PFAFF® Industrial

KSL

1571
1574

INSTRUCTION MANUAL

1591
1593

This instruction manual applies to machines from the serial number # **7 278 700** onwards.

This instruction manual applies to all models and subclasses listed in **chapter 3 Technical Data**.

The adjustment manual for the machine can be downloaded at no charge under **www. pfaff-industrial.de/de/service-support/downloads/technical**. As an alternative to the Internet download, the adjustment manual can also be ordered as a hard copy under order no. **296-12-19 402/002**.

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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 and bobbin) 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!

● 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 the 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.

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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!

Danger to operating personnel or technical staff

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 oper-
ating 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 safe-
ty 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 equipping, 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 and secure it against reactivation before starting any adjustment and repair work!
● Never work on live parts and equipment!
  Exceptions are regulated by the EN 50110 standards.
● Reattach the safety covers following repair and maintenance work!

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1.06 Danger warnings

A work area of **1 m** must be kept free in front of and behind the machine 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!
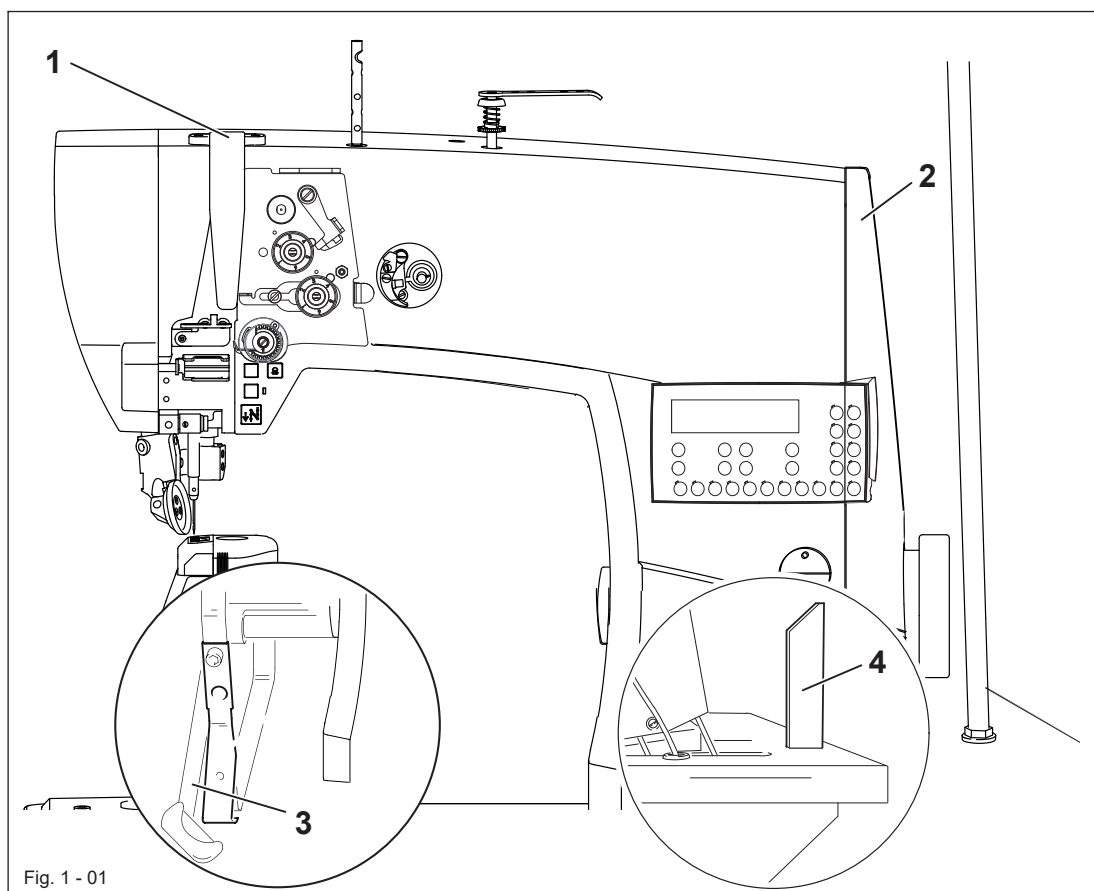
Fig. 1 - 01

Do not operate the machine without the take-up lever guard **1**!
Risk of injury due to the motion of the take-up lever!

Do not operate the machine without the belt guard **2**!
Risk of injury due to the rotating driving belt!

Do not operate the machine without the anti-tipping device **3**!
Risk of injury by crushing between the sewing head and the table top!

Do not operate the machine without the support **4**! Risk of damage due to the top-heavy sewing head!
Machine can tip over backwards when moving it!

2   Proper Use

The **PFAFF 1571** is a single needle post-bed high-speed seamer (post is positioned to the left of the needle) with forwards- and backwards-moving feed wheel and roller presser plus feed-synchronised needle.

The **PFAFF 1574** is a two-needle post-bed high-speed seamer with forwards- and backwards-moving feed wheel and roller presser.

The **PFAFF 1591** is a single needle post-bed high-speed seamer (post is positioned to the right of the needle) with forwards- and backwards-moving feed wheel and roller presser plus feed-synchronised needle.

The **PFAFF 1593** is a single needle post-bed high-speed seamer (post is positioned to the right of the needle) with forwards- and backwards-moving feed wheel and roller presser.

The machines are used to create double lock stitch seams in the leather and upholstery industries.

⚠️ 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 1571

Stitch type: .... 301 (lockstitch)

Needle system: 134

Model BN7: ....for the machining of medium-weight materials

Model CN7:... for the machining of medium-heavy materials

Needle size in 1/100 mm:

Model BN7: ....80 - 100

Model CN7: .... 110 - 140

Stitch length max: .... 7.0 mm

Speed max.:

Model BN7 .... 3000 stitches/min ◆

Model CN7 .... 2000 stitches/min ◆

Trimming margin (for -725/..) .... 1.2 - 1.5 mm

Cutting speed (for -725/..)..2800 cuts/min.

Clearance beneath the roller presser for dia. 25 mm; dia. 30 mm and dia. 35 mm:....... 12 mm

Passage width: .... 245 mm

Clearance height:.. 115 mm

Post height.. 180 mm

Bed plate dimensions: .... 518 x 177

Sewing head dimensions

Length:... approx. 562 mm

Width:... approx. 250 mm

Height (above table): .... approx. 505 mm

Motor data:..see motor specification plate

Noise data

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

Model B:

Emissions sound pressure level in the workplace at n = 2800 min^{-1}: .... L_{pA} = 80 dB(A)■

Model C:

Emissions sound pressure level in the workplace at n = 1600 min^{-1}: ....L_{pA} = 74 dB(A ■)

Net weight of sewing head:.. approx. 64 kg

Gross weight of sewing head:... approx. 74 kg

▲   Subject to alterations.

◆   Depending on the material, workstep and stitch length.

■ K_{pA} = 2,5 dB

3.02	**PFAFF 1574**

Stitch type: .... 301 (lockstitch)

Needle system: 134-35

Model BN7: ....for the machining of medium-weight materials

Model CN7: .... for the machining of medium-heavy materials

Needle size in 1/100 mm:

Model BN7: .... 80 - 100

Model CN7: .... 110 - 140

Stitch length max: .... 7.0 mm

Speed max.:

Model BN7 .... 3000 stitches/min ◆

Model CN7 .... 2000 stitches/min ◆

Trimming margin (for -725/..) .... 1.2 - 1.5 mm

Cutting speed (for -725/..) ....2800 cuts/min.

Clearance beneath the roller presser for dia. 25 mm; dia. 30 mm and dia. 35 mm:....... 12 mm

Passage width: .... 245 mm

Clearance height:.. 115 mm

Post height... 180 mm

Bed plate dimensions: .... 518 x 177

Sewing head dimensions

Length:.. approx. 562 mm

Width:.. approx. 250 mm

Height (above table): .... approx. 505 mm

Motor data:..see motor specification plate

Noise data

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

Model B:

Emissions sound pressure level in the workplace at n = 2800 min^{-1}: .... L_{pA} = 81 dB(A)■

Model C:

Emissions sound pressure level in the workplace at n = 1600 min^{-1}: ....L_{pA} = 74 dB(A ■)

Net weight of sewing head:... approx. 68 kg

Gross weight of sewing head:.. approx. 78 kg

▲   Subject to alterations.

◆   Depending on the material, workstep and stitch length.

■ K_{pA} = 2,5 dB

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3.03   **PFAFF 1591**

Stitch type: .... 301 (lockstitch)

Needle system: 134

Model BN7: ....for the machining of medium-weight materials

Model CN7: .... for the machining of medium-heavy materials

Needle size in 1/100 mm:

Model BN7: ....80 -100

Model CN7: .... 110 - 140

Stitch length max .... 7.0 mm

Speed max.:

Model BN7 .... 3000 stitches/min ◆

Model CN7 .... 2000 stitches/min ◆

Trimming margin (for -725/..) .... 1.2 - 1.5 mm

Cutting speed (for -725/..)..2800 cuts/min.

Clearance beneath the roller presser for dia. 25 mm; dia. 30 mm and dia. 35 mm:....... 12 mm

Passage width: .... 245 mm

Clearance height:.. 115 mm

Post height.. 180 mm

Bed plate dimensions: .... 518 x 177

Sewing head dimensions

Length:... approx. 562 mm

Width:... approx. 250 mm

Height (above table): .... approx. 505 mm

Motor data:..see motor specification plate

Noise data

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

Model B:

Emissions sound pressure level in the workplace at n = 2800 min^{-1}: .... L_{pA} = 80 dB(A)■

Model C:

Emissions sound pressure level in the workplace at n = 1600 min^{-1}: ....L_{pA} = 74 dB(A ■)

Net weight of sewing head:... approx. 64 kg

Gross weight of sewing head:.. approx. 74 kg

▲   Subject to alterations.

◆   Depending on the material, workstep and stitch length.

■ K_{pA} = 2,5 dB

| 3.04 | **PFAFF 1593** |

Stitch type: ....301 (lockstitch)

Needle system: 134

Model BN7: ....for the machining of medium-weight materials

Needle size in 1/100 mm:

Model BN7: ....80 -100

Stitch length max ....7.0 mm

Speed max.:

Model BN7 .... 3000 stitches/min ♦

Clearance beneath the roller presser for dia. 25 mm; dia. 30 mm and dia. 35 mm:....... 12 mm

Passage width: ....245 mm

Clearance height:...115 mm

Post height..180 mm

Bed plate dimensions: .... 518 x 177

Sewing head dimensions

Length:.. approx. 562 mm

Width:.. approx. 250 mm

Height (above table): .... approx. 505 mm

Motor data:...see motor specification plate

Noise data

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

Emissions sound pressure level in the workplace at n = 2800 min^{-1}: ....L_{pA} = 80 dB(A)■)

Net weight of sewing head:.. approx. 64 kg

Gross weight of sewing head:... approx. 74 kg

▲   Subject to alterations.

♦   Depending on the material, workstep and stitch length.

■ K_{pA} = 2,5 dB

4   Disposal of the Machine

● 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!

4.01   Environmental protection

Careless disposal of the machine and its components may lead to environmental pollution.

➟

➟ ● Dismantle assemblies into individual components. Dismantling must only be carried out by
   by qualified personnel! Springs under tension must be relieved before disassembly.

➟ ● Dispose of the components in a proper and environmentally friendly manner while adhering to all statutory and operational regulations.

The final decommissioning and disposal requires a complete disconnection of the entire power supply, the dismantling of the mechanical components and the disposal of the media that may remain in the machine.

All safety and environmental aspects must be taken into consideration when dismantling and [recycling] of the machine.

Risk of environmental damage!
● Observe the applicable national and regional regulations and the manufacturer's instructions when disposing of the machine.
● Segregate the different operating and auxiliary materials and dispose of them in a proper manner.

Risk of fatal injury from electric shock!
● Disconnect the power supply when carrying out the dismantling and disconnection work.
● Work to disconnect the electrical components must only be carried out by qualified electricians.

Risk of uncontrolled machine movements!

Sufficient energy reserves remain in various supply systems (e.g. electrics, electronics, pneumatics) after disconnecting the power supply (emergency stop switch) that could have dangerous consequences in the case of intervention by an unqualified person.

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. The relevant safety regulations must be observed.

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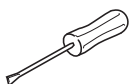
Maintenance, repairs, adjustment, service work
(only to be carried out by technical staff)

7 Operating Controls

7.01 Main switch

ℹ️ Before switching on the machine, raise the take-up lever as far as possible.

Fig. 7 - 01
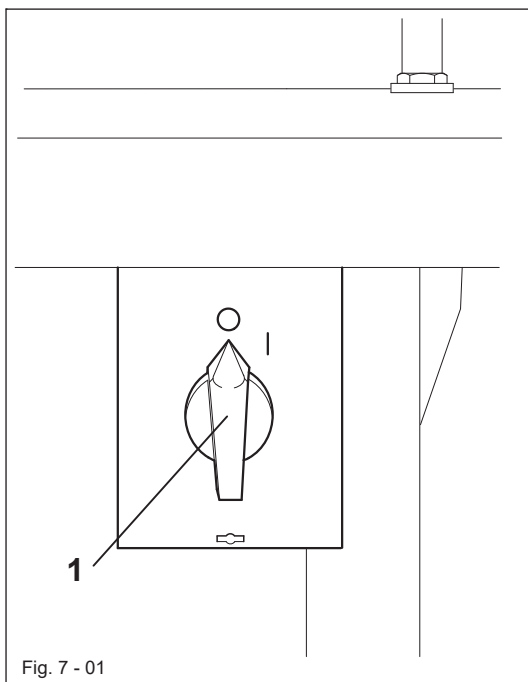
● Turning the main switch **1** switches the machine on and off.

7.02 Keys on the machine head

Fig. 7 - 02
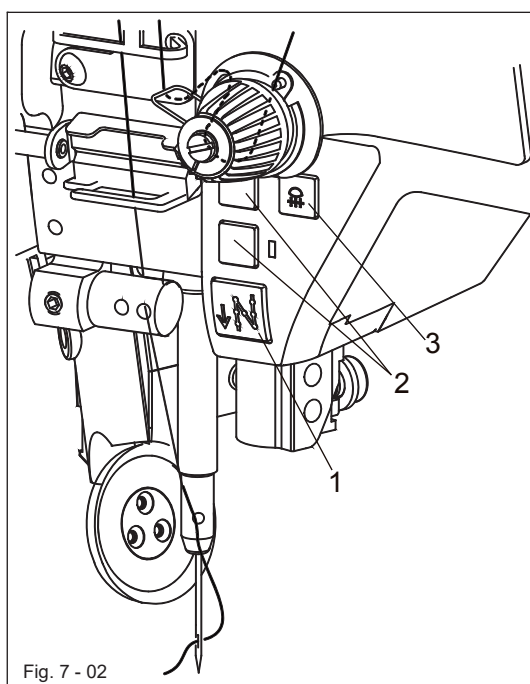
● The machine sews backwards as long as the key **1** is pressed during the sewing operation.

● The keys **2** can be assigned functions using parameters "**8005**" and "**8006**". (See chapter **11**.**0**7 Parameter settings).

● The sewing lamp integrated on the machine head is switched on and off with the key **3**.

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7.03 Bobbin thread monitoring using the stitch count
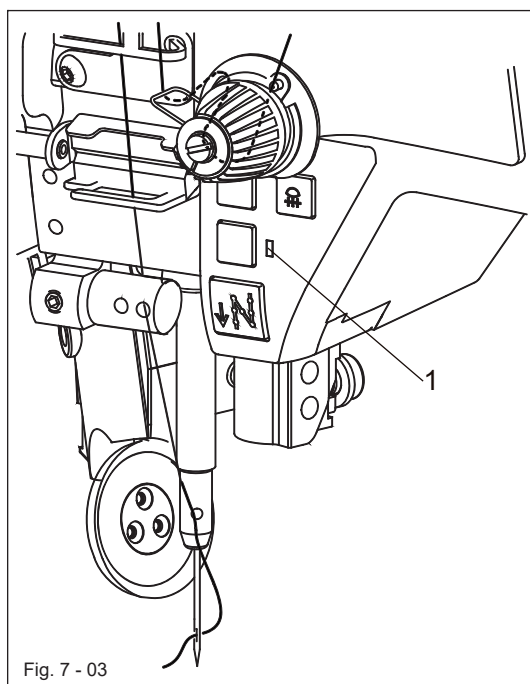
Fig. 7 - 03

● The diode **1** flashes on reaching the predefined stitch count.

● The stitch count re-starts after trimming the thread and changing the bobbin.
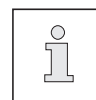
> ℹ️ For presetting the stitch count please refer to chapter **9.10 Setting the bobbin stitch counter**.

7.04 Pedal

0
+1
-1
-2
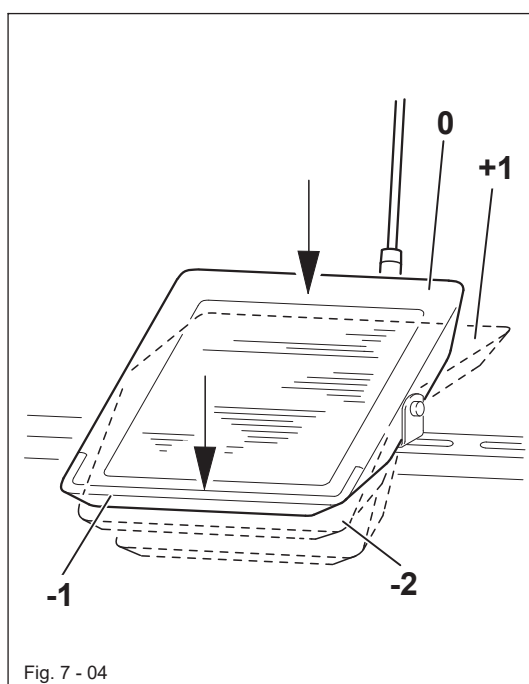
Fig. 7 - 04

● With the main switch turned on

0	=	Neutral position
+1	=	Sewing
-1	=	Raise roller presser
-2	=	Trim thread
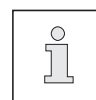
> ℹ️ Other pedal functions can be set through the programming, see chapter **10 Sewing**.

Operating Controls

7.05   **Hand lever to raise the roller presser**
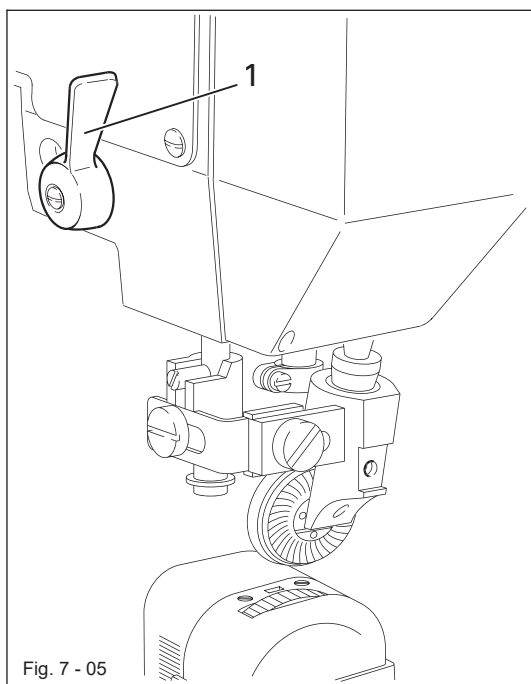
Fig. 7 - 05

● Turning the hand lever **1** raises the roller presser.

7.06   **Swivelling out the roller presser**
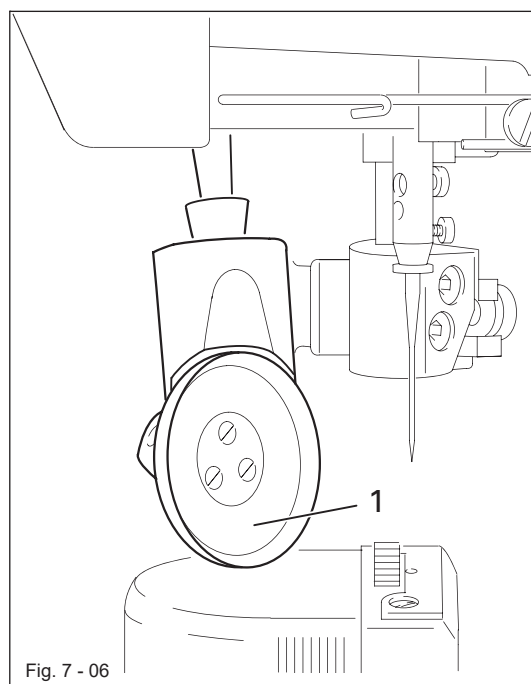
Fig. 7 - 06

● The roller presser **1** can be swivelled out by gently pulling downwards when the roller presser is in the raised position.

7.07   Knee switch
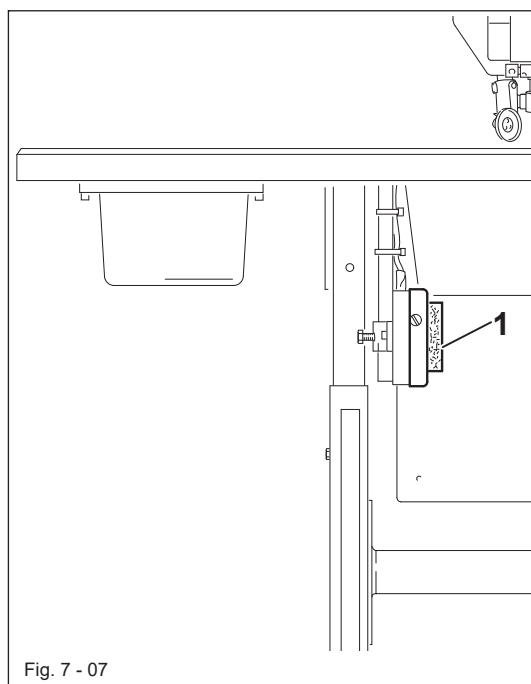
Fig. 7 - 07

● By pressing the knee switch 1 can be selected between program 1 with 2 seam sections and different stitch length and program 2 with 3 seam sections and different stitch length.

● It is possible to move to the next seam zones in programmed sewing by using the knee switch **1**.

The function of the knee switch **1** must be activated on the control panel, see chapter **10 Sewing**.

7.08   Knee lever
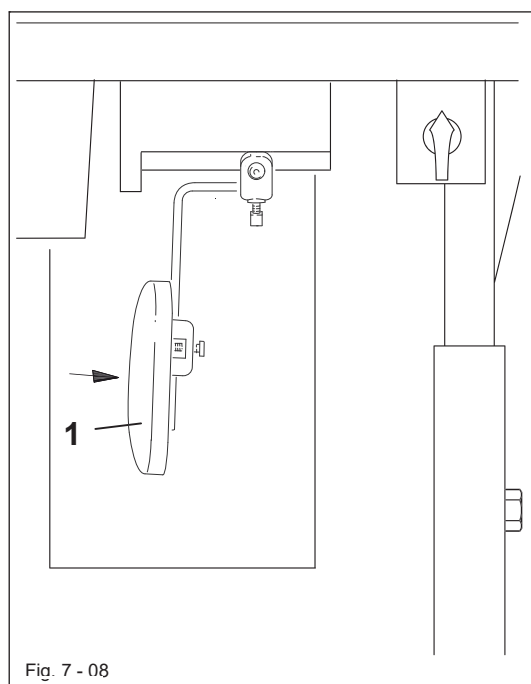
Fig. 7 - 08

● Pressing the knee lever **1** in the direction shown by the arrow raises the roller presser.

7.09   **Edge trimmer -725/04 for PFAFF 1571**
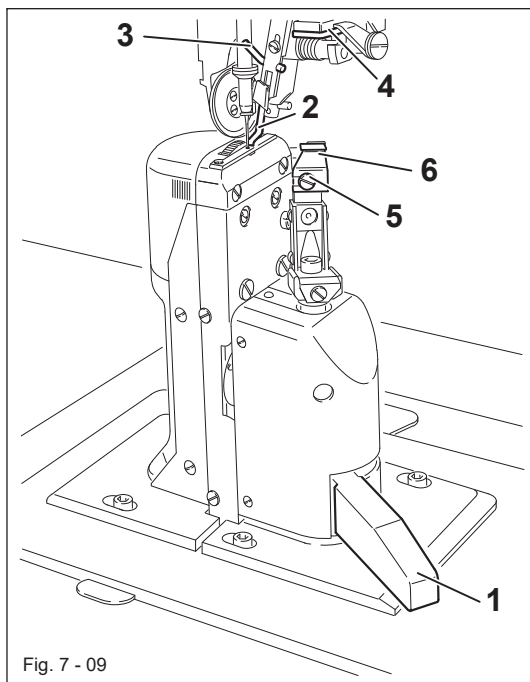
Fig. 7 - 09

Do not reach into the knife during operation! Risk of injury!

Switching on the knife drive:
● Swivel the lever **1** backwards; the knife moves to the operating position.

Switching off the knife drive:
● Press the lever **1**; the knife swivels away backwards.

Switching on the edge guide:
● Swing in the edge guide **2** by hand and press the lever **3**; the edge guide **2** moves to the operating position.

Switching off the edge guide:
● Raise the edge guide **2** and allow it to engage; the edge guide **2** is out of operation.
● Raise the lever **4**; the edge guide swivels away backwards.

Replacing knives:

The work described below may only be carried out by technical staff or people with appropriate training!

● Switch the machine off.
● Release the screw **5** and remove the knife **6**.
● Insert a new knife and gently tighten the screw **5**.
● Adjust the knife as described in chapter **15.05.05 Knife movement** of the adjustment manual and tighten the screw **5**.

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7.10 Edge trimmer -725/04 for PFAFF 1574 and 1591

Fig. 7 - 10

Do not reach into the knife during operation! Risk of injury!

Switching on the knife drive:

● Swivel the lever **1** backwards; the knife moves to the operating position.

Switching off the knife drive:

● Press the lever **1**; the knife swivels away backwards.

Switching on the edge guide:

● Swing in the edge guide **2** by hand and press the lever **3**; the edge guide **2** moves to the operating position.

Switching off the edge guide:

● Raise the edge guide **2** and allow it to engage; the edge guide **2** is out of operation.

● Raise the lever **4**; the edge guide swivels away backwards.

Replacing knives:

The work described below may only be carried out by technical staff or people with appropriate training!

● Switch the machine off.

● Release the screw **5** and remove the knife **6**.

● Insert a new knife and slide it fully towards the needle plate insert **7**.

● Gently tighten the screw **5**.

● Adjust the knife as described in chapter **15.05.07 Knife position** of the adjustment manual and tighten the screw **5**.

7.11 Control panel

Machine functions for set-up and sewing, to enter parameters and service settings are displayed and called up via the control panel.
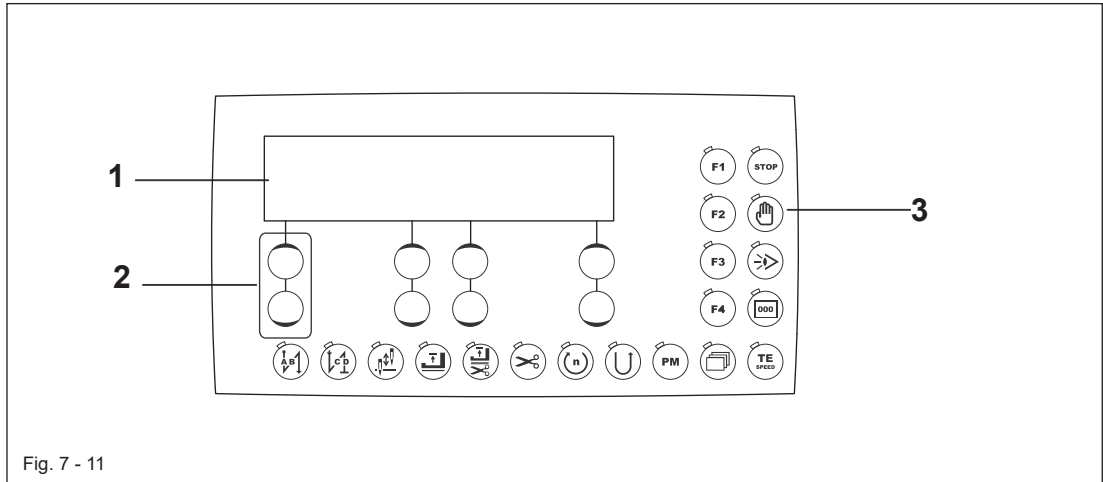
Fig. 7 - 11

The control panel consists of the following operating and display controls:

● The display **1** comprises a two-line alphanumeric LCD display with **16** characters per line and is used to display relevant information and the selection of parameters.

● The +/- keys **2** are used to select or change the functions and parameters displayed.

● The function keys **3** are used to switch the relevant function on or off. Switched-on functions are each indicated by an illuminated LED lamp.

7.11.01 What appears on the display

Besides the texts and setting values, the following symbols are shown on the display.
The symbols appear solely in programmed sewing mode, see chapter **10**.**02 Programmed sewing.**

P⟩	Current program number
⊹	Current seam section
T⟩	Seam input via "teach-in"
DEL⟩	Deleting a program
▯▯▯	Stitch count in the current seam zone
⟲	Maximum speed in the current seam zone
▬	Stitch length (feed motion) for the roller presser
▬	Stitch length (feed motion) for the feed wheel

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7.11.02 +/- keys
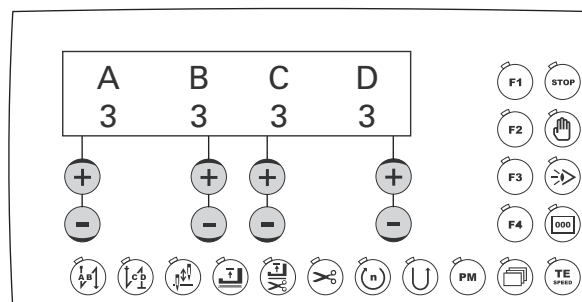
Setting values (e.g. input of backtack stitches) are selected and changed using the respective +/- keys. Pressing and holding the corresponding +/- key will slowly change the number value shown above the key. The change to the number value will be made quicker if the +/- key is held for a longer period of time.

7.11.03 Function keys

An active function is always indicated by a corresponding illuminated LED lamp.
Detailed functional description: Start backtack

Start backtack
● The seam lock at seam start (start backtack) is turned on or off by pressing this key. The number of start backtack forward stitches (A) or backward stitches (B) can be changed in manual sewing by pressing the respective key underneath. Reset the corresponding partial seam stitch count to zero to convert from double backtack to single backtack.

End backtack
● The seam lock at seam end (end backtack) is turned on or off by pressing this key. The number of start reverse stitches (C) or forward stitches (D) can be changed in manual sewing by pressing the respective +/- key underneath. Reset the corresponding partial seam stitch count to zero to convert from double backtack to single backtack.

Needle position up after sewing stop
● The "needle position up after sewing stop" function is turned on or off by pressing this key. If this function is on, the needle moves to top dead centre when sewing stops.

Foot position after stop
● The "foot position up after sewing stop" function is turned on or off by pressing this key. If this function is on, the sewing foot is raised when sewing stops.

Foot position after thread trimming
● The "foot position up after thread trimming" function is turned on or off by pressing this key. If this function is on, the sewing foot is raised after the thread has been trimmed.

Thread trimming
● The "thread trimming" function is switched on or off by pressing this key.

Operating Controls

Speed
- With this key, a maximum speed for each seam zone can be defined which is only activated in the corresponding seam zone.

Reverse sewing (only for programmed sewing)
- If this key is pressed, the reverse sewing function is switched on or off.

Program interrupt
- The automatic processing of a sewing program is interrupted by pressing this key. The stitch count is switched off and a few processes vary.

Stop
- The machine stops automatically at the seam zone end in programmed sewing when the function is turned on.

Photo cell
- The corresponding function is switched on and off by pressing this key. If this function is on, the machine moves to the next seam zone via the photo cell.

Stitch count (only for programmed sewing)
- The corresponding function is switched on and off by pressing this key. If this function is on, the machine moves to the next seam zone after sewing the number of stitches entered.

TE/speed
- If this key is pressed once, the speed limit for the programmed sewing mode is activated.
- If this key is pressed twice (within 5 seconds) the machine changes from sewing mode to input mode.

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

PM / mode
- If this key is pressed, the programmed sewing function is switched on or off. The program-specific parameters are shown in the alphanumeric part of the display.

F1
- If this key is pressed, the placed stitch position is switched on or off when sewing begins. The corresponding needle position is set using the key and by turning the handwheel.

F2
- No function is assigned.

F3
- The corresponding function is switched on and off by pressing this key. If this function is on, the machine moves to the next seam zone by using the knee switch.

F4
- If this key is pressed, the next backtack is not stitched. If this key is pressed twice, the next two backtacks are not stitched.

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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!

If the machine was delivered without a table, then the stand and the table top provided must safely support the weight of the machine and its motor.

Adequate stability of the stand must be guaranteed, even during the sewing operations.

8.01 **Set-up**

Suitable electrical supply connections must be provided at the erection site, see **chapter 3 Technical Data**. The erection site must also have a firm and level subsurface and adequate lighting.

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

8.01.01 Setting the table height
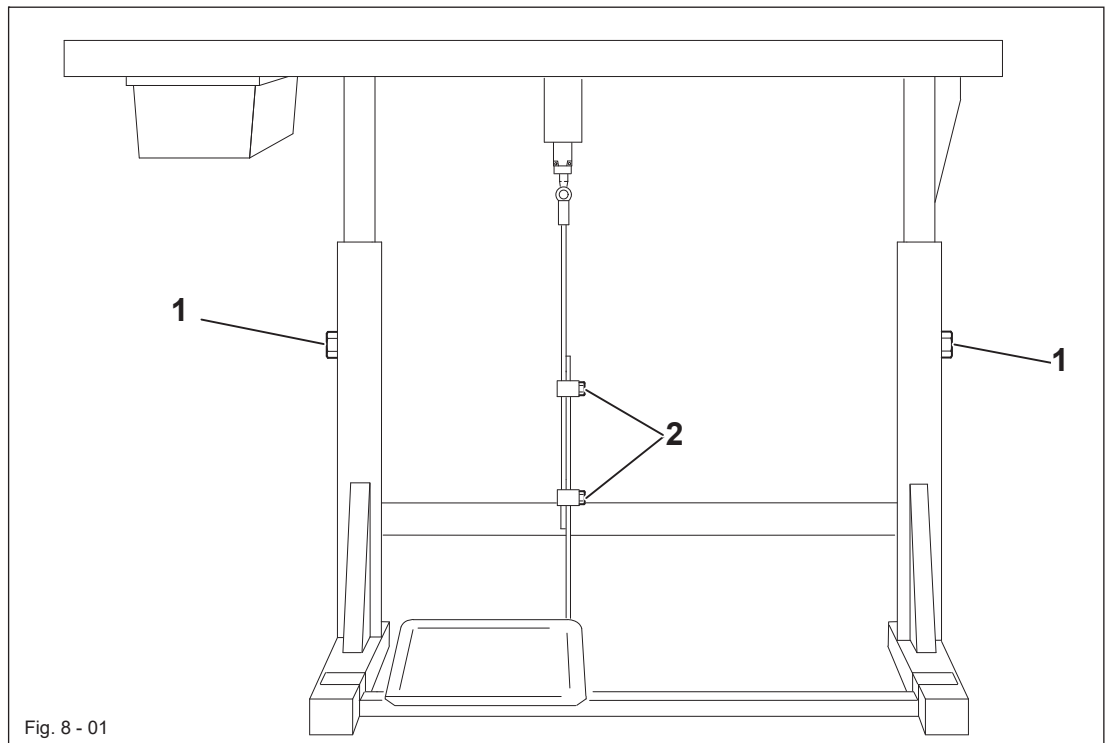
Fig. 8 - 01

● The stand must have all four feet firmly on the ground to make sure it is positioned securely.

● Loosen the screws **1** and **2**.

● Move the table top to the desired working height by pulling it out and pushing it in and align the table top horizontally.

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

● Firmly tighten the screws **1**.

● Adjust and tighten the desired pedal position on the screws **2**.

8.01.02   Inserting the sewing machine into the stand

Fig. 8 - 02
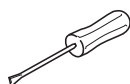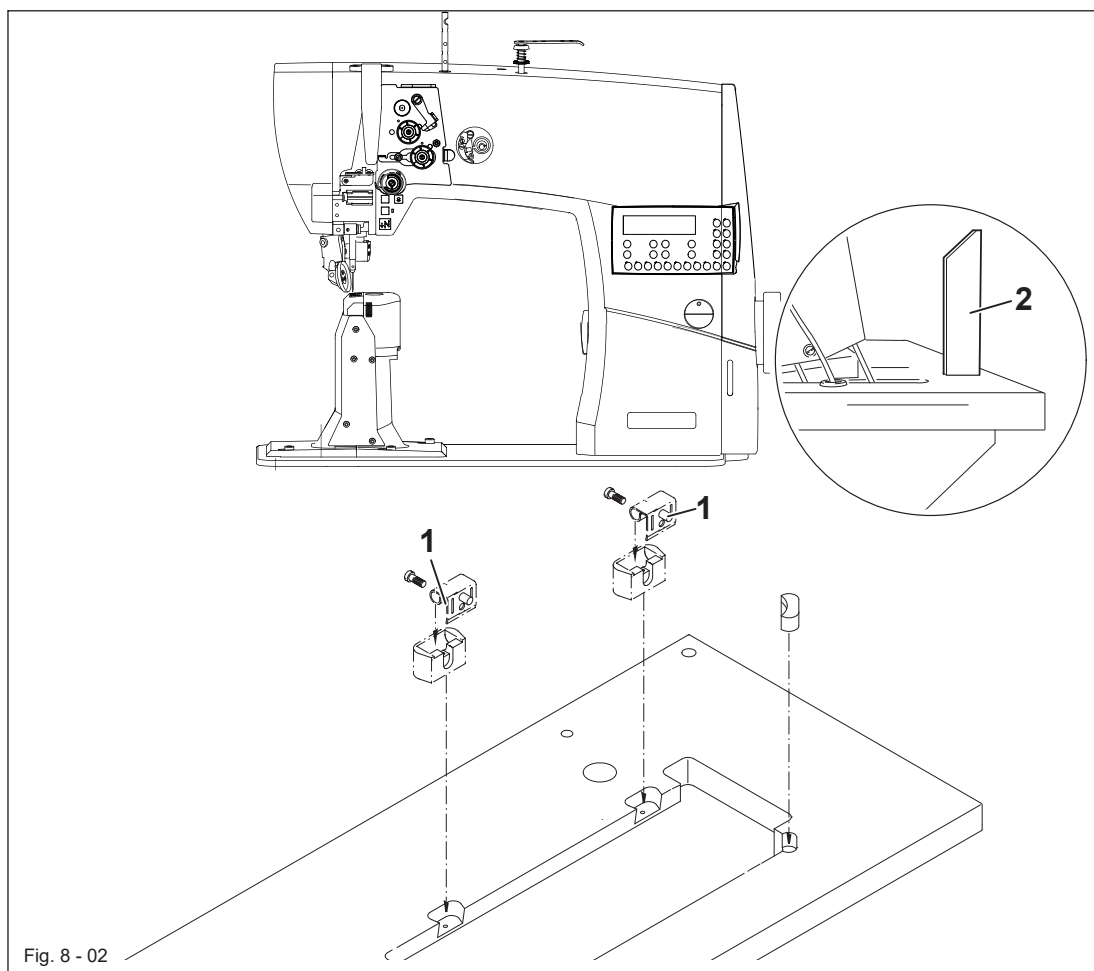
● The hinges **1** are screwed to the sewing head base plate.

● Insert the sewing machine into the table top.

● Insert the sewing head support **2** into the table top hole.

Do not operate the machine without the support **2**! Risk of damage due to the top-heavy sewing head!
Machine can tip over backwards when moving it!

8.01.03   Assembling the anti-tipping device

Fig. 8 - 03
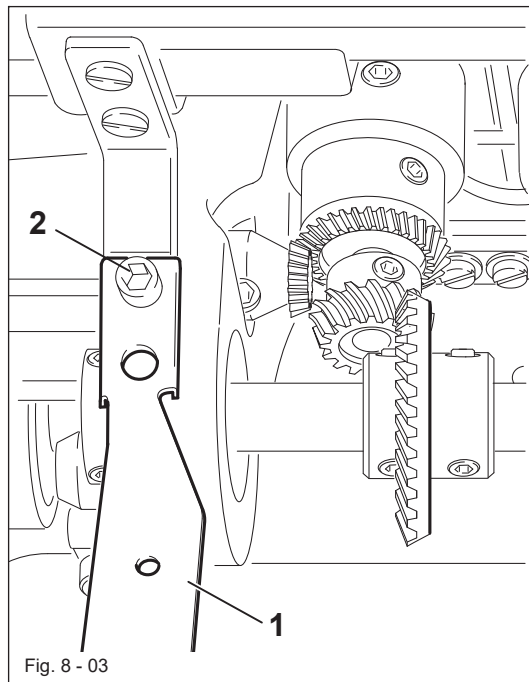
Switch off the machine!

Risk of injury due to accidental machine start-up!

● Screw on the anti-tipping device **1** included in the accessories with the screw **2**.

Do not operate the machine without the anti-tipping device **1**!

Risk of injury by crushing between the sewing head and the table top!

8.02   Mounting the flange motor

8.02.01   Mounting the flange motor on the bearing plate
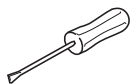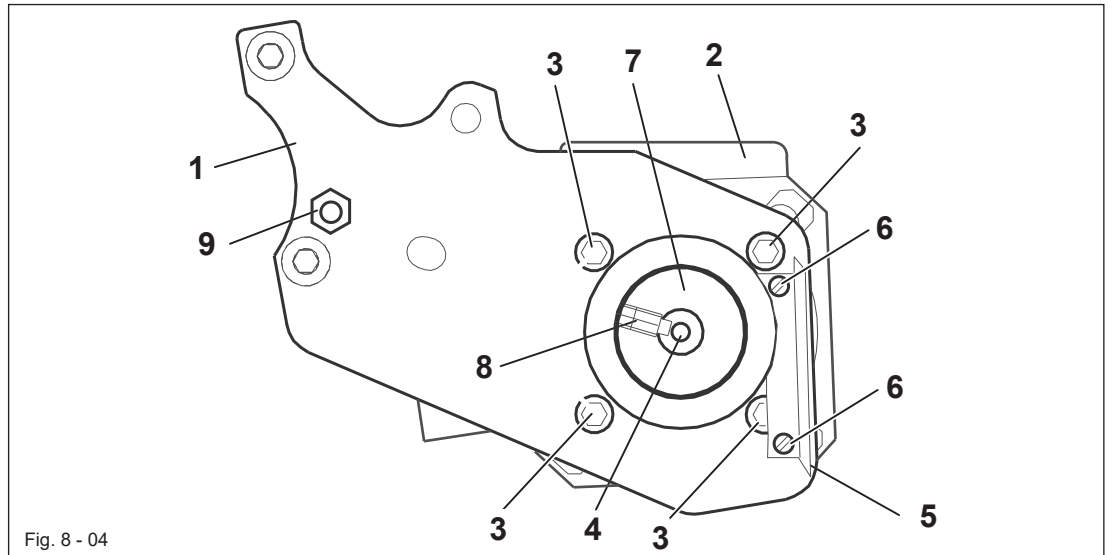
Fig. 8 - 04

● Fix the bearing plate **1** onto the motor **2** using the screws **3**, as shown in fig. **8-04**.

● Remove the wedge from the motor shaft **4**.

● Attach the angle bracket **5** with the screws **6**.

● Mount the toothed belt wheel **7** onto the motor shaft **4** so that the screw **8** is positioned with the lug in the motor shaft slot **4**.

● Screw the threaded pins **9** into the bearing plate **1**.

Set-up and Initial Commissioning

8.02.02   Mounting the flange motor on the machine

Fig. 8 - 05
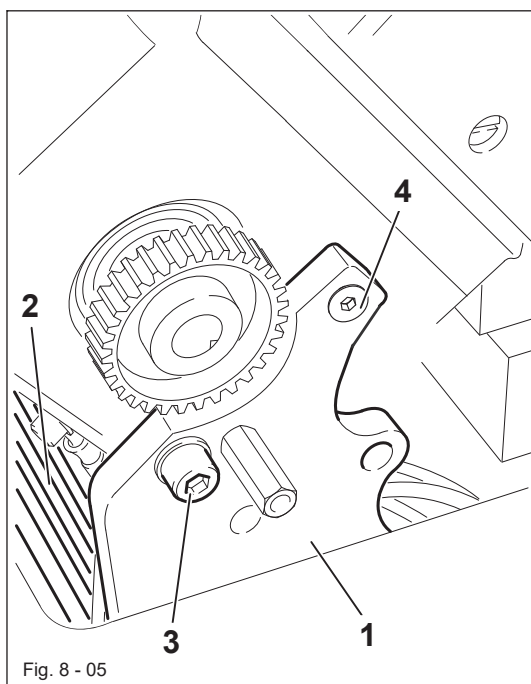
● Use the screw **3** and **4** to fix the bearing plate **1** of the motor **2** to the machine housing (tighten the screws **3** and **4** slightly).

8.02.03   Mounting the machine cover
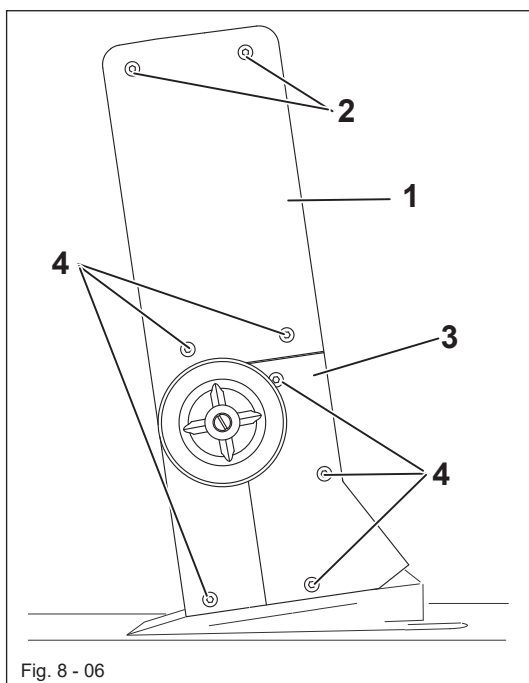
Fig. 8 - 06

● Use the screws **2** (**2**x) and the screws **4** (**3**x) to fasten the cover **1** to the housing.

● Place the cover **3** on the cover **1** and fasten with the screws **4** (**3**x).

8.02.04   Connecting the plug-in connections and ground cable
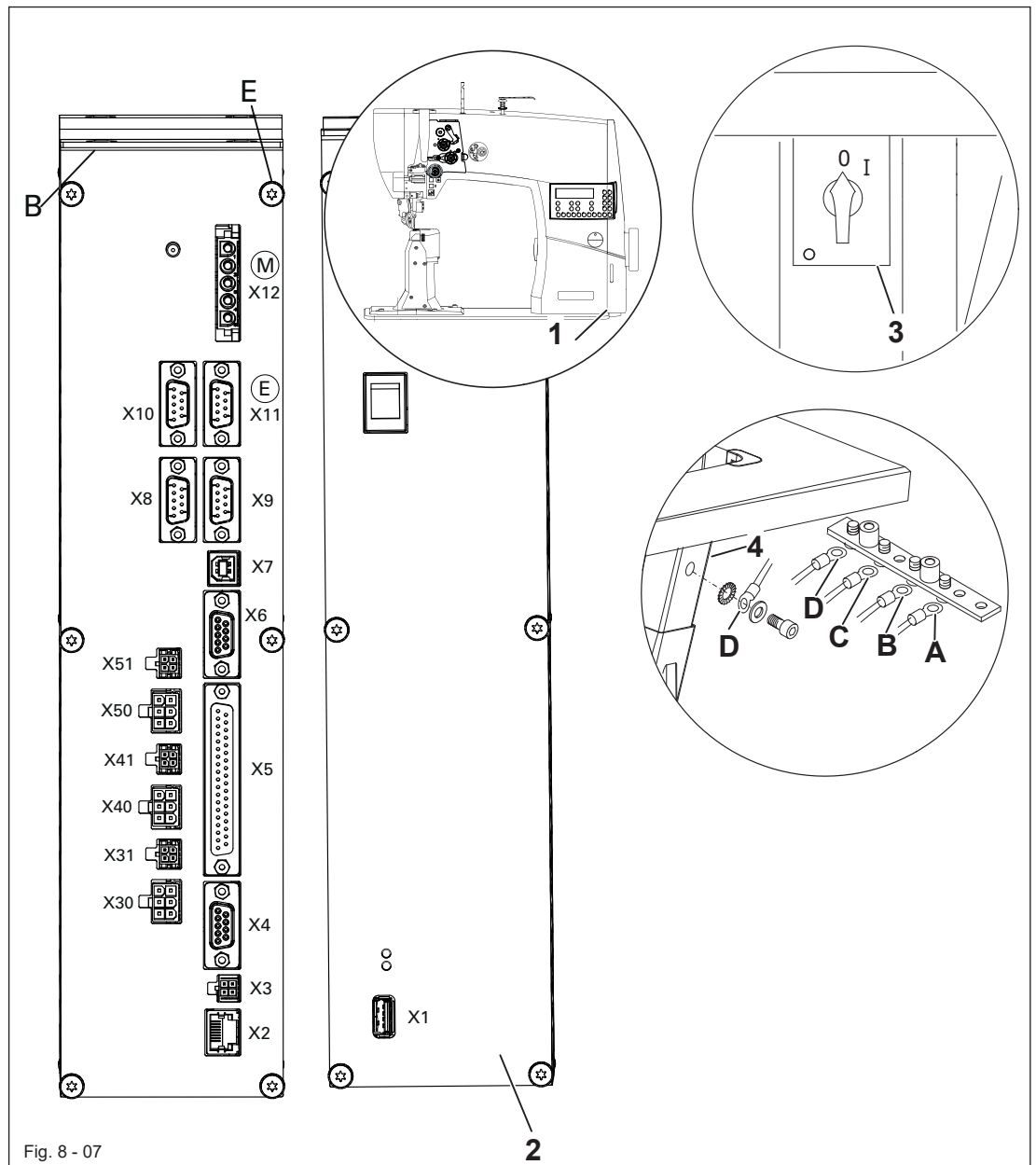
Fig. 8 - 07
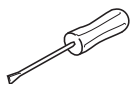
● Insert all connectors on the control box **2** in accordance with their designation.

● Insert the "motor" to the bushing **E** and the bushing **M**.

Caution

Inserting 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 **B** 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 from the motor cable **M** to ground point **E**.

8.02.05 Fitting the toothed belt / home position of the machine drive with the PFAFF 1571; 1591 and 1593

● Switch the machine on
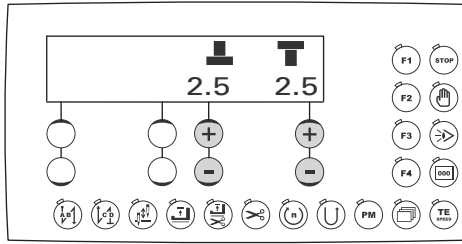
2 x **TE SPEED**   ● Press the TE/Speed key twice to call up the input mode.
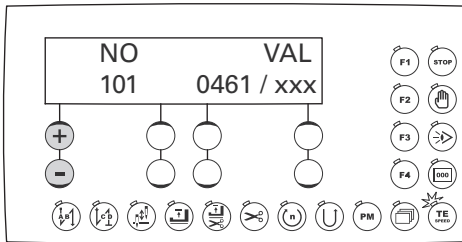
No ● Select the parameter "**8025**" by pressing the corresponding **+/-** key.
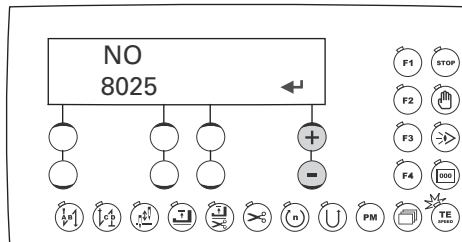
● Confirm the selection by pressing the corresponding **+/-** key.

● Enter the template code, see chapter **9.09 Entering/changing the template code**.
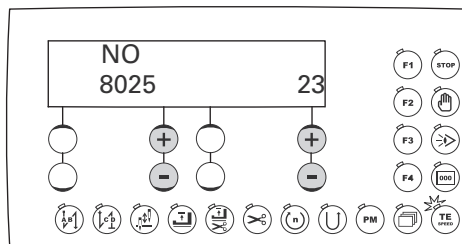
● Select the parameter group "**8025**" by pressing the corresponding **+/-** key.

● Turn the motor shaft by hand until the display shows the value at 1571,1591 **"23°"** and at 1574, 1593 **"31°"**.

● Turn the handwheel in the direction of rotation until the needle point (approaching from above) is on the upper edge of the needle plate.

● Lay on the toothed belt 1 while making sure that both the motor shaft 4 (**Fig. 8 - 08**) and the machine are not twisted.

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Fig. 8 - 08
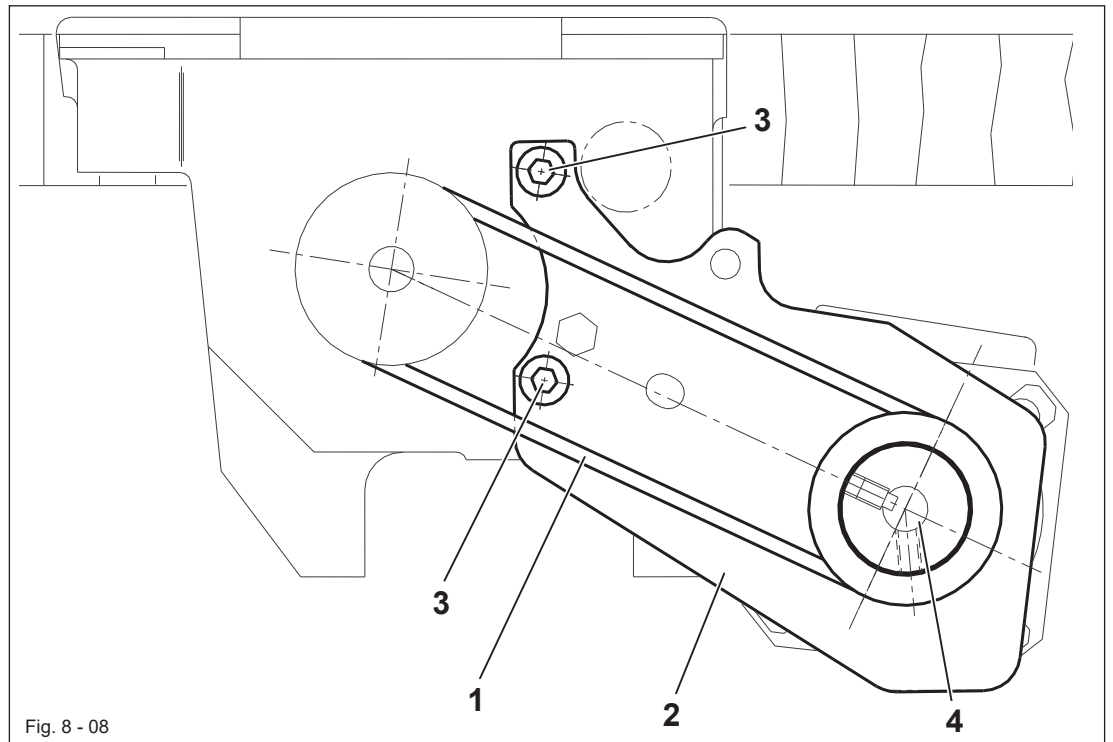
● Fit the toothed belt **1**

● Pivot the motor bearing plate 2 so that the toothed belt 1 is taut.

● Tighten the screws 3 in this position.

● Turn the handwheel in the direction of rotation until the needle point (approaching from above) is on the upper edge of the needle plate. ± 2 increments are permitted as a tolerance.

● Complete the adjustment of the sewing motor by pressing the TE/SPEED key.

8.02.06   Mounting the flange motor belt guard
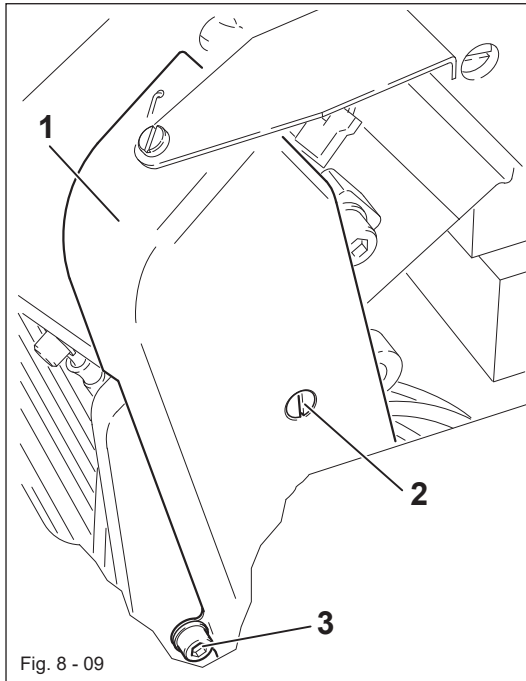
Fig. 8 - 09

● Attach the belt guard **1** with the screws **2** and **3**.

8.02.07   Connecting the safety switch
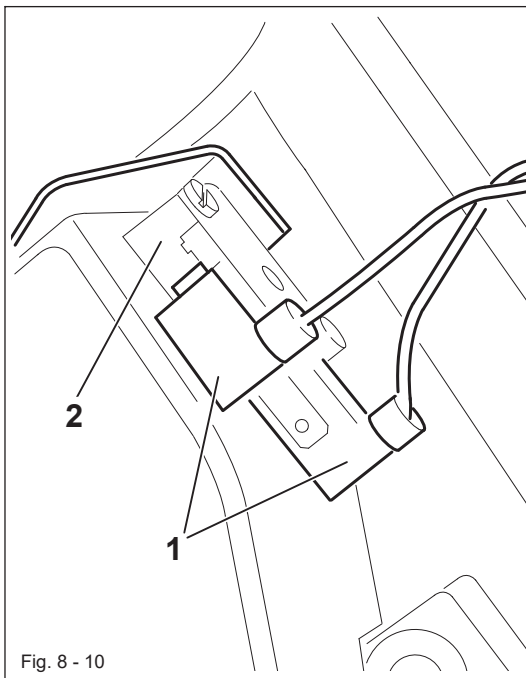
Fig. 8 - 10

● Plug in the connector **1** of the safety switch **2** as shown in Fig. **8 - 10**.

> ℹ️ If the sewing head is tilted back, the safety switch activates the start inhibitor, preventing the machine starting up if the main switch is turned on.

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8.02.08   Checking the start inhibitor function
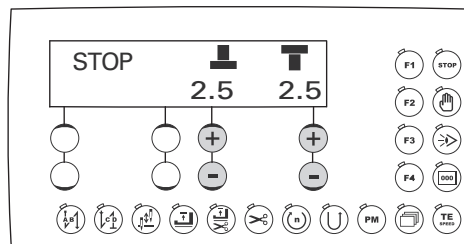
● Switch on the machine at the main switch and move the sewing head.

● The error message "**STOP**" must appear on the control panel.

● If this message does not appear, check the switch **2** setting.

● The machine is ready for operation again after righting the sewing head.

8.03   Assembling the reel stand

Fig. 8 - 11

● Assemble the reel stand as shown in the adjacent illustration.

Set-up and Initial Commissioning

8.04 **Initial start-up**

● Inspect the machine for any damage, particularly the electric cables.
● Clean the machine thoroughly and then oil it, see also **chapter 12 Maintenance and Care**.
● Arrange for technical staff to check whether the machine's motor may be operated at the existing mains voltage and whether it is connected properly.

⚠ Never operate the machine if there are any differences.

⚠ The machine must only be connected to a grounded socket!

⚠ Arrange for the home position of the machine drive to be verified by certified technicians before the initial start-up! Have these settings carried out where required.

8.05 **Switching the machine on / off**

● Switch the machine on (see **chapter 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
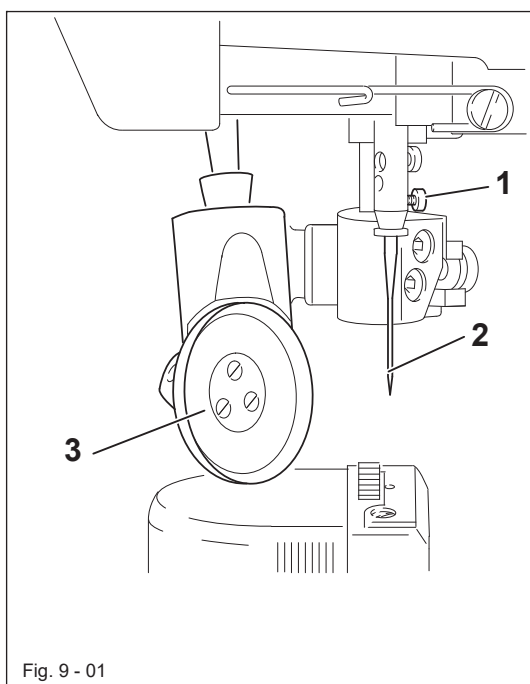
Fig. 9 - 01
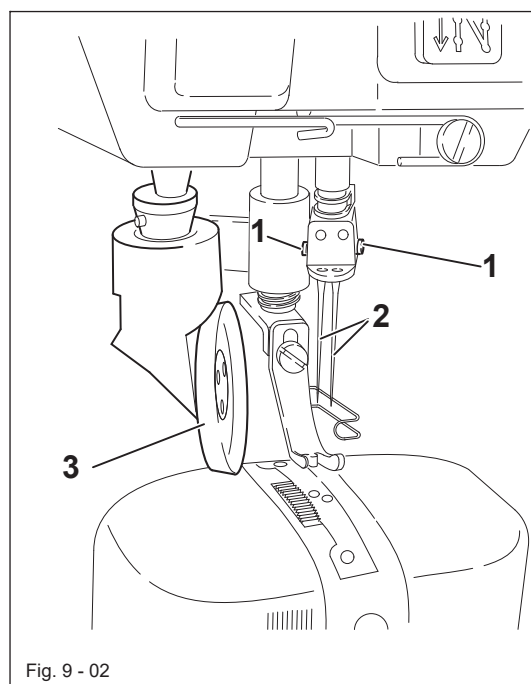
Fig. 9 - 02

⚠️ 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**!

PFAFF 1571; **1591** and **1593**

● Raise and fold out the roller presser **3**

● Bring the needle bar to the top position.

● Loosen the screw 1 and insert the needle 2 until you feel it stop. The long groove must point to the **right** with the PFAFF **1571** and to the **left** with the PFAFF **1591** and **15**93.

● Tighten the screw 1.

PFAFF 1574

● Raise and fold out the roller presser **3**

● Bring the needle bar to the top position.

● Loosen the screws 1 and insert the needles 2 until you feel them stop. The long groove of the left needle must point to the right and that of the right needle must point to the left.

● Tighten the screws 1.

9.02   **Winding the bobbin thread, adjusting the thread tension**
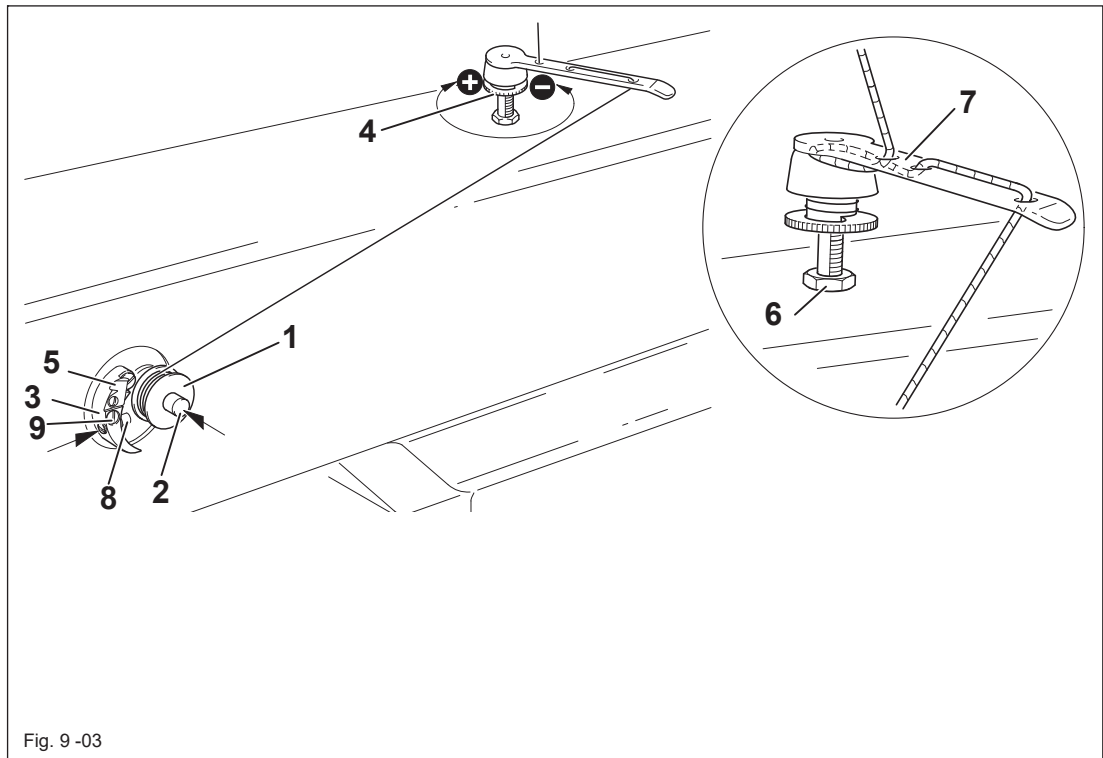
Fig. 9 -03

● Fit the empty bobbin **1** onto the bobbin winder spindle **2** with the rest thread chamber on the outside.

● Thread in the thread as shown in Fig. **9 - 03** and wind it round the bobbin **1** a few times in an anti-clockwise direction.

● Switch on the bobbin winder by pressing the bobbin winder spindle **2** and the lever **3** simultaneously.

The bobbin fills up during sewing.

If the machine is only run for bobbin winding (without sewing), a bobbin case must be fitted in the hook!

Otherwise a jammed thread may damage the hook!

● The tension of the thread on the bobbin **1** can be adjusted with the knurled thumb screw **4**.

● The bobbin winder stops automatically when the bobbin **1** is sufficiently full.

● Remove the filled bobbin **1** and cut the thread with the knife **5**.

● The fill amount of the bobbin **1** can be adjusted with the pin **8** (loosen the screw **9** and tighten it again) if the thread is wound unevenly:

● Loosen the nut **6**.

● Turn the thread guide **7** accordingly.

● Tighten the nut **6**.

9.03   Removing / inserting the bobbin case
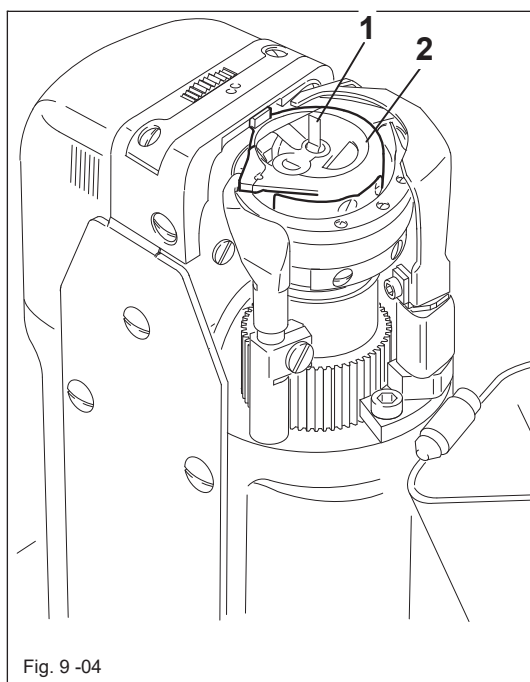
Fig. 9 -04

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

Removing the bobbin case:
● Bring the take-up lever to its top position
● Open the post cover, raise the lever **1** and remove the bobbin case **2**.

Inserting the bobbin case:
● Press the bobbin case **2** until you feel it snap into the bobbin case base.
● Move the lever **1** and close the post cover.

Do not operate the machine with an open post cover!

Risk of injury due to moving parts!

9.04   Inserting the bobbin case / adjusting the bobbin thread tension
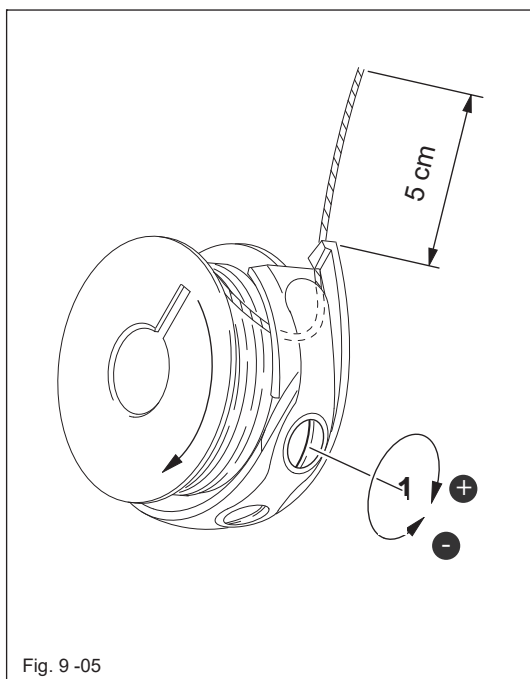
Fig. 9 -05

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

● Insert the bobbin as shown in **Fig. 9 - 05**.
● When the thread is drawn off, the bobbin must turn in the direction shown by the arrows.
● Adjust the thread tension by turning the screw **1**.

9.05   **Threading the needle thread / adjusting the needle thread tension**
(with the PFAFF 1571; 1591 and 1593)
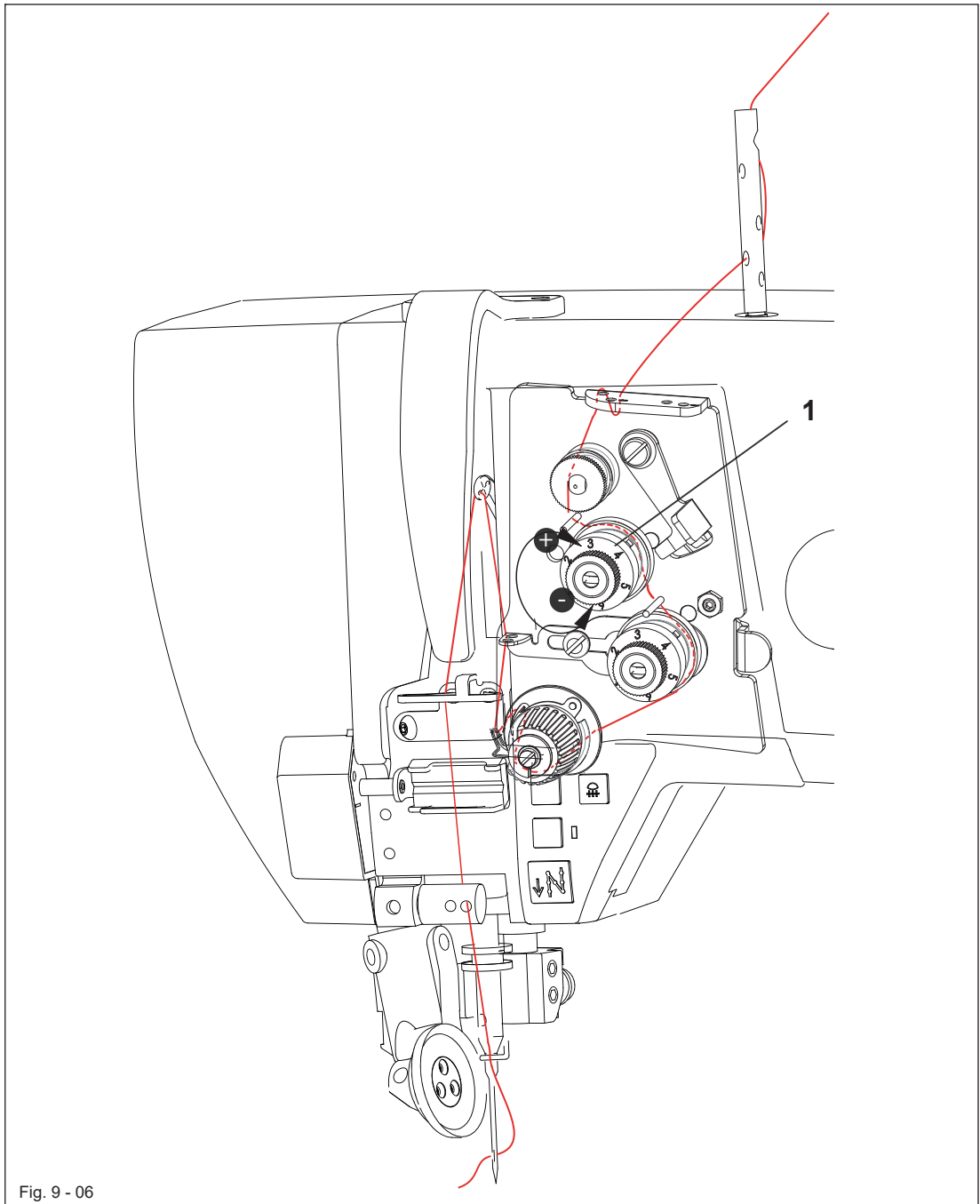
Fig. 9 - 06

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

● Thread the needle thread as shown in Fig. **9 - 06**. Please ensure that the PFAFF **1571** needle is threaded from **right** to **left** and that of the PFAFF **1591;1593** is threaded from **left** to **right**.

● Adjust the needle thread tension by turning the knurled thumb screw 1.

9.06   **Threading the needle thread / adjusting the needle thread tension**
(with the PFAFF 1574)
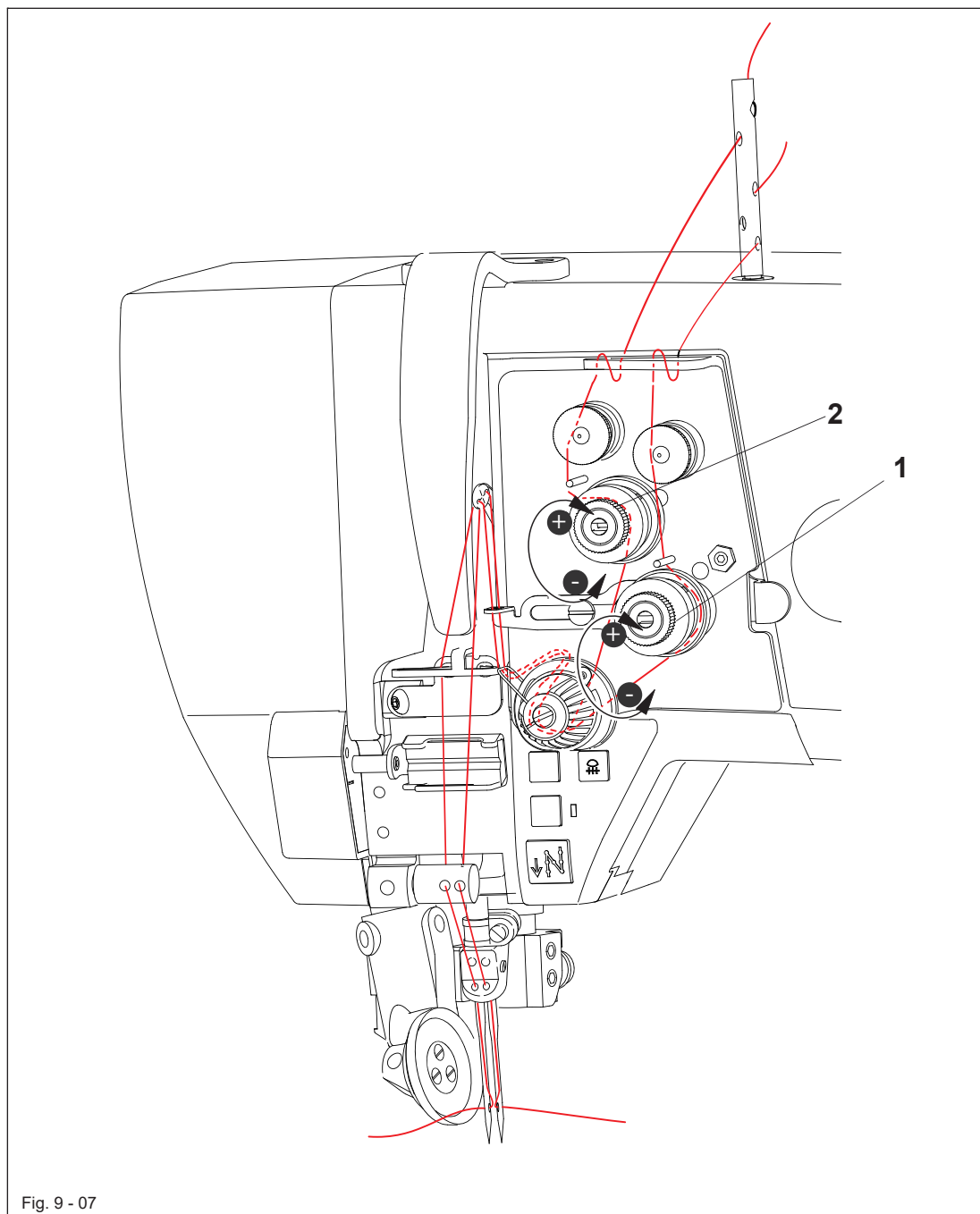
Fig. 9 - 07

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

● Thread the needle thread as shown in Fig. **9 - 07**. Please ensure that the right needle is threaded from the left and the left needle is threaded from the right.

● Adjust the needle thread tension by turning the knurled thumb screw **1** (right needle or **2** left needles).

Set-up

9.07   **Adjusting the stitch length**

The stitch length is defined by setting the feed motion of the roller presser and feed wheel. For the incorporation of fullness, the feed motion on the roller presser must be larger or smaller than the feed motion on the feed wheel.

9.07.01   Entering the sealing speed

● Switch the machine on.

    Once the machine is switched on, the current stitch length values for the roller presser and feed wheel are shown in the display.
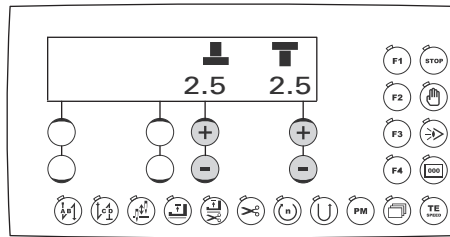
● Set the stitch length (feed motion) for the roller presser by pressing the corresponding **+/-** key.

● Set the stitch length (feed motion) for the feed wheel by pressing the corresponding **+/-** key.

9.07.02   Entering a second stitch length or fullness

Using the **PM key**, a second stitch length or fullness setting can be made in addition to the standard stitch length. Switching between both settings is carried out in programmed sewing by pressing the knee switch.
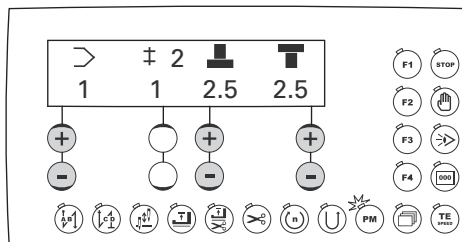
● Switch machine on.

● Press the **PM** key to enter programmed sewing (LED lamp lights up).

● Select the program number (**1** or **2**) by pressing the corresponding **+/-** key.
Sew **1** - **2** stitches and press the knee switch, see also chapter **7.07 Knee switch.**

● Set the stitch length (feed motion) for the roller presser by pressing the corresponding +/- key.

● Set the stitch length (feed motion) for the feed wheel by pressing the corresponding +/- key.

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9.08   Entering the start and end backtacks

● Switch machine on.
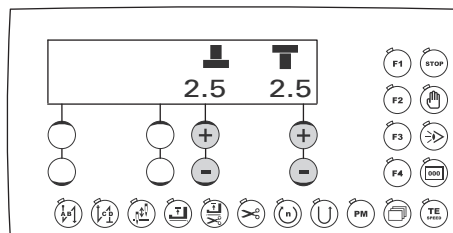
● Set the corresponding function by pressing the **start backtack** and/or the **end backtack** keys. (LED lamp lights up)

● Switch to the input menu for the start and end backtacks by pressing the **scroll** key.
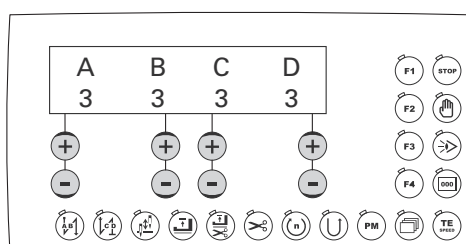
A   ● Select the desired value for the number of start backtack forward switches (**A**) by pressing the corresponding **+/-** key.

B   ● Select the desired value for the number of start backtack reverse stitches (**B**) by pressing the corresponding **+/-** key.

C   ● Select the desired value for the number of end backtack reverse stitches (**C**) by pressing the corresponding **+/-** key.

D   ● Select the desired value for the number of end backtack forward stitches (**D**) by pressing the corresponding (**+/-** key.

● The input menu for the stitch length is called up again by pressing the **scroll** key.

9.09   **Entering/changing the machine code**

● Switch machine on.
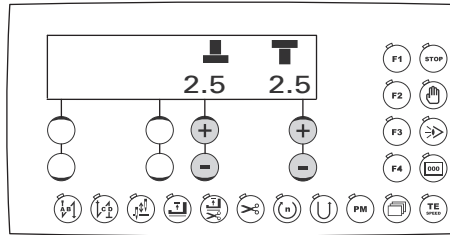
2 x **TE SPEED**   ● Press the **TE/Speed** key twice to call up the input mode.
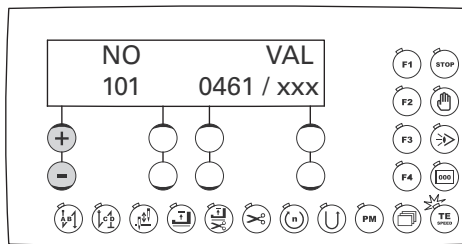
No   ● Select the parameter group "**8199**" by pressing the corresponding **+/-** key.
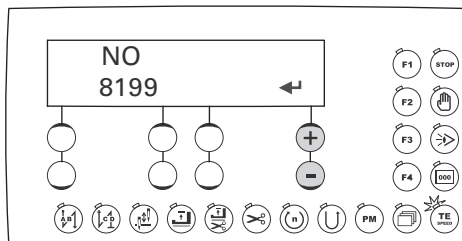
● Confirm the selection by pressing the corresponding **+/-** key.
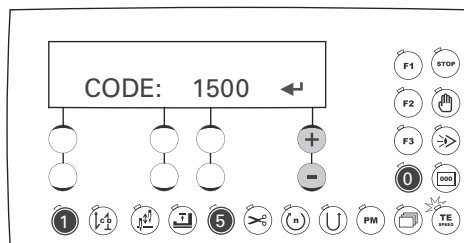
● Enter the machine code by pressing the corresponding keys (the factory setting is code "**1500**", see also chapter **7.11.03 Function keys.**

● Conclude the input of the template code by pressing the corresponding **+/-** key.

⚠ The code input remains saved until the machine is switched off by the main switch. Provided that the machine is not turned off, all parameters can be accessed without re-entering the template code.

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NO
8199
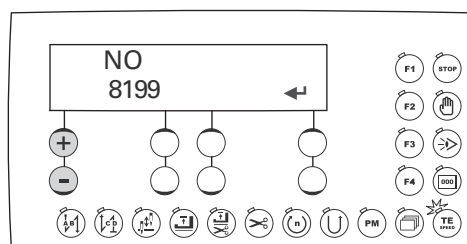
No ● Select the parameter "**8199**" by pressing the corresponding **+/-** key.
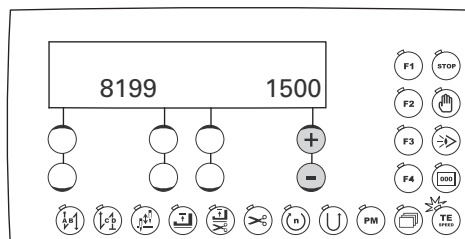
8199   1500

● Confirm the selection by pressing the corresponding **+/-** key.

TE SPEED ● End the input by pressing the **TE/SPEED** key. The newly entered template code is saved and the sewing mode is called up.

⚠ Provided that the machine is not turned off, all parameters can be accessed without having to repeatedly enter the template code. Do not forget the code. Protected functions cannot be called up without the corresponding code! Please contact PFAFF customer service centre in this case.

Set-up

9.10   **Setting the bobbin stitch counter**

● Switch machine on.
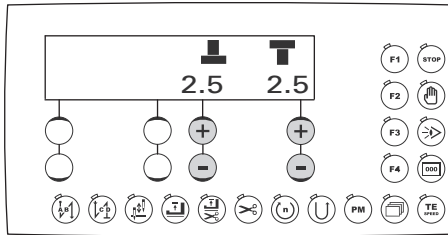
2 x **TE SPEED**   ● Press the **TE/Speed** key twice to call up the input mode (LED lamp lights up).
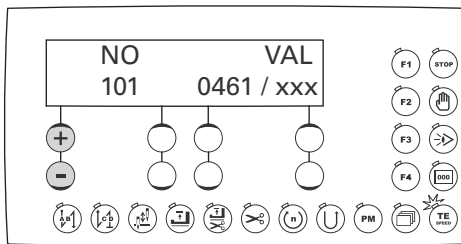
No   ● Select the parameter group "**2210**" by pressing the corresponding **+/-** key.
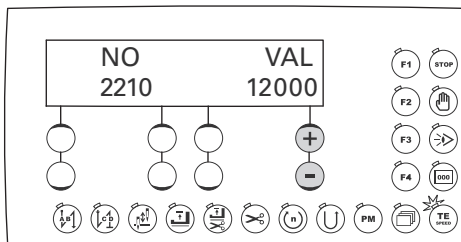
VAL   ● Set the number of stitches that can be sewn with a bobbin by pressing the corresponding **+/-** keys.

TE SPEED   ● End the input by pressing the **TE/Speed** key. The entered value is saved and the sewing mode is called up.

> ℹ The stitch count function can only be activated when parameter "**2201**" is set to "**1**".

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9.11   Inserting and removing the SD memory card
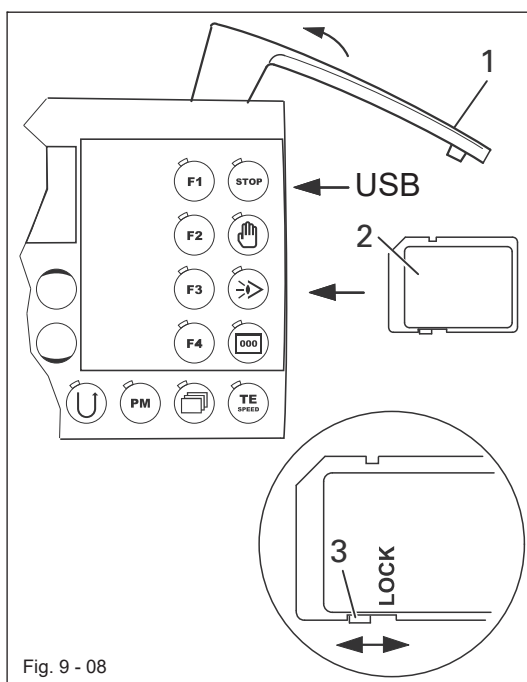
Fig. 9 - 08

Insert 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.

.

Remove the SD card

● Open the cover **1**.

● Press gently on the corner of the SD memory card **2** - the SD card will be ejected.

● Close the cover **1** again.

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

● The SD card must be kept for future boot processes.

● The SD card is not a default configuration.

Sewing

10   Sewing

In sewing mode all settings relevant for the sewing operation are shown in the display. Functions can be switched on or off by pressing the key, values for start and end backtacks or placed stitch can be altered directly.

A difference is made between **manual sewing** and **programmed sewing** in this mode. The "PM" key is used to switch between manual sewing (LED lamp off) and programmed sewing (LED lamp on).

Fixed programs are set under the program numbers 1-2. The program numbers 3-99 can be assigned freely programmable seams.

10.01   Manual sewing

After the machine has been switched on and manual sewing has been selected by pressing the **PM** key, the display appears for entering the stitch length, see also chapter **9.07 Setting the stitch length**.
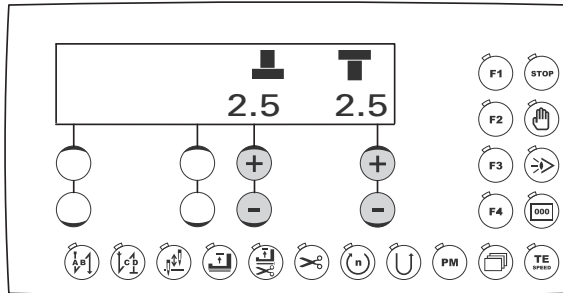
If the backtack function is switched on, the display appears for entering the backtack values, see also chapter **9.08 Entering the start and end backtacks**.

Pressing the **scroll** key switches between the displays.
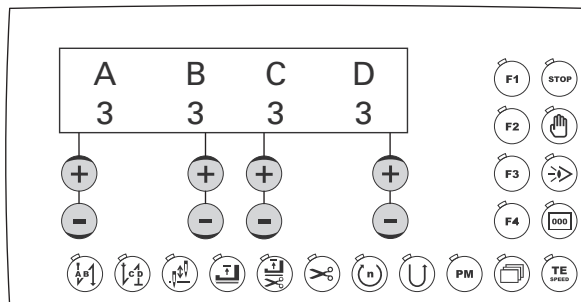
For other functions during manual sewing, see also chapter **7.11.03 Function keys**:

F4	Backtack suppression		Raise roller presser on/off
	Start backtack on/off		Raise roller presser after seam end on/off
	End backtack on/off		Thread trimming on/off
	Raise needle position on/off		

Sewing is carried out using the pedal function, see also chapter **7.04 Pedal.**

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10.02   Programmed sewing

In programmed sewing a difference is made between fixed programs (program numbers 1 and 2) and freely programmable sewing programs (program numbers 3-99).
The fixed programs are are used for the quick and easy production of seams with different number of stitches or fullness. The respective 2 or 3 seam zones are switched using the knee switch function, see also chapter **7.07 Knee switch**.
The fixed programs are also designed as running programs and can be concluded by the pedal function, see also chapter **7.04 Pedal.**
The freely programmable sewing programs (program numbers 3 to 99) can be entered, altered or deleted if necessary, see chapter **11 Input.**

After the machine has been switched on (**chapter 7.01 Main switch**) and the programmed sewing mode key has been selected with the **PM** key, the display appears for selecting the program number, seam zone and stitch length.
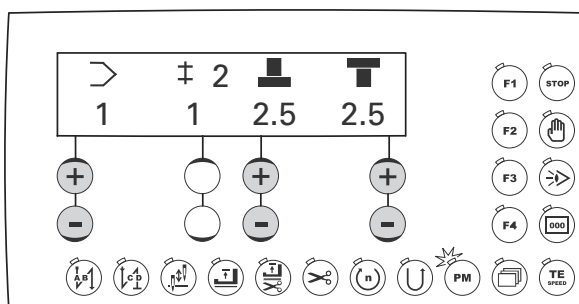
If other functions are switched on, for example backtack functions, maximum seam zone speed or stitch count, the **scroll** key can be used to switch between other menu displays, for example, for entering the values in the corresponding seam zone and stitch count.

The number of backtack stitches is set in manual sewing mode, see chapter **9.08 Entering the start and end backtacks**. The values entered apply to all seam programs.
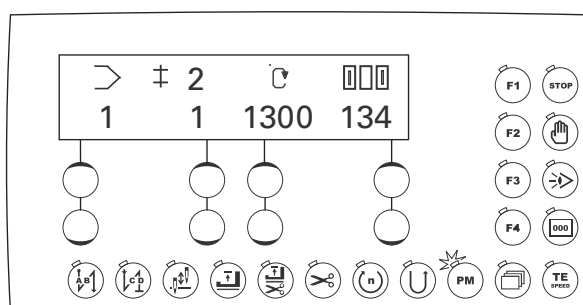
Entering the values is carried out by pressing the corresponding **+/-** key.

Sewing

For other functions in programmed sewing, see also chapter **7**.**11**.**03 Function keys**:

F1	Target position on/off	✂	Thread trimming on/off
F3	Knee switch function on/off	**n**	Seam zone speed on/off
F4	Backtack suppression on/off	∪	Reverse sewing direction on/off
	Start backtack on/off		Program interrupt
	End backtack on/off	**STOP**	Programmed stop on/off
	Raise needle position on/off		Photo cell on/off
	Raise roller presser on/off	**000**	Stitch count on/off
	Raise roller presser after thread trimming on/off		

Sewing is carried out using the pedal functions, see **chapter 7.04 Pedal**.

> ⚠ If multiple seam zones belong to a seam program, the individual seam zones are automatically processed one after the other.

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10.03   Program interrupt

If the course of a seam program is interrupted (e.g. a broken thread), the program interrupt function must be called up.

● The seam program course is interrupted after pressing the **program interrupt** key. Sewing can continue manually and the values for the stitch length from the current seam program are taken over.
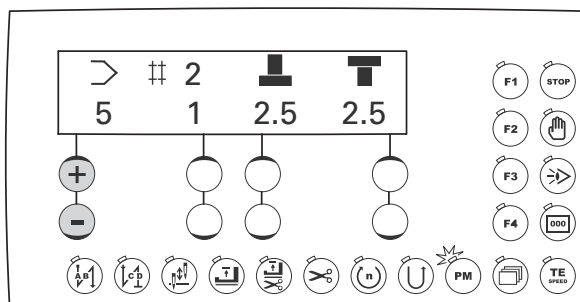
‡   ● The corresponding **+/- key** can be used to select the seam zone, in which the seam program should be continued.

● By pressing the **program interrupt** key again, the machine moves into the selected seam zone and the programmed sewing function is continued.

10.04   Error messages

When a fault occurs, the display shows **"ERROR"** together with an error code, as shown in the following example. In addition, the LED in the memory card slot lights up red (see arrow). An error message can be caused by the incorrect set up, faulty elements or overloading.
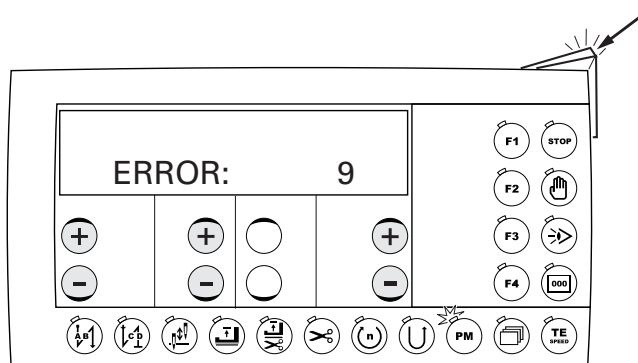
● Correct the error.

● Confirm the error correction if required by pressing the **TE/Speed** key. The LED in the memory card slot lights up yellow (see arrow).

For a description of errors see chapter **11**.**08 Error codes and descriptions**.

11   Input

This chapter describes the input mode functions and how to enter seam programs.

11.01   Input mode

When the machine is in its initial state, it is possible to enter the parameters and the corresponding values directly in the control unit. The functions information, photo cell and service can be called up.

11.01.01   Overview of the functions in input mode

2 x   (TE SPEED)   The input mode is called up by pressing the **TE/Speed** key twice.
A difference is made between parameter inputs and seam program inputs within the input mode.

(PM)   The **PM key** is used to enter into the seam program input after calling up the input mode.

11.01.02   Overview of the seam program input

PM	Call up seam program input
+/−	Select program number (corresponding +/- key)
▤	Select input variants
P▷	Seam program input/ alteration
↵	Confirm selection (Enter)
♯	Seam zone
▪	Stitch length (feed motion) roller presser
▬	Stitch length (feed motion) feed wheel
▤	Scroll (only when the following functions are turned on)
♯	Seam zone
↻	Max. speed
▥▥▥	Stitch number
F1	Placed stitch position
▤	Scroll (only when the following functions are turned on)
♯	Seam zone
A	Start backtack forward stitches
B	Start backtack backward stitches
↻	Start backtack speed
▤	Scroll (only when the following functions are turned on)
♯	Seam zone
C	End backtack backward stitches
D	End backtack forward stitches
↻	End backtack speed

Scroll
- ♯ Seam zone
- INS Insert seam zone
- DEL Delete seam zone
- END Last seam zone selection

Input variant

- Seam input via teach-in
- Confirm selection (Enter)
  - ♯ Seam zone
  - ▪ Stitch length (feed motion) roller presser
  - ▪ Stitch length (feed motion) feed wheel

Scroll (only when the following functions are turned on)
- ♯ Seam zone
- ↻ Max. speed
- F1 Placed stitch position

Scroll (only when the following functions are turned on)
- ♯ Seam zone
- A Start backtack forward stitches
- B Start backtack backward stitches
- ↻ Start backtack speed

Scroll (only when the following functions are turned on)
- ♯ Seam zone
- C End backtack backward stitches
- D End backtack forward stitches
- ↻ End backtack speed

After operation of pedal
- ♯ Seam zone
- ▯▯▯ Stitch number sewn
- END Last seam zone selection

Select input variants

- DEL Delete seam programs

For a more detailed explanation of other functions, see chapter **7.11.03 Function keys.**

Input

11.02   Seam program input variants

There are three basic input variants available to enter and/or change or delete seam pro-
gram inputs.

- ● Seam program input/ alteration (entering the values).
- ● Seam program input via teach-in.
- ● Delete seam programs.

The desired input variants can be selected as follows:

- ● Switch the machine on.
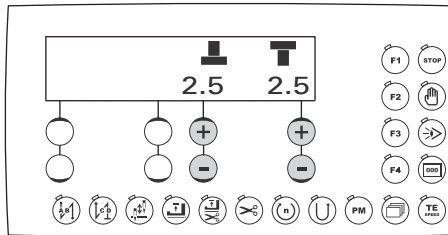
2 x   **TE/SPEED**   ● Press the **TE/Speed** key twice to call up the input mode (LED lamp lights up).
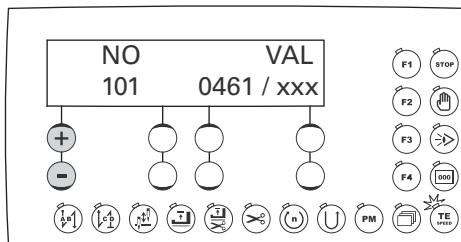
● Press the **PM** key to call up the seam program input (LED lamp lights up).

● Enter the template code, see chapter 9.**09 Entering/changing the template code**.
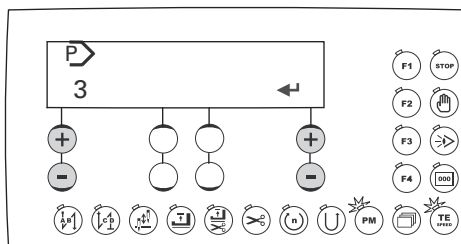
● Select the desired program number by pressing the corresponding **+/-** key.

● Select the desired input variant by pressing the **scroll** key.

● Confirm this selection by pressing the corresponding **+/-** key.

● Make the desired entries and then conclude the seam program input by pressing the
  TE/Speed key.

11.03 Changing available seam programs

The following description implies that a seam program has already been set with all the required parameters.

● Switch the machine on.

● Call up the "seam program input/ alteration" input variant, see chapter **11.02 Seam program input variants.**
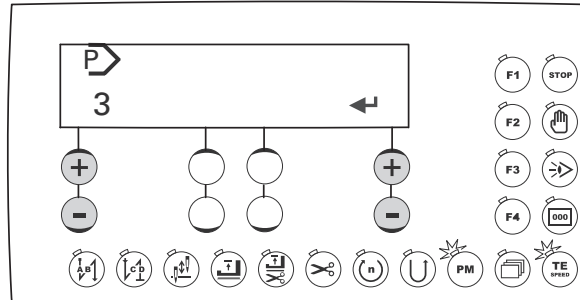
● Select the desired program number by pressing the corresponding **+/-** key.

● After confirming the selection by pressing the corresponding **+/-** key, the first of up to five input menus is displayed, in which the parameters of the selected program can be changed, as described as follows.

Each of the five input menus can be individually selected by pressing the **scroll** key. Only the input menus of functions that are turned on will be displayed. By pressing the **PM** key, the machine moves back to the program selection menu.
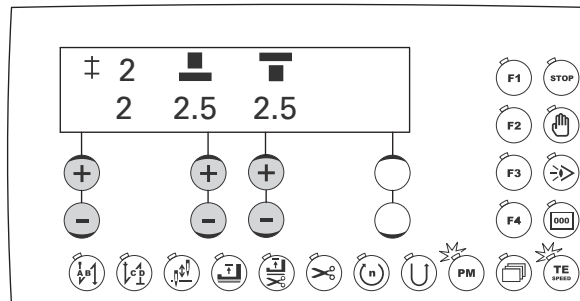
● Select the desired seam zone by pressing the corresponding **+/-** key.

● Select the desired value for the roller presser stitch length by pressing the corresponding **+/-** key.

● Select the desired value for the feed wheel stitch length by pressing the corresponding **+/-** key.

● Call up the next input menu by pressing the **scroll** key.
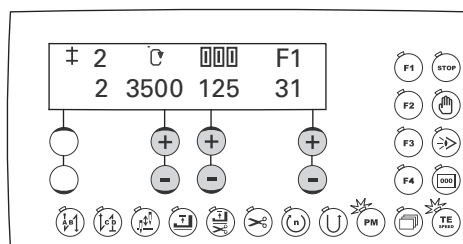
The following functions must be switched on (LED lamps light up) so that the input menu appears as shown:

F1   F1 (Placed stitch) - on/off

n   Speed (Speed limit) - and/or

000   Stitch count

○ ● Select the desired value for the speed of the current seam zone by pressing the corresponding **+/-** key.

○○○ ● Select the desired value for the number of stitches in the current seam zone by pressing the corresponding **+/-** key.

F1 ● The placed stitch position is set by turning the handwheel or by pressing the corresponding **+/-** key.

● Call up the next input menu by pressing the **scroll** key.

‡ 2   A   B   ○
  2   3   3   800
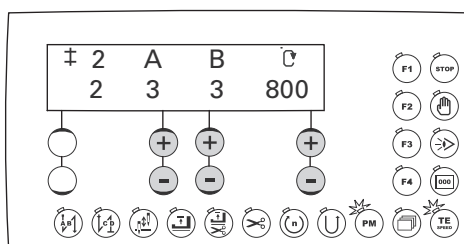
This input menu can be called up only if the start backtack function is switched on (LED lamp lights up).

A ● Select the desired value for the number of start backtack forward stitches (**A**) for the current seam zone by pressing the corresponding **+/-** key.

B ● Select the desired value for the number of start backtack reverse stitches (**B**) for the current seam zone by pressing the corresponding **+/-** key.

○ ● Select the desired value for the start backtack speed for the current seam zone by pressing the corresponding **+/-** key. Whether the start backtack is sewn with constant speed or pedal controlled is determined by the parameter "**101**".

● Call up the next input menu by pressing the **scroll** key.

‡ 2   C   D   ○
  2   3   3   900
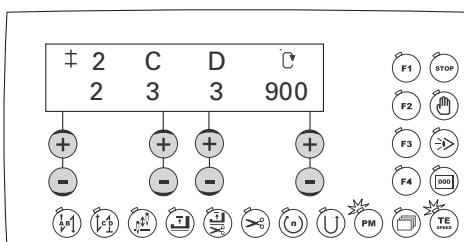
This input menu can be called up only if the end backtack function is switched on (LED lamp lights up).

C ● Select the desired value for the number of end backtack reverse stitches (**C**) for the current seam zone by pressing the corresponding **+/-** key.

D ● Select the desired value for the number of end backtack forward stitches (**D**) for the current seam zone by pressing the corresponding **+/-** key.

○ ● Select the desired value for the end backtack speed for the current seam zone by pressing the corresponding **+/-** key.

● Call up the next input menu by pressing the **scroll** key.

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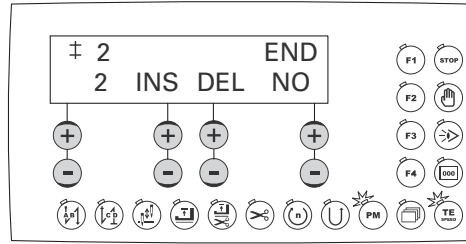
INS
● A new seam zone is inserted by pressing the corresponding **+/-** key.

DEL
● The current seam zone is deleted by pressing the corresponding **+/-** key.

END
● Pressing the corresponding **+/-** key determines whether the selected seam zone of the last program is ("**YES**") or whether a further seam zone ("**NO**") should be added.

● The first input menu is called up again by pressing the **scroll** key or the programmed sewing operation is changed by pressing the **TE/Speed** key. The entered values are saved.

Input

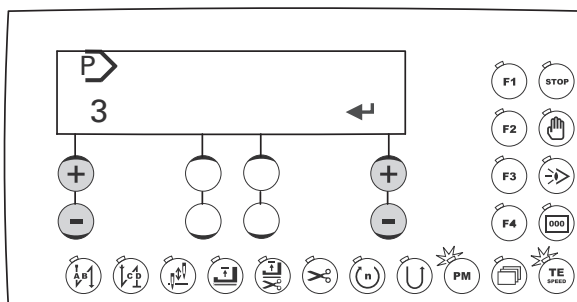**11.**04   **Deleting seam programs**

● Switch the machine on.
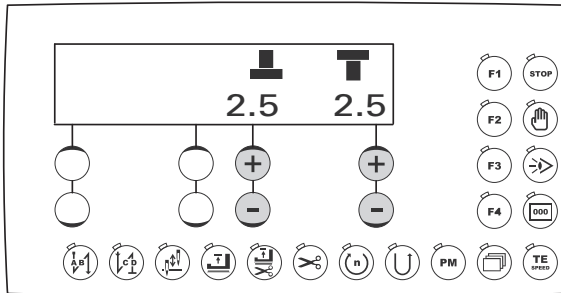
2 x   (TE SPEED)   ● Press the **TE/Speed** key twice to call up the input mode (LED lamp lights up).
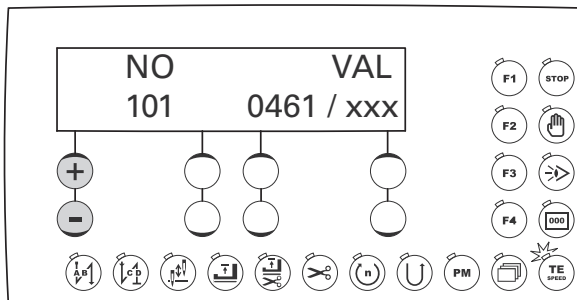
● Press the PM key to call up the seam program input (LED lamp lights up).

● Enter the template code, see chapter **9.09 Entering/changing the template code**.

● Select the desired program number by pressing the corresponding **+/-** key.

● Select the "Deleting seam programs" input variant using the **scroll** key, see chapter **11.02 Seam program input variants.**
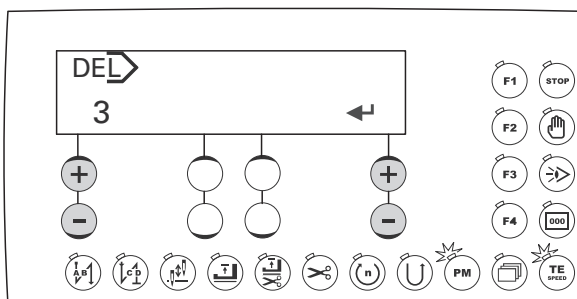
● Confirm the seam program deletion by pressing the corresponding **+/-** key.

● End the seam program input by pressing the **TE/Speed** key.

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11.05 Examples for seam programming

In the following, examples are shown of the procedure for creating seam programs via the seam program input, as well as the teach-in function.
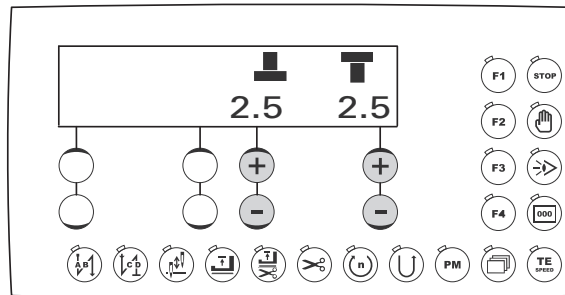
> The programming examples shown in the display are only as follows, when no seam program has been entered under the selected program number.

11.05.01 Example for seam program input

The seam to be programmed should
- contain 5 seam zones
- and be saved under program number 7

● Switch the machine on

2 x **TE/SPEED**   ● Press the **TE/Speed** key twice to call up the input mode (LED lamp lights up).

PM
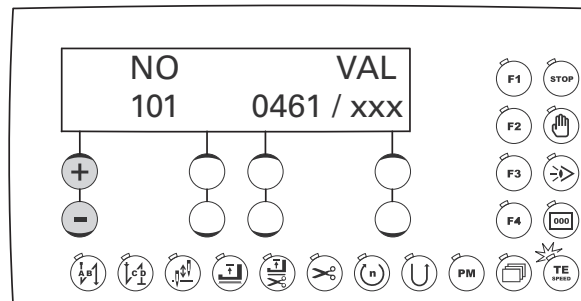
● Press the PM key to call up the seam program input (LED lamp lights up).
● Enter the template code, see chapter **9.09 Entering/changing the template code**.
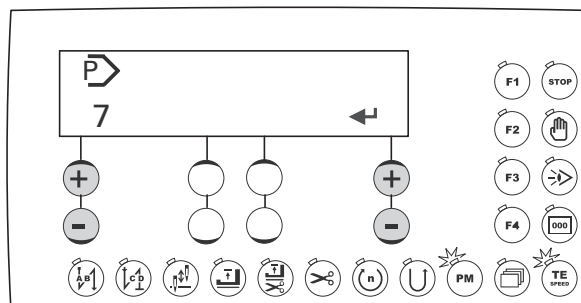
● Select the program number "7" by pressing the corresponding +/- key.
Confirm this selection by pressing the corresponding **+/-** key.

● The display switches to enter seam zone one.

Seam zone one should contain
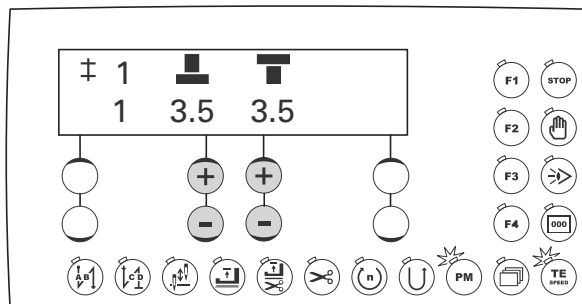- a double start backtack (2 stitches forwards and backwards)
- backtack speed of 700 min¹
- stitch count (5 stitches)
- and a stitch length (for roller presser and feed wheel) of 3,5 mm.

● Set the value for the roller presser stitch length to "**3.5**" by pressing the corresponding **+/-** key.

● Set the value for the feed wheel stitch length to "**3.5**" by pressing the corresponding **+/-** key

● Switch on the corresponding function by pressing the start backtack key. The display switches to enter the values for the start backtack.
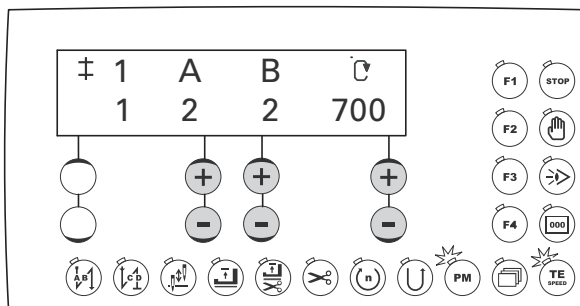
A ● Set the number of forward stitches to "**2**" by pressing the corresponding **+/-** key.

B ● Set the number of reverse stitches to "**2**" by pressing the corresponding **+/-** key.

● Set the value for the backtack speed to "**700**" by pressing the **+/-** key.

● Switch on the corresponding function by pressing the stitch count key. The display switches to enter the number of stitches.

● If the "stitch count" function is already switched on, the menu appears for entering the stitch number after pressing the scroll key.
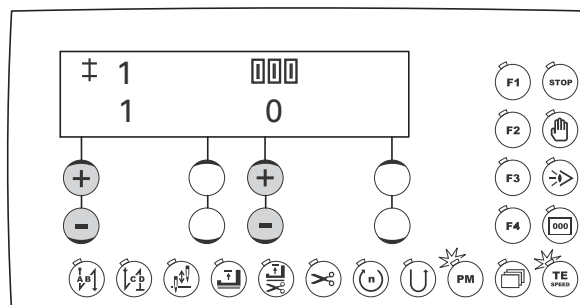
● Set the value for the number of stitches to "5" by pressing the corresponding +/- key:

● **Call up the following screen by pressing the scroll key:**

END ● Select "**NO**" by pressing the corresponding **+/-** key to add further seam zones.

‡ ● Switch to seam zone two by pressing "**+**" on the corresponding **+/-** key.

In seam zone two
- the stitch length (for roller presser and feed wheel) should be 2.5 mm
- and one stitch count should be carried out (1 stitch).

▟ ● Set the value for the roller presser stitch length to "**2.5**" by pressing the corresponding **+/-** key.

▛ ● Set the value for the feed wheel stitch length to "**2.5**" by pressing the corresponding **+/-** key.

000 ● Switch on the corresponding function by pressing the stitch count key. The display switches to enter the number of stitches.

▤ ● If the "stitch count" function is already switched on, the menu appears for entering the stitch number after pressing the scroll key.

▥ ● Set the value for the number of stitches to "**1**" by pressing the corresponding **+/-** key.

‡ ● Switch to seam zone three by pressing "**+**" on the corresponding **+/-** key.

In seam zone three
- the stitch length (for roller presser and feed wheel) should be 3 mm,
- one stitch count should be carried out (2 stitches),
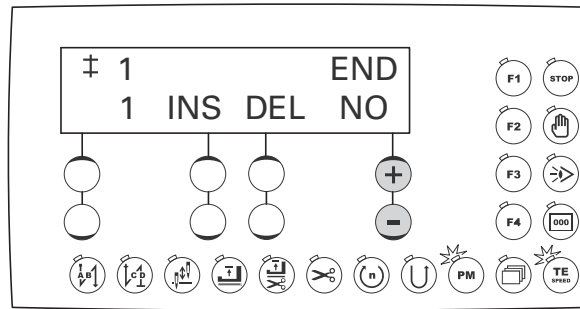- and the seam should be sewn in reverse.
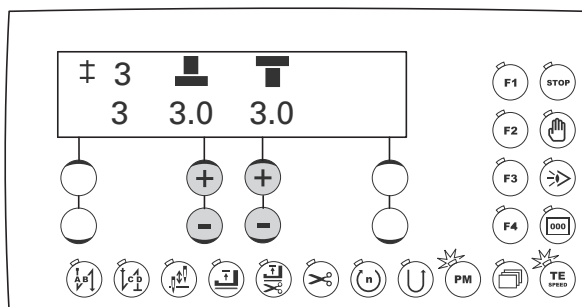
● Set the value for the roller presser stitch count to "**3.0**" by pressing the corresponding **+/-** key.

● Set the value for the feed wheel stitch length to "**3.0**" by pressing the corresponding **+/-** key.

● Switch on the corresponding function by pressing the stitch count key. The display switches to enter the number of stitches.

● If the "stitch count" function is already switched on, the menu appears for entering the stitch number after pressing the scroll key.
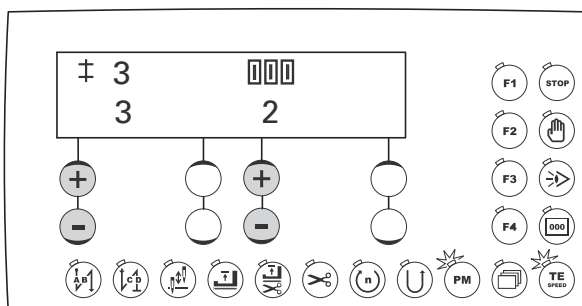
● Set the value for the number of stitches to "**2**" by pressing the corresponding **+/-** key.

● Switch on the " reverse sewing " function by pressing the corresponding key.

● Switch to seam zone four by pressing "**+**" on the corresponding **+/-** key.

In seam zone four
- the stitch length (for roller presser and feed wheel) should be 5 mm.
- one stitch count should be carried out (1 stitch).

● Set the value for the roller presser stitch length to "**5.0**" by pressing the corresponding **+/-** key.

● Set the value for the feed wheel stitch length to "**5.0**" by pressing the corresponding **+/-** key.

● Switch on the corresponding function by pressing the stitch count key. The display switches to enter the number of stitches.

● If the "stitch count" function is already switched on, the menu appears for entering the stitch number after pressing the scroll key.
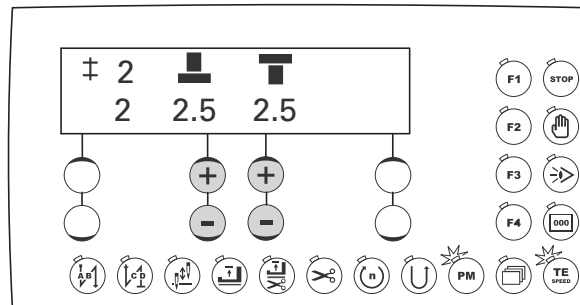
```
‡ 4        ▯▯▯
  4          1
```

● Set the value for the number of stitches to "**1**" by pressing the corresponding **+/-** key.

● Switch to seam zone five by pressing "**+**" on the corresponding "**+/-**" key.

Seam zone five should contain
- a double end backtack and
- a stitch length (for roller presser and feed wheel) of 5 mm,
- backtack speed of 700 min¹,
- one stitch count should be carried out (1 stitch)
- and the thread trimming function at seam zone end.
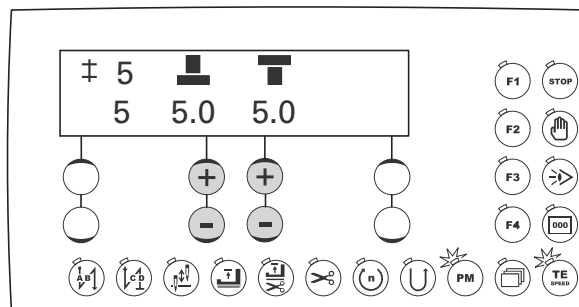
```
‡ 5    ▪      ▀
  5   5.0    5.0
```

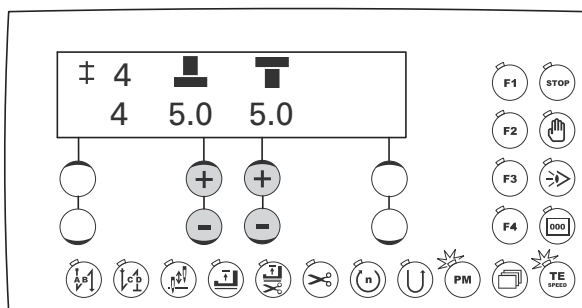● Set the value for the roller presser stitch length to "**5.0**" by pressing the corresponding **+/-** key.

● Set the value for the feed wheel stitch length to "**5.0**" by pressing the corresponding **+/-** key.

● Switch on the corresponding function by pressing the **end backtac**k key. The display switches to enter the stitch count for the end backtack.

```
‡ 5    C    D    ↻
  5    1    1    700
```
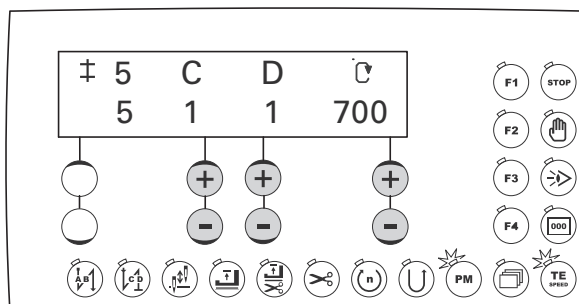
C ● Set the value for the number of reverse stitches to "**1**" by pressing the corresponding **+/-** keys.

D ● Set the value for the number of forward stitches to "**1**" by pressing the corresponding **+/-** key.

● Set the backtack speed to "**700**" by pressing the corresponding **+/-** key.

● Switch on the corresponding function by pressing the **stitch count** key. The display switches to enter the number of stitches.

● If the "stitch count" function is already switched on, the menu appears for entering the stitch number after pressing the **scroll** key.
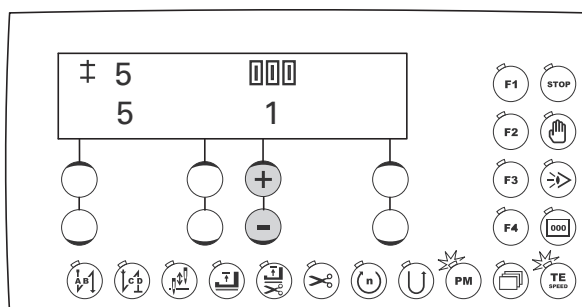
● Set the value for the number of stitches to "**1**" by pressing the corresponding **+/-** key.

● Switch on the corresponding function for the seam zone end by pressing the **thread trimming** function.

● Call up the following screen by pressing the **scroll** key.
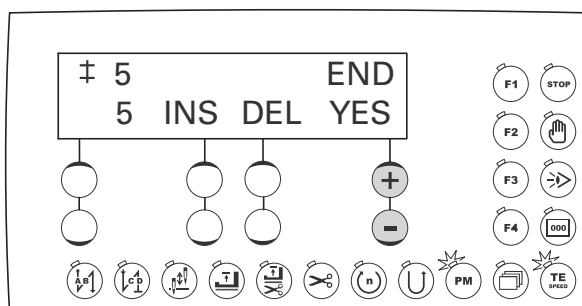
END ● Select "**YES**" by pressing the **+/-** key to conclude the entry of the seam.

● The selected values are taken over by pressing the **TE/Speed** key and a change is made to the programmed sewing.

> ℹ️ If no seam zone end function is switched on, the seam zone end is moved by the pedal function, see chapter **7.04 Pedal.**

11.05.02 Examples for seam program input via teach-in

The seam program should
- contain 3 seam zones
- and be saved under program number 8.

● Switch the machine on
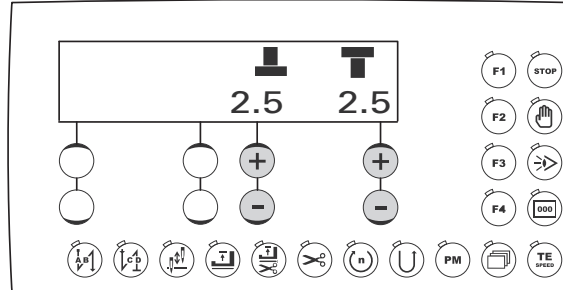
● Press the **TE/Speed** key twice to call up the input mode (LED lamp lights up).

2 x
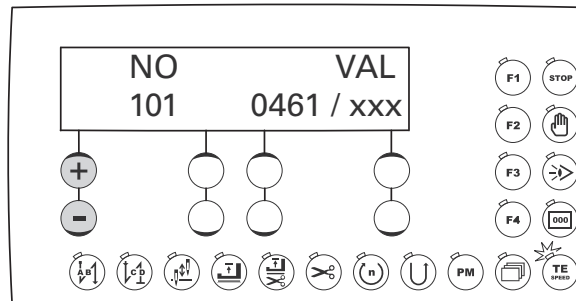
● Press the **PM** key to call up the seam program input (LED lamp lights up).
● Enter the template code, see chapter **9.09 Entering/changing the template code**.
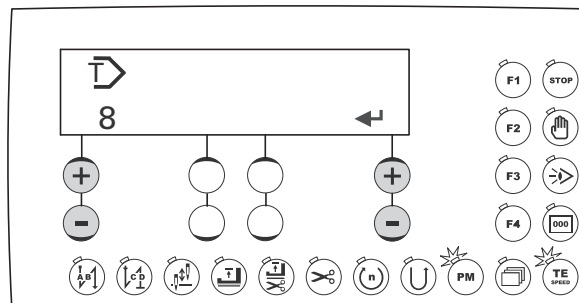
● Call up the "seam input via teach-in" input variant by pressing the **scroll** key, see chapter **11.02 Seam program input variants.**

● Select the program number "8" by pressing the corresponding **+/-** key.
Confirm this selection by pressing the corresponding **+/-** key.

● The display switches to enter seam zone one.

Seam zone one should contain

- the knee switch at seam zone end function and
- a stitch length (roller presser and feed wheel) of 2.8 mm.
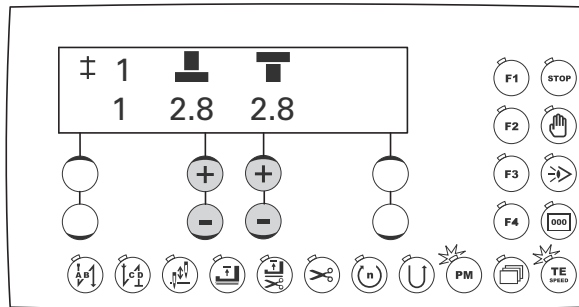
● Set the value for the roller presser stitch length to "**2.8**" by pressing the corresponding **+/-** key.

● Set the value for the feed wheel stitch length to "**2.8**" by pressing the corresponding **+/-** key.

● Sew seam zone one manually.
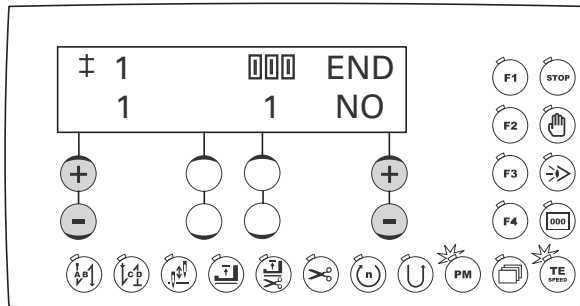
● The input of the seam zone end must be carried out after the machine stop. Switch on the "end of section by knee switch function" by pressing the knee switch or the **F3** key.

END ● After sewing, enable the input of further seam zones by pressing "**NO**" on the corresponding +/- key.

● Switch to seam zone two by pressing "**+**" on the corresponding **+/-** key.

Seam zone two should contain

- the knee switch at seam zone end function and
- a stitch length (roller presser and feed wheel) of 2.4 mm.
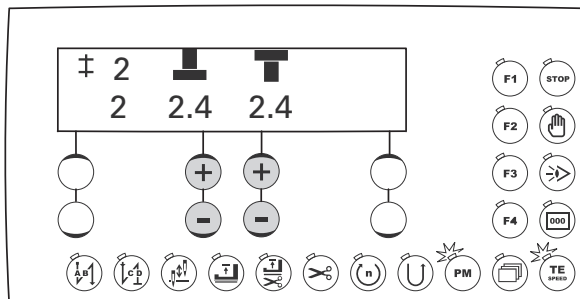
● Set the value for the roller presser stitch count to "**2.4**" by pressing the corresponding **+/-** key.

● Set the value for the feed wheel stitch length to "**2.4**" by pressing the corresponding **+/-** key:

● Sew seam zone two manually.
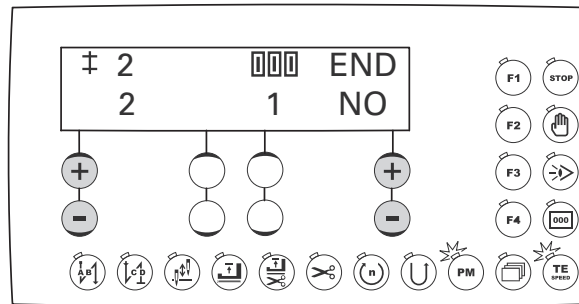
```
‡ 2        ▯▯▯   END        F1  STOP
  2          1   NO         F2  🖑
                            F3  ⇥▷
  +     ◯  ◯      +          F4  000
  −     ◯  ◯      −
  ⬑  ⬑  ⬑  ⬑  ⬑  ✂  ⬑  ⊔  PM  ⬑  TE
                              SPEED
```

F3 ● The input of the seam zone end must be carried out after the machine stop. Switch on the "end of section by knee switch function" by pressing the knee switch or the F3 key.

‡ ● Switch to seam zone three by pressing "**+**" on the corresponding **+/-** key.

Seam zone three should contain
- the thread trimming at seam zone end function and
- a stitch length (roller presser and feed wheel) of 2.8 mm.
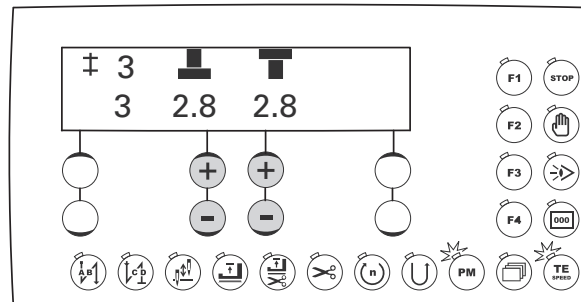
```
‡ 3     ▙    ▛              F1  STOP
  3    2.8  2.8             F2  🖑
                            F3  ⇥▷
  ◯    +    +    ◯          F4  000
  ◯    −    −    ◯
  ⬑  ⬑  ⬑  ⬑  ⬑  ✂  ⬑  ⊔  PM  ⬑  TE
                              SPEED
```

▙ ● Set the value for the roller presser stitch length to "**2.8**" by pressing the corresponding **+/-** key.

▛ ● Set the value for the feed wheel stitch length to "**2.8**" by pressing the corresponding **+/-** key.

● Sew seam zone three manually.

```
‡ 3        ▯▯▯   END        F1  STOP
  3          1   NO         F2  🖑
                            F3  ⇥▷
  ◯  ◯  ◯  ◯                F4  000
  ◯  ◯  ◯  ◯
  ⬑  ⬑  ⬑  ⬑  ⬑  ✂  ⬑  ⊔  PM  ⬑  TE
                              SPEED
```
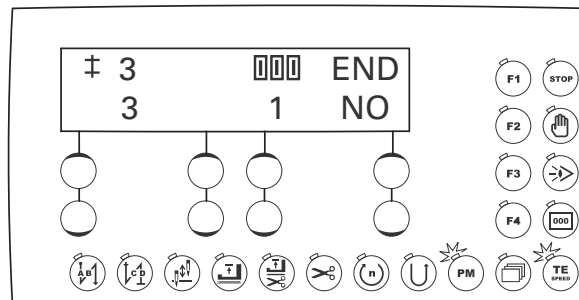
● The input of the seam zone end must be carried out after the machine stop. Activate the "seam zone end by pedal" function by pressing the pedal in position "**2**", see chapter **7.04 Pedal**.

✂ ● Switch on the corresponding function for the seam zone by pressing the thread trimming key.

END ● Select "**YES**" by pressing the corresponding **+/-** key to conclude the entry of the seam.

TE
SPEED
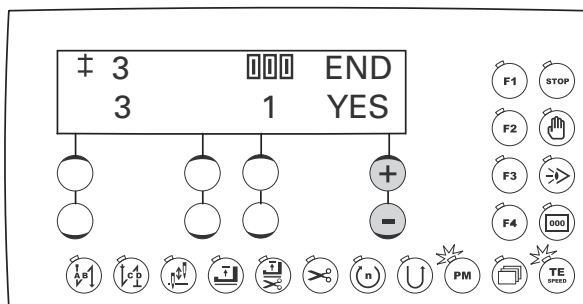
● The teach-in seam programming with three seam zone is completed as follows. The thread is trimmed and the selected values are taken over by pressing the TE/Speed key. The machine then switches to sewing mode.

ℹ️ If no seam zone end function is switched on, the seam zone end is moved by the pedal function, see chapter **7.04 Pedal.**

11.06   Program management

The program numbers that are saved in the machine memory or on the SD memory card are displayed in program management. The programs can be deleted or copied. Conventional SD memory cards up to a maximum of 128GB can be inserted into the control panel.
The machine data is saved in the file "**MD**" in the subdirectory **\P15xx_1**. The programs are saved in the directory **\P15xx_1** in the files **03** – **9**9.

The insertion and removal of the SD memory card is described in **chapter 9.11 Inserting and removing the SD memory card**.

Here, instead of the SD card, a USB stick can also be used. If you format the SD card or USB stick with the PC, it must be formatted in FAT (FAT**32**) format. Alternatively, the SD memory card can also be formatted using the formatting function on the corresponding machine, see **chapter 11**.**06**.**08 Formatting the SD memory card**.

> **If the SD card and a USB stick are used at the same time, only the SD card is accessed!**

11.06.01   Calling up program management

● Switch the machine on.

2x ● Call up input mode (**LED lights up**).

● Program management is called up by pressing the **scroll** key.
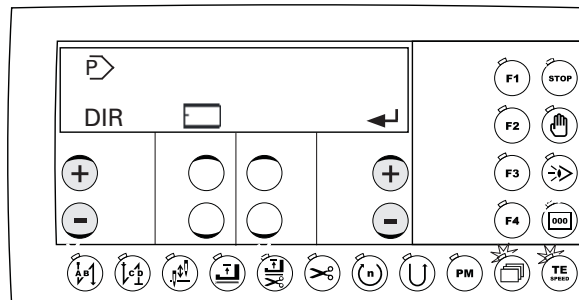
After calling up program management, the first menu item appears (display of the program in the machine memory).
Confirm selection of the menu item by pressing the right **plus key**.
Further menu items can be scrolled through by pressing the left **+/- keys**, see the following chapter.

The following menu items are available in program management:

● Display of the program in the machine memory

● Display of the program and the machine data on the inserted SD memory card

● Copying of single programs and the machine data onto the SD memory card

● Copying of single programs and the machine data in the machine memory

● Deleting programs in the machine memory

● Deleting programs and machine data on the SD memory card

● Formatting the SD memory card

11.06.02 Displaying programs in the machine memory

● To call up program management, see chapter **11.06.01 Calling up program management.**
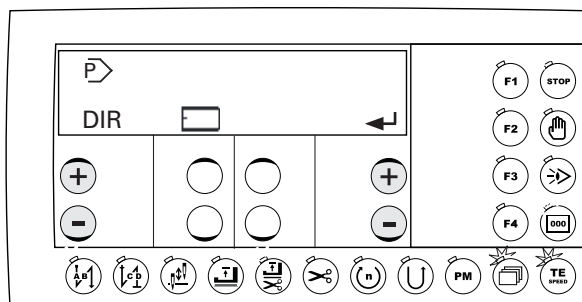
● Press the left **+/- keys** until the corresponding menu item is displayed.

● Confirm selection of the menu item by pressing the right **plus key**.
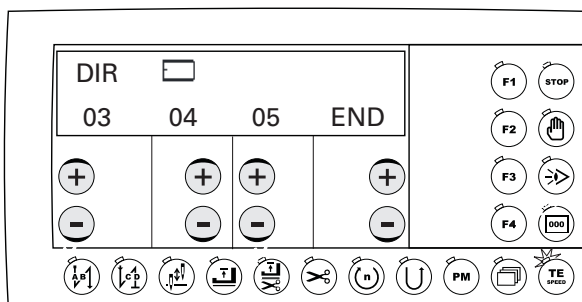
● The machine memory can be scrolled through within the display by pressing **"+" on the right +/- keys**.

● The programs (**1 - 99**) are displayed. Only occupied program places are displayed.

● Further program management menu items are called up by pressing the left **+/- keys**.

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11.06.03 Displaying programs and the machine data on the SD memory card

● To call up program management, see chapter **11.05.01 Calling up program management.**

● Press the left **+/- keys** until the corresponding menu item is displayed.

● Confirm selection of the menu item by pressing the right **plus key**.

● The SD memory card can be scrolled through within the display by pressing **"+" on the right +/- keys**.

● Programs (**1 - 99**) and machine data (**MD**) are displayed. Only occupied program places and saved machine data are displayed.

● Further program management menu items are called up by pressing the left **+/- keys**.

11.06.04   Copying programs and machine data onto the SD memory card

● To call up program management, see chapter **11.06.01 Calling up program management.**

● Press the left **+/- keys** until the corresponding menu item is displayed.

● Confirm selection of the menu item by pressing the right **plus key**.
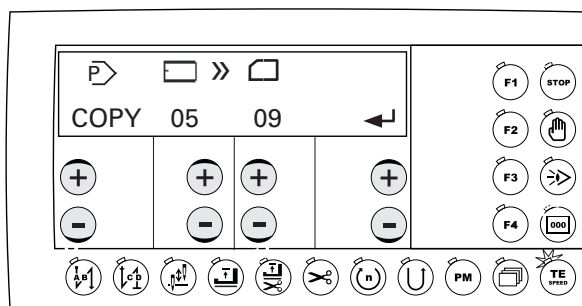
● Select the data to be copied from the machine memory to the SD memory card (programs **01 - 99**, machine data - **MD**, all programs - **ALL**) by pressing the **+/- keys** under the symbol of the machine memory.

● When copying programs, select the program number for saving on the SD memory card by pressing the **+/- keys** under the symbol of the memory card.

● Confirm the copying process by pressing the right **plus key**.

● Further program management menu items are called up by pressing the left **+/- keys**.

If a program is already present on the SD memory card, a prompt for confirmation will be displayed. The program will be overwritten by pressing the right **plus key**. Pressing the right **minus key** will cancel the operation.

11.06.05   Copying programs and machine data in the machine memory

● To call up program management, see chapter **11.06.01 Calling up program management.**

● Press the left **+/- keys** until the corresponding menu item is displayed.

● Confirm selection of the menu item by pressing the right **plus key**.
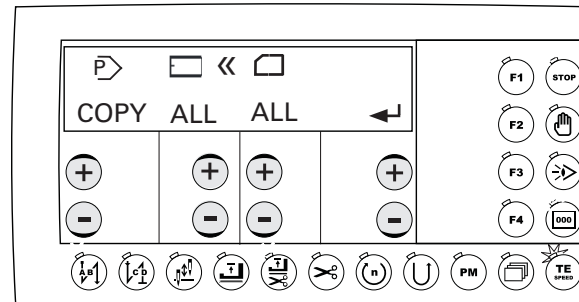
● Select the data to be copied from the SD memory card to the machine memory (programs **01 - 99**, all programs - **ALL**) by pressing the **+/- keys** under the symbol of the memory card.

● Select the data for storing in the machine memory by pressing the **+/- keys** under the symbol of the memory card.

● Confirm the copying process by pressing the right **plus key**.

● Further program management menu items are called up by pressing the left **+/- keys**.

If a program is already present in the machine memory, a prompt for confirmation will be displayed. The program will be overwritten by pressing the right **plus key**. Pressing the right **minus key** will cancel the operation.

11.06.06   Deleting programs in the machine memory

● To call up program management, see chapter **11.06.01 Calling up program management.**
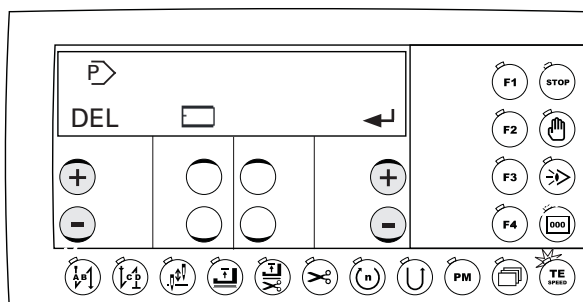
● Press the left **+/- keys** until the corresponding menu item is displayed.

● Confirm selection of the menu item by pressing the right **plus key**.
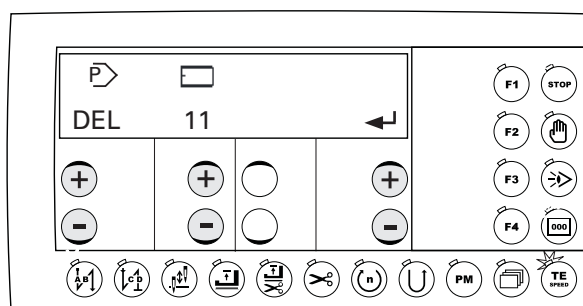
● Select the data to be deleted from the machine memory (programs **01 - 99**, machine data - **MD**, all data - **ALL**).(by pressing the **+/- keys** under the symbol of the machine memory.

● Confirm the deletion process by pressing the right **plus key**.

● Further program management menu items are called up by pressing the left **+/- keys**.

> ℹ️ Before the deletion process, a prompt for confirmation will be displayed. The program will be overwritten by pressing the right **plus key**. Pressing the right **minus key** will cancel the operation.

11.06.07   Deleting programs and machine data on the SD memory card

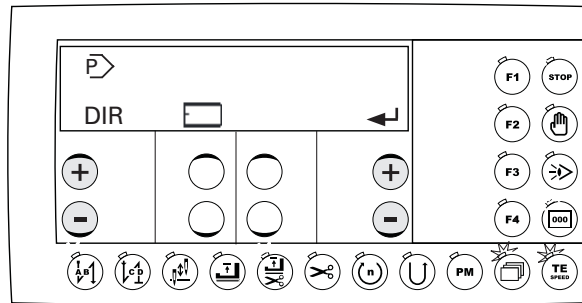● To call up program management, see chapter **11.06.01 Calling up program management.**
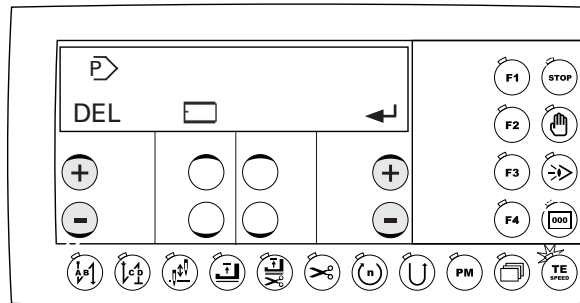
● Press the left **+/- keys** until the corresponding menu item is displayed.

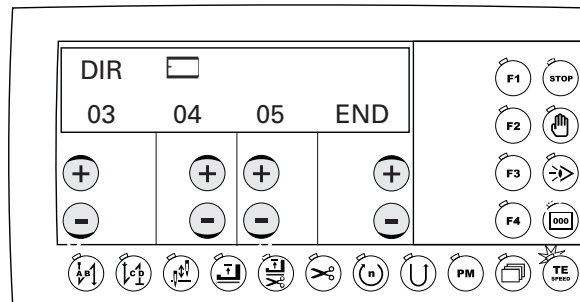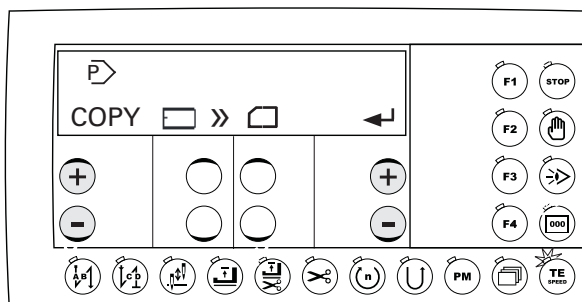● Confirm selection of the menu item by pressing the right **plus key**.
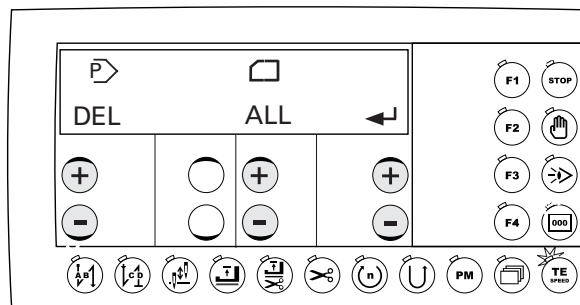
● Select the programs to be deleted from the SD memory card (programs **1 - 99**, all programs - **ALL,** machine data **- MD**) by pressing the **+/- keys** under the symbol of the SD memory card.

● Confirm the deletion process by pressing the right **plus key**.

● Further program management menu items are called up by pressing the left **+/- keys**.

> Before the deletion process, a prompt for confirmation will be displayed. The program will be overwritten by pressing the right **plus key**. Pressing the right **minus key** will cancel the operation.

Input

11.06.08   Formatting the SD memory card

● To call up program management, see chapter **11.06.01 Calling up program management.**
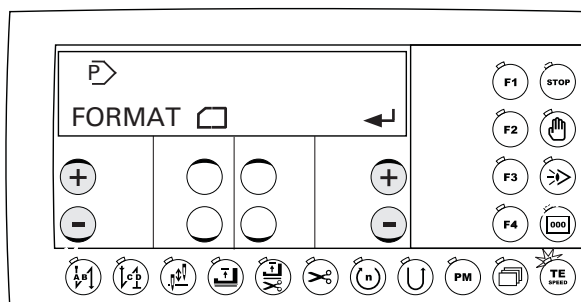
● Press the left **+/- keys** until the corresponding menu item is displayed.

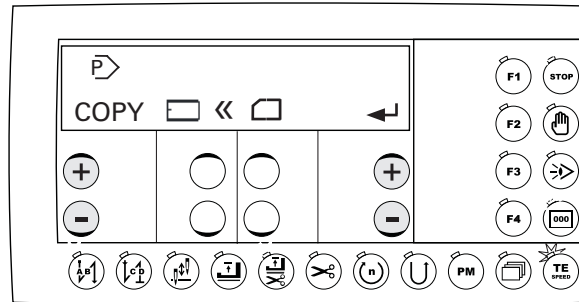● Confirm selection of the menu item by pressing the right **plus key**.

Before the start of formatting, a prompt for confirmation will be displayed.
The formatting process is confirmed by pressing the right **plus key**.
The formatting process can be cancelled by pressing the right **minus key**

The card is completely formatted if it cannot be read. If it is readable and the directory **\P1500_1** for the **15xx** exists, the machine data and the subdirectories for all programs are deleted.

If the directory **\P1500_1** for the **15xx** does not exist, only the directory is created. This is to ensure that programs from other machines and other files are not lost.

● Further program management menu items are called up by pressing the left **+/- keys**.

11.07   Parameter settings

11.07.01   Overview of parameter functions

After switching on the machine, the input mode in which the individual parameters can be called up directly is called up by pressing the corresponding function. All parameter groups or also individual ones can be protected by a code against unauthorised access.

2 x (TE SPEED)

(+) (−)   Select parameter group

100	**Info**
1400	**Roller presser**
1500	Placed stitch
1700	Thread tension
1800	**Backtack**
2000	**Sewing**
2200	**Thread monitor**
3000	**Thread trimming**
8000	**Configuration**
8100	Access rights
8300	Sewing motor
8600	**Others**
8700	**QONDAC**
9000	**Service**

(PM)   To call up the seam program input,
        see chapter **11.01 Input mode**
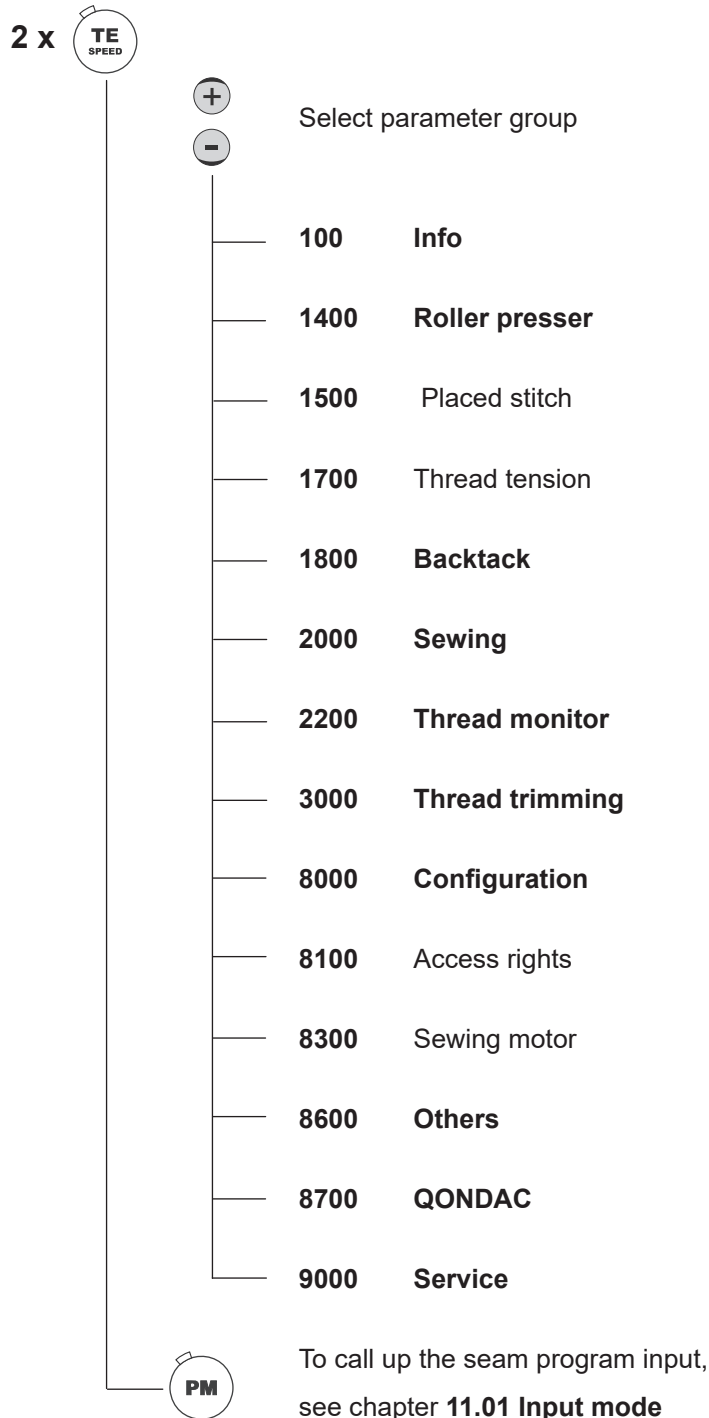
For a more detailed description of parameter functions, see chapter **11.07.03**

List of parameters.

11.07.02   Example of a parameter entry

● Switch the machine on.

2 x (TE SPEED)   ● Press the **TE/Speed** key twice to access the parameter entry function.
The status text "TE" appears on the display and the pedal functions are locked to prevent an accidental start-up of the machine.

```
         TE
         No            VAL
         101           on          F1   STOP
                                   F2
    +       +      ○       +       F3
    –       –      ○       –       F4   000
```
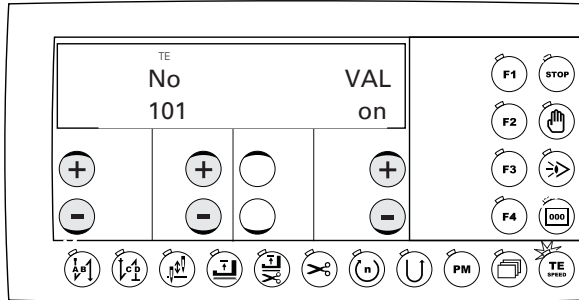
No ● Select the desired parameter, e.g. "**660**" bobbin thread monitor by pressing the corresponding **+/-** keys.

```
         TE
         No            VAL
         2201          1           F1   STOP
                                   F2
    +       +      ○       +       F3
    –       –      ○       –       F4   000
```
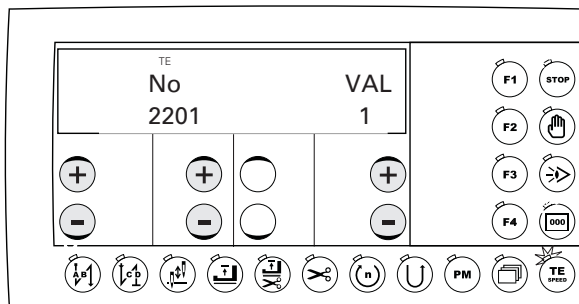
VAL ● Set the desired value for the parameter, e.g. "**0**" to switch off the bobbin thread monitor by pressing the corresponding **+/-** key.

```
         TE
         No            VAL
         2201          0           F1   STOP
                                   F2
    +       +      ○       +       F3
    –       –      ○       –       F4   000
```
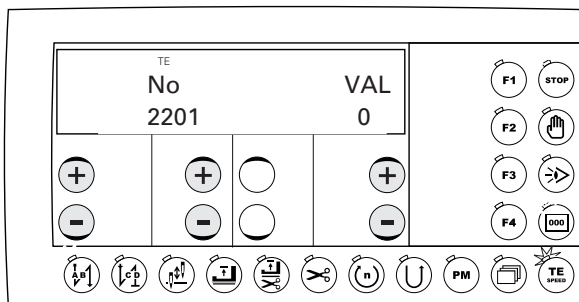
(TE SPEED)   ● The value is taken over and the machine switches to sewing mode by pressing the **TE/Speed** key.

11.07.03   Parameter list for control P430SD

Group	Parameter	Description	Setting range	Set value 1574	Set value 1571; 1591;1593
100	101	Display main processor software version	0461/xxx		
	102	Show software version of the bootloader	0458/xxx		
	103	Display sewing drive component software version	0427/xxx		
	104	Display control panel software version	VxxxHyyy		
	196	Display hardware ID of the controller			
	197	Show serial number of the controller	600-xxxx-xxxxxx		
	198	Show serial number			
	199	Display product number			
1400	1402	Roller presser lowering speed 0 = slow, 1 = quick	0 - 1	0	0
	1460	Holdoff time roller presser lift	0,001s - 1,500s	0,050s	0,050s
	1461	Lower start delay after roller presser	0,001s - 1,500s	0,050s	0,050s
	1462	Set roller presser lift Must be increased for high foot pressure	0,001s - 0,200s	0,080s	0,080s
	1480	Roller presser magnet pulse	10% - 50%	35%	35%
1500	1501	Placed stitch , 0 = OFF, 1 = ON	0 - 1	0	0
	1520	Placed stitch position	0° - 359°	20°	20°
1700	1703	Open thread tension on stop and roller presser lift 0 = OFF, 1 = ON	0 - 1	1	1
	1704	Open thread tension after trimming and roller presser lift 0 = OFF, 1 = ON	0 - 1	1	1
	1720	Thread tension ventilation position	0° - 359°	290°	300°(1571) 300°(1591) 290°(1593)
	1760	Time thread tension ventilation before timing	0,001s - 1,500s	0,100s	0,100s
	1780	Thread tension magnet timing	10% - 50%	35%	35%
1800	1840	Start backtack speed	100 - 1500	700	700
	1841	End backtack speed	100 - 1500	700	700

Input

Group	Parameter	Description	Setting range	Set value 1574	Set value 1571; 1591;1593
3000	3003	**Reverse rotation** , 0 = OFF, **1 = ON**	**0 - 1**	**1**	**1**
	3020	**Thread trimmer magnet position on**	**0° - 359°**	**66°**	**48°(1571)** **48°(1591)** **66°(1593)**
	3021	**Thread trimmer magnet position timing**	**0° - 359°**	**235°**	**283°(1571)** **283°(1591)** **235°(1593)**
	3022	**Thread trimmer magnet position off**	**0° - 359°**	**348°**	**339°(1571)** **339°(1591)** **348°(1593)**
	3026	**Reverse rotation position**	**0° - 359°**	**340°**	**283°(1571)** **283°(1591)** **340°(1593)**
	3040	**Cutting speed**	**100 - 300**	**180**	**180**
	3060	**Waiting time before turning back**	**0,001s - 1,500s**	**0,020s**	**0,020s**
	3080	**Thread trimmer magnet timing**	**10% - 50%**	**35%**	**35%**
8000	8002	**Take-up lever at t.d.c. position**	**0° - 359°**	**6°**	**353°(1571)** **353°(1591)** **6°(1593)**
	8003	**Position of needle at t.d.c. bottom position**	**0° - 359°**	**66°**	**48°(1571)** **48°(1591)** **66°(1593)**
	8004	**Machine configuration**	**1 - 9**	**2**	**1(1571)** **1(1591)** **9(1593)**
	8005	**Single stitch key assignment** **1 = half stitch** **2 = single stitch** **3 = double stitch** **4 = parameter stitch (parameter 2010)** **5 = needle up** **6 = Target stitch in sewing at 1574** **7 = Not high** **8 = knee switch**	**1 - 8**	**2**	**2**
	8006	**Half stitch key assignment** **1 = half stitch** **2 = single stitch** **3 = double stitch** **4 = parameter stitch (parameter 2010)** **5 = needle up** **6 = Target stitch in sewing at 1574** **7 = Not high** **8 = knee switch**	**1 - 8**	**1**	**1**
	8025	**Adjust sewing motor on sewing head** **(Needle top edge stitch plate)**		**31°± 6°**	**23°± 6°(1571)** **23°± 6°(1591)** **31°± 6°(1593)**

Group	Parameter	Description	Setting range	Set value 1574	Set value 1571; 1591;1593
8100	8101	Access rights for function group 100* (Info)	0 - 1	0	0
	8104	Programming access rights*	0 - 1	1	1
	8114	Access rights for function group 1400*(Roller presser)	0 - 1	1	1
	8115	Access rights for function group 1500* (Placed stitch)	0 - 1	1	1
	8117	Access rights for function group 1700* (Thread tension)	0 - 1	1	1
	8118	Access rights for function group 1800* (Backtack)	0 - 1	1	1
	8120	Access rights for function group 2000* (Sewing)	0 - 1	0	0
	8122	Access rights for function group 2200* (Thread monitor)	0 - 1	1	1
	8130	Access rights for function group 3000* (Thread trimming)	0 - 1	1	1
	8180	Access rights for function group 8000* (Configuration)	0 - 1	1	1
	8181	Access rights for function group 8100* (Access rights)	0 - 1	1	1
	8183	Access rights for function group 8300* (Sewing motor)	0 - 1	1	1
	8186	Access rights for function group 8600* (Others)	0 - 1	0	0
	8187	Access rights for function group 8700* (QONDAC)	0 - 1	1	1
	8190	Access rights for function group 9000* (Service)	0 - 1	1	1
	8199	Input access code	0 - 9999	1500	1500

Input

Group	Parameter	Description	Setting range	Set value 1574	Set value 1571; 1591;1593
9000	9001	Move roller presser and feed wheel and needle stepping motor			
	9002	Inputs: 0123456789ABCDEF			
		MACHINE:			
		0= reversing key on the machine head (E1)			
		1= single stitch key on the machine head (E2)			
		2= half stitch key on the machine head (E3)			
		3= free (E4)			
		4= knee switch (E5)			
		5= start inhibitor (E6)			
		6= photo cell (E7)			
		7= Material thickness with PFAFF 3834 (E8)			
		8= free (E9)			
		9= free (E10)			
		A= free (E11)			
		B= free (E12)			
		C= free (E13)			
		D= free (E14)			
		E= free (E15)			
		F= free (E16)			
		After key scroll:			
		SPECIAL:			
		0= Reference SM1			
		1= Reference SM2			
		2= Reference SM3			
		3= Busy SM1			
		4= Busy SM2			
		5= Busy SM3			
		6= Error SM1			
		7= Error SM2			
		8= Error SM3			
		9= Track A Incremental encoder #1			
		A= Track B Incremental encoder #1			
		B= 180° Track			
		C= 180° Track at translation			
		D= Track A Incremental encoder #2			
		E= Track B Incremental encoder #2			

Group	Parameter	Description	Setting range	Set value 1574	Set value 1571; 1591;1593
9000	9003	**Outputs test**			
		A1= Roller presser lift			
		A2= free			
		A3= free			
		A4= Thread trimming			
		A5= free			
		A6= Tension ventilation			
		A7= free			
		A8= free			
		A9= free			
		A10= free			
		A11= free			
		A12= Sewing engine is running			
		A13= free			
		A14= free			
		A15= free			
		A16= LED on the machine head			
		A17= free			
		A18= free			
		A19= free			
	9004	**Display values of the two setpoint transmitters**			
	9005	**Turn sewing motor**			
	9006	**Thread tension magnets**			
	9099	**Run cold start**			

Input

11.08   Error messages and description

Error	Description
E 001	System error
E 002	Sewing motor **E002/BB/xxx** **BB = 20: Deadman** **01: Switch on speed** **02: Positioning** **03: Start distance** **04: Read distance** **05: Set translation** **06: Read translation** **07: Error reset** **08** Write parameters **09: Read version** **0A: Read speed** **0B: Read actual position** **0C: Delete distance** **xxx =** Sewing motor controller error byte (see motor error**)**
E 003	Seam zone data
E 004	**Flash memory**
E 005	**No room on the heap**
E 006	**Mains voltage outside the work area**

E 007	**24V IO power supply E007/xx**
	xx= 1: Short circuit
	    2: overload
	    3: 5V timeout when switching on
	    4: 20 V timeout when switching on

E 008	**60V SM power supply E008/xx**
	xx= 1: Short circuit
	    2: overload
	    3: 20V timeout when switching on
	    4: 50 V timeout when switching on
	    5: 60 V not reached after switching on

E 009	**Encoder of the sewing drive not plugged in**

E 017	**Serial interface E017/xx**
	xx= 20: Overflow interface 1
	    21: Receive buffer of interface 1 full
	    22: Overflow interface 2
	    23: Receive buffer of interface 2 full
	    24: Overflow interface 3
	    25: Receive buffer of interface 3 full

E 019	**Sewing motor has no 180 ° track**

E 020	CAN interface **E020/xx**
	xx= 1: Number of CAN nodes wrong
	    2: Hardware error (possibly short circuit)
	    3: Communication

E 021	**Button pressed when switching on**
E 022	Pedal activated when machine turned on

Error	Description

E 040	**Stepper motor 1 E040/xx**
	xx= 1: Wrong command
	      2: Overtemperature
	      3: Excess current

E 041	**Stepper motor 2 E041/xx**
	xx= 1: Wrong command
	      2: Overtemperature
	      3: Excess current

E 042	**Stepper motor 3 E042/xx**
	xx= 1: Wrong command
	      2: Overtemperature
	      3: Excess current

E 101	**Program number invalid (3 - 99)**
E 102	**Error in the sewing program**
E 106	Incorrect stitch length
E 107	Ramp not completed
E 110	Needle drive mid-point not found
E 111	Sewing displacement error
E 125	**Fatal, unrecoverable internal error**

E 152	SD card error **E152/xx**
	xx= 1: no card inserted
	      2: wrong card (not formatted for 15xx)
	      3: Card not inserted correctly
	      4: Card protected
	      5: Data error while reading or writing
	      6: Error formatting
	      7: File not suitable for 15xx
	      8: Incorrect file size
	      9: Transmission error
	    10: Error deleting a file

11.09 Sewing motor errors

Error	Description
48	Timeout for increasing speed
49	Timeout from deadman
50	Timeout for initialisation
51	**Number of communication attempts exceeded**
52	**Timeout during communication**
53	**Invalid command**
54	**Checksum wrong**
55	**Invalid data**
56	**Parameter does not exist**
57	**Parameter limits exceeded or exceeded**
58	**Sewing motor has not turned yet**
70	**Motor blocked**
71	**External synchronization mark not found**
72	**Excess current (20A)**
73	**Sewing motor not plugged**
74	**Synchronization mark at the first attempt not found**
75	**Current sensors out of tolerance**
76	**Deadman expired**
77	**Error at brake resistor**
78	**Overvoltage**
79	**Undervoltage**
80	**Fatal, unrecoverable internal error**
81	**Synchronization mark of the sewing motor is missing**
82	**No valid hardware identifier**
83	**Ground fault of the sewing motor detected**

11.10 Warning messages

Error	Description
Warning 2	**Bobbin thread error**

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12   *Maintenance and Care*

12.01   *Maintenance intervals*

Cleaning...daily, several times if in continuous operation

Clean the hook area...............................daily, several times if in continuous operation

General oiling .... daily, before start-up

Oil the hook .... daily, before start-up

Oil level (thread lubrication / hook lubrication) .... twice a week

Lubricate the bevel gears.. once as year

⚠️ *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.*

12.02   *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!*
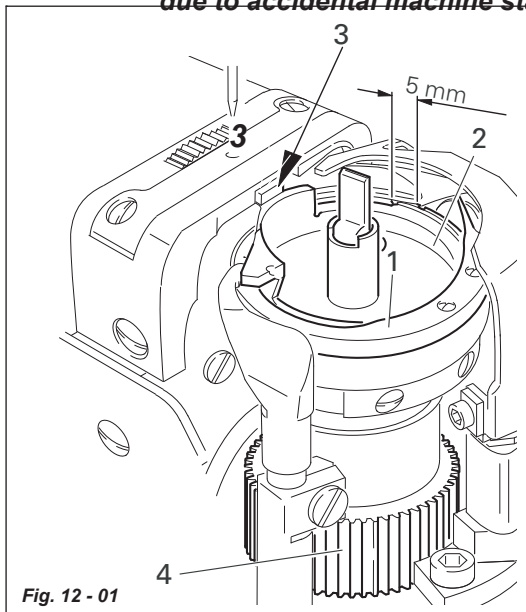
Fig. 12 - 01

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

Clean the hook area
- *Clean the hook area with a brush.*

Clean the hook
- *Open the post cover.*
- *Bring the needle bar to the top position.*
- *Remove the bobbin case sewing head with bobbin.*
- *Unscrew the hook gib 1.*
- *Turn the handwheel until the tip of the bobbin case 2 has penetrated approx. 5 mm into the groove of the hook race*
- *Remove the bobbin case and clean the hook race with kerosene.*

- *Make sure that the horn 3 engages in the groove of the stitch plate when inserting the bobbin case.*
- *Screw on the hook gib 1.*
- *Insert the bobbin case with bobbin.*
- *Clean the pinion 4.*
- *Close the post cover.*

12.03 Oiling the hook

Fig. 12 - 02
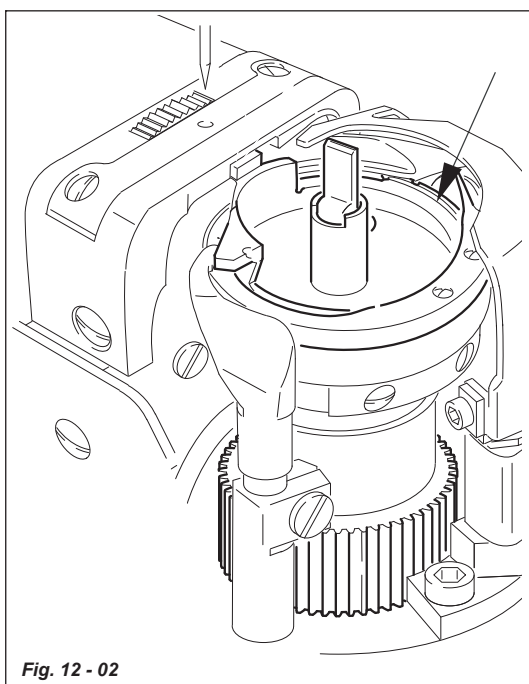
Switch off the machine!
Risk of injury due to accidental machine start-up!

● *Open the post cover.*

● *Bring the needle bar to the top position.*

● *Add a few drops of oil onto the hook race at initial start-up or if the machine has been standing still for a prolonged period of time (see arrow).*
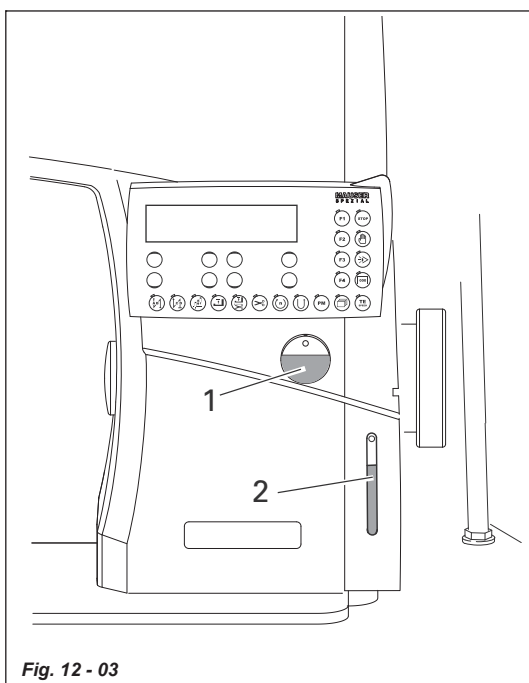
Only use oil with a centre viscosity of 22.0 mm^2/s at 40 °C and a density of 0.865 g/cm^3 at 15 °C!
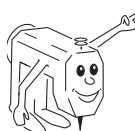
We recommend PFAFF sewing machine oil, order no. 280-1-120 144.

12.04 Oil reservoir for hook lubrication

Fig. 12 - 03

Check the oil level before every start-up.

Oil must always be visible in the sight glass 1 and 2.

● *Add oil through the hole above the sight glass as needed.*

Only use oil with a centre viscosity of 22.0 mm^2/s at 40 °C and a density of 0.865 g/cm^3 at 15 °C!

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

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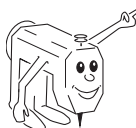
12.05   Lubricating the bevel gears

Fig. 12 - 04
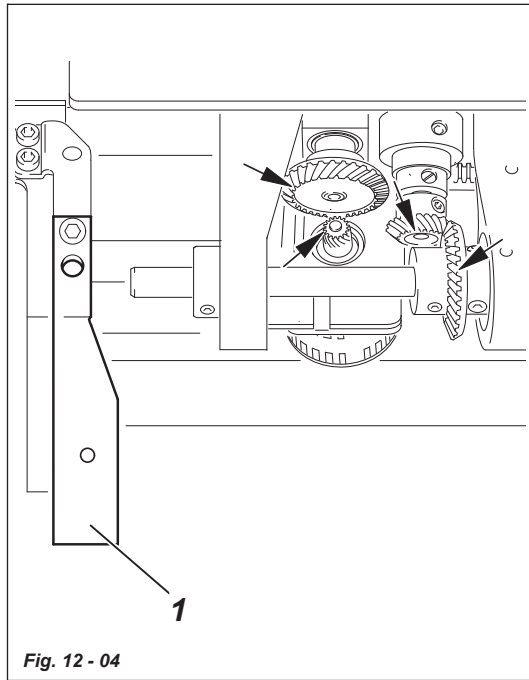
Switch off the machine!

Risk of injury due to accidental machine start-up!

● **Fresh grease should be applied to all bevel gears once a year.**

● **Tilt back the machine sewing head and let it rest on the sewing head support.**

● **To return the machine sewing head to its upright position, press the anti-tipping device 1 backwards and return the machine sewing head to its upright position using both hands!**
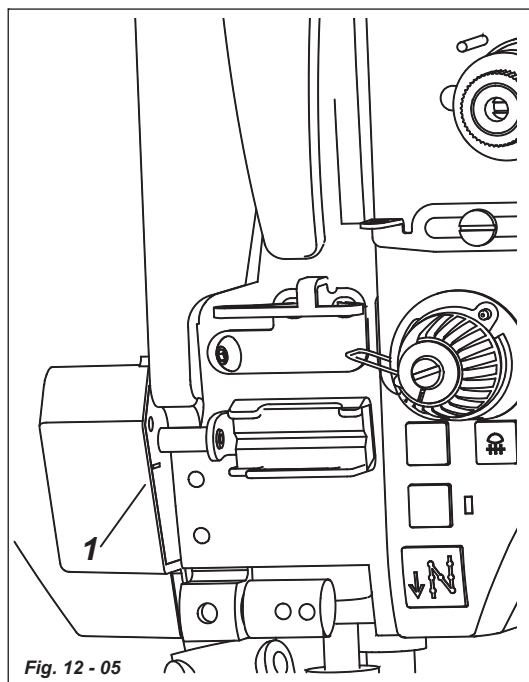
Return the machine sewing head to its upright position using both hands!

Risk of injury from crushing between the machine sewing head and the table top!
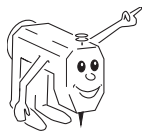
We recommend
PFAFF sodium soap grease with a dripping point of approx. 150°C.

12.06   Topping up the thread lubrication oil reservoir

Fig. 12 - 05

Check the oil level before every start-up.

The oil reservoir 1 must always have oil in it.

● **Add oil through hole as needed**
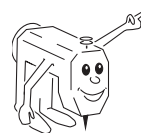
We recommend
PFAFF thread lubricating oil
Order no. 280-1-120 217.

Maintenance and Care

12.07   *Lubricating the roller presser drive gear mechanism* (only for a diameter of 25 mm and 35 mm)
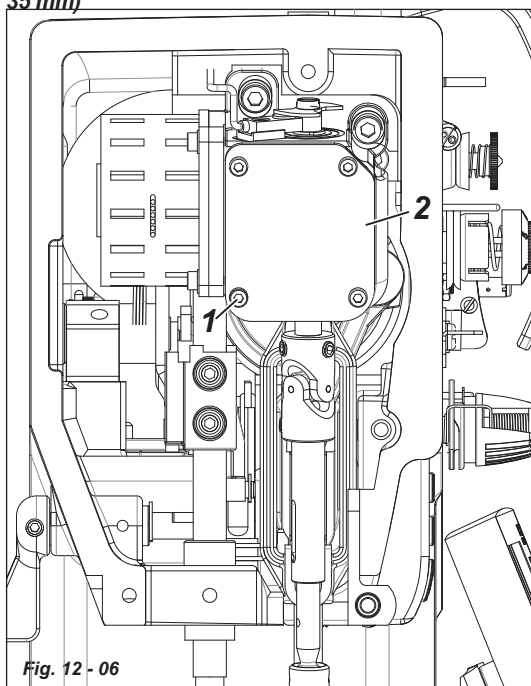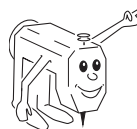

Fig. 12 - 06

Switch off the machine!

Risk of injury due to accidental machine start-up!

● *Loosen the screws 1.*

● *Remove the cover 2.*

● *Lubricate the gear mechanism.*

● *Fit the cover 2 again.*

● *Tighten the screws 1.*

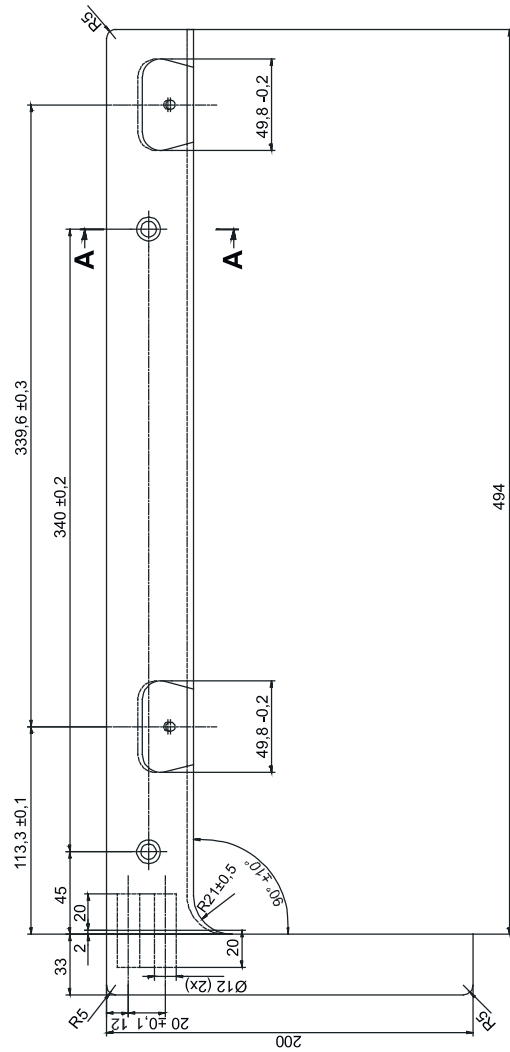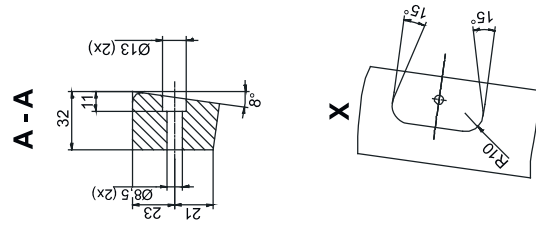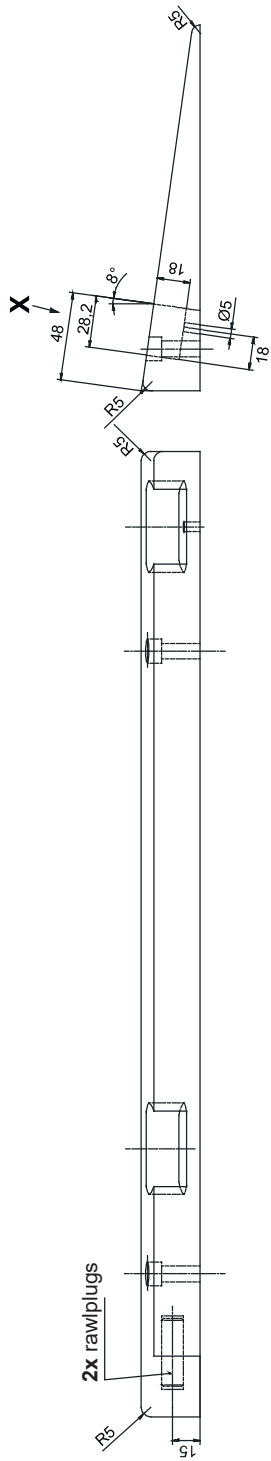*Only use grease with a dripping point of approx. 150 °C!*

We recommend PFAFF sodium soap grease with a dripping point of approx. 150 °C. Order no. 280-1-120 243.

Tilt base

13   **Table Top**
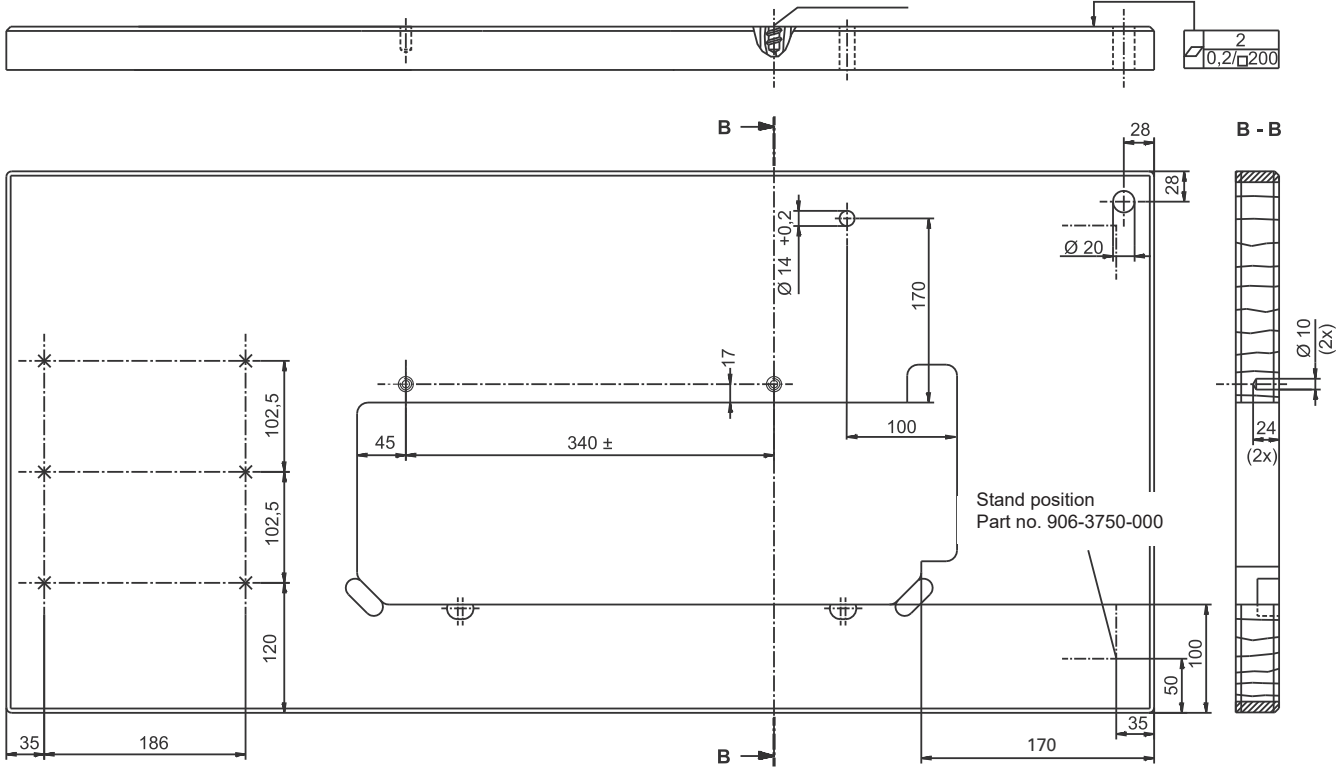
13.01   Tilt base

13.02 Table top cutout

Anchor nut DIN 7965 (2x)
Order no. 12-177 106-05

Stand position
Part no. 906-3750-000

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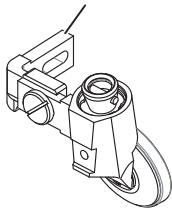
KSL
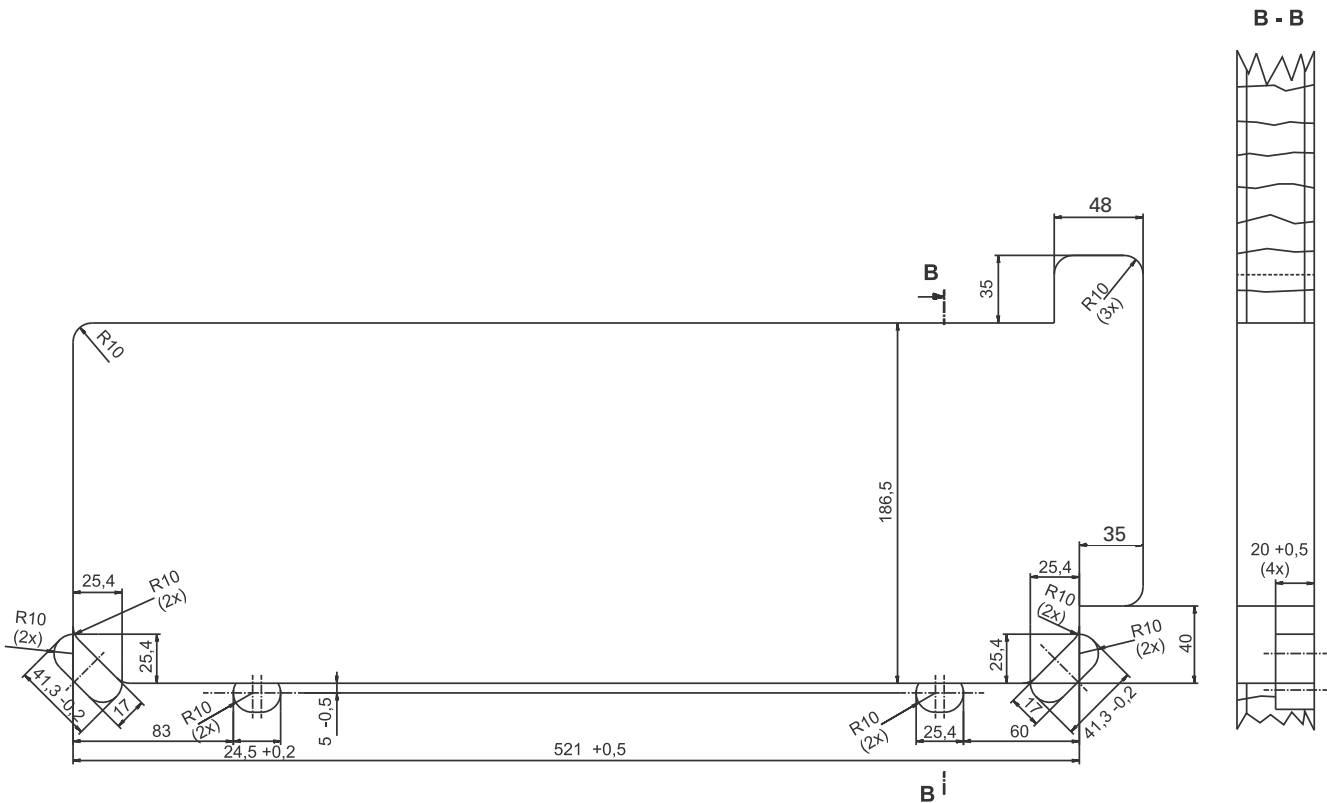
14 Wearing Parts

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. **296-12-19 401.**

PFAFF 1574   **PFAFF 1571; 1591; 1593**

91-363 048-93/001   Rollfuss 25 mm Ø
91-363 050-93/001   Rollfuss 30 mm Ø
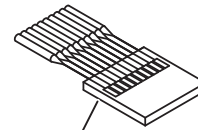91-363 052-93/001   Rollfuss 35 mm Ø

91-363 119-05 (Pfaff 1571; 1591; 1593)
91-363 074-05 (Pfaff 1574)
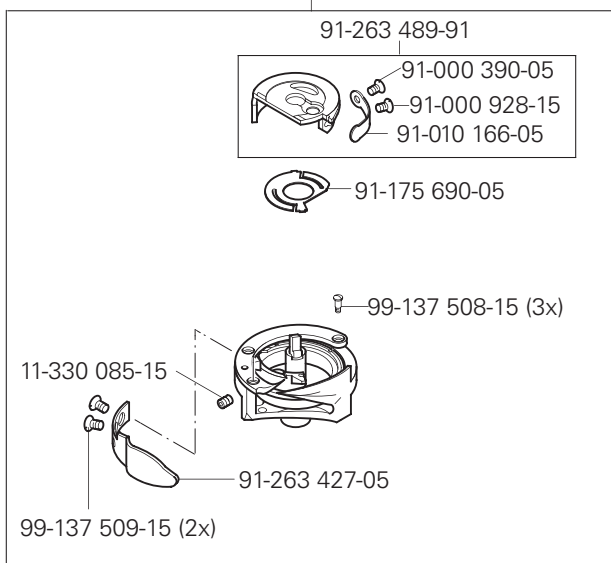
11-108 093-15
91-173 664-15

91-165 344-15 (2x)

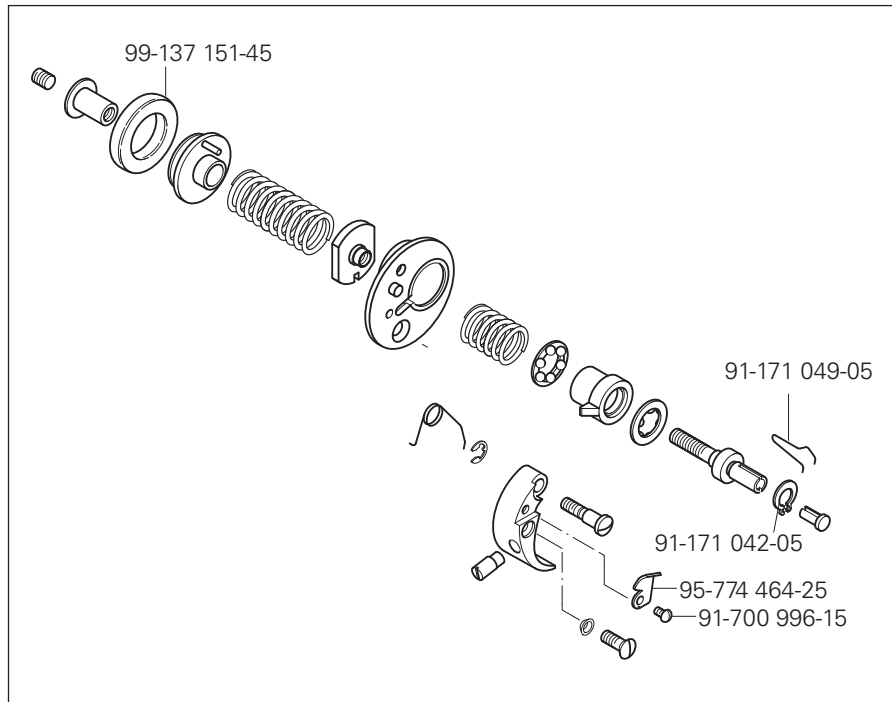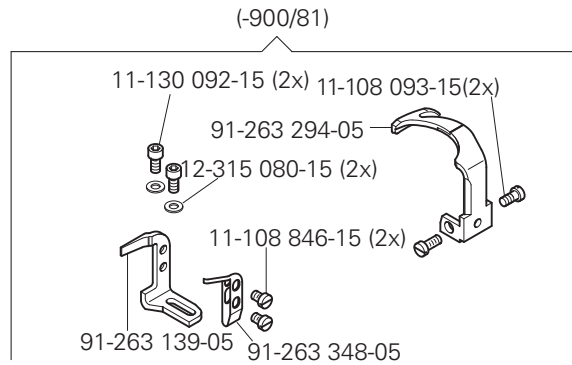**PFAFF 1571; 1591; 1593**
System 134

PFAFF 1574
System 134-35

91-263 490-91 B
91-263 495-91 C

91-263 489-91

91-000 390-05
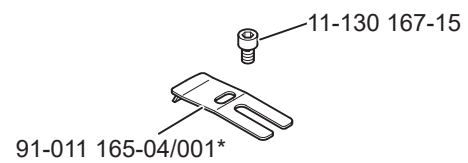91-000 928-15
91-010 166-05

95-774 789-05

91-175 690-05

99-137 508-15 (3x)

11-330 085-15

91-263 427-05

99-137 509-15 (2x)

(-900/81)

11-130 092-15 (2x) 11-108 093-15(2x)

91-263 294-05

12-315 080-15 (2x)

11-108 846-15 (2x)

91-263 139-05 91-263 348-05

99-137 151-45

91-171 049-05

91-171 042-05

95-774 464-25

91-700 996-15

1571-725/..

11-173 168-15

91-119 202-04/001*

1574-725/..; 1591-725/..

11-130 167-15

91-011 165-04/001*
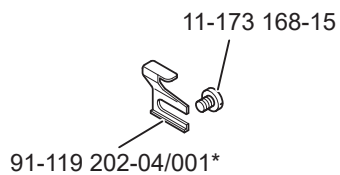
* More knives see parts list

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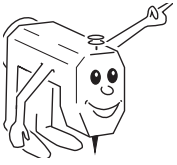
Notes

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