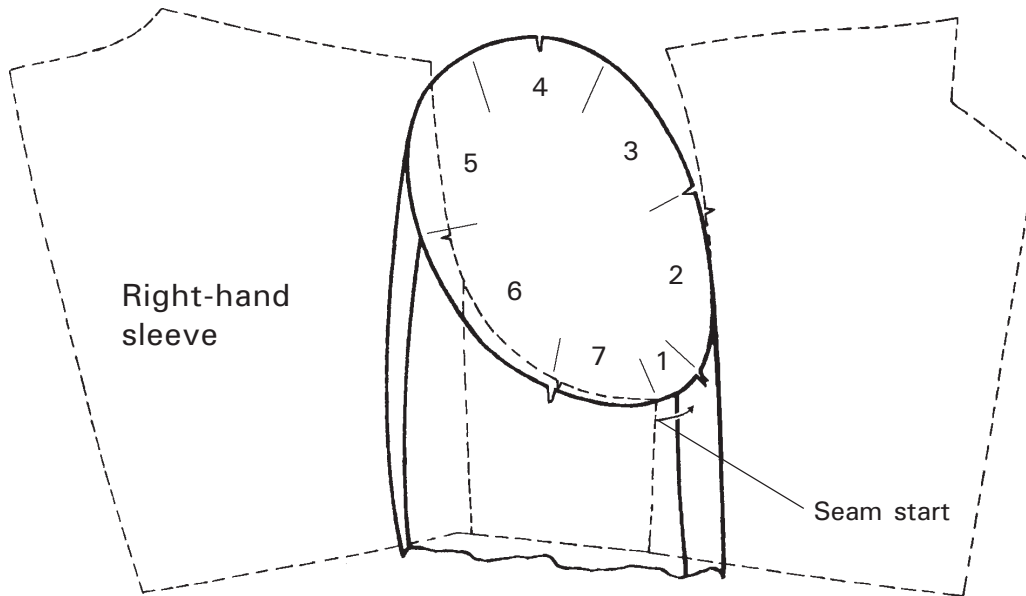
1 and **1** and **5**

SEAMLENGTH *115MM*

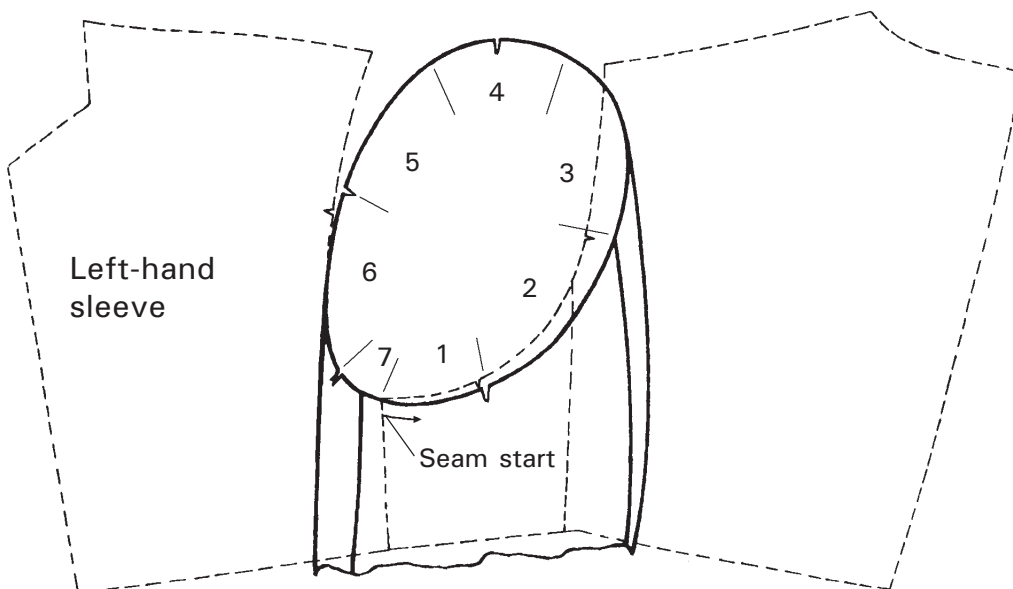


The changed seam lengths are saved and the machine is operational.

Example seam: jacket sleeve



Seam segment	Roller presser feed	Wheel feed	Grading
1	2,6	2,5	0 mm
2	2,8	2,5	0 mm
3	3,0	2,5	4 mm
4	2,6	2,5	0 mm
5	3,2	2,5	4 mm
6	2,8	2,5	4 mm
7	2,7	2,5	0 mm



Seam segment	Roller presser feed	Wheel feed	Grading
1	2,7	2,5	0 mm
2	2,8	2,5	4 mm
3	3,2	2,5	4 mm
4	2,6	2,5	0 mm
5	3,0	2,5	4 mm
6	2,8	2,5	0 mm
7	2,6	2,5	0 mm

Changing the battery of the memory card



In order to avoid damage to the memory card only use 3-Volt-lithium batteries (type BR2325 or similar).

It is necessary to change the battery if the memory card is inserted and the display shows the following error:

E36-M.C. BATTERY [] []

In order to save the memory card data during the battery change the memory card must be inserted in the system socket of the machine and the power supply must be switched on.

Then carry out battery change as described here:



INPUT [] []

2

MEMORY CARD [] []

Enter

1 READ PROGRAM [] []

+

until

5 BATTERY CHANGE [] []

Enter

COMPLETED ? [] []

Turn out screw 1 (fig. 22) by 4 to 5 mm.

Secure memory cards with hands so that it cannot be pulled out of the system socket and remove battery mounting 2 from the memory card.

Insert new battery into battery mounting making sure that the plus sign is visible from above.

Push battery mounting 2 into memory card and tighten screw 1.

Enter

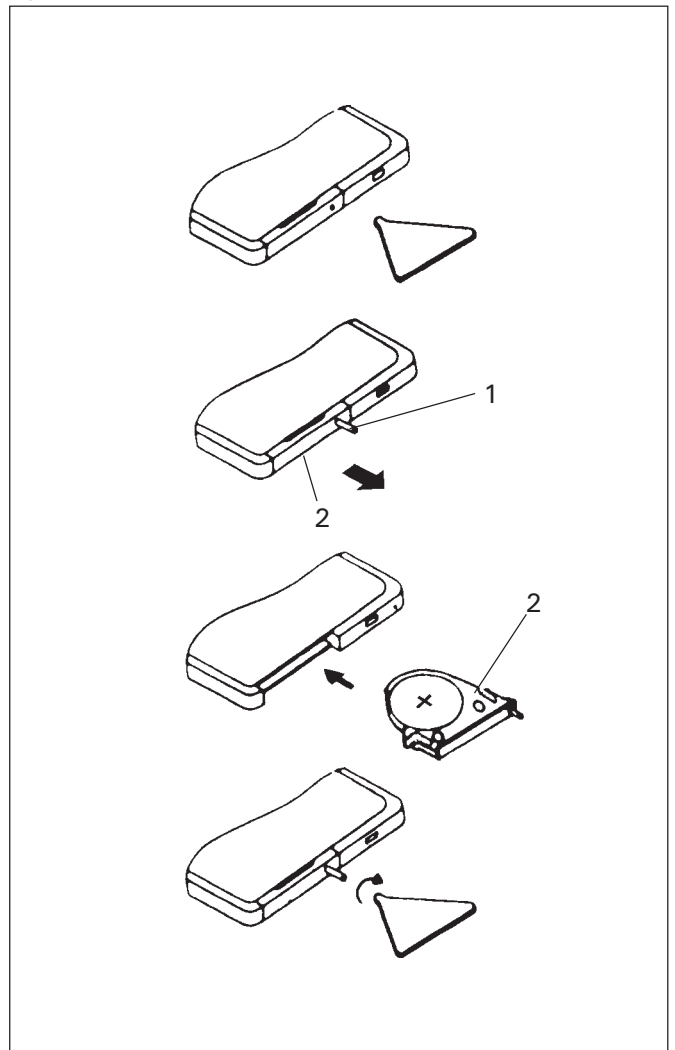
MEMORY CARD [] []



Now the memory card can be removed, the machine is operational.

Note: Dispose of used batteries appropriately.

Fig. 22

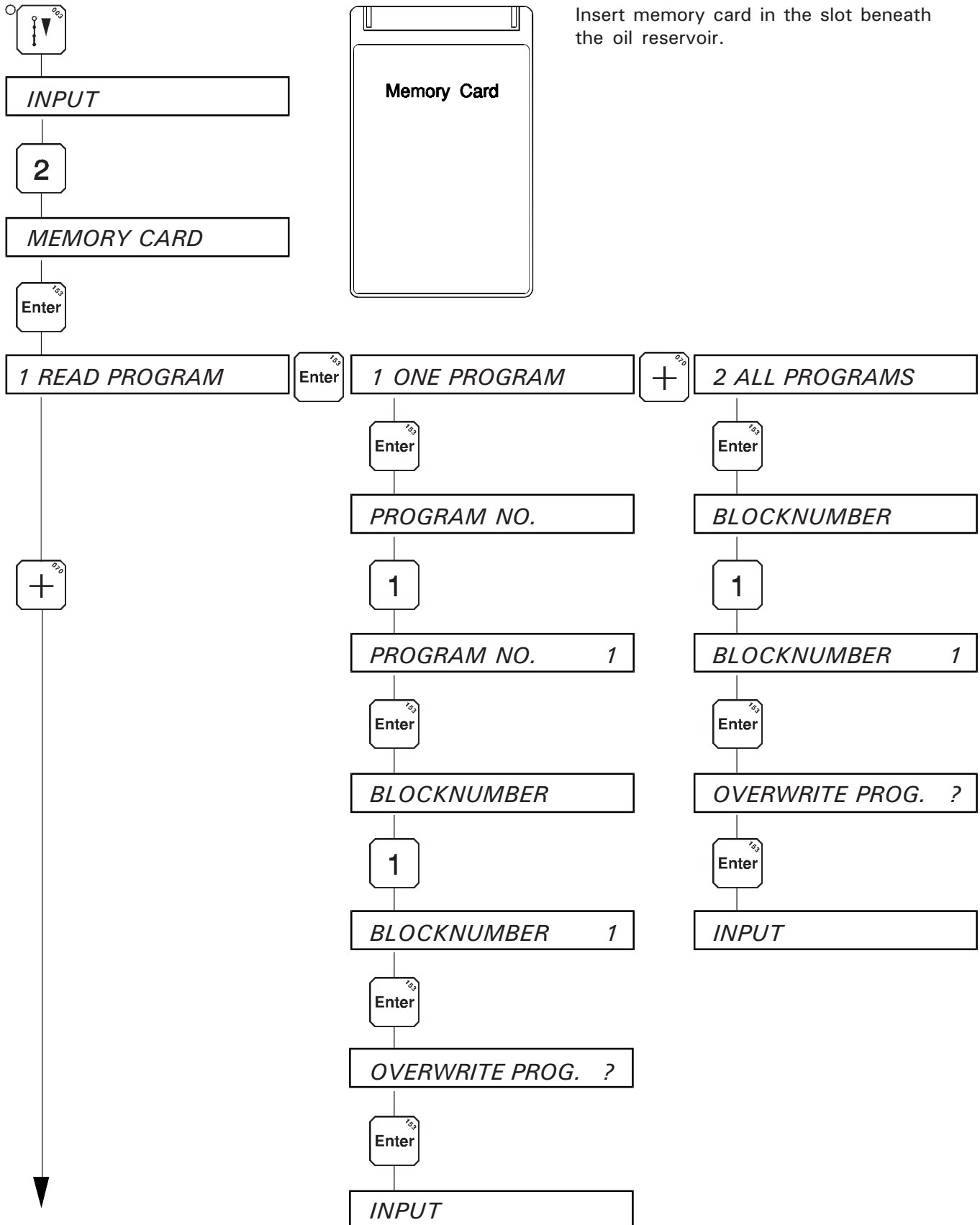


Memory Card (Option)

Functions :

- To store up to 480 programs in 20 blocks of 24 programs each.
- To read programs from the memory card to the memory of the machine.
- To write programs on the memory card.

Menu - functions of the memory card



+^{0/0}

2 WRITE PROGRAM Enter^{1/3} 1 ONE PROGRAM +^{0/0} 2 ALL PROGRAMS

The following dialogs correspond to the dialogs from "READ PROGRAM."



+^{0/0}

3 DISPLAY FR. BL. Enter^{1/3} FR.BLK. 4 5 9 10 11

Enter^{1/3}

FR.BLK. 19 20 END

+^{0/0}

4 FORMAT Enter^{1/3} ARE YOU SURE ? Enter^{1/3} FORMATTING

Note:

Brand new memory cards have to be formatted before use i.e. prepared for the user's system. The command "M.C.FORMATting" examines the card for defects and prepares it for the storage of data. If the memory card already contains data this is erased with the formatting command.

+^{0/0}

5 BATTERY CHANGE Enter^{1/3} COMPLETED ? Enter^{1/3}

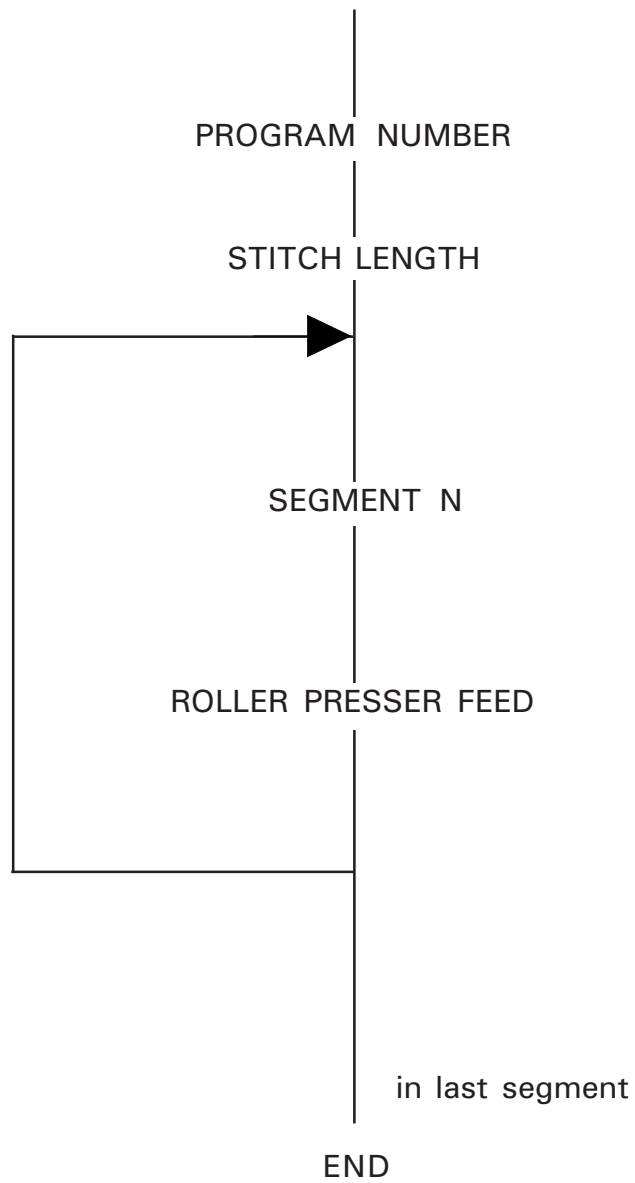
List of error messages

<i>E00-SIZE</i>	Selected size is not valid or a size of a different size system has been selected. For valid sizes see page 33.
<i>E01-FD. ROLL-P.</i>	Error in selection of roller presser feed motion (possible only from 0.8 to 5.0 mm).
<i>E02-ST. LENGTH</i>	Error in selection of wheel feed (possible from 0.8 to 5.0 mm only).
<i>E03-PROG. NO.</i>	Invalid program number input (valid program numbers for "sewing" mode are 0 to 24, for "input" mode 1 to 24).
<i>E04-PROG. DATA</i>	Input of invalid data or selection of a program that has not been programmed.
<i>E05-SL. ST. SPEED</i>	Input of invalid slow start stitches speed (valid from 100 to 1500 r.p.m.).
<i>E06-GRADING</i>	The inputted grading is invalid. Unsuccessful attempt to grade with enabled knee switch.
<i>E07-GRADE VAL.</i>	Input of invalid grading value (valid form 1 to 50 mm).
<i>E13-PEDAL ACT.</i>	Pedal was engaged when switching on the machine.
<i>E15-SEAM LENGTH</i>	Input of invalid seam length (valid from 1 to 999 mm).
<i>E16-SEGMENT NO.</i>	Input of invalid segment number (valid from 1 to 15).
<i>E17-MAX. SPEED</i>	Input of invalid maximum speed (valid from 100 to 3200 r.p.m.).
<i>E19-SEGM. DATA</i>	Invalid segment data.
<i>E22-SEW. MOTOR</i>	Error when reading the setting number.
<i>E23-SEW. MOTOR</i>	Error when reading status word "angle".
<i>E24-SEW. MOTOR</i>	Sewing drive communication error when positioning needle in b.d.c.
<i>E25-SEW. MOTOR</i>	Sewing drive communication error when positioning needle in t.d.c.

<i>E26-SEW. MOTOR</i>	Sewing drive communication error when trimming the sewing threads.
<i>E27-SEW. MOTOR</i>	Sewing drive communication error when switching to a fixed speed.
<i>E28-SEW. MOTOR</i>	Sewing drive communication error when switching to a treadle-dependent speed.
<i>E29-SEW. MOTOR</i>	Communication error when actuating the sewing drive.
<i>E30-SEW. MOTOR</i>	Sewing drive communication error when writing the setting number.
<i>E31-CMOS-RAM</i>	Error when reading from or writing to the internal RAM-module of the control.
<i>E33-RAMP END</i>	The feed motion could not be finished.
<i>E35-LANGUAGES</i>	Error in language selection.
<i>E36-M.C.BATTERY</i>	Memory card battery must be changed.
<i>E37-M.C.MISSING</i>	Memory card not inserted.
<i>E38-WRONG M.C.</i>	Wrong or unformatted memory card inserted.
<i>E39-READ M.C.</i>	Error when reading the memory card.
<i>E40-WRITE M.C.</i>	Error when writing to the memory card.
<i>E41-INPUT</i>	General input error.
<i>E42-PROGRAM</i>	The program to be read or to be written is invalid.
<i>E43-DATA SET</i>	Error in data set of a program.
<i>E44-ERROR</i>	General programming error.

Flow charts for programming

Fixed programs 1 and 2, incrementing the seam segments via knee switch.




The programming procedure can be aborted at any time by pressing key



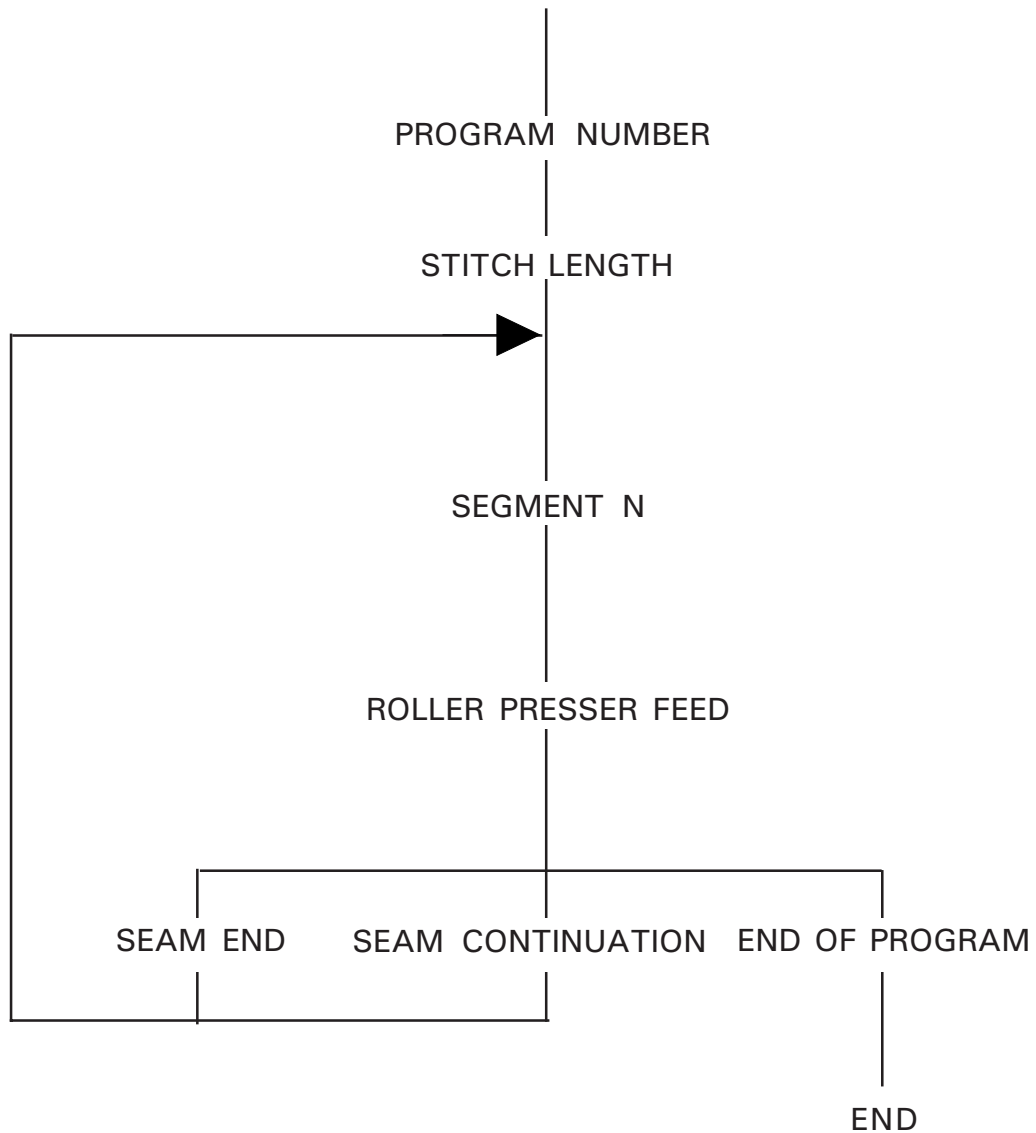
Verify error message in display with key



Press  key to use the current value.

Press  key to jump back to the nearest higher level.

Programs 3 to 24, incrementing the seam segments via knee switch



The programming procedure can be aborted at any time by pressing key



Verify error message in display with key



Press **Enter** key to use the current value.



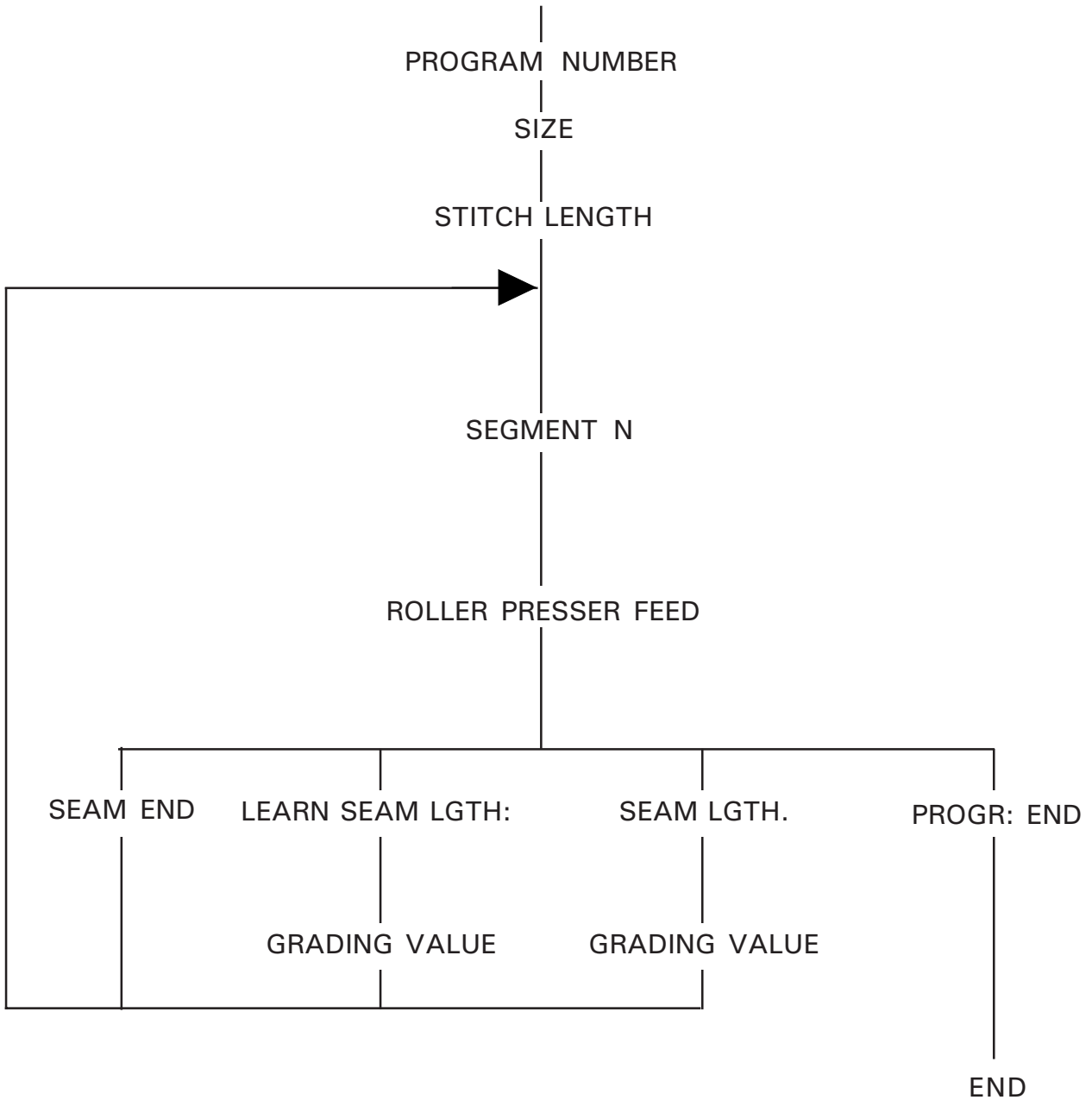
Press **Esc** key to jump back to the nearest higher level.



Press keys **+** and **-** to move horizontally to and fro within one level.



Programs 3 to 24, incrementing the seam segments via length measurement (learn seam length) with grading



The programming procedure can be aborted at any time by pressing key



Verify error message in display with key



Press **Enter** key to use the current value.



Press **Esc** key to jump back to the nearest higher level.



Press keys **+** and **-** to move horizontally to and fro within one level.



Model: _____ Basic size: _____ Stitch length: _____

Seam segment	Right-hand sleeve			Left-hand sleeve		
	Roller presser feed	Seam length	Grading value	Roller presser feed	Seam length	Grading value
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						

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Gedruckt in der BRD
Printed in Germany
Imprimé en R.F.A.
Impreso en la R.F.A.
Stampato in R.F.G.
отпечатано ФРГ