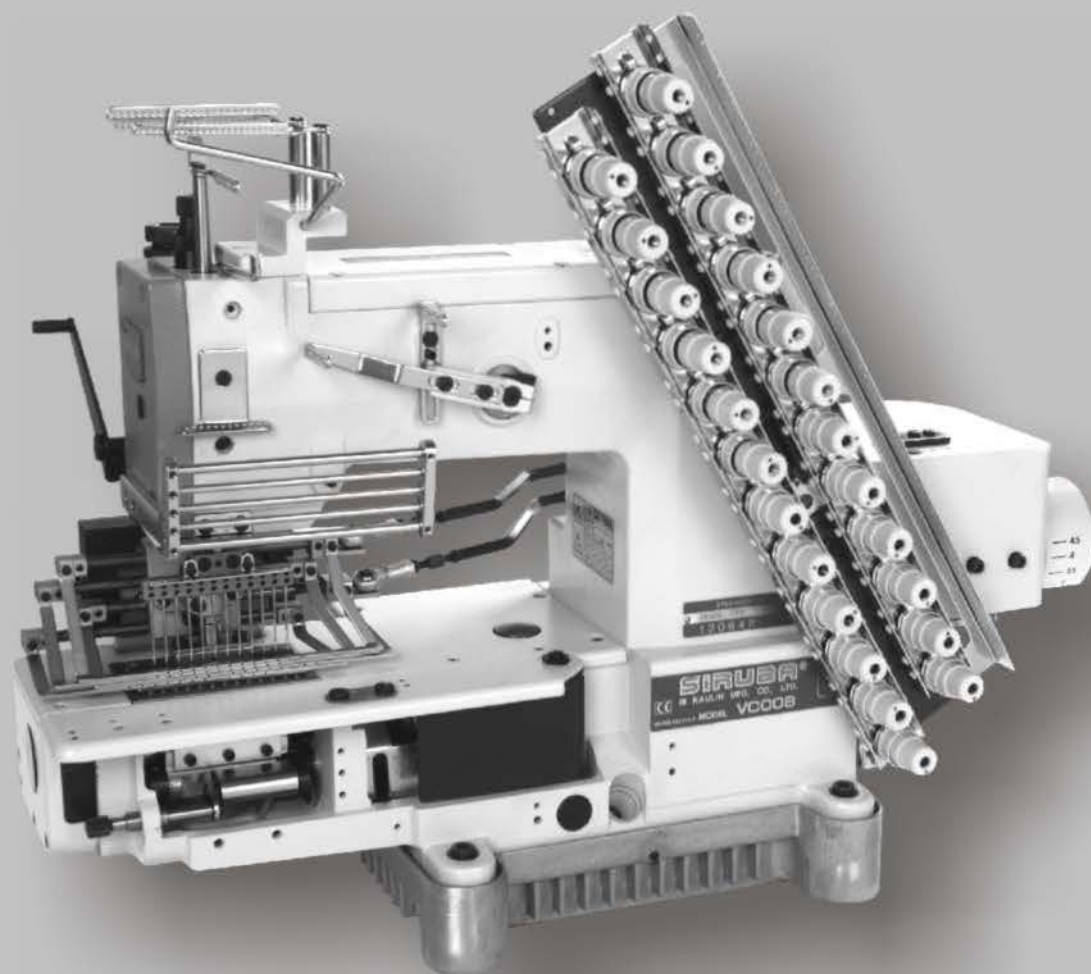



SIRUBA®
銀箭牌工業用縫紉機
INDUSTRIAL SEWING MACHINE

VC008 VSQ/VSM

使用說明書 INSTRUCTION BOOK



CE

 高林股份有限公司
KAULIN MFG. CO., LTD.

From the library of: Superior Sewing Machine & Supply LLC

EC DECLARATION OF CONFORMITY

According to the following European Directive

EC Machinery Directives:89/392/EEC (as amended by 89/368, 93/44 and 93/68/EEC).

The undersigned, ROBERT TSAI, representing KAULIN MFG. CO., LTD. 11F, No.128, Sec.3, Minsheng East Road, Songshan District, Taipei, Taiwan, ROC., manufacturer, Declares that the machine described hereafter:

Cylinder Bed Multineedle
Double Chainstitch Machine

Model:VC008/VSQ/VSM

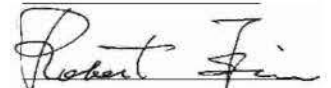
Provided that it is used and maintained in accordance with the generally accepted codes of good practice and the recommendations of the instructions manual, meets the essential safety and health requirements of the Machinery Directive.

For the most specific risks of the machine, safety and compliance with the essential requirements of the Directive has been based on elements of IEC 204-3-1:1988: Electrical equipment of industrial machine- particular requirement for sewing machines, units and systems, and of EN 60335-2-28: 1990: Safety of household and similar electrical appliances- Particular requirements for sewing machines.

The compliance of the model with the requirements of EC Machinery Directive was established by AIB-VINCOTTE Inter n.f.p. Avenue A. Drouart 27-29, B 1160, Brussels, Belgium (Notified body under the number 26 for machinery listed in annex IV of EC Machinery Directive).



Date: Mar/01/2008

Signature:








Qualification: R&D MANAGER

危險水準的說明 Explanation of Dangerous Level

 危險 Dangerous	<p>如果忽視此標記而運行了錯誤的機械操作, 保養時肯定會引起當事者或第三者人員重傷或死亡</p> <p>Don't ignore the warning sign and don't proceed incorrect operation. Or it will cause the person or the third party seriously injured or dead during maintenance.</p>
 注意 Caution	<p>如果忽視此標記而運行了錯誤的機械操作, 保養時有可能會引起當事者或第三者人員受傷及造成設備損壞</p> <p>Ignoring this warning sign and proceed incorrect operation will cause the person involved or the third party wounded and equipment damaged during maintenance.</p>

警告圖案表示及表示標誌的說明 Explanation of Warning Signs and Labels

警告圖案表示 Warning Sign		運動部位, 謹防工傷事故 Moving part, beware of industrial accident
		高壓部位, 謹防觸電事故 High voltage, beware of electric shock
		高溫部位, 謹防燙傷事故 High temperature, beware of burns
指示標幟 Instruction Label		禁止 Prohibited
		地線的接線表示 Indication of ground wiring

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針高、針與勾針間隙、時位 、導針片、撥線桿、控線桿 等之規格調VSM同一般機種 調整說明	THE HEIGHT OF NEEDLE, GAP BETWEEN THE NEEDLE AND LOOPER, TIMING, NEEDLE GUIDER, WIPER AND THE THREAD TAKE UP IS TO BE ADJUSTED ON VSM AS SAME AS OTHER NORMAL MODEL	15
VSQ規格調整	ADJUST VSQ GAUGE SET	15

警告！

當使用這台機器，基本安全預防應恆被遵守，以減輕火災、電擊、或是個人傷害的風險。包含以下注意事項。

在操作這台機器之前，請閱讀所有說明並且謹記於心。

- 1. 保持工作場所清潔**
雜亂的環境與椅子會招引危害。
- 2. 考量工作場所環境**
勿暴露電源於雨水之中、勿在濕氣重的地方或潮濕的場所使用機械器具。保持工作場所良好整齊。當有引發火災或爆炸危險時，勿使用電源工具。
- 3. 免於電擊危害**
避免身體接觸地線或是接地表面。(即：管線，發熱物體，以及冷凍庫)
- 4. 勿使孩童接近**
不要讓孩童碰觸工具或是延伸管線
- 5. 適當的穿著**
不要穿著寬鬆衣物或穿戴珠寶，這可能被活動零件拉扯而導致危險。穿戴護髮套以包住長髮。
- 6. 不要任意拉扯電線**
絕不要用電線端拉扯機器，或是從插座猛拉電線來拔掉電線。使電線遠離熱源、油類或是尖銳邊緣。
- 7. 謹慎保養機器**
遵從指示來添加潤滑油或是更換附件。定期檢測工具用線，如果有所損害，請使用合格的維修器具來修復。

Warning!

When using this machine, basic safety precautions should always be followed to reduce the risk of fire, electric shock and personal injury, including the followings. Read all these instructions before operating this product and save these instructions.

- 1. Keep work area clean**
Cluttered areas and benches invite injuries.
- 2. Consider work area environment**
Do not expose power to rain. Do not use machine tools in damp or wet locations. Keep work area well lit. Do not use power tools where there is risk to cause any fire or explosion.
- 3. Guard against electric shock**
Avoid body contact with earthed or grounded surfaces (e.g. Pipes, radiators, ranges refrigerators.)
- 4. Keep children away**
Do not let children touch the tool or extension code.
- 5. Dress properly**
Do not wear loose clothing or jewelry, they can be caught in moving parts. Wear protecting hair covering to contain long hair.
- 6. Do not abuse the cord**
Never carry the machine by cord or yank it to disconnect it from the socket. Keep the cord away from heat, oil, and sharp edges.
- 7. Maintain machine with care**
Follow instructions for lubrication and changing accessories. Inspect tool cord periodically. If damaged, have it repaired by an authorized service facility.

8. **分開機器**
當不使用機器時、維修前、以及更換配件時。
9. **避免誤啟動**
不要以手指置於啟動開關上之後，搬運一個已插入電源的工具。確定在插電之前，電源開關是關閉的。
10. **檢查損害零件**
在進一步使用器具之前，應該小心檢查並確認損傷的零件或是穿戴保護器具來確認零件會正確運轉並且呈現應有功能。
11. **警告**
除了在這本使用說明手冊中建議的功能之外，任何附件或是配件的使用，都可能會導致個人傷害的危險。
12. **由合格人員來修理事具**
所以的修理工作應該由合格的人員使用原始個別零件來作修理。

連接電源的特別警示

1. 只可與有“CE”認證的按壓啟動裝置連接這台機器。
2. 遵守此使用說明手冊來安裝控制裝置。
3. 在操作過程中，永遠保持機器適當的接地。
4. 在調整、更換零件、或是維修保養之前，必須確定將插頭由插座拔出，以預防任何機器意料之外的啟動而造成危害。

8. **Disconnect machine**
When not in use, before servicing and when changing accessories.
9. **Avoid unintentional starting**
Do not carry a plug-in tool with a finger on the switch. Ensure the power switch is off when plugging in.
10. **Check damaged parts**
Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function.
11. **Warning**
The use of any accessory or attachment, other than those recommended in this instruction manual, may present a risk of personal injury.
12. **Have your tool repaired by a qualified person**
Repairs should only be carried out by qualified persons using original spare parts.

SPECIAL WARNING FOR ELECTRIC CONNECTION!

1. Incorporate this machine only with “CE” certificate hold-to-run control device.
2. Follow the instruction manual device to install control device.
3. Always earth machine appropriately during operation.
4. Before adjustment, parts change or servicing must be sure to pull out the plug from socket to prevent the hazard of unintentionally start of machine.








重要安全事項說明

恭喜您購買本機器,為了使這台機器能獲得最佳功能以及安全的操作,務必請正確的使用這台機器,使用前請仔細閱讀使用說明書,希望您能長期使用它。請記得將此說明書放在容易取得的地方。



-  1. 當您使用機器時,除了以下事項外,請注意其他基本安全措施。
-  2. 使用機器前,除了這本使用說明書外,請詳細閱讀其他有關說明書。此外,請妥為保存這本使用說明書,以便需要時可以隨時取閱。
-  3. 先確認機器是符合貴國安全規定及標準後,再使用機器。
-  4. 當機器完成操作準備時,所有安全配備必需安裝就緒,在缺少所述安全配備下操作是不被允許的,以免導致人員受傷。
-  5. 此機器應由受過適當訓練之操作員操作。
-  6. 為了安全,我們建議您配戴安全眼鏡。
-  7. 以下情形,請先關閉電源或拔掉插頭:
 - (1) 穿針線、線導片、天平等以及更換梭子時,
 - (2) 更換針、押具、針板、送具、頂針片、喇叭、車布導板,以及其他附屬配件時。


IMPORTANT SAFETY INSTRUCTIONS


For operating safely and getting the best functions of this machine, you must operate it correctly. Please read and follow the instructions of this manual, and keep it at hand for future references. We are confident that you will enjoy this machine as much as we enjoy manufacturing it.

-  1. Instead of the following instructions, when you use this machine, please pay attention to the basic safety measures.
-  2. Before using this machine, please read this manual and all related instructions. In addition, please keep this manual for future needs.
-  3. Before using this machine, please ascertain that it conforms with safety standards and regulations of your country.
-  4. When the machine is ready for operation, all the safety equipments must be ready. Operate this machine without the specified safety devices is not allowed.
-  5. This machine must be operated by a properly trained operator.
-  6. For your own safety, we suggest you wearing goggles.
-  7. Please turn off the power switch or disconnect it for any one of the circumstances of the followings:
 - (1) When threading needle(s), adjusting thread Take-up(s), thread guide(s), and / or replacing bobbin(s),
 - (2) When replacing needles, presser feet, needle plates, feed dogs, needle guards, horns, cloth guides and other parts or accessories,


- (3) 維修工作時。
- (4) 離開工作場所或工作場所無人看顧時。
- (5) 若使用離合器馬達而無煞車片裝置時，必需待馬達完全停止。


 8. 假如不慎讓機器及配件使用之油或油脂，接觸到眼睛、皮膚或誤食時，請立刻以水清洗接觸部位及就診。



 9. 請勿擅自碰觸運轉中之零件及配件及注意機器電源是否已開啟，以免導致人員受傷。

 10. 維修、修改及調整等工作，需由受過適當訓練的技師或熟手為之。維修時只許使用指定之零件。



 11. 一般維修及檢查工作必須由受過適當訓練的人員為之。


 12. 電子零件維修及保養工作必須由資深的電子技師為之，或由非常熟練的人員檢查及指導，當發現零件損壞時，請立刻停止機器運轉。


 13. 在做裝有氣動式零件(例如氣缸)機器的維修及保養工作前，機器連接空壓機及高壓空氣必須予以關閉及卸除，機器中殘存高壓氣體必需予以消除，此外調整及性能檢查只能由受過適當訓練的技師或熟手為之。


 14. 機器使用一段時間，必需定期清理。


- (3) When repairing,
- (4) When the operator leaves the working place or leaves the machine unattended.
- (5) If clutch motors without brake pads are used, must wait until the motor stops completely.


 8. If grease, oil, or any fluid contacts your skin or eyes by any chance, please wash the contacted area completely with clean water and consult a doctor. Or, swallow any fluid mistakenly, consult a doctor immediately.



 9. Do not touch any functioning parts and devices. Always attend to whether power switch is on or off before operating in order to prevent anyone from getting hurts.





 10. Qualified technicians are required for adjustment, modification, and repair. Only use assigned parts for replacement.

 11. Routine maintenance and service must be performed by well trained persons , or qualified technicians.




 12. Maintain and check the electronic parts must be done by qualified electrician or well-trained persons. If any electronic part damaged or malfunctioned, stop the machine immediately.








 13. The air hose has to be detached from the machine and the compressor or air supply has to be cut off before repairing and servicing the machine equipped with pneumatic parts such as an air cylinder. Qualified technicians or well-trained persons are required for adjustment and repairs.

 14. To ensure the best performance, periodically clean the machine is necessary.

-  15. 為使機器能正常操作及減少噪音，機台務必平放地上，機器避免在強烈噪音的環境下操作。
-  16. 選用適當的電源插頭，並由電子技師將其按裝在機器上，且插頭必需插在接地線之插座上。
-  17. 機器只允許被使用於指定用途上，其他用途是不允許的。
-  18. 修改或變更機器必需依照安全規定及標準，同時採取有效的安全措施，本公司不承擔任何私自因修改或變更機器所引起損壞之責。

19. 警告提示以兩種符號標示：

-  (1) 對操作員或服務人員之傷害危險，也為了避免觸電之危險，請勿打開馬達電器箱之外蓋，也不要觸摸電器箱裡面之零件。
-  (2) 必需特別注意事項
- a. 絕對不可在移開皮帶蓋，手指保護蓋或安全配件後，進行機器操作，以免導致人員受傷。
-  b. 為了避免被機器纏住，當機器運轉中，您的手、頭髮及衣服，需遠離手輪，皮帶及馬達；此外這些部位周圍不可放置任何物品，以免導致人員受傷。

-  15. In order to operate properly and to reduce the noise, please place the machine flat and level on the ground. Avoid operating the sewing machine at a noisy surrounding.
-  16. Select a proper power plug and install it by an electrician. Please connect the power plug to a grounded receptacle.
-  17. This machine can only be used for the designed purpose. Other uses of this machine are not allowed.
-  18. Any modification or conversion made on this machine must be conformed with the safety standards and regulations. Precaution is necessary. No responsibility will our company take for damages caused by any modification or conversion of this machine without permission.
19. Two safety warning signs are applied as warning signs:
-  (1) For the safety of operators and service persons, please don't open the cover of any electronic control boxes of motor or other devices and don't touch any components inside to avoid electrical shock hazards.
-  (2) Always keep in mind :
- a. Please never operate this machine without belt cover, finger guard or any safety device to avoid physical injury.
-  b. Please keep your hair, fingers and cloths away from the hand wheel, V belt and motor while the machine is in operation, as well as never put anything near these parts, to prevent the risk of injuries by tangled into them.



- c. 當您打開電源開關後或機器已在運轉中，絕不可將您的手放在針的下方或針線控線桿外蓋中，以免導致人員受傷。



- c. Please never put your fingers under the needle(s) or in the thread take-up cover to prevent physical injuries when you turn on the power switch or operate the machine.



- d. 當機器運轉中，梭頭高速轉動，為了避免對手可能引起之傷害，必需確定您的手保持遠離梭頭附近。此外，當更換梭子時，確定電源開關已關閉，以免導致人員受傷。



- d. While the machine is in operation, the hook rotates at a high speed. Please keep your hands away from the area of hook to prevent any potential injury to your hands. In addition, please make sure to turn off the power of the machine while changing bobbins.



- e. 當放置或抬起機頭時，小心勿將手置於機器中，以免導致人員受傷。



- e. Be careful and do not place your fingers inside the machine when placing or lifting the machine head to avoid possible physical injuries.



- f. 為了避免機器突然啟動而引起可能意外，當機頭傾斜或移開皮帶蓋及皮帶時，請關掉機器電源，以免導致人員受傷。



- f. Please turn off the power before tilting the machine head or removing the belt cover and the V belt to avoid possible accidents due to abrupt start of this machine.



- g. 如果您的機器是配置伺服馬達，機器於靜止狀態時，馬達是不會產生噪音的，為了避免機器突然啟動而引起可能意外，故請關掉機器電源。



- g. For machines equipped servo motors, the motors do not produce noise while the machines are at rest. Therefore, please turn off the power of this machine to avoid possible accidents due to abrupt start of the machine.



- h. 為了避免觸電之危險，請絕不要在移開電源接地線後操作機器。



- h. Never operate the sewing machine after the ground wire is removed to avoid electrical shock hazards.



- i. 為了避免觸電或電子零件損壞而引起之可能意外，請先切斷電源，再插上或拔掉插頭。



- i. Please turn the power switch off before connecting or disconnecting the power plug to prevent possible accidents due to electric shock or damaged electronic components.

特別事項

WARNING

為了避免機器故障及損壞，請先確定以下事項：

1. 當您安裝好機器後，做第一次機器操作前，請徹底清潔機器。
2. 清除運送途中累積之灰塵及溢出之油脂。
3. 確定電壓及馬達相數(單相或三相)安裝正確。
4. 確定電源插頭正確地接上電源。
5. 當使用電壓與標示電壓不同時，請勿使用機器。
6. 確定機器轉動方向是否正確。



警告：

在操作或調整本書中所提到之各步驟前，請先將電源關掉，以免因為機器突然啟動造成之意外。

Please confirm the followings to avoid malfunction or damage to this machine.

1. After installing the machine, and before the first operation, please clean it completely.
2. Clean all dust and overflowed oil during transportation.
3. Confirm that the voltage and the phase (single or 3 phase) of motor are set correctly.
4. Confirm that the power plug is correctly connected to the power supply.
5. Never use the machine when the local voltage type is different from the marked voltage on the nametag attached on the machine.
6. Confirm that the rotating direction of the machine pulley is correct.



Warning：

Before doing any operation or any adjustment described later in this manual, please turn the power off to prevent accidents caused by abrupt start of the sewing machine.

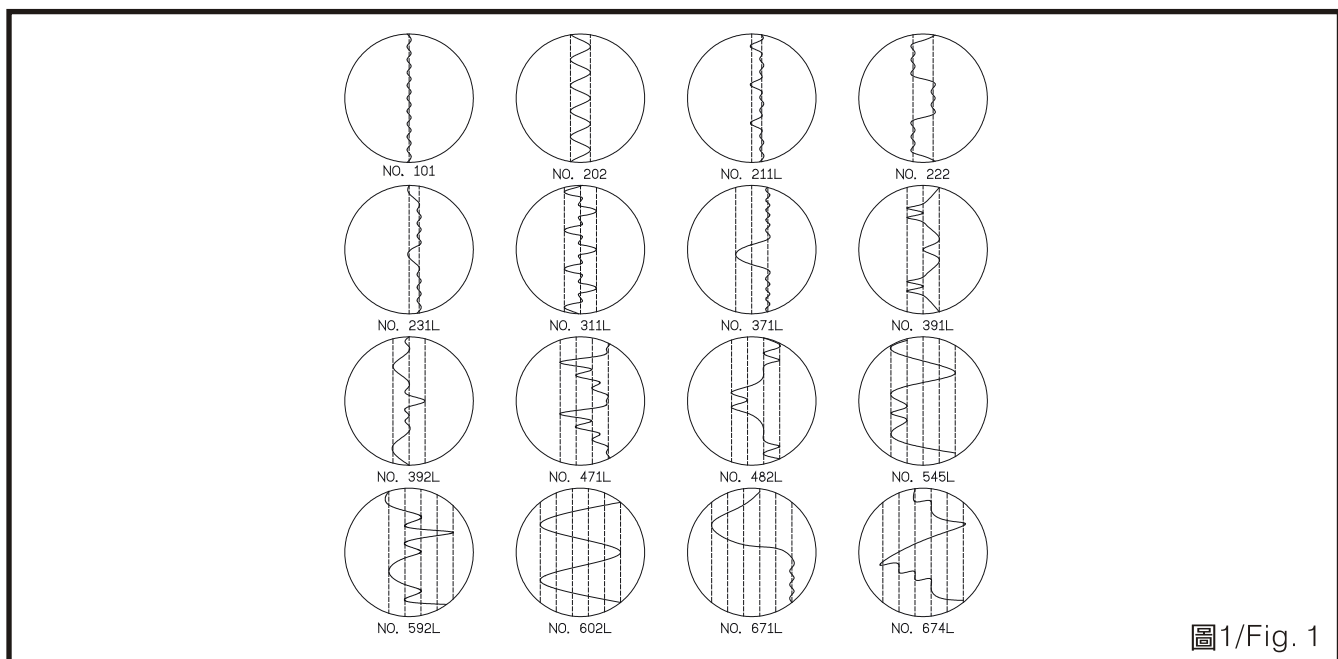
規格

SPECIFICATIONS

機型別 Model	伸縮繡花飾縫 VSQ		一般花飾縫 VSM	
規格 Conversion				
針數 Needle	12		12	
下勾針 Looper	12		12	
撥線桿數 Retainer	—		12	
線數 Thread	36		48	
車針規格 Needle Specification	DV-K25(#18,21)		DV-57(#11-18)	
針寬規格 Needle Gauge	4.76*11=52.36 (3/16"×11=2 1/16")	6.35*11=69.85 (1/4"×11=2 3/4")	4.76*11=52.36 (3/16"×11=2 1/16")	6.35*11=69.85 (1/4"×11=2 3/4")
送具機構 Feeding Mechanism	平送式 Plain			
縫距 Stitch Length	3.5-4針 Stitches/吋 Inch		8-14針 Stitches/吋 Inch	
針線 Needle Thread	伸縮線(美國) Elastic Thread (U.S.A) #2T or #3M		麻紗線 Spun Thread #50-60	
勾針線 Looper Thread	—		麻紗線 Spun Thread #50-60	
裝飾線 Ornament Thread	人造纖維線 Rayon and Synthetic Thread		人造纖維線 Rayon and Synthetic Thread	

標準配備凸輪: 16個

TYPES OF THE STANDARD ORNAMENTATION CAM (16 PIECES)



以上為單支裝飾線推桿、穿單條裝飾線，經各號凸輪所形成之裝飾花樣。

There are 16 single ornamental lever above, thread the ornamental thread to different cam and get different designs.

花樣說明

DESCRIPTION OF ORNAMENTS

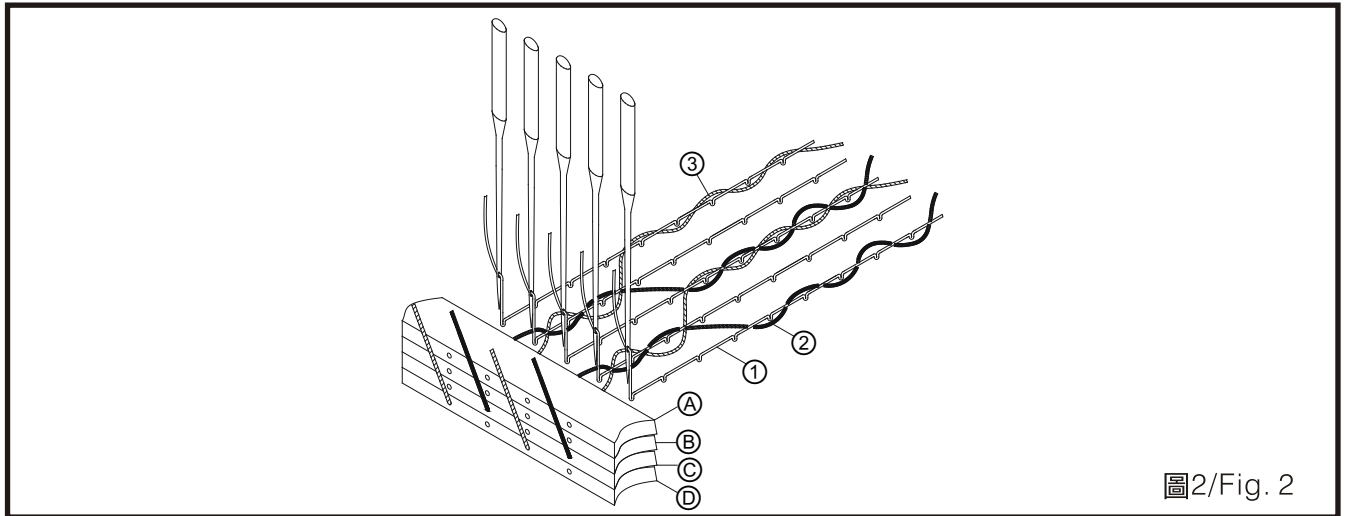


圖2/Fig. 2

- ① 針線 Needle Thread
- ② 裝飾線 Ornamental Thread
- ③ 裝飾線 Ornamental Thread
- Ⓐ 裝飾線上花盤之上推桿 Upper Level of the Cam for Ornamental Thread
- Ⓑ 裝飾線上花盤之下推桿 Upper Level of the Cam for Ornamental thread
- Ⓒ 裝飾線上花盤之下推桿 Lower Level of the Cam for Ornamental Thread
- Ⓓ 裝飾線下花盤之下推桿 Lower Level of the Cam for Ornamental Thread

車縫範例

STITCH EXAMPLE

凸輪花盤 Ornamental Cam	穿線位置 Threading Position	圖形 Example
1. 101/602 L		
2. 222/202		
3. 391L		
4. 482L		
5. 592L		
6. 674L		

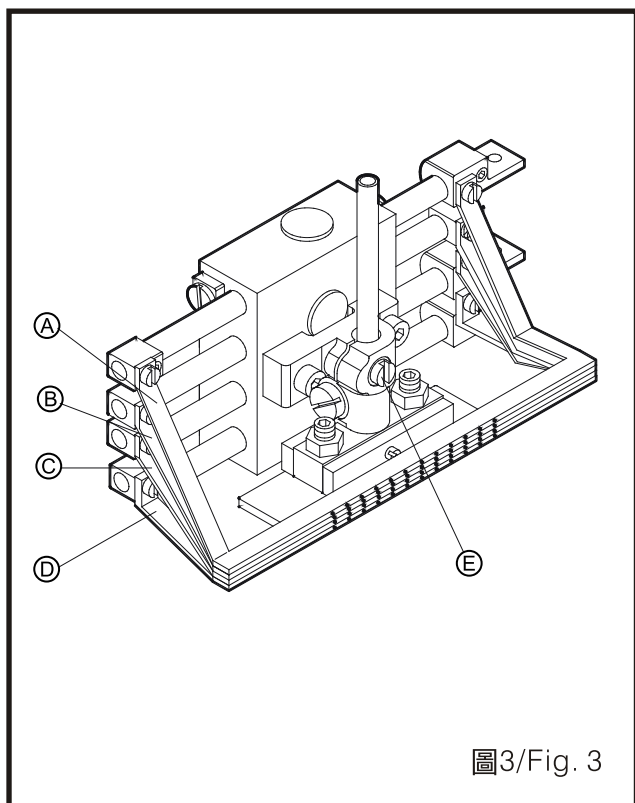
凸輪花盤及裝飾線推桿調整

1. 凸輪花盤的使用

上下兩凸輪花盤可做適當的組合，做出不同的裝飾花樣，上凸輪花盤控制推桿之上面2支裝飾線推桿Ⓐ及Ⓑ的車縫花樣，下凸輪花盤控制推桿組之下面2支裝飾線推桿Ⓒ及Ⓓ的車縫花樣(圖3)

2. 凸輪花盤的更換

凸輪花盤的更換，先取下上連桿①上的C形扣環Ⓒ取出上連桿①，鬆開螺絲Ⓐ取下墊片⑤然後可依序取下上凸輪花盤③及下凸輪花盤④，換裝新凸輪花盤時，請先塗些牛油於凸輪花盤溝槽內以增加壽命(圖4)



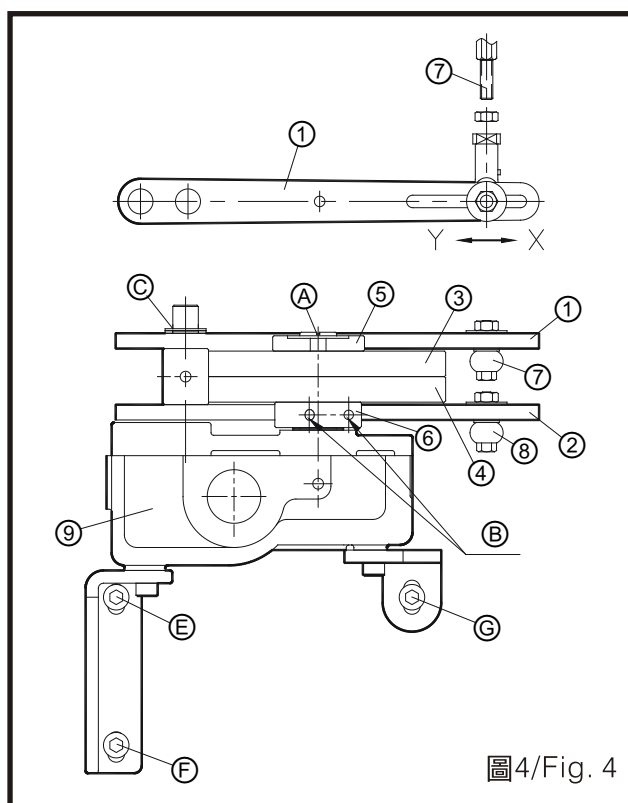
ADJUST THE ORNAMENTAL CAM AND ORNAMENTAL ROD

1. The usage of ornamental cam

The upper and lower ornamental cams have appropriate combination for various patterns. The upper cam controls the top ornamental rods Ⓐ and Ⓑ, and the lower cam controls the bottom ornamental rods Ⓒ and Ⓓ. (Fig.3.)

2. The interchange of ornamental cam

To interchange the ornamental cam, remove C type retaining ring Ⓒ and the upper rod ①; loosen screw Ⓐ and remove washer ⑤ and then remove the upper ③ and lower ④ cam. Before installing the new ornamental cam, apply some oil in the gap of the cam to extend its life. (Fig.4)



傳動齒輪箱的調整

傳動齒輪箱⑨，可藉由Ⓔ、Ⓕ、Ⓖ調整傳動齒輪箱⑨上、下、左、右的位置，如圖4。

ADJUST THE GEARBOX

Screws Ⓔ, Ⓕ, and Ⓖ can adjust the position of the gearbox ⑨. (Fig.4)

凸輪花盤的時位調整

1. 校車調整時下凸輪花盤裝No.602L凸輪，上凸輪裝No.101凸輪為基準，時位調整好後如再更換其他凸輪花盤時，則時位不必再調整。
2. 將上連桿⑦與下連桿⑧裝於上搖桿①與下搖桿②之橢圓孔中央，往X方向調整，可使裝飾推桿行程加大，往Y方向則形成變小(圖4)
3. 當針之針尖升至最高點，在由上往下降至最上方第一支裝飾線推桿④平面上緣時，調整四支裝飾線推桿，使各推桿上線孔中心與針中心對齊，此時時位即正確，調整時(圖4)先放鬆螺絲⑤，取下螺絲⑤及墊片⑥，再放鬆束環⑦上之兩個M5固定螺絲⑧調整束環⑦之角度(凸輪花盤會一起轉動)使針與裝飾線推桿之相關位置，如圖5所述，再依序鎖緊螺絲⑧及⑤。

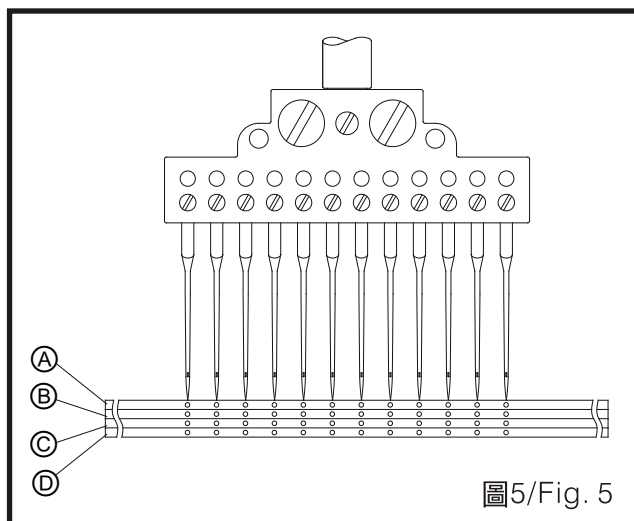


圖5/Fig. 5

TIMING AND POSITION ADJUSTMENT OF THE ORNAMENTAL CAM

1. When adjustment, the under ornamental cam is with No.602L and the upper ornamental cam is with No.101. After the adjustment is done, the timing and position doesn't need to be re-adjusted if the ornamental cam is replaced again.
2. Please assemble the upper connection rod ⑦ and under connection rod ⑧ in the center oval hole of the upper rod ① and under rod ②. If it adjusting to X direction, it will enlarge the route of ornamental pushing rod. Otherwise, if it adjusting to Y, it will shorten the route. (Fig.4)
3. When the needle tip rise to the highest spot. Then it descend to the surface of the first ornamental pushing rod ④, please align the rod thread hole and needle hole. Meanwhile, the timing and position is correct. When adjusting (Fig.4), please loosen the screw ⑤ and remove the screw ⑤ and washer ⑥ and then loosen two fixed M5 screws ⑧ on the bush ⑦. Adjust the angle of bush ⑦, the ornamental cam will revolve simultaneously in order to make the needle and ornamental pushing rod in the correct position as the Fig.5 mentioned. Then please tighten the screws ⑧ and ⑤ in sequence.

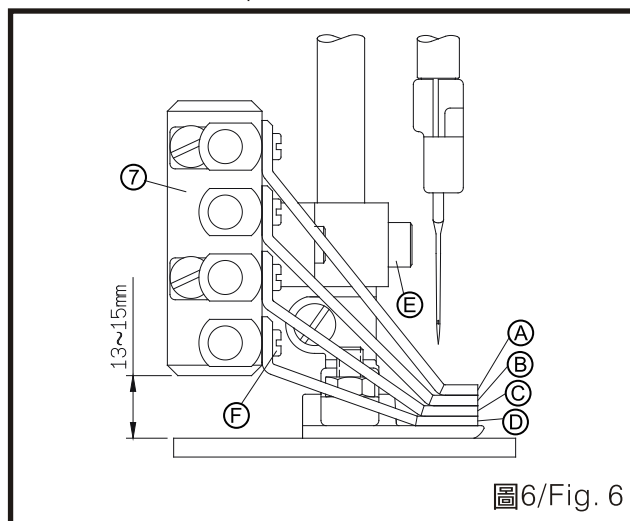


圖6/Fig. 6

裝飾線推桿的調整

ADJUST THE ORNAMENTAL PUSHING ROD

1. 上下高度調整

- (1) 將裝飾線推桿基座①底面與針板面的距離調整為13~15 mm，後鎖緊螺絲⑥(圖6)
- (2) 安裝上最低位置的裝飾線推桿②，並使推桿下緣與押具面上緣約0.2 mm的間隙能左右順暢滑動，不會與押具面摩擦，裝飾線推桿②的內側與針外緣需為1.5~2.0 mm(圖7)
- (3) 當裝飾線推桿內側直線與針座最右針及最左針連線之直線未平行時，可稍放鬆螺絲⑥調基座⑦位置使裝飾線推桿與針左右之間隙相同(即平行 $a=b$)後再鎖緊螺絲⑥(圖8)
- (4) 當裝飾線推桿左右高低不平時，可調整兩個螺絲⑥使左右高度與押具保持約0.2 mm間隙後再鎖緊螺絲⑥。(圖8)
- (5) 依序裝上裝飾線推桿③、④、⑤並依安裝②之要點，確認各推桿是否可滑動順暢，上下桿間不可摩擦太大。

1. Adjust the height

- (1) Adjust the distance to 13~15 mm between the bottom surface of Ornamental pushing rod base① and needle plate surface. Then please tighten the screw⑥.(Fig.6)
- (2) Assemble the lowest ornamental pushing rod② and make the gap 0.2 mm between the bottom surface of ornamental pushing rod and the upper surface of presser foot. So it can move smoothly and not have friction with the presser foot. By the way, the distance between ornamental pushing rod② inner side and needle outer side is 1.5 mm~2.0 mm. (Fig. 7)
- (3) When the line of ornamental pushing rod inner side and the line between right and left needle of needle clamp is Parallel, please loosen the screw⑥ and adjust the base⑦ in order to make the distance between ornamental Pushing rod and left or right needle be the same (It means parallel $a=b$). Then please tighten the screw⑥. (Fig.8)
- (4) When the ornamental pushing rod is not flat, please adjust the two screws⑥ in order to keep the difference in 0.2 mm between the ornamental pushing rod and presser foot. Then please tighten the screws⑥.(Fig.8)
- (5) Assemble the ornamental pushing rod in sequence③,④,⑤. Follow the key point to assemble②. Please make sure if the rods can be moved fluently. The friction between upper and lower rods should be small.

2. 左右位置的調整

(1) 轉動手輪使裝飾線推桿Ⓓ位移至左死點時，調整裝飾線推桿Ⓓ的位置，使最左針針尖對準Ⓓ之左邊第5個線孔中心，調整Ⓒ的位置，使最右針針尖對準Ⓒ之右邊第5個線孔中心(圖9)

(2) 再轉動手輪使裝飾線推桿Ⓓ位移至右死點，此時最右針位於Ⓓ右邊第4個線孔中心。最左位於Ⓒ左邊第4個線孔中心，如圖10。

(3) 轉動手輪使裝飾線推桿Ⓓ位移至左死點時，調整裝飾線推桿Ⓓ的位置，使最左針針尖對準Ⓓ之左邊第2個線孔中心。調整Ⓒ的位置，使最右針針尖對準Ⓒ之右邊第2個線孔中心，如圖11。

(4) 再轉動手輪使裝飾線推桿Ⓓ位移至右死點，此時最右針位於Ⓓ的右邊第2個線孔中心。最左針Ⓒ位於左邊第2個線孔中心，如圖12。

(5) 繼續轉動手輪使裝飾線推桿Ⓐ、Ⓑ、Ⓒ、Ⓓ各孔上下疊一致，此時最右針在最右邊線孔的中心。最左針在左邊線孔的中心，如圖5。

註：此時，裝飾線推桿基座兩旁距離齒條端的距離為50 mm，如圖13。

2. The adjustment of horizontal movement

(1) Turn the hand wheel to move the spreader of decorative threadⒹ to the left dead point. Adjust the spreader of decorative thread for letting the left needle point to aim at the central of the 5th thread hole ofⒹ from the left side. AdjustⒸ position to left and right needle point to aim at the central of the 5th hole ofⒸ.(Fig.9)

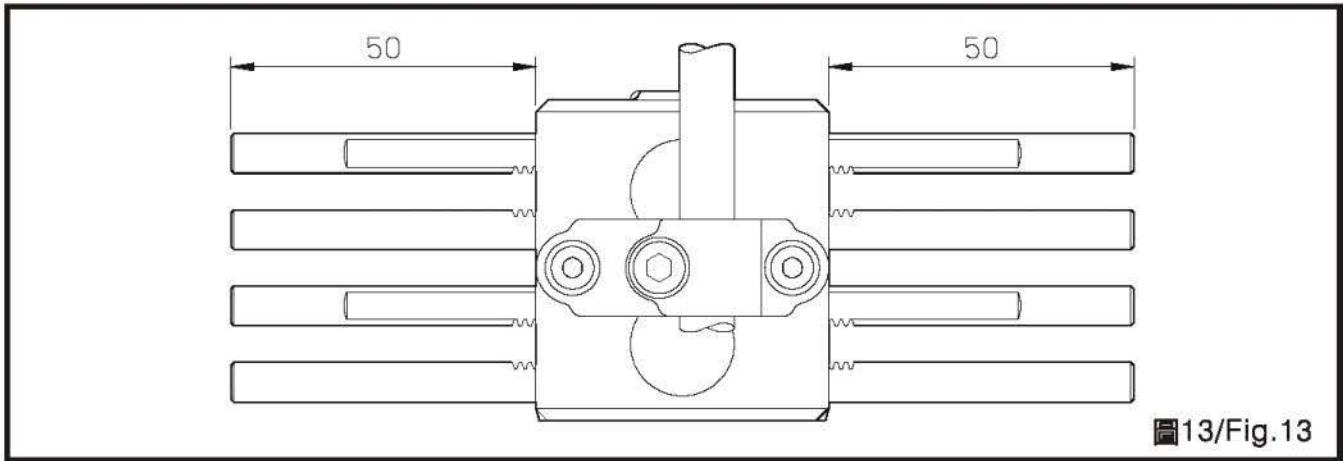
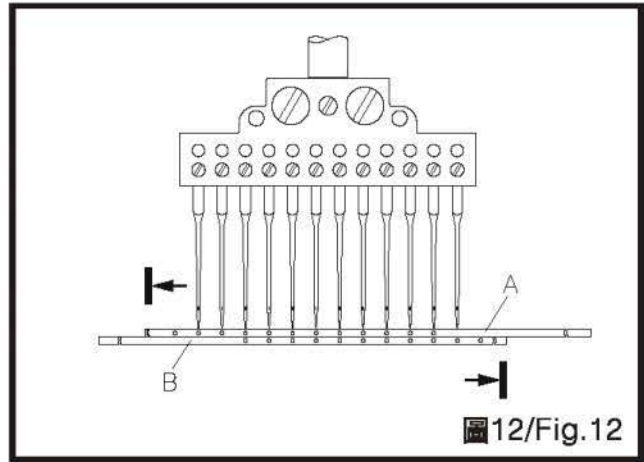
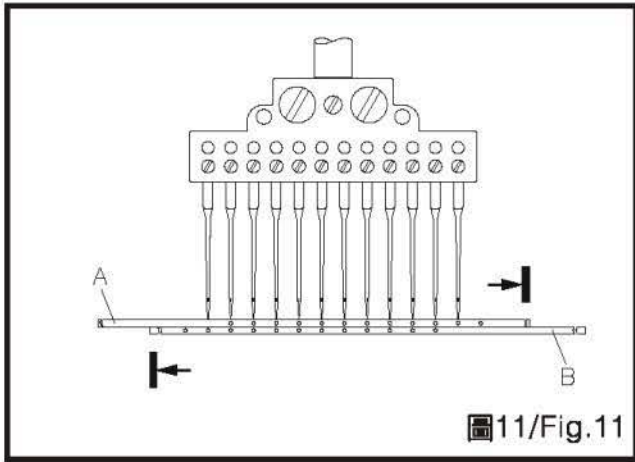
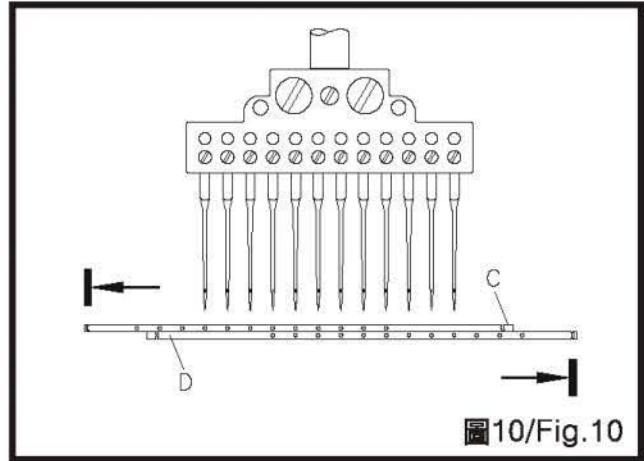
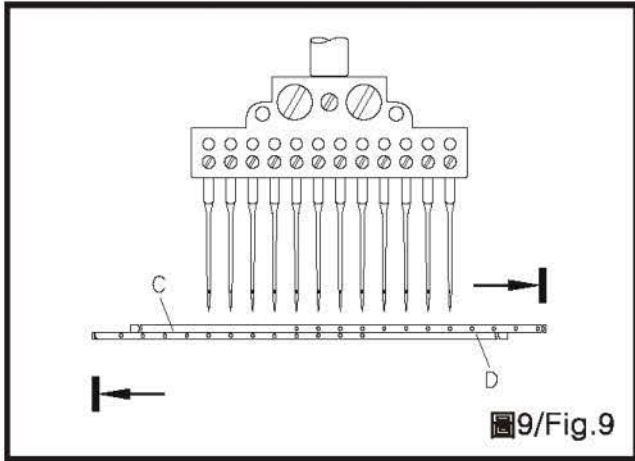
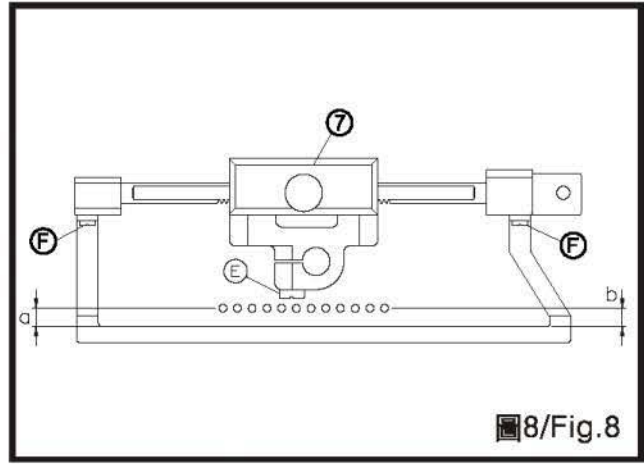
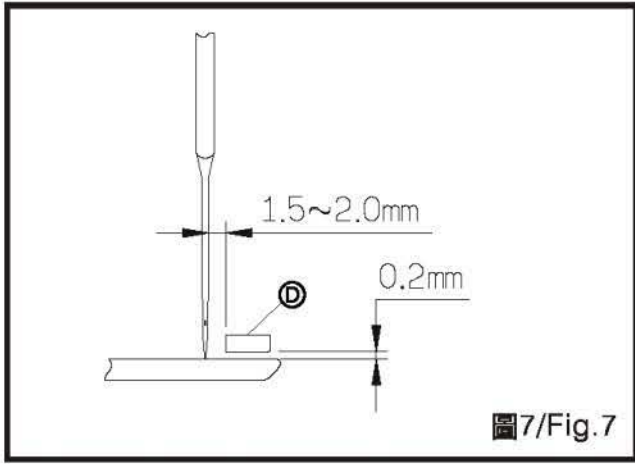
(2) Turn the hand wheel till the thread spreaderⒹ move to the right dead point. For the time being, the right needle is positioned at the central of the 4th hole on the right side ofⒹ. The left needle is positioned at the central of the 4th hole on the left side ofⒸ. (Fig. 10)

(3) Turn the hand wheel to move the spreader of decorative threadⒹ to the left dead point and adjust the position ofⒹ for letting the left needle point aim at the central of the 2nd hole on the left side. (Fig.11)

(4) Turn the hand wheel to move the spreader of decorative threadⒹ to the right dead point and for the time being, the right needle is positioned at the central of the 2nd right hole. The left needle is positioned at the central of the 2nd left hole. (Fig.12)

(5) Turn the hand wheel to move the thread of decorative threadⒶ,Ⓑ,Ⓒ andⒹ for having the holes on them to be complied each other. For the time being, the right needle point is positioned at the central of the right hole. The left needle point is positioned at the central of the left hole. (Fig.5)

Remarks: The distance is 50 mm between the holder edge of decorative thread and two side. (Fig.13)



針高，針與勾針間隙、時位、導針片、撥線桿、控現感等之規格調VSM同一般機種調整說明

THE HEIGHT OF NEEDLE, GAP BETWEEN THE NEEDLE AND LOOPER, TIMING, NEEDLE GUIDER, WIPER AND THE THREAD TAKE UP IS TO BE ADJUSTED ON VSM AS SAME AS OTHER NORMAL MODEL

VSQ規格調整

ADJUST VSQ GAUGE SET

1. 送具齒的高度

將送具齒的高度調整與針板面[Ⓐ]高1~1.2 mm(圖14)

1. The height of Feed Dog:

Adjust the feed dog till its tip is 1~1.2 mm higher than the needle plate's surface[Ⓐ]. (Fig.14)

2. 針棒高度的調整

針棒高度是，當針上升至最高點時，針尖與針板面[Ⓐ]之距離12.3 mm(圖15)
調整時：

2. Adjust the height of the Needle Bar:

The needle bar's height is: when the needle rise to their highest position, the clearance between the needles' tips and the needle plate's surface[Ⓐ] should be 12.3 mm (Fig.15)

Please do the adjustment as following :

(1) 轉動手輪使針棒位於最高點，然後鬆開固定針棒的螺絲[Ⓐ]

(1) Rotate the hand wheel to move the needle bar to the highest position, and then loosen the fixing screw[Ⓐ] of needle bar.

(2) 調整針棒[Ⓐ]至上述間隙再鎖緊螺絲[Ⓐ]，調整好後請再確認，當針棒降至最低點時針應在針孔中心。(圖16)

(2) Adjust the needle bar[Ⓐ] till the clearance is as advised above, then tighten screw[Ⓐ]. When finishing the adjustment, please reconfirm that "when the needle bar moves to the lowest position, the needle should be in the center of the needle plate's hole. (Fig.16)

註：

押具壓縮彈簧[Ⓐ]：

Note:

Regarding presser foot tension spring[Ⓐ]:

(1) 逆時針調整螺絲[Ⓐ]可以減低彈簧壓力來車縫薄布料。

(1) Adjusting screw[Ⓐ] counter clockwise can reduce the spring tension. It will apply to sewing light materials.

(2) 順時針調整螺絲[Ⓐ]可以增加彈簧壓力來車縫厚布料。(圖16)

(2) Adjusting screw[Ⓐ] clockwise can increase the spring tension. It will apply to sewing heavy. (Fig.16)

3. 安裝勾針

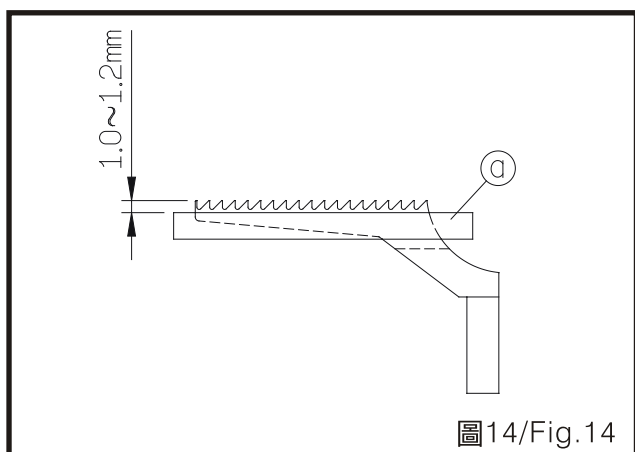
(1) 勾針高度：當勾針在後死點位置(人面向機台)時，勾針上緣與針板下緣的間隙調整為3.3 mm。(圖17)

(2) 調整勾針：當針棒位於下死點，勾針位於前死點時，放鬆螺絲Ⓐ前後調整勾針座①距離，使勾針尖與針的前緣距離為a，在使用DV-K25#21針時 $a=1.8\text{ mm}$ 、#18針時 $a=2.0\text{ mm}$ 調整好後再鎖緊螺絲Ⓐ。(圖17)

4. 針與勾針的時位關係

(1) 調整針與勾針的時位，當時位正確時，勾針由前死點往後移，勾針尖至針中心離針眼上緣之距離a與勾針由後死點回移時，勾針尖至針中心離針眼上緣之距離b是相同的。(圖18)

(2) 勾針角度設定：當勾針到達針的中心時，勾針與針之外緣間隙保持0~0.05mm。(圖19)



3. Install the looper:

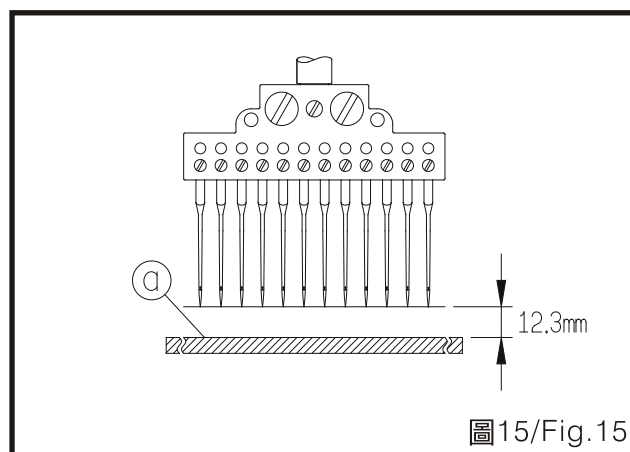
(1) The height of looper: When looper reaches the rear dead point (the direction facing the machine), adjust the clearance between looper's top and needle plate's bottom to be 3.3mm. (Fig.17)

(2) The adjustment of looper: When the Needle bar is on the down dead point and the looper is on the down dead point, loosen screwⒶ and adjust looper holder①, and let the clearance between looper's tip and needle to be "a" ($a=1.8\text{ mm}$ when using needle DV-K25#21, and $a=2.0\text{ mm}$ when using needle #18). When the adjustment is finished, tighten screwⒶ. (Fig.17)

4. The timing of Needle and Loper:

(1) Test the following to check if the timing of needle and looper is correct: When the looper move forward from the front dead point to the center of needle, the clearance between looper's tip and needle hole's top is a. When the looper move back from the rear dead point to the center of needle, the clearance between looper's tip and needle hole's top is b. If the timing is correct, a should be the same as b. (Fig.18)

(2) The setting for looper's position: when looper reaches the center of needle, the clearance between looper and needle should be 0~0.05 mm (Fig.19)



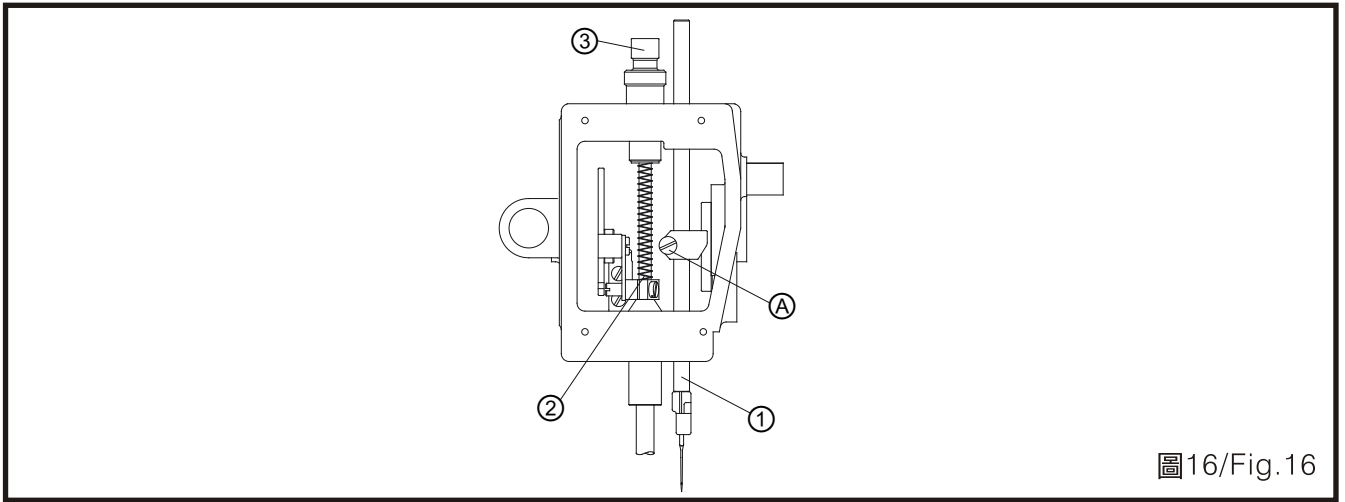


圖16/Fig.16

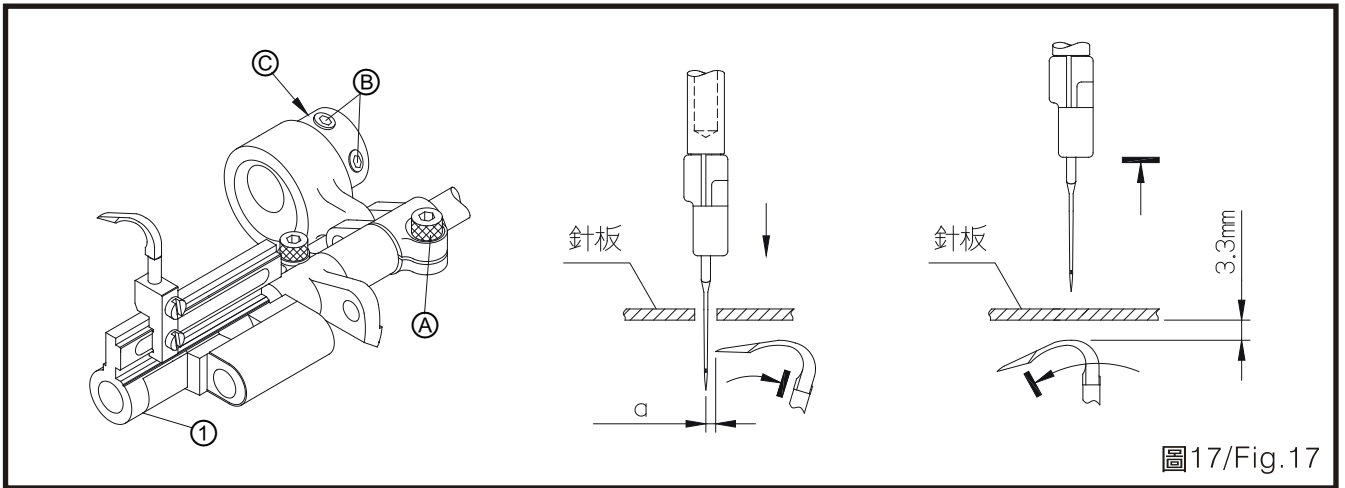


圖17/Fig.17

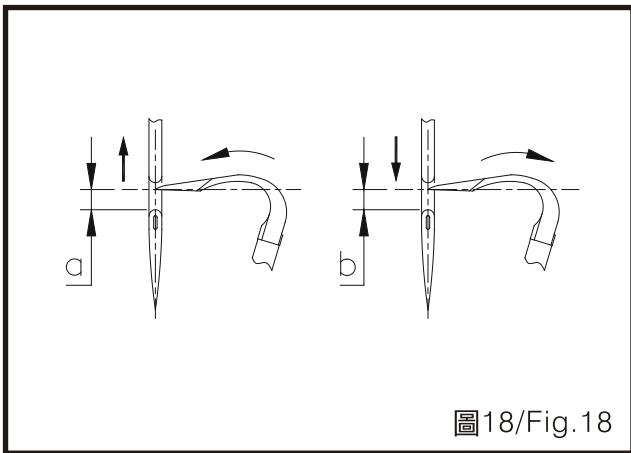


圖18/Fig.18

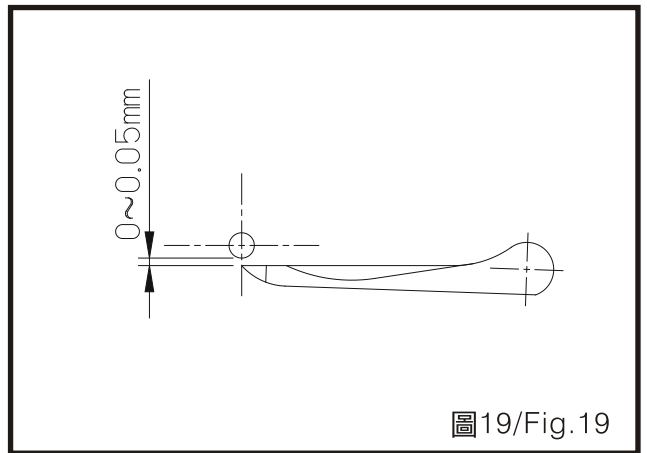


圖19/Fig.19



VC008 VSQ/ VSM

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