

MODEL: CK-1508NH

1 needle, Unison-feed, Lockstitch Machine with Large Hook for Heavy-Weight Materials

單針綜合送料縫紉機（大釜、厚料）

INSTRUCTION MANUAL

操 作 手 冊



Chikon Industrial Sewing Machine Co., Ltd.

2011-07

INSTRUCTION MANUAL 操作手冊

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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.

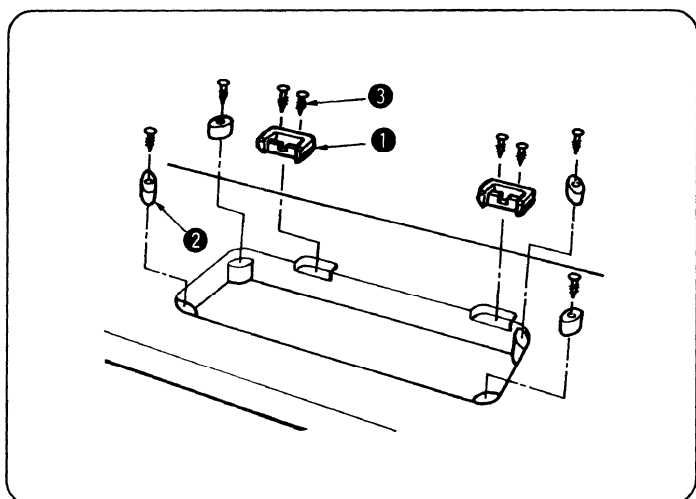
1. Observe the basic safety measures, including, but not limited to the following ones, whenever you use the machine.
2. Read all the instructions, including, but not limited to this instruction manual before you use the machine.
3. Use the machine after it has been ascertained that it conforms with safety rules/standards valid in you 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.
 - ✓ For threading needle(s), looper, spreader etc. and replacing bobbin.
 - ✓ For replacing part(s) of needle, presser foot, throat plate, looper, spreader, feed dog, needle guard, folder, cloth guide etc.
 - ✓ For repair work.
 - ✓ When leaving the working place or when the working place is unattended.
 - ✓ 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. used 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 CHIKON 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.
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 used are not allowed.
18. Remodel or modify the machine in accordance with the safety rules/standards while taking all the effective safety measures. *CHIKON* assumes no responsibility for damage caused by remodeling or modification of the machine.

重要安全事項

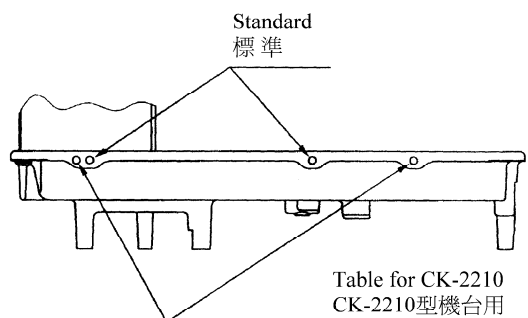
此縫紉機在有些國家（設置場所）由於該國安全規定而被禁止使用。同時，技術服務也同樣被禁止。

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，或拔下電源線插頭。
 - ✓ 車針、彎針、分離器穿線和更換旋梭時。
 - ✓ 更換車針、押腳、針板、彎針、分離器、送布牙、護針器、支架布、布導向器等時。
 - ✓ 修理時。
 - ✓ 工作場所無人作業或離開工作場所時。
 - ✓ 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並去醫院治療。
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、調整應由受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受過訓練的人員來進行。
12. 有關縫紉機電氣方面的修理、維修應由有資格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除。
15. 為了正常安全運轉，應安裝地線。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，並採取有效的安全措施。另外，對於有關改造和變更，**CHIKON** 公司概不負責。

1. INSTALLATION / 縫紉機的安裝



Hinge attaching hole / 合頁安裝孔

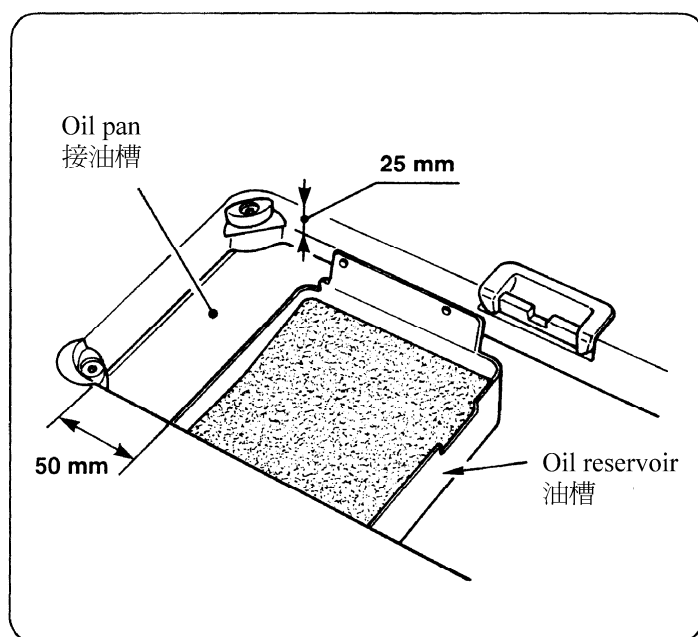
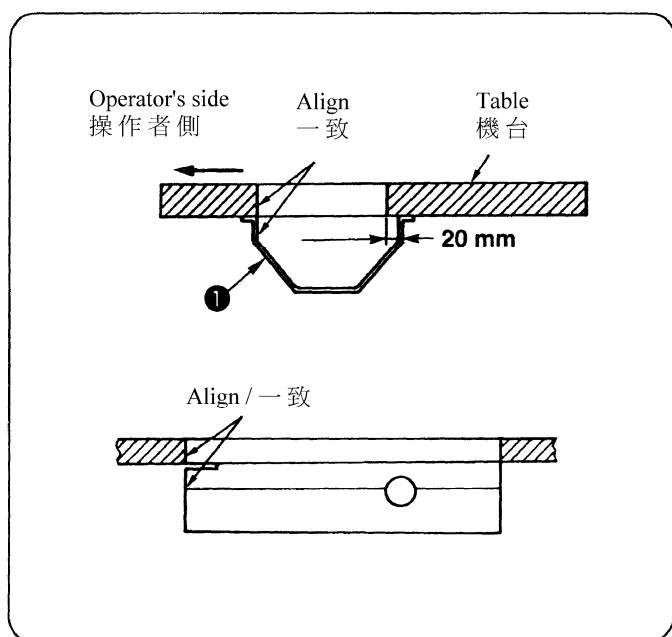


1) Attaching the hinge seats and the support rubbers of the machine head:

Fix the hinge seats① and the support rubbers② supplied with the machine on the table using nails③.

1) 合頁座、機頭支撐橡膠等的安裝：

用釘子③把附屬的合頁座①及機頭支撐橡膠②固定到機台上。



2) Attaching the oil pan:

Fix the oil pan① supplied with the machine by tightening eight wood screws

3) Attaching the oil reservoir:

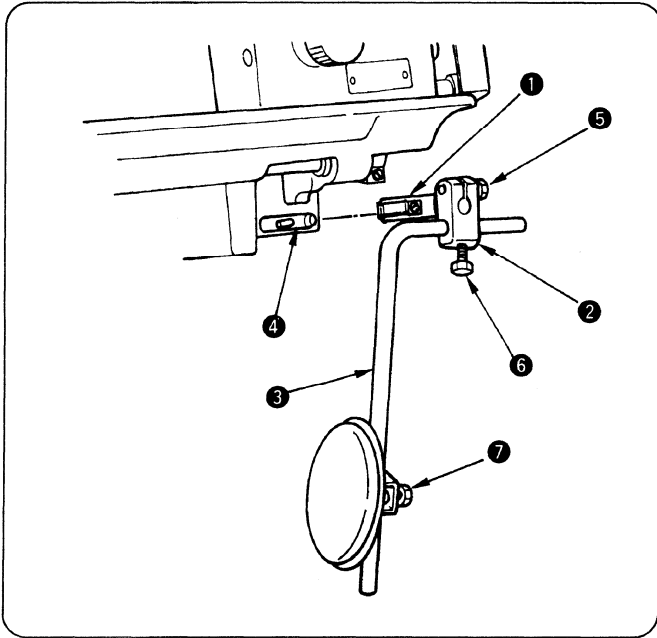
Fix the oil reservoir supplied with the machine on the four corners of the table using nails.

2) 接油槽的安裝：

用 8 個木螺絲把附屬的接油槽①固定到機台上。

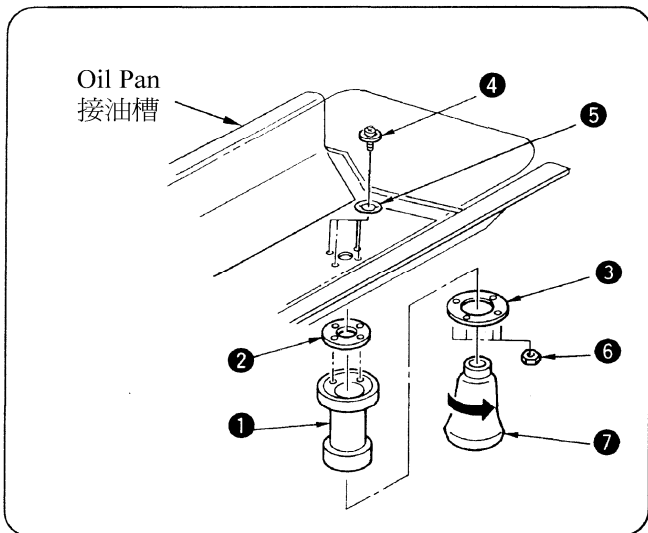
3) 油槽的安裝：

用 4 個釘子把附屬的油槽安裝到機台上。



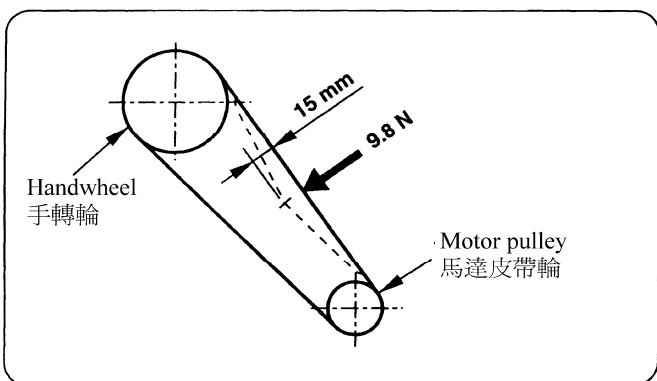
- 4) Adjust knee pad joint①, Knee lifter vertical shaft installing arm② and knee pad lever③ to the direction of knee lifter lever shaft④ and assemble there components.
- 5) Adjust the direction of the pad with setscrews⑤, ⑥ and ⑦.
- 4) 根據膝動提昇桿軸④的朝向，安裝膝頂接頭①、膝動縱軸安裝曲柄②、膝頂桿③
- 5) 用固定螺絲⑤、⑥、⑦調整墊塊的方向。

2. INSTALLING THE WASTE OIL CONTAINER / 廢油容器的安裝



- 1) Attach drain plug①, oil seal② and washer③ to the oil pan. Attach packing⑤ to screw④ and fix them with nut⑥.
- 2) After they are fixed, screw in waste oil container⑦ into drain plug①.
- 1) 把排油栓①、油封②、墊片③安裝到接油槽上，再把墊片⑤套到固定螺絲④上，並用螺母⑥固定。
- 2) 固定之後，把廢油容器⑦擰到排油轉栓上。

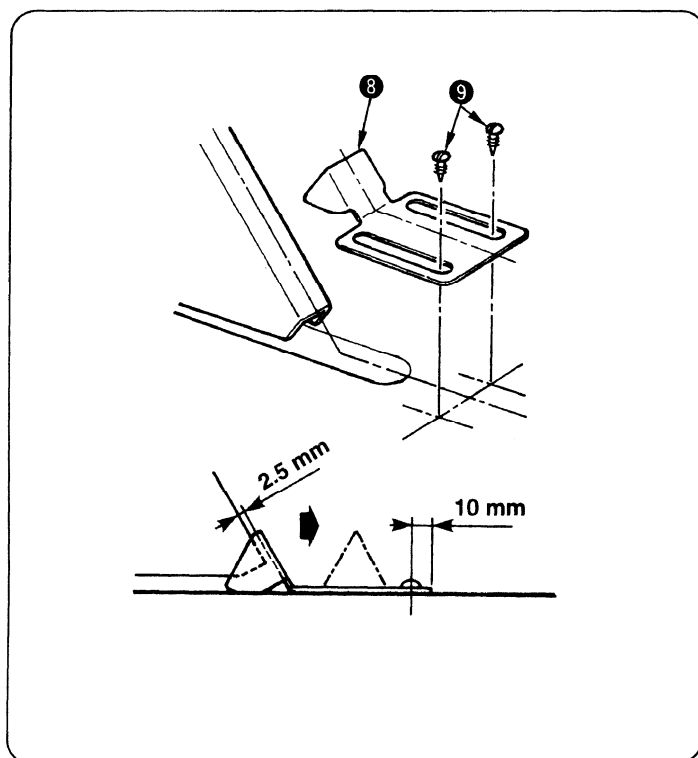
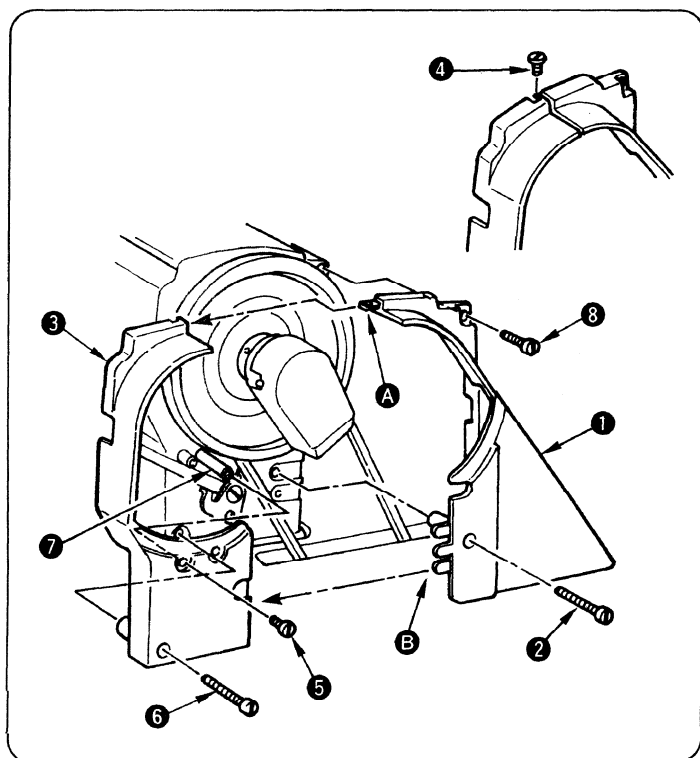
3. ADJUSTING THE BELT TENSION / 皮帶張力的調整



Adjust the belt tension with the height of the motor so that the belt sags 15mm when the center of V belt is applied with a 9.8N load.

調整皮帶張力時，請移動馬達的高度，用 9.8N 的力量按壓皮帶中央部，此時的鬆弛量應為 15mm。

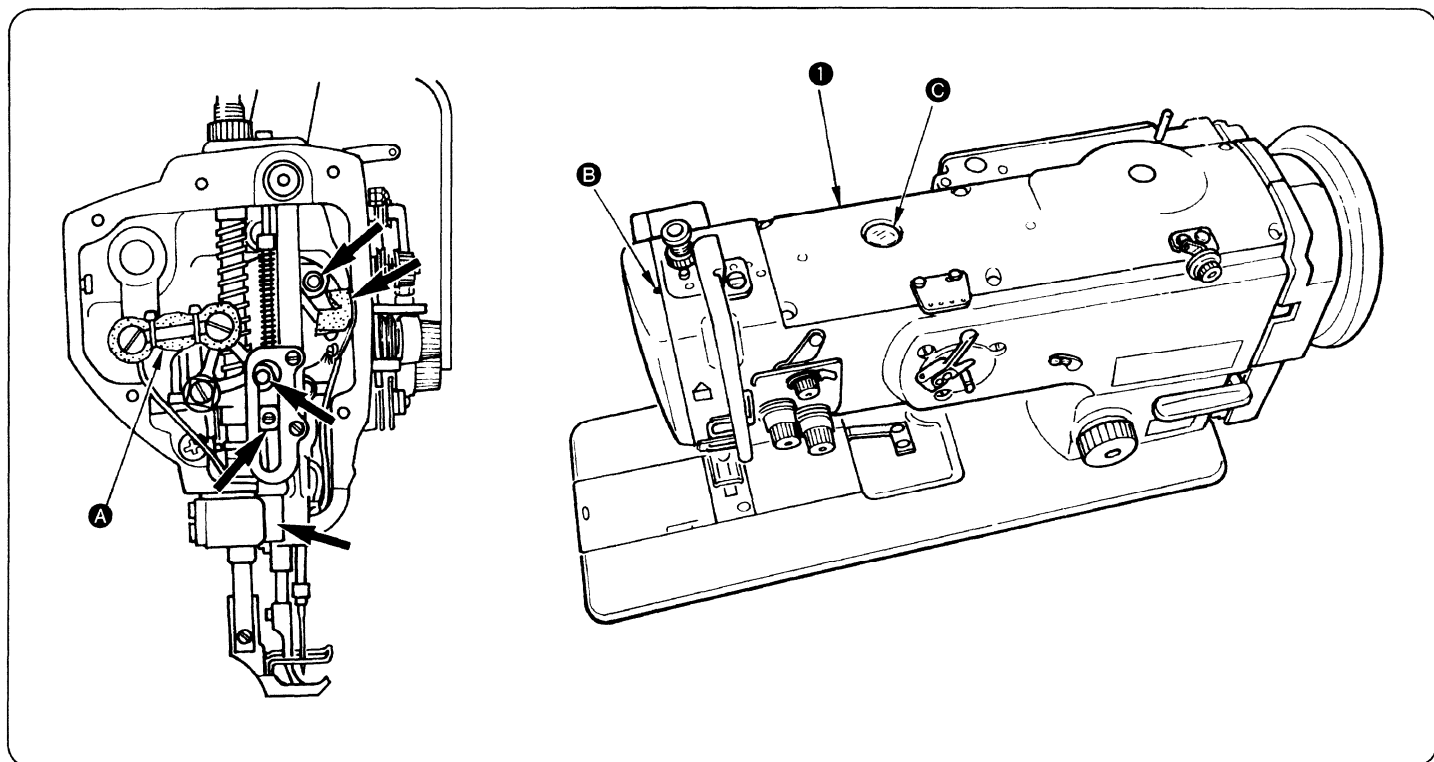
4. ATTACHING THE BELT COVER / 皮帶外罩的安裝



- 1) Attach belt cover stud⑦ to the screw hole in the arm.
- 2) Fix belt cover (right)① on the arm with screws② and ⑧.
- 3) Fit belt cover (left)③ to notch④ and ⑤ of the belt cover (right)
- 4) Fix belt cover (left)③ with screws④,⑤ and ⑥.
- 5) Fix belt cover auxiliary plate⑧ at the position of 10mm from the rear end with wood screws⑨ when there is a clearance of 2.5mm between the belt cover and the auxiliary plate.
- 6) When tilting the machine head, loosen wood screws⑨ and move the belt cover auxiliary plate in the direction of the arrow until it stops. Then, tilt the machine head.

- 1) 把皮帶外罩支柱⑦插到機架的螺絲孔上。
- 2) 用固定螺絲②、⑧把皮帶外罩(右)①安裝到機架上。
- 3) 把皮帶外罩(左)③鑲到皮帶外罩(右)①的爪部④、⑤上。
- 4) 用固定螺絲④、⑤、⑥固定好皮帶外罩(左)③。
- 5) 把皮帶外罩輔助板⑧與皮帶外罩張開 2.5mm，在距離輔助板台後端 10mm 的位置用木螺絲固定。
- 6) 擰鬆木螺絲⑨，把皮帶外罩輔助板沿箭頭方向移動到底，然後放倒縫紉機。

5. LUBRICATION / 潤滑

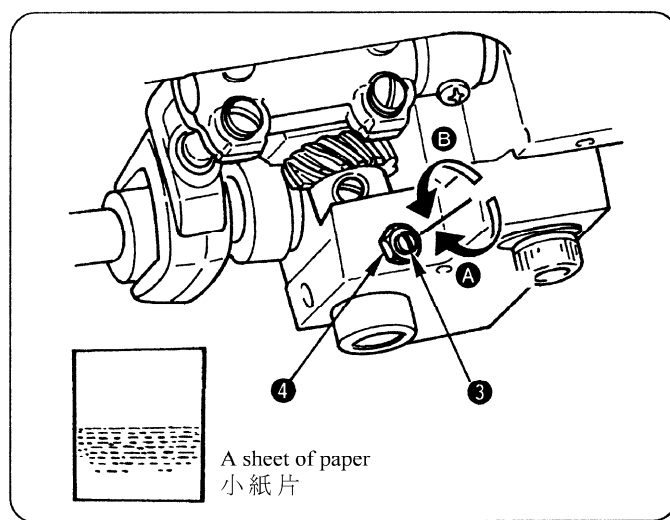
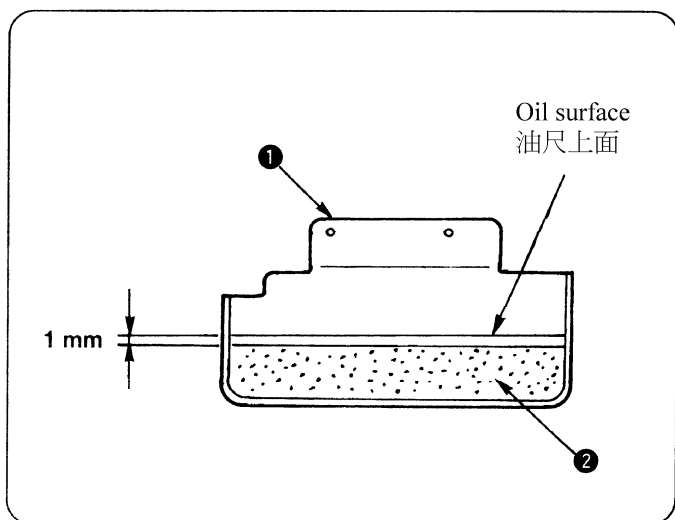


- 1) Prior to operation, apply an adequate amount of oil once a day to the points marked with the arrows ①.
- 2) Prior to operation, apply one drop of oil once a day to the point marked with the arrow ②.
☆ You can apply oil to the point marked with ② after removing the rubber cap without removing the face plate.
☆ Apply oil (5 ml) to ③ approximately once a week since they are oil tanks.
- 3) When you operate your machine for the first time after the set-up or after an extended period of disuse, apply an adequate amount of oil to the points marked with the arrows and to each felt and oil wick after removing top cover ④.

(Caution) If oil is filled more than required, oil leakage may result.

- 1) 在箭頭①表示的位置，請每日運轉前滴適量的機油。
- 2) 在箭頭②表示的位置，請每日運轉前滴 1 滴機油。
☆ ②處不用卸下面罩，只要卸下橡膠帽即可加油。
☆ ③處為油槽，請每 1 星期加 1 次油 (5 ml)。
- 3) 初次運轉縫紉機之前，或長時間沒有使用時，請卸下頂蓋④，往箭頭所示的位置和各毛氈，油蕊裡加適當的機油。

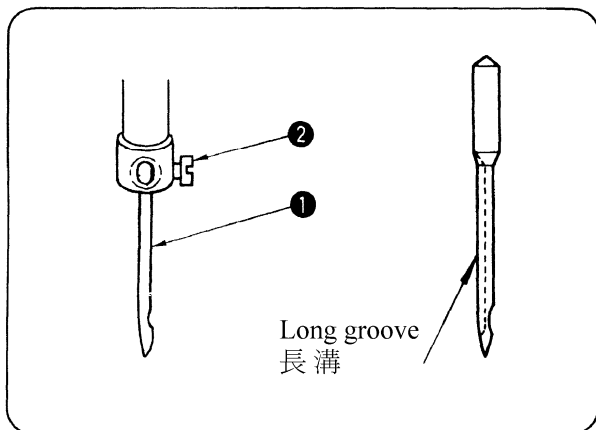
【注意】 加油時不要加過多，以免漏油。



- 4) Put sponge② in oil pan① and fill the oil reservoir with oil so that the oil surface is higher by 1mm than the upper surface of the sponge. Necessary amount of oil is approximately 500 cc.
- 5) Adjustment of the amount of oil in the hook is performed with oil amount adjustment screw③ after loosening nut④. Turning the oil amount adjustment screw clockwiseⒶ will increase the amount of oil in the hook, or counterclockwiseⒷ will decrease it.
- 6) The appropriate amount of oil, when a sheet of paper is placed near the periphery of the hook, is to such an extent that splashes of oil from the hook appear in approximately five seconds as shown in the figure on the top.

- 4) 把油棉②插入油槽①，加油到油棉上面 1mm 需要的油量約為 500 cc。
- 5) 擰鬆螺母④，用油量調節螺絲③調節旋梭油量。向右轉動Ⓐ油量變多，向左轉動Ⓑ變少。
- 6) 把紙片放到旋梭外圍附近，約 5 秒鐘，如果有了油跡如左上圖那樣即為適量。

6. ATTACHING THE NEEDLE / 車針的安裝方法



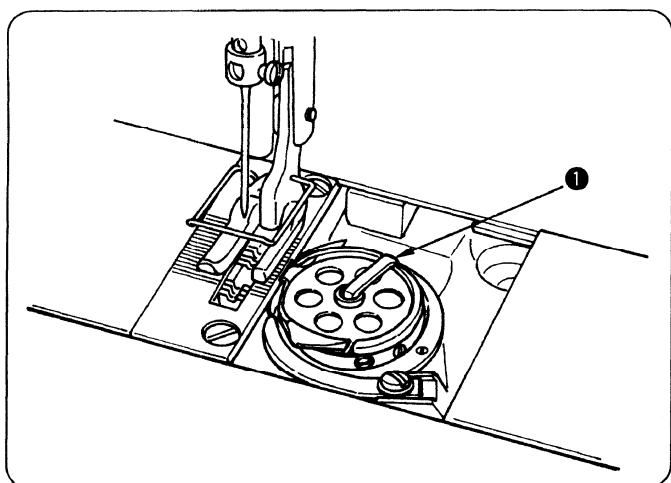
- 1) Turn the handwheel to bring the needle bar to the highest position of its stroke.
- 2) Loosen needle clamp screw②, and hold needle① so that the long groove in the needle is facing exactly to the left.
- 3) Push needle① deep into the needle clamp hole until it will go no further.
- 4) Tighten needle clamp screw② firmly.

- 1) 轉動手轉輪，把針桿上昇到最高位置。
- 2) 擰鬆車針固定螺絲②，讓車針①的長溝轉到朝向左側。
- 3) 把車針①插到最裡面。
- 4) 鎖緊車針固定螺絲②。

(Caution) When replacing the needle, check the clearance provided between the needle and the blade point of hook. If there is no clearance, the needle and the hook will be damaged. (Refer to “17. NEEDLE-TO-HOOK RELATION” and “18. ADJUSTING THE HOOK NEEDLE GUARD”).

【注意】 更換車針後，請確認車針與旋梭尖的間隙。如果沒有間隙，會使車針與旋梭損壞。(請參照“17.車針和旋梭的關係”與“18.旋梭針座的調整”)。

7. ATTACHING AND REMOVING THE BOBBIN / 梭蕊的安裝與取出



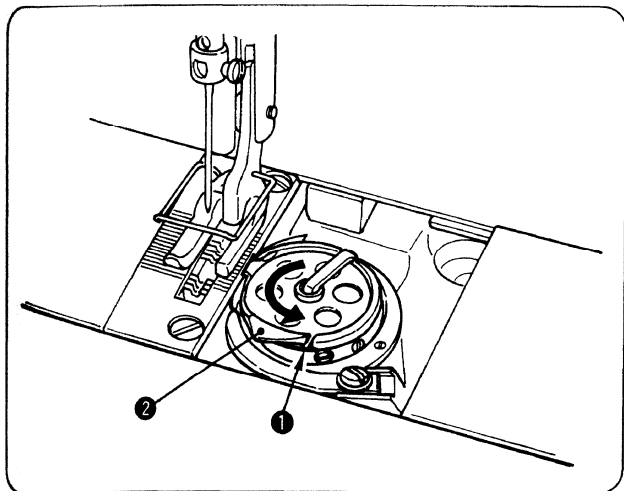
- 1) Lift latch① of hook, and take out the bobbin.
- 2) Put the bobbin into the shaft in the hook correctly and release the latch.

(Caution) Do not make the machine run idle with the bobbin (bobbin thread). The bobbin thread is caught in the hook. As a result, the hook may be damaged.

- 1) 扳起旋梭的撥片①，取出梭仔。
- 2) 裝入時，正確地插入旋梭軸，然後放倒撥片。

【注意】 放入梭仔(底線)後，請不要讓縫紉機空轉，以免底線繞到旋梭上弄換旋梭。

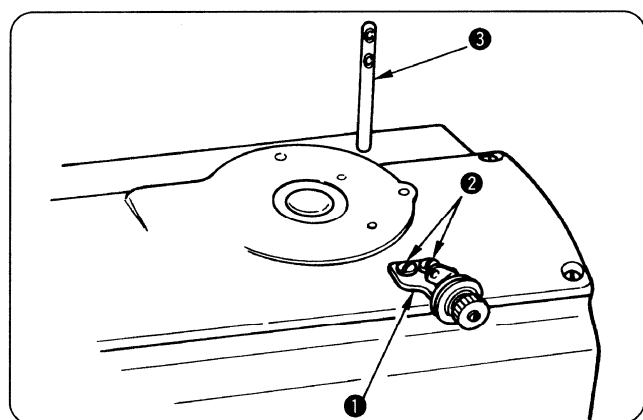
8. THREADING THE HOOK / 底線的穿線方法



- 1) Put the thread through thread path ① in the inner hook and the tension spring after passing it under protrusion ②.
- 2) Make sure that the bobbin revolves in the direction of the arrow when you draw the thread.

- 1) 把線插進旋梭穿線槽①，再從突起部②的下面穿過去，然後穿進線張力彈簧。
- 2) 拉底線之後，梭仔應沿箭頭方向轉動。

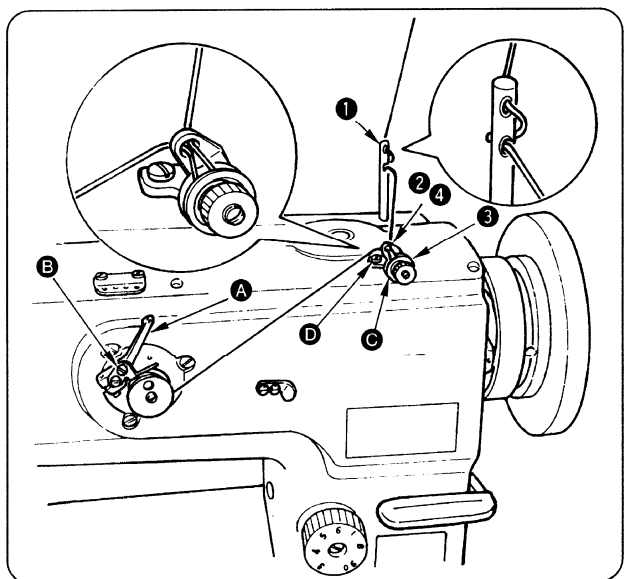
9. INSTALLING THE BOBBIN WINDER THREAD / 繞線導線器的安裝



- 1) Attach bobbin winder thread guide ① to the top cover with setscrew ②.
- 2) Adjust the position of the thread guide referring to “10. WINDING A BOBBIN”.
- 3) Strike bobbin thread guide rod ③ into the machine arm.

- 1) 用固定螺絲②把繞線導線器①安裝到頂蓋上。
- 2) 調節位置，請參考【10.底線的繞線方法】。
- 3) 把底線導線桿③安裝到機架上。

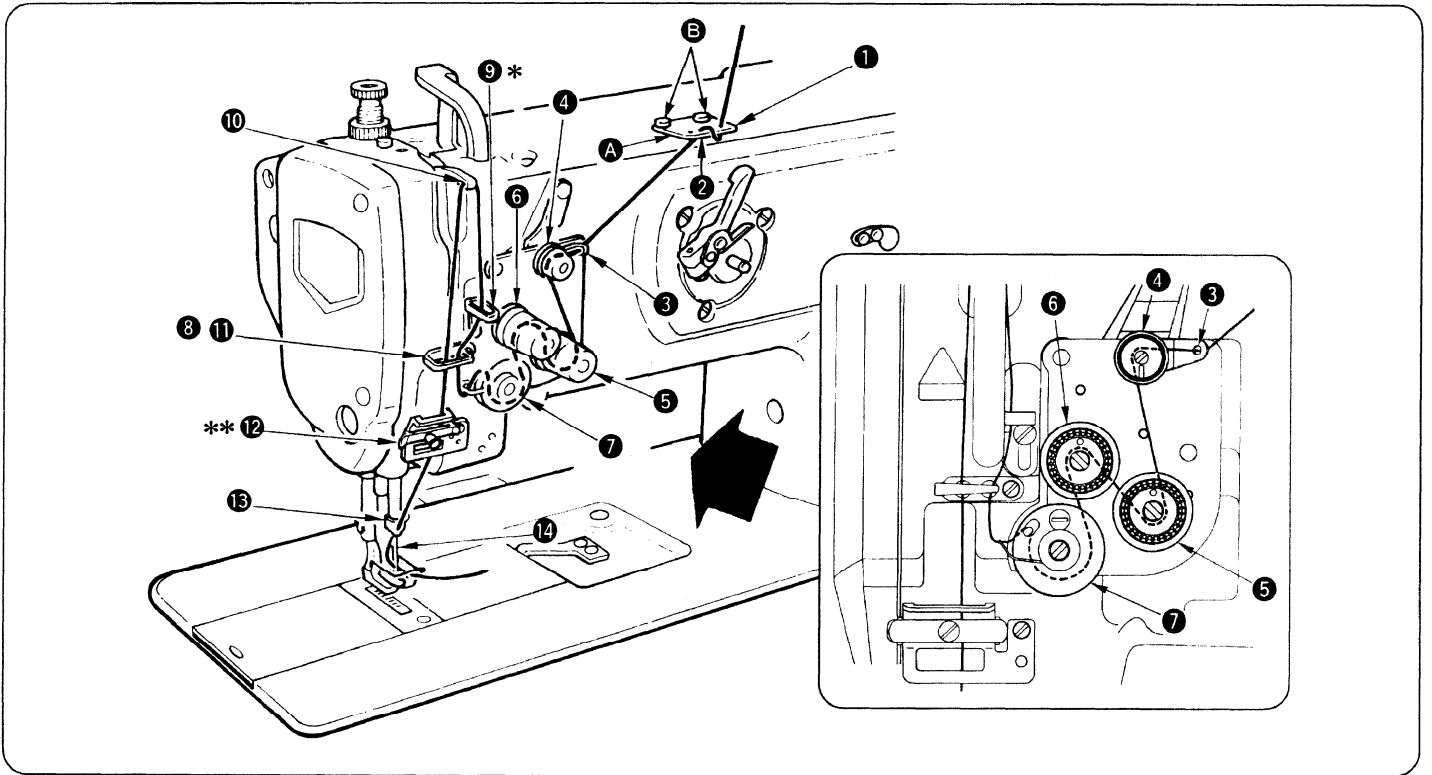
10. WINDING A BOBBIN / 底線的繞線方法



- 1) Pass the thread in the order of ①, through ④. Then, wind it several turns round the bobbin, and tilt bobbin winder lever ①.
- 2) Loosen setscrew ② and adjust the position of the adjusting plate to wind a bobbin about 80% of its capacity.
- 3) If the bobbin is wound unevenly, correct it by moving bobbin winder thread guide ③ back or forth. Then, tighten setscrews ④.
- 4) When the bobbin is filled up, the bobbin winder lever automatically releases the bobbin and the bobbin winder stops running.

- 1) 按①~④的順序穿線，然後在梭仔上繞幾圈，並放倒繞線桿①。
- 2) 擰鬆固定螺絲②，調整調節板到讓線捲繞到 80%左右的位置。
- 3) 線繞偏時，前後移動繞線導向器③進行調整，再用固定螺絲④固定。
- 4) 繞線結束後，繞線桿分離自動停止。

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



- 1) Attach arm thread guide **A** to the top cover with setscrew **B**.
- 2) Thread the machine head following the order of ① through ⑭ as shown in the illustration given above.

☆ The thread guide **⑨** is used only for CK-1508NS.

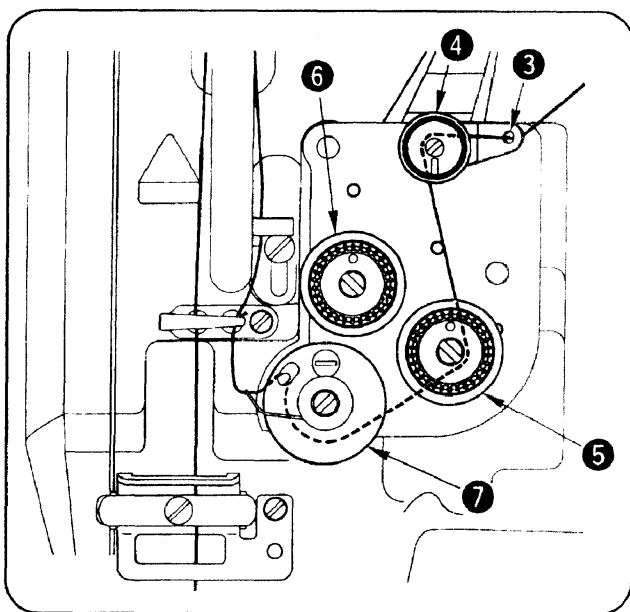
☆☆ Pass thread through the right side of thread guide **⑫**

- 3) 用固定螺絲 **B** 把機架導線器 **A** 安裝到頂蓋上。

- 4) 如圖所示按 ①~⑭ 的順序穿上線。

☆ 導線器 **⑨** 為 CK-1508NS 使用。

☆☆ 導線器 **⑫** 從右側穿過。

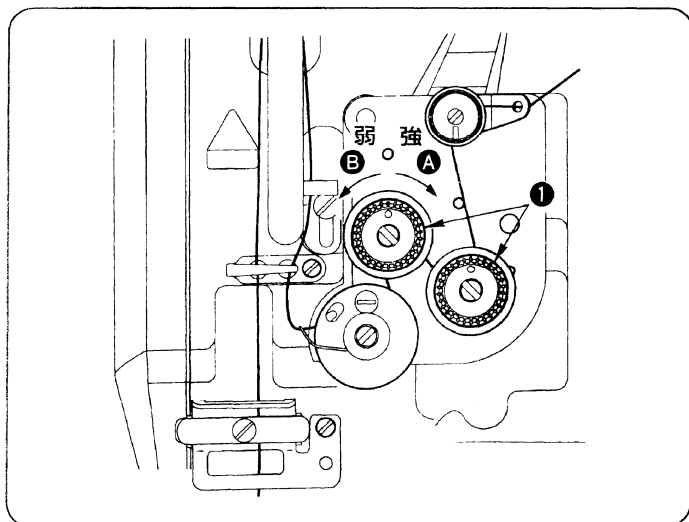


When using thin thread / 使用細線時

When using thin needle thread (when needle thread is passed through both of the thread tension disk No.2, necessary tension cannot be applied and the disks play), do not pass the thread through **⑥** and pass it in the order of **⑤** to **⑦**.

使用細上線(線穿過第二線張力盤的兩側後,達不到所需要的張力,張力盤鬆弛)時,請不要穿過**⑥**,按照**⑤**~**⑦**的順序穿線。

12. THREAD TENSION / 線張力

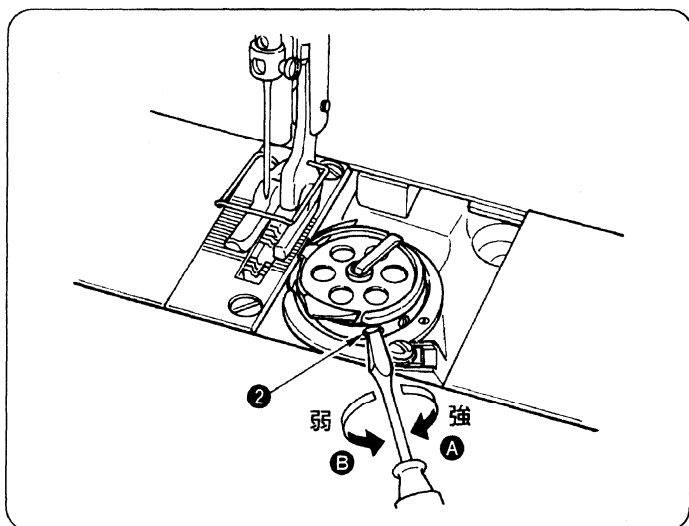


- 1) Adjusting the needle thread tension
Turn thread tension nut No.2 ① clockwise ① to increase the needle thread tension, or counterclockwise ② to decrease it.

(Caution) Apply the same tension to both of the thread tension nut No.2.

- 1) 上線張力的調節
向右轉動①第二線張力螺母①，上線張力變強，向左轉動②則變弱。

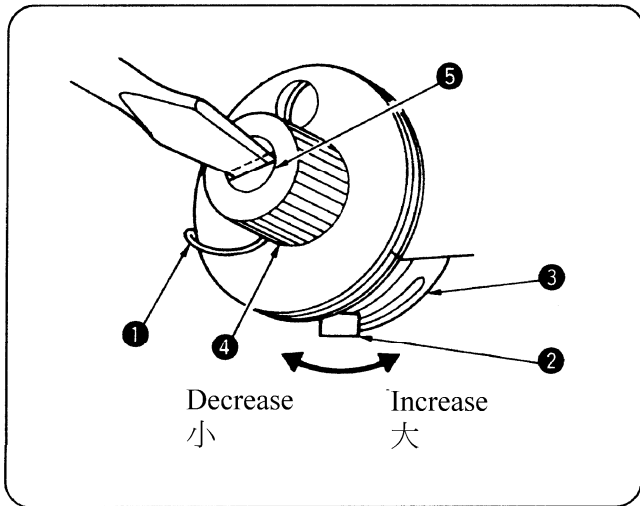
【注意】請把第二張力螺母兩側的張力調整為一樣大小。



- 2) Adjusting the bobbin thread tension
Turn tension adjustment screw ② clockwise ① to increase the bobbin thread tension or counterclockwise ② to decrease it.

- 2) 底線張力的調節
向右①的方向轉動線張力螺絲②，底線張力變強，向左②的方向轉動則張力變弱。

13. THREAD TAKE-UP SPRING / 挑線彈簧



- 1) **When you want to change the stroke of the spring:**
 - Loosen screw ② in the stopper, and move stopper ③ to the right or left to change the stroke of thread take-up spring ①.
 - Move the stopper to the right to increase the stroke of the thread take-up spring, or the left to decrease it.
- 2) **When you want to change the tension of the spring:**
 - Loosen nut ④, and turn spring stud ⑤ counterclockwise to increase the tension of the spring, or clockwise to decrease it.

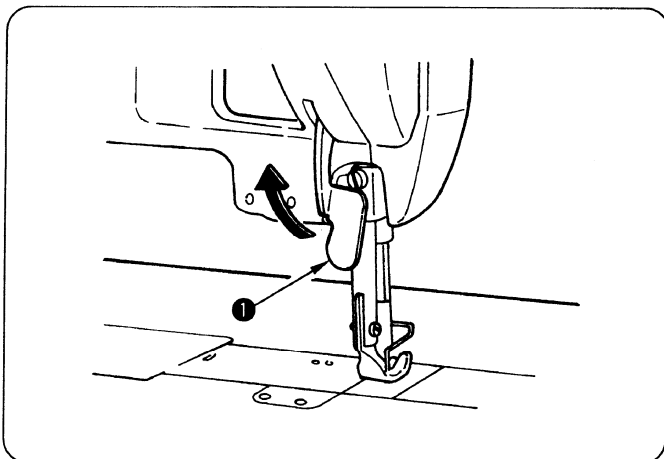
1) 變更挑線彈簧的移動量時：

- 擰鬆止動器固定螺絲②，左右移動止動器③，調節挑線彈簧①。
- 向右移動止動器則挑線彈簧的移動量變大，向左移動則變小。

2) 變更挑線彈簧的強度時：

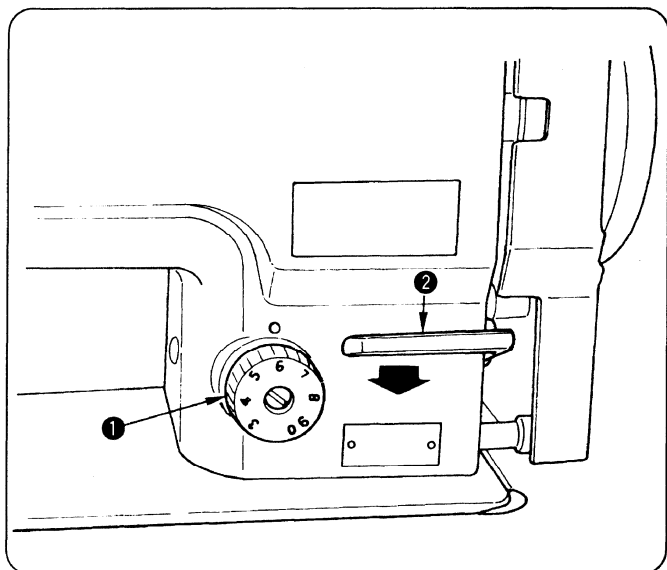
- 擰鬆螺母④，把彈簧軸⑤向逆時針方向轉動，強度變強，順時針方向轉動，強度變弱。

14. HAND LIFTER / 有關押腳提昇



- 1) When you want to keep the presser foot in the lifted position, lift hand lifter ① in the direction of the arrow. This makes the presser foot rise 9mm and stay at that position.
 - 2) To make the presser foot come down to its home position, lower the hand lifter.
- 1) 讓押腳在上昇的位置停止時，把押腳提昇桿①向箭頭方向抬起，押腳上昇 9mm 後停止。
 - 2) 下降押腳時，放下押腳提昇桿，即返回原來位置。

15. ADJUSTING THE STITCH LENGTH / 縫跡長度的調節



Turn stitch dial ① counterclockwise (clockwise) so that the number corresponding to the desired stitch length is brought to the top until the marking spot is reached.

Reverse feed stitching:

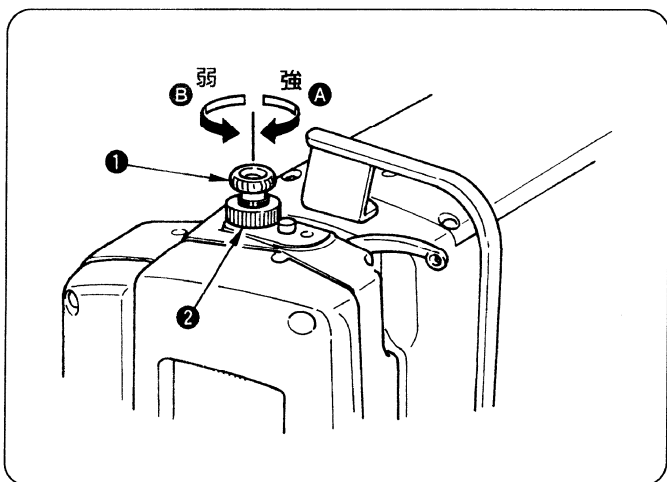
- 1) Press down reverse feed control lever ②.
- 2) Reverse feed stitches are made as long as you keep pressing the lever down.
- 3) Release the lever, and the machine will run in the normal feed direction.

把送料調節盤①向左(右)轉動，讓調整標記對準希望的數字

倒縫方式:

- 1) 向下按倒縫桿②。
- 2) 按下的期間可以倒縫。
- 3) 手離開時，又變為正常縫製。

16. ADJUSTING THE PRESSURE OF THE PRESSER FOOT / 押腳壓力的調整



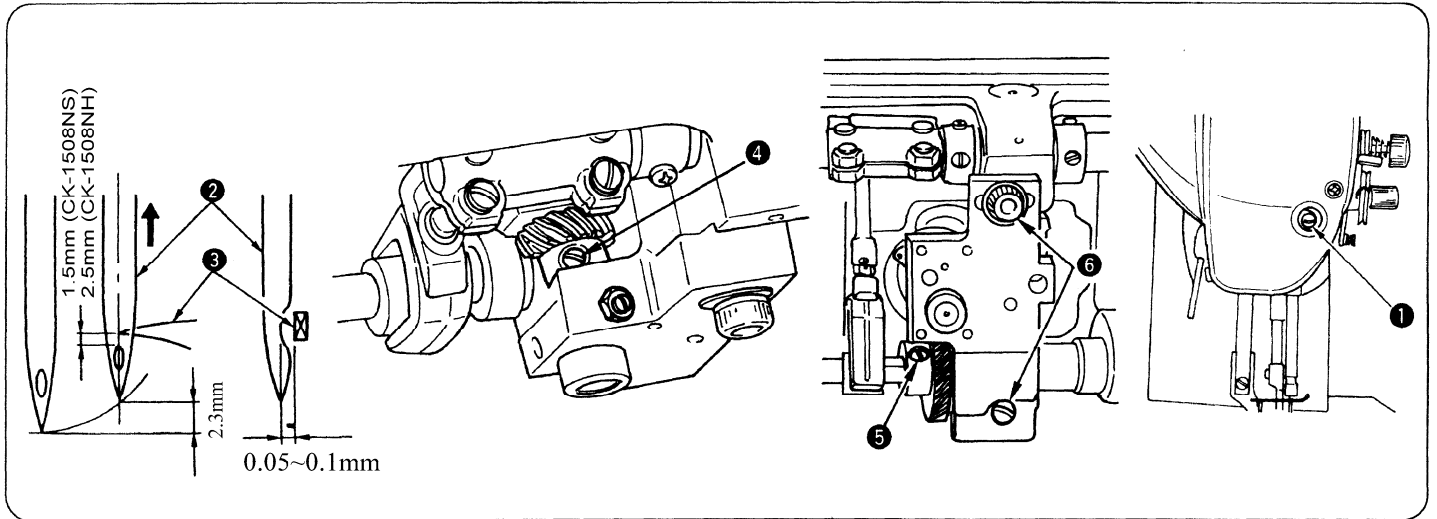
Turn presser spring regulating dial ① clockwise (A) to increase the pressure of the presser foot, or counterclockwise (B) to decrease it. After the adjustment, tighten nut ②.

(Note) Be sure to operate the sewing machine with the pressure of the presser foot minimized as long as the presser foot securely holds the material.

向右轉動A押腳壓力調節盤①則壓力變強，向左轉動B則壓力變弱。

【註】請把壓力調整到需要的最小限度的壓力。

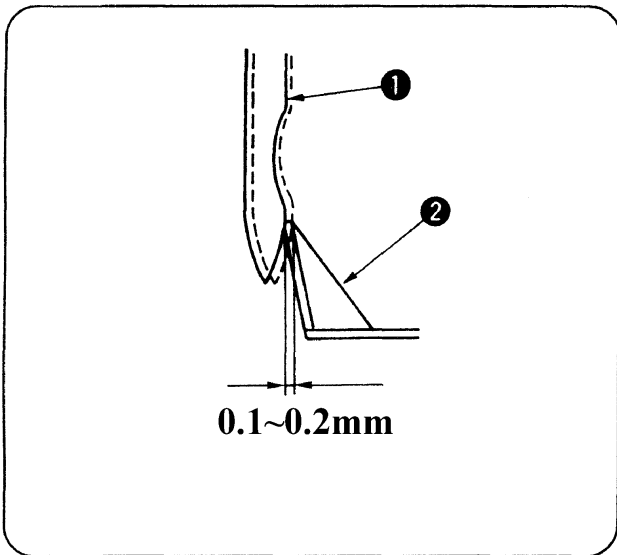
17. NEEDLE-TO-HOOK RELATION / 車針與旋梭的關係



- 1) Set the stitch dial to 0 [zero].
- 2) Turn the handwheel and loosen screw ① in the needle bar bracket to adjust so that the distance from the upper end of needle eyelet of needle ② to blade point ③ of the hook is 1.5mm (CK-1508NS), or 2.5mm (CK-1508NH) when the needle bar is raised by 2.3mm from the lowest position of its stroke. Then, tighten the screw again.
- 3) Turn the handwheel to make the needle bar ascend by 2.3mm from the lowest position of its stroke. Tighten two setscrews ④ in the screw gear (small) so that blade point ③ of the hook is almost aligned with the center of needle ②. However, fit one setscrew having a V-shaped top end of two setscrews ② to the V-groove on the hook driving shaft and tighten it.
- 4) Loosen setscrews ⑥ in the hook driving shaft saddle and move the hook driving shaft saddle to the right or left until a clearance of 0.05 to 0.1mm is provided between the blade point of the hook and the needle at the position where blade point ③ of the hook is almost aligned with the center of needle ②. After the adjustment, tighten setscrews ⑥.
- 5) Loosen two setscrews ⑤ in the screw gear (large) and move the screw gear (large) to the right or left until blade point ③ of the hook is aligned with the center of needle ②. After the adjustment, tighten setscrews ⑤. However, fit the setscrew No.1 of two setscrews ⑤ to the flat section of the hook driving shaft and tighten it.

- 1) 把送布調節盤調整到 0。
- 2) 轉動手轉輪，把針桿從最低點上升 2.3mm，擰鬆針桿套固定螺絲①，把車針②的針孔上端到旋梭尖③的距離調整到 1.5mm (CK-1508NS) 或 2.5mm (CK-1508NH)，然後擰緊固定。
- 3) 轉動手轉輪，把針桿從最下點上升 2.3mm。把旋梭尖③和車針②的中心調整到基本一致，然後擰緊 2 個螺絲齒輪 (小) 的固定螺絲④。把 2 個固定螺絲④之中前端為 V 型的第一螺絲，對準旋梭軸的 V 型溝，然後擰緊固定。
- 4) 因為旋梭③和車針②的中心基本致的位置，擰鬆旋梭軸台的固定螺絲⑥，左右移動旋梭軸台，把旋梭尖和機の間隙調整為 0.05 ~ 0.1 mm，然後擰緊固定螺絲⑥。
- 5) 擰鬆 2 個螺絲齒輪 (大) 的固定螺絲⑤，左右移動螺絲齒輪 (大)，把旋梭尖③和車針②的中心調整為一致，然後擰緊固定螺絲⑤。把 2 個固定螺絲⑤中的第一螺絲對準下軸的平部，然後擰緊。

18. ADJUSTING THE HOOK NEEDLE GUARD / 旋梭針座的調整



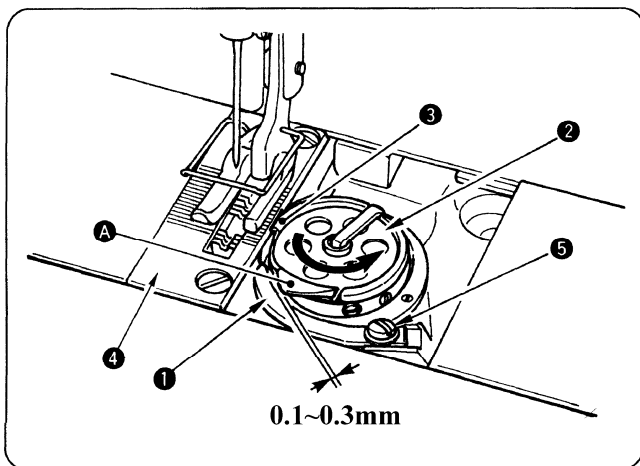
When a hook has been replaced, be sure to check the position of the hook needle guard. As the standard position of the hook needle guard, hook needle guard② must push the side face of needle① to lean the needle by 0.1 to 0.2mm away from its straight position. If not, adjust the hook needle guard by bending it.

- 1) To bend the hook needle guard inward, apply a screwdriver to the outside of the hook needle guard.
- 2) To bend the hook needle guard outward, apply a screwdriver to the inside of the hook needle guard.

更換了旋梭之後，請確認針座位置。標準位置是，旋梭針座②頂到車針①側面，離車針 0.1~0.2mm 的狀態。如果不正確，請彎曲旋梭針座進行調整。

- 1) 旋梭針座往內側彎曲時，把螺絲起子插到旋梭針座的外側。
- 2) 旋梭針座往外側彎曲時，把螺絲起子插到旋梭針座的內側。

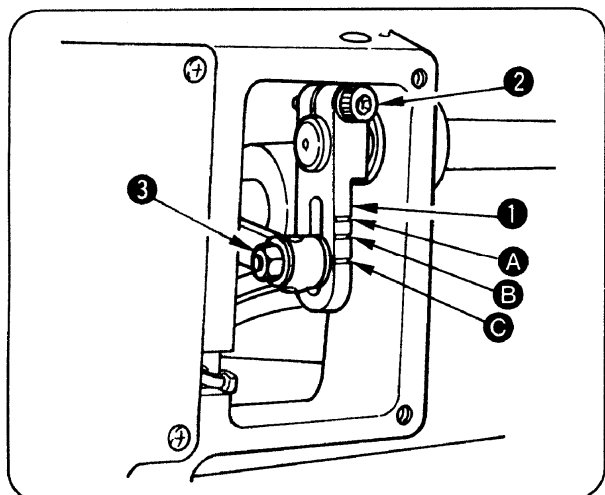
19. ADJUSTING THE BOBBIN CASE OPENING LEVER / 中旋梭導向器的調整



- 1) Turn the handwheel in its normal rotational direction to bring bobbin case opening lever① to its back end position.
- 2) Turn bobbin case② in the direction of the arrow until bobbin case stopper③ rests in the groove in throat plate④.
- 3) Loosen screw⑤ in the bobbin case opening lever and adjust so that a clearance of 0.1 to 0.3mm is provided between the bobbin case opening lever and protruding section④ of the bobbin case.

- 1) 向正常方向轉動飛輪，把中旋梭導向器①移送到最後位置。
- 2) 向箭頭方向轉動梭殼②，把中旋梭止動器③頂到針④的溝。
- 3) 擰鬆中導向器固定螺絲⑤，把中旋梭導向器和梭殼的突起部④之間間隙調整為 0.1~0.3mm。

20. ADJUSTING THE LIFTING AMOUNT OF THE PRESSER FOOT AND THE WALKING FOOT / 押腳與上送料腳上昇量的調整

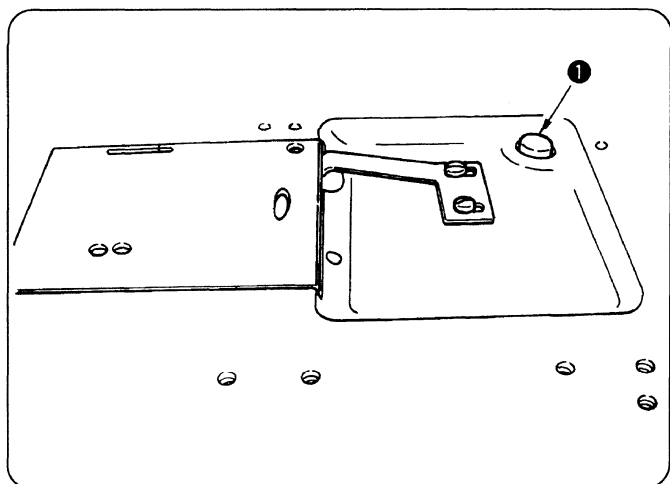


- The amount of alternate vertical movement of the presser foot and the walking foot is normally equal. To increase the amount of alternate vertical movement, move upper feed arm① upward in the range of the slot. To decrease it, move the upper feed arm downward. Then, tighten the nut③.
- To change the lifting amount of the presser foot and that of the walking foot, loosen screw② in the upper feed arm, turn the handwheel to this side and tighten screw② when the bottom faces of the presser foot and the walking foot are flush at the top surface of the throat plate. Then, the lifting amount of the presser foot becomes more than that of the walking foot. Or, turn the handwheel in the reverse direction to increase the lifting amount of the walking foot more than that of the presser foot
- You will find upper feed arm① when removing the right side of the window plate.
- 押腳和上送布腳的交替上昇的量一般為等力量增大交替上昇量時，在上送布曲柄①的長溝範圍向上調節。減少交替上昇量時，向下方調整，然後擰緊螺母③。
- 押腳和上送布腳的上昇量不同時，先把壓腳頭和上送布腳的下面移送到與針板上表面一致，然後擰鬆上送布曲柄固定螺絲②，把手轉輪轉到前側，擰緊螺絲②，押腳比上送布腳的上昇量大。把手轉輪反轉，上送布腳的上昇量比押腳小。
- 卸下窗板右側就可以看到上送布曲柄①。

| Standard of the amount of alternative vertical movement | |
|---|--------------|
| Engraved marker line ① | Approx. 5 mm |
| Engraved marker line ② | Approx. 4 mm |
| Engraved marker line ③ | Approx. 3 mm |

| 大致的上下交互量 | |
|----------|--------|
| 刻線 ① | 約 5 mm |
| 刻線 ② | 約 4 mm |
| 刻線 ③ | 約 3 mm |

21. RESETTING THE SAFETY CLUTCH / 安全裝置的復位



The safety clutch functions when an excessive load is applied to the hook or the other components during sewing. At this time, the hook will never rotate even if turning the handwheel. When the safety clutch has functioned, remove the cause and reset the safety clutch as given in the following procedure.

- 1) Pressing push button① located on the top surface of the machine bed, strongly turn the handwheel in the reverse direction of rotation.
- 2) The resetting procedure completes when the handwheel clicks.

縫製中，如果向旋梭等施加過大的力，安全裝置就動作。這時轉動手轉輪旋梭也不轉動。安全裝置動作之後，請排除故障原因，再進行復位。

- 1) 按住機頭上面的按鈕①，用強力反轉手轉輪。
- 2) 聽到「喀喳」的聲音之後，即完成復位。

22. SEWING SPEED TABLE / 縫製速度一覽表

CK-1508NS

| Amount of alternate vertical movement | Stitch length: ~ 6mm | Stitch length: 6mm ~ 9mm |
|---------------------------------------|-------------------------|-----------------------------|
| ~ 3mm | 2,500 rpm | 2,000 rpm |
| 3mm ~ 4mm | 2,000 rpm | 2,000 rpm |
| 4mm ~ 6.5mm | 1,600 rpm | 1,600 rpm |

CK-1508NH

| Amount of alternate vertical movement | Stitch length: ~ 6mm | Stitch length: 6mm ~ 9mm |
|---------------------------------------|-------------------------|-----------------------------|
| ~ 4mm | 2,000 rpm | 1,600 rpm |
| 4mm ~ 6.5mm | 1,600 rpm | 1,600 rpm |

CK-1508NS

| 押腳上下交互量 | 縫目: ~ 6mm | 縫目: 6mm ~ 9mm |
|----------------|--------------|------------------|
| 3mm 以下 | 2,500 rpm | 2,000 rpm |
| 3mm ~ 4mm 以下 | 2,000 rpm | 2,000 rpm |
| 4mm ~ 6.5mm 以下 | 1,600 rpm | 1,600 rpm |

CK-1508NH

| 押腳上下交互量 | 縫目: ~ 6mm | 縫目: 6mm ~ 9mm |
|-------------|--------------|------------------|
| ~ 4mm | 2,000 rpm | 1,600 rpm |
| 4mm ~ 6.5mm | 1,600 rpm | 1,600 rpm |

23. MOTOR PULLY AND V BELT / 馬達皮帶輪和 V 型皮帶

Use an M type V belt.

The following table shows the relationship among the motor pulley, belt length and the rotational speed of the sewing machine.

| Model | speed of sewing machine | diameter of handwheel | Number of poles | Frequency | speed of motor | diameter of motor pulley | Size of V belt |
|-----------|-------------------------|-----------------------|-----------------|-----------|----------------|--------------------------|----------------|
| CK-1508NS | 2,500 rpm | Ø 93.3mm | 2 | 50Hz | 2,840 rpm | Ø 80mm | M 44 |
| | | | | 60Hz | 3,400 rpm | Ø 65mm | M 43 |
| | | | 4 | 50Hz | 1,430 rpm | Ø 160mm | M 47 |
| | | | | 60Hz | 1,715 rpm | Ø 135mm | M 46 |
| CK-1508NH | 2,000 rpm | Ø 93.3mm | 2 | 50Hz | 2,840 rpm | Ø 65mm | M 43 |
| | | | | 60Hz | 3,400 rpm | Ø 55mm | M 42 |
| | | | 4 | 50Hz | 1,430 rpm | Ø 130mm | M 46 |
| | | | | 60Hz | 1,715 rpm | Ø 110mm | M 45 |

For the motor, use a 2P or 4P clutch motor of 3-phase 400W (1/2 HP).

請使用 V 型皮帶。

馬達皮帶輪、皮帶的長度和縫紉機轉速的關係如下表所示：

| 機種 | 縫紉機轉速 | 手轉輪直徑 | 極數 | 頻率 | 馬達轉速 | 皮帶輪直徑 | V 型皮帶 |
|-----------|-----------|----------|----|------|-----------|---------|-------|
| CK-1508NS | 2,500 rpm | Ø 93.3mm | 2 | 50Hz | 2,840 rpm | Ø 80mm | M 44 |
| | | | | 60Hz | 3,400 rpm | Ø 65mm | M 43 |
| | | | 4 | 50Hz | 1,430 rpm | Ø 160mm | M 47 |
| | | | | 60Hz | 1,715 rpm | Ø 135mm | M 46 |
| CK-1508NH | 2,000 rpm | Ø 93.3mm | 2 | 50Hz | 2,840 rpm | Ø 65mm | M 43 |
| | | | | 60Hz | 3,400 rpm | Ø 55mm | M 42 |
| | | | 4 | 50Hz | 1,430 rpm | Ø 130mm | M 46 |
| | | | | 60Hz | 1,715 rpm | Ø 110mm | M 45 |

請使用三相 400W (1/2 馬力) 的 2 極或 4 極的離合馬達。

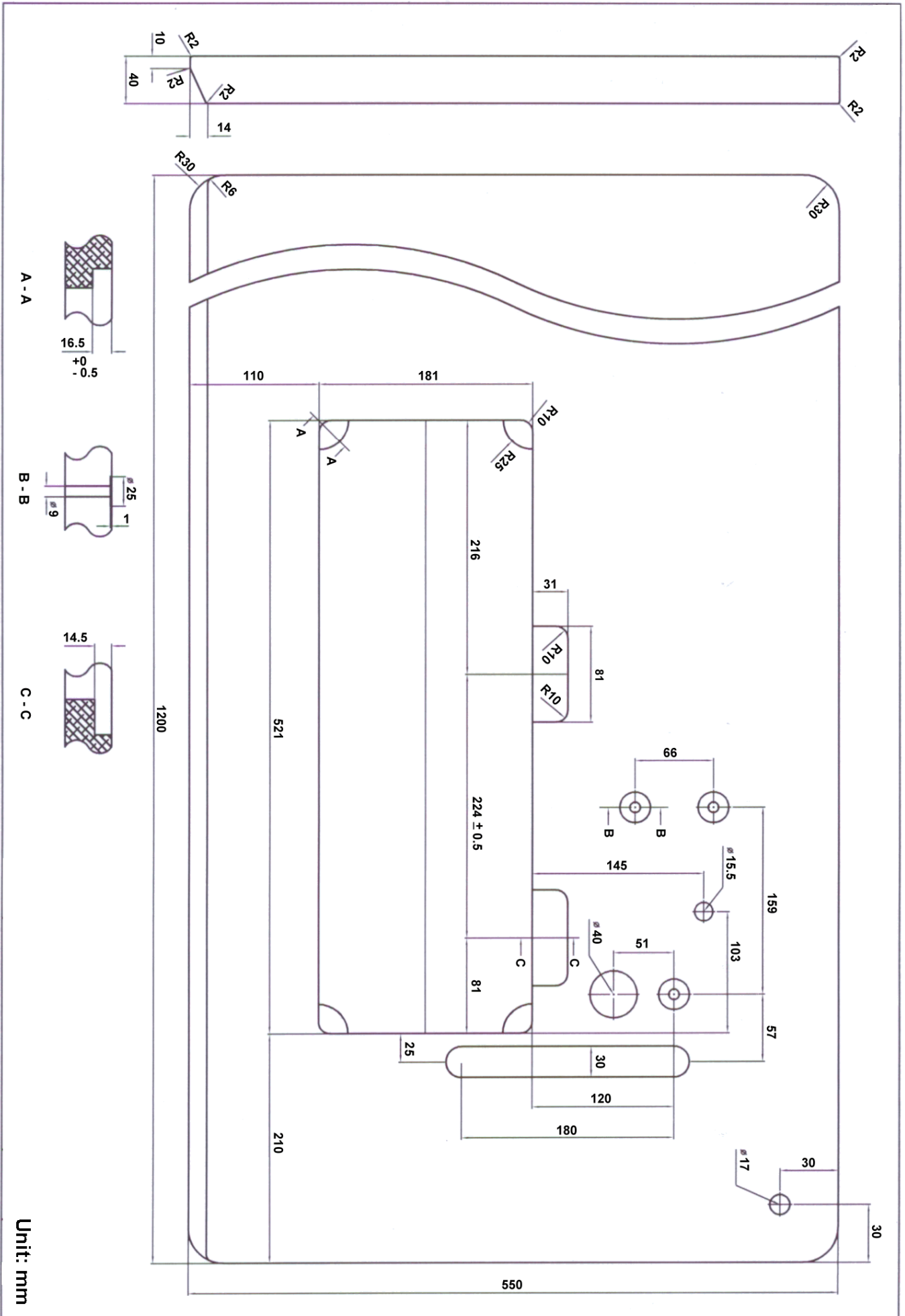
24. TROUBLES IN SEWING AND CORRECTIVE MEASURES

| Troubles | Causes | Corrective measures |
|--|--|--|
| 1. Thread breakage (Thread frays or is worn out.) | 1) Thread path, needle point, hook blade point or bobbin case resting groove on the throat plate has sharp edges or burrs. | <ul style="list-style-type: none"> ● Remove the sharp edges or burrs on the blade point of hood using a fine emery paper. Buff up the bobbin case resting groove on the throat plate. |
| | 2) Needle thread tension is too high. | <ul style="list-style-type: none"> ● Decrease the needle thread tension. |
| | 3) Bobbin case opening lever provides an excessive clearance at the bobbin case. | <ul style="list-style-type: none"> ● Decrease the clearance provided between the bobbin case opening lever and the bobbin. ● Refer to “19. ADJUSTING THE BOBBIN CASE OPENING LEVER”. |
| | 4) Needle comes in contact with the blade point of hook. | <ul style="list-style-type: none"> ● Refer to “17. NEEDLE-TO-HOOK RELATION”. |
| | 5) Amount of oil in the hook is too small. | <ul style="list-style-type: none"> ● Adjust the amount of oil in the hook properly. ● Refer to “5. LUBRICATION”. |
| 2. Needle thread trails 2 to 3 cm from the wrong side of the fabric. | 1) Needle thread tension is too small. | <ul style="list-style-type: none"> ● Increase the needle thread tension. |
| | 2) Thread take-up spring works excessively or the stroke of the spring is too small. | <ul style="list-style-type: none"> ● Decrease the tension of the spring and increase the stroke of the spring. |
| | 3) Timing between the needle and the hook is excessively advanced or retarded. | <ul style="list-style-type: none"> ● Refer to “17. NEEDLE-TO-HOOK RELATION”. |
| 3. Stitch skipping | 1) Timing between the needle and the hook is excessively advanced or retarded. | <ul style="list-style-type: none"> ● Refer to “17. NEEDLE-TO-HOOK RELATION”. |
| | 2) Pressure of the presser foot is too low. | <ul style="list-style-type: none"> ● Tighten the presser spring regulator. |
| | 3) The clearance provided between the top end of the needle eyelet and the blade point of hook is not correct. | <ul style="list-style-type: none"> ● Refer to “17. NEEDLE-TO-HOOK RELATION”. |
| | 4) Hook needle guard is not functional. | <ul style="list-style-type: none"> ● Refer to “18. ADJUSTING THE HOOK NEEDLE GUARD”. |
| | 5) Improper type of needle is used. | <ul style="list-style-type: none"> ● Replace the needle with one which is thicker than the current by one count. |
| 4. Loose stitches | 1) Bobbin thread does not pass through the tension spring of the inner hook. | <ul style="list-style-type: none"> ● Thread the bobbin thread correctly. |
| | 2) Thread path has been poorly finished. | <ul style="list-style-type: none"> ● Remove rough parts with a fine emery paper or buff it up. |
| | 3) Bobbin fails to move smoothly. | <ul style="list-style-type: none"> ● Replace the bobbin or hook with a new one. |
| | 4) Bobbin case opening lever provides too much clearance at the bobbin. | <ul style="list-style-type: none"> ● Refer to “19. ADJUSTING THE BOBBIN CASE OPENING LEVER”. |
| | 5) Bobbin thread tension is too low. | <ul style="list-style-type: none"> ● Increase the bobbin thread tension. |
| | 6) Bobbin has been wound too tightly. | <ul style="list-style-type: none"> ● Decrease the tension applied to the bobbin winder. |

24. 縫製中出現的現象、原因和處理方法

| 現象 | 原因 | 處理方法 |
|-----------------------|----------------------------|---------------------------------|
| 1. 斷線（綻線、或切斷。） | 1) 線道、針尖、旋梭尖、針板中旋梭固定溝上有傷痕。 | ● 用細砂紙打磨旋梭尖的傷痕。或用銼刀挫針板的中旋梭固定溝。 |
| | 2) 上線張力過強。 | ● 減弱上線張力。 |
| | 3) 中旋梭導向器間隙過大。 | ● 調小間隙。 ● 參照“19. 中旋梭導向器的調整”。 |
| | 4) 車針與旋梭尖相碰。 | ● 參照“17. 車針和旋梭的關係”。 |
| | 5) 旋梭部的油量少。 | ● 調整為合適的油量。 ● 參照“5. 潤滑”。 |
| 2. 布背面上殘留 2 ~ 3 mm | 1) 上線張力過弱。 | ● 增強上線張力。 |
| | 2) 挑線彈簧過強，移送量小。 | ● 減弱挑線彈簧，加大移動量。 |
| | 3) 針與旋梭同步過該部奔快，或過慢。 | ● 參照“17. 車針和旋梭的關係”。 |
| 3. 跳線 | 1) 針與旋梭同步過快，或過慢。 | ● 參照“17. 車針和旋梭的關係”。 |
| | 2) 壓腳壓力過弱。 | ● 擰緊壓腳調節螺絲。 |
| | 3) 針孔上端和旋梭尖の間隙不正確。 | ● 參照“17. 車針和旋梭的關係”。 |
| | 4) 旋梭車針座不正確。 | ● 參照“18. 旋梭針座的調整”。 |
| | 5) 車針號不對。 | ● 更換為大一號的車針。 |
| 4. 緊線不良 | 1) 中旋梭線張力彈簧上沒有夾底線。 | ● 正確地穿底線。 |
| | 2) 線道加工不好。 | ● 用細線砂紙打磨，或用銼刀銼。 |
| | 3) 梭芯不滑動。 | ● 更換梭芯，或更換旋梭。 |
| | 4) 中旋梭導向器間隙過大。 | ● 參照“19. 中旋梭導向器的調整”。 |
| | 5) 底線張力過弱。 | ● 加強底線張力。 |
| | 6) 底線繞線過強。 | ● 減弱底線繞線張力。 |

25. THE DRAWING OF TABLE / 車板尺寸圖



Unit: mm