

MAQI

使用说明书

美机缝纫机

MAQI SEWING MACHINE

OPERATION MANUAL

2284N 高速单针曲折缝缝纫机

HIGH-SPEED ONE-NEEDLE ZIGZAG STITCHING MACHINE

使用说明

Operation Manual

感谢您购买本公司的产品。

为了安全地使用，请您在使用之前一定阅读本使用说明书。

另外，请您注意保管本使用说明书，以便随时查阅。

Read safety instructions carefully and understand them before using.

Retain this Instruction Manual for future reference.

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運轉縫紉機前的注意事項



注意

爲了防止機械的錯誤動作或損傷，請確認如下項目。

- 最初使用縫紉機之前，請把其打掃幹淨。清除運送途中積存的灰塵，并加油。
- 請確認電壓設定是否正確。并確認電源插頭是否正確連接。
- 電壓規格不同時，請絕對不要使用。
- 縫紉機的轉動方向，從皮帶輪側看應爲逆時針方向。請注意不要反轉縫紉機。
- 機頭部沒加油進，請絕對不要運轉縫紉機。
- 試運轉時，請把梭套和上綫卸下。
- 縫紉機開始使用的最初1個月，請降低縫紉速度，將縫紉速度控制到2800rpm以下。
- 待縫紉機確認停止之後再轉動手輪。
- 面板上安裝有切刀，請不要把手指放到附近。
- 縫紉機運轉中，請不要打開挑綫杆防護罩。

CAUTION BEFORE OPERATION



WARNING :

To avoid malfunction and damage of the machine, confirm the following.

- Before you put the machine into operation for the first time after the set-up, clean it thoroughly. Remove all dust gathering during the transportation and oil it well.
- Confirm that the voltage has been correctly set.
Confirm that the power plug has been properly connected to the power supply.
- Never use the machine in the state where the voltage type is different from the designated one.
- The sewing machine must rotate counterclockwise as viewed from the pulley. Take care not to allow the sewing machine to rotate in the reverse direction.
- Do not run the machine before filling the oil reservoir with the prescribed lubricating oil.
- Before starting a test run, remove the bobbin case and the needle thread from the machine.
- For the first month after the set-up, use the machine at a reduced sewing speed, 2,800 rpm or less
- Operate the handwheel after the sewing machine has totally stopped.
- Do not allow your fingers to come close to the face plate since the thread take-up knife is attached to the face plate.
- Do not open the thread take-up cover while the machine is operating.

1. 规格/SPECIFICATIONS

型式 Model		2284N 2284N-7	2284NU 2284NU-7
縫紉型式 Type of zigzag		標準 2 點/4 點人字縫 (可相互轉換) Standard zigzag/3-step zigzag(With pattern changeover function)	
線跡圖示 Stitch diagram			
最高轉速 Max.sewing speed		5000 針 / 分 5000rpm	4500 針 / 分 4500rpm
最大擺動寬度 Max.needle throw		10mm(標準出貨爲 8mm) 10mm(Factory-set to 8mm at the time of delivery)	
最大送布量 Max.feeding amount		2 點人字縫:2.5mm/4 點人字縫:2mm 2.5mm (3-step zigzag:2mm)	
使用機針 Needle		ORGAN: DP X5 #10	
壓腳高度 Lifter of the presser foot	手提 by the hand	5.5mm	
	膝提 by the knee	10mm	
使用機油 Lubricating oil		Oil No.10#	

不同縫紉型式和擺動寬度的最高轉速如表1所示。

Type and max.sewing speed depending on zigzag width conform to Table 1.

表 1(table 1)

型式 Model	2284N (-7)		2284NU (-7)	
綫迹圖 Stitch diagram				
擺動寬度 zigzag width				
0 ~ 5mm	5000rpm	5000rpm	4500rpm	4500rpm
6mm	4500rpm	5000rpm	4500rpm	4500rpm
6mm ~ 8mm	4000rpm	5000rpm	4000rpm	4500rpm
8mm ~ 10mm	3000rpm	4000rpm	3000rpm	4000rpm

2. 2 點曲折縫/4 點曲折縫的轉換

CHANGEOVER OF STANDARD ZIGZAG/3-STEP ZIGZAG

注意：

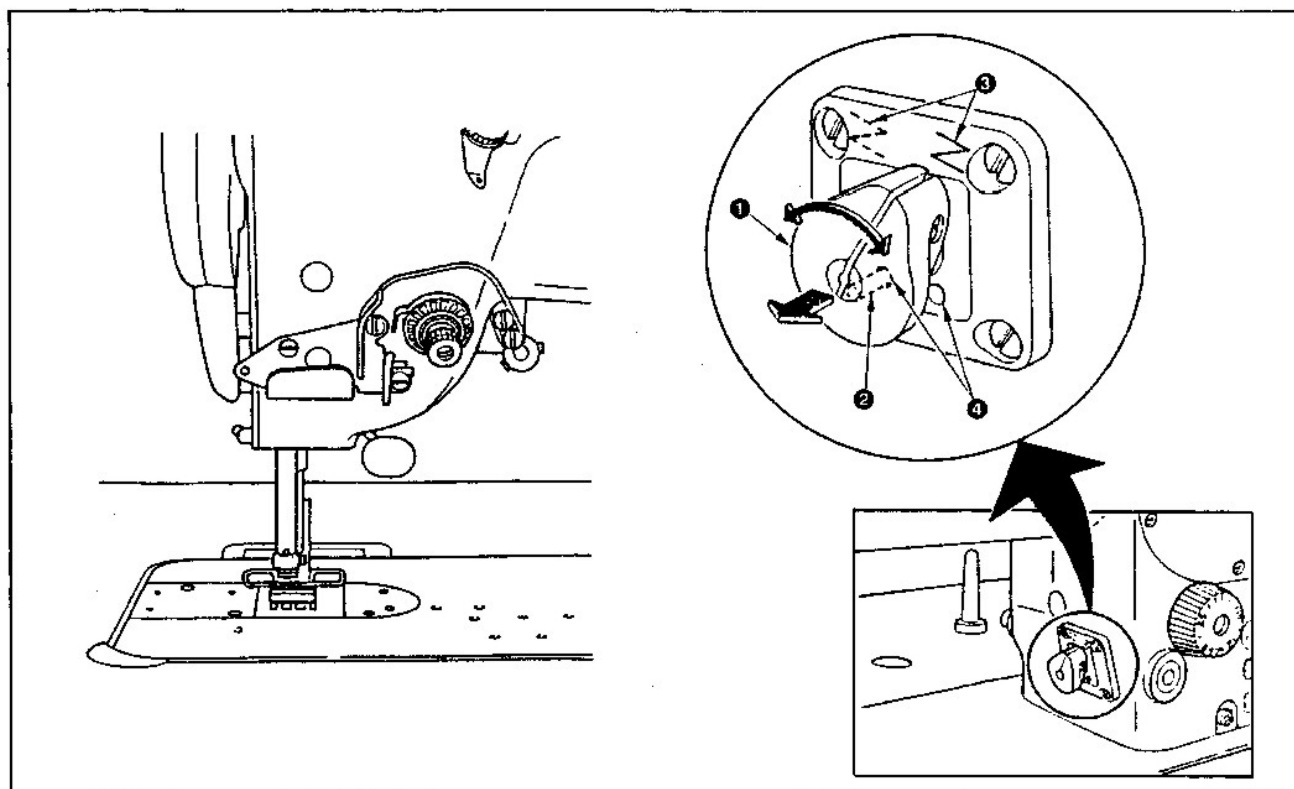


為了防止突然啓動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行。

WARNING:

To avoid possible personal injury due to abrupt start of the machine, turn off the power to the machine and check to be sure that the motor has totally stopped rotating in prior.

- 1) 用手轉動皮帶輪，使機針處于最下點。
- 2) 把轉換撥杆①往外拉，使鎖定銷②從定位孔④中拔出來。
- 3) 拉出轉換撥杆①後轉動，對準希望的綫迹圖標記③。此時，把鎖緊銷②準確的插到定位孔④內。
- 4) 轉換撥杆①不能轉動時，用手轉動皮帶輪 1 圈 (360°) 之後再按 1) —— 3) 步驟進行操作。反復進行直到可以進行轉換操作。



- 1) Turn handwheel by hand to bring needle to its lowest position.
- 2) Pull changeover lever ① toward this side and pull out lock pin ② from positioning hole ④.
- 3) Turn changeover lever ① while pulling it and adjust it to zigzag mark ③ you desire. At this time, securely place lock pin ② in positioning hole ④ and set it.
- 4) When changeover lever ① cannot be turned, perform again the work of steps 1) to 3) after manually turning the handwheel by one turn (360°). Perform repeatedly until changeover work can be completed.



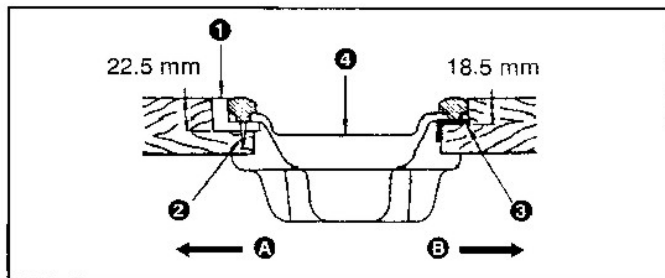
請確認鎖定銷 ② 不能轉動時，確實地插到定位孔 ④ 中，另外，鎖定銷 ② 沒有進入到定位孔 ④ 的情況(轉換途中)時，請絕對不要讓縫紉機轉動，如果縫紉機轉動了有可能發生故障。



Make sure that lock pin ② is securely placed in positioning hole ④.

In addition, never operate the sewing machine in the state that lock pin ② is not placed in positioning hole ④ (on the way of changeover). It will cause the trouble of the sewing machine.

3. 縫紉機的安裝 /SETTING UP THE SEWING MACHINE/

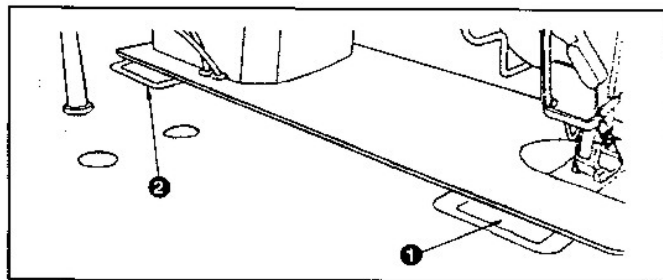


(1) 油槽的安裝

用螺釘②把前側A的2個頭部橡膠支座①釘到機台的伸出部，用黏接劑黏接固定好絞鏈側B的2個頭部膠墊座③，然後把油槽④放上去。

(1) Attaching the oil pan

Hammer the nails ② on the two support rubber seats ① of the machine head on operators' side A of the protruding section of the table, and fix the two cushion seats ③ of the machine head on hinging side B with rubber adhesive agent. Now, put the oil pan ④ on the cushions.



(2) 絞鏈的安裝

把絞鏈①放到機台的孔上，對準台板橡膠支座②，把頭部放到四角的機頭膠墊上。

(2) Attaching the hinge

Fit the hinge ① in the hole in the bed and engage it with the rubber hinge ② of the table. Put the machine head down on the cushions located at the four corners.

4. 皮帶防護罩的安裝 /ATTACHING THE BELT COVER/

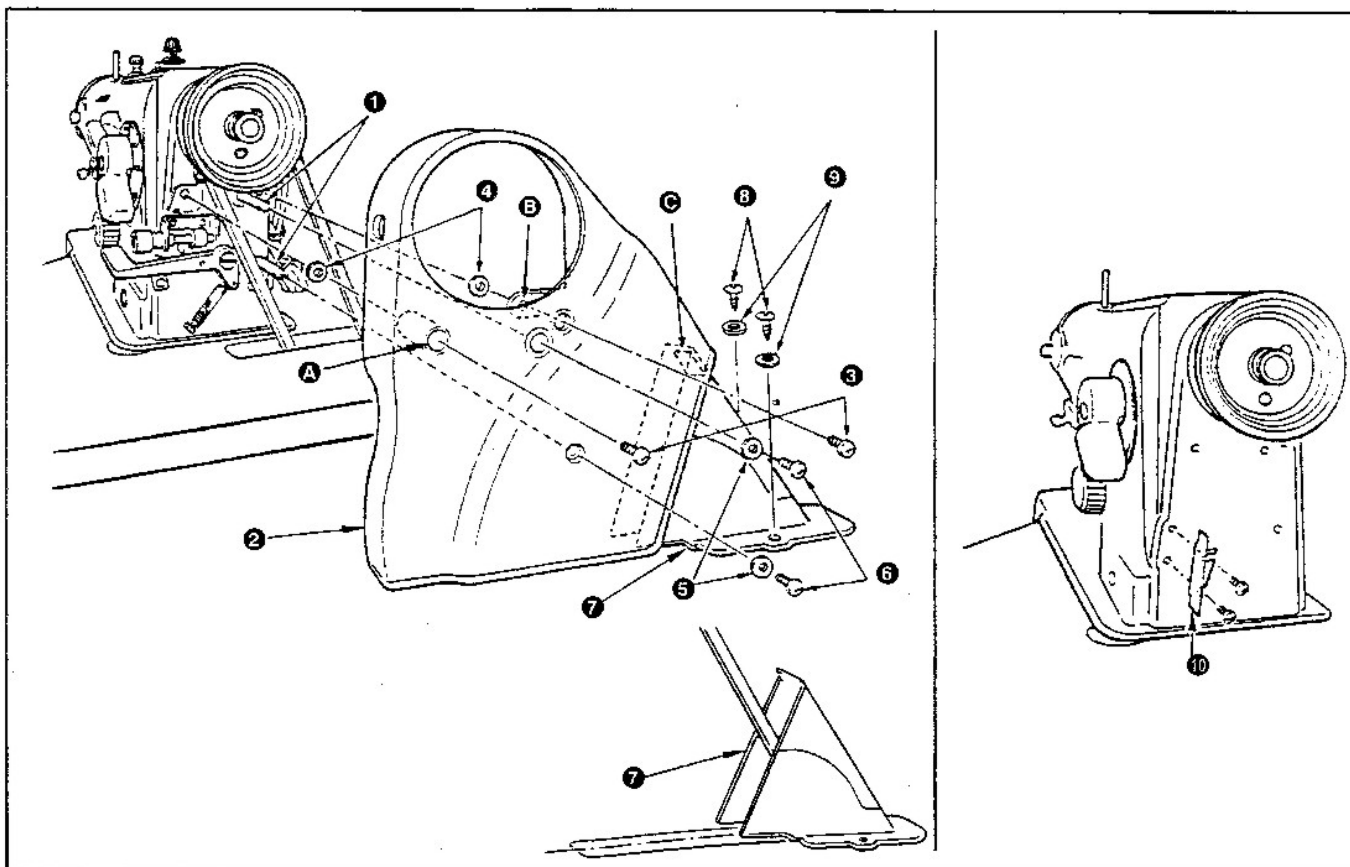
注意：

爲了防止突然啓動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行。



WARNING:

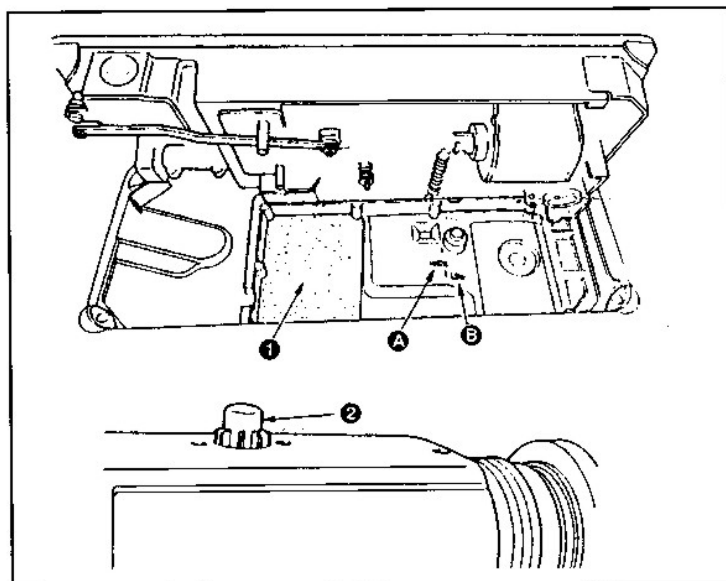
To avoid possible personal injury due to abrupt start of the machine, turn off the power to the machine and check to be sure that the motor has totally stopped rotating in prior.



- 1) 把皮帶護罩的 3 根支柱①牢牢地安裝到機架的螺絲孔上。
- 2) 把固定螺絲③插到皮帶護罩 A ②的孔。A 和 B 部，然後用固定螺絲墊片④固定。
- 3) 傾斜皮帶護罩 A ②；從後方把皮帶安裝到機架上。
- 4) 把固定螺絲③插到機臂的螺絲孔裡，然後把墊片⑤和固定螺絲⑥固定到皮帶護罩支柱。
- 5) 把皮帶護罩 B 連接器⑦從皮帶護罩 A ②的後方插入，在皮帶護罩 B 連接器⑦的橡膠部⑧輕輕頂住的位置固定好。此時，把木螺絲③、墊片⑤安裝到機台長孔的左右均等的位置。

- 1) Securely attach two belt cover studs ① to the screw holes in the machine arm.
- 2) Put setscrews ③ in hole A of belt cover ② and section B, and fix them with setscrew washers ④.
- 3) Attach belt cover A ② to the machine arm from the started rear side so that it covers the belt.
- 4) Fix setscrews ③ to the screw holes in the machine arm, and washers ⑤ and setscrews ⑥ to the belt cover supports.
- 5) Insert belt cover B asm. ⑦ from the rear of belt cover A ② and fix it at the position where rubber section ⑧ of belt cover B asm. ⑦ lightly comes in contact with the belt cover A. At this time, attach the belt cover B asm. at the position where the right and left sides are equal in terms of the long hole of the table with wood screw ③ and washer ⑤.

5. 供油 / LUBRICATION



- 1) 把縫紉機專用油10#加入到油槽，加到HIGH標記 A 的位置。
 - 2) 如果油面降到LOW標記 B 以下時，請再次把油加滿。
 - 3) 加油後運轉縫紉機，潤滑正常時應能看到油窗②裡油面跳動。
 - 4) 油的跳動量大小跟油量的多少無關，因此不用擔心。
 - 5) 請把泡沫塑料①放到油槽中。
- 更換縫紉機油時，請用手擰泡沫塑料除去積在裡面的污垢。



使用新縫紉機或長期沒有使用過的縫紉機時，請進行約 10 分鐘3,000~3,500rpm的空載運轉。

- 1) Fill the oil pan with oil No.10# upto the level of "HIGH" mark A.
- 2) Add the oil as soon as the oil level comes down to "LOW" mark B or lower.
- 3) Run the sewing machine after the lubrication. As long as the machine is lubricated normally, the oil splash is seen through the oil sight window ②.
- 4) The amount of the oil splash has no connection with the oil amount in the oil pan. So, do not worry about the amount of the oil splash.
- 5) Put foamed polyurethane pad ① in the oil pan. When replacing the oil, squeeze the sponge and remove dust accumulated in the oil pan.



Before operating a newly installed machine or a machine which has not been used for a relatively long period of time, let the machine run idle for approximately ten minutes at 3,000 to 3,500 rpm.

6. 旋梭的油量調整 /ADJUSTING THE AMOUNT OF OIL IN THE HOOK/

注意：

爲了防止突然啓動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行。



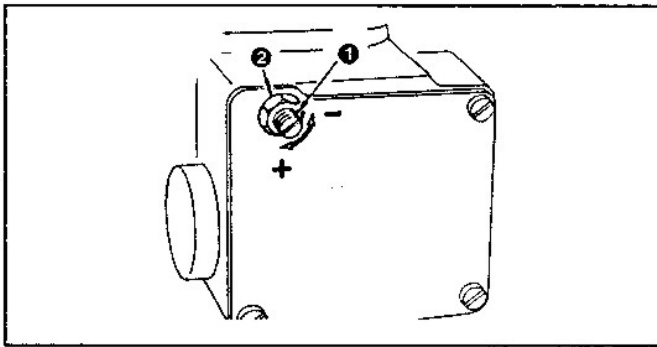
WARNING:

To avoid possible personal injury due to abrupt start of the machine, turn off the power to the machine and check to be sure that the motor has totally stopped rotating in prior.

- 1) 向後倒放縫紉機，轉動旋梭軸齒輪箱上的調整螺絲②進行調整。請擰鬆螺母②後轉動調整螺絲①。
向+的方向轉動……變多
向-的方向轉動……變少
- 2) 調整後，請把螺母②擰緊固定。



調整後，用 3000rpm~3500rpm 的速度運轉約10分鐘，確認油量。



- 1) Bascuter la tête de la machine en arrière et régler la quantité d'huile dans le crochet en tournant la vis de réglage ① se trouvant sur le boîtier du pignon de l'arbre de commande du crochet. Desserrer l'écrou ②, puis tourner la vis de réglage ①.

Pour augmenter la quantité d'huile dans le crochet, tourner le cadran de réglage dans le sens "+" (sens des aiguilles d'une montre).

Pour diminuer la quantité d'huile dans le crochet, tourner le cadran dans le sens "-" (sens inverse des aiguilles d'une montre).

- 2) Après le réglage, bloquer la vis de réglage en serrant l'écrou ②.



Après le réglage, vérifier la quantité d'huile dans le crochet après avoir fait tourner la machine à une vitesse de 3.000 à 3.500 pts/mn pendant 10 minutes environ.

7. 機針的安裝方法 /INSERTING THE NEEDLE/

注意：

爲了防止突然啓動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行。

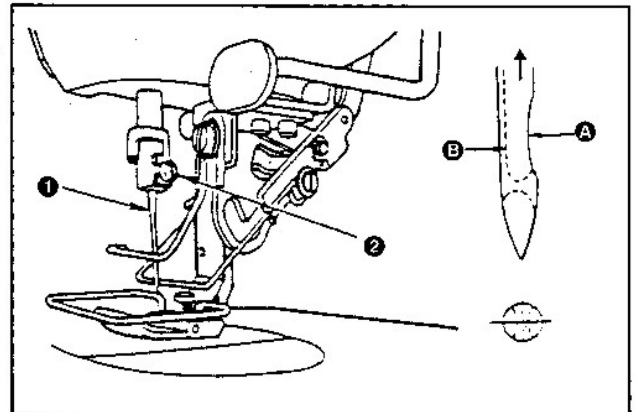


WARNING:

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- 1) 轉動手輪，把針杆上升到最高位置。
- 2) 擰松機針固定螺絲②，手拿機針讓機針①的長溝部③朝向前方。
- 3) 沿箭頭方向把機針插到針杆孔的最深處。
- 4) 把機針固定螺絲②擰緊。
- 5) 確認機針的長溝③是否朝向前方。

- 1) Tourner le volant à la main pour remonter complètement la barre à aiguille.
- 2) Desserrer la vis du pince-aiguille ②. Présenter l'aiguille ① avec sa longue rainure ③ tournée directement vers soi.
- 3) Introduire l'aiguille à fond dans l'orifice de la barre à aiguille dans le sens de la flèche.
- 4) Serrer à fond la vis ②.
- 5) S'assurer que la longue rainure ③ de l'aiguille est tournée vers soi.



8. 底綫的卷繞方法 /WINDING THE BOBBIN THREAD/

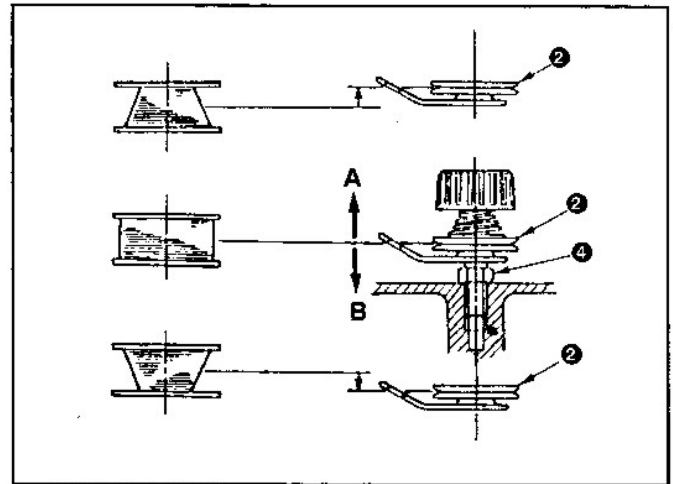
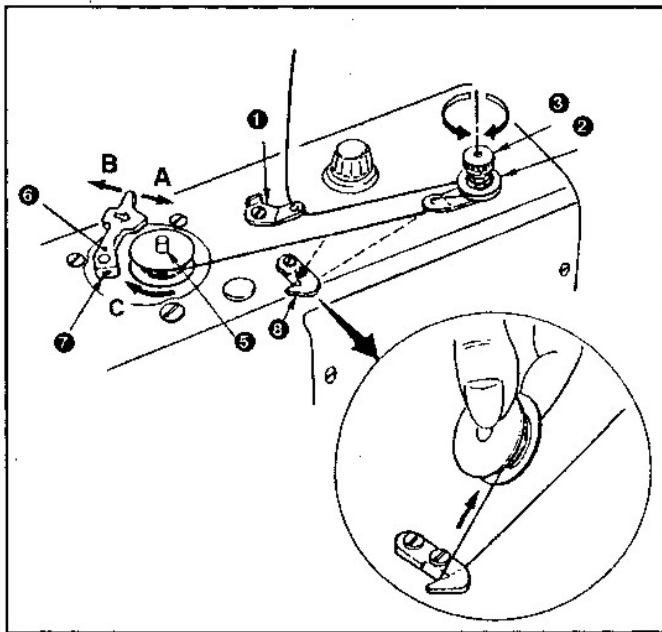
注意：

爲了防止突然啓動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行。



WARNING:

To avoid possible personal injury due to abrupt start of the machine, turn off the power to the machine and check to be sure that the motor has totally stopped rotating in prior.



- 1) 把梭心推到卷線軸 ⑤ 的最裡面。
- 2) 把線架右側的卷線如圖所示穿線，並把線端在梭心上先繞幾圈。
- 3) 把卷線撥杆 ⑥ 推到A方面，轉動縫紉機，梭心向C方向轉動；線被繞到梭心上，卷線結束後卷線軸 ⑤ 自動停止。
- 4) 取下梭心，用切線保持板 ③ 切斷機線。
- 5) 調整底線卷線量時，請擰松固定螺絲 ⑦，把卷線撥杆 ⑥ 移動到向A方向或B方向；然後擰緊固定螺絲 ⑦。
A方向：變少
B方向：變多

- 1) Insert the bobbin deep into the bobbin winder spindle ⑤ until it will go no further.
- 2) Pass the bobbin thread pulled out from the spool rested on the right side of the thread stand following the order as shown in the figure on the left. Then, wind the end of the bobbin thread on the bobbin several times.
- 3) Press the bobbin winder trip latch ⑥ 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 ⑤ will automatically stop 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 ⑦ and move the bobbin winder trip latch ⑥ to the direction A or B. Then, tighten the setscrew ⑦.

To the direction A: Decrease

To the direction B: Increase

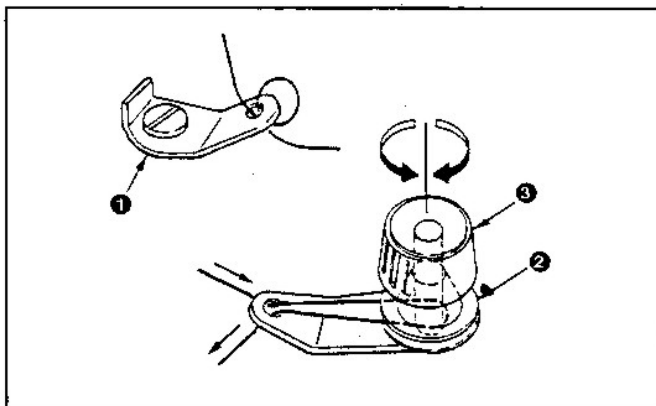
- 6) 如果線不能平繞梭心時，擰松螺母 ④，轉動卷線張力器，調整線張力盤 ② 的高度。
旋梭中心和線張力盤中心高度一樣時為標準位置。
下多卷時，如圖的A方向。
上多卷時，如圖的B方向移動線張力盤 ② 的位置。
調整後，把固定螺母 ④ 擰緊。

- 6) In case that the bobbin thread is not wound evenly on the bobbin, loosen the nut ④ and turn the bobbin thread tension to adjust the height of the thread tension disk ②.

- 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 ② to the direction 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 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 ④.

- 7) 調整底線卷繞張力時，請轉動線張力螺母③進行調整。
- 8) 底線使用裝飾線時，有可能從底線繞線的線張力盤②脫線；卷線困難，這時，把線往卷線線張力導向器①上穿2次線；或往卷線張力杆(結合)上穿一次線，過線張力盤②，再次穿過卷線張力杆(結合)，來改善卷線。
- 7) Turn the thread tension nut ③ to adjust the tension of the bobbin thread winder.
- 8) In case of using the decorative thread for the bobbin thread, it is likely to be difficult to wind the bobbin thread as the decorative thread comes off the thread tension disk ②. In this case, this problem will be improved by passing the bobbin thread two times through the thread tension guide ① or passing the bobbin thread once through the bobbin thread tension rod (asm.) and again passing the bobbin thread through the bobbin thread tension rod (asm.) after passing the bobbin thread through the thread tension disk ②.



9. 梭心的安裝方法 / INSERTING THE BOBBIN CASE AND THE BOBBIN



注意：

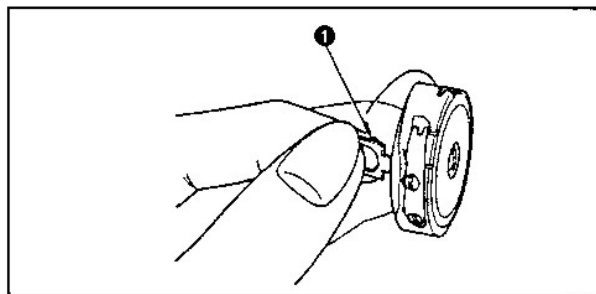
為了防止突然啟動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行。

WARNING:

To avoid possible personal injury due to abrupt start of the machine, turn off the power to the machine and check to be sure that the motor has totally stopped rotating in prior.

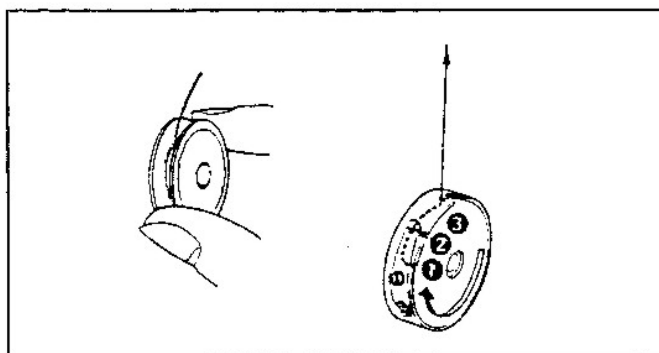
梭套的取出安裝

- 1) 轉動手輪，讓機針到達最高位置。
 - 2) 如圖所示，搬起梭套的把手①。
 - 3) 從油槽的下方伸進手，插到旋梭軸上。
 - 4) 確實地扣好梭套把手。
- ★ 取出時按裝入時相反的順序拉起梭套把手即可取出來。



Inserting and removeing the bobbin case

- 1) Turn the handwheel by hand to raise the needle to the highest point.
 - 2) Raise the bobbin case latch ① and hold it between your two fingers as shown in the figure on the left.
 - 3) Insert the bobbin case as it is being held into the sewing hook shaft as far as it will go by putting your hand from the under of the oil reservoir.
 - 4) Release the bobbin case latch to let it steadily rest in the closing position.
- * Reverse the above procedures when removing the bobbin case.



梭心的插入方法

- 1) 把梭心上的線頭拉出5cm左右，如圖所示插入梭套。
- 2) 把線按槽溝的號碼順序穿進，把線從穿線口拉出。
- 3) 手拉底線，梭心如箭頭方向旋轉。

Placing a bobbin into the bobbin case

- 1) Take a bobbin by your right hand with the thread drawn out about 5 cm and place it into the bobbin case as illustrates.
- 2) Thread the bobbin case in the order of the numbers and pull it out through the thread path as illustrates.
- 3) Make sure that the bobbin rotates in the bobbin case in the direction shown by arrow.

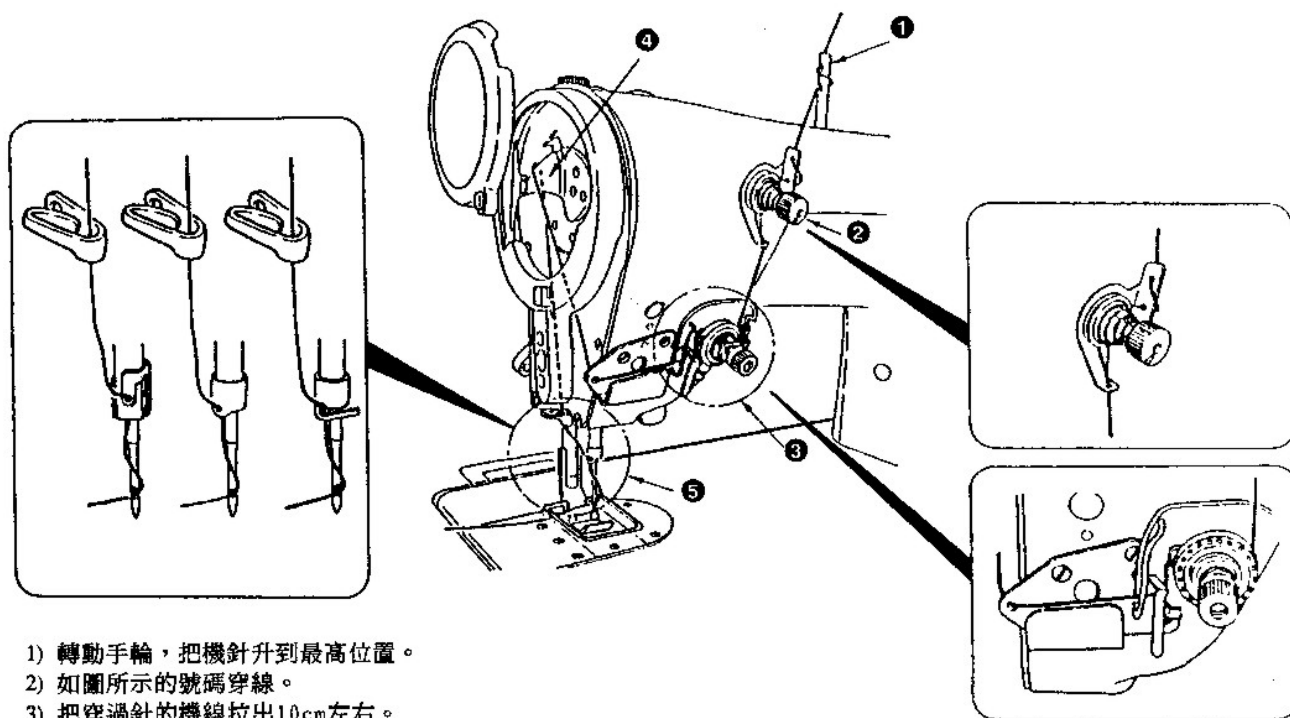
10. 上線的穿線方法 / THREADING THE MACHINE HEAD/

注意:

為了防止突然啓動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行。

WARNING:

To avoid possible personal injury due to abrupt start of the machine, turn off the power to the machine and check to be sure that the motor has totally stopped rotating in prior.



11. 線張力的調整方法 / ADJUSTING THE THREAD TENSION/

注意:

發生斷線時，有時撿線杆上會繞線。這時，請打開挑線杆防護罩取下卷繞的機線。此時，請注意手不要被刀切傷。

WARNING:

In case of thread-breakage, it may occur that the thread tangles on the thread take-up lever. In this case, remove the thread tangling around the thread take-up lever by raising the thread take-up cover. At this time, be careful not to cut your fingers with the knife.

(1) 上線張力的調整

1) 上線張力用線張力螺母①調整。

向右轉動……變強

向左轉動……變弱



1. 線張力器②過弱的话，轉盤張力③變小有時線會打滑。請注意張力的適度，用張力調整螺母④進行調整。
2. 設定了上線張力之後，把線向F方向拉出，確認張力器③不打滑線可以順利轉動。
如果滑出時，請擰緊張力調整螺母④。

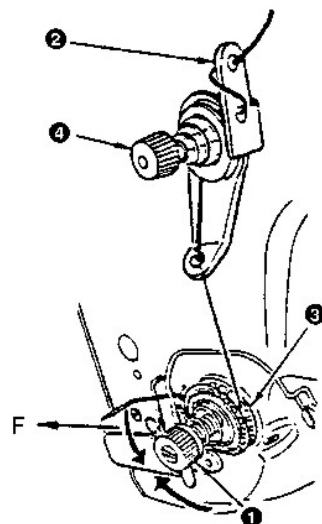
(1) Adjusting the needle thread tension.

1) Adjust the needle thread tension using the tension nut ①.

Turning the tension nut clockwise increases the needle thread tension, or counterclockwise decreases it.



1. If the thread tension of the pretension disc ② is too low, the thread may slip out of the rotary tension ③. Adjust the thread tension of the pretension, using the pretension adjusting nut ④ taking care of tension balance between the pretension and the rotary tension.
2. After adjusting the needle thread tension, draw the thread in the direction F to check that the rotary tension ③ smoothly rotates with no thread slippage.
If the thread slips out of the rotary tension, tighten the pretension adjusting nut ④.



(2) 挑線彈簧的調整

1) 改變挑線彈簧的強度時，請把線張力棒固定螺絲①擰緊，把螺絲刀插入線張力杆②的溝槽進行調整。

向右轉動……變強

向左轉動……變弱

2) 改變挑線彈簧的挑線量時，請擰松線張力杆固定螺絲①，轉動線張力杆座③。

挑線量範圍…6~10mm

(2) Adjusting the thread take-up spring

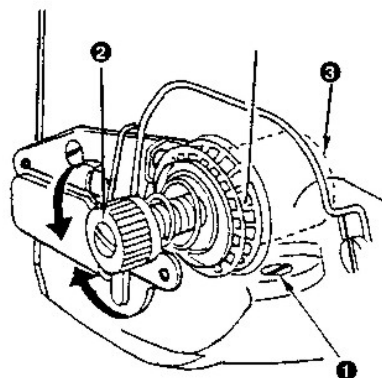
1) To change the tension of the thread take-up spring, firmly tighten the screw ① which fastens the tension post socket to the machine arm and insert the blade of a screwdriver into the slot in the tension post ② to adjust the tension of the thread take-up spring.

Turn it clockwise to increase.

Turn it counterclockwise to decrease.

2) To change the amount of thread taken by the thread take-up spring, loosen the clamping screw ① of the tension post socket and turn the tension post socket ③.

Adjustable range of the amount of thread taken by the thread take-up spring 6 to 10 mm



(3) 底線張力的調整

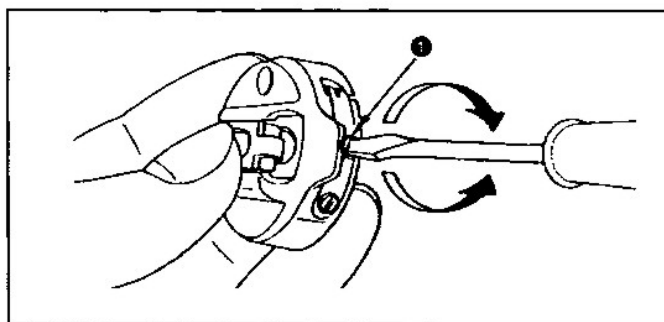
- 1) 底線張力請轉動梭套的線張力螺絲 ❶ 進行調整。
向右轉動……變強
向左轉動……變弱

(3) Adjusting the bobbin thread tension

- 1) The tension of the bobbin thread is adjusted by turning the tension adjusting screw ❶.

Turn it clockwise to increase.

Turn it counterclockwise to decrease.



12. 針擺動幅度的調整 / ADJUSTING THE ZIGZAG WIDTH /

注意:

爲了防止突然啓動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行。



WARNING:

To avoid possible personal injury due to abrupt start of the machine, turn off the power to the machine and check to be sure that the motor has totally stopped rotating in prior.

(1) 擺動幅度的調整

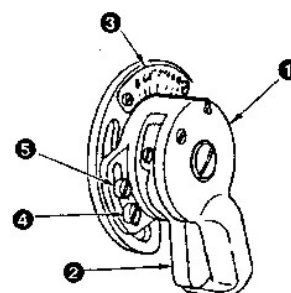
擺動幅度用擺動幅度旋鈕 ❶ 來進行調整。

- 1) 用手按旋鈕柄 ❷。
- 2) 按住旋鈕柄的狀態下轉動旋鈕，把指示線對準刻度板 ❸ 的數字 (mm)。
- 3) 手松開旋鈕柄，即被固定到其刻度位置。

(1) Adjusting the zigzag width

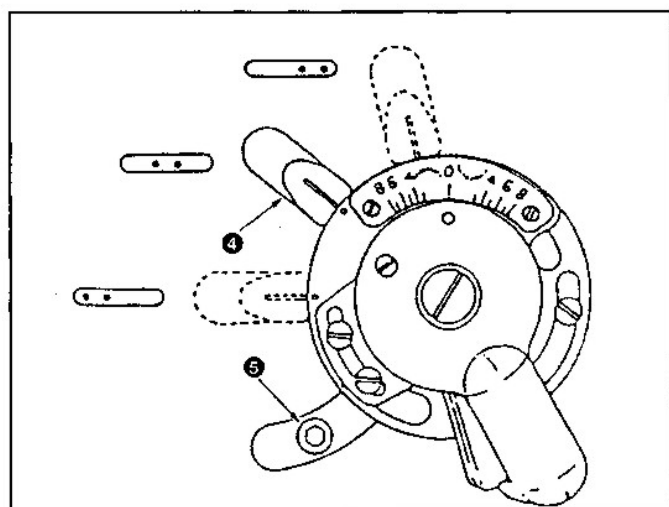
The zigzag width is adjusted by the knob ❶.

- 1) Push the lever ❷ with your finger.
- 2) Turn the knob as you are pushing the lever and set the pointing line to a desired zigzag width which is indicated by the zigzag width scale ❸ in mm.
- 3) Release the lever, and the knob will be locked up in the given position.



(2) 變更針位置

變更落針位置時，請如圖所示那樣移動變更針位置手柄。



(2) Changing the needle position

When changing the position of needle entry, move the needle position changing lever as shown in the figure on the left.

用附屬的4mm六角板手擰松螺絲 ❺，移動機針位置變更杆 ❹，可以變更機針的落針位置。



1. 運轉時，請一定擰緊螺絲。
2. 反轉花樣時，一定把拉杆放到中央。

Loosen screw ❺ with a 4 mm hexagon wrench key supplied with the and change the position of needle entry by moving needle position changing lever ❹.



1. When operating the machine, screw ❺ has to be tightened without fail.
2. When sewing an inverse pattern, the lever has to be positioned at the center of its adjustment range.

13. 壓腳壓力的調整 / ADJUSTING THE PRESSURE OF THE PRESSER FOOT/



注意:

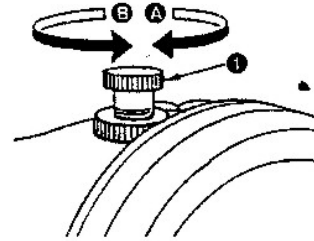
為了防止突然啟動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行。

WARNING:

To avoid possible personal injury due to abrupt start of the machine, turn off the power to the machine and check to be sure that the motor has totally stopped rotating in prior.

- 1) 向右方向 **A** 轉動壓腳調節螺絲 **1**，壓力變大。
- 2) 向左方向 **B** 轉動壓力變小。

- 1) Turn the presser spring regulator **1** clockwise **A** to increase the pressure given by the presser foot.
- 2) Turn the presser spring regulator counterclockwise **B** to decrease it.



14. 壓腳杆高度的調整 / ADJUSTING THE HEIGHT OF THE PRESSER BAR/

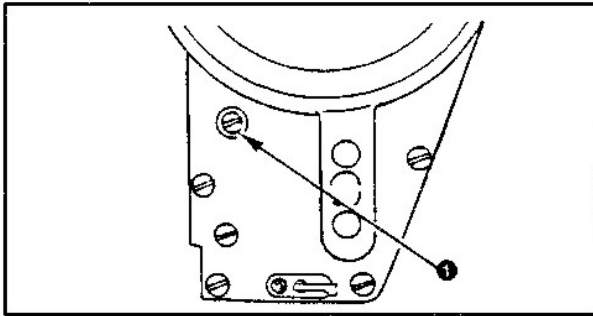


注意:

為了防止突然啟動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行。

WARNING:

To avoid possible personal injury due to abrupt start of the machine, turn off the power to the machine and check to be sure that the motor has totally stopped rotating in prior.



- 1) 變更壓腳杆高度和壓腳角度時，擰松壓腳軸套固定螺絲 **1** 進行調整。
- 2) 調整後，把固定螺絲擰緊。

- 1) To change the height of the presser bar or the inclination of the presser foot, loosen the presser bar connection screw **1** and perform the adjustment properly.
- 2) After the adjustment, securely tighten the screw.

15. 壓腳微量浮起調整 / ADJUSTING THE MICRO-LIFTING MECHANISM OF THE PRESSER FOOT/

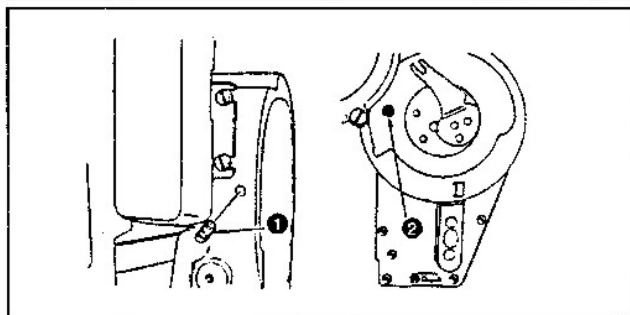


注意:

為了防止突然啟動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行。

WARNING:

To avoid possible personal injury due to abrupt start of the machine, turn off the power to the machine and check to be sure that the motor has totally stopped rotating in prior.



根據縫製材料的需要，浮起壓腳進行縫製參照下列調整方法。

- 1) 擰松壓腳浮起固定螺絲 **1**。
- 2) 從機台的孔部，向右方向轉動壓腳浮起螺絲 **2**，把壓腳升到需要的高度後擰緊固定螺絲 **1**。

Some type of material needs to be sewn with the presser foot slightly lifted.

In this case, perform this adjustment following the procedure described below.

- 1) Loosen the setscrew **1** in the presser foot micro-lifter.
- 2) Turn the presser foot micro-lifting screw **2** clockwise through the hole in the face plate until the presser foot is raised as desired. Then, tighten the screw **1**.



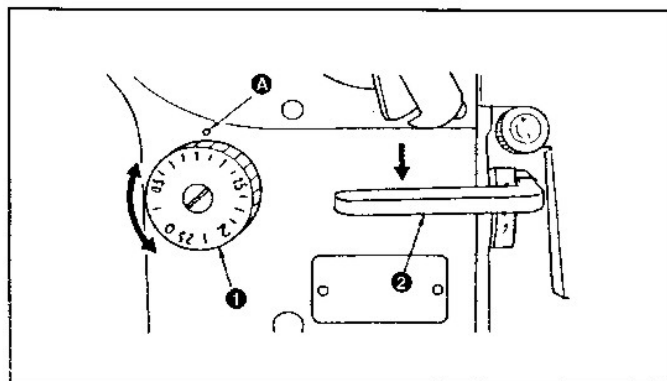
If you do not use the micro-lifting mechanism of the presser foot, fully return the presser foot micro-lifting screw **2** to its home position.



不使用時，請把壓腳浮起螺絲 **2** 返回到原來的位置。

16. 送布長度的調整 /ADJUSTING THE STITCH LENGTH/

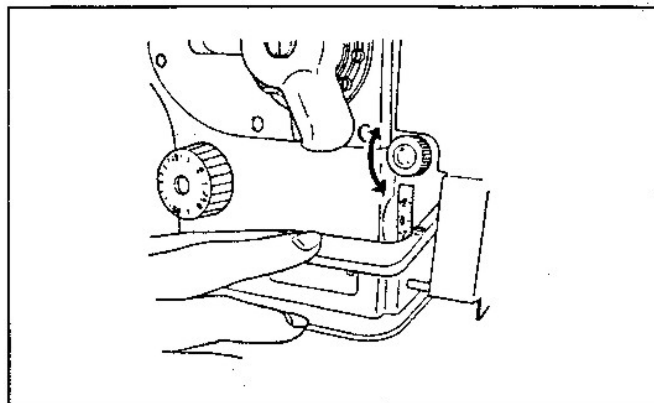
- 1) 順箭頭方向轉動送布調節刻度盤 ❶，把希望的數字對準機臂刻點 ❷。
- 2) 刻度的數字為 mm。
- 3) 從大向小變更送布刻度時，順箭頭方向按住送布杆 ❷，同時轉動送布調節盤 ❶。
倒縫時，向下壓倒縫送布杆 ❷。在壓下的時間，可以倒縫。手松開後，倒縫送布杆返回原來位置，縫紉機恢復為正方向送布。



- 1) Turn the stitch length dial ❶ in the direction of the arrow so that the number corresponding to the desired stitch length meets the marker dot A engraved on the machine arm.
- 2) Numbers on the stitch length dial are calibrated in "mm".
- 3) To change the stitch length from a larger value to a small value, turn the stitch length dial ❶ while pressing the feed lever ❷ in the direction of the arrow.

To perform reverse feed stitching, press down the feed lever ❷. The sewing machine performs reverse feed stitching as long as you keep the feed lever held pressed. The feed lever will return to its home position and the sewing machine will run in the normal stitching direction when you release the feed lever.

17. 壓縮針腳的調整 /ADJUSTING THE DENSER STITCHING/



開始縫紉和縫紉結束時讓針跡的間距縮短，以及縫紉終止時等進行加固時使用。

- 1) 按下倒縫送布杆的同時轉送撥盤，倒縫送布杆便移動，把刻度對準送布杆上面調整密縫針跡。
- 2) 向+方向轉動刻度盤，倒縫的針跡縮小（正送布的附近）。
+2表示〔正送布 2mm〕，-2表示〔倒送布2mm〕。
- 3) 密縫調整（讓倒縫按鍵動作，不進行倒縫，讓正送的針跡變小）也可以進行。
* 刻度僅是大概的數字，讓邊縫邊調整。

Stitch length can be reduced at the start or end of sewing. This feature is used for fastening stitch.

- 1) If you turn the dial with the feed lever held pressed down, the feed lever will move. Adjust the stitch length for denser stitching taking the graduation which meets the top surface of the feed lever as reference.
 - 2) Turn the dial in the "+" direction to reduce the reverse feed stitch length (i.e. the feeding direction gradually changes to the normal one).
"+2" means "normal feed stitch length is 2 mm" and "-2" means "reverse feed stitch length is 2 mm".
 - 3) The denser stitching can be adjusted under the normal stitching mode (when the one-touch type reverse feed switch is actuated, the feed will not move in the reverse direction but the normal feed stitch length will be reduced).
- * The graduations on the dial are mere reference. So, adjust the denser stitching while actually observing the finished seam.

18. 送布牙的高度、傾斜度 / HEIGHT AND INCLINATION OF THE FEED DOG/

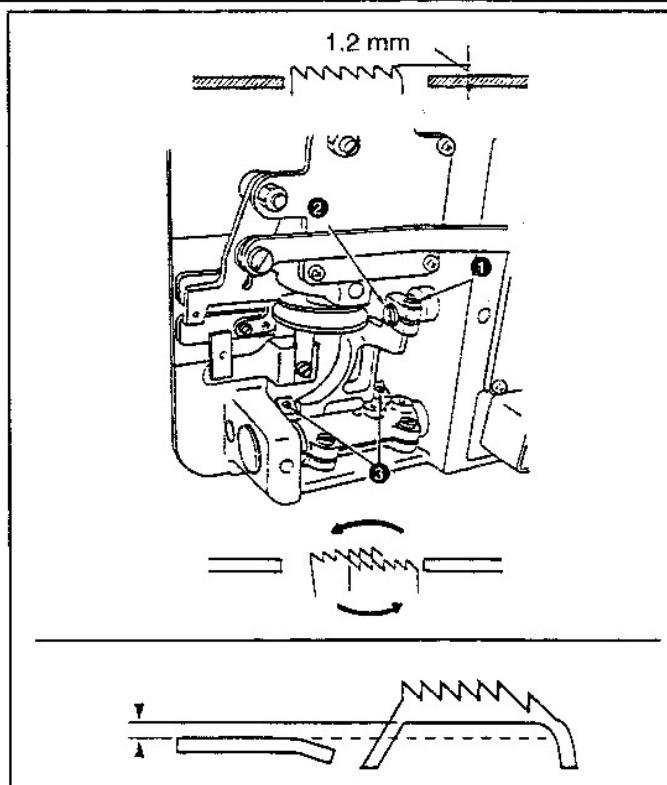


注意:

爲了防止突然啓動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行。

WARNING:

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(1) 送布牙的高度

- 1) 調整送布牙的高度時，如圖所示擰松上下送布環軸的固定螺絲 ①，用螺絲刀轉動上下送布環軸 ②。
- 2) 送布牙的標準高度爲1.2mm。
- 3) 送布牙與護針器的傾斜度調整，如圖所示擰松2根送布台軸固定螺絲 ③，把螺絲刀穿過機座上的孔轉動送布台軸。
- 4) 切線規格機種進行了送布調整(變更高度、同步等)，或使用市場出售的送布牙時，有可能固定刀和送布牙下面的空間沒有了。這時，可以往送布台下面的墊上送布台墊片和在護針器下面墊上護針器墊片以確保空間。

(2) 送布牙的傾斜度

送布牙的標準傾斜度爲針板與送布牙出來時呈水平狀態。

(1) Height of the feed dog

- 1) To adjust the height of the feed dog, loosen the screw ① and turn the feed driving link pin ② using a screwdriver.
- 2) The standard height of the feed dog is 1.2 mm.
- 3) To adjust the inclination of the feed dog, loosen the two screws ③ and turn the eccentric shaft inserting a screwdriver through the adjustment hole in the machine bed.
- 4) For the machine with a thread trimmer, there can be no space between the counter knife and the underside of the feed dog when adjusting the feed mechanism(change in height and timing)or using a commercially-available feed dog. In this case, place a feed bar spacer under the feed mechanism and a throat plate space under the throat plate so as to secure a space between the counter knife and the underside of the feed dog.

(2) Inclination of the feed dog

The standard inclination of the feed dog is obtained by adjusting the feed dog so that it becomes horizontal when it rises above the top surface of the throat plate.

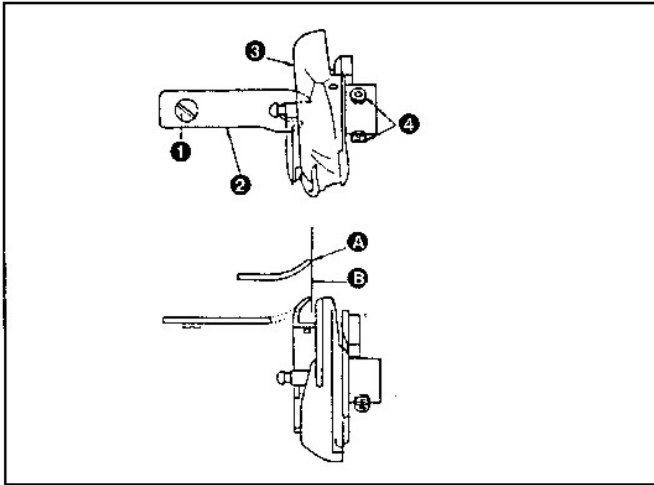
19. 旋梭的安裝與拆卸 / ATTACHING OF THE HOOK/

注意:

爲了防止突然啓動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行。

WARNING:

To avoid possible personal injury due to abrupt start of the machine, turn off the power to the machine and check to be sure that the motor has totally stopped rotating in prior.



更換旋梭時，請按照以下的順序進行。

- 1) 轉動手輪，把機針升到最高位置。
- 2) 卸下機針、壓腳、針板、送布牙、梭套。
- 3) 卸下內旋梭固定螺絲①，取下內旋梭擋塊②。
- 4) 擰松2只旋梭③固定螺絲④取出旋梭。

★ 安裝旋梭時，請按與此相反的順序進行。這時，應該內旋梭前端

▲與圖的B線基本一致。但是，前端不能從B線的右側出來。

When you replace the sewing hook, remove it in the following procedures;

- 1) Turn the handwheel until the needle reaches to its highest position.
- 2) Remove the needle, presser foot, throat plate, feed dog and bobbin case from the machine.

3) Remove the setscrew ① and take out the bobbin case positioning finger ②.

4) Loosen the two screws ④ and remove the sewing hook ③.

* Reverse the above procedures when inserting the sewing hook.

At this time, make sure that top end ▲ of the bobbin case positioning finger is aligned with line B as shown in the figure on the left. Never let ▲ protrude from line B.

20. 針杆高度的調整 / ADJUSTING HEIGHT OF THE NEEDLE BAR/

注意:

爲了防止突然啓動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行。

WARNING:

To avoid possible personal injury due to abrupt start of the machine, turn off the power to the machine and check to be sure that the motor has totally stopped rotating in prior.



- 1) 把擺動寬度設爲 0，針的位置應在中央。
- 2) 卸下壓腳、針板、月牙板、送布板。
- 3) 把半月牙A放到機座上，如圖所示擰松固定螺絲①，

把月牙板的上面到針杆的下端的高度調整成與同步板1相同的高度

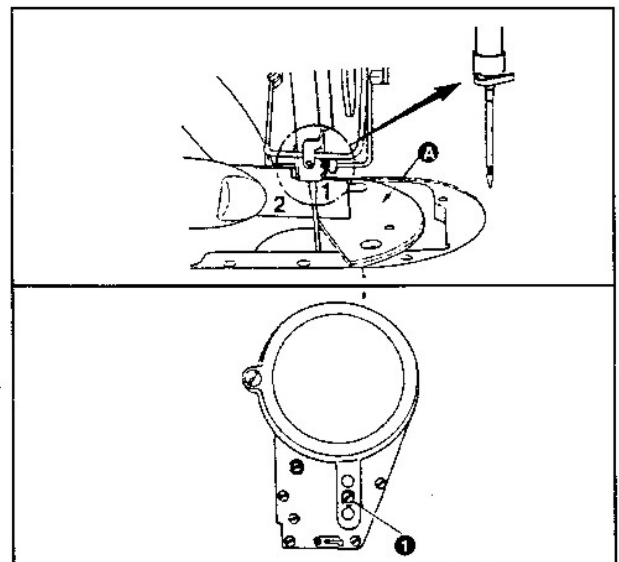


1. 因針板和月牙板的厚度不同，所以調整時一定要使用月牙板。(調整時，必須將擺幅調整爲0，在基線中心調整)。

- 1) Set the zigzag width to "0". Bring the needle to the center of the zigzag stroke.
- 2) Remove the presser foot, throat plate, semicircle plate and feed dog.
- 3) Place a semicircle plate on the plane, to which the throat plate is to be attached, of the bed. Loosen the screw ①, and adjust so that a height difference of timing gauge 1 is provided between the lowest end of the needle bar and the top surface of the semicircle plate.



1. Thickness of the semicircle plate is different from that of the throat plate. So, be sure to use the semicircle plate when adjusting the height of the needle bar.
Be sure to perform the adjustment with zigzag width set to zero and with the needle positioned at the center of the zigzag stroke.



21. 針和旋梭的同步以及針板的調整

ADJUSTING THE NEEDLE-TO-HOOK TIMING AND THE NEEDLE GUARD/

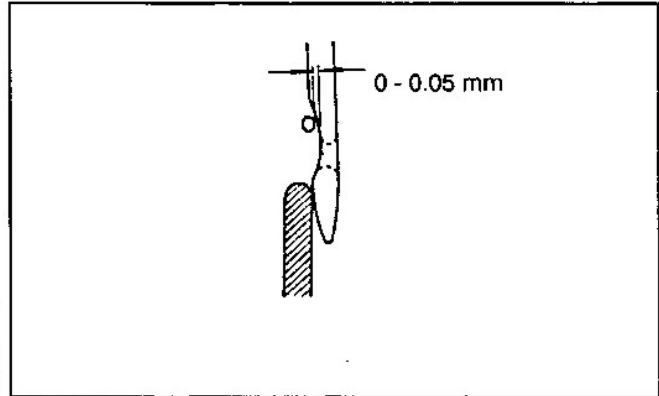
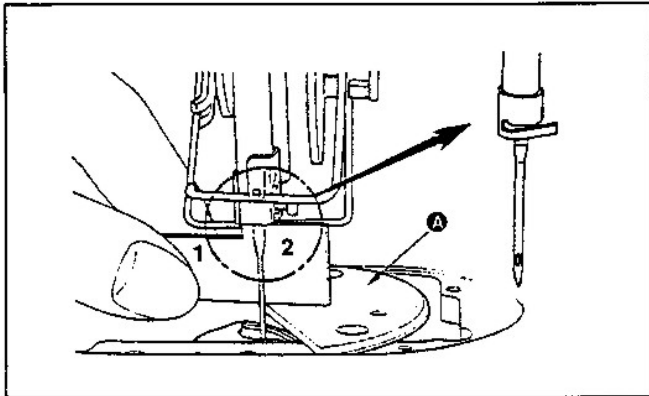
注意:



為了防止突然啟動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行。

WARNING:

To avoid possible personal injury due to abrupt start of the machine, turn off the power to the machine and check to be sure that the motor has totally stopped rotating in prior.



(1) 旋梭位置的調整

- 1) 調整完針杆高度後，在同步板 2 的高度，讓旋梭尖正好對準針的中央。
- 2) 此時，讓針器不要碰到機針，讓旋梭尖輕輕與機針相碰。

(2) 確認

最大擺動寬度時的左擺，針孔上端和旋梭尖頭的距離應為 0.2~0.5mm。

* 擺動寬度 10mm 時，針杆高度不同時，請再次調整針杆高度。

(3) 針板的調整

- 1) 把擺動寬度設為最大，左右調整護針器，在左右位置都不使針和旋梭相碰。此時，針和旋梭尖間隙為 0~0.05mm。
- 2) 護針器是防止旋梭尖和針相碰損傷梭尖的裝置。因此更換旋梭後一定要調整護針器的位置。

(1) Positioning the hook

- 1) After the completion of the adjustment of the needle bar height, adjust the hook using timing gauge 2 so that the blade point of the hook is aligned with the center of the needle.
- 2) At this time, the blade point of the hook should slightly come in contact with the needle when the needle guard does not touch the needle.

(2) Confirmation

Maximize the zigzag width. Bend the needle to the leftmost position of the zigzag stroke. Now confirm that the top end of the needle eyelet is spaced 0.2 to 0.5 mm away from the blade point of the hook.

* If the zigzag width is set to 10 mm or the needle bar height is different from the standard one, re-adjust the height of the needle bar.

(3) Adjusting the needle guard

- 1) Maximize the zigzag width. Bend the needle guard to adjust so that the needle does not come in contact with the blade point of the both at the leftmost and rightmost positions of the zigzag stroke. At this time, adjust the clearance provided between the needle and the blade point of the hook to 0 to 0.05 mm.
- 2) The needle guard functions to keep the needle away from the blade point of the hook, thereby preventing damage to the blade point of the hook. Whenever you have replaced the hook with a new one, be sure to adjust the position of the needle guard.

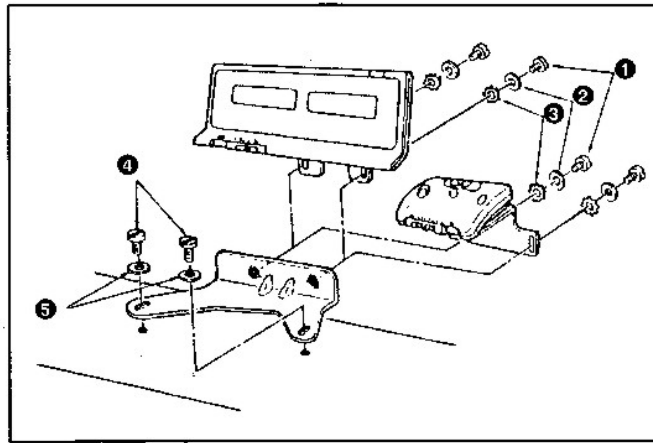
22. 控制盤的安裝 /INSTALLING THE CONTROL PANEL/

注意:

爲了防止突然啓動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行。

WARNING:

To avoid possible personal injury due to abrupt start of the machine, turn off the power to the machine and check to be sure that the motor has totally stopped rotating in prior.



23. 踏板的調整 /ADJUSTING THE PEDAL/

注意:

爲了防止突然啓動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行。

WARNING:

To avoid possible personal injury due to abrupt start of the machine, turn off the power to the machine and check to be sure that the motor has totally stopped rotating in prior.



(1) 連接杆的安裝

- 1) 向箭頭方向移動踏板調節板 ③，讓馬達控置杆 ①和連接杆 ②成一直線。

(2) 踏板的角度

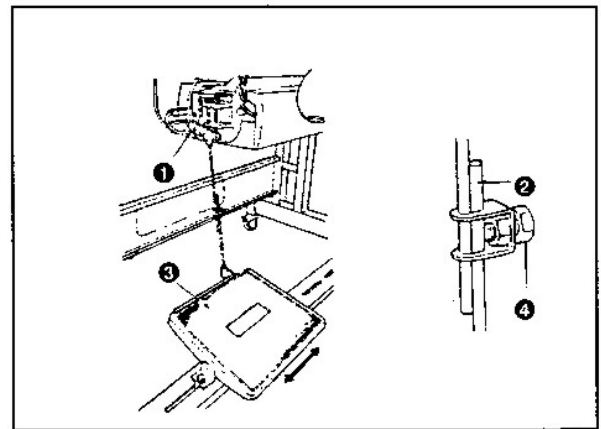
- 1) 調節連接杆的長度即可以改變踏板的角度。
- 2) 擰松調節螺絲 ④，移動連接杆 ②進行調節。

(1) Attaching the connecting rod

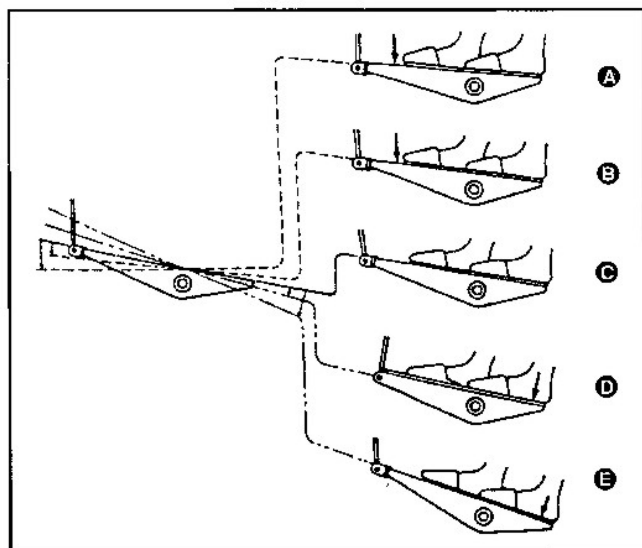
- 1) Move the pedal adjusting plate ③ in the direction of the arrow to make the motor control lever ① and the pedal connecting rod ② straight.

(2) Inclination of the pedal

- 1) Inclination of the pedal can be adjusted by changing the length of the pedal connecting rod.
- 2) Loosen the adjusting screw ④, and move up or down the connecting rod ② to change its length as desired.



24. 踏板操作 /HOW TO OPERATE THE PEDAL/



踏板有4級操作。

- 1) 向前輕輕踩踏板為低速縫紉 **B**。
- 2) 在繼續往前踩踏板為高速縫紉 **A**。(但是，設定了自動倒縫開關後，倒縫結束之後為高速縫紉)
- 3) 輕輕踩踏板然後返回縫紉機停止 **C** (機針為上停止或下停止)。
- 4) 向後踩踏板為切線動作 **E**。
※ 向後輕輕踩踏板，為壓腳提升動作 **D**，在繼續踩踏板為切線動作。

The pedal is operated in four stages.

- 1) Lightly depress the front part of the pedal for low-speed operation **B**.
- 2) Further depress the front part of the pedal for high-speed operation **A**. (Note that the sewing machine will enter the high-speed operation mode after the completion of reverse feed stitching if the automatic reverse feed stitching function is specified with the corresponding switch.)
- 3) Bring the pedal back to its neutral position, and the sewing machine will stop running **C**.
(The needle stops in the highest/lowest position.)
- 4) Strongly depress the back part of the pedal, and the thread trimmer will be actuated **E**.
* Lightly depress the back part of the pedal, and the presser foot will go up **D**. Further depress the back part of the pedal, and the thread trimmer will be actuated.

25. 機針停止位置的調整 /ADJUSTING THE STOP POSITION OF THE NEEDLE/

注意:

為了防止突然啟動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行。



WARNING:

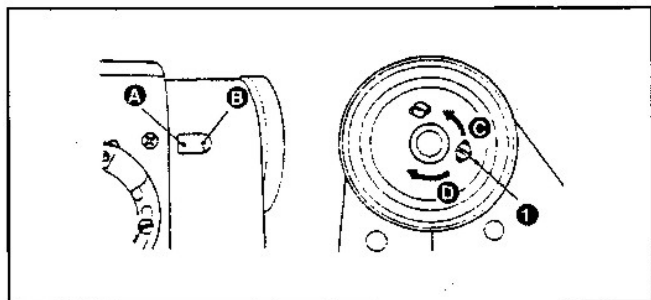
To avoid possible personal injury due to abrupt start of the machine, turn off the power to the machine and check to be sure that the motor has totally stopped rotating in prior.

(1) 切線後的停止位置

- 1) 標準的機針停止位置示機架的刻點 **A** 和飛輪的白刻點 **B** 對齊的位置。
- 2) 讓機針上升到上停止位置，擰松螺絲 **1**，在長孔範圍進行調節。
① 向 **C** 的方向移動機針停止提前。
② 向 **D** 的方向移動機針停止推遲。



擰鬆螺絲 **1** 的狀態下請不要運轉縫紉機。
此螺絲祇能擰鬆而不能擰下來。

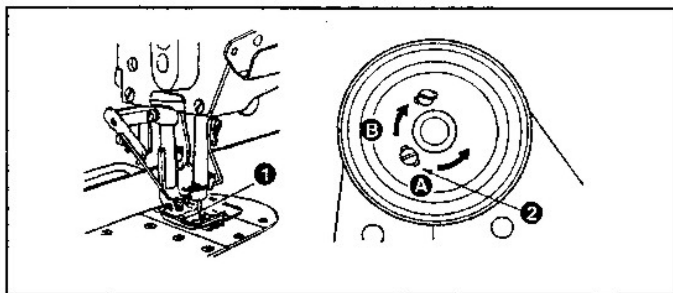


(1) Stop position of the needle after thread trimming

- 1) The needle stops at the standard stop position when red marker dot **A** engraved on the machine arm is aligned with white marker dot **B** engraved on the handwheel.
- 2) Stop the needle at the highest position of its stroke, loosen the screw **1**, and adjust the stop position of the needle after thread trimming by moving the screw **1** within the slot.
① Move the screw in the direction **C** to advance the timing to make the needle stop.
② Move the screw in the direction **D** to retard the timing to make the needle stop.



Do not operate the sewing machine with the screw **1** loosened. Only loosen the screw **1** and do not remove it.



(2) 下停止位置

- 1) 踏板從前踩踏變為中立時的機針下停止位置與上停止同樣，讓機針①下停止之後擰鬆螺絲②，在長孔範圍內進行調整。向A方向移動機針停止位置提前，向B方向移動機針停止位置推遲。



注意：擰鬆螺絲①的狀態下請不要運轉縫紉機。
此螺絲祇能擰鬆而不能擰下來。

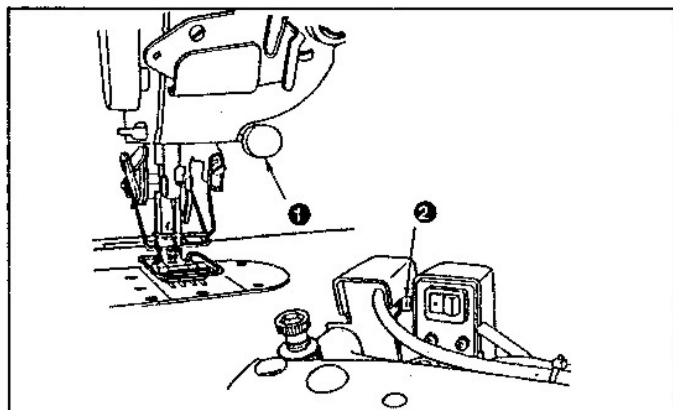
(2) The lowest stop position of the needle

When you return the pedal to its neutral position after having depressed the front part of it, the needle stops at the lowest stop position. As in the case of the adjustment of the highest stop position of the needle, stop the needle ① in the lowest position of its stroke, loosen the screw ②, and adjust the lowest stop position of the needle by moving the screw ② within the slot. Move the screw in the direction A to advance the timing to make the needle stop or in the direction B to retard it.



Do not operate the sewing machine with the screw ② loosened. Only loosen the screw ② and do not remove it.

26. 觸鍵手動倒縫 / ONE-TOUCH TYPE REVERSE FEED SWITCH LEVER/



(1) 使用方法

- 1) 按開關撥杆①，縫紉機立即變為倒送，進行倒縫。
- 2) 按下撥杆的時間，可以進行倒縫。
- 3) 放開撥杆，則立即返回到正縫。

(1) How to use the reverse feed switch lever

- 1) Press down the switch lever ①, and the machine will immediately run in the reverse direction.
- 2) Reverse stitching is performed as long as you keep the lever held pressed down.
- 3) Release the switch lever, and the machine will immediately run in the normal direction.

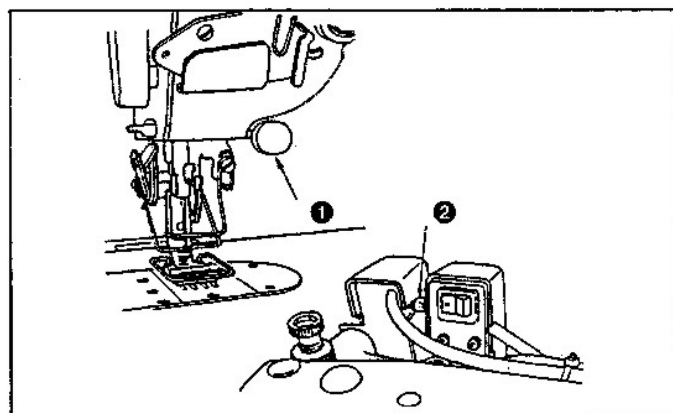
注意：



為了防止突然啟動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行。

WARNING:

To avoid possible personal injury due to abrupt start of the machine, turn off the power to the machine and check to be sure that the motor has totally stopped rotating in prior.



(2) 開關撥杆的高度

- 1) 請把開關撥杆①的高度調整到使用方便的位置。
- 2) 擰鬆螺絲②，上下移動就可以調整高度。

(2) Height of the reverse feed switch lever

- 1) Adjust the height of the switch lever ① for your convenience.
- 2) Loosen the screw ②, and adjust the height of the switch lever as desired by moving it up or down.

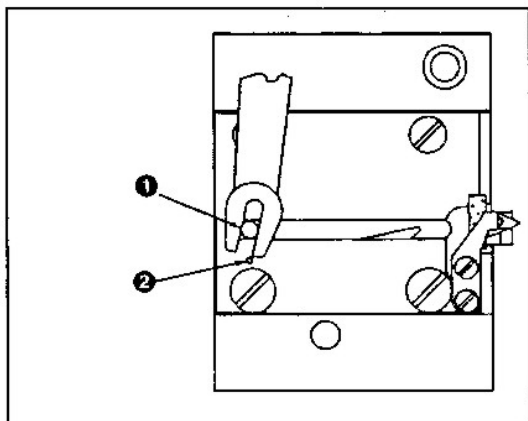
27. 切線的調整 /ADJUSTING THE THREAD TRIMMER/

注意:

爲了防止突然啓動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行。

WARNING:

To avoid possible personal injury due to abrupt start of the machine, turn off the power to the machine and check to be sure that the motor has totally stopped rotating in prior.



(1) 移動刀的初期位置

移動刀的初期位置如圖所示，讓移動刀銷釘①與刻點②一致。

(1) Initial position of the moving knife

When the moving knife is in its initial position, the moving knife pin ① should be aligned with the engraved marker dot ② as shown in the figure on the left.

初期位置不正確時

擰鬆螺母③，左右移動，調整①-②。
在適合的位置擰緊螺母③。

If the initial position of the moving knife is not correct
Loosen the nut ③, and move the moving knife to the right or left
until the pin ① meets the marker dot ②.
Then, tighten the nut ③.

(2) 切線同步的調整

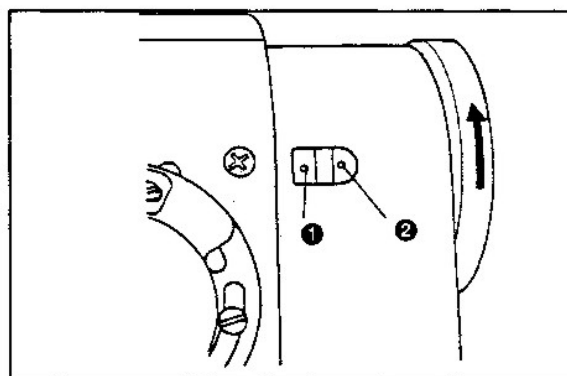
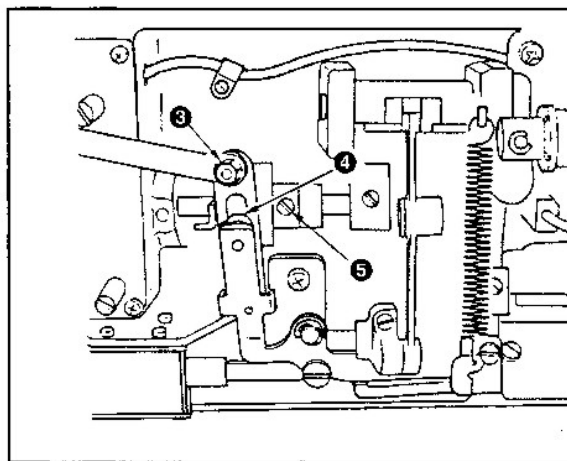
把凸塊④嵌入凸輪槽的狀態，靜靜地逆轉飛輪帶，機架的刻點①
和飛輪的紅刻點②對準的位置；飛輪不能運轉。

調整切線凸輪時：機架罩和飛輪的紅刻點對齊；凸塊嵌入凸輪槽
的狀態下，慢慢向下軸轉動相反的方向輪，在停止的位置把2
個螺絲⑤固定起來。

(2) Adjusting the thread trimming timing

Put the roller ④ in the cam groove. Now, gradually turn the
handwheel in the reverse direction. The handwheel will go no
further when the red marker dot ① engraved on the machine
arm is aligned with the red marker dot ② engraved on the
handwheel.

To adjust the thread trimming cam, align the red marker dot on
the machine arm with the red marker dot on the handwheel, put
the roller in the groove of the thread trimming cam, and turn the
handwheel in the direction opposite to the direction of rotation
of the hook driving shaft until it will go no further. Now, tighten
the two screws ⑤.



28. 上線挑線裝置 / NEEDLE THREAD FEEDING DEVICE /

注意:



爲了防止突然啓動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行。

WARNING:

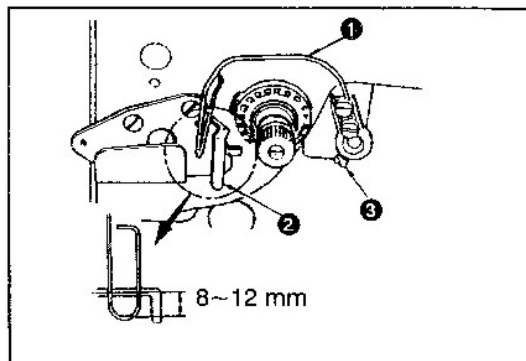
To avoid possible personal injury due to abrupt start of the machine, turn off the power to the machine and check to be sure that the motor has totally stopped rotating in prior.

(1) 拉線鋼絲的位置

安裝拉線鋼絲①時，請把挑線杆導向器A②和鋼絲前端的距離調整爲 8~12mm，然後固定好固定螺絲③（2個）。

(1) Position of the feeding wire

Adjust the installing position of the feeding wire ① so that a distance of 8 to 12 mm is provided between the guide portion ② of the thread guide A and the top end of the wire. Then, tighten the two screws ③.



(2) 拉線鋼絲行程的調整

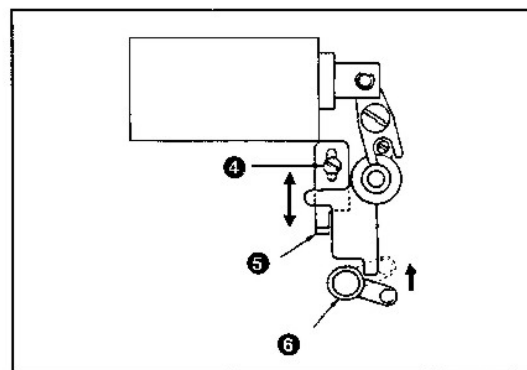
- 1) 開始縫，如有針跡松脫或線容易拔出時，請把拉線量增大。
- 2) 把拉線量增大時，請擰松拉線擋塊⑤的固定螺絲④，向下移動調整。



拉線量過大時，會容易發生斷線現象。

拉線鋼絲不能動時

向上拉擋塊旋鈕⑥，左右轉動讓其前端進入上方的孔內。



(2) Adjusting the stroke of the feeding wire

- 1) Increase the feeding amount of the needle thread if the needle thread fails to interlace with the bobbin thread or is likely to slip out of the needle eyelet at the start of sewing.
- 2) To increase the feeding amount of the needle thread, loosen the screw ④ in the feeding stopper ⑤ and move down the stopper.



If the feeding amount of the needle thread is excessive, the thread will be likely to break.

* When the feeding wire is not used

Pull up the stopper knob ⑥, turn it counterclockwise and fit the top end of the knob in the hole located above the knob.

29. 撥線器的位置 / POSITION OF THE WIPER/



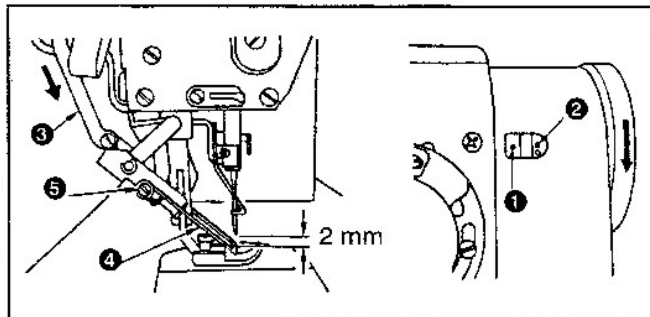
注意:

為了防止突然啟動造成人身事故，請關掉電源，確認馬達確實停止轉動後再進行。

WARNING:

To avoid possible personal injury due to abrupt start of the machine, turn off the power to the machine and check to be sure that the motor has totally stopped rotating in prior.

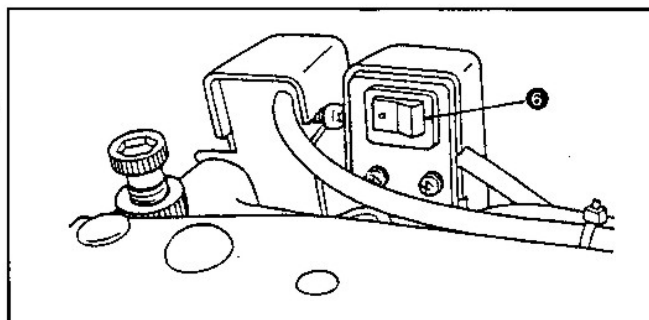
- 1) 把機臂的紅刻點①對準手輪的白刻點②（縫紉機旋轉方向的第2個白刻點）。
- 2) 沿箭頭方向轉動杆③，把針前端和撥線杆④的間隙調整為2 mm左右，然後再擰緊固定螺絲⑤。



- 1) Align the red marker dot ① engraved on the machine arm with the white marker dot ② engraved on the handwheel (the 2nd white marker dot in terms of the direction of rotation of the sewing machine).
- 2) Move the rod ③ in the direction of the arrow, and adjust the clamping screw ⑤ so that an approximate 2 mm clearance is provided between the top end of the needle and the wiper ④.

- 3) 不需要使用撥線杆時，請關掉撥線開關⑥。

- 3) If you do not use the wiper, turn OFF the seesaw switch ⑥ of the wiper.



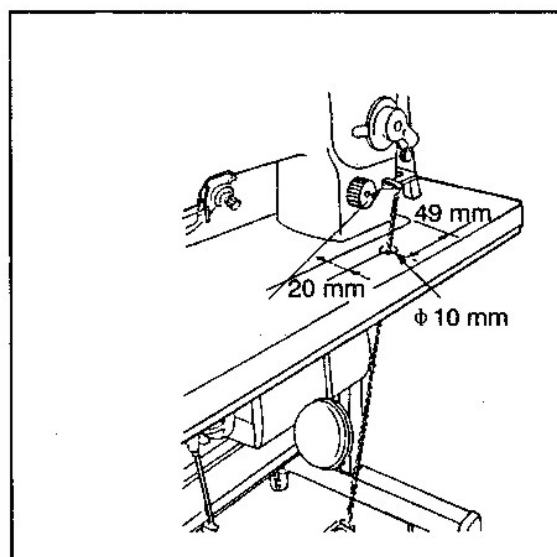
30. 踏板倒縫裝置(RF-1)〔選購品〕PEDAL-OPERATED REVERSE FEED DEVICE (RF-1)

為了方便用雙手來操作，請使用RF-1裝置。此裝置可以不用右手便可方便地進行倒縫。
如圖所示，安裝時必須同時把送布杆彈簧。
換成RF-1附屬的彈簧。

When you sew bulky materials, it is not easy to operate the feed lever with your right hand to make the machine perform reverse feed stitching.

In this case, attach the RF-1 device to your sewing machine. This device allows you to reverse the sewing directions as desired with your foot instead of your right hand.

The figure on the left shows the device installed on the sewing machine. When using the device be sure to replace the feed lever tension spring mounted on the machine with the spring supplied with the RF-1.



31. 馬達皮帶輪和皮帶 /MOTOR PULLEY AND BELT/

(1) 無切線時

- 1) 請使用輸出功率 400W(2P) 的離合馬達。
- 2) 請使用M型V形皮帶。
- 3) 馬達皮帶輪合皮帶長度、縫紉機轉速的關係如下表所示。

(1) For the sewing machine without a thread trimmer

- 1) The driving motor of this machine is a 400 watts (2P) clutch motor.
- 2) Use the M type V belt.
- 3) The attainable sewing speeds are determined by the diameter of the motor pulley and the length of the belt as listed below.

馬達皮帶輪外徑 (mm)	精密牌帶輪的貨號	轉速 (rpm)		皮帶長度 mm (inch)	皮帶貨號
		50 Hz	60 Hz		
135	MTKP0130000	5480	—	1168 (46)	MTJVM00460A
130	MTKP0125000	5270	—		
125	MTKP0120000	5060	—	1143 (45)	MTJVM00450A
120	MTKP0115000	4850	—		
115	MTKP0110000	4630	—		
110	MTKP0105000	4440	5330	1118 (44)	MTJVM00440A
105	MTKP0100000	4250	5040		
100	MTKP0095000	4000	4780		
95	MTKP0090000	3820	4540		
90	MTKP0085000	3610	4320	1092 (43)	MTJVM00430A
85	MTKP0080000	3390	4000		
80	MTKP0075000	3160	3790		
75	MTKP0070000	2950	3520		
70	MTKP0065000	2740	3260		
65	MTKP0060000	2530	3020	1067 (42)	MTJVM00420A
60	MTKP0055000	2320	2760		

Outer diameter of motor pulley (mm)	Motor pulley part No.	Sewing speed (rpm)		Belt length mm (inch)	Belt Part No.
		50 Hz	60 Hz		
135	MTKP0130000	5480		1168 (46)	MTJVM00460A
130	MTKP0125000	5270			
125	MTKP0120000	5060		1143 (45)	MTJVM00450A
120	MTKP0115000	4850			
115	MTKP0110000	4630			
110	MTKP0105000	4440	5330	1118 (44)	MTJVM00440A
105	MTKP0100000	4250	5040		
100	MTKP0095000	4000	4780		
95	MTKP0090000	3820	4540		
90	MTKP0085000	3610	4320	1092 (43)	MTJVM00430A
85	MTKP0080000	3390	4000		
80	MTKP0075000	3160	3790		
75	MTKP0070000	2950	3520		
70	MTKP0065000	2740	3260		
65	MTKP0060000	2530	3020	1067 (42)	MTJVM00420A
60	MTKP0055000	2320	2760		

(2) 帶切綫時

- 1) 請一定使用SC-800馬達，馬達皮帶輪的外徑為70mm。
- 2) 請使用專用的HM型V形皮帶1067mm。

(2) For the sewing machine with a thread trimmer

- 1) Be sure to use the motor in combination with an SC-1. Use the motor pulley of which outside diameter is 70 mm.
- 2) Use the exclusive HM type V belt of 1016 mm.

32 縫製不良的原因和處理方法

現象	原因	處理方法	參考頁
斷線	① 挑線桿上繞線。 ② 上線的穿線方法不對。 ③ 旋梭上繞線了。 ④ 上線張力過強，或過弱。 ⑤ 張力弱，線打滑。 ⑥ 挑線彈簧的張力過強，或過弱。 ⑦ 挑線彈簧的動作範圍過大，或過小。 ⑧ 機針和旋梭的同步不好。 ⑨ 旋梭、梭殼、挑線桿等線道上有傷痕。 ⑩ 線有問題。 a. 線的質量不好。 b. 線比針粗。 c. 線受熱溶解。 ⑪ 跳針。	拆除卷繞的線 正確地穿線。 拆除卷繞的線。 把張力調整到適當。 加強張力。 把張力調整到適當。 調整到適當的動作範圍（8~12mm）。 調整同步。 修正傷痕，或更換新品。 換成質量好的線。 使用適當的針或適當的線。 安裝線冷卻裝置。 參照下一項目跳針。	8 8 8 8 8 8 15 8 8 15
跳針	① 機針的安裝方法不正確。 a. 沒有完全插入針杆。 b. 針孔沒有對正。 c. 針裝反了。 ② 機針有問題。 a. 針彎了。 b. 針的質量不好。 c. 針比線細。 d. 針尖豁了。 ③ 旋轉尖彎曲或折斷。 ④ 機針和旋梭的同步不好。 ⑤ 針杆的高度不適當。 ⑥ 針杆旋梭的間隙過大。	把針插到針杆的深處。 把針孔安裝到正面。 把長槽轉到前面。 換新針。 換質量好的針。 換合適的針或合適的線。 換新針。 修理旋梭尖，或換新品。 調整同步。 調整針杆高度。 調整間隙。	5 5 5 5 5 5 5 15 15 14 15
緊線不良	① 上線張力過弱。 ② 挑線彈簧的張力過弱。 ③ 底線張力過強。 ④ 機針和旋梭的同步不好。 ⑤ 與針相比線過粗。 ⑥ 張力弱，線打滑。	增強張力。 增強張力。 增強張力。 調整同步。 使用適當的針或適當的線。 增強皮帶張力。	8 8 8 15 8
緊線不勻	① 底線張力過弱。 ② 底線繞線不好。 ③ 旋梭、梭殼、挑線桿等線道有傷痕。	增強張力。 正確繞線。 修理傷痕，或更換新品。	8 5
斷針	① 機針彎曲了。 ② 針的質量不好。 ③ 針沒有完全插入針杆。 ④ 針與旋梭相碰。 ⑤ 與縫製物和線相比針過細。 ⑥ 針板的針孔過細。 ⑦ 針和針板相碰。 ⑧ 針和壓腳相碰。	換新針。 換質量好的針。 插到針杆的裡面。 調整針和旋梭的同步，間隙，針座的位置。 換合適的針。	5 15

32. TROUBLES AND CORRECTIVE MEASURES

Trouble	Cause	Corrective measures	See page
Thread breakage	① When the thread gets entangled in the thread take-up lever.	Remove the entanglement.	8
	② When the needle thread is threaded in a wrong way.	Thread it correctly.	8
	③ When the thread gets entangled in the sewing hook.	Remove the entanglement.	8
	④ When the needle thread is excessively tight or loose.	Adjust the thread tension.	8
	⑤ When the needle thread slips in the rotary tension.	Increase the tension of the pretension disk.	8
	⑥ When the tension of the thread take-up spring is excessively high or low.	Adjust the tension of the take-up spring.	8
	⑦ When the stroke of the thread take-up spring is excessively large or small.	Adjust the stroke of the take-up spring. (8 to 12 mm)	8
	⑧ When the timing of the sewing hook and the needle is not matched.	Adjust the timing.	15
	⑨ When there is a scratch on the thread patch of hook, bobbin case, thread take-up lever or any other part.	Remove such a scratch or replace the component.	
	⑩ When the thread is not suitable. a. The quality of the thread is poor. b. The thread is too thick for the needle. c. The thread is broken by heat.	Use a thread of good quality. Use a suitable thread or needle. Use Silicone Oil Lubricant unit.	
	⑪ When the stitch is skipped.	Refer to the following paragraphs, Stitch skipping.	
Stitch skipping	① When the needle is inserted in a wrong way. a. The needle is not entirely inserted into the needle bar. b. The needle eye is not facing straight to the operator. c. The needle is facing backwards.	Fully insert the needle. Let the needle eye face straight to the operator. Let the long groove on the needle face to the operator.	5 5 5
	② When the needle itself is not suitable. a. The needle is bent. b. The quality of the needle is not good. c. The needle is too thin for the thread. d. Blunt needle is used.	Replace it with a new needle. Use a needle of good quality. Use a suitable needle or thread. Replace it with a new needle.	5 5 5 5
	③ When the hook blade point is not sharp enough or damaged.	Resharpen the hook or replace it.	15
	④ When the timing of the sewing hook and the needle is not matched.	Adjust the timing properly.	15
	⑤ When the height of the needle bar is not correct.	Adjust the height of the needle bar.	14
	⑥ When the clearance between the needle and the sewing hook is too great.	Adjust the clearance.	15
Loose stitch	① When the needle thread tension is too low.	Increase the needle thread tension.	8
	② When the tension of the thread take-up spring is too low.	Increase the tension of the spring.	8
	③ When the tension of the bobbin thread is too high.	Decrease the bobbin thread tension.	8
	④ When the timing of the sewing hook and the needle is not matched.	Adjust the timing correctly.	15
	⑤ When the thread is too thick for the needle.	Use a suitable needle or thread.	
	⑥ Thread slips out of the rotary tension.	Increase the tension of the pretension disk.	8
Irregular stitch tightness	① When the bobbin thread tension is too low.	Increase the bobbin thread tension.	8
	② When the bobbin thread is not wound correctly.	Wind up the bobbin thread evenly.	5
	③ When there is a scratch on the thread cath of the sewing hook, bobbin case, thread take-up lever or any other parts.	Remove such a scratch or replace the component.	
Needle breakage	① When the needle is bent.	Replace it with a new needle.	
	② When the quality of the needle is not good.	Use a needle of good quality.	
	③ When the needle is not entirely inserted into the needle bar.	Insert the needle into the needle bar as far as it will go.	5
	④ When the needle hits the sewing hook.	Adjust the timing and clearance between the needle and the sewing hook and also the position of the needle guard.	15
	⑤ The needle is too thin for the sewing material and thread.	Replace a suitable needle.	
	⑥ The needle hole in the throat plate is too narrow		
	⑦ The needle hits against the throat plate.		
	⑧ The needle hits against the presser foot.		

重要安全事項

此縫紉機在有的國家（設置場所）由於該國的安全規定而被禁止使用。
同時，技術服務也同樣被禁止。

1. 使用此縫紉機時，必須遵守包括如下項目的基本安全措施。
2. 使用此縫紉機之前，請閱讀本使用說明書在內的所有指示文件。
同時應將此使用說明書妥善保管，以便能夠隨時查閱。
3. 此縫紉機應與貴國的有關安全規定一起使用。
4. 使用此縫紉機和縫紉機動作中，所有的安全裝置應安裝到規定的位置。
沒有安裝規定的安全裝置的縫紉機禁止使用。
5. 此縫紉機應由接受過培訓的操作人員來操作。
6. 使用縫紉機時，建議戴安全防護眼鏡。
7. 發生下列情況時，應立即關掉電源開關，或拔下電源綫插頭。
 - 7-1 機針、分離器等穿綫和更換旋梭時。
 - 7-2 更換機針、壓腳、針板、分離器、送布牙、護針器、支架、布導向器等時。
 - 7-3 修理時。
 - 7-4 工作場所無人了或離開工作場所時。
 - 7-5 使用離合馬達時，請等待馬達完全停止之後再進行。
8. 縫紉機以及附屬裝置使用的機油、潤滑脂等液體流入眼睛或沾到皮膚上時，或被誤飲時，應立即清洗有關部份并去醫院治療。

9. 禁止用手觸摸打開了縫紉機開關通電的零件或裝置。
10. 有關縫紉機的修理、改造、調整應由愛過專門訓練的技術人員或專家來進行。
11. 一般的維修保養應由愛過訓練的人員來進行。
12. 有關縫紉機的電氣方面的修理、維修應由有資格的電氣技術人員或專家的監督和指導下進行。
13. 修理、保養有關空氣、氣缸等壓縮空氣的零件時，應切斷空氣壓縮機供氣源後再進行。
如有殘留壓縮空氣時，應放掉壓縮空氣。
但，受過相當訓練的技術人員或專家進行有關調整或確認動作時除外。
14. 縫紉機的使用期間應定期進行清掃。

15. 爲了正常安全運轉，應安裝地綫。同時應在不受高頻焊接機等強噪音源影響的環境下使用。
16. 電源插頭應用具有電氣專門知識的人來安裝。電源插頭必須連接到接地插座上。

17. 縫紉機指定用途以外不能使用。
18. 對縫紉機的改造、變更應符合安全規格，并采取有效的安全措施。
另外，對於有關改造和變更，本公司概不負責。

19. 本使用說明書上採用以下2個警告符號。



有損傷操作人員、維修人員的危險。



安全上需要特別加以注意的事項。

IMPORTANT SAFETY INSTRUCTIONS

Putting sewing systems into operation is prohibited until it has been ascertained that the sewing systems in which these sewing machines will be built into, have conformed with the safety regulations in your country. Technical service for those sewing systems is also prohibited.

1. Observe the basic safety measures, including, but not limited to the following ones, whenever you use the machine.
 2. Read all the instructions, including, but not limited to this instruction Manual before you use the machine. In addition, keep this instruction Manual so that you may read it at anytime when necessary.
 3. Use the machine after it has been ascertained that it conforms with safety rules/standards valid in your country.
 4. All safety devices must be in position when the machine is ready for work or in operation. The operation without the specified safety devices is not allowed.
 5. This machine shall be operated by appropriately-trained operators.
 6. For your personal protection, we recommend that you wear safety glasses.
 7. For the following, turn off the power switch or disconnect the power plug of the machine from the receptacle.
 - 7-1 For threading needle(s), spreader etc. and replacing bobbin.
 - 7-2 For replacing part(s) of needle, presser foot, throat plate, spreader, feed dog, needle guard, folder, cloth guide etc.
 - 7-3 For repair work.
 - 7-4 When leaving the working place or when the working place is unattended.
 - 7-5 When using clutch motors without applying brake, it has to be waited until the motor stopped totally.
 8. If you should allow oil, grease, etc. use with the machine and devices to come in contact with your eyes or skin or swallow any of such liquid by mistake, immediately wash the contacted areas and consult a medical doctor.
-
9. Tampering with the live parts and devices, regardless of whether the machine is powered, is prohibited.
 10. Repair, remodeling and adjustment works must only be done by appropriately trained technicians or specially skilled personnel. Only spare parts designated by can be used for repairs.
 11. General maintenance and inspection works have to be done by appropriately trained personnel.
 12. Repair and maintenance works of electrical components shall be conducted by qualified electric technicians or under the audit and guidance of specially skilled personnel. Whenever you find a failure of any of electrical components, immediately stop the machine.
 13. Before making repair and maintenance works on the machine equipped with pneumatic parts such as an air cylinder, the air compressor has to be detached from the machine and the compressed air supply has to be cut off. Existing residual air pressure after disconnecting the air compressor from the machine has to be expelled. Exceptions to this are only adjustments and performance checks done by appropriately trained technicians or specially skilled personnel.
 14. Periodically clean the machine throughout the period of use.
-
15. Grounding the machine is always necessary for the normal operation of the machine. The machine has to be operated in an environment that is free from strong noise sources such as high-frequency welder.
 16. An appropriate power plug has to be attached to the machine by electric technicians. Power plug has to be connected to a grounded receptacle.
-
17. The machine is only allowed to be used for the purpose intended. Other uses are not allowed.
 18. Remodel or modify the machine in accordance with the safety rules/standards while taking all the effective safety measures. Our assumes no responsibility for damage caused by remodeling or modification of the machine.

19. Warning hints are marked with the two shown symbols.



Danger of injury to operator or service staff



Items requiring special attention

運轉縫紉機前的注意事項

 危險	1. 爲了防止發生觸電事故，請不要在打開電源的狀態下，打開電氣箱蓋以及觸摸電氣箱內的零件。
 注意	1. 爲了防止人身事故的發生，請不要在卸下皮帶防護器等安全裝置的狀態運轉縫紉機。 2. 爲了防止卷入機器的人身事故，縫紉機運轉中，請不要把手指、頭髮、衣服靠近飛輪，也不要將物品放到縫紉機上。 3. 爲了防止人身事故的發生，打開電源時以及縫紉機運轉中，請不要把手指放到機針的附近。 4. 爲了防止人身事故的發生，縫紉機運轉中請不要把手指放到挑線杆外罩內。 5. 縫紉機操作中，旋梭高速地旋轉。爲了防止手受到傷害，運轉中請絕對不要把手靠近旋梭。 6. 爲了防止人身事故的發生，放倒縫紉機或返回原來位置時，要注意不要夾住手。 7. 爲了防止突然的起動造成的事故，放倒縫紉機時或更換零件、調整等時請關掉電源。 8. 縫紉機停止時馬達沒有聲音。爲了突然的起動造成的事故，請注意不要忘記關掉電源。 9. 爲了防止觸電事故，卸下電源地綫的狀態，請不要運轉縫紉機。 10. 爲了防止觸電的損壞電氣零件，拔電源的插頭時，請先關掉機器電源開關。

FOR SAFE OPERATION

	1. To prevent accidents caused by electric shock, never open the control box cover or touch the components inside the control box while the power switch is ON.
	1. To avoid personal injuries, never operate the machine with any of the belt cover, finger guard, eye guard or safety devices removed. 2. To avoid personal injuries, never bring your fingers, hair or clothes close to or place anything on the handwheel, V-belt or motor while the machine is running. 3. To avoid personal injuries, never bring your fingers under or near the needle when the power switch is turned ON or while the machine is running. 4. To avoid personal injuries, never bring your fingers into the needle bar cover while the machine is running. 5. To avoid personal injuries, be careful not to allow your fingers to be caught when tilling or re-setting of the machine is performed. 6. To prevent accidents caused by abrupt start of the sewing machine, turn OFF the power switch when the machine is tilted or the belt cover and the V-belt are removed. 7. The motor does not produce the noise while the machine is stopped. To prevent accidents caused by abrupt start of the sewing machine, be sure to turn OFF the power switch when you stop the machine. 8. To prevent accidents caused by electric shock, do not operate the machine with the ground wire removed. 9. To prevent accidents caused by electric shock and damage of the electrical components, turn OFF the power switch in advance in case of inserting or removing the power plug.