

3819^{-20/02}
^{-40/01}

INSTRUCTION MANUAL

This instruction manual applies to machines
from the following serial numbers onwards:
2 808 742 and software version 0441/001.



This instruction manual applies for all of the models and subclasses listed in Chapter 3 Technical Data.



The adjustment manual for the machine can be downloaded at no charge at www.pfaff-industrial.de/de/service-support/downloads/technical. As an alternative to the Internet download, the adjustment manual can also be ordered under order no. **296-12-19 291/002**.

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**PFAFF Industriesysteme
und Maschinen GmbH**

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	Contents	Page
1	Safety	5
1.01	Directives	5
1.02	General safety instructions	5
1.03	Safety symbols	6
1.04	Special points of attention for the owner-operator	6
1.05	Operating personnel and technical staff	7
1.05.01	Operating personnel	7
1.05.02	Technical staff.....	7
1.06	Danger warnings.....	8
2	Proper Use.....	9
3	Technical Data	10
3.01	PFAFF 3819	10
4	Disposal of the Machine.....	11
5	Transport, Packaging and Storage	12
5.01	Transport to the customer's premises	12
5.02	Transport within the customer's premises	12
5.03	Disposal of the packaging materials	12
5.04	Storage	12
6	Work Symbols.....	13
7	Operating Controls	14
7.01	Main switch	14
7.02	Light barrier.....	14
7.03	Treadle	15
7.04	Control panel.....	16
7.04.01	Symbols on the display.....	17
7.04.02	Plus/minus keys.....	17
7.04.03	Function keys.....	18
8	Set-up and Initial Commissioning	20
8.01	Set-up	20
8.01.01	Setting the table height	20
8.01.02	Mounting the reel stand	21
8.02	Connecting the plug-in connections and ground cable	22
8.03	Initial start-up	23
8.04	Switching the machine on/off	23

Table of Contents

	Contents	Page
9	Set-up.....	24
9.01	Inserting the needle.....	24
9.02	Threading the needle / adjusting the needle thread	25
9.03	Threading the looper thread / adjusting the looper thread.....	26
9.04	Fitting the tape reel.....	27
9.05	Threading the tape into the pleating attachment.....	27
10	Production	28
10.01	Sewing – automatic mode	29
10.02	Sewing – manual mode	30
10.03	Input mode	31
10.04	Input mode	33
10.05	Programming	34
10.07	Programming	35
10.08	Programming a trouser waistband.....	36
10.09	Parameter list.....	37
10.10	Program management	40
10.10.01	Inserting and removing the SD memory card.....	40
10.10.02	Displaying the machine directory.....	41
10.10.03	Displaying the SD card directory.....	42
10.10.04	Copying program(s) to the SD card.....	43
10.10.05	Copying program(s) from the SD card.	44
10.10.05	Deleting program(s) in the machine memory	45
10.10.06	Deleting program(s) on the SD card	46
10.10.07	Formatting the SD card.....	47
10.10.08	Error messages.....	48
11	Maintenance and Care.....	51
11.01	Maintenance intervals.....	51
11.02	Cleaning the machine	51
11.03	Checking / topping up the oil level of the oil tank for the front parts.....	52
11.04	Checking / topping up the oil level of the gear mechanism.....	53
11.05	Checking / setting the air pressure	54
11.06	Emptying / cleaning the maintenance unit's water tank.....	54
12	Wearing Parts.....	55

1 Safety**1.01 Directives**

The machine was built in compliance with the European regulations specified in the declaration of conformity and declaration of incorporation.

As a supplement to this instruction manual, please also observe the generally applicable, legal and other regulations and legislation – also in the country of use – and the valid environmental protection regulations! Always comply with the locally applicable regulations of the professional associations and other supervisory authorities!

1.02 General safety instructions

- The machine may only be operated after you have become acquainted with the associated instruction manual and only by operating personnel who have received appropriate training!
- Always read the safety instructions and the instruction manual of the motor manufacturer before starting up the machine!
- Always follow the hazard and safety instructions attached to the machine!
- The machine may only be operated for its intended purpose and only with the associated safety covers, while adhering to all the relevant safety requirements.
- The machine must always be disconnected from the power supply by pressing the main switch or pulling out the mains plug when sewing tools are replaced (such as the needle, sewing foot, needle plate, feed dog etc.) and when threading, leaving the workstation, or performing maintenance!
- The daily maintenance work may only be carried out by suitably qualified personnel!
- Repairs and special maintenance work may only be carried out by technical staff or people with appropriate training!
- Unless otherwise stated, the machine must be isolated from the power supply and pneumatic supplies before any servicing work or repairs are performed! The only permitted exceptions are for adjustment work and functional tests by appropriately trained technical staff!
- Work on electrical equipment may only be carried out by qualified technical staff!
- Work on parts and equipment under voltage is not permitted! Exceptions are regulated by the **EN 50110** standards.
- Modifications and changes to the machine may only be made in compliance with all of the relevant safety requirements!
- Only replacement parts approved by us for usage may be used for repairs! We warn you expressly that spare parts and accessories that are not supplied by us are also not tested and approved by us.
Fitting or using these products may therefore have negative effects on features which depend on the machine design. We are not liable for any damage caused by the use of non-Pfaff parts.

1.03

Safety symbols



Hazard point!
Special points of attention.



Risk of injury to operating personnel or technical staff!



Electric voltage!
Danger to operating personnel or technical staff



Danger of hands being crushed!



Caution!

Do not operate without finger guard and safety covers!

Turn off the main switch before threading, changing the bobbin or needle, **cleaning, etc.!**

1.04

Special points of attention for the owner-operator

- This instruction manual is a part of the machine and must be made available to the operating personnel at all times. The instruction manual must have been read before the initial start-up.
- The operating personnel and technical staff must be instructed about the machine's safety covers and about safe working methods.
- The owner-operator may only operate the machine in a flawless condition.
- The owner-operator must ensure that no safety covers are removed or disabled.
- The owner-operator must ensure that only authorised persons work on the machine.

Additional information can be requested from the responsible sales centre.

1.05 Operating personnel and technical staff

1.05.01 Operating personnel

Operating personnel are persons responsible for setting up, operating and cleaning the machine and for fault clearance in the sewing area.

The operating personnel are obligated to comply with the following points:

- The safety instructions provided in the instruction manual must be followed for all work!
- Any work method jeopardising machine safety must be refrained from!
- Tight-fitting clothing must be worn. The wearing of jewellery such as chains and rings is prohibited!
- Care must be taken to ensure that no unauthorised persons are located in the machine's hazard zone!
- Any changes occurring on the machine which impair its safety must be reported to the owner-operator immediately!

1.05.02 Technical staff

Technical staff are persons with technical training in electricity/electronics and mechanics. They are responsible for lubricating, servicing, repairing and adjusting the machine.

The technical staff are obligated to comply with the following points:

- The safety instructions provided in the instruction manual must be followed for all work!
- Turn off the main switch before starting any adjustment or repair work and secure it against reactivation!
- Working on live parts and equipment is prohibited!
Exceptions are regulated by the EN **50110** standards.
- Unless otherwise stated, the machine must be isolated from the power supply and pneumatic supplies before any servicing work or repairs are performed!
Exceptions are permitted solely for function tests.
- Reattach the safety covers following repair and maintenance work!

1.06

Danger warnings



A work area of **1 m** must be kept around the machine during operation to ensure unobstructed access at all times.



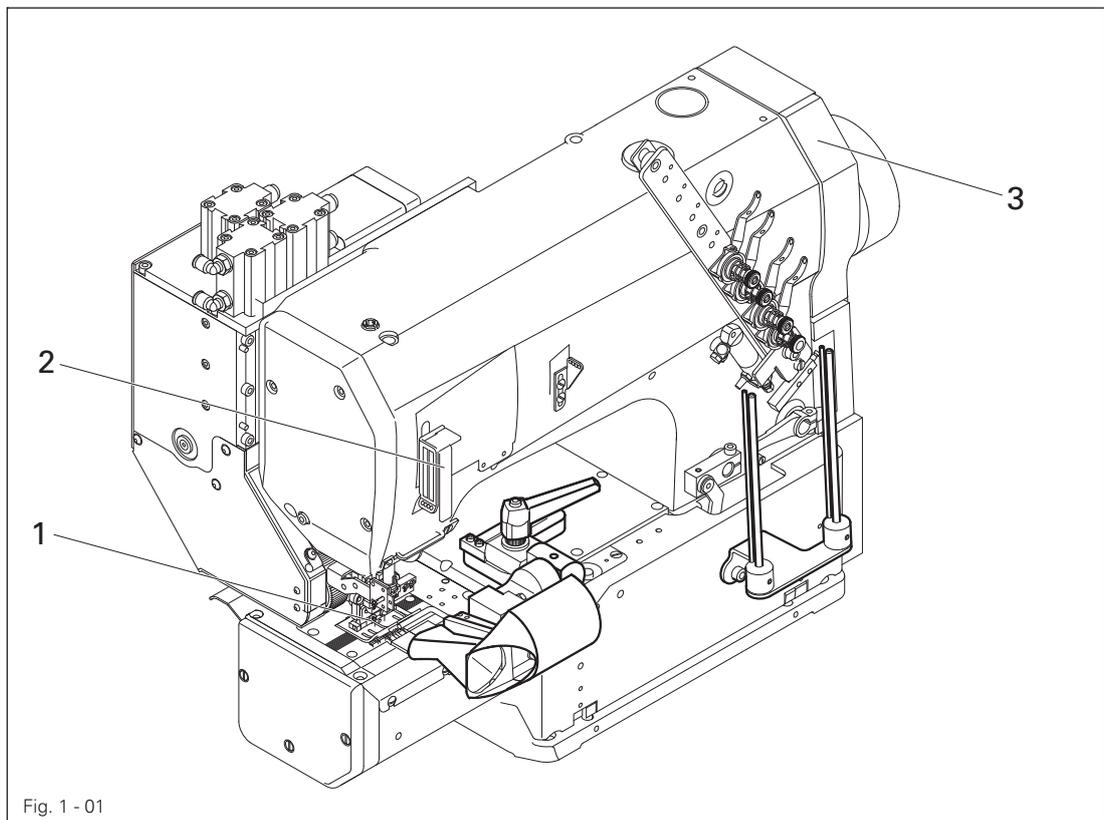
Do not reach into the needle range during the sewing operation!
Risk of injury from the needle!



Do not allow any objects to be placed on the table during the adjustment work!
The objects could become jammed or be slung away!
Risk of injury from parts flying around!



Danger of hands being crushed!



Do not operate the machine without the finger guard **1**!
Risk of injury from the needle!



Do not operate the machine without the take-up lever guard **2**!
Risk of injury due to movement of the take-up lever!



Do not operate the machine without the belt guard **3**!
Risk of injury due to the rotating driving belt!

2 **Proper Use**

The PFAFF 3819 is a sewing machine for efficiently sewing on trouser waistbands.



Any usage not approved by the manufacturer is deemed misuse! The manufacturer shall assume no liability for damage caused by misuse! Proper use also includes compliance with the operating, maintenance, adjustment and repair measures specified by the manufacturer!

3 Technical Data▲

3.01 PFAFF 3819

Stitch type:.....401 (chainstitch)

Design B: for the machining of medium-weight materials

Design C:for the machining of medium-heavy materials

Needle thickness: 80 – 140

Needle system:..... 62-57

Speed max.: 4000 stitches/min.

Stitch length max:.....4.5 mm

Noise data:

Noise emission level at workplace with a sewing speed of $n = 2400 \text{ min}^{-1}$:LpA = 75 dB(A)

(Noise measurement in accordance with DIN 45 635-48-A-1, ISO 11204, ISO 3744, ISO 4871)

Motor data: see motor instruction manual

Air consumption per switching cycle:.....0.146 NI

Net weight of sewing head with stand:..... approx. 128 kg

Gross weight of sewing head with stand:approx. 258 kg

▲ Subject to alterations

■ $K_{pA} = 2.5 \text{ dB}$

4

Disposal of the Machine

- It is up to the customer to dispose of the machine properly.
- The materials used for the machine include steel, aluminium, brass and various plastics. The electrical equipment consists of plastics and copper.
- The machine must be disposed of in accordance with the locally valid environmental protection regulations, with a specialised company being contracted if necessary.



Please ensure that parts coated with lubricants are disposed of separately in accordance with the locally valid environmental protection regulations!

5 Transport, Packaging and Storage

5.01 Transport to the customer's premises

All machines are completely packed for delivery.

5.02 Transport within the customer's premises

The manufacturer assumes no liability for transport within the customer's premises or to the individual usage sites. Please ensure that the machines are only transported in a vertical position.

5.03 Disposal of the packaging materials

The packaging materials of these machines consists of paper, cardboard and VCI fleece. It is up to the customer to dispose of the packaging properly.

5.04 Storage

The machine can be stored for up to **6** months when not in use. It must then be protected from dirt and moisture. For longer storage periods, the machine's single components, especially its sliding surfaces, must be protected against corrosion, e.g. by an oil film.

6 Work Symbols

Activities to be performed or important information in this instruction manual are emphasised by symbols. The symbols used have the following meaning:



Note, information



Cleaning, care



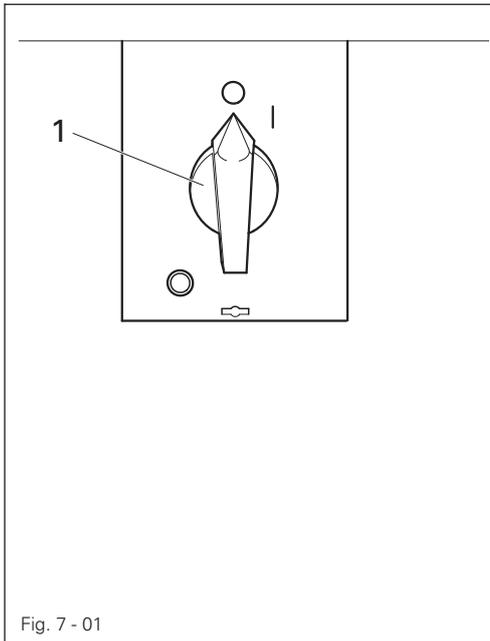
Lubrication



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

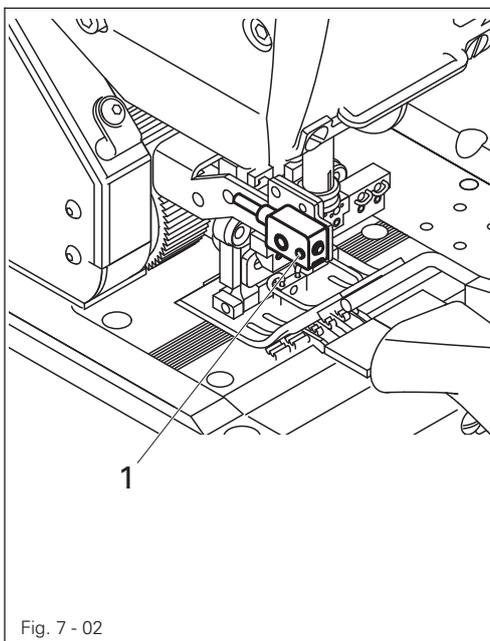
7 Operating Controls

7.01 Main switch



- Turning the main switch 1 switches the machine on and off.

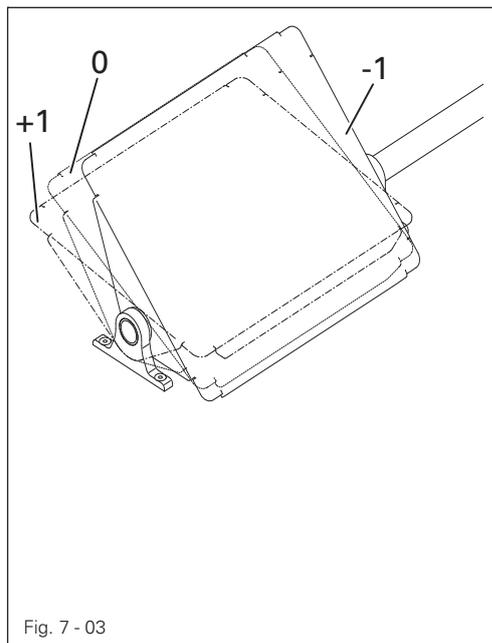
7.02 Light barrier



- The LED in the light barrier 1 indicates the following status:
 - LED lights up green = Reception indicator (If there is no sewing material below it).
 - LED flashes green or yellow = Setting aid/soiling indicator.
 - LED lights up yellow = Output indicator (If there is sewing material below it).

7.03

Treadle



● With the main switch turned on:

- 0 = Neutral position
- +1 = Manual sewing or start sewing cycle
- 1 = Raise sewing foot and top needle bar position

7.04 Control panel

The control panel is used to display and access machine functions for set-up and sewing, to enter parameter values and to read error messages and service settings.

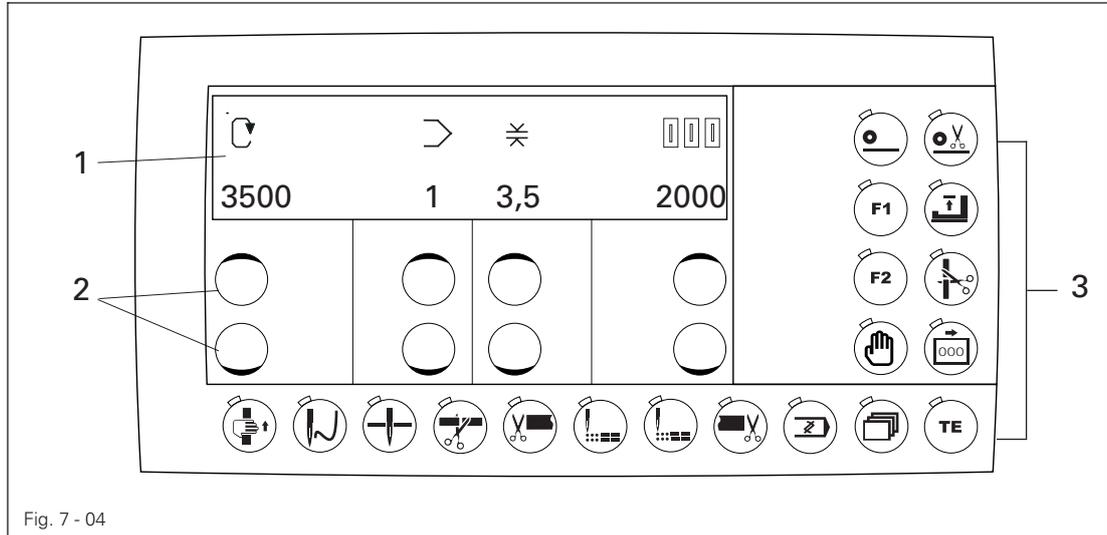


Fig. 7 - 04

The control panel has the following operating and display controls:

- The display 1 comprises a two-line alphanumerical LCD display with 16 characters per line and is used to display corresponding information and selection parameters.
- The plus/minus keys 2 are used for selecting or altering the functions and parameters shown on the display.
- The function keys 3 are used for turning the corresponding function on and off. Switched-on functions are each indicated by the lit LED.

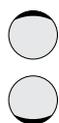
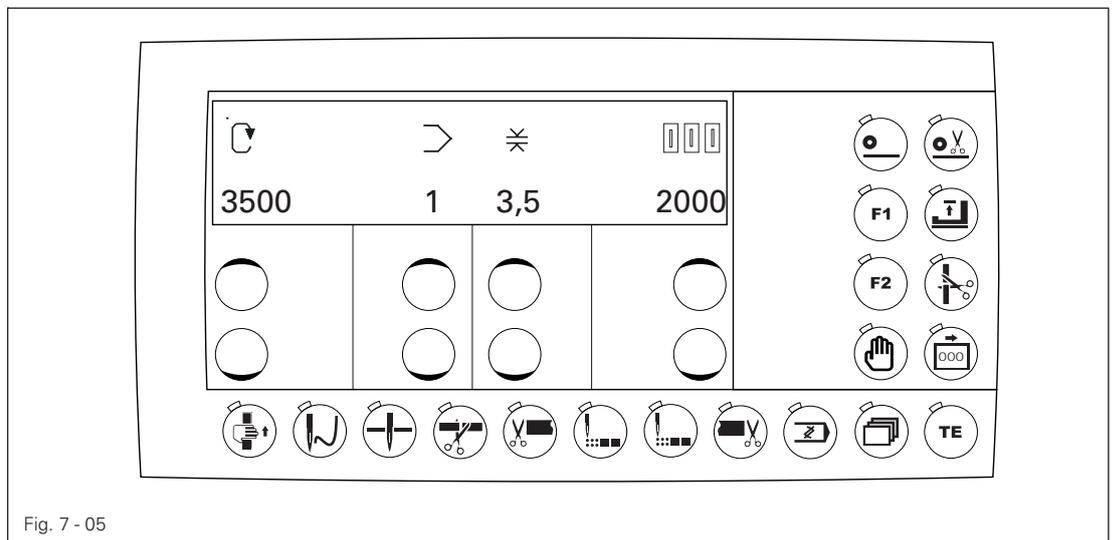
7.04.01 Symbols on the display

In addition to clear texts and set values, the following symbols appear on the display: The symbols exclusively appear in programmed sewing, see Chapter 10.02 Programmed sewing.

Symbol	Function
	Current program number
	Piece counter
	Speed
	Stitch length
	SD memory card
	Machine memory

7.04.02 Plus/minus keys

The corresponding set values are selected and altered using the appropriate plus-minus keys. At the same time the set value shown above is changed slowly at first by pressing and holding the corresponding plus or minus key. If the key is held pressed for longer, the set value changes more quickly.



Plus/minus keys

The displayed values can be increased or decreased using the respective key on the display.

7.04.03 Function keys

If a function is on, this is always indicated by the correspondingly lit LED. Detailed explanation of functions:



● Thread tape

The sewing drive moves to the top position, the presser foot and both pullers are raised so that the tape can be threaded in the machine.

This key corresponds to number **1** when entering the code number.



● Thread the thread

The sewing drive moves to the top position, the presser foot and both pullers are not raised so that the needle can be threaded with the sewing thread.

This key corresponds to number **2** when entering the code number.



● Position needle downwards

The sewing drive moves to the bottom position.

This key corresponds to number **3** when entering the code number.



● Tape cutter on/off

This key corresponds to number **4** when entering the code number.



● Tape cutter at seam start on/off

This key corresponds to number **5** when entering the code number.



● Skip stitch system at seam start on/off

This key corresponds to number **6** when entering the code number.



● Skip stitch system at seam end on/off

This key corresponds to number **7** when entering the code number.



● Tape cutter at seam end on/off

This key corresponds to number **8** when entering the code number.



● Program

This key is used to execute the menu navigation to create and change the sewing programs. This key corresponds to number **9** when entering the code number.



● Scroll

If this key is pressed, the input menus on the display are scrolled through.



● TE key

If this key is pressed, the machine changes from sewing mode to stitch input mode.



- Piece counter
This key is used to set the piece counter to zero.
Coded via parameters **811** and **812**.



- Puller on/off



- Cutting puller on/off



- Free



- Raise/lower presser foot
This is raised if the presser foot is lowered and lowered if the presser foot is raised.
Coded via parameter **813**.



- Free.



- Free sewing
You can sew with treadle control and the machine does not react to a photo cell.
This key corresponds to number **0** when entering the code number.

8 Set-up and Initial Commissioning



The machine may only be set up and started up by qualified personnel! All of the relevant safety regulations must always be complied with in this process! Adequate stability of the stand must be guaranteed, even during the sewing operations.

8.01 Set-up

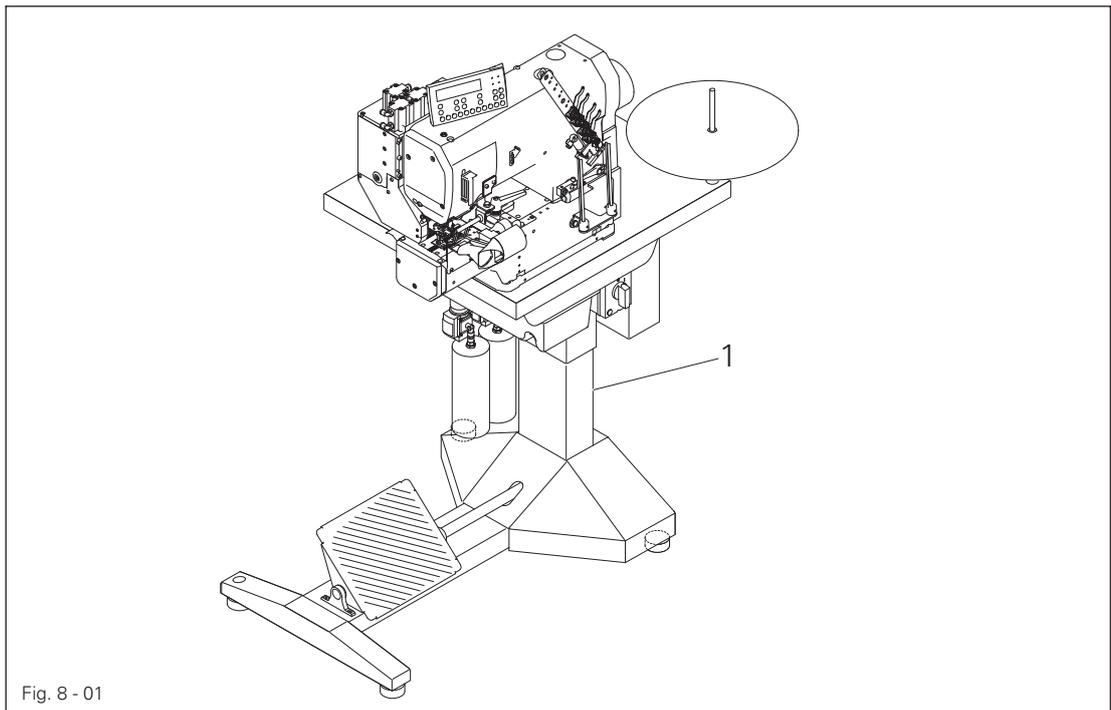
Suitable electrical and pneumatic supply connections must be provided at the erection site, see **Chapter 3 Technical Data**.

The erection site must have a firm and level subsurface and adequate lighting.



The table top is lowered for packaging purposes.
The adjustment of the table height is described below.

8.01.01 Setting the table height



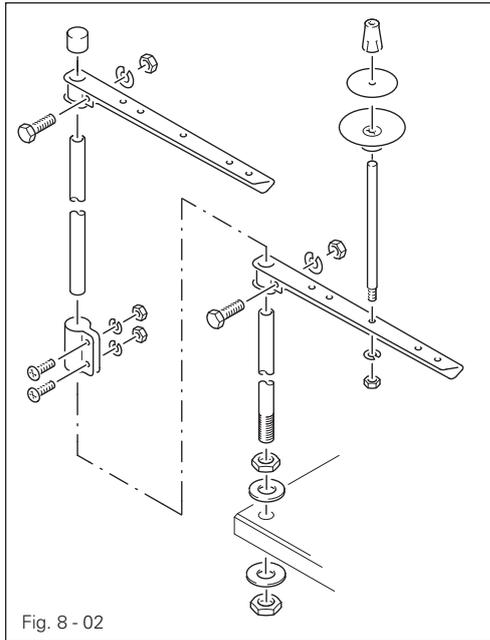
- Loosen the screws 1.
- Move the table top to the desired working height by pulling it out and pushing it in and align the table top horizontally.



Adjust the stand on both sides evenly to prevent it tilting.

- Firmly tighten the screws 1.

8.01.02 Mounting the reel stand



- Assemble the reel stand as shown in Fig. 8 - 02.
- Then insert the stand into the hole in the table top and secure it with the enclosed nuts.

8.02 Connecting the plug-in connections and ground cable

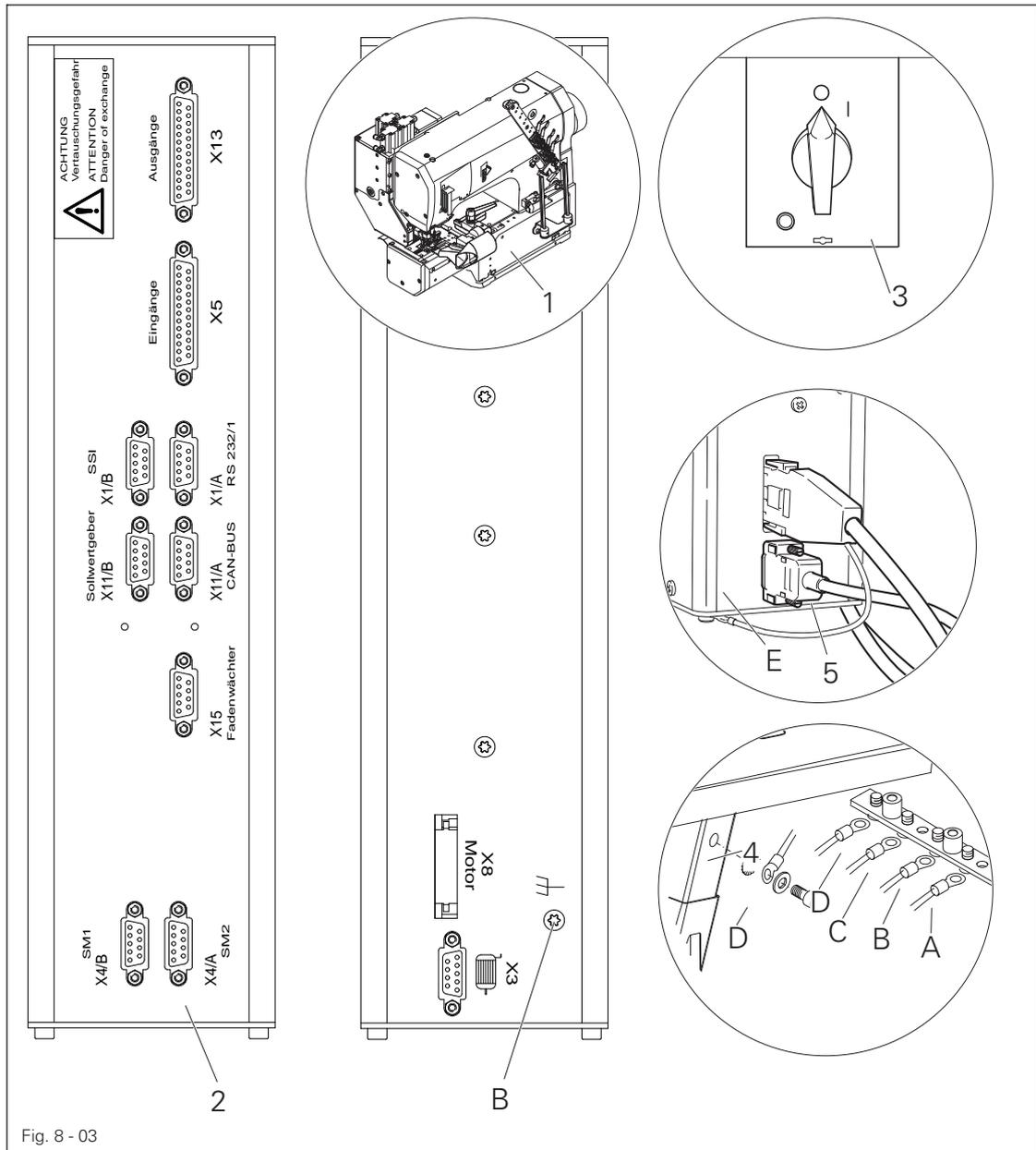


Fig. 8 - 03



- Insert all plugs on the control box 2 in accordance with their designation.
- Insert the "motor" into the bushing X 3 and the bushing X 8.

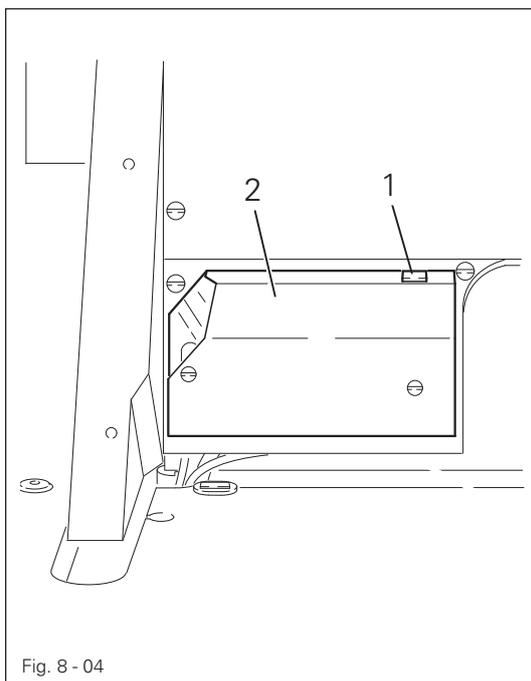


Caution!

Plugging in the connector incorrectly can damage the control unit!

- Attach the following ground cables in order to discharge static electricity:
- Securely attach the ground cable from the sewing head 1 to ground point A.
- Securely attach the ground cable from the control point 8 to ground point B.
- Securely attach the ground cable from the main switch 3 to ground point C.
- Securely attach the ground cable from the stand 4 to ground point D
- Securely attach the ground cable 5 from the motor to ground point E

8.03 Initial start-up



- Inspect the machine and in particular the electric lines and pneumatic connecting hoses for possible damage.
- Remove the stopper **1** from the oil tank **2**. The stopper serves solely for transit support and may not be used during the sewing operations.
- Clean the machine thoroughly and then oil it, see **Chapter 10 Maintenance and Care**.
- Have technical staff check whether the machine's motor may be operated at the existing mains voltage.



Never operate the machine if there are any differences.



Before the initial commissioning, have technical staff verify that parameter **201** (machine class) is set to "**1**".



The machine must only be connected to a grounded socket!

- Connect the machine to the compressed air system. The manometer should display a pressure of around **6 bar**. Set this value if required (see **Chapter 10.04 Checking / setting the air pressure**).

8.04 Switching the machine on/off

- Switch the machine on, see **Section 7.01 Main switch**.

9

Set-up



Observe and comply with all regulations and instructions in this instruction manual.

Pay particular attention to all safety regulations!

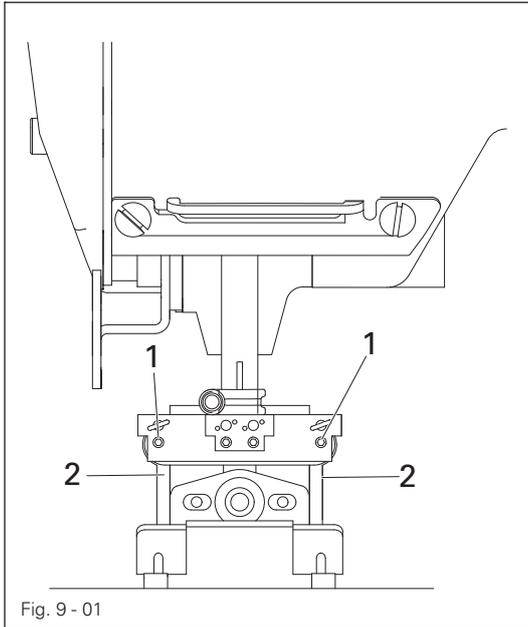


All set-up work may only be carried out by appropriately instructed personnel.

Disconnect the machine from the electricity mains for all set-up work by operating the main switch or by removing the mains plug!

9.01

Inserting the needle



Switch off the machine!

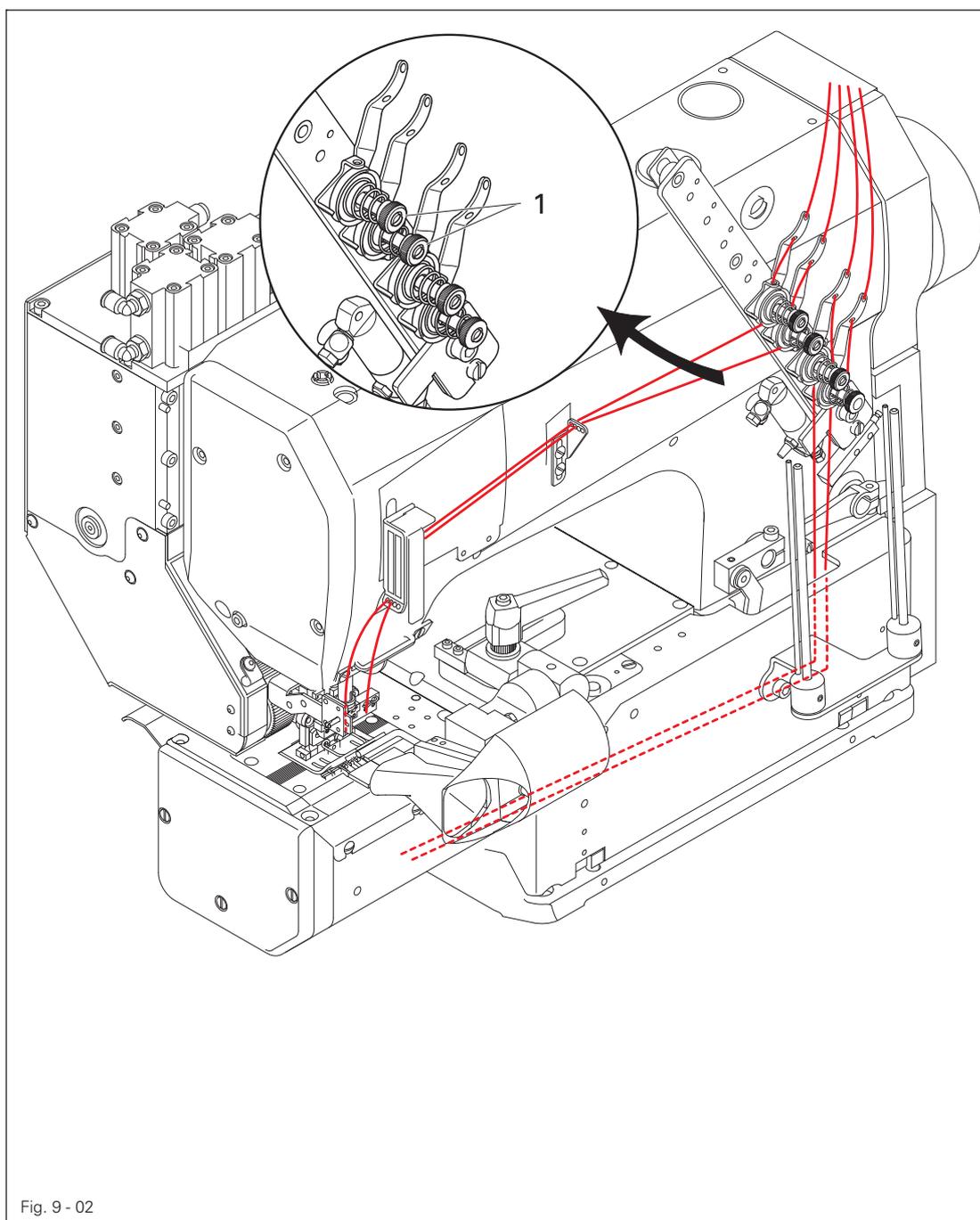
Risk of injury due to accidental machine start-up!



Only use needles of the system intended for the machine, see **Chapter 3 Technical Data!**

- Bring the needle bar to the top position and loosen the screws 1.
- Insert the needles 2 up to the stop (while doing so, the long needle groove must point to the right).
- Tighten the screws 1.

9.02 Threading the needle / adjusting the needle thread



Switch off the machine!
Risk of injury due to accidental machine start-up!

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

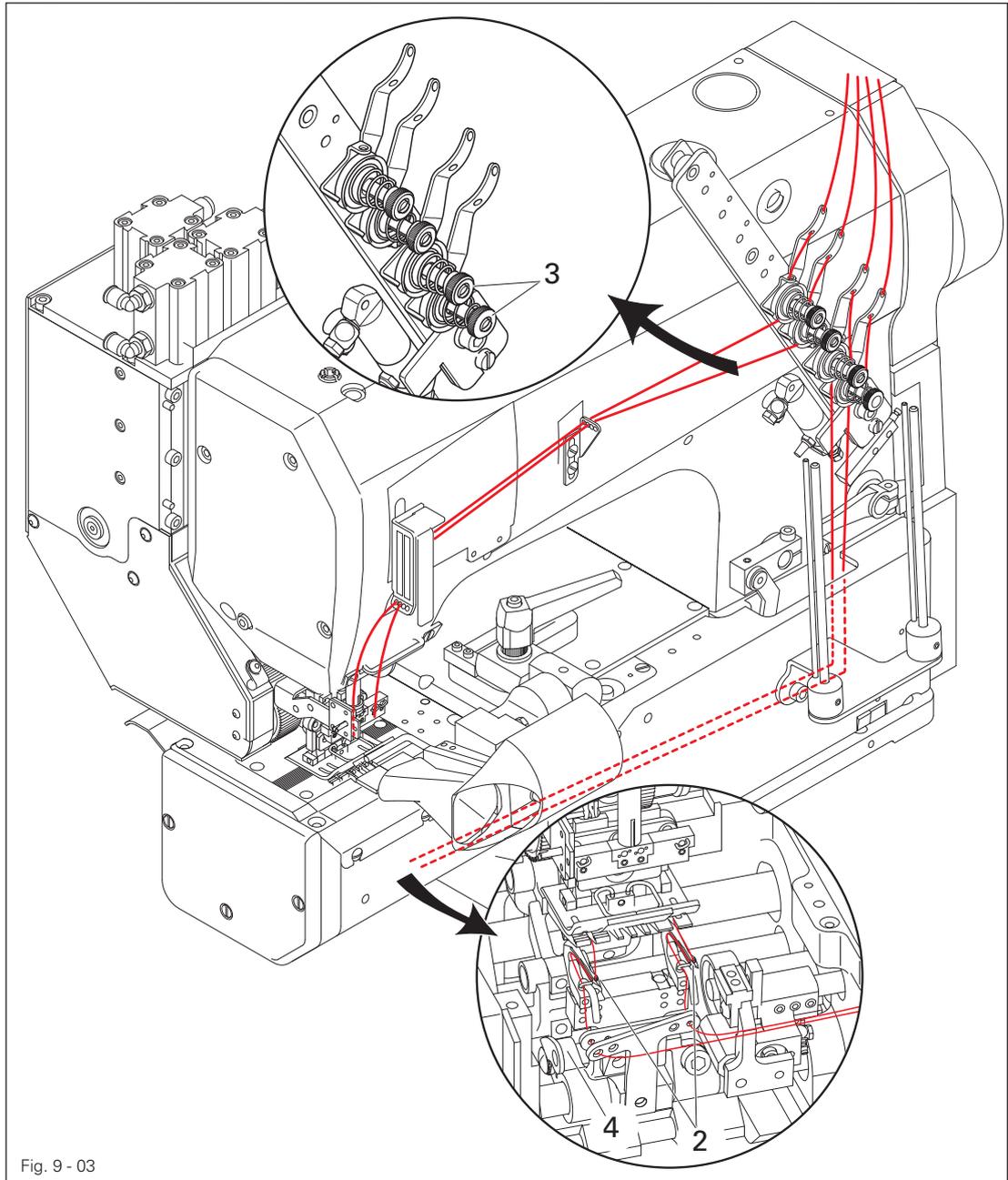


Fig. 9 - 03

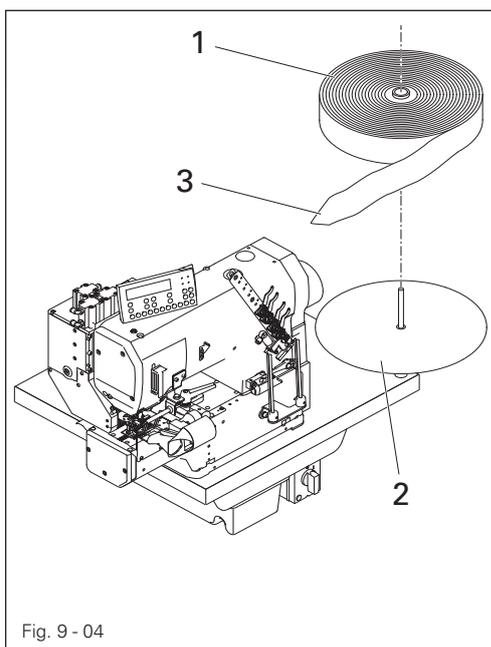


Switch off the machine!

Risk of injury due to accidental machine start-up!

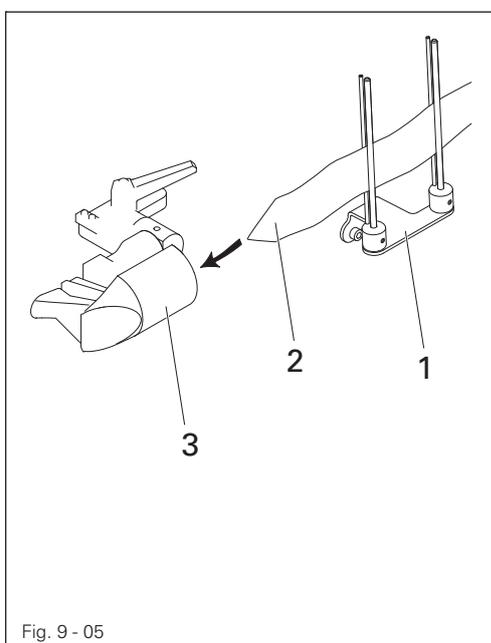
- Open the hook room cover and side cover.
- Slide the lever 4 to the left; this unlocks the hook bracket and it can be swivelled out.
- Thread the looper thread as shown in Fig. 9-03.
- Use tweezers to thread in the thread on the hook 2.
- Slide the lever 4 to the left, swivel the hook bracket back in until it engages.
- Adjust the looper thread tension by turning the knurled thumb screw 3.

9.04 Fitting the tape reel



- Fit the tape reel 1 to the tape reel bracket 2 as shown in 9 - 04.
- Please note the unwinding direction: Tape discharge points towards the operator.
- Cut the beginning of the tape 3 sharply.

9.05 Threading the tape into the pleating attachment



- Feed the tape through the tape smoother 1.
- Insert the tape tip 2 into the pleating attachment 3 and slide the tape completely through the pleating attachment 3 with the aid of scissors.
- Fold the tape in the pleating attachment 3 and feed it to the sewing position

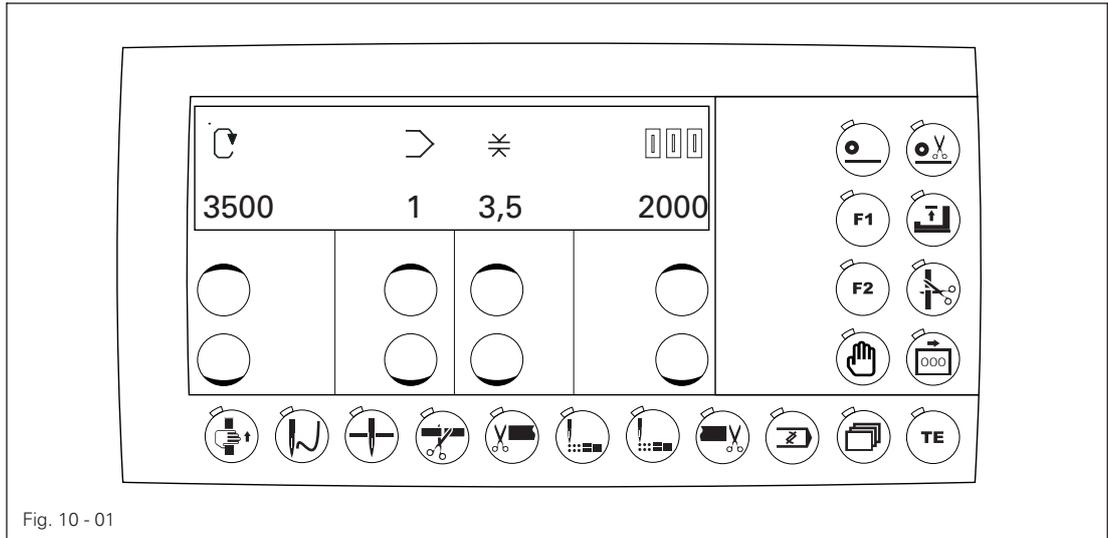


Fig. 10 - 01

The following appear on the display (from the left):

- max. speed (e.g. **3500** revolutions per minute), it can be changed using the corresponding plus/minus key. Coded via parameter **809**.
- Program number (**1 – 99**).
- Stitch length (e.g. **3.5** mm), it can be changed using the corresponding plus/minus key. The electronically set stitch length here must be identical to the mechanically set stitch length on the sewing head. See the "Stitch length" chapter in the adjustment manual to set the stitch length.
- Coded via parameter **810**.
- Piece counter (e.g. **2000**).

The function of the other keys is explained in the "Operating Controls" chapter.

10.01 Sewing – automatic mode



The following work steps assume that the sewing preparations listed in the "Set-up" chapter have been carried out thoroughly and the machine has been programmed according to the order.



- Turn on the machine at the main switch and wait for it to be ready for operation.
- Press the presser foot key and raise the presser foot.
- Place the cut-to-size trouser piece under the raised presser foot directly in front of the needle (attenuated "skip stitch" photo cell).
- The cut-to-size piece must always be placed in the same position when the machine is at a standstill.
- Press the presser foot key and lower the presser foot.
- The presser foot automatically lowers when you press the treadle and the machine sews at a fixed speed (set in P08) and possibly with the skip stitch system switched on until the start cut is made ("Tape cutter" photo cell and the clearance programmed in P01).
- Switch on the skip stitch system after reaching the appropriate clearance (P02).
- After cutting the tape, sew with treadle control until the "Skip stitch" photo cell light up again and the skip stitch system switches on after reaching the clearance in P03.
- Once the "Tape cutter" photo cell lights up, the machine continues to sew at a fixed speed (P08) until the final cut clearance (P04) is reached and the final cut is made.
- Now stop the machine with the needle down and raise the presser foot.
- The next piece can be sewn once the treadle is in the neutral position.



The following keys are switched on in automatic mode, see Fig. 10-02

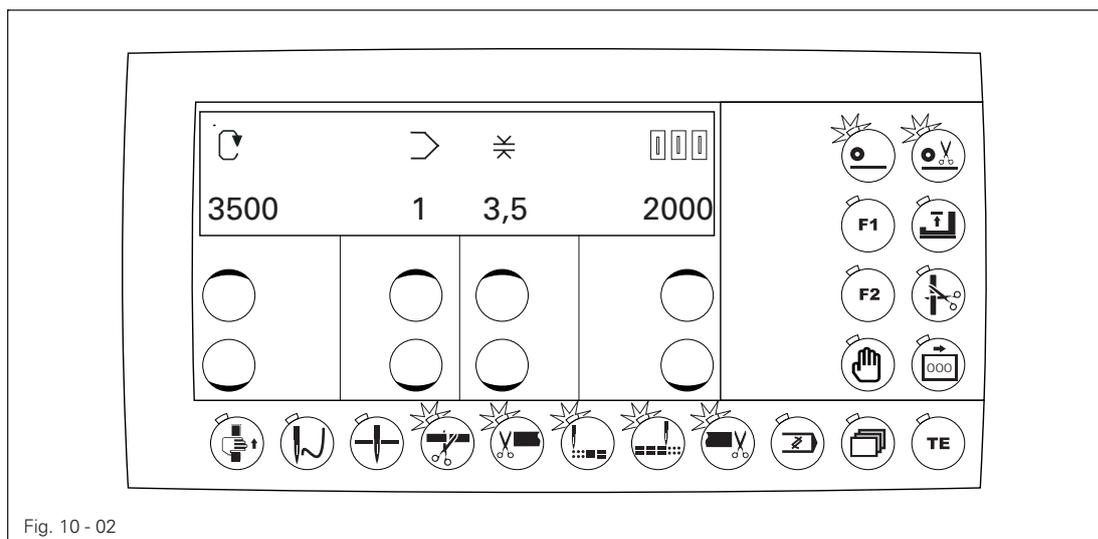


Fig. 10 - 02

10.02 Sewing – manual mode



The following work steps assume that the sewing preparations listed in the "Set-up" chapter have been carried out thoroughly.



- Turn on the machine at the main switch and wait for it to be ready for operation.
- Press the "Insert tape" key. The needle and puller move to the top dead centre position.
- Feed the tape manually to below the puller rollers.



- Press the "Insert tape" key again. The needle and puller move to the working position.



- Press the "Free sewing" key.



- Press the "Tape cutter tape end" key and trim the tape.
- Now stop the machine with the needle down and raise the presser foot.
- The next piece can be sewn once the treadle is in the neutral position.

10.03 Input mode

- Select the function group

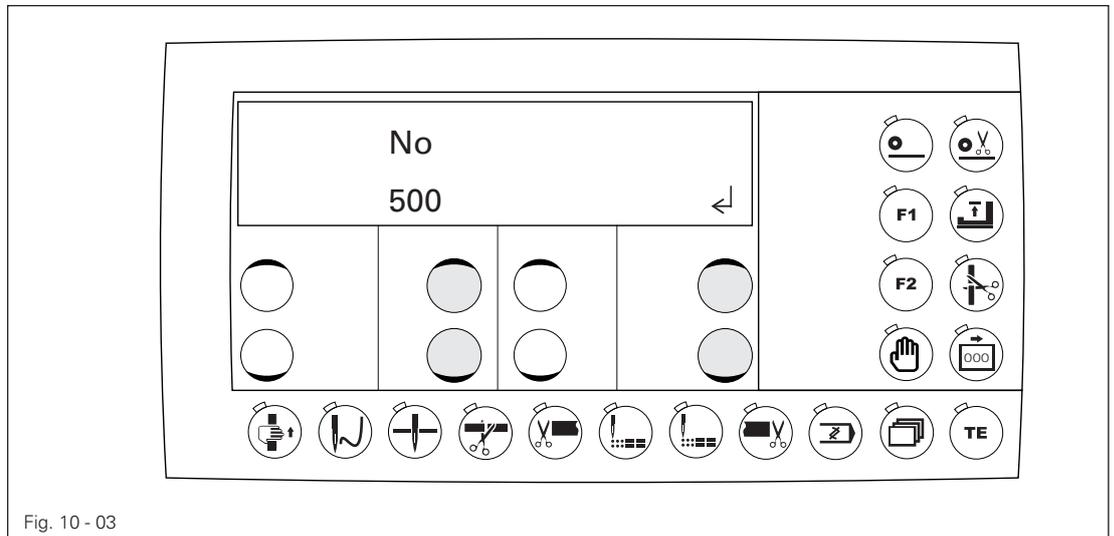


Fig. 10 - 03

The desired function group must be selected using the allocated plus/minus key after changing to input mode.

- Select the function group or function with the corresponding plus/minus key. The upper key is + and the lower key is -.
- ↵ The selected function group is taken over by pressing the plus/minus key under the Enter symbol and the machine jumps to the "Enter parameter" status after entering the code. This display does not appear if the access code has already been entered or the function group is not code protected.
- TE If the TE key is pressed, the machine changes to production mode (LED off).

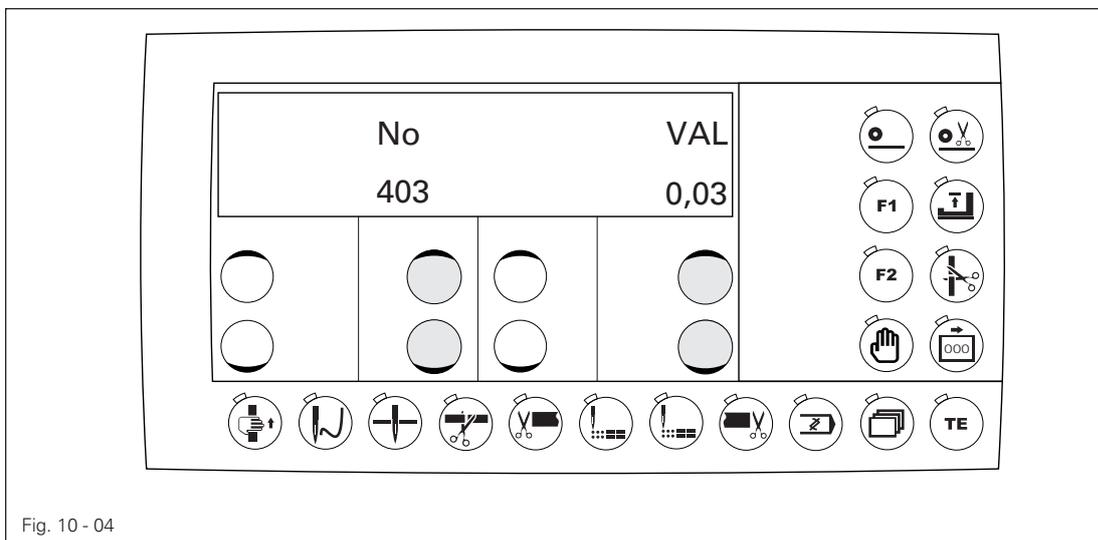
- The following function groups are available:

Group	Function	Access rights (factory setting)
100	Operator level	free
200	Mechanic level	coded
300	Sewing drive positions	coded
400	Times	coded
500	Counter and speeds	coded
600	Service	coded
700	Sewing motor	coded
800	Access rights	coded

Access rights for the individual function groups and for the functions accessible via the keys can be changed in the function group **800**. The access code for coded functions can also be changed (status on delivery: **3819**). Coded functions can only be accessed after entering the code. Specific keys as interpreted as numeric keys for input purposes (see the "Operating Controls" chapter).

10.04 Input mode

Enter parameters



The display shows the selected parameter number on the left and the associated parameter value further to the right. Parameter **403**, the tape cutter switch-on time, has been selected in the example above. The displayed parameter value is **0.03 s**.

- 


The values above can be changed using the plus/minus keys. The parameter values are taken over by advancing to another parameter number.
- 

If the TE key is pressed, the values are also taken over and the machine switches to sewing mode.

10.05 Programming



Change from sewing mode to programming mode

● Select the program number

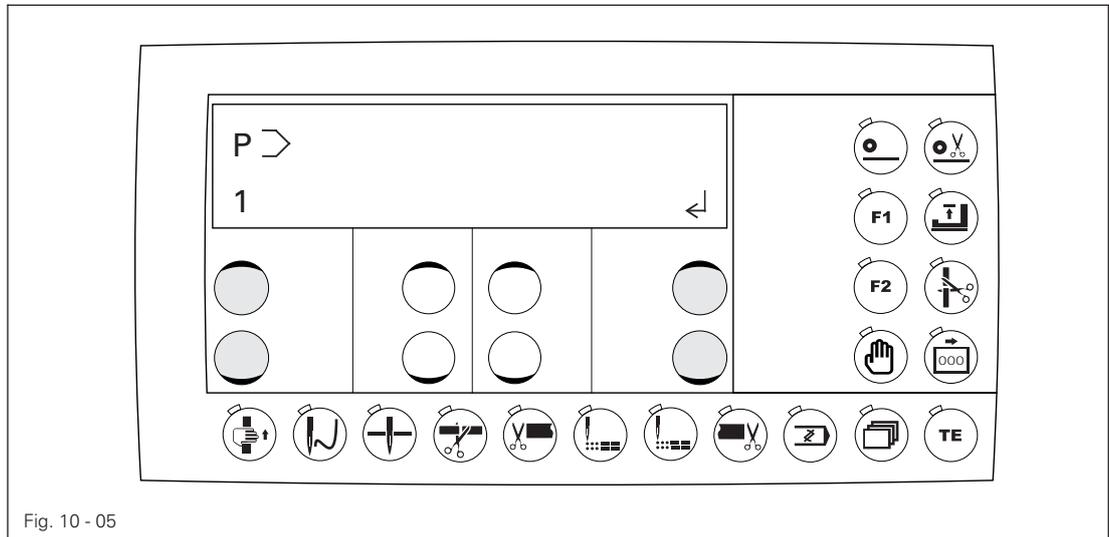


Fig. 10 - 05

The desired function group must be selected using the allocated plus/minus key after changing to programming mode.



Select the program number with the corresponding plus/minus key. The upper key is + and the lower key is -.



The selected function group is taken over by pressing the plus/minus key under the Enter symbol and the machine switches to enter the **8** program parameters (P01 – P08).



The entered values are taken over by pressing the "Program" key and the machine switches back to the initial status of input mode.



The entered values are taken over by pressing the "Sew/Enter" key and the machine switches to input mode.

10.07 Programming

Control panel display in programming mode

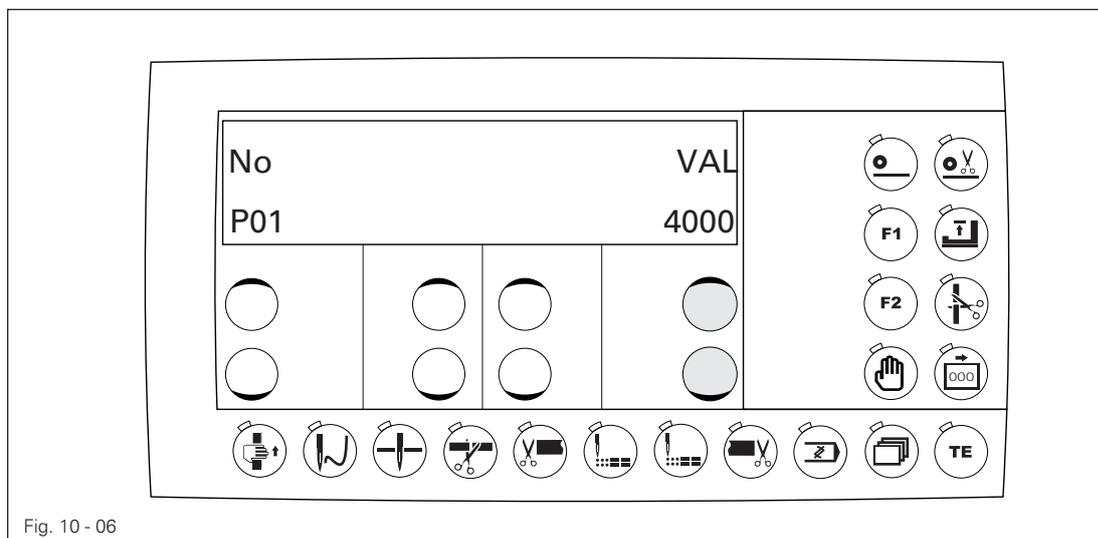


Fig. 10 - 06

The display shows the selected programmable parameter number (P01) on the left and the associated values of the trouser waistband further to the right.

Example:

The maximum program speed is limited to **4000** rpm.

- 

The programmable parameter numbers (P01, P02, ..., P08) can be changed with the corresponding plus/minus key.
- 

The entered values are taken over by pressing the "Sew/Enter" key and the machine switches to input mode.
- 

The entered values are taken over by pressing the "Program" key and the machine switches back to the initial status of input mode.

10.08 Programming a trouser waistband

Parameter number	Function
P01	Maximum program speed
P02	Clearance to start cut in mm
P03	Length of first skip stitch after start of seam at seam start in mm
P04	Start clearance of final skip stitches in mm
P05	Clearance of final cut at seam end in mm
P06	Length after which the cutting puller moves down at seam start in mm
P07	Length for which the cutting puller stays down after the start cut in mm
P08	Constant speed during the tape cutting

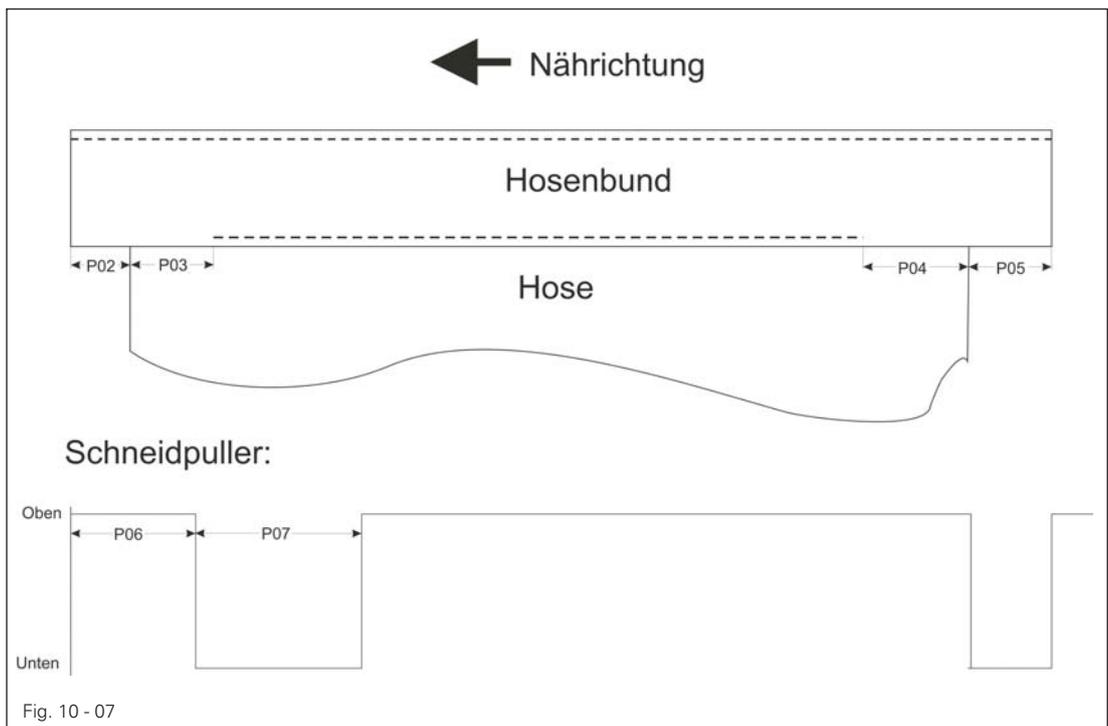


Fig. 10 - 07

10.09 Parameter list

Function group 100:	Operator level
101	Display software version (0441/xxx)
102	Display motor control software version
103	Key beeper (I = OFF, II = ON)
104	Thread monitor, left (I = OFF, II = ON)
105	Thread monitor, right (I = OFF, II = ON)
106	Display serial number of machine
Function group 200:	Mechanic level
201	Subclass 1: 3819
202	Puller acceleration (200; 50 – 999)
203	Puller braking (250; 50 – 999)
204	Maximum stitch length when sewing in 1/10 mm (40, 20 – 80)
205	Switching frequency from fine step to full step (375; 100 – 2000)
Function group 300:	Positions
301	Reference position (needle at top edge of needle plate)
302	Position of cover-thread carrier t.d.c. (153, 0 – 191)
303	Position of needle at bottom position (81, 0 – 191)
Function group 400:	Times (0.01 – 2.00 s)
401	Delay time before raising presser foot (0.01 s)
402	Start time after lowering presser foot (0.02 s)
403	Tape cutter switch-on time (0.10 s)
404	Tape cutter travel time (0.03 s)
405	Needle thread monitor hide stitches (option) 3-9 stitches
406	Bobbin thread monitor hide stitches (option) 3-9 stitches
Function group 500:	Counter, speeds and clearances
501	Soft start stitches (0; 0-15) soft start speed (1500; 0 – 4500 rpm)
502	Needle cooling start speed (200; 100 – 4500)
503	Clearance of skip stitch light barrier to needle in mm (30; 0 – 999)
504	Clearance of cutting light barrier to knife in mm (38; 0 – 999)

Function group 600:	Service
601	Move puller stepping motor
602	Inputs: 0123456789ABCDEF
	0: free (E1 – X5.1)
	1: free (E2 – X5.2)
	2: free (E3 – X5.3)
	3: free (E4 – X5.4)
	4: free (E5 – X5.5)
	5: free (E6 – X5.14)
	6: free (E7 – X5.15)
	7: free (E8 – X5.16)
	8: free (E9 – X5.9)
	9: free (E10 – X5.10)
	A: free (E11 – X5:11)
	B: Needle thread monitor, left (E12 – X5.12)
	C: Bobbin thread monitor, right (E13 – X5.13)
	D: Skip stitch light barrier (E14 – X5.8)
	E: Tape cutter light barrier (E15 – X5.6)
	F: free (E16 – X5.7)
603	Outputs:
	1: Presser foot (X13.1 and X13.2) (1: up, 0: down)
	2: Tape cutter (X13.3 and X13.4) (1: down, 0: up)
	3: Needle cooling (X13.5)
	4: Thread tension (X13.6) (1: open, 0: close)
	5: Skip stitch generation (X13.7) (1: on, 0: off)
	6: Raise transport puller (X13.8) (1: up, 0: down)
	7: Raise cutting puller (X13.9) (1: up, 0: down)
	8: free (X13.10)
	9: free (X13.11)
	10: free (X13.12)
	11: free (X13.13)
	12: free (X13.25)
	13: free (X13.24)
	14: free (X13.16)
	15: Sewing motor running (X5.17) (1: running, 0: at a standstill)
	16: free (X5.18)

604	Run cold start
605	Display treadle values
Function group 700:	Sewing motor
701	P-section speed regulator (10)
702	I-section speed regulator (50)
703	P-section position controller (20)
704	D-section position controller (30)
705	Time for position controller (25)
706	P-section position controller for rest brake (25)
707	D-section position controller for rest brake (15)
708	Maximum torque for rest brake (0)
709	Minimum machine speed (6)
710	Maximum machine speed (4500)
711	Maximum motor speed (68)
712	Positioning speed (25)
713	Acceleration ramp (35)
714	Braking ramp (30)
715	Reference position (43)
716	Dead man time (40)
717	Motor starting current (7)
718	Anti-rank filter (3)
719	Rotation direction assignment (1)
720	Positioning technique (1 – time-optimised; 2 – path-optimised)
Function group 800:	Access rights
801	Access rights for function group 100*
802	Access rights for function group 200*
803	Access rights for function group 300*
804	Access rights for function group 400*
805	Access rights for function group 500*
806	Access rights for function group 600*
807	Access rights for function group 700*
808	Access rights for function group 800*
809	Access rights for programming*
810	Access rights for stitch length keys*
811	Access rights for maximum key speed*
812	Enter access code (in status on delivery: 3819)

* 0 – free, 1 – blocked with a code

10.10 Program management



The program management menu opens after pressing the "Scroll" key in input mode (LED in the  key lights up).

Standard SD cards with a maximum capacity of 2 GB can be inserted in the control panel Bdf-S3. The 3819 stores its data in the subdirectory \P3819. Programs 1 – 99 are stored in files 01 – 99 and the machine data is stored in the MD file. If the SD card is to be formatted with the PC, it must be formatted in the FAT16 format.

You can also format the SD card with the formatting function on the 3819. All actions are started with the +/- key under the Enter symbol. Values can be changed under the respective value using the +/- keys.

The functions are:

- Display the machine directory
- Display the SD card directory
- Copy program(s) to the SD card
- Copy program(s) from the SD card
- Delete program(s) in the machine memory
- Delete program(s) on the SD card
- Format the SD card

10.10.01 Inserting and removing the SD memory card

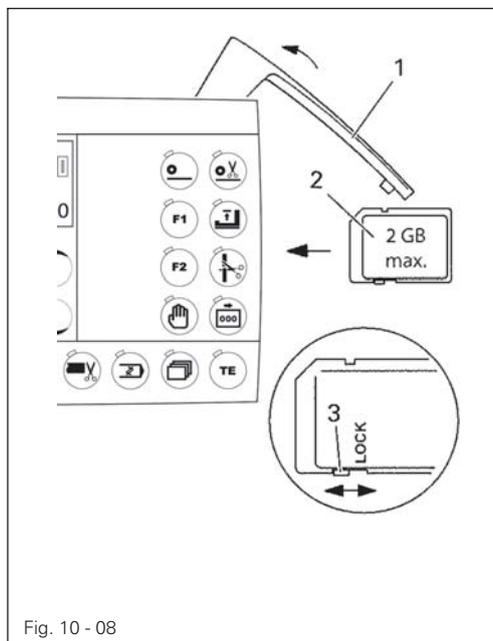


Fig. 10 - 08

Inserting the SD card

- Open the cover 1.
- Insert the SD card 2 into the card slot with the label facing forwards.
- Close the cover 1 again.

Removing the SD card

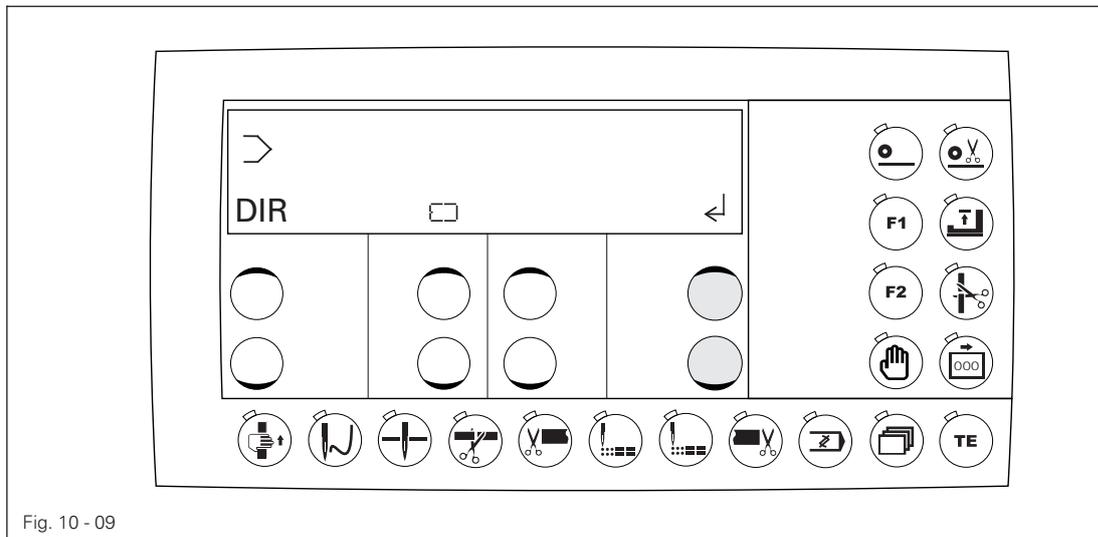
- Open the cover 1.
- Press gently on the SD card 2 – the SD card will be ejected.
- Close the cover 1 again.
- The SD card must be kept for future boot processes.
- The SD card is not a default configuration.



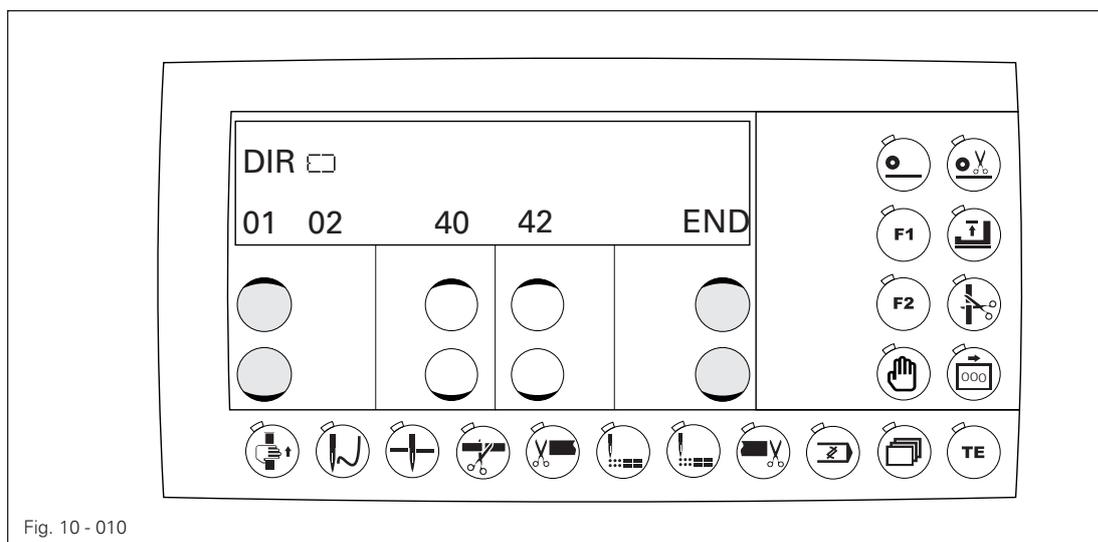
Only use FAT16 format memory cards.

Adjusting the slide 3 makes it possible to activate (LOCK) or deactivate the write protection function on the SD card. The write protection function must be deactivated to store, edit or delete data on the SD card.

10.10.02 Displaying the machine directory



- The contents of the machine memory are displayed after pressing the +/- key under the Enter symbol ↵.
-



- You can scroll through within the display by pressing the right +/- keys. You can switch to the next/previous menu item by pressing the left +/- keys.
-

10.10.03 Displaying the SD card directory

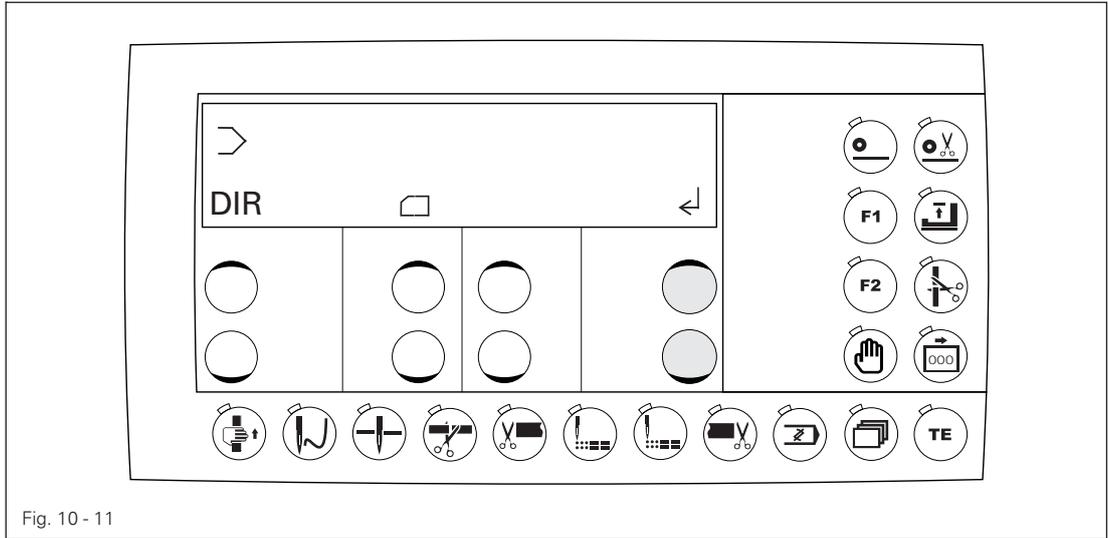


Fig. 10 - 11

- The contents of the SD card are displayed after pressing the +/- key under the Enter symbol ↵.

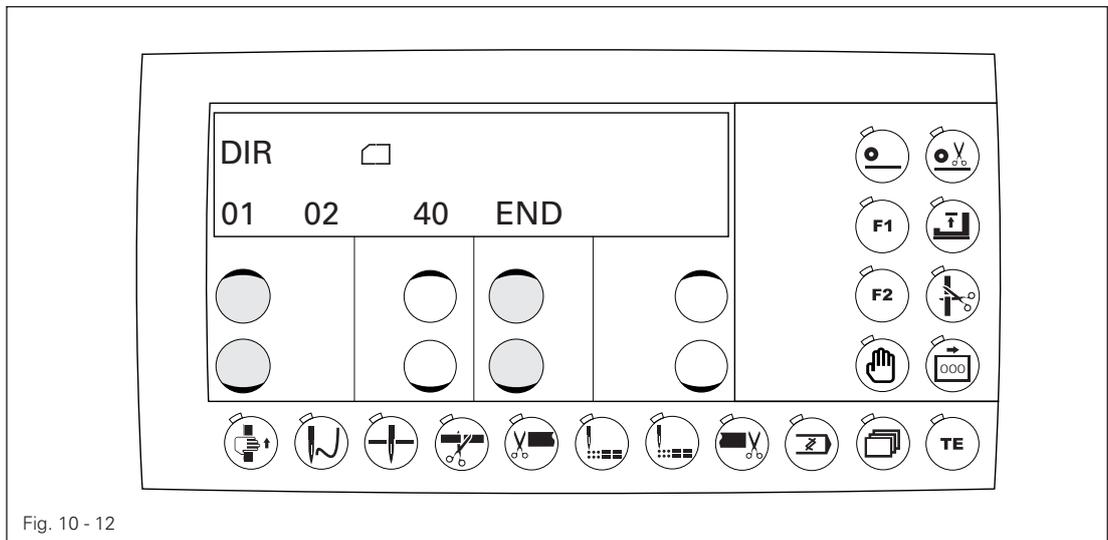


Fig. 10 - 12

- You can scroll through within the display by pressing the right +/- keys. You can switch to the next/previous menu item by pressing the left +/- keys.

10.10.04 Copying program(s) to the SD card

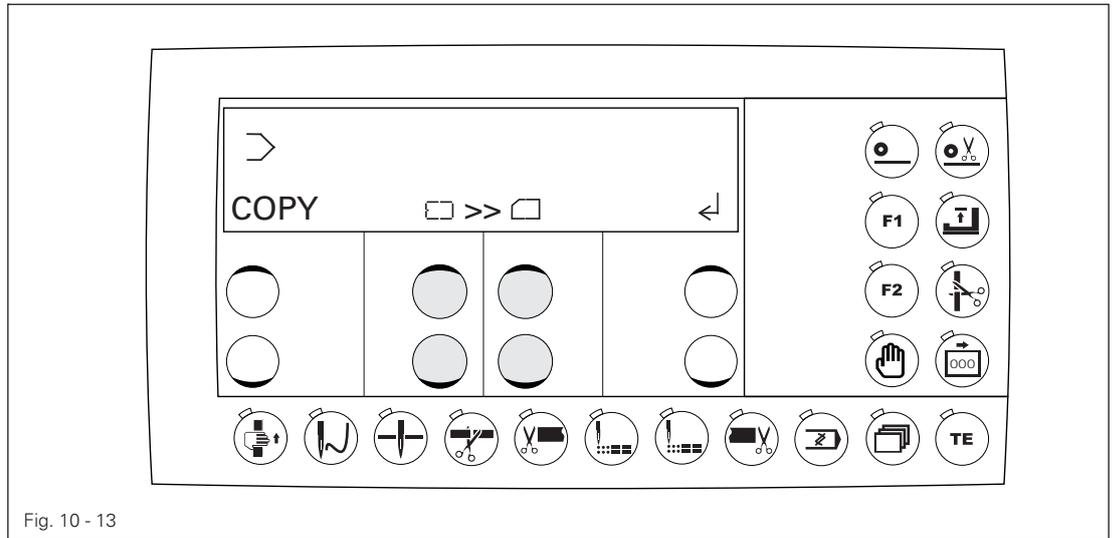


Fig. 10 - 13

- The machine switches from the machine memory to the SD card to enter the copy function after pressing the +/- key under the Enter symbol ↵.

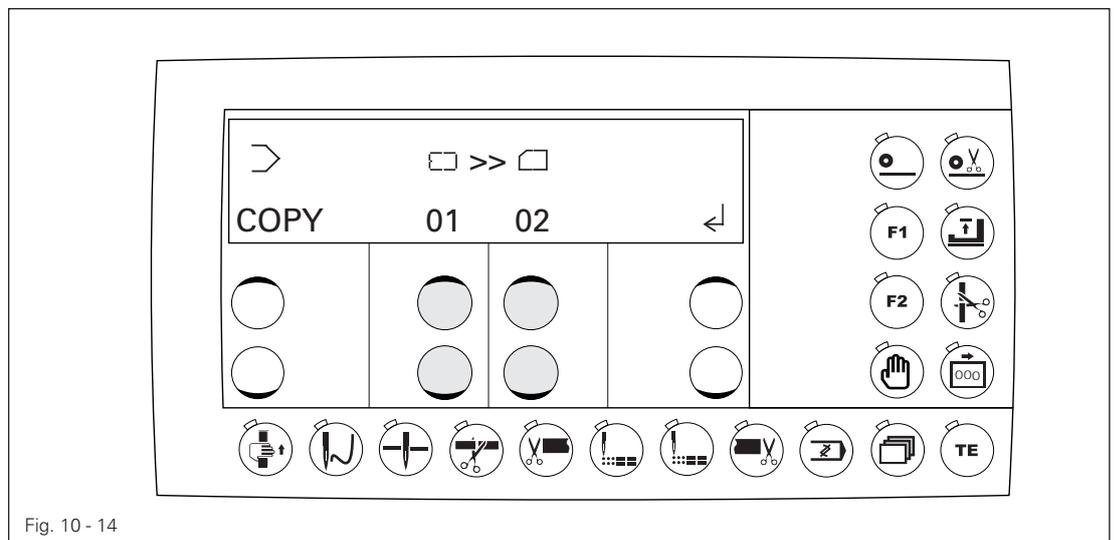


Fig. 10 - 14

- The program numbers of the program that you want to copy in the machine memory □ and on the SD card □ can be selected with the +/- buttons under the values.
- The MD machine data can only be copied to the machine data file.
If the complete machine contents ALL are selected, all programs are copied to the SD card. If a program is already present on the SD card, a prompt for confirmation will be displayed. The right + key confirms that the data will be overwritten. The right – key cancels the overwriting process.

10.10.05 Copying program(s) from the SD card.

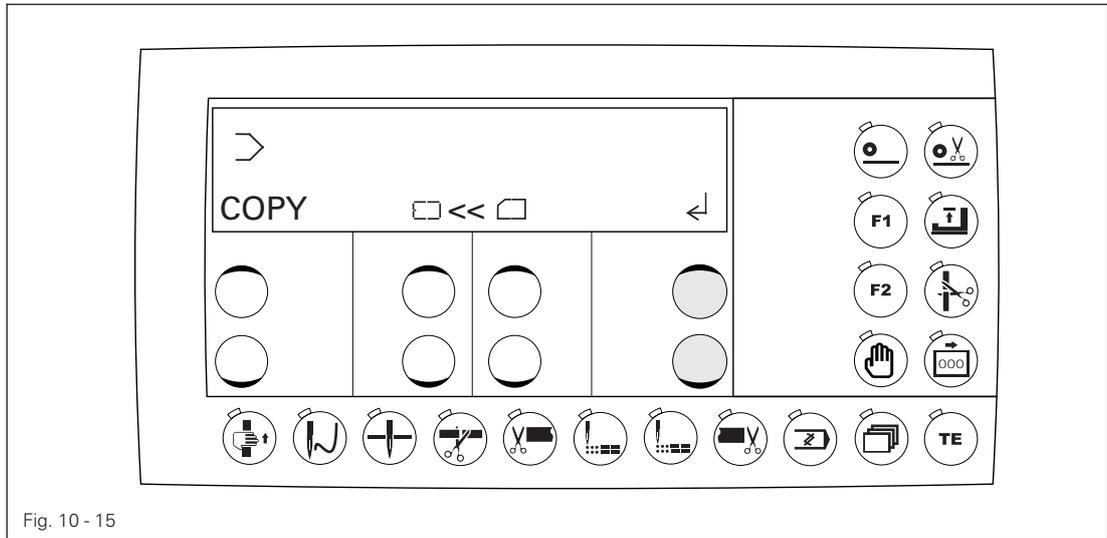


Fig. 10 - 15

- The machine switches from the SD card to the machine memory to enter the copy function after pressing the +/- key under the Enter symbol ↵.

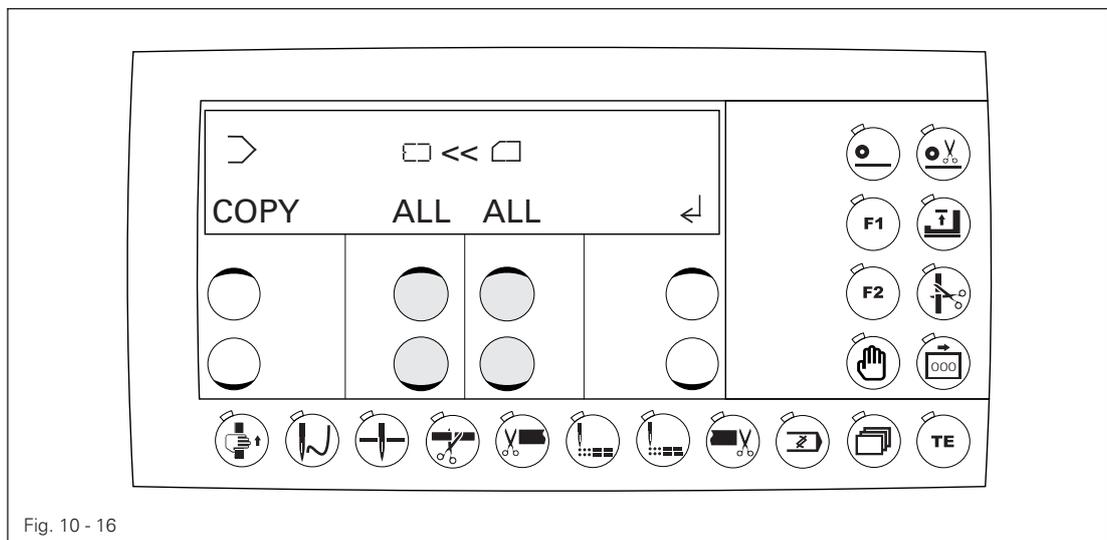


Fig. 10 - 16

- The program numbers of the program that you want to copy in the machine memory and on the SD card can be selected with the +/- keys under the values.
- The MD machine data can only be copied to the machine data file.
If the complete machine contents ALL are selected, all programs are copied to the machine memory.
If a program is already present in the machine memory, a prompt for confirmation will be displayed. The right + key confirms that the data will be overwritten. The right - key cancels the overwriting process.

10.10.05 Deleting program(s) in the machine memory

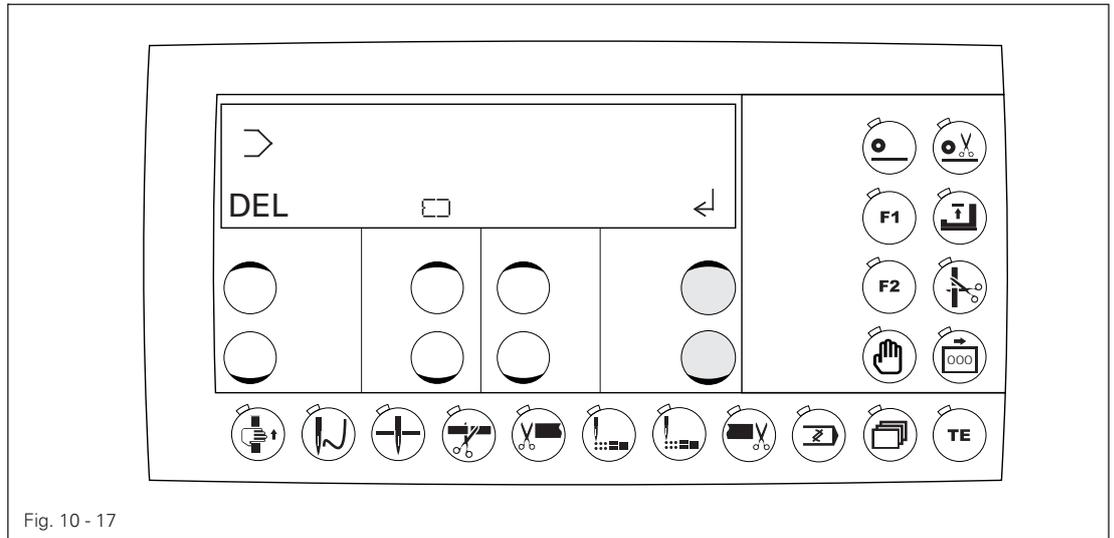


Fig. 10 - 17

- The machine switches to the machine memory to enter the delete function after pressing the +/- key under the Enter symbol ↵.
-

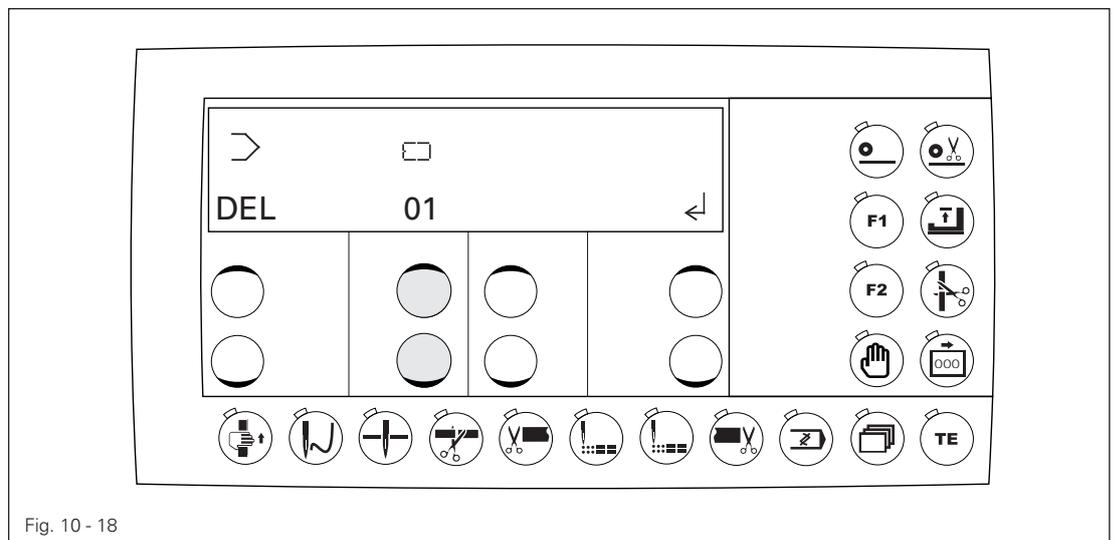


Fig. 10 - 18

You can switch to the program number of the program in the machine memory that you want to delete using the +/- keys.

If the complete machine contents ALL are selected, all programs are deleted.

The MD machine data cannot be deleted.

A prompt for confirmation is displayed before deleting the data. The right + key confirms that the data will be overwritten. The right - key cancels the overwriting process.

10.10.06 Deleting program(s) on the SD card

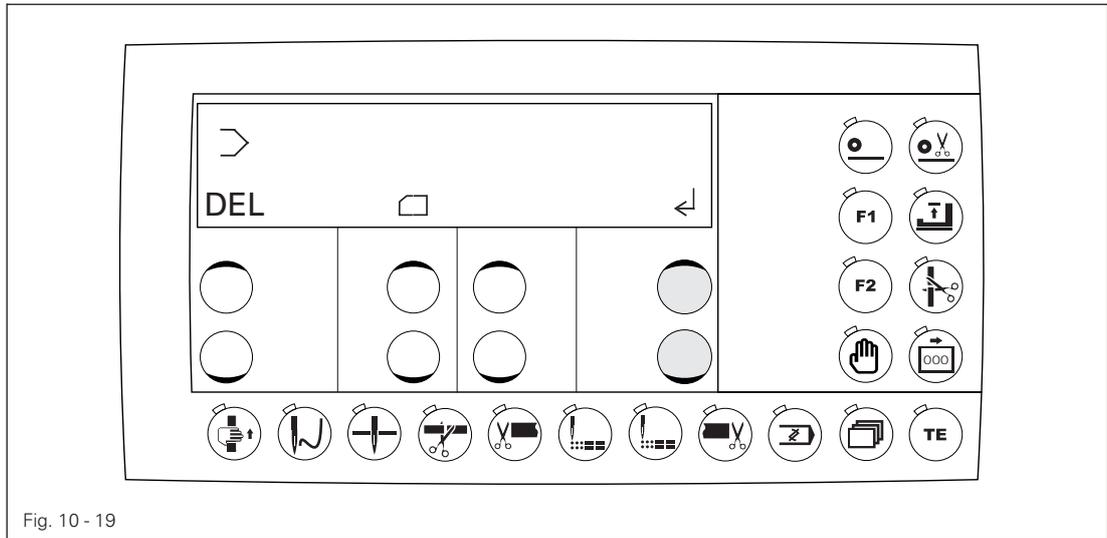


Fig. 10 - 19

- The machine switches to the machine memory to enter the delete function after pressing the +/- key under the Enter symbol ↵.

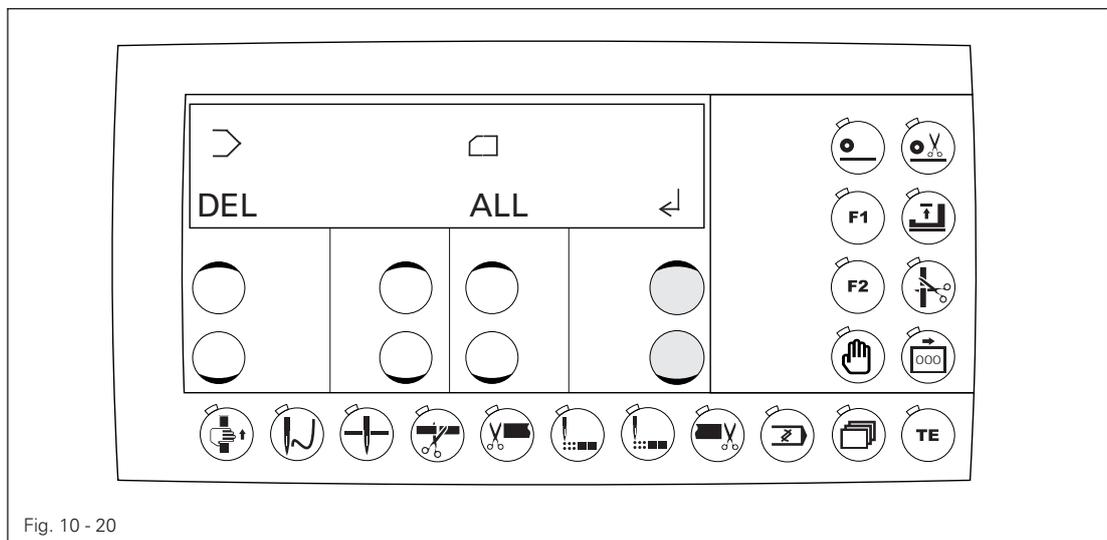


Fig. 10 - 20

- You can select the program number of the program on the SD card □ that you want to delete using the +/- keys under the value.
 - If the complete machine contents ALL are selected, all programs on the SD card are deleted.
- A prompt for confirmation is displayed before deleting the data. The right + key confirms that the data will be overwritten. The right - key cancels the overwriting process.

10.10.07 Formatting the SD card

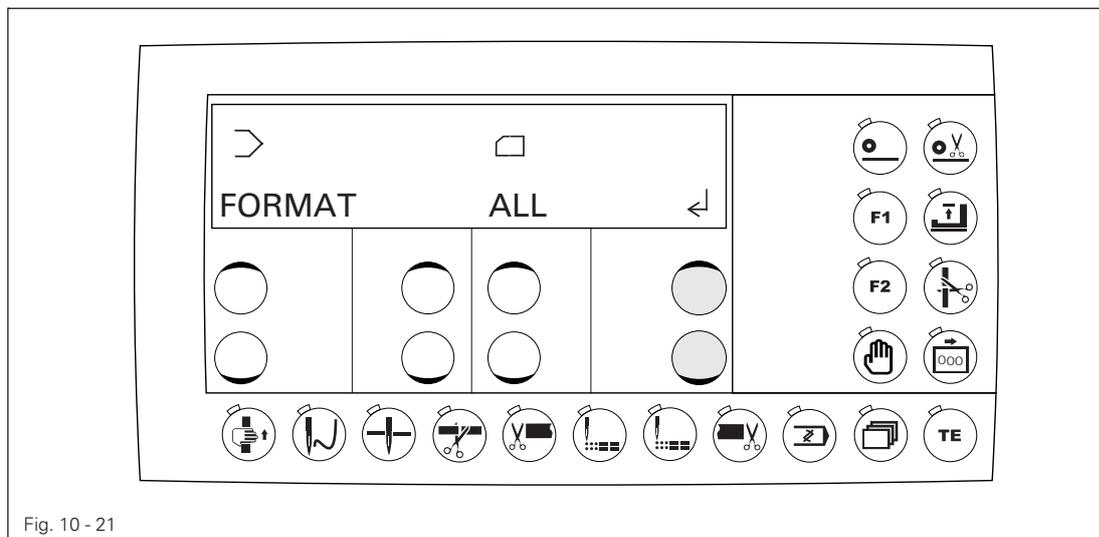


Fig. 10 - 21

- The SD card is formatted after pressing the +/- key under the Enter symbol \leftarrow .
 - A prompt for confirmation is displayed before the SD card is formatted. The right + key confirms that the card will be formatted. The right - key cancels the formatting process.
- The card will be completely formatted if it cannot be read. All files in this directory will be deleted if it can be read and the directory \P3819 for the 3819 exists.
- If the directory \P3819 for the 3819 does not exist, only the directory is created. This is to ensure that programs from other machines and other files are not lost.

Error code	Description
Error 1	System error
Error 2	Sewing motor ERROR 2/BB/xxx
BB =	20 Deadman
	10 Speed
	0B StopX
	0A Reset stitch counter
	09 Write parameter
	05 Position t.d.c. by shortest route
	03 Position t.d.c. in reverse
	02 Position t.d.c. forwards
	30 Timeout for increasing speed
	31 Timeout from uncertain positioning
	32 Timeout from deadman command
	33 Timeout for deleting errors
	34 Timeout for emergency stop
	35 Timeout for writing parameters
	36 Timeout for resetting stitch counter
	37 Timeout for stop command after x stitches
	38 Timeout for initialisation
xxx = sewing motor control unit error (see Motor errors)	39 Establishing contact when turned on
Error 3	Ramp memory too small
Error 4	free
Error 5	Treadle activated when machine turned on
Error 6	free
Error 7	Stepping motor movement
	1. Ramp X not ready
	2. Ramp Y not ready
	3. Time monitoring
Error 8	free
Error 9	Needle thread monitor
Error 10	Lower thread monitor
Error 11	Stepping motor step frequency too high
Error 12	free
Error 13	free
Error 14	free
Error 15	free
Error 16	free

Error 17	free
Error 18	free
Error 19	free
Error 20	free
Error 21	Power supply unit overloaded (24V)
Error 22	Mains voltage
Error 23	Power supply 24V too low
Error 24	free
Error 25	free
Error 26	free
Error 27	1. SD card reader error: No SD card inserted
	2. Incorrect card (does not fit 3819)
	3. Card incorrectly inserted
	4. Card is write-protected
	5. Data error on SD card
	6. Formatting failed
	7. File does not fit 3819
	8. Incorrect file size
	9. Transfer error
	10. File could not be deleted
Error 28	free
Error 29	1. CAN error: Timeout
	2. Incorrect answer
	4. Lost data
Error 30	free

All error messages are acknowledged with the  key. If the  key is pressed, the error is also acknowledged and the machine changes to stitch input mode.

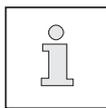
Motor errors

Error code	Description
33	Invalid parameter value
35	Communication error
36	Init. not ready
37	Command overrun
64	Mains off during initialisation
65	Excess current directly after mains on
66	Short circuit
68	Excess current during operation
70	Motor blocked
71	No incremental plug
74	Incremental encoder missing for transmission/ reduction
173	Motor blocked in 1st stitch
175	Internal starting error
222	Dead man monitoring

11 Maintenance and Care

11.01 Maintenance intervals

Cleaning the hook area	daily, several times during continuous operation
Cleaning the complete machine	weekly
Machine oil level	daily, before start-up
Checking / setting the air pressure	as needed
Cleaning the maintenance unit air filter	as needed



These maintenance intervals are based on an average running time of a single shift production shop. Shorter maintenance intervals are recommended for increased running times.

11.02 Cleaning the machine



The required cleaning cycle for the machine depends on the following factors:

- Single or multi-shift operation
- Dust formation caused by the workpieces

Optimal cleaning instructions can therefore only be determined on a case-by-case basis.



Disconnect the machine from the electricity mains for all cleaning work by shutting off the main switch or removing the mains plug! Risk of injury due to accidental machine start-up!

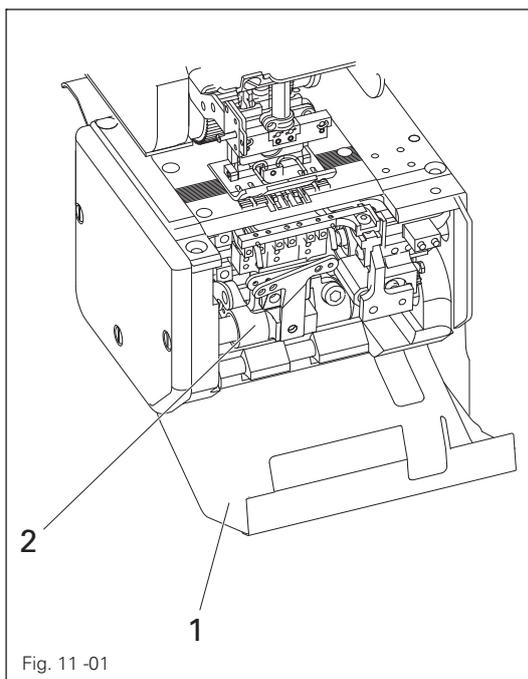


Fig. 11 -01

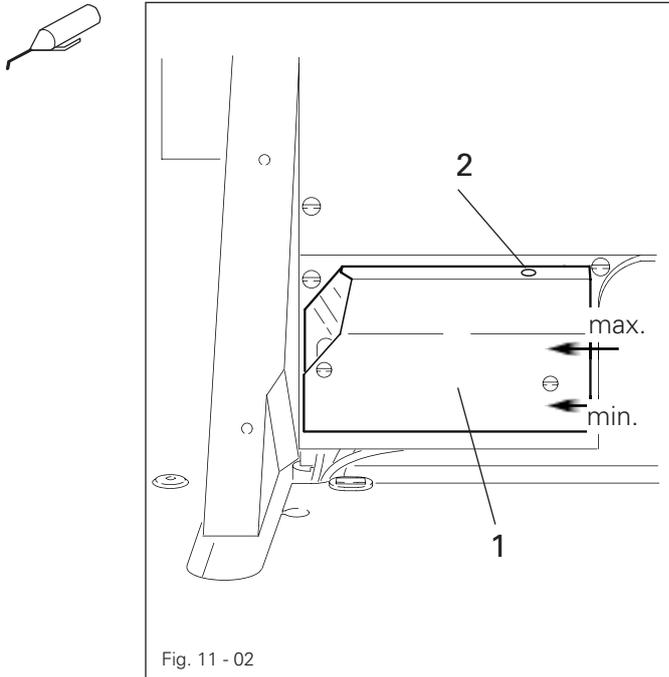
The following tasks are recommended during a single shift operation to avoid operational errors:

- Open the hook area cover 1.
- Daily, clean the hook area 2 more frequently during continuous operation.
- Close the gripper area cover!



Only operate the machine when the hook room cover is closed!
Risk of injury due to moving parts!

11.03 Checking / topping up the oil level of the oil tank for the front parts



Check the oil level before every start-up.

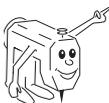
The oil level must not drop below the "min." marking and rise above the "max." marking.

The oil level must always be visible in the sight glass 1.

● Add oil to the container through the hole 2 as needed

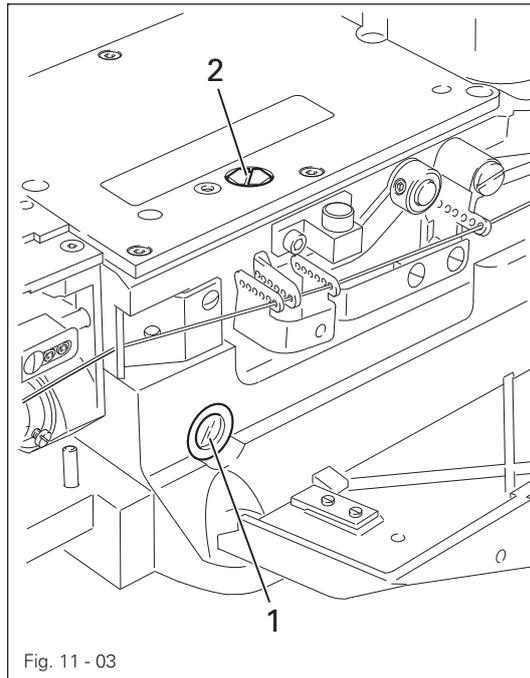


Only use oil with a centre viscosity of $22.0 \text{ mm}^2/\text{s}$ at $40 \text{ }^\circ\text{C}$ and a density of 0.865 g/cm^3 at $15 \text{ }^\circ\text{C}$.



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

11.04 Checking / topping up the oil level of the gear mechanism



Switch off the machine!
Risk of injury due to accidental machine start-up!



Open the side cover and check the oil level before every machine start-up.
The oil level must always be visible in the sight glass 1 (if no air bubble is visible, then the oil level is too high).

- Remove the screw 2 as needed and add only enough oil for an air bubble to remain visible.
- Replace the screw 2.

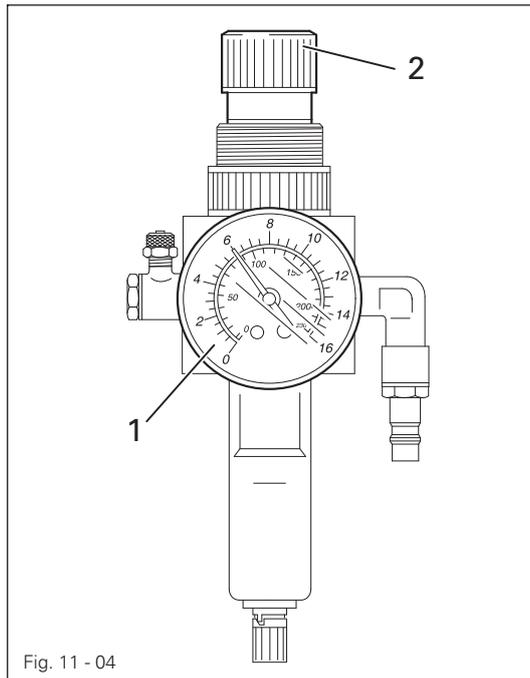


Only use oil with a centre viscosity of 22.0 mm²/s at 40 °C and a density of 0.865 g/cm³ at 15 °C.



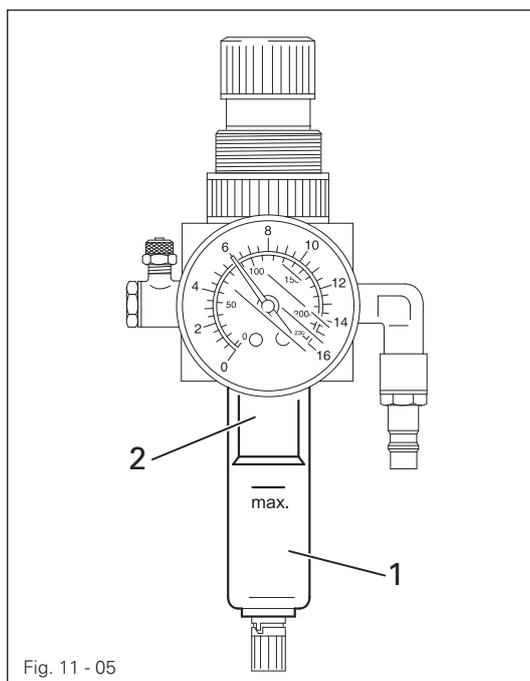
We recommend PFAFF sewing machine oil part no. 280-1-120 144.

11.05 Checking / setting the air pressure



- Check the air pressure on the manometer 1 before every start-up.
- The manometer 1 must show a pressure of 6 bar.
- Adjust this value if needed.
- Pull up the button 2 for this and turn it out of position accordingly.

11.06 Emptying / cleaning the maintenance unit's water tank



Switch the machine off.
Detach the compressed air tube on the maintenance unit.

Empty the water tank

- The water tank 1 empties itself automatically after the compressed air tube for the maintenance unit has been removed.

Clean the filter

- Unscrew the water tank 1 and take out the filter 2.
- Clean the filter with compressed air or isopropyl alcohol, part number 95-665 735-91.
- Screw in the filter 2 and screw on the water tank 1.

12

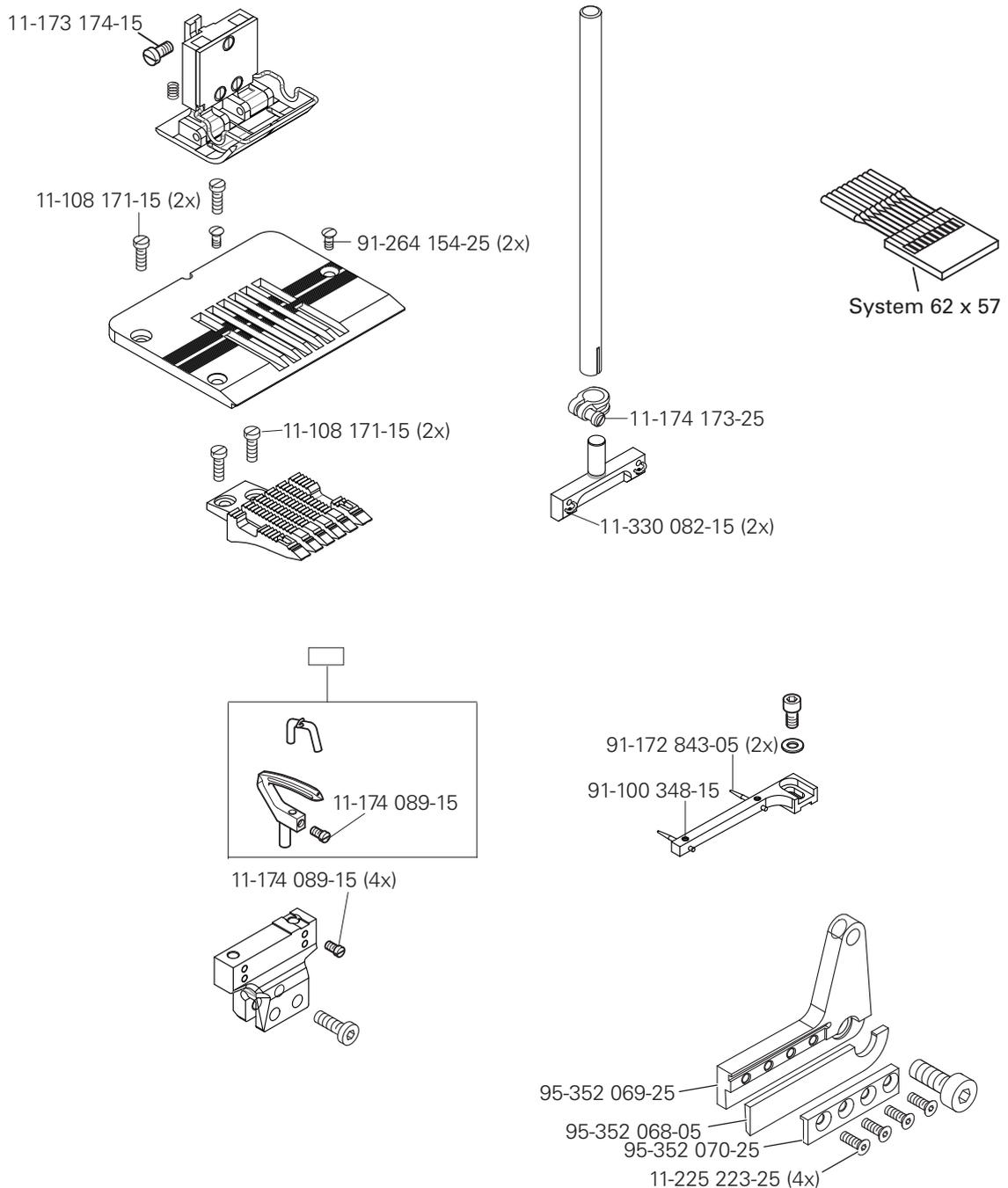
Wearing Parts



This list shows the most important wearing parts.

A detailed parts list for the complete machine can be downloaded at www.pfaff-industrial.de/de/service-support/downloads/technical.

As an alternative to the Internet download, the parts list can also be requested as a hard copy under order no. 296-12-19 290.





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Wachstum durch Innovation – EFRE

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