

PFAFF

5642

Service Manual

296-12-13 925
Justieranl. engl. 7.92

Notes on safety

- The machine must only be commissioned in full knowledge of the instruction book and operated by persons with appropriate training.
- The machine must only be used for the purpose intended.
- Use of the machine without the safety devices belonging to it is not permitted.
- When gauge part are exchanged (e.g. needle, presser foot, needle plate, feed dog and bobbin) during threading, when the workplace is left, and during service work, the machine must be isolated from the mains by switching off the main switch or disconnecting the mains plug.
On mechanically operated clutch motors without start inhibitor it is necessary to wait until the motor has stopped.
- General servicing work must only be carried out by appropriately trained persons.
- Repairs, conversion and special maintenance work must only be carried out by technicians or persons with appropriate training.
- For service or repair work on pneumatic systems the machine must be isolated from the compressed air supply system.
Exceptions to this are only adjustments and function checks made by appropriately trained technicians.
- Work on the electrical equipment must only be carried out by electrical engineers or appropriately trained persons.
- Work on parts and systems under electric current are not permitted, except as specified in regulations DIN 57105 or VDE 0105.
- Conversions or changes to the machine must be authorized by us and only be made on adherence to all safety regulations.
- For repairs, only replacement parts approved by us must be used.

Please note:

This service manual applies for the single-needle- as well as for the multi-needle version. Divergencies in the illustrations have no bearing on the adjustments.

Tools, gauges and other equipment needed for adjustment

Set of screwdrivers with blades from 2 to 10 mm

Set of allen keys from 1.5 to 6 mm

Adjustment pin, 3 mm dia. (flattened to 2.3 mm at one end), part No. 61-111643-55

Positioning pin, 5 mm dia., part No. 13-030341-05

Positioning pin, 6 mm, with 3 mm end dia., part No. 61-111643-53

C-clamp, part No. 08-880137-00

Adjusting gauge (5 and 7 mm), part No. 61-111643-54

Metal rule, part No. 08-880218-00

Packet of system 5640 needles

Sewing thread and testing fabric

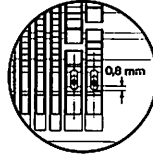
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The most important adjustment data in brief

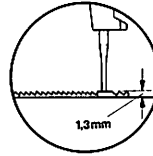
Step-by-step
adjustment
in section

- 1** Position of needle in needle hole
at b.d.c. of needle bar



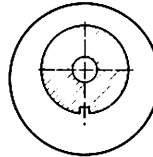
8

- 2** Feed dog height at
b.d.c. of needle bar



7

- 3** Feed driving eccentric
for **33 mm** needle bar stroke
at b.d.c. of needle bar
for **36 mm** needle bar stroke
0,9 mm before b.d.c. of needle bar

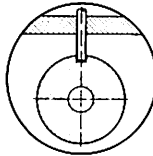


5

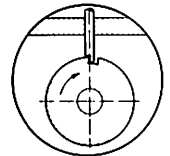
- 4** Feed dog lifting motion
for **33 mm** needle bar stroke
at b.d.c. of needle bar
for **36 mm** needle bar stroke
0,9 mm before b.d.c. of needle bar
= respective highest position of feed dog

3

- 5** Looper drive eccentric
at b.d.c. of needle bar
for stitch lengths
over 4.5 mm



at b.d.c. of needle bar
for stitch lengths
up to 4.5 mm

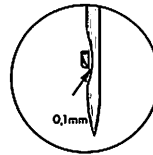
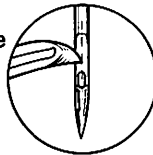


2

- 6** Needle rise **5 mm**

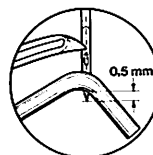
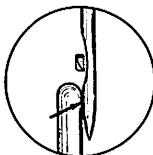
2 + 9

- 7** Looper-to-needle clearance



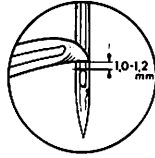
9

- 8** Needle guard



12

9 Needle height

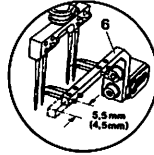


10

10 Spreader stroke

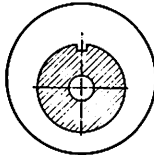
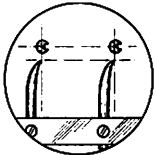
5.5 mm

4.5 mm for needle gauge 4.8 mm



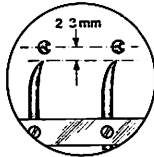
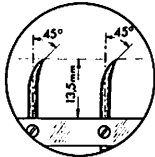
4

11 Spreader drive eccentric
at b.d.c. of needle bar



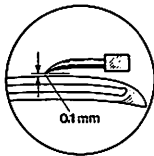
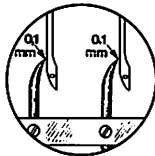
4

12 Spreader position
in sewing direction



11

crosswise to sewing
direction

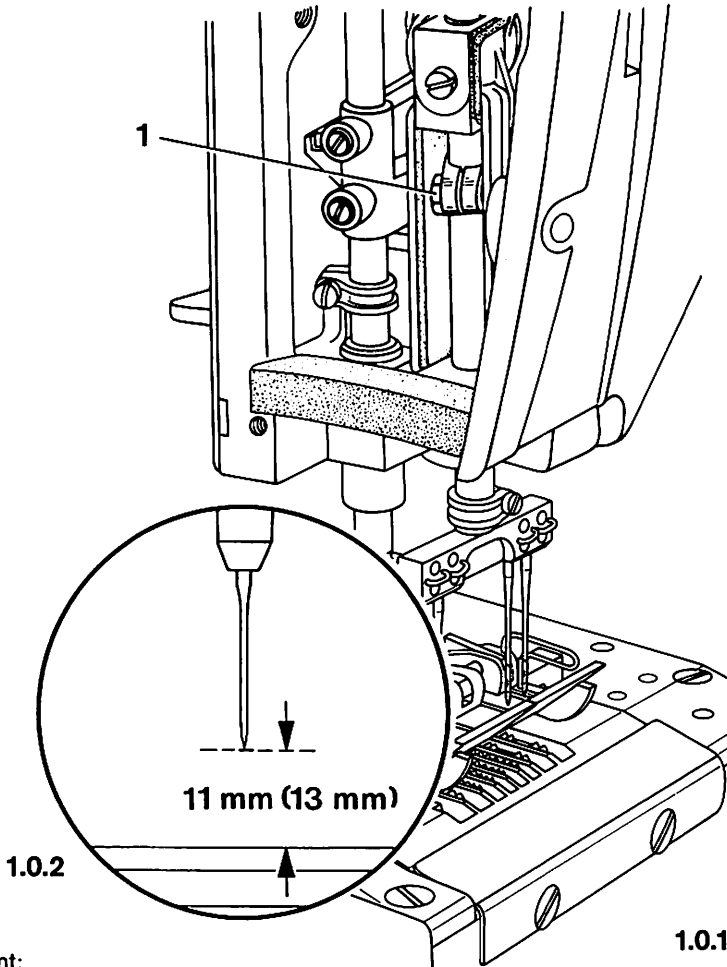


1

Preliminary adjustment of needle bar height

Setting:

With the needle bar at t.d.c., the clearance between needle point and needle plate must be 11 mm or 13 mm, depending on the needle bar stroke.
33 mm needle bar stroke = 11 mm
36 mm needle bar stroke = 13 mm



Adjustment:

- 1.1 Unscrew face plate.
- .2 Set needle bar at t.d.c.
- .3 Loosen screw 1.
- .4 **Reposition needle bar vertically until the clearance between needle point and needle plate is 11 mm or 13 mm (see "Setting").**
- .5 Tighten screw 1.

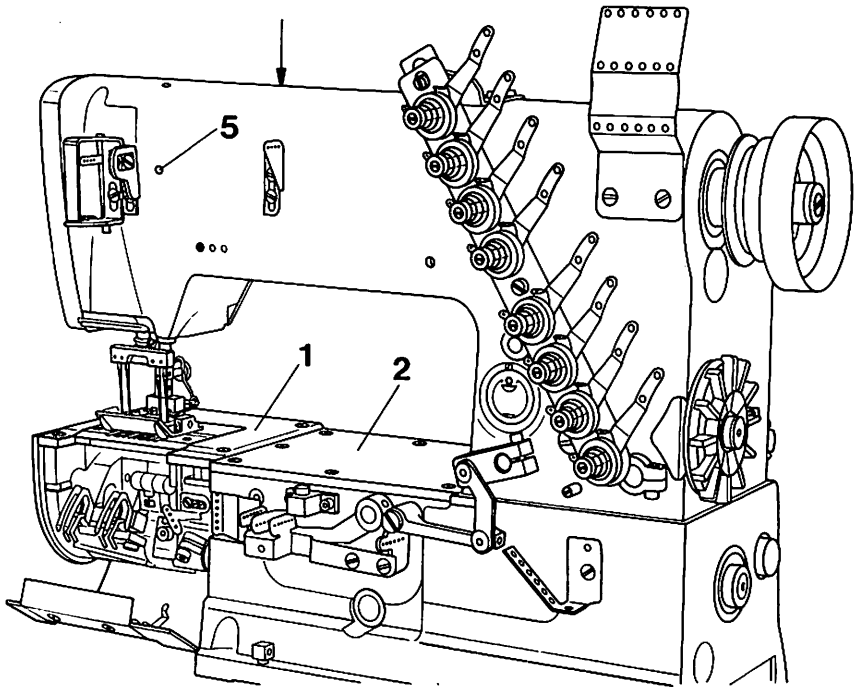
Setting:

For stitch lengths longer than 4.5 mm:

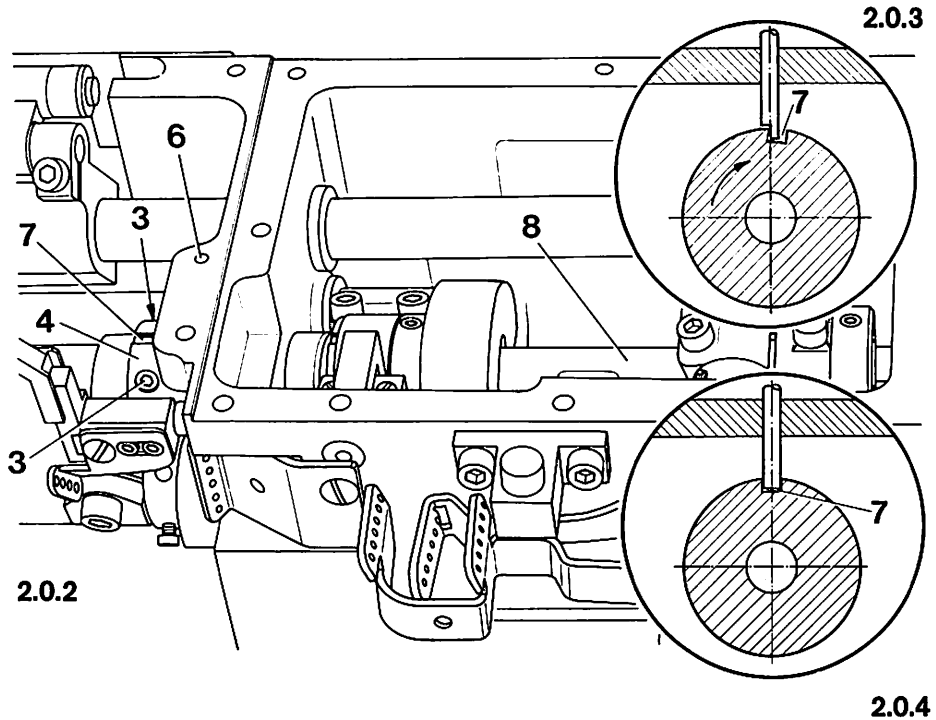
With the needle bar at b.d.c., the rounded end of the 3-mm-thick adjustment pin must enter groove 7 when the pin is inserted through hole 6 (see Fig. 2.0.4).

For stitch lengths up to 4.5 mm:

With the needle bar at b.d.c., the flattened end of the adjustment pin inserted through hole 6 must enter groove 7 in such a way that the flat section of the pin contacts the rear edge of the groove (see Fig. 2.0.3).



2.0.1

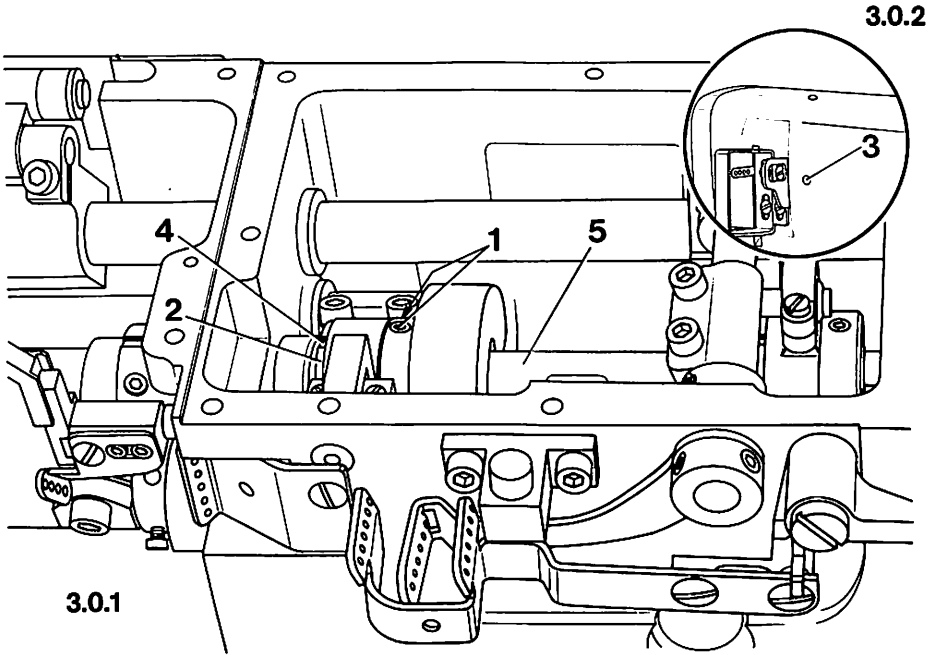


Adjustment:

- 2.1 Unscrew presser foot and cover plate 1 (see fig. 2.0.1).
- .2 Loosen screw 3 so that eccentric 4 can be turned against resistance.
- .3 Set needle bar at b.d.c. and insert the 5-mm adjustment pin in hole 5 (to block the machine) (see fig. 2.0.1).
- .4 **For stitch lengths longer than 4.5 mm**, turn eccentric 4 so that groove 7 is positioned vertically above looper drive shaft 8.
When using the 3-mm adjustment pin, turn eccentric 4 so that the rounded end of the pin inserted through hole 6 can enter groove 7.
For stitch lengths up to 4.5 mm, turn eccentric 4 so that the rear edge of groove 7 (as seen in the direction of rotation) is positioned vertically above looper drive shaft 8. When using the 3-mm adjustment pin, turn eccentric 4 so that the rear edge of groove 7 contacts the flat section of the pin.
- .5 Tighten screws 3 and remove the adjustment pins from holes 5 and 6 (see fig. 2.0.1).

Setting:

Groove 4 must be positioned vertically above looper drive shaft 5, when:
 for 33 mm needle bar stroke, needle bar is at b.d.c., or
 for 36 mm needle bar stroke, needle bar is 0.9 mm before b.d.c.



Adjustment:

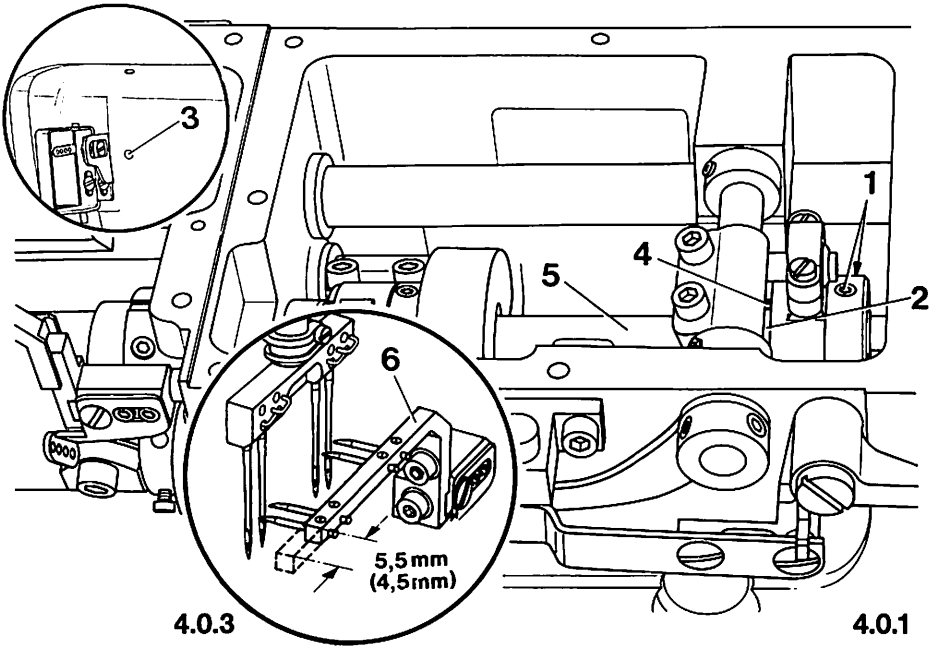
- 3.1 Unscrew cover 2 (Fig. 2.0.1) and loosen screws 1 so that eccentric 2 can be turned against resistance.
- 2 Set needle bar according to stroke type (see "Setting") and insert the 5 mm adjustment pin in hole 3 (to block the machine).
- 3 Turn eccentric 2 on the shaft so that groove 4 is positioned vertically above looper drive shaft 5.
- 4 Tighten screws 1 and take the adjustment pin out of hole 3.
- 5 Check this adjustment (see "Setting").

4 Spreader drive eccentric

Setting:

With the needle bar at b.d.c., groove 4 of eccentric 2 must be positioned vertically above looper drive shaft 5.
The stroke of spreader bracket 6 must be 5.5 mm. On machines with 4.8 mm needle gauge, or needle gauge combinations in which the needle gauge of 4.8 mm is contained, this stroke must be 4.5 mm.

4.0.2



Adjustment:

- 4.1 Loosen screws 1 so that eccentric 2 can be turned against resistance.
- 2 Set needle bar at b.d.c. and insert the 5-mm adjustment pin in hole 3 (to block the machine).
- 3 Turn eccentric 2 on the shaft so that groove 4 is positioned vertically above looper drive shaft 5.
- 4 Reposition eccentric 2 axially so that the stroke of spreader bracket 6 is 5.5 mm (4.5 mm) (see "Setting").
- 5 Tighten screws 1 and take the adjustment pin out of hole 3.
- 6 Check this adjustment (see "Setting").
- 7 Fit the cover to the gear case.

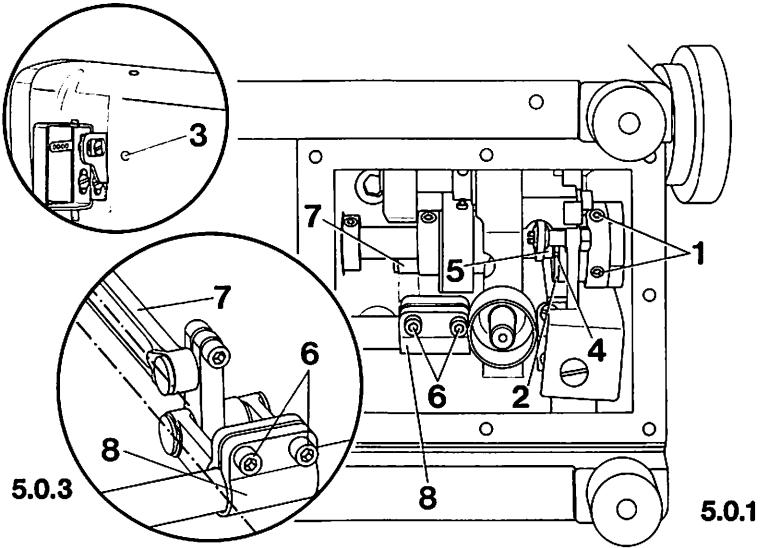
5 Feed driving eccentric and needle bar frame drive

Setting:

Groove 4 of feed driving eccentric 2 must be positioned exactly above shaft 5, when:

for 33 mm needle bar stroke, needle bar is at b.d.c., or
for 36 mm needle bar stroke, needle bar is 0.9 mm before b.d.c.

5.0.2



Adjustment:

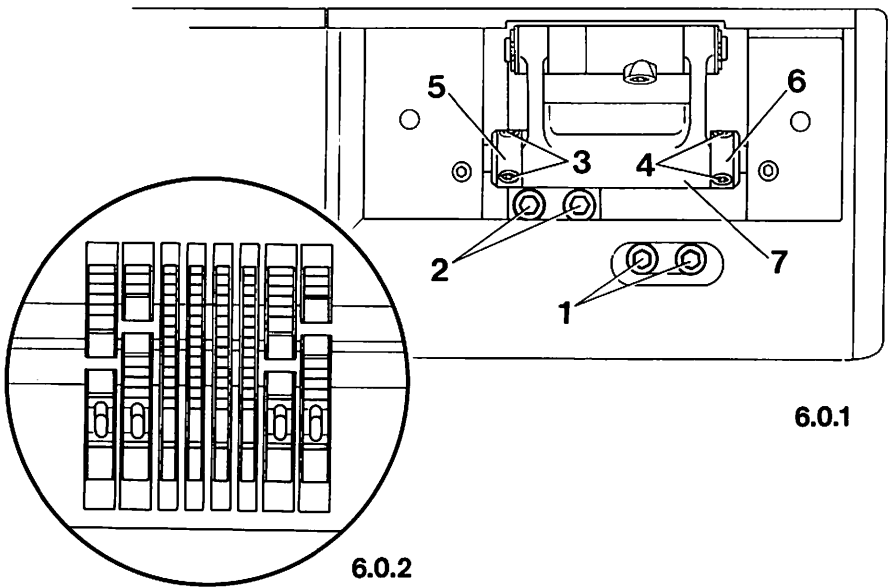
- 5.1 Unscrew the gear cover at the underside of the machine stand.
- .2 Loosen screws 1 so that eccentric 2 can be turned against resistance.
- .3 Set needle bar according to stroke type (see "Setting") and insert the 5-mm adjustment pin in hole 3 (to block the machine).
- .4 **Turn feed driving eccentric 2 on its shaft so that groove 4 is positioned exactly above the center of shaft 5.**
- .5 Tighten screws 1.
- .6 Loosen screws 6 and, **making sure that connecting rod 7 does not contact the housing** (see arrow in Fig. 8.0.3), **turn drive crank 8 so that the imaginary center lines of drive crank 8 and connecting rod 7 are parallel to each other** (see Fig. 5.0.3).
- .7 Tighten screws 6 and take the adjustment pin out of hole 3.
- .8 Check this adjustment (see "Setting").
- .9 Replace gear cover.

6 Feed dog position

6.1 Crosswise to sewing direction

Setting:

The feed dog must be centered in the needle plate slots and move freely in them.



6.0.1

6.0.2

Adjustment:

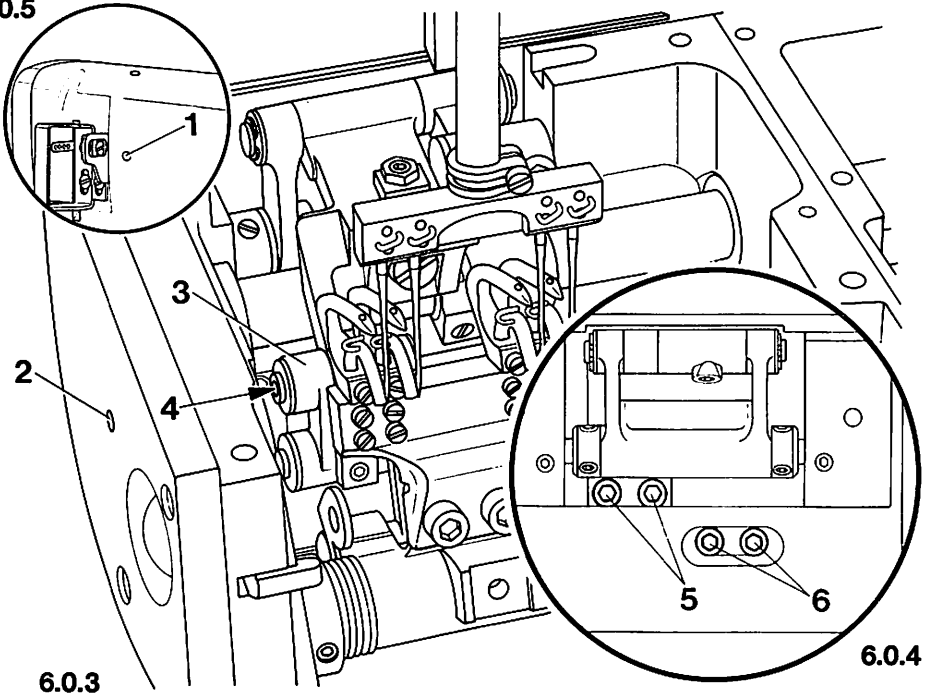
- 6.1.1 Unscrew cover plate at the back of the arm-bed.
- .2 Loosen screws 1, 2, 3, and 4.
- .3 Set the maximum stitch length.
- .4 Fit cover plate together with needle plate.
- .5 **Position feed mechanism 7 so that the feed dog is laterally centered in the feed slots.**
- .6 Push fixing collars 5 and 6 up against feed mechanism 7 and tighten screws 3 and 4.
- .7 Check this adjustment (see "Setting").

6.2 In sewing direction

Setting:

With the maximum stitch length set, the 6-mm adjustment pin must fit into hole 4 with its 3-mm end, when:
for 33 mm needle bar stroke, needle bar is at b.d.c., or
for 36 mm needle bar stroke, needle bar is 0.9 mm before b.d.c.

6.0.5



Adjustment:

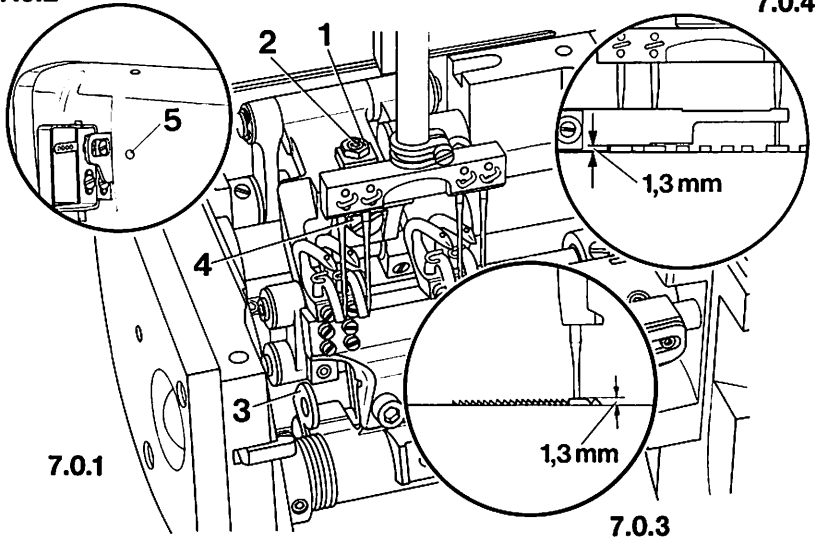
- 6.2.1 Set the maximum stitch length and position the needle bar according to stroke type (see "Setting").
- .2 Insert the 5-mm adjustment pin in hole 1 (to block the machine).
- .3 **Insert the 6-mm adjustment pin in hole 2, repositioning connecting pin 3 so that the 3-mm end of the adjustment pin fits into hole 4.**
- .4 Tighten screws 5 and 6, and take the adjustment pins out of holes 1 and 2.
- .5 Check this adjustment (see "Setting").

Setting:

With the needle bar at bottom dead center and the maximum stitch length set, the front teeth of the feed dog must protrude from the needle plate by 1.3 mm (see Fig. 7.0.3).
When using the adjustment gauge, the teeth of the feed dog must in this position contact the gauge (see Fig. 7.0.4).

7.0.2

7.0.4



7.0.1

7.0.3

Adjustment:

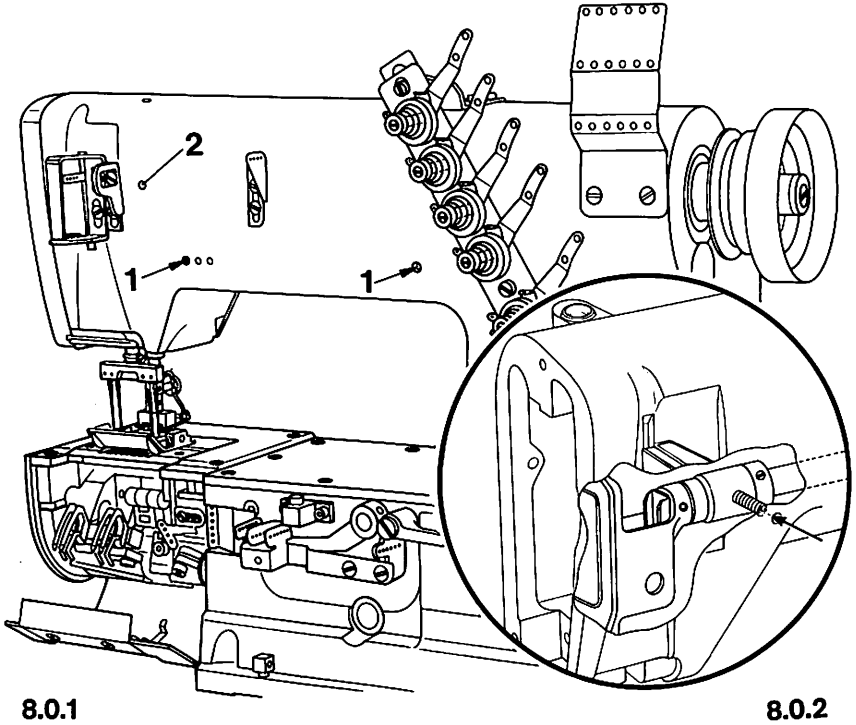
- 7.1 Unscrew the cover plate and the needle plate.
- .2 Loosen nut 1 and turn out regulating screw 2 by 2 to 3 turns.
- .3 Set needle bar at t.d.c., push locking lever 3 to the left and swing out the loopers.
- .4 Loosen screw 4, replace cover plate and needle plate, and set the maximum stitch length.
- .5 Set needle bar at b.d.c. and insert the 5-mm adjustment pin in hole 5 (to block the machine).
- .6 Tighten screw 4 just lightly.
- .7 **Tighten regulating screw 2 through the hole in the needle plate until the front teeth of the feed dog (as seen in feeding direction) protrude from the needle plate by 1.3 mm or, when using gauge No. 61-111 643-37, contact the gauge.** (The inclination of the feed dog results from this procedure.)
- .8 Remove cover plate and needle plate.
- .9 Lock regulating screw 2 with nut 1, tighten screw 4, and take the 5-mm adjustment pin out of hole 5.
- .10 Replace cover plate and needle plate and fix them with the screws.
- .11 Check this adjustment (see "Setting").

8 Position of needle in needle hole

8.1 Crosswise to sewing direction

Setting:

Crosswise to the sewing direction, the needles must enter the needle holes in the center (see dash-dot line in Fig. 8.0.4).



Adjustment:

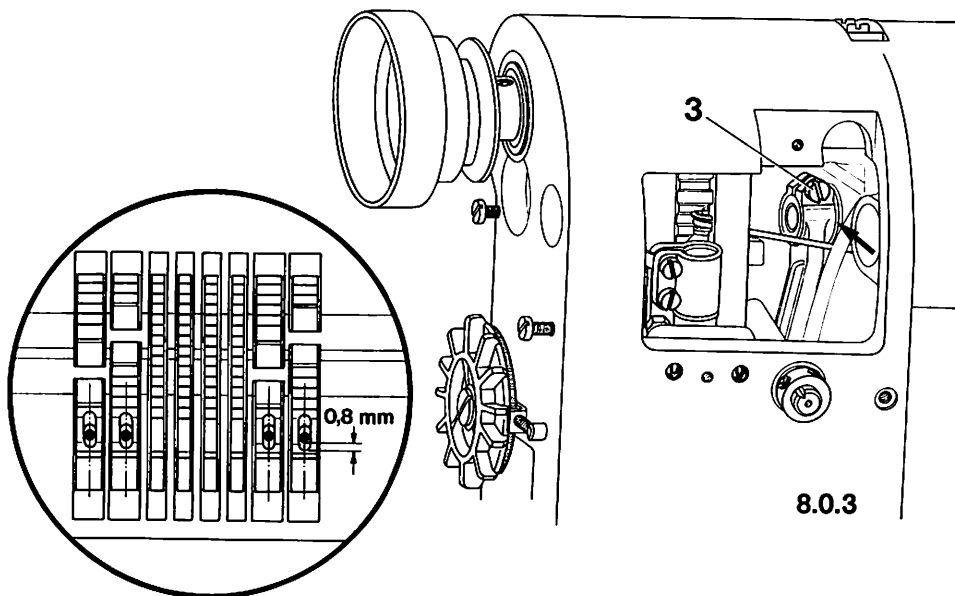
- 8.1.1 Insert new (system 5640) needles (the long groove must face to the right).
- .2 Loosen screws 1 (see arrows in Figs. 8.0.1 and 8.0.2) and screw 3 (see Fig. 8.0.3).
- .3 Turn the balance wheel to set the needles just above the needle holes.
- .4 Make sure that the needles are the same distance from the front edges of the needle holes (as seen in feed direction); adjust the needle holder, if necessary.
- .5 **Adjust the needle bar frame so that, crosswise to the feed direction, the needles are exactly centered in the needle holes.** If the take-up lever strikes against its cutout, adjust it accordingly.
- .6 Tighten screws 1.

8.2

In sewing direction

Setting:

With the needle bar at b.d.c., there must be a distance of **0.8 mm** between the needles and the front edges of the needle holes.



8.0.4

8.0.3

Adjustment:

- 8.2.1 Set the needle bar at b.d.c. and insert the 5-mm adjustment pin in hole 2 (to block the machine).
- .2 Unscrew the cover at the back of the machine.
- .3 **Loosen screw 3 and position the needle bar in sewing direction so that there is a distance of 0.8 mm between the needles and the front edges of the needle holes (Fig. 8.0.4).**
- .4 Tighten screw 3 and take the adjustment pin out of hole 2.
- .5 Check this adjustment (see "Setting").

9 Looper-to-needle clearance

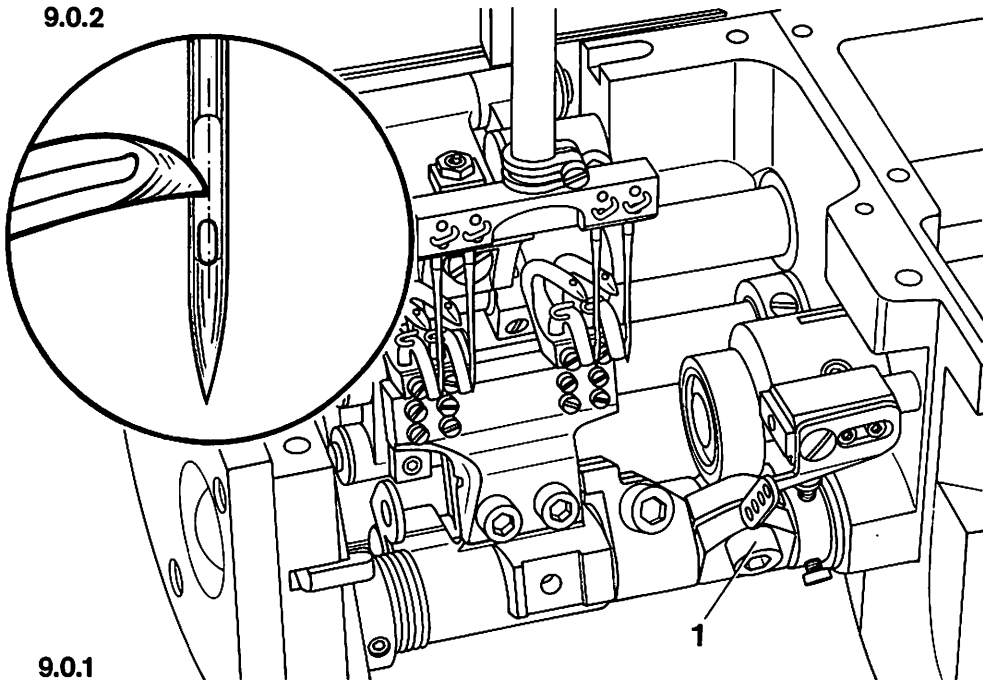
9.1 In sewing direction

Setting:

At a needle bar position 5.0 mm past b.d.c., the looper points must be positioned exactly at the needle center lines.

Requirement: The loopers must be inserted fully in the guide slot of the looper holders and the looper drive eccentric must be adjusted according to chapter 2.

9.0.2



9.0.1

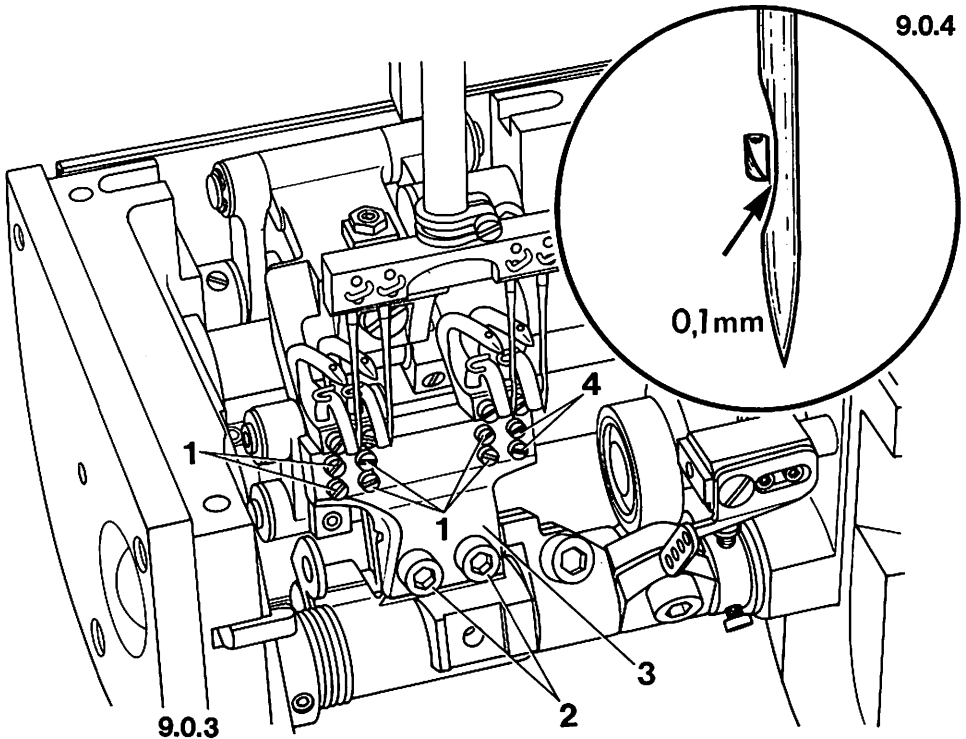
Adjustment:

- 9.1.1 Remove cover plate with needle plate and unscrew the feed dog.
- .2 Set needle bar at a position 5.0 mm past b.d.c. and loosen screw 1.
- .3 Adjust the looper holders so that the looper points are opposite the needle center lines.
- .4 Tighten clamp screw 1.

9.2 Crosswise to sewing direction

Setting:

When the looper points are opposite the needle center lines, there must be a clearance of 0.1 mm between looper points and needles.

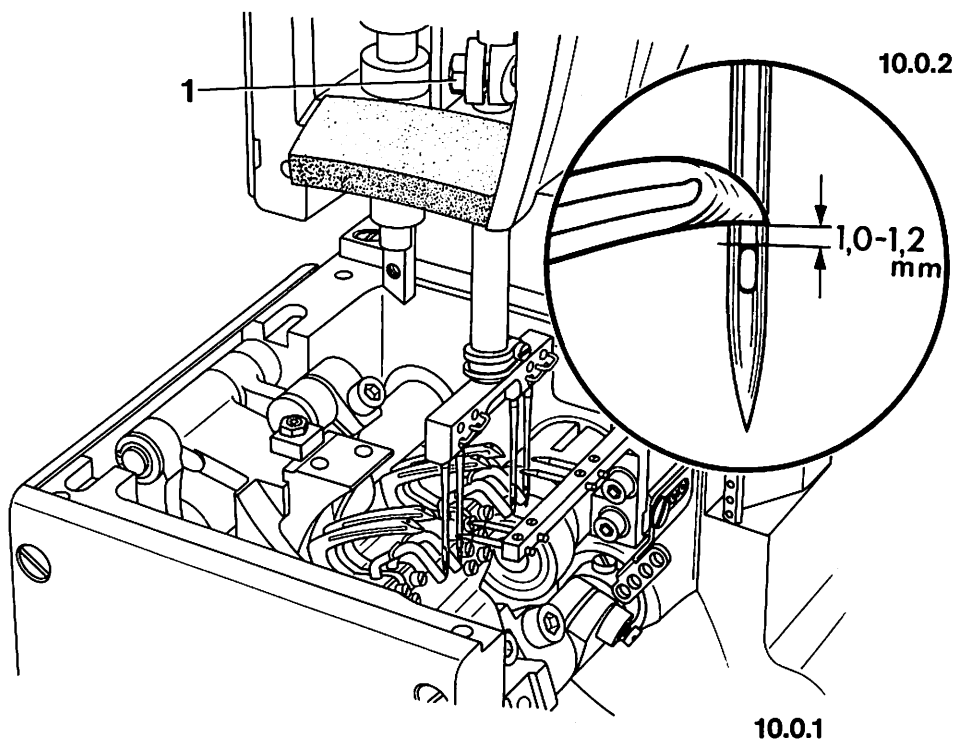


Adjustment:

- 9.2.1 Loosen screws 1 and take out the loopers (except the right one). The right looper is placed in a groove in holder 3.
- .2 Loosen screws 2.
- .3 Making sure that the looper point is opposite the needle center line, re-position looper holder 3 so that the looper point contacts the needle.
- .4 Tighten screws 2.
- .5 Loosen screws 4 of the right looper just a little.
- .6 **Adjust the looper so that between its point and the needle there is a clearance of 0.1 mm.**
- .7 Tighten screws 4.
- .8 Replace the other loopers and tighten screws 1 lightly.
- .9 **Adjust the loopers so that between their points and the needles there is a clearance of 0.1 mm.**
- .10 Tighten screws 1.
- .11 Check this adjustment (see "Setting").

Setting:

When the points of the advancing loopers are flush with the fronts of the needles, there must be a clearance of 1 to 1.2 mm between the underside of the looper blade and the top of the needle eye.



Adjustment:

- 10.1 Turn the balance wheel until the points of the advancing loopers are flush with the front of the needles.
 - .2 Loosen clamp screw 1.
 - .3 **Adjust the height of the needle bar, without turning it, so that there is a clearance of 1 to 1.2 mm between the underside of the looper blade and the top of the needle eye.**
 - .4 Tighten clamp screw 1.
 - .5 Check this adjustment (see "Setting"), and also check the setting under section 9.2.
- If the take-up lever strikes against its slot, adjust its height accordingly.

11 Spreader position

11.1 In sewing direction

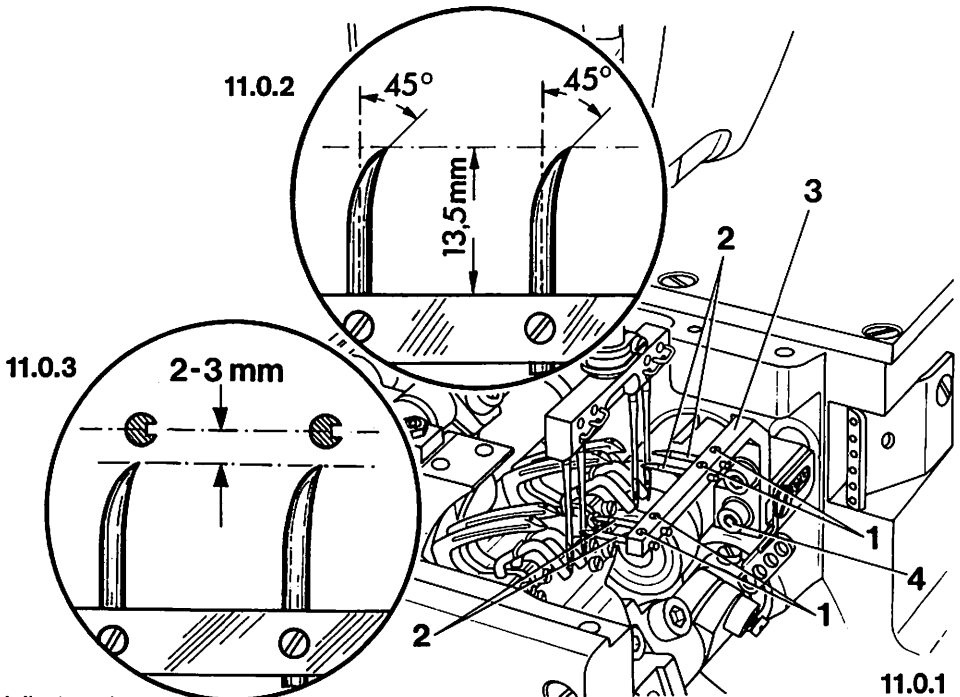
Setting:

The spreader points must have a 45° -inclination to the right, and they must be 13.5 mm away from the spreader bracket.
Also, with the maximum stitch length set and the needle bar at b.d.c., the distance from the spreader points to the needle centers must be 2 to 3 mm.

Note:

The looper threads must be retained by the spreaders until the needle points are flush with the underside of the loopers.

However, before the needle thread drops off the looper, the looper thread must have dropped off the spreader.



Adjustment:

- 11.1.1 Set the maximum stitch length and loosen screws 1.
- .2 Position spreaders 2 so that between their points and spreader brackets 3 there is a distance of 13.5 mm.
- .3 In this position, turn spreaders 2 so that their points are inclined 45° to the right.
- .4 Tighten screws 1.
- .5 Loosen screw 4 and set needle bar at b.d.c.
- .6 Adjust spreader bracket 3 so that there is a distance of 2 to 3 mm between the spreader points and the needle centers.
- .7 Tighten screw 4.
- .8 Check this adjustment (see "Setting").

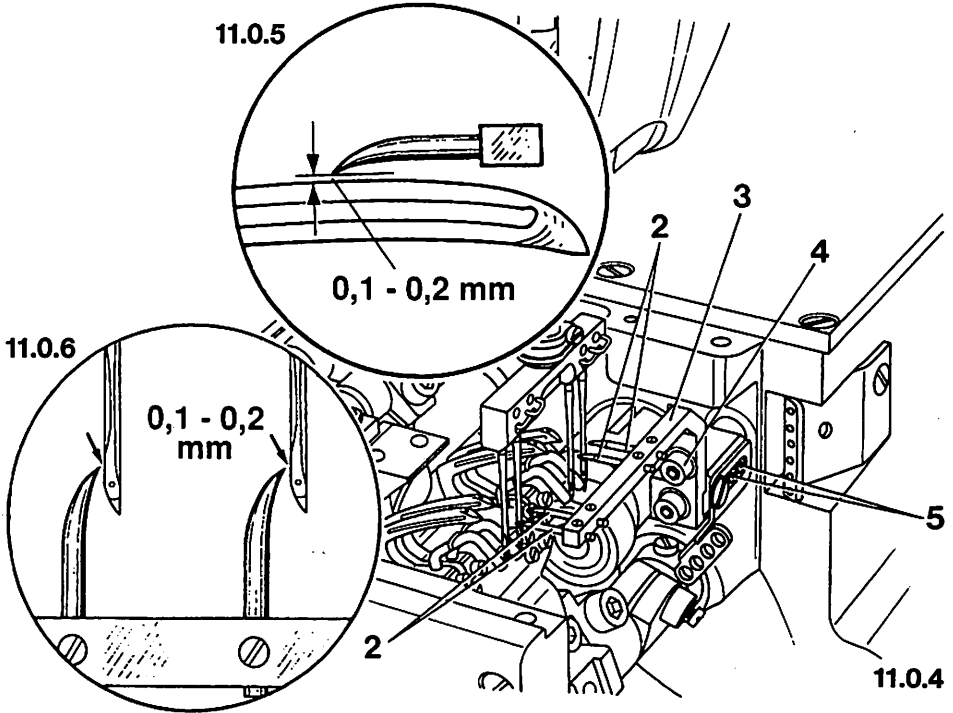
11.2 Crosswise to sewing direction and looper

Setting:

At t.d.c. of the spreader brackets 3 there must be a clearance of 0.1 to 0.2 mm between spreader point and looper (Fig. 11.0.5).
At l.d.c. of the spreader brackets 3 there must be a clearance of 0.1 to 0.2 mm between spreader point and spreader (Fig. 11.0.6).

Note:

The spreaders must not touch the loopers at any position.



Adjustment:

- 11.2.1 Loosen screw 4 and turn the balance wheel until the spreaders 2 are positioned directly above the backs of the loopers.
- .2 Adjust the height of spreader bracket 2 so that the spreader points are 0.1 to 0.2 mm above the backs of the loopers (Fig. 11.0.5).
 - .3 Tighten screw 4.
 - .4 Turn the balance wheel until spreader bracket 3 is in l.d.c. and loosen screw 5.
 - .5 Position spreader bracket 3 so that there is a clearance of 0.1 to 0.2 mm between the spreader points and the loopers (Fig. 11.0.6).
 - .6 Tighten screws 5.
 - .7 Check this adjustment (see "Setting").

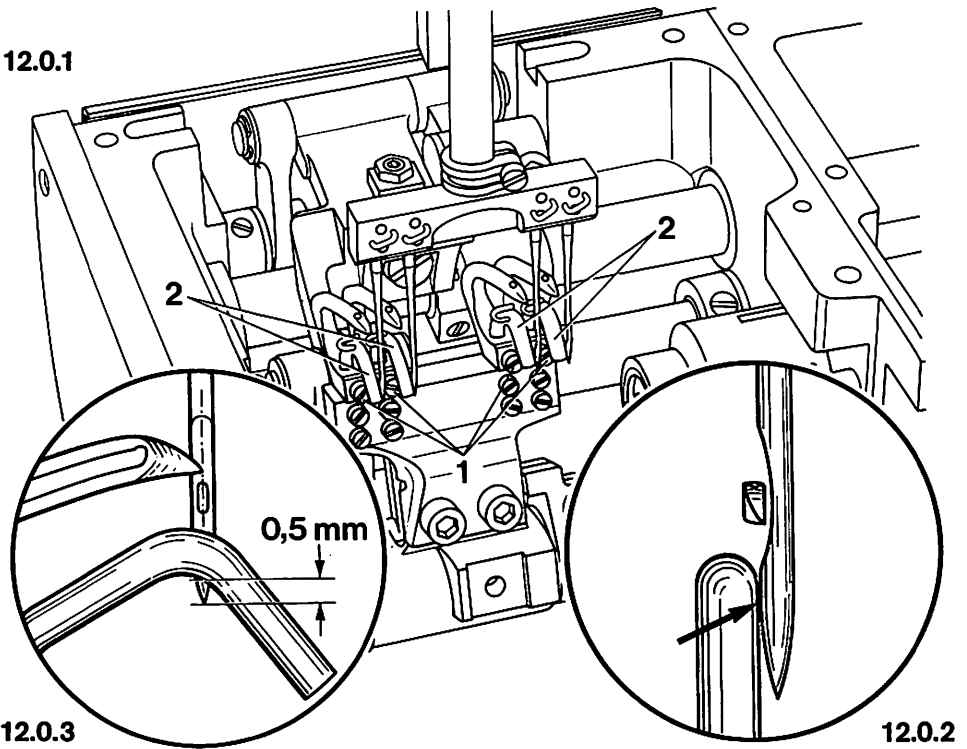
12

Needle guard

Setting:

When the points of the advancing loopers are opposite the needle center lines, the undersides of needle guards 2 must be about 0.5 mm above the needle points and rest lightly against the needles.

12.0.1



12.0.3

12.0.2

Adjustment:

- 12.1 Loosen screws 1.
- .2 Turn the balance wheel until the points of the advancing loopers are opposite the needle center lines (see Fig. 12.0.3).
- .3 **Adjust needle guards 2 so that their undersides are about 0.5 mm above the needle points (see Fig. 12.0.3) and that the guards rest lightly against the needles, however, without deflecting them (see arrow in Fig. 12.0.2).**
- .4 Tighten screws 1.
- .5 Check this adjustment (see "Setting").

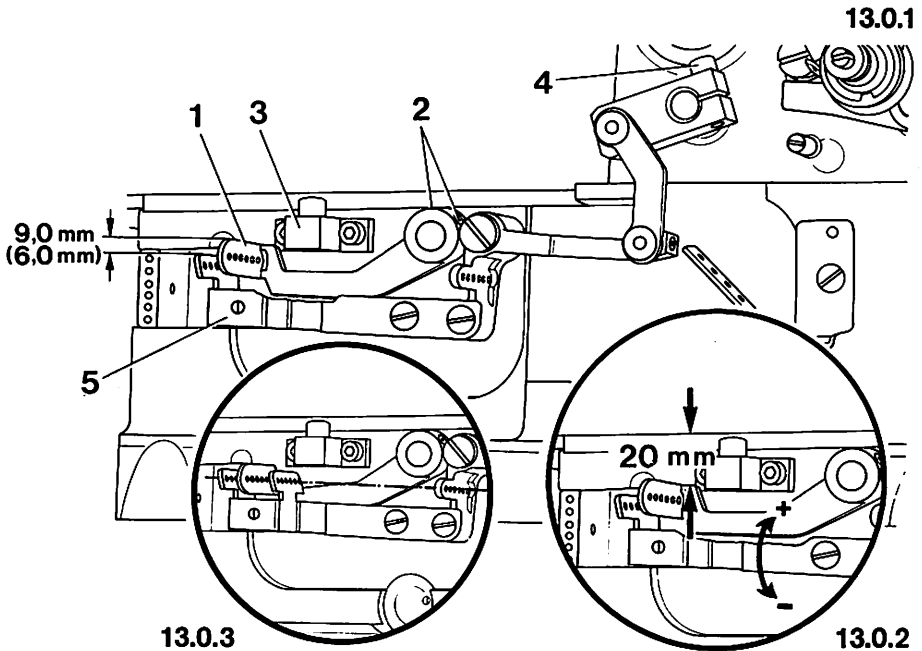
Regulating the looper thread

Setting:

With thread puller 1 at t.d.c., there must be a distance of **20 mm** between puller 1 and the base plate surface. With thread puller 1 at t.d.c., the difference in height between the top edges of thread pullers 1 and 5 must be as follows:
 for stitch lengths up to 3.5 mm **9 mm**;
 for stitch lengths between 3.5 and 4.5 mm **6 mm**.
 For stitch lengths over 4.5 mm, the eyes of thread puller 1 and thread puller 5 must be aligned with each other.

Note:

The position of the thread guides depends on the material and thread used. Therefore, the following adjustment data can only be regarded as basic values.



Adjustment:

- 13.1 Set the maximum stitch length.
- .2 Set thread puller 1 at t.d.c.
- .3 Loosen screws 2 and position thread puller 1 so that between it and the surface of the base plate there is a distance of 20 mm (Fig. 13.0.2).
- .4 Tighten screws 2.
- .5 Loosen screw 4.
- .6 **Adjust thread puller 5 according to "Setting".**
- .7 Tighten screw 4.
- .8 If the seam requires more or less thread, thread guide 5 must be moved in ⊕ or ⊖ direction, respectively.

14

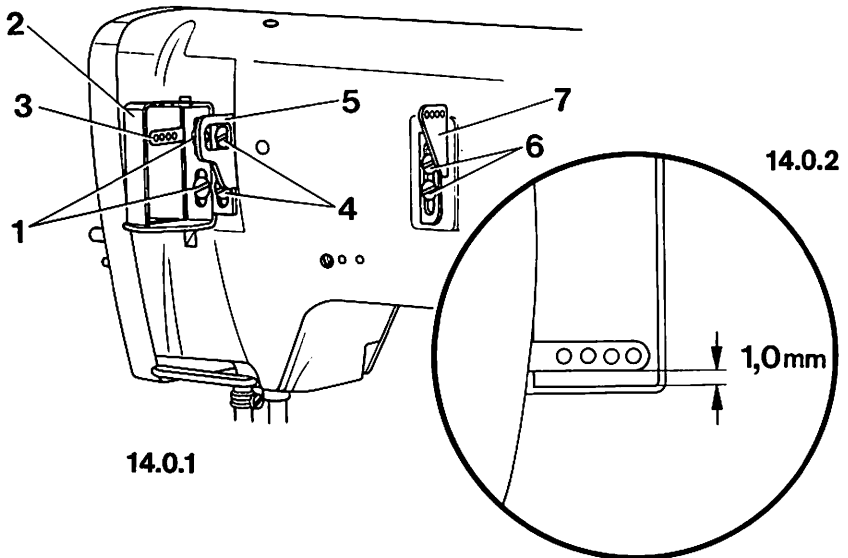
Needle-thread regulation and take-up lever guard

Setting:

With the needle bar at b.d.c., there must be a clearance of 1 mm between take-up lever 3 and take-up lever guard 2.
The retaining screws must be centered in the elongated holes of thread guides 5 and 7.

Note:

The positions of the needle thread guides and the thread regulator depend on the stitch length and the material. Therefore, the adjustment data can only be regarded as basic values.



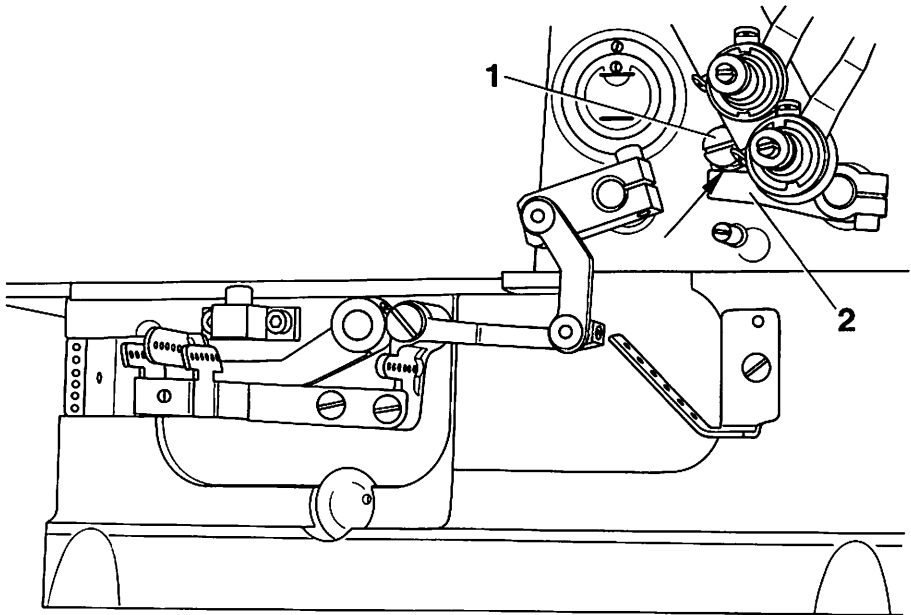
Adjustment:

- 14.1 Set needle bar at b.d.c. and loosen screws 1.
- .2 **Position take-up lever guard 2 so that between it and take-up lever 3 there is a clearance of 1 mm.**
- .3 Tighten screws 1, making sure that take-up lever 3 is positioned horizontally in the middle of the take-up lever guard.
- .4 Loosen screws 4 and **position thread regulator 5 so that screws 4 are centered in the elongated holes.**
- .5 Tighten screws 4.
- .6 Loosen screws 6 and **position thread guide 7 so that screws 6 are centered in the elongated holes.**
- .7 Tighten screws 6.

Stitch length limitation

Setting:

With the maximum stitch length set, eccentric 1 must rest against stop crank 2 (see arrow in Fig. 15.0.1).

**15.0.1**

Adjustment:

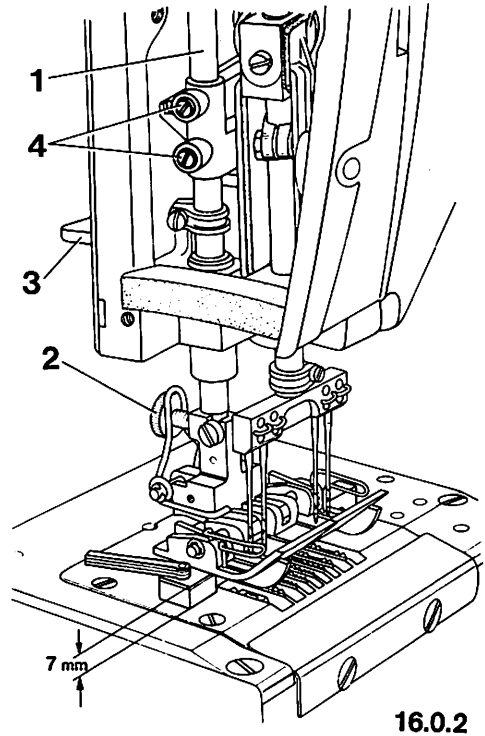
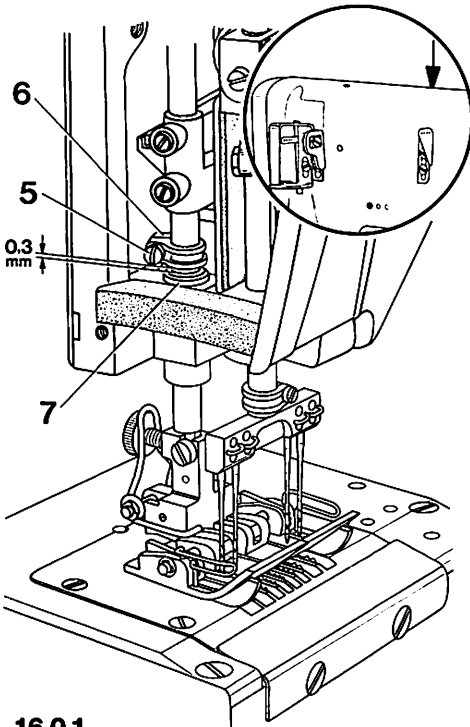
- 15.1 Loosen locknut behind eccentric 1.
- .2 Turn eccentric 1 until its lobe points up.
- .3 Set the maximum stitch length.
- .4 **Turn eccentric 1 so that it rests against crank 2 (see arrow in Fig. 15.0.1).**
- .5 Lock eccentric 1 with the nut behind it.

Setting:

With presser bar lifter 3 raised, there must be a clearance of 7 mm between presser foot and needle plate. On machines with floating foot, raising presser bar lifter 3 must first raise the presser bar by 0.3 mm before the presser foot begins to lift clear of the needle plate.

On machines with plain hinged presser foot, there must be a clearance of 0.3 mm between collar 6 and presser bar bushing 7 when the feed dog is lowered and the presser foot is resting on the needle plate.

16.0.3



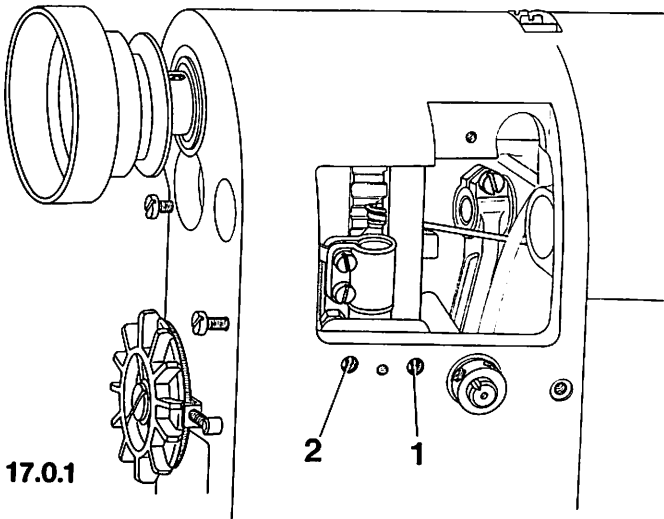
Adjustment:

- 16.1 Set needle bar at t.d.c.
- .2 Reduce the pressure on presser bar 1 by turning out the regulating screw (see arrow in Fig. 16.0.3).
- .3 Refit feed dog, cover plate with needle plate, and presser foot.
- .4* Turn knurled nut 2 until its face side is flush with the screw.
- .5 Raise the presser bar lifter, loosen screws 4, and place the 7-mm adjustment gauge under the presser foot hinge.
- .6 Push presser bar 1 down until the presser foot rests lightly on the adjustment gauge (without pressure), and is parallel with the needle plate cutout as seen in sewing direction. (The needles must be centered in the needle holes of the presser foot.)
- .7 Tighten screws 4 and take the adjustment gauge out from under the presser foot.
- .8* Lower presser bar lifter 3 just sufficiently to allow the presser foot to contact the needle plate with its entire straight sole without exerting any pressure.
- .9* In this position, loosen screw 5, push collar 6 down until it contacts presser bar bushing 7, then tighten screw 5 again.
- .10 **On machines with plain hinged presser foot adjust collar 6 so that there is a clearance of 0.3 mm between it and presser bar bushing 7 when the feed dog is lowered and the presser foot is resting on the needle plate.**
- .11 Turn in the pressure regulating screw (see arrow in Fig. 16.0.3) to increase the pressure on the presser bar so that proper feeding is ensured even at top speed.
- .12* Turn knurled nut 2 to adjust the pressure so that proper feeding is ensured even at varying speeds (and the material does not flag).
- .13 Screw on the face plate.

* = Does not apply to presser feet without knurled nut 2.

Setting:

When the knee lever is fully actuated, the presser bar lifter must drop by its own weight, and the presser foot must lift clear of the needle plate by a little more than 7 mm.
Also, the knee lever must have a slight amount of play before lifting the presser foot.



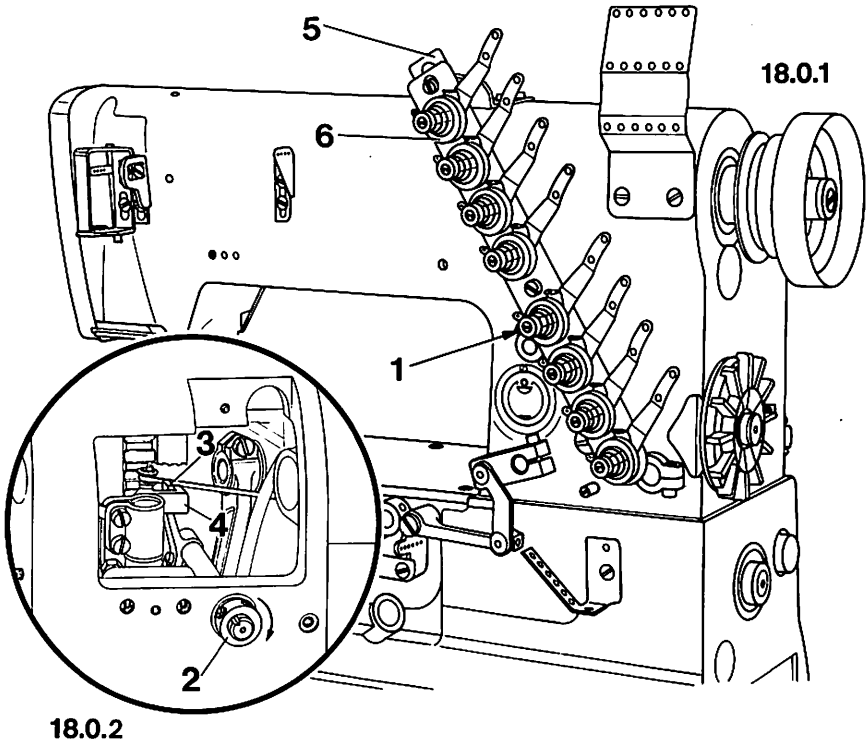
17.0.1

Adjustment:

- 17.1 Make sure that the knee lever is inserted in its connection, then lower the presser foot onto the needle plate by means of the lifting lever.
- .2 Loosen nut of screw 1 and turn out screw by a few turns.
- .3 **Turn in screw 1 until the presser foot begins to lift from the needle plate.**
- .4 Turn screw 1 back by about half a turn and tighten its locknut. (In this position, the knee lever must be at about right angles to the base plate.)
- .5 Loosen nut of screw 2 and turn the screw out by a few turns.
- .6 **Raise the presser foot with the lifting lever and place the 10-mm-thick adjustment gauge under the presser foot from the rear.**
- .7 **Push the knee lever to the right until the presser foot begins to lift off the adjustment gauge.**
- .8 Hold the knee lever in this position and turn the left screw in as far as it will go.
- .9 Release the knee lever, turn screw 2 back by about half a turn and lock it with the nut.
- .10 Check this adjustment (see "Setting").

Setting:

When the presser foot is raised with the knee lever by about 10 mm, thread tensions 6 must be released.



Adjustment:

- 18.1 Loosen screw 1.
- .2 Raise the presser foot with the knee lever by about 10 mm and retain this position.
- .3 Turn fixing collar 2 (in direction of arrow) until crank 3 is resting against the angle piece of crank 4.
- .4 In this position, push tension release plate 5 fully downwards, then have it return by about 1 mm.
- .5 Tighten clamp screw 1.
- .6 Check this adjustment (see "Setting").
- .7 Screw on cover plate at the back of the machine.

PFAFF

PFAFF
Postfach 3020/3040
Königstraße 154
D-6750 Kaiserslautern

Telefon: (06 31) 200-0
Telefax: (06 31) 172 02
Telex: 45 753

Weber
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