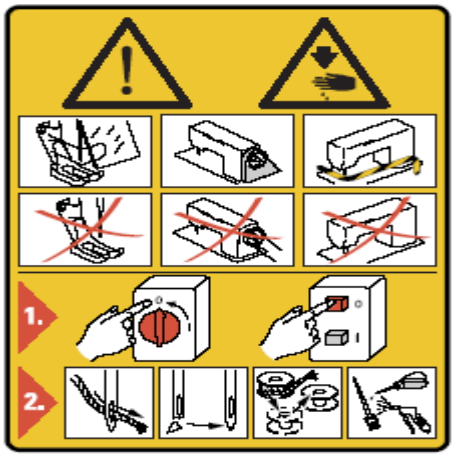
Index

Safety

1.01 Safety symbols



Danger!
Points to be observed

Danger of injury for operating and specialist personnel !

Caution
Do not operate without finger guard and safety devices.
before threading,changing bobbin and needle, cleaning etc. switch off main switch.

Important points for the user

- This Instruction Manual is a component of the machine and must be available to the operating personnel at all times.
- The Instruction Manual must be read before operating the machine for the first time.
- The operating and specialist personnel must to be instructed in the safeguards of the machine and safe work methods.
- It is the duty of the user to operate the machine in perfect running order.
- It is the obligation of the user to ensure that none of the safety mechanisms are removed or deactivated.
- It is the obligation of the user to ensure that only authorized persons operate and work on the machine.

Safety

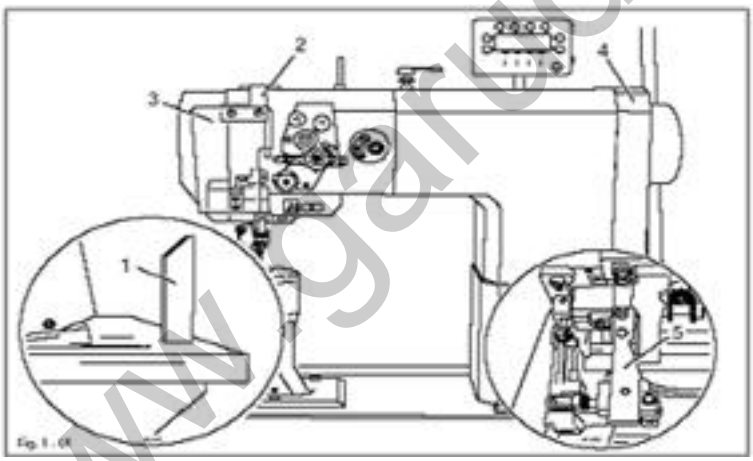
1.03 Danger

A working area of 1 meter is to be kept free both in front of and behind the machine in operation so that the machine is always easily accessible.

Never reach into the sewing area while sewing! Danger of injury by the needle!

Never leave objects on the table while adjusting the machine settings!
Objects can become trapped or be slung away! Danger of injury!

Do not operate the machine without support1! Danger due to top-heavy sewing head!
Machine can tip over backwords when tilted!



Safety

Switch the machine off before tilting it backwards!
Danger of injury if the machine is started accidently!

Do not operate the machine wihout its take-up-lever guard 2!
Danger of injury due to the motion of the take-up lever!

On machines with thread lubricator, only operate the machine with the eye guard 3 lowered!
The eye guard 3 protects the eyes from oil particles from the thread lubrication!

Do not operate the machine without belt guard 4!
Danger of injury by rotating drive belt!

Do not operate the machine without tilt lock 5!
Danger of crushing between sewing head and table top!

2 Proper use

GP-724-108 Is a double-needle, high-speed post bed sewing machine with driven feed wheel and roller presser.

GP-710-148 Is a single needle, high-speed post bed sewing machine (post to the right of the needle) with driven feed wheel and roller presser and synchronized needle.

The machines are used for sewing lockstitch seams in the leather and upholstery industries.

Any use of these machines which is not approved by the manufacturer shall be considered as improper use! The manufacturer shall not be liable for any damage arising out of improper use! Proper use shall also be considered to include compliance with the operation, adjustment, service and repair measures specified by the manufacturer!

3 Specifications

3.01 GP-710, GP724

Stitch type..... 301 (lockstitch)
Clearacne under roller presser..... 7 mm
Clearance width .... 245 mm
Clearance height..... 115 mm
Post height ..... 180 mm

Sewing head dimensions
Length..... ..... approx. 615 mm
Width ..... approx. 240 mm
Height (above table)..... approx. 500 mm
Bedplate dimensions..... 518 x 177 mm

Max.speed
GP-710, GP-724 Model ..... 3000spm◆
Connection data
Operating voltage.....230 V ± 10%, 50/60 Hz
Max.power consumption ..... 1.2 kVA
Fuse protection ..... 1 x 16 A, insert

Noise data
Emission sound level at the work place at appropriate speed
DIN 45 635-48-A-1, ISO 11204, ISO 3744, ISO4871)
(Noise measurement in accordance with DIN 45 635-48-A-1, ISO 11204, ISO 3744, ISO4871)
H962 and H961 at a speed of 2400spm.....L_{pA} = 79 dB(A) ▪

Net weight of sewing head ..... approx. 61 kg
Gross weight of sewing head..... approx. 71 kg

▲ Subject to alteration
◆ Dependent on material, work operation and stitch length
▪ KpA = 2,5 dB

3.02 Needles and threads

	(Nm)	1/100mm	GP-710	GP-724
	40/3	90	134	134-35

Model	Thread thickness (Nm) max. ▲ Synthetics	Needle thickness 1/100mm	GP-710 Needle system	GP-724 Needle system
	40/3	90	134	134-35

▲ or similar strengths of other types of thread

3.03 Possible models and subclasses

Additional equipment
Subclass-D……..Automatic edge trimmer
Subclass-D3…….Automatic edge trimmer, automatic presser foot lifter, backtacker.

4 Explanation of symbols

In this instruction manual, work to be carried out or important information is accentuated by symbols which have the following meanings:

Note, information

Cleaning, care

Lubrication

Maintenance, repairs, adjustment, servise work
(only to be carried out by technical staff)

5 Controls

5.01 Keys on the machine head (only for machines with-D3)

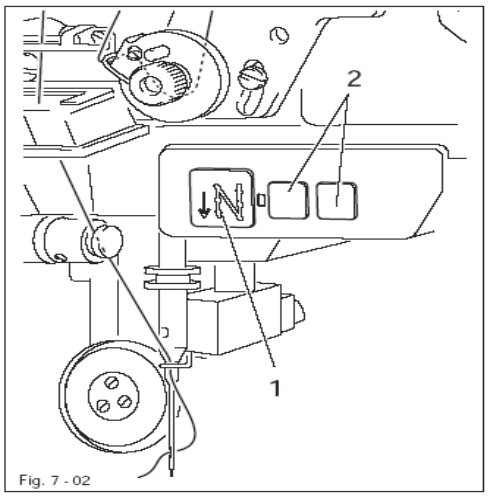


Fig. 7 - 02

- As long as key **1** is pressed during sewing, the machine sews in reverse direction.
- Keys **2** can be used for parameter settings, **Instruction manual of electronic control**.

5.02 Bobbin thread monitoring with stitch counting

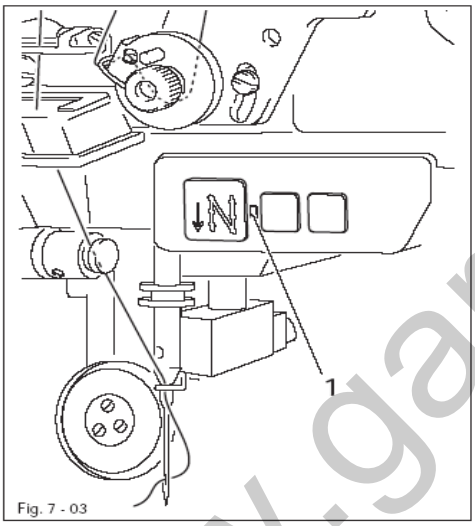


Fig. 7 - 03

Machines without –D3/..

- About 100 stitches before reaching the preset number of stitches, LED **1** Flashes.
- After the thread has been trimmed and the bobbin changed, The stitch counting begins anew.

Presetting the number ofstitches, see **Instruction manual of electronic control**.

5.03 Pedal

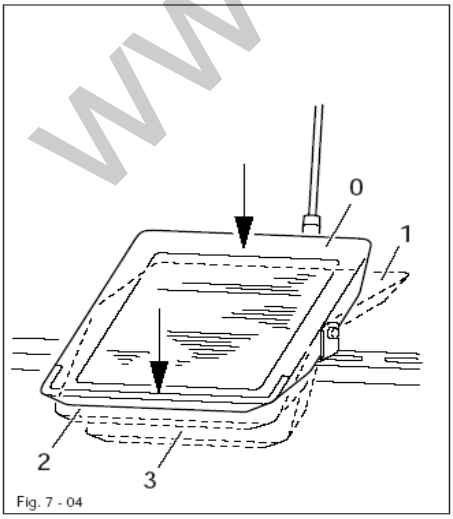


Fig. 7 - 04

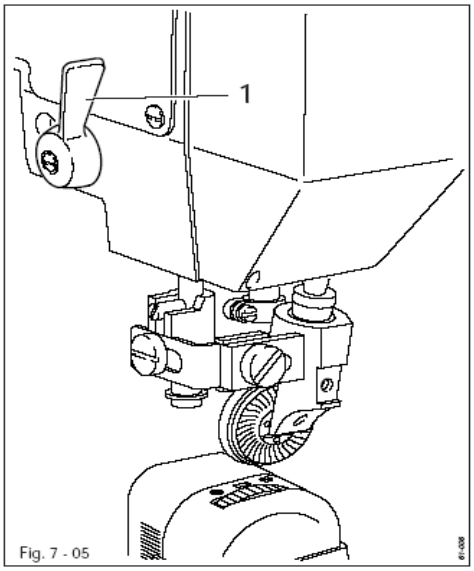
0 = Neutral position

1 = Sewing

2 = Raiser roller presser(on machines with-D3..)

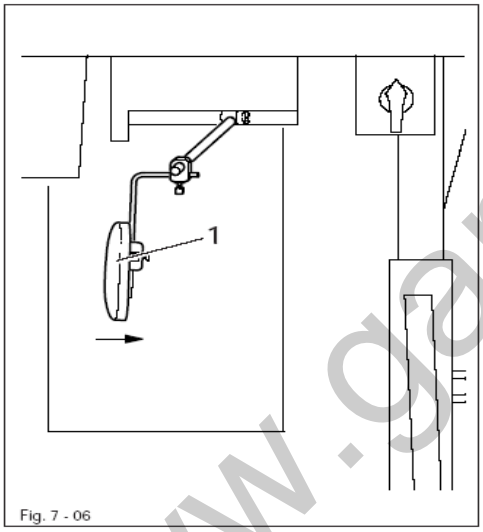
3 = Trim sewing threads (on machines with-D..)

5.04 Lever for lifting roller presser



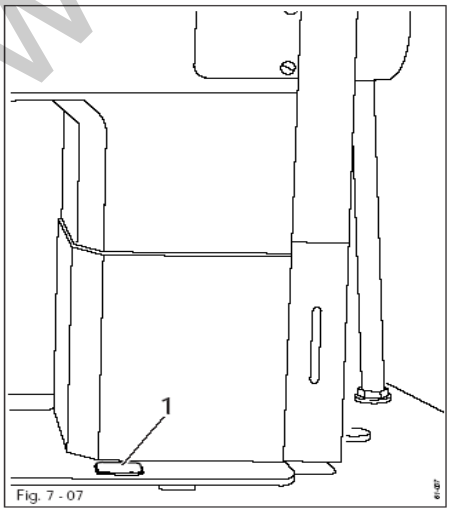
- The roller presser can be raised by turning lever**1**.

5.05 Knee lever



- The roller presser can be raised by pressing the knee lever **1** in the direction of the arrow.

5.06 Key for setting stitch length



- The stitch length is set by pressing key **1** and turning the balance wheel (see **Chapter 7.08 Setting the stitch length**).

5.07 Swing out roller presser

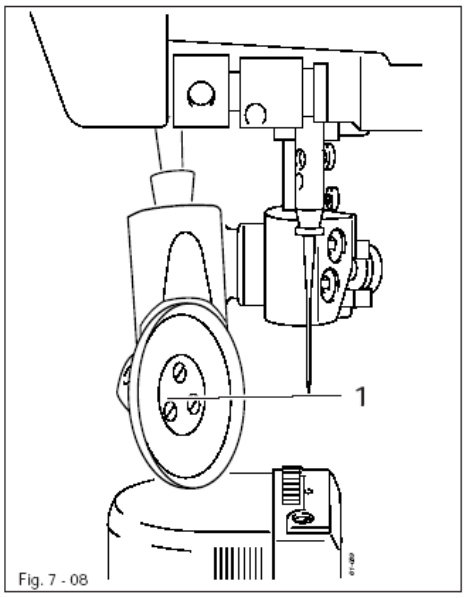


Fig. 7 - 08

- When the roller presser is raised, it can be swung out by pulling it lightly downwards.

6 Installation and commissioning

The machine must only be installed and commissioned by qualified personnel!
All relevant safety regulations must be strictly adhered to!

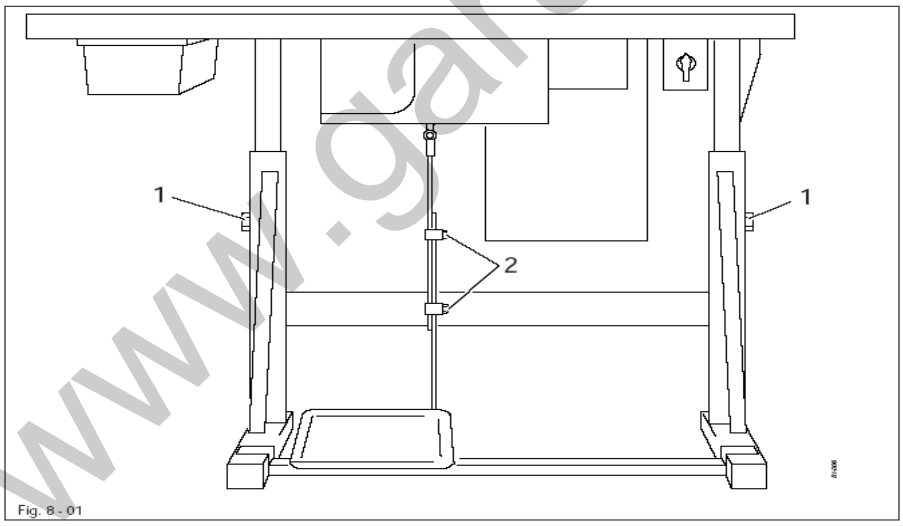
If the machine is delivered without a table, be sure to use a stand and table top that can hold the weight of the machine with its motor.
It is very important to ensure that the stand of the machine is firm and steady, also during sewing.

6.01 Installation

The site where the machine is installed must be provided with suitable connections for electric current.
It must be ensured that the standing surface of the machine site is firm and horizontal, and that sufficient lighting is provided for.

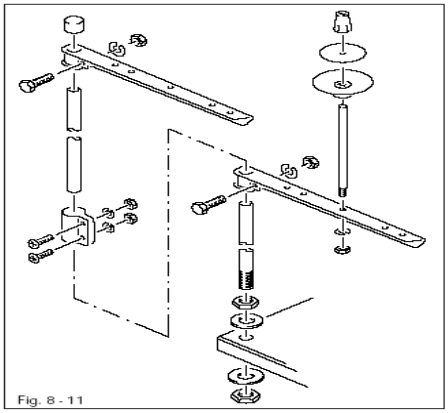
For packing and transportation reasons the table top is in the lowered position. The table height is adjusted as described below.

6.01.01 Adusting the table height



- Loosen screws **1**and **2** and set the table height as required.
- Firmly tighten screw **1**.
- Set the required pedal position and tighten screw **2**

6.02.01 Fitting the reel stand



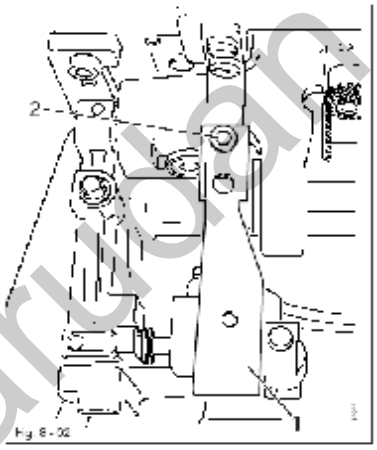
- Fit the reel stand as shown in **Fig.**
- Afterwards insert the stand in the hole of the table top and secure it with the nuts provided.

6.02.02 Fitting the tilt lock

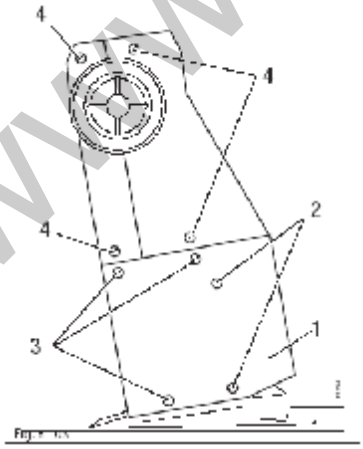
Switch off the machine!
Danger of injury if the machine is the machine is started accidentally!

- Screw on the tilt lock 1, provided in the accessories, using screw 2.

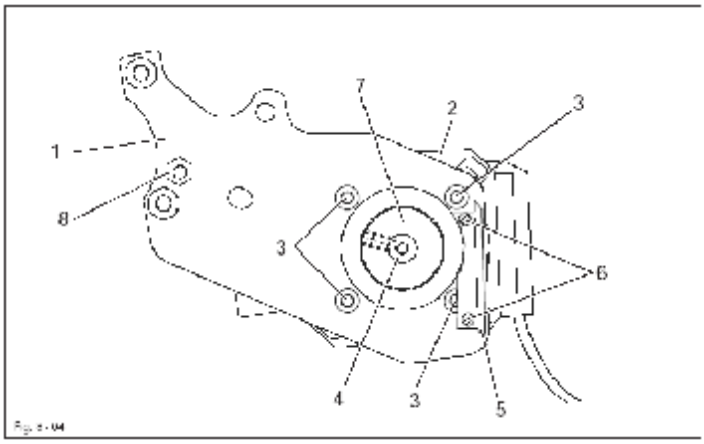
Do not operate the machine without tilt lock 1. Danger of crushing between sewing head and table top!



6.02.03 Fitting the machine cover

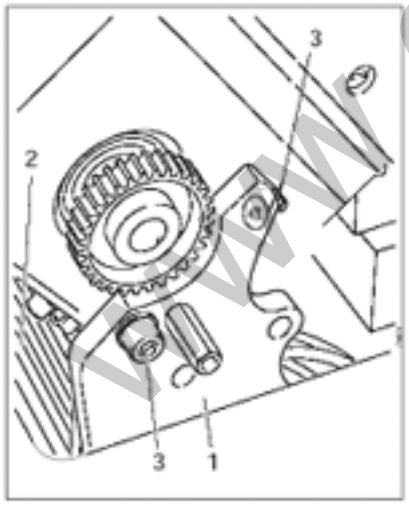


6.02.04 Mounting the flange motor to the bearing plate



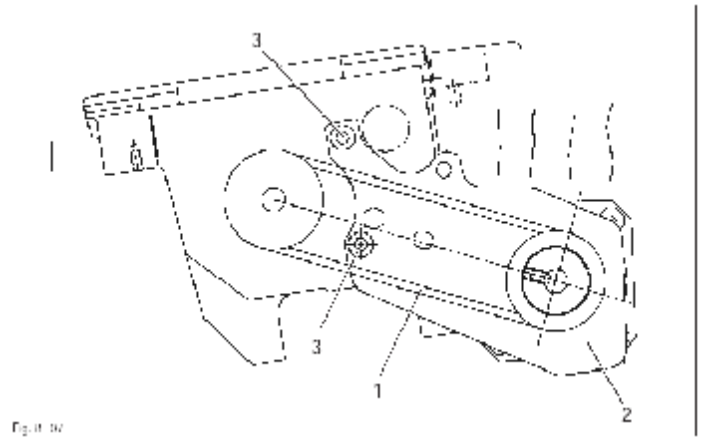
- Lagerplatte 1, wie in Fig. 8 - 08 gezeigt, am Motor 2 mit den Schrauben 3 anschrauben.
- Den Keil aus der Motorwelle 4 entnehmen.
- Winkel 5 mit den Schrauben 6 anschrauben
- Zahnriemenrad 7 so auf der Motorwelle 4 montieren, dass die Schraube mit Ansatz in der Nut der Motorwelle steht.
- Gewindebolzen 8 in die Lagerplatte 1 einschrauben.

6.02.05 Mounting the flange motor to the machine



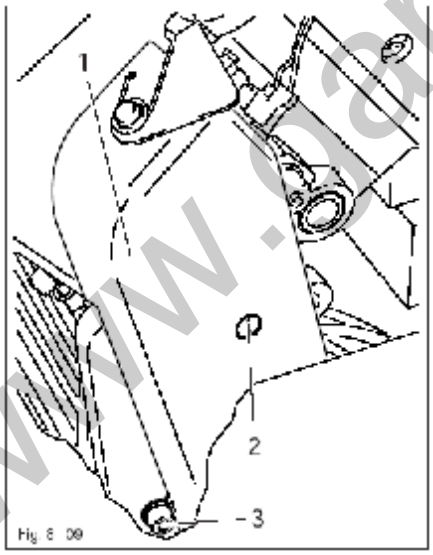
- Lagerplatte 1 des Motors 2 am Maschinengehäuse mit den Schrauben 3 anschrauben (Schrauben 3 nur leicht anziehen).

6.02.06



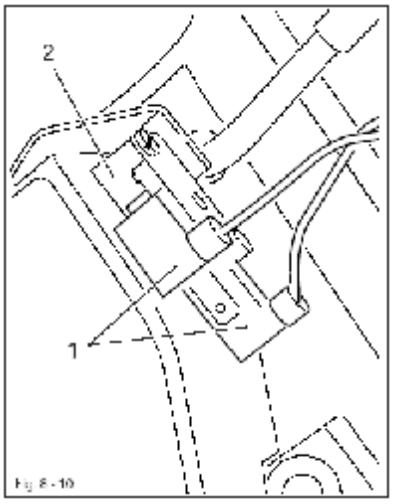
- In this position fit toofhed belt 1.
- Swing the bearing plate 2 of the motor,so that the toothed belt is tensioned.
- In this position tighten screws 3.

6.02.07 Mounting the belt guard of the flange motor



- Riemenschutz 1 mit den Schrauben 2 und 3 anschrauben.

6.02.08 Connecting the safety switch



- Connect plug 1 of safety switch 2 as shown in Fig.

When the sewing head is tilted back,the safety switch prevents the machine starting when the main switch is on.

6.01 Commissioning

6.02

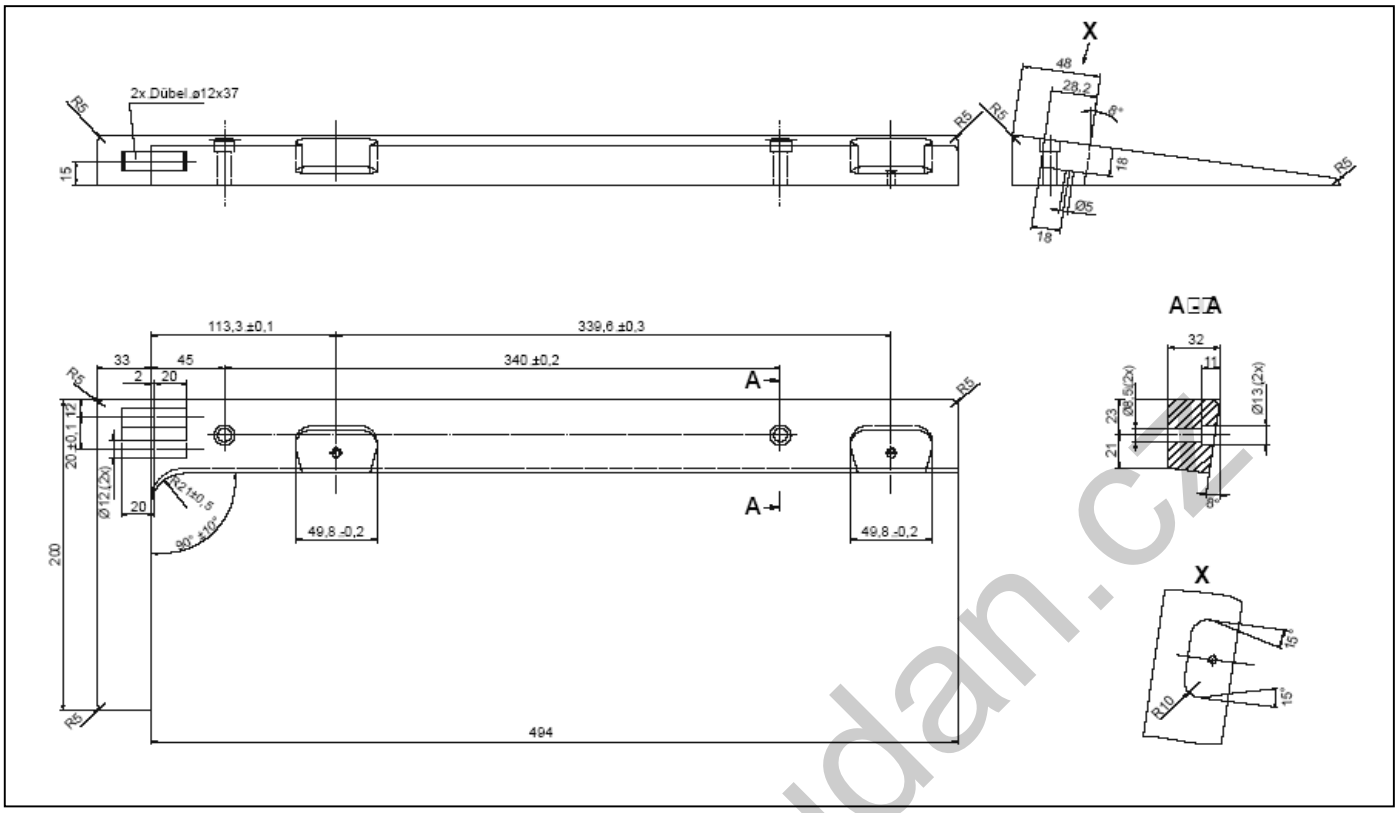
- Check the machine, particularly the electrical wriring for any damage.
- Clean the machine thoroughtly and then oil it or fill oil in (see **Chapter 11 Care and maintenance**).
- Have a mechanic check whether the motor of the machine can be operated with the available power supply, and that the motor is correctly connected in the junction box. If there are any discrepancies. the machine **must not be operated under any circumstances**.

The machine only be connected to an earthed socket!

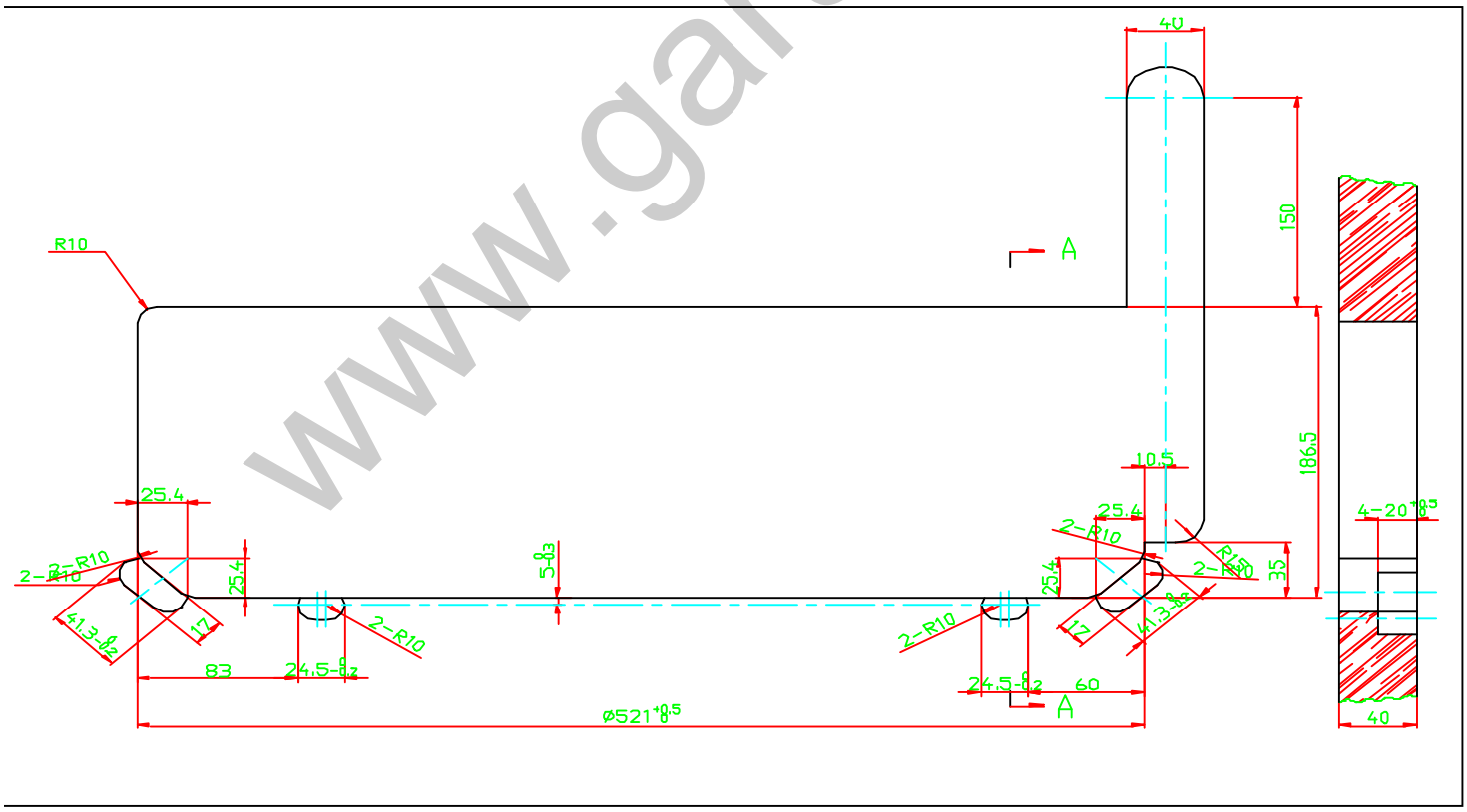
- When the machine is running, the balance wheel must turn towards the operator.If it does not, the motor connection must be changed by a mechanic.
- Machines with pneumatic equipment must be connected to the compressed air supply. The pressure gauge should indicate a pressure of 6 bar. If necessary, adjust to the correct setting (see **Chapter 11.07 Checking adjusting the air pressure**).

6 Installation and commisioning

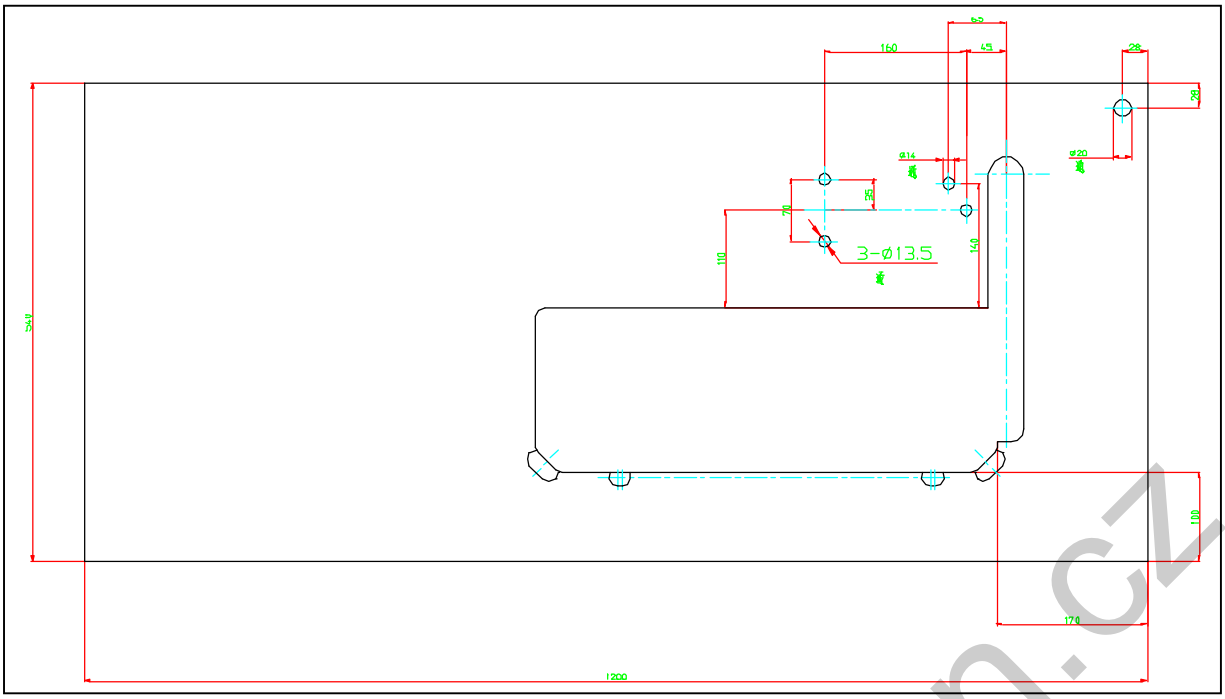
6.04 Tilted work base



6.05 Tilted work base



6.06 Mounting the table top



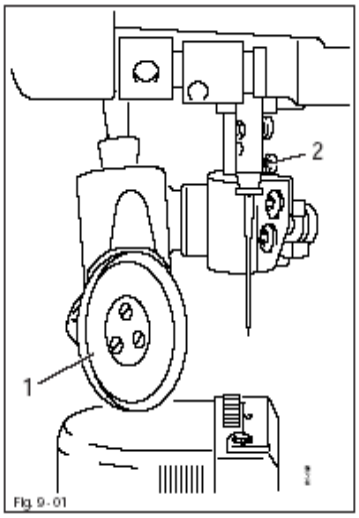
Preparation

7 Setting up

All instructions and regulations in this instrution manual must be observed .
Special attention must be paid to all safety regulations!

All setting-up work must only be carried out by personnel with the appropriate training.
For all setting-up work the machine must be disconnected from its power supply by turning off the on/off switch, or
removing the plug from the electric power socket.

7.01 Inserting needle on model GP710-108



Switch the machine off!
Danger of injury if the machine is started accidentally!

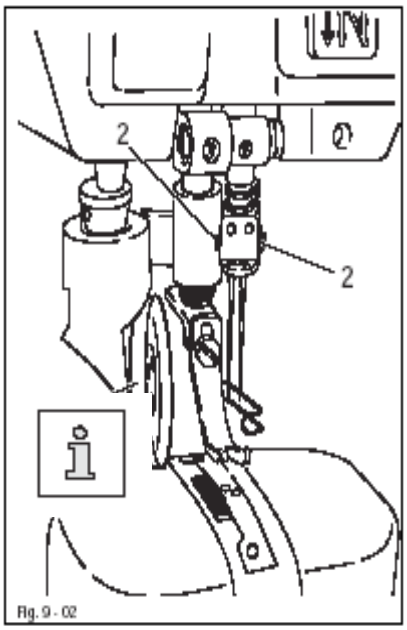
Only use needles of system **134**

- Raise the roller presser **1** and swing it out.
- Loosen screw **2** and insert the needles as far as possible. The long groove must face to left on model GP-710.
- Tighten screw **2** and swing roller presser **1** back to position.

The Choice of needle depends on the model of the machine and the thread and material used (see **Chapter 3.02 Needles and threads**).

7 Preparation

7.02 Inserting the needle on model GP-724-108



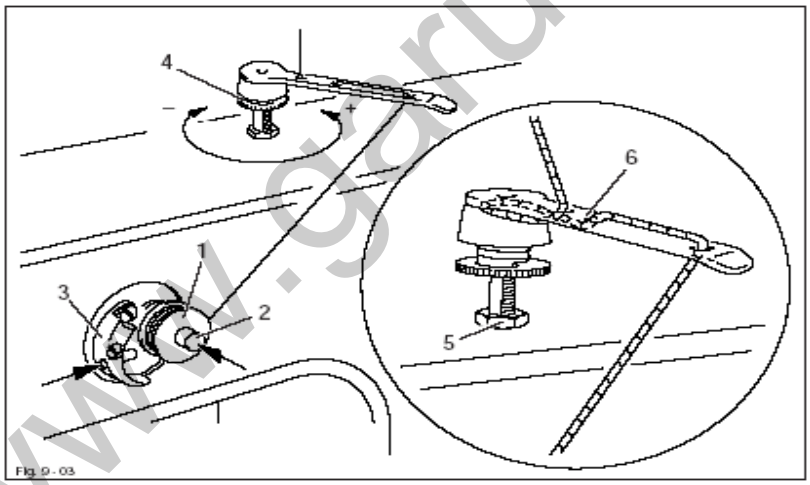
Switch the machine off!
Danger of injury if the machine is started accidentally!

Only use needles of system **134-35**.

- Raise the roller presser **1** and swing it out.
- Loosen screws **2** and insert the needles so that the long groove of the left needle is facing right, and that of the right needle is facing left.
- Tighten screws **2** and swing roller presser **1** back into position.

: depends on the model of the machine and the thread ad
hapter 3.02 Needles and threads)

7.03 Winding the bobbin thread; adjusting the primary thread tension



- Place an empty bobbin **1** into bobbin winder spindle **2**.
- Thread the bobbin as shown in **Fig. 9-03** and wind it clockwise around bobbin **1** a few times
- Switch on the bobbin winder while pressing bobbin winder spindle **2** and lever **3**.
  The bobbin is filled up during sewing.

- The thread tension of bobbin **1** can be adjusted by knurled screw **4**.
- The bobbin winder stops automatically when bobbin **1** is full.

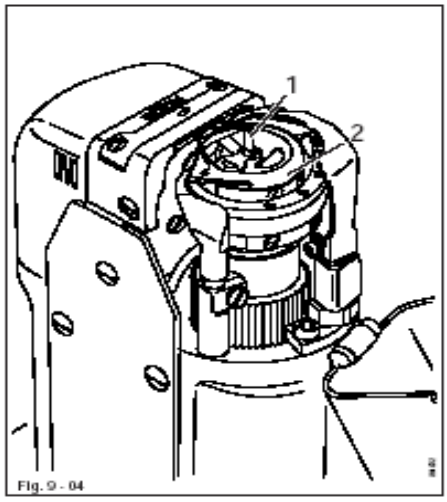
If the thread is wound unevenly:

- Loosen nut **5.**

- Turn thread guide **6** accordingly

Tighten nut **5.**

7.04 **Removing/Inserting the babblin case**



Switch the machine off!
Danger of injury if the machine is started accidentally!

Removing the bobbin case:

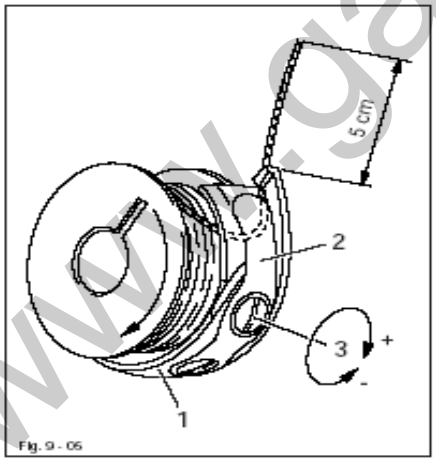
- Open the post cap.
- Raise latch **1** and remove bobbin case **2**.

Inserting bobbin case:

- Insert bobbin case **2**.
- Close the latch and close the post

H962 is shown in **Fig.**

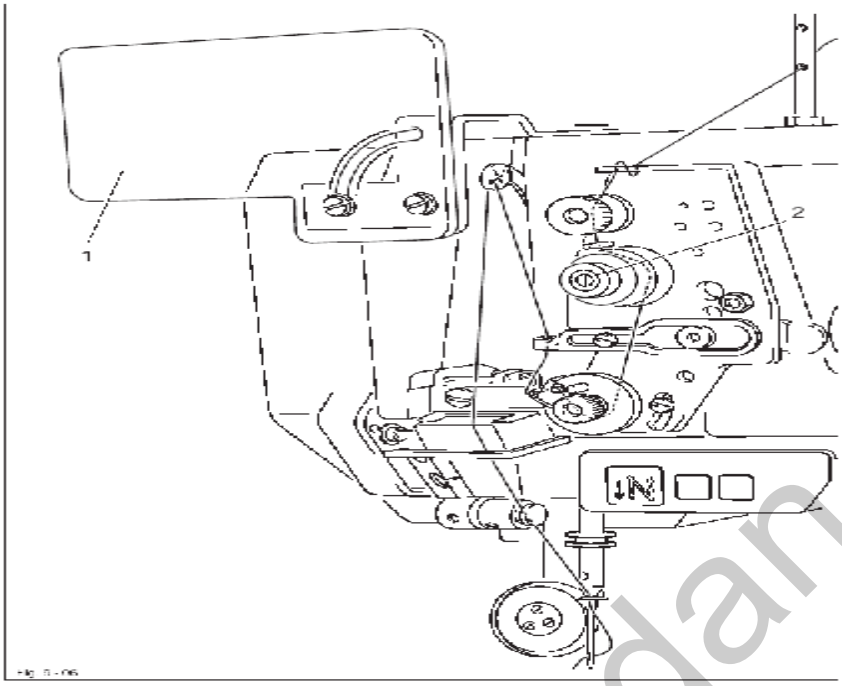
7.05



- Insert the bobbin into the bobbin case **1**.
- Pass the thread through the slot under spring **2**.
- Pass the thread through the notch.
- Adjust the thread tension by turning screw **3**.

When the thread is pulled, the bobbin must rotate in the direction of the arrow.

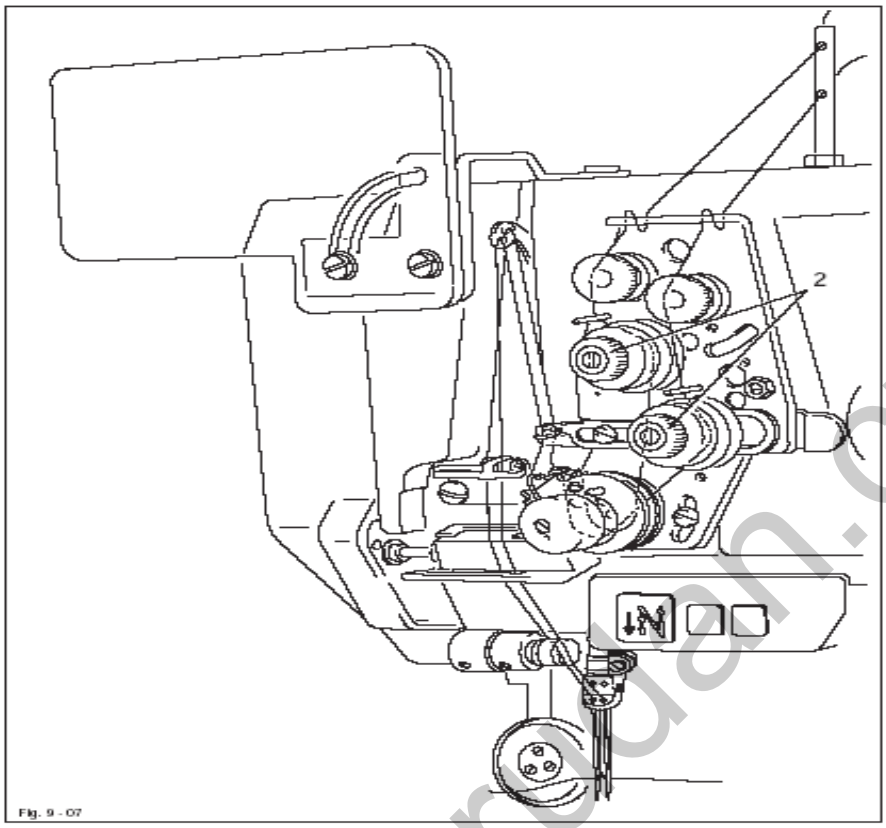
7.06 Threading the needle thread and regulating its tension on model GP-710.



Swith the machine off!
Danger of injury if the machine is started accidentally!

- Tilt up the eye guard 1.
- Thread the needle thread as shown in **Fig.9-06**.
- On model H961 the needle is threaded from left to the right.
- Ajust the needle thread tension by turning milled screw **2**.

7.07 Threading the needle thread and regulating its tension on model GP-724



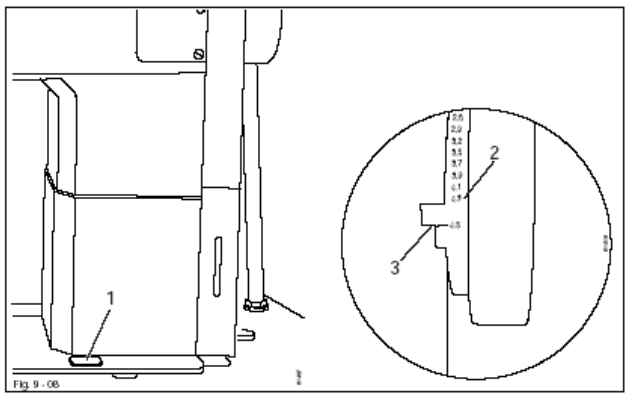
Switch the machine off!
Danger of injury if the machine is started accidentally!

- Tilt up the eye guard **1**.
- Thread both needle threads as shown in **Fig.9-07**.
- The left needle is threaded from right to the left, and the right needle from the left to right.
- Ajust the needle thread tension by turning milled screw **2**.

7-6 Preparation

7.08

Setting the stitch length



- Press key **1** and at the same time turn the balance wheel until the stitch setter clicks into position.
- Hold down key **1** and turn the balance wheel to and fro until the stitch length required is shown on the scale **2** opposite the bottom edge **3** of the belt guard recess.

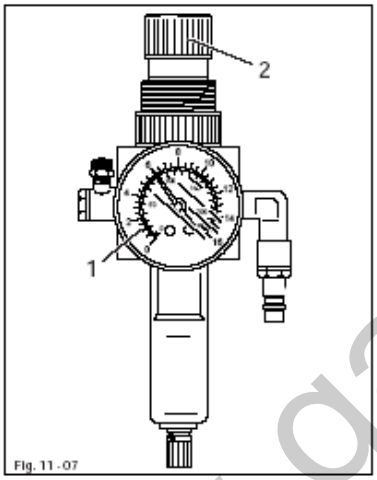
7-7 Care and Maintenance

8 Care and Maintenance

Clean……..daily, more frequently if in continuous operation
Oil level (thread lubrication/hook lubrication)……..daily, before use
Oil the hook……daily, before use
Lubricate the bevel gears……..……once a year
Check/adjust air pressure……daily, before use
Clean air filter of air filter/lubricator……..…when required

These maintenance intervals are caculated for the average running time of a single shift operation. If the machine is operated more than this,, shorter intervals are recommended.

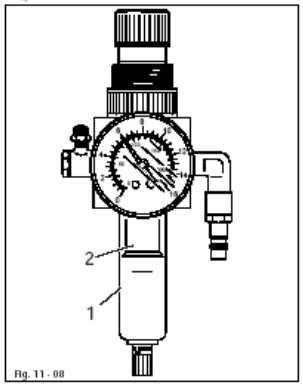
8.01



- Before operating the machine, always check the air presure on gauge **1**.
- Gauge 1 must shou a pressure of **6 bar**.
- If necessary adjust to this reading.
- To do so, pull knob **2** upwards and turn it so that the gauge shows a pressurer of **6 bar**.

8-1

8.02



Switch the machine off!
Disconnect the air hose at the air-filter/lubricator.

Draining woter bowl **1:**

- Water bowl **1** drains itself automatically when the compressed-air hose is disconnected from the air-filter/lubricator.

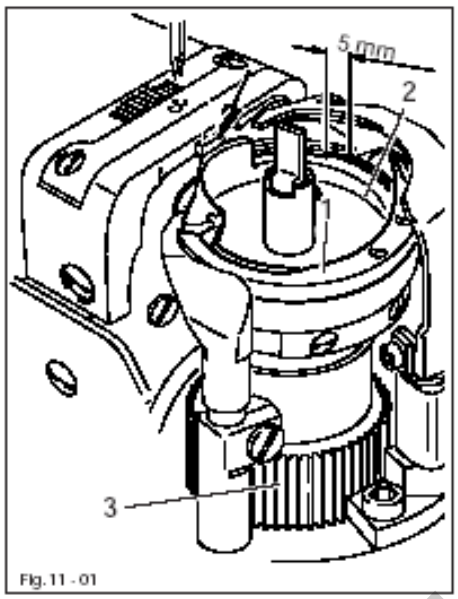
Cleaning filter **2**:

- Unscrew water bowl **1**.
- Take out filter **2**.
- Clean filter **2** with compressed air or isopropyl alcohol.
- Screw in filter **2** and screw on water bowl **1**.

Care and Maintenance

8.03 Cleaning

Clean the hook, hook compartment and toothed wheel **3** every day, several times if in continuous use



Switch the machine off!
Danger of injury if the machine is started accidentally!

sition.

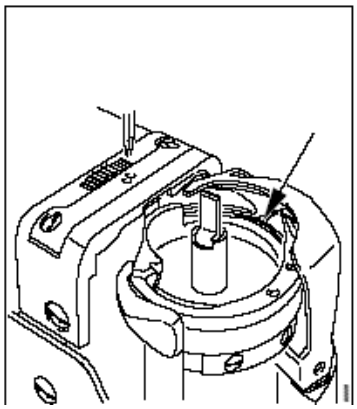
obbin case cap and the bobbin.

f bobbin case **2** penetrates into the groove of the

- Remove bobbin case **2**.
- Clean th hook race with paraffin.
- When inserting the bobbin case **2**, ensure that the horn of the bobbin case **2** engages in the groove of the needle plate.
- Screw hook gib **1** back on the close the post cap.

Care and Maintenance

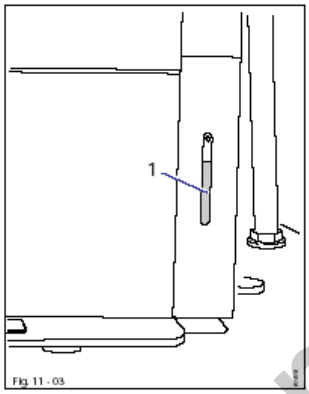
8.04 **Oiling the hook**



Switch the machine off!
Danger of injury if the machine is started accidentally!

- Pour **1-2 drops** of oil into hole **1** of the hook gib daily.
- Before commissioning the machine, and after long periods out of operation, pour a few drops of oil into the hook race (see arrow).

8.05



Check the oil level before each use. There must always be oil in reservoir **1**.

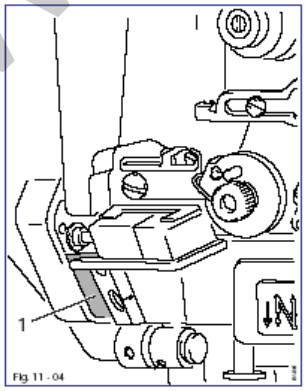
- If required refill oil through hole.

Use only oil with a mean viscosity of 22.0 mm2/s at 40°C and a density of 0.865g/cm3 at 15°C

Care and Maintenance

8.06

Filling the oil reservoir of the thread lubrication unit



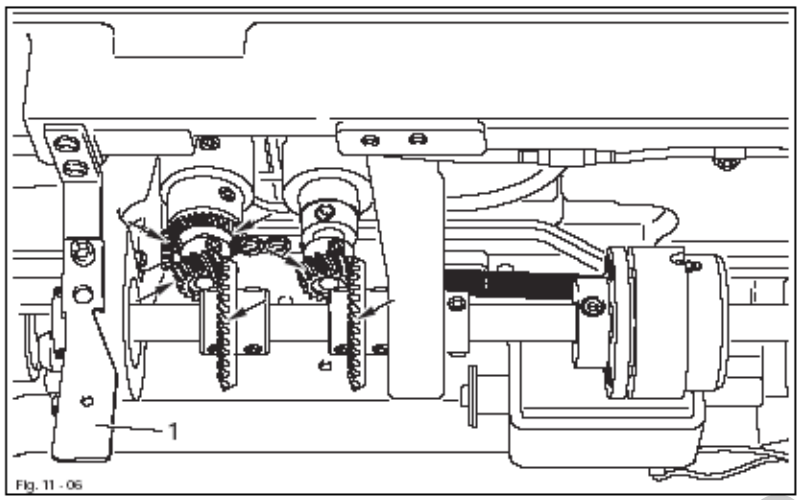
Control the oil lvevel before each use.
There must always be oil in the reservoir **1.**

- If necessary, fill oil up to mark through hole.

We recommend thread lubricatiing oil .

Care and maitenance

8.07 Lubricating the bevel gears



Switch the machine off!
Danger of injury if the machine is started accidentally!

- All bevel gears must be supplied with new grease once a year.
- Tilt the sewing head back onto the support.

Fig. shows the bevel gears of the GP-724.

- Apply grease to all the tooth flanks and the rack (see arrows).
- To set the sewing head upright, press tilt lock **1** backwards and set the sewing head upright using both hands.

Use both hands to set the sewing head upright!
Danger of crushing between the sewing head and the table top!

We recommend sodium grease with a dripping point of approx.150C.

9 Adjustment

Unless stated otherwise, during all adjustment work the machine must be disconnected from electric and pneumatic power supply!
Danger of injury if the machine is started accidentally!

9.01 Notes on adjustment

All followinng adjustment are based on a fully assembled machine and may only be carried out by expert staff trainned for this purpose.
Machine covers, which have to be removed and replaced to carry out checks and adjustments, are not mentioned in the text.
The order of the following chapters corresponds to the most logical work sequence for machines which have to be completely adjusted. If only specific individual work steps are carried out, both the preceding and following chapters must be observed.
Screws, nuts indicated in brackets ( ) are fastenings for machine parts, which must be loosened before adjustment and tightened again afterwards.

9.02 Tools, guages and other accessories

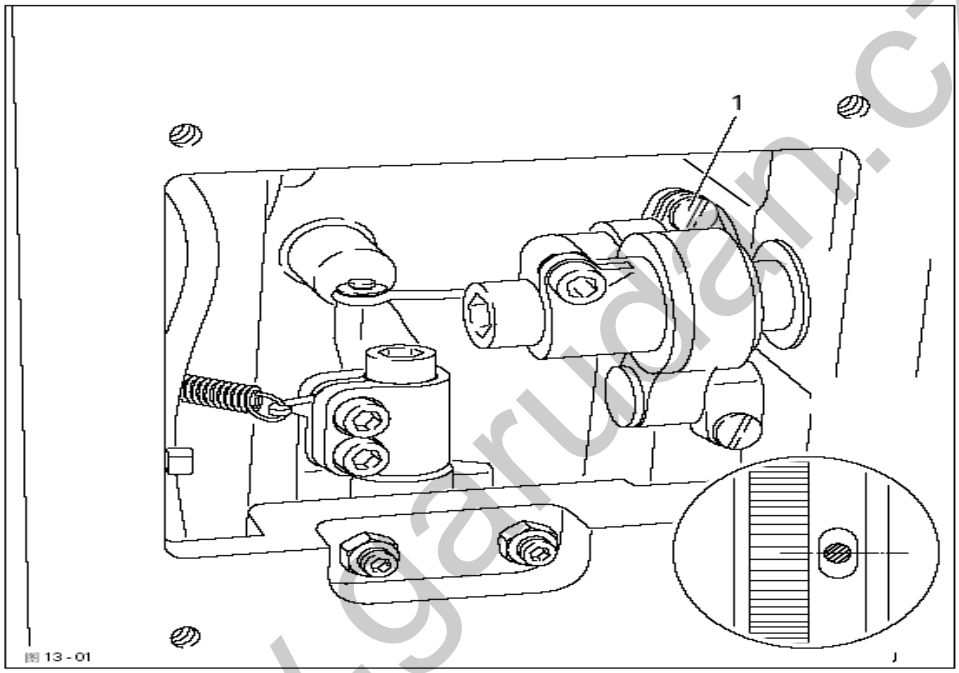
- I set of screwdrivers with blade widths from 2 to 10 mm
- 1set of open –ended wrenches with opening sizes from 7 to 13 mm
- 1 set of allen keys from 1.5 to 6mm
- 1 clamp
- I metal ruler
- 1 gauge
- Sewing thread and test material

Adjustment

Adjusting the basic machine

9.03.01
Needle position in sewing direction on the GP-710

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



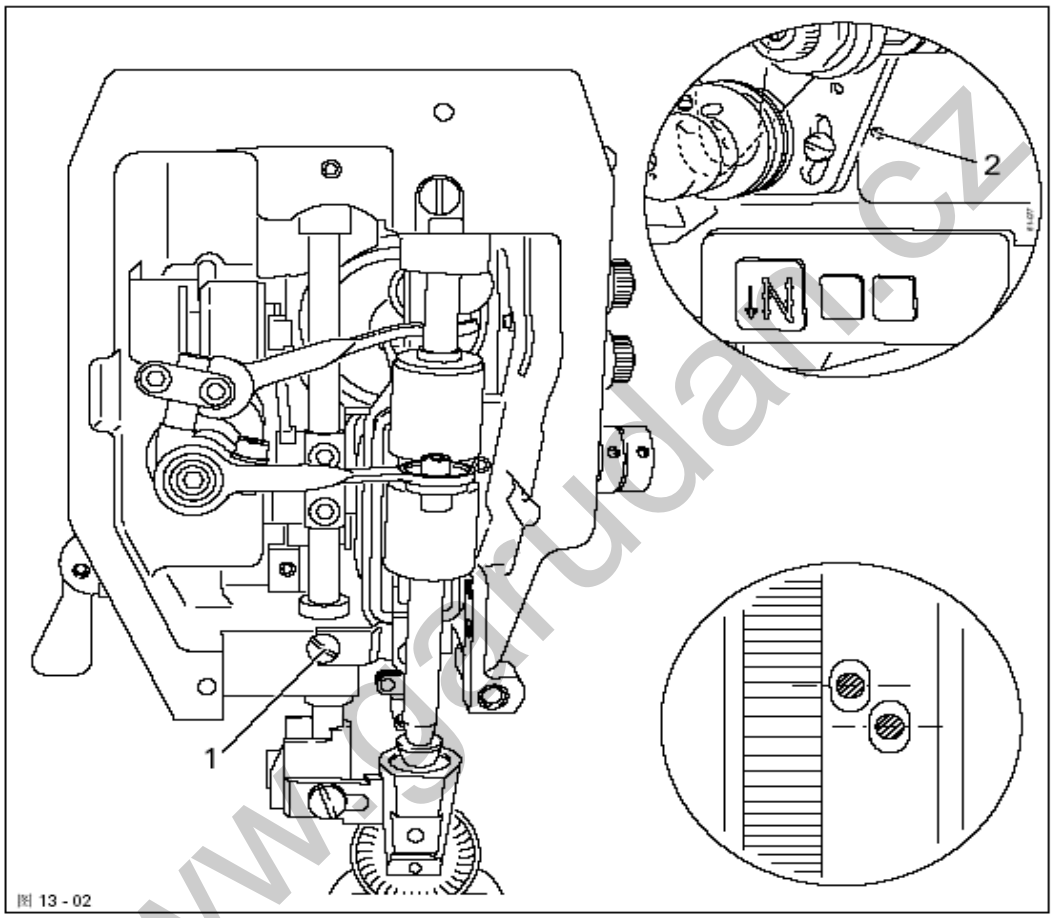
- Set the minimum stitch length.
- Adjust needle bar (screw **1**) according to the **Requirement**.

Adjustment

9.0302

Neelde position in sewing direction on the GP-724

Requirement
The needle should be positioned in the centre of the needle hole as seen in the direction of sewing.



- Ajust needle bar (screws **1** and **2**) according to the **Requirement**.

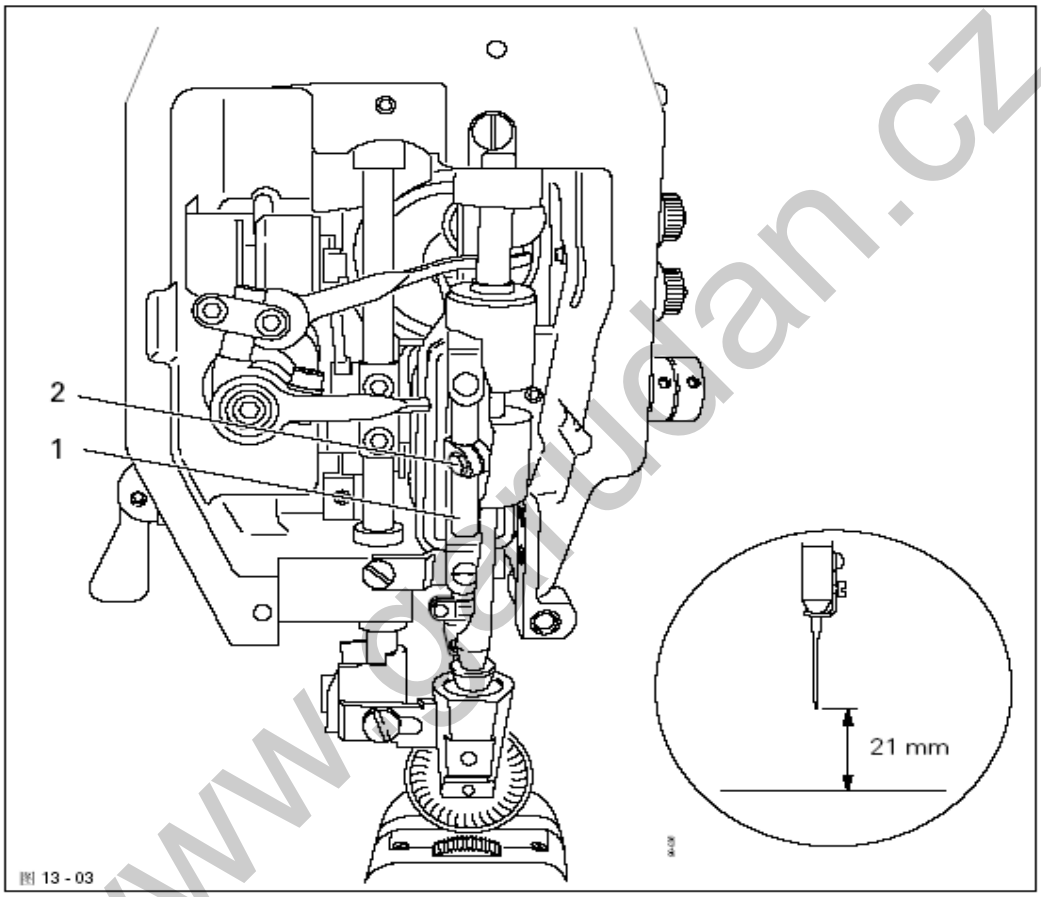
Adjustment

90-036

9.03.03

Prelininary adjustment of the needle height

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



- Adjust needle bar **1** (screw **2**). Without turning it, according to the **Requirement**.

9-4 Adjustment

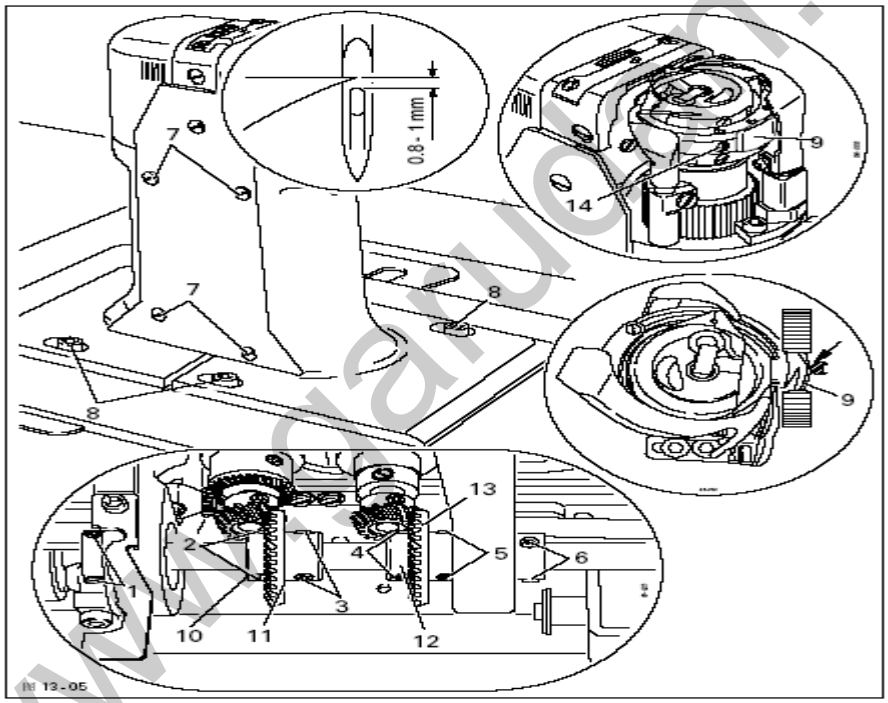
9.03.04

Needle rise, hook clearance, needle height and needle guard on the GP-724

Requirement

With the needle bar positioned **2.0 mm** after bottom dead centre on both hooks :

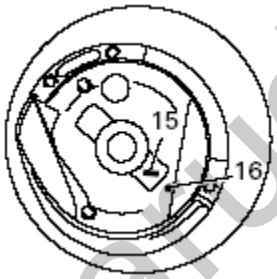
1. the hook point must be at needle centre with a hook-to-needle clearance of **0.05** to **0.1 mm**.
2. the top of the needle eye must be **0.8** to **1.0 mm** below the hook points.
3. the needle guard **9** must touch the needle lightly.



9-7 Adjustment

- Loosen screws **1**, **2**, **3**, **4**, **5**, **6** and **7**.
- Loosen screws **8** slightly.
- Bring needle bar to **2.0 mm** past bottom dead centre.
- Set both hook points at needle centre, making sure that the needles are not deflected by needle guard **9**.
- Adjust needle height according to **Requirement 2**.
- Adjust both hook posts according to **Requirement 1** and tighten screw **8.**
- Tighten screws **1** and **6**.
- Making sure that there is some play in the bevel gear, tighten screws **3** and **5**.
- With retaining collar **10** touching bevel gear **11** tighten screws **2**.
- With retainting collar **12** touching bevel gear **13** tighten screw **4**.
- Tighten screws **7** on both sides of the post.
- Adjust needle guard **9** (screw **14**) on both hooks according to **Requirement 3**.

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



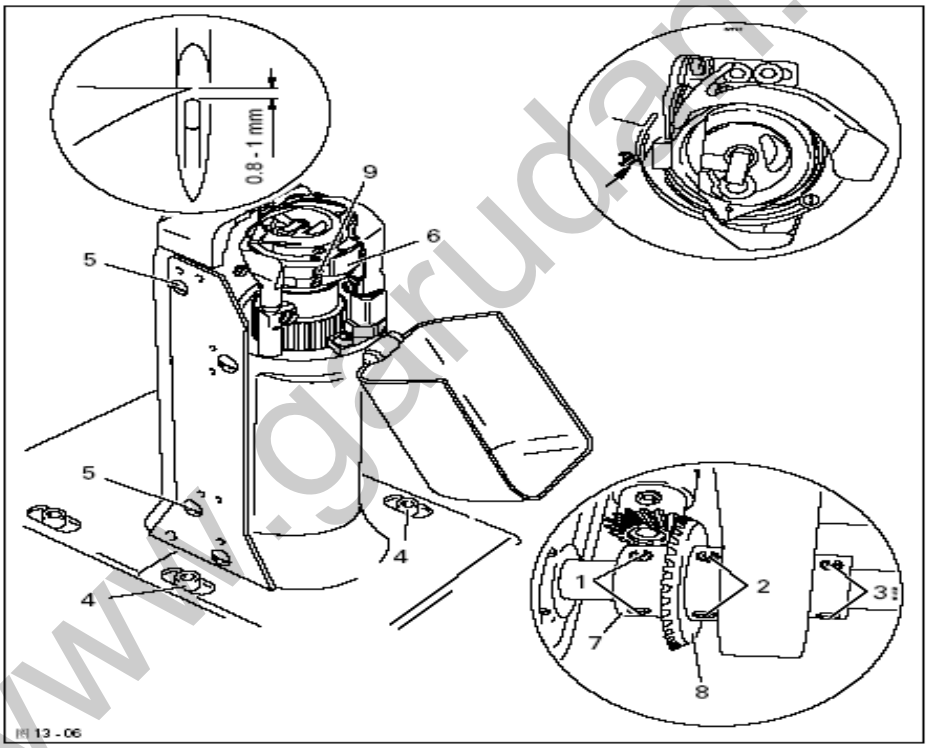
Adjustment

9.03.05

Needle rise, hook clearance, needle height and needle guard on the GP-724

Requirement
With the needle bar positioned **2.0mm** after bottom dead centre and the stitch length set at “0.8”:

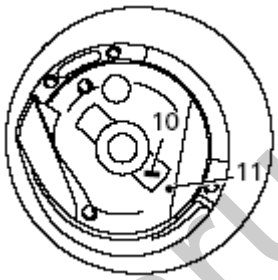
1. the hook point must be at needle centre with a hook-to-needle clearance of **0.05** to **0.1mm**.
2. the top of the needle eye must be **0.8** to **1.0 mm** below the hook point.
3. the needle guard **6** must touch the needle lightly.



Adjustment

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

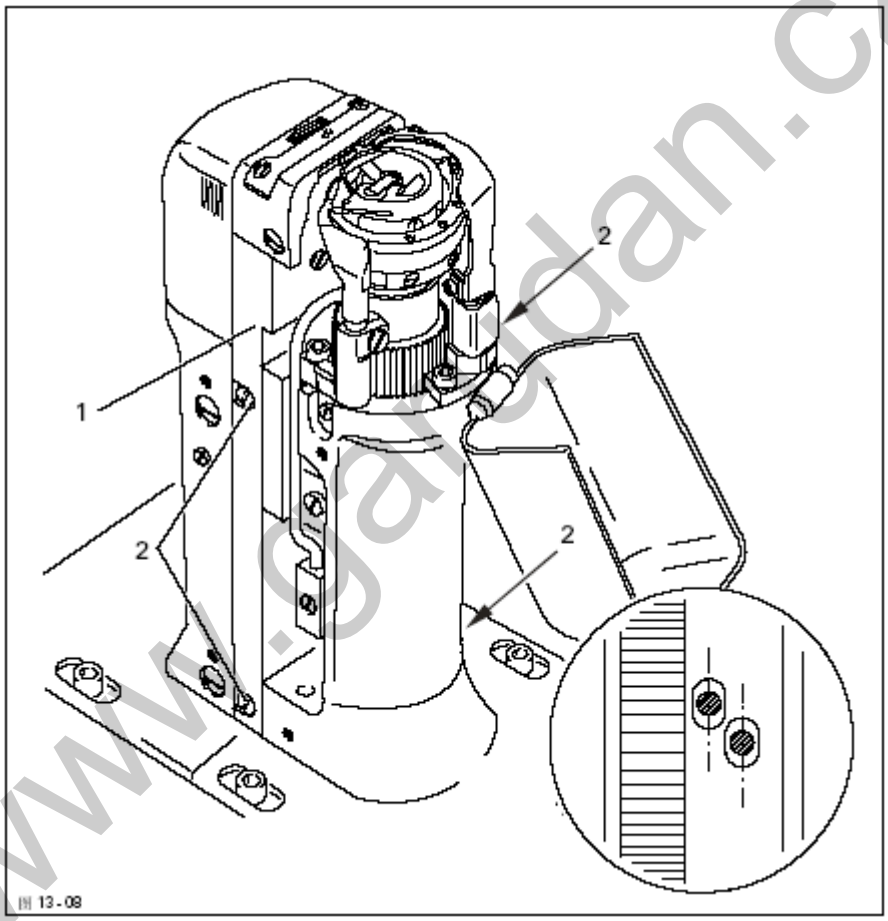
When the hook is changed, make sure that the markings **10** and **11** are both on one side.



Adjustment

9.03.06Needle position crosswise to sewing direnction on the GP-724

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



- Shift bearing plate **1** (screws **2**, on both sides of the post) according to the **Requirement**.

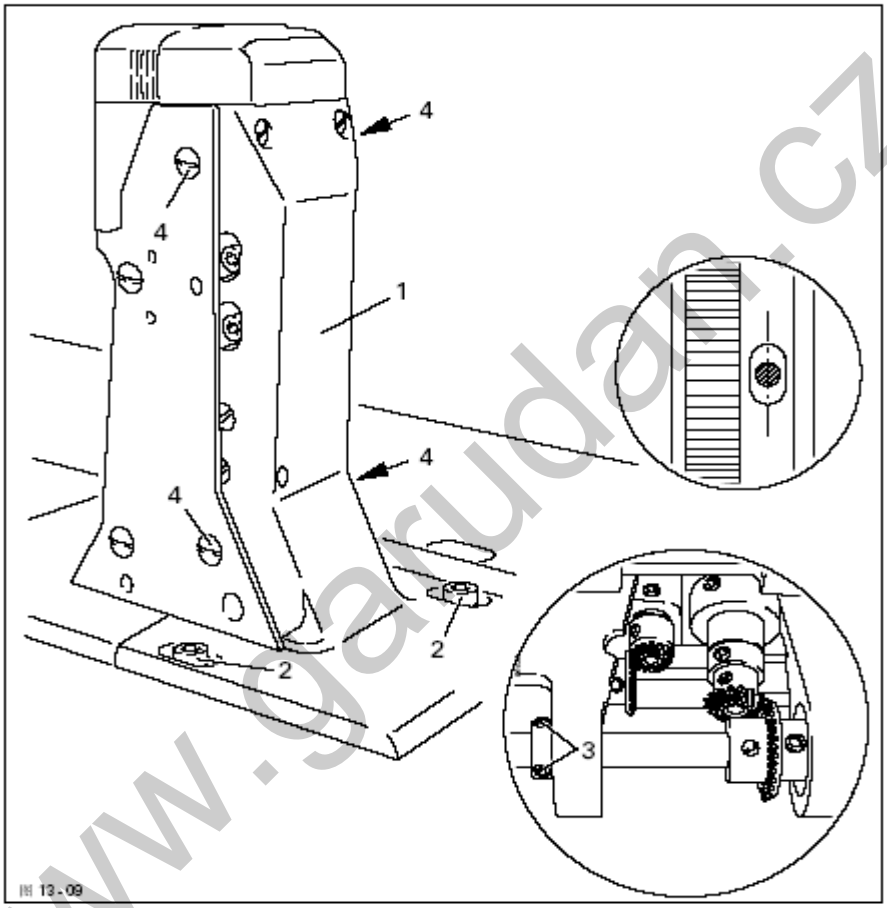
Adjustment

5

9.03.07

Needle position crosswise to sewing direnction on the GP-710

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



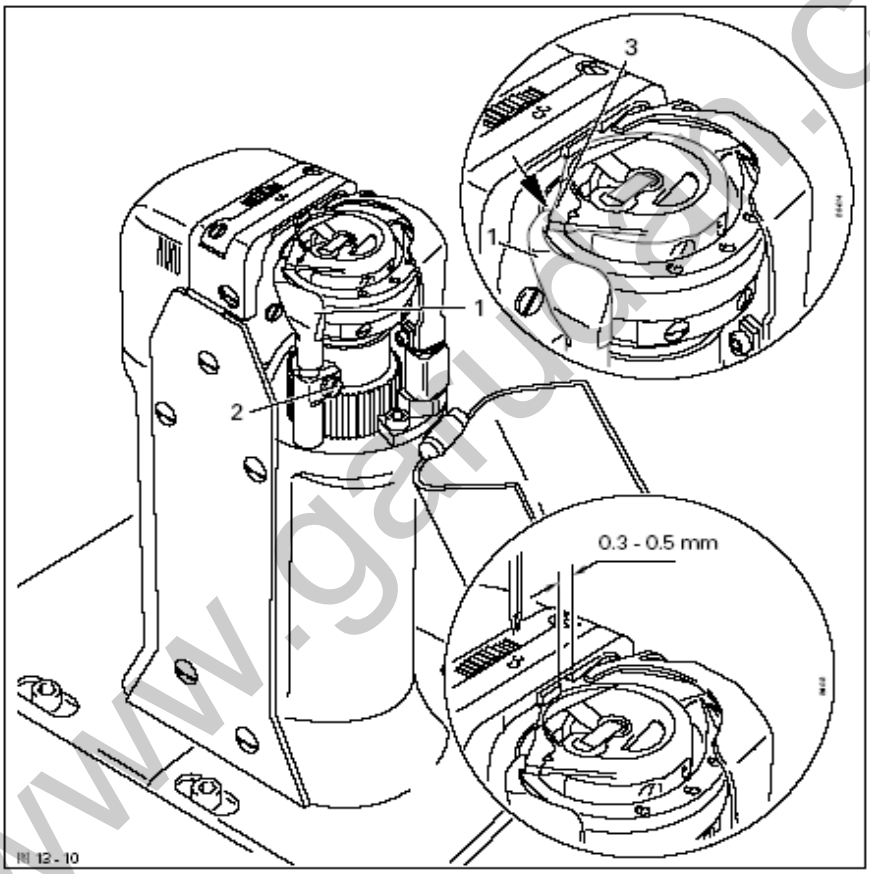
- Adjust feed wheel post **1** (screws **2**, **3** and **4**) according to the **Requirement**.

Adjustment

9.03.08 **Height and stroke of the bobbin case opener**

Requirement

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



Adjustment

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

On the GP-724 these adjustments must be repeated on the right post. Depending on the thread size, a variation of the setting in Requirement **2** is permitted.

86-01

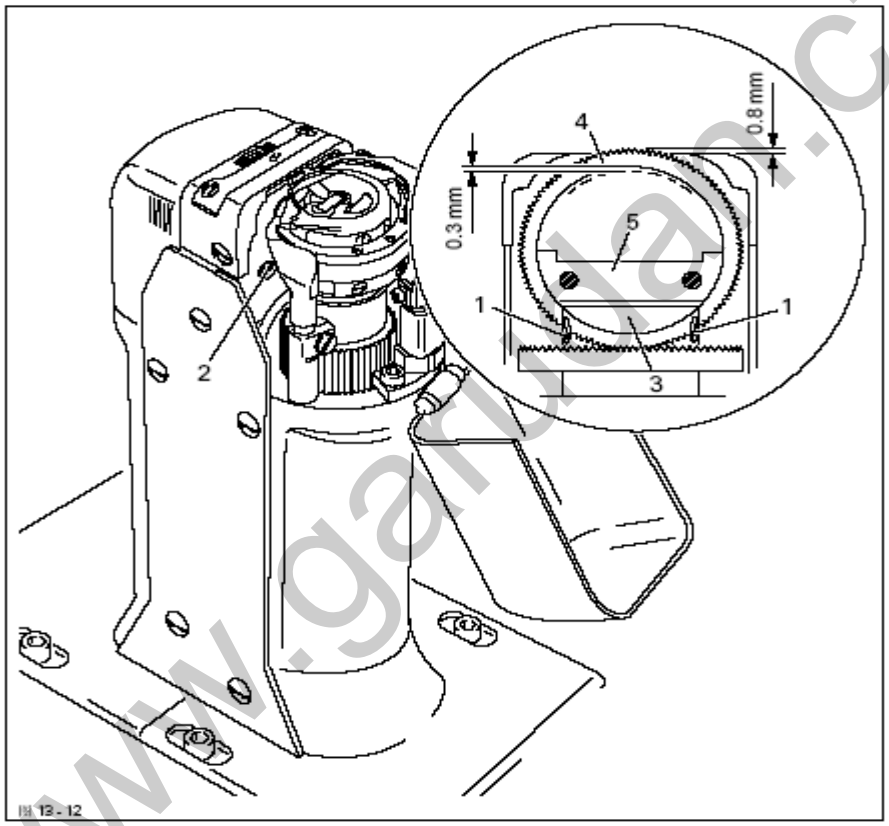
Adjustment

9.03.09

Height of the feed wheel on the GP-724

Requirement

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



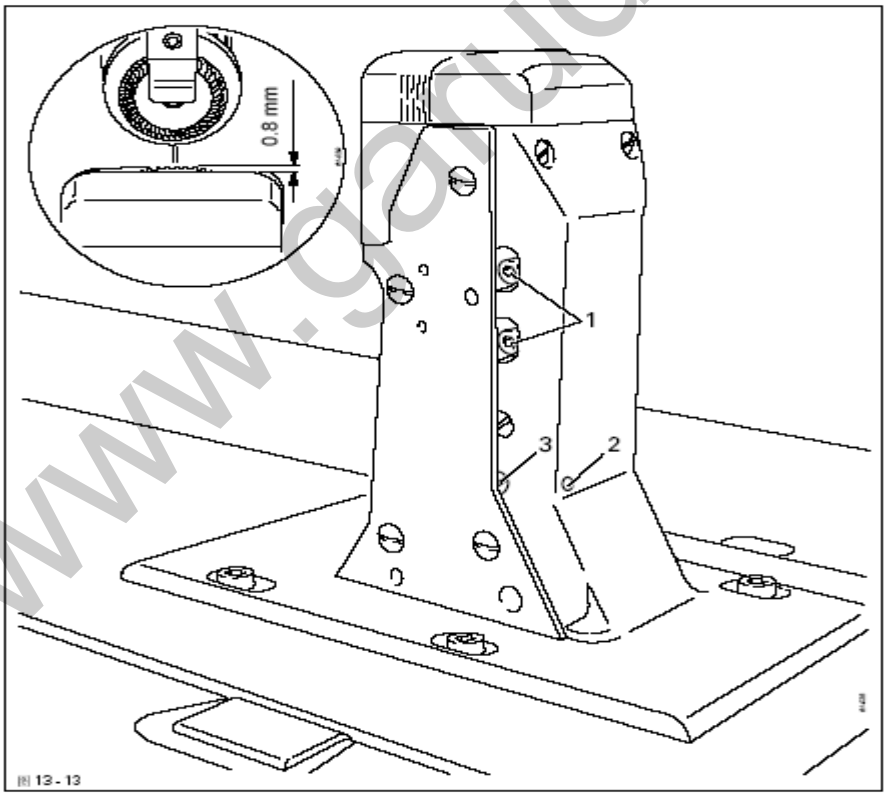
- Swing out the roller presser.
- Loosen screws **1** and **2** (two screws each).
- Adjust drive wheel **3** according to **Requirement 1**, taking care to see that the teeth of drive wheel **3** and feed wheel **4** lock into each other properly.
- Tighten screws **1**.
- Adjust guide **5** according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

Adjustment

61-035

9.03.10 Height of the feed wheel on the GP-710

Requirement
Feed wheel should protrude from the needle plate by tooth height (appro. **0.8 mm**).



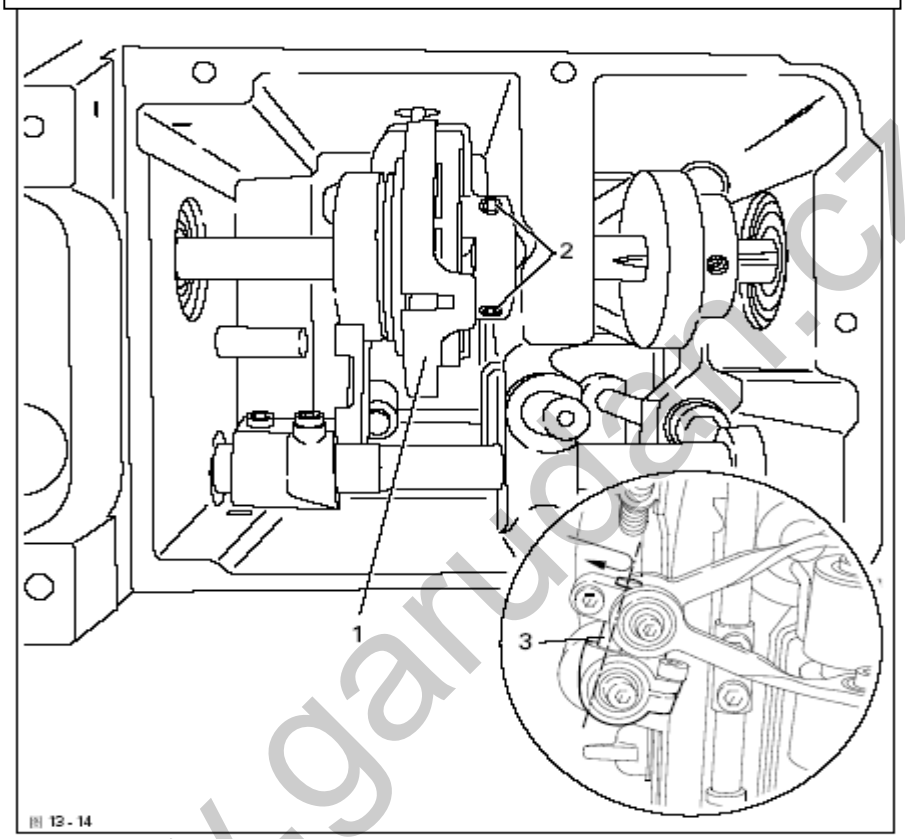
- Swing out the roller presser.
- Loosen screws 1.
- Adjust eccentric 3 (fastening screw accessible through hole 2) according to the requirement.
- Tighten screws 1.

61–036

9.03.11

Stitch length control eccentric

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



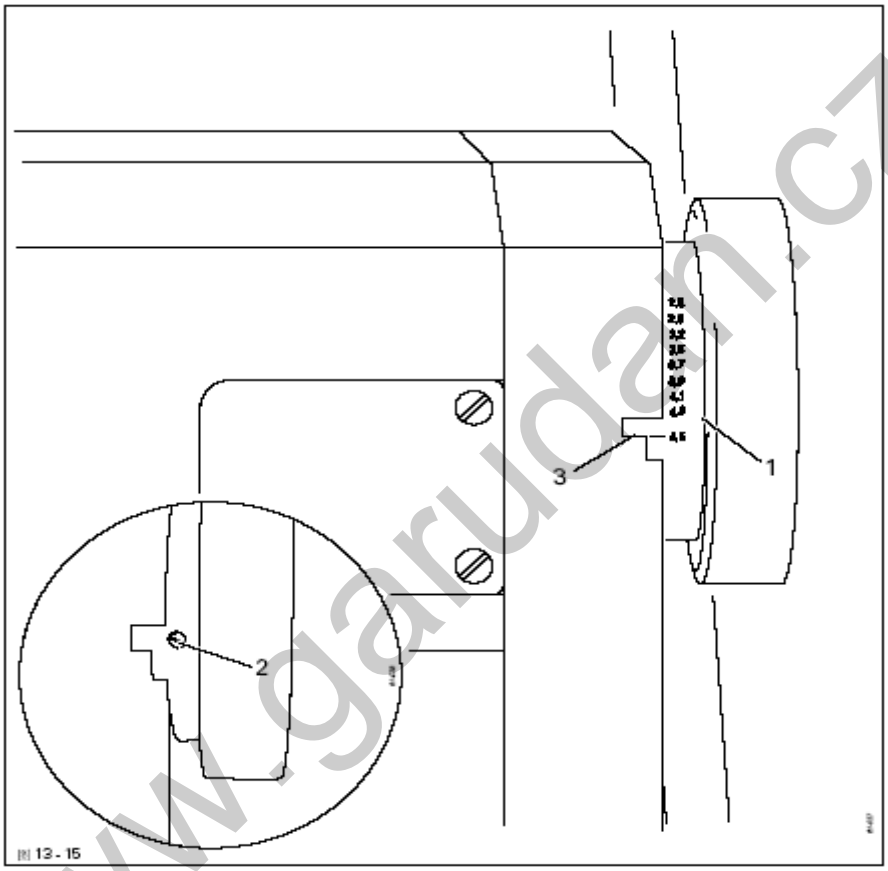
- Set the maximum stitch length.
- Turn stitch length control device **1** (screws **2**) according to **Requirement**.

Adjustment

61-037

9.03.12 Stitch length scale disk

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



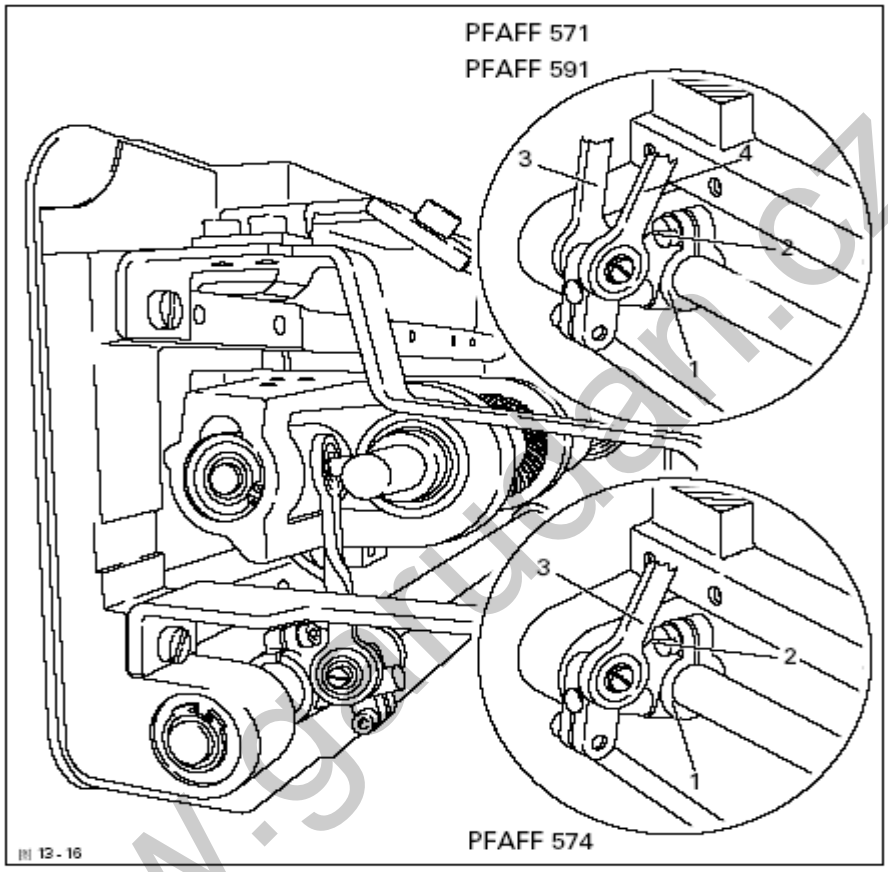
- Set the maximum stitch length.
- Turn the scale disk **1** (screw **2**) according to the **Requirement**.

61–

9.03.13

Shaft crank to feed wheel drive

Requirement
When the maximum length is set, the linkage rod **3**, or lingkage rods **3** and **4** on the model 9625 and 9610, must be able to move freely when the balance wheel is turned.

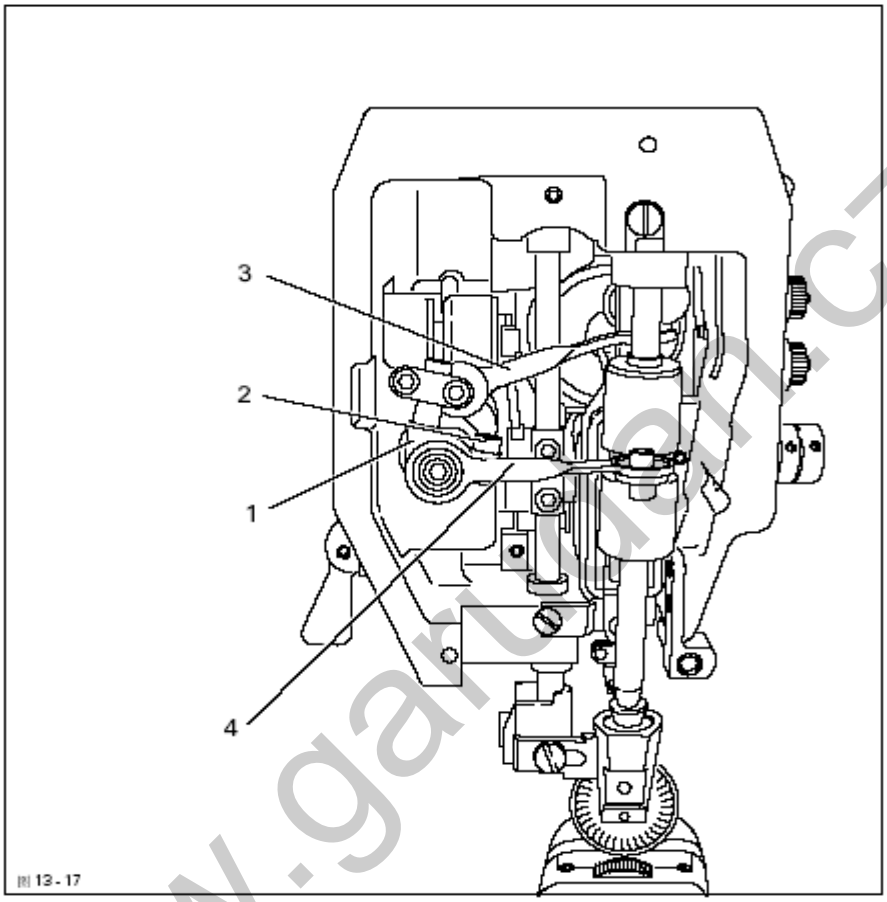


-
- Set the maximum stitch length.
- Twist or shift the shaft crank **1** (screw **2**) according to the **Requirement**.

Adjustment

9.03.14 Shaft crank to roller presser drive

Requirement
When the maximum stitch length is set, the linkage rods **3** and **4** must be able to move freely at their left and right point of reversal when the balance wheel is turned.

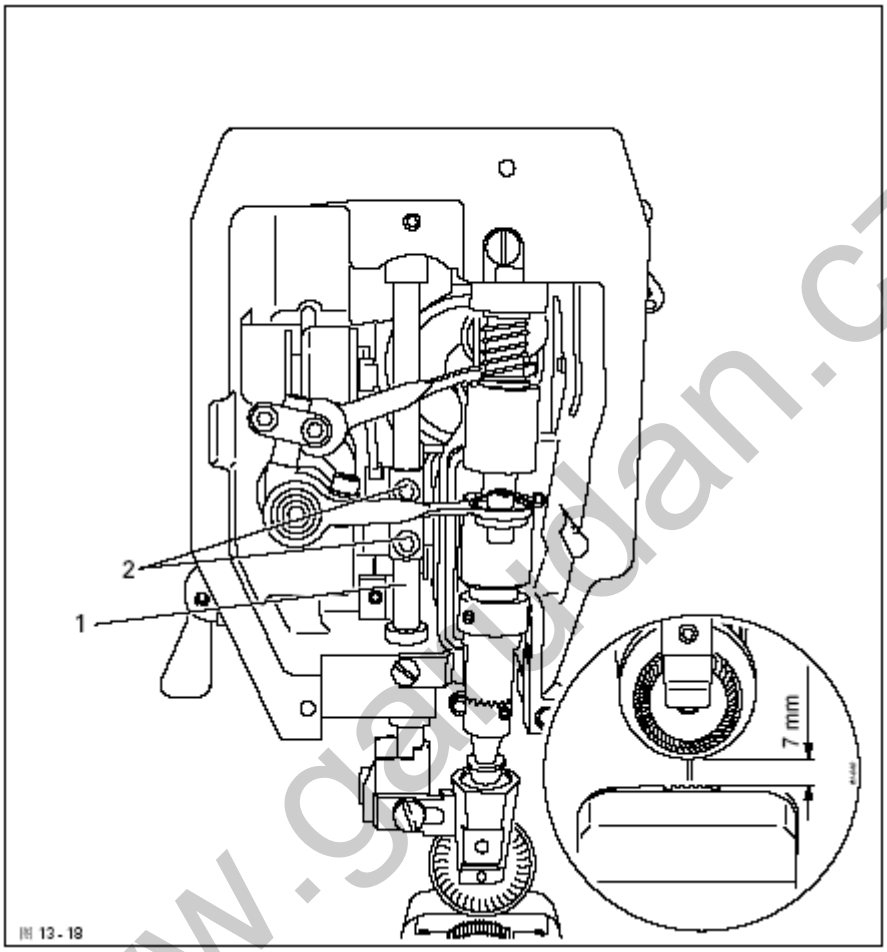


- Set the maximum stitch length
- Twist or shift the shaft crank **1** (screw **2**) according to the **Requirement**.

9.03.15

Clearance between roller presser and feed wheel

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



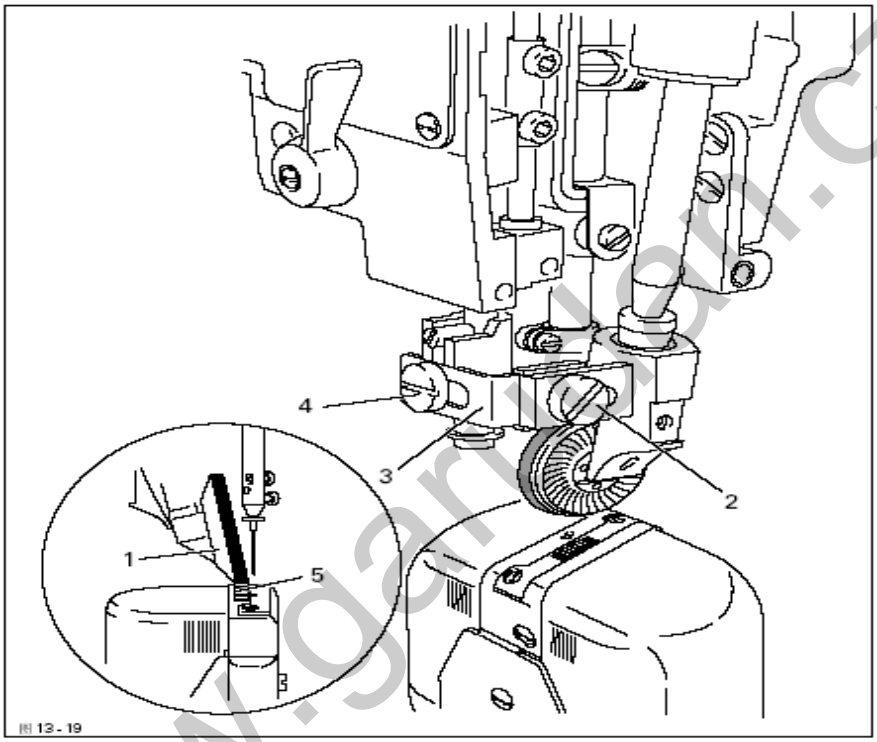
- Raise the presser bar lifter.
- Adjust the presser bar **1** (screws **2**) according to the **Requirement**. Make sure that the roller presser is parallel to the feed wheel.

Adjustment

9.03.16

Roller presser

Requirement
When the roller presser **1** is touching the feed wheel **5** it must:
1. be parallel to feed wheel **5**, as seen in the direction of sewing.
2. be in the centre of the needle (on model GP-724 the left needle), as seen in the direnction of sewing.
3. be as near as possible to the needle (on modelGP-724 the left needle), as seen crosswise to the direction of sewing.



Adjustment

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

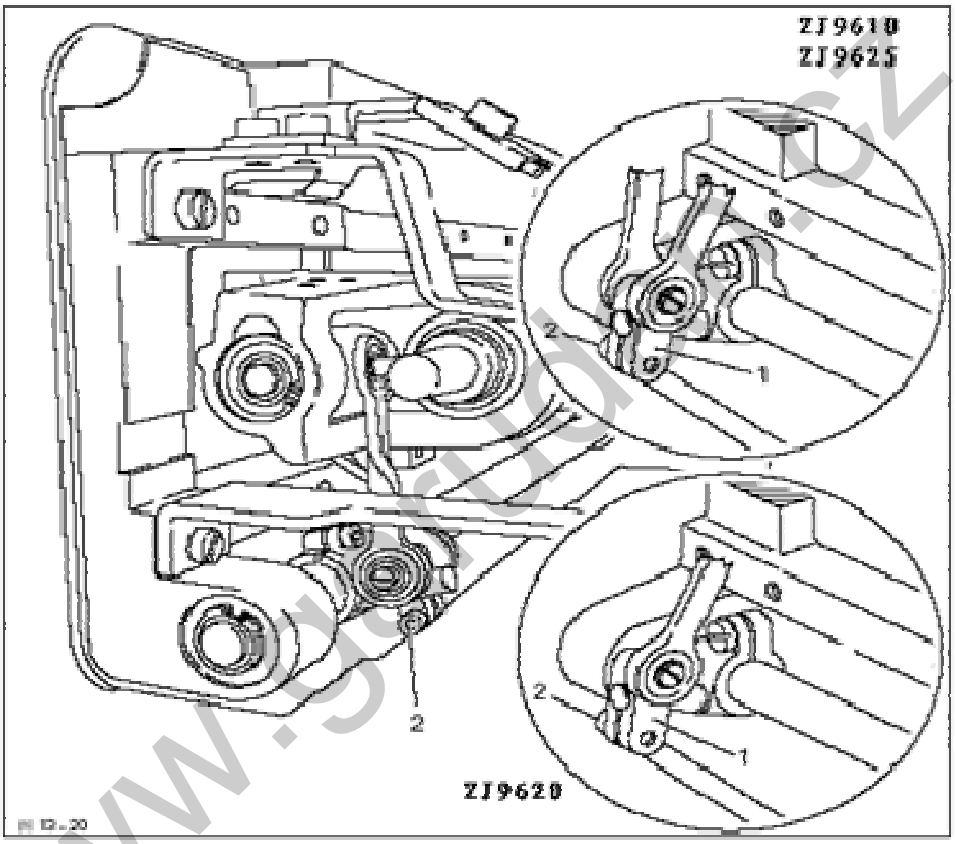
When sewing very tight curves, the roller presser 1 must be moved a little towards the operator.

Adjustment

9.03.17

Stitch length on stitch length scale

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



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

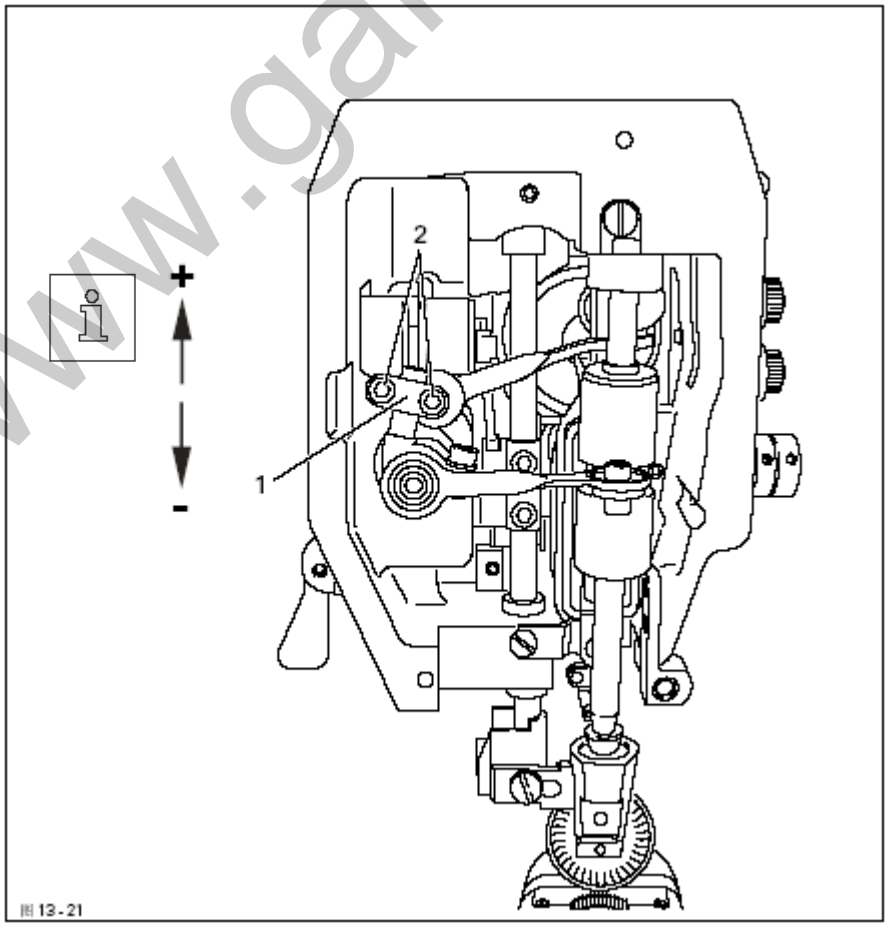
Clamp **1** must not be positioned diagonally to the rock shaft!

Adjustment

9.03.18

Synchronization of roller presser and feed wheel

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



Adjustment

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

Clamp **1** must not be positioned diagonally to the rock shaft.

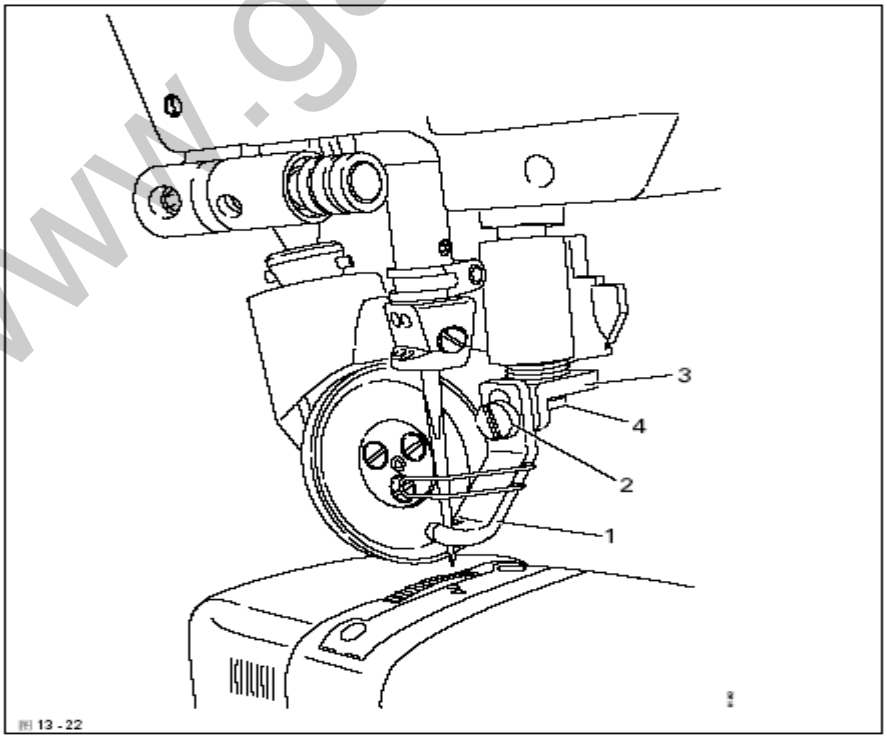
Adjustment

61-042

9.03.19

Retainer(only on GP-724)

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

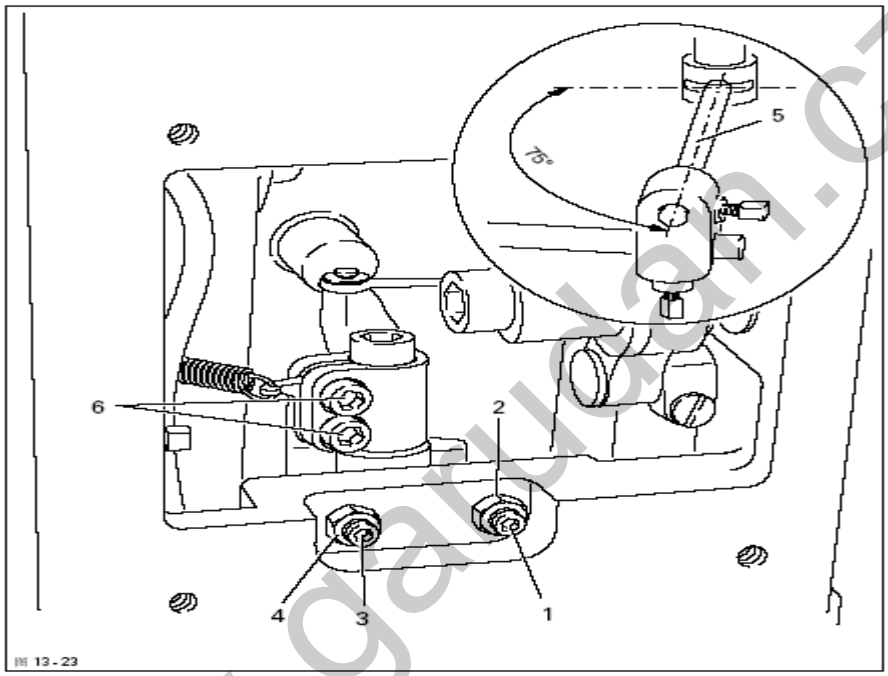


- Adjust retainer **1** (screw **2**) according to **Requirement 3**.
- Adjust bracket **3** (screw **4**) according to **Requirenment 1 and 2.**

9.03.20

Knee lever

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

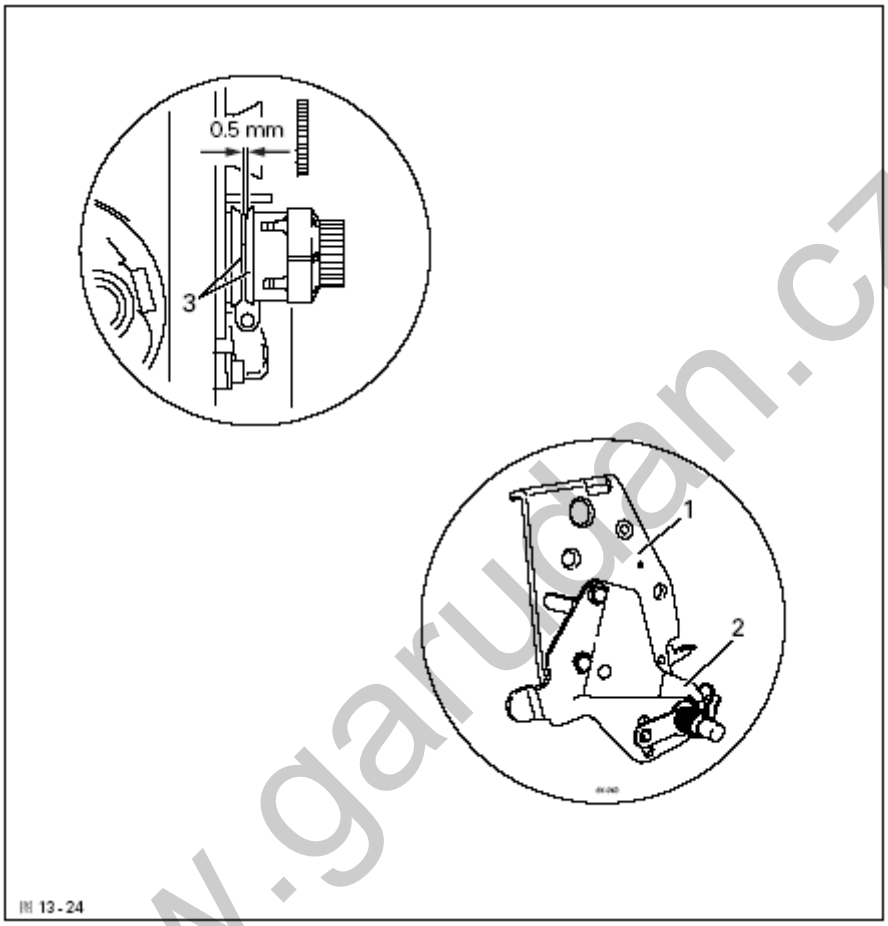


- Adjust screw **1** (nut **2**) according to **Requirement 3**.
- Adjust screw **3** (nut **4**) according to **Requirement 2**.
- Set bar **5** (screws **6**) according to **Requirement 3**.

Adjustment

61-

9.03.21 Needle thread tension release



61-043

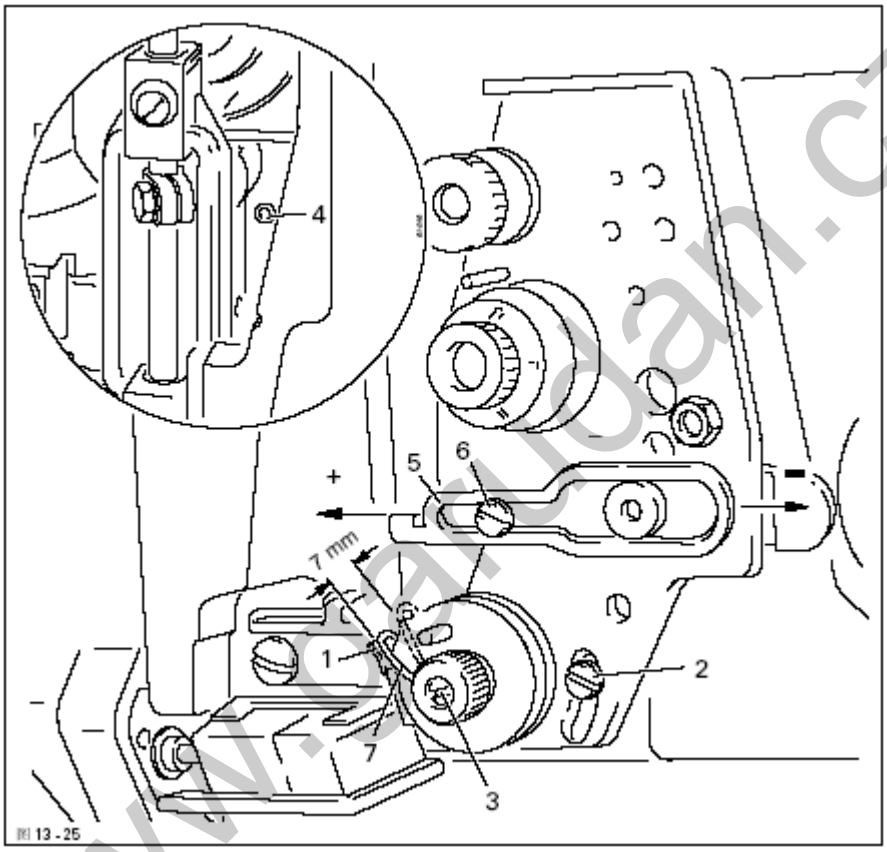
- Align tension mounting plate **1** and pressure plate **2** according to **Reqirement**.

Adjustment

9.03.22 Thread check spring (GP-710)

Requirement

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



Adjustment

- Adjust support **1** (screw **2**) according to **Requirement 1**.
- Adjust the spring tension by turning screw **3** (screw **4**).
- Adjust the thread regulator **5** (screw **6**) acoording to **Requirement 2**.

For technical reasons it may be necessary to deviate from the specified spring stroke or spring tension.
Move the thread regulator **5** (screw **6**) towards “+”(= more thread) or “-”(= less thread).

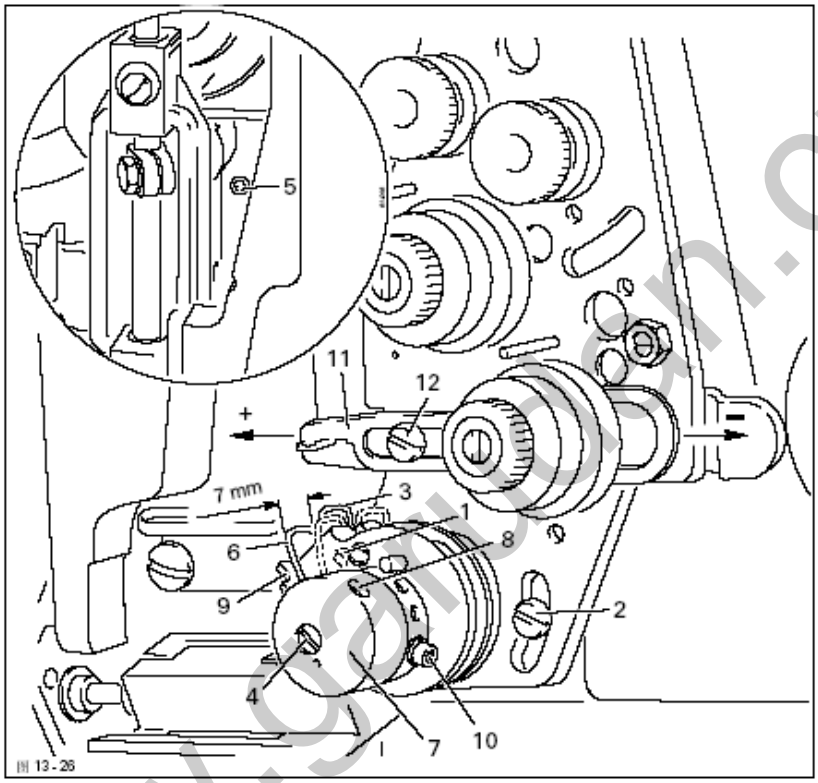
Adjustment

9.03.23

Thread check springs (GP-724)

Requirement

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



Adjustment

- Adjust support **1** (screw **2**) according to **Requirement 1**.
- Adjust the spring tension of thread check spring **3** by turning screw **4** (screw **5**).
- Adjust the spring tension of thread by checking spring **6** and **7** (screw **8**).
- Adjust support **9** (screw **10**) according to **Requirement 1**. (If the adjustment range is too low, support **9** can be screwed into another hole).
- Adjust the thread regulator **11** (screw **12**) according to **Requirement 2**.

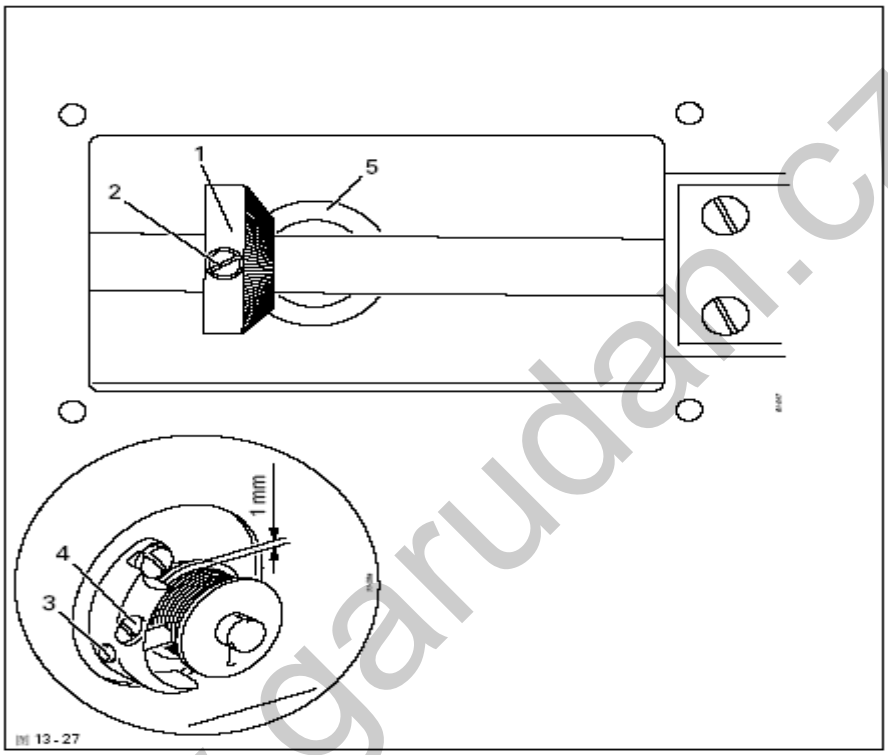
For technical reasons it may be necessary to deviate from the specified spring stroke or spring tension.
Move the thread regulator **11** (screw **12**) towards “+” (=more thread) or “-”(= less thread).

Adjustment

9.03.24 Bobbin winder

Requirement

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

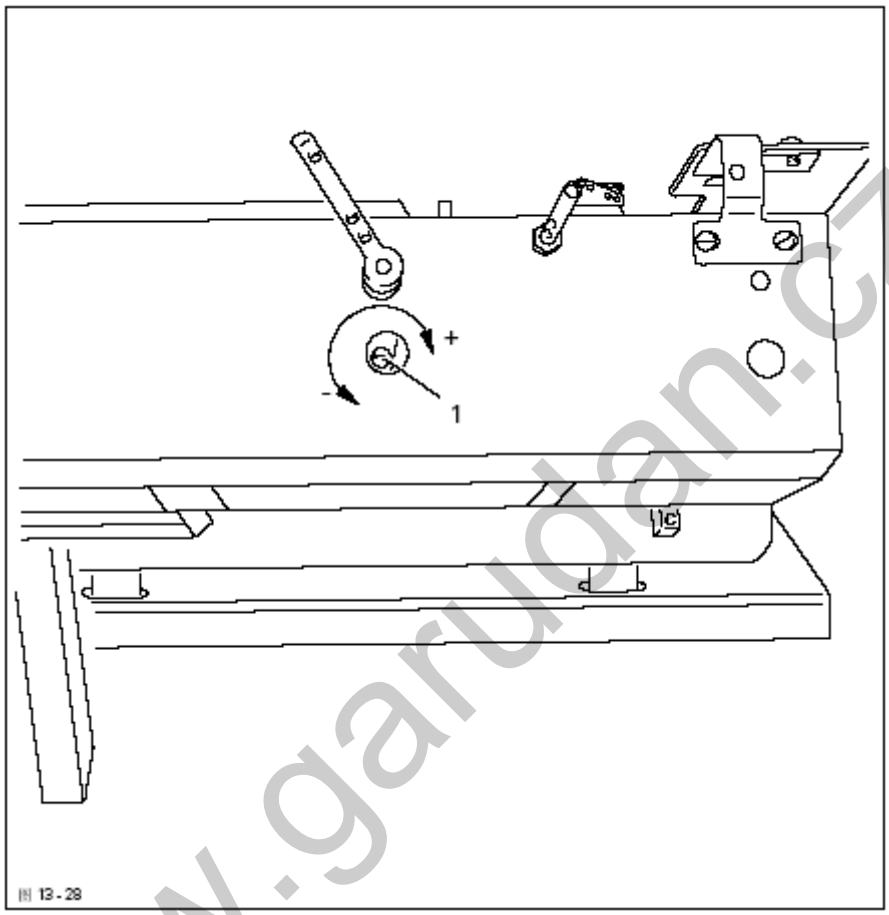


- Position drive wheel **1** (screws **2**) according to **Requirement 1**.
- Position bolt **3** (screw **4**) according to **Requirement 2**.

Adjustment

9.03.25

Pressure of roller presser

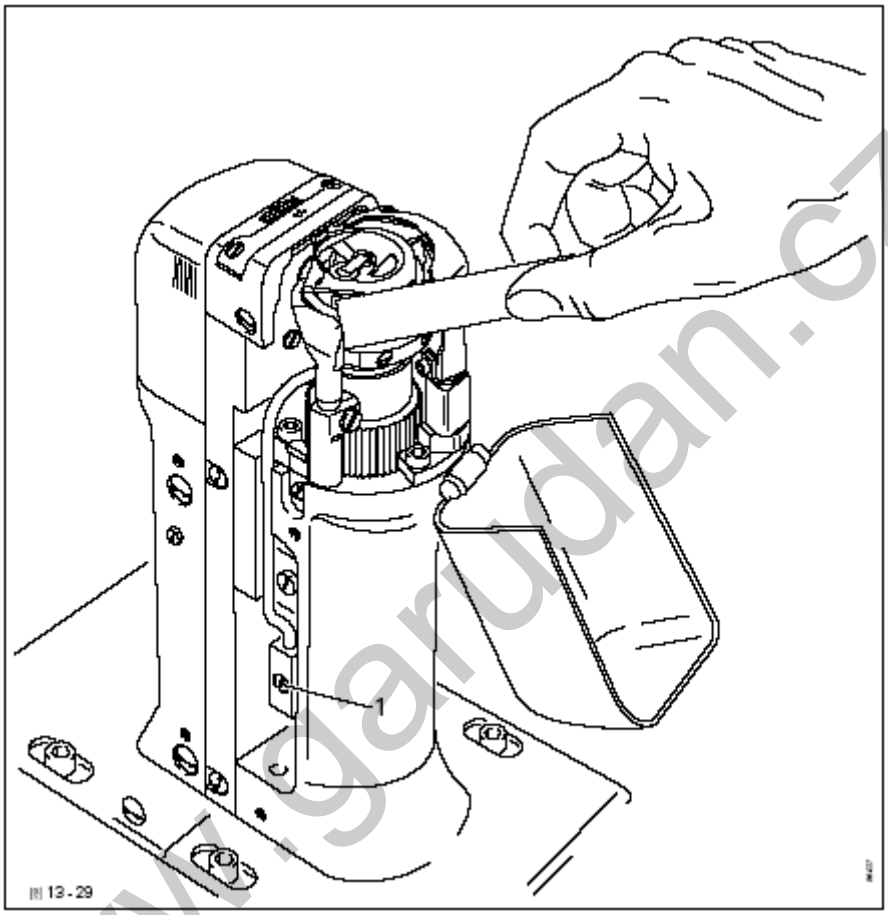


- Adjust roller pressure with screw **1** according to the **Requirement**.

Adjustment

9.03.26 **Lubrication**

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



Adjustment

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

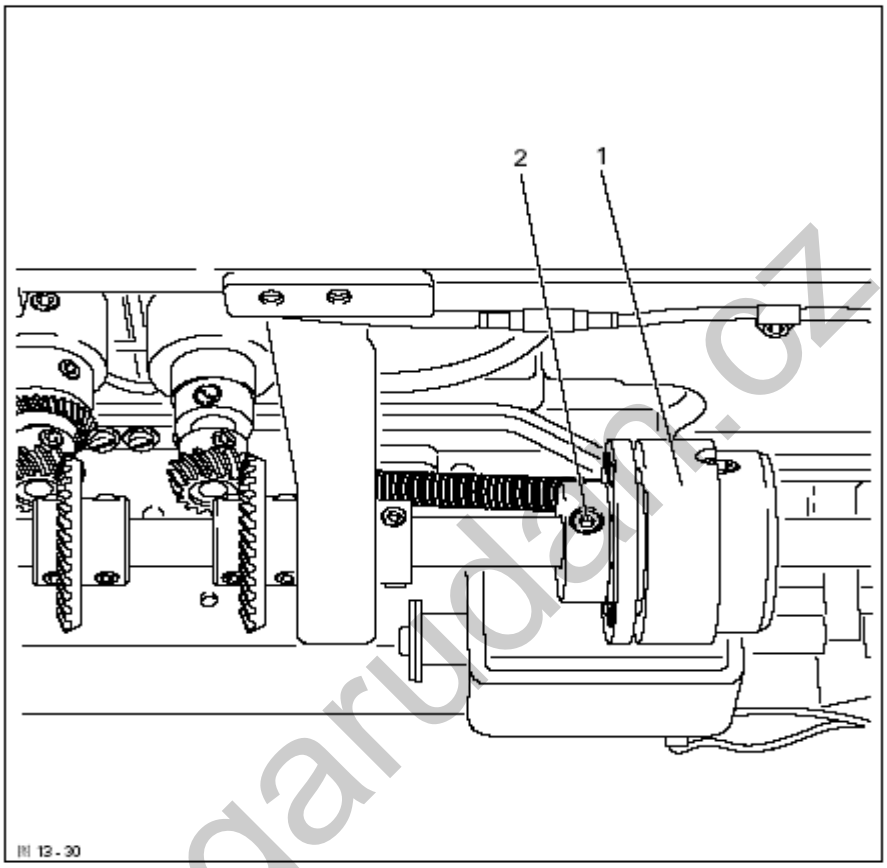
While the machine is running do not place hands in the needle or hook area!
Danger of injury from moving parts!

- With the machine running hold a strip of paper on the hook and check the **Requirement**.
- If necessary, adjust the oil flow on screw **1**.

Adjustment

9.03.27 Re-engage safety coupling

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



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

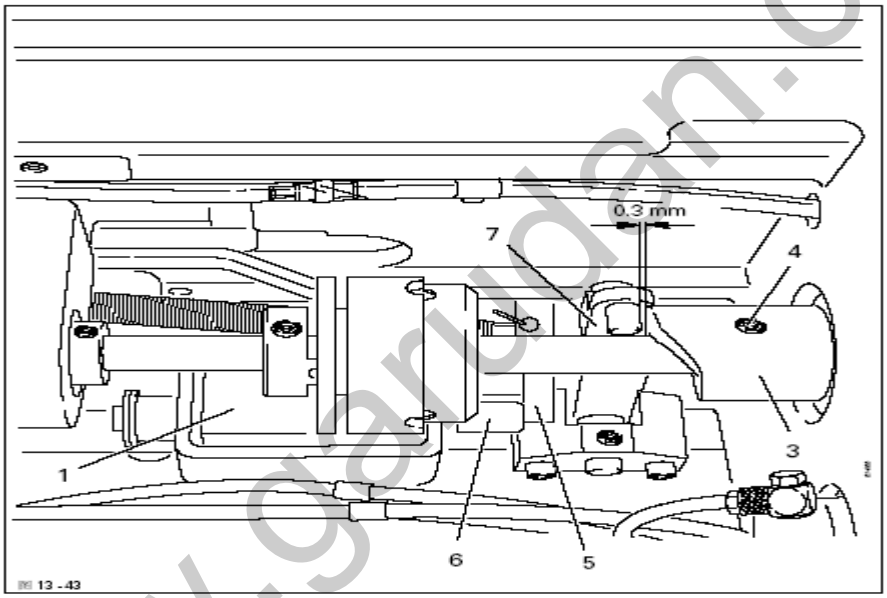
Adjustment

9.04 Adjusting the thread trimmer -D

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

Requirement

1. when the thread trimmer is in resting positon, lever **5** should be touching piston **6** and the roller of roller lever **7** should be **0.3** mm away from control cam **3**.
2. when the take-up lever is at top dead centre, control cam **3** should just have placed roller lever **7** in its resting position.



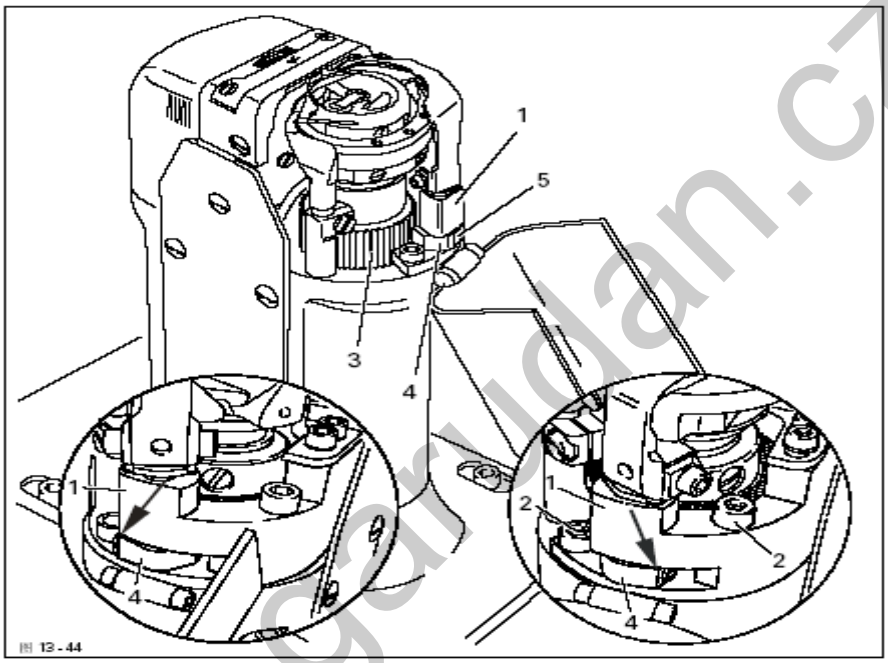
- Having made sure that piston **6** is positioned against the left stop, adjust magnet **1** (2 screws) in accordance with **Requirement 1**.
- Adjust control cam **3** (screw **4**) in accordance with **Requirement 2**.

Adjustment

9.04.02 Position of the thread catcher holder

Requirement

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



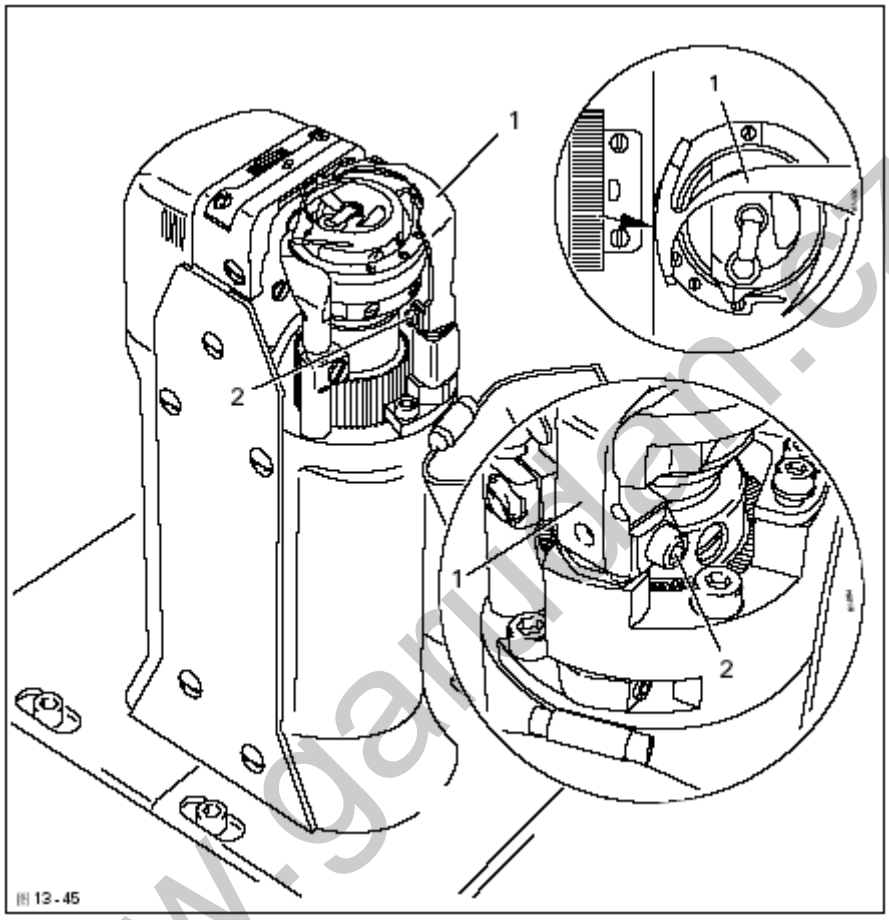
- Adjust the thread catcher holder **1** (screws **2**) according to **Requirements**.

If **Requirement 2** cannot be fulfilled, loosen screw **2** and move the toothed segment **4** by one tooth.

Adjustment

9.04.03 Distance between thread catcher and needle plate

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



- Move thread catcher **1** (screws **2**, two screws) parallel to the thread catcher holder in accordance with the **Requirement**.

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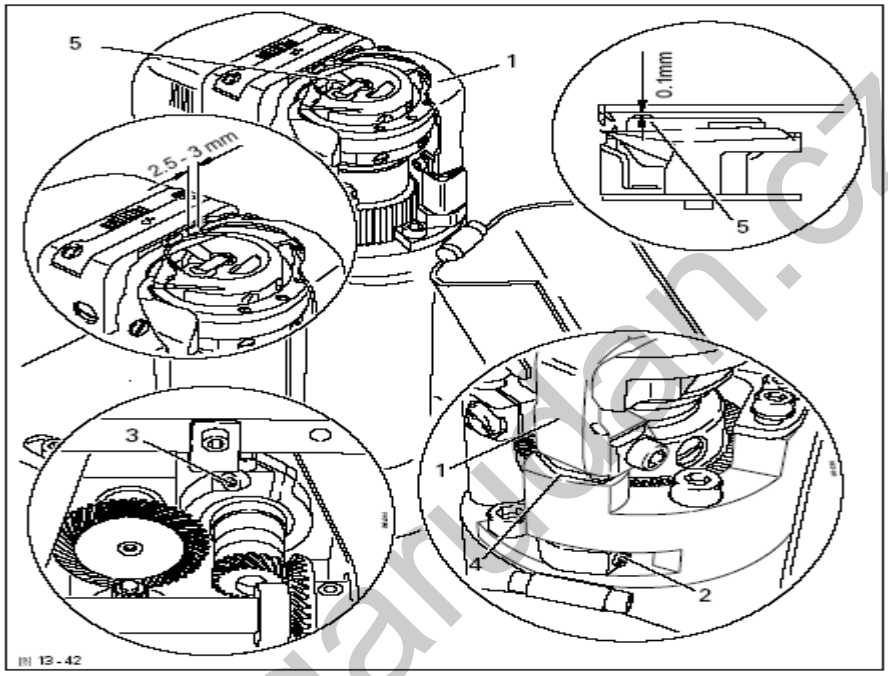
9.04.04 Position of the thread catcher

Requirement

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



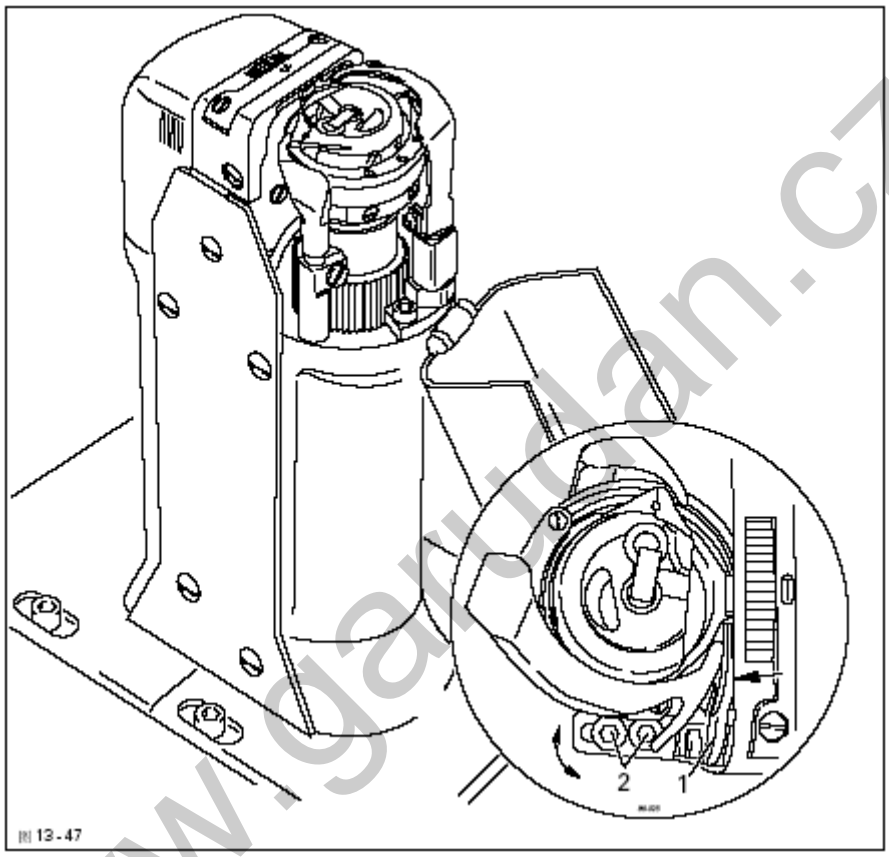
- Move thread catcher **1** (screw **2**, two screws) in accordance with **Requirement 1**.
- Turn thread cather **1** (screw **3**) in accordance with **Requirement 2.**

Thread catcher **1** must be parallel to the surface of the thread catcher holder **4**.

9.04.05

Knife position and knife pressure

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



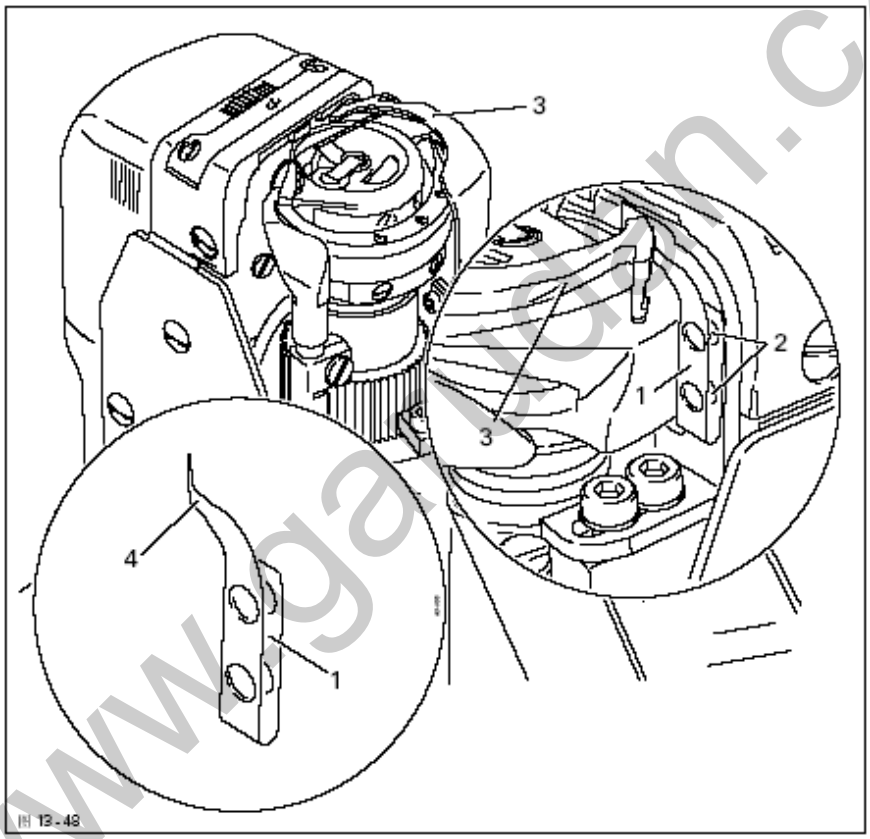
Move knife **1** (screw **2**) in accordance with **Requirement 1** or swivel it in accordance with **Requirement 2**.

Adjustment

9.04.06 **Bobbin thread retaining spring**

Requiement

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



Adjustment

- Adjust bobbin thread clamp spring **1** (screw **2**) in accordance with **Requirement 1**.
- Adjust the tension in accordance with **Requirement 2** by bending side **4** of the bobbin thread clamp spring **1**.

:**Control – requirement** 1

- Switch off the machine and bring the take-up lever to its bottom dead centre.
- Engage and disengage the thread cather **3** by hand and check **Requirement 1**. Adjust if necessary.

Control – requirement 2

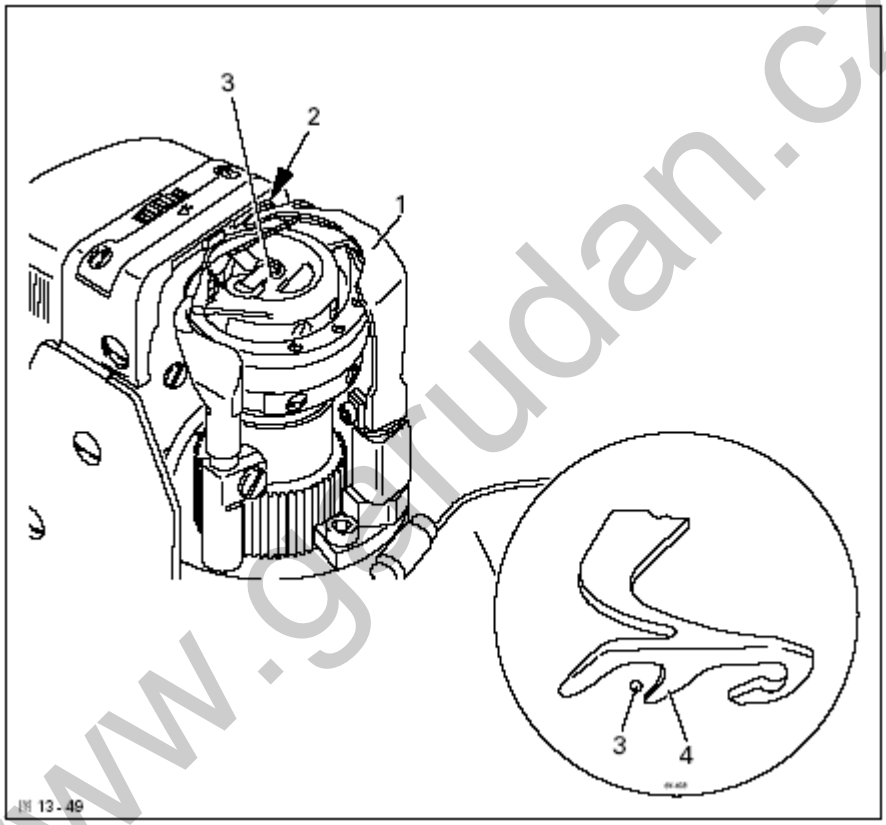
- After the thread has been cut, sew a few stitches by turning the balance wheel, checking whether the bobbin thread is drawn out of the bobbin thread clamp spring between the 1st and 3rd stitched, if necessary, correct the tension.

9.04.07

Manual cutting test

Requirement

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

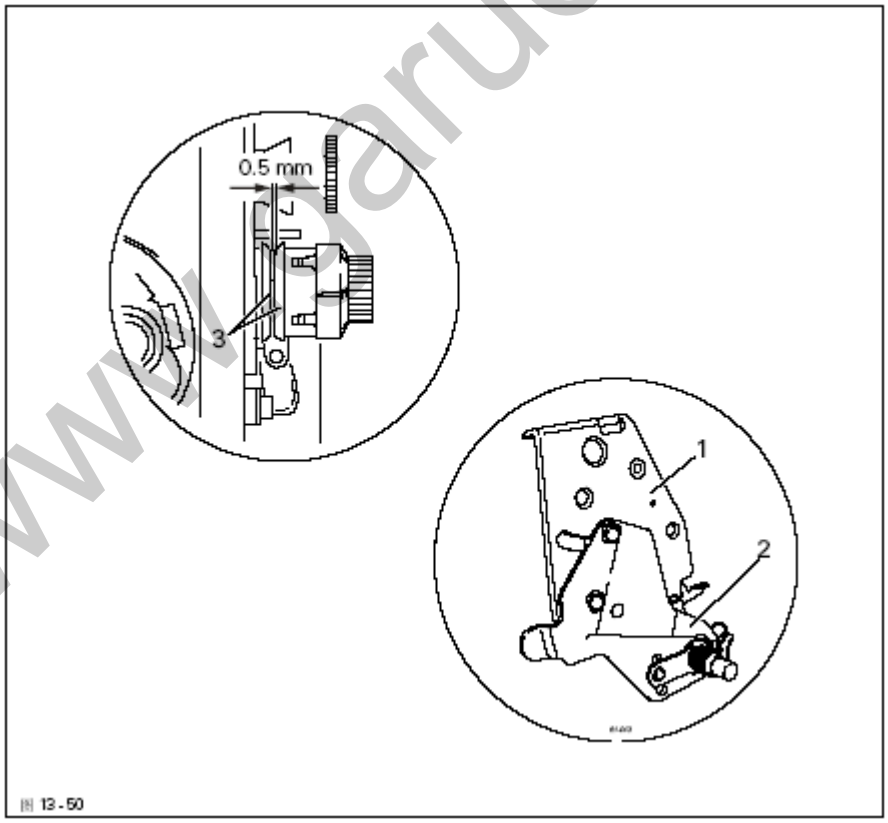


- Sew a few stitiches.
- Turn off the on/off switch.
- Carry out the cutting operation manually.
- Check **Requirement 1** and **2**, and if necessary readjust thread cather **1** in accordance with **Chapter 9.04.05 Position of the thread catcher**.
- Check **Requirement 3**, and if necessary readjust the bobbin thread retaining spring **2** in according with **Chapter 9.04.06 Bobbin thread retaining spring**.

9.04.08

Releasing the tension

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

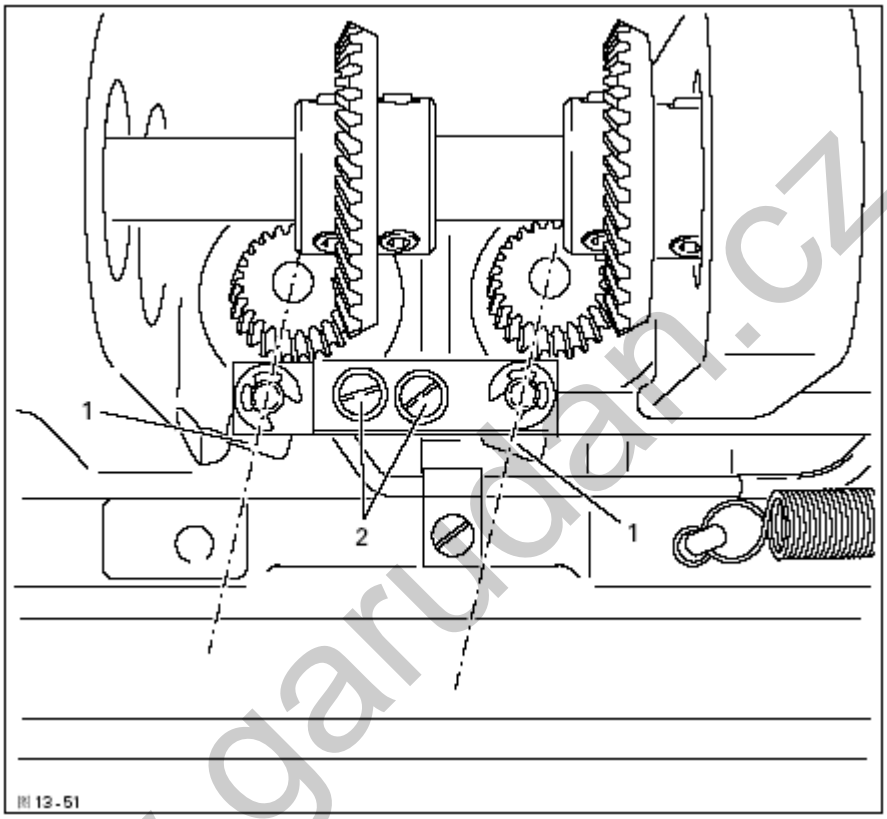


- Activate the magnet.
- Detach the tension bearing plate **1** and adjust pressure plate **2**.

Adjustment

9.04.09 **Linkage rod** (only for the GP-724)

Requirement
When the thread trimmer is in its resting position, the drive levers **1** must be parallel.



- Adjust drive levers **1** (screw **2**) in accordance with the **Requirement**.

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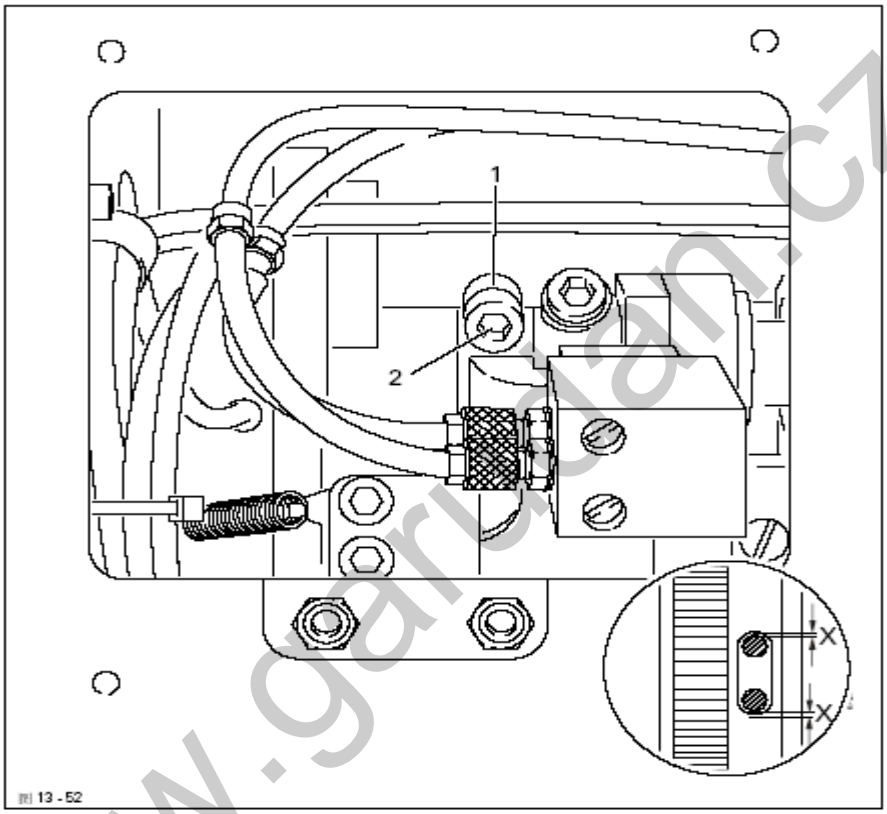
9.05 Adjusting backtacking mechanism --D3

9.05.01 Needle in needle hole (only for GP-710)

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

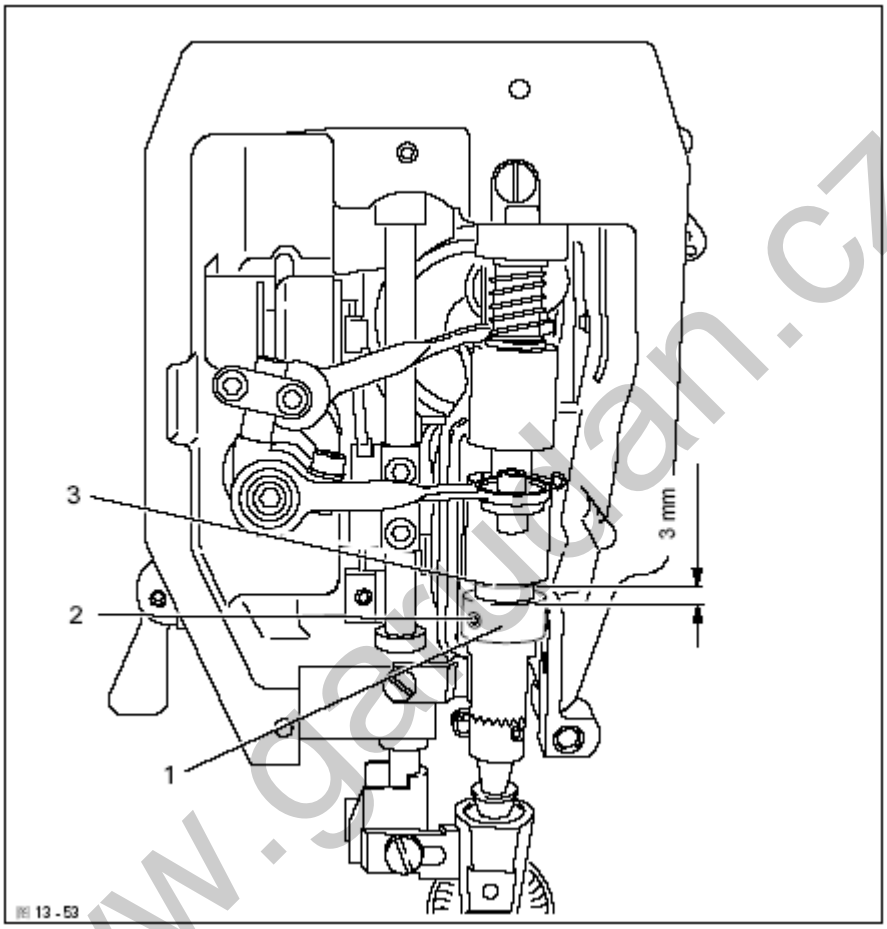


- Turn crank **1** (screw **2**) according to the **Requirement**,

Adjustment

9.05.02 **Coupling for roller presser drive**

Requirement
There must be a distance of **3 mm** between coupling half **1** and locking disc **3** of the drive mechanism.

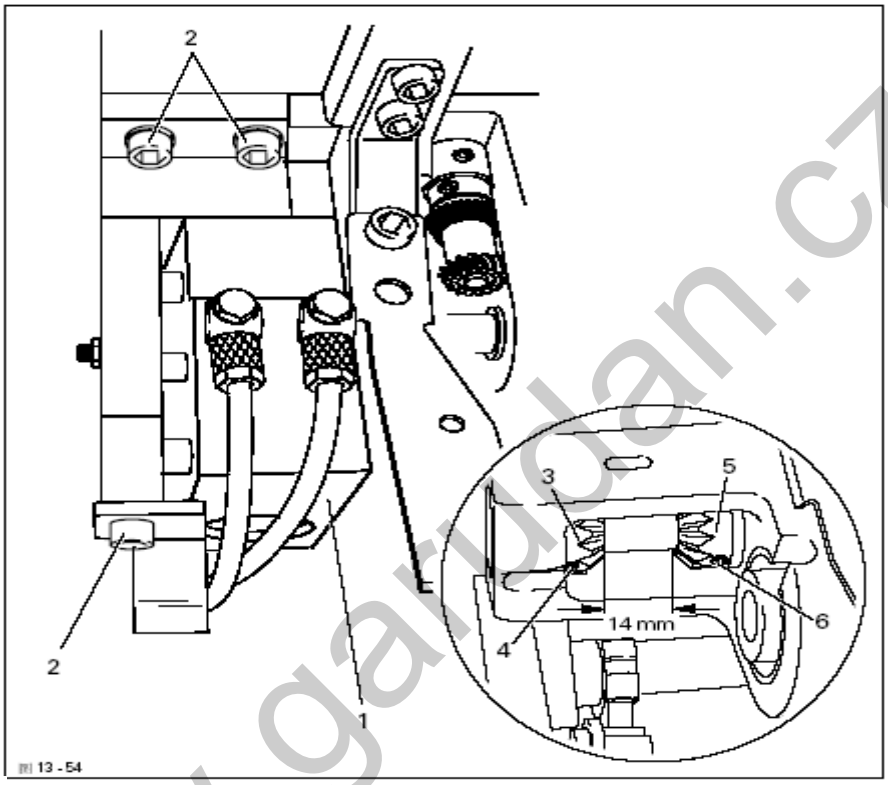


- Adjust coupling half **1** (screw **2**) according to the **Requirement**.

Adjustment

9.05.03 **Bevel gears for feed wheel drive** (on the GP-724)

Requirement
1. bevel gear **3** must fit well on the left side.
2. there must be a distance of **14 mm** between bevel gear **3** and bever gear **5**.

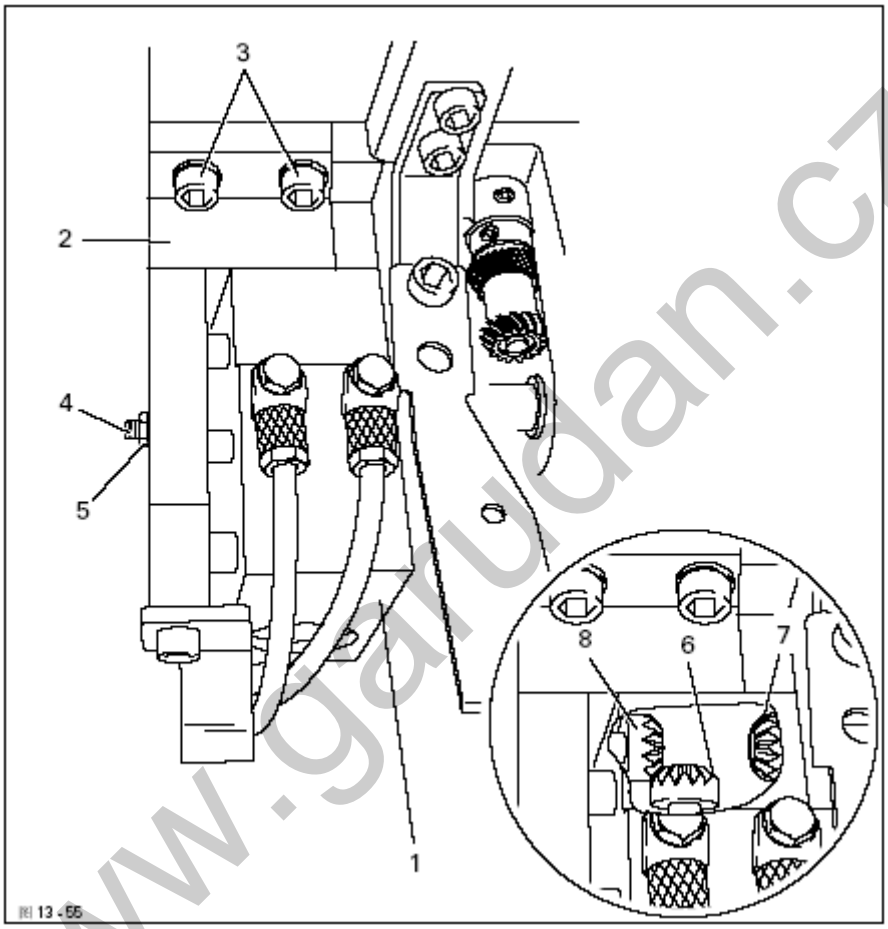


- Remove control unit **1** (screws **2**).
- Adjust bevel gear **3** (screw **4**) according to **Requirement 1**.
- Adjust beve gear **5** (screw **6**) according to **Requirement 2**.

Adjustment

9.05.04 **Bevel gear play** (on the GP-724)

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

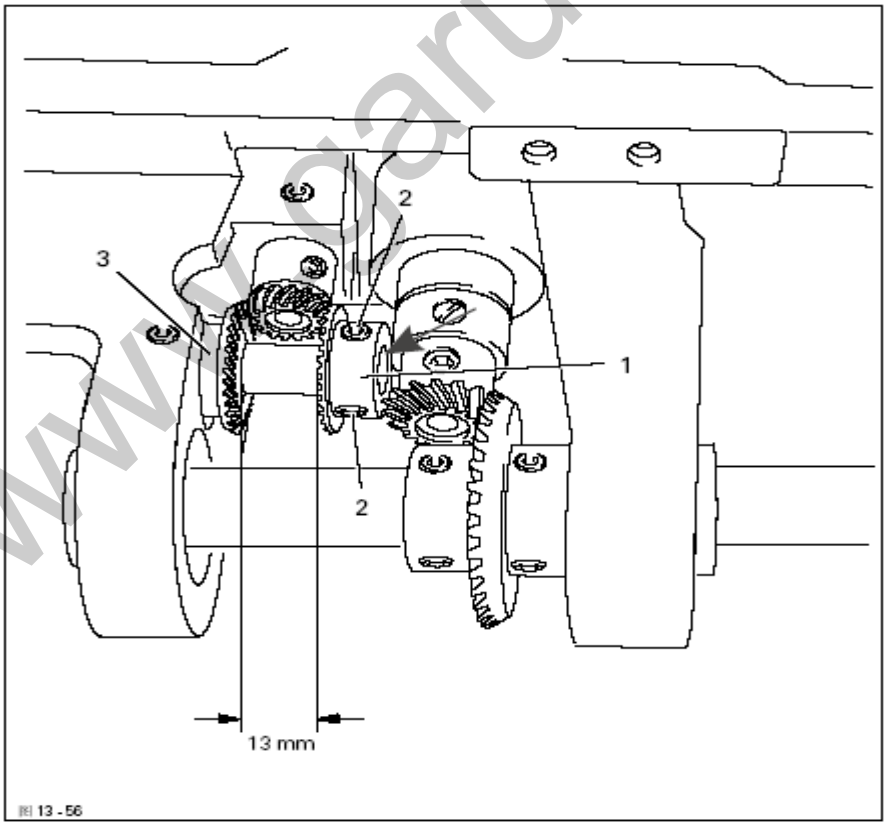


- Disconnect air supply of the air filter/ lubricator.
- Move unit **1** by hand as far as possible to the right.
- Adjust bracket **2** (screws **3**) according to **Requirement 1**.
- Move unit **1** by hand as far as possible to the left.
- Adjust screw **4** (nut **5**) according to **Requirement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

Adjustment

9.05.05 **Bevel gears for feed wheel drive** (on the GP-710)

Requirement
1. the right side of bevel gear **1** must be flush with its drive shaft (see arrow).
2. there must be a distance of **13 mm** between bevel gear **3** and bevel gear **1**.



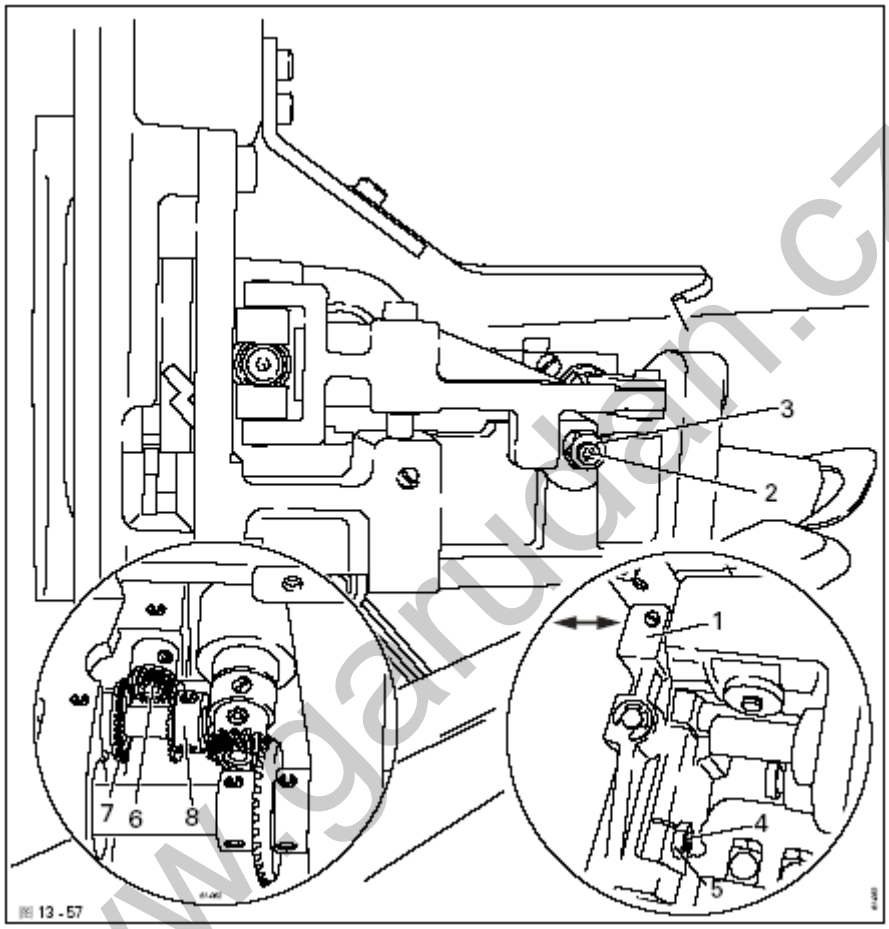
- Adjust bevel gear **1** (screws **2**) according to **Requirement 1**.
- Adjust bevel gear **3** (screws **4**) according to **Requirement 2.**

9 – 60 Adjustment

9.05.06 **Bevel gear play** (on the GP-710)

Requirement

1. when sewing forwards, there must be a slight play between bevel gear **6** and **7**.
2. when sewing backwards, there must be a slight play between bevel gear **6** and **8**.



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