

**PFAFF**<sup>®</sup>

-748 / 16; 26;  
28; 29

# Service Manual

Innovation made by **PFAFF**

## **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.

## **Area of application:**

This manual applies to the following machine versions:

418-748/16	481-748/26	5642-748/28
438-748/16	483-748/26	5642-748/29
439-748/16	489-748/26	
	5483-748/26	
	5489-748/26	

## **Tools, gauges and other equipment needed for adjusting:**

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

Gauge (No. 61-111 642-37)

Adjustment pin, 6 mm dia., length about 70 mm

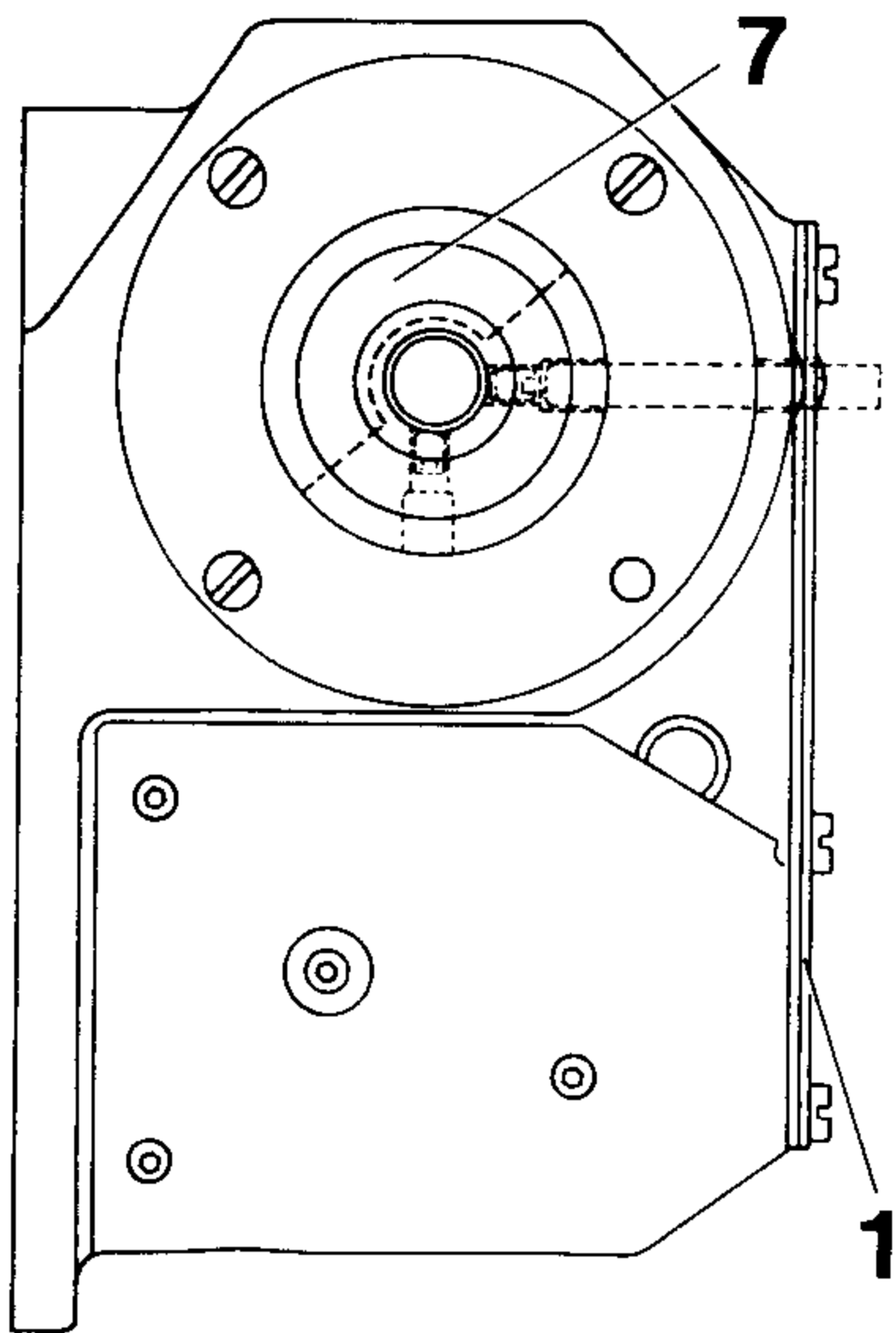
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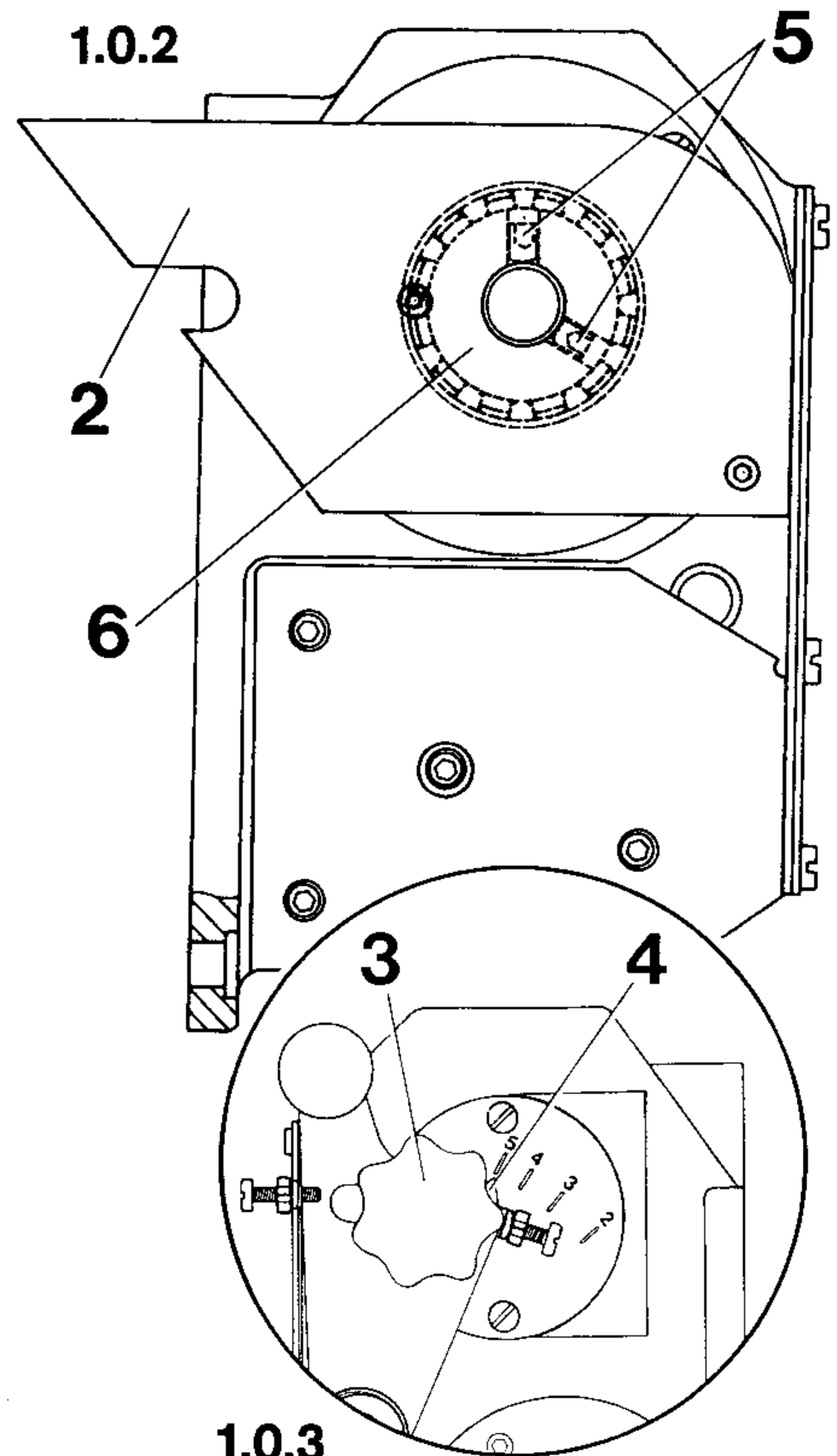
# 1 Puller feed eccentric

Setting:

The feeding motions of bottom feed dog and puller must be finished simultaneously.



1.0.1



1.0.3

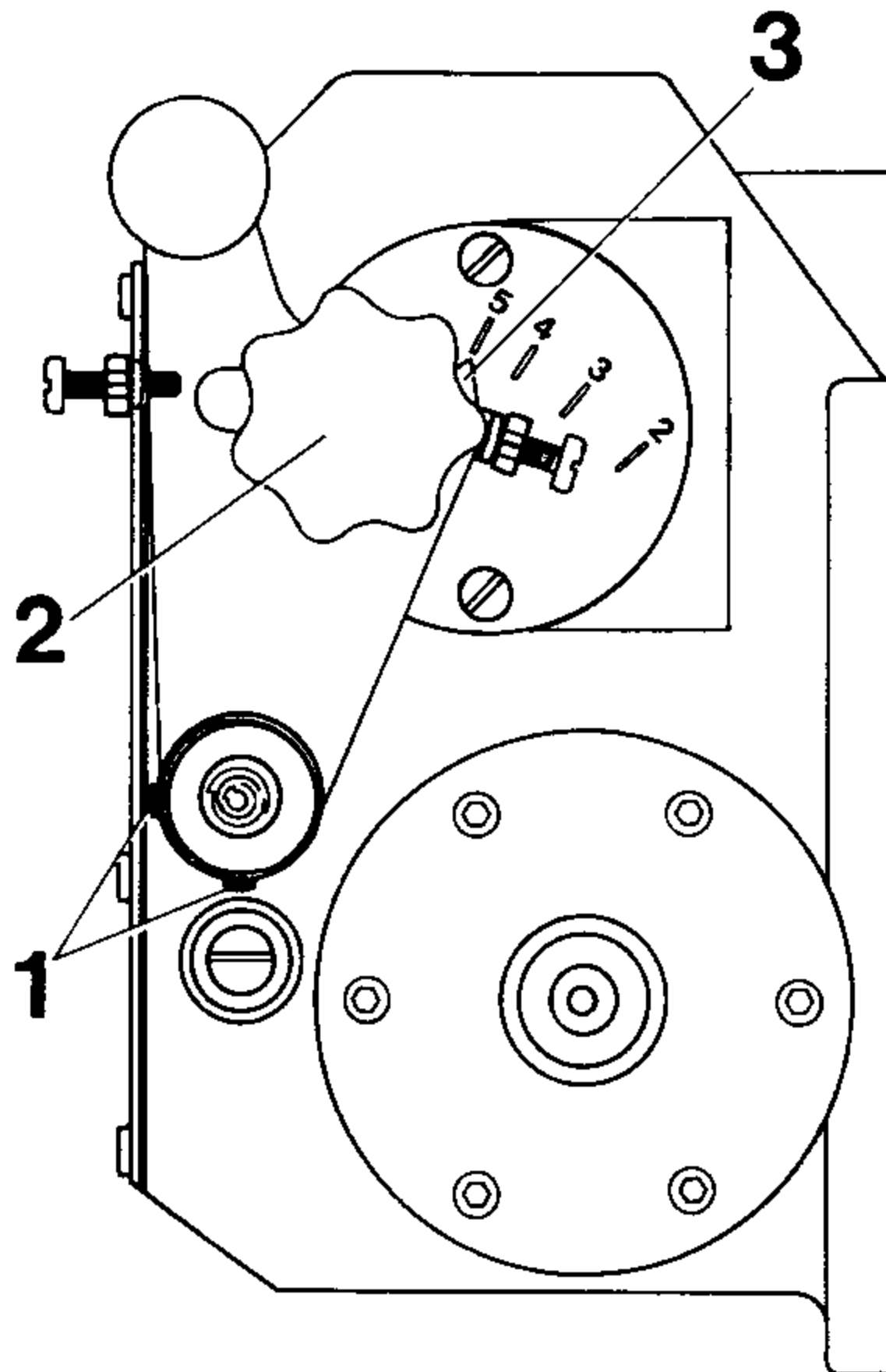
Adjustment:

- 1.1 Unscrew cover 1 and belt guard 2.
- .2 Loosen star grip nut 3, set pointer 4 at mark "5" and tighten star grip nut 3.
- .3 Loosen screws 5 so that belt pulley 6 can just be turned on its shaft.
- .4 **Turn balance wheel until bottom feed dog has finished its feed stroke.**
- .5 In this position, hold balance wheel tight and **turn eccentric 7 so that feed motion of puller is finished, too.**
- .6 Tighten screws 5.
- .7 Check this adjustment (see "Setting") and screw on belt guard 2.

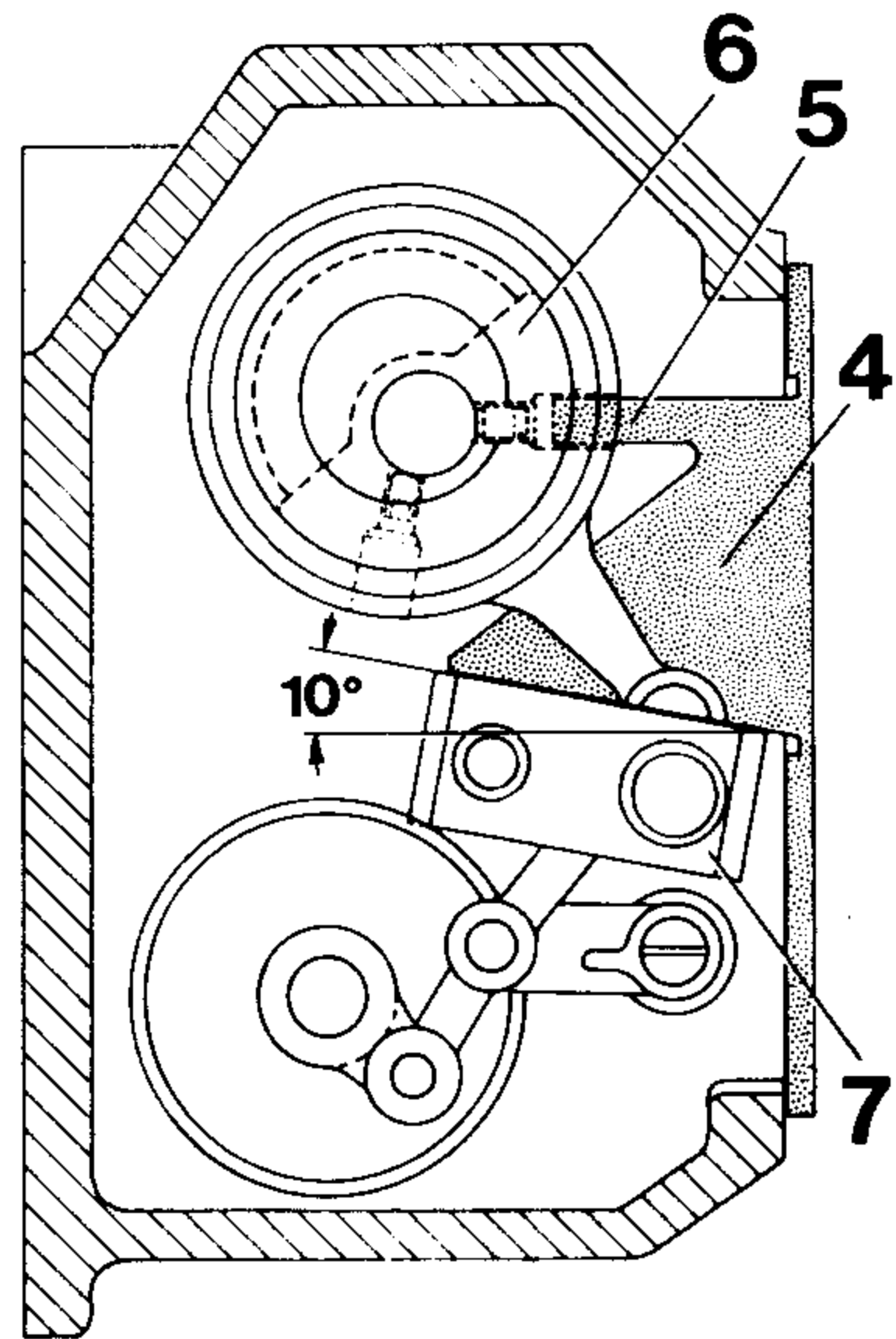
## 2 Puller feed advancing motion (basic setting)

Setting:

When pointer 3 is opposite mark "5", adjusting crank 7 must contact gauge 4 with its entire surface.



2.0.1



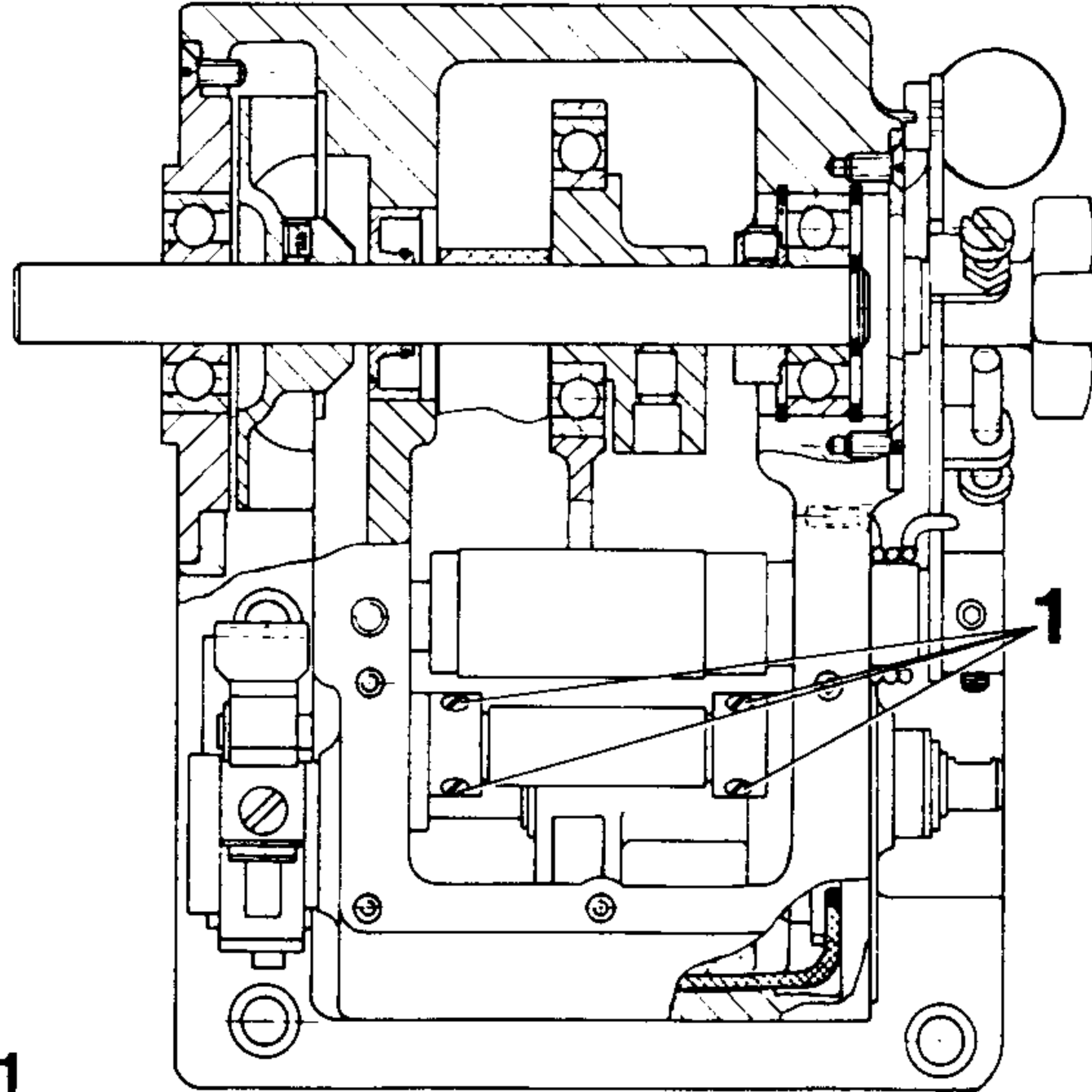
2.0.2

Adjustment:

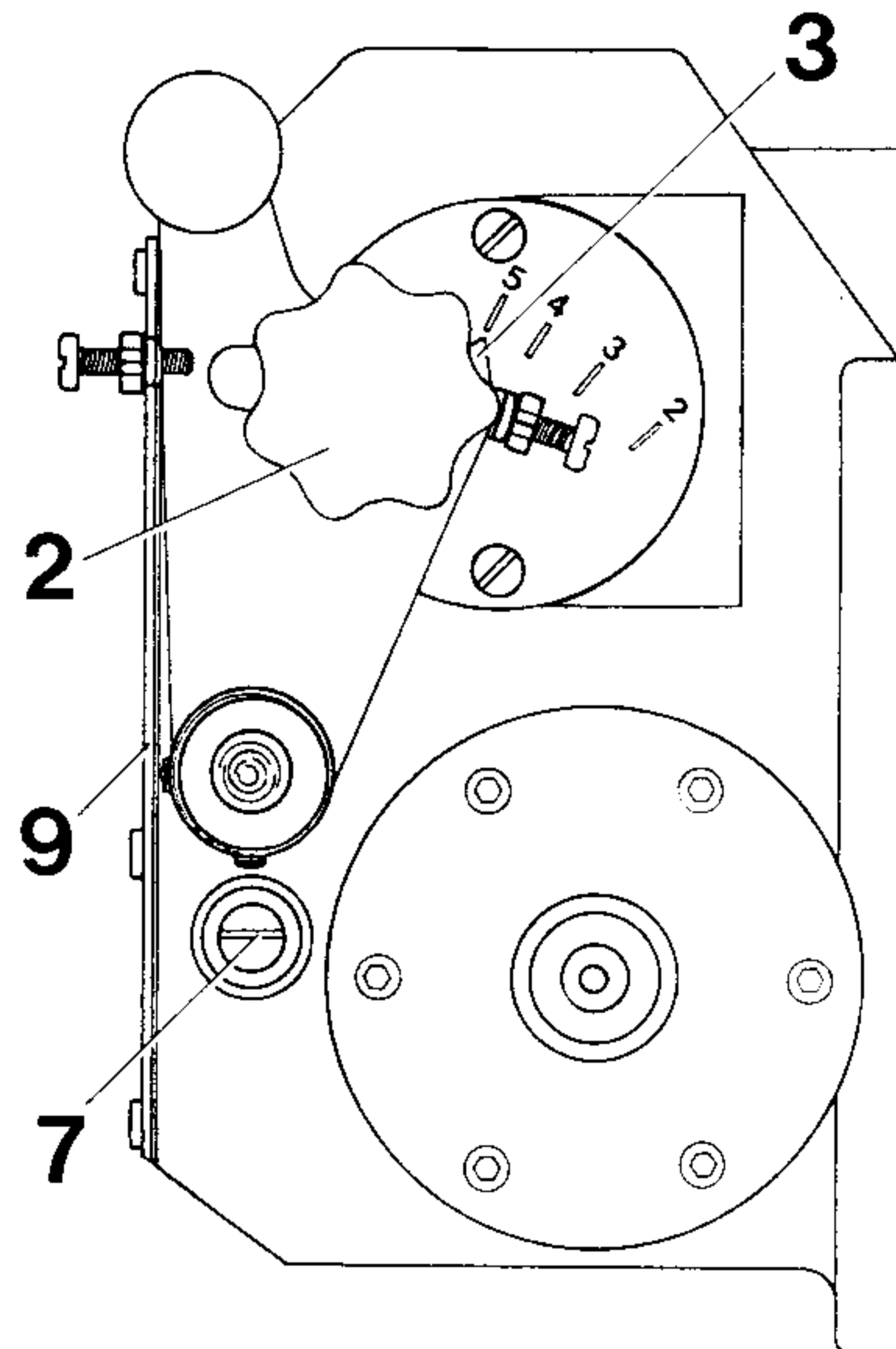
- 2.1 Loosen screws 1 and star grip nut 2.
- .2 **Set pointer 2 opposite mark "5" and tighten star grip nut 2.**
- .3 Apply adjustment gauge 4 in such a way that its pin 5 enters the first hole of eccentric 6 (as seen in the direction of rotation).
- .4 **Turn adjusting crank 7 so that it contacts adjustment gauge 4 with its entire length.**
- .5 Tighten screws 1 and remove adjustment gauge 4.

Setting:

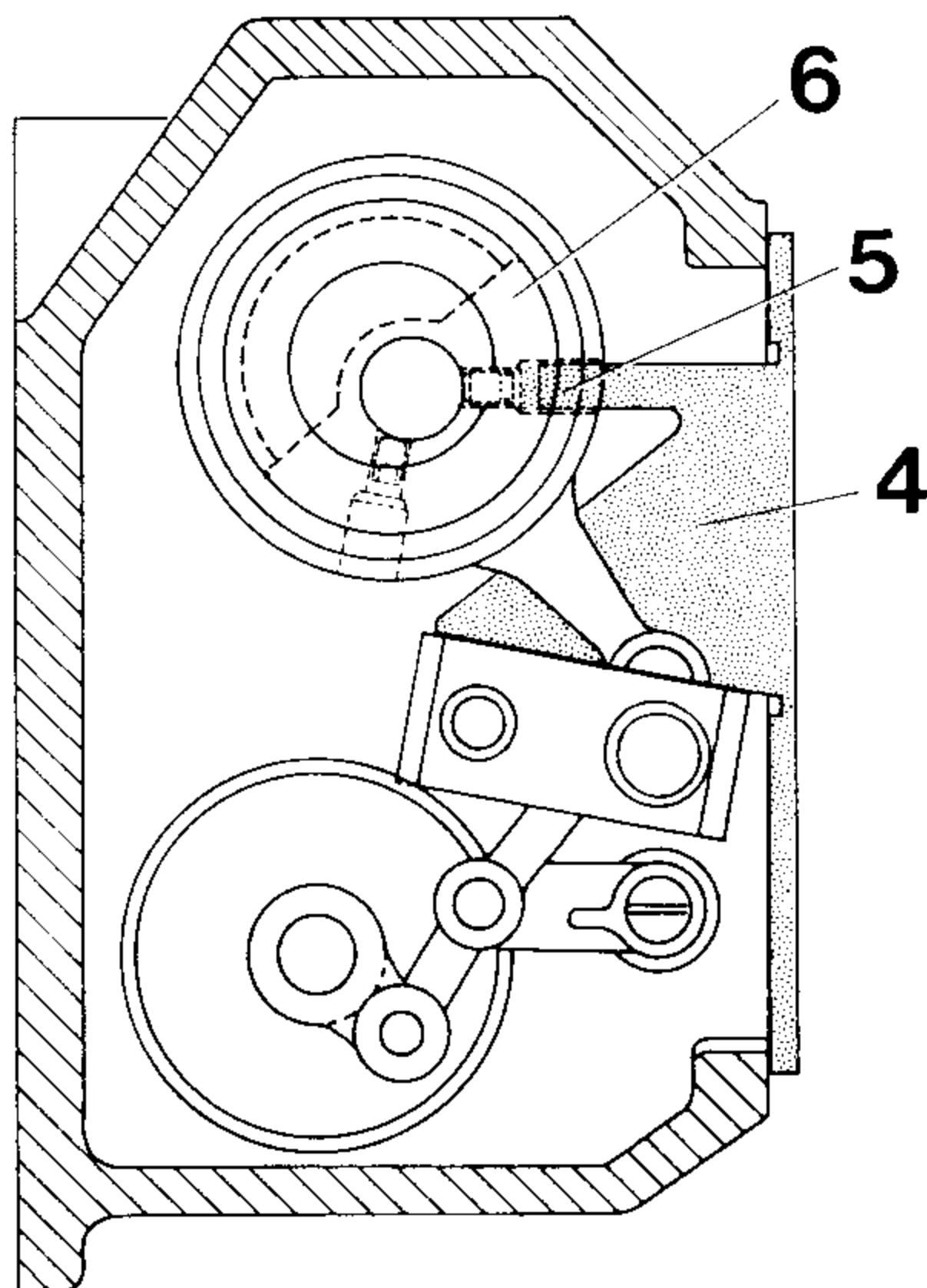
With pointer 3 opposite mark "5", and pin 5 of adjustment gauge 4 in the first hole of eccentric 6 (as seen in the direction of rotation), groove 7 must be horizontal.



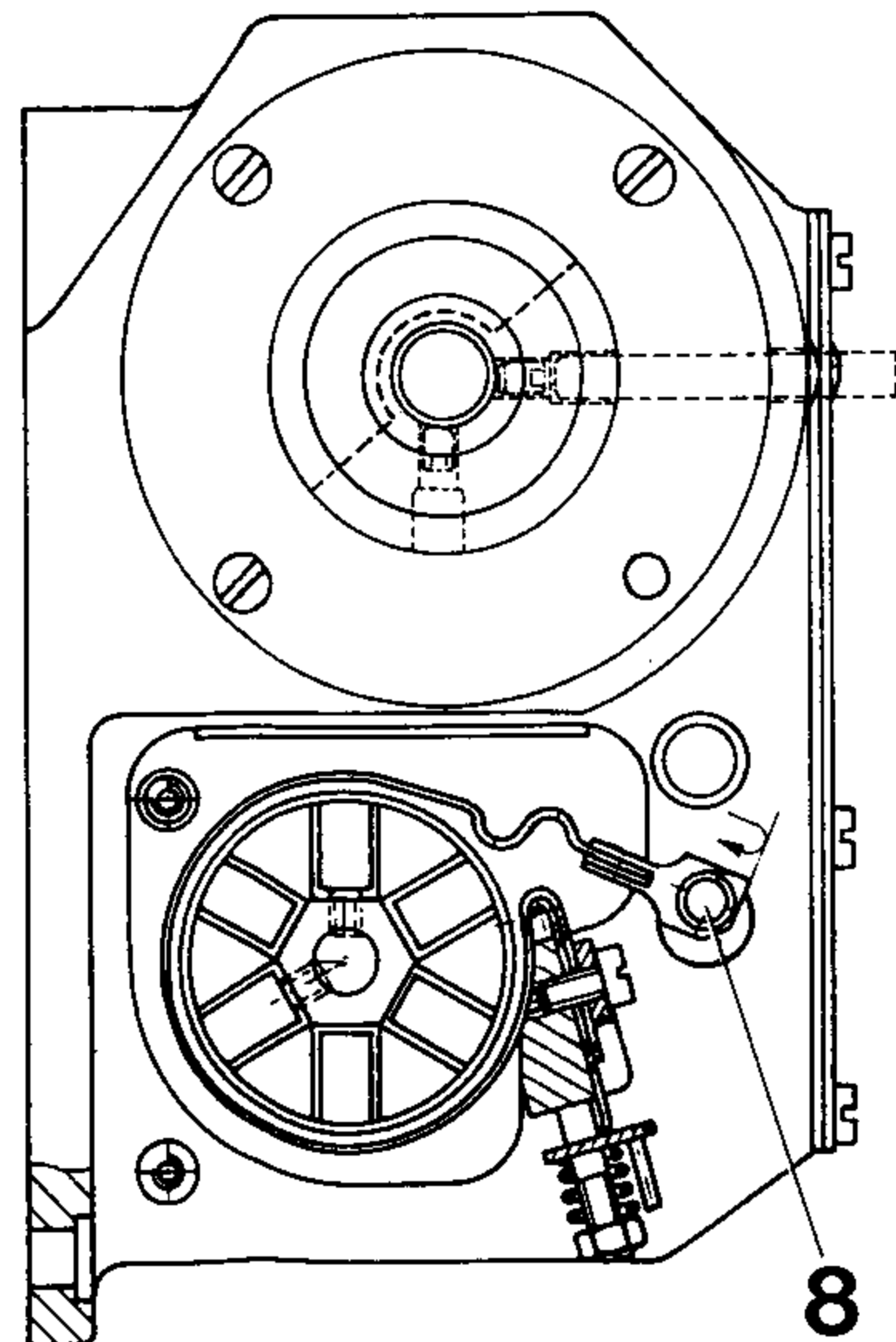
3.0.1



3.0.2



**3.0.3**



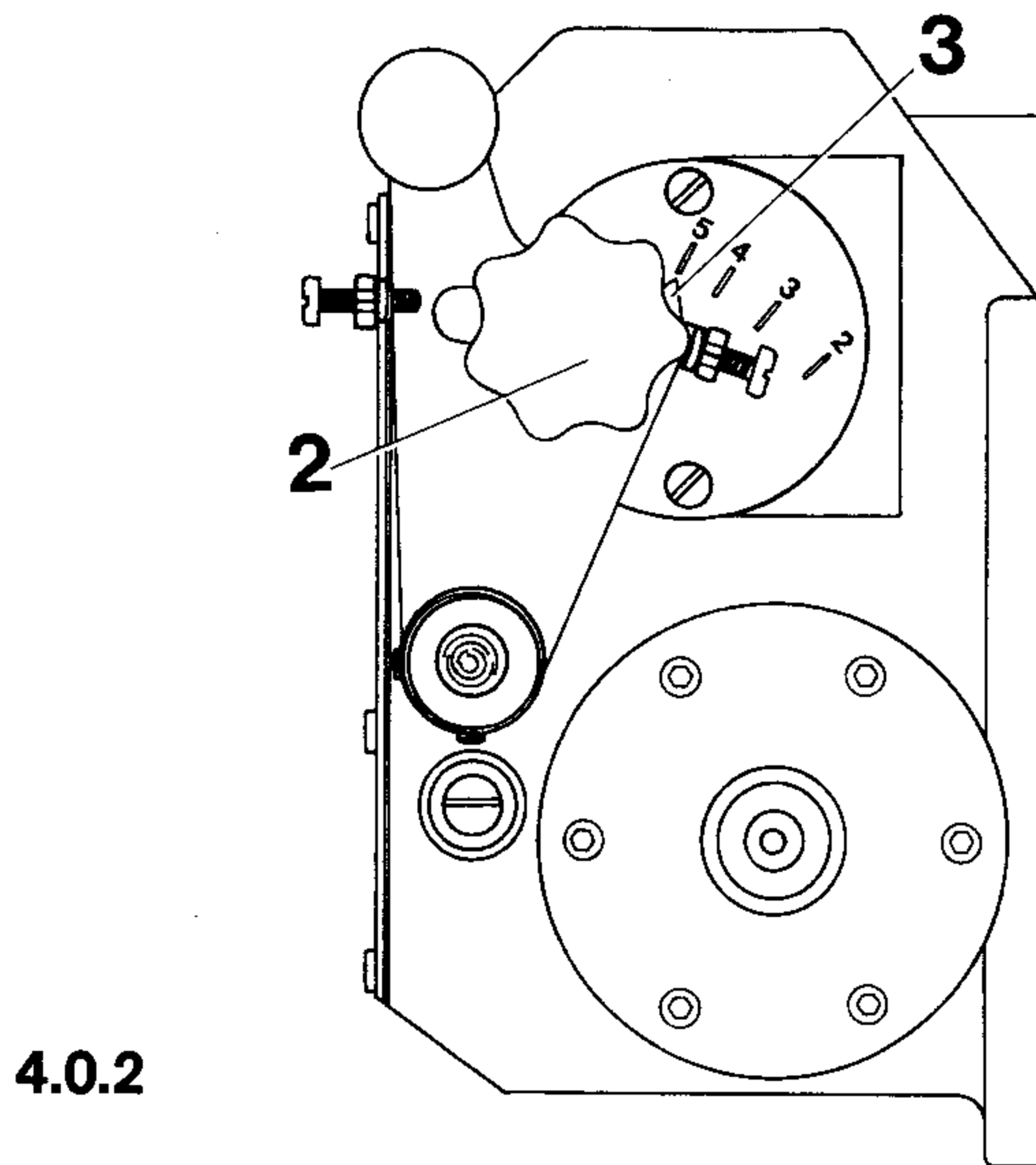
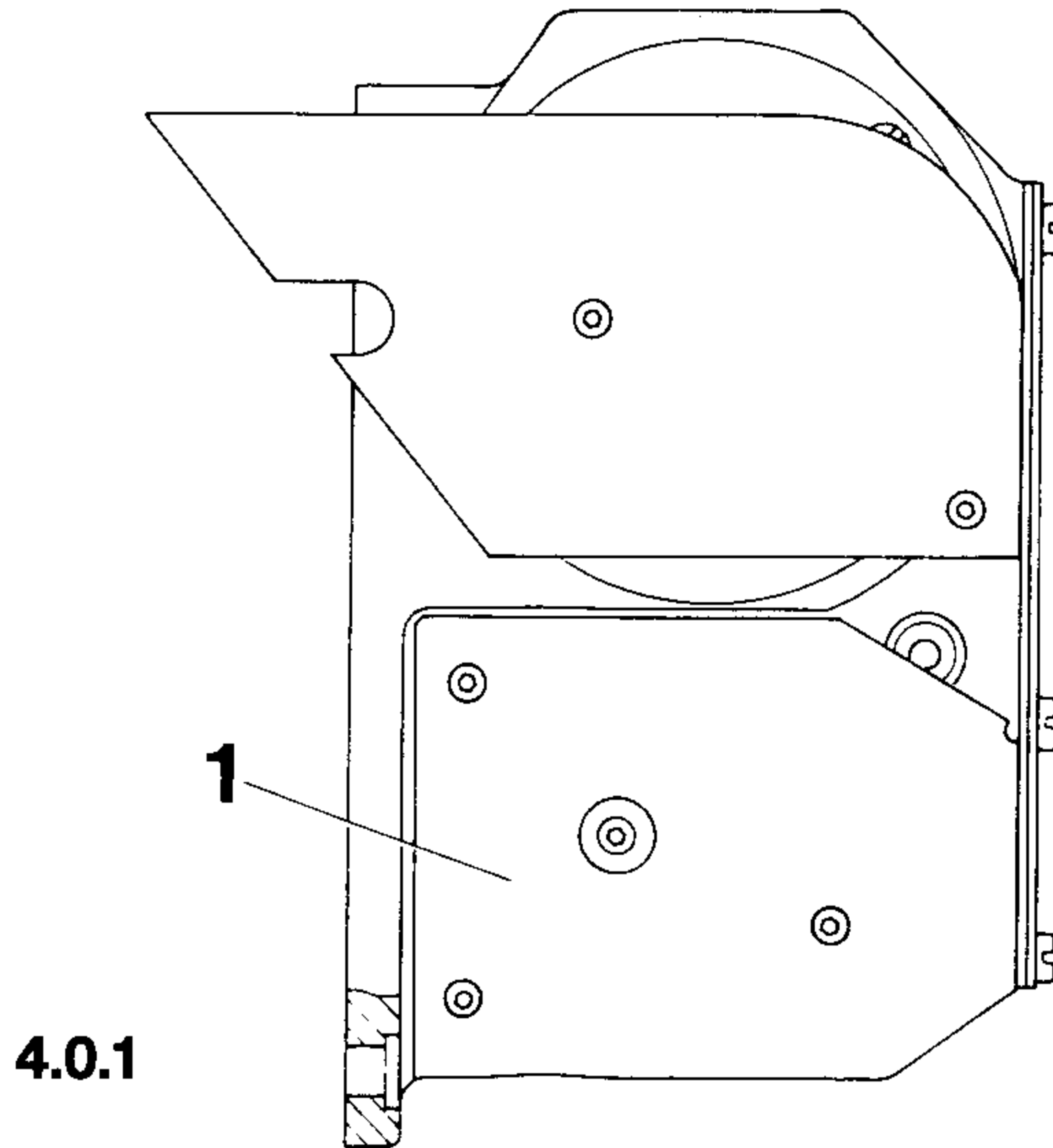
**3.0.4**

**Adjustment:**

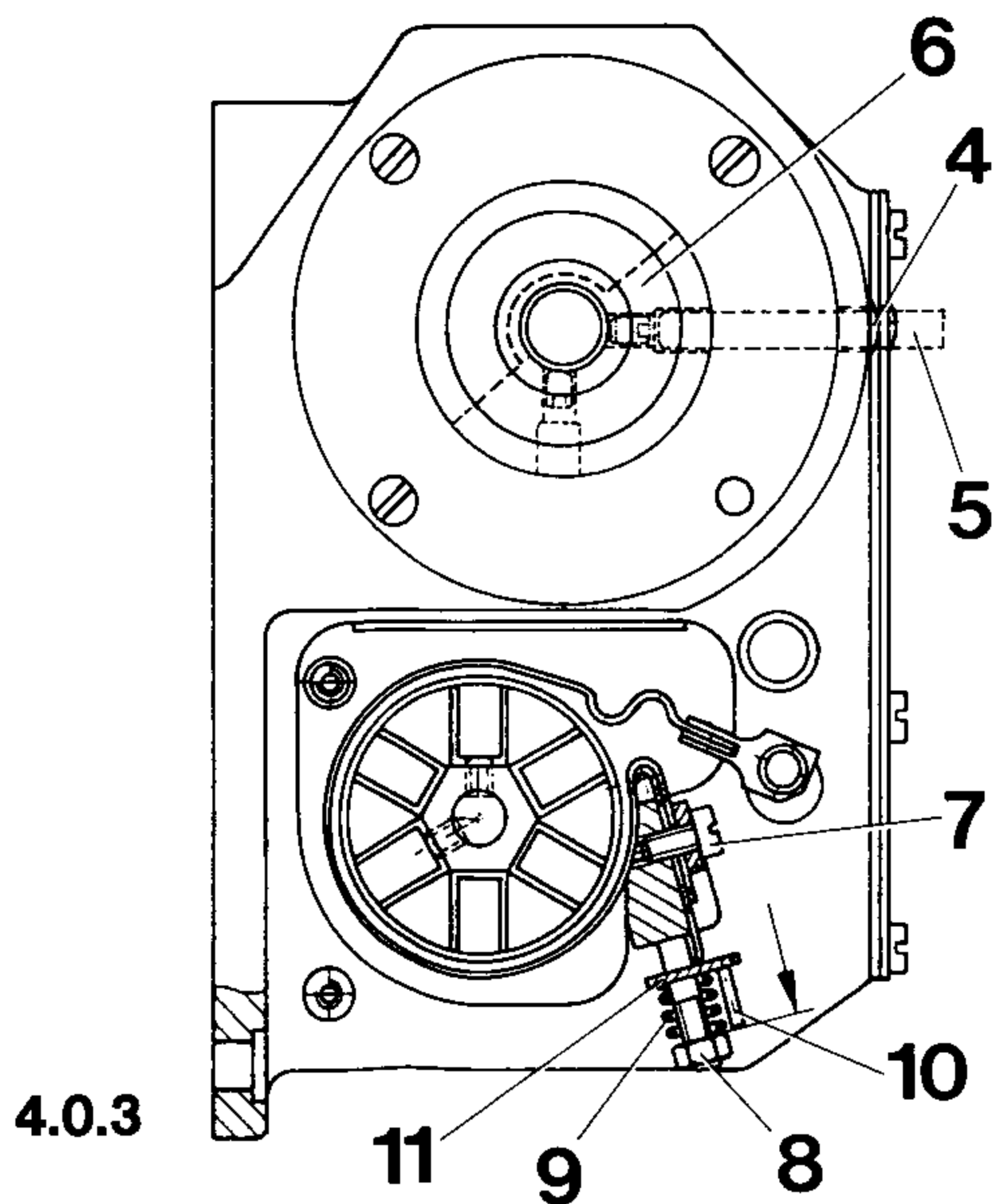
- 3.1 Loosen screws 1 and star grip nut 2.
- .2 **Set pointer 2 opposite mark "5" and tighten star grip nut 2.**
- .3 **Apply adjustment gauge 4 in such a way that its pin 5 enters the first hole of eccentric 6 (as seen in the direction of rotation).**
- .4 **Set groove 7 horizontal and, making sure that the retaining collars are in contact with the bearing bushes, tighten screws 1 (eccentric pin 8 must be in "up" position).**
- .5 Remove adjustment gauge 4 and screw on cover 9.

Setting:

When pointer **3** is opposite mark "5" and adjustment pin **5** is in the first hole of eccentric **6** (as seen in the direction of rotation), spring **9** must be compressed to the length of pin **10**.





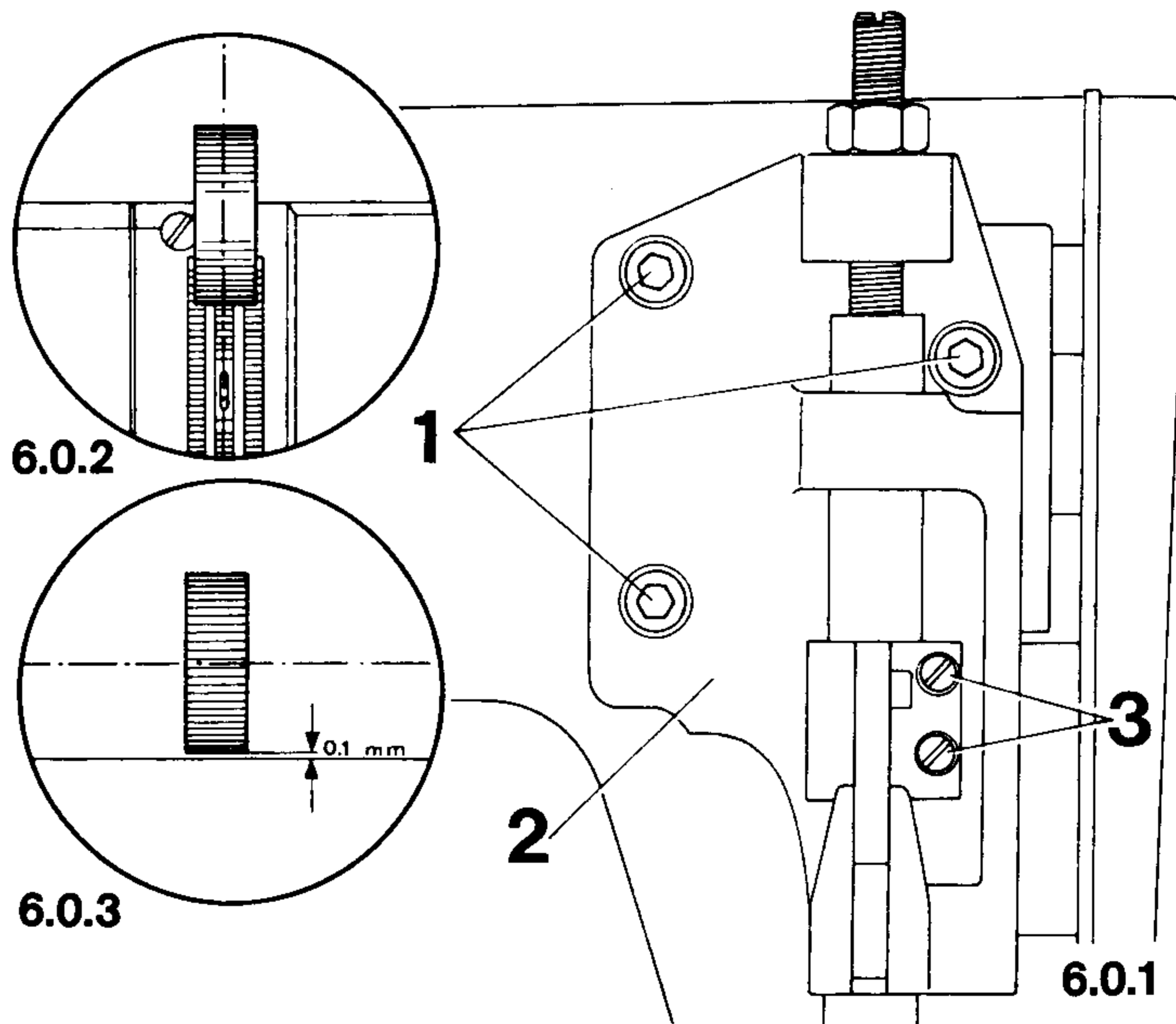


**Adjustment:**

- 4.1 Unscrew belt guard at sewing head and cover **1**.
- .2 Loosen star grip nut **2**.
- .3 Set pointer **3** opposite mark "5" and tighten star grip nut **2**.
- .4 Turn balance wheel until puller roller has finished its feed motion.
- .5 Remove plug **4** and insert adjustment pin **5** in the hole.
- .6 Turn balance wheel in sewing direction until adjustment pin **5** enters the first hole of eccentric **6**.
- .7 Loosen screw **7**.
- .8 Turn nut **8** so that spring **9** is compressed to the length of pin **10** (see arrow).
- .9 Press slide **11** down by about 2 mm and let it return by spring action.
- .10 Tighten screw **7**.
- .11 Pull out adjustment pin **5** and replace plug **4**.
- .12 Screw on cover **1**.

## Setting:

In sewing direction the roller must be parallel with the centre-line of the needle plate (see Fig. 6.0.2). The mounting bracket of the roller must be positioned so that the roller is parallel with the surface of the needle plate (see Fig. 6.0.3). Also, on versions -748/16 and /26 there must be a clearance of **0.10 mm** between roller and needle plate when the roller is lowered (see Fig. 6.0.3).



## Adjustment:

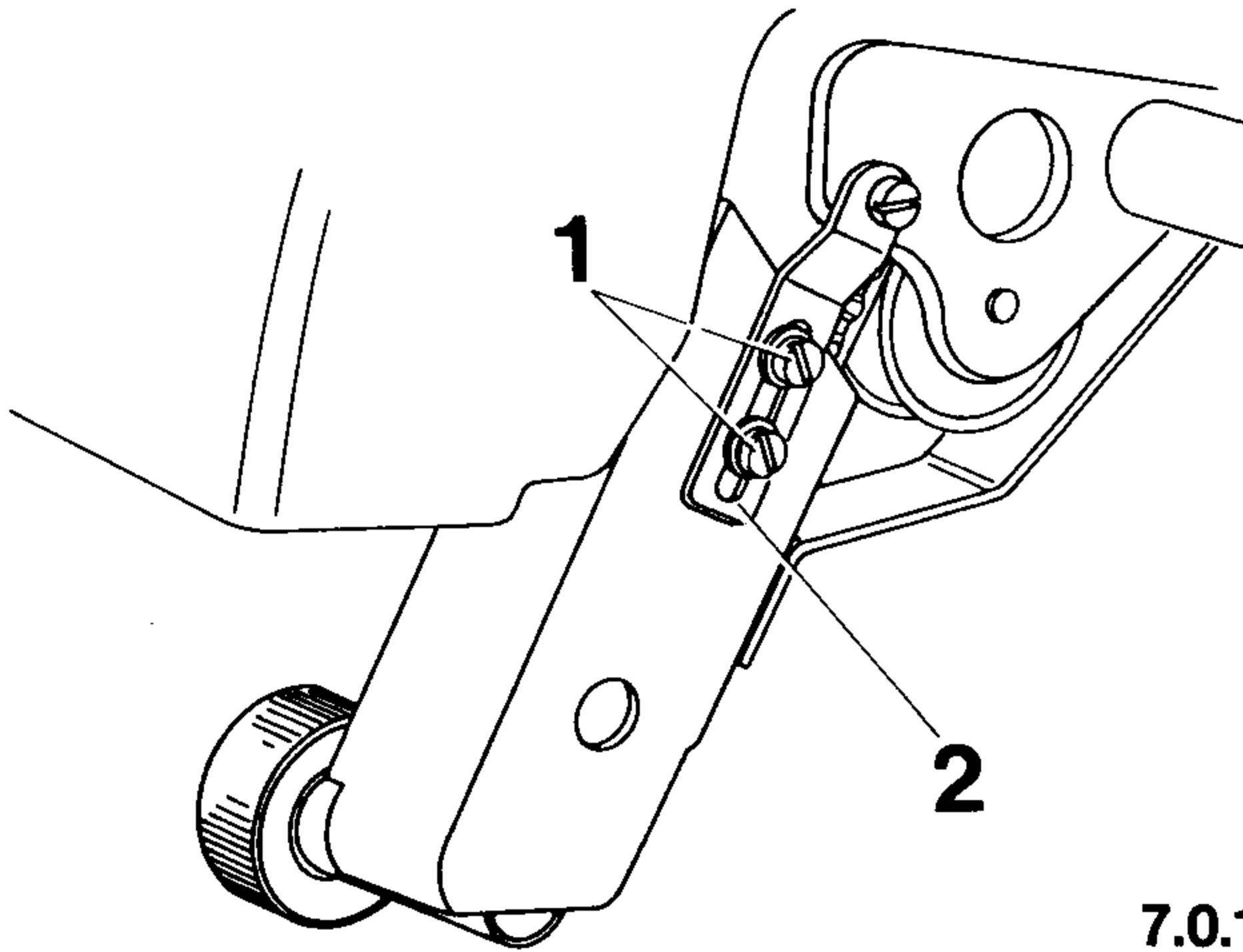
- 6.1 Loosen screws 1 a little.
- .2 **Position roller bracket 2 so that the roller is parallel with the surface of the needle plate (see Fig. 6.0.3).**
- .3 In this position tighten screws 1.
- .4 **Loosen screws 3 a little and turn the roller so that it is parallel with the centre-line of the needle plate (see Fig. 6.0.2).**
- .5 In this position tighten screws 3.
- Roller height adjustment (only on -748/16 and /26)**
- .6 Lift the roller by means of the hand lever.
- .7 Place a piece of paper under the roller and lower the roller onto it.
- .8 **Loosen screw 3 again and push the roller onto the paper a little. This will produce a clearance of about. 0.10 mm (see Fig. 6.0.3).**
- .9 Tighten screws 3 again.
- .10 Carry out a check (see "Setting").

7

**Belt drive of the roller**

Setting:

The drive belt must be taut enough to remove any backlash in the rotation of the roll.



7.0.1

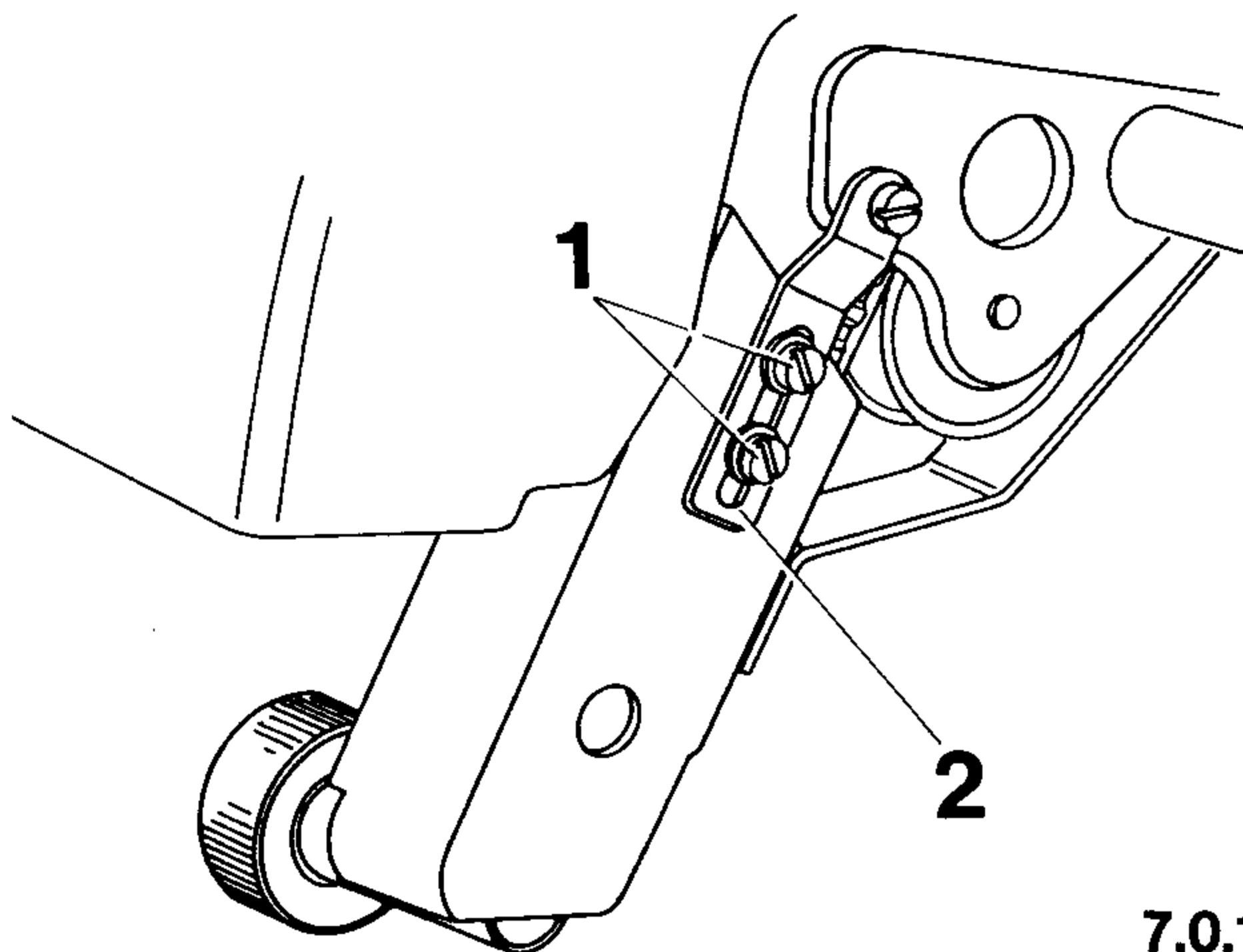
Adjustment:

- 7.1 Loosen screws 1.
- .2 **Adjust link 2 so that there is no backlash in the roller.**
- .3 In this position tighten screws 1.

## 7 Belt drive of the roller

Setting:

The drive belt must be taut enough to remove any backlash in the rotation of the roll.



7.0.1

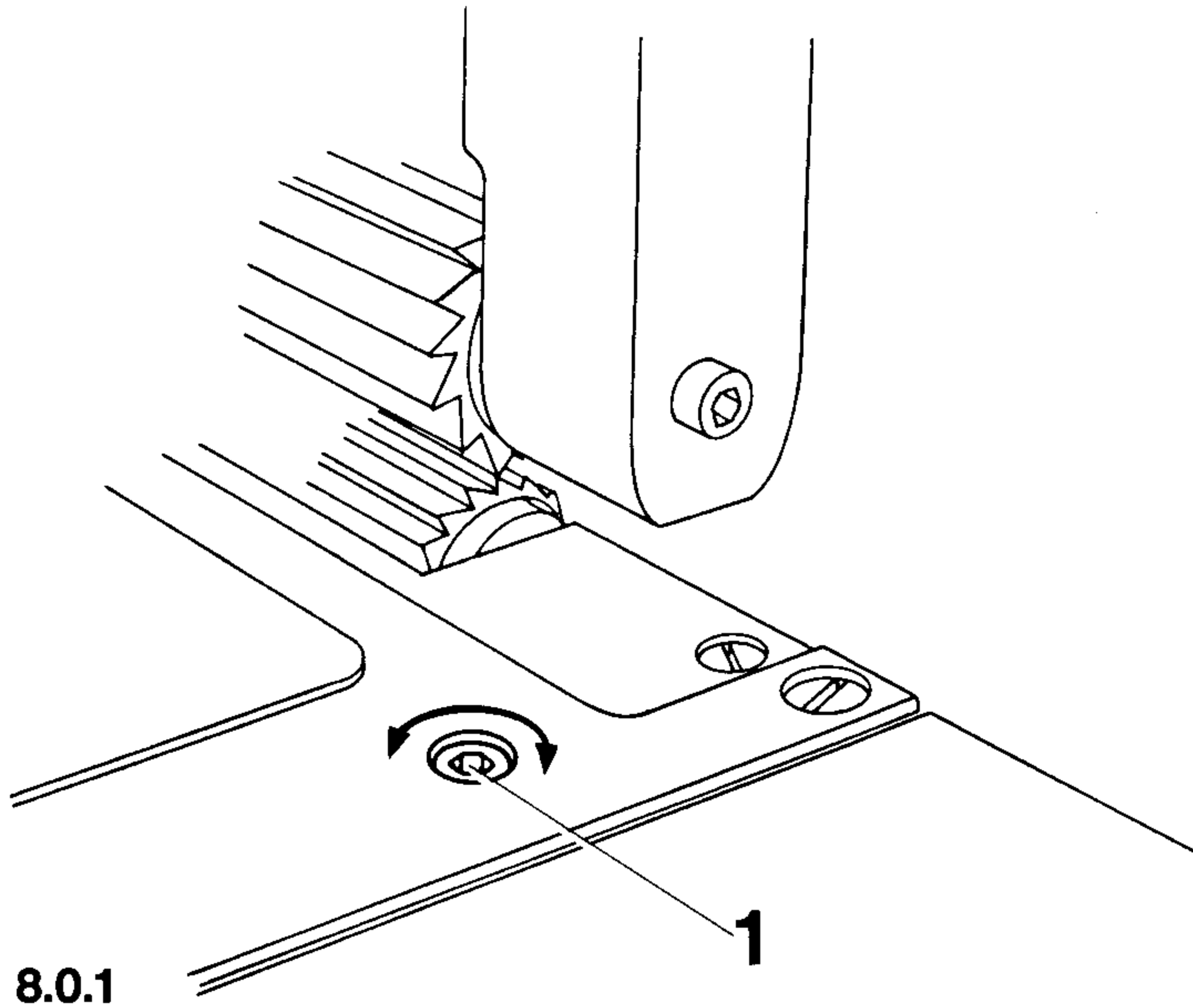
Adjustment:

- 7.1 Loosen screws 1.
- .2 **Adjust link 2 so that there is no backlash in the roller.**
- .3 In this position tighten screws 1.

**8 Pressure of the lower, spring-loaded roller (only on -748/69)**

Setting:

The pressure of the lower spring-loaded roller must be a little weaker than that of the top roller.



Adjustment:

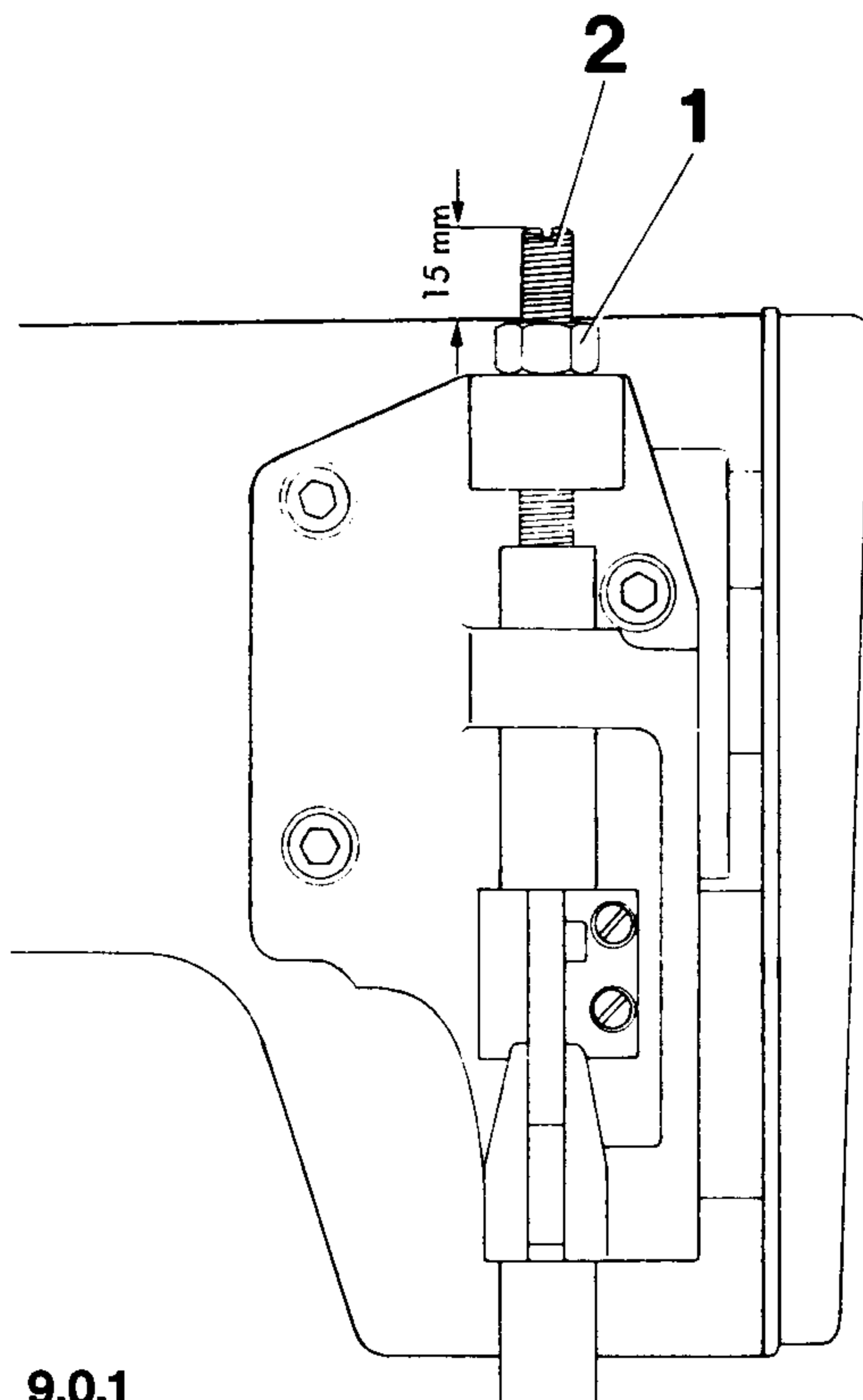
- 8.1 Raise the top roller by means of the hand lever.
- .2 Turn screw **1** accordingly:  
**To increase pressure:** turn right  
**To decrease pressure:** turn left
- .3 Carry out a check (see "Setting").

## 9

### Pressure of top roller

Setting:

Regulating screw **2** must project from the top of locknut **1** by about 15 mm. This is a basic setting which can be altered slightly if required.



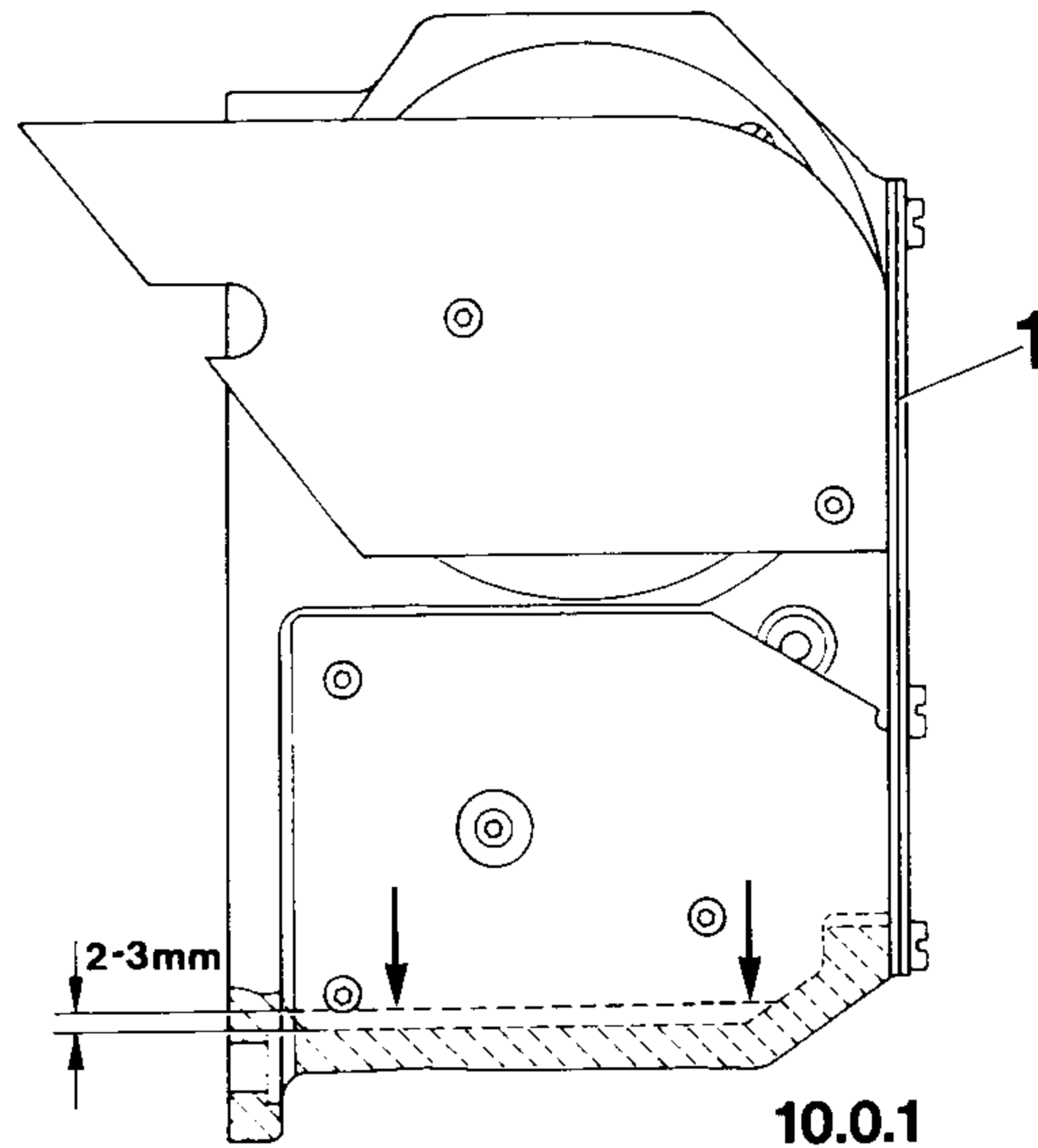
9.0.1

Adjustment:

- 9.1 Loosen locknut **1**.
- .2 Turn regulating screw **2** to a position in which it stands out of locknut **1** by roughly 15 mm.
- .3 In this position, tighten locknut **1**.

Setting:

The gear box is practically maintenance-free and needs no additional lubrication under normal circumstances.



Adjustment:

- 10.1 If necessary, unscrew cover 1.
- .2 Soak the oil pad with a sufficient amount of oil (oil level with lubrication pad inserted 2 to 3 mm above bottom of oil pan).
- Only use oil 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> at 15°C.** We recommend Pfaff sewing machine oil, part No. 280-1-120144.
- .3 Replace cover 1.

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