

Thank you very much for buying our sewing machine. Before using your new machine, please read the safety instructions below and the explanations given in the Operation Instruction.



With industrial sewing machines, it is normal to carry out work while positioned directly in front of moving parts such as the needle and thread take-up lever, and consequently there is always a danger of injury that can be caused by these parts. Follow the instructions from training personnel and instructors regarding safe and correct operation before operating the machine so that you will know how to use it correctly.

SAFETY INSTRUCTIONS

1. Safety indications and their meanings

This instruction manual and the indications and symbols that are used on the machine itself are provided in order to ensure safe operation of this machine and to prevent accidents and injury to yourself or other people. The meaning of these indications and symbols are given below.

Indications

 DANGER	The instructions which follow this term indicate situations where failure to follow the instructions will almost certainly result in death or severe injury.
 CAUTION	The instructions which follow this term indicate situations where failure to follow the instructions could cause injury when using the machine or physical damage to equipment and surroundings.

Symbols



..... This symbol (\triangle) indicates something that you should be careful of. The picture inside the triangle indicates the nature of the caution that must be taken. (For example, the symbol at left means "beware of injury".)



..... This symbol (\otimes) indicates something that you must not do.



..... This symbol (\bullet) indicates something that you must do. The picture inside the circle indicates the nature of the thing that must be done. (For example, the symbol at left means "you must make the ground connection".)

Notes On Safety








DANGER













Wait at least 5 minutes after turning off the power switch and disconnecting the power cord from the wall outlet before opening the face plate of the control box. Touching areas where high voltages are present can result in severe injury.

CAUTION

Environmental requirements

-  Use the sewing machine in an area which is free from sources of strong electrical noise such as high-frequency welders. Sources of strong electrical noise may cause problems with correct operation.
-  Any fluctuations in the power supply voltages should be within $\pm 10\%$ of the rated voltage for the machine. Voltage fluctuations which are greater than this may cause problems with correct operation.
-  The power supply capacity should be greater than the requirements for the sewing machine's electrical consumption. Insufficient power supply capacity may cause problems with correct operation.
-  The ambient temperature should be within the range of 5°C to 35°C during use. Temperatures which are lower or higher than this may cause problems with correct operation.
-  The relative humidity should be within the range of 45% to 85% during use, and no dew formation should occur in any devices. Excessively dry or humid environments and dew formation may cause problems with correct operation.
-  Avoid exposure to direct sunlight during use. Exposure to direct sunlight may cause problems with correct operation.
-  In the event of an electrical storm, turn off the power and disconnect the power cord from the wall outlet. Lightning may cause problems with correct operation.

Installation

-  Machine installation should only be carried out by a qualified technician.
-  Contact your dealer or a qualified electrician for any electrical work that may need to be done.
-  The sewing machine weighs approximately 40kg. The installation should be carried out by two or more people.
-  Don't connect the power cord until installation is complete, otherwise the machine may operate if the foot switch is depressed by mistake, which could result in injury.
-  Be sure to connect the ground. If the ground connection is not secure, you run a high risk of receiving a serious electric shock, and problems with correct operation may also occur.
-  Install the safety covers to the machine head and motor.
-  Hold the machine head with both hands when tilting it back or returning it to its original position. Furthermore, after tilting back the machine head, do not push the face plate side or the pulley side from above, as this could cause the machine head to topple over, which may result in personal injury or damage to the machine.
-  All cords should be secured at least 25mm away from any moving parts. Furthermore, do not excessively bend the cords or secure them too firmly with staples, otherwise there is the danger that fire or electric shocks could occur.
-  If using a work table which has casters, the casters should be secured in such a way so that they cannot move.
-  Be sure to wear protective goggles and gloves when handling the lubricating oil and grease, so that they don't get into your eyes or onto your skin, otherwise inflammation can result. Furthermore, do not drink the oil or eat the grease under any circumstances, as they can cause vomiting and diarrhoea. Keep the oil out of the reach children.

Notes On Safety

CAUTION

Sewing



This sewing machine should only be used by operators who have received the necessary training in safe use beforehand.



If using a work table which has casters, the casters should be secured in such a way so that they cannot move.



The sewing machine should not be used for any applications other than sewing.



Attach all safety devices before using the sewing machine. If the machine is used without these devices attached, injury may result.



Be sure to wear protective goggles when using the machine.
If goggles are not worn, there is the danger that if a needle breaks, parts of the broken needle may enter your eyes and injury may result.



Do not touch any of the moving parts or press any objects against the machine while sewing as this may result in personal injury or damage to the machine.



Turn off the power switch at the following times, otherwise the machine may operate if the foot switch is depressed by mistake, which could result in injury.

- When threading the needle
- When replacing the needle and bobbin
- When not using the machine and when leaving the machine unattended



If an error occurs in machine operation, or if abnormal noises or smells are noticed, immediately turn off the power switch. Then contact your nearest dealer or a qualified technician.



If the machine develops a problem, contact your nearest dealer or a qualified technician.

Cleaning



Turn off the power switch before carrying out cleaning, otherwise the machine may operate if the foot switch is depressed by mistake, which could result in injury.



Be sure to wear protective goggles and gloves when handling the lubricating oil and grease, so that they do not get into your eyes or onto your skin, otherwise inflammation can result. Furthermore, do not drink the oil or eat the grease under any circumstances, as they can cause vomiting and diarrhoea. Keep the oil out of the reach of children.

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1. 规格 Specifications

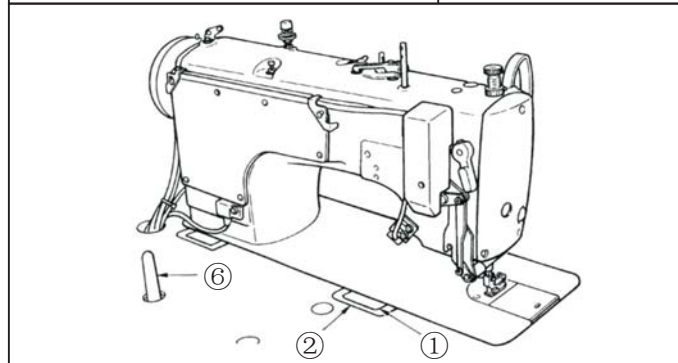
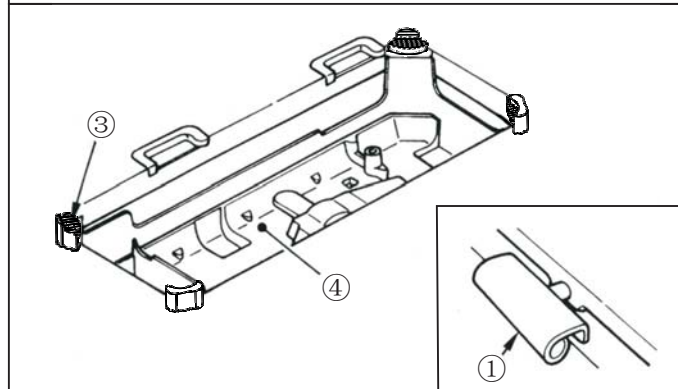
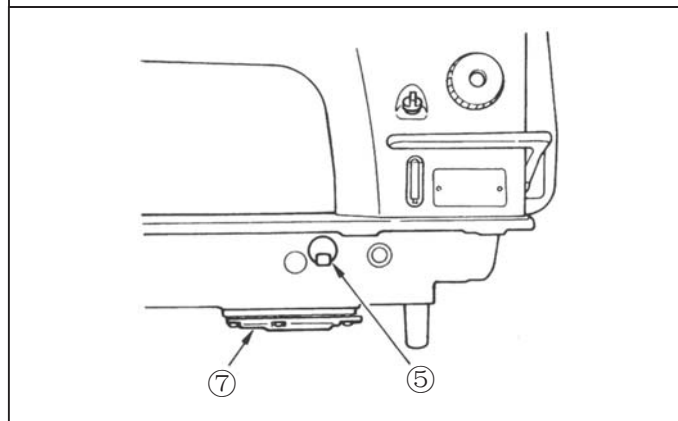
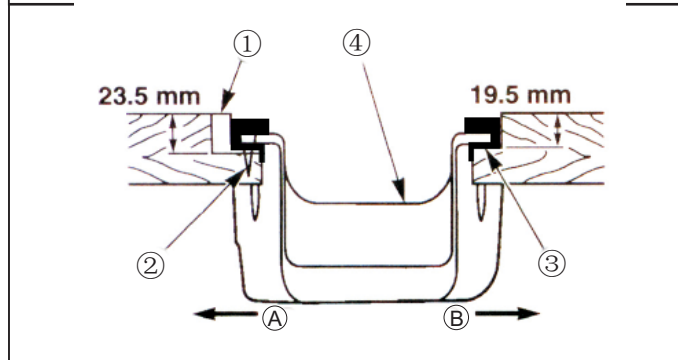
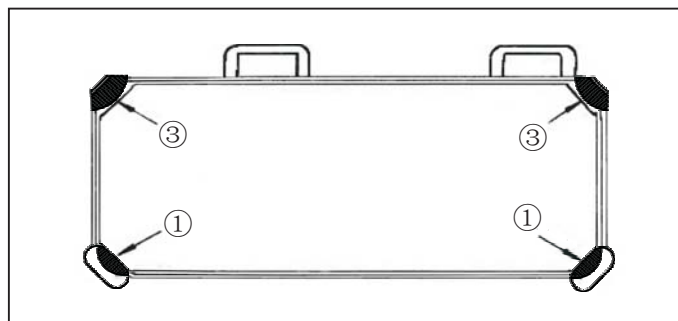
	9310E/9320E	9310E-H/9320E-H
用途	一般布料、薄料、中厚料	厚料
最高缝纫速度	4500rpm	3500rpm
最大针脚长度	5mm	
使用机针	DB 1 14#	DP 5 18#
压脚高度(膝动提升)	10mm(标准) 15mm(最大)	
使用机油	10#白油	

* 3.5mm以上的最高缝纫速度为3500rpm以下

	9310E/9320E	9310E-H/9320E-H
Application	General fabrics, light-weight and Medium-weight materials	Heavy-weight materials
Stitch length	5mm	
Sewing speed	Max. 4500rpm	Max. 3500rpm
Needle	DB 1 14#	DP 5 18#
Presser foot life (By knee lifter)	10mm(standard) 15mm(max.)	
Lubricating oil	10#oil	

*The maximum sewing speed is less than 3500 rpm when the sititch length is 3.5 mm or less

2. 缝纫机的安装 Installation



(1)底槽的安装

- 1)把底槽支到机台沟的四角上。
 - 2)用螺钉②把前侧A的2个头部橡胶支座①钉到机台的伸出部,用黏接剂粘接固定好铰链侧B的2个头部胶垫座③,然后把底槽④放上去。
 - 3)请卸下机台的放气盖⑤。(搬动机车时,请一定把放气盖⑤盖上。)
- 注意:不卸下放气盖⑤运转缝纫机的话,从齿轮箱⑦就会有油漏出。

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(1)Installing the under cover

- 1)The under cover should rest on the four corners of the machine table groove.
- 2)Fix two rubber seats ① on side A (operator's side) using nails ② as illustrated above. Fix two cushion seats ③ on side B (hinged side) using a rubber-based adhesive. then place under cover ④ on the fixed seats.
- 3)Remove air vent cap ⑤ attached to the machine bed. (Be sure to attach cap ⑤ when transporting the machine head in the state that the machine head is removed from the machine table.)


Caution: If the sewing machine is operated without removing air vent cap ⑤, oil leakage from gear box portion ⑦ may occur.

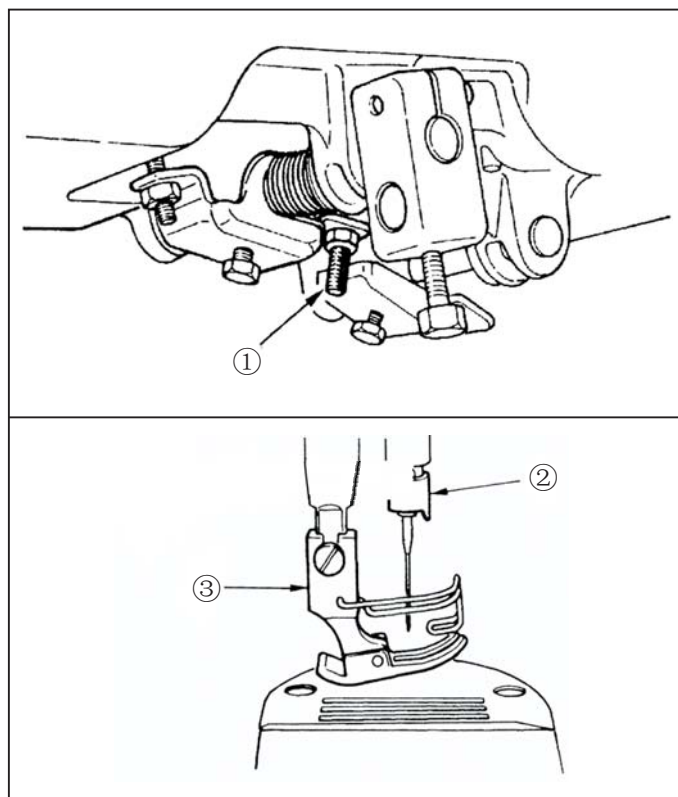
- 4)把铰链①放到机台的孔上,对准台板橡胶支座②,把头部放到四角的机头胶垫③上。
- 5)没有安装AK装置时,请把机头支撑焊⑥安装到机台上。

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- 4)Fit hinge ① into the opening in the machine bed, and fit the machine head to table rubber hinge ② before placing the machine head on cushions ③ on the four corners.
- 5)In case the AK-device is not provided, attach head support rod ⑥ to the machine table.

3. 膝动提高高度的调整 Adjusting the height of the knee lifter

 <p>注意 CAUTION</p>	<p>为了防止缝纫机的意外启动，请关掉电源之后进行操作 Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.</p>
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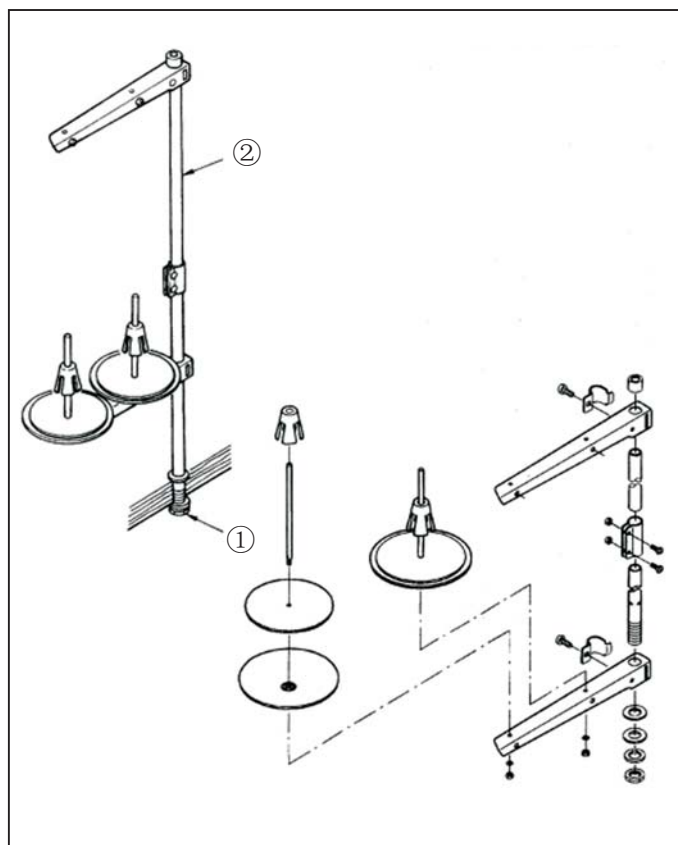


- 1) 膝动提升压脚的标准高度为10mm。
 - 2) 调节膝动提升调节螺丝①可以把压脚最高提升到15mm。
- 注意：在把压脚③提升10mm以上的状态，因为针杆②与压脚③相碰，所以请不要运转缝纫机。

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- 1) The standard height of the presser foot lifted using the knee lifter is 10 mm.
 - 2) You can adjust the presser foot lift up to 15 mm using knee lifter adjust screw ①.
- Caution: Do not operate the sewing machine in the state that the presser foot ③ is lifted by 10 mm or more since the needle bar ② comes in contact with the presser foot ③.

4. 线架的安装 Installing the thread stand




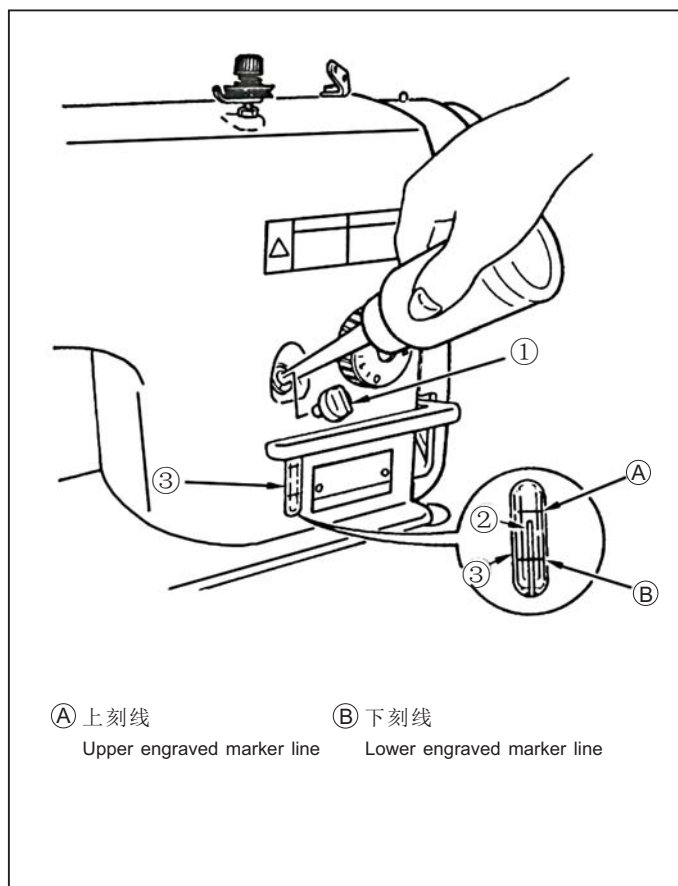
- 1) 如图所示那样把线架安装到机台孔上。
- 2) 用固定螺母①固定线架。
- 3) 顶线配线时，请把电源线从线架杆②中穿过。

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- 1) Assemble the thread stand unit, and insert it in the hole in the machine table.
- 2) Tighten locknut ① to fix the thread stand.
- 3) For ceiling wiring, pass the power cord through spool rest rod ②.

5. 加油 Lubrication

 注意 CAUTION	为了防止缝纫机的意外启动，请关掉电源之后进行操作 Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.
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运转缝纫机之前, 请一定要往旋梭油槽中加油。

- 1) 卸下加油口盖①, 使用附属的加油壶加入机油。
- 2) 油加到油量指示杆②的前端与油量指示窗③的上刻度一致为止。

注意: 请注意加油过多的话, 机油会从油槽空气孔漏出来, 也会发生不能正常加油的现象。

- 3) 使用缝纫机时, 如果油量指示杆②指到油量指示窗③的下刻度以下, 请进行加油。

注意: 使用新缝纫机或较长时间没有使用的缝纫机时, 请先进行3000~3500rpm的磨合运转之后再使用。

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Fill the oil tank with oil for hook lubrication before operating the sewing machine.

- 1) Remove oil hole cap ① and fill the oil tank with oil using the oiler supplied with the machine.


- 2) The amount of oil should be filled until the top end of oil amount indicating rod ② aligns with the upper engraved marker line of oil amount indicating window ③.

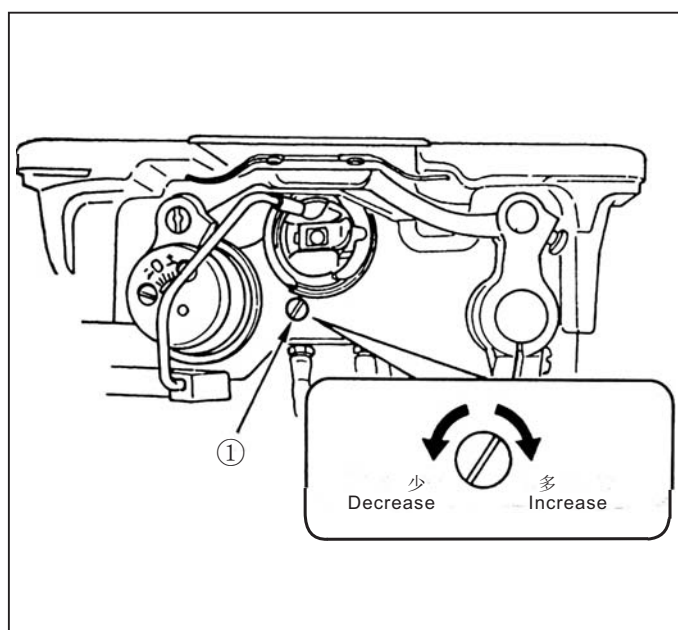
Caution: If the oil is filled excessively, it will leak from the air vent hole in the oil tank or proper lubrication will be not performed. so, be careful.

- 3) When you operate the sewing machine, refill oil if the top end of oil amount indicating rod ② comes down to the lower engraved marker line of oil amount indicating window ③.

Caution: When you use a new sewing machine or a sewing machine after an extended period of disuse, run your machine at 3, 000 to 3, 500 rpm for the purpose of break-in.

6. 旋梭油量的调整 Adjusting the amount of oil in the hook

 注意 CAUTION	为了防止缝纫机的意外启动，请关掉电源之后进行操作 Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.
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旋梭油量用旋梭油量调节螺丝①来调节。

(1) 调节方式

拧紧(向右转动)旋梭油量调节螺丝①后, 旋梭油量变多, 拧松(向左转动)旋梭油量变少。

注意: 1. SS型缝纫机使用RP旋梭(乾式旋梭)时, 请一定把油量调整到最小, 不然机油流出。

2. 使用RP旋梭(乾式旋梭)时, 也一定不能把机油槽的油放掉。

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Adjustment of the amount of oil in the hook is performed with oil amount adjustment screw ①.

(1) Adjustment procedure

Tighten(turn clockwise)oil amount adjustment screw ① to increase the amount of oil in the hook, or loosen(turn counterclockwise)to decrease it.

Caution: 1. when using RP hook(hook for dry head)for the SS type, be sure to loosen the oil amount adjustment screw up to the minimum so as to reduce the oil amount in the hook. 2. Never drain the oil in the oil tank even when RP hook(hook for dry head)is used.

7. 旋梭部油量的调整方法 Adjusting the amount of oil in the hook

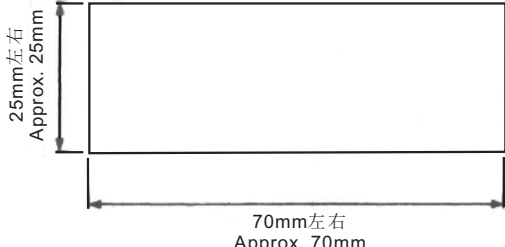


注意
CAUTION

旋梭以高速运转。为了防止人身伤害，请充分注意调节油量。
Be extremely careful about the operation of the machine since the amount of oil has to be checked by turning the hook at a high speed.

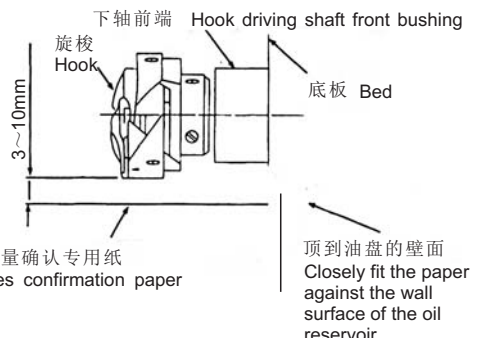
(1) 油量的确认方法 How to confirm the amount of oil

① 油量专用纸
Amount of oil confirmation paper



※ 不用考虑纸的质量
Use any paper available regardless of the material.

② 油量确认位置
position to confirm the amount of oil



※ 把油量确认专用纸插到旋梭下面。
Place the amount of oil confirmation paper under the hook.

进行下列2)的作业时，请卸下推板，同时要充分注意手指不要碰到旋梭。

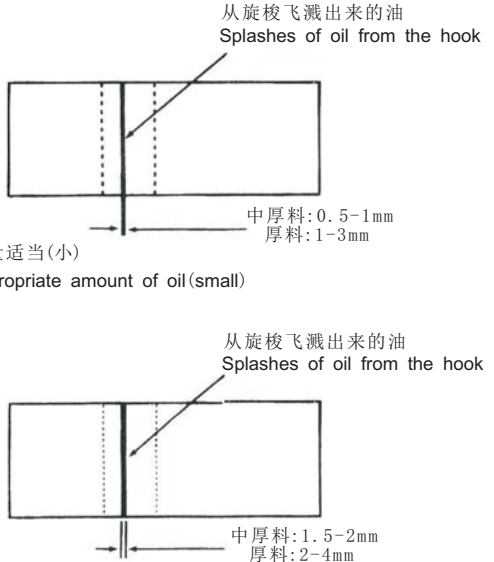
- 1) 机头冷却时，请进行3分钟左右的空载运转。(适当的间歇运转)
- 2) 请在缝纫机转动时将油量确认专用纸插入。
- 3) 请确认油槽中是否有油。
- 4) 确认油量时，请空运转30秒以上，然后不停止运转，确认5秒钟的油迹情况。(请用表来计算时间)

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When carrying out the procedure described below in 2), remove the slide plate and take extreme caution not to allow your fingers to come in contact with the hook.

- 1) If the machine has not been sufficiently warmed up for operation, make the machine run idle for approximately three minutes.(Moderate intermitten operation.)
- 2) Place the amount of oil confirmation paper under the hook while the sewing machine is in operation.
- 3) Confirm that oil exists in the oil tank.
- 4) For confirming the amount of oil, make the sewing machine run idle for 30 seconds or more. then check the oil splashes in five seconds without stopping the operation. (Check the period of time with a watch.)

(2) 油量适量样品 Sample showing the appropriate amount of oil



油量适当(小)
Appropriate amount of oil (small)


油量适当(大)
Appropriate amount of oil (large)

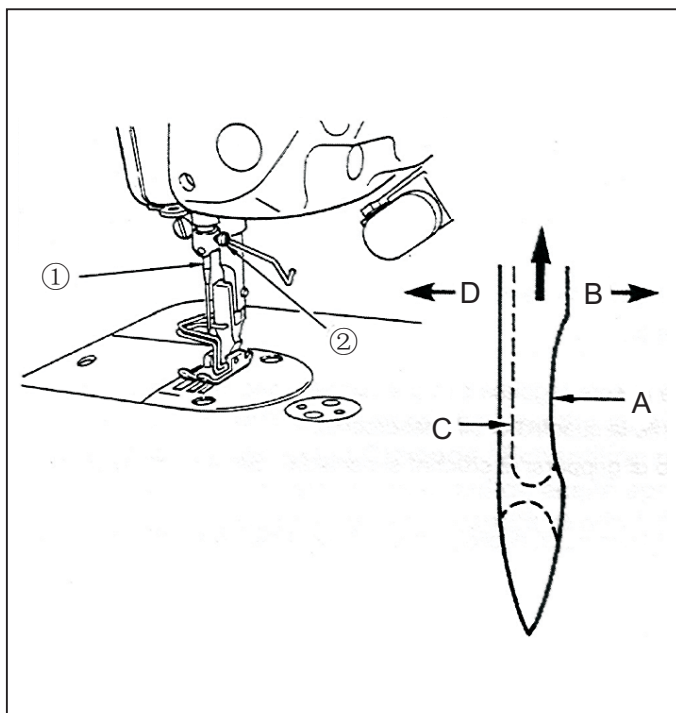
- 1) 左图样品根据缝制工序需要微调增减，但注意不要过大增加或减少。(油量过少时，会烧坏旋梭(发热)。油量过多时，会玷污缝制品)
- 2) 油量应确认3次(3张)均无变化。

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- 1) The amount of oil shown in the semples on the left should be finely adjusted in accordance with sewing processes. Be careful not to excessively increase/decrease the amount of oil in the hook. (If the amount of oil is too small, the hook will be seized (be hook will be hot). If the amount of oil is too much, the sewing product may be stained with oil.)
- 2) Adjust the amount of oil in the hook so that the oil amount should not change while checking the oil amount three times (on the three sheets of paper).

8. 机针的安装方法 Attaching the needle

 注意 CAUTION	为了防止缝纫机的意外启动，请关掉电源之后进行操作 Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.
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请根据线的粗细、布料的种类选择适当的机针。

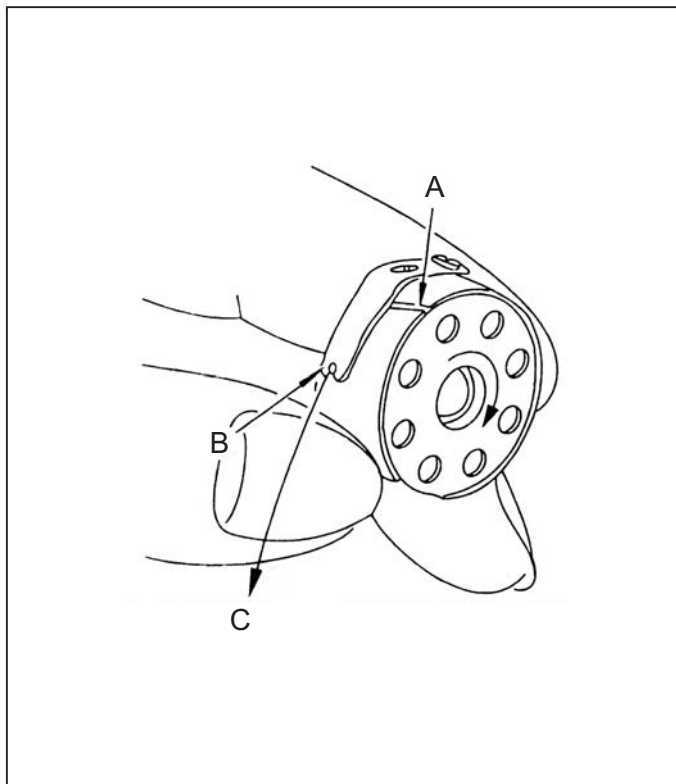
- 1) 转动带轮，把针杆升到最高处。
- 2) 拧松机针固定螺丝②，手拿机针把机针①凹部A横向转到B的方向。
- 3) 把机针插到针杆孔的深处。
- 4) 拧紧机针固定螺丝②。
- 5) 确认针的长孔C在左横向D的方向。

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Select a proper needle size according to the count of thread and the type of material used.

- 1) Turn the handwheel until the needle bar reaches the highest point of its stroke.
- 2) Loosen screw ②, and hold needle ① with its indented part A facing exactly to the right in direction B.
- 3) Insert the needle fully into the hole in the needle bar in the direction of the arrow until the end of hole is reached.
- 4) Securely tighten screw ②.
- 5) Check that long groove C of the needle is facing exactly to the left in direction D.

9. 梭心的安装方法 Setting the bobbin into the bobbin case

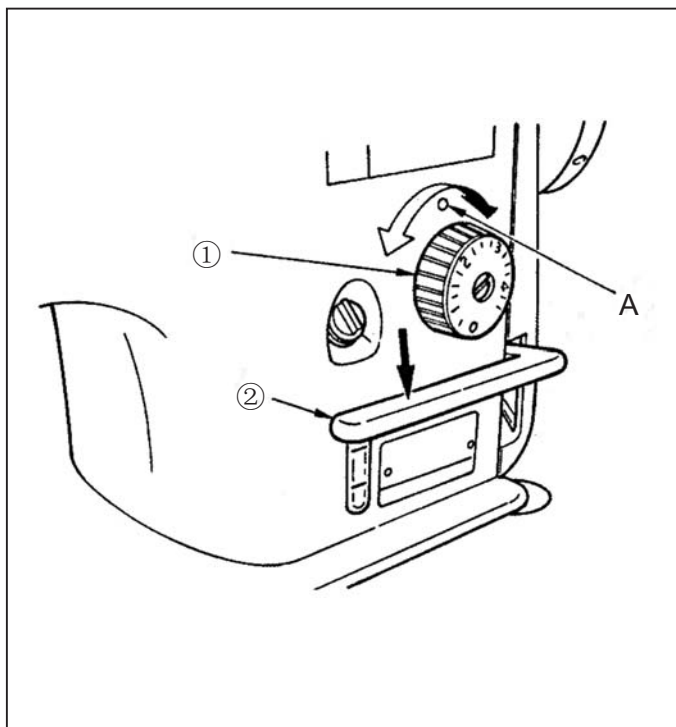


- 1) 手拿梭心，让线往左绕的方向，把它放入梭壳。
- 2) 把线穿过梭壳的穿线口A，然后把线往B方向拉，从线张力弹簧下面的穿线口B拉出来。
- 3) 拉底线C，确认梭心是否按箭头方向转动。

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- 1) Install the bobbin in the bobbin case so that the thread wound direction is clock wise.
- 2) Pass the thread through thread slit, and pull the thread in direction B. By so doing, the thread will pass under the tension spring and come out from notch C.
- 3) Check that the bobbin rotates in the direction of the arrow when thread is pulled.

10. 缝迹长度的调节 Adjusting the stitch length



- 1) 沿箭头方向转动送布调节刻度盘①，并把希望的数字对准机臂的刻点A。
- 2) 刻度盘的数字为mm。
- 3) 从大往小变更送布刻度时，请向箭头方向按下倒缝扳手②的同时转动调节刻度盘①进行调节。

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- 1) Turn stitch length dial ① in the direction of the arrow, and align the desired number to marker dot A on the machine arm.
- 2) The dial calibration is in millimeters.
- 3) When you want to decrease the stitch length, turn stitch length dial ① while pressing feed lever ② in the direction of the arrow.

11. 压脚压力的调节 Presser foot pressure

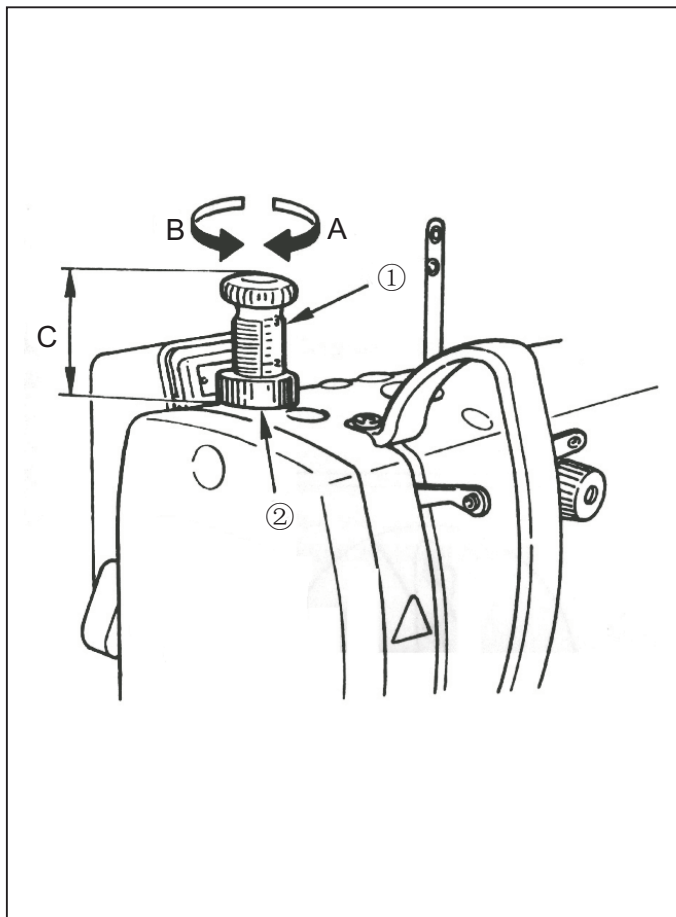


注意

CAUTION

为了防止缝纫机的意外启动，请关掉电源之后进行操作

Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.




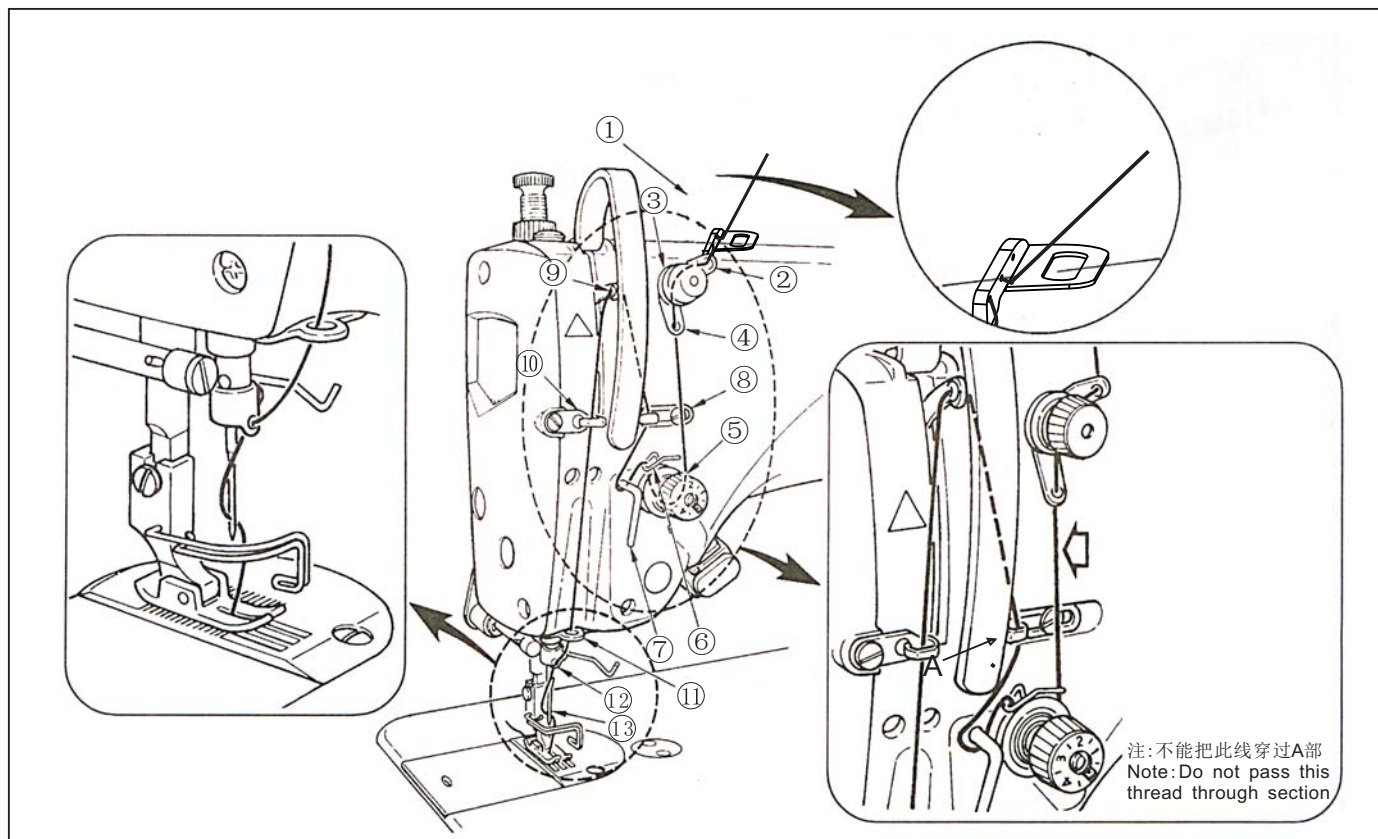
- 1) 拧紧螺母②，把压脚调节螺钉①向右A方向转，压力变强。
- 2) 向左B方向转，压力变弱。
- 3) 调节后，拧紧螺母②。
- 4) 一般布料时，压脚调节螺钉的标准高度C为30~32mm。

EN

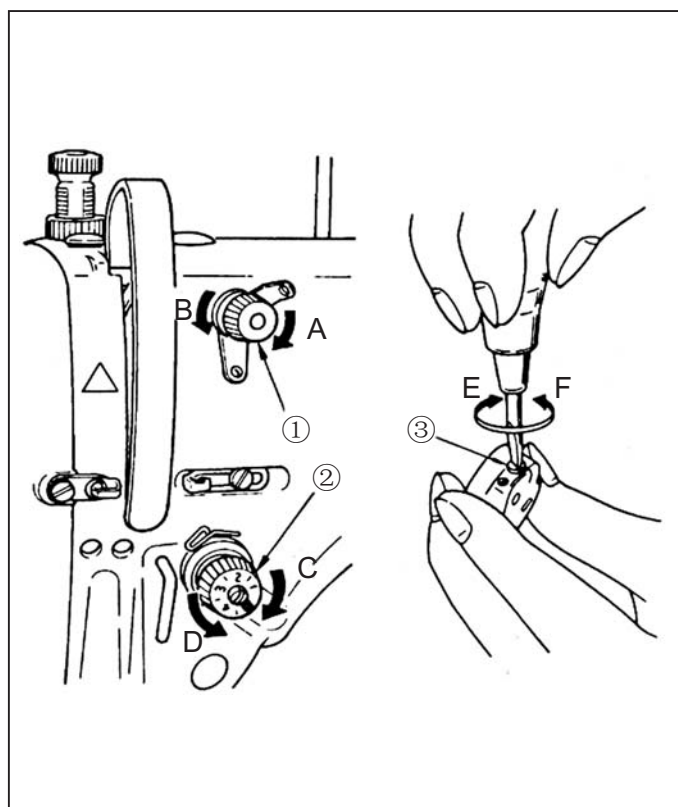
- 1) Loosen nut ②. As you turn presser spring regulator ① clockwise (in direction A), the presser foot pressure will be increased.
- 2) As you turn the presser spring regulator counter-clockwise (in direction B), the pressure will be decreased.
- 3) After adjustment, tighten nut ②.
- 4) For general fabrics, the standard height C of the presser spring regulator is 30 to 32 mm.

12. 上线穿线方法 Threading the machine head

 注意 CAUTION	为了防止缝纫机的意外启动，请关掉电源之后进行操作 Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.
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13. 线张力的调整 Adjusting the needle thread tension



1. 上线张力的调整

- 1) 把第一线张力螺母①顺时针方向(A方向)转动，上线张力变强。
- 2) 把第一线张力螺母①逆时针方向(B方向)转动，上线张力变弱。
- 3) 把线张力螺母②向右C方向逆转，上线张力变强。
- 4) 向左D方向转动则变弱。

2. 底线张力的调整

- 1) 把线张力螺丝③向右E方向转动，底线张力变强。
- 2) 向左F方向转动则变弱。

EN

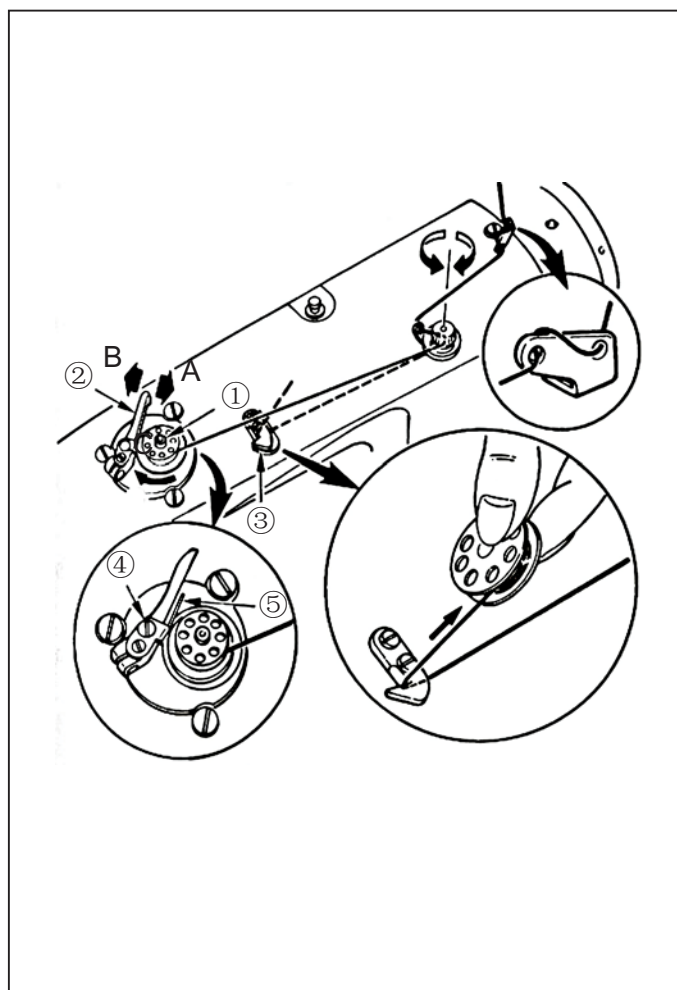
1. Adjusting the needle thread tension

- 1) As you turn thread tension No.1 nut ① clock wise (indirection A), the thread remaining on the needle after thread trimming will be shorter.
- 2) As you turn nut ① counter clock wise (indirection B), the thread length will be longer.
- 3) As you turn thread tension nut ② clock wise (indirection C), the needle thread tension will be increased.
- 4) As you turn nut ② counter clock wise (indirection D), the needle thread tension will be decreased.

2. Adjusting the bobbin thread tension

- 1) As you turn tension adjust screw ③ clockwise (in direction E), the bobbin thread tension will be increased.
- 2) As you turn screw ③ counter clockwise (in direction F), the bobbin thread tension will be decreased.

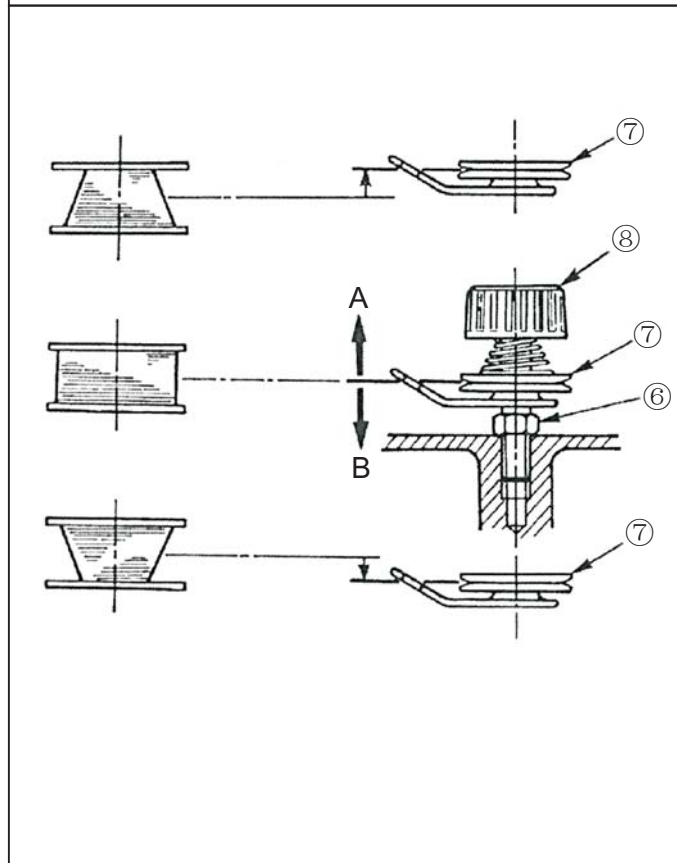
14. 底线卷绕方法 Winding the bobbin thread



- 1) 把梭心推到卷线轴①的最里面。
- 2) 把线架右侧的卷线如图所示穿线，并把线端向右缠绕数圈。
- 3) 把卷线拨杆②推到A方向，转动缝纫机。核心向C方向转动，线卷绕到核心上。卷绕结束后卷线轴①自动停止。
- 4) 取下梭心，用切线保持板③切断机线。
- 5) 调整底线卷线量时，请拧松固定螺丝④，把调节板⑤移动到A方向或B方向，然后再固定螺丝④。
A方向：变少
B方向：变多

EN

- 1) Insert the bobbin deep into the bobbin winder spindle ① until it will go no further.
- 2) Pass the bobbin thread pulled out from the spool on the right side of the thread stand following the order as shown in the figure on the left. Then, wind clockwise the end of the bobbin thread on the bobbin several times.
- 3) Press the bobbin winder trip latch ② in the direction of A and start the sewing machine. The bobbin rotates in the direction of C and the bobbin thread is wound up. The bobbin winder spindle ① automatically as soon as the winding is finished.
- 4) Remove the bobbin and cut the bobbin thread with the thread cut retainer ③.
- 5) To adjust the winding amount of the bobbin thread, loosen the setscrew ④ and move the bobbin winder adjusting plate ⑤ to the direction of A or B.
Then, tighten the setscrew ④.
To the direction of A: Decrease
To the direction of B: Increase

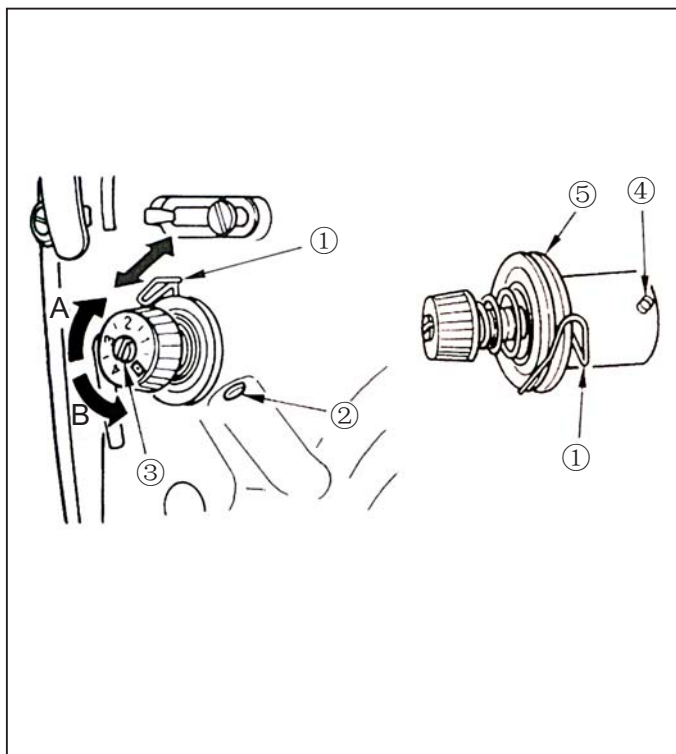


- 6) 如果线不能平绕梭心时，请拧松螺母⑥转动卷线张力器，调整线张力盘⑦的高度。
旋梭中心和线张力盘中心高度一样时为标准位置。
下部卷得多时，如图A的方向上部卷得多时，如图B方向，移动线张力盘⑦的位置。
调整后，把固定螺母⑥拧紧。
 - 7) 调整底线卷绕张力时，请转动线张力螺母⑧进行调整。
- 注意：1. 卷绕底线时，请在梭心和线张力盘⑦之间拉线的状态开始绕线。
2. 不进行缝裂的状态，卷绕底线时，请把上线从挑线杆线道上卸下来，从旋梭里把梭心卸下来。

EN

- 6) In case that the bobbin thread is not wound evenly on the bobbin, loosen the nut ⑥ and turn the bobbin thread tension to adjust the height of the thread tension disk ⑦.
It is the standard that the center of the bobbin is as high as the center of the thread tension disk.
Move the position of the thread tension disk ⑦ to the direction of A as shown in the figure on the left when the winding amount of the bobbin thread on the lower part of the bobbin is excessive and to the direction of B as shown in the figure on the left when the winding amount of the bobbin thread on the upper part of the bobbin is excessive. After the adjustment, tighten the nut ⑥.
- 7) To adjust the tension of the bobbin winder, turn the thread tension nut ⑧.

15. 拉线弹簧 Thread take-up spring



1. 要改变拉挑弹簧①的行程时
 - 1) 拧松固定螺丝②.
 - 2) 把夹线螺钉③向右A的方向转动则变大。
 - 3) 向左B的方向转动则变小。
2. 要改变拉挑弹簧①的压力时
 - 1) 拧松固定螺丝②，卸下张力器(组件⑤)。
 - 2) 拧松夹线螺钉固定螺丝④进行调整。
 - 3) 把夹线螺钉③向右A的方向转动则变强。
 - 4) 向左B的方向转动则变弱。

EN

1. Changing the stroke of thread take-up spring ①①
 - 1) Loosen setscrew ②.
 - 2) As you turn tension post ③ clock wise (indirection A), the stroke of the thread take-up spring will be increased.
 - 3) As you turn the knob counter clock wise (indirection B), the stroke will be increased.
2. Changing the pressure of thread take-up spring ①
 - 1) Loosen setscrew ②, and remove thread tension (asm.) ⑤.
 - 2) Loosen setscrew ④.
 - 3) As you turn tension post ③ clock wise (indirection A), the pressure will be increased.
 - 4) As you turn tension post ③ counter clockwise (indirection B), the pressure will bedecreased.

16. 挑线杆挑线量的调节 Adjusting The Thread Take-up Stroke

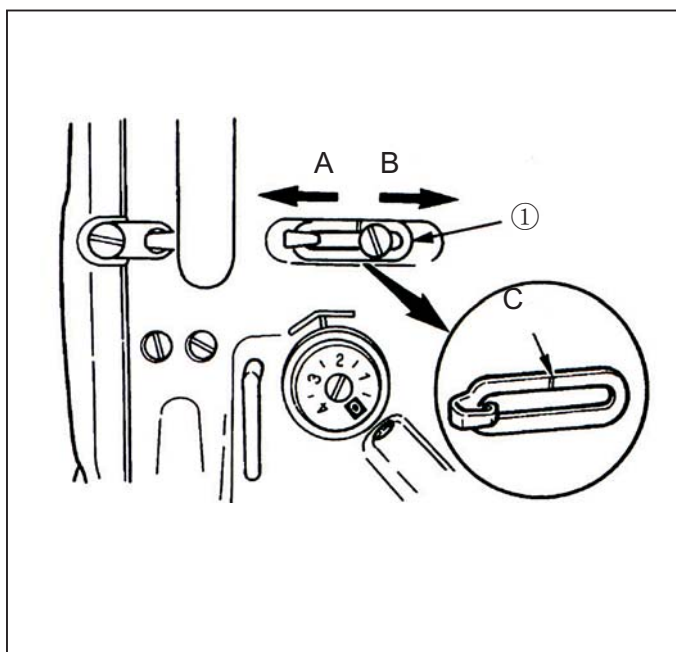


注意

CAUTION

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Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.




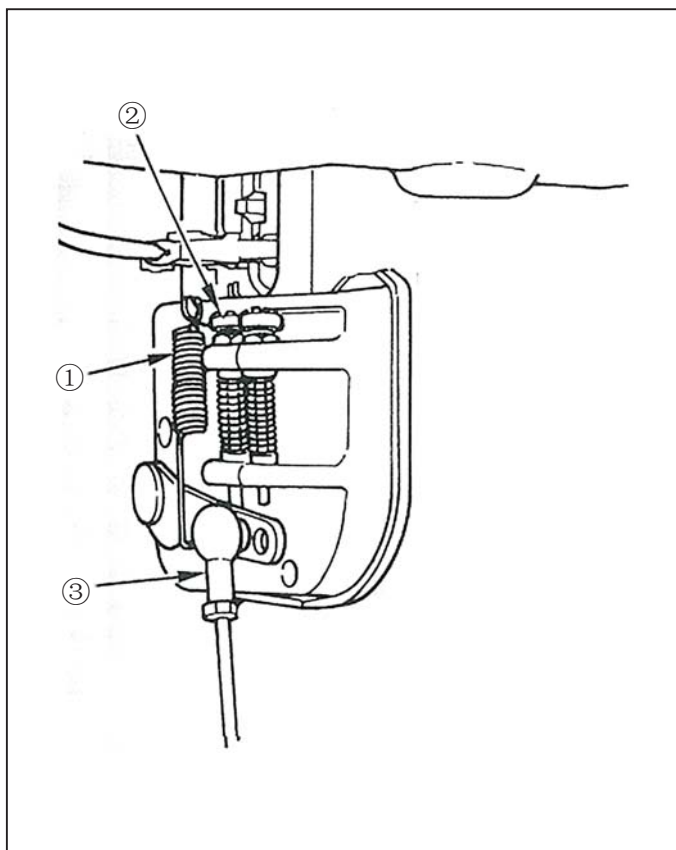
- 1) 缝制厚料时,把导线勾①向左A的方向移动,挑线量变大。
- 2) 缝制薄料时,把导线勾①向左B的方向移动,挑线量变小。
- 3) 导线勾①的标准位置是刻线C距离螺丝中心约2mm的位置。

EN

- 1) When sewing heavy-weight materials, move thread guide to the left (in direction A) to increase the length of thread pulled out by the thread take-up.
- 2) When sewing light-weight materials, move thread guide to the left (in direction B) to decrease the length of thread pulled out by the thread take-up.
- 3) Normally, thread guide ① is positioned to the place where marker line C is approximately 2 mm from the left of the screw.

17. 踏板压力和行程 Pedal pressure and pedal stroke

 注意 CAUTION	为了防止缝纫机的意外启动，请关掉电源之后进行操作 Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.
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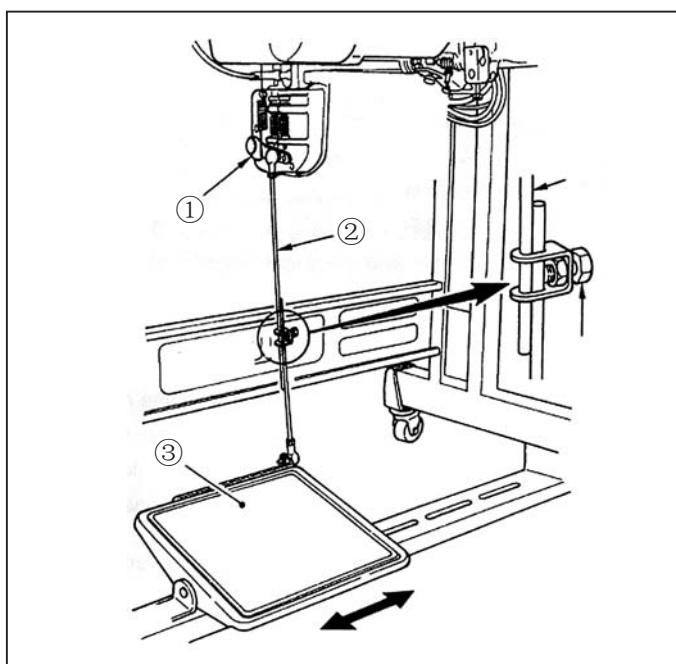
1. 踏板踩踏压力的调整
 - 1) 摘下踏板压力调节弹簧①进行调节。
 - 2) 把弹簧挂到左侧压力变轻。
 - 3) 挂到右侧压力变大。
2. 踏板返还力的调整
 - 1) 用返踩调节螺丝②可以进行调节。
 - 2) 拧紧调节螺丝压力变大。
 - 3) 拧松螺丝压力变轻。
3. 踏板踩踏行程的调整
 - 1) 把连接杆③安装到左侧的孔内，行程变小。

EN

1. Adjusting the pressure required to depress the front part of the pedal
 - 1) This pressure can be changed by altering the mounting position of pedaling pressure adjust spring ①
 - 2) The pressure decreases when you hook the spring on the left side.
 - 3) The pressure increases when you hook the spring on the right side.
2. Adjusting the pressure required to depress the back part of the pedal.
 - 1) This pressure can be adjusted using regulator screw ②.
 - 2) The pressure increase as you turn the regulator screw in.
 - 3) The pressure decrease as you turn the screw out.
3. Adjusting the pedal stroke
 - 1) The pedal stroke decreases when you insert connecting rod ③ into the left hole.

18. 踏板的调整 Adjustment of the pedal

 注意 CAUTION	为了防止缝纫机的意外启动，请关掉电源之后进行操作 Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.
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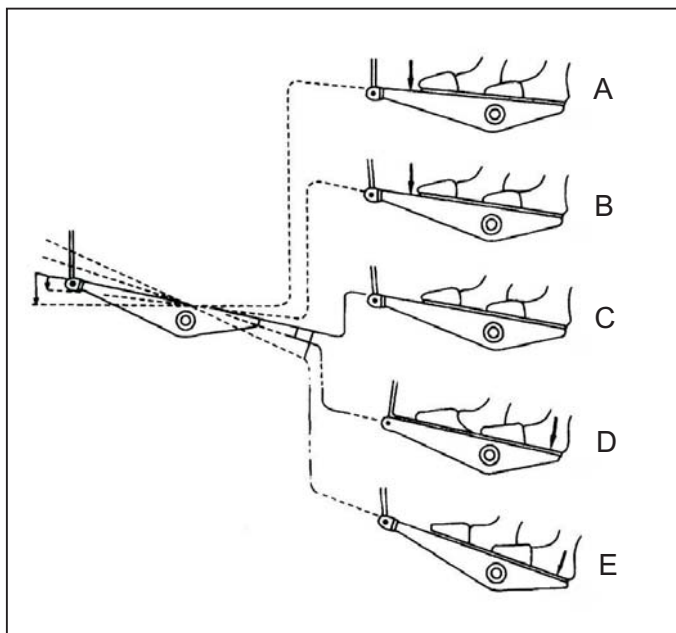


1. 连接杆的安装
 - 1) 向箭头方向移动踏板调节板③，让马达控制杆①和连接杆②成一直线。
2. 踏板的角度
 - 1) 调节连接杆的长度即可以改变踏板的角度。
 - 2) 拧松调节螺丝④，移动连接杆②进行调节。

EN

1. Installing the connecting rod
 - 1) Move pedal ③ to the right or left as illustrated by the arrows so that motor control lever ① and connecting rod ② are straightened.
2. Adjusting the pedal angle
 - 1) The pedal tilt can be freely adjusted by changing the length of the connecting rod.
 - 2) Loosen adjust screw ④, and adjust the length of connecting rod ②.

19. 踏板操作 Pedal operation

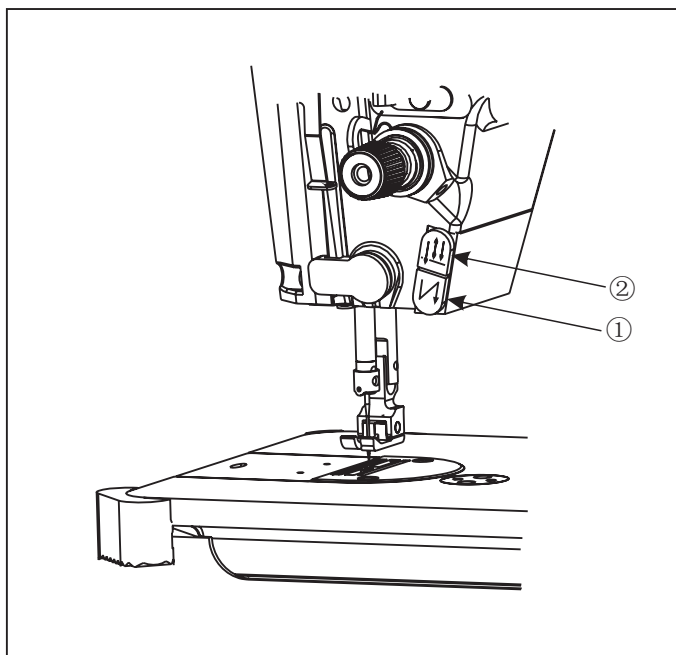


1. 踏板有4级操作。
 - 1) 向前轻轻踩踏板为低速缝纫B。
 - 2) 在继续往前踩踏板为高速缝纫A。（但是，设定了自动倒缝开关后，倒缝结束之后为高速缝纫。）
 - 3) 轻轻踩踏板然后返还缝纫机停止C（机针为上停止或下停止）。
 - 4) 向后踩踏板为切线动作E。

EN

1. The pedal is operated in the following four steps.
 - 1) The machine runs at low sewing speed when you lightly depress the front part of the pedal .
 - 2) The machine runs at high sewing speed when you further depress the front part of the pedal . (If the automatic reverse feed stitching has been preset, the machine runs at high speed after it completes reverse feed stitching.)
 - 3) The machine stops (with its needle up or down) when you reset the pedal to its original position .
 - 4) The machine trims threads when you fully depress the back part of the pedal.

20. 单独手动倒缝 One-touch type reverse feed stitching mechanism



1. 倒缝按钮
 - 1) 按下倒缝开关①，缝纫机立即倒缝。
 - 2) 在按下的时间进行倒缝。
 - 3) 手一松开立即变为正向缝纫。
2. 补针按钮
 - 1) 在缝纫过程中，没有进行剪线动作时，按下补针按钮 ②然后释放，机器进行一针的补偿。
 - 2) 若按下按钮②不放，则直接进行普通缝纫，松开后立即停止。

EN

1. How to operate
 - 1) The moment switch lever ① is pressed, the machine performs reverse feed stitching.
 - 2) The machine performs reverse feed stitching as long as the switch lever is held depressed.
 - 3) The machine resumes normal feed stitching the moment the switch lever is released.
2. Fill needle button:
 - 1) In sewing, if the machine can't trim, press the button ② and then release, the machine will fill one needle back.
 - 2) Press the button ② all along, the machine sewing as normal, release the button, the foot switch closed.

21. 机针与旋梭的关系 Needle-To-Hook Relationship

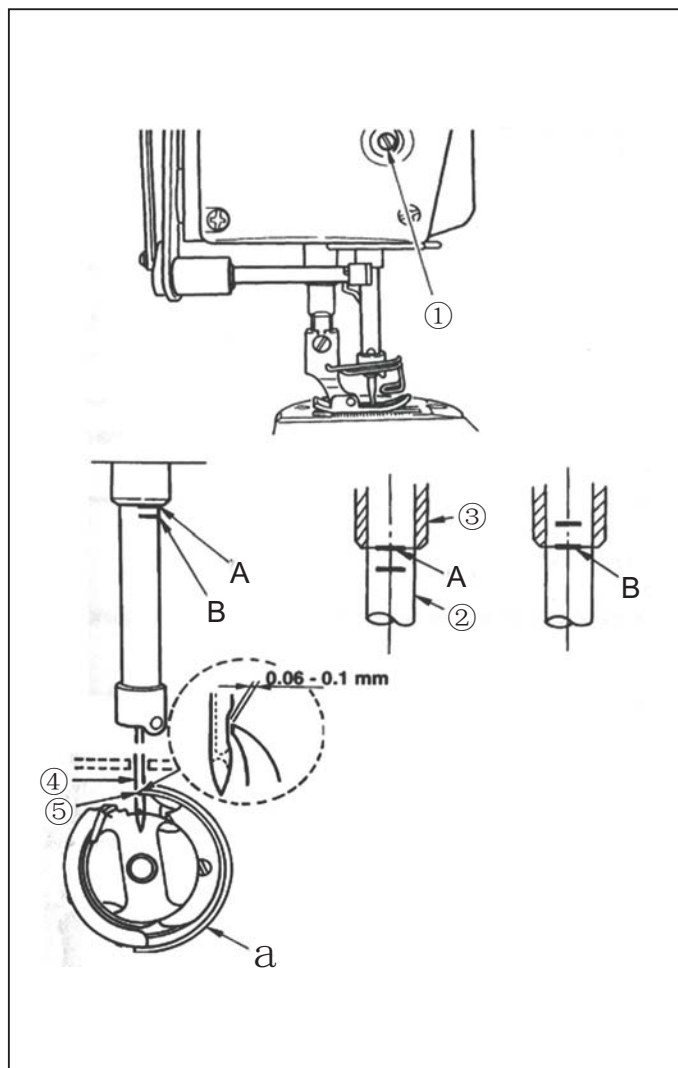


注意

CAUTION

为了防止缝纫机的意外起动，请关掉电源之后进行操作

Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.



1. 请按如下方法调整机针和旋梭。

1) 转动带轮，让针杆降到最下点，然后拧松针杆连接柱固定螺丝①。

(决定针杆高度)

2) 把针杆②的刻线A对准针杆下轴套③的下端，然后拧紧针杆连接柱固定螺丝①。

(决定旋梭a的安装位置)

3) 拧松3颗旋梭固定螺丝，转动带轮在针杆②上升的方向，把刻线B对准针杆下套③的下端。

4) 在此状态下，让旋梭尖⑤对准机针④的中心，把机针与旋梭的间隙调整为0.06~0.1mm(大致)，然后拧紧螺丝。

注意:间隙过小的话，会损伤旋梭尖，间隙过大的话，会跳针。

EN

1. Adjust the timing between the needle and the hook as follows:

1) Turn the handwheel to bring the needle bar down to the lowest point of its stroke, and loosen set screw ①.

(Adjusting the needle bar height)

2) Align marker line A on needle bar ② with the bottom end of needle bar lower bushing ③, then tighten set screw ①.

(Adjusting position of the hook a)

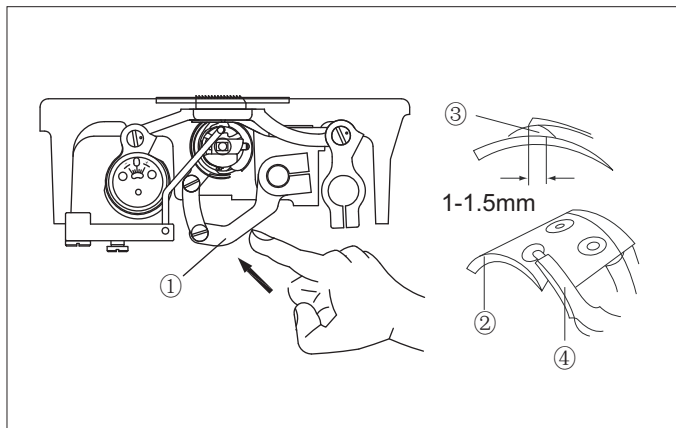
3) Loosen the three hook setscrews, turn the handwheel and align marker line B on ascending needle bar ② with the bottom end of needle bar lower bushing ③.

4) After making the adjustments mentioned the above steps align hook blade point ⑤ with the center of needle ④. Provide a clearance of 0.06 mm to 0.1 mm (reference value) between the needle and the hook, then securely tighten setscrews in the hook.

Caution: If the clearance between the blade point of hook and the needle is smaller than the specified value, the blade point of hook will be damaged. If the clearance is larger, stitch skipping will result.

22. 切线时机及装置调整 Adjusting trimming time and device

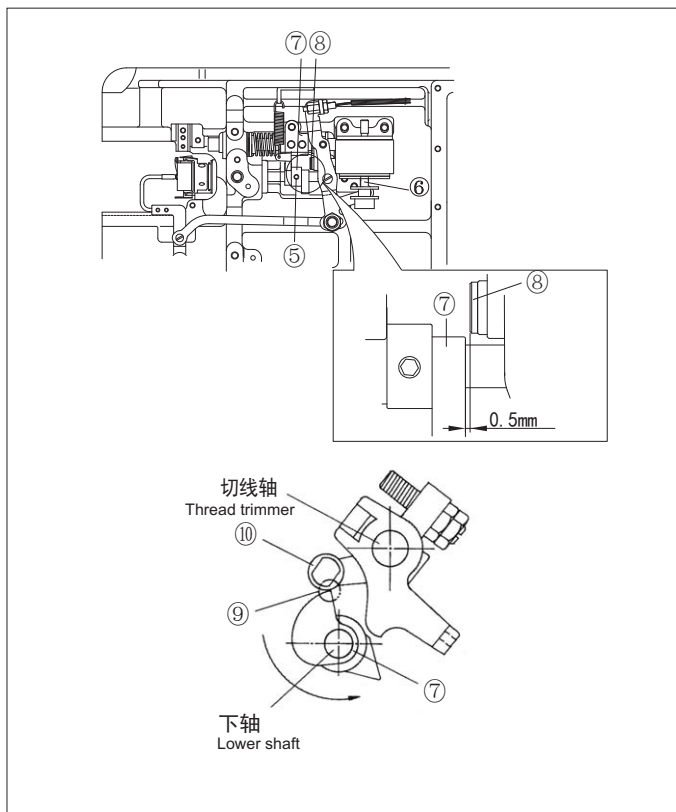
22-1. 切线时机调整 Adjusting trimming time



- 1) 转动缝纫机的手轮，把挑线杆放在最高位置。
- 2) 用手推切线杆①，动刀片②钝部的切钩刀刃③和固定刀片④间距调为1-1.5mm。

EN

1. Turn the pulley until the tread take-up lever reaches the highest position.
2. Push the trimming lever① so that the thread trimming knife③ on the hill of the movable knife② is about 1 ~ 1.5mm more protruded than the end of the fixed knife④.




3. 松开切线凸轮固定螺丝⑤，用手推切线电磁阀⑥轴。
- （这时初始状态下切线凸轮⑦和卷轴端螺丝⑧的间距为0.5mm）
4. 用手转动切线凸轮⑦，切线凸轮⑦与滚筒端点⑨滚轴⑩接触为止调整后，拧紧切线凸轮固定螺丝⑤。
5. 连接复位弹簧。

EN

3. Push the trimming solenoid shaft⑥ manually while the trimming cam fixing screw⑤ is loose. (At this point, the appropriate distance between the initial trimming cam⑦ and the roller single screw⑧ is 0.5mm.)
4. Turn the trimming cam⑦ manually so that the edge⑨ of the roller driving part on the trimming cam⑦ touches the roller⑩. Then tighten the trimming cam fixing screw⑤.
5. Connect the return spring.

22-2. 切线装置调整 Adjusting the trimming device

 <p>注意 CAUTION</p>	<p>本缝纫机采用了以装在下轴的凸轮为驱动源的切线驱动方式。因此，调整缝纫机时，若在启动切线电磁铁的状态下，回转缝纫机，使得移动刀片与针之发生冲突，就会导致这两个部件的毁损。若要在启动切线电磁铁的状态下，操作缝纫机，必须在正规的切线范围内（针杆下面位置上面位置）进行操作。</p> <p>The trimming cam attached to the lower part runs the machine. Therefore in adjustment time, if the machine is run with trimming solenoid working, movable knife and needle conflict. So in that case, run the machine at the fixed trimming space (from the lower- upper side of needle bar)</p>
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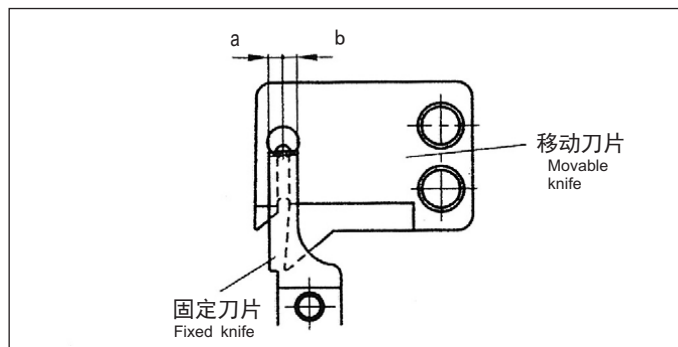
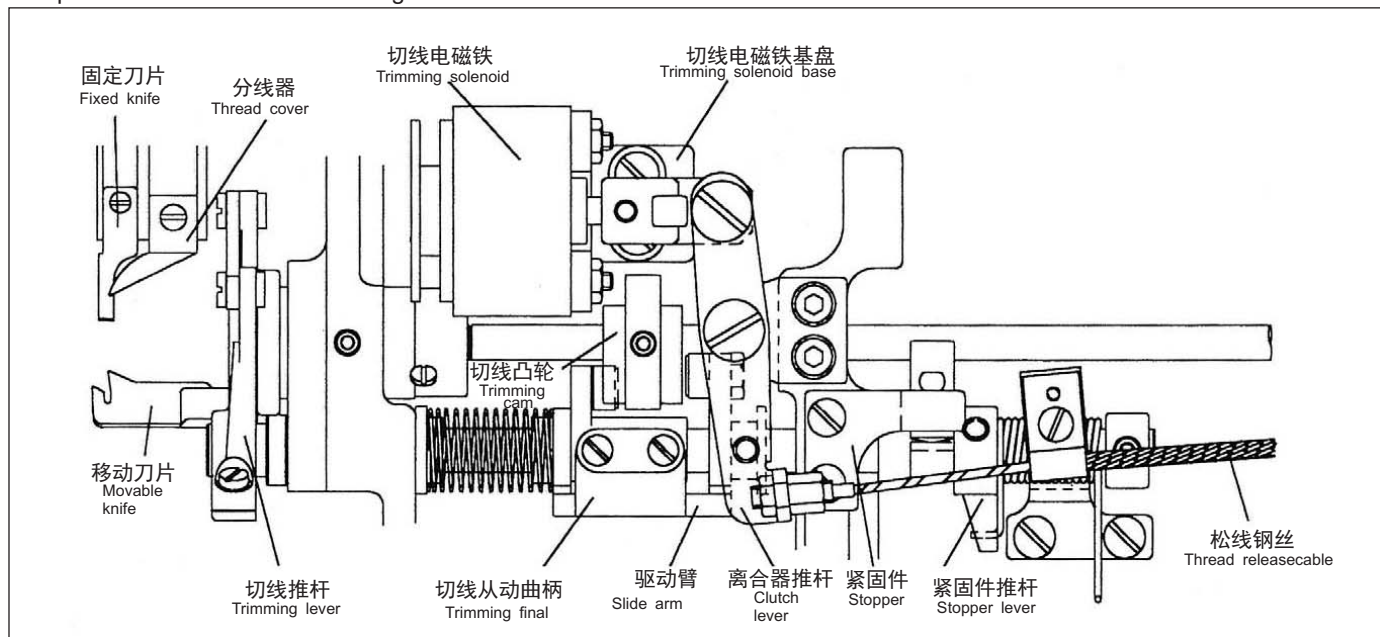
A. 切线装置的结构

本缝纫机的切线结构如下图所示。

EN

A. Adjusting the trimmer driving part

The part of trimmer cam is seen in figure



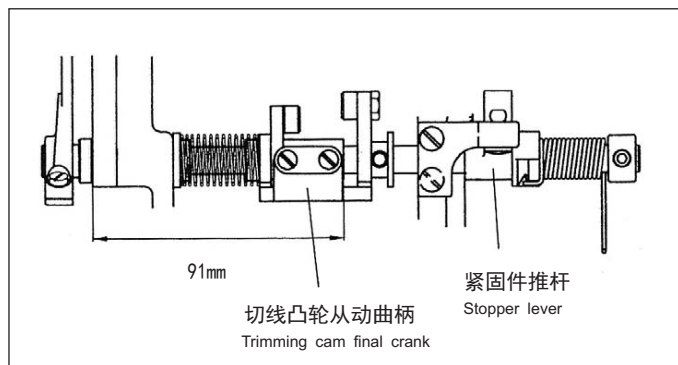
B. 固定刀片与移动刀片的调整

- a) 如固所示，其标准是移动刀片断面位于固定刀片中央的。
- b) 如图上的a部变大，就会发生三段线。这会为切线后从针孔里脱离针线的原因。此外，若b部变大，就成为切线错误的原因，因此请注意。

EN

B. Adjusting moveable knife and fixed knife

- a) As can be seen in figure, it is normal that the position of the fixed blade is at the center of the movable knife
- b) Notice if a part is widened, a thread is spitted into three pieces and then the thread falls out of needle after trimming. And a widened b part causes trimming miss.



C. 切线驱动部的调整

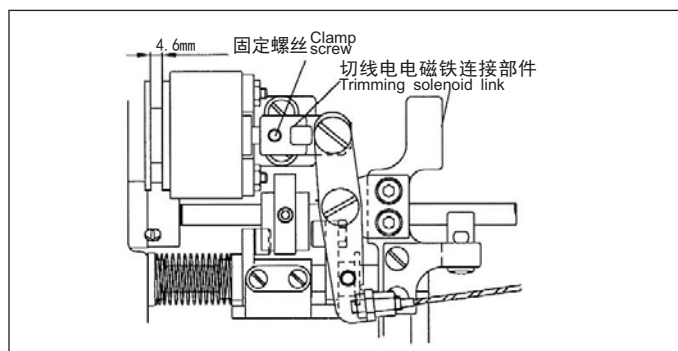
- a) 如图所示组装的是标准组装位置。
- b) 切线凸轮从动曲柄如图所示的位置，固定在切线轴上。
- c) 为了紧固件推杆在切线轴没有发生间隙的范围内柔和地回转，就要紧贴贴在底板固定好。

EN

C. Adjusting the trimmer driving part

- a) It is normal to assemble as in figure.
- b) Fix the trimming cam final crank to the trimming shafi as in the picture.
- c) Attach the stopper lever closely to bed in order to run trimming shafi smoothly enough not to let friction happen.

22-2. 切线装置调整 Adjusting the trimming device



D. 切线电磁铁的调整

a) 切线电磁铁的运动量

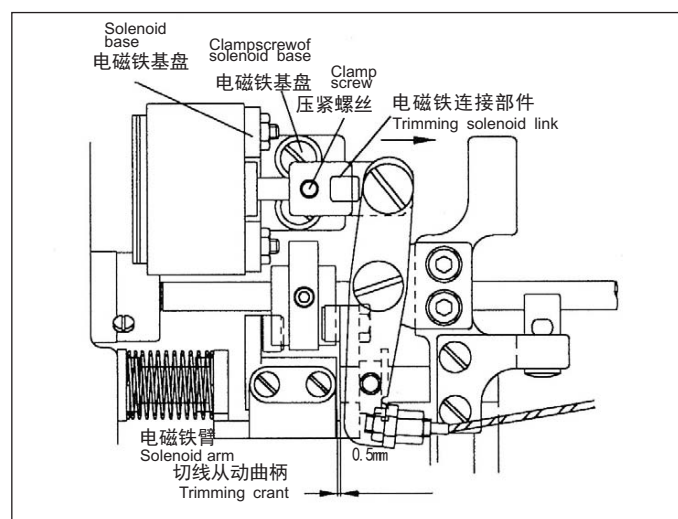
- ①切线电磁铁的运动量如图所示，以4.6mm为标准。
- ②调整运动量，要利用切线电磁铁的连接部件。

EN

D. Adjusting trimmng solenoid

a) Trimming solenoid stroke

- ①The normal solenoid stroke is 4.6mm as in figure.
- ②Adjust the stroke with using trimming solenoid link.



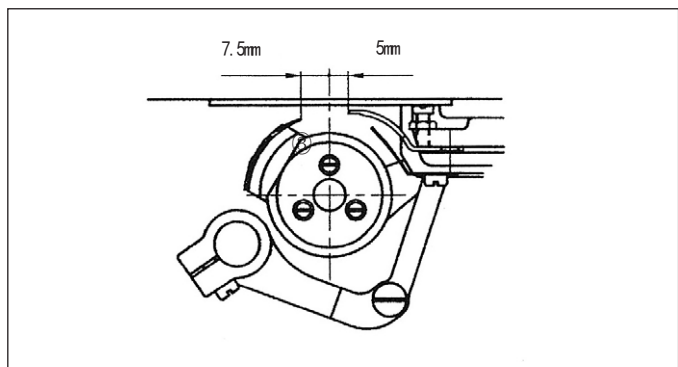
b) 切线电磁线的调整

- ①解开电磁铁连接部件压紧螺丝，左右移移动柄推杆后，在柔和移动的位置上拧紧电磁铁基盘的固定螺丝。接着，往右紧贴滑动臂，在切线电磁铁紧固件与电磁铁相互紧贴的状态下，拧紧切线电磁铁连接件的固定螺丝。
- ②若在此状态下启动电磁铁，如固所示，切线凸轮从动曲柄与滑动臂间会有0.5mm的间隙，这状态就是标准状态。

EN

b) Adjusting trimming solenoid

- ①First loosen the clamp screw of trimming solenoid link. Fix solenoid base clamp screw at a point where clutch lever moves right or left smoothly. When it is done, attach slide arm closely to the left. And then fix the clamp screw of trimming solenoid link with trimming solenoid stopper closely on the solenoid.
- ②Then, run the solenoid. The clearance between and the trimming cam crank and slide arm is 0.5mm as in figure, which is normal.



E 刀片位置调整

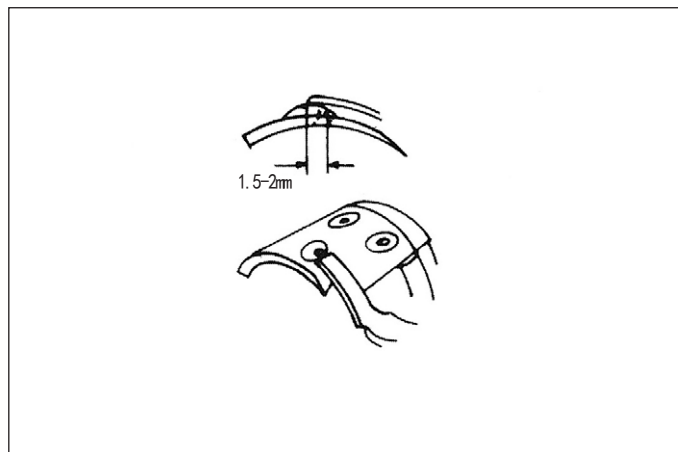
- a) 移动刀片与固定刀片的位置调整如固所示，其标准是把移动刀片调整为离针中心远7.5mm处，把固定刀片调整为离针中心远5mm处。

EN

E Adjusting knife position

a) Adjusting movable and fixed knife

- As can be seen in figure, adjust the distance of movable and fixed knives from the center of needle to be 7.5 mm and 5mm respectively by trimming. And a widened b part causes trimming miss.



b) 移动刀片的工作量调整

- ①在电磁铁处于启动状态下，转动缝纫机，就会让移动刀片随着切线凸轮回转。移动刀片的工作量为最大时，其标准是移动刀片的断面从固定刀片的端点到1.5mm-2mm之间工作。
- ②通过切线推杆进行调整。

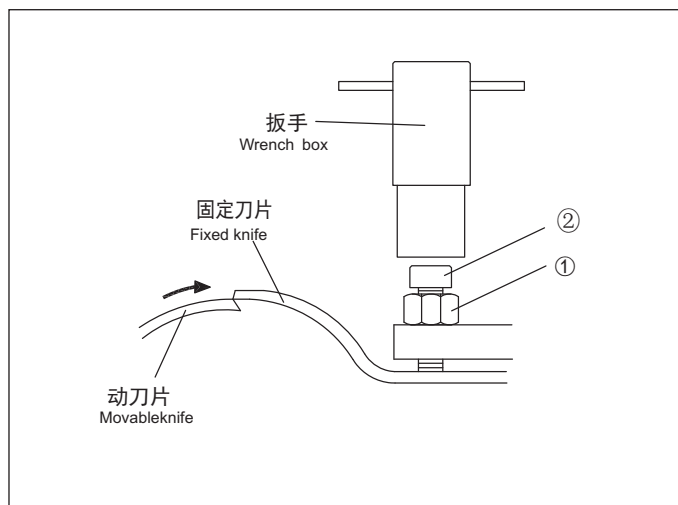
EN

b) Adjusting the stroke of movable knife

- ①With the solenoid running on, operate the machine. And then, movable knife rotate by the trimming cam. When stroke of the knife reaches the highest, it is normal the blade of movable knife moves 1.5~2mm from the edge of fixed knife.
- ② Adjust with moving the trimming lever.

23. 刀片调整以及更换 Adjusting and replacing knife

23-1. 固定刀片调整 Adjusting fixed knife

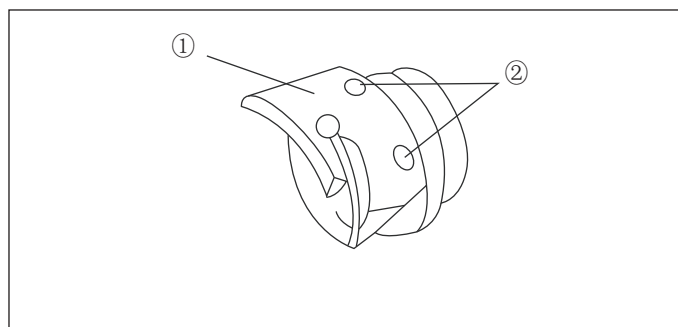


1. 用扳手松开固定刀片张力调整螺母①，然后松开张力调整螺丝②。
2. 如图移动动刀片前端，与固定刀片前端保持一致。
3. 这时调整固定刀片张力调整螺丝，刀片前端畅通无阻为止，进行调整。
4. 调整结束后，必须利用配件箱扳手拧紧张力调整螺母①。

EN

1. First, loosen the fixed knife tension adjusting nut① with a wrench box and then loosen the tension adjusting screw②.
2. Adjust the tension adjusting screw of the fixed knife when the movable knife-edge meets the fixed knife-edge.
3. Adjust knives so that the knife edges meet without too much tension.
4. After adjustment, make sure to tighten the tension adjusting nut① using the wrench box in the accessory box. And a widened b part causes trimming miss.

23-2. 动刀片更换 Replacing movable laufe

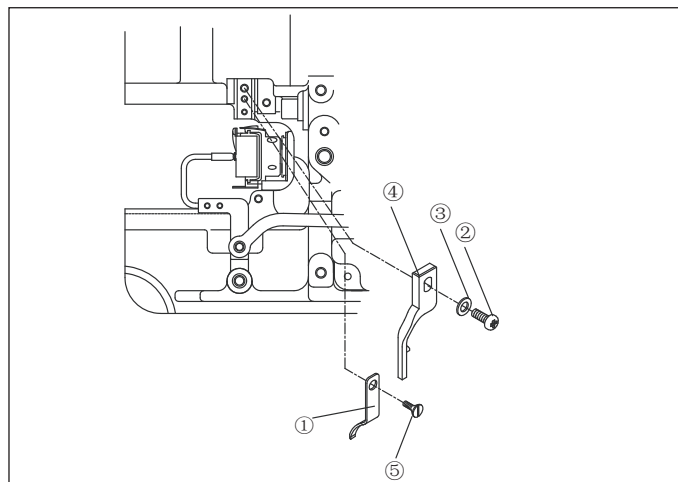


1. 更换动刀片①时，手动转动滑轮，把针移到最高位置后，先取出针板。
2. 如图解开动刀片2个紧固定螺丝②。
3. 组装更换品时，根据拆卸相反顺序进行。

EN

1. To replace the movable knife①, turn the pulley manually to place the needle at the highest position.
2. Unscrew two moveable knife fixing screws and remove them as shown in fig②.
3. Follow these instructions in reverse order to assemble.

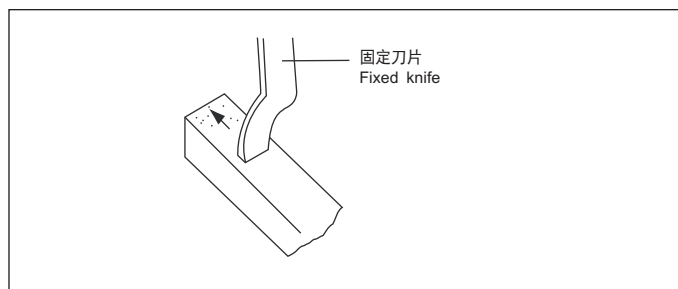
23-3. 固定刀片更换 Replacing fixed knife



1. 更换固定刀片①时，如图解开旋梭把固定螺丝②，取出垫圈③和旋梭④，解开固定刀片固定螺丝⑤，并取出。
2. 组装更换品时，根据拆卸相反顺序进行。

EN

1. To replace the fixed knife①, loosen the hook holder fixing screw② as in Fig, remove the washer④ and hook holder④, and then unfasten the fixed knife fixing screw⑤.
2. Follow these instructions in reverse order to assemble.

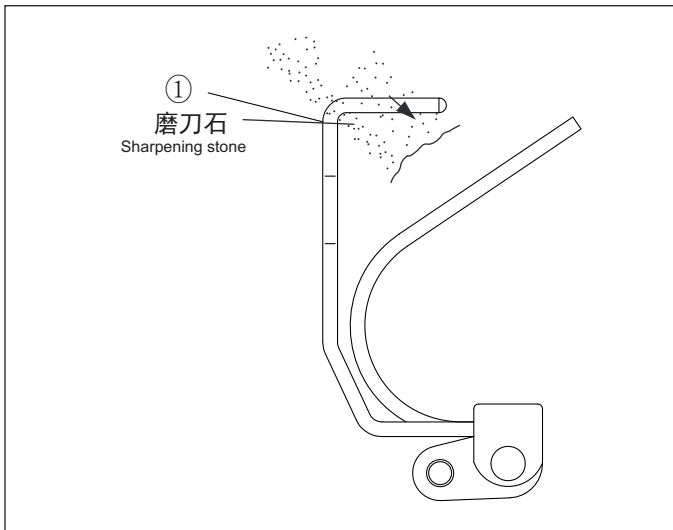


- 3 固定刀片刀刃研磨时，如图利用磨刀石磨刀片前端。

EN

3. If the edge of the fixed knife is worn, make sure to grind the knife edge with an oil grindstone as shown in fig.

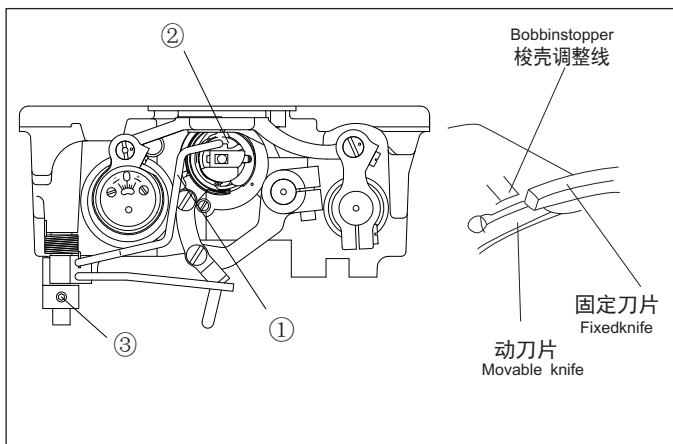
24. 梭芯制动器调整 Adjusting bobbin stopper



1. 切线时如果梭芯制动器①往梭壳方向陷入太深，梭芯不能旋转，底线残量变小，重新缝纫时不能形成缝合线。
2. 相反切线时如果梭芯制动器①往梭壳方向陷入太浅，切线时面线从梭壳露出，切线后针线残量减少，重新缝纫时不能形成缝合线。

EN

- 1.If bobbin stopper① is inserted too deeply into bobbin case, lower remaining thread will be so short that bobbin cannot rotate. As a result, sewing may not be created in the next sewing.
2. On the contrary,if bobbin stopper① is not inserted enough, upper thread will missed from bobbin stopper during trimming and the length of remaining thread in needle will be short. As a result, sewing may not be created in the next sewing.



3. 手动进行切线时，如图动刀片移动，上面表示的梭壳调整线和固定刀片保持一致后，停止机械运行，在这件状态下为了让梭壳①接触面与梭芯②突出部中心轻松接触，解开梭壳固定螺丝③进行调整，并且调整结束后确认是否轻松复位。

EN

- 3.If the trimming was done manually, stop the machine when the edge of the fixed knife meets the bobbin stopper adjustment baseline that is marked on the top. Loosen the bobbin catcher fixing screw③ and adjust the bobbin stopper so that the contact surface of the bobbin stopper ① lightly touches the center of the projecting part of the bobbin ②. Once the operation is completed, check to see whether the bobbin stopper springs back lightly.

25. 送布牙的高度和倾斜度 Height and tilt of the feed dog



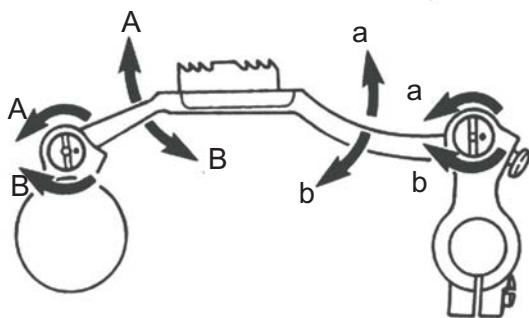
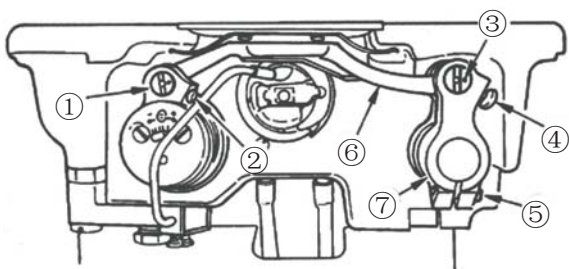
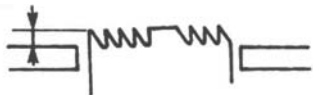
注意

CAUTION

为了防止缝纫机的意外起动，请关掉电源之后进行操作

Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.

9310D3-Y: 0.75~0.85mm
9310D3-H-Y: 1.15~1.25mm



送布牙的高度是高出针板0.75~0.85mm。(厚料时为1.15~1.25mm)。

请根据布料的具体情况调节适合的高度。

1. 送布牙的高度和倾斜度的调整

1) 拧松上下送布台轴①的固定螺丝②以平送布台轴③的固定螺丝。

2) 用螺丝刀转动①、③两轴，就可以改变送布牙的高度和倾斜度。

3) 有关各轴的转动方向和送布台⑥的倾斜关系请参照图示。

4) 调整后，请把拧松的螺丝拧紧固定。(固定螺丝②、④，请在推住轴①、③的状态拧紧。)

注意: 1. 如果只用一侧的轴调整送布牙的倾斜度，送布牙的高度也会变化，所以请一定用两侧轴来调整。

2. 如果调整轴位置之后，送布牙的运动位置偏斜，请拧松平送布台曲柄⑦的固定螺丝⑤，调整送布牙的运动位置。

EN

Height of the feed dog is adjusted so that the feed dog protrudes from the throat plate surface by 0.75 to 0.85 mm (1.15 to 1.25 mm for H type)

Adjust the height in accordance with the material to be used.

1. Adjusting the height and tilt of the feed dog.

1) Loosen setscrew ② in feed bar driving shaft ① and setscrew ④ in feed bar rocker shaft ③.

2) Height and tilt of the feed dog will change by turning both shafts ① and ③ with a screwdriver.

3) For the relation between the rotating direction of each shaft and tilt of feed bar ⑥, refer to the figure on the left.

4) After the adjustment, securely tighten the setscrews. (Tighten setscrews ② and ④ in the state that shafts ① and ③ are pushed against the handwheel side.)

Caution: 1. If the tilt of the feed dog is adjusted with one shaft only, the height of the feed dog changes. Be sure to adjust it with both shafts.

2. Movement position of the feed dog may be shifted depending on the adjusting position of the shaft.

At this time, loosen setscrew ⑤ in feed rocker shaft arm ⑦ and adjust the movement position.

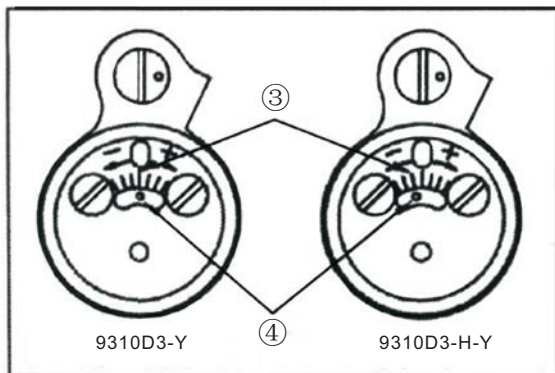
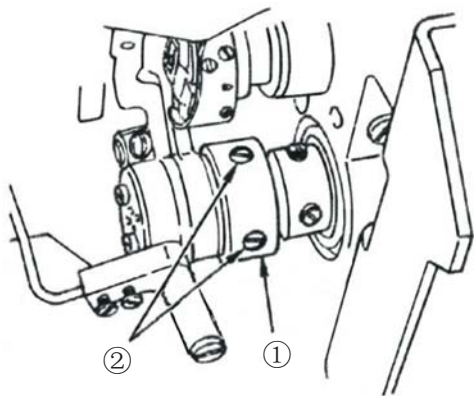
26. 送布的 Adjusting the feed timing



注意
CAUTION

为了防止缝纫机的意外起动，请关掉电源之后进行操作

Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.



改变上下送布凸轮①的固定位置，就可以变更送布同步时间。

送布同步的调整方法

1) 放倒缝纫机，拧松上下送布凸轮①的固定螺丝② (2颗)。

2) 转动上下送布凸轮①，就可以变更送布的同步时间。

请把上下送布台曲柄的刻度③对准上下送布轴的刻度④。

向(+)方向转动上下送布凸轮① → 上下送布的同步时间变快。

向(-)方向转动上下送布凸轮① → 上下送布的同步时间变慢。

注意:普通使用时, D型请在刻度③的中央对准刻点④的状态下使用; DH型在刻度③的-1刻点④对准刻点④的状态下使用。

EN

The feed timing can be changed by changing the stop position of feed eccentric cam①.

How to adjust the feed timing.

1) Tilt the sewing machine head and loosen two setscrews ② in feed eccentric cam ①.

2) Turn feed eccentric cam ① to change the feed timing.

Align graduation ③ on the feed bar driving arm with engraved marker dot ④ on the feed driving shaft.

Turn feed eccentric cam ① in the direction of(+)


→Increases the feed timing.

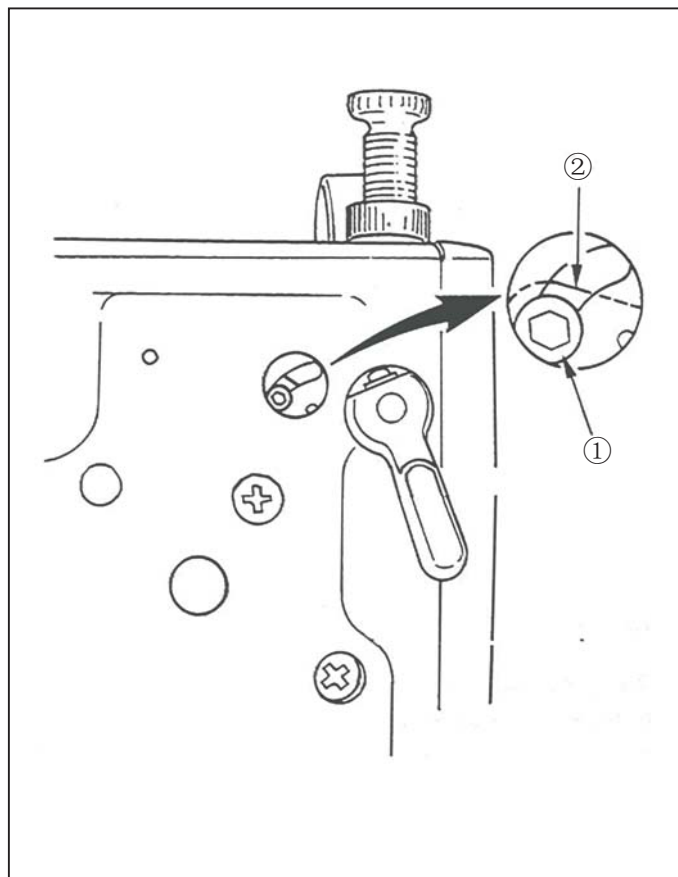
Turn feed eccentric cam ① in the direction of(-)

→Decreases the feed timing.

Caution:For general use, use the machine of D type in the state that center of graduation ③ is aligned with engraved marker dot ④ and the machine of DH type in the state that "-1"of graduation ③ is aligned with engraved marker dot ④.

27. 松线的解除机构 Thread tension release releasing mechanism

 注意 CAUTION	为了防止缝纫机的意外起动，请关掉电源之后进行操作 Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.
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利用松线解除机构，缝裂中也可以提升上线也不松线。（厚的叠层部用膝动提升压脚，让它越过叠层部，而线张力不变化）

1. 解除方法

- 1) 卸下缝纫机盖子，用六角扳手拧松松线变换螺丝①。
- 2) 把螺丝①固定到松线变化板②的最上部。提升压脚线张力盘也不浮起，上线张力也不松。（只在切线时线张力浮起。）

注意：螺丝①的位置，只能固定到拧松变换板的最上或最下位置，其它位置不能使用。

EN

By means of the thread tension release releasing mechanism, sewing can be performed without slackening the needle thread tension even when the presser foot is lifted during sewing. (Even when the presser foot is slightly lifted at the thick overlapped section by the knee lifter, this mechanism can prevent the thread tension from being changed.)


1. How to release

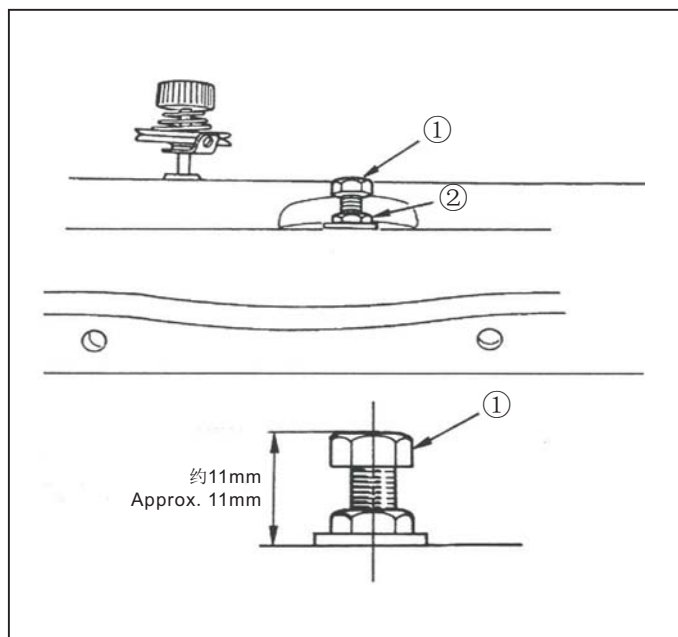
- 1) Remove the cap in the machine head and loosen thread tension release changeover screw① using a hexagon wrench.
- 2) Fix screw ① on the top of thread tension release changeover plate ②.

The thread tension disk does not rise even when the presser foot is lifted, and the needle thread tension is not loosensd. (The thread tension disk rises only when thread trimming is performed.)

Caution: Do not use screw ① at any position other than the top or bottom position of the thread tension release changeover plate.

28. 微量压脚提升 Micro-lifting mechanism of the presser foot

 注意 CAUTION	为了防止缝纫机的意外起动，请关掉电源之后进行操作 Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.
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缝制丝绒等起毛性素材时，使用微量压脚提升螺丝①功能就可以不使素材缝偏，减轻素材的损伤。

在拧松螺母②的状态，一点一点拧紧微量压脚提升螺丝①，调整到适合素材的让压脚微量上升的位置，然后用螺母②固定。

注意：微量压脚提升机在不使用时，请把螺丝①的高度调整到比缝纫机高约11mm的位置。微量压脚提升机在提升后缝纫机的送布能力会减弱。

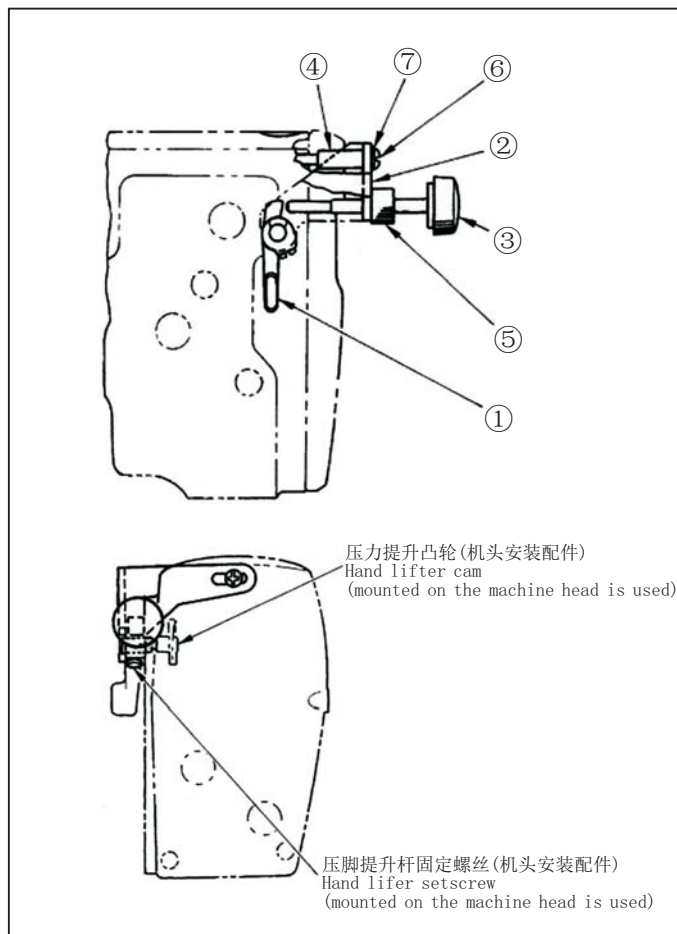
EN

When sewing velvet or the like which is fluffy, slippage of material or damage of material is reduced by using screw for presser foot micro-lifting.

Gradually tighten screw for presser foot micro-lifting in the state that nut is loosened, adjust the presser foot to the position where it is finely lifted until it matches the material, and fix it with nut.

Caution: When the presser foot micro-lifting mechanism is not used, adjust the height of screw so that it is higher by approximately 11 mm than the sewing machine. If the sewing machine is operated in the state that the micro-lifting mechanism is working, sufficient feed force cannot be obtained.

28. 微量压脚提升 Micro-lifting mechanism of the presser foot



微量压脚提升装置（组件）[1271.04—11]

缝纫机上标准装备有微量压脚提升机构，使用本装置后，不用工具就可以进行调整，需要频繁调整时十分方便。

EN


Presser foot micro-lifer (asm.) [1271.04-11]

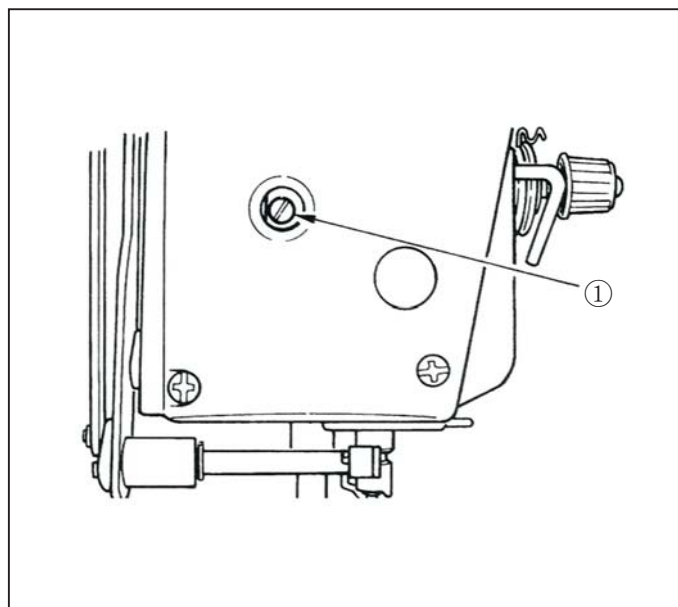
presser foot micro-lifting mechanism is provided as standard. This device, however, can be adjusted without using tools. It is convenient when desired to frequently adjust this device.

微量压脚提升装置构成零件

No.	货号 Part No.	品名 Description	数量 Q'ty
1	1271.04-12	压脚提升杆 Hand lifter	1
2	1271.04-13	挡块座 Stopper base	1
3	1271.04-14	挡块螺丝 Stopper screw	1
4	1271.04-15	挡块环 Collar	1
5	1271.04-16	挡块螺母 Nut	1
6	1271.04-17	挡块座固定螺丝 Setscrew	1
7	21-04808080-01	挡块座垫片 Washer	1

29. 压脚杆高度的调整 Adjusting the height of the presser foot

 <p>注意 CAUTION</p>	<p>为了防止缝纫机的意外启动，请关掉电源之后进行操作 Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.</p>
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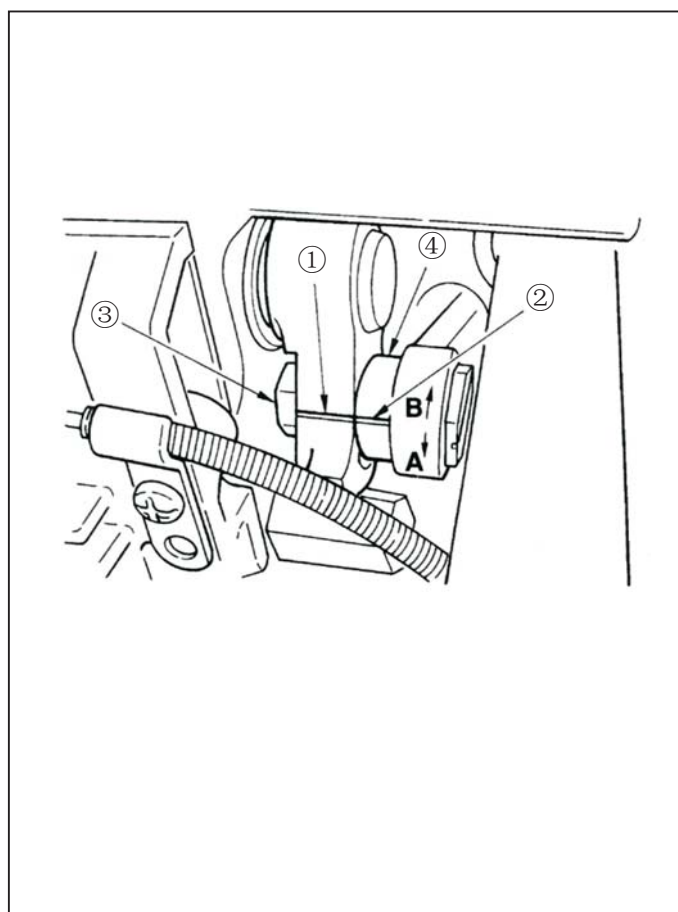
- 1) 变换压脚高度或角度时，请拧松压脚杆的固定螺丝①进行调节。
- 2) 调节后，再拧紧固定螺丝①。

EN

- 1) Loosen setscrew ①, and adjust the presser foot height and the angle of the presser foot.
- 2) After adjustment, securely tighten the setscrew ①.

30. 针摆动量的调整 Adjusting the height of the presser foot

 <p>注意 CAUTION</p>	<p>为了防止缝纫机的意外启动，请关掉电源之后进行操作 Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.</p>
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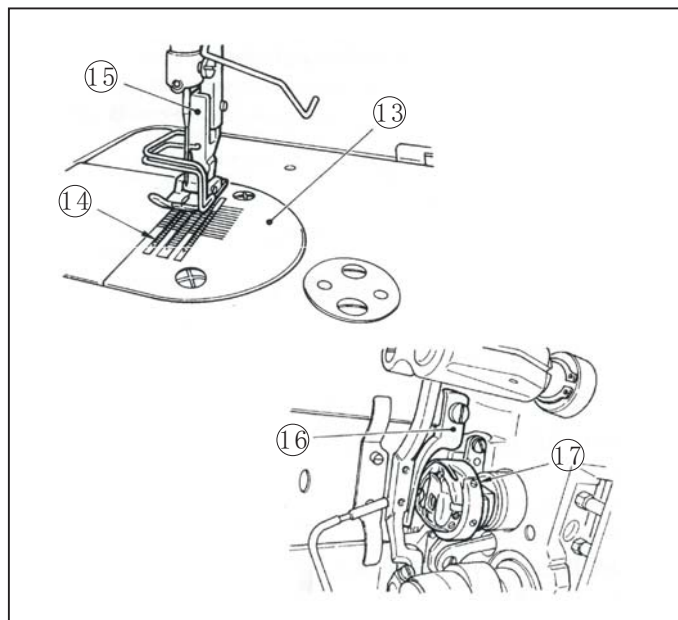
- 1) 标准位置时，送针曲柄的刻线①和送针调节块的刻线②对齐的位置。
- 2) 想让送针量比送布牙的送布量大时，请拧松锁定螺母③，把针线调节块④向A方向移动，然后锁定螺母③。
- 3) 相反，把送针器调节块④向B方向移动之后，针送量比送布牙的送布量小。

EN

- 1) The standard stitch width is obtained when marker line ① of the needle feed driving crank aligns with marker line ② of the needle feed regulator block.
- 2) When it is required to make the needle feed amount larger than the feed dog amount, loosen locknut ③, move needle feed regulator block ④ to the direction A, and tighten locknut ③.
- 3) On the contrary, when moving needle feed regulator block ④ to the direction B, the needle feed amount will be smaller than the feed dog amount.

31. 针送↔下送的变换程序 Alternate changing over procedure between the needle feed and the bottom feed

 <p>注意 CAUTION</p>	<p>为了防止缝纫机的意外启动，请关掉电源之后进行操作 Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.</p>
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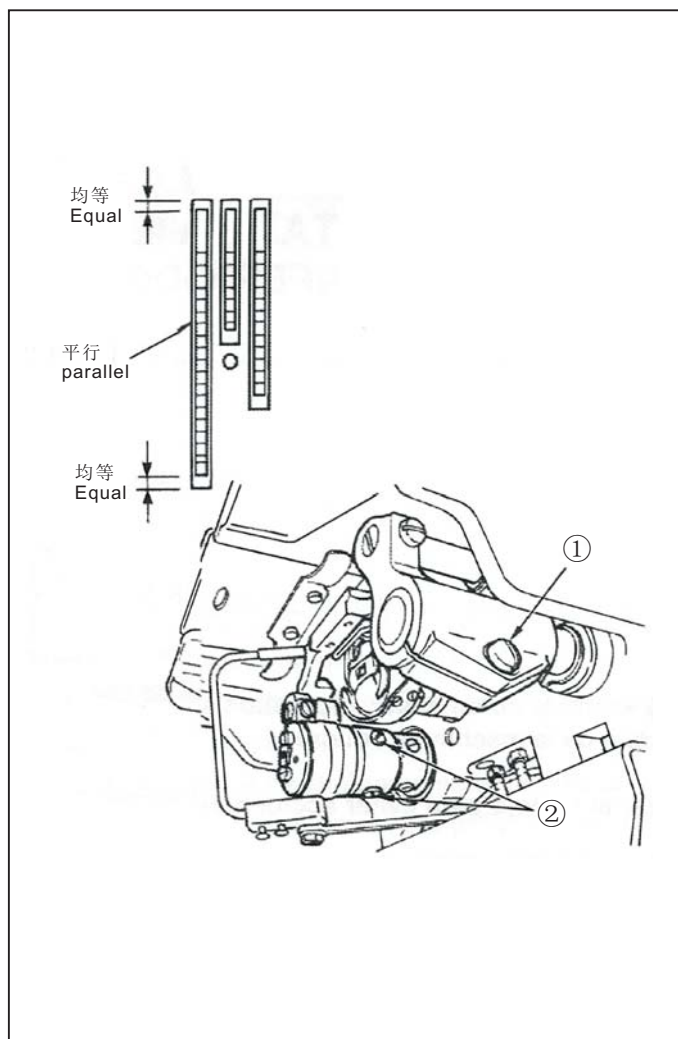


针送→下送的变换程序

- 1) 卸下针送用的针板⑬、送布牙⑭、压脚⑮。
- 2) 卸下中旋梭压片⑯、旋梭⑰。

EN

- 1) Remove throat plate ⑬, feed dog ⑭ and presser foot ⑮ the needle feed.
- 2) Remove bobbin case positioning finger ⑯ and hook ⑰.



- 3) 安装下送用的针板、送布牙、压脚，根据针板的送布牙槽，调整送布牙的左右、前后位置。

- * 请把送布牙与针板的送布牙槽平行安装。
- * 关于送布牙的左右位置，如果因送布牙的固定螺丝孔松动无法调整左右位置时，请拧松 平送布座曲柄紧固螺丝①、上下移动凸轮固定螺丝②，左右移动送布座进行调整。
- * 关于送布牙的前后位置，送布拨盘刻度的最大数值时，送布牙在最前位置或在最后位置，请拧松 平送布座曲柄紧固螺丝①，调整送布牙的前后位置，让送布牙顶不到针板(前后的间隙基本均等)。
- * 拧松了上下移动凸轮之后，请注意不要让其与 平布座曲柄的前后位置偏斜。(请注意上下移动凸轮不要过度压入。)

EN

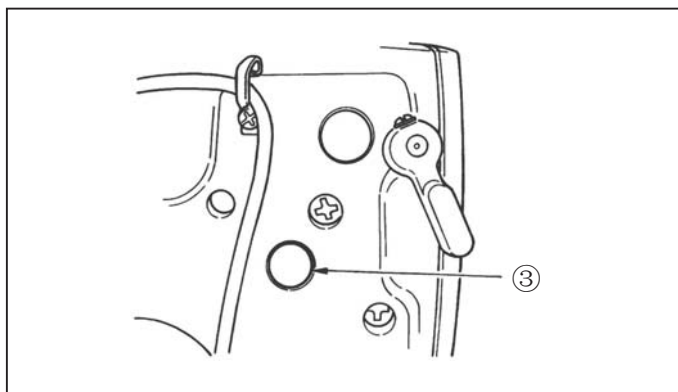
- 3) Install the throat plate, feed dog and presser foot for the bottom feed, and adjust the lateral and longitudinal positions of the feed dog in regard to the feed dog slot of throat plate
- * Install the feed dog parallel to the feed dog slot of the throat plate.

- * Adjust the lateral position of the feed dog by loosening clamping screw ① in the feed rocker base arm and setscrew ② in the feed driving cam, and moving the feed base to the right or left when the lateral position cannot be adjusted with the looseness of the setscrew hole of the feed dog.

- * Adjust the longitudinal position of the feed dog by loosening clamping screw ① in the feed rocker base arm so that the feed dog does not come in contact with the throat plate (the front and rear clearances should be almost equal.) At the position where the feed dog moves to the extreme front or to the extreme rear when the scale of feed dial is set to the maximum.

- * When the feed driving cam is loosened, be careful that the longitudinal position between the feed driving cam and the feed rocker base arm is not slipped. (Be careful that the feed driving cam is not excessively pressed.)

31. 针送↔下送的变换程序 Alternate changing over procedure between the needle feed and the bottom feed

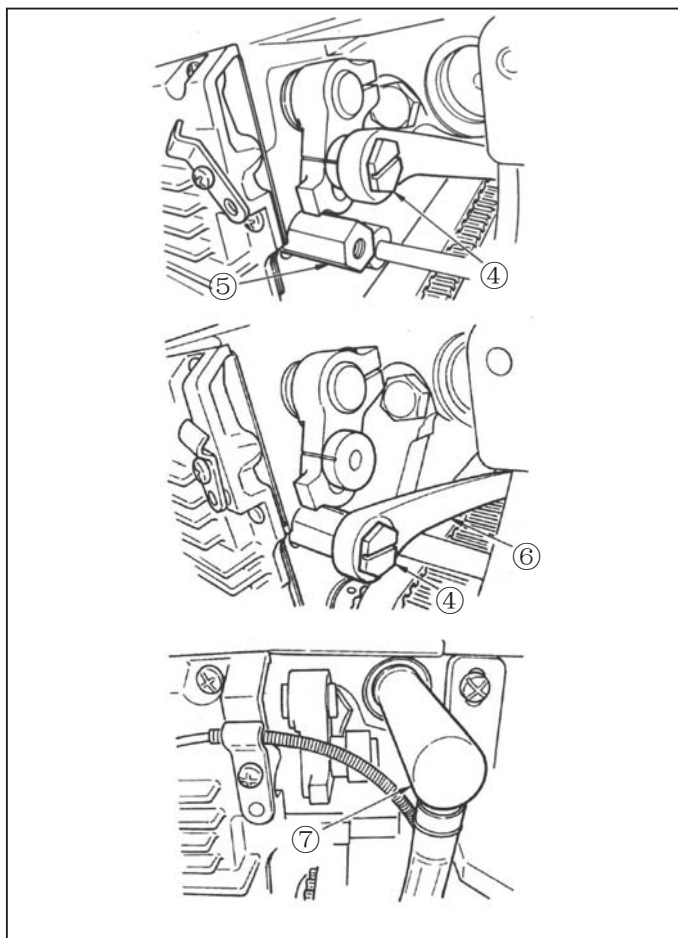


4) 卸下机臂背面的盖子③，拧松孔内的送针轴曲柄（前）的固定螺丝。此时，为了防止损伤机针和针板，请让针前端在针板的上方。
* 带有挑线杆的机种，请先卸下挑线杆，然后再卸盖子③。

EN

4) Remove cap ③ in the back of machine arm and loosen the clamping screw in the needle feed shaft arm (front) located in the hole. At this time, adjust so that the needle tip is above the throat plate so as not to damage the needle and the throat plate.

* For the models with wiper, remove the wiper and remove cap ③.



5) 放倒机头，卸下机台内的送针杆台形螺丝④，然后把送针杆⑥固定到支柱⑤。

* 如果卸台形螺丝④困难时，请拆卸浮子箱⑦。

* 更换了台形螺丝④后，请一定确实把浮子箱插到最里面。（请把浮子箱前端插入机台孔里）

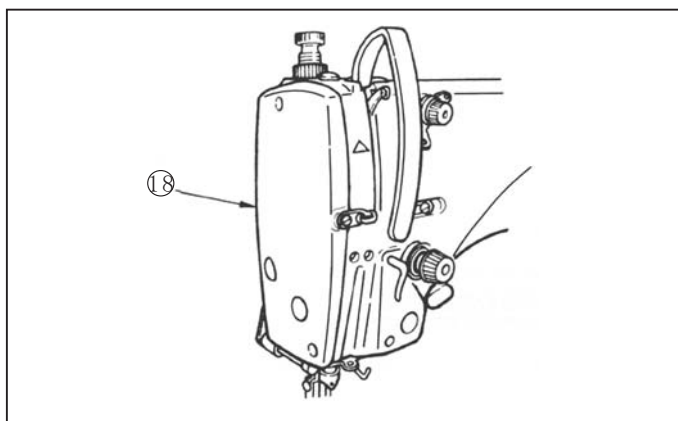
EN

5) Tilt the machine head, remove hinge screw ④ in the needle feed connecting rod in the machine bed and fix needle feed connecting rod ⑥ to strut ⑤.

* If it is difficult to remove hinge screw ④, remove float case

* After replacing hinge screw ④, securely insert the float case until it will go no further.

(Insert the top end of float in the float case into the hole in the machine bed.)

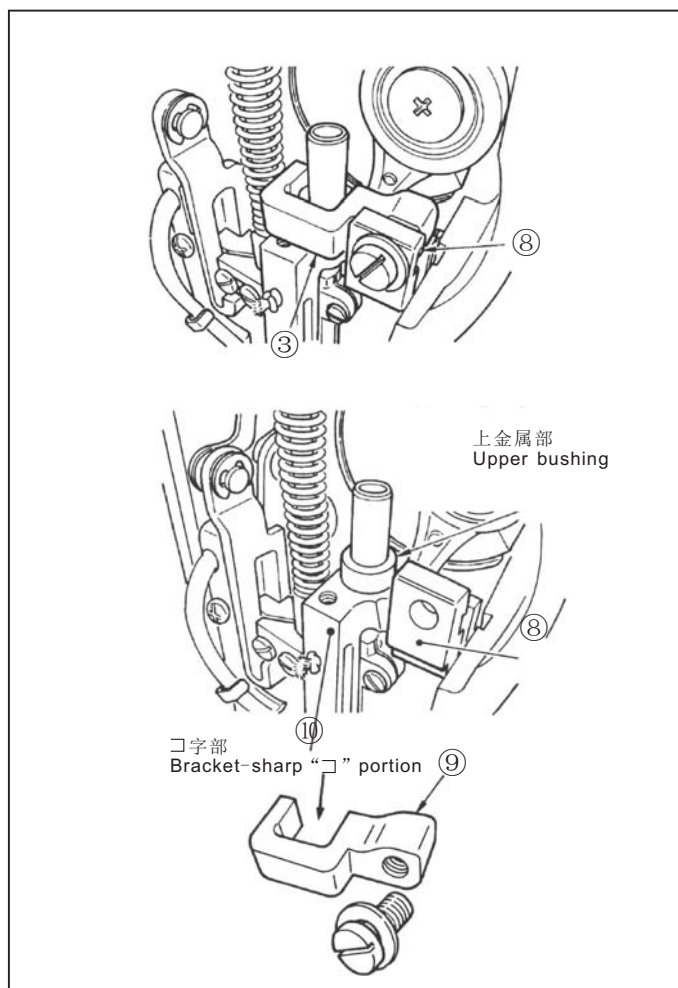


6) 抬起机头，卸下面板⑬。

EN

6) Raise the machine head and remove face plate ⑬.

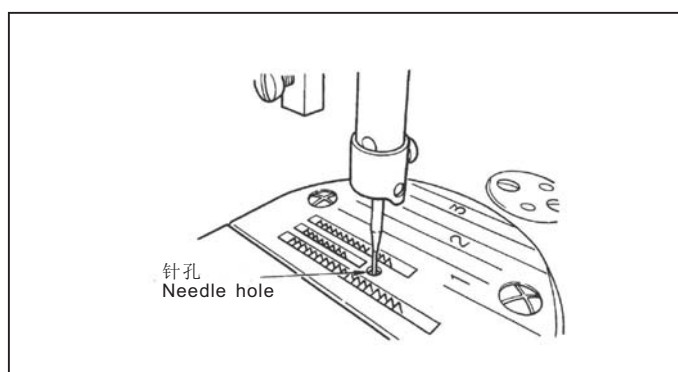
31. 针送↔下送的变换程序 Alternate changing over procedure between the needle feed and the bottom feed



7) 把附属的摆动座支架⑨临时固定到摆动座导向器⑧上(临时固定时, 摆动台支架⑨可以移动)。此时, 请把摆动座支架⑨的ㄣ字部插进摆动座⑩的上金属部上。

EN

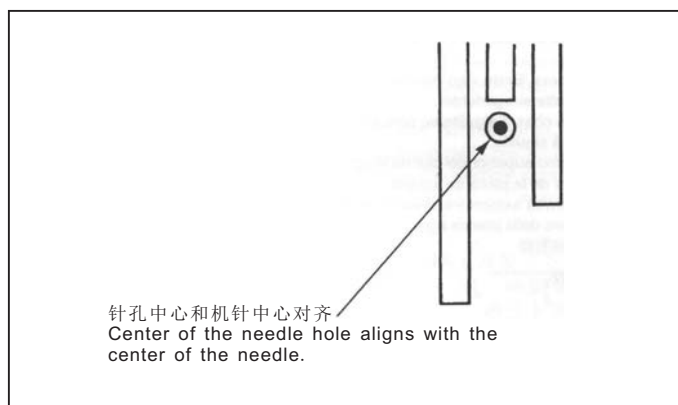
7) Temporarily tighten needle bar frame positioning block ⑨ supplied as accessory to needle bar frame guide ⑧ (temporarily tighten to such an extent that needle bar frame positioning block ⑨ can move). At this time, fit the bracket-sharp “ㄣ” portion of needle bar frame positioning block ⑨ to the upper bushing portion of needle bar frame ⑩.



8) 机针下降到进入到针板的针孔里。
* 请注意不要让针尖碰到针板。

EN

8) Lower the needle until it enters the needle hole in the throat plate.
* Be careful that the needle tip does not come in contact with the throat plate.

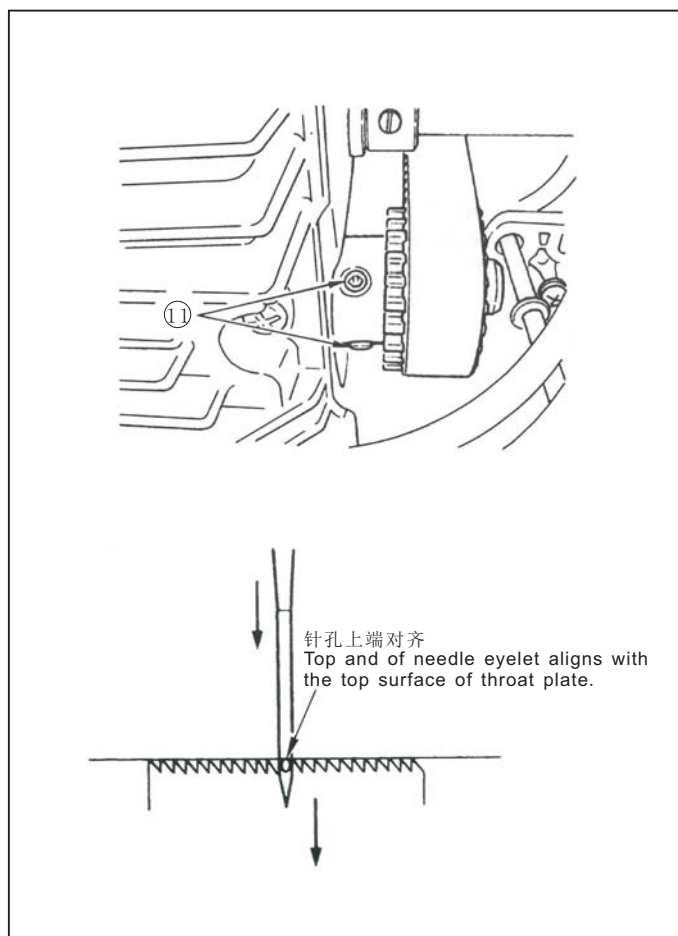


9) 把摆动座支架⑨向送布方向移动, 在下送用针板的针孔中心与机针的中心对齐的位置, 牢牢地固定好摆动座支架。
* 请不要拧松摆动座导向器的固定螺丝。

EN

9) Move needle bar frame positioning block ⑨ in the direction of cloth feeding and securely fix the needle bar frame positioning block at the position where the center of the needle hole in the throat plate for the bottom feed aligns with the center of the needle.
* Do not loosen the setscrew in the needle bar frame guide.

31. 针送↔下送的变换程序 Alternate changing over procedure between the needle feed and the bottom feed



10) 拧紧4) 拧松的送针轴曲柄(前)的紧固螺丝, 然后把盖子③安装到机臂的孔上。
* 带有挑线杆的机种, 请安装好挑线杆。

EN

10) Tighten the clamping screw in the needle feed shaft arm (front) which has been loosened in step 4) and install cap ③ on the hole in the machine arm.
* For the models with wiper, install the wiper.

11) 拧松机台内的下链轮固定螺丝⑪, 调整下送用的机针和送布牙的同步。

* 固定上下移动凸轮不能让其转动, 转动飞轮变更同步。

* 下送时, 送布牙在下降方向, 送布牙上面和针板上面对齐后, 机针在下降方向, 针孔上端和针板上面对齐, 即可以同步。

12) 调整完送布同步之后, 请牢牢地把下链轮固定螺丝⑪(2个)固定好。

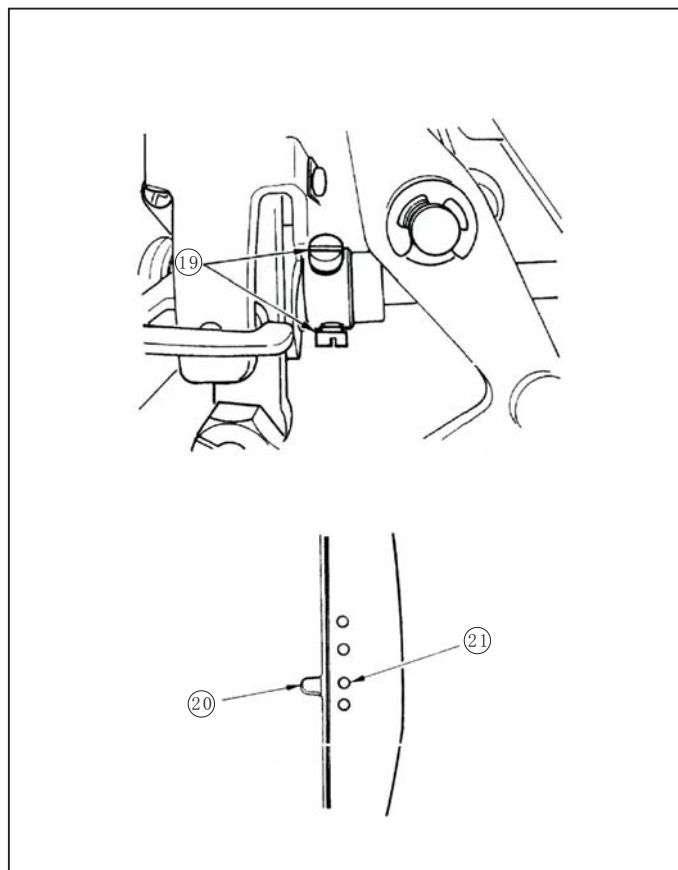
EN

11) Loosen setscrews ⑪ in the lower sprocket inside the machine bed and adjust the timing between the needle and the feed dog for the bottom feed.

* Fix the feed driving cam so that it does not turn, and turn the handwheel to change the timing.

* In case of the bottom feed, normally, adjust the timing so that the top end of needle eyelet aligns with the top surface of throat plate in the descending direction of the feed dog.

12) After the completion of adjusting the feed timing, securely tighten two setscrews ⑪ in the lower sprocket.



13) 拧松切线凸轮固定螺丝⑲, 在飞轮罩的刻点⑳和飞轮的红色刻点㉑对齐的相位, 重新调整切线凸轮。

EN

13) Loosen setscrews ⑲ in the thread trimmer cam and adjust the thread trimmer cam again at the timing when marker dot ⑳ on the pulley cover aligns with red marker dot ㉑ on the handwheel.

14) 安装旋梭、中旋梭压片。

15) 安装面板。

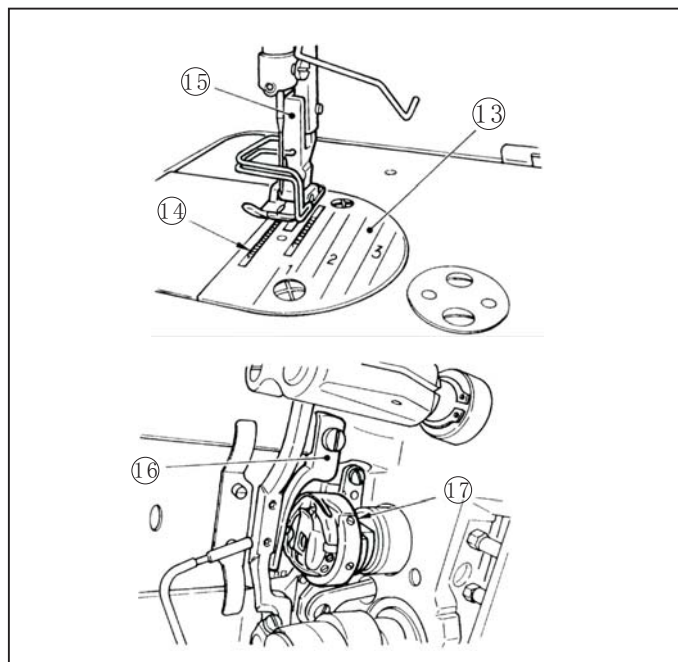
16) 最后把送布拨盘刻度调到最大, 确认针板和送布牙不相碰。

EN

14) Install the hook and the bobbin case positioning finger.
15) Install the face plate.

16) Finally, check that the throat plate does not come in contact with the feed dog when the scale of feed dial is set to the maximum.

31. 针送↔下送的变换程序 Alternate changing over procedure between the needle feed and the bottom feed

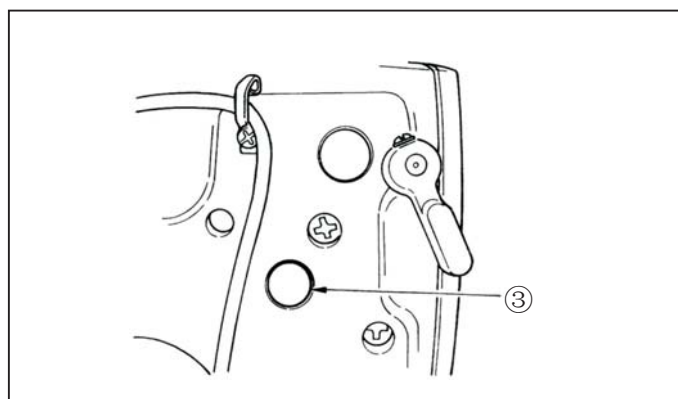


下送→针送的变换程序

- 1) 卸下针送用的针板⑮、送布牙⑬、压脚⑭。
- 2) 卸下中旋梭压片⑯、旋梭⑰。

EN

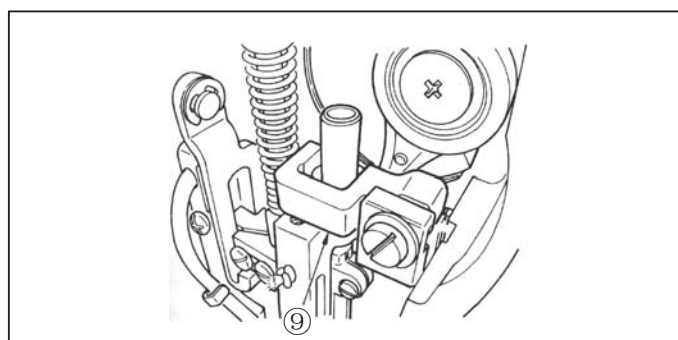
- 1) Remove the throat plate ⑮, feed dog ⑬ and presser foot ⑭ for the bottom feed.
- 2) Remove bobbin case positioning finger ⑯ and hook ⑰.



- 3) 卸下机臂背面的盖子③，拧松孔内的送针轴曲柄（前）的紧固螺丝。此时，为了防止损伤机针和针板，请让针前端在针板的上方。
* 带有拔线器的机种，请先卸下拔线器，然后再卸盖子③。

EN

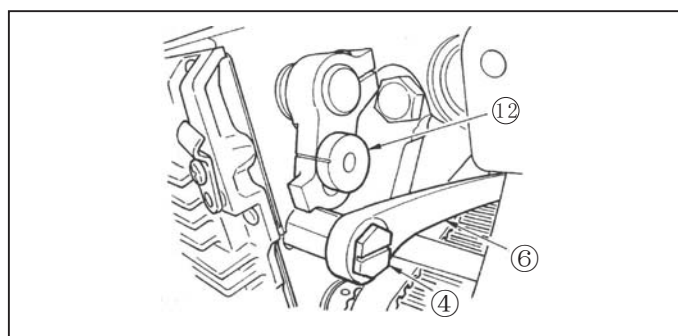
- 3) Remove cap ③ in the back of machine arm and loosen the clamping screw in the needle feed shaft arm (front) located in the hole. At this time, adjust so that the needle tip is above the throat plate so as not to damage the needle and the throat plate.
* For the models with wiper, remove the wiper and remove cap ③.



- 4) 卸下面板⑱，在卸下摆动作支架⑨。

EN

- 4) Remove face plate ⑱ and remove needle bar frame positioning block ⑨.

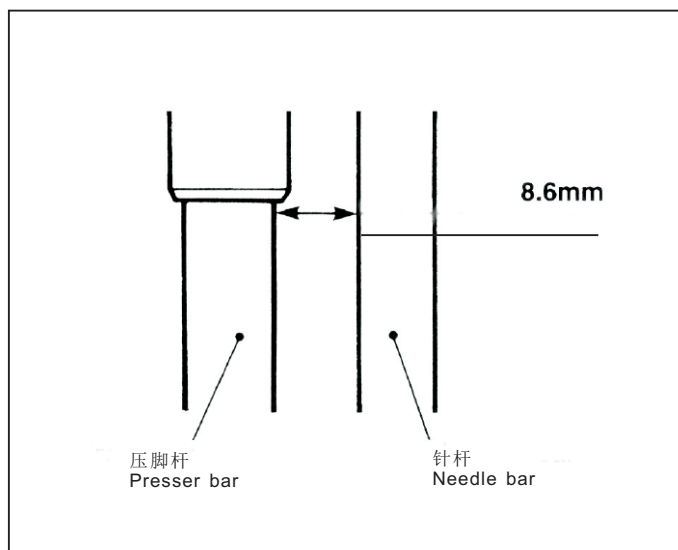


- 5) 放倒机头，卸下机台内的送针杆台形螺丝④，把送针杆⑥固定到送针调节块⑫上。

EN

- 5) Tilt the machine head and remove hinge screw ④ in the needle feed connecting rod in the machine bed. Then fix needle feed connecting rod ⑥ to needle feed regulator block ⑫.

31. 针送↔下送的变换程序 Alternate changing over procedure between the needle feed and the bottom feed

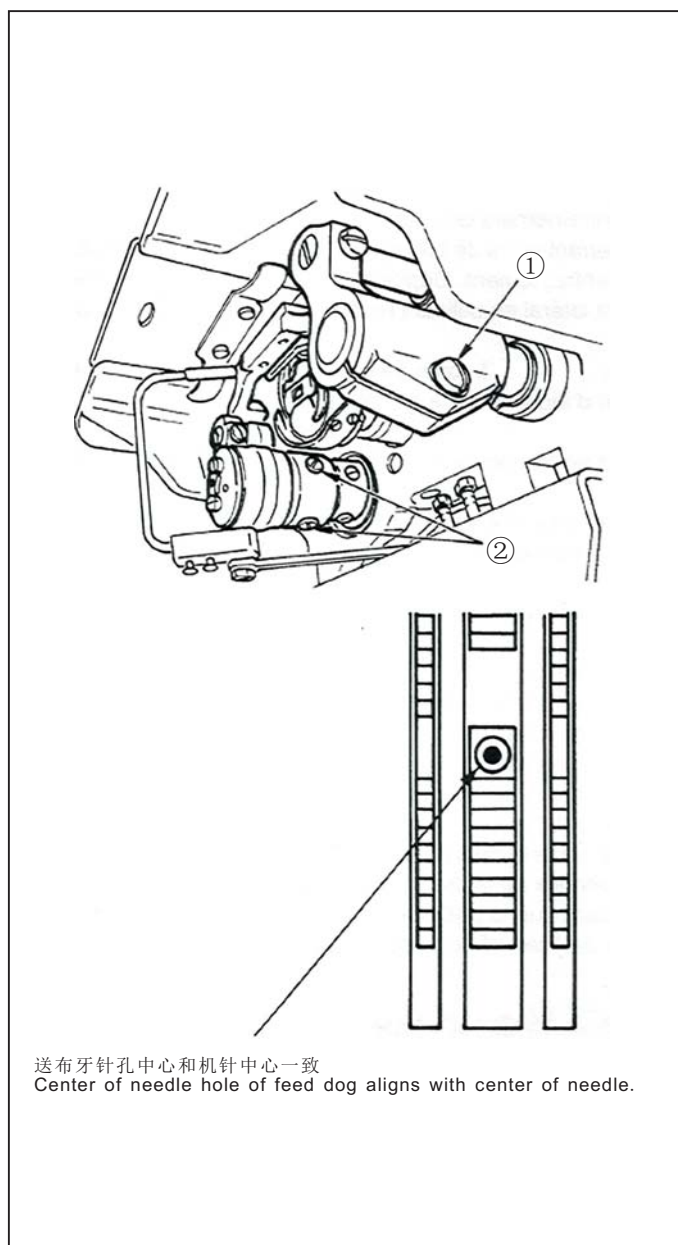


6) 把送布拨盘刻度调整到零,把针杆和压脚杆的距离调整到8.6mm,然后把3) 拧松的曲柄紧固螺丝拧紧。
* 在压脚杆金属块的下端部,把针杆和压脚杆的距离正确地调整为8.6mm。

EN

6) Tighten the clamping screw in the arm which has been loosened in step 3) so that the distance between the needle bar and the presser bar becomes 8.6 mm when the scale of feed dial is set to 0(zero) and the needle bar is in the lowest dead point.

* Precisely adjust the distance between the needle bar and the presser bar so that the distance between the needle bar and the bottom end of presser bar bushing becomes 8.6 mm.



7) 安装送用的针板⑬、送布牙⑭、压脚⑮,根据针板的送布牙槽,调整送布牙的左右、前后位置。

* 请把送布牙与针板的送布牙槽平行安装。

* 关于送布牙的左右位置,如果因送布牙的固定螺丝孔松动无法调整左右位置时,请拧松平送布座曲柄紧固螺丝①、上下移动凸轮固定螺丝②,左右移动送布座进行调整。

* 关于送布牙的前后位置,送布拨盘刻度零,针杆在下死点,送布牙针孔的中心和机针中心基本位置一致,请拧松平送布牙的前后位置。

* 调整后,请确认送布牙和针板的送布牙槽不要相碰。

* 拧松了上下移动凸轮之后,请注意不要让其与平布座曲柄的前后位置偏斜。(请注意上下移动凸轮不要过度压入。)

EN

7) Install throat plate ⑬, feed dog ⑭ and presser foot ⑮ for the needle feed, and adjust the lateral and longitudinal positions of the feed dog.

* Install the feed dog parallel to the feed dog slot of the throat plate.

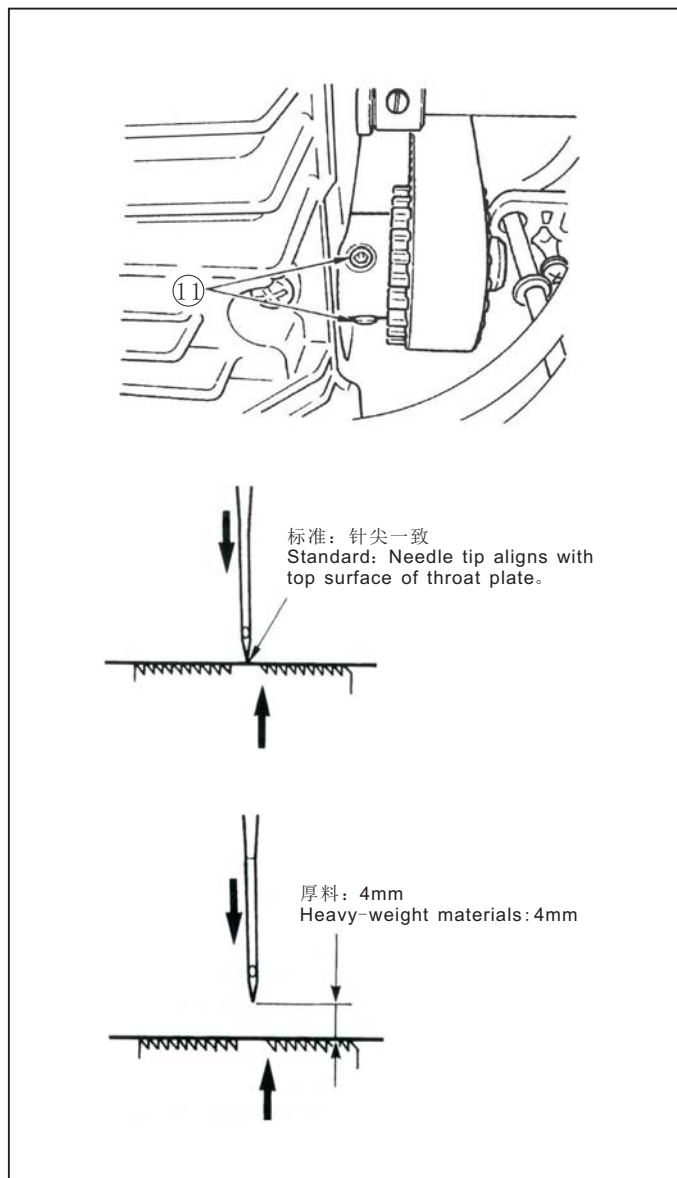
* Adjust the lateral position of the feed dog by loosening clamping screw ① in the feed rocker base arm and setscrew ② in the feed driving cam, and moving the feed base to the right or left when the lateral position cannot be adjusted with the looseness of the setscrew hole of the feed dog.

* Adjust the longitudinal position of the feed dog by loosening the feed rocker base arm at the position where the center of the needle hole of feed dog almost aligns with the center of needle when the scale of feed dial is set to 0 (zero) and the needle bar is in the lowest dead point.

* When the feed driving cam is loosened, be careful that the longitudinal position between the feed driving cam and the feed rocker base arm is not slipped. (Be careful that the feed driving cam is not excessively pressed.)

送布牙针孔中心和机针中心一致
Center of needle hole of feed dog aligns with center of needle.

31. 针送↔下送的变换程序 Alternate changing over procedure between the needle feed and the bottom feed



- 8) 拧松机台内的下链轮固定螺丝⑪，调整送针用的机针和送布牙的同步。
 - * 固定上下移动凸轮不让其转动，转动飞轮，即可以变更同步。
 - * 送针和下送的同步，与机针和送布的同步相差约180°。
 - * 送针时，送布牙在上升方向，送布牙上面和针板上面对齐，这是一般的同步调整方法。但是，厚料规格时，针尖应离开针板上面对齐4mm左右。
- 9) 送布同步调整后，请牢牢地把下链轮固定螺丝⑪（2个）拧紧。
- 10) 送布同步调整后，请再次确认送布牙的针孔和机针的偏差。
 - * 如果有偏差时，请再次拧松 平送布座曲柄，重新调整送布牙的前后位置。

EN

- 8) Loosen setscrew ⑪ in the lower sprocket inside the machine bed and adjust the timing between the needle and the feed dog for the needle feed.
 - * Fix the feed driving cam so that it does not turn, and turn the handwheel to change the timing.
 - * The timing between the needle and the feed dog for the needle feed is approximately 180° different from that for the bottom feed.
 - * In case of the needle feed, normally, adjust the timing so that the needle tip aligns with the top surface of throat plate in the descending direction of the needle when the top surface of feed dog aligns with the top surface of throat plate in the ascending direction of the feed dog. However, in case of the machine for heavy-weight materials, adjust the needle tip to approximately 4 mm from the top surface of throat plate.
- 9) After completion of adjusting the feed timing, securely tighten two setscrews ⑪ in the lower sprocket.
- 10) After the feed timing adjustment, check again the slip between the needle hole of feed dog and the needle.
 - * If there is a slip between them, loosen the feed rocker base arm and re-adjust the longitudinal position of the feed dog.

32. 保养 Cleaning

为了爱护缝纫机，保持其良好的性能，每天都要保养机器，如长时间放置，请按照下面的保养顺序进行。

The following cleaning operations should be carried out each day in to maintain the performance of this machine end to ensure a long service life.



注意 CAUTION



作业前请切断电源开关。避免误踩踏板启动缝纫机而受伤。由于电机惯性作用，切断电源，电机还会继续运动，直到它完全停止运动后才可以进行操作。

使润滑油时，要佩带防护眼镜和手套遮盖皮肤以免引起炎症。

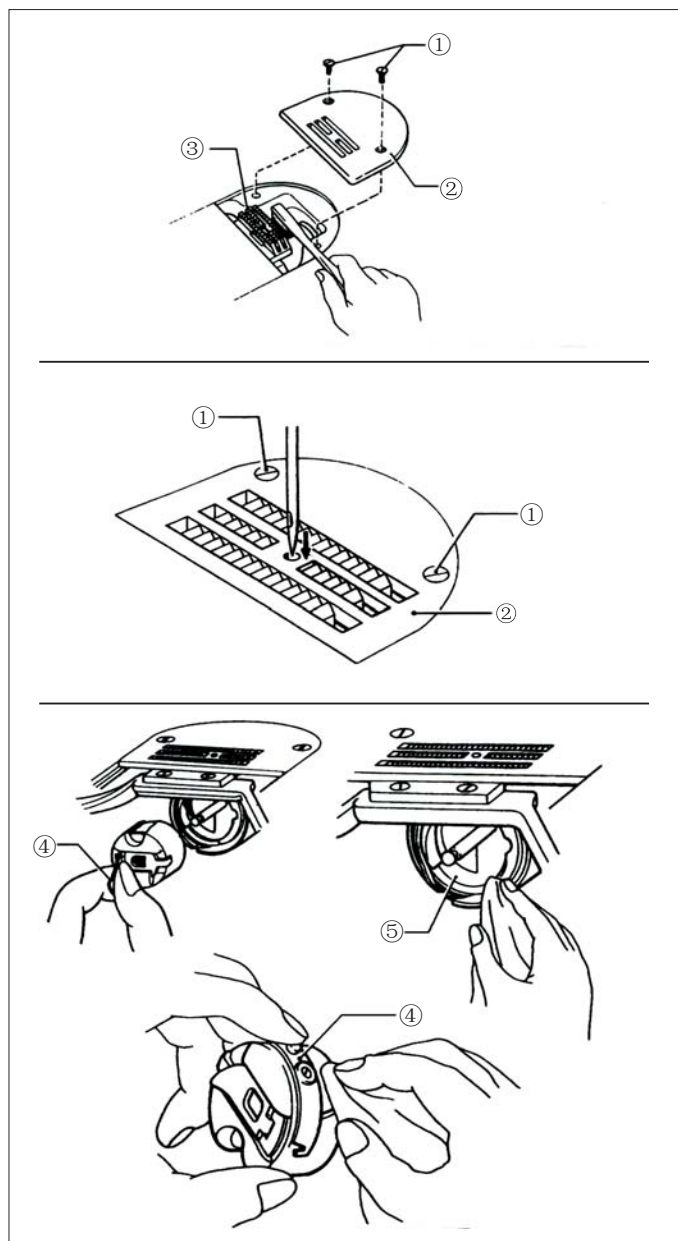
润滑油不能饮用，以免发生痢疾和呕吐。

请不要放置孩子可以触 的地方。

Turn of the power switch before xarrying out cleaning. The motor will keep turning even after the power is switched off as aresult of the motor's inertia. Wait until the motor stops fully before starting work. The machine may operate if the treadle is pressed by mistake, which could result in injury.

Be sure to wear protective goggles and gloves when handling the lubricating oil, so that no oil gets into your eyes or onto your skin, otherwise inflammation can result.

Furthermore, do not drink the oil under any circumstances ,as it can cause vomiting and diarrhoea. Keep the oil out of the reach of children.



- 1) 抬起压脚。
- 2) 取出两个紧固螺钉①，取下针板②。
- 3) 用牙刷等物清扫送布牙③上的灰尘。
- 4) 将两个紧固螺钉②装进针板①。
- 5) 慢慢转动缝纫机主动轮，机针应准确无误进入针板②针孔中心。

※如果机针不能进入针板孔中心时，确认机针是否弯曲。松开两个紧固螺钉①后，针板②，是否回原位。

- 6) 转动缝纫机上轮，使机针上升到针板②上面，确认针尖是否损坏，针尖损坏时，更换机针。
- 7) 放倒缝纫机。
- 8) 取下梭心套④。
- 9) 用软布清扫旋梭⑤的灰尘，查看一下是否有损坏。
- 10) 从梭心套④中取出梭心，用布擦拭梭心套。
- 11) 把梭心装入梭心套④，把梭心套装入旋梭。

EN

- 1) Raise the presser foot.
- 2) Remove the two screws ①, and then remove the needle plate②.
- 3) Use a soft wire brush to clean any dust from the the feed dog③.
- 4) Install the needle plate ② with the two screws ①.
- 5) Turn the machine pulley slowly and check that the needle is lowered through the center of the hole in the needle plate②.
※If the needle does not go through the center.
Check that the needle is not bent.
Loosen the two screws ① and thenre-seat the needle plate ②.
- 6) turn the machine pully to raise the needle above the needle plate ②. and then check that the tip of the needle is not blunt.
- 7) Tilt back the machine head.
- 8) Remove the bobbin case ④.
- 9) Wipe off any dust from the rotary hook ⑤ with a soft cloth. and check that there is no damage to te rotary hook⑤.
- 10) Remove the bobbin from the bobbin case ④ and clean the bobbin case ④ with a cloth.
- 11) Insert the bobbin into the bobbin case ④ and then place the bobbin case ④ back into the machine.