



**292;  
1291**

# **Service Manual**

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# Instructions for adjusting Pfaff 292 and 1291 machines

Note:

All illustrations in this Manual apply to Pfaff 1291 single-needle machines. On Pfaff 292 two-needle machines various adjustments have to be made twice.  
The respective sections contain a note to this effect; some of the illustrations in these sections apply in reflex.

## Technical data:

Needle system: 134

Needle bar rise:

Models A and B: 1.6 mm

Model C: 2.0 mm

Clearance between presser foot/roller presser and needle plate: 7 mm

## Tools, gauges and other implements needed for adjustment

1 set of screwdrivers with blades from 2 to 10 mm wide

1 set of allen keys from 2 to 6 mm

1 set of spanners from 7 to 14 mm wide

1 C clamp No. 08-880137-00

1 gauge No. 08-880136-14

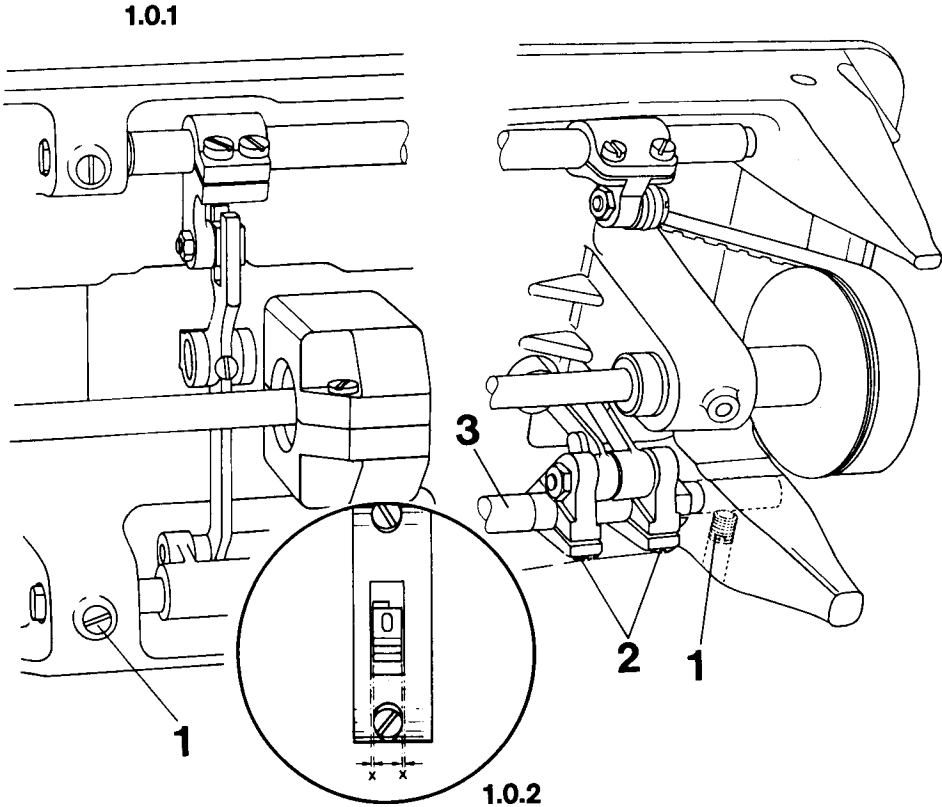
1 metal rule

Sewing thread and material for testing purposes

1 **Lateral position of feed dog**  
(crosswise to sewing direction)

Correct  
setting:

The feed dog should be centered in the feed slot sideways.



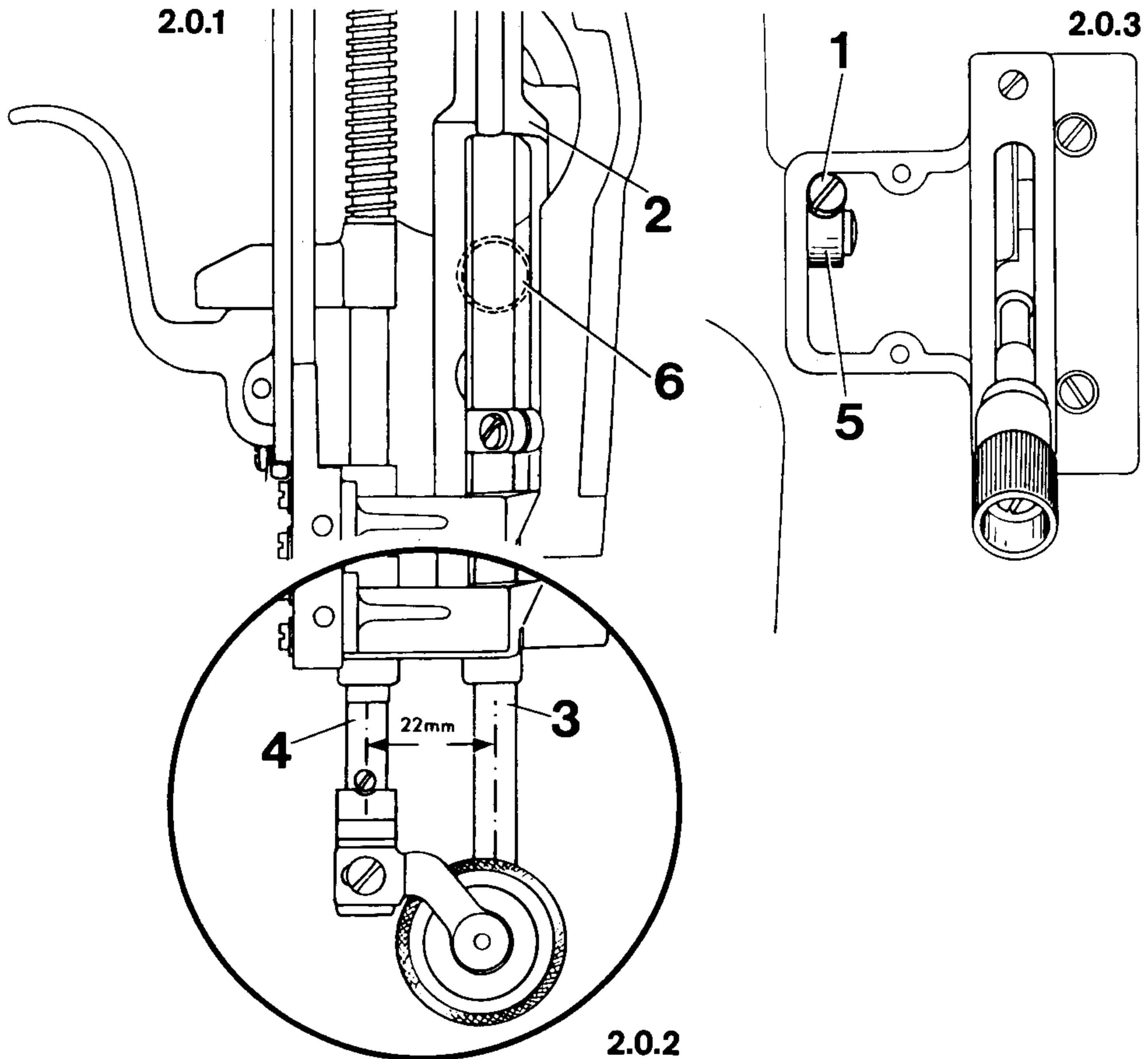
- 1.1 Take the needle out of the needle holder and loosen screws 1 and 2 (two each).
- 1.2 **Adjust shaft 3 sideways until the feed dog is centered in its slot.**
- 1.3 In this position, tighten the two screws 1.  
The flat spots on the centers should be opposite the flat ends of screws 1.  
Shaft 3 must neither bind nor have any excessive play.
- 1.4 Leave screws 2 loose for the subsequent adjustments (until item 3.3).

## 2

### Clearance between needle bar and presser bar

Correct setting:

There should be a center-to-center distance of **22 mm** between needle bar and presser bar.

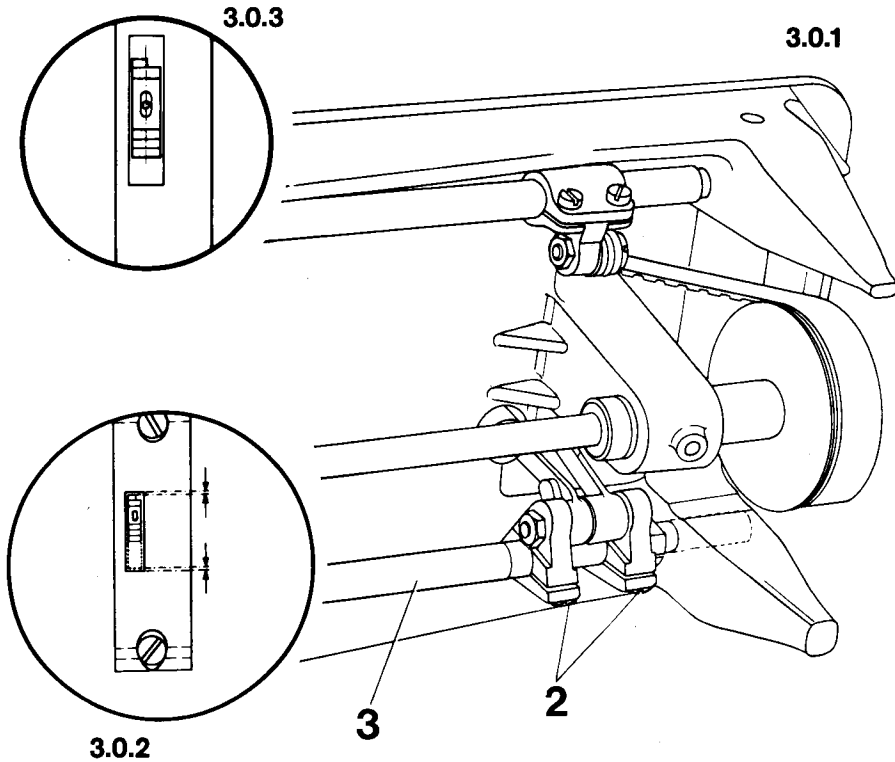


- 2.1 Unscrew face cover and cover plate (to the left of the feed regulator lever).
- 2.2 Set the feed regulator lever at "0".
- 2.3 Loosen screw 1.
- 2.4 **Adjust needle bar frame 2 until there is a center-to-center clearance of 22 mm between needle bar 3 and presser bar 4.**
- 2.5 Push driving crank 5 toward the left against the wall of the machine housing, while retaining the above setting. Then push against shaft 6 from the needle bar side and tighten screw 1.
- 2.6 Check this adjustment (see "Correct setting").

3 **Lengthwise position of feed dog**  
(in sewing direction)

Correct setting:

With the feed regulator lever set at "0", the needle should be centered in the needle hole in sewing direction.  
With the machine set at its longest stitch, the feed dog must strike neither the near nor the far end of its slot during its reciprocating motion.

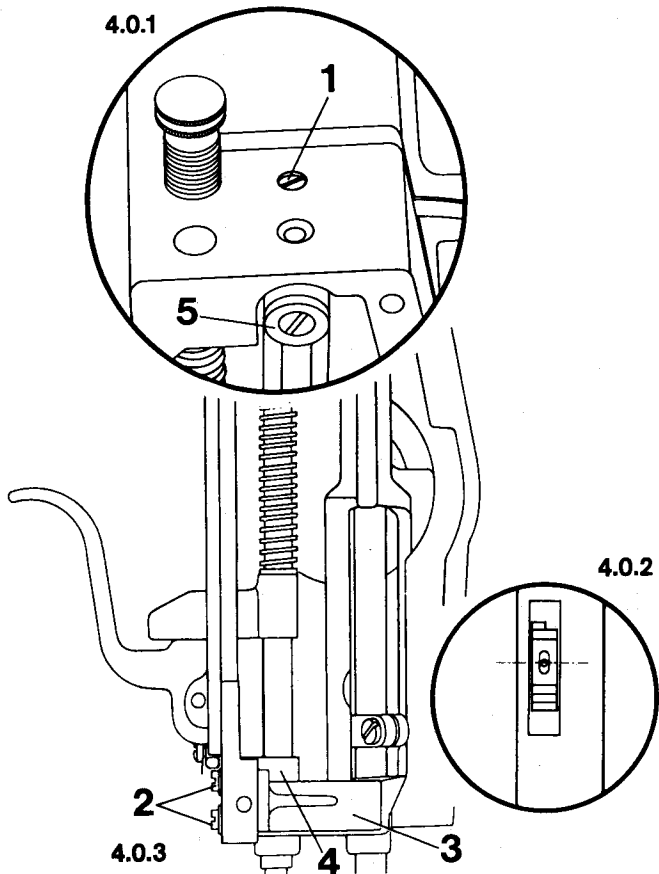


- 3.1 Insert a new (System 134) needle in the needle holder.
- 3.2 Set the feed regulator lever at "0".
- 3.3 **Check to make sure screws 2 are still loose, then adjust the position of the feed dog by turning shaft 3 until the needle is centered in the needle hole when the balance wheel is turned.**
- 3.4 In this position, tighten the two screws 2.
- 3.5 Check this adjustment (see "Correct setting").

4 Centering the needle in the needle hole (crosswise to sewing direction)

Correct setting:

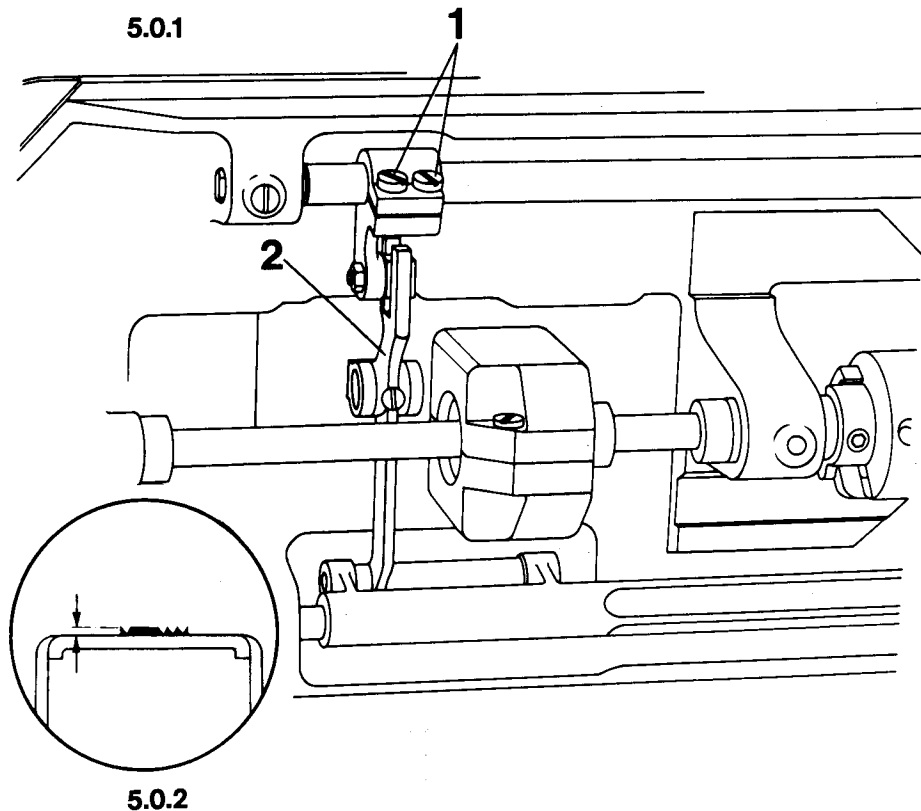
A straight needle should be centered in the needle hole crosswise to the sewing direction.



- 4.1 Set the feed regulator lever at "0" and loosen screw 1.
- 4.2 Loosen the two screws 2.
- 4.3 Turn the balance wheel until the needle point is positioned immediately above the needle hole.
- 4.4 **Adjust the position of guide bracket 3 so that it is in contact with surface 4 over its entire surface, then turn fulcrum stud 5 to center the needle above the needle hole sideways.**
- 4.5 Tighten screws 1 and 2, while retaining the above position. Make sure the needle bar guide moves under guide bracket freely, but without having any excessive play.
- 4.6 Check this adjustment (see "Correct setting").

Correct setting:

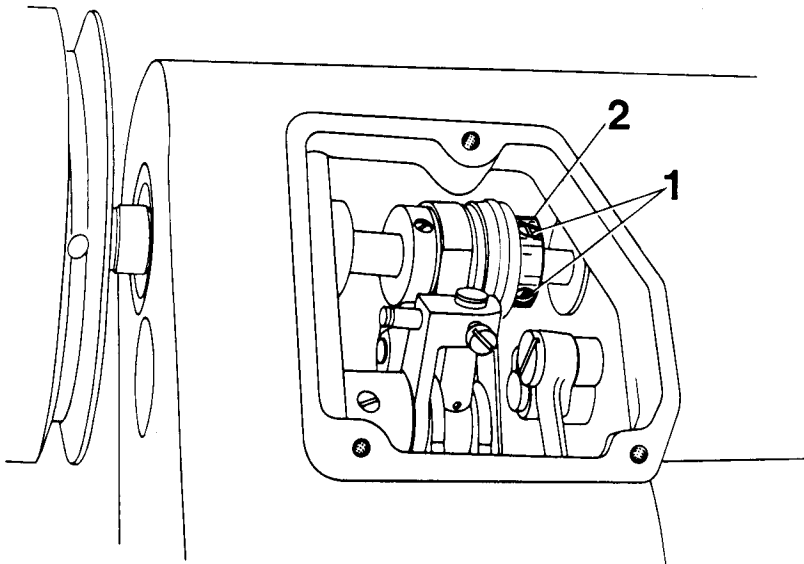
With the feed regulator lever set at "0", the feed dog should show a full tooth above the needle plate when it is at its highest point.



- 5.1 Set the feed regulator lever at "0".
- 5.2 Turn the balance wheel to bring the feed dog to its highest point.
- 5.3 Loosen screws 1.
- 5.4 **Adjust feed bar 2 vertically until the feed dog shows a full tooth above the needle plate.**
- 5.5 In this position, tighten both screws 1.
- 5.6 Check this adjustment (see "Correct setting").

Correct  
setting:

When the needle bar is at bottom dead center the lobe of lifting eccentric 2 should be at the top.



### 6.0.1

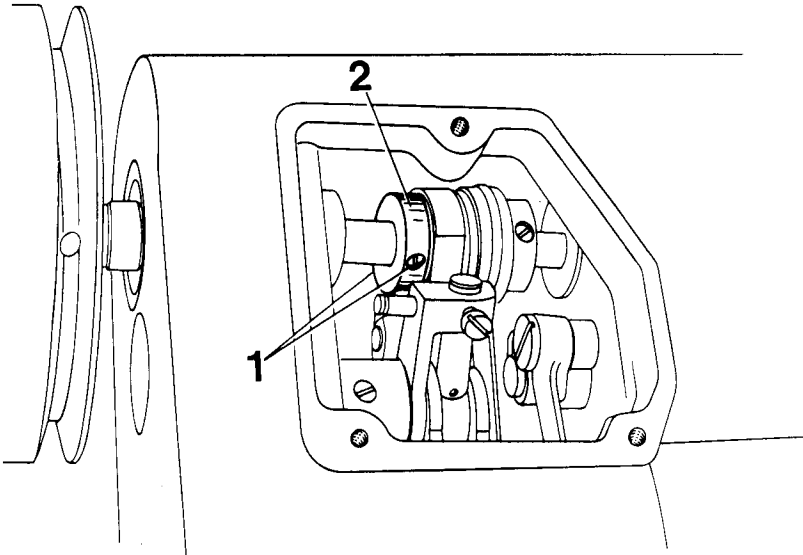
- Note: Preliminary adjustment is not required on machines having no feed lifting phase.
- 6.1 Unscrew the cover plate on the back of the arm standard.
  - 6.2 Loosen screws 1 and turn the balance wheel to bring the needle bar to bottom dead center.
  - 6.3 **Turn feed lifting eccentric 2 so that its lobe is at the top.**
  - 6.4 In this position, tighten the accessible screw 1 securely. Leave the second screw 1 loose until final adjustment has been completed (Section 8).



**Feed advancing motion**

Correct setting:

With the machine set at its longest stitch and the needle bar positioned at bottom dead center, the feed dog should not move when the feed regulator lever is operated.

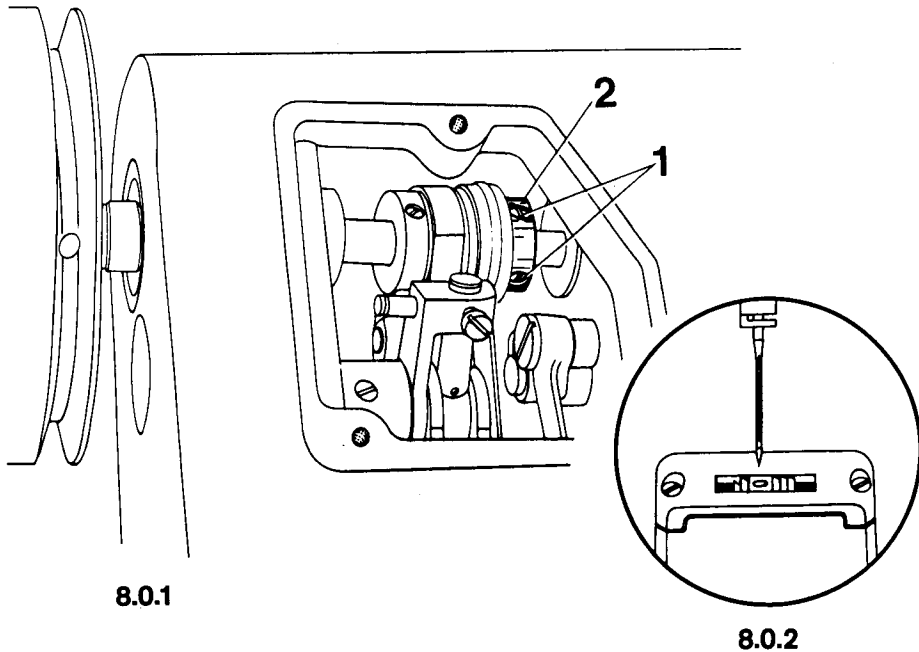
**7.0.1**

- 7.1 Set the machine at its longest stitch.
- 7.2 Loosen screws **1** just sufficiently to allow feed lifting eccentric **2** to be turned on its shaft against resistance.
- 7.3 Bring the needle bar to bottom dead center.
- 7.4 **Turn feed lifting eccentric 2 back or forth on its shaft just slightly (making sure its lobe remains at the top) until the feed dog is completely motionless when the feed regulator is operated.**
- 7.5 In this position, tighten screws **1**.
- 7.6 Check this adjustment (see "Correct setting").

## Final adjustment of feed lifting motion

Correct setting:

With the machine set at its longest stitch, the feed dog and the needle should reach the top surface of the needle plate at the same time when the balance wheel is turned.



8.0.1

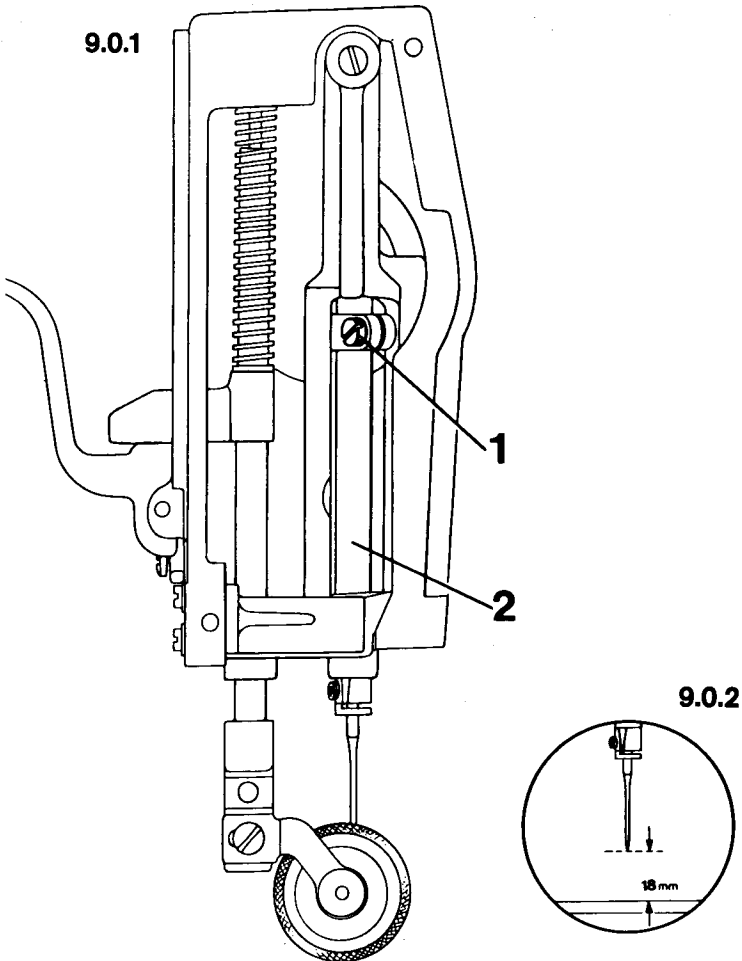
8.0.2

- 8.1 Replace and screw on feed dog and needle plate, making sure that position lug 5 of the bobbin case base (Fig. 13.0.2) enters the recess in the needle plate and the feed dog moves freely in its slot.
- 8.2 Loosen screws 1 (Fig. 8.0.1) just sufficiently to allow feed lifting eccentric 2 to be turned on its shaft against resistance.
- 8.3 **Turn feed lifting eccentric 2 back or forth on its shaft just slightly until feed dog and needle point reach the top surface of the needle plate at the same time when the balance wheel is turned.**
- 8.4 In this position, tighten screws 1.
- 8.5 Check this adjustment (see "Correct setting").

## Preliminary adjustment of needle bar height

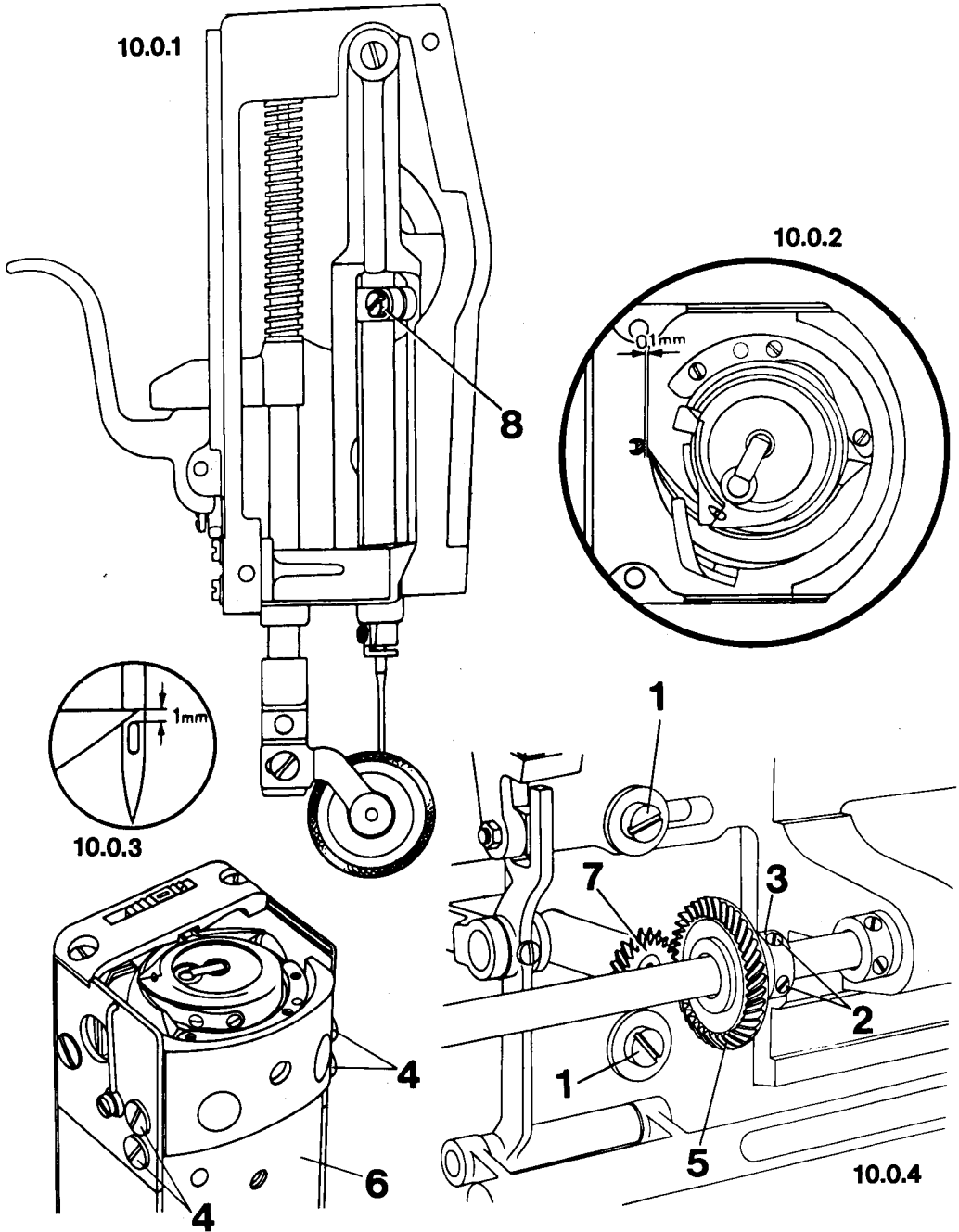
Correct setting:

When the needle bar is positioned at top dead center there should be a clearance of **18 mm** between needle point and needle plate.



- 9.1 Turn the balance wheel to bring the needle bar to top dead center.
- 9.3 Loosen screw 1.
- 9.3 **Adjust needle bar 2 vertically until there is a clearance of 18 mm between needle point and needle plate.**
- 9.4 In this position, tighten screw 1, making sure the needle bar is not turned in the process.
- 9.5 Check this adjustment (see "Correct setting").  
For final adjustment, please refer to Section 10.

**Hook timing, hook-to-needle clearance and needle bar height (final adjustment)** (On two-needle machines make this adjustment twice)



Correct setting:

With the feed regulator lever set at "0" and the needle bar positioned at the respective needle rise position (see below), there should be a clearance of **0.1 mm** between hook point and needle. In this position, the top edge of the needle eye should be positioned **1 mm** below the hook point.

Needle bar rise: Models A and B = 1.6 mm  
Model C = 2.0 mm

- 10.1 Set the feed regulator lever at "0". Check to make sure the needle is straight; if necessary, insert a new needle.
- 10.2 Unscrew needle plate, feed dog and bevel gear case.
- 10.3 Loosen screws **1** and **2** as well as the screws of bevel gear **5**.
- 10.4 Loosen screws **4** on the front and back of the post. (Subcl. -900/56 machines have only one screw on the front and back respectively.)
- 10.5 Unmesh bevel gear **5** and set the mark of the small bevel gear **7** between the marks on the large bevel gear **5**.
- 10.6 Turn the balance wheel and turn bevel gear **5** (making sure it is in mesh) until the hook point is positioned in the middle of the needle scarf.
- 10.7 **Adjust the position of hook post 6 sideways until there is a clearance of 0.1 mm between hook point and needle.**
- 10.8 In this position, tighten screws **1** and screws **4** on the front and back of the post.
- 10.9 Push bevel gear **5** up against the small bevel gear **7** so that both gears are neither set too close nor have too much play.
- 10.10 In this position, push collar **3** up against bevel gear **5** and tighten screws **2**.
- 10.11 Turn the balance wheel to bring the needle bar to bottom dead center.
- 10.12 Push the appropriate blade of the needle rise gauge (see needle rise data above) onto the needle bar immediately below its lower bearing, push the C clamp up against the blade and tighten its screw.
- 10.13 Pull out the gauge blade and carefully turn the balance wheel in its normal direction until the C clamp contacts the needle bar bearing just lightly.
- 10.14 **Turn the large bevel gear 5 until the hook point is opposite the center line of the needle.**
- 10.15 In this position, tighten the accessible screw of bevel gear **5**.
- 10.16 Remove the C clamp from the needle bar.
- 10.17 **Make sure the hook point is still positioned opposite the center line of the needle, then loosen screw 8 and adjust the needle bar vertically until the hook point is positioned 1.0 mm above the top edge of the needle eye.**
- 10.18 In this position, tighten screw **8**, making sure the needle scarf faces toward the hook point.
- 10.19 Turn the balance wheel until the second screw of bevel gear **5** is accessible, then tighten this screw.
- 10.20 Check this adjustment (see "Correct setting").

## 11

### Needle guard

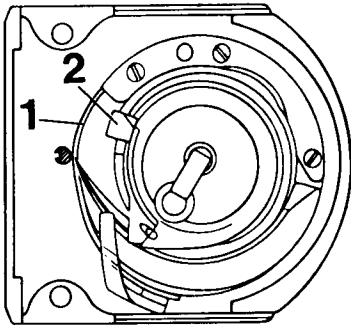
(On two-needle machines make this adjustment twice)

Correct setting:

When the needle bar is at the needle rise position, needle guard 1 should contact the needle just lightly, thus preventing the needle from striking the hook point.

Requirement:

The hook-to-needle clearance of 0.1 mm must have been set correctly.

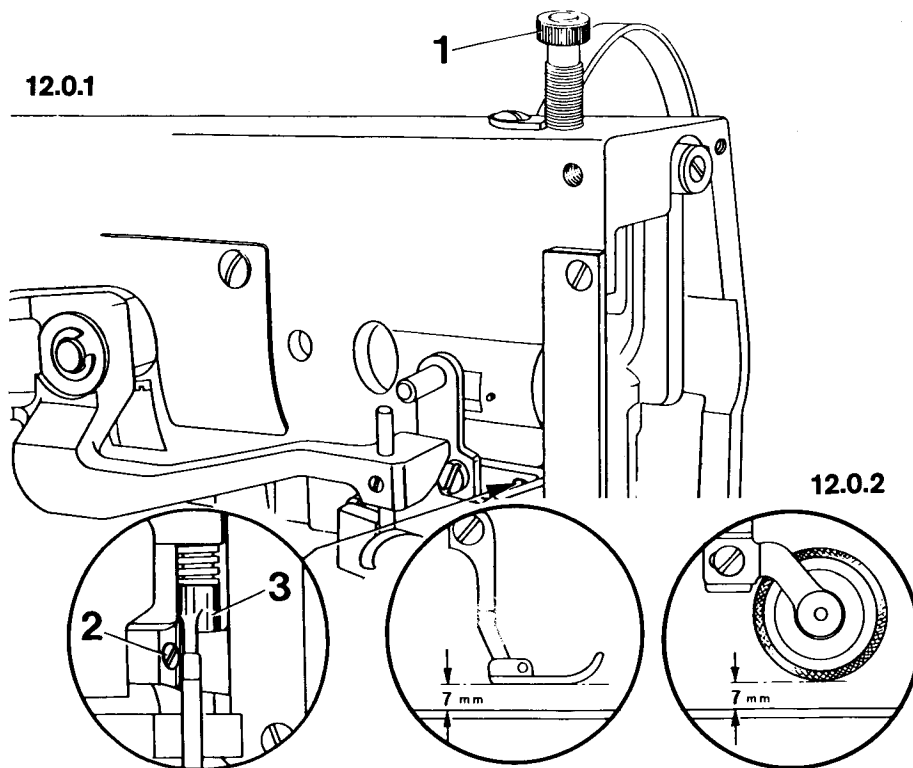


#### 11.0.1

- 11.1 **Adjust needle guard 1 so that it contacts the needle just lightly at the needle rise position, however without deflecting it.**
- 11.2 Check this adjustment (see "Correct setting").
- 11.3 Replace and screw on feed dog and needle plate, making sure that position lug 5 of the bobbin case base (Fig. 13.0.2) enters the recess in the needle plate and the feed dog moves freely in its slot.

Correct setting:

When the presser bar lifter is raised, there should be a clearance of **7 mm** between presser foot/roller presser and needle plate.



- 12.1 Take the needle out of the needle holder.
- 12.2 Operate the presser bar lifter to raise the presser foot/roller presser.
- 12.3 Turn the balance wheel to lower the feed dog below the needle plate.
- 12.4 Turn screw 1 to reduce the pressure on the presser foot/roller presser.
- 12.5 Loosen screw 2 in lifting collar 3.
- 12.6 **Adjust the presser bar vertically until there is a clearance of 7 mm between presser foot/roller presser and needle plate.**
- 12.7 In this position, tighten screw 2, making sure the presser foot/roller presser is parallel to the edge of the needle plate.
- 12.8 Check this adjustment (see "Correct setting").
- Note: Regulate the pressure of the presser foot/roller presser by turning in screw 1 while making a sewing test.

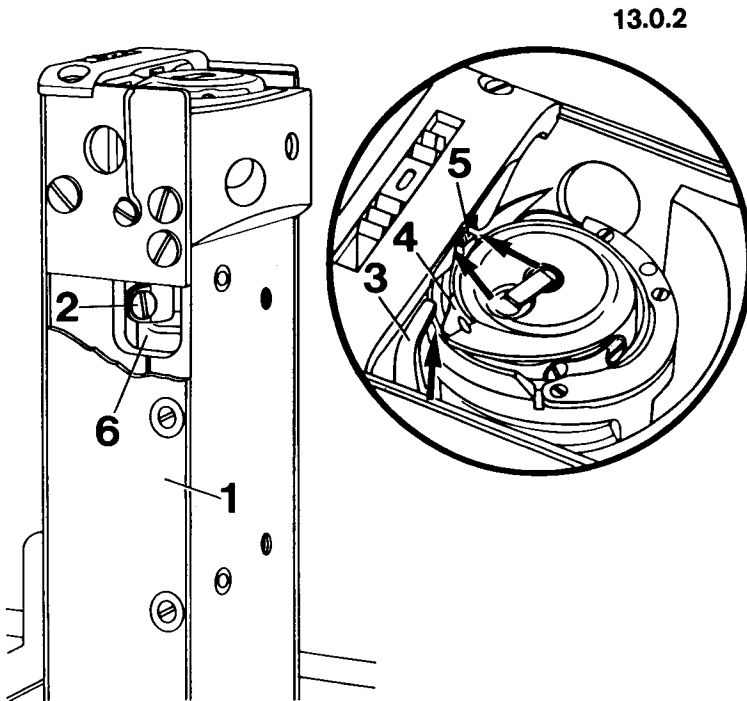
### 13

#### Bobbin case opener

(On two-needle machines make this adjustment twice)

Correct setting:

The needle thread should pass freely between opener finger 3 and bobbin case base 4 as well as between position lug 5 and the walls of the recess in the needle plate (see arrows in Fig. 13.0.2).



#### 13.0.1

- 13.1 Unscrew post cover plate 1.
- 13.2 Loosen screw 2 just sufficiently to allow opener finger 3 to be turned against resistance.
- 13.3 Insert the needle, thread the machine, place a piece of fabric under the presser foot/roller presser and lower the latter.
- 13.4 **Adjust opener finger 3 laterally so that, when you turn the balance wheel, the needle thread passes freely between opener finger 3 and bobbin case base 4 as well as between position lug 5 and the walls of the recess in the needle plate (see arrows in Fig. 13.0.2) from the time the loop is picked up by the hook point until it is pulled up through the needle hole.**
- 13.5 In this position, push opener finger 3 downwards while pushing collar 6 upwards (to eliminate play), and tighten screw 2.
- 13.6 Check this adjustment (see "Correct setting").



14

### Tension release mechanism

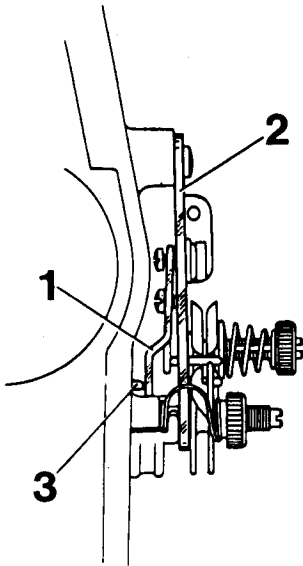
(On two-needle machines make this adjustment twice)

Correct setting:

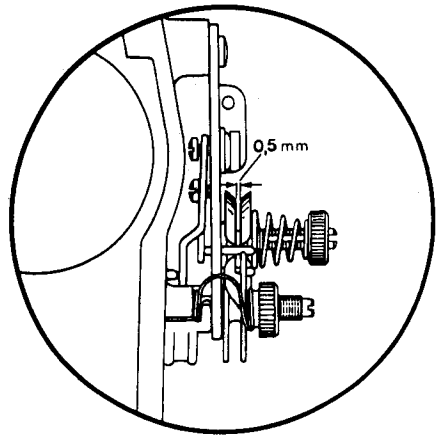
When the presser foot/roller presser is raised both tension discs should be at least **0.5 mm** apart.

Note:

The clearance of **0.5 mm** is the minimum clearance; for thicker threads a clearance of more than **1.0 mm** may be required.



14.0.1



14.0.2

14.1

Operate the presser bar lifter to raise the presser foot/roller presser.

14.2

**Adjust thrust plate 1 behind tension base plate 2 so that there is a clearance of at least 0.5 mm between both tension discs.**

When the tension is activated, tension release pin 3 must not be under pressure.

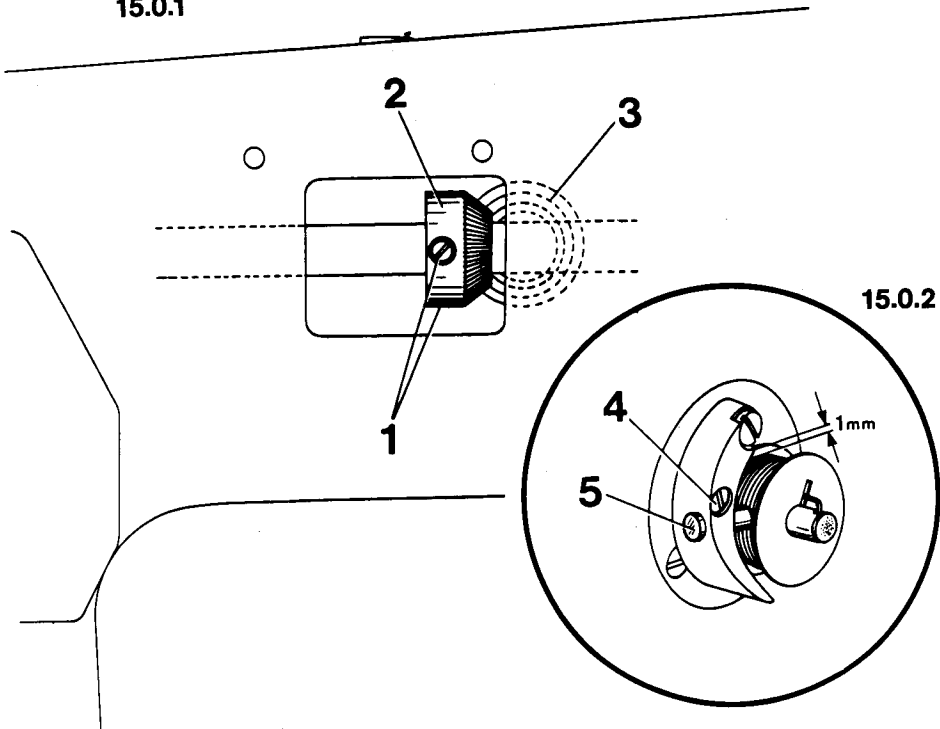
14.3

Check this adjustment (see "Correct setting").

Correct setting:

When the bobbin winder is engaged the winder spindle should be driven reliably; when the bobbin winder is disengaged, however, drive wheel 2 must not contact friction wheel 3. Also, the bobbin winder should stop automatically when the thread wound on the bobbin has reached a point about 1 mm below its rim.

## 15.0.1



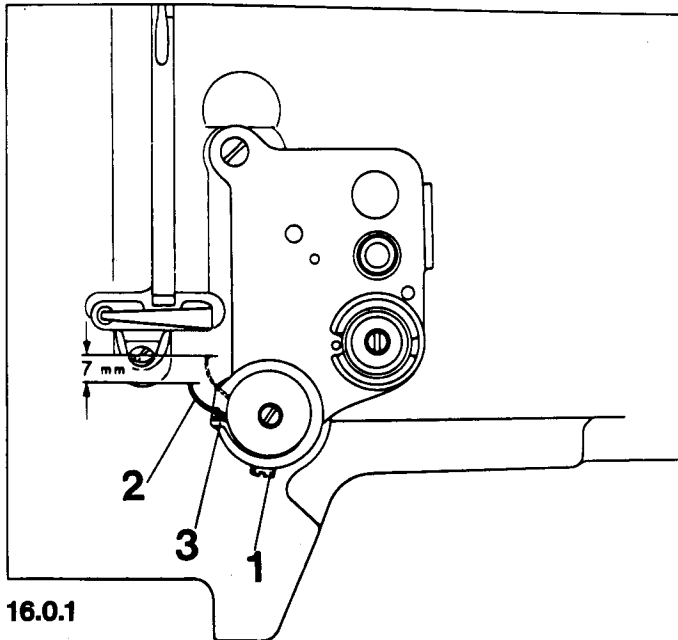
- 15.1 Engage the bobbin winder.
- 15.2 Unscrew the cover plate with the eccentric regulating disc and loosen screws 1.
- 15.3 **Adjust the position of the arm shaft to set drive wheel 2 so that when the balance wheel is turned the bobbin winder spindle is driven reliably, but drive wheel 2 will not contact friction wheel 3 when the bobbin winder is disengaged.**
- 15.4 Tighten both screws 1.
- 15.5 Loosen screw 4.
- 15.6 **Push stud 5 toward the right, if the bobbin is too full, or toward the left, if it is not full enough. Then tighten screw 4.**
- 15.7 Check this adjustment (see "Correct setting").
- 15.8 Replace and screw on the cover plate with the eccentric regulating disc.

Correct setting:

The stroke of thread check spring 2 should be completed when the needle point is about to enter a piece of fabric of medium thickness (equalling a stroke of abt. 7 mm).

Note:

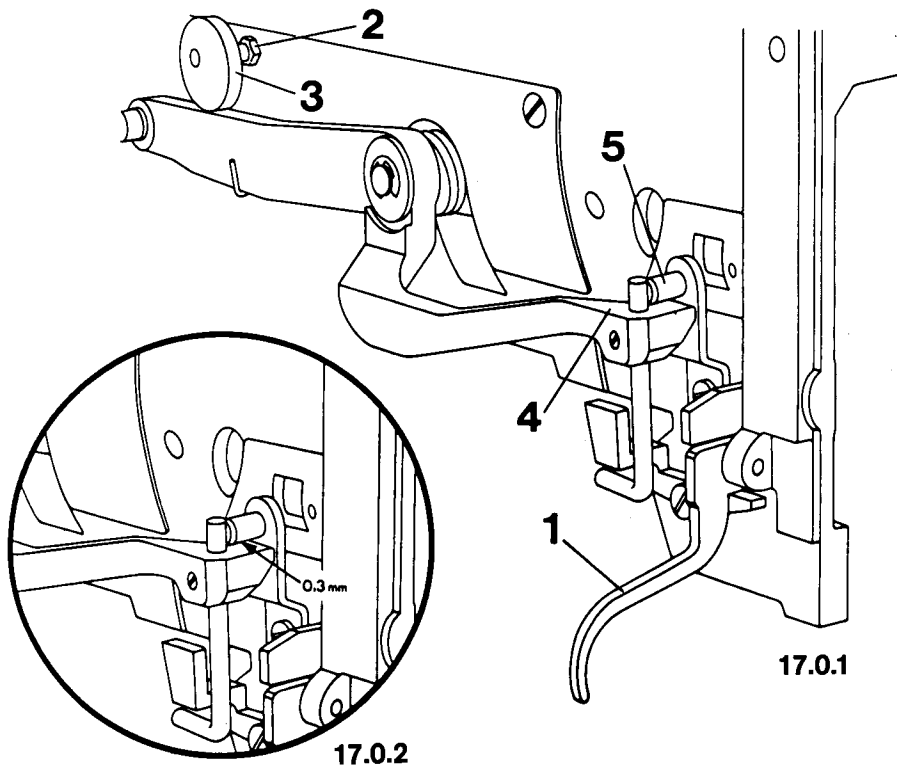
Special sewing conditions may make it necessary to set the check spring for a slightly shorter or longer stroke.



- 16.1 Make sure the machine has been threaded, then place a piece of fabric under the presser foot/roller presser.
- 16.2 Loosen screw 1.
- 16.3 Turn the balance wheel to sew a few stitches and stop with the take-up lever at its highest point.
- 16.4 **Continue turning the balance wheel in its normal direction until thread check spring 2 has returned to the starting position of its 7-mm stroke.**
- 16.5 In this position, push stop 3 up against the thread check spring and tighten screw 1.
- 16.6 Check this adjustment (see "Correct setting").

Correct  
setting:

When the presser foot/roller presser is resting on the needle plate while the needle bar is at top dead center there should be a clearance of **0.3 mm** between lifting lever **4** and stop pin **5**.



- 17.1 Make sure the needle bar is at top dead center, then operate presser bar lifter 1 to lower the presser foot/roller presser onto the needle plate.
- 17.2 **Loosen nut 2 and turn eccentric regulating disc 3 to set a clearance of 0.3 mm between lifting lever 4 and stop pin 5.**
- 17.3 In this position, tighten nut 2.
- 17.4 Check this adjustment (see "Correct setting").

**18 Final worksteps**

- 18.1 Replace and screw on the face cover, all cover plates and the bevel gear housing(s) below the bedplate.
- 18.2 Make a sewing test and, while doing so, regulate the presser bar pressure by turning screw 1 (Fig. 12.0.1) in or out until proper feeding is ensured even at top speed.

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