

5622_{-840/..}

INSTRUCTION MANUAL

This instruction manual applies to machines
from the serial number **2 815 203** and
software version **0435/002**.



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. **296-12-19 344/001**.

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**PFAFF Industriesysteme
und Maschinen GmbH**

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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, feed dog etc.) and when threading, leaving the workstation, or performing maintenance!
- The daily maintenance work may only be carried out by suitably qualified personnel!
- Repairs and special maintenance work may only be carried out by technical staff or people with appropriate training!
- Unless otherwise stated, the machine must be isolated from the power supply and pneumatic supplies before any servicing work or repairs are performed! The only permitted exceptions are for adjustment work and functional tests by appropriately trained technical staff!
- Work on electrical equipment may only be carried out by qualified technical staff!
- Work on parts and equipment under voltage is not permitted!
Exceptions are regulated by the EN 50110 standards.
- Modifications and changes to the machine may only be made in compliance with all of the relevant safety requirements!
- Only 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.

1.03 Safety symbols



Hazard point!
Special points of attention.



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

Additional information can be requested from the responsible sales centre.

1.05 Operating personnel and technical staff

1.05.01 Operating personnel

Operating personnel are persons responsible for 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 before starting any adjustment or repair work and secure it against reactivation!
- Never work on live parts and equipment!
Exceptions are regulated by the **EN 50110** standards.
- Unless otherwise stated, the machine must be isolated from the power supply and pneumatic supplies before any servicing work or repairs are performed!
Exceptions are permitted solely for function tests.
- Reattach the safety covers following repair and maintenance work!

1.06

Danger warnings



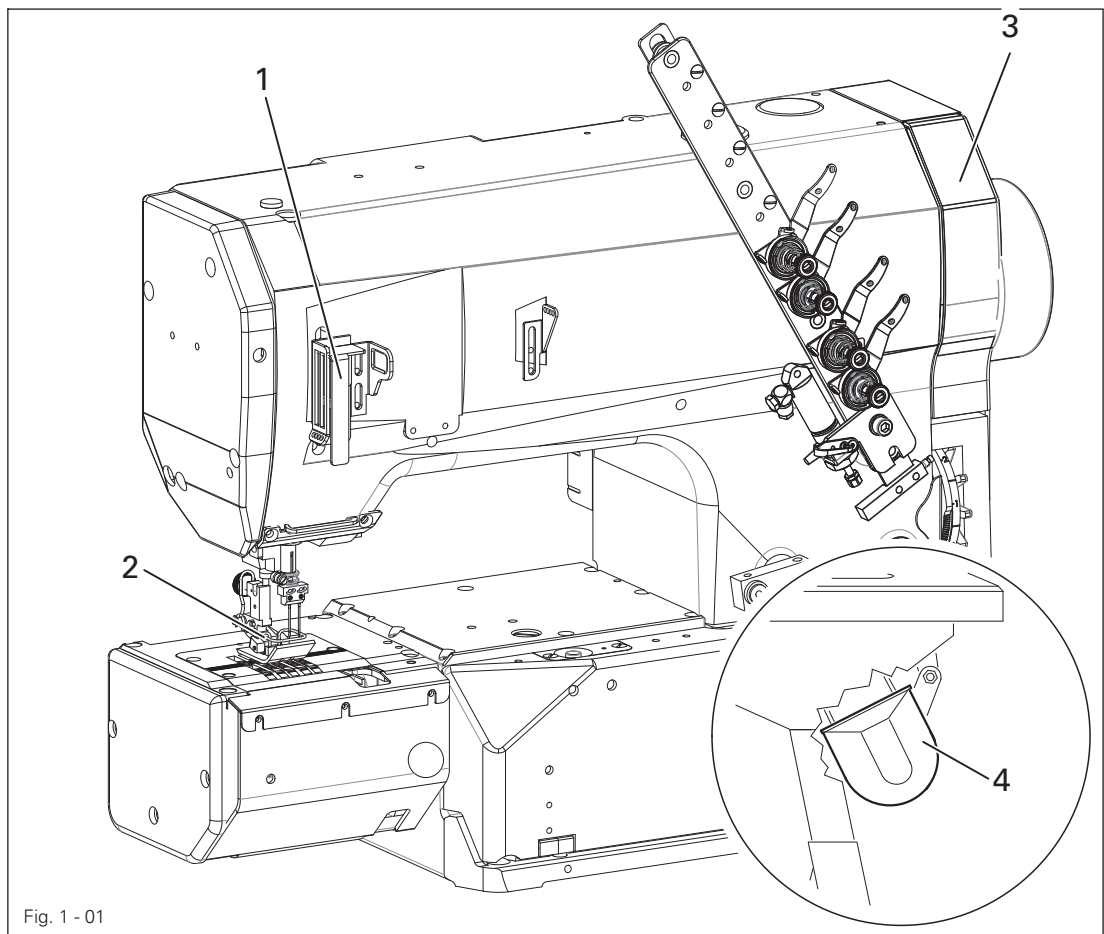
A work area of **1 m** must be kept free in front of and behind the machine to ensure unobstructed access at all times.



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!



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



Do not operate the machine without the finger guard **2!**
Risk of injury from the needle!



Do not operate the machine without the belt guard **3** and **4!**
Risk of injury due to the rotating driving belt!

2 **Proper Use**

The PFAFF 5622 is a two-to-ten needle double chainstitch special sewing machine with needle feed, pneumatic foot lift and tension release. Lift adjustment via dial.



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 5622

Stitch type:..... 401 (Double chainstitch)
Model B; BN6: for the machining of medium materials
Model C; CN6:for the machining of medium-heavy materials

Needle thickness: 80 - 140
Needle system:..... 62-57

Thread thickness max.: 11/3
(Synthetic or comparable thicknesses of other types of yarn)

Handwheel effective Ø:80 mm

Clearance beneath the sewing foot: 11 mm
Passage width: 255 mm
Clearance height: 112 mm
Stitch length max.:6.0 mm

Noise data:
Emissions sound pressure level in the workplace at $n = 2400 \text{ min}^{-1}$:..... $L_{pA} = 81 \text{ dB(A)}$ ■
(Noise measurement as per DIN 45 635-48-A-1, ISO 11204, ISO 3744, ISO 4871)

Motor data: see motor instruction manual

Air consumption per switching cycle:0.146 NI

Net weight of sewing head: approx. 56 kg

Gross weight: approx. 64 kg

* Subject to technical changes

■ $K_{pA} = 2.5 \text{ dB}$



Speed when chaining off

We recommend reducing the max. stitch count again to minimise any disturbing noises when chaining off.

4

Disposal of the Machine

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



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

5 Transport, Packaging and Storage

5.01 Transport to the customer's premises

All machines are completely packed for delivery.

5.02 Transport within the customer's premises

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

5.03 Disposal of the packaging materials

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

5.04 Storage

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

6 Work Symbols

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



Note, information



Cleaning, care



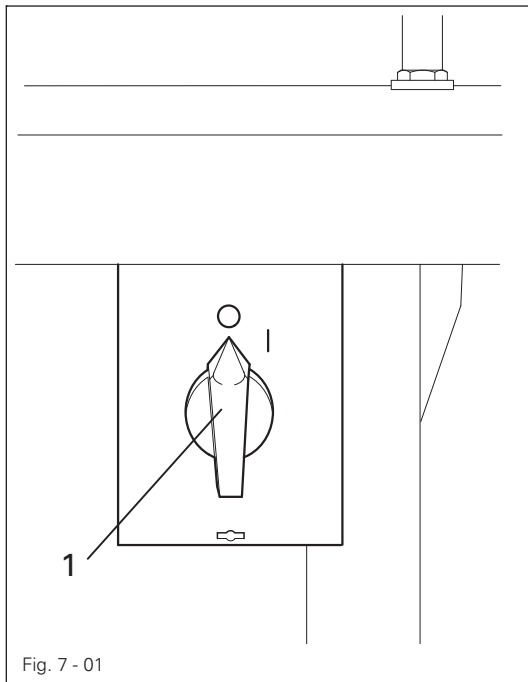
Lubrication



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

7 Operating Controls

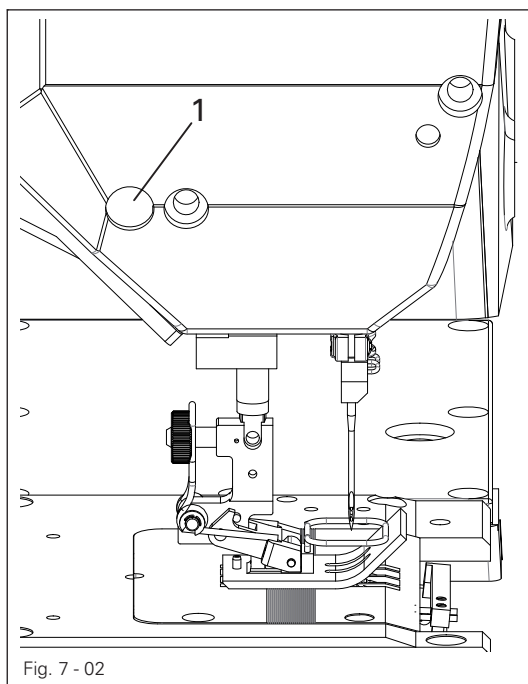
7.01 Main switch



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

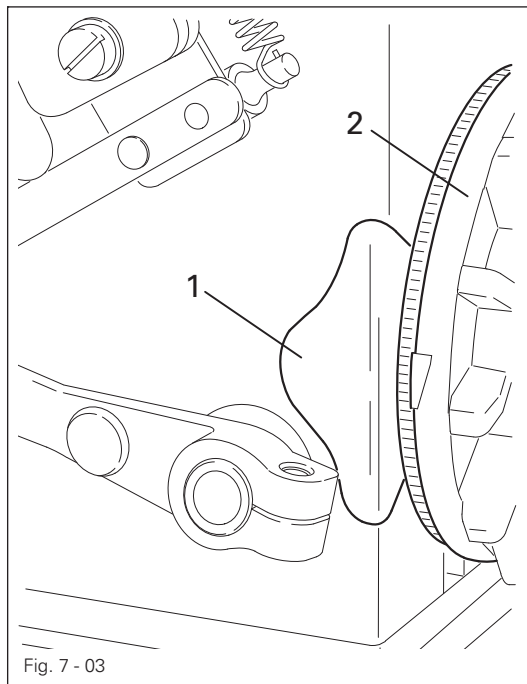
- Turning the main switch 1 switches the machine on and off.

7.02 Sewing foot lock key



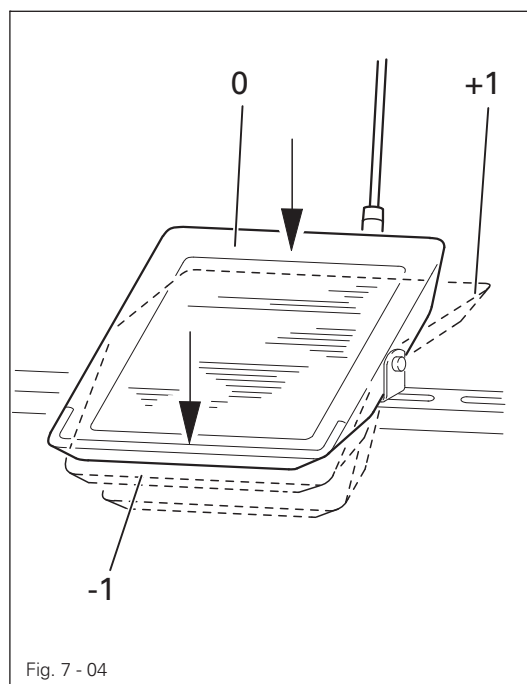
- Lift the pedal to lock the sewing foot, then press the key 1 and release the pedal.
- Briefly lift the pedal to release the sewing foot.

7.03 Stitch length regulation



- After pressing the key 1, the desired stitch length is set by turning adjusting wheel 2.

7.04 Pedal



- When the main switch is turned on
 - 0 = Neutral position
 - +1 = Sew
 - 1 = Raise sewing foot

7.05 **Control panel** (only in machines with P40 CD)

The description can be found in the instruction manual for the drive.

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.



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

8.01.01 Setting the table height

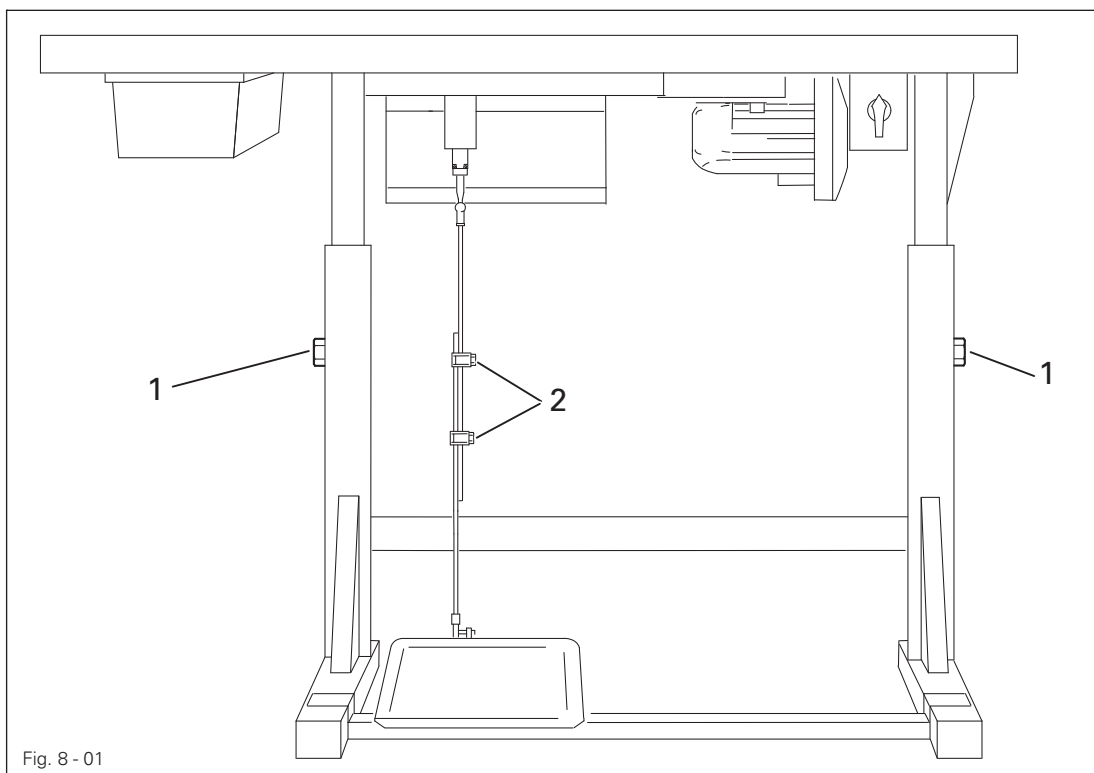


Fig. 8 - 01

- 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.

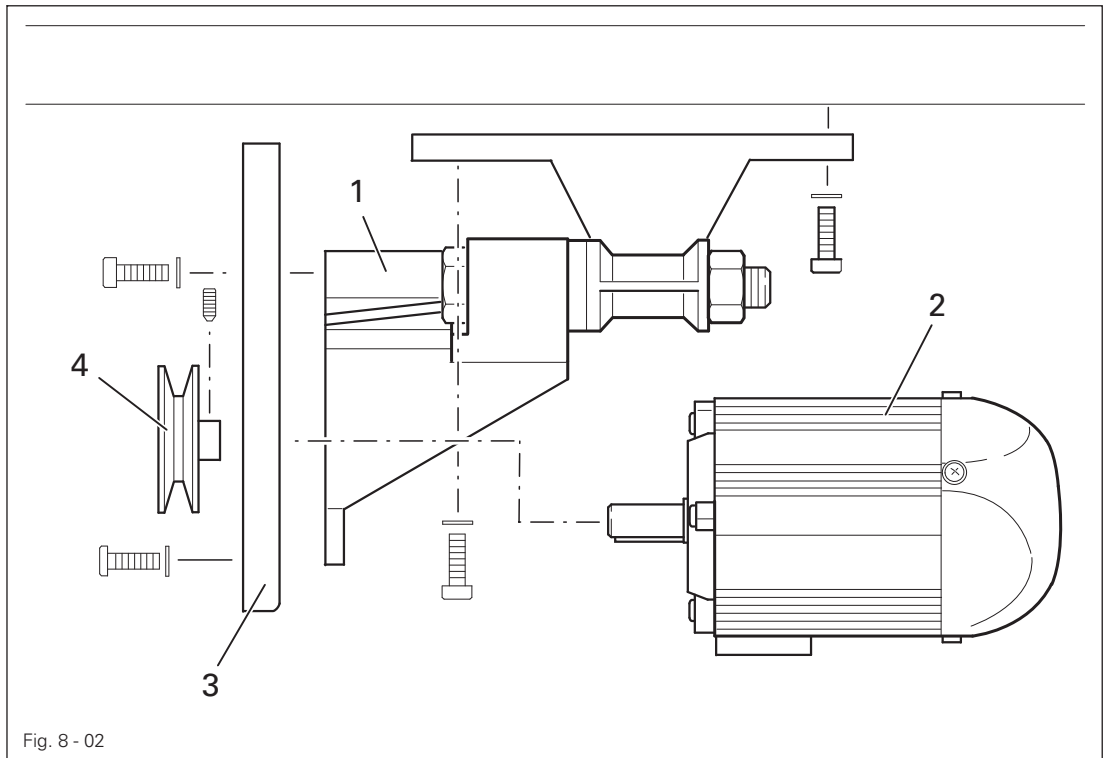


Adjust the stand on both sides evenly to prevent it tilting.

- The stand must have all four feet firmly on the ground to make sure it is positioned securely.
- Firmly tighten the screws **1**.
- Adjust and tighten the desired pedal position on the screws **2**.

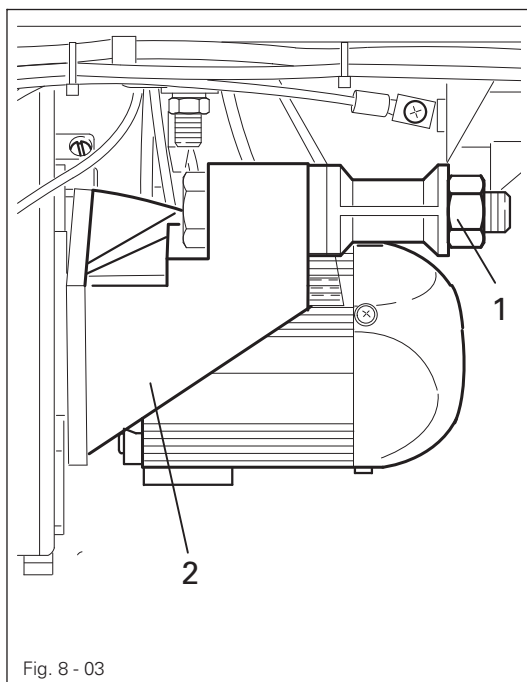
Set-up and Initial Commissioning

8.01.02 Assembling the drive



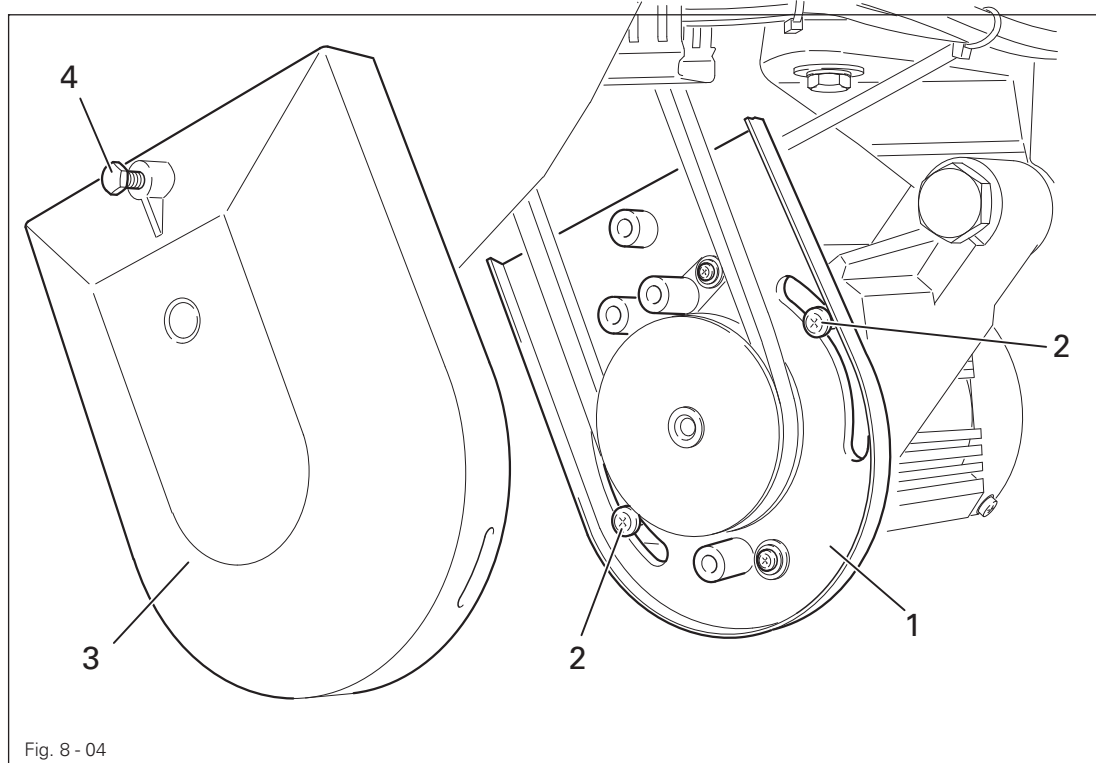
- Assemble the motor bracket 1, motor 2, belt guard bracket 3 and belt pulley 4 as shown in Fig. 8-02.

8.01.03 Tensioning the V-belt



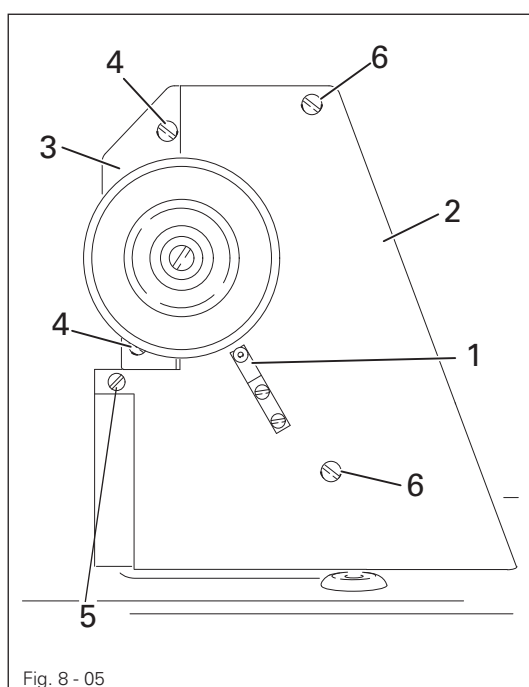
- Fit the V-belt.
- Loosen the nut 1 and tension the V-belt by turning the motor bracket 2 out of position.
- Tighten the nut 1.

8.01.04 Assembling the lower V-belt guard



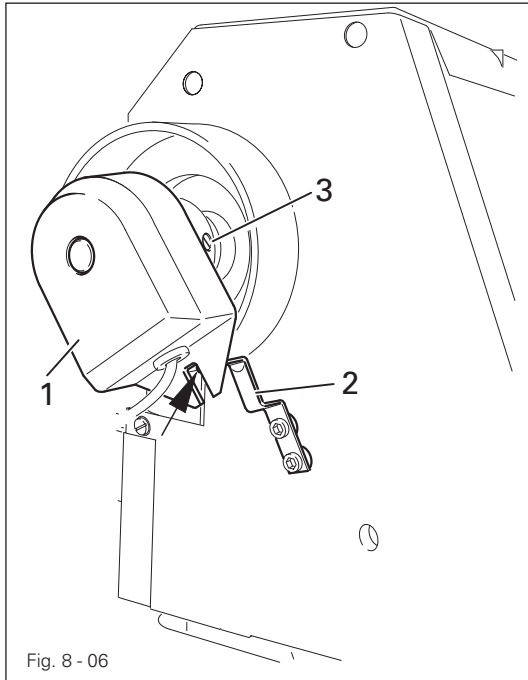
- Loosen the screws 2 and align the belt guard bracket 1 so that the motor pulley and V-belt run freely.
- Use the screw 4 to tighten the screws 2 and the belt guard 3.

8.01.05 Mounting the upper V-belt guard



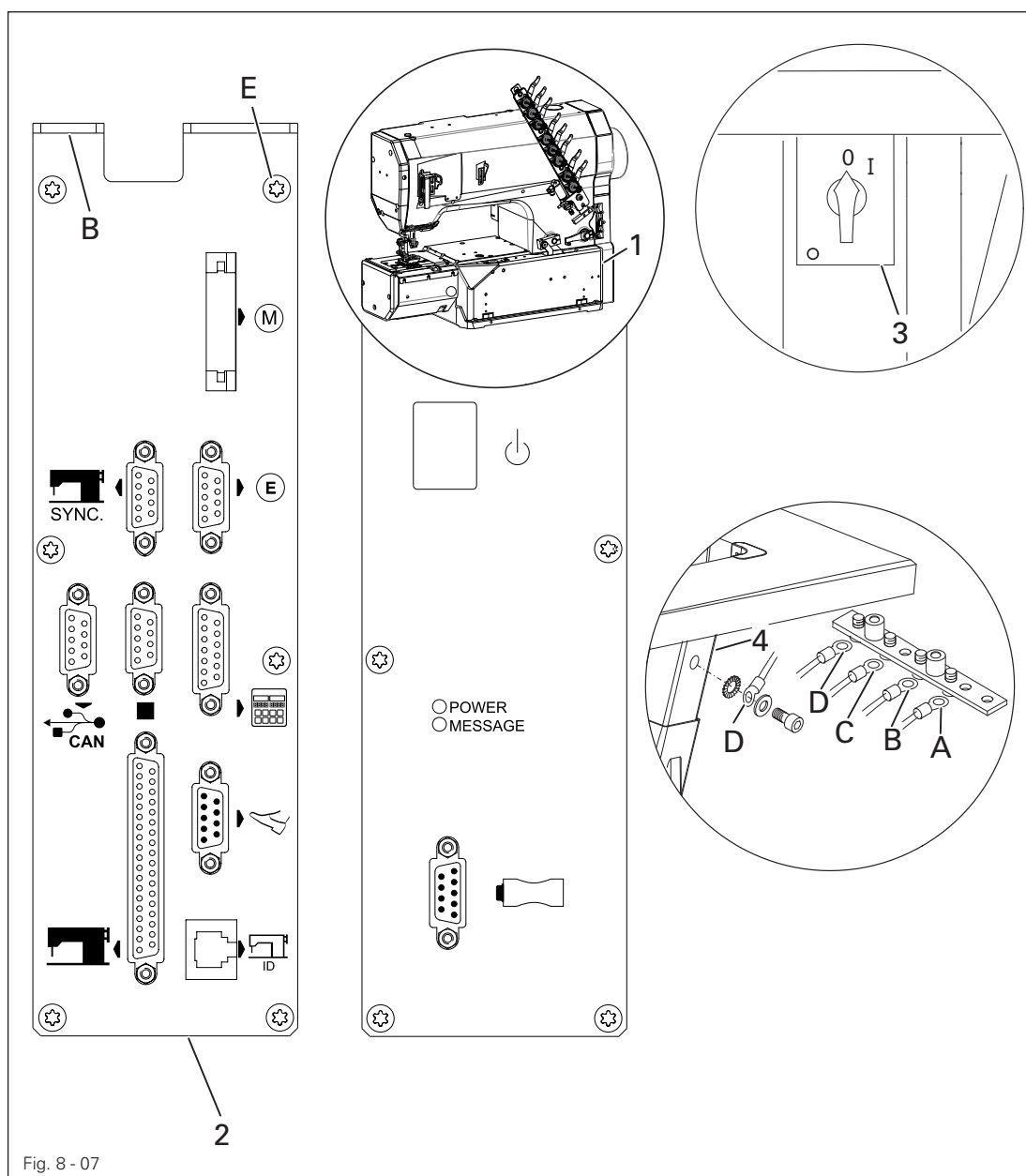
- Screw position finger 1 to the right belt guard half 2.
- Use the screws 4 to screw on the left belt guard half 3.
- Slide the right belt guard half 2 with its slots behind the heads of the retaining screws 6 and tighten with the screws 5 and 6.

8.01.06 Mounting the synchroniser



- Slide the synchroniser 1 onto the shaft so that the position finger 2 is positioned in the synchroniser groove (see arrow).
- Tighten the screws 3.
- Insert the synchroniser plug on the control box (see chapter 8.02 **Connecting the plug-in connections and ground cable**).
- Adjust the synchroniser, this must be learned with parameter **t0819** in machines with gear reduction. The needle reference position **t0810** must be reset after an update. An adjustment of the treadle **t0820** must also be carried out, see **chapter 4.4 Positions** of the drive service manual

8.02 Connecting the plug-in connections and ground cable



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

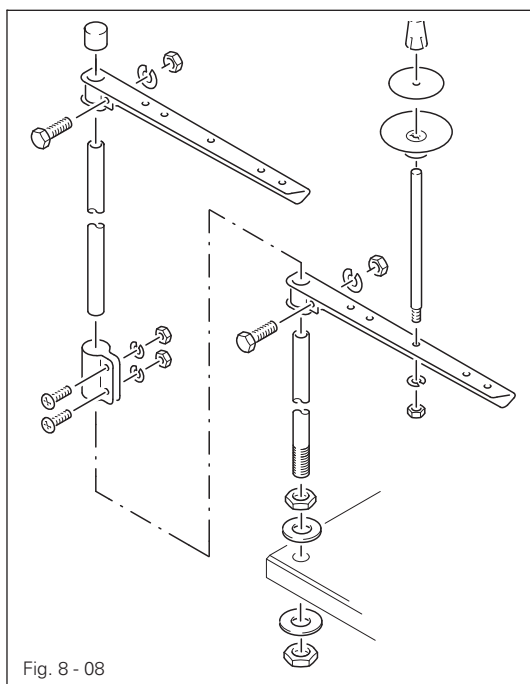


Caution

Inserting the plug incorrectly can damage the control unit!

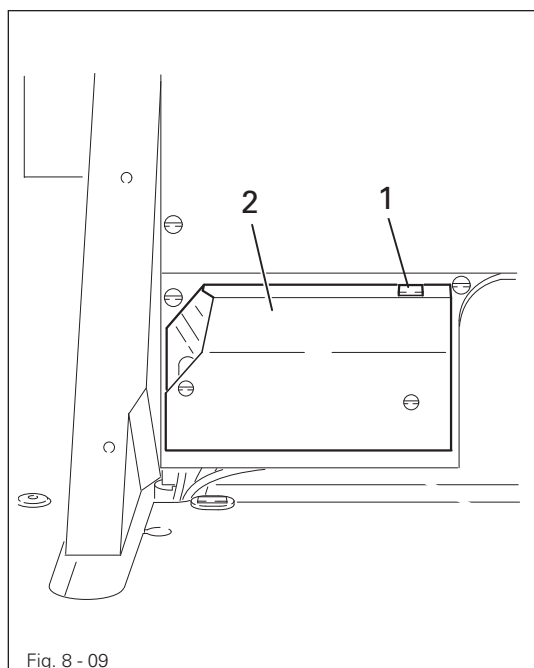
- Attach the following ground cables in order to discharge static electricity
- Securely attach the ground cable from the sewing head 1 to ground point A.
- Securely attach the ground cable from the control point B to ground point B.
- Securely attach the ground cable from the main switch 3 to ground 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

8.03 Assembling the reel stand



- Assemble the reel stand as shown in Fig. 8 - 08.
- Then insert the stand into the hole in the table top and secure it with the enclosed nuts.

8.04 Initial start-up



- Remove the plug 1 of the oil reservoir 2 before the initial commissioning.



Danger of machine damage!

The plug 1 serves solely for transit support and may not be used during the sewing operations.

- Inspect the machine, particularly the electric cables, for any damage.
- Clean the machine thoroughly and then oil it, see also **chapter 10 Maintenance and Care**.

- Connect the machine to the compressed air system. The manometer must show a pressure of 6 bar. Set this value if required, see **chapter 10.05 Checking / setting the air pressure**.
- 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 (see the **drive service manual** in **chapter 4.4**).

8.05 Switching the machine on / off

- Switch the machine on (see **chapter 7.01 Main switch**).

8.06 Machine drive home position

- See **chapter 4.4** of the drive service manual

9

Set-up



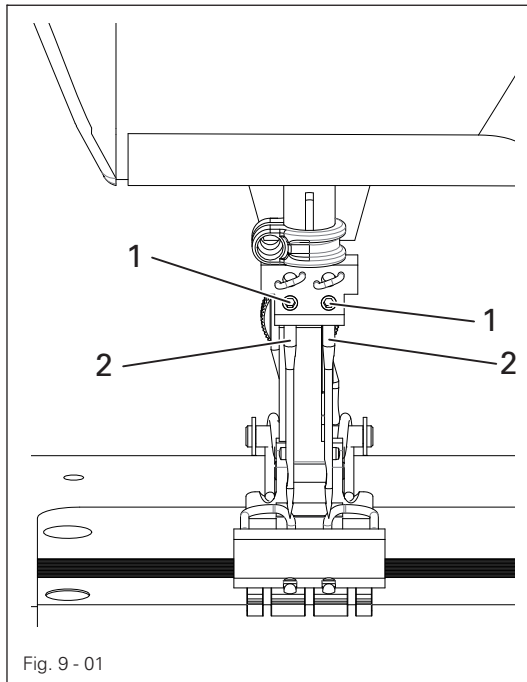
Observe and comply with all regulations and instructions in this instruction manual. Pay particular attention to all safety regulations!



All set-up work may only be carried out by appropriately instructed personnel. Disconnect the machine from the electricity mains for all set-up work by operating the main switch or by removing the mains plug!

9.01

Inserting the needle



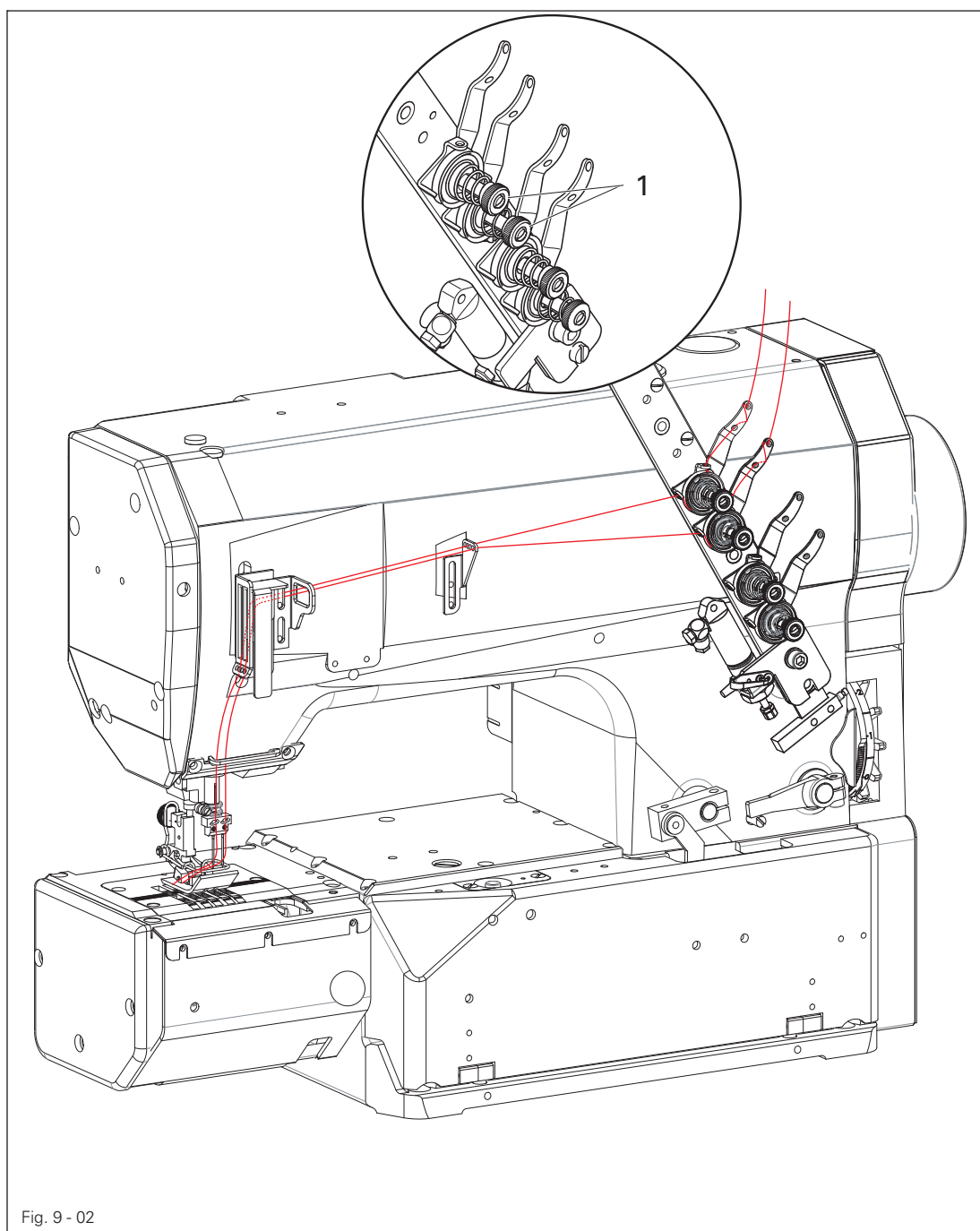
Switch off the machine!
Risk of injury due to accidental machine start-up!



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

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

9.02 Threading the needle / adjusting the needle thread



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

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

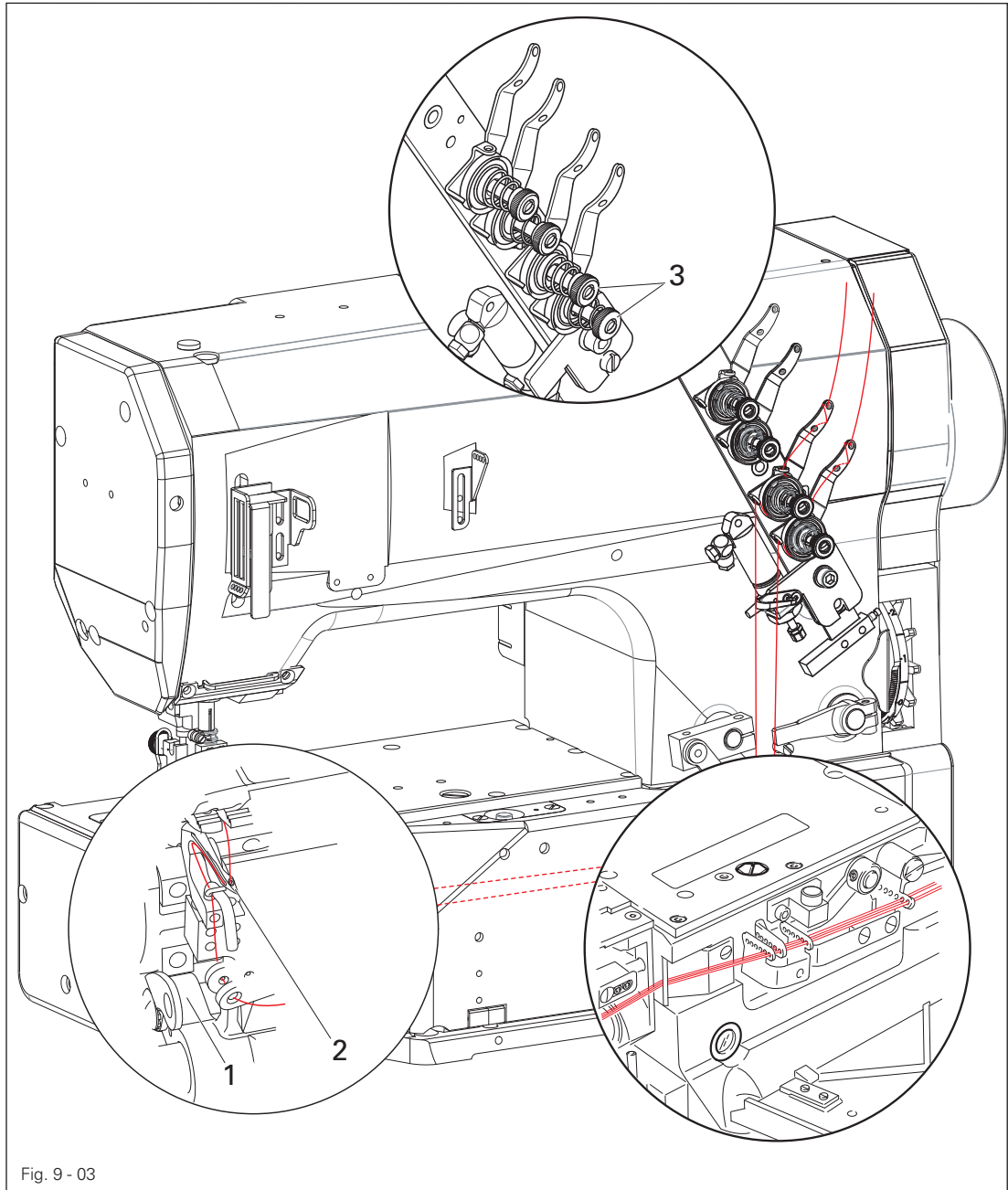


Fig. 9 - 03



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

- Open the hook room cover and side cover.
- Slide the lever 1 to the left; this unlocks the hook bracket and it can be swivelled out.
- Thread the looper thread as show in Fig. 9-03.
- Use tweezers to thread in the thread on the hook 2.
- Slide the lever 1 to the left, swivel the hook bracket back in until it engages.
- Adjust the looper thread tension by turning the knurled thumb screw 3.

10 Maintenance and Care

10.01 Maintenance intervals

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



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

10.02 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!

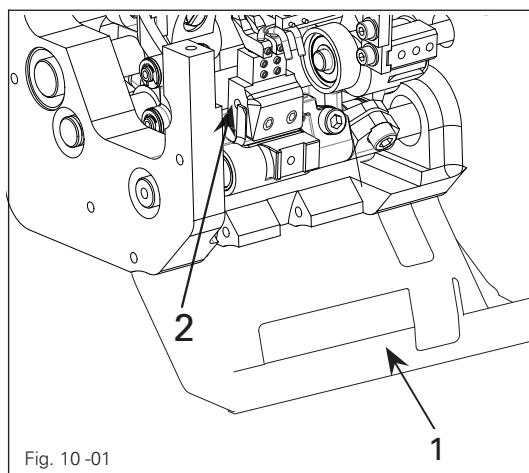


Fig. 10 -01

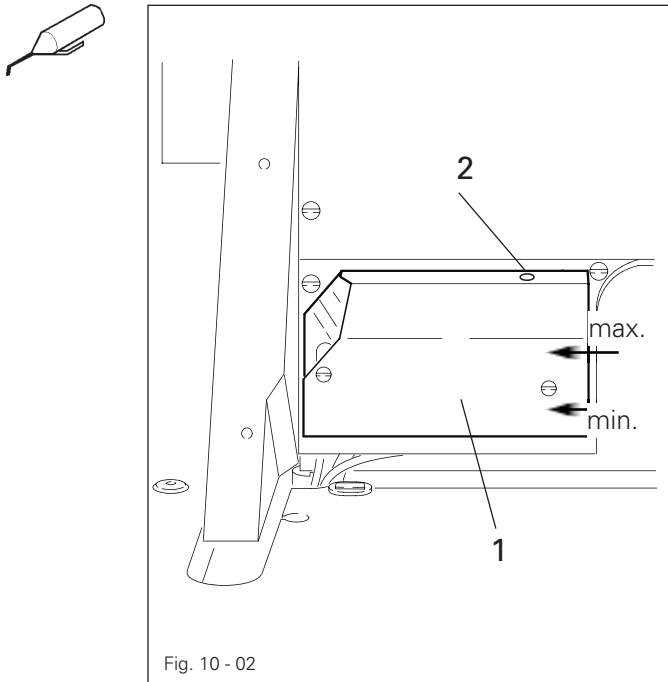
The following tasks are recommended during single shift operation to avoid operational errors:

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



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

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



Check the oil level before every start-up.

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

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

● Add oil to the container through hole 1 as needed



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



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

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

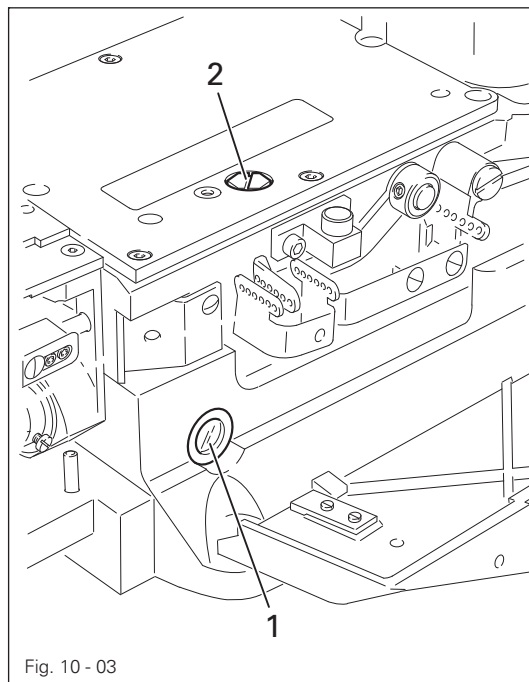


Fig. 10 - 03



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



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

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

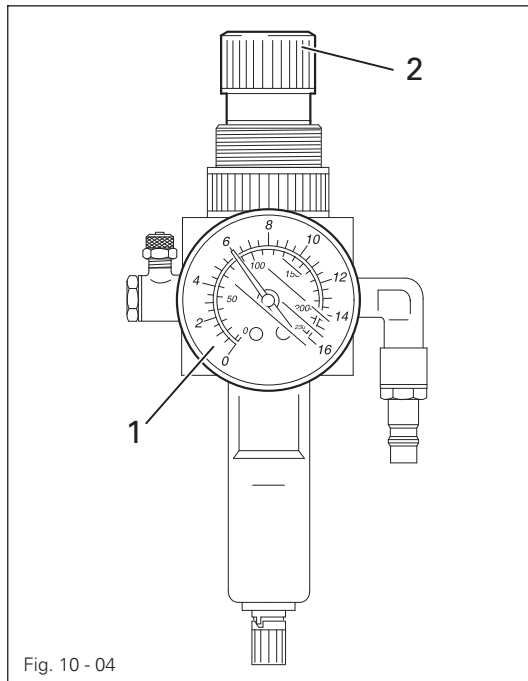


Only use oil with a centre viscosity of 22.0 mm²/s at 40 °C and a density of 0.865 g/cm³ at 15 °C.



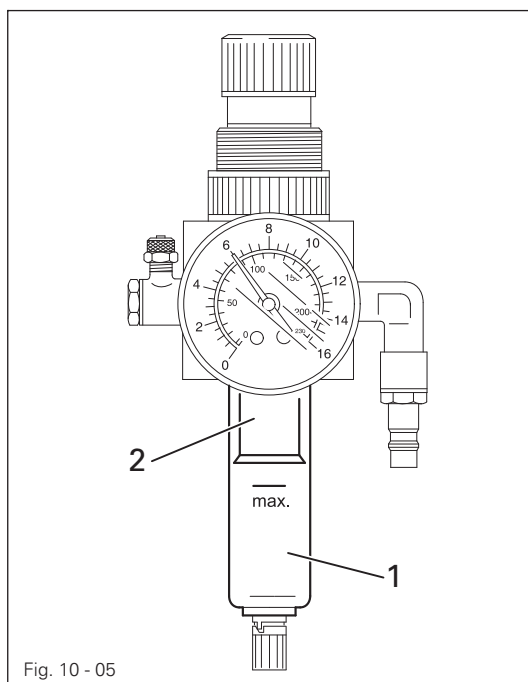
We recommend PFAFF sewing machine oil part no. 280-1-120 144.

10.05 Checking / setting the air pressure



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

10.06 Emptying / cleaning the maintenance unit's water tank



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

Empty the water tank

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

Clean the filter

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

11 Table Top

11.01 Table top cutout (sewing head mounted directly on the table top)

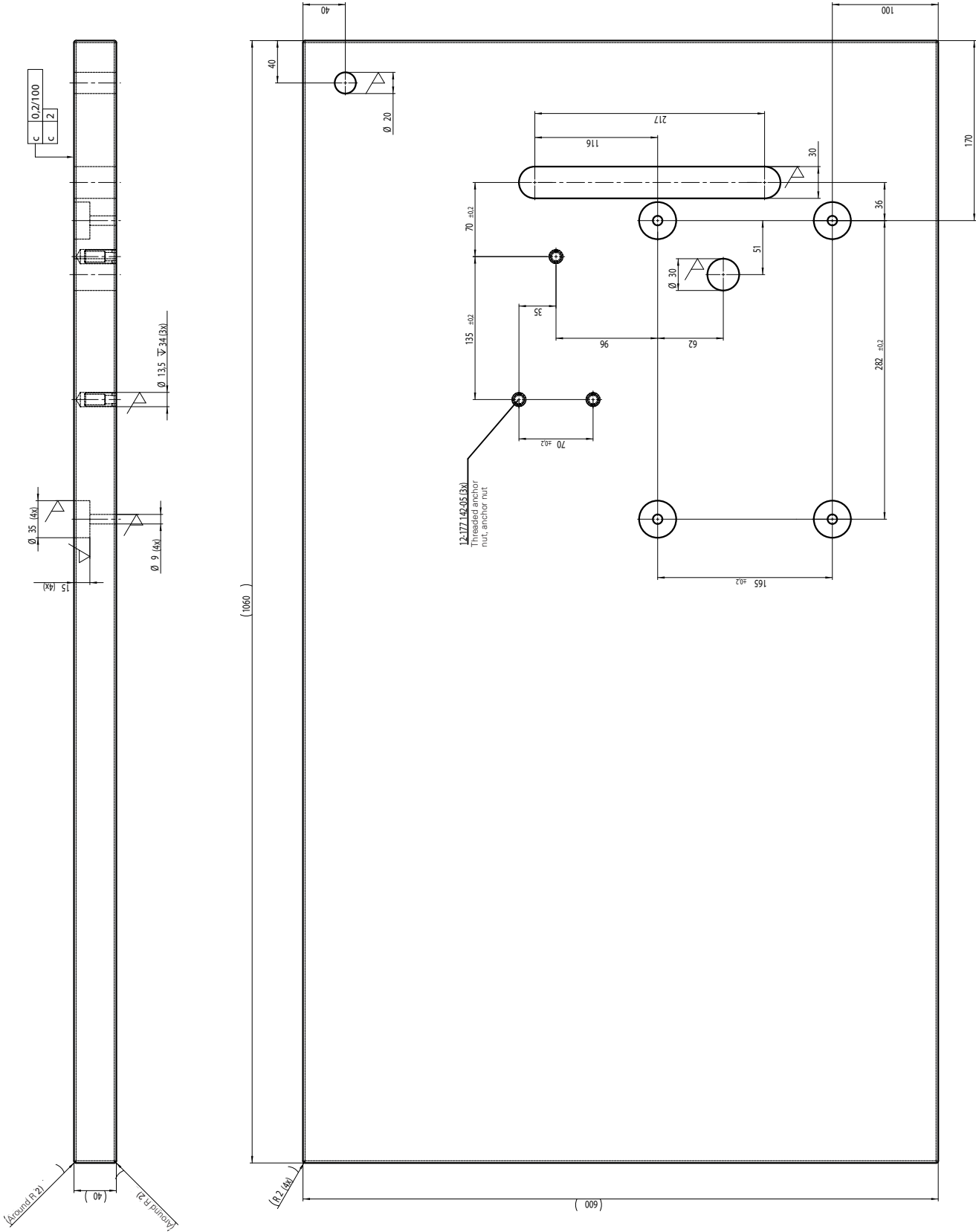
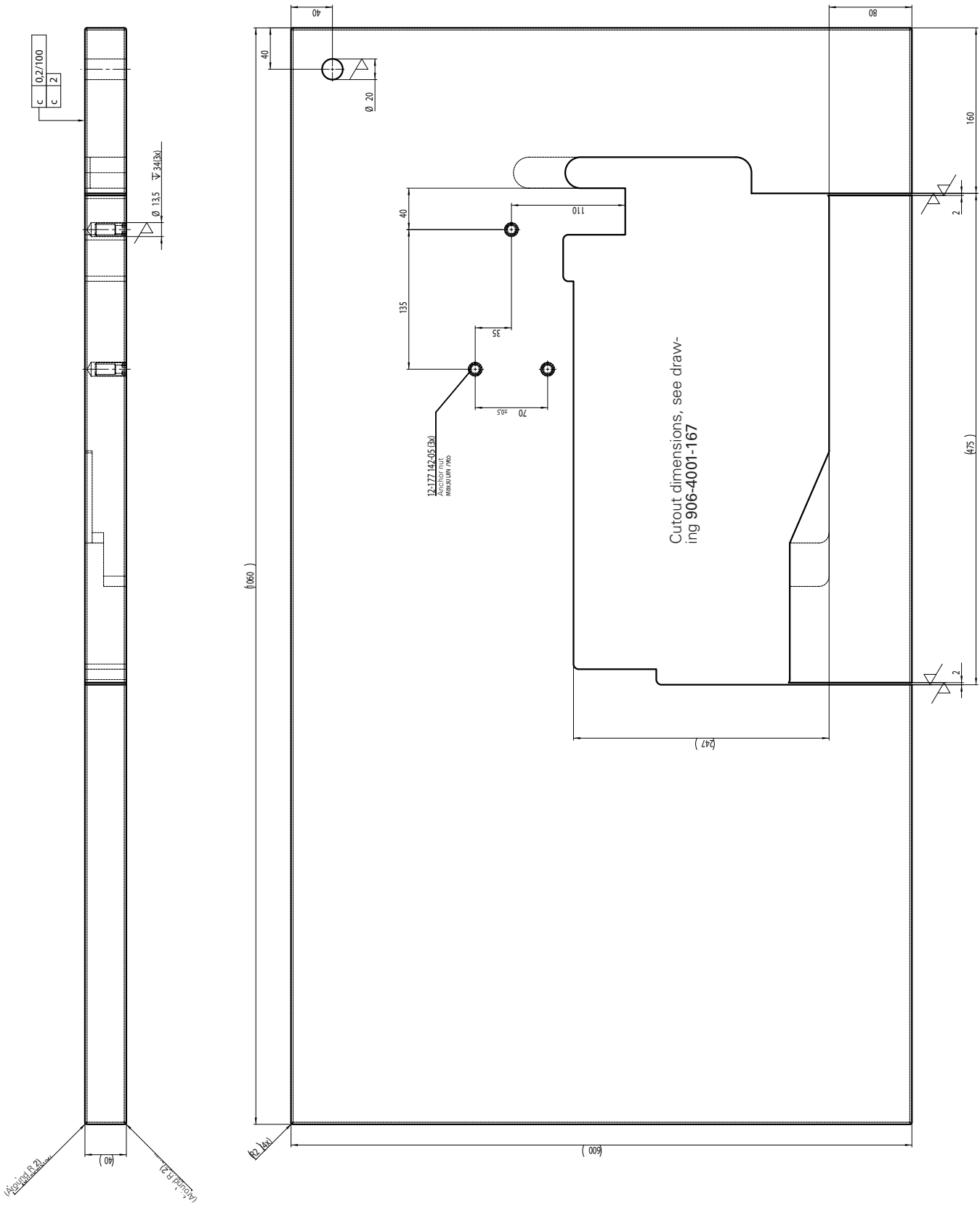
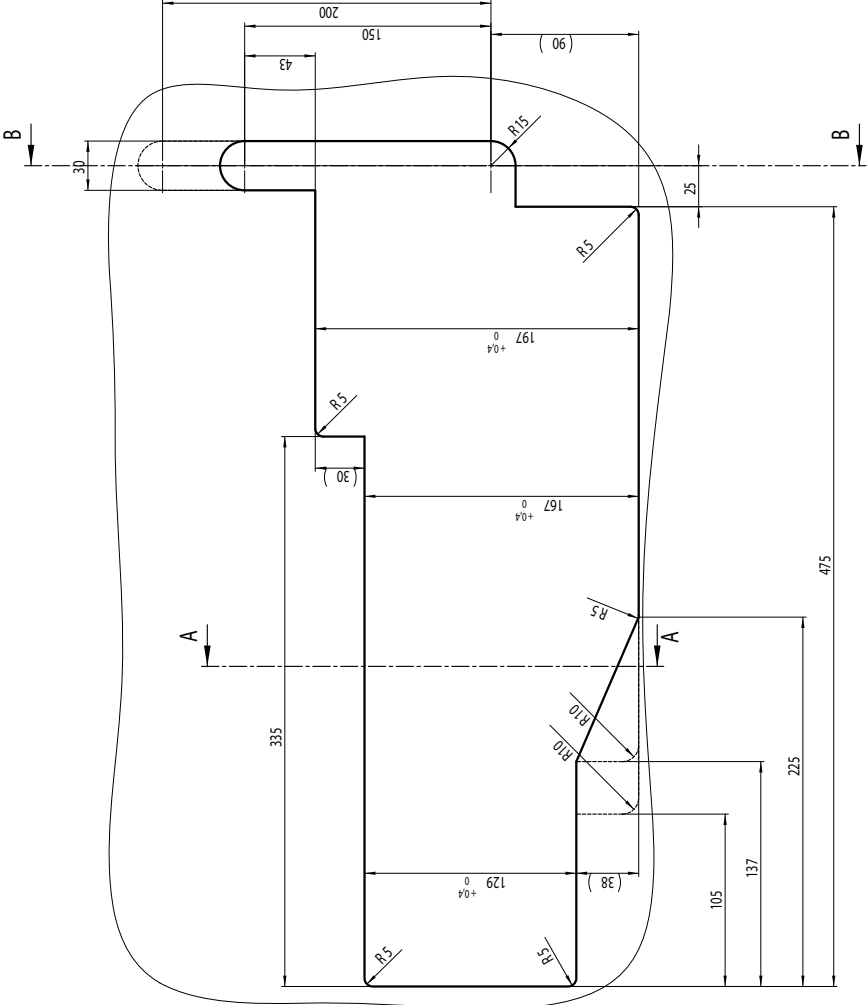


Table top cutout

11.02 Table top cutout (sewing head flush-mounted on table with puller)

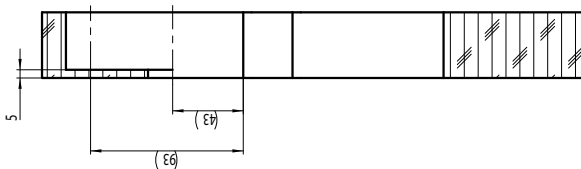




CUT A-A



CUT B-B



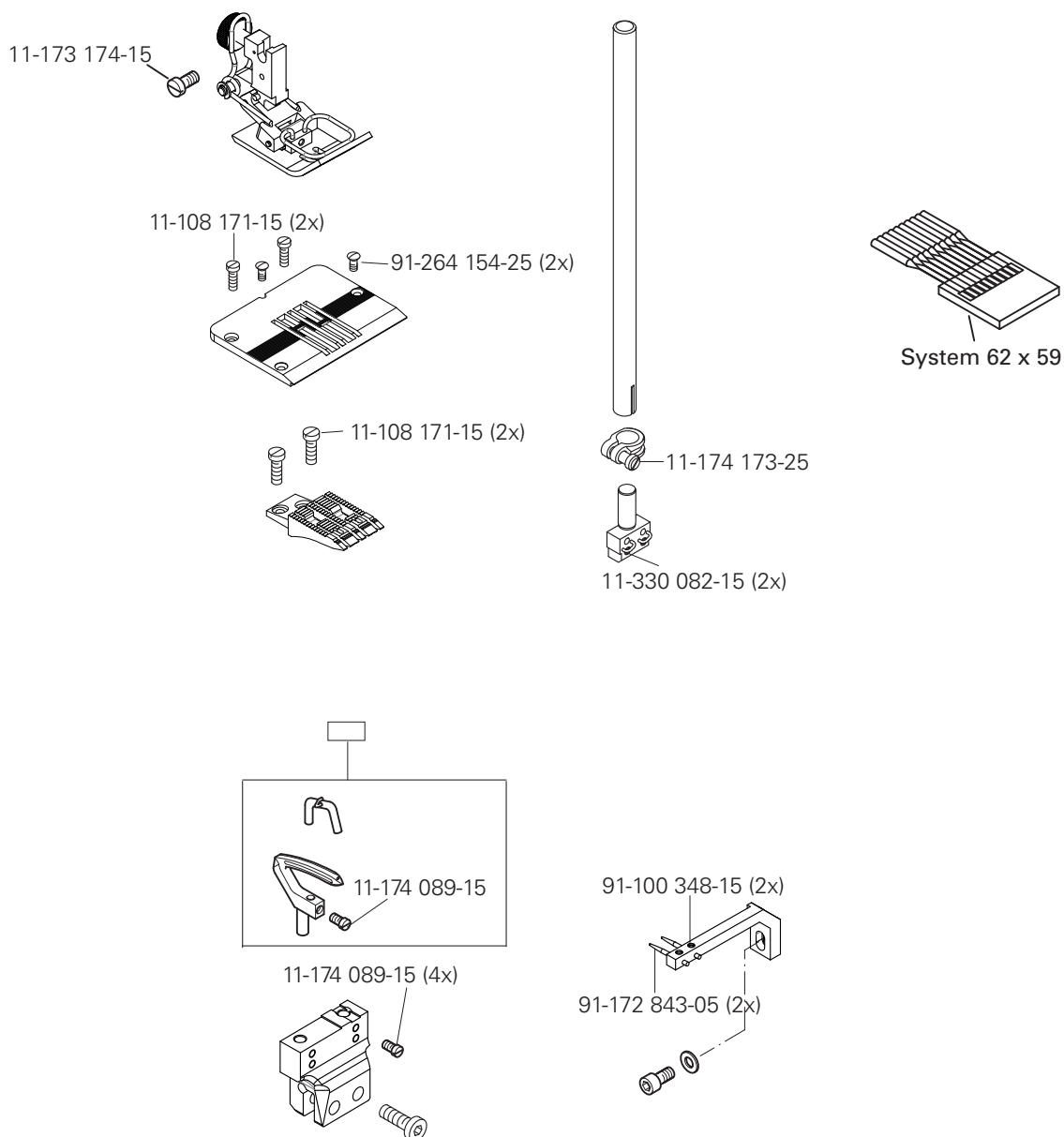
12 Wearing Parts



This list shows the most important wearing parts.

A detailed parts list for the complete machine can be downloaded at www.pfaff-industrial.de/pfaff/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. 296-12-19 343.





Europäische Union
Wachstum durch Innovation – EFRE

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