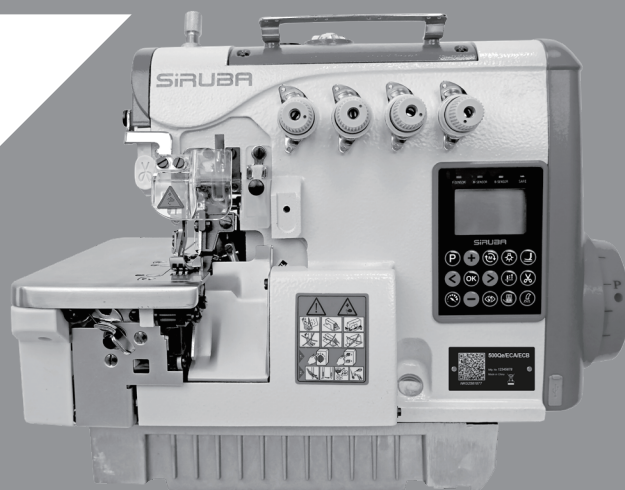


# SIRUBA

使用説明書

INSTRUCTIONS BOOK

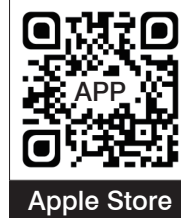
■ 500Qe ECA/ECB



## 溫馨提醒 A WARM REMINDER

請儘快下載 SIRUBA APP，並將您的機器註冊，以便獲得原廠的保固。APP 還提供多項有用的資訊。

please register your Siruba machine online or through Siruba App at once, as to gain the full warranty protection. You may also acquire more useful information through Siruba APP.



## 安全警示 GENERAL SAFETY INSTRUCTION

有關於縫紉機、自動化機構，以及其他輔助設備（以下統稱為機器），在工作中無可避免會接近機器移動區域，也就有伴隨著潛在風險。因此，我們強烈要求操作者，維修技師一定要先仔細閱讀並瞭解本操作手冊的內容。安全指示係包含了某些未載於規格書上的加裝配件。現場管理者有責任要求所有操作者要閱讀並瞭解機器的操作與注意事項。未能確實遵守本手冊所記載的事項，將可能導致機器的損害，或是人員的傷亡。

### 警告標示說明

For the sewing machine, automatic mechanic system, and auxiliary devices (hereinafter referred as "machine"), it is inevitable to conduct work near moving parts of the machine. This means that there is always a potential risk from the moving parts. Operators actually operating the machine and service technicians performing maintenance and repair are strongly advised to read and understand fully the following instructions in advance. The safety instructions include items which are not listed in the specifications of your product. It is the manager/supervisor's responsibility to have their fellow workers fully understand before operation. Fail to follow the instructions may cause damage to properties, severe injury or even death.

Explanation of warning indications and labels.

	<p>高壓電危險 在機器關機後十分鐘內，勿開啟電控箱。</p> <p>HIGH VOLTAGE DANGER Do not open the power cabinet within 10 minutes after the power off.</p>		<p>零部件移動區 勿接近，以避免人員受傷。</p>
	<p>零部件高速移動區 勿接近，以避免人員受傷。</p> <p>High speed moving area! Stay away and keep clear to avoid injury.</p>		<p>Machine moving area! Stay away and keep clear to avoid injury.</p>

標告標示說明 WARNING LABELS	標告標示說明 WARNING LABELS
	<p>一般安全標示 GENERAL SAFETY INDICATIONS</p>

## 安全須知

### 危險

意外事件將會導致人員受傷甚至死亡，也會造成財產的損害。  
當有必要進行電控系統的檢修時，務必要關閉電源，並等候至少 5 分鐘以上才能打開電控箱 / 操作箱，以避免電擊。

### 注意

#### 1. 基本預防

- (1) 在操作前務必先閱讀操作手冊與其他機器電件的說明書，請妥善保存操作手冊與說明書以便隨時查閱。
- (2) 這些注意措施包含了機器上加裝，但未列在規格書上的項目。
- (3) 務必要戴護目鏡與手套，以避免破損零件所帶來的傷害。
- (4) 有裝戴心臟調節器的人員，請先詢問醫護人員有關注意事項。

#### 2. 安全裝置與警告標示

- (1) 操作前要檢查，並確認所有的安全設施有妥善安裝且運作正常。
- (2) 若安全設施因維修需要移動，在機器重新啟動操作前，請確認安全設施有重新安裝回原位，並且運作正常。
- (3) 機器上的安全警告標示要保持完整與可辨視。如果有污損或遺失，請儘以更新。
- (4) 未能確實遵守安全規範，將會導致人員受傷，甚至影響生命安全。

#### 3. 應用與修改

- (1) 嚴格禁止機器使用在非原始設計用途。也禁止以任何不是操作手冊上記載的方式來操作機器。
- (2) 嚴格禁止修改機器。任何未經原廠許可的變動將不在保固範圍內。
- (3) 機台一經修改變動，本公司將不擔負財務損失，人員傷亡的責任。

#### 4. 教育與訓練

- (1) 工廠主管人員有義務提供機台使用人（操作者 / 維修者）相關的教育訓練。良好的教育訓練不僅可以避免造成人員傷害，也可以避免財產的損失。
- (2) 操作人員操作機器之前，都必需接受過良好的訓練。
- (3) 機器的維修保養必須由合格的技師執行。

#### 5. 必須關閉電源的情況：

如何關閉電源：按壓下緊急停止開關（如果機器有配置的話），關閉電源，拔除電源線。

- (1) 當機器出現異常時，按下緊急停止開關（如果有配置），關閉電源。
- (2) 為了避免機器突然啟動造成意外，在操作機器前，要先確定機器電源關閉，再行開啟電源。
- (3) 當檢查或清潔機器時，關閉電源，並確定機器已完全停止運作。
- (4) 當維修機器時（如更換或調整零件），要關閉電源，並確定機器已完全停止運作。

#### 6. 拔除電源線時，務必要抓住電源插頭，而非抓住電源線，以避免斷裂，電擊，甚至火災。

#### 7. 當機器停止運作，且無人看管時，要關閉電源。

#### 8. 萬一停電或電力供應出現不穩，關閉電源，以避免意外發生。

## SAFETY PRECAUTIONS

### Danger

An accident means " to cause personal injury or death, or damage to property. "

When it is necessary to perform service on electrical parts, be sure to turn the power off and wait for 5 minutes or more before opening the power cabinet/box in order to avoid electrical shock.

### Caution

#### 1. Basic precaution

- (1) Read the manual and other papers supplied with accessories of the machine before operation. Keep the manual and papers at hand for quick reference.
- (2) The content of this section includes items which are not listed in the specification of your product.
- (3) Always wear safety goggles and gloves to avoid accident caused by parts breakage.
- (4) For those who use a heart pacemaker, please consult the medical specialist first.

#### 2. Safety devices and warning labels

- (1) Check to ensure all safety devices are correctly installed in place and properly before operation.
- (2) If any of the safety devices is removed for service cause, please be sure to replace it back to position and verify that it works normally before resuming operation.
- (3) Always keep the warning labels adhered on the machine clearly visible. If any of the labels missing or contaminated, replace with a new one at soon.
- (4) Fail to obey instructions above may cause severe injury or death to the operators.

#### 3. Application and modification

- (1) It is prohibited to use the machine for any application other than its original intention, or in any manner other than that prescribed in the instruction manual.
- (2) Never modify or alter the machine. Any unauthorized change of the specification will not be covered by the warranty.
- (3) Our company assumes no responsibility/liability to damages, injuries, or death resulting from the machine which has been modified or altered.

#### 4. Education and training

- (1) The plant managers/supervisors are obliged to provide education and training to operators and service technicians. A good education/training plan not only avoids personal injury but also prevent damage to the property.
- (2) Only a well-trained operator is allowed to operate the machine.
- (3) Only a certified technician is allowed to perform service to the machine.

#### 5. Situations that you must turn off the power

Turning off the power: press EMG Stop (if there is one), switch off the power, and remove the power plug from the outlet.

- (1) When there is a failure or abnormality, press EMG Stop (if there is one), switch off the power.
- (2) To prevent accident resulting from abrupt start of the machine, before operating the machine, always turn off the power and switch on again.
- (3) When cleaning or inspecting the machine, make sure the machine stops completely after turning off the power.
- (4) When performing service (i.e. changing or adjusting any component), make sure the power is off and the machine stops completely.

#### 6. Remove the power plug by holding the plug section instead of the cord to avoid electrical shock, leakage, or fire accident.

#### 7. Turn off the power whenever the machine is left unattended between works.

#### 8. In case of a power failure or black out, turn off the power to avoid damage or accident.

## 在不同階段的注意事項

## PRECAUTIONS TO BE TAKEN IN VARIOUS OPERATION STAGES

### 1. 運輸

- (1) 當搬運或移動機器時，請考量機器重量，選擇安全合適的方式。請參考機器規格。
- (2) 採取足夠的安全防護，以避免機台在搬運或移動中掉落。
- (3) 為避免意外，運送時不要重覆使用包裝材料。

### 2. 拆箱

- (1) 在拆箱前，檢查機器是否平穩放置，並採用適當的工具維持拆箱過程的穩定。
- (2) 進行拆箱時，遵循外箱上的指示，小心外箱上的釘子或碎片。

### 3. 安裝：

#### 3A. 桌板與腳架

- (1) 採用原廠的桌板以確保機器得到足夠的保護與支撐。如果在安裝或維修時，需要暫時將機器置放於物件上，請確定該物件有足夠的支撐力。
- (2) 如果桌板有裝置滾輪，滾輪需要有煞車鎖定機構，而且在操作與維修時，煞車機構必需鎖定。

#### 3B. 電線與管路

- (1) 電線與管路的材質必需符合規範與需求。
- (2) 電線與管路不能夠有折彎或壓迫。移動的零配件上，電線與管路需有至少 30mm 以上的預留量。
- (3) 接線時不能有跳火。
- (4) 所有接頭都必需確實固定。當拆除時，務必要抓住接頭本體。

#### 3C. 接地

- (1) 接地是必需的。且需由合格的技師來施工。
- (2) 在操作前需確認接地有確實。

#### 3D. 馬達

- (1) 馬達的選用，必需符合規範與需求。
- (2) 如果馬達為皮帶傳動，務必要安裝保護措施以避免捲入危險。

### 4. 在開始操作前

- (1) 在開啟電源前，確認所有接頭，電線，管路都完好無損，確實連結。
- (2) 檢查皮帶輪的轉向與標示為同一方向。
- (3) 確認腳架滾輪都已鎖定。
- (4) 保持作業範圍淨空。

### 5. 在操作中

### 1. Transportation

- (1) When lift or move the machine, please take the machine weight into consideration and apply a safe manner. Refer to the specification for the information you need for transportation.
- (2) Apply sufficient safety measures when lifting or moving the machine to avoid falling or dropping.
- (3) To avoid unexpected accident, do not reuse the packing material for transportation.

### 2. Unpacking

- (1) Before proceeding to unpacking, check the balance of the machine and apply necessary tools to hold the proper position.
- (2) When unpacking, follow the instruction printed on the cartoon. Be careful of the nails and chips when unpacking from a wooden rack.

### 3. Installation:

#### 3A. Table and Stand

- (1) Only adopt a qualified genuine table and stand to assure the holding support. In case you need to leave the machine on a surface temporarily for service, make sure the surface is strong enough to hold the weight.
- (2) If casters are applied to the table stand, adopt casters with a locking mechanism only and lock them well to secure the machine during the operation and service.

#### 3B. Cable and Wire

- (1) The cables and wires must comply with the specification and requirement.
- (2) The cables and wires shall be free from bending or extra force. Reserve a free space of at least 30mm between cables/wires and the moving parts.
- (3) Do not apply starburst connection when wiring.
- (4) All connectors must be fixed securely. And always hold the connector body when removing it.

#### 3C. Grounding

- (1) Grounding is necessary and must be done by a certified technician. (2) Check and ensure the grounding is secured before operation.

#### 3D. Motor

- (1) The motor must comply with the specification and requirement.
- (2) If there is a belt in the motor transmission, adopt or apply a proper protector to avoid entangling.

### 4. Before Operation

- (1) Before turning on the power, make sure all the connectors, cables, and wires are free from damage, dropout, or looseness.
- (2) Check and make sure the pulley rotation follows the same direction as labels.
- (3) Make sure all the stand casters are locked or fixed in position.
- (4) Keep the working area clean from obstacles.

### 5. During Operation

- (1) Always keep your fingers, hair, or clothing away from the moving components and moving area. Do not place your personal belongings on the machine.

- (1) 注意手、頭髮、衣服不在機件移動範圍。不要將個人物品置放於機器上。
- (2) 機器會高速運作。保持雙手遠離移動機件範圍。機器完全停止前不要靠近。
- (3) 在移動物件或重新設定機器時，注意不要被機器或零件撞擊。
- (4) 避免突然起動造成意外，在檢查或維修馬達或皮帶時，務必關閉電源並確認機器完全停止。
- (5) 機器停止時，伺服馬達是無聲的。注意要關閉電源以免突然起動。
- (6) 永遠保持電控箱的風扇與氣道淨空。

## 6. 潤滑

- (1) 請依照說明書指示，選用合格的油脂來潤滑機件。
- (2) 如果油品接觸到眼睛或身體，立即以清水沖洗。如有不適，立即尋求醫護人員協助。
- (3) 如果油品不慎進入身體，立即尋求最近的醫療協助。

## 7. 維修保養

- (1) 只有合格的技師或工程師能夠進行維修服務，包含機器調整與修理。只採用原廠的零件進行更換。如果採用非原廠零件，或是因不當維修 / 調整所造成的傷害，本公司將不負任何責任。
- (2) 只有合格的技師或認證的工程師才能對電控系統進行維修或保養。
- (3) 當對氣動原件（如氣缸）進行維修保養時，務必先拔除風源，並將氣體完全洩除，以避免突然啟動。
- (4) 在調整或更換部件後，檢查所有螺絲是否鎖固。
- (5) 定期清潔是必需的。在清潔前務必先關閉電源，並確認機台完全停止。
- (6) 如果運作異常或不良，立即停止操作並關閉電源。聯絡授權經銷商或我們公司以尋求技術協助。
- (7) 當保險絲故障，立即關閉電源，找出故障原因並予以排除後，更換同規格的新的保險絲。
- (8) 定期檢查與清潔風道，電線與管路。

## 8. 工作環境

- (1) 機器必需不用電磁波干擾。
- (2) 電源供應必需良好且穩定。電壓波動不得超過 10%。
- (3) 隨時檢查空壓的壓力與品質。如果氣源不穩定，請安裝合適器材以改善。
- (4) 機器操作環境，室溫 5°C ~ 35°C，相對濕度 35%~85%。
- (5) 為了保護電子元件與安全起見，當有劇烈氣溫變化而導致凝水時，立即關閉並拔除電源，並靜候至完全乾燥為止。
- (6) 為了安全起見，當有打電或閃電時，請停止操作，關閉並拔除電源。
- (7) 勿在機器週遭使用電視或收音機，以避免干擾。
- (8) 依當地法令規範，在操作中採取必要的防護。
- (9) 關於包裝材料、潤滑油品，以及機器（含零配件）的丟棄，請依各地政府法規的規範執行。

- (2) The machine is designed to run at high speed. Always keep your hands away from the moving area. Do not resume the work cycle until the machine stops completely.
- (3) Be careful not to be caught by the machine or components when removing or resetting the machine.
- (4) To avoid accident caused by abrupt start, when performing service on the motor or belt, make sure the power is off and the machine stops completely.
- (5) A servo motor is silent as the machine stops. Be sure to turn off the power to avoid an abrupt start. (6) Always keep the fan and airway of the power cabinet clean from any obstacle.

## 6. Lubrication

- (1) Apply only qualified oil and grease onto the parts as instructed in the manual.
- (2) If the lubricant contacts your eye or body, wash it off immediately. Consult a medical care if necessary.
- (3) If the lubricant goes into your body accidentally, go to the nearby medical care immediately.

## 7. Service

- (1) Only a certified engineer/technician is allowed to perform service to the machine, including adjusting and repairing. Use only genuine parts for replacement. Our company assumes no responsibility/liability for any accident caused by improper repair or adjustment, or the use of any parts other than genuine one.
- (2) Only a certified technician or authorized engineer is allowed to repair or maintenance the electric system.
- (3) When performing service to air-driven parts, like an air cylinder, first disconnect the air supply and expel the air completely to avoid abrupt start.
- (4) Check all screws and nut are fixed well after adjusting and replacement.
- (5) A periodical cleaning is necessary. Make sure the power is off and the machine stops completely before cleaning.
- (6) If the machine functions poorly or abnormally, stop the operation and turn off the power. Contact the authorized dealers or us to request for a technical service support.
- (7) When there is a fuse failure, turn off the power, find out the cause of the failure and apply solution to it, then replace with a new one with the same spec.
- (8) Periodically check and clean the fan airway and the cable/wiring.

## 8. Working Environment

- (1) The machine should be free from the affection of electro-magnetic wave.
- (2) The power supply should be in good and reliable condition, the fluctuation of rated voltage should be less than 10%.
- (3) Always check the air pressure and quality. Some extra device might be needed if the supply is not reliable.
- (4) The machine is designed to be used with ambient temperature 5°C ~ 35°C, relative humidity 35%~85%.
- (5) To protect the electronic components and for safety cause, when there is a frost resulting from a dramatic temperature rise, disconnect the power and wait until it dry completely.
- (6) For safety cause, when there is a thundering or lightening, stop the operation and disconnect the power supply.
- (7) Do not use TV or radio nearby the machine as to avoid interference.
- (8) Apply necessary protection during operation. Follow applicable regulations set by local administration.
- (9) For disposal of packages, lubricant, and product, please follow the applicable regulations set by local administration.

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## 規格

## SPECIFICATION

500Qe - 514M - 3 - 24 / VT

規格 SPECIFICATION	三線	四線	五線
	504M-3-04	514M-3-24	516M-3-35/55
	中厚布料		
針寬		2	3/5
包邊寬度	4	4	5
固縫寬度	4	6	8 / 10
差動比	0.7~1.7	0.7~1.7	0.7~1.7
針腳長度 ( 縫距 )	0.6~4.2	0.6~4.2	0.6~4.2
壓腳上升量	6	6	5
針棒行程	28	28	28
針離針板最高距	10.1	10.6	10.6
送料具高出針板	0.9~1.1	0.9~1.1	0.9~1.1
上勾針越距	4.4~4.7	4.4~4.7	4.4~4.7
下勾針退距	3.7~3.9	3.7~3.9	3.7~3.9
環鉤針退距			1.5
轉速	5500	5500	5500
使用針	DCX27 11#	DCX27 11#	DCX27 11#

## 致使用者

我們非常感謝您使用本公司出品之超高速直針鎖邊縫紉機 ( 拷克車 )。請詳細閱此說明書，將使您更了解本機器獨特之性能及正確的使用方法，進而提高您縫製的效率與品質。

首先請您注意，請先註入潤滑油及確認馬達之向為順時針方向，才可以開動機器。

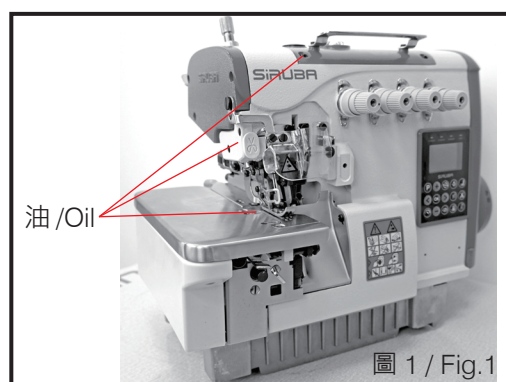


圖 1 / Fig.1

## TO THE OPERATORS

Thank you very much for using our Ultra High speed, Straight Needle, Overlock Safety Stitch Machine. Before operating this machine, please study this book thoroughly, understand the functions and features of the machine. Then it will help you to increase your sewing efficiency and quality.

ATTENTION: Because this is an ultra high speed machine. Do not run it before filling oil and making sure the correct turection of motor.

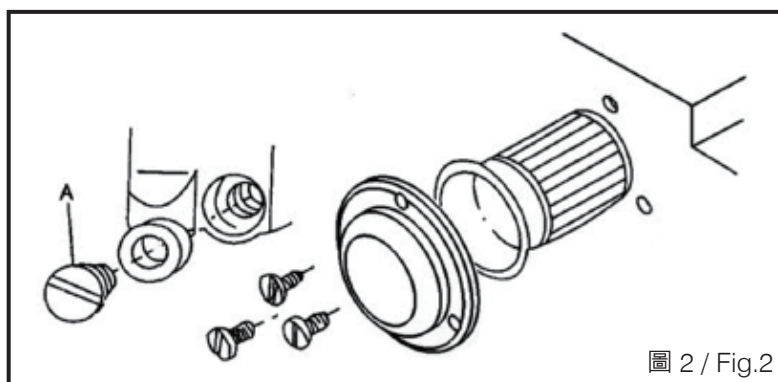


圖 2 / Fig.2

## 機器安裝

1. 依本機所附桌板裁製圖及零件組合圖所列之配件，依序安裝也震機座鋁板半沉式時，機台針板面與桌板面之距離為 100mm，全沉式為 5mm。
2. 馬達啟動踏板裝於左邊，抬壓腳踏板則裝於右邊。
3. 按零件圖示裝置廢料槽及線架。

## HOW TO INSTALL THE MACHINE

1. Install the machine according to the table cut-out diagram, Cushion Rubber and Rest Board as enclosed. In case of semi-submerged, the distance between Needle plate top surface and Table Top is about 100mm, and for fully-submerged is about 5mm.
2. Setting the pedal of clutch motor to the left side and the pedal of presser foot lift at right ride.
3. Install the cloth waste chute, thread stand as parts list.

## 新機器之啟用規定

新機器在最初啟用四個星期內請用低於最高速度 20% 的速度運轉，然後換新潤滑即可運轉到最高速度。

## HOW TO OPERATE THE NEW MACHINE

Please run the new machine in the first four at 20% less speed than maximum. Then replace the new oil and thereafter the machine may be operated up to maxim um speed.



## 潤滑油之注入與更換

### 1. 潤滑油之注入 圖 1

將螺絲 A 旋開，以包裝箱內所附之超高速潤滑油或選用 MOBIL#10 或 SGIP 等相當之機油加入，使油量指示杆位於油標上下之間即可，然後再鎖緊螺絲 A。

### 2. 潤滑油更換 圖 2

將螺絲 A 放鬆旋開，使油完全排出後再鎖緊。  
為延長本機器之壽命，請於開始使用四個星期更換新油後約四個月更換一次。  
本機器特別裝有濾油器，約每使用一個月後卸下清洗，必要量更換新品。

### 3. 針之冷卻油

使用油：矽油

## LUBRICATION AND DRAINAGE

### 1. Lubrication Fig.1

Remove Screw A and fill in enclosec ultra high speed lubricate oil (or similar to Mobil#10, Esso#32) until the top of Oil Level indicator between two lines of Oil Level Sight Window, Then replace Screw A.

When the machine is operated for the first time is was idle for a long time, please be sure to oil the top of the needle holder, guide, upper looper guide etc . before operating the machine.

### 2. Drainage Fig.2

Remove Screw A and drain out the oil then eplace Screw A.

For keeping the good lubrication and machine life. please replace the new oil when the new machine has been operating over four weeks, And after that, change oil every four months.

This machine has been fixed with oil filer, Please clean it every month or replace a new one if necessary.

### 3. Needle Cooling Lubrication-Silicon oil.

## 穿線方法

請確實按照圖示各種不同合形式穿線，錯誤之穿線將引起斷線，跳針或車縫不平坦等現象。

## THREADING THE MACHINE

Refer to the sewing type you need for correct threading. Any incorrect threading may cause thread break, uneven stitches or skip stitches etc.

僅供縫型 516 使用 / For seamtype 516 only

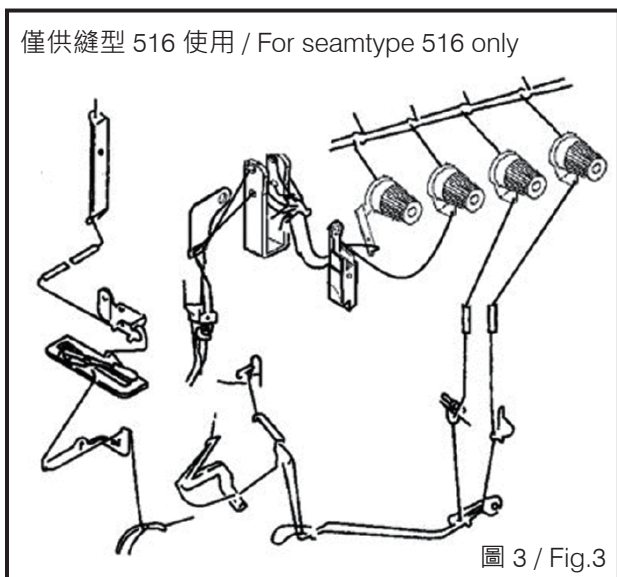


圖 3 / Fig.3

僅供 4 線使用 / For four thread only

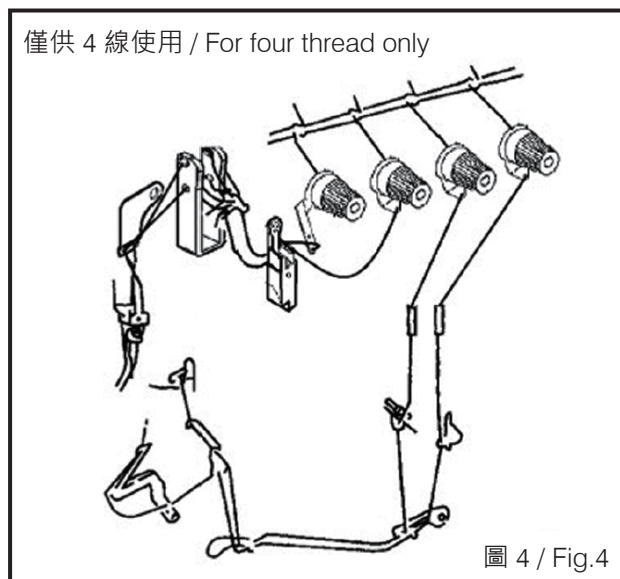


圖 4 / Fig.4

## 控線調整

## THREAD TENSION

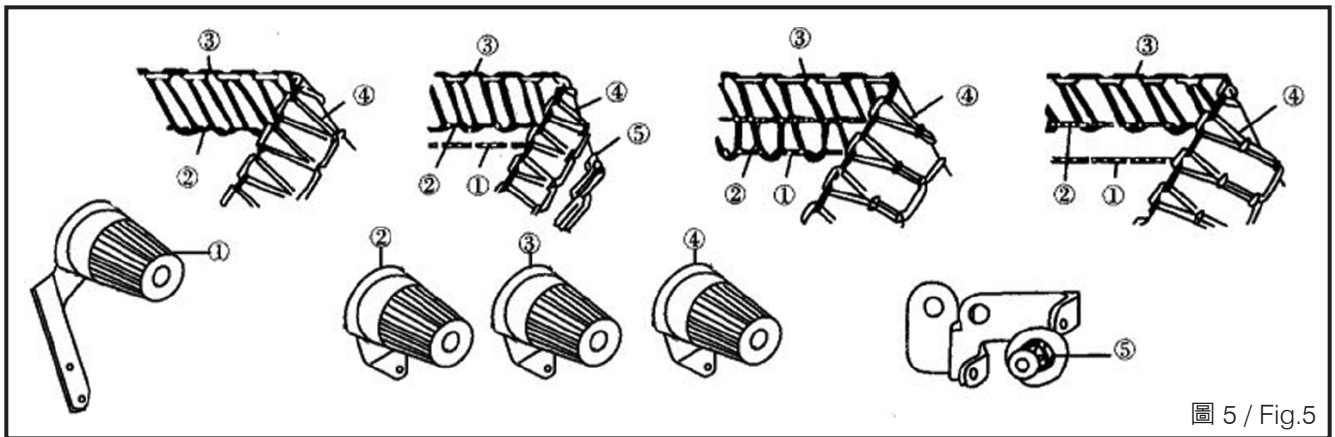


圖 5 / Fig.5

控制線強弱必須根據縫合材料種類、厚薄、線、針距及包邊寬度等不同之調整。

### 1. 調整按鍵之控線關係 圖 5

- ①調整按鍵控制雙環針線或左側拷克針線。
- ⑤控制雙鏈彎針線。
- ②調整按鍵控制包邊針線。
- ③調整鍵控制下勾針線。
- ④調整按鍵控制雙環勾針線。

### 2. 針線控制線關係 圖 6

在縫合方式 504、512、514 時，將①②移至最下端，縫合方式 503 及 505 時，將①②移至最上端。  
(+) 表示增加針線強度，(-) 表示減少針線強度。

The thread tension be adjusted according to sewing fabric, thickness, sewing thread, seam width, stitch length etc. Therefore the pressure of the Tension Nuts or Thread Guides must be adjusted in each individual case.

### 1. Tension Nuts Adjustment. Fig.5

The tension Nut ① controls the double chain needle thread or left side overlock needle thread.

The tension Nut ⑤ controls the double chain looper thread.

The tension Nut ② controls the overlock needle thread.

The tension Nut ③ controls the upper looper thread.

The tension Nut ④ controls the lower looper thread.

### 2. Needle Thread Control Fig.6

In case of sewing type 504,512,&514, push Thread guide ① and ② to lowest point. and up to highest point fo sewing type 503,505.

Note: The (+) direction is for more needle thread tension, and the (-) direction is for less needle thread tension.

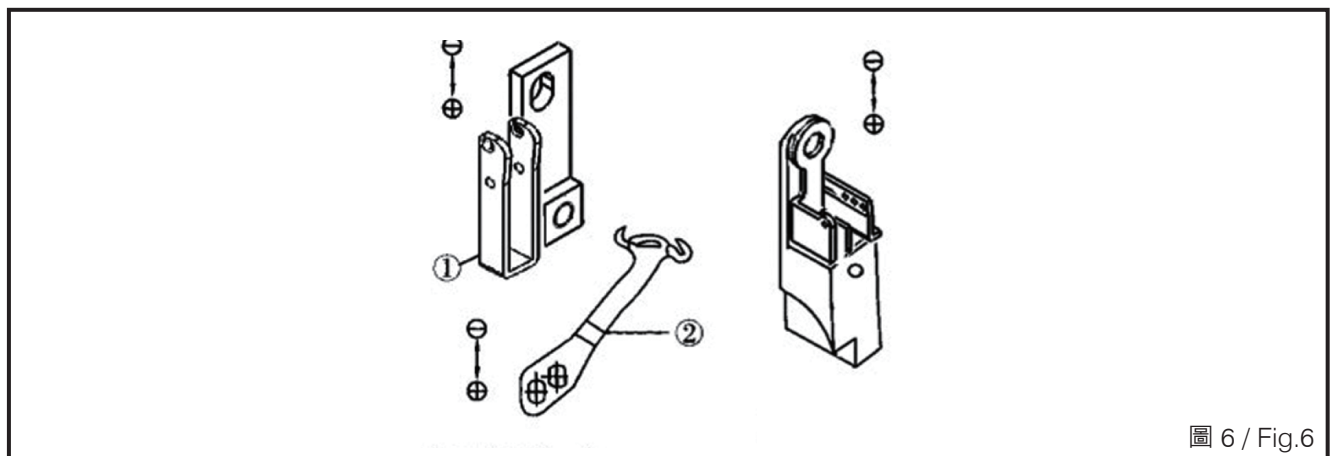


圖 6 / Fig.6

### 3. 勾針控制線關係 圖 7

在縫合方式為 512、504 當上鉤針移至最左時，將①及②高速整線至實際位置，若縫合方式為 503、504、514 及上鉤針移針②，應移至晚調整至虛線位置。

固定線導向板③如下：

A 點：尼龍伸縮線

B 點：拷下擺

C 點：縫合方式 512

固定線導板④如下：

D 點：尼龍伸縮線

E 點：拷下擺 + 方向為縫合比較多，反之比較少。

※ 該方向是縫線多線的方向，縫線少線的方向。

### 4. 環縫線凸輪控線關係 圖 8

正確之環線凸輪控線位置是當針提升至最高點時，A 點恰好在勾針線導板①之表面，放鬆凸螺絲②轉動凸輪③向反時針方向則勾針線較快。

### 3. Looper thread Control Fig.7

For sewing type 512, when Upper Looper is extremely left, push takeup ① and ② at the position as the chain line (-----). In case of sewing tupe 503, &505, When Upper Looper moves to lowest, set Take up ① and ② at the position as the continuous line (-----).

Adjust thread guide ③ as follow. Point A-for stretchy thread is used.

Point B--for seaming and blindstitch hemming.

Point C--for seaming tupe 512.

Adjust Thread guide ④ as follows.

Point D--for stretchy thread is used.

Point E--for seaming and blindstitch hemming.

※ The direction is for more thread in sewing seam, and the direction is for less thread in sewing seam.

### 4. Chain Looper Thread Cam Control Fig.8

When the needle moves to its highest position, the right corner of the Thread Cam ③ matches with the upper surface of Thread Guide Bracket ①.

Loosen serve ② and adjust the thread cam ③ as clockwise is late for timing of looper thread cam.

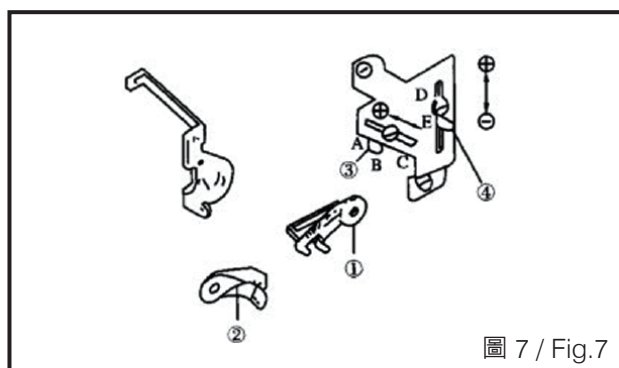


圖 7 / Fig.7

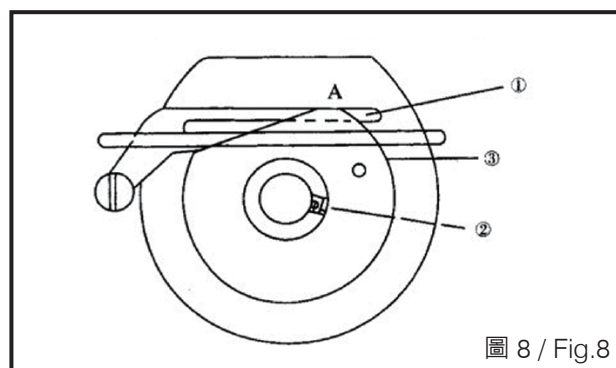


圖 8 / Fig.8

## 針距調整

## STITCH LENGTH ADJUSTMENT

通常按鈕縫合佈料，差動比等之不同而調整。

持續壓下按鈕並轉動皮帶輪使鈕卡住，再轉動皮帶輪至所需之針距後放開此按鈕。

The stitch length adjustment is made according to the sewing fabric, differential feed ratio etc.

Keep pushing the Push Button enter deep inside.

Keep pressing the Push Button and match the desired stitch length which is shown on the pulley with the indicating point of Belt Cover.

最大辯差率 Maxidiff ratio	機型 Machine type	帶輪到度 / Pulley scale						
		1	2	3	4	5	6	7
1:2	縫線 / Seaming	1	1.5	2	2.5	3	3.5	3.8
1:3	抽褶 / Shirring	0.7	1	1.4	1.7	2	2.3	2.5
1:1.3	剪毛邊 / Sergin	1.6	2.3	3.1	3.9	4.7	5.4	5.9
1:4	特邊的 / Special	0.6	0.9	1.2	1.5	1.8	2.1	1

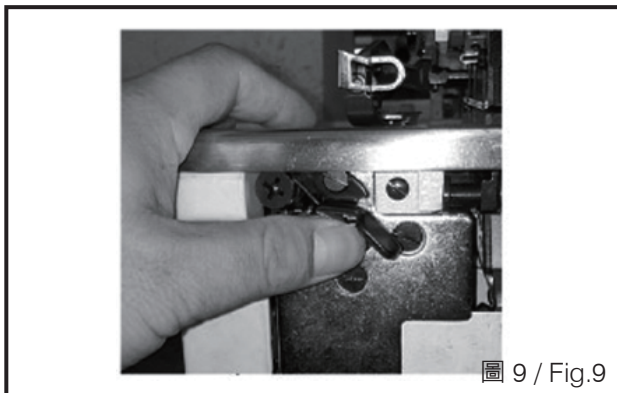


圖 9 / Fig.9

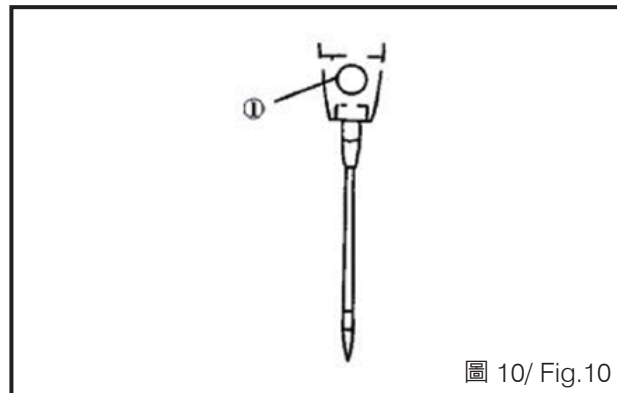


圖 10 / Fig.10

## 換針

使用 DC+27 或同規格之針。  
 旋開螺絲①並取下針。  
 將新針插至針孔最底端，並使針之長溝面向自己。  
 固定螺絲①。

## NEEDLE REPLACEMENT

Please use DCX27 or equivalent needle size.  
 Loosen Screw ① and remove the old needle.  
 Insert the needle which long groove faces you and push it up deep into the needle hole until it stops and tighten Screw ①.

## 差動比調整 (主送料具與分送料具運動程之比)

若主送料具之運動程大於分送料具運動時，則布料車縫時伸張，反之則收縮。  
 調整方法為放鬆螺絲①轉動螺絲②順時鐘方向時使布料伸張，反之則收縮，高速後再回定螺絲①。  
 注：當調整桿③之表面固定在刻劃 2 時差動比這 1:1。  
 若將其固定在刻劃 2 以上時，可使布料伸張至 1:0.7。

## DIFFERENTIAL FEED RATIO ADJUSTMENT

The differential feed ratio is the ratio of movements between Main Feed Dog and Differential feed dog, when the movement of main feed dog is bigger than differential feed dog, the fabric be stretched in sewing. Otherwise the fabric be shrunked.  
 Loosen Nut ① then turn screw ② in clockwise for stretching the fabric, and in reverse direction for shrinking the fabric then tighten Nut ①.  
 Note: When the surface of adjusting level ③ be set at the scale the differential feed ratio is 1:1, and if it be set over the scale its ratio can be adjustable up to 1:0.7.

到度 / Scale		1	2	3	4	5
差動進料比率	1:13	-	1:0.7	1:0.9	1:1.1	1:1.3
	1:2	1:0.7	1:1	1:1.4	1:1.7	1:2
Differential Feed ratio	1:3	1:1	1:1.5	1:2	1:2.5	1:3
	1:4	1:1.1	1:1.6	1:2.3	1:2.8	1:3.3

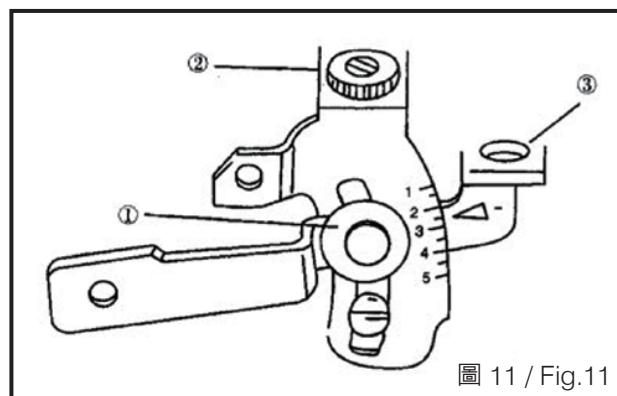
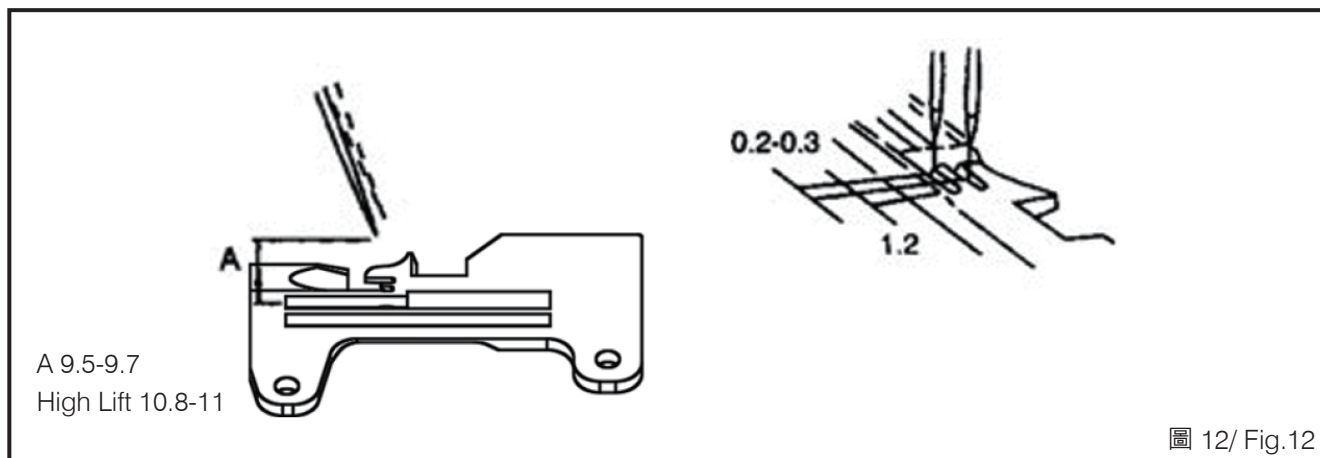


圖 11 / Fig.11

## 各縫紉元件之相互關係

## PARTS RELATION AND TIMING



### 1. 針於針板之 圖 12

當針上升至最高時，針尖端 (雙直時以左針為準) 於針板之距離，三線為 10.1mm，四線、五線為 10.6mm，厚料為 12mm。雙針時右針必須略比左針向前 0.2-0.3mm，但右針於板溝前端距離 1.2mm。

### 1. Needle and Needle Plate Fig.12

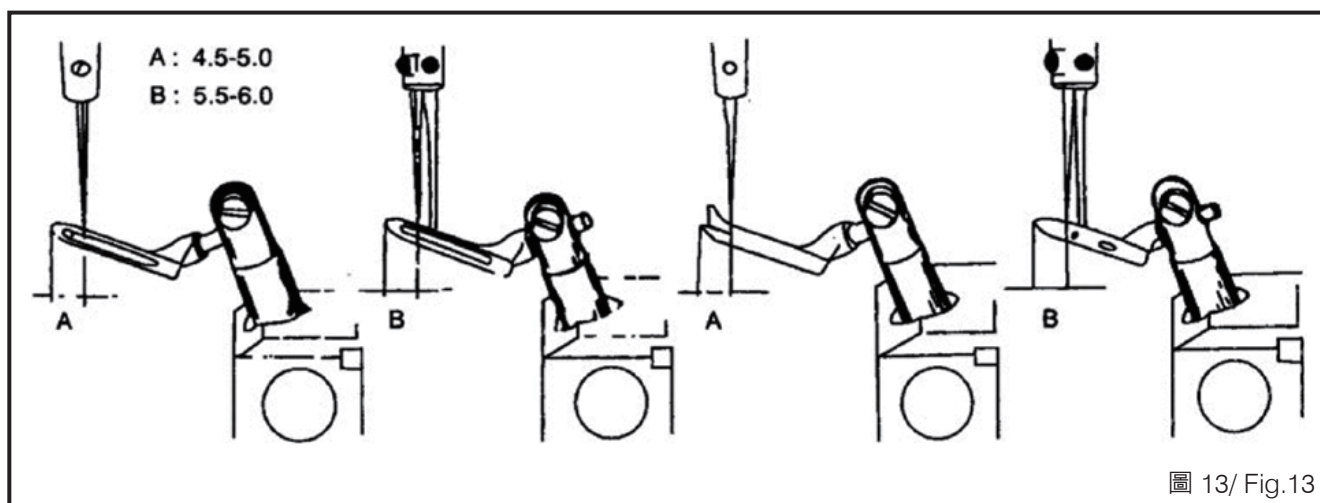
When the needle rises to the highest, the distance between the needle top (the left needle shall prevail when the needle is straight) and the needle plate is 10.1mm for three thread, 10.6mm for four thread and five thread, and 12mm for thick material. For double needle, the right needle must be slightly 0.2-0.3mm forward of the left needle, but the distance between the right needle and the front end of the plate groove is 1.2mm.

### 2. 上勾針與針之關係圖 13

當上勾針移至最左時，勾針尖端與針中心線約 4.5-5.0mm，雙針時其左邊針中心線與勾針尖端約距 5.5-6.0mm。

### 2. Upper Looper (Spreader) and Needle Fig.13

When the Upper (spreader) moves to the extremely left, the distance between the point of looper (spreader) and center line of needle is 4.5-5.0, for 1 needle (spreader) to center line of left needle is 5.5-6.0mm for 2 needle machine.





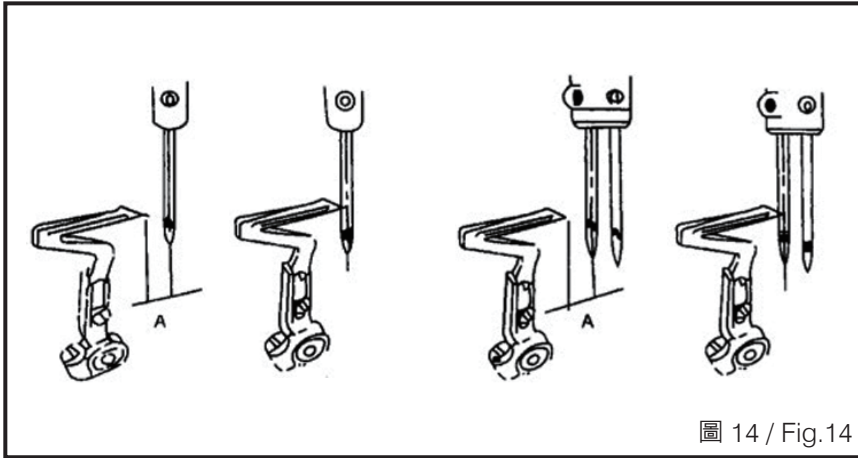


圖 14 / Fig.14

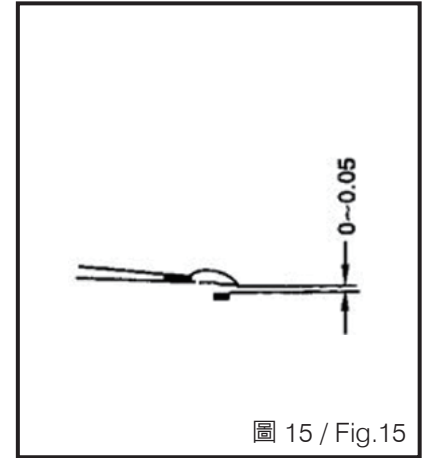


圖 15 / Fig.15

### 3. 下勾針與針之關係圖 14、15

當下勾針移至最左時，勾針尖與針中心線（雙針時以左針為準）之距離 A 標準程機構：3.4-3.2mm 高程機器：3.0-3.2mm。  
當下勾針移中心線（雙針時以左針為主）時，針與勾針之間隙為 0-0.05mm。

### 4. 上勾針與下勾針之關係 圖 16

當上、下勾針相交會時，兩勾針盡可能接近，但不可磨擦相撞，其間隙 A 點為 0.5mm 及 B 點為 0.2mm。  
當針移到了低點量，針與前導針 B 之間隙為 0.1-0.2mm。

### 5. 針與導針片之關係 圖 17

當下勾針尖剛好到針（雙針時以左針為準）中心線時，針與後導針片 A 之間隙為 0mm  
當針移到了低點量，針與前導針板 B 之間隙為 0.1-0.2mm。

### 6. 環縫勾針與針之關係 圖 18

環縫勾針移至最左時勾針尖端與針中心線之距離 2.5mm。

### 3. Lower Looper and Needle Fig.14 15

When the lower looper moves to the extremely left, the distance between looper point and center line of needle (left needle if 2 needle) is 3.4-3.2 mm for high lift machine.  
When the lower looper moves to the center line of needle (left needle if 2 needle) the gap between needle and looper is 0-0.05mm.

### 4. Upper Looper and Lower Lopper Fig.16

When the Upper and Lower Looper is crossed.

### 5. Needle and eedle Guard Fig.17

When the Lower Looper point is opposite the center line of Needle (left needle if 2 needle), the gap between Needle and rear Needle Guard A is 0mm. When Needle moves to the lowest position, the gap between Needle and front Needle guard B if 0.15-0.2mm.

### 6. Chain Looper and Needle Fig.18

The Chain Looper must be fixed into the lowest position of is holder and when the Chain Looper moves the the extremely left, the distance between the looper point and center line of needle is 2.5mm.

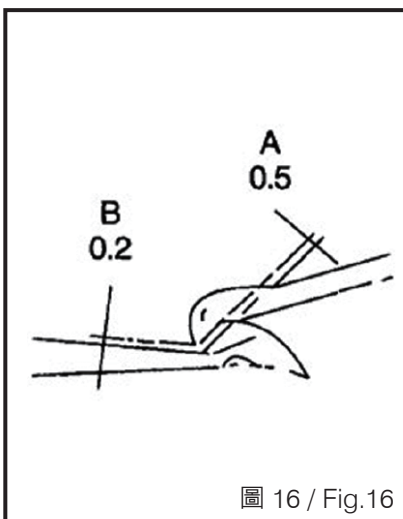


圖 16 / Fig.16

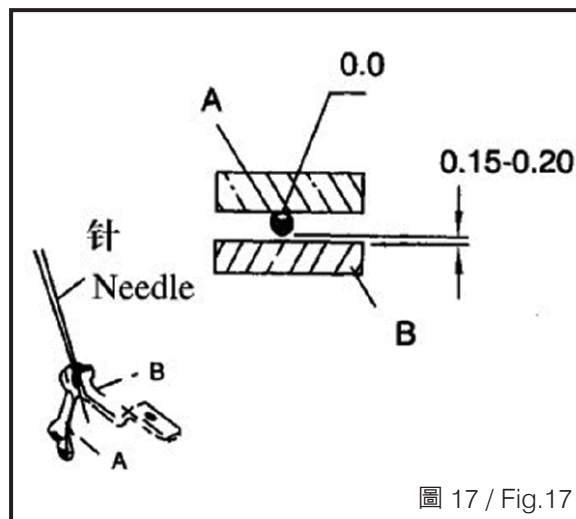


圖 17 / Fig.17

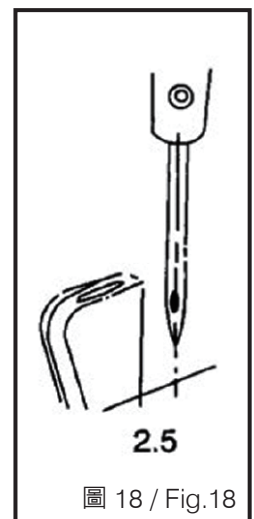


圖 18 / Fig.18



## 故障排除

## PROBLEM SETTLEMENT

### 斷針

### NEEDLE BREAK

#### 原因 / REASON

1. 針安裝錯誤
2. 針尺寸不合
3. 針已變彎
4. 針與頂針片之關係錯誤
5. 針與勾針之關係錯誤
6. 針未入針板溝或壓腳溝中央

1. Needle installed wrong
2. Wrong needle size
3. Needle is bended.
4. Wrong relation with Needle Guard.
5. Wrong relation with looper.
6. Needle does not center the needle slot of Needle Plate or Presser Foot.

#### 對策 / CORRECT

1. 重新裝針，長溝面向您自己
2. 選用適合布料及用線之針
3. 重換新針
4. 高速頂針片與針之關係
5. 調整勾針與針之關係
6. 重新裝針板或針，或高速壓腳

1. Reset needle correctly.
2. Use properly needle for fabric and thread.
3. Replace new needle.
4. Readjust Needle guard.
5. Readjust looper.
6. Readjust the Needle Plate and Presser Foot.

### 斷線

### THREAD BREAK

#### 原因 / REASON

1. 線品質不良
2. 線粗細不均或比針孔大
3. 穿線錯誤
4. 控線壓力太強
5. 針安裝錯誤
6. 線架過線錯誤
7. 針溫度過高：(1) 針冷卻已元冷卻油  
(2) 針導板裝錯
8. 控線片已粗糙
9. 針與勾針之關係錯誤
10. 針，勾針，針板針導板擦起毛頭

1. Inferior quality of thread.
2. Thread thicker than Needle hole.
3. Wrong threading.
4. Thread tension is too strong.
5. Needle installed wrong.
6. Thread Stand installed wrong.
7. Over heat of Needle: (1)No silicon oil (2)Wrong setting of Needle Guard.
8. Thread Disc or Guide is burred.
9. Wrong relation of Needle and Looper.
10. Needle, Looper needle Plate and guide is burred.

#### 對策 / CORRECT

1. 改用品質好的線
2. 換適宜之針與線
3. 重新正確穿線
4. 高速控線強度
5. 重新正確裝針
6. 重新裝線架使線能通過自如
7. (1) 加冷卻油  
(2) 調整針導片
8. 用砂布拉滑後拋光
9. 調整針與勾針之關係
10. 磨去毛頭或換新品

1. Use good quality thread.
2. Use proper Needle for fabric and thread.
3. Rethreading correctly.
4. Readjust thread tension nut.
5. Reset needle correctly.
6. Reset thread stand for threading smoothly.
7. (1) Fill in Silicone oil.  
(2) Readjust Needle Guard.
8. Grind off polish or replace new one.
9. Readjust Needle and Looper.
10. grind off, polish or replace new one.

## 跳針

## SKIP STITCHES

### 原因 / REASON

1. 針與勾針之關係錯誤
2. 穿線錯誤
3. 針安裝錯誤
4. 控線壓力太強或太弱
5. 勾針尖端損壞毛頭
6. 針變彎
7. 頂針片安裝錯誤

1. Wrong relation of Needle and Looper.
2. Wrong threading.
3. Needle installed wrong.
4. Inadequate thread tension or tension too strong.
5. Looper point is damaged.
6. Needle is bended.
7. Wrong installed Needle Guard.

### 對策 / CORRECT

1. 高速針與勾針關係
2. 重新正確穿線
3. 重新正確裝線
4. 高速控線強度
5. 去除毛頭或換新品
6. 換新品
7. 重新正確安裝頂針片

1. Readjust Needle and Looper.
2. Rethreading correctly.
3. Reset Needle correctly.
4. Readjust Thread Tension Nut.
5. Replace new one.
6. Replace new one.
7. Readjust Needle guard.

## 鬆縫合

## LOOSEN STITCHES

### 原因 / REASON

1. 穿線錯誤
2. 線太粗
3. 控線圈未壓到線
4. 針線已無矽油
5. 針與勾針裝錯

1. Wrong threading.
2. Thread is thicker than Needle hole.
3. Tension Disc do not press thread properly.
4. Needle thread is not lubricated.
5. Wrong setting of Needle and Loopers.

### 對策 / CORRECT

1. 重新確穿線
2. 換適當尺寸之針穿線
3. 調整控線圈適當壓著線
4. 添加矽油
5. 重新正確安裝

1. Rethreading correctly.
2. Use proper Needle.
3. Reset Tension Disc properly.
4. Fill silicon oil.
5. Readjust needle and loopers.

## 縫合不均

## UNEVEN STITCHES

### 原因 / REASON

1. 穿線錯誤
2. 線架安裝錯誤
3. 下刀安裝錯誤
4. 刀剪布未整齊 (1) 刀裝錯 (2) 刀鈍
5. 過線孔擦傷
6. 針尖受損
7. 送料具高度不適宜
8. 押具壓力太強或太弱

### 對策 / CORRECT

1. 重新正確穿線
2. 重新裝線架使線能通過自如
3. 重新安裝下刀
4. (1) 調整刀正確位置 (2) 磨掉或換新品
5. 重新打光
6. 換新針
7. 調整正確高度
8. 調整押具壓力強度

1. Wrong threading.
2. Thread stand installed wrong.
3. Lower Knife installed wrong.
4. Knives do not trim neatly.
  - (1) Knives installed wrong.
  - (2) Dull lower knife.
5. Thread Disc or Guide in burred.
6. Needle point is damaged.
7. Inadequate height of feed dogs.
8. Inadequate thread tension.

1. Rethreading correctly.
2. Reset Threadt for threading smoothly.
3. readjust lower knife.
4. Correct as follow:
  - (1) Readjust Knives.
  - (2) Sharpen or replace new knives.
5. Grind off, Polish or replace new one.
6. Replace new Needle.
7. readjust feed dogs.
8. Readjust Thread tension nut.

## 縫合起皺紋

### 原因 / REASON

1. 控線壓力太強
2. 押具壓力太強或太弱
3. 送料具太突出針板
4. 刀無法快切
5. 差動送料未配合
6. 針太粗
7. 包邊寬度比針板舌狹
1. Thread tension is too strong.
2. Inadequate pressure of presse foot.
3. Inadequate height of feed dogs.
4. Knives do not trim neatly.
5. Differential feed is not matched.
6. Needle is too thick.
7. Seam width is too narrow against the chainoff finger of Needle plate.

## WRINKLED STITCHES

### 對策 / CORRECT

1. 重新高速控線強度
2. 高速押具壓力強度
3. 調整送料具正高度
4. 磨利刀片或換新品
5. 高速適當差動送料
6. 用適宜布和線之針
7. 調整包邊寬度或換針板
1. Readjust thread tension nut.
2. Readjust Presser foot pressure.
3. Readjust feed dogs.
4. Readjust knives or sharpen knives.
5. Readjust differential feed ratio.
6. Use proper Needle for fabric and thread.
7. Rendjust seam width or replace chain off finger.

## 環縫出線不順原因

### 原因 / REASON

1. 押具安裝錯誤
2. 勾針線凸輪運動時間配合不適當
3. 環縫勾針安裝錯誤
4. 穿線錯誤
5. 控線強度太大或太弱
6. 針與勾針之關係錯誤
7. 針板或押起毛邊
8. 控製片已粗糙
1. Presser foot installed wrong.
2. Inadequate timing of looper thread cam.
3. Double chain looper installed wrong.
4. Wrong threading.
5. Inadequate or too strong thread tension.
6. Wrong relation of Needle and looper.
7. Needle Plate Thread Disc or Presser foot is burred.
8. Thread tension disk is rough.

## THREAD CHAIN DOES NOT COME OUT SMOOTHLY

### 對策 / CORRECT

1. 重新正確安裝
2. 高速適當輪方位
3. 重新正確安裝
4. 重新正確穿線
5. 調整適當控線強度
6. 調整針與勾針之關係
7. 用砂布或油石打滑並拋光
8. 用砂布拉滑並拋
1. Reset presser foot correctly.
2. Readjust Looper thread Cam.
3. Reset Double chain looper correctly.
4. Rethreading correcty.
5. Readjust Thread tension nut.
6. Readjust Needle and looper .
7. Grind off, polish or replace new one.
8. Polish thread tension disk.



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The specification and/or appearances of the equipment described in this instruction book & parts list are subject to change because of modification which will without previous notice.  
HBL-20W04.AUG.2023