

PFAFF

SSD (Skip stitch detection)

Instruction and adjustment manual

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1 Safety

- This machine may only be operated by adequately trained operators and only after having completely read and understood the Instruction Manual!
- All Notes on Safety and Instruction Manuals of the motor manufacturer are to be read before operating the machine!
- The danger and safety instructions on the machine itself are to be followed!
- This machine may only be used for the purpose for which it is intended and may not be operated without its safety devices. All safety regulations relevant to its operation are to be adhered to.
- When exchanging sewing tools (e.g. needle, roller presser, needle plate and bobbin), when threading the machine, when leaving the machine unattended and during maintenance work, the machine is to be separated from the power supply by switching off the On/Off switch or by removing the plug from the mains!
- Everyday maintenance work is only to be carried out by appropriately trained personnel!
- Repairs and special maintenance work may only be carried out by qualified service staff or appropriately trained personnel!
- Work on electrical equipment may only be carried out by appropriately trained personnel!
- Work is not permitted on parts and equipment which are connected to the power supply! The only exceptions to this rule are found in the regulations EN 50110.
- Modifications and alterations to the machine may only be carried out under observance of all the relevant safety regulations!
- Only spare parts which have been approved by us are to be used for repairs! We expressly point out that any replacement parts or accessories which are not supplied by us have not been tested and approved by us. The installation and/or use of any such products can lead to negative changes in the structural characteristics of the machine. We are not liable for any damage which may be caused by non-original parts.

2 Proper use

The **SSD (skip-stitch detection)** is a device for detecting skipped stitches on sewing machines.



Any and all uses of this machine which have not been approved of by the manufacturer are considered to be inappropriate! The manufacturer cannot be held liable for any damage caused by the inappropriate use of the machine! The appropriate use of the machine includes the observance of all operational, adjustment, maintenance and repair measures required by the manufacturer!

3 Specifications[▲]

Operating voltage: 24 V
Interfaces: RS 232, CAN
Software: 71-001 103-36/025

▲ Subject to alterations

4 Disposal of machine

- The proper disposal of the machine is the responsibility of the customer.
- The materials used in the machines are steel, aluminium, brass and various plastics. The electrical equipment consists of plastics and copper.
- The machine is to be disposed of in accordance with the locally valid environmental protection regulations. If necessary, a specialist is to be commissioned.



Special care is to be taken that parts soiled with lubricants are separately disposed of in accordance with the locally valid pollution control regulations!

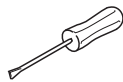
5 Explanation of the symbols

In the following section of this Instruction Manual, certain tasks or important pieces of information are accentuated by symbols.

The symbols used have the following meanings:



Note, information



Servicing, repairing, adjustment, maintenance
(only to be carried out by specialist personnel)

6 Controls

6.01 On/off switch

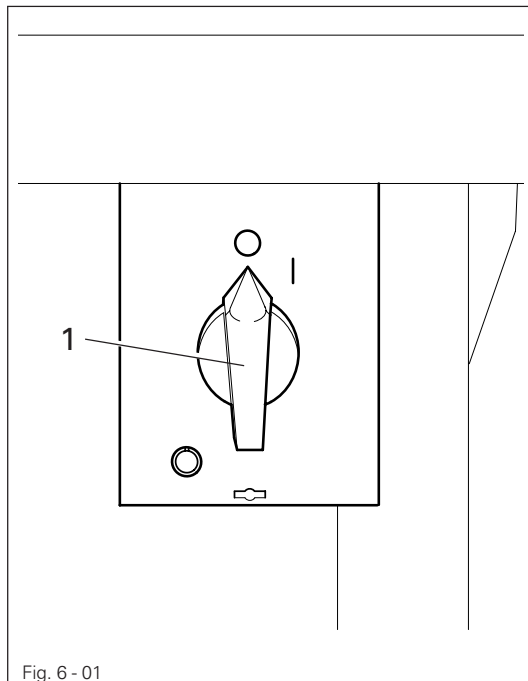


Fig. 6 - 01

- Switch the machine on or off by turning main switch 1.

6.02 Control unit (face side)

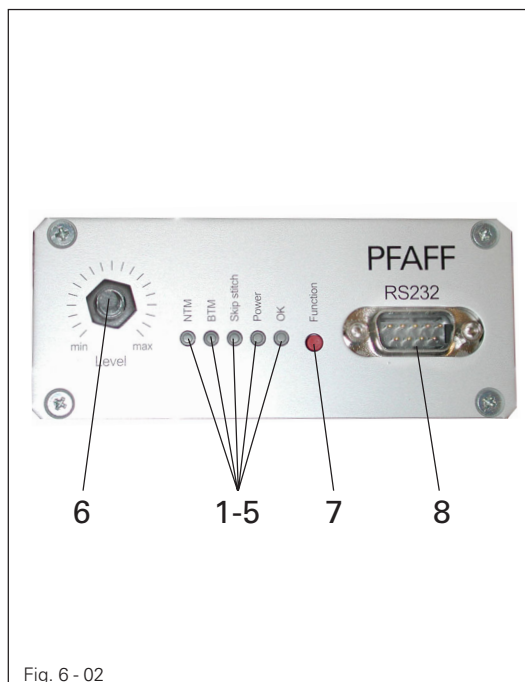


Fig. 6 - 02

- The LEDs 1 - 5 show the number of fade-out stitches or the timeout time.
- Regulator 6 is used to adjust the sensor threshold.
- Function key 7 is used to select the fade-out stitches or timeout time function.
- Interface 8 (RS 232) for PC connection.



Two-needle machines have a control unit for each hook.

6.03 Control unit (rear side)

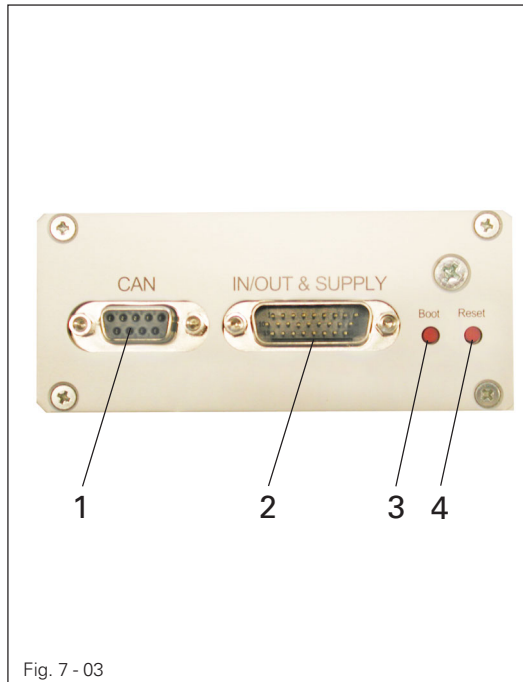


Fig. 7 - 03

- Socket 1 is a CAN interface.
- Socket 2 is an interface for inputs and outputs.
- Button 3 is used to boot the control unit.
- Button 4 is used to reset the set values.

6.04 Skip-stitch detection device button

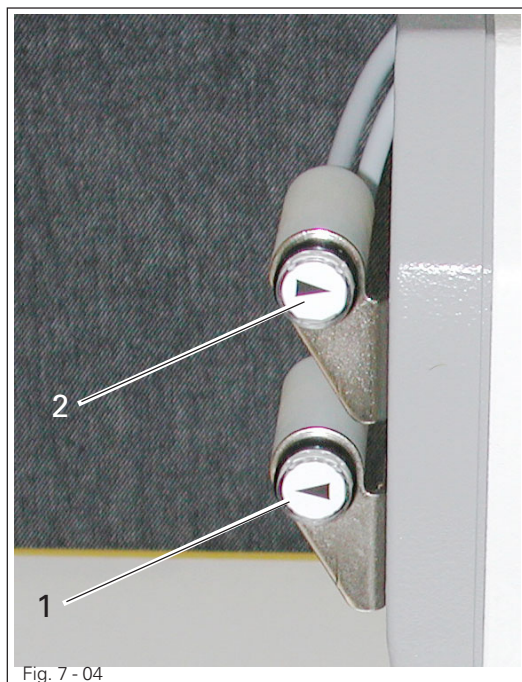


Fig. 7 - 04

- Button 1 lights up, if an error is detected in the sewing operation of the **left** hook (the machine pedal is blocked, the error message ERROR 9 is shown on the control panel).
- Press button 1 to acknowledge the error message.
- Button 2 has the same function for the **right** hook.

7

Setting up



All regulations and directions in this instruction manual must be observed.
Special attention must be paid to all safety regulations!

All setting-up work may only be carried out by appropriately trained personnel.

7.01

Setting the fade-out stitches

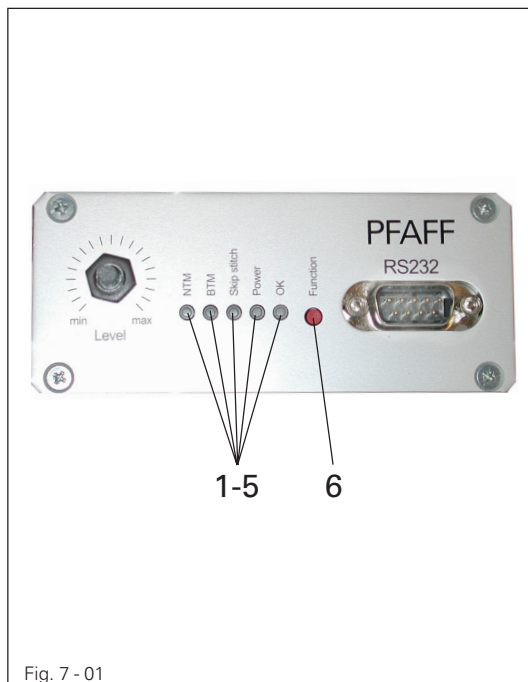


Fig. 7 - 01



Fade-out stitches are those stitches, which are required for a secure seam start and which are therefore ignored by the skipped stitch detection device.

- When switching on the machine, simultaneously press function key **6** for approx. **3 seconds**, until the LEDs **1 - 5** flash once for a short time.
- By shining and flashing the LEDs **1 - 5** now show the currently set number of fade-out stitches.
Example
If 5 LEDs are shining = **5** stitches,
If 2 LEDs are flashing = **7** stitches.
(Status at the time of delivery = **5** stitches)

- It is possible to increase or reduce the number of stitches by pressing the function key **6** several times.
- Press function key **6** for approx. **3 seconds** to store the set number of stitches.



On two-needle machines this adjustment must be made on the respective control unit for the left and right hook.

7.02 Setting the timeout time

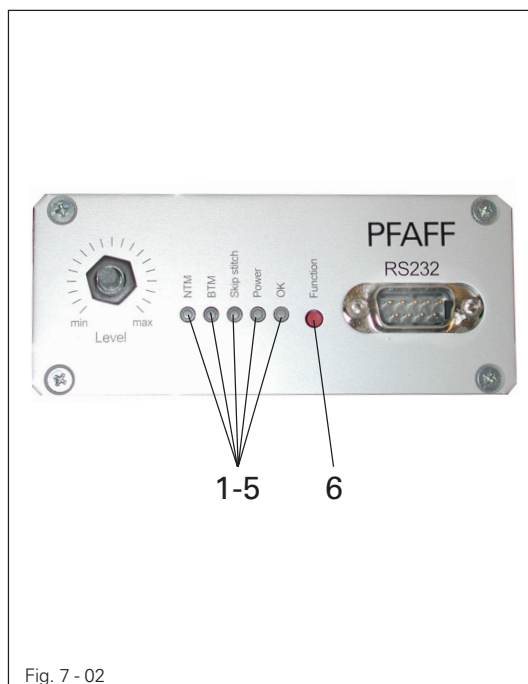


Fig. 7 - 02



The timeout time is the time between **each** machine stop until the fade-out stitches are activated.

- With the machine switched on, shortly press function key **6**.
- The LEDs **1 - 5** now light up or flash to show the time currently set.
Example
If 5 LEDs are shining = **2.5** sec.
If 2 LEDs are flashing = **3.5** sec.
If no LEDs are illuminated = **0** (timeout function is off)
Min. time = 0.5 sec.
Max. time = 5.0 sec.
(Status at the time of delivery = **2.5** sec.)

- It is possible to increase or reduce the time by pressing the function key **6** several times.
- 5 seconds after the key was last pressed, the set time is stored automatically.



On two-needle machines this adjustment must be made on the respective control unit for the left and right hook.

Of special importance!

If an interruption in sewing exceeds the timeout time, the number of fade-out stitches is reactivated – the result is that any skipped stitches occurring in the range of the fade-out stitches will **not be shown**.

Timeout-setting "0" means no timeout, monitoring remains active until thread trimming function, or backtacking function or reverse sewing

If the time after thread trimming and the start of a new seam is shorter than the timeout time (fade-out stitches are not activated), the system shows **non-existent skipped stitches**.

Conclusion

For long handling times, the timeout time must be increased, for short handling times reduced.

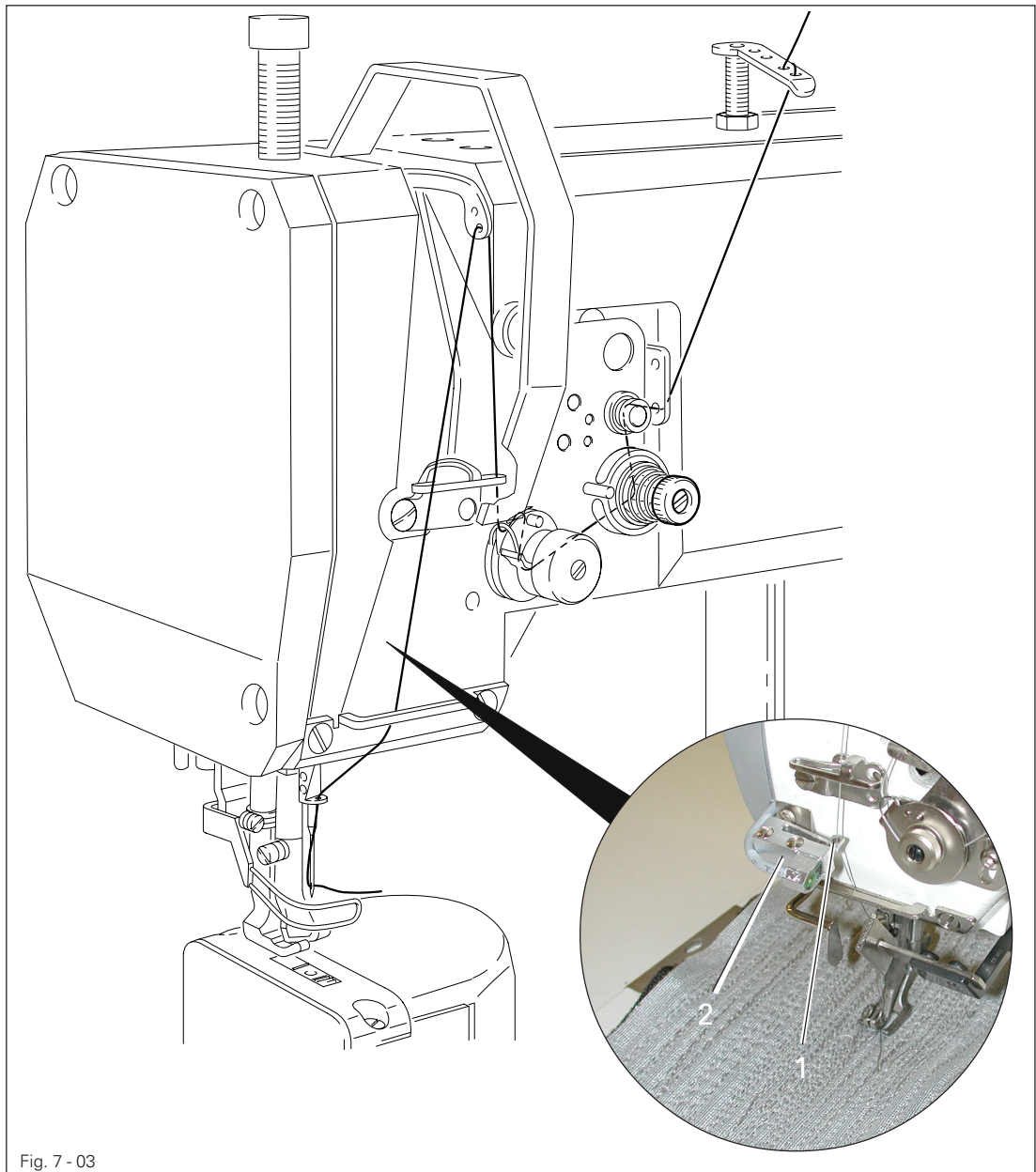


Fig. 7 - 03



Switch off the machine!

Danger of injury if the machine is started accidentally!

- Thread the needle thread as shown in **Fig. 7-03**, taking care that the needle is threaded from the left.
Also make sure that on the single needle machines 1295 and 1525 the needle thread is passed through the ring **1** of sensor **2**.

7.04

Threading the needle thread on the PFAFF 1296/1526

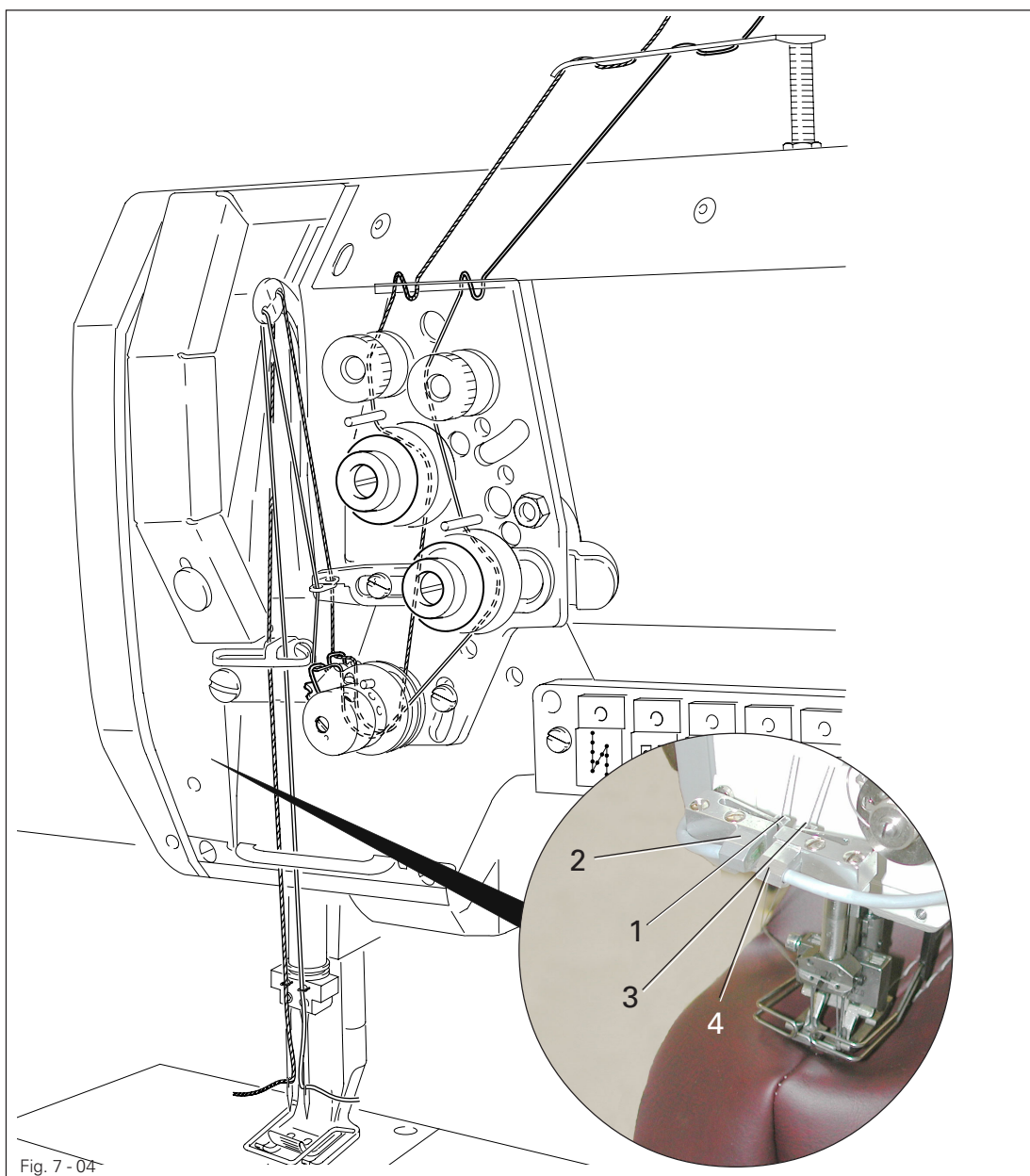


Fig. 7-04



Switch off the machine!
 Danger of injury if the machine is started accidentally!

- Thread the needle thread as shown in Fig. 7-04.
- Take care that the left needle is threaded from the right to left and the right needle from left to right.

Also make sure that on the two needle machines 1296 and 1526 the left needle thread is passed through the ring 1 of sensor 2, and the right needle thread through ring 3 of sensor 4.

8 Adjustment

8.01 Notes on adjustment

All the adjustments in this manual are based on a fully-assembled machine and may only be carried out by appropriately trained personnel.

Machine covers, which have to be removed and replaced to carry out checks and adjustments, are not mentioned in the text.

The order of the following chapters corresponds to the most logical work sequence for machines which have to be completely adjusted. If only specific individual work steps are carried out, both the preceding and the following chapters must be observed.

Screws and nuts indicated in brackets () are fastenings for machine parts, which must be loosened before adjustment and tightened again afterwards.



The illustrations in this chapter show the **PFAFF 1526**.

For adjusting the **PFAFF 1295 / 1296** the illustrations can be used analogously.

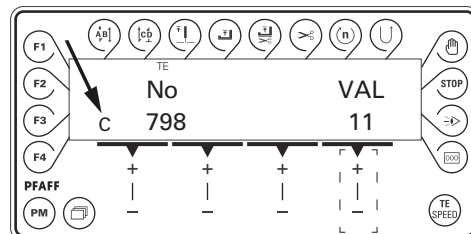
8.02 Setting parameter 680 on the PFAFF 1525 + 1526

(Quick-control P70 EDx)

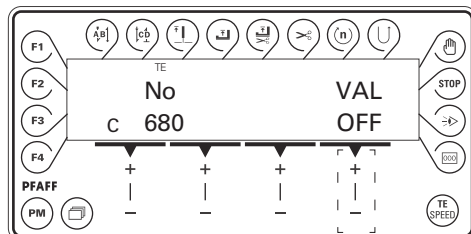
2x



- Switch on the machine.
- Press the **TE/Speed** key twice to call up the parameter input function.
- Call up parameter "798" by pressing the corresponding **+/-** key.
- Press the corresponding **±** key to select the user level "C".



- Call up parameter "680" by pressing the corresponding **+/-** key.



- Press the corresponding **±** key to set the value at "OFF".
(= ERROR 9 when the seam is interrupted).



- Change to the sewing mode by pressing the **TE/Speed** key.

8.03 Space between initiator and trip dog

Requirement

1. Initiators **3** should be centred to trip dogs **5**.
2. There should be a space of **0.3 mm** between the initiators **3** and the trip dogs **5**.

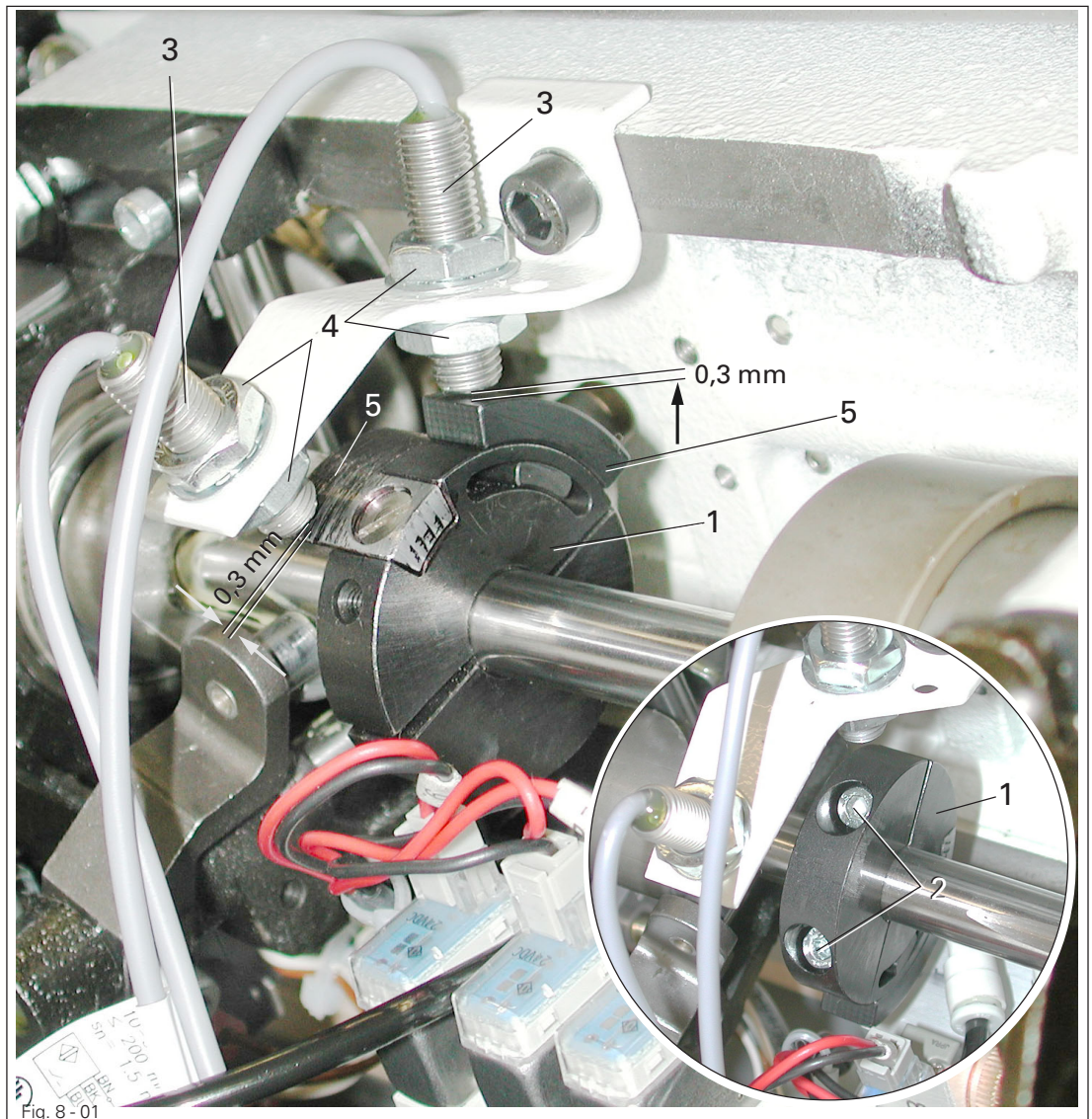
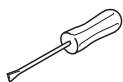


Fig. 8-01



- Adjust disk **1** (screws **2**) in accordance with requirement 1.
- Twist initiators **3** (nuts **4**) in accordance with requirement 2.

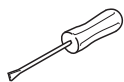
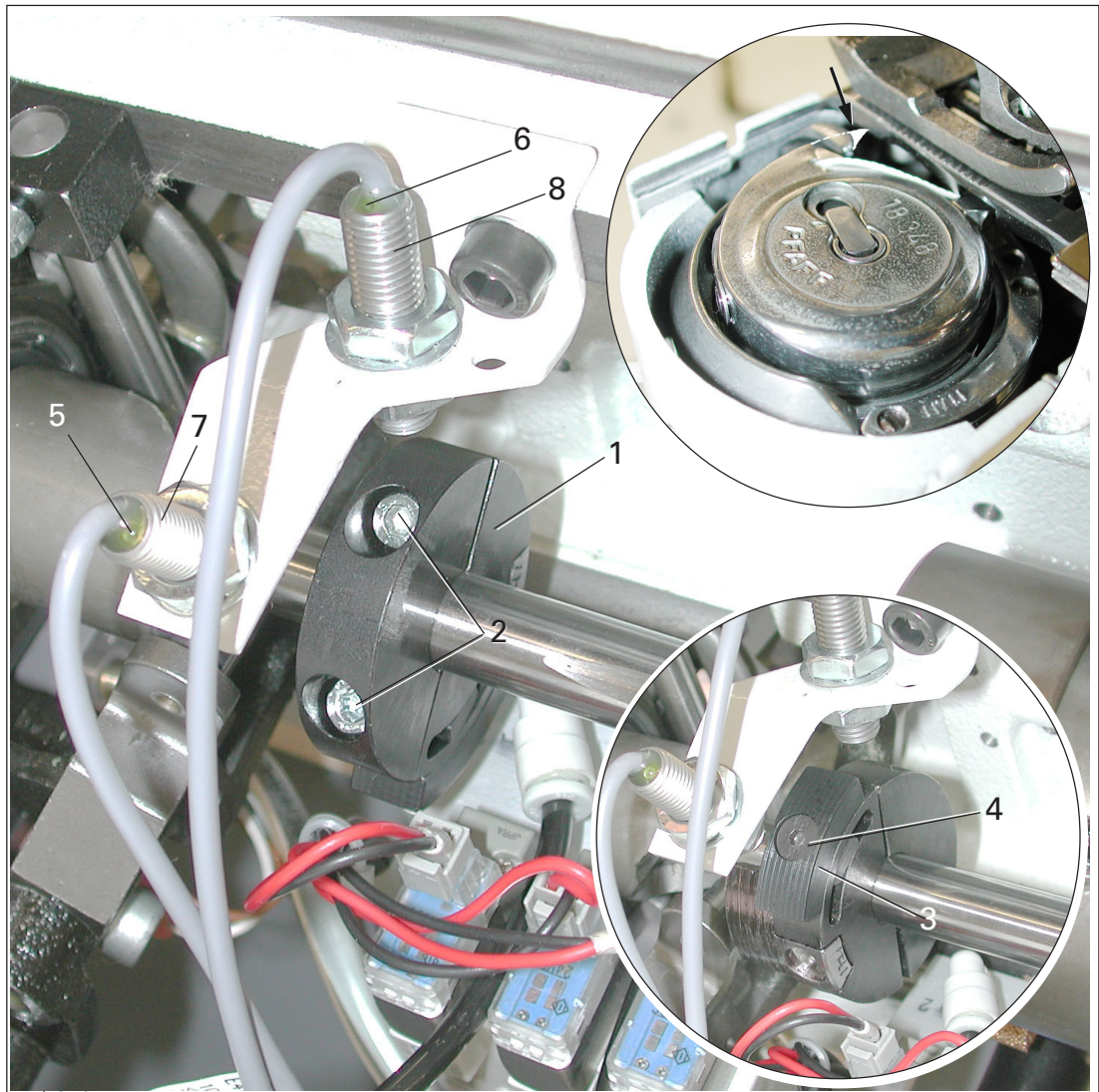


On single-needle machines there is only one initiator.

8.04 Radial adjustment of the trip dogs (on the Pfaff 1296)

Requirement

When, after picking up the loop, the tip of the left hook is at the edge of the needle plate (see arrow), the LEDs 5 (for the left hook) and 6 (for the right hook) on initiators 7 and 8 should switch from "ON" to "OFF".

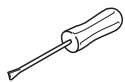
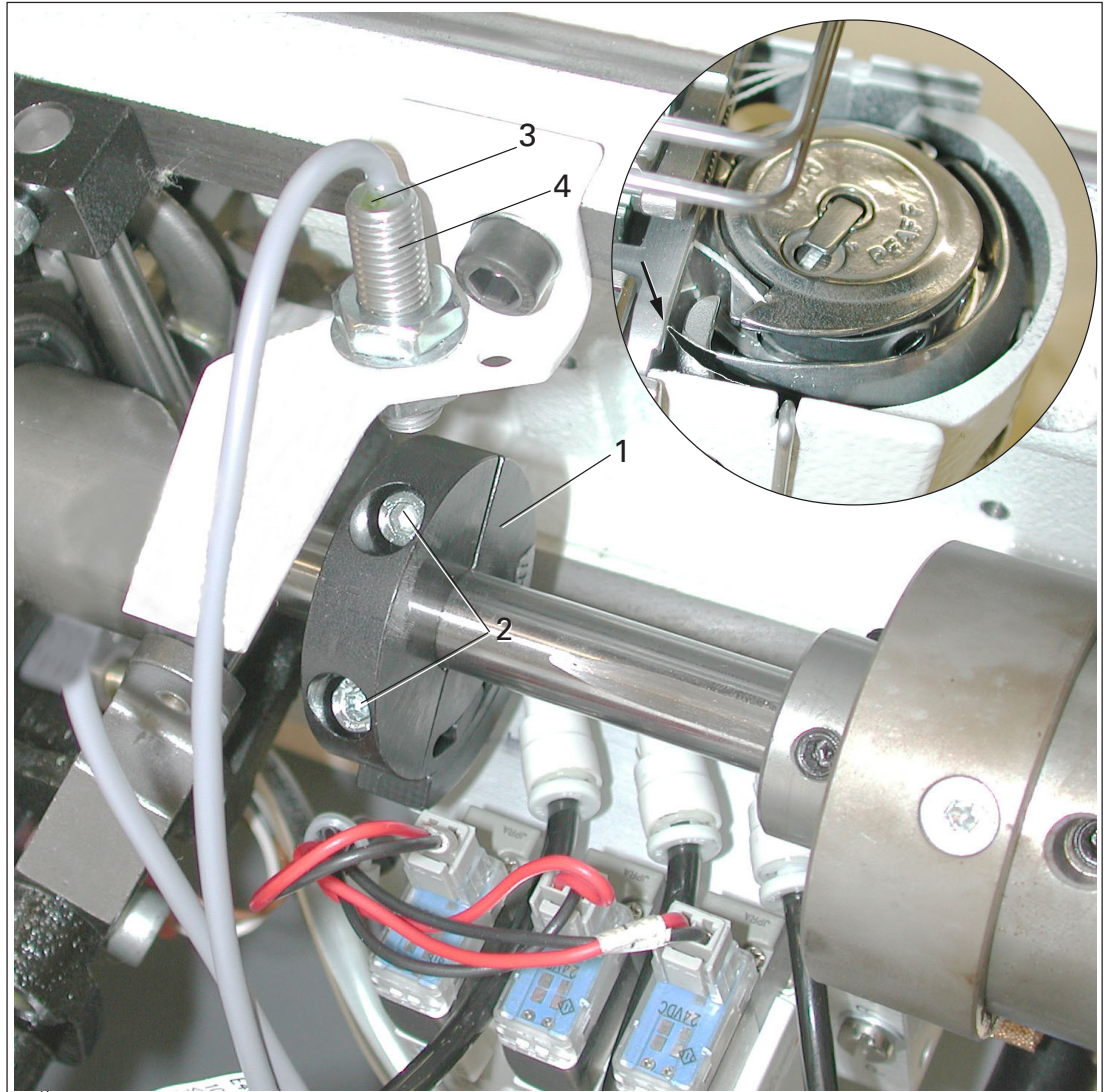


- Bring the left hook into the position described.
- Turn disk 1 (screws 2) in accordance with the **requirement**.
- Adjust trip dog 3 (screw 4) in accordance with the **requirement**.

8.05 Radial adjustment of the trip dogs (on the Pfaff 1295)

Requirement

When, after picking up the loop, the tip of the hook is at the edge of the needle plate (see arrow), the LEDs 3 on initiator 4 should switch from "ON" to "OFF".

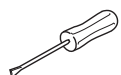
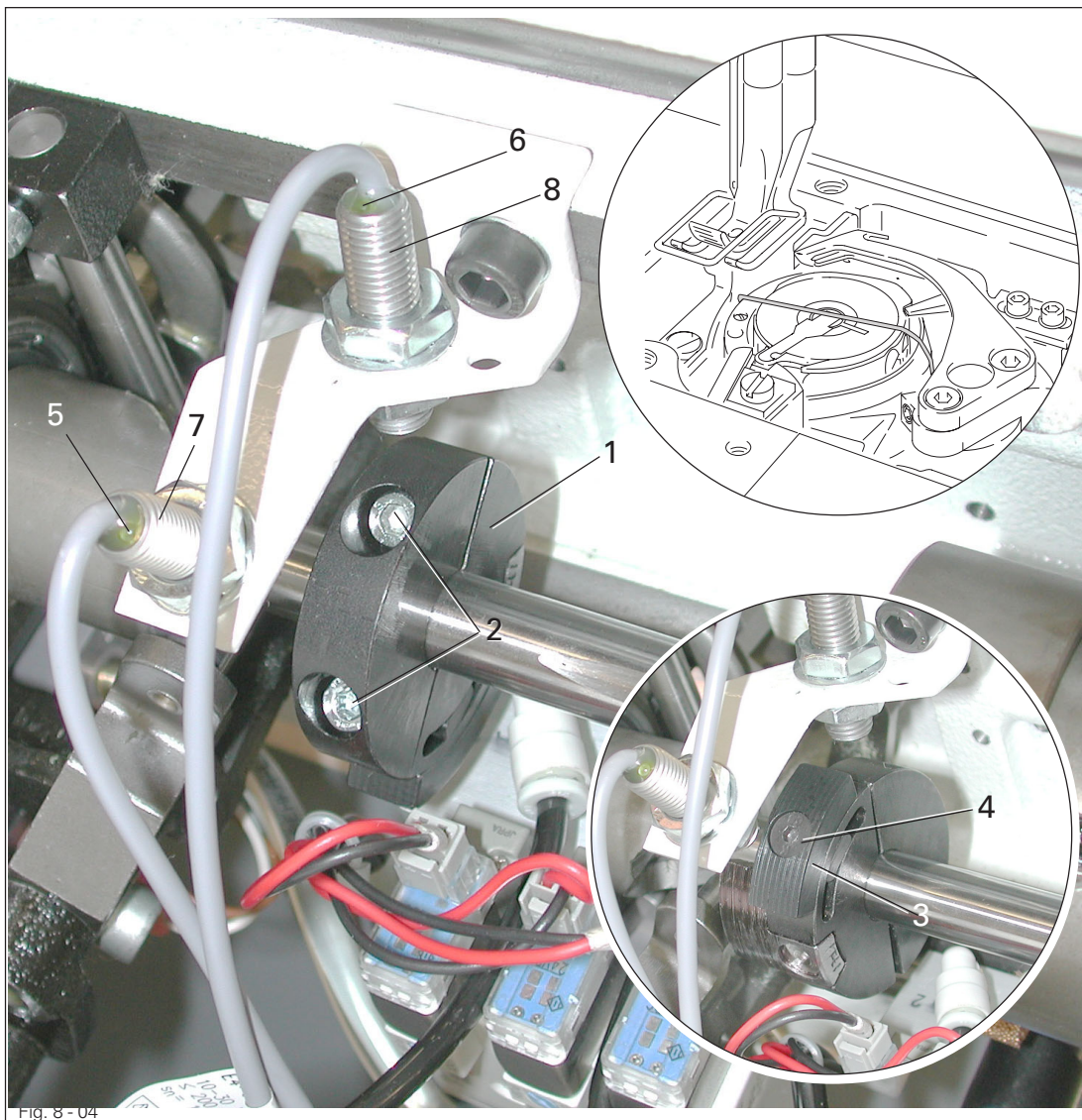


- Bring the hook into the position described.
- Turn disk 1 (screws 2) in accordance with the requirement.

8.06 Radial adjustment of the trip dogs (on the Pfaff 1525 / 1526)

Requirement

When the largest loop is formed while passing the thread around the hook, the LEDs 5 (for the left hook) and 6 (for the right hook) on initiators 7 and 8 should switch from "ON" to "OFF".

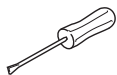
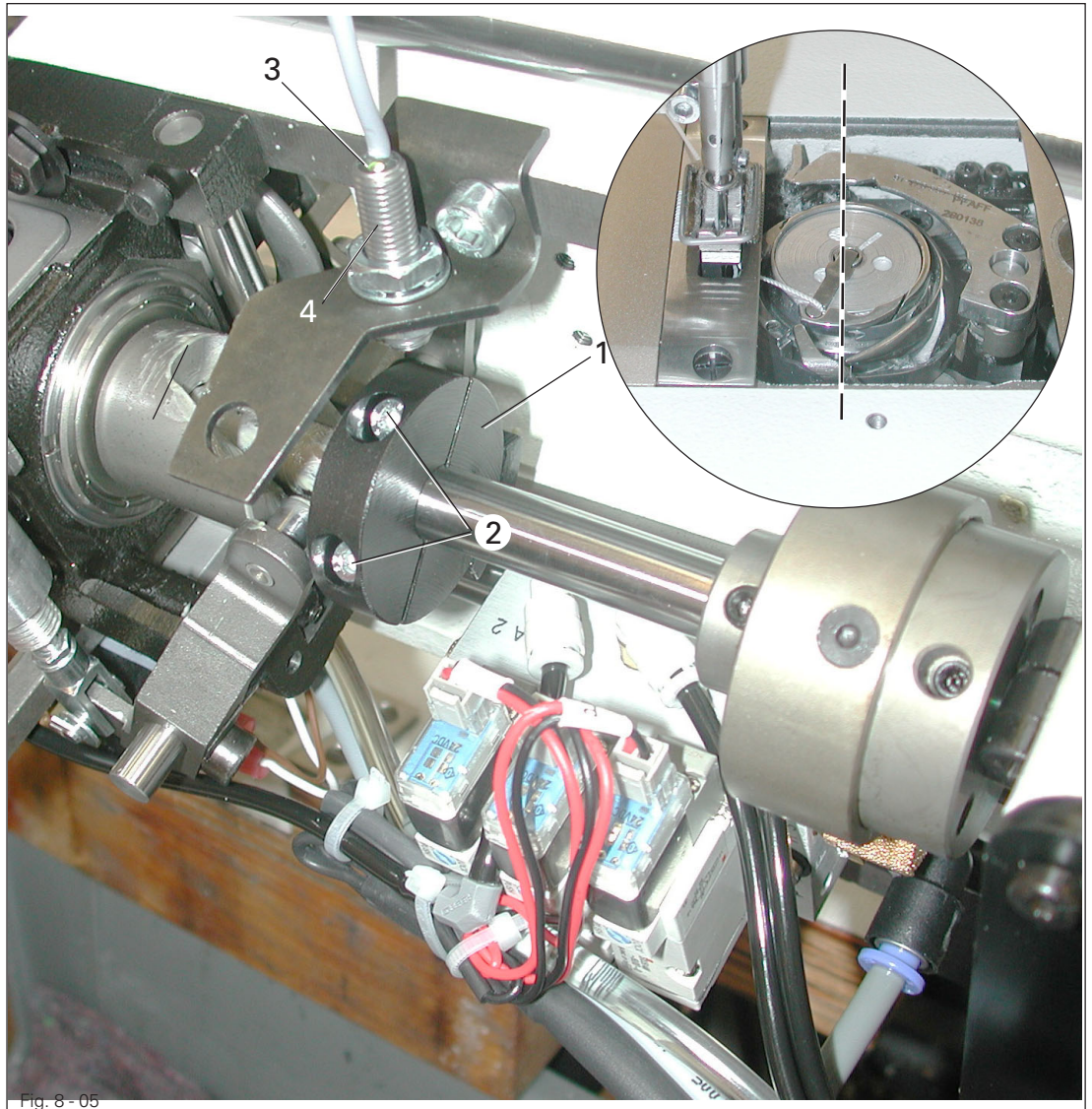


- Bring the right hook into the position described.
- Turn disk 1 (screws 2) in accordance with the **requirement**.
- Bring the left hook into the position described.
- Adjust trip dog 3 (screw 4) in accordance with the **requirement**.

8.07 Thread check spring and regulator on the PFAFF 1525-G

Requirement

The LED 3 on initiator 4 should switch from "ON" to "OFF" when the hook point, during thread looping, is in the position shown in the enlarged drawing.



- Bring the hook into the position shown in the enlarged drawing.
- Turn disk 1 (screws 2) in accordance with the requirement.

Requirement

1. The movement of thread check springs **7** and **8** should be completed, when the needle point enters the material.
2. When the thread loop is at its largest while being passed around the hook, thread check springs **7** and **8** should rise approx. **3 mm** from position rests **1** and **3**.

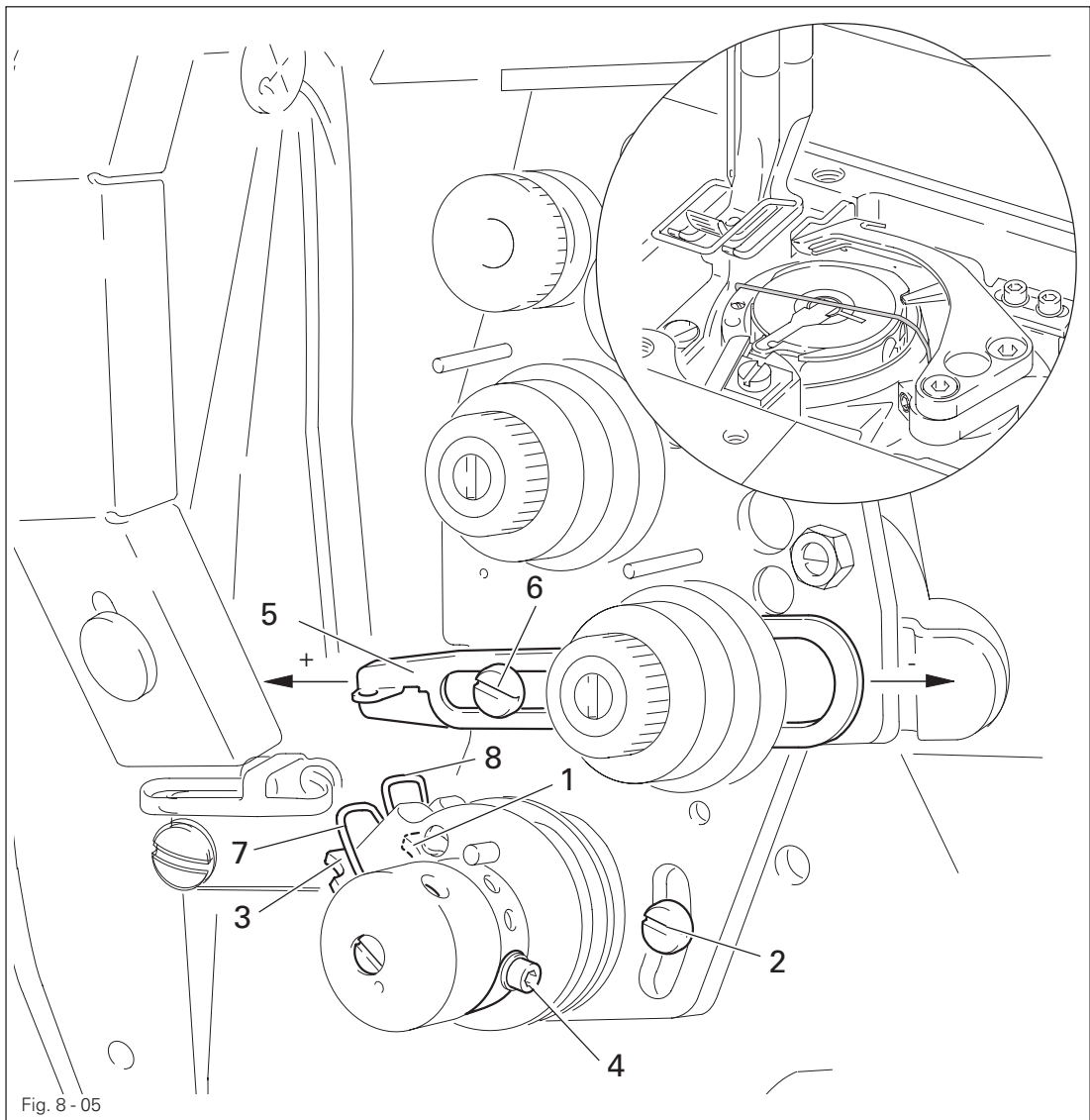
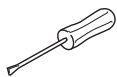


Fig. 8 - 05

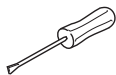
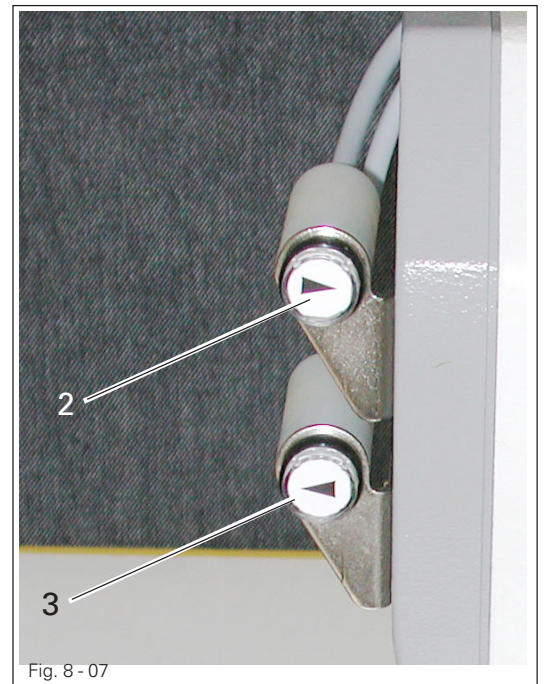
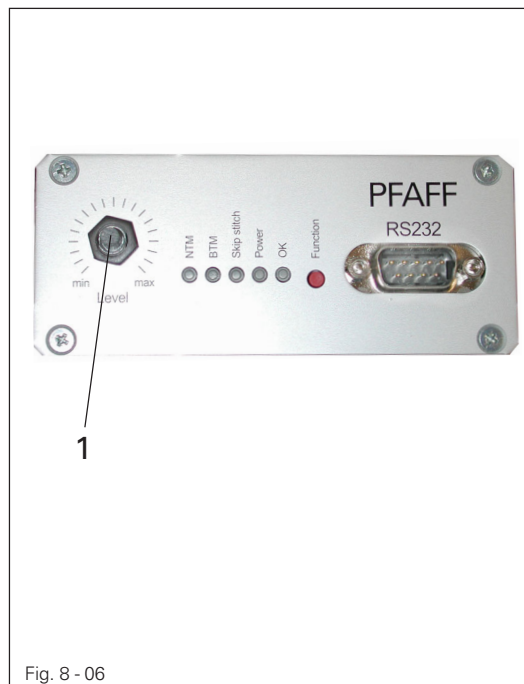


- Adjust position rest **1** (screw **2**) in accordance with **requirement 1**.
- Adjust position rest **3** (screw **4**) in accordance with **requirement 1**. (If the adjustment range is too small, position rest **3** can be screwed into another hole.)
- Adjust thread regulator **5** (screw **6**) in accordance with **requirement 2**.



On the PFAFF 1525 there is only one thread check spring and one thread regulator to be adjusted.

8.09 Sensor threshold



- Switch on the machine.
- Set regulator **1** at **min**.
- Unthread the machine.
- Sew without thread while slowly turning regulator **1** (for the left hook) in the direction of **max**. until key **2** lights up.
- When key **2** lights up, turn regulator **1** one mark further on the scale.
- Sew without thread while slowly turning regulator **1** (for the right hook) in the direction of **max**. until key **3** lights up.
- When key **3** lights up, turn regulator **1** one mark further on the scale.

9 Circuit diagrams

9.01 Circuit diagram for the PFAFF 1295 + 1296

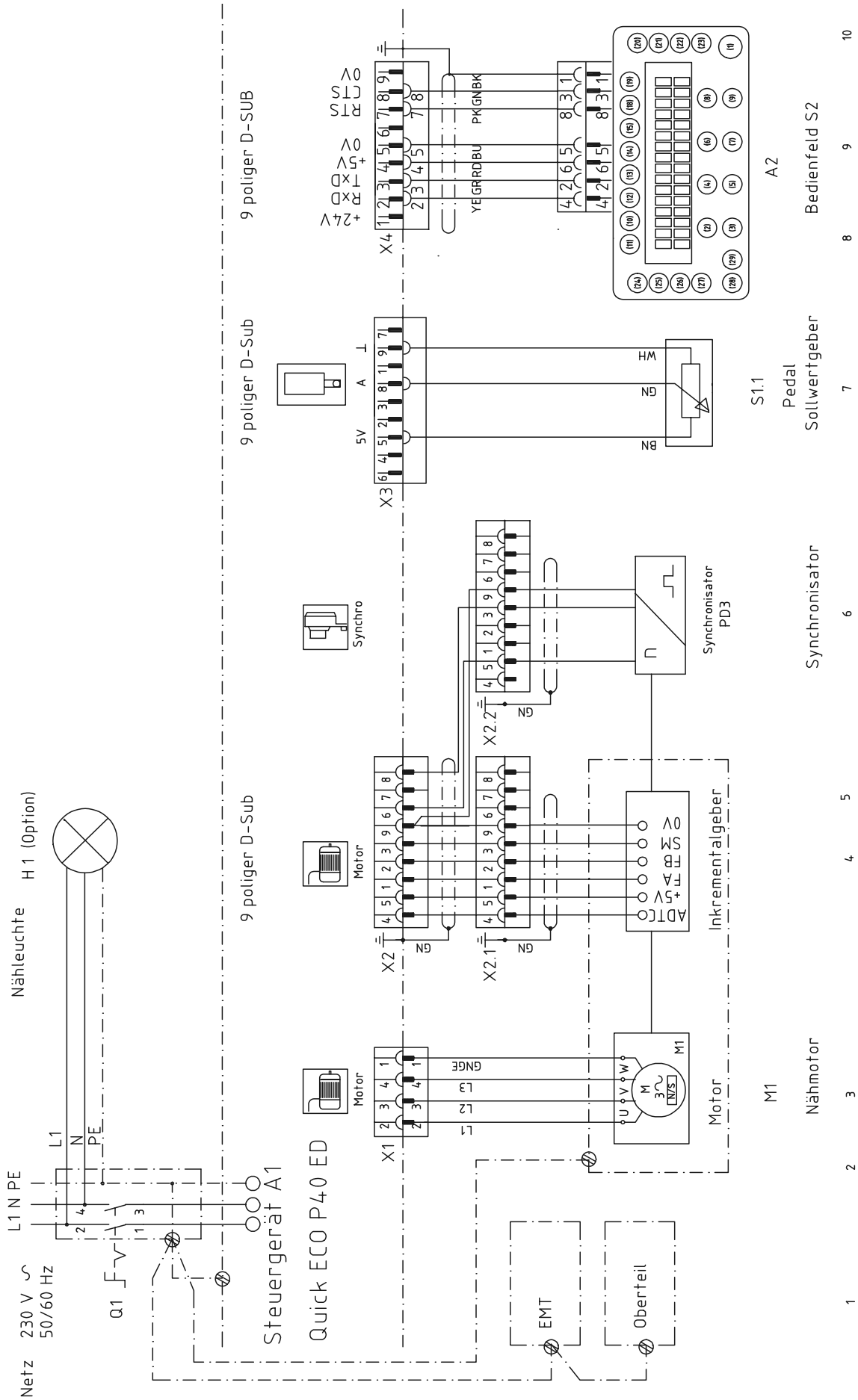
Reference list for the circuit diagram 91-191 515-95

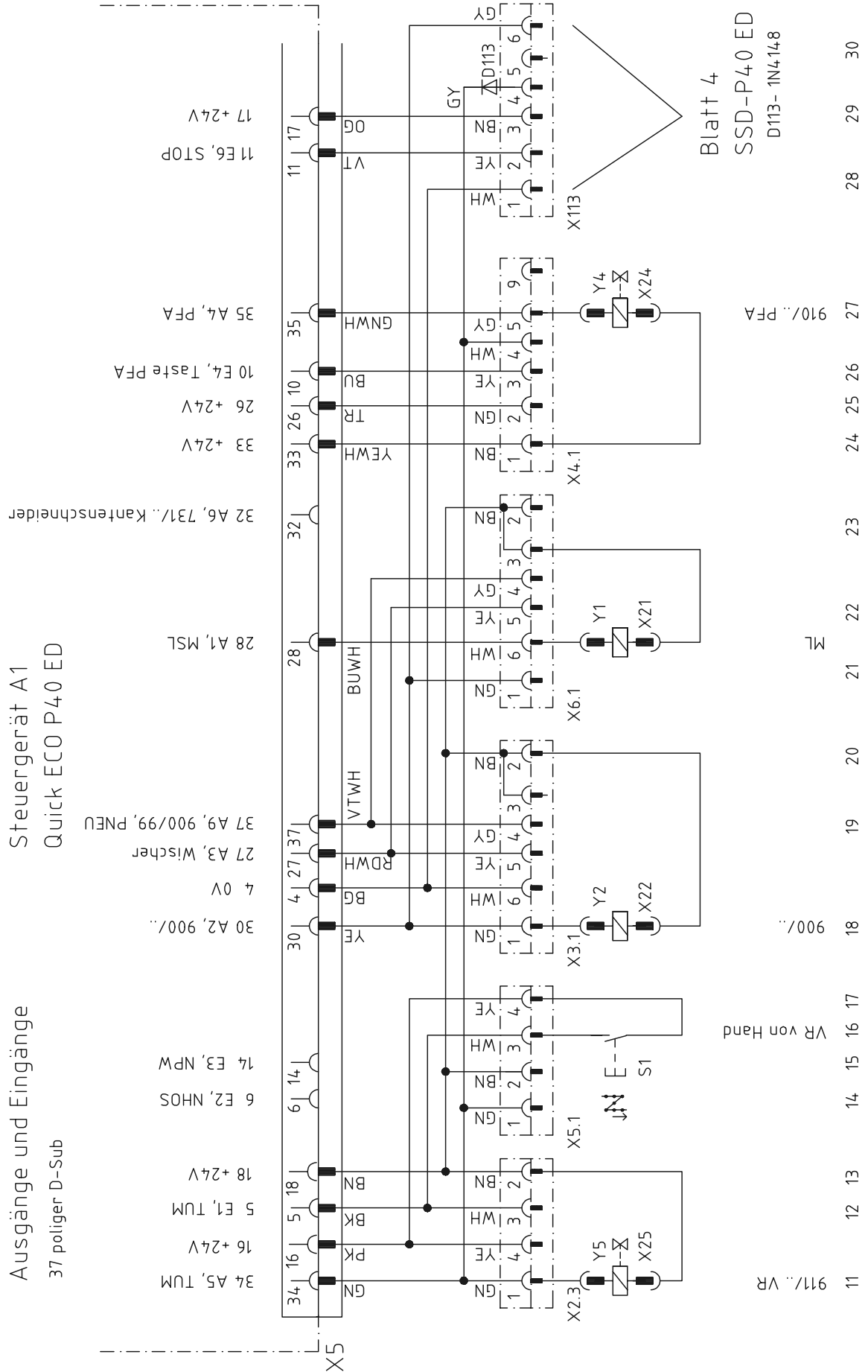
A1	Control unit Quick P40 ED
A2	Control panel BDF S2
A14	Sewing head recognition system (OTE)
A100R	Thread strength module, right needle
A100L	Thread strength module, left needle
A110R	Thread strength alarm + reset, right needle
A110L	Thread strength alarm + reset, left needle
B111R	Thread strength sensor, right needle
B111L	Thread strength sensor, left needle
B112R	Initiator, right needle
B112L	Initiator, left needle
H1	Sewing lamp
H110R	Alarm lamp, right needle
H110L	Alarm lamp, left needle
M1	Sewing motor
Q1	Main switch
S1.1	Pedal speed control unit
S1	Manual backtacking key
S110R	Reset key, right needle
S110L	Reset key, left needle
X0	PC-interface (RS 232)
X1	Sewing motor
X2	Incremental transducer
X3	Speed control unit PD3
X4	Control panel BDF S2
X5	Out-/inputs
X6	Bobbin thread monitor (optional)
X7	Photoelectric barrier (optional)
X21	Motor running signal

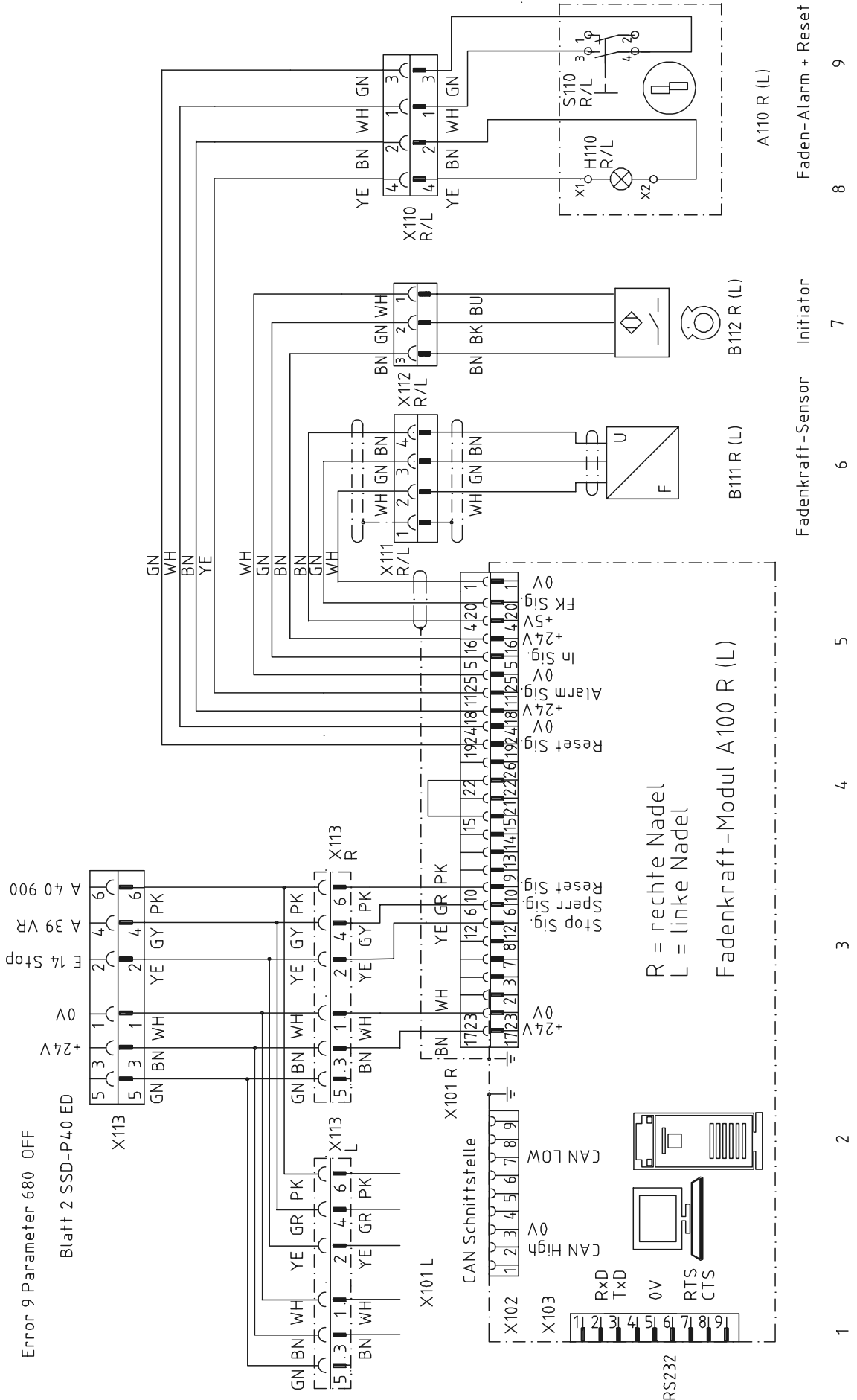
X101R	Thread strength module sensor and supply, right needle
X101L	Thread strength module sensor and supply, left needle
X102	Thread strength module, CAN interface
X103	Thread strength module, RS232
X110R	Thread strength alarm + reset, right needle
X110L	Thread strength alarm + reset, left needle
X111R	Thread strength sensor, right needle
X111L	Thread strength sensor, left needle
X112R	Initiator, right needle
X112L	Initiator, left needle
X113R	Y-adapter, right needle
X113L	Y-adapter, left needle
Y1	Motor running signal
Y2	-900/.. thread trimmer
Y4	-910/.. automatic foot lift
Y5	-911/.. backtacking device

R = right needle

L = left needle







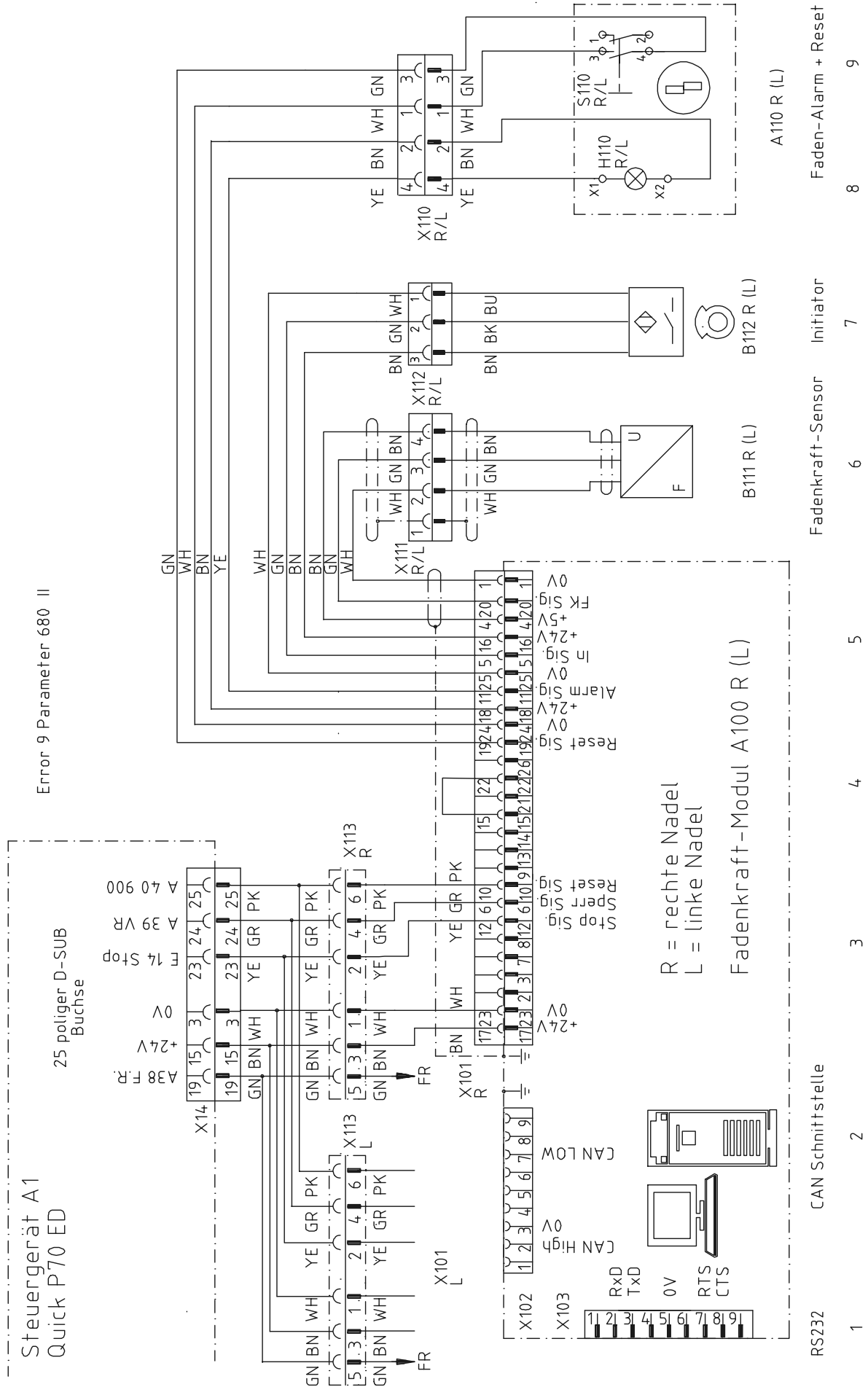
9.02 Circuit diagram for the PFAFF 1525 + 1526

Reference list for the circuit diagram 91-191 510-95

A1	Control unit Quick ECO P70 ED
A100R	Thread strength module, right needle
A100L	Thread strength module, left needle
A110R	Thread strength alarm + reset, right needle
A110L	Thread strength alarm + reset, left needle
B111R	Thread strength sensor, right needle
B111L	Thread strength sensor, left needle
B112R	Initiator, right needle
B112L	Initiator, left needle
H110R	Alarm lamp, right needle
H110L	Alarm lamp, left needle
S110R	Reset key, right needle
S110L	Reset key, left needle
X14	Out-/inputs P70 ED
X101R	Thread strength module sensor and supply, right needle
X101L	Thread strength module sensor and supply, left needle
X102	Thread strength module, CAN interface
X103	Thread strength module, RS232
X110R	Thread strength alarm + reset, right needle
X110L	Thread strength alarm + reset, left needle
X111R	Thread strength sensor, right needle
X111L	Thread strength sensor, left needle
X112R	Initiator, right needle
X112L	Initiator, left needle
X113R	Y-adapter rechte Nadel
X113L	Y-adapter linke Nadel

R = right needle

L = left needle



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