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14 套结校验
Adjustment



请注意所有使用说明第1章"安全"中给出的提示! 特别要注意, 所有的防护设施在校验工作完成后, 要按规定重新安装好, 见使用说明1.06章, 危险提示!

Please observe all notes from Chapter 1 Safety of the instruction manual! In particular care must be taken to see that all protective devices are refitted properly after adjustment, see Chapter 1.06 Danger warnings of the instruction manual!



如果没有其它的说明, 将机器与电源分开!
If not otherwise stated, the machine must be disconnected from the electrical power supply.

14.01 对校验的说明
Notes on adjustment

本说明中所述的所有校验工作都是针对完全安装完毕的机器, 并且只允许由受过相应培训的专业人员来完成。

那些在检查和校验工作中需要卸下和重新安装上的机器盖板在文章中将不再提及。后续章节的顺序按照机器进行全部调整的工作顺序排列。如果仅是有目的的完成某一单独的工作步骤, 则要注意其前、后的章节。

写在括号 () 内的螺钉和螺母用来固定机器部件、它们必须在校验工作之前松开, 并在校验工作之后重新拧紧。

All following adjustments are based on a fully assembled machine and may only be carried out by expert staff trained 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

14.02 工具、量规和其它辅助材料
Tools, gauges and other accessories

- 1套2至10mm头宽的螺丝刀
1 set of screwdrivers with blade widths from 2 to 10 mm
- 1套7至14mm扳口宽的扳手
1 set of spanners with jaw widths from 7 to 14 mm
- 1套1.5至6mm的内六角螺钉扳手
1 set of Allen keys from 1.5 to 6 mm

14.03 缩写
Abbreviations

- o.T.=上死点
- u.T.=下死点
- t.d.c.= top dead centre
- b.d.c.= bottom dead centre

14.04

图标说明

Explanation of the symbols

在本校验说明中，所要完成的工作或者重要的信息都用图标来表达。
所使用的图标具有下述意义：

In this adjustment manual, symbols emphasize operations to be carried out or important information. The symbols used have the following meaning



提示，信息
Note, information



维护，修理，校验，维修
(只能由专业人员完成的工作)
Service, repair, adjustment, maintenance
(work to be carried out by qualified staff only)

14.05

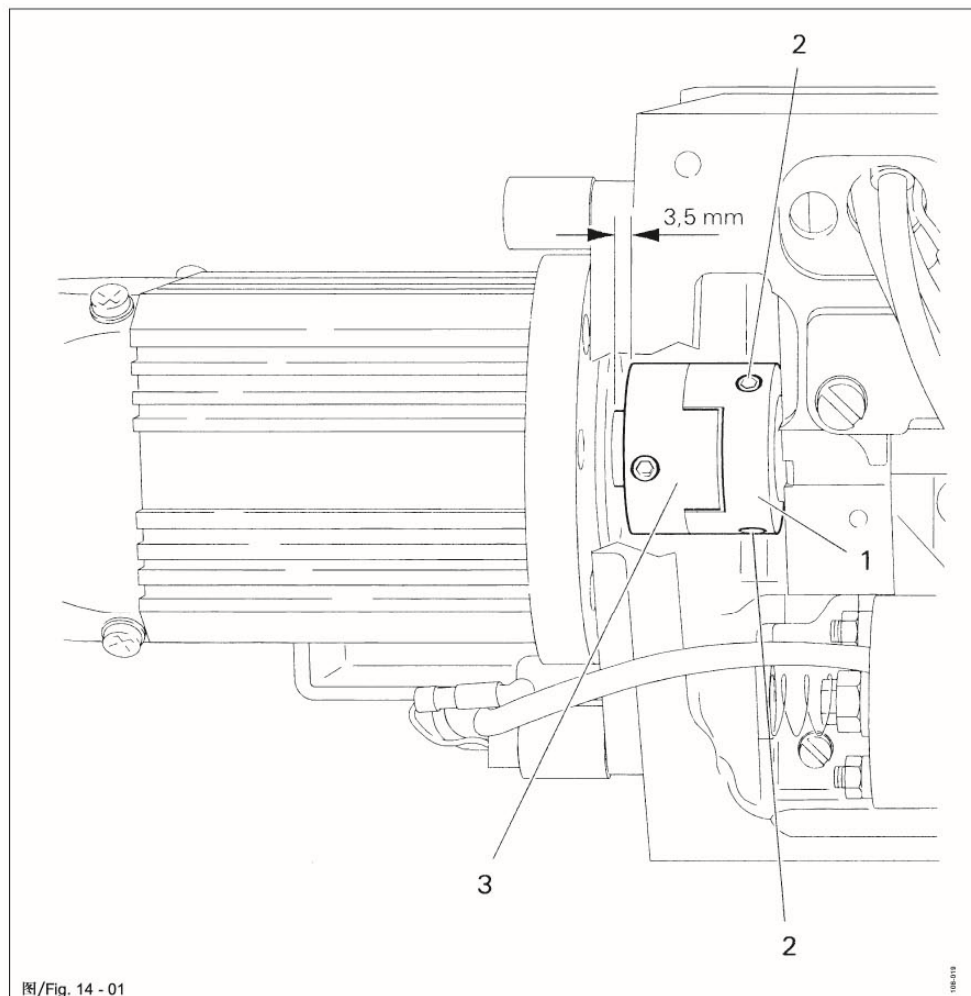
机器的初始位置

Basic position of the machine

规则 Requirement

起动之后, 机器处在针杆的上死点位置。

After the machine has been switched on, it should position in t.d.c. needle bar.



- 起动机器。
Switch on the machine.
- 固定联轴器1(螺钉2), 并且通过转动手轮将针杆移动到相应的位置。
Hold coupling part 1 and bring the needle bar (screws 2) into the appropriate position by turning the balance wheel.
- 关闭机器。
Switch off the machine.



联轴器1与电机盘之间的距离应为3.5mm。

The distance from the clutch 1 to the motor plate should be 3.5 m m.

14.06

定位框零点

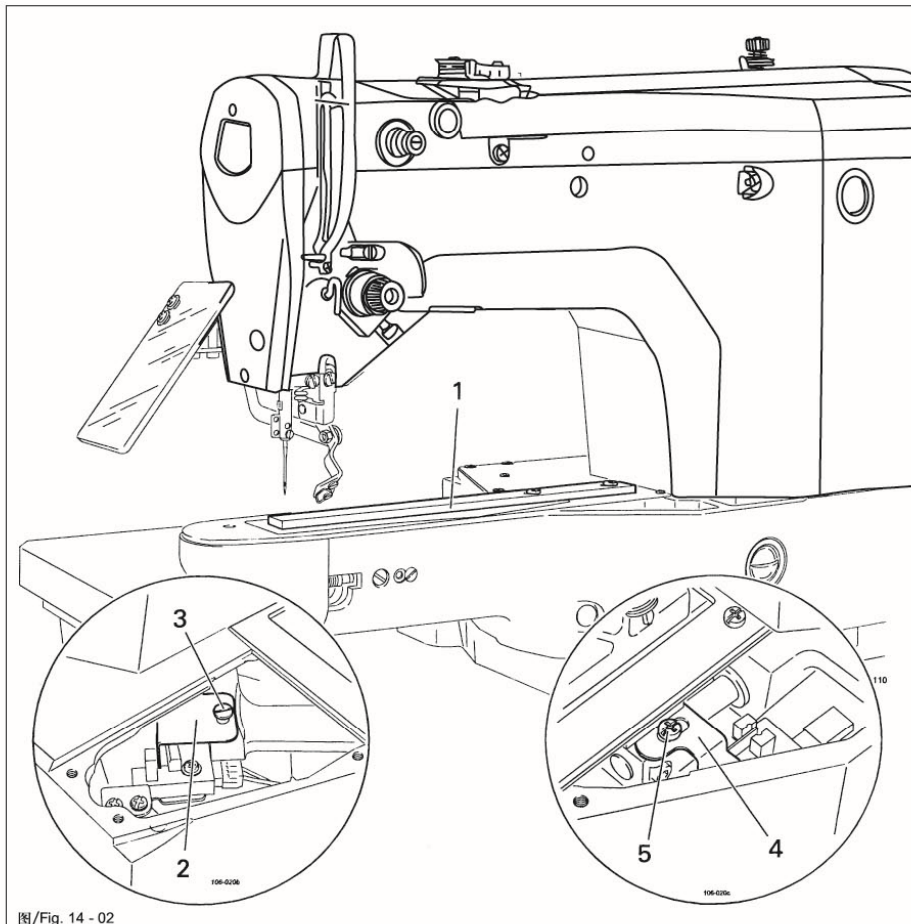
Work clamp zero point

规则 Requirement

启动机器和调用参数 "608" 后, 应该达到如下状态:

After the machine has been switched on and parameter "608" selected,

1. 针应该处在校验量规的孔中心。
1. the needle should be centred to the hole in the adjustment gauge,
2. 开关角铁2和4应该与各自相应的临界开关对中。
2. the switch lugs 2 and 4 should be centred to the respective initiator.



图/Fig. 14 - 02



在取下定位框支架时要注意, 不要使机臂支撑中的滚珠掉出!

When removing the work clamp holder, take care that the ball bearings in the arm support do not drop out!



- 取下定位框支架和下送料板
Remove the work clamp holder and the lower feed plate.
- 将校验量规1 (订货号: 61-111 637-08) 拧在定位框驱动器上。
Screw adjustment gauge 1 (part no.xxxxxxxx) to the work clamp drive unit.

预校验

Preliminary adjustment

- 按规则1用手相应地推移定位框驱动器
Move the work clamp drive unit by hand in accordance with requirement 1.
- 按规则2相应地调整开关角铁2(螺钉3) 和开关角铁4 (螺钉5)
Adjust switch lug 2 (screw 3) and switch lug 4 (screw 5) in accordance with requirement 2.

精密校验

Fine adjustment

- 起动机器。
Switch on the machine.
- 在操作方式输入下, 调用参数"608", 见使用说明11.03章, 参数输入
In the input mode, select parameter:"608", see Chapter 11.03 Parameter input in the instruction manual.
- 需要时, 输入操作密码, 见使用说明11.04.01章, 操作密码输入。
If necessary, enter the access code, see Chapter 11.04.01 Entering the access code in the instruction manual.



- 按规则1相应地用相应的正/负键运行定位框驱动器, 见使用说明11.03章。参数输入。
With the corresponding plus/minus key move the work clamp drive unit in accordance with requirement 1, also see Chapter 11.03 Parameter input.
- 关闭机器。
Switch off the machine.
- 拆下校验量规1
Remove adjustment gauge 1.
- 装上下送料板和定位框支架
Fit the lower feed plate and work clamp holder.

14.07

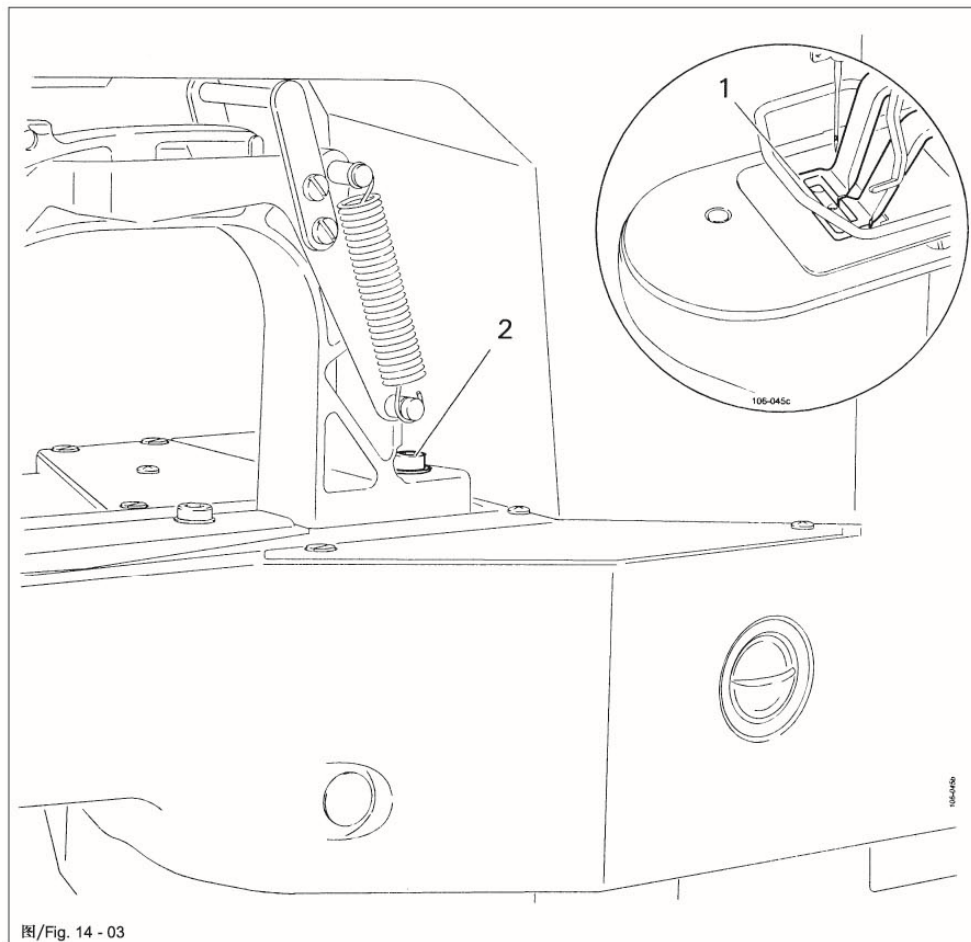
定位框调整

Aligning the button clamp

规则 Requirement

定位框应该在"X"和"Y"方向上如此调整,使它在缝纫过程中不碰到针。

The work clamp should be aligned in "X" and "Y" direction,so that it does not touch the needle during sewing



- 启动机器。
switch on the machine.
- 设置缝纫区尺寸 (见使用说明9.07章, 缝纫区尺寸设置)。
Set the sewing area size (See Chapter 9.07 Adjusting the size of sewing area in the instruction manual)
- 在操作方式输入下, 调用参数"609", 见使用说明11.03章, 参数输入。
In the input mode, select parameter"609",see Chapter 11.03 Entering the access code in the instrution manual.
- 在需要时, 输入操作密码, 见使用说明11.04.01章, 操作密码输入。
If necessary,enter the access code, see Chapter 11.04.01 Entering the access code in the instruction manual.



- 按规则相应地用正/负键使定位框1在X方向运行。
With the plus/minus keys move the work clamp in the X-direction in accordance with the requirement.



- 调用参数 "610" 。
Select parameter " 610"

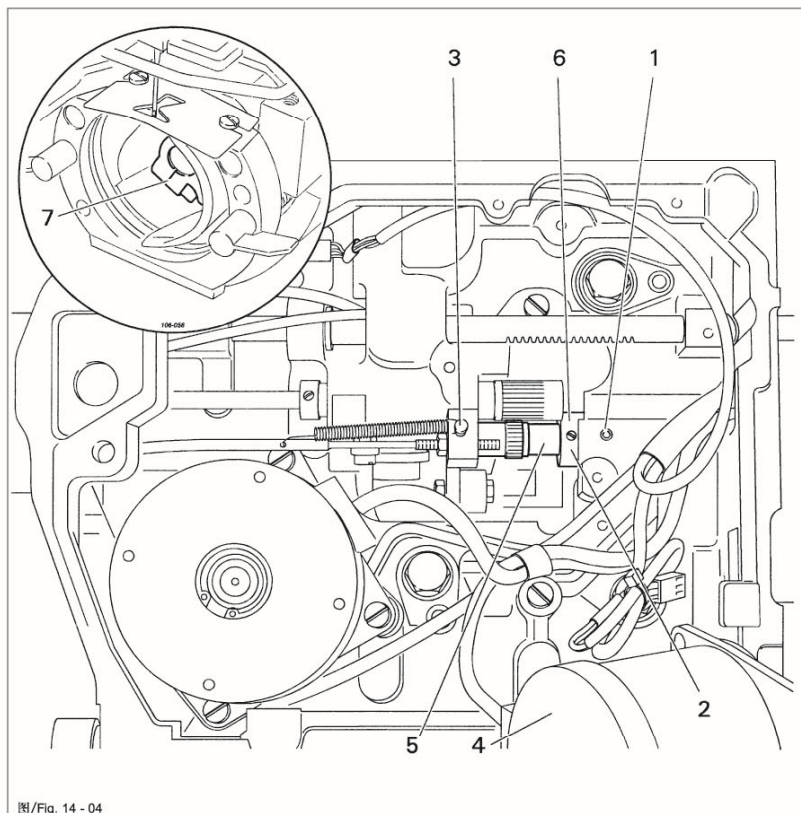


- 按规则相应地在Y方向移动定位框1（螺钉2），以及用正/负键使其运行。
Slide work clamp 1(screw 2) in the Y-direction in accordance with the requirement, or move it with the plus/minus keys.
- 结束输入
Conclude the input

14.08 线梭驱动器
Hook driver

规则 Requirement

1. 在转动手轮时，机器不许有沉重的感觉。
1. When the balance wheel is turned, the machine should not bind.
2. 随动件7的活动间隙应该小于0.1mm
2. The play of catch 7 should be less than 0.1 mm.



图/ Fig. 14 - 04



- 取下线梭。
Remove the hook.
- 松开螺钉1、2和3（拆下电机4）。
Loosen screws 1, 2 and 3 (remove motor 4).
- 按规则1相应地推移偏心轴5，并按规则2相应地转动。
Move the eccentric shaft 5 in accordance with requirement 1 and twist it in accordance with requirement 2.

- 拧紧螺钉1和3
Tighten screws 1 and 3.
- 使调整环6靠紧在铸件边沿上，并拧紧螺钉2。
Move adjustment ring 6 against the metal edge and tighten screw 2.
- 装上线梭。
Insert the hook.



随动件7的间隙过大，会增大机器的噪音。

If catch 7 has too much play, the running noise of the machine increases. Too little play may cause the machine to jam.

如果间隙过小，可能会导致机器抱轴。

14.09

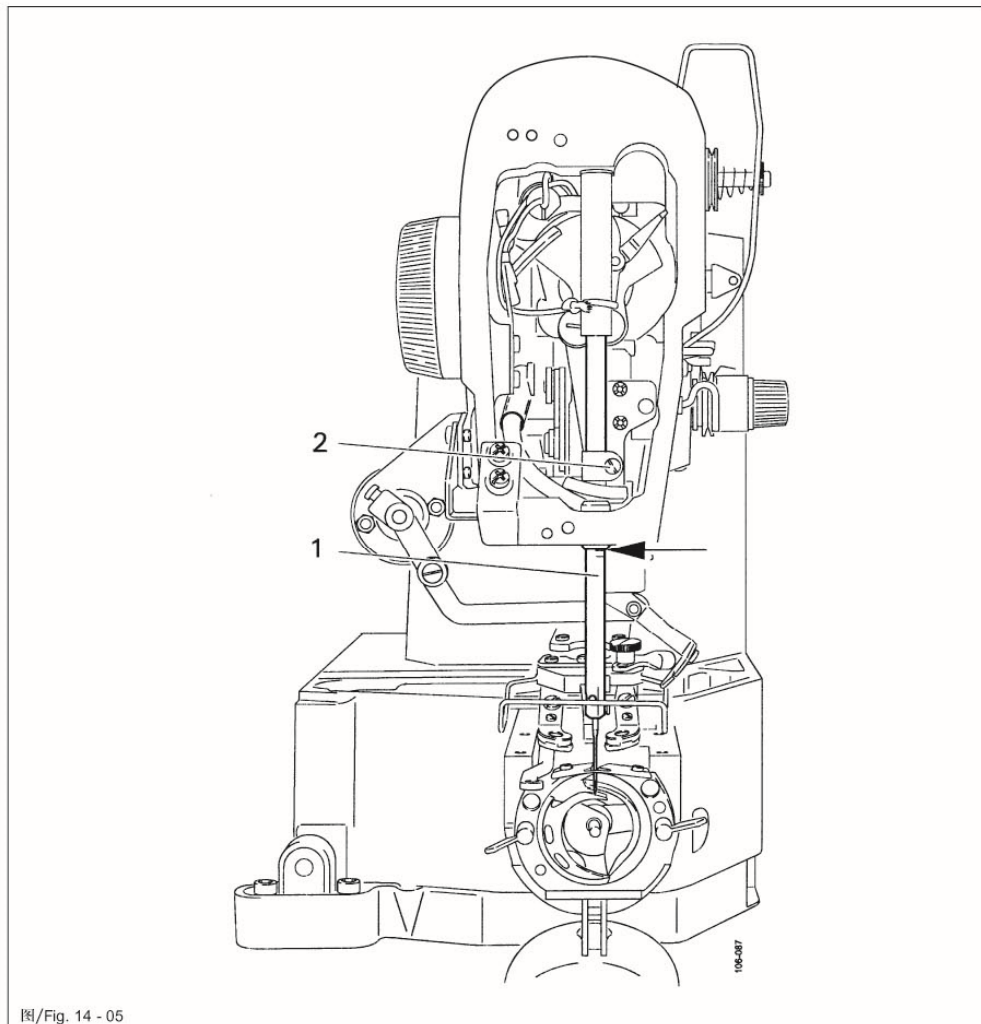
针高度

Needle height

规则 Requirement

在针杆的下死点，应该使针杆1的上标记与针杆套的下边沿平齐。

With the needle bar in b.d.c., the upper marking on the needle bar 1 should be flush with the lower edge of the needle bar bush.



- 按规则相应地移动针杆1（螺钉2）。

Adjust needle bar 1(screw 2)in accordance with the requirement.

14.10

线梭距离

Hook-to-needle clearance

规则 Requirement

当针杆从下面来，并且在它的下标记与针杆套的下边沿平齐时：

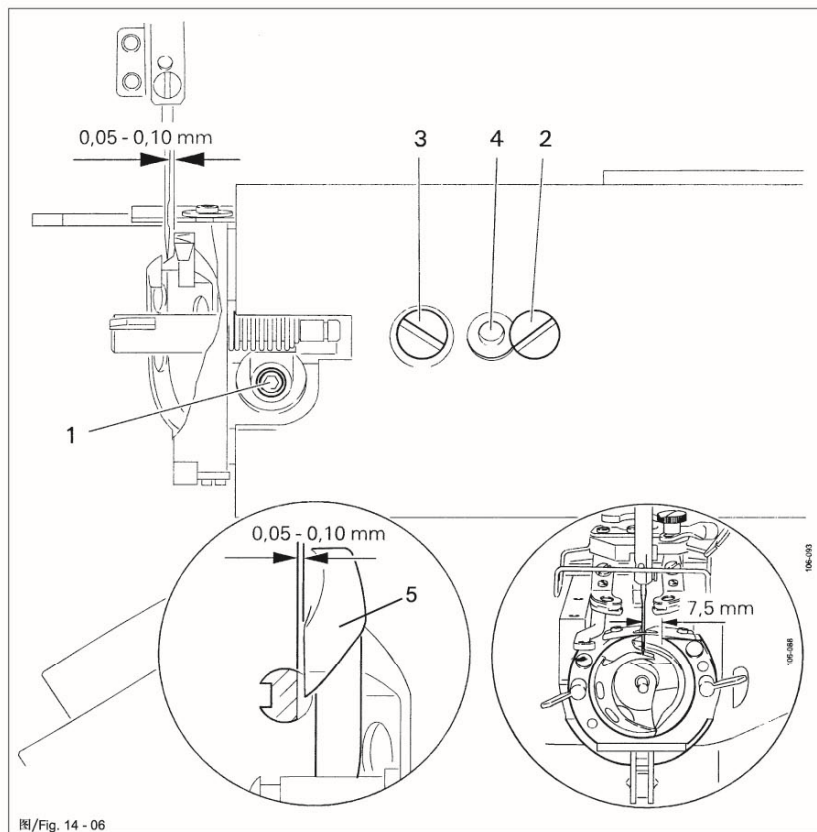
When the bottom marking of the ascending needle bar is level with the lower edge of the needle bar bush

1. 线梭5应该处在针后0.05-0.1mm处。

1. hook 5 should be 0.05 -0,1 mm behind the needle and.

2. 针与线梭轨道尖之间应该有一个7.5mm的距离。

2.the distance between the needle and the tip of the hook rece should be 7.5 mm.



- 松开螺钉1,2和3

Loosen screws 1,2 and 3.

- 按规则相应地转动偏心销4。

Turn the eccentric pin 4 in accordance with the requirements..

- 拧紧螺钉2和3。

Tighten screws 2 and 3.



在后续的校验工作中，螺钉1保持在松开的状态。

Screw 1 remains loose for further adjustments.

14.11 针天心动程和针保护器
Needle rise and needle guard

规则 Requirement

当针杆从下面来，并且在它的下标记与针杆套的下边沿平齐时：

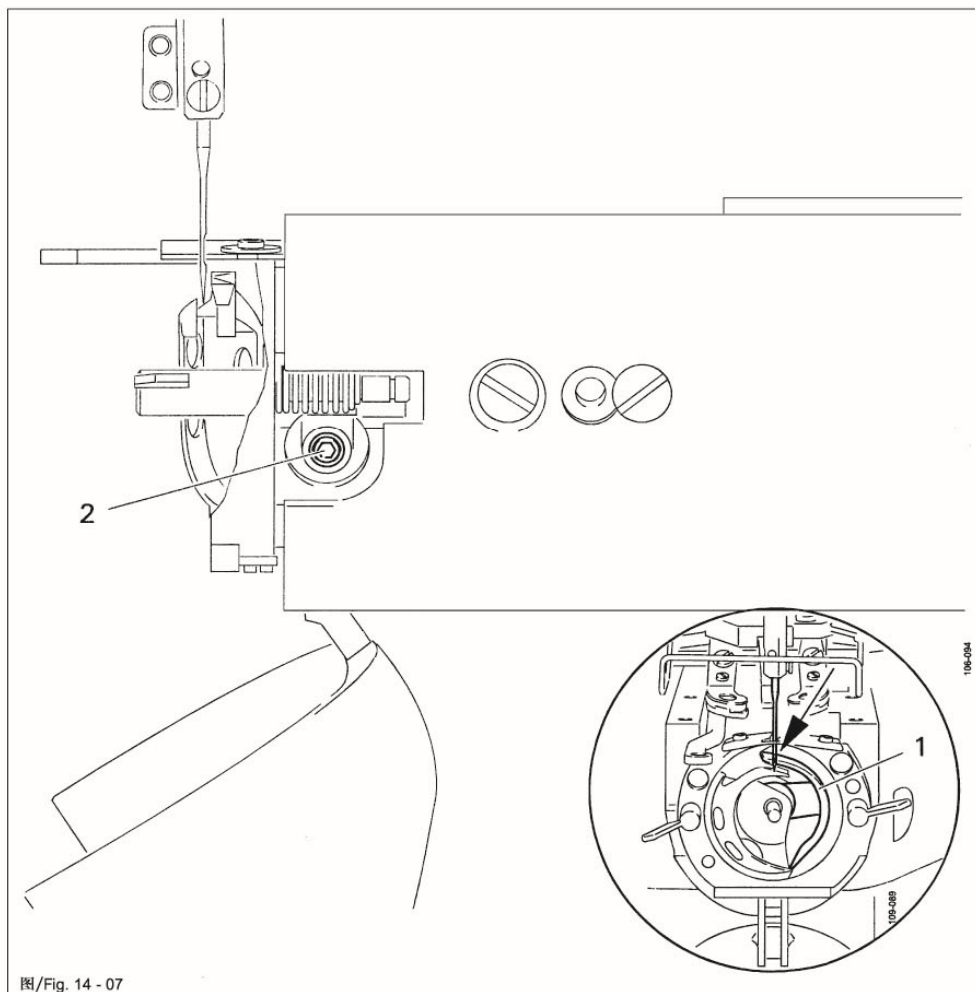
When the bottom marking of the ascending needle bar is level with the lower edge of the needle bar bush

1. 线梭钩线尖应该对准针的中心。

1.the hook point should be centred to the needle and

2. 针保护器(见箭头)应该与针有轻微接触。

2.the needle guard (see arrow) should slightly touch the needle.



- 按规则1相应地转动随动件1（螺钉2），及按规则2相应地移动随动件。
Turn catch 1(screw 2) in accordance with requirement 1, or move it in accordance with requirement 2.

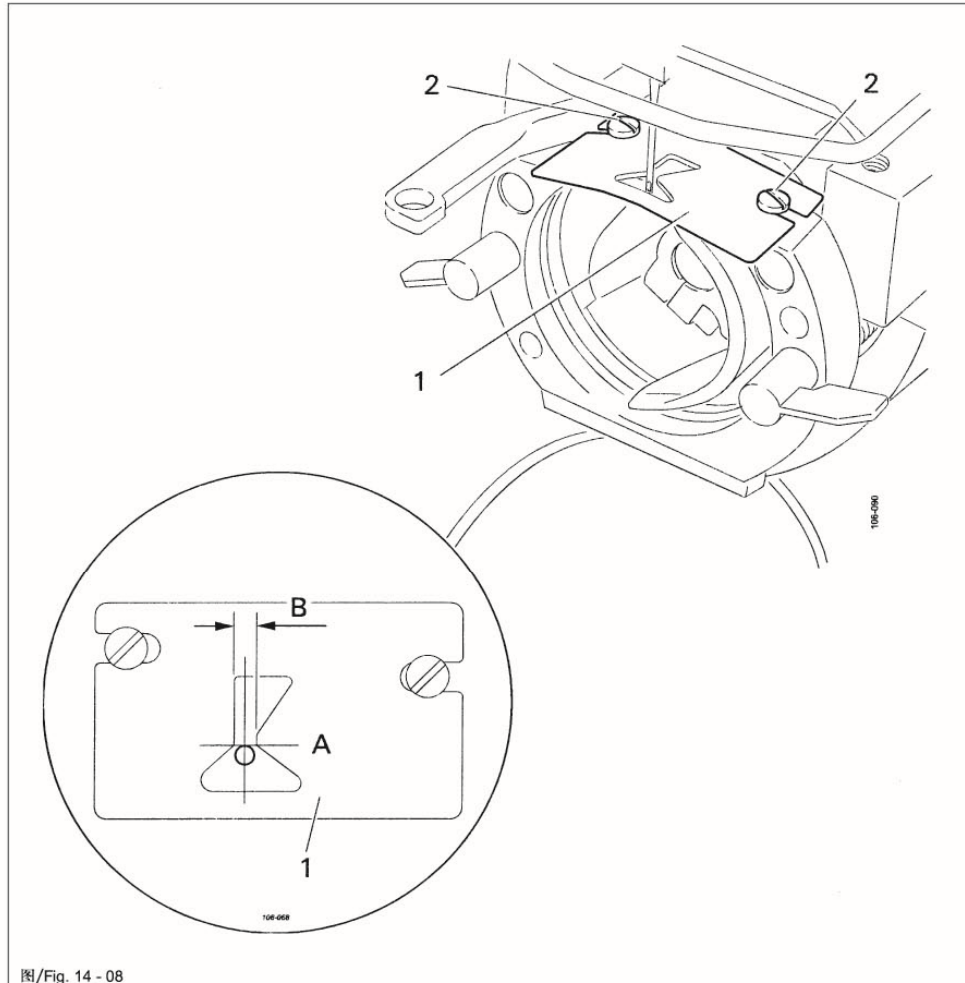
14.12

线梭轨道盖板的调整
Aligning the hook race cover

规则 Requirement

针应该与豁口B对中，并以其背面与想象中的线A平齐。

The needle should be centred to cutout Band the rear side of the needle flush to the imaginary line A.



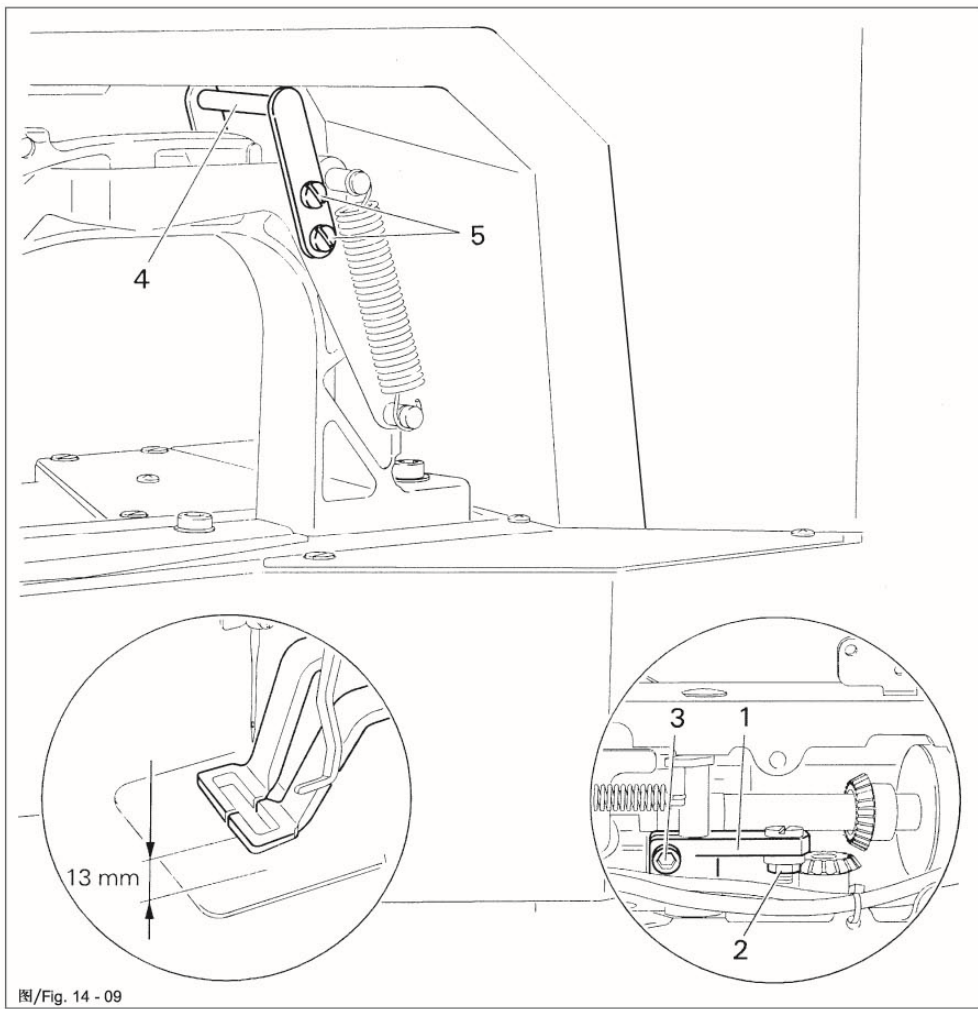
图/ Fig. 14 - 08



- 按规则相应地移动线梭轨道盖板1 (螺钉2)。
Move the hook race cover 1(screws 2) in accordance with the requirement.

14.13 定位框高度
Work clamp height

规则 Requirement
 1. 定位框应该处在高于针板上边沿13mm的位置。
 1.The work clamp should be 13 mm above the upper edge of the needle plate.
 2. 定位框的两个半框应该互相平行。
 2.Both halves of the work clamp should be parallel to each other.



图/ Fig. 14 - 09



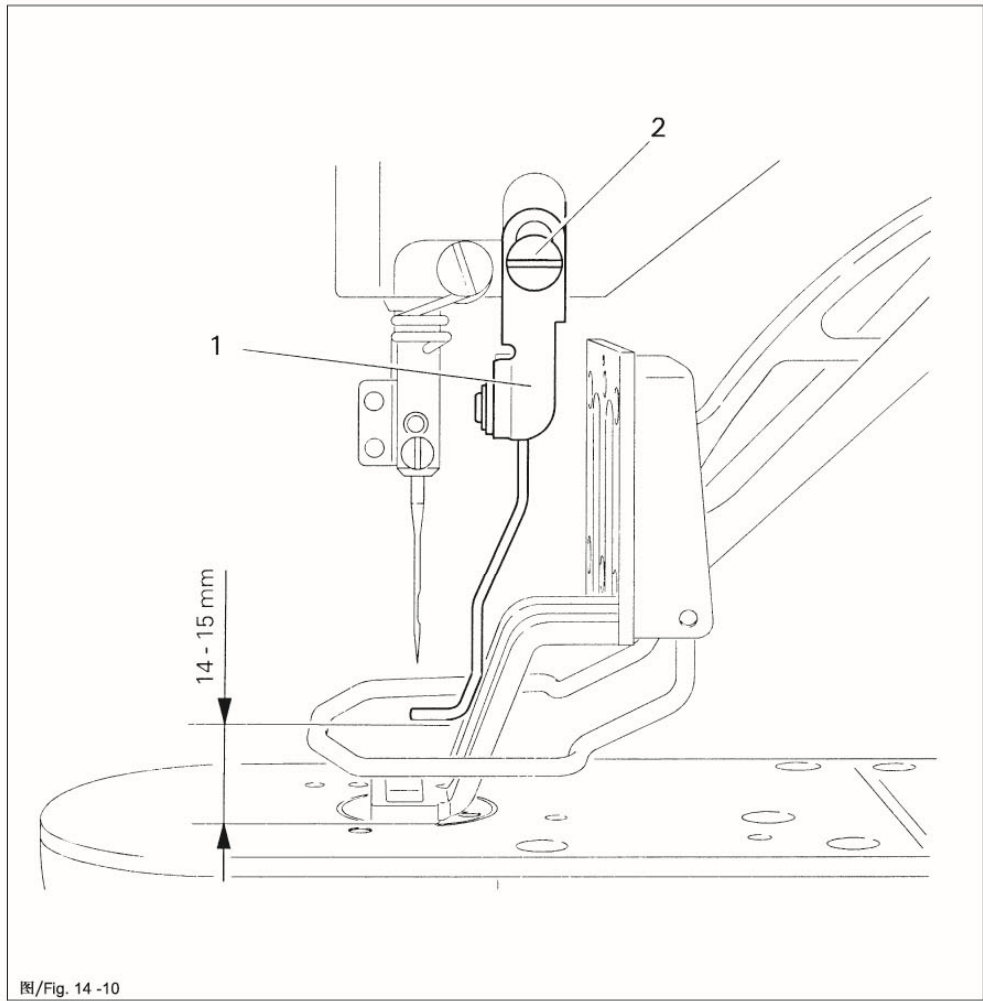
- 按规则1相应地转动拉杆1（螺母2和螺钉3）。
Turn lever 1(nut 2 and screw 3) in accordance with requirement.
- 按规则2相应地推动拉杆板4（螺钉5）
Move lift plate 4(screws 5) in accordance with requirement 2.



定位框调整结束之后，必须检查拨线器的位置，见14.14章，
 拨线器的位置！有断针的危险！
 After aligning the button clamp, it is imperative to check the position of the
 thread wiper, see Chapter 14.14.Position of the thread wiper! Danger of
 needle breakage!

14.14 拨线器的位置
Position of the thread wiper

规则 Requirement
当拨线器与针对中时，它的下边沿应该高出针板上边沿14-15mm。
When the thread wiper is centred to the needle, its lower edge should be 14-15mm above the upper edge of the needle plate.



- 通过手动操纵定位框，将拨线器1移到相应的位置。
Bring the thread wiper 1 into the appropriate position by operating the work clamp manually.
按规则相应地移动拨线器1（螺钉2）。
Move thread wiper 1(screw2)in accordance with the requirement.

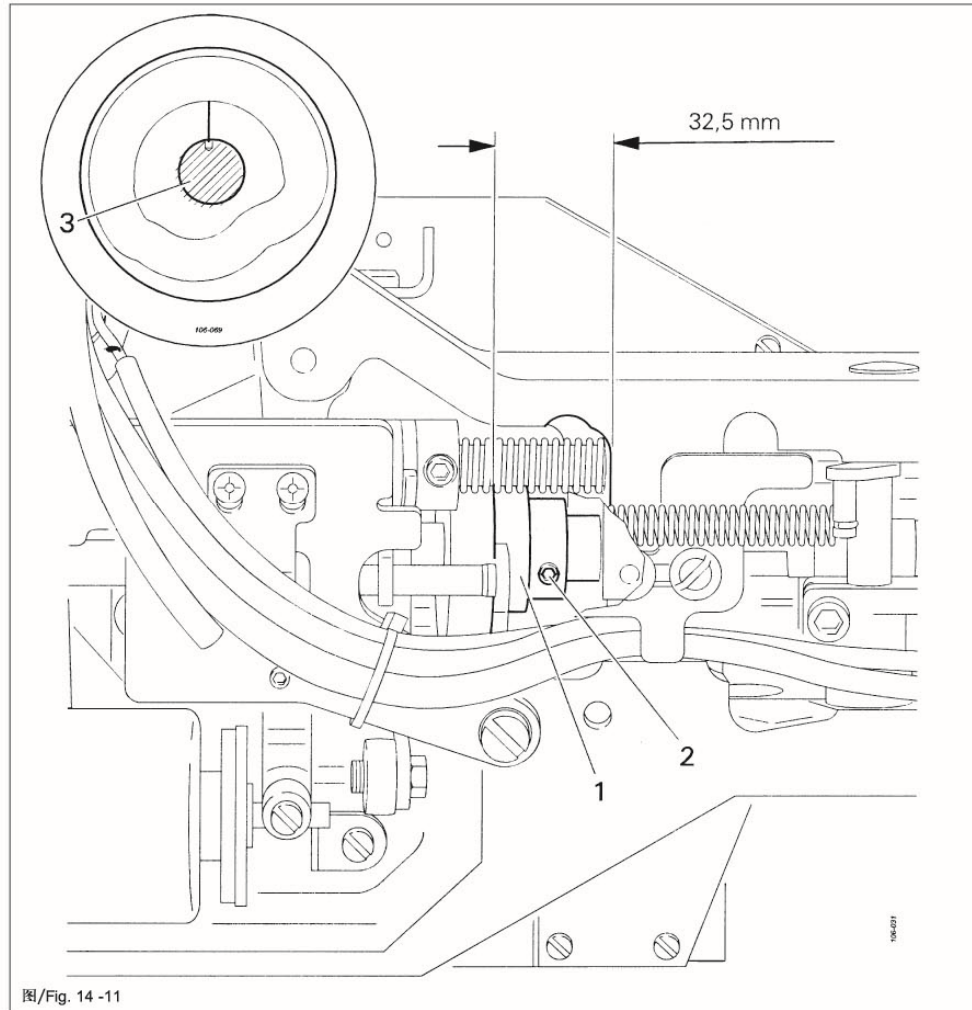
14.15

控制凸轮的位置

Position of the control cam

规则 Requirement

1. 控制凸轮1上的标记, 要与臂轴3上的标记一致。
- 1.The markings on control cam 1 and arm shaft 3 should correspond with each other.
2. 控制凸轮1的外沿应该与机壳上的铸铁面有一个32.5mm的距离。
- 2.The outer edge of control cam 1 should be at a distance of 32.5 mm from the metal surface of the case.



- 按规则1相应地转动控制凸轮1 (螺钉2), 以及按规则2相应地推移控制凸轮。
Turn control cam 1 (screw 2) in accordance with requirement 1, or move it in accordance with requirement 2.

14.16

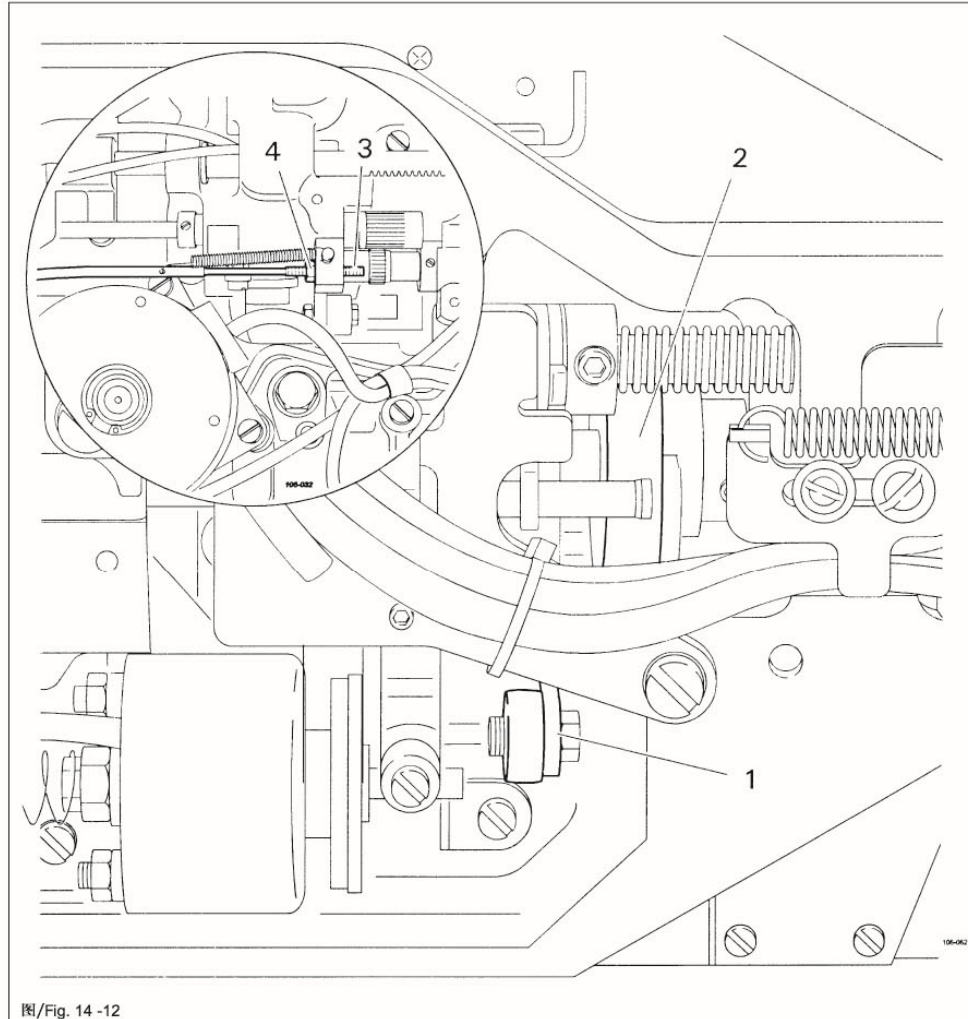
控制辊的位置

Position of the control roller

规则 Requirement

在针杆的下死点位置，控制辊应该与控制凸轮2的运行轨道对中。

When the needle bar is at its b.d.c., the control roller should be centred to the running path of control cam 2.



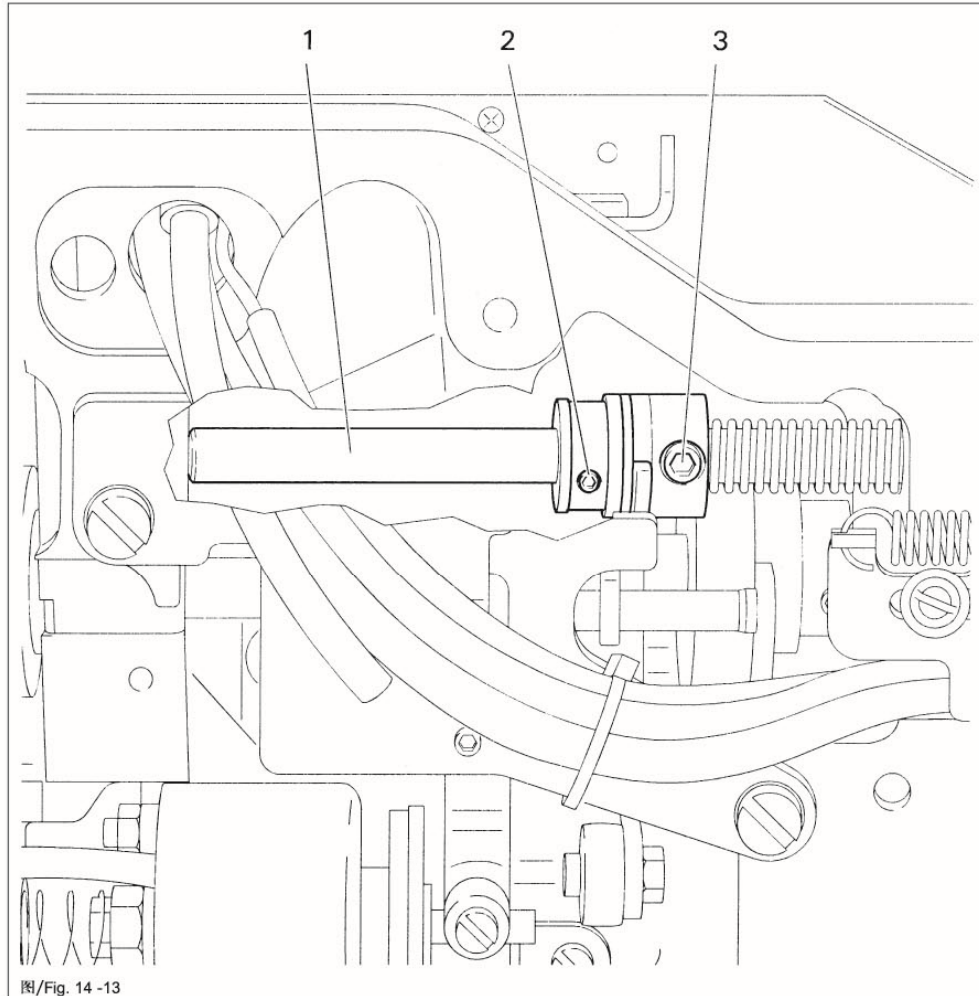
图/ Fig. 14 -12



- 按规则相应地转动螺钉3（螺母4）。
Turn screw 3 (nut 4) in accordance with the requirement.
- 为进行检查，用手通过连杆1使控制辊落到控制凸轮2的运行轨道上。
For checking purposes, operate lever 1 by hand to let the control fall into the running path of control cam 2.

14.17 切线器驱动轴的位置
Position of the drive shaft of the thread trimmer

规则 Requirement
在切线器的初始位置。轴1应该与机壳的铸铁边沿平齐。
When the thread trimmer is in its basic position, shaft 1 should be flush with the metal edge of the machine case.



- 按规则相应地移动轴1（螺钉2和3）。
Move shaft 1(screws 2 and 3)in accordance with the requirement.

14.18

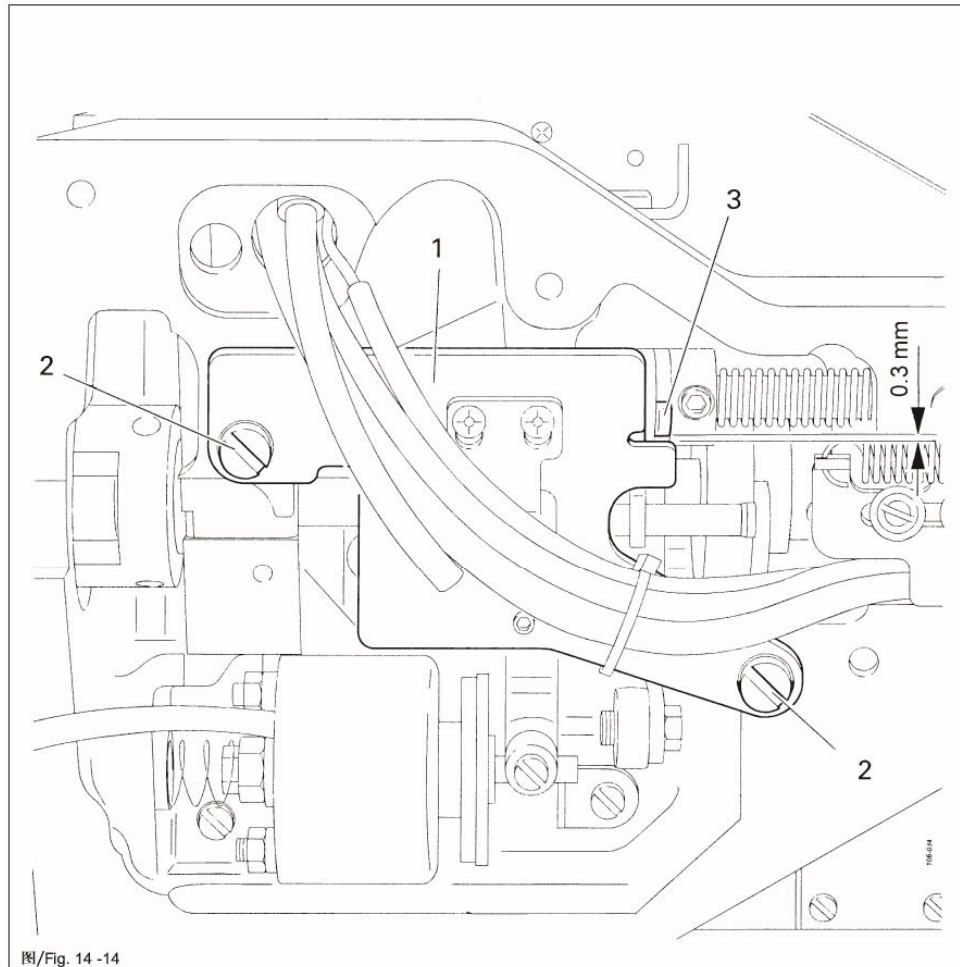
止挡板的调整

Aligning the stop plate

规则 Requirement

在切线器的初始位置，连杆3应该与板1有一个0.3mm的距离。

When the thread trimmer is in its basic position, there should be a clearance of 0.3 mm between lever 3 and plate 1.



图/ Fig. 14 -14



- 按规则相应地移动板1（螺钉2）。

Move plate 1(screws 2) in accordance with the requirement.

14.19

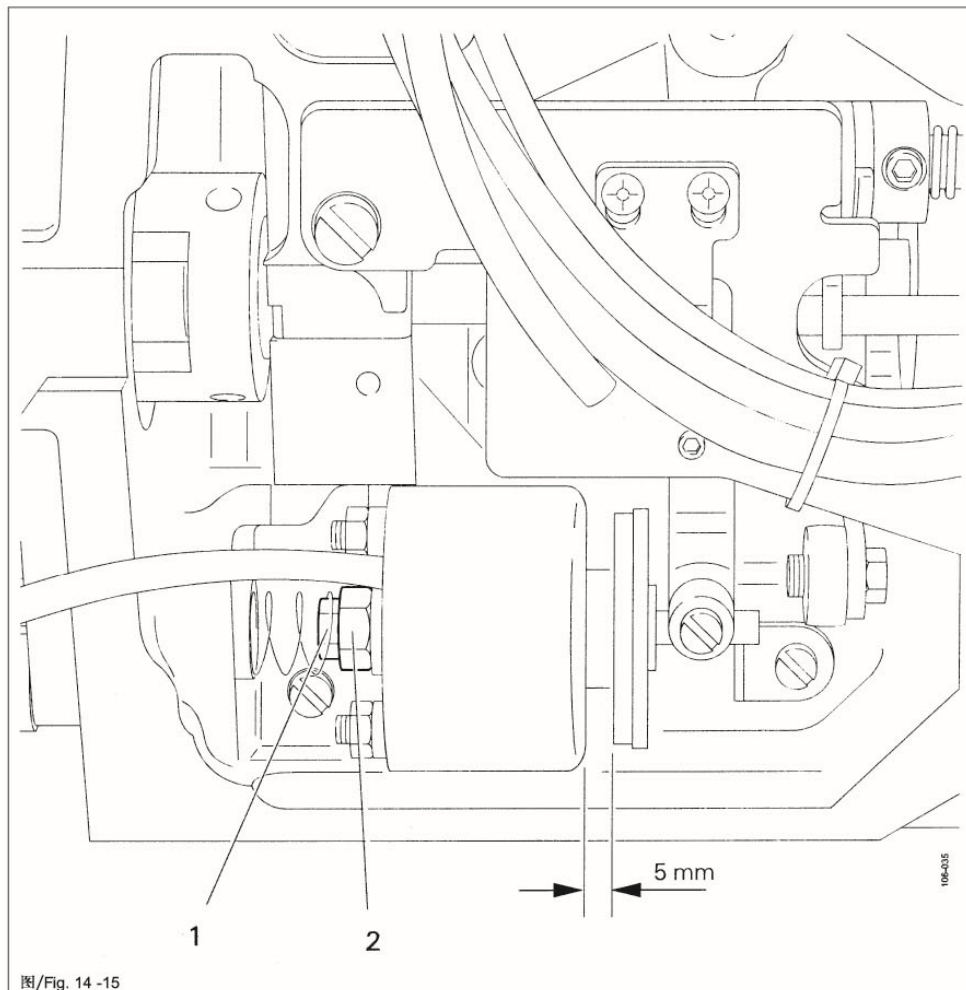
切线磁铁的调整

Aligning the trimmer solenoid

规则 Requirement

在切线器的静止位置，磁铁1应该与机壳有一个5mm的距离。

When the thread trimmer is in its neutral position, solenoid 1 should be at a distance of 5 mm from the case.



- 按规则相应地转动螺母1(螺母2)。
Turn net 1(nut 2) in accordance with the requirement.

14.20

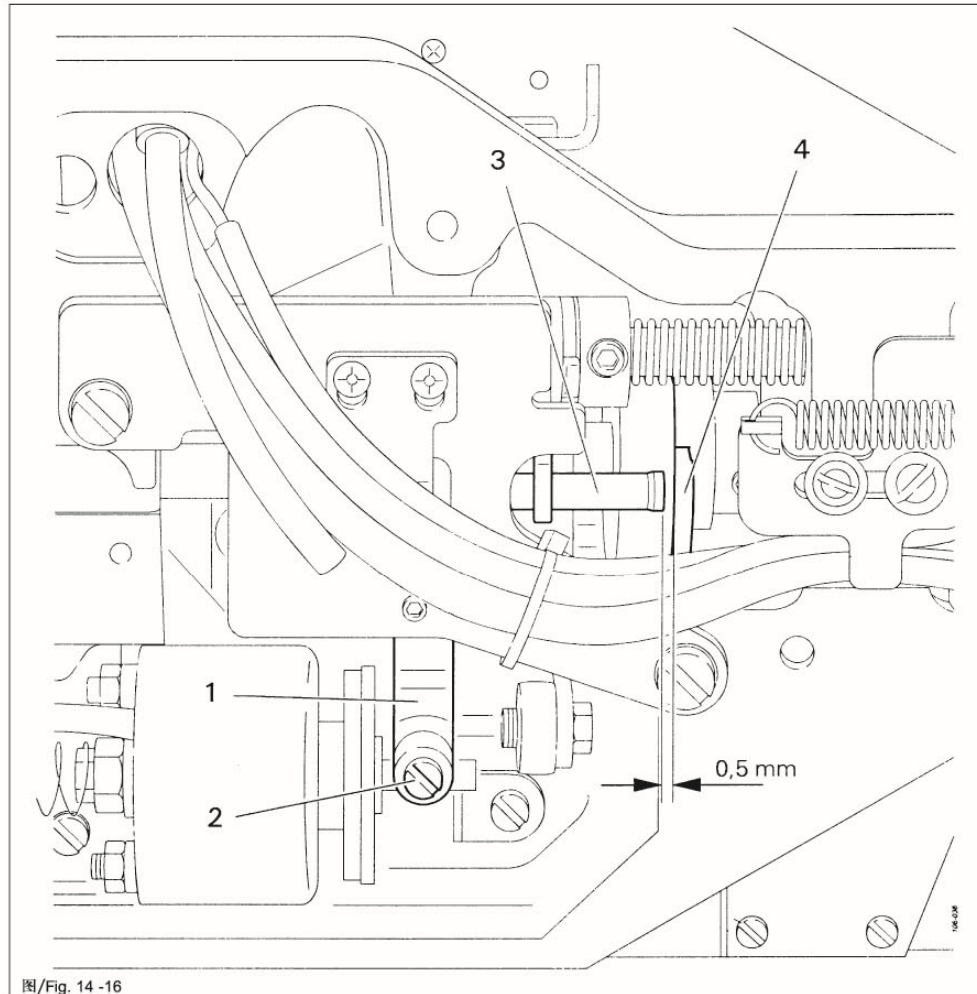
压入杆的调整

Aligning the engaging lever

规则 Requirement

在切线器的静止位置。销3应该与离合凸轮4有一个0.5mm的距离。

When the thread trimmer is in its neutral position, pin 3 should be at a distance of 0.5 mm from release trip 4.

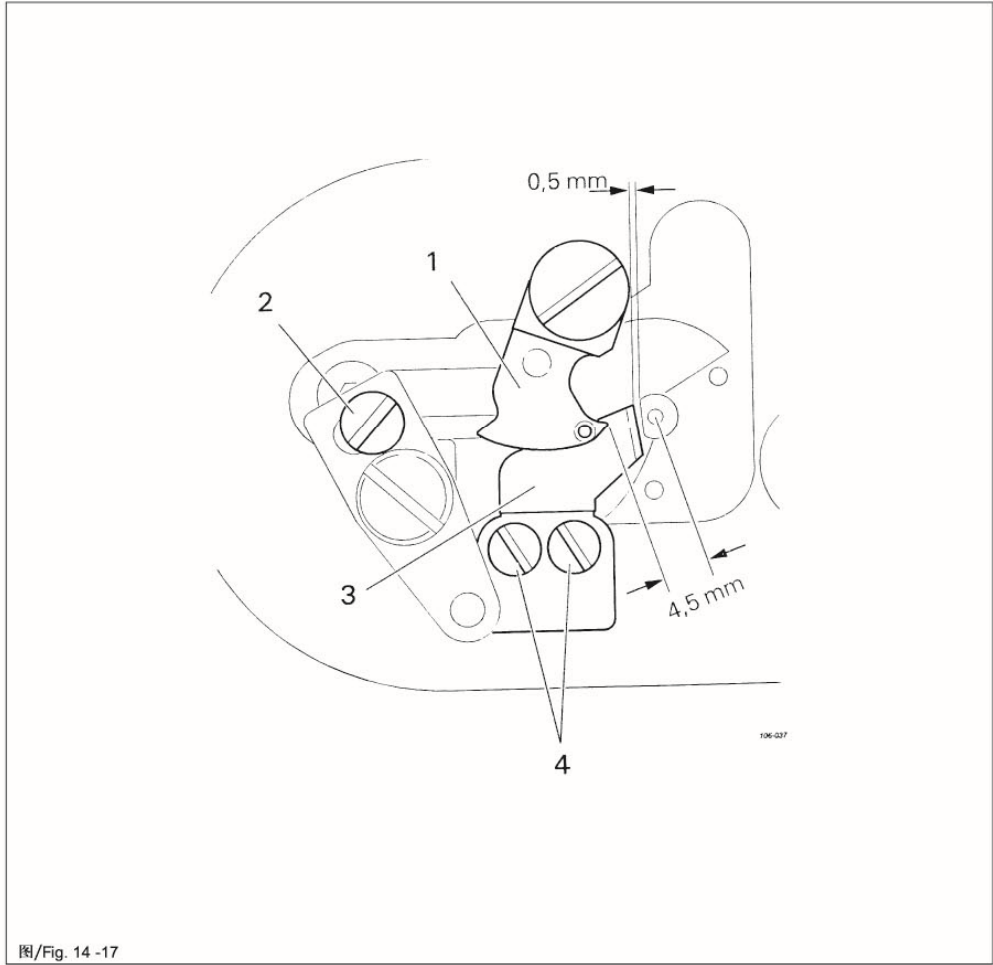


- 按规则相应地移动杆1 (螺钉2)。
Move lever 1(screws 2) in accordance with the requirement.

14.21 捕线器和切线刀的位置
Position of the thread catcher and knife

规则 Requirement
在机器的初始位置时:
When the machine is in its basic position

1. 捕线器1的钩线尖应该停在距针孔中心4.5mm的位置。
1. the tip of the thread catcher 1 should be at a distance of 4.5 mm from the centre of the needle hole.
2. 切线刀3的刃口应该与针板部件有一个0.5mm的距离。
2. The blade of knife 3 should be at distance of 0.5 mm from the needle plate insert.



图/ Fig. 14 -17



- 按规则1相应地调节捕线器1（螺钉2）
Adjust thread catcher 1(screw 2) in accordance with requirement 1
- 按规则2相应地移动切线刀3（螺钉4）。
Adjust knife 3(screws 4) in accordance with requirement 2.

14.22

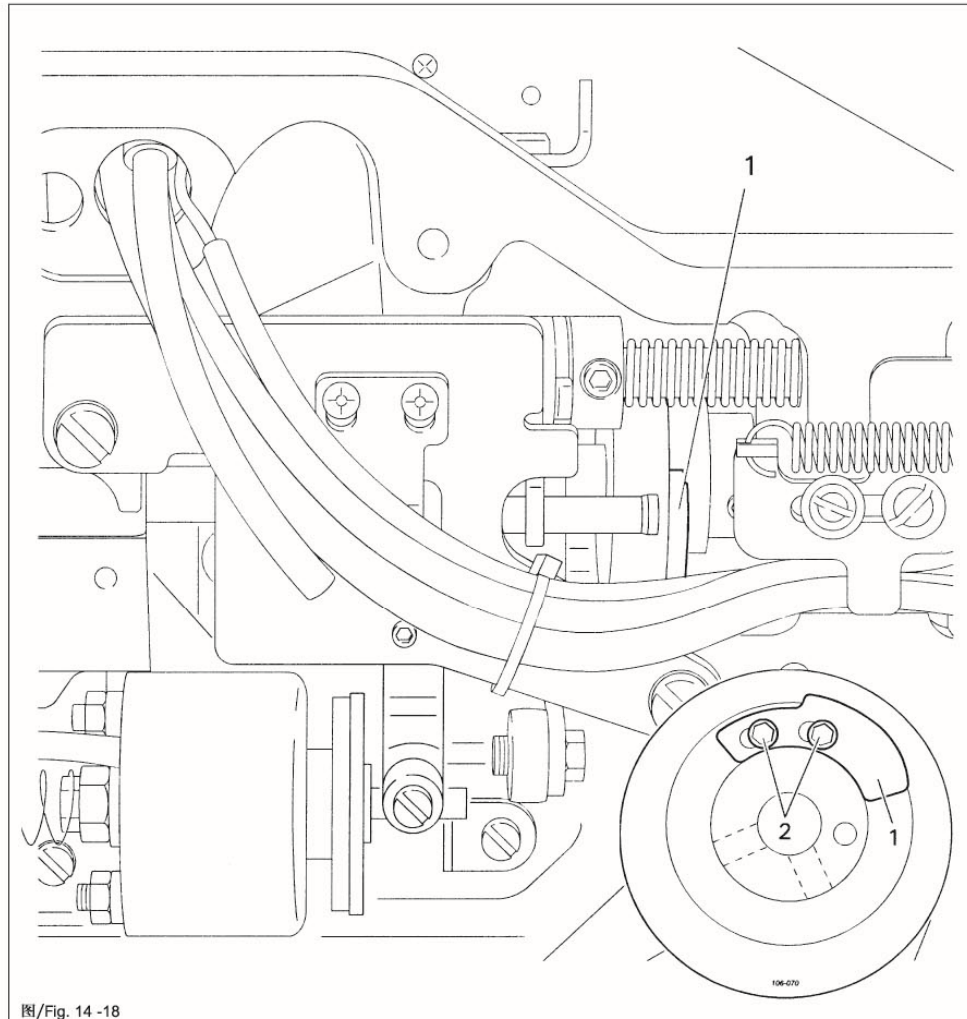
离合凸轮的位置

Position of the release trip

规则 Requirement

凸轮1应该用它的长孔右侧靠在螺钉2上。

The slots of trip 1 should be touching screws 2 on the right side.



图/ Fig. 14 -18



- 按规则相应地移动凸轮1（螺钉2）。

Move trip 1(screws 2) in accordance with the requirement.

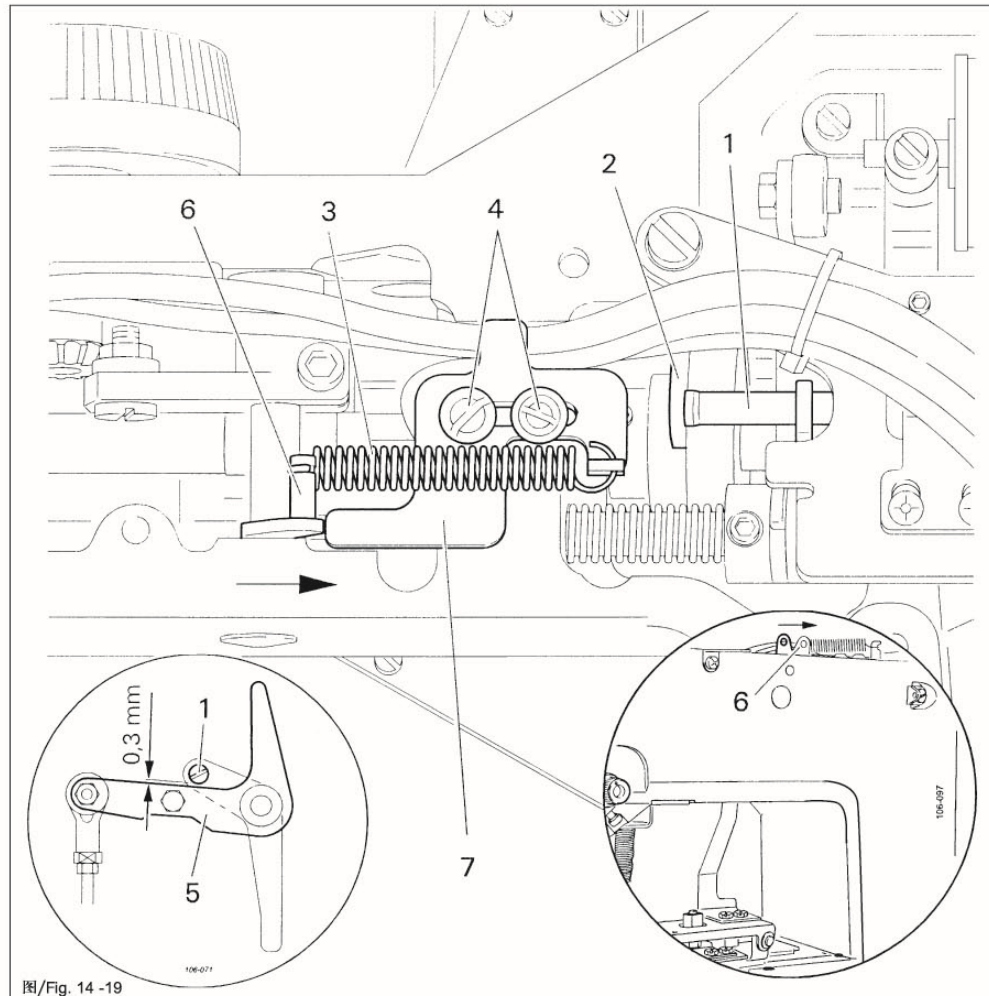


切线后的针线过短时，可以再稍微调整一下凸轮1。

If the needle thread is too short after trimming, trip 1 can be slightly readjusted.

14.23 离合器定位器的位置
Position of the release catch

规则 Requirement
当杆6靠在离合器定位器7上时，应该在驱动杆5和销1之间有一个0.3mm的距离。
When lever 6 is touching release catch 7, there should be a distance of 0.3 mm between drive lever 5 and pin 1.



图/ Fig. 14 -19



- 转动手轮，直至销1不再停在凸轮2上。
Turn the balance wheel until pin 1 is no longer on the release trip 2.
- 取下弹簧3和松开螺钉4。
Release spring 3 and loosen screws 4.
- 将塞尺按规则相应地塞入驱动杆5和销1之间。
In accordance with the requirement, place the feeler gauge between the drive lever 5 and pin 1.

- 将杆6轻微地沿箭头方向推压。
Push lever 6 lightly in the direction shown by the arrow.
- 将离合定位器7靠上杆6，并拧紧螺钉4。
Move release catch 7 against lever 6 and tighten screws 4.
- 取出塞尺和挂上弹簧3。
Remove the feeler gauge and attach spring 3.

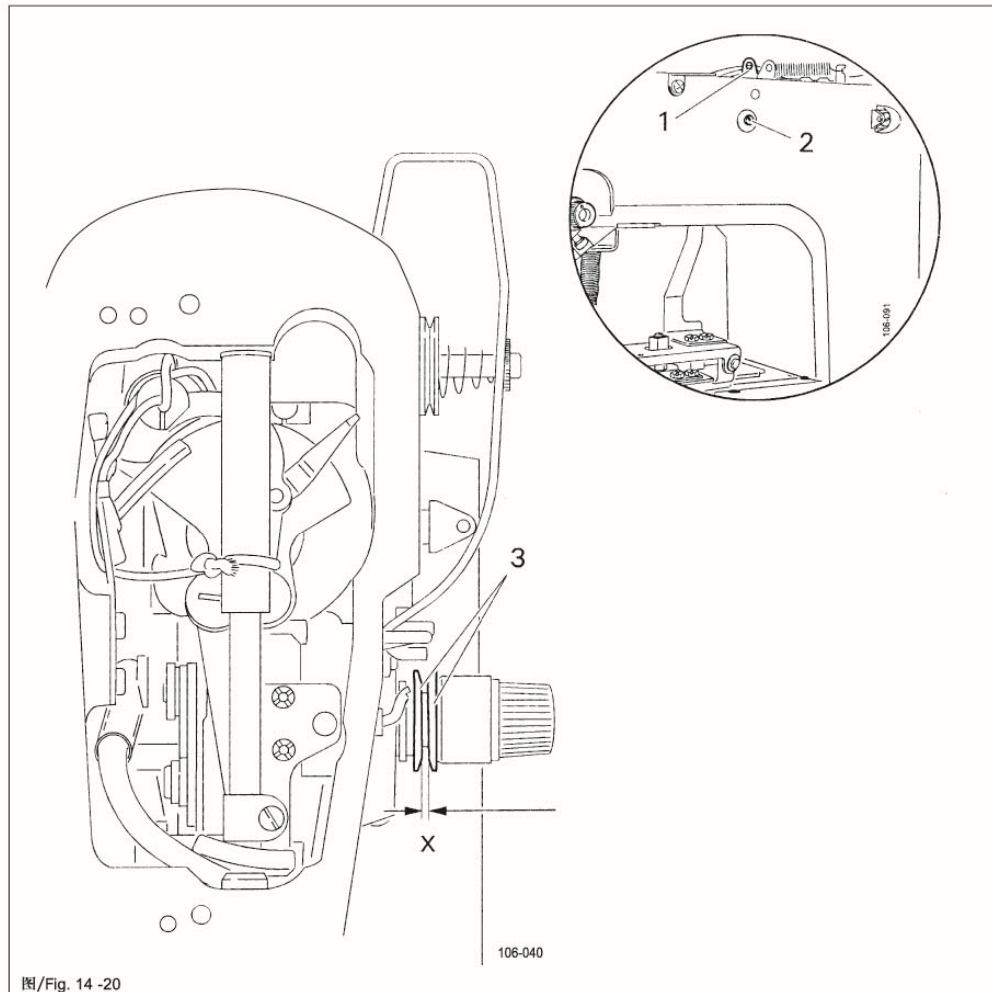


弹簧3只能用相应的工具取下和挂上!
有受伤的危险!

Spring 3 should only be released and attached with suitable tools!
Danger of injury!

14.24 上线夹线片打开
Needle thread tension release

规则 Requirement
切线完成之后，夹线片3之间的距离X在使用正常缝料时应该为0.6-0.8mm。在使用厚缝料时应该为0.8-1.0mm。
After thread trimming the distance X between tension discs 3 should be 0.6-0.8 mm for normal materials and 0.8-1.0 mm for heavy materials.

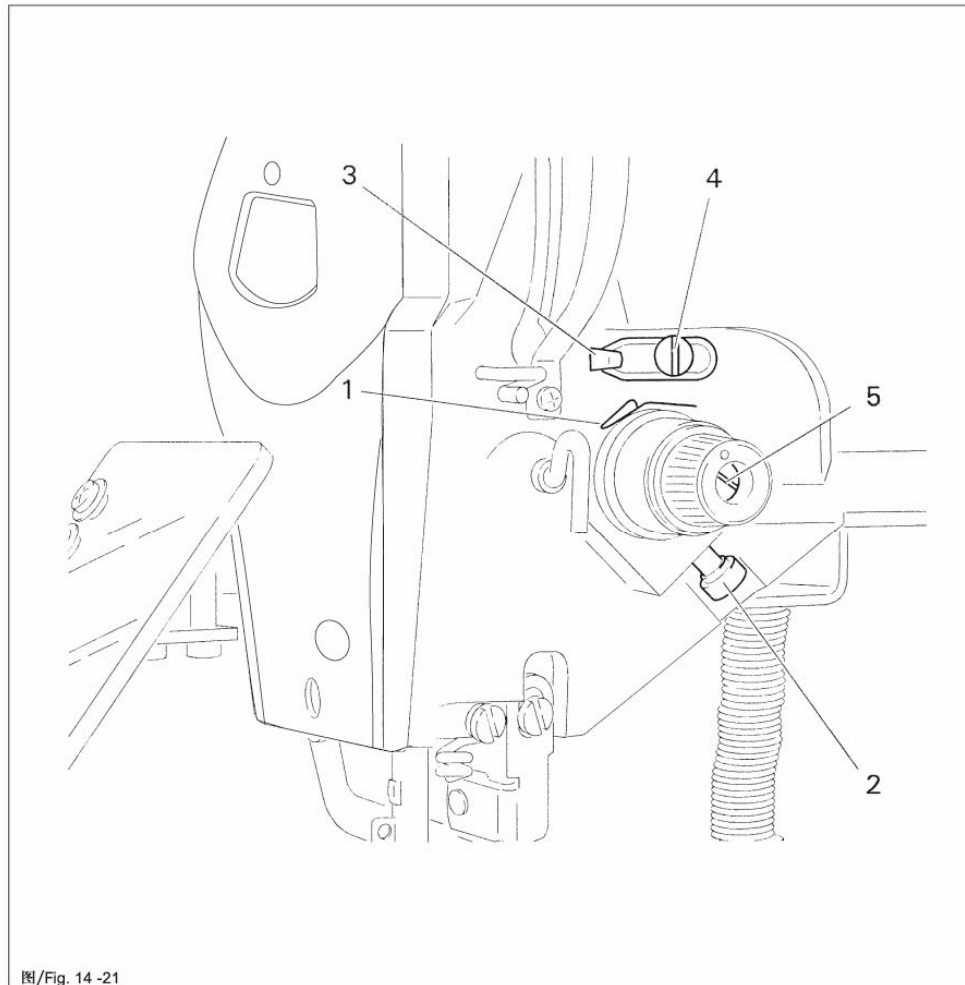


- 用手将机器移动到切线位置。
Bring the machine into the cutting position by hand.
按规则相应地移动杆1（螺钉2）。
Move lever 1(screw 2) in accordance with the requirement.

14.25 夹线簧和调线器
Thread check spring and thread regulator

规则 Requirement

1. 夹线簧1应该运动的距离为6-8mm。
1. The thread check spring 1 should have a 6-8 mm stroke.
2. 螺钉4应该与调线器3的长孔豁口对中。
2. Screw 4 should be positioned in the centre of the slot of thread regulator 3.



- 按规则1相应地调节夹线簧1（螺钉2）。
Adjust thread check spring 1 (screw 2) in accordance with requirement 1.
- 按规则2相应地移动调线器3（螺钉4）。
Move thread regulator 3(screw 4) in accordance with requirement 2.

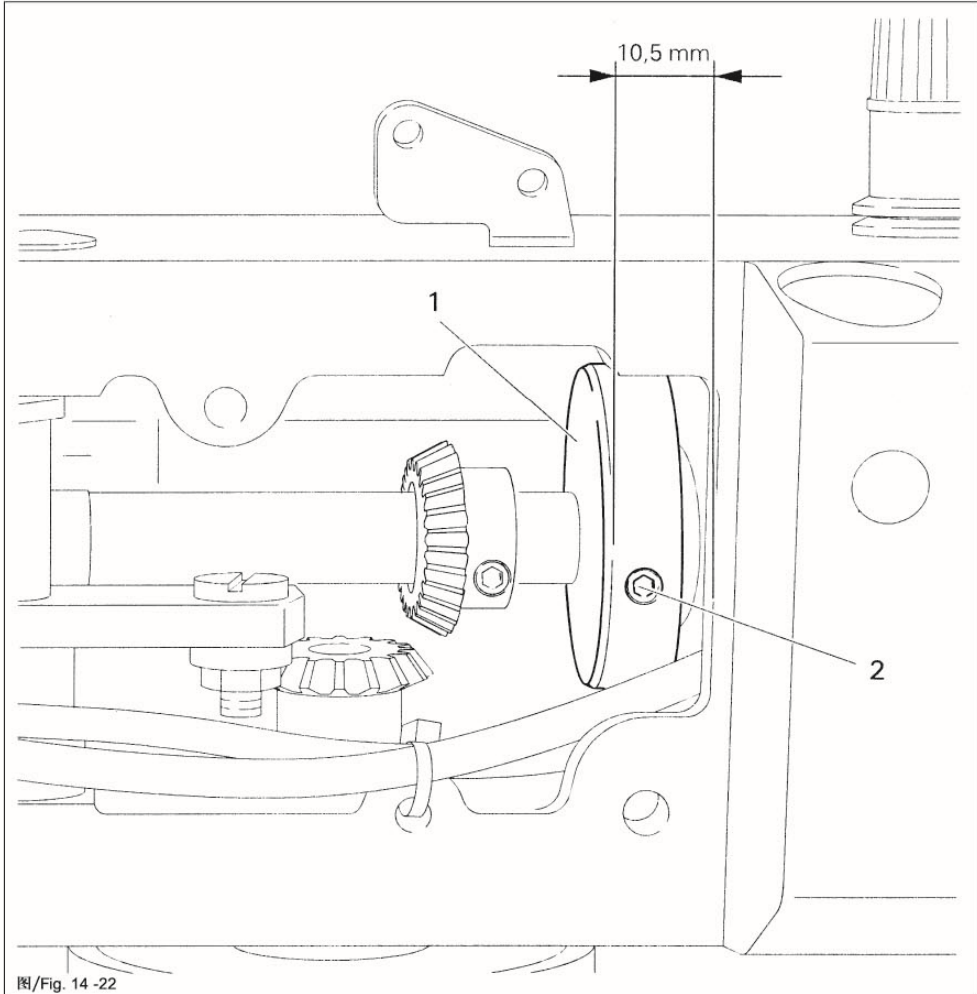


线的张紧力通过旋转销5调节。
夹线簧1和调线器3的所有设置都决于缝料，
因此，在需要时，必须根据缝纫结果对它们进行修正。
Turn pin 5 to adjust the thread spring resistance. All settings of the thread check spring 1 depend on the material and might have to be corrected to achieve the desired result.

14.26 绕线器驱动轮
Bobbin winder drive wheel

规则 Requirement

1. 在驱动轮1和机壳铸铁边沿之间应该有一个约10.5mm的距离。
- 1.The should be a distance of approx. 10.5 mm between drive wheel 1 and the metal edge of the machine case.
2. 在绕线器启动时，绕线器的摩擦轮应该由驱动轮1驱动。在绕线器关闭时，驱动轮1与绕线器的摩擦轮之间不许有接触。
- 2.When the bobbin winder is switched on , its friction wheel should be driven by drive wheel 1. When the bobbin winder is switched off, drive wheel 1 must not touch the friction wheel of the bobbin winder.



图/Fig. 14 -22



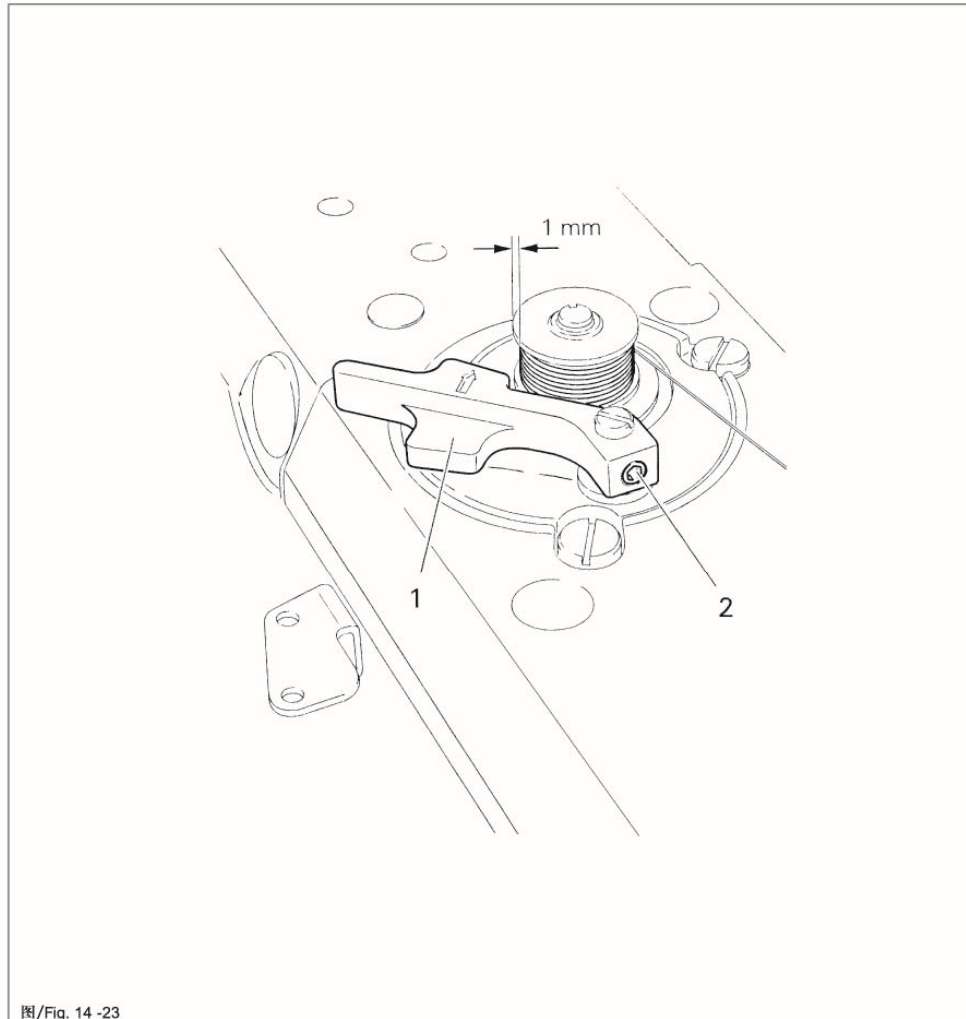
- 按规则相应地移动驱动轮1（螺钉2）。
- Adjust drive wheel 1 (screw 2) in accordance with the requirements.

14.27 绕线器
Bobbin winder

规则 **Requirement**

当梭心绕线到还差1mm到梭心边沿时，绕线器应该自动关闭。

The bobbin winder should switch off automatically, when the thread level is about 1 mm from the edge of the bobbin.

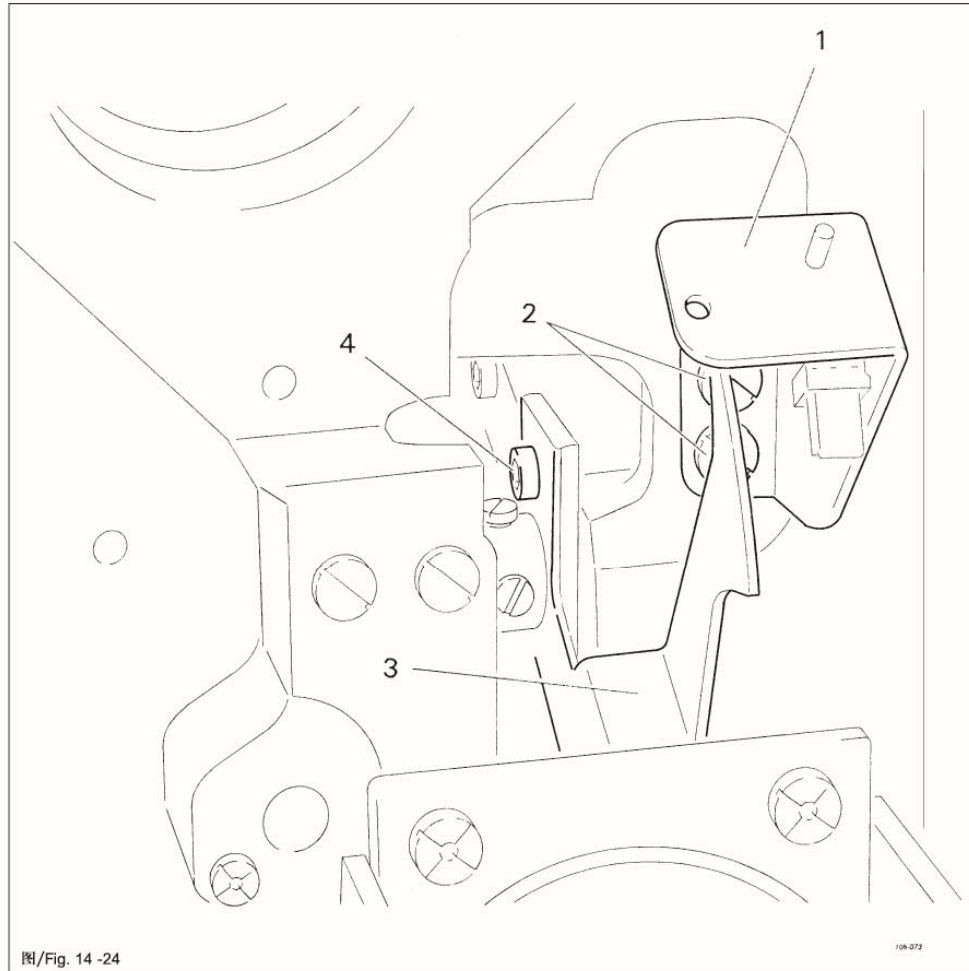


- 按规则相应地转动手柄1（螺钉2）。
Turn lever 1 (screw 2) in accordance with the requirement.

14.28 定位框的临界开关
Work clamp initiator

规则 Requirement

在定位框放下的情况下, 临界开关应该被操作 (参数 "601" 的输入 "3" 停在 "Off")。
When the work clamp is lowered, the initiator should be actuated (input "3" parameter "601" is in the "off" position).



图/ Fig. 14 -24



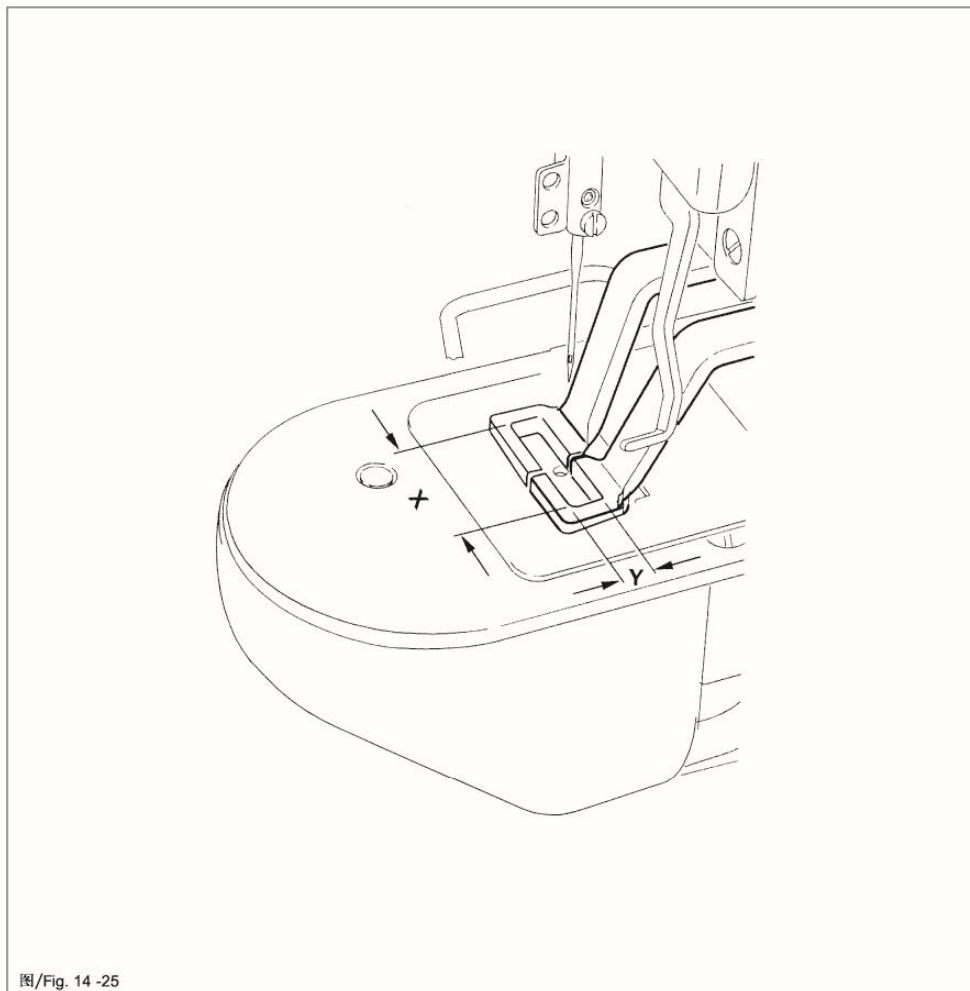
- 起动机。 Switch on the machine.
- 在操作方式输入下, 调用参数 "601", 见使用说明11.03章, 参数输入。
In the input mode, select parameter "601", see Chapter 11.03 Parameter input in the instruction manual.



- 用相应的正/负键选取输入 "3"。
Select input "3" with the corresponding plus /minus key.

- 在需要时，输入操作密码，见使用说明11.05.01章，操作密码输入。
If necessary, enter the access code, see Chapter 11.05.01 Entering the access code in the instruction manual.
- 按规则相应地调节支架1（螺钉2）和开关角铁3（螺钉4）。
Adjust bracked 1 (screws 2) and switch lug 3 (screws 4) in accordance with the requirement.
- 关闭机器。
Switch off the machine.

14.29 定位框的更换
Changing the work clamp



图/ Fig. 14 -25



- 在X和Y方向上测量新定位框的内空间
Measure the cutout of the new work clamp in X-and Y-direction.
- 按使用说明9.07章设置缝纫区的尺寸。
Adjust the sewing area size as described in Chapter 9.07 of the instruction manual.
- 安装新定位框，并按14.07章进行调整
Fit the new work clamp and align it in as described in Chapter 14.07.
instruction manual).
- 调用与定位框内空间相匹配的缝纫程序（见使用说明9.06章）。
Select the seam program to match the work clamp cutout (see Chapter 9.06 of the
instruction manual).
- 步进式检查缝纫程序（见使用说明7.04章）。
Check the seam program by tacting(see Chapter 7.04 of the instruction manual).



如果实际的缝纫区尺寸与给定的缝纫区尺寸不符，
可能会导致机器的严重损坏！

If the actual size of the sewing area differs from the size entered, serious
damage can be caused to the machine!

14.30 冷起动
Cold start



在执行冷起动时，线缝图50-99及所有已更改的参数设置都被删除！机器返回到供货时的状态，机器的零点被保留。

When a cold start is carried out, the seam patterns 50-99 and all altered parameter settings are deleted! The machine is reset to its condition on delivery, the machine's zero points remain unaffected.

- 起动机器。

Switch on the machine



- 用相应的正/负键选取参数"607"。

Select parameter"607" with the corresponding plus/minus keys.



- 需要时，输入操作密码，见使用说明11.04.01章，操作密码输入。

If necessary, enter the code, see Chapter 11.05.01 Entering the access code in the instruction manual.

- 用相应的正/负键执行冷起动。

With the corresponding Plus/minus key carry out the reset operation.

- 关闭机器，并在约3秒后重新起动。

Switch the machine off and on again after approx. 3 seconds.

14.31 机器软件通过互联网更新 Internet update of the machine software

机器软件可以借助于PFAFF Flash 编程进行更新。为此，必须将PFP-Boot程序，以及与机器型号相匹配的控制软件安装在一台 计算机上。为了将数据传递给机器，必须将PC与机器控制器用一条相应的零调制解调器电缆（订货号:91-291998-91)连接起来。

The machine software can be updated with PFAFF flash programming. For this purpose the PFP boot program and the appropriate control software for the machine type must be installed on a PC. To transfer the data to the machine, the PC and the machine control unit must be connected with an appropriate null modem cable(part no. 91-291 998-91).



PFP-Boot程序和符合机器型号的软件可以在PFAFF网站的下列地址下载：
www.pfaff-industrial.de/service/download/steuerungssoftware.html

The PFP boot program and the control software of the machine type can be downloaded from the PFAFF- homepage using the following path:

[Twww.pfaff-industrial.com/de/service/download/steuerungssoftware.html](http://www.pfaff-industrial.com/de/service/download/steuerungssoftware.html)

机器软件更新步骤如下:

To update the machine software carry out the following steps:



在机器软件更新过程中，不允许在机器上进行机器准备、保养或校验工作！

While the machine software is being updated, no setting up, maintenance or adjustment work may be carried out on the machine!

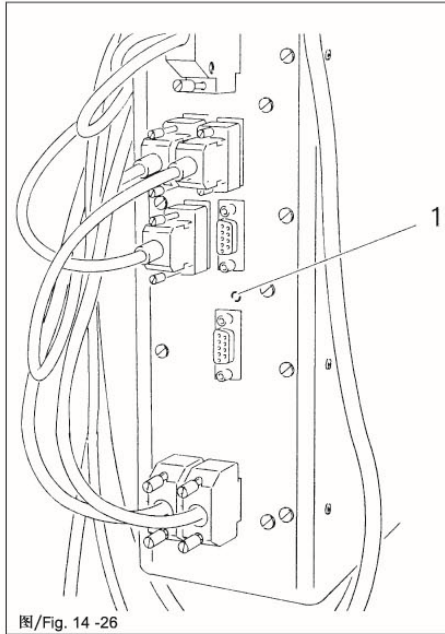
关闭机器。

Switch off the machine.

连接PC(串行接口或相应的USB接口)和机器控制器 (RS232),为此,必须断开操作板的插头连接。

Connect the PC (serial interface or appropriate USB-adaptor) and the machine control unit (RS232). To do so disconnect the plug of the control panel.

- 启动PC和PFP-Boot程序。
Switch on the PC and start the PFP boot program.
- 选取机器型号。
Select the machine type.
- 按“编程”键。
Press the "programming" button.
- 起动机，并且按住Boot键1。
Switch on the machine, keeping the boot key 1 pressed.



图/ Fig. 14 -26

- 按"OK"键。
软件更新开始运行，更新工作的进展情况用条形图标显示在PFP-Boot程序的显示窗上。
Press the "OK" button.
The software update is carried out, the update progress is shown on the bar display of the PFP boot program.
- 更新结束之后，关闭机器和结束PFP-Boot程序。
When the update has been completed, switch off the machine and end the PFP boot program.
- 断开PC和机器控制器之间的插头连接，并将操作板重新插接到机器控制器上。
End the connection between the PC and the machine control unit and reconnect the control panel to the machine control unit.

- 启动机器。
Switch on the machine.
进行一次简单的检查，在需要时，可执行一次冷启动。
A plausibility control is carried out and, if necessary, a cold start.



其它更详细的资料和帮助都储存在“PFPHILFE.TXT”文件内。可以在PFP-Boot程序中点击“Hilfe”键打开该文件。

More information and assistance is at your disposal in the file "PFPHILFE.TXT", which can be called up from the PFP boot program by pressing the "help" button.

14.32 参数表
List of parameters

组 Group	参数 Parameter	含义 Description	调节范围 Setting range	设定的数值 Set value
000	001	<p>最大转速 用此参数设定缝纫运行的最大缝纫速度（上限）。 Maximum speed This parameter is used to fix the max. sewing speed (upper limit)</p>	200-2700	2700
	002	<p>始缝速度 用此参数可以设定起始5针的始缝速度。 第1针速度 [min-1] 第2针速度 [min-1] 第3针速度 [min-1] 第4针速度 [min-1] 第5针速度 [min-1] .Sewing speed for start stitches With this parameter the speeds for the 5 start stitches are fixed. Speed(spm)for start stitch no.1 Speed(spm)for start stitch no.2 Speed(spm)for start stitch no.3 Speed(spm)for start stitch no.4 Speed(spm)for start stitch no.5</p>	200-2700	400
		200-2700	900	
		200-2700	2700	
		200-2700	2700	
		200-2700	2700	
		200-2700	2700	
	003	<p>线缝图的封锁/解封 在操作方式缝纫下，用此参数来执行单个线缝图（0至99）的解封（ON）和封锁（OFF）。 Locking/releasing seam patterns This parameter is used to release(ON) or lock(OFF)the individual seam patterns(0 to 99)to be carried out in the sewing mode.</p>	ON-OFF	

组 Group	参数 Parameter	含义 Description	调节范围 Setting range	设定的数值 Set value
	004	<p>底线计数器的开/关 预给值（每线梭的件数） 在操作方式缝纫下，底线计数器以从预线值中减去缝纫完的件数的方式进行倒数。 在底线计数器接通的情况下，在操作方式缝纫下，当计数器的值达到0时，给出一个报告 Switch bobbin thread counter on/off Standard value (pieces per bobbin) In the sewing mode, the bobbin thread counter counts the pieces sewn backwards from the standard value. If the bobbin thread counter is Switched on ,in the sewing mode a signal is given when the value 0 is reached.</p>	<p>ON-OFF 1-9999</p>	<p>ON 1000</p>
	006	<p>切线结束后反转 反转位置 [°] 用此参数可以完成切线结束后自动反转的开/关。当反转功能接通时，要在手轮上设定反转位置。进行设定需要操作密码。 Reversing after thread trimming Reverse position [°] With this parameter it is possible to switch the automatic reversing function after thread trimming on or off. If the reversing function is switched on ,the reverse position can be set by turning the balance wheel.The access code is necessary for this adjustment.</p>	<p>ON-OFF 0-45</p>	<p>ON 11</p>

组 Group	参数 Parameter	含义 Description	调节范围 Setting range	设定的数值 Set value
	007	<p>起点 = 定标时的基点 用此参数可以进行选择，此基点在定标时是作为起点（ON），还是作为零点（OFF）使用。 Starting point=scale reference point With this parameter it is possible to choose whether the scanle reference point is the starting point(ON)or the zero point(OFF).</p>	ON-OFF	OFF
	008	<p>"绕线"功能的转速 用此参数设定绕线工作的转速。 Speed for the "winding"function This parameter is used to fix the speed for the winding operation.</p>	200-2700	1000

组 Group	参数 Parameter	含义 Description	调节范围 Setting range	设定的数值 Set value
000	009	<p>顺序程序执行后通过NP转到AP 用此参数可以选取，X和Y轴驱动器在执行完顺序程序之后，通过参考临界开关(NP)运动到缝纫起点(AP) Via zero point to starting point after end of sequence With this parameter it is possible to choose that, after the end of the sequence, the X-,Y-drive moves to the seam starting point via the reference initiators.</p>	ON-OFF	OFF
	010	<p>执行完一定数量的程序之后通过NP转到AP 运行程序的数量 用此参数能够选取，X和Y轴的驱动器在执行完一定数量的缝纫程序之后，通过参考临界开关(NP)运行到缝纫起点(AP)。 Via zero point to starting point after number of program cycles Number of program cycles With this parameter it is possible to choose that,after a certain numberof program cycles,the X-,Y-drive moves to the seam starting point via the reference initiators</p>	ON-OFF 1-100	OFF
	011	<p>踏板模式 此参数用于快反应模式(0)和Fip Flop模式(1)之间的转换。 Pedal mode Switchover between level mode (0)and flip flop mode(1).</p>	0-1	0

组 Group	参数 Parameter	含义 Description	调节范围 Setting range	设定的数值 Set value
	013	<p>NIS"针入缝料中" [°] 用此参数来设置NIS信号的位置。当执行此功能时，可以通过转动手轮来设定位置。位置的改变会推移送料板的送料时间点。做调节时需要操作密码。 NIS"needle in material"[°] This parameter is used to set the NIS signal. If the function is executed, the position can be entered by turning the balance wheel. If the position is altered, the result is a change in the point of time when the carriage is moved. The access code is necessary for this adjustment.</p>	65-166	107
	014	<p>切线速度 [min-1] 用此参数来设定切线的速度 Thread trimming speed[min-1] This parameter is used to fix the speed for thread trimming.</p>	100-700	200
	015	<p>步进电机的电流下降 在封闭的定位框情况下，在静止时，停车电流下降功能被接通或断开。 Fip Flop模式(1)之间的转换。 Reduced current for stepping motors The reduction function of the holding current at rest with closed work clamp is switched on or off.</p>		
	016	<p>按键音响 用此参数接通和关闭操作板上按键反应音响。错误输入的双响信号总是接通。 Key tone The key tone, as reaction to a key on the control panel being pressed, is switched on or off. The double tone for incorrect inputs always remains switched on.</p>	ON-OFF	ON

组 Group	参数 Parameter	含义 Description	调节范围 Setting range	设定的数值 Set value
000	017	定位框电磁铁 接通时间 [10ms] 输入电磁铁完全通电的时间。 Clamp solenoid Operating time[10ms] The time. for which the solenoid is under full current, is entered.	5-100	20
	018	定位框电磁铁Duty-Cycle [%] 在定位框电磁铁ED (参数"017") 完成之后, 磁铁作节拍运动。这种 接通时间与断开时间的节拍比例 可以在此处给定。 Clamp solenoid duty-cycle[%] At the end of the clamp solenoid operating time (Parameter"017")the solenoid is clocked, The relationship between duration of operation and non-operation is entered here.	5-100	25
	019	切线器电磁铁ED [10ms] 输入电磁铁完全通电时间。 Thread trimming solenoid duty-cycle At present without a function	5-100	25
	020	切线器电磁铁Duty-Cycle 目前没有此功能 Thread trimming solenoid operating time[10ms] The time,for which the solenoid is under full current, is entered.		
	021	放线器上死点 [°] 此参数输入放线器上死点的位置。 在执行此功能时, 可以通过转动手 轮来调节这个位置。位置调节时需 要操作密码。 Thread take-up lever t.dc.[°] The position for the t.d.c. thread take-up lever is entered here. If the function is executed, the postion can be set by turning the balance wheel. The access code is necessary for this adjustment.	45-53	51

组 Group	参数 Parameter	含义 Description	调节范围 Setting range	设定的数值 Set value
	022	<p>切线位置 (以针的上死点为基点) [°] 在此输入切线器电磁铁接通的位置。可以通过转动手轮进行调节。调节时需要操作密码。 Thread trimming position (in relation to t.d.c. needle)[°] The position,at which the thread trimming solenoid is switched on,is entered here. The adjustment is set by turning the balance wheel. The access code is necessary for this adjustment.</p>	180-253	180
	023	<p>缝纫区尺寸X [1/10mm] 为了避免发生机械碰撞, 要输入所使用的定位框的缝纫区尺寸。控制器对运行路程进行检查, 如有错误, 将给出一个相应的错误报告。 Sewing area size X [1/10mm] To avoid mechanical collisions, the sewing area size of the clamp in use is entered. The control unit checks the path and ,if necessary, issues an error message.</p>	10-400	200
	024	<p>缝纫区尺寸Y [1/10mm] 为了避免发生机械碰撞, 要输入所使用的定位框的缝纫区尺寸。控制器对运行路程进行检查, 如有错误, 将给出一个相应的错误报告。 Sewing area size Y [1/10mm] To avoid mechanical collisions, the sewing area size of the clamp in use is entered. The control unit checks the path and, if necessary, issues an error message.</p>	10-200	30

组 Group	参数 Parameter	含义 Description	调节范围 Setting range	设定的数值 Set value
100	101	主处理器的软件版本 在此显示主处理器的软件版本。 Software version main processor The software version of the main processor is displayed		
	102	缝纫驱动器的软件版本 在此显示缝纫驱动器模式的软件版本。 Software version sewing drive unit The software version of the sewing drive module is displayed		
	103	操作板软件版本 在此显示操作板的软、硬件版本。 Software version control panel The soft-and hardware version of the control panel are displayed.		
600	601	输入的显示 用此功能可对数码输入进行检查。 “IN”代表输入的编码(1-16)。 在“VAL”下面显示出所属的开关状态。 Display inputs With this function the digital inputs can be checked."IN"shows the input numbers(1-16).Under "VAL"the respective switch status is displayed. IN VAL 1 IN1, 可编程 输入1 2 IN1, 可编程 输入1 3 E3, 定位框上 IN VAL IN1 programmable input 1 IN2 programmable input 2 E3 button clamp raised		

组 Group	参数 Parameter	含义 Description	调节范围 Setting range	设定的数值 Set value
		4 5 6 7 8 9 10 11 12 13 14 15 16		
	602	<p>特殊输入的显示 用此功能可对特殊输入踏板, 参照点X (SM1)和参照点Y (SM2) 进行检查。"IN"代表各输入 (PED,REFX,REFY) .在"VAL"下面显示所属的开关状态。</p> <p>Display special inputs With this function it is possible to check the special inputs pedal, reference X(SM1)and reference Y (SM2)."IN"shows the inputs (PED, REFX,REFY). Under"VAL"the respective switch status is displayed.</p> <p>IN VAL</p> <p>PED 踏板 (给定值发生器 -1;0;+1;2)</p> <p>REFX 参照输入X REFX 参照输入Y</p> <p>IN VAL</p> <p>PED Pedal(speed control unit -1;0;+1;2)</p> <p>REFX Reference input X REFX Reference input Y</p>		

组 Group	参数 Parameter	含义 Description	调节范围 Setting range	设定的数值 Set value																																																
600	603	<p>输入开关 用此功能可以接通各输出。 "OUT"代表所选的输出 (1-16) . 在"VAL"下面, 可用正/负键(+) 为所选的输出设置(S) 和用正/负 键 (-) 去掉设置 (R) 对锁紧进行检查。 没有设置的输出不被接通。 Connect outputs With this function the outlets can be connected."OUT" shows the outlet selected(1-16).Under"VAL"the selected output is set(S) with the plus/minus key(+),and reset(R) with the plus/minus key.Interlocks are checked. Non-assigned outlets are not connected.</p> <p>OUT VAR</p> <table border="0"> <tr> <td>1</td> <td>S/R</td> <td>电磁铁用于 定位框抬起 Solenoid for work clamp open</td> </tr> <tr> <td>2</td> <td>S/R</td> <td></td> </tr> <tr> <td>3</td> <td>S/R</td> <td>电磁铁用于 切线器 Solenoid for thread trimming</td> </tr> <tr> <td>4</td> <td>S/R</td> <td></td> </tr> <tr> <td>5</td> <td>S/R</td> <td></td> </tr> <tr> <td>6</td> <td>S/R</td> <td>可编程输出 program outlet</td> </tr> <tr> <td>7</td> <td>S/R</td> <td>可编程输出 program outlet</td> </tr> <tr> <td>8</td> <td>S/R</td> <td></td> </tr> <tr> <td>9</td> <td>S/R</td> <td></td> </tr> <tr> <td>10</td> <td>S/R</td> <td></td> </tr> <tr> <td>11</td> <td>S/R</td> <td></td> </tr> <tr> <td>12</td> <td>S/R</td> <td></td> </tr> <tr> <td>13</td> <td>S/R</td> <td></td> </tr> <tr> <td>14</td> <td>S/R</td> <td></td> </tr> <tr> <td>15</td> <td>S/R</td> <td></td> </tr> <tr> <td>16</td> <td>S/R</td> <td></td> </tr> </table>	1	S/R	电磁铁用于 定位框抬起 Solenoid for work clamp open	2	S/R		3	S/R	电磁铁用于 切线器 Solenoid for thread trimming	4	S/R		5	S/R		6	S/R	可编程输出 program outlet	7	S/R	可编程输出 program outlet	8	S/R		9	S/R		10	S/R		11	S/R		12	S/R		13	S/R		14	S/R		15	S/R		16	S/R			
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组 Group	参数 Parameter	含义 Description	调节范围 Setting range	设定的数值 Set value
	604	<p>步进电机运动 用相应的正/负键分别运行步进电机SM1(X轴)和SM2(Y轴)。对锁紧不进行检查。</p> <p>Move stepping motors The stepping motors SM1 (X-axis)and SM2(Y-axis)are moved individually with the respective plus/minus keys, Interlocks are not checked.</p>		
	605	<p>缝纫电机旋转 通过操作踏板，用可选的给定转速驱动缝纫电机。在缝纫电机启动之后，还会附加地显示出现实的转速。</p> <p>Turn sewing motor The sewing motor can be operated with a selectable set speed by pressing the pedal. After the sewing motor has been started, the current speed is also displayed.</p>		
	606	<p>切线器运行 整个切线循环的运行可以用正/负键(+)在CUT和THR下启动。</p> <p>Thread trimming sequence The sequence for a complete thread trimming cycle is started with the plus/minus key(+) below CUT and below THR.</p>		

组 Group	参数 Parameter	含义 Description	调节范围 Setting range	设定的数值 Set value
600	607	<p>冷起动（还原） 用此功能使控制器执行一次冷起 动（还原），使数据还原成初始值。 在选取了此功能之后，必须关闭 机器和重新启动。 Cold start (RESET) With this function the control unit carries out a cold start (RESET) with which the data is reset. After this function has been selected, the machine must be switched off and then on again.</p>		
	608	<p>零点设置 用此功能和设置量规来设定X/Y驱 动器的零点。（参照点REFX,REFY 的步进电机修正值）。设置时需要 操作密码。 Setting zero points With this functin and the adjustment gauge, the zero points for the X/Y-drive unit can be set.(stepping motor correction values for the reference points REFX,REFY,)The access code is required for this adjustment.</p>		
	609	<p>定位框X方向的中心设置 用此功能能够设定定位框在X方向 的中心。在进入此功能时，运行到 现实的定位框中心。之后，根据所 设定的界限（参数"023"）能够运行 到定位框的左边缘或右边缘。用 正/负键输入修正值。移动的数据 被显示。 Setting the clamp centre X This function is used to set the centre of the clamp in X-direction.When entering this function, the machine moves to the current clamp centre, after which it is possible to move to the right or left dege of the clamp, depending on the set limits (param, "023"). A correction can be made with the plus/minus keys.The relocation value is displayed.</p>		

组 Group	参数 Parameter	含义 Description	调节范围 Setting range	设定的数值 Set value
	610	<p>定位框Y方向的中心设置 此功能用作帮助设定定位框在Y方向的中心。进入此功能之后，运行到现实的定位框中心，在按键之后，运行到定位框的前边缘及后边缘（参数"024"）。定位框的移动必须机械式完成。</p> <p>Setting the clamp centre Y This function is used to help set the centre of the clamp in Y-direction, After entering this function,the machine moves to the current clamp centre, after pressing a key to the front or the rear limit (param."024"). The clamp must be shifted manually.</p>		
	611	<p>关闭定位框自动打开功能 用此功能可以关闭切线后定位框自动打开功能。在机器关闭之后，定位框自动打开功能总是接通。</p> <p>Automatic clamp opening off With this function the automatic opening of the clamp after thread trimming can be switched off.After the machine has been switched off, the automatic clamp opening function is always activated.</p>	ON-OFF	

组 Group	参数 Parameter	含义 Description	调节范围 Setting range	设定的数值 Set value
700		<p>这些参数对缝纫电机的控制有影响，因此，应该只由受过相应培训的人员进行更改。</p> <p>These parameters influence the control of the sewing motor and should only be altered by appropriately instructed persons.</p>		
	701	<p>转速控制器P部分</p> <p>P-quota speed controller</p>	1-50	10
	702	<p>转速控制器I部分</p> <p>I-quota speed controller</p>	0-100	35
	703	<p>位置控制器P部分</p> <p>P-quota position controller</p>	1-50	30
	704	<p>位置控制器D部分</p> <p>D-quota position controller</p>	1-100	25
	705	<p>位置控制器时间</p> <p>Time for position controller</p>	0-100	25
	706	<p>剩余刹车位置控制器P部分</p> <p>P-quota position controller for rest brake</p>	1-50	25
	707	<p>剩余刹车位置控制器D部分</p> <p>D-quota position controller for rest brake</p>	1-50	15
	708	<p>最大剩余刹车转矩</p> <p>Maximum moment for rest brake</p>	0-100	5
	709	<p>最小机器转速</p> <p>Minimum machine speed</p>	2-64	2
	710	<p>最大机器转速</p> <p>Maximum machine speed</p>	1-35	27
	711	<p>最大电机转速</p> <p>Maximum motor speed</p>	1-35	27

组 Group	参数 Parameter	含义 Description	调节范围 Setting range	设定的数值 Set value
	712	定位转速 Positioning speed	2-40	30
	713	加速斜坡 Acceleration ramp	1-50	35
	714	减速斜坡 Brake ramp	1-50	30
	715	参照位置 (NIS) Reference position(NIS)	1-127	38
	716	紧急停车信号时间 [10ms] Time-out	0-255	40
	717	起动电流 Starting current motor	3-10	6
	718	防卷过滤器 Anti-vibration filter	1-10	3
	719	逻辑回转方向配置 Logical rotation direction allocation	0-255	255
	720	NIS-弯曲角铁位置 NIS-deformation flag position	0-127	64
	721	面向BIT的电机配置 High level motor configuration	0-255	1
	722	空 not assigned		0
	723	空 not assigned		0
	724	空 not assigned		0

组 Group	参数 Parameter	含义 Description	调节范围 Setting range	设定的数值 Set value
700	725	空 not assigned		0
	726	空 not assigned		0
	727	空 not assigned		0
	728	空 not assigned		0
	729	空 not assigned		0
	730	空 not assigned		0
800		<p>此功能组和功能键P,P1-P8及C1-C3的编程功能可以为操作工作解封（ON），或者对其封销(OFF)。如果一个功能组被封锁，则只在输入了一个有效的操作密码后，才能对其参数进行更改。一旦输入了正确的操作密码，解封一直保持到机器关闭。</p> <p>The function groups and the functions Programming the Function Keys P, P1-P8 and C1-C3 can be released for manipulation(ON)or locked (OFF).If a function group is suppressed, its parameters cannot be changed until a valid access code has been entered. Once a valid access code has been entered, the suppression is cancelled until the machine is switched off.</p>		
	801	操作权限组000 Right of access function group 000	ON-OFF	ON
	802	操作权限组100 Right of access function group 100	ON-OFF	ON

组 Group	参数 Parameter	含义 Description	调节范围 Setting range	设定的数值 Set value
	807	操作权限组600 Right of access function group 600	ON-OFF	OFF
	808	操作权限组700 Right of access function group 700	ON-OFF	OFF
	809	操作权限组800 Right of access function group 800	ON-OFF	OFF
	810	操作"P","P1"-"P8"和"C1"-"C3" 键的权限 Right of access to keys"P", "P1"-"P8" and "C1"-"C3"	ON-OFF	NO
	811	操作密码 用此参数来更改操作密码。 供货状态时的机器作密码设定 为"3371"。 Access code This parameter is used to alter the access code. Upon delivery the machine is set with the access code "3371".		3371

14.33

屏幕上的错误报告

Error messages on the display

下列的各种错误报告在操作板的屏幕上显示。

Following error messages are shown on the control panel display.

ERROR:1	处理器错误 STACK_OVERFLOW
ERROR:1	Processor error STACK_OVERFLOW
ERROR:2	处理器错误 STACK_UNDERFLOW
ERROR:2	Processor error STACK_UNDERFLOW
ERROR:3	处理器错误 UNDEF_OPCODE
ERROR:3	Processor error UNDEF_OPCODE
ERROR:4	处理器错误 PROTECTION_FAULT
ERROR:4	Processor error PROTECTION_FAULT
ERROR:5	处理器错误 ILLEGAL_WORD_OPERAND
ERROR:5	Processor error ILLEGAL_WORD_OPERAND
ERROR:6	处理器错误 ILLEGAL_INSTRUCTION
ERROR:6	Processor error ILLEGAL_INSTRUCTION
ERROR:7	处理器错误 ILLEGAL_BUS_ACCESS
ERROR:7	Processor error ILLEGAL_BUS_ACCESS
ERROR:8	处理器错误 NMI
ERROR:8	Processor error NMI
ERROR:10	OTE 没有安装
ERROR:10	OTE (Sewing head recognition unit) not attached
ERROR:11	OTE 没有编程 (新)
ERROR:11	OTE not programmed(new)
ERROR:12	OTE 总检错误
ERROR:12	OTE check sum error
ERROR:13	OTE -Header无效
ERROR:13	OTE header invalid
ERROR:14	OTE -Userdaten 无效
ERROR:14	OTE user data invalid
ERROR:30(#)	(OTE 错误, 见14.34章)
ERROR:30(#)	(Error Sewing motor see cap. 14.34)
ERROR:31(#)	(缝纫电机错误, 见14.34章)
ERROR:31(#)	Incorrect control panel
ERROR:50	错误在操作板
ERROR:50	Incorrect control panel
ERROR:51	在OTE中错误的机器类型
ERROR:51	Incorrect machine class in OTE
ERROR:101	电源电压
ERROR:101	Mains voltage
ERROR:102	电源过载
ERROR:102	Power supply overload
ERROR:103	24电压过低
ERROR:103	24 V too low

ERROR:201(#)	(缝纫电机错误, 见14.34章)
ERROR:201(#)	(Error Sewing motor see cap. 14.34)
ERROR:202	图象太大
ERROR:202	Pattern too large
ERROR:203	缝纫电机数据传输过载
ERROR:203	Overload data transfer sewing motor
ERROR:204	节拍被锁紧
ERROR:204	Tacting function locked
ERROR:205	运行被锁紧
ERROR:205	Run functio locked
ERROR:206	没有NIS
ERROR:206	No NIS
ERROR:207	斜坡没结束
ERROR:207	Not end of ramp
ERROR:208	没找到零点
ERROR:208	Zero point not found
ERROR:209	缝纫被锁紧
ERROR:209	Sewing function locked
ERROR:210	底线故障
ERROR:210	Bobbin thread fault
ERROR:211	针迹过大
ERROR:211	Stitch too large

ERROR:301 定位框抬起没完成
 ERROR:301 Raise clamp not completed
 ERROR:302 定位框落下没完成
 ERROR:302 Lower clamp not completed
 ERROR:303 定位框抬起被锁紧, (针位置)
 ERROR:303 Raise clamp locked (needle position)
 ERROR:304 定位框落下被锁紧, (针位置)
 ERROR:304 Lower clamp locked (needle position)
 ERROR:305 拨线器接通被锁紧, (针位置)
 ERROR:305 hread wiper on locked (needle position)

ERROR:401 缝纫电机错误
 ERROR:401 Error sewing motor
 ERROR:402 缝纫电机数据传输过载
 ERROR:402 Overload data transfer sewing motor
 ERROR:403 程序站没有编程
 ERROR:403 Program station not programmed
 ERROR:404 程序被封锁
 ERROR:404 Program locked
 ERROR:405 程序不存在
 ERROR:405 Program does not exist
 ERROR:406 没有 NIS
 ERROR:406 No NIS
 ERROR:407 零点无效
 ERROR:407 Zero points invalid
 ERROR:408 机器不在初始位置
 ERROR:408 Machine not in basic position
 ERROR:409 没找到零点
 ERROR:409 Zero point not found

14.34

缝纫电机错误
 Sewing mottor errors

1 超时	70 电机抱轴
1 Time out	70 Motor blocking
2 没有到达位置	71 没有增量器插头
2 Position not reached	71 No incremental connector
34 刹车距离太短	73 电机运行被干扰
34 Brake path too short	73 Motor running interrupted
35 通信错误	75 控制器被封锁
35 Communication error	75 Controller locked

	36 初始化 (Init) 没完成	170 降速比无效
	36 Initialisation (Init.) not completed	170 Invalid transmission
	65 在init时Extintlow	171 零标记无效
	65 Extint low at Init	171 Zero mark invalid
	66短路	175 起动的错误
	68 在运行时Extint low	175 Start error
	68 Extint low in operation	222紧急情况监控
	69没有增量器	222 Time-out monitoring
	69 No increments	
14.35	OTE-错误	
	OTE-errors	
	1 读错误	
	2 写错误	
	3 OTE已满	
	4 缺少OTE	
	5 错误的尺寸	
	6 错误的地址	
	7 地址过盈	
	8 总检错误	
	9 错误的系列号	
	1 Read error	
	2 Write error	
	3 Full EEPROM	
	4 No EEPROM	
	5 Invalid size	
	6 Invalid address	
	7 Address overflow	
	8 Checksum failed	
	9 Serialnr.changed	