This Adjustment Manual is valid for machines from the following serial numbers onwards:

# 6 001 000 →
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Adjustment

13  Adjustment

Unless stated otherwise, during all adjustment work the machine must be disconnected from the electric and pneumatic power supply!

Danger of injury if the machine is started accidentally!

13.01  Notes on adjustment

All following adjustments are based on a fully assembled machine and may only be carried out by expert staff trained for this purpose.

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 following chapters must be observed.

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

13.02  Tools, gauges and other accessories

- 1 set of screwdrivers with blade widths from 2 to 10 mm
- 1 set of open-ended wrenches with opening sizes from 7 to 13 mm
- 1 set of allen keys from 1.5 to 6 mm
- 1 clamp (Order No. 08-880 137-00)
- 1 metal rule (Order No. 08-880 218-00)
- 1 gauge (Order No. 08-880 136-01)
- Sewing thread and test material

13.03  Abbreviations

TDC = top dead center
BDC = bottom dead center
13.04 Adjusting the basic machine

13.04.01 Needle position in sewing direction on the PFAFF 571 and 591

Requirement
With the stitch length set at its minimum, the needle should be positioned in the centre of the needle hole, as seen in the direction of sewing.

- Set the minimum stitch length.
- Adjust needle bar (screw 1) according to the requirement.
Requirement
The needle should be positioned in the centre of the needle hole as seen in the direction of sewing.

Fig. 13 - 02

- Adjust needle bar (screws 1 and 2) according to the requirement.
Preliminary adjustment of the needle height

Requirement
When the needle bar is at TDC, there must be a clearance of approx. 21 mm between the needle point and the needle plate.

- Adjust needle bar 1 (screw 2), without turning it, according to the requirement.
Adjustment

13.04.04 Needle rise, hook clearance, needle height and needle guard on the PFAFF 571

Requirement
With the needle bar positioned 2.0 mm after BDC and the stitch length set at "0.8"
1. the hook point must be at needle centre with a hook-to-needle clearance of 0.05 to 0.1 mm;
2. the top of the needle eye must be 0.8 to 1.0 mm below the hook point;
3. the needle guard 6 must touch the needle lightly.

- Set stitch length at "0.8".
- Loosen both screws 1, 2, 3, 4 and 5.
- Bring needle bar to 2.0 mm past BDC:
- Set hook point at needle centre, making sure that the needle is not deflected by needle guard 6.
- Adjust needle height according to Requirement 2.
Adjust hook post according to Requirement 1 and tighten screws 4 and 5.
● Making sure that there is some play in the bevel gear, tighten screws 1.
● With retaining collar 7 touching bevel gear 8 tighten screws 2 and 3.
● Adjust needle guard 6 (screw 9) according to requirement 3.

When the hook is changed, make sure that the markings 10 and 11 are both on one side.
Needle rise, hook clearance, needle height and needle guard on the PFAFF 574

Requirement
With the needle bar positioned 2.0 mm after BDC on both hooks
1. the hook point must be at needle centre with a hook-to-needle clearance of 0.05 to 0.1 mm;
2. the top of the needle eye must be 0.8 to 1.0 mm below the hook points;
3. the needle guard 9 must touch the needle lightly.

Loosen screws 1, 2, 3, 4, 5, 6 and 7.
Loosen screws 8 slightly.
Bring needle bar to 2,0 mm past BDC:
Set both hook points at needle centre, making sure that the needles are not deflected by needle guard 9.
Adjust needle height according to Requirement 2.
Adjust both hook posts according to Requirement 1 and tighten screws 8.
Tighten screws 1 and 6.
Making sure that there is some play in the bevel gear, tighten screws 3 and 5.
With retaining collar 10 touching bevel gear 11 tighten screws 2.
With retaining collar 12 touching bevel gear 13 tighten screws 4.
Tighten screws 7 on both sides of the post.
Adjust needle guard 9 (screw 14) on both hooks according to requirement 3.

When a hook is changed, make sure that the markings 15 and 16 are both on one side.
Adjustment

13.04.06 Needle rise, hook clearance, needle height and needle guard on the PFAFF 591

Requirement
With the needle bar positioned 2.0 mm after BDC and the stitch length set at "0.8"
1. the hook point must be at needle centre with a hook-to-needle clearance of 0.05 to 0.1 mm;
2. the top of the needle eye must be 0.8 to 1.0 mm below the hook point;
3. the needle guard 6 must touch the needle lightly.

- Set stitch length at "0.8".
- Loosen screws 1, 2, 3, 4 and 5.
- Bring needle bar to 2.0 mm past BDC:
- Set hook point at needle centre, making sure that the needle is not deflected by needle guard 6.
- Adjust needle height according to Requirement 2.
Adjust hook post according to Requirement 1 and tighten screws 4.
Making sure that there is some play in the bevel gear, tighten screws 2.
With retaining collar 7 touching bevel gear 8 tighten screws 1.
Adjust needle guard 6 (screw 9) according to requirement 3.

When the hook is changed, make sure that the markings 10 and 11 are both on one side.
Adjustment

13.04.07 Needle position crosswise to sewing direction on the PFAFF 571

Requirement
When the stitch length is set at its maximum, the needle must be positioned in the centre of the needle hole when entering and coming out of the needle plate.

- Turn screws 1 (screws 2, on both sides of the post) according to the requirement.
13.04.08 Needle position crosswise to sewing direction on the PFAFF 574

Requirement
As seen crosswise to the sewing direction, the needles must penetrate in the centre of their needle holes.

● Shift bearing plate 1 (screws 2, on both sides of the post) according to the requirement.
13.04.09 Needle position crosswise to sewing direction on the PFAFF 591

Requirement
As seen crosswise to the sewing direction, the needle must penetrate in the centre of the needle hole.

Adjust feed wheel post 1 (screws 2, 3 and 4) according to the requirement.
13.04.10 Height and stroke of the bobbin case opener

Requirement
1. The top edges of the bobbin case opener 1 and bobbin case base 3 should be on one level.
2. When the bobbin case opener 1 has deflected the bobbin case to its furthest point, the catch of the bobbin case should be 0.3 – 0.5 mm from the back edge of the needle plate recess.

Fig. 13 - 10

- Adjust bobbin case opener 1 (screw 2) in accordance with requirement 1.
- Turn the balance wheel until the bobbin case opener has deflected the bobbin case to its furthest point.
- Adjust bobbin case opener 1 (screw 2) in accordance with requirement 2.

On the PFAFF 574 these adjustments must be repeated on the right post. Depending on the thread size, a variation of the setting in Requirement 2 is permitted.
13.04.11 Height of the feed wheel on the PFAFF 571

Requirement
1. When pressure is applied to the feed wheel 4, it should protrude from the needle plate by tooth height (approx. 0.8 mm)
2. When no pressure is applied to the feed wheel 4, it should have a vertical play of approx. 0.3 mm.

Swing out the roller presser.
Loosen screws 1 and 2.
Adjust drive wheel 3 according to requirement 1, taking care to see that the teeth of drive wheel 3 and feed wheel 4 lock into each other properly.
Tighten screws 1.
Adjust guide 5 according to requirement 2 and tighten screws 2.
Requirement
1. When pressure is applied to the feed wheel 4, it should protrude from the needle plate by tooth height (approx. 0.8 mm)
2. When no pressure is applied to the feed wheel 4, it should have a vertical play of approx. 0.3 mm.

Fig. 13-12

- Swing out the roller presser.
- Loosen screws 1 and 2 (two screws each).
- Adjust drive wheel 3 according to requirement 1, taking care to see that the teeth of drive wheel 3 and feed wheel 4 lock into each other properly.
- Tighten screws 1.
- Adjust guide 5 according to requirement 2 and tighten screws 2.
13.04.13 Height of the feed wheel on the PFAFF 591

Requirement
The feed wheel should protrude from the needle plate by tooth height (approx. 0.8 mm)

- Swing out the roller presser.
- Loosen screws 1.
- Adjust eccentric 3 (fastening screw accessible through hole 2) according to the requirement.
- Tighten screws 1.
13.04.14 Stitch length control eccentric

Requirement
When the needle (with maximum stitch length set), coming from TDC, is 3 mm above the needle plate, the crank 3 must have reached its front point of reversal.

- Set the maximum stitch length.
- Turn stitch length control device 1 (screws 2) according to the requirement.
13.04.15 Stitch length scale disk

Requirement
When the stitch length control device is locked in position, and the maximum stitch length is set, the marking line of the highest number on the scale disk 1 must be opposite the lower edge 3 of the belt guard recess.

- Set the maximum stitch length.
- Turn the scale disk 1 (screws 2) according to the requirement.
13.04.16  Shaft crank to feed wheel drive

Requirement
When the maximum stitch length is set, the linkage rod 3, or linkage rods 3 and 4 on the models 571 and 591, must be able to move freely when the balance wheel is turned.

- Set the maximum stitch length.
- Twist or shift the shaft crank 1 (screw 2) according to the requirement.
Adjustment

13.04.17  Shaft crank to roller presser drive

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<td>When the maximum stitch length is set, the linkage rods 3 and 4 must be able to move freely at their left and right point of reversal when the balance wheel is turned.</td>
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- Set the maximum stitch length.
- Twist clamp crank 1 (screw 2) according to the requirement.
13.04.18 Clearance between roller presser and feed wheel

Requirement
When the presser bar lifter is raised, the clearance between the roller presser and the feed wheel must be 7 mm.

- Raise the presser bar lifter.
- Adjust the presser bar 1 (screws 2) according to the requirement. Make sure that the roller presser is parallel to the feed wheel.
13.04.19 Roller presser

Requirements
When the roller presser 1 is touching the feed wheel 5 it must
1. be parallel to feed wheel 5, as seen in the direction of sewing,
2. be in the centre of the needle (on model 574 the left needle), as seen in the direction of sewing,
3. be as near as possible to the needle (on model 574 the left needle), as seen crosswise to the direction of sewing.

- Raise the roller presser.
- Always observe requirement 1 for subsequent adjustments.
- Adjust roller presser 1 (screw 2) according to requirement 2.
- Lower roller presser 1 to rest on feed wheel 5.
- Adjust roller presser bracket 3 (screw 4) according to requirement 3.

When sewing very tight curves, the roller presser 1 must be moved a little towards the operator.
13.04.20 Stitch length on stitch length scale

Requirement
When the stitch length is set at "3", and after the needle has entered a strip of leather 11 times, the total length from the first to last needle penetration must be 30 mm.

- Set stitch length "3".
- By turning the balance wheel, let the needle enter 11 times and measure the total length.
- Adjust clamp 1 (screw 2) according to the requirement.

Clamp 1 must not be positioned diagonally to the rock shaft!
Adjustment

13.04.21 Synchronization of roller presser and feed wheel

Requirement
After 30 needle penetrations in a strip of leather the total length from the first to the last penetration should be the same, both in the lower and the upper leather layer.

- Set stitch length "3".
- By turning the balance wheel, let the needle enter 30 times.
- Compare the total sewn length of the lower and upper leather layer.
- Adjust clamp 1 (screw 2) according to the requirement.

Clamp 1 must not be positioned diagonally to the rock shaft.
13.04.22 Retainer (only on model 574)

Requirements
The retainer 1 must
1. be as close as possible to the needle, as seen in the direction of sewing and
2. be in the centre of the needle, as seen crosswise to the direction of sewing.
3. When the roller presser is lowered, the distance between the retainer 1 and the workpiece must be 0.2 - 0.3 mm.

- Adjust retainer 1 (screw 2) according to requirement 3.
- Adjust bracket 3 (screw 4) according to requirement 1 and 2.
Knee lever

Requirements

1. Before the roller presser rises, the knee lever must still have a slight play.
2. When the knee lever is raised as far as possible, the lever for the roller presser must drop automatically.
3. Knee lever bar 5 must be at an angle of approx. 75° to the bedplate.

- Adjust screw 1 (nut 2) according to requirement 3.
- Adjust screw 3 (nut 4) according to requirement 2.
- Set bar 5 (Screws 6) according to requirement 3.
13.04.24 Needle thread tension release

Requirements
1. When the presser bar lifter is raised, the tension discs 3 should be pressed at least 0.5 mm apart.
2. When the roller presser is lowered, the tension must be fully effective.

* Align tension mounting plate 1 and pressure plate 2 according to the requirement.
Adjustment

13.04.25 Thread check spring (PFAFF 571 and 591)

Requirement
1. The movement of thread check spring 7 should be completed when the needle point penetrates the fabric (spring stroke approx. 7 mm).
2. When the largest thread loop is formed while the thread is passed around the hook, the thread check spring 7 should rise slightly from its support.

Adjust support 1 (screw 2) according to requirement 1.
To adjust the spring tension turn screw 3 (screw 4).
Adjust the thread regulator 5 (screw 6) according to requirement 2.

For technical reasons it may be necessary to deviate from the specified spring stroke or spring tension.
Move the thread regulator 5 (screw 6) towards "+" (= more thread) or "−" (= less thread).
13.04.26 Thread check springs (PFAFF 574)

Requirement
1. The movement of thread check springs 3 and 6 should be completed when the needle points penetrate the fabric (spring stroke approx. 7 mm).
2. When the largest thread loop is formed while the thread is passed around the hook, the thread check springs 3 and 6 should rise slightly from supports 1 and 9.

- Adjust support 1 (screw 2) according to requirement 1.
- To adjust the spring tension of thread check spring 3 turn screw 4 (screw 5).
- To adjust the spring tension of thread check spring 6 turn bush 7 (screw 8).
- Adjust support 9 (screw 10) according to requirement 1. (If the adjustment range is too low, support 9 can be screwed into another hole).
- Adjust the thread regulator 11 (screw 12) according to requirement 2.

For technical reasons it may be necessary to deviate from the specified spring stroke or spring tension.
Move the thread regulator 11 (screw 12) towards "+" (= more thread) or "−" (= less thread).
Adjustment

13.04.27  Bobbin winder

Requirements
1. When the bobbin winder is engaged, the winding spindle must be driven reliably. When the bobbin winder is disengaged, the friction wheel 5 must not be moved by drive wheel 1.
2. The bobbin winder must switch itself off, when the filled thread is about 1 mm from the edge of the bobbin.

Fig. 13 - 27

- Position drive wheel 1 (screws 2) according to requirement 1.
- Position bolt 3 (screw 4) according to requirement 2.
13.04.28 Pressure of roller presser

**Requirement**
The material must be fed smoothly. No pressure marks should be visible on the material.

![Diagram of roller presser adjustment](image)

- Adjust roller presser pressure with screw 1 according to the requirement.
Adjustment

13.04.29 Lubrication

Requirement
After a running time of 10 seconds a fine line of oil should form on a strip of paper held next to the hook.

- Check whether oil has been filled in and that there is no air in the oil lines.
- Let the machine run for 2-3 min.

⚠️ While the machine is running do not place hands in the needle or hook area!
Danger of injury from moving parts!

- With the machine running hold a strip of paper on the hook and check the requirement.
- If necessary, adjust the oil flow on screw 1.
13.04.30 Re-engage safety coupling

The coupling 1 is set by the manufacturer. When the thread jams, the coupling 1 disengages in order to avoid damage to the hooks.
A description of how to engage the coupling follows.

- Remove jammed thread.
- Hold coupling 1 with screw 2 and turn the balance wheel, until you feel coupling 1 snap back into place again.
Adjustment

13.05 Adjusting the edge trimmer -725/04

13.05.01 Position of the knife holder on model 571

Requirements
When the thread trimmer is engaged and the adjusting wheel has been turned to its highest position
1. the knife holder must be parallel to the post and
2. the top edge of the needle plate must be in the centre of the angular knife opening.

- Turn the adjusting wheel 1 to its highest position and engage edge trimmer.
- Adjust knife holder 2 (screw 3) according to the requirements.
13.05.02  Position of the knife holder on models 574 and 591

Requirement
When the thread trimmer is engaged, the centre of the angular knife opening must be level with the top edge of the needle plate.

- Switch off the machine and engage the edge trimmer.
- Loosen screw 1.
- By turning eccentric 2, position the knife in the centre of its adjustment range.
- Adjust knife holder 3 according to the requirement and tighten screw 1.
- Position locking ring 4 on the knife holder 3.

Depending on the material thickness, changes in the basic setting of eccentric 2 are possible.
Adjustment

13.05.03 Knife stroke on model 571

Requirement
The knife stroke can be adjusted over a range from 1.0 to 3.5 mm, allowing the best possible adaption to all materials used.

- Turn eccentric 1 (screws 2) so that the marking of the desired cutting stroke is opposite the marking on clamp collar 3.

Fig. 13 - 33
Adjustment

13.05.04 Knife stroke on models 574 and 591

Requirement
The knife stroke can be adjusted over a range from 2.0 to 3.5 mm, allowing the best possible adaption to all materials used.

Fig. 13 - 34

- Adjust crank 1 (nut 2) in slotted lever 3 according to the requirement.
Adjustment

13.05.05 Cutting stroke on model 571

Requirement
When the edge trimmer is engaged and the needle is in the needle hole, the stroke of
knife 1 should be half in front of and half behind the needle, when the motor shaft is
turned by hand.

- Switch off the machine and engage the edge trimmer.
- Adjust knife 1 (screw 2) according to the requirement.
13.05.06  Cutting stroke on models 574 and 591

Requirement
When the edge trimmer is engaged and the needle is in the needle hole, the stroke of knife 3 should be half in front of and half behind the needle, when the motor shaft is turned by hand.

- Switch off the machine and engage the edge trimmer.
- Adjust knife holder 1 (screw 2) according to the requirement.
Adjustment

13.05.07  Knife position

Requirement
When the edge trimmer is engaged, the knife should rest lightly on the needle plate insert, but no whistling sound should occur during trimming.

571
- Adjust screw 1 (screw 2) according to the requirements.
- Carry out a cutting test and repeat adjustment if necessary.

574 and 591
- Adjust knife 3 (screw 4) according to the requirements.
- Carry out a cutting test and repeat adjustment if necessary.
13.06 Adjusting the thread trimmer -726/05 on model 591

13.06.01 Position of the knife to the needle plate

**Requirement**
When the edge trimmer is engaged, the knife 2 must be parallel to the needle plate insert.

- Switch off the machine and engage the edge trimmer.
- Loosen screw 1 and push back knife 2 slightly.
- Turn milled screw 3 until its top edge is flush with the top edge of the cylindrical guide 4.
- Loosen screw 5, position guide 6 in the centre of guide 7 and slightly tighten screw 5.
- Adjust knife holder 8 according to the requirement and tighten screw 5.

Screw 1 remains loosened for further adjustments.
Adjustment

13.06.02 Knife position crosswise to sewing direction

Requirement
When the edge trimmer is engaged, knife 2 must be vertical and rest lightly on the needle plate insert.

Switch off the machine and engage the edge trimmer.
Bring the knife into a vertical position by turning milled screw 1.
Bring knife 2 into light contact with the needle plate insert and tighten screw 3.

The cutting pressure can be adapted to the material used with milled screw 1.
**13.06.03 Knife height**

**Requirement**
When the edge trimmer is engaged, the centre of the angular knife opening must be at the same height as the upper edge of the needle plate.

---

- Switch off the machine and engage the edge trimmer.
- Adjust milled screw 1 according to the requirement.

---

The basic setting may be changed depending on the material thickness.
13.06.04  Cutting stroke

Requirement
When the edge trimmer is engaged and the needle is in the needle hole, the stroke of knife 3 should be half in front of and half behind the needle, when the motor shaft is turned by hand.

Switch off the machine and engage the edge trimmer.
Adjust knife holder 1 (screw 2) according to the requirement.
13.06.05 Knife stroke

Requirement
The knife stroke can be adjusted over a range from 1.0 to 3.5 mm, allowing the best possible adaption to all materials used.

Fig. 13 - 42

● Turn eccentric 1 (screws 2) on the back of the sewing head so that the marking of the desired cutting stroke is opposite marking 3.
13.07 Adjusting the thread trimmer - 900/81

13.07.01 Resting position of the roller lever / radial position of the control cam

Requirement
1. When the thread trimmer is in its resting position, lever 5 should be touching piston 6 and the roller of roller lever 7 should be 0.3 mm away from control cam 3.
2. When the take-up lever is at t.d.c., control cam 3 should just have placed roller lever 7 in its resting position.

Fig. 13 - 43

- Having made sure that piston 6 is positioned against the left stop, adjust magnet 1 (2 screws) in accordance with requirement 1.
- Adjust control cam 3 (screws 4) in accordance with requirement 2.
Position of the thread catcher holder

Requirement
1. There should be a minimum amount of play between toothed wheel 3 and toothed segment 4.
2. Both in the neutral position and the foremost position of the catcher, the distance between the toothed segment 4 and the outer edge of the thread catcher holder 1 should be the same (see arrow).

Adjust the thread catcher holder 1 (screws 2) according to the requirements.

If requirement 2 cannot be fulfilled, loosen screw 2 and move the toothed segment 4 by one tooth.
13.07.03 Distance between thread catcher and needle plate

Requirement
During its swivel movement thread catcher 1 should not pass the edge of the needle plate (see arrow).

- Move thread catcher 1 (screws 2, two screws) parallel to the thread catcher holder in accordance with the requirement.
13.07.04 Position of the thread catcher

Requirement
1. The bottom edge of the thread catcher 1 should be at a distance of 0.1 mm from the positioning finger of the bobbin case 5.
2. When the thread trimmer is in its neutral position, the rear edge of thread catcher should be positioned approx. 2.5 – 3 mm behind the edge of the knife.

- Move thread catcher 1 (screws 2, two screws) in accordance with requirement 1.
- Turn thread catcher 1 (screw 3) in accordance with requirement 2.

Thread catcher 1 must be parallel to the surface of the thread catcher holder 4.
13.07.05 Knife position and knife pressure

Requirement
1. The knife should be touching the needle plate.
2. The knife pressure should be set as low as possible but the cutting operation should still be carried out reliably.

- Move knife 1 (screws 2) in accordance with requirement 1 or swivel it in accordance with requirement 2.
Bobbin thread retaining spring

**Requirement**

1. The bobbin thread clamp spring should be guided reliably in the thread groove of the thread catcher 3.
2. The tension of the bobbin thread spring clamp should be as low as possible, but the bobbin thread should be held reliably after the cutting operation.

**Adjust bobbin thread clamp spring 1 (screws 2) in accordance with requirement 1.**

**Adjust the tension in accordance with requirement 2 by bending side 4 of the bobbin thread clamp spring 1.**

**Control – requirement 1**

- Switch off the machine and bring the take-up lever to its b.d.c.
- Engage and disengage the thread catcher 3 by hand and check requirement 1. Adjust if necessary.

**Control – requirement 2**

- After the thread has been cut, sew a few stitches by turning the balance wheel, checking whether the bobbin thread is drawn out of the bobbin thread clamp spring between the 1st and 3rd stitches. If necessary, correct the tension.
13.07.07 Manual cutting test

Requirement
1. When thread catcher 1 is on its forward stroke, it must not carry bobbin thread 3 forward too.
2. When thread catcher 1 is in its front position, bobbin thread 3 must be held reliably by hook 4.
3. After the trimming action, both the needle thread and the bobbin thread must be perfectly cut and bobbin thread 3 retained.

- Sew a few stitches.
- Turn off the on/off switch.
- Carry out the cutting operation manually.
- Check requirement 1 and 2, and if necessary readjust thread catcher 1 in accordance with Chapter 13.07.04 Position of the thread catcher.
- Check requirement 3, and if necessary readjust the bobbin thread retaining spring 2 in accordance with Chapter 13.07.06 Bobbin thread retaining spring.
Releasing the tension

**Requirement**
When the magnet is activated, tension discs 3 must be at least 0.5 mm apart.

---

- Activate the magnet.
- Detach the tension bearing plate 1 and adjust pressure plate 2 in accordance with the requirement.

--

It is possible to set the time for releasing the tension with the parameter functions, see Chapter 13.09 Parameter settings.
**Requirement**
When the thread trimmer is in its resting position, the drive levers 1 must be parallel.

* Adjust drive levers 1 (screws 2) in accordance with the requirement.
13.08 Adjustment of backtacking mechanism -911/..

13.08.01 Needle in needle hole (only for PFAFF 571 and 591)

Requirement
When the maximum stitch length is set, the needle must be the same distance from the inside edge of the needle hole, both for forward and reverse stitch.

- Turn crank 1 (screws 2) according to the requirement.
Requirement
There must be a distance of 3 mm between coupling half 1 and locking disc 3 of the drive mechanism.

- Adjust coupling half 1 (screw 2) according to the requirement.
Bevel gears for feed wheel drive (on the PFAFF 571 and 574)

Requirements
1. Bevel gear 3 must fit well on the left side.
2. There must be a distance of 14 mm between bevel gear 3 and bevel gear 5.

Fig. 13 - 54

- Remove control unit 1 (screws 2).
- Adjust bevel gear 3 (screws 4) according to requirement 1.
- Adjust bevel gear 5 (screws 6) according to requirement 2.
Adjustment

13.08.04 Bevel gear play (on the PFAFF 571 and 574)

Requirements
1. When sewing forwards, there must be a slight play between bevel gears 6 and 7.
2. When sewing backwards, there must be a slight play between bevel gears 6 and 8.

- Disconnect air supply of the air filter/lubricator.
- Move unit 1 by hand as far as possible to the right.
- Adjust bracket 2 (screws 3) according to requirement 1.
- Move unit 1 by hand as far as possible to the left.
- Adjust screw 4 (nut 5) according to requirement 2.
Adjustment

13.08.05  KBevel gears for feed wheel drive (on the PFAFF 591)

Requirements
1. The right side of bevel gear 1 must be flush with its drive shaft (see arrow).
2. There must be a distance of 13 mm between bevel gear 3 and bevel gear 1.

Fig. 13 - 56

- Adjust bevel gear 1 (screws 2) according to requirement 1.
- Adjust bevel gear 3 (screws 4) according to requirement 2.
13.08.06 Bevel gear play (on the PFAFF 591)

Requirements
1. When sewing forwards, there must be a slight play between bevel gears 6 and 7.
2. When sewing backwards, there must be a slight play between bevel gears 6 and 8.

- Disconnect air supply of the air filter/lubricator.
- Move unit 1 by hand as far as possible to the right (see arrow).
- Adjust screw 2 (nut 3) according to requirement 1.
- Move unit 1 by hand as far as possible to the left (see arrow).
- Adjust screw 4 (nut 5) according to requirement 2.
13.09 Parameter settings

13.09.01 Selecting the user level

- Switch on the machine.

2 x TE/Speed

- Press the TE/Speed key twice to call up the input mode.

- By pressing the corresponding +/- key select the parameter group "798".

- By pressing the corresponding +/- key select the desired user level:

  "0" = operator level A
  "1" = technician level B
  "11" = service level C

The selected user level is displayed on the screen. (see arrow)
Adjustment

13.09.02 Example of a parameter input

- Switch on the machine.

2 x

- Press the TE/Speed key twice to select the input mode.

- By pressing the corresponding plus/minus key select parameter "798" and the desired user level, see Chapter 13.09.01 Selecting the user level.

- Select parameter "760" by pressing the +/- keys 1 and 2.

- Select the required value for the total number of stitches (x200) for each bobbin by pressing the +/- key 3.

- By pressing the TE/Speed key the selected value is taken over and the machine switches to the sewing mode.
### List of parameters

<table>
<thead>
<tr>
<th>Group</th>
<th>Parameter</th>
<th>Description</th>
<th>User level</th>
<th>Setting range</th>
<th>Set value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>101</td>
<td>Control panel beep tone (OFF = AUS, ON = EIN)</td>
<td>A,B,C</td>
<td>0 – 1</td>
<td>ON</td>
</tr>
<tr>
<td>5</td>
<td>523</td>
<td>Bartacks</td>
<td>A,B,C</td>
<td>I – II</td>
<td>I</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I = ornamental bartack, II - standard bartack</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>605</td>
<td>Speed display (OFF = AUS, ON = EIN)</td>
<td>B,C</td>
<td>I – II</td>
<td>OFF</td>
</tr>
<tr>
<td></td>
<td>607</td>
<td>Speed PFAFF 571, 591</td>
<td>B,C</td>
<td>300 – 3200</td>
<td>3000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Speed PFAFF 574</td>
<td>B,C</td>
<td>300 – 2600</td>
<td>2600</td>
</tr>
<tr>
<td></td>
<td>609</td>
<td>Cutting speed 1</td>
<td>B,C</td>
<td>60 – 300</td>
<td>180</td>
</tr>
<tr>
<td></td>
<td>660</td>
<td>Bobbin thread control</td>
<td>A,B,C</td>
<td>0 – 2</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0 = off</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = thread monitor</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>2 = reverse counter</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>700</td>
<td>Needle position 0 (needle reference position)</td>
<td>B,C</td>
<td>0 – 255</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>702</td>
<td>Needle position 1 (needle lowered)</td>
<td>B,C</td>
<td>0 – 255</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>703</td>
<td>Needle position 2 (take-up lever raised)</td>
<td>B,C</td>
<td>0 – 255</td>
<td>230</td>
</tr>
<tr>
<td></td>
<td>705</td>
<td>Needle position 5 (end of cutting signal 1)</td>
<td>B,C</td>
<td>0 – 255</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>706</td>
<td>Needle position 6 (start of cutting signal 2)</td>
<td>B,C</td>
<td>0 – 255</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>707</td>
<td>Needle position 9 (start thread tension release)</td>
<td>B,C</td>
<td>0 – 255</td>
<td>190</td>
</tr>
<tr>
<td></td>
<td>760</td>
<td>Multiplier for the fixed value (200) for stitch count</td>
<td>A,B,C</td>
<td>0 – 250</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>798</td>
<td>User level</td>
<td>A,B,C</td>
<td>0,1,11</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0 = User level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = Technician level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>11 = Service level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>799</td>
<td>Selected machine class</td>
<td>C</td>
<td>1 – 4</td>
<td>2</td>
</tr>
</tbody>
</table>

Further parameters are listed in the Motor Instruction Manual.
09.04 Reset / Cold start

After selecting the reset menu, by pressing the corresponding key it is possible to delete seam parameters, delete seam programs and to carry out a cold start.

- Press and hold "+" on keys A and D and switch on the machine, see Chapter 7.01 Main switch.

**Resetting the seam parameters**
- Press "+" on key "A".
  All parameters are deleted, the display "—rE—" appears for a short time on the screen.

**Resetting the seam programs**
- Press "+" on key "B".
  All seam programs are deleted, the display "—rE—nA" appears for a short time on the screen.

**Cold start**
- Press "+" on key "D".
  With the exception of the value for the machine class, the values of the machine control unit are set back to their basic values, the display "—COLd—" appears for a short time on the screen.

After the cold start all programmed values are set back to their status at the time of delivery. For this reason after a cold start it is necessary to re-enter first the parameter "799" and then the parameter "700".
13.10 Internet update of the machine software

The machine software can be updated with PFAFF flash programming. For this purpose the PFP boot program and the appropriate control software for the machine type must be installed on a PC. To transfer the data to the machine, the PC and the machine control unit must be connected with an appropriate null modem cable (part no. 91-291 998-91).

The PFP boot program and the control software of the machine type can be downloaded from the PFAFF-homepage using the following path:
www.pfaff-industrial.com/de/service/download/steuerungssoftware.html

To update the machine software carry out the following steps:

⚠️ While the machine software is being updated, no setting up, maintenance or adjustment work may be carried out on the machine!

- Switch off the machine.
- Connect the PC (serial interface or appropriate USB-adapter) and the machine control unit (RS232).
- Switch on the PC and start the PFP boot program.
- Select the machine type.
- Press the "programming" button.
- An extra program (quick loader) is started.
- Switch on the machine within 60 seconds.
- The software update is carried out, the update progress is shown on the bar display.
- When the update has been completed, the message "software update successfully completed" appears.

⚠️ If this message does not appear, the entire procedure must be repeated!

The machine is not safe for operation until the programming has been completed successfully and without faults.

- Switch off the machine and end the quick loader and PFP boot program.
- End the connection between the PC and the machine control unit.
- Switch on the machine.
- A plausibility control is carried out and, if necessary, a cold start.

More information and assistance is at your disposal in the file "PFPHILFE.TXT", which can be called up from the PFP boot program by pressing the "help" button.
## Adjustment

### 13.11 Explanation of the error signals

<table>
<thead>
<tr>
<th>Signal</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E001</td>
<td>Pedal not in neutral position</td>
</tr>
<tr>
<td>E009</td>
<td>Start inhibitor during standstill</td>
</tr>
<tr>
<td>E010</td>
<td>Incorrect machine class</td>
</tr>
<tr>
<td>E062</td>
<td>Short circuit 24V</td>
</tr>
<tr>
<td>E063</td>
<td>Overload mains supply circuit</td>
</tr>
<tr>
<td>E064</td>
<td>Network monitoring</td>
</tr>
<tr>
<td>E065</td>
<td>Extint low in operation</td>
</tr>
<tr>
<td>E066</td>
<td>Short circuit</td>
</tr>
<tr>
<td>E067</td>
<td>Network off</td>
</tr>
<tr>
<td>E068</td>
<td>Extint low in operation</td>
</tr>
<tr>
<td>E069</td>
<td>No increments</td>
</tr>
<tr>
<td>E070</td>
<td>Motor blocking</td>
</tr>
<tr>
<td>E071</td>
<td>No incremental connector</td>
</tr>
<tr>
<td>E074</td>
<td>External transmitter for synchronisation marker missing</td>
</tr>
<tr>
<td>E088</td>
<td>RAM defective</td>
</tr>
<tr>
<td>E092</td>
<td>Start inhibitor when motor running</td>
</tr>
<tr>
<td>E173</td>
<td>Start error</td>
</tr>
<tr>
<td>E175</td>
<td>Start error</td>
</tr>
</tbody>
</table>
Reference list for circuit diagrams

A1 Controller (Quick P40 ED)
A2 Control panel S1
A14 Sewing head identification (OTE)
C1 Start capacitor knife motor
H1 Sewing lamp
H10 LED Stitch counter
K1 Relay knife motor
M1 Sewing motor
M10 Knife motor
Q1 Main switch
PD3 Synchronizer
S1 Pedal set value transmitter
S10 Knife motor key
S41 Manual backtacking key
S42 Needle position change key
S43 Single stitch key
S46 Start inhibitor key
T10 Transformer knife motor
X0 RS232 – interface (PC)
X1 Motor
X2 Incremental transmitter
X2.1 Incremental transmitter
X2.2 Synchronizer PD3
X3 Set value transmitter
X4 Control panel
X5 Inputs/outputs
X6 Bobbin thread monitor (optional)
X7 Light barrier (optional)
X22 Thread trimmer (-900/..)
X24 Automatic presser foot lift (-910/..)
X25 Connector for backtacking device (-911/..)
X28 Thread tension solenoid
X40 Keyboard
X46 Start inhibitor
X50 Sewing head identification (OTE)
Y2 Thread trimmer (-900/..)
Y4 Automatic presser foot lift (-910/..)
Y2 Backtacking device (-911/..)
Y8 Thread tension solenoid
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