

**PFAFF**<sup>®</sup>

561

Service Manual

Innovation made by **PFAFF**

# Instructions for adjusting the Pfaff 561

## Notes on safety

The machine must only be used for the purpose it was designed for.

When converting it into other versions, all valid safety regulations must be observed.

Adjustment- and repair work must only be carried out by mechanics instructed accordingly.

Apart from exceptions according to DIN 57 105 and VDE 0105, work on live parts is not permitted.

## Important

On machines which are put into operation for the first time or which have been idle for a longer period of time (1 or 2 months), make absolutely sure to check the hook lubrication system (Section 16). For topping up we recommend using Pfaff sewing machine oil No. 280-1-120144 with a mean viscosity of 22 mm<sup>2</sup>/s at 40°C and a density of 0.865 g/cm<sup>3</sup>.

## Tools, gauges and other equipment needed for adjusting the Pfaff 561:

Set of screwdrivers with blades from 2 to 10 mm wide

Set of allen keys ranging from 1.5 to 6.0 mm

Set of spanners from 7 to 14 mm wide

Metal rule

C-clamp (No. 08-880 137-00)

Gauge (No. 08-880 179-00 or 61-111 642-19)

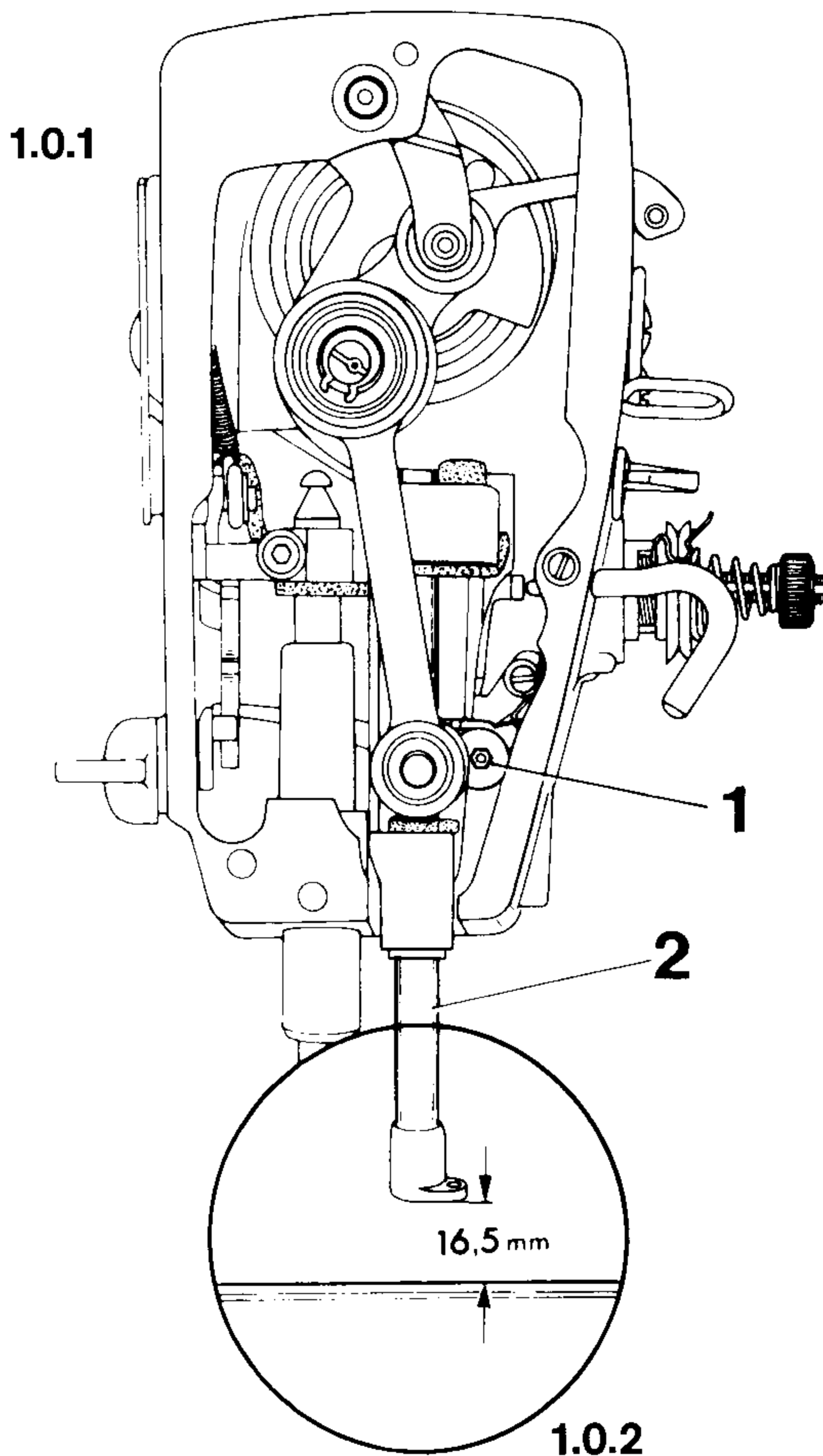
Pack of needles

Strips of white paper, sewing thread and material for testing purposes

# 1 Preliminary adjustment of needle bar height\*

Setting:

With the needle bar at bottom dead center, there must be a clearance of approx. **16.5 mm** between needle holder and needle plate.



## Adjustment

- 1.1 Take needle out of needle holder.
- .2 Loosen screw **1** a little.
- .3 Turn balance wheel to set needle bar at bottom dead center.
- .4 **Adjust needle bar 2 vertically until there is a clearance of approx. 16.5 mm between needle holder and needle plate.**
- .5 In this position, tighten screw **1**, making sure the needle set screw points toward the right as seen in feed direction.

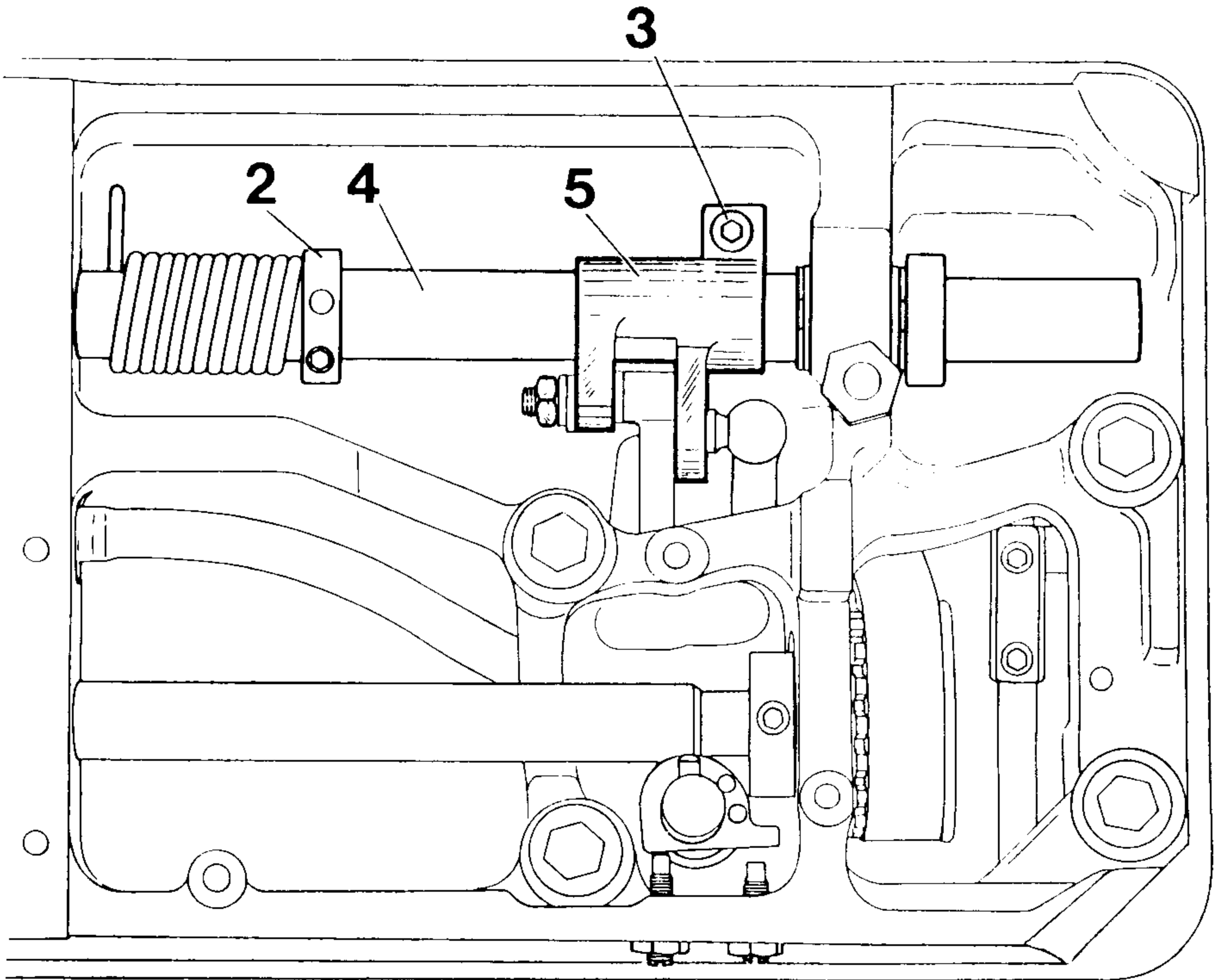
\* Final adjustment see Section 10.

## 2 Neutral drop feed setting

Setting:

With the stitch length control set at "0" the feed dog must not move when the balance wheel is turned.

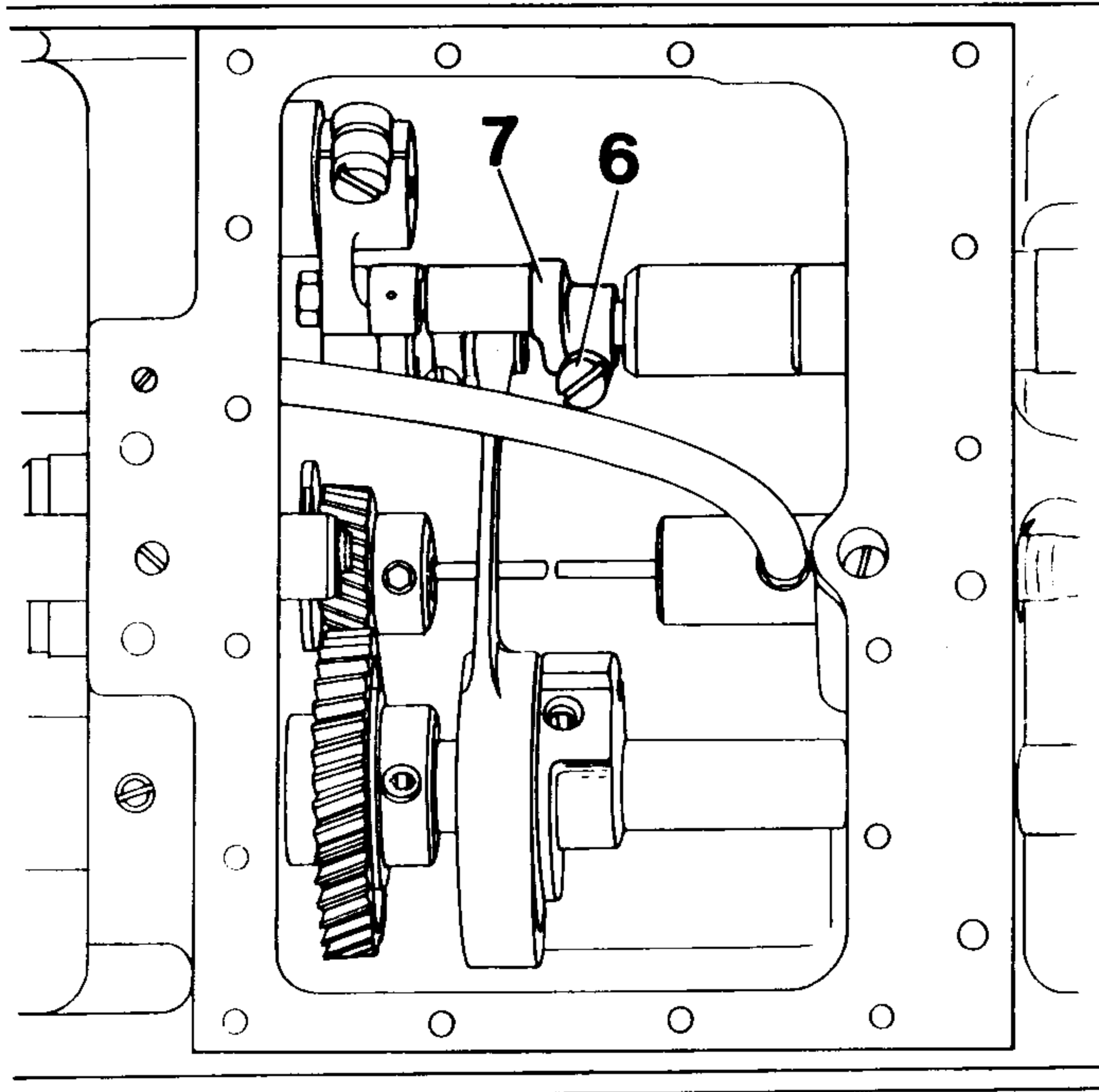
2.1 With the gearcase **closed**.



### 2.0.1

Adjustment:

- 2.1.1 Remove knee lever.
- .2 Raise presser foot and turn stitch length control to "0".
- .3 Insert an allen key or a pin in tension ring 2 and hold feed regulator shaft 4 fast with it.
- .4 **Loosen screw 3 and, while rotating the balance wheel, turn feed regulator shaft 4 with the aid of the allen key until the feed dog remains absolutely still.**
- .5 In this position, hold the allen key fast and tighten screw 3.
- .6 Check this adjustment (see "Setting").



### 2.0.2

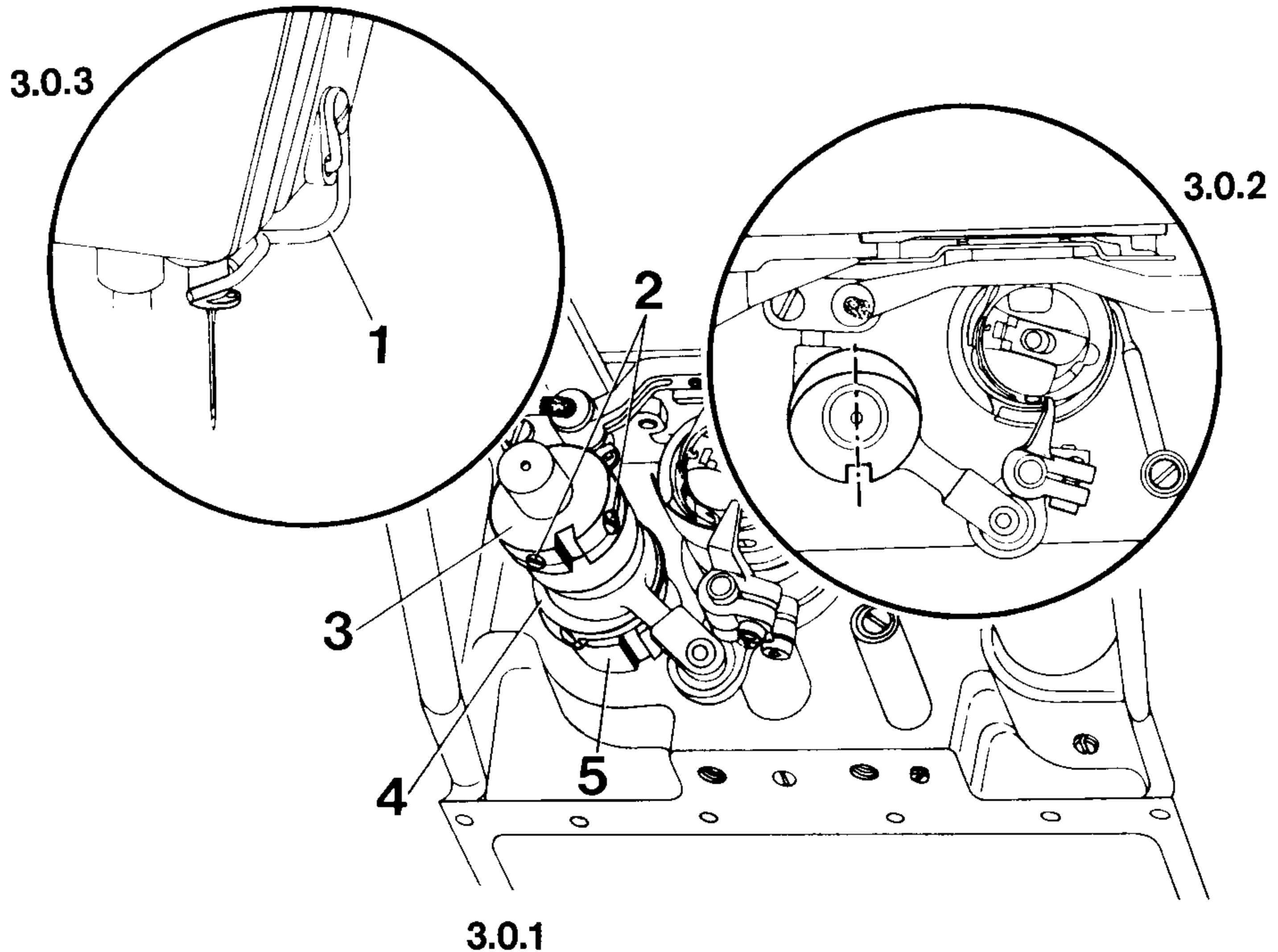
#### Adjustment:

- 2.2.1 Set stitch length "0".
- .2 Remove knee lever and raise presser foot.
- .3 Unscrew screws of gearcase cover and remove cover with gasket, making sure that the oil, if any, is drained off into a container.
- .4 Take oil sponge out of gearcase.
- .5 Loosen screw **6** just sufficiently to allow crank **7** to be turned on its shaft against resistance.
- .6 **Adjust crank 7 while rotating the balance wheel until the feed dog no longer moves.**
- .7 In this position, tighten screw **6**.
- .8 Check this adjustment (see "Setting").

### 3 Feed dog lifting motion and balance weight

Setting:

The feed dog must be at its highest point when the needle bar is positioned **0.6 mm** past bottom dead center. Also in this position, the notches in feed lifting eccentric **3** and in balance eccentric **5** must be positioned below the center of the shaft (see Fig. 3.0.2).



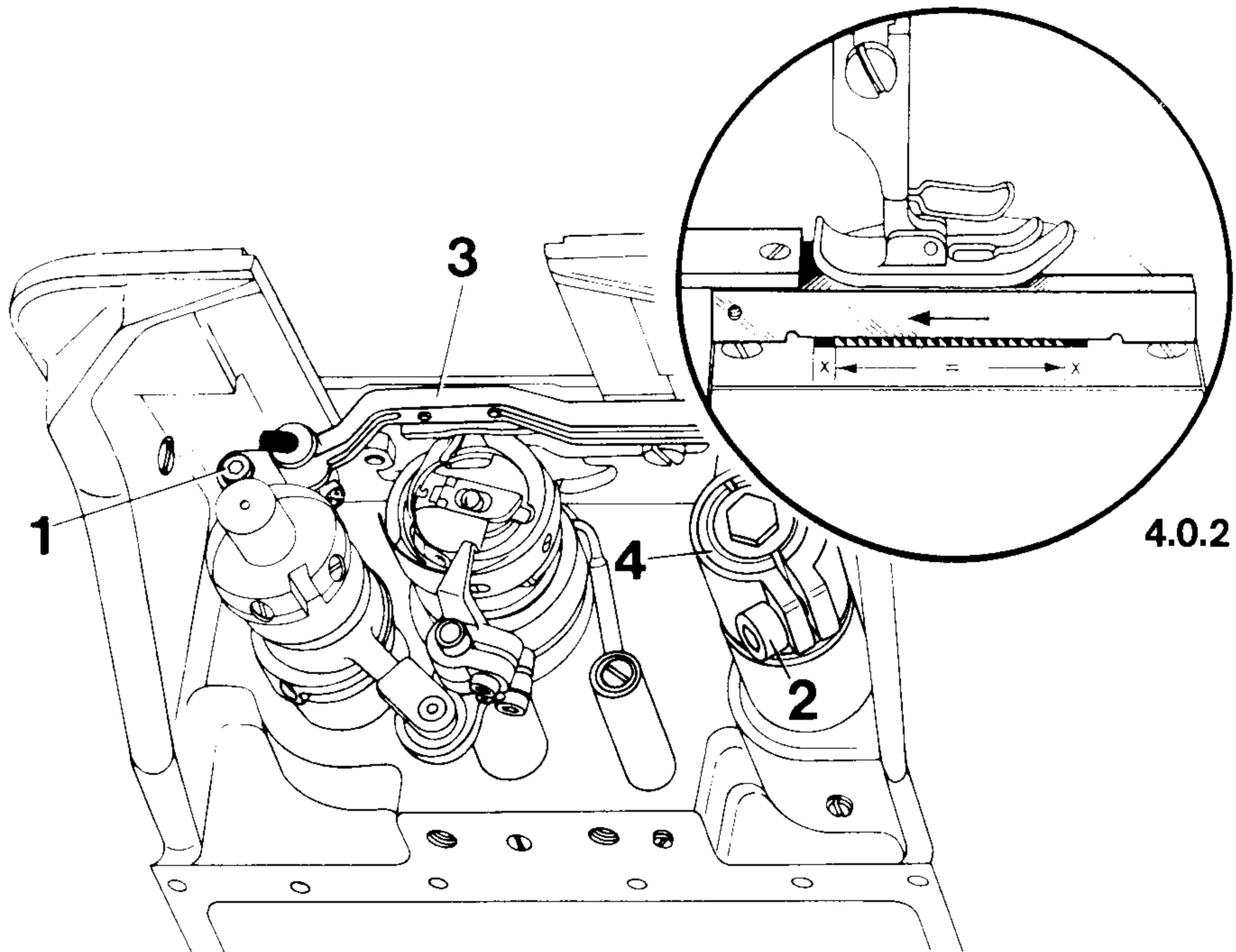
Adjustment:

- 3.1 Unscrew thread guide **1**.
- .2 Loosen screws **2** and screws of the balance eccentric just a little.
- .3 Turn balance wheel to set needle bar at bottom dead center.
- .4 Push 0.6-mm-thick gauge blade with its cutout onto needle bar so that it contacts the lower bush.
- .5 Push C-clamp up against gauge blade and tighten its screw.
- .6 Pull out gauge blade and turn balance wheel in normal direction of rotation until C-clamp contacts lower needle bar bush.
- .7 **In this position, turn feed lifting eccentric **3** until the feed dog is at its highest position. Turn balance eccentric **5** so that its notch, just as the notch of feed lifting eccentric **3**, is positioned below the center of the shaft.**
- .8 In this position, tighten accessible screw **2** of lifting eccentric and accessible screw **5** of balance eccentric, making sure there is a small amount of play between eccentrics **3** and **4**.
- .9 Remove C-clamp and tighten the second screw of eccentric **3** and **5**, respectively.
- .10 Check this adjustment (see "Setting").

## 4 Feed dog height

Setting:

With the stitch length control set at "0", the feed dog, positioned at top dead center, must be centered in its slots and contact the gauge throughout its length (Fig. 4.0.2).



Adjustment:

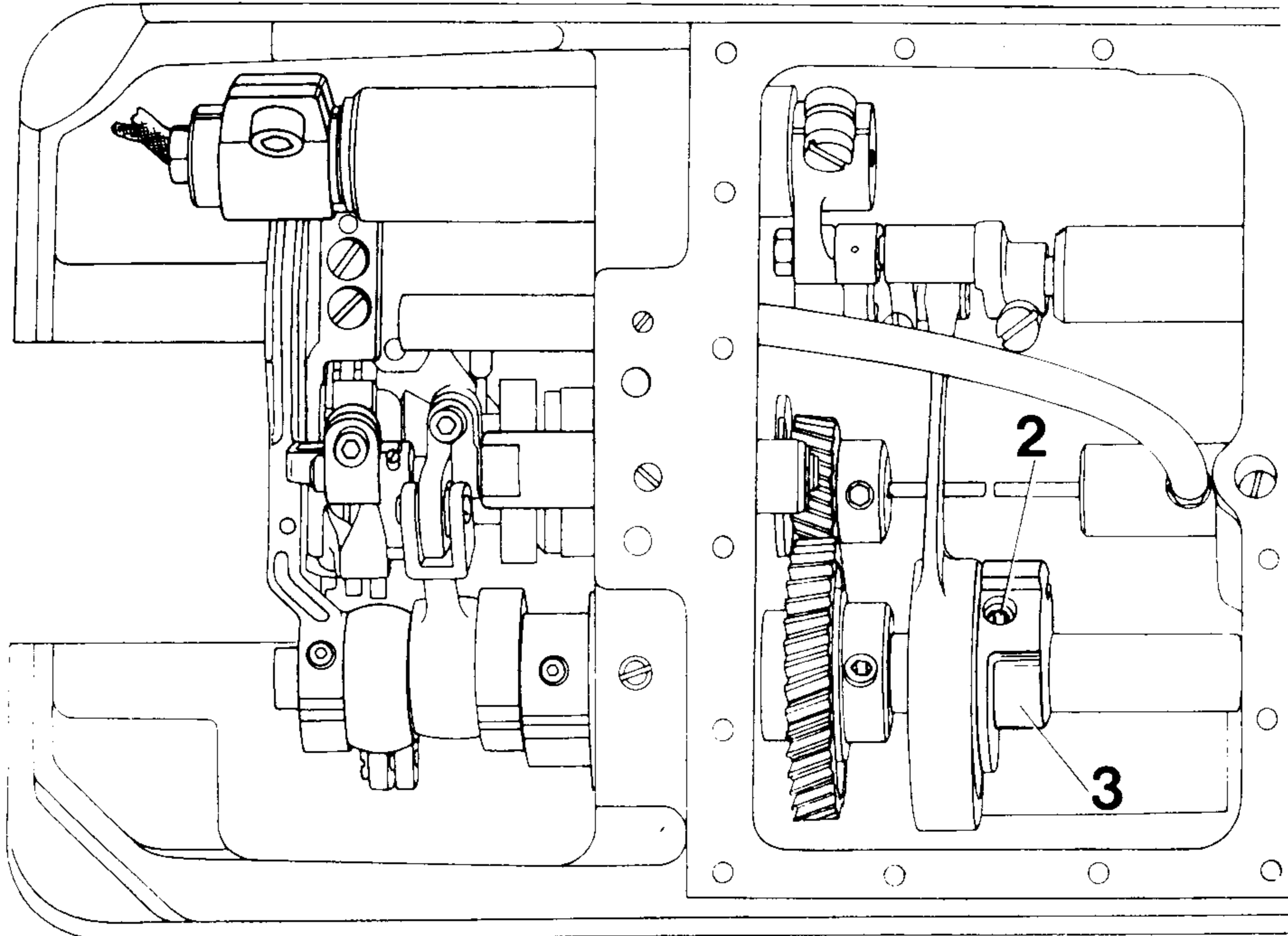
### 4.0.1

- 4.1 Check to make sure stitch length is set at "0" and turn balance wheel until feed dog is at its highest point.
- .2 Loosen screws **1** and **2**.
- .3 Place gauge No. 08-880179-00 or No. 61-111642-19 under presser foot so that it is flush with front edge of needle plate and arrow on gauge points in direction of feed.
- .4 Lower presser bar lifter to rest presser foot on gauge.
- .5 Center feed dog in its slots (Fig. 4.0.2) and tighten screw **2** just lightly.
- .6 Push feed bar **3** upwards until feed dog contacts gauge and tighten screw **1** lightly.
- .7 **Turn eccentric bush 4 until the feed dog is in contact with the gauge throughout its entire length.**
- .8 In this position, tighten screws **1** and **2**, making sure the feed dog is centered in its slots both sideways and lengthwise.
- .9 Check this adjustment (see "Setting").
- .10 Raise presser bar lifter and remove gauge from under presser foot.

## 5 Feeding motion

Setting:

With the machine set for its longest stitch and the needle bar positioned **0.6 mm** past bottom dead center, the feed dog must not move when the reverse-feed control is operated.



### 5.0.1

Adjustment:

- 5.1 Set machine for longest stitch.
- .2 Loosen two screws **2** just sufficiently to allow feed eccentric **3** to be turned on its shaft against resistance.
- .3 Turn balance wheel to set needle bar at bottom dead center.
- .4 Push 0.6-mm-thick gauge blade with its cutout onto needle bar so that it contacts the lower bush.
- .5 Push C-clamp up against gauge blade and tighten its screw.
- .6 Pull out gauge blade and turn balance wheel in normal direction of rotation until C-clamp contacts lower needle bar bush.
- .7 **While moving reverse-feed control up and down, turn feed eccentric **3** until feed dog is completely motionless.**
- .8 In this position, tighten accessible screw **2**, making sure connecting rod of feed eccentric **3** is positioned at right angles to feed rock shaft.
- .9 Remove C-clamp.
- .10 Tighten second screw **2**.
- .11 Check this adjustment (see "Setting").

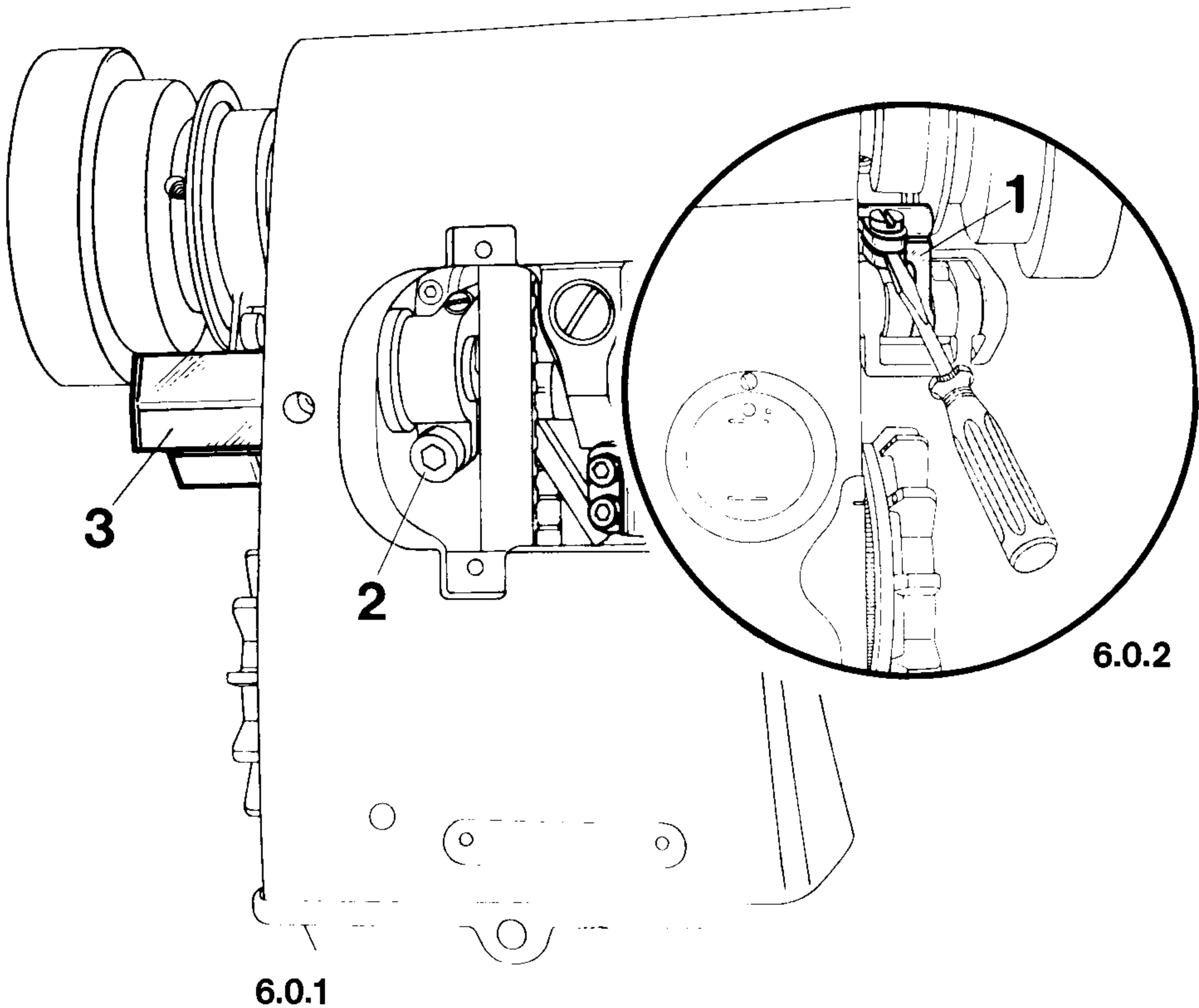


## 6

## Neutral needle feed setting

Setting:

With the stitch length control set at "0", the needle bar must make no feeding motion when the balance wheel is turned.



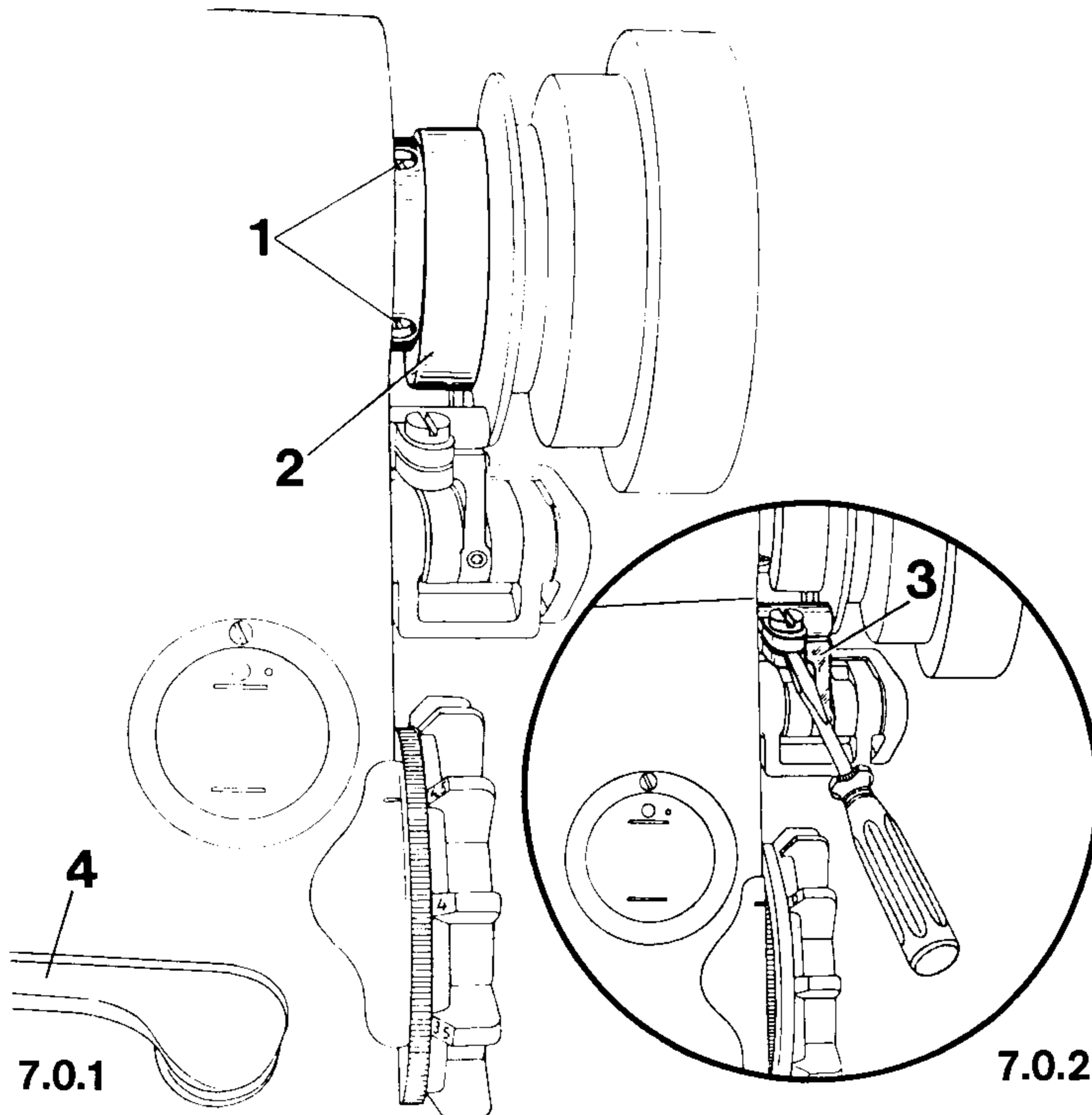
Adjustment:

- 6.1 Set stitch length "0".
- .2 To facilitate adjustment, insert screwdriver in slot of driving crank 1.
- .3 Remove cover at back of machine.
- .4 Loosen screw 2.
- .5 **Adjust regulating crank 3 so that the needle bar makes no feeding motion when the balance wheel is turned** (i. e. that the screwdriver in driving crank 1 remains still).
- .6 In this position, tighten screw 2.
- .7 Check this adjustment (see "Setting").
- .8 Leave screwdriver in slot of driving crank 1 for subsequent adjustments.

## 7 Timing the needle feed motion

Setting:

With the machine set for its longest stitch and the needle bar positioned **0.6 mm** past bottom dead center, neither the needle bar nor the feed dog must move when the reverse-feed control is operated.



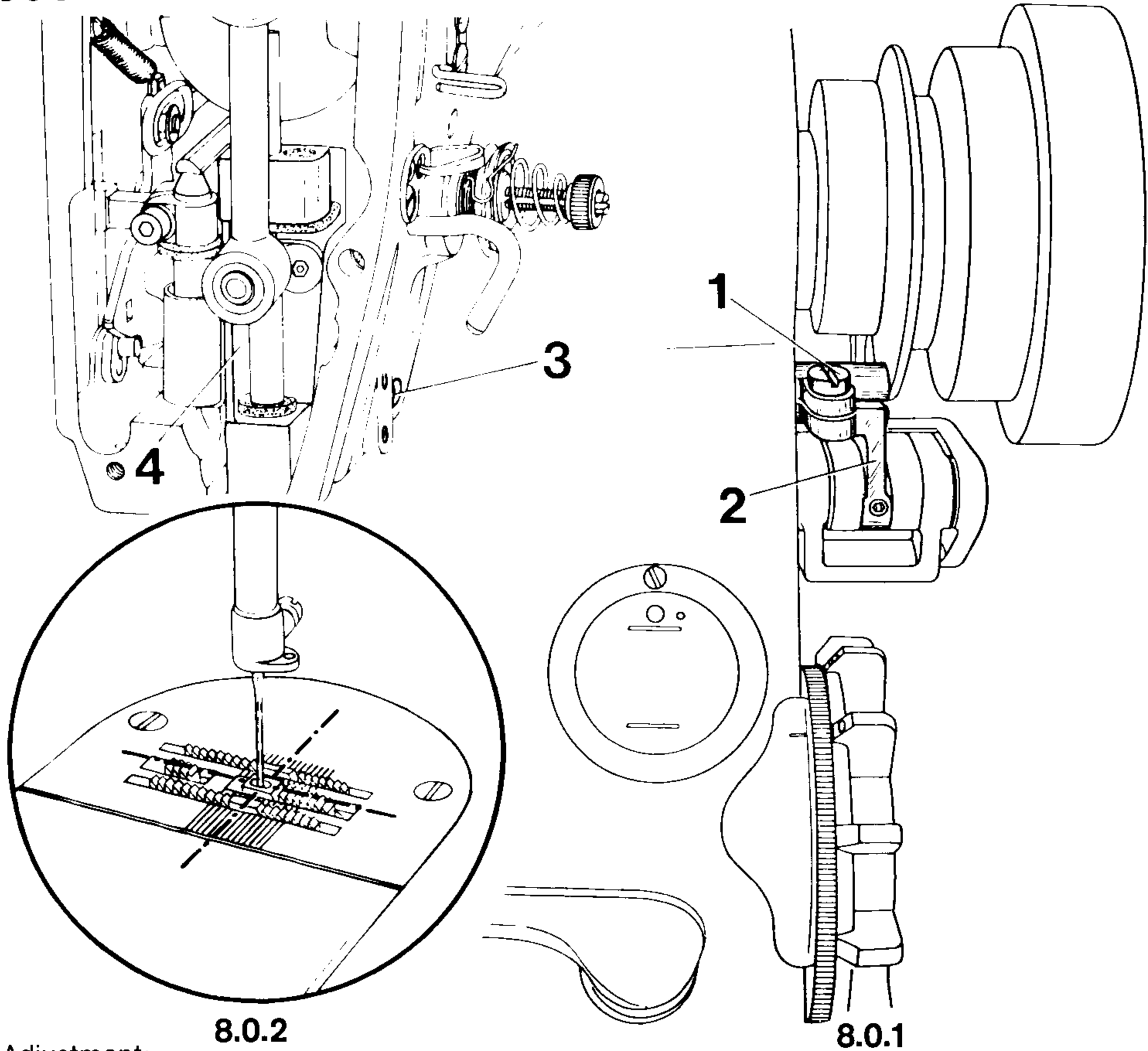
Adjustment:

- 7.1 Set machine for longest stitch.
- .2 Loosen screws **1**.
- .3 Turn balance wheel to set needle bar at bottom dead center.
- .4 Push 0.6-mm-thick gauge blade with its cutout onto needle bar so that it contacts the lower bush.
- .5 Push C-clamp up against gauge blade and tighten its screw.
- .6 Pull out gauge blade and turn balance wheel in normal direction of rotation until C-clamp contacts lower needle bar bush.
- .7 Turn eccentric **2** so that its screws face to rear of machine.
- .8 **While moving reverse-feed control 4 up and down, turn eccentric 2 a little forwards or backwards until needle bar (or rather screwdriver in driving crank 3) is completely motionless.**
- .9 In this position, tighten accessible screw **1**.
- .10 Remove C-clamp and screwdriver.
- .11 Also tighten second screw **1**.
- .12 Check this adjustment (see "Setting").

Setting:

When the feed dog is at its highest point, the needle must be positioned exactly in the middle of the needle hole both lengthwise and crosswise (Fig. 8.0.2).

## 8.0.3

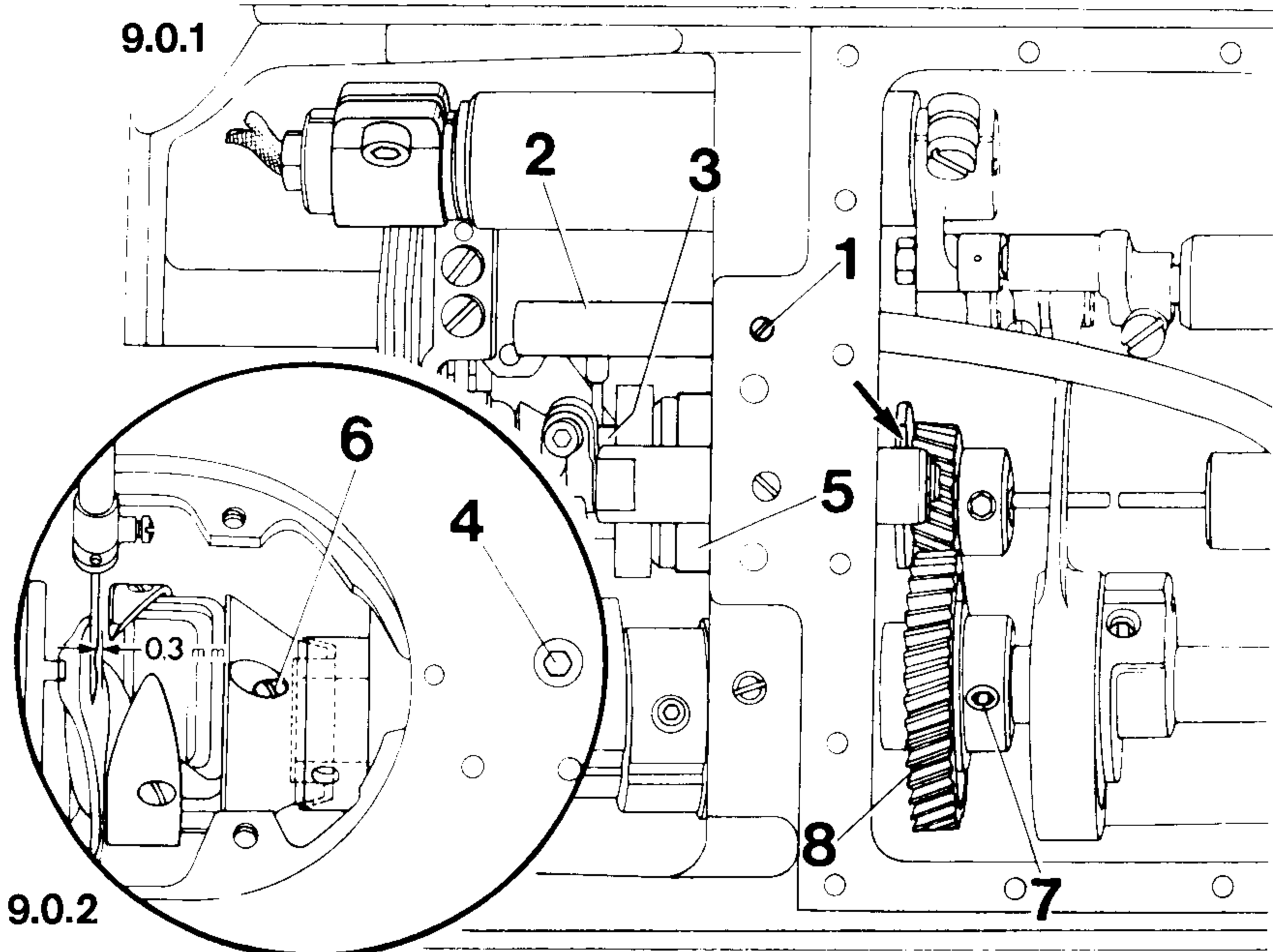


Adjustment:

- 8.1 Set needle bar at top dead center and remove presser foot.
- .2 Insert new System 134 needle into needle bar and push it up as far as it will go, making sure its long groove faces left.
- .3 Set stitch length "0".
- .4 Loosen screws 1 and 3.
- .5 Rotate balance wheel and simultaneously adjust position of needle bar frame 4 until needle enters needle hole in feed dog.
- .6 **Set needle bar at bottom dead center and adjust needle bar frame 4 so that needle is centered exactly in needle hole, both lengthwise and crosswise.**
- .7 In this position, tighten screw 1 securely.
- .8 Turn balance wheel a few turns to ensure that needle bar is not under stress in needle bar frame 4, and tighten screw 3.
- .9 Check this adjustment (see "Setting").

Setting:

There must be a clearance of approx. **0.3 mm** between the hook point and the middle of the clearance cut of the needle when the sewing hook rests against oil thrower **3** (Fig. 9.0.2). Also, there must be a minimum amount of play between the gears.



Adjustment:

- 9.1 Remove needle plate and feed dog.
- .2 Loosen screw **1** and swivel oil tube out of oil thrower **3**.  
On machines with thread trimmer -900/.., also loosen retaining screws of oil thrower.
- .3 Loosen screw **4**.
- .4 **Turn eccentric hook shaft bearing **5** so that its recess (see arrow in Fig. 9.0.1) is visible from below and the two gears neither have too much play nor stand too close together.**
- .5 Loosen both screws **6**.
- .6 Push sewing hook up against oil thrower **3**.
- .7 Turn sewing hook and reposition needle bar until hook point is positioned in middle of clearance cut of needle.
- .8 **Reposition bearing **5** until there is a clearance of approx. 0.3 mm between hook point and middle of clearance cut of needle, making sure however that bearing is not turned and hook remains in contact with oil thrower **3**.**
- .9 In this position, tighten screw **4** securely, making sure gears have correct amount of play.
- .10 Loosen both screws **7**.
- .11 Reposition gear **8** on its shaft until it is exactly in line with the pinion.
- .12 Tighten screws **7** securely.
- .13 Leave screws **6** loose for next adjustment (on machines with -900/.. also oil-thrower retaining screw) and oil tube swivelled out until Section 14.

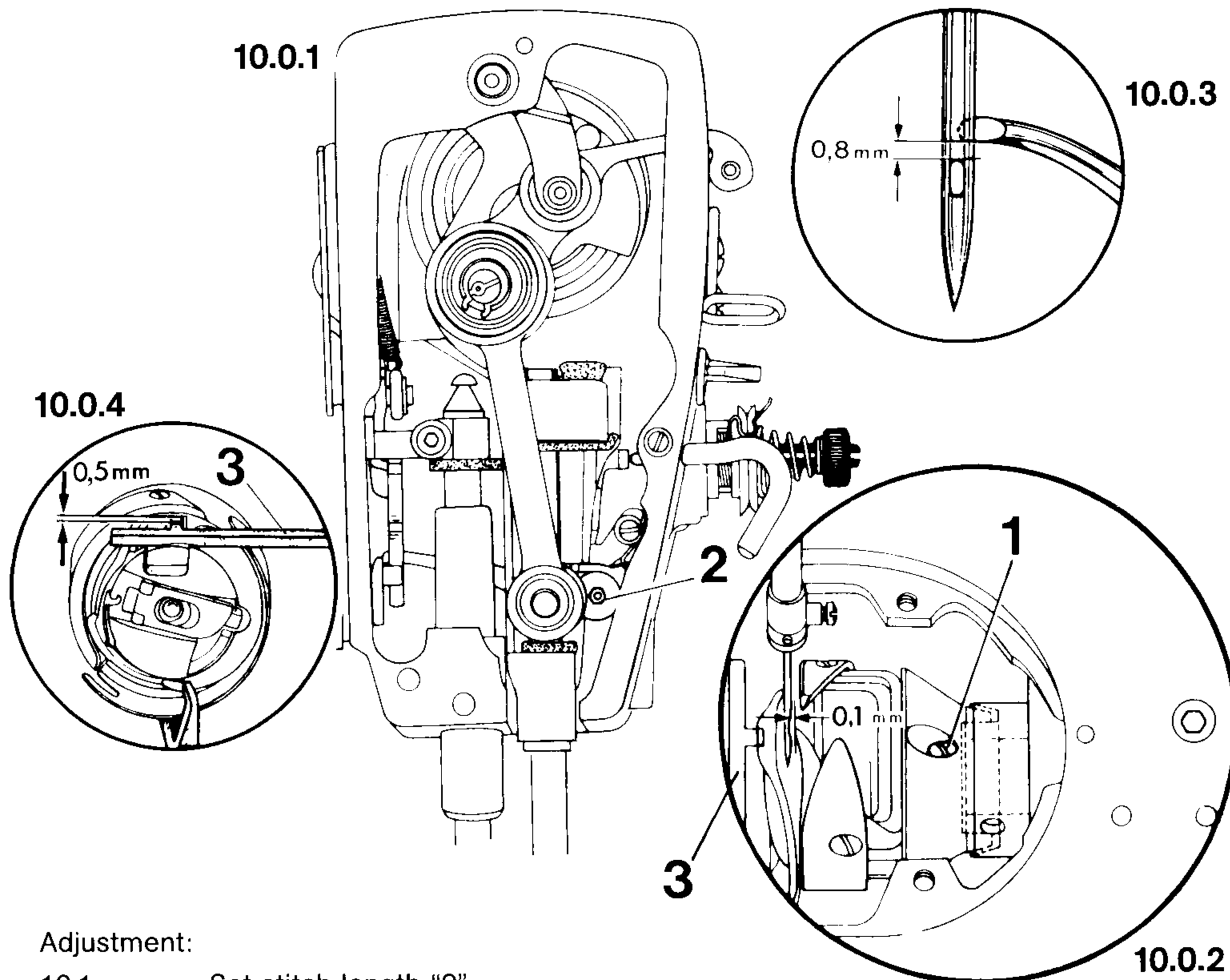
**10 Needle bar height (final adjustment), hook timing and hook-to-needle clearance**

Setting:

With the stitch length set at "0" and the needle bar positioned **1.8 mm** past bottom dead center, the top edge of the needle eye must be positioned **0.8 mm** below the hook point (Fig. 10.0.3). In this position, there must be a clearance of not more than **0.1 mm** between hook point and needle (Fig. 10.0.2).

Note:

When changing the needle size, check adjustment of Section 9.



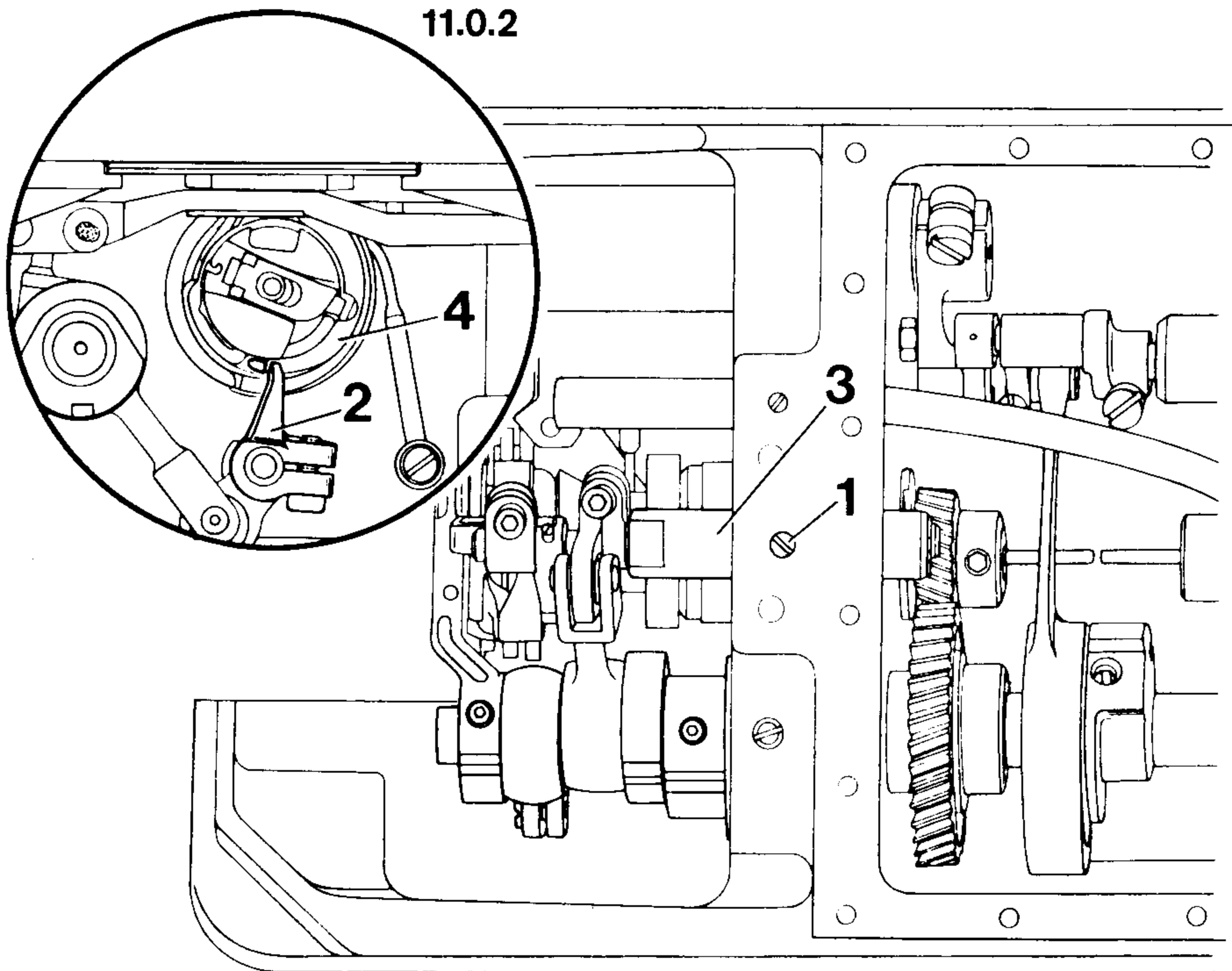
Adjustment:

- 10.1 Set stitch length "0".
- 10.2 Set needle at bottom dead center, making sure both screws 1 are loose and needle does not strike sewing hook.
- 10.3 Push 1.8-mm-thick gauge blade with its cutout onto needle bar so that it contacts the lower bush.
- 10.4 Push C-clamp up against gauge blade and tighten its screw.
- 10.5 Pull out gauge blade and turn balance wheel in normal direction of rotation until C-clamp contacts lower needle bar bush.
- 10.6 **Check to make sure top edge of needle eye is positioned 0.8 mm below bottom edge of hook point.**
- 10.7 **If adjustment is required, loosen screw 2, move needle bar up or down as appropriate, however without turning it, and tighten screw 2 again.**
- 10.8 **Adjust sewing hook so that there is a clearance of not more than 0.1 mm between its point and needle (center of scarf) when hook is positioned opposite center line of needle.**
- 10.9 In this position, tighten accessible screw 1, making sure position finger 3 is in slot of bobbin case base and that it is **0.5 mm** away from bottom of slot.
- 10.10 Remove C-clamp from needle bar.
- 10.11 Tighten second screw 1 and check this adjustment (see "Setting").

## 11 Height of bobbin case opener

Setting:

At the left point of reversal of bobbin case opener **2**, the bobbin case opener finger must be level with the lug of bobbin case base **4**.



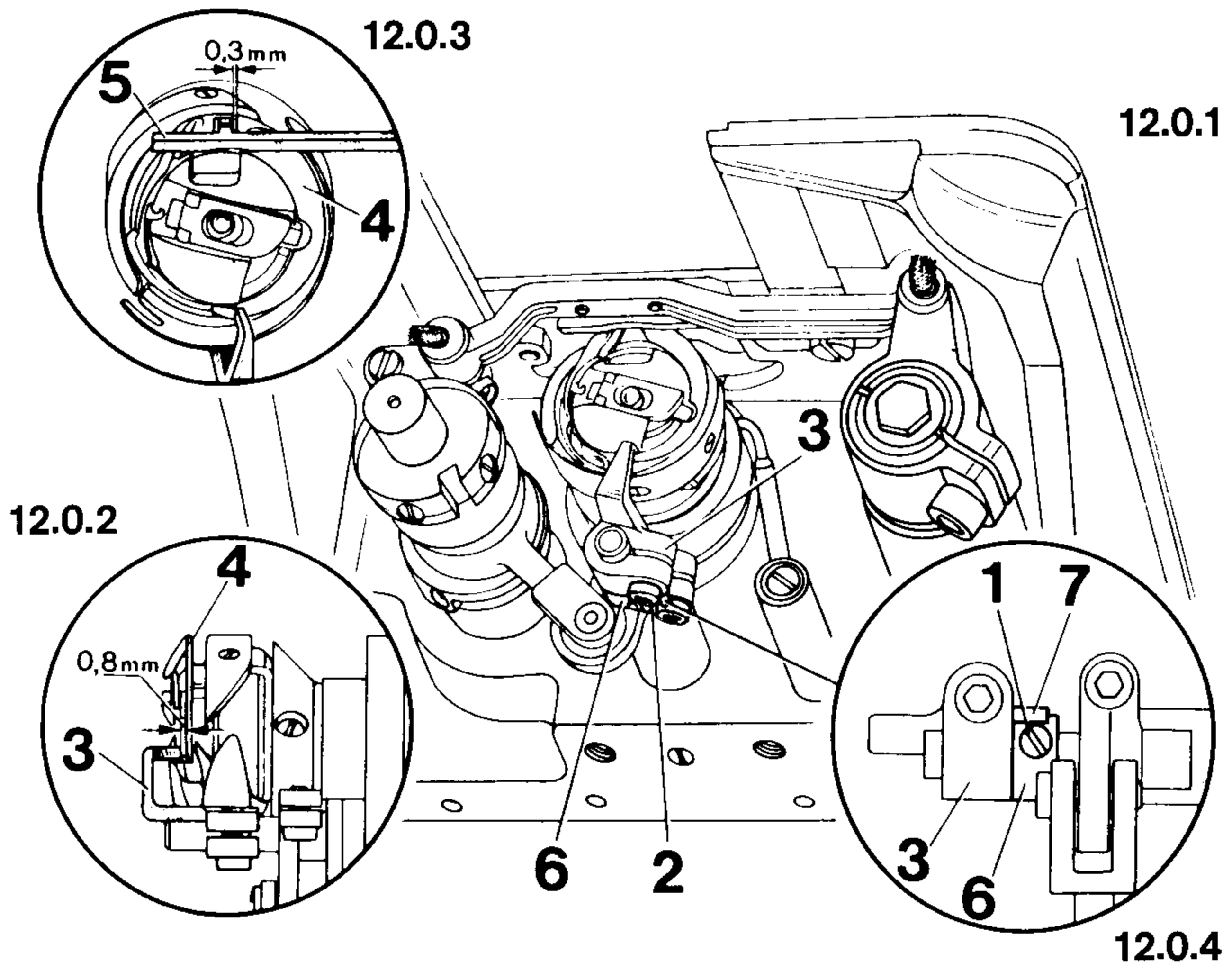
11.0.1

Adjustment:

- 11.1 Loosen screw **1**.
- .2 Turn balance wheel to set opener **2** at its left point of reversal.
- .3 **Turn eccentric bush **3** until the finger of opener **2** is level with the lug of bobbin case base **4**.** (It must be easy to take the bobbin case out of the sewing hook.)
- .4 In this position, tighten screw **1**.
- .5 Check this adjustment (see "Setting").

Setting:

There must be a clearance of **0.8 mm** between the finger of bobbin case opener **3** and bobbin case base **4** (Fig. 12.0.2). When opener **3** is at its left point of reversal, there must be a clearance of approx. **0.3 mm** between bobbin case base **4** and position finger **5** (Fig. 12.0.3). In this position, screw **1** must contact stop pin **7** (Fig. 12.0.4).

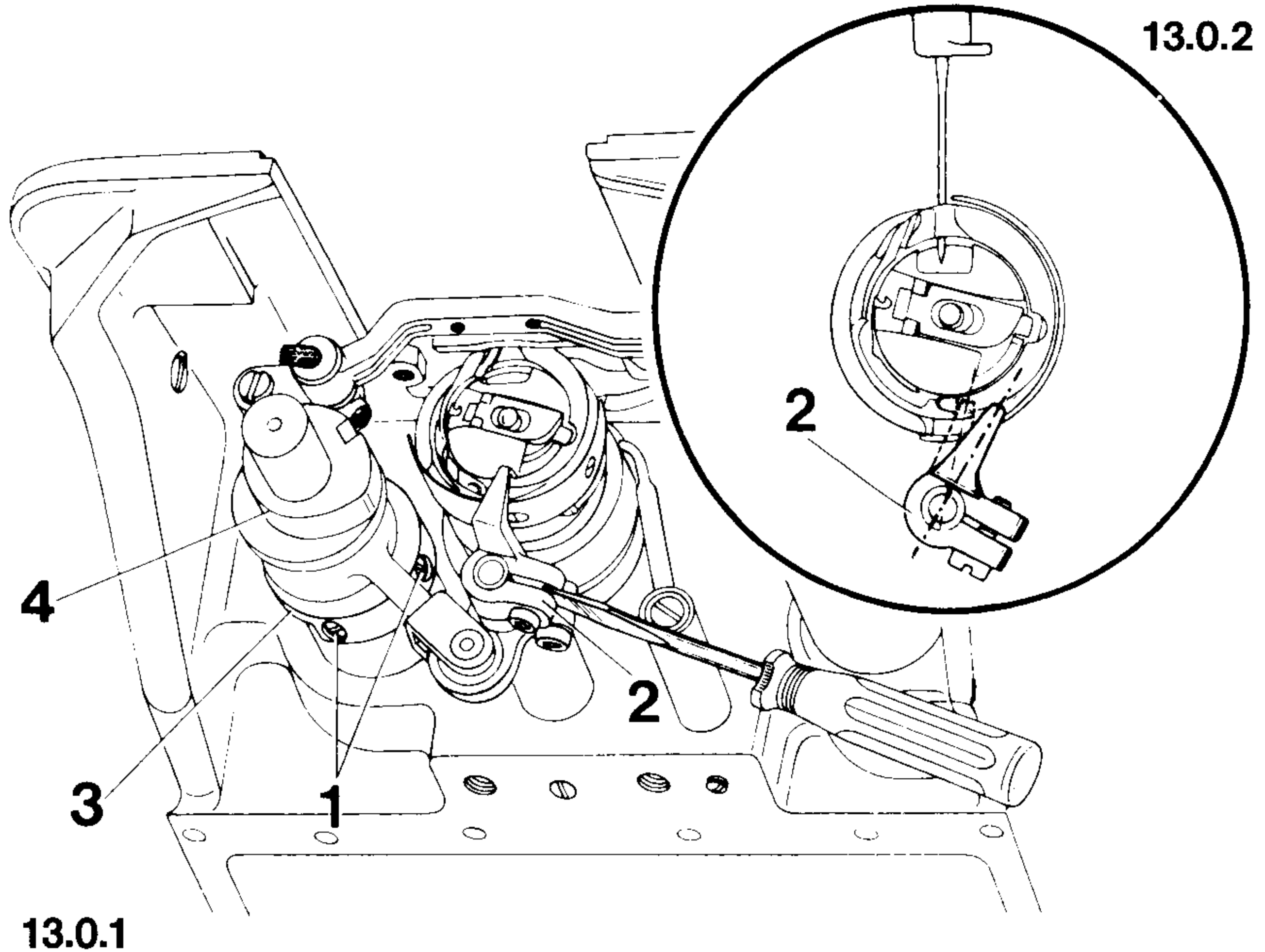


Adjustment:

- 12.1 Loosen screw 1.
- .2 Loosen screw 2 of opener 3 just sufficiently to allow it to be turned on its shaft against resistance.
- .3 **Reposition opener 3 on its shaft until there is a clearance of 0.8 mm between it and bobbin case base 4.**
- .4 Rotate balance wheel until opener 3 is at left point of reversal.
- .5 **Turn opener 3 until there is a thread clearance of approx. 0.3 mm between position finger 5 and right wall of position slot in bobbin case base 4, making sure opener 3 contacts lug of bobbin case base 4.**
- .6 In this position, tighten screw 2.
- .7 Push collar 6 up against opener 3 and turn it so that screw 1 contacts stop pin 7.
- .8 In this position, tighten screw 1.
- .9 Check this adjustment (see "Setting").

Setting:

When the needle bar is positioned **1.8 mm** past bottom dead center, bobbin case opener **2** must be at its right point of reversal.



Adjustment:

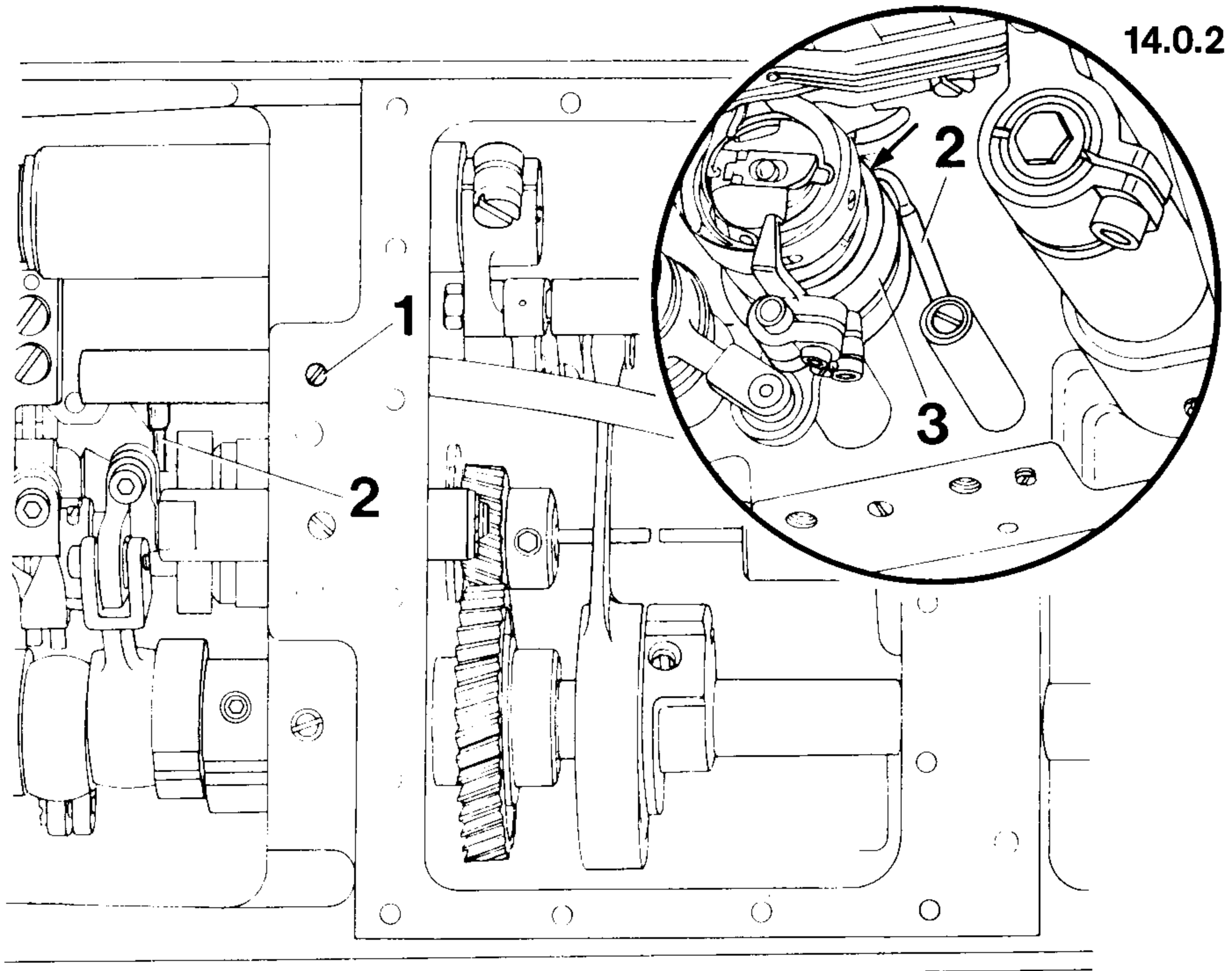
- 13.1 Loosen screws **1** a little.
- .2 Turn balance wheel until needle bar is at bottom dead center.
- .3 Push 1.8-mm-thick gauge blade with its cutout onto needle bar so that it contacts lower bush.
- .4 Push C-clamp up against gauge blade and tighten its screw.
- .5 Pull out gauge blade and turn balance wheel in normal direction of rotation until C-clamp contacts lower needle bar bush.
- .6 To facilitate adjustment, insert small screwdriver in slot of clamp of opener **2**.
- .7 **Turn opener eccentric **3** until opener **2** is at its right point of reversal.**
- .8 In this position, tighten accessible screw **1**, making sure there is a small clearance between eccentrics **3** and **4**.
- .9 Remove C-clamp from needle bar and tighten second screw **1**, too.
- .10 Check this adjustment (see "Setting") and pull screwdriver out of clamp slot.



## 14 Oil tube and oil thrower

Setting:

Oil tube 2 must be in the hole of oil thrower 3.



14.0.1

Adjustment:

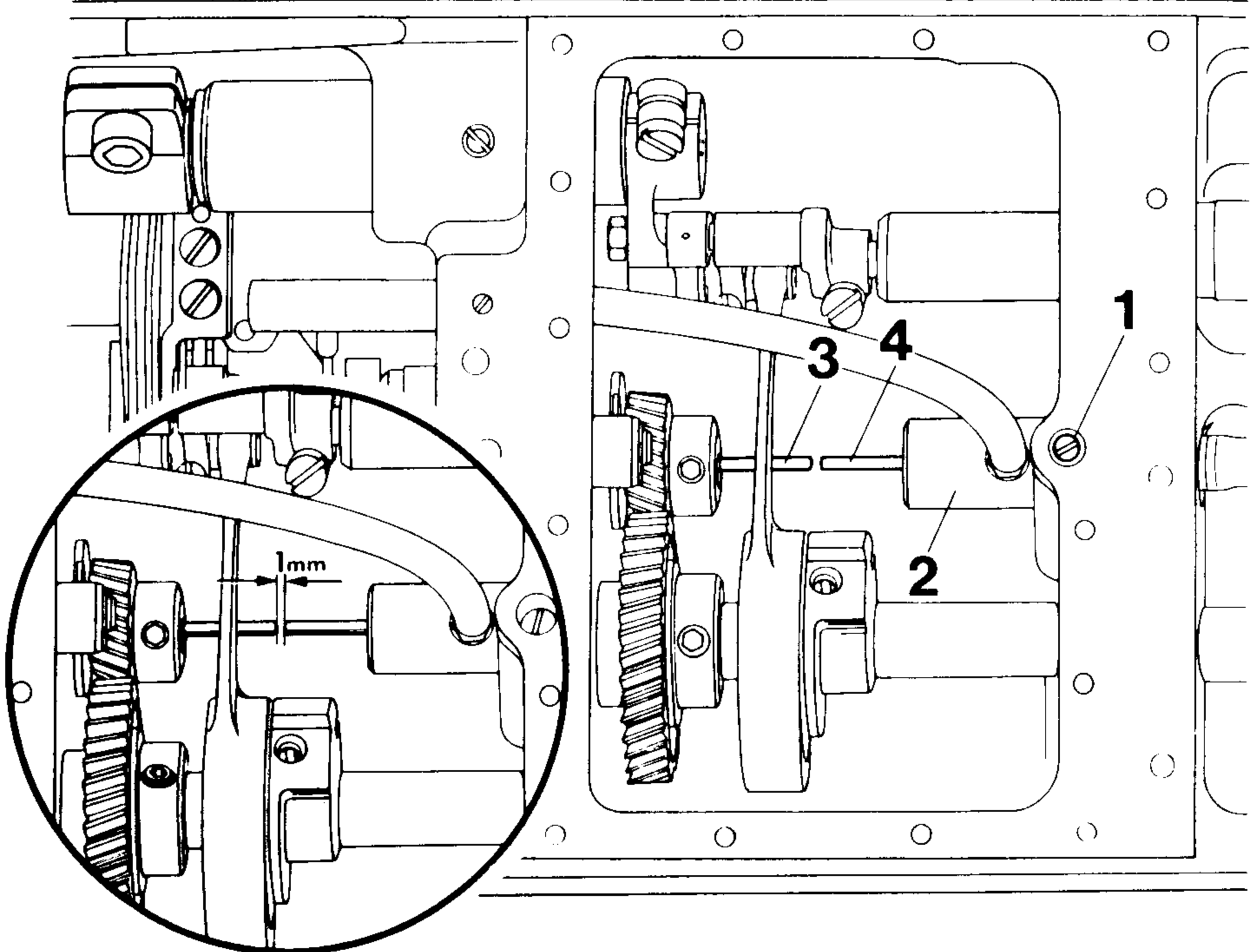
- 14.1 **Loosen screw 1 and insert oil tube 2 in the hole of oil thrower 3 (see arrow in Fig. 14.0.2). If necessary, turn oil thrower 3 accordingly.**
  - .1.1 On subcl. -900/.. machines the oil thrower can only be turned after loosening its screws.
  - .2 Tighten screw 1.
  - .3 Check this adjustment (see "Setting").

**15 Oil check valve**

Setting: There must be a clearance of **1.0 mm** between actuating rod **3** and valve rod **4**.

Note: On machines which have been in operation for a longer time it is recommended to replace the oil pad (No. 91-171951-05) and fill in about 100 c.c. of fresh oil (No. 280-1-120144) before the gearcase is closed.

**15.0.1**



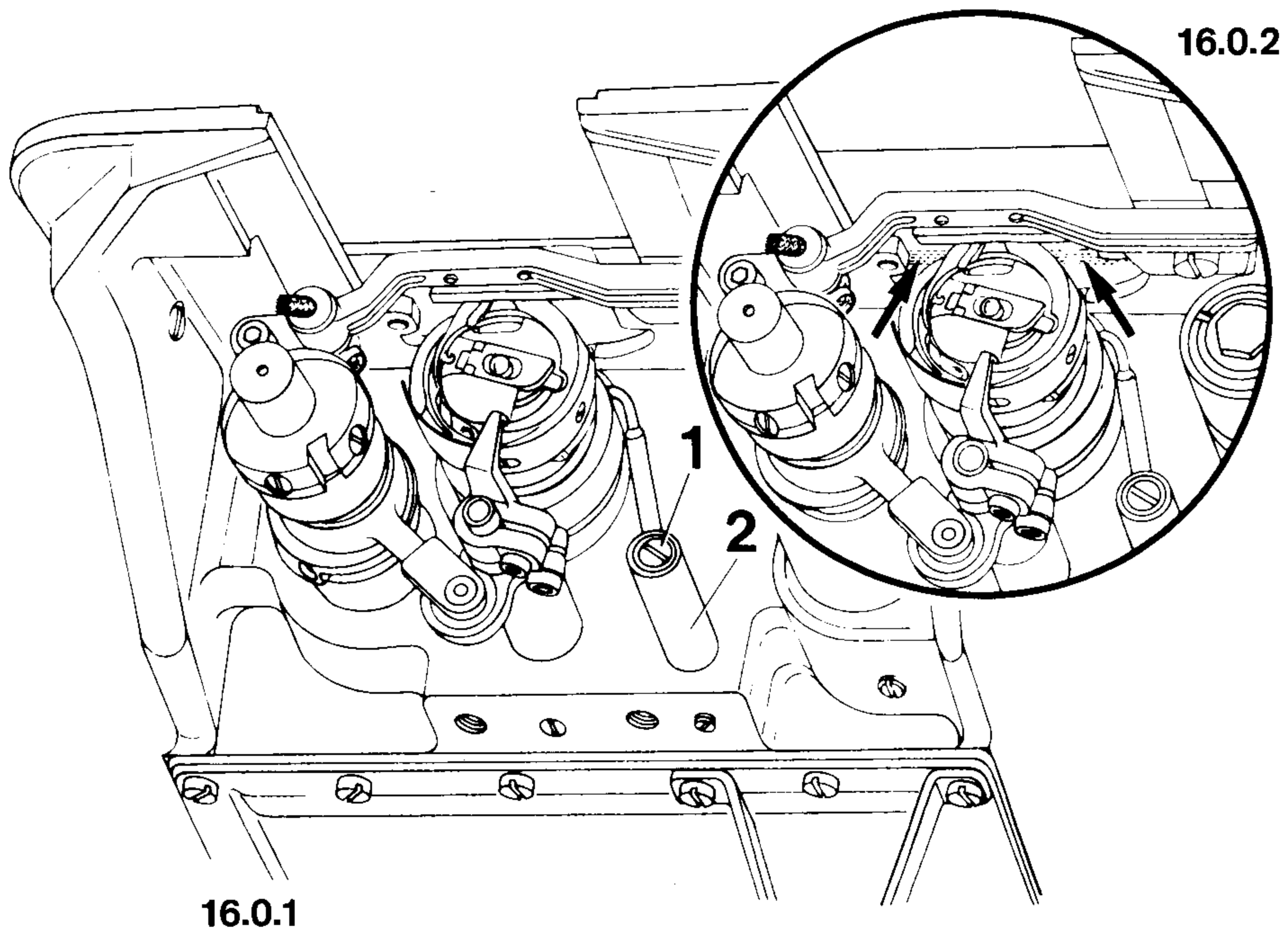
**15.0.2**

Adjustment:

- 15.1 Loosen screw **1**.
- .2 Push actuating rod **3** into centrifugal governor as far as it will go.
- .3 Push valve rod **4** into oil check valve **2** until a resistance is felt.
- .4 **Reposition oil check valve 2 until there is a clearance of 1.0 mm between actuating rod 3 and valve rod 4.**
- .5 In this position, tighten screw **1**.
- .6 Check this adjustment (see "Setting").
- .7 Place oil pad between oil tube and gears.
- .8 Clean gasket face on gearcase and gasket of gearcase cover.
- .9 Replace gearcase cover and simultaneously screw on two machine legs, tightening screws of cover crosswise.

## Setting:

After the machine has run at full speed for about ten seconds, a fine trace of oil must appear on a piece of white paper placed over the feed slot above the hook raceway (see arrows in Fig. 16.0.2).



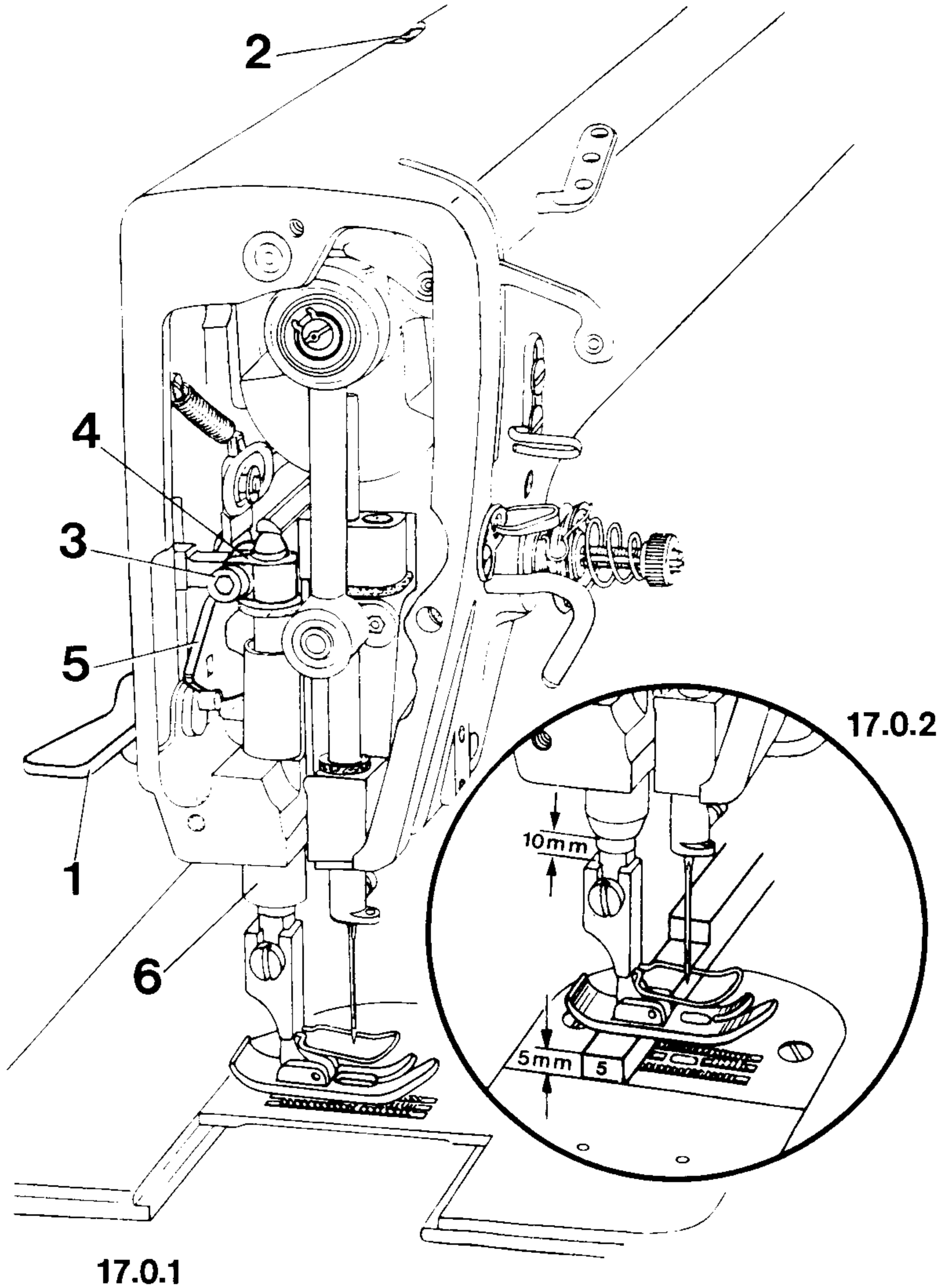
## Adjustment:

- 16.1 Check oil level in oil sight glass and, if necessary, top up reservoir until oil level is in line with upper mark. Use oil No. 280-1-120144.
- .2 Screw in regulating screw 1 of oil regulating valve 2 as far as it will go, and then back by about three turns.
- .3 Start machine and run it until sewing hook starts to emit oil.
- .4 Screw in regulating screw 1 completely and then back by  $\frac{1}{8}$  turn.
- .5 Let machine run about 1 minute.
- .6 Place piece of paper on feed slot.
- .7 **Let the machine run about ten seconds. Then check to see if a fine trace of oil has appeared on the paper opposite the hook raceway.**
- .8 If too much oil is emitted, screw regulating screw 1 in a little; or, if too little oil is emitted, screw it out somewhat.
- .9 Check this adjustment (see "Setting").

**Clearance between presser foot and needle plate**

Setting:

With presser bar lifter 1 raised, there must be a clearance of **5.0 mm** between needle plate and presser foot. When the presser foot rests on the needle plate there must be a clearance of **10 mm** between presser foot and presser bar bush 6.



Note:

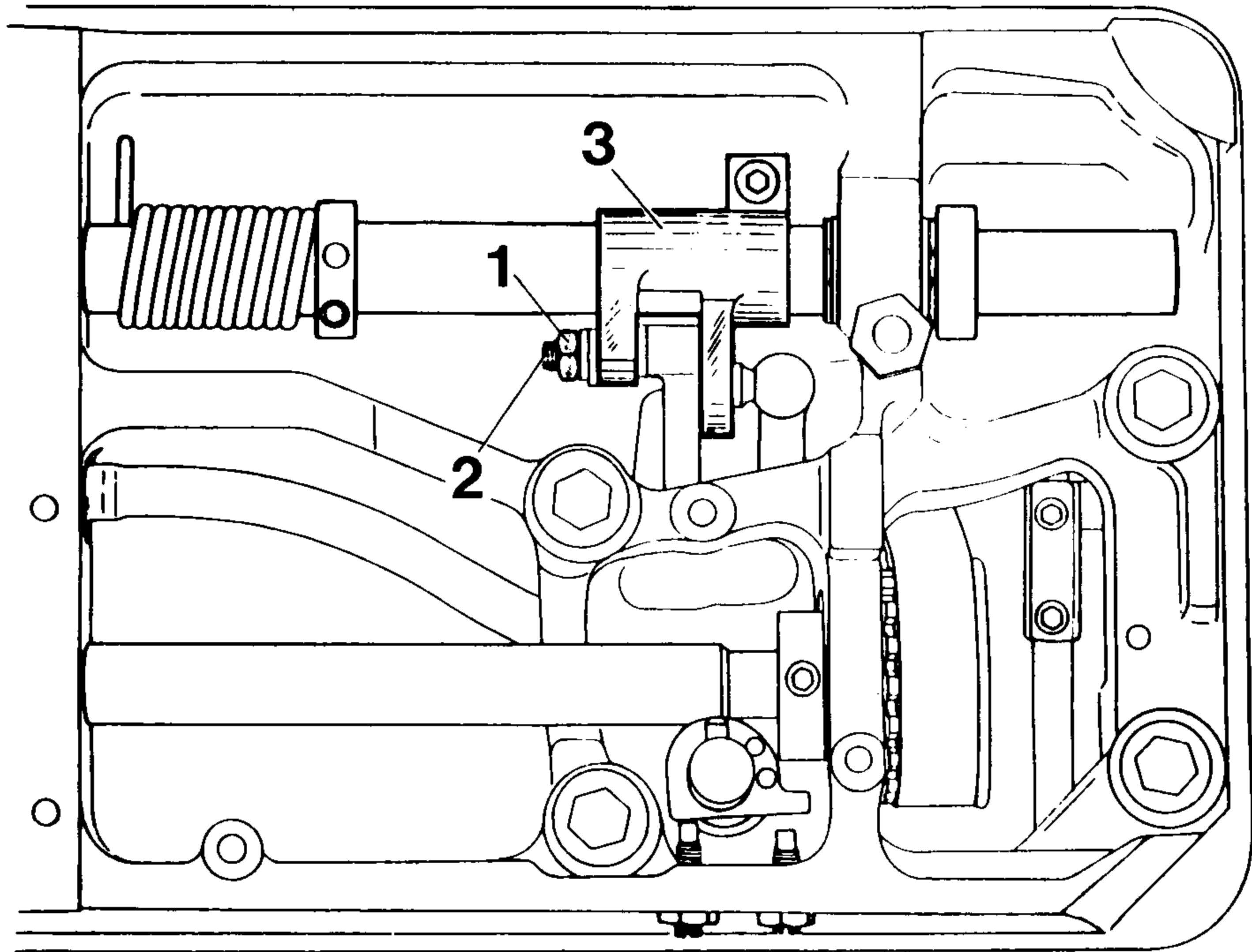
When the presser foot has been raised to its highest point either by fully operating the knee lever or by the automatic presser foot lift -900/..., the presser foot shank must not contact bush 6.

Adjustment:

- 17.1 Screw on feed dog and needle plate, making sure feed dog moves freely in its slots.
- .2 Screw on presser foot and lower presser bar lifter 1 to rest presser foot on needle plate.
- .3 Reduce pressure on presser bar by turning regulating screw 2 counterclockwise until pressure is just sufficient to hold presser foot down on needle plate.
- .4 Push 5-mm-thick gauge blade gauge under presser foot so that it is positioned under presser foot fulcrum.
- .5 Loosen screw 3.
- .6 Raise presser bar lifter 1.
- .7 Turn balance wheel until needle point is down in needle hole of presser foot.
- .8 Adjust presser foot so that needle is exactly centered in needle hole of presser foot.
- .9 **With presser foot in this position, push presser bar lifting bracket 4 downwards onto raised lifting lever 5 and tighten screw 3.**
- .10 Remove gauge from under presser foot and lower foot onto needle plate.
- .11 Loosen retaining screw of bush 6 (accessible through hole below lifting lever 1).
- .12 **Push presser bar bush 6 up or down until there is a clearance of about 10 mm between lower edge of bush and presser foot.**
- .13 In this position, tighten retaining screw of bush 6 securely.
- .14 Check this adjustment (see "Setting").

Setting:

With the machine set for its longest stitch, both the feed dog and the needle must make feed strokes of the same length when the balance wheel is turned.



## 18.0.1

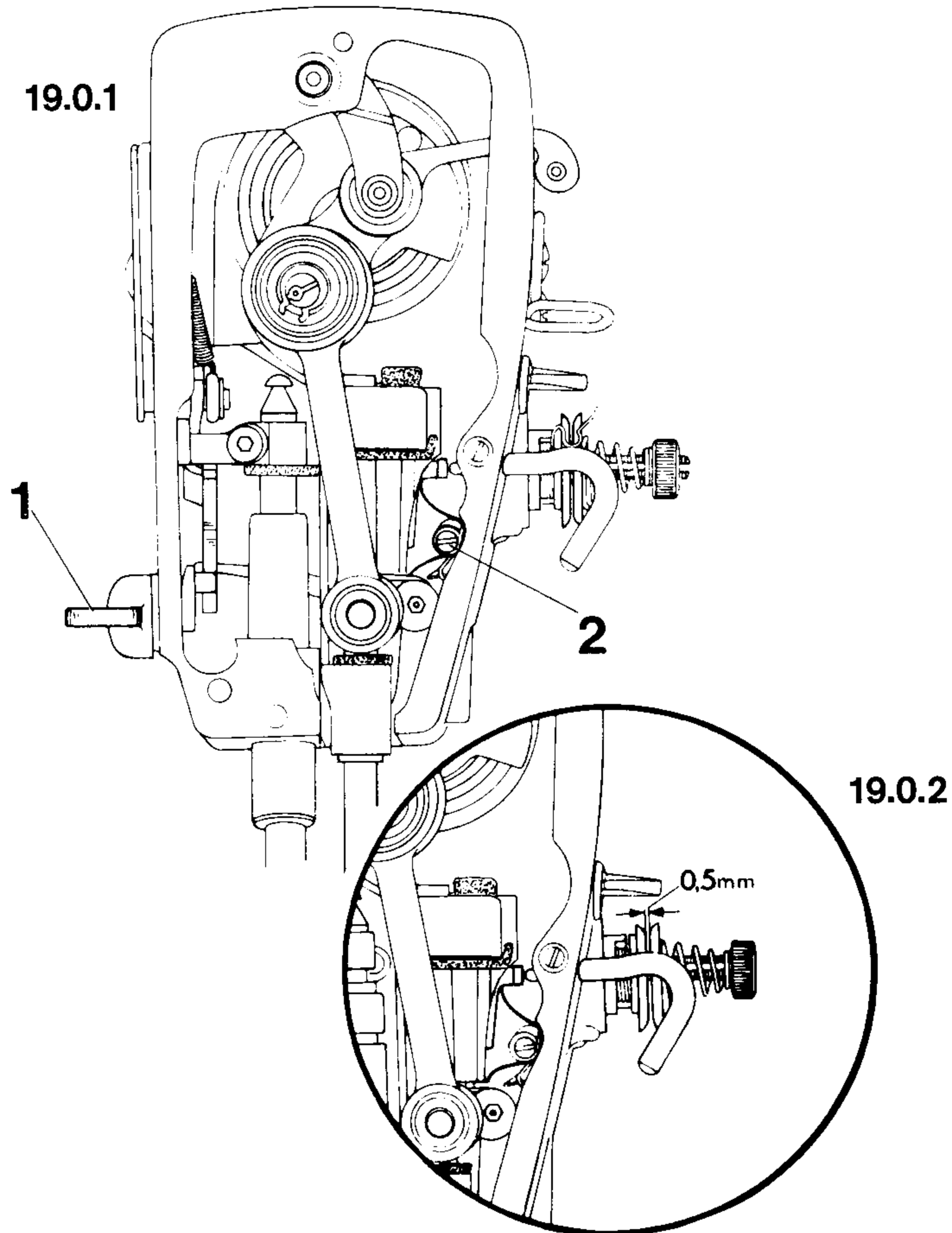
Adjustment:

- 18.1 Set machine for longest stitch.
- .2 Loosen nut 1.
- .3 **Move pivot pin 2 toward regulating shaft to decrease needle feed stroke, and in opposite direction to increase it.**
- .4 Tighten nut 1.
- .5 Check needle-feed neutral setting (see Section 6) and adjust, if necessary.
- .6 Check this adjustment (see "Setting").

## 19 Tension release mechanism

Setting: With presser bar lifter 1 raised, both tension discs must be at least **0.5 mm** apart.

Note: When using thicker needle threads, the tension discs must be correspondingly wider apart.



### Adjustment:

- 19.1 Raise presser foot by means of presser bar lifter 1.
- .2 **In this position, loosen lock screw of eccentric pin 2 (accessible through assembly hole on opposite side of machine head) and turn pin so that there is a clearance of at least 0.5 mm between both tension discs.**
- .3 In this position, tighten lock screw of eccentric pin 2.
- .4 Lower presser foot onto needle plate and check to make sure tension is fully activated.
- .5 Check this adjustment (see "Setting").

## 20 Thread check spring and thread regulator

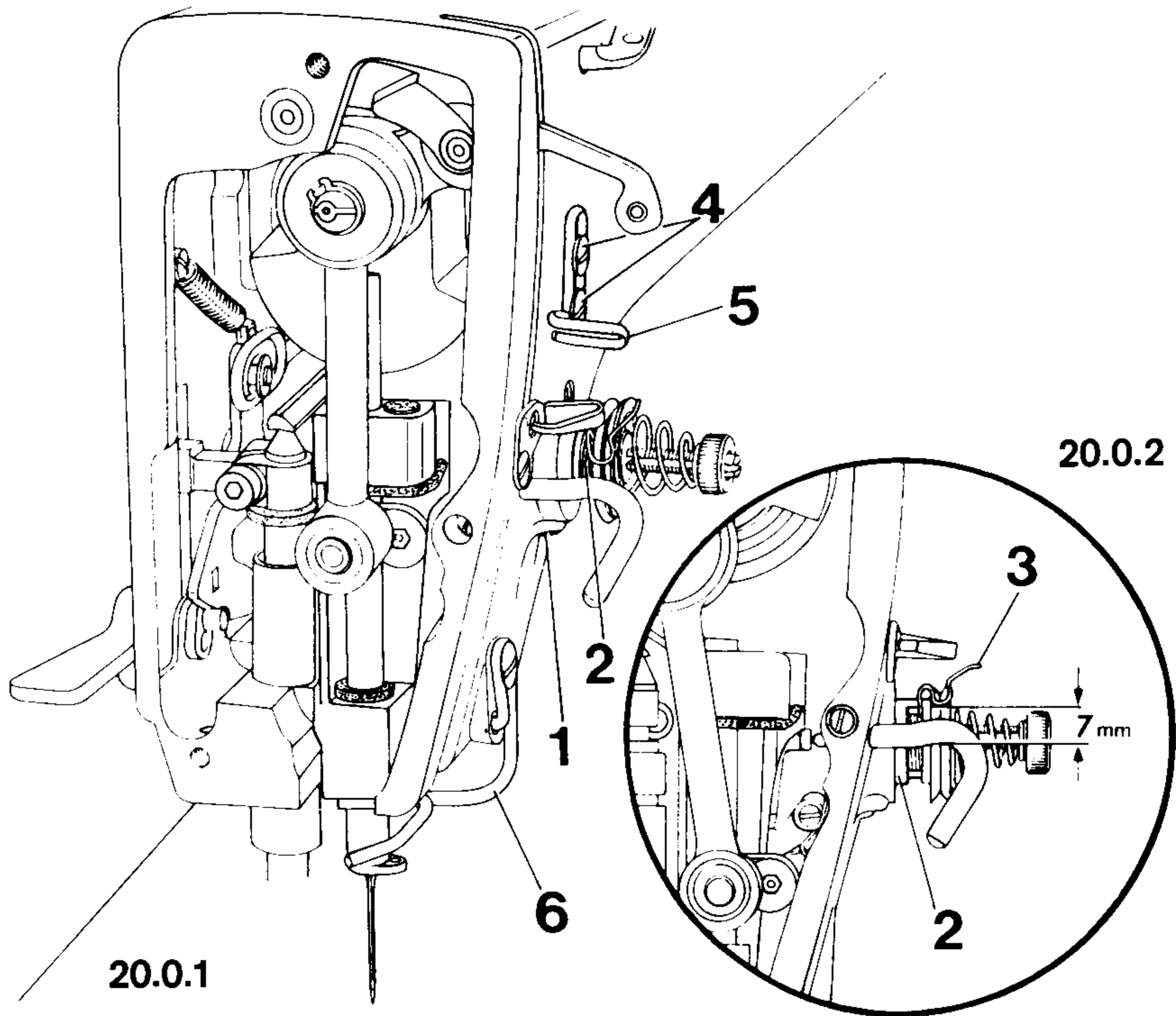
Setting:

The stroke of thread check spring **3** must be approx. **7 mm**.

Note:

The stroke of thread check spring **3** and the position of thread regulator **5** are dependent on the type of thread and material used and have to be adjusted according to the appearance of the seam.

Thread regulator **5** in its elongated hole must be positioned so that thread check spring **3** has moved by about 2 mm when the needle thread loop is at its largest.



Adjustment:

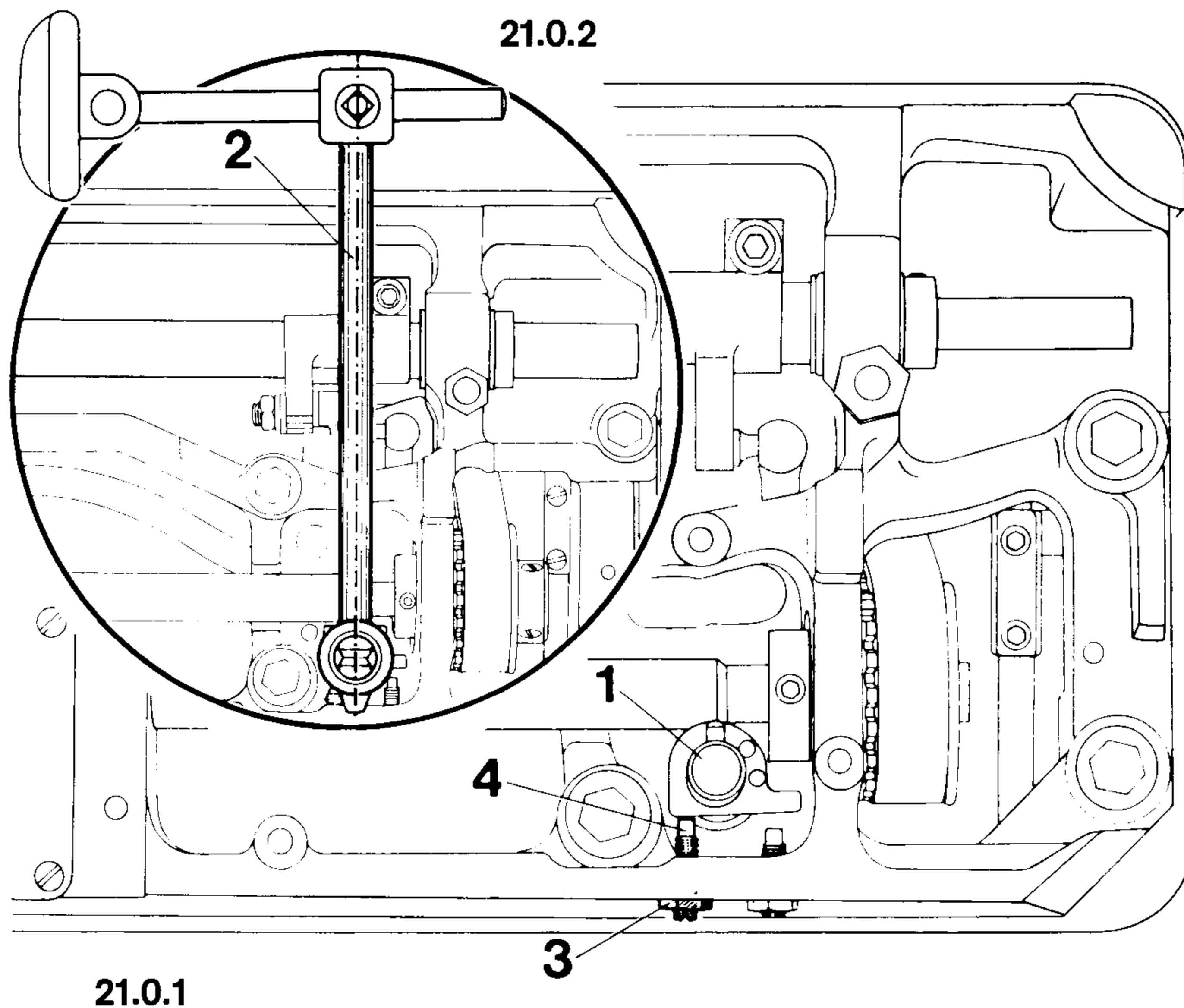
- 20.1 Loosen screw **1**.
- .2 **Turn tension barrel **2** until stroke of thread check spring **3** is approx. 7.0 mm.** (Special sewing operations may make it necessary to set thread check spring for a shorter or longer stroke).
- .3 In this position, tighten screw **1**.
- .4 Check this adjustment (see "Setting").
- .5 Loosen screws **4**, position thread regulator **5** according to "Note", and tighten screws **4** again.
- .6 Screw on thread guide **6**.



## 21 Knee lever rest position

Setting:

When at rest, knee lever connecting rod **2** must be roughly at right angles to the front edge of the bedplate.

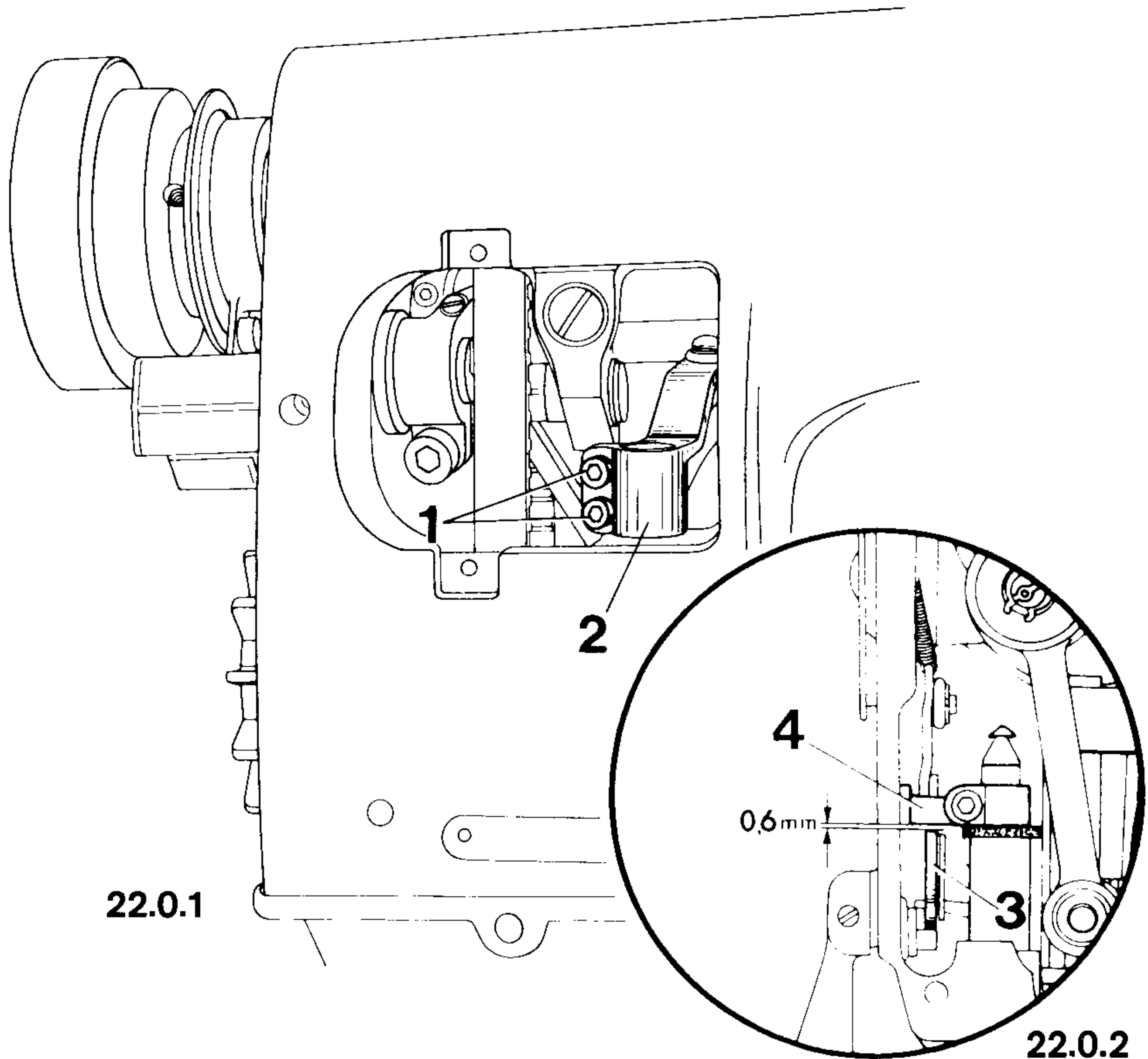


Adjustment:

- 21.1 Raise presser foot by means of presser bar lifter.
- .2 Push knee lever joint onto knee lever shaft **1** and let connecting rod **2** snap in place in the joint.
- .3 Loosen locknut **3**.
- .4 **Turn stop screw **4** until connecting rod **2** is roughly at right angles to front edge of the bedplate.**
- .5 In this position, lock stop screw **4** by tightening nut **3**.
- .6 Remove knee lever.

Setting:

When the presser foot is down on the needle plate, there must be a clearance of approx. **0.6 mm** between lifting lever **3** and lifting bracket **4**.



Adjustment:

- 22.1 Set needle bar at bottom dead center and rest presser foot on needle plate.
- .2 Remove rear arm cover.
- .3 Loosen screws 1.
- .4 **Adjust crank 2 so that there is a clearance of approx. 0.6 mm between lifting lever 3 and lifting bracket 4.**
- .5 In this position, tighten screws 1, making sure vertical knee lever shaft has no end play.
- .6 Check this adjustment (see "Setting").

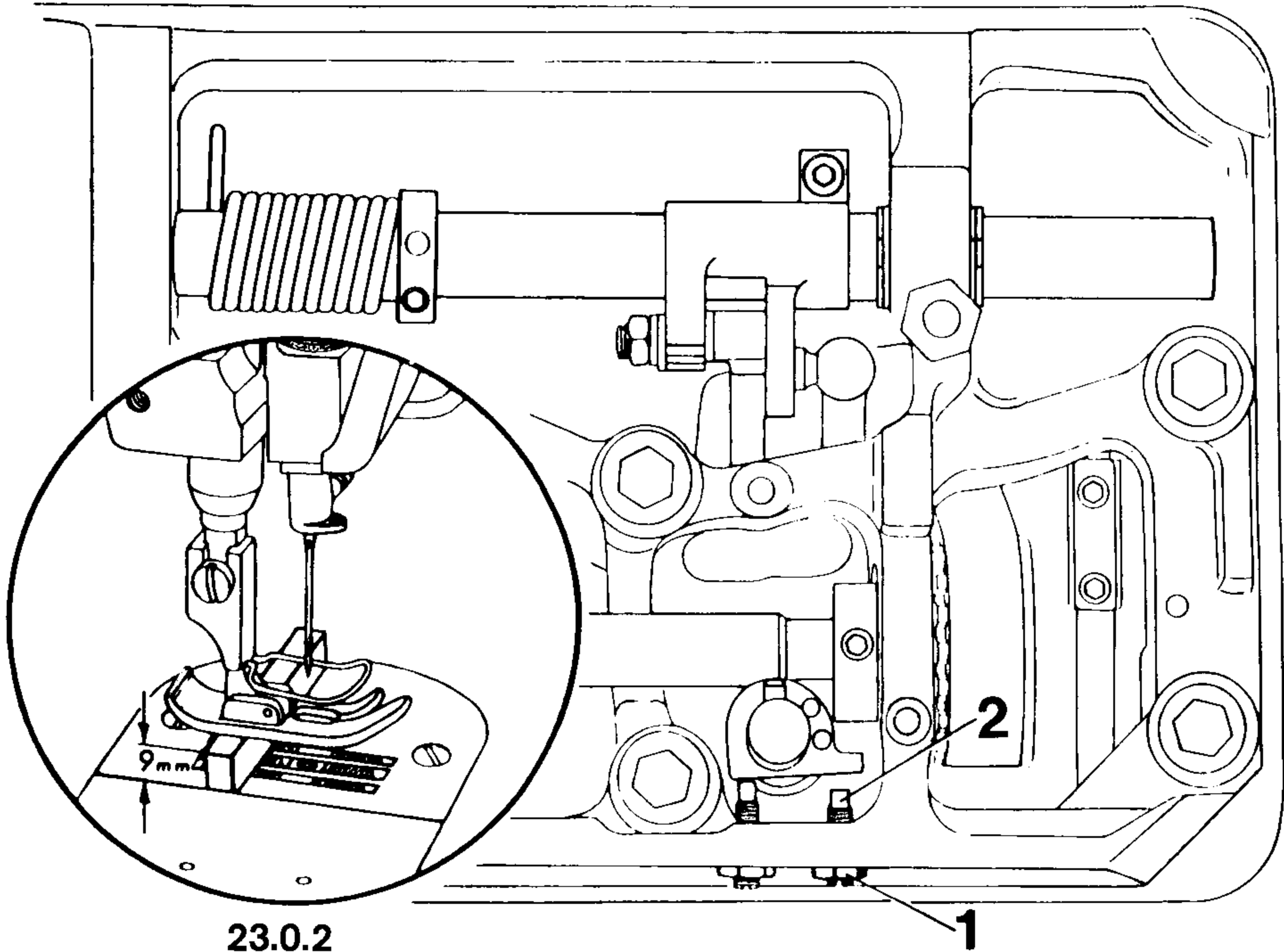
## 23 Knee lever stroke limitation

Requirement: The presser foot must be raised.

Setting:

When the knee lever is fully operated, the presser foot must be lifted off the needle plate by a little more than **9 mm**, and the presser bar lifter must drop by its own weight.

### 23.0.1



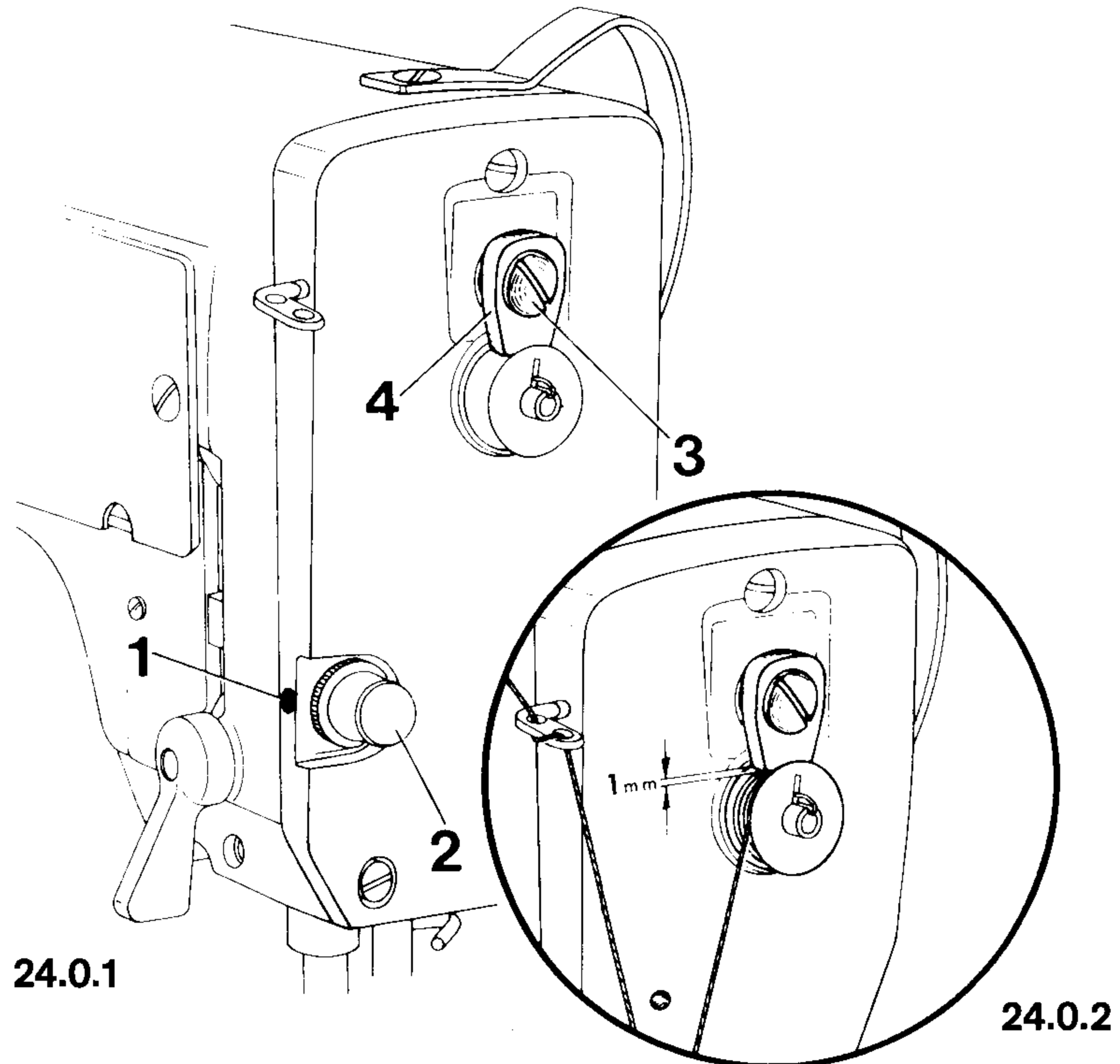
### 23.0.2

Adjustment:

- 23.1 Loosen locknut 1.
- .2 Screw out stop screw 2 by a few turns.
- .3 Raise presser bar lifter and insert knee lever.
- .4 Place a 9-mm-thick object (e. g. bobbin) under presser foot and lower presser bar lifter again.
- .5 Push knee lever to right until resistance is felt; during this motion, however, presser foot must not be lifted off the gauge.
- .6 **Hold knee lever in this position and screw in stop screw 2 as far as it will go, then out again by half a turn. Lock stop screw 2 by tightening nut 1.**
- .7 Remove 9-mm-thick object from under presser foot.
- .8 Check this adjustment (see "Setting").
- .9 Screw on face plate.

Setting:

The bobbin winder must wind the thread evenly on the bobbin and must stop automatically when the thread has reached a point about **1.0 mm** below its rim.

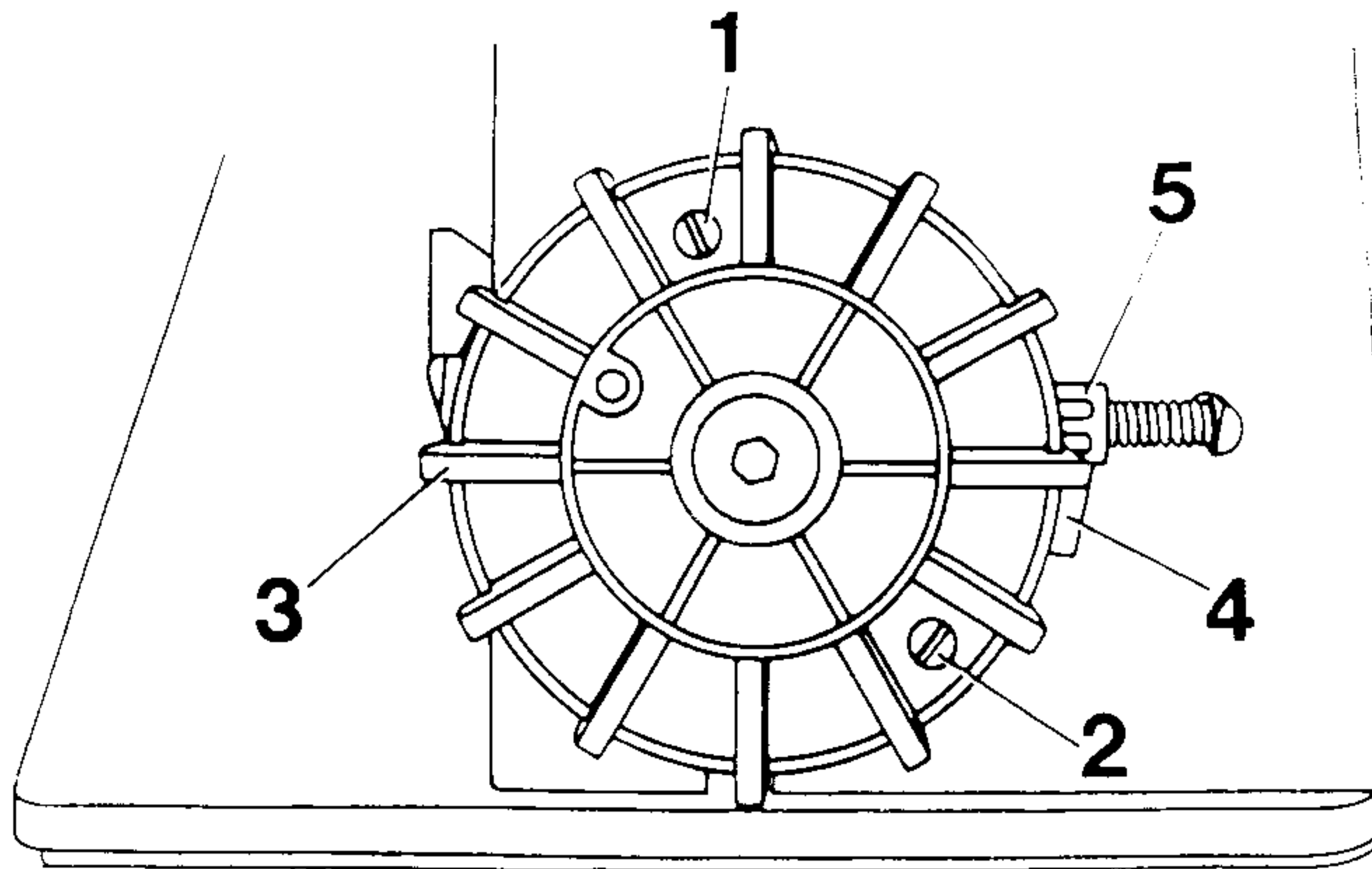


Adjustment:

- 24.1 Place bobbin on winder spindle, thread machine for bobbin winding, engage bobbin winder and start machine.
- .2 Loosen screw 1.
- .3 Adjust position of thread retainer stud 2 until thread is wound evenly on bobbin.
- .4 Tighten screw 1.
- .5 Loosen screw 3.
- .6 If bobbin is not full enough, push stop latch 4 upwards, if bobbin is too full, push it downwards.
- .7 Tighten screw 3.
- .8 Check this adjustment (see "Setting").

25

### Stitch length limitation



25.0.1

Adjustment:

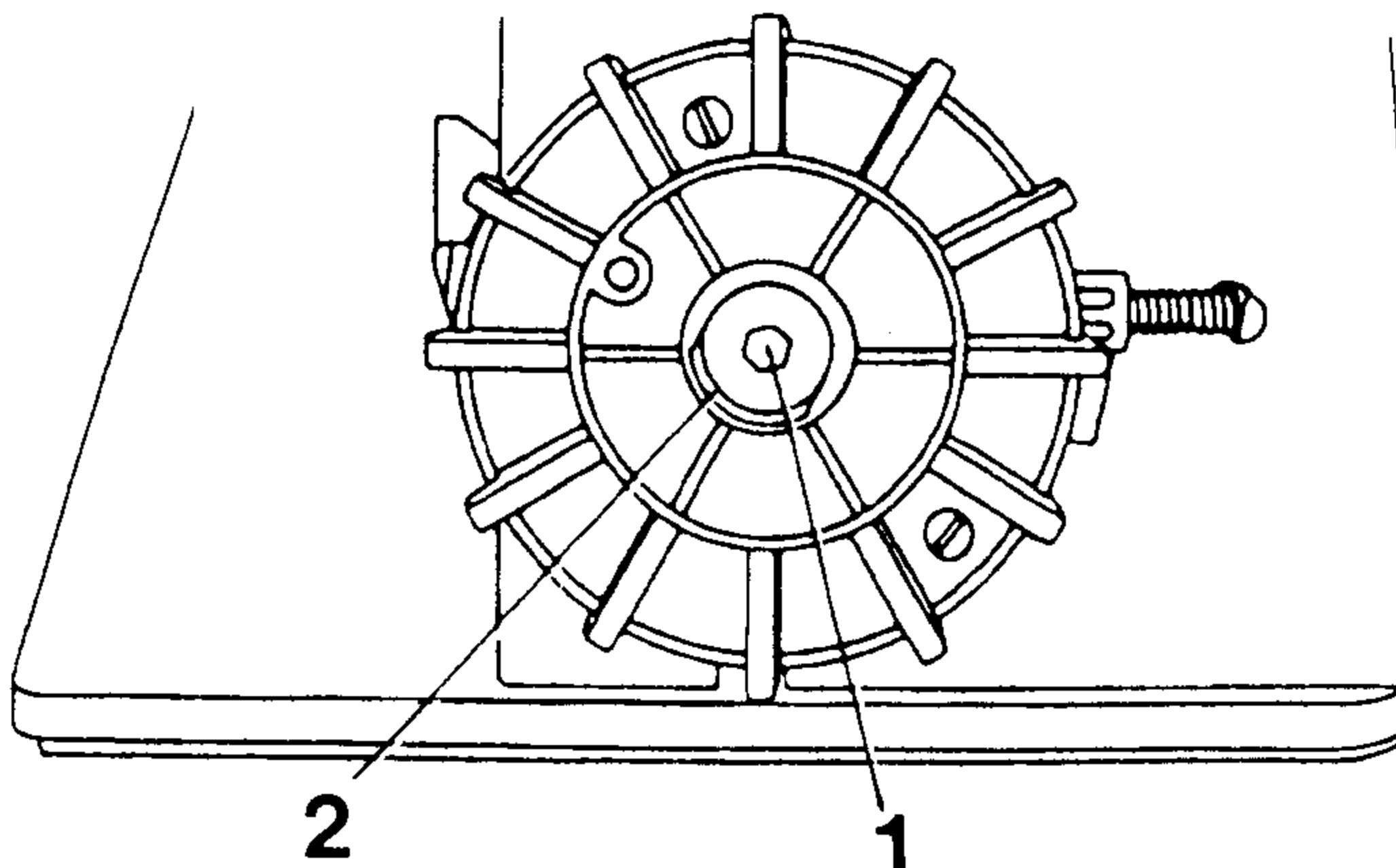
- 25.1 Loosen screws 1 and 2.
- .2 Set desired maximum stitch length on feed regulator wheel.
- .3 **Turn limitation ring so that its lug 4 contacts stop 5 from below.**
- .4 In this position, tighten screws 1 and 2.

26

### Stitch length adaption

Setting:

With the stitch length set at "3", forward and reverse stitches must be of equal length.



26.0.1

Adjustment:

- 26.1 Set stitch length "3".
- .2 Loosen screw 1.
- .3 **Turn bush 2, making sure that its lobe faces down, until forward and reverse stitches are equally long.**
- .4 In this position, tighten screw 1.
- .5 Check this adjustment (see "Setting").

**27 Final worksteps**

- 27.1 Screw on rear arm cover and belt guard.
- .2 Replace bed slide and insert knee lever in its joint.
- .3 Thread machine, place piece of fabric under presser foot and lower presser foot onto it.
- .4 Adjust presser foot pressure by turning regulating screw **2** clockwise (Fig. 17.0.1) so that fabric is fed properly even at top speed.

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