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MODEL		VC008	
Net Weight (Kgs)	42	Noise Level, dB(A)	See Attach Table 1
Serial No.		Vibration (m/sec2)	
Dimension	Length	Width	Height
	45.5 cm	23cm	36 cm

## 重要安全事項說明

感謝您購買本機器, 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, 請詳細閱讀其他相關說明書. 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.
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.
  - (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.

## IMPORTANT SAFETY INSTRUCTIONS

For operating safely and to get the most out of the many 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 enjoyed manufacturing it.

1. When you use this machine, please pay attention to the basis safety measures.
2. Before using this machine, please read this manual and all related instructions. In addition, please save this manual for your future needs.
3. Please use this machine after it has been ascertained that it conforms with safety standards and regulations of your country.
4. It is not allowed to operate this machine without the specified safety devices. All safety devices must be in right position. When the machine is ready for operation.
5. This machine must be operated by an appropriately trained operator.
6. For your own safety, we suggest you wear goggles.
7. Please turn off the power switch or disconnect it before doing the following tasks :
  - (1). Threading needle(s), adjusting thread Take-up(s), thread guide(s), and / or replacing bobbin(s).
  - (2). Replacing needles, presser feet, needle plates, feed dogs, needle guards, folders, cloth guides and other parts or accessories.
  - (3). Repairing this machine.
  - (4). When the operator is leaving the working place or when the working place is unattended.
  - (5). While clutch motors without brake pads are used, motors must come to completely stop.

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並立即就診.
9. 在未確認電源是否關閉, 請勿擅自碰觸運轉中之零件或配件。
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. 維修時只許使用由SIRUBA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, 及當發現零件損壞時, 應立刻停止機器運轉
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, 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.
15. 為使機器能正常操作, 機台務平放地上, 機器避免在強烈噪音的環境下操作.

8. By any chance, if you allow grease, oil, or any fluid contact your skin or eyes, please wash the contacted area completely with clean water and consult a medical doctor. If the fluid was swallowed contact a medical doctor immediately.
9. Before confirming the power is turned off, do not touch any operating part or device.
10. Qualified technicians are required for machine adjustment, modification, and repair. Only genuine parts from SIRUBA are recommended for replacement. Damage resulted in using generic parts are subject to your own risk.
11. Routine maintenance and check-up have to be performed by appropriately trained persons, or qualified technicians.
12. Qualified technician or well-trained persons are required for services to electronic components knowledge of electronic is essential for conducting adjustment or repair tasks. Stop the machine immediately when discover the failure of any of the electronic components.
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 up on the machine is necessary.
15. To level the machine on the ground is essential in order to ensure a proper operation and lower noise. Avoid operating a machine at a noisy surrounding.



- 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.
- 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.

- 16.A proper power plug must be used with this machine by 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. We assume no responsibility for damage caused by modification or conversion of this machine.
- 19.Two safety warning signs are applies :
- (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 :
- Please never operate this machine with belt cover, finger guard or any safety device removed to avoid physical injury
- a.Please keep your hair, fingers and cloths away from the hand wheel "bobbin winder", V belt and motor while the machine is in operation to prevent the risk of injuries by tangled into them.
- b.Please never put your fingers under the needle or in the thread take up cover when you turn on the power switch or operate the machine.

- 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.
- 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.
- e. 當放置或抬起機頭時, 小心勿將手置於機器中.
- 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.
- 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.
- 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
- 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.

- c. Please never put your fingers under the needle or in the thread take up cover when you turn on the power switch or operate the machine.
- 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 possible injury to your hands. In addition, please make sure to turn off the power of the machine while changing bobbins.
- e. Be careful not to place your fingers inside the machine when moving / raising the machine head to avoid possible physical injuries.
- f. Please turn off the power of the machine 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. The motor does not produce noise while the machine is at rest if your machine is equipped with a servo motor. So, please turn off the power of this machine to avoid possible accidents due to abrupt start of the machine.
- h. Never operate the sewing machine with the ground wire removed to avoid electrical shock hazards.
- i. Please turn the power switch off in prior to the connection or disconnection of the power plug to prevent possible accidents due to electric shock or damaged electronic components.

## 特別事項

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 :

以下各步驟, 請先將電源關掉, 以免因為機器突然啟動造成之意外

## WARNING

Please confirm the following to avoid malfunction and damage to this machine.

1. Clean this machine completely before putting this machine in operation for the first time after set up.
2. Clean all dust and oil gathered during transportation.
3. Confirm that the voltage are set correctly and phase (single or 3 phase) of motor.
4. Confirm that the power plug is properly connected to the power supply.
5. Never use the machine where the voltage type is different to the designated on shown on the motor nameplate.
6. Confirm that the direction of the rotation of the machine pulley is correct.

Warning :

Before doing the following operation or adjustment, please turn the power off to prevent accidents caused by abrupt start of the sewing machine.

一. 標準配備凸輪:16個

Types of standard ornamentation cam:  
16 types

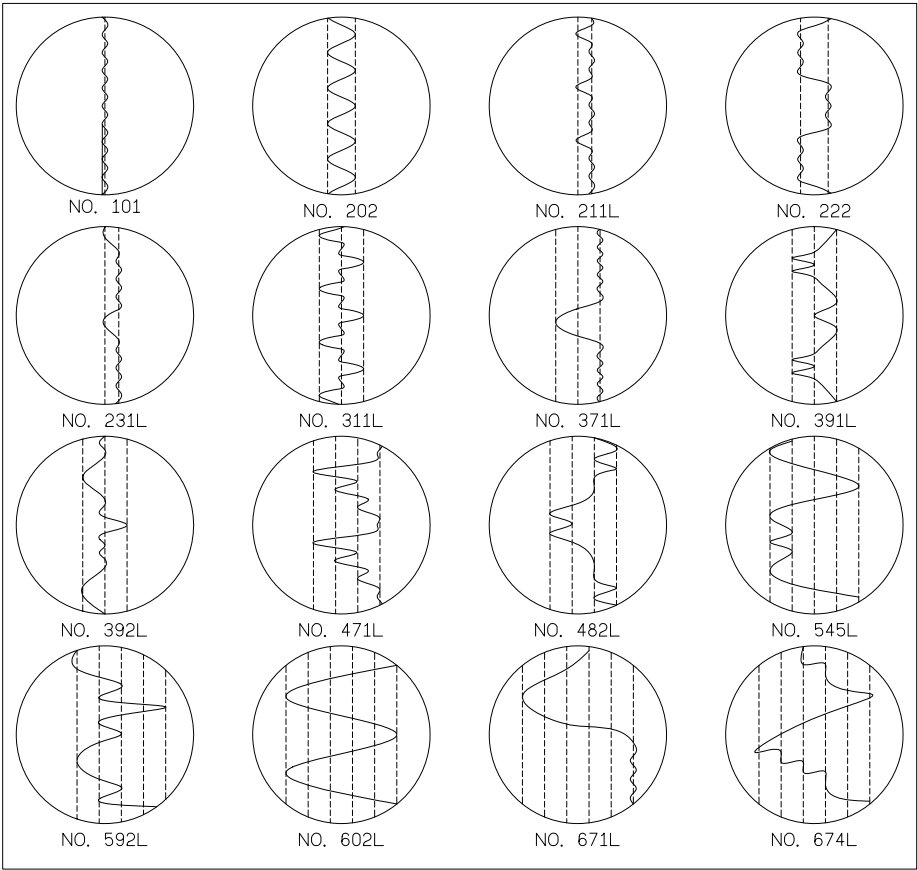


圖1/Fig. 1

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。

The above are the ornamental patterns formed by the single ornamental thread which is threaded through the single ornamental thread push rod and passes through each cam.

二.花樣說明:

Pattern:

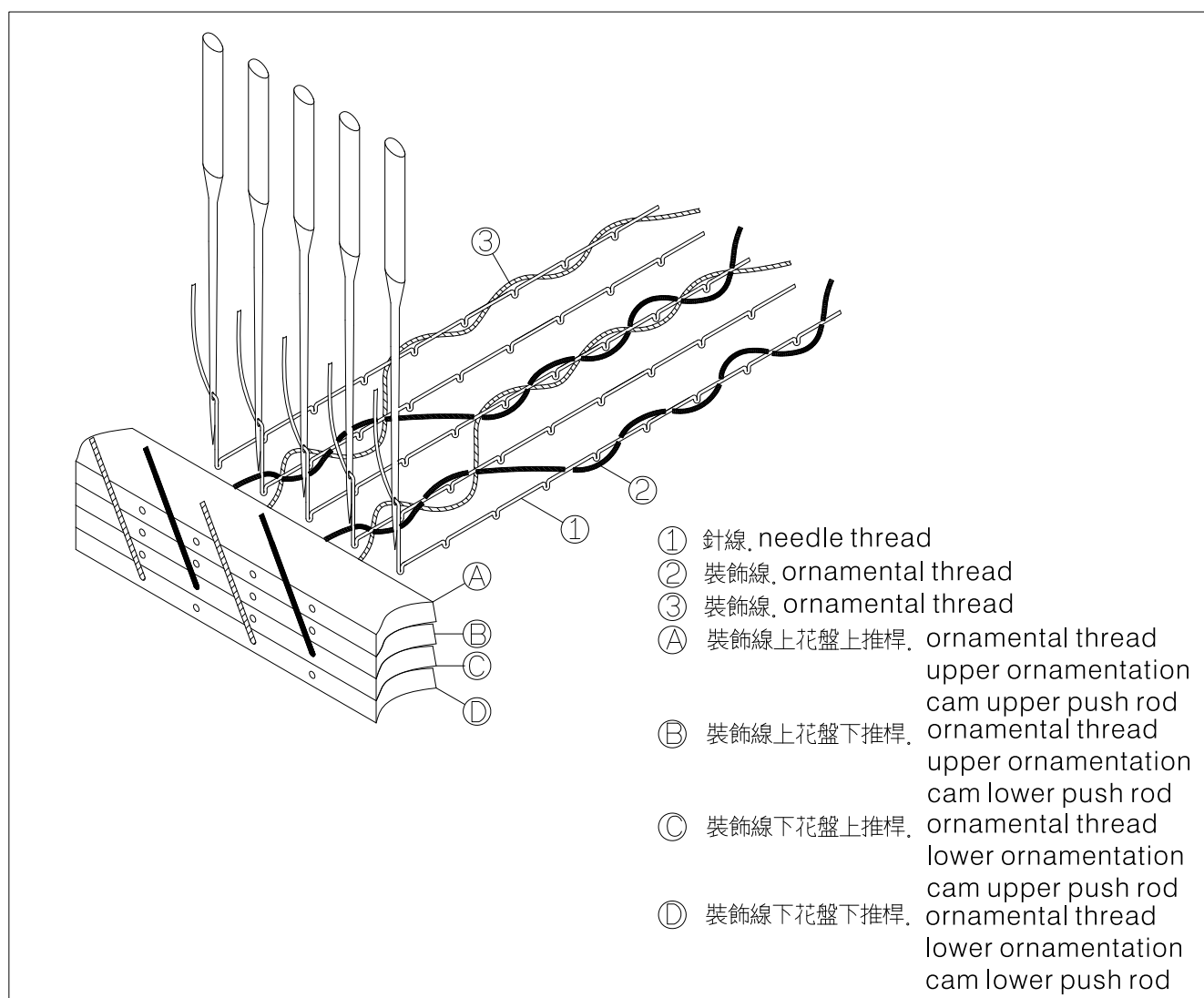

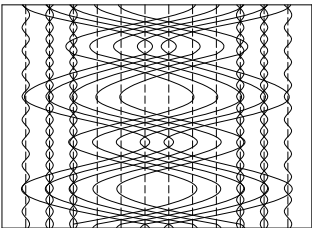
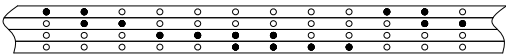
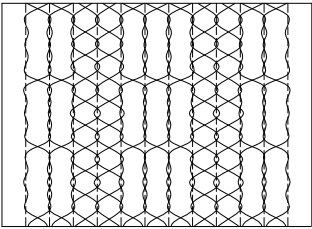

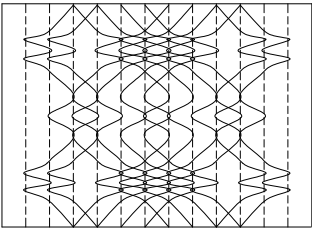

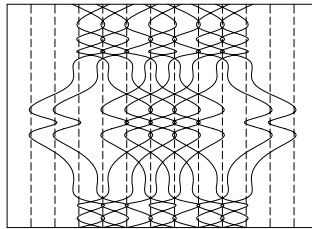
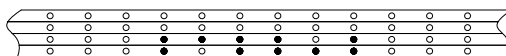
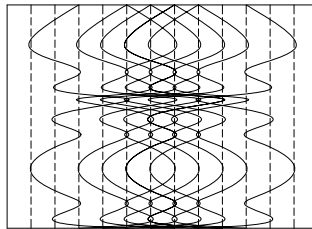

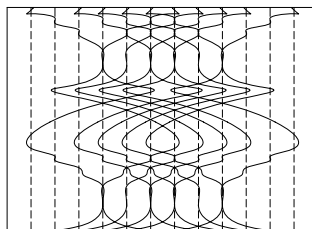


圖2/ Fig. 2

三.範例車縫：

Sewing samples:

凸輪花盤 ornamentation cam	穿線位置 threading position	圖形 pattern
1. 101/602L	 <p>圖3/Fig. 3</p>	
2. 222/202	 <p>圖4/Fig. 4</p>	
3. 391L	 <p>圖5/Fig. 5</p>	
4. 482L	 <p>圖6/Fig. 6</p>	
5. 592L	 <p>圖7/Fig. 7</p>	
6. 674L	 <p>圖8/Fig. 8</p>	

#### 四. 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組之上面2支裝飾線推桿 ①及 ②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 ③及 ④的車縫花樣(圖9)。

##### 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 ③取出上連桿 ①, 鬆開螺絲 ④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10)。

The adjustment of ornamentation cams and ornamental thread push rods:

##### 1. The use of ornamentation cams

The upper and lower ornamentation cams can be used together to form different patterns. The upper ornamentation cam controls the sewing patterns of the upper two ornamental thread push rods ① and ②. The lower ornamentation cam controls the sewing patterns of the lower two ornamental thread push rods ③ and ④. (figure 9)

##### 2. The replacement of ornamentation cams

Before replacing the ornamentation cams, you need to remove the C-shaped snap ring ③ to take out the upper connecting rod ①, and loosen the screw ④ to take out the washer ⑤. Then you can take out the upper ornamentation cam ③ and the lower ornamentation cam ④. When you replace the old ornamentation cams with the new ones, please apply some oil to the groove of ornamentation cams to increase their life span. (figure 10)

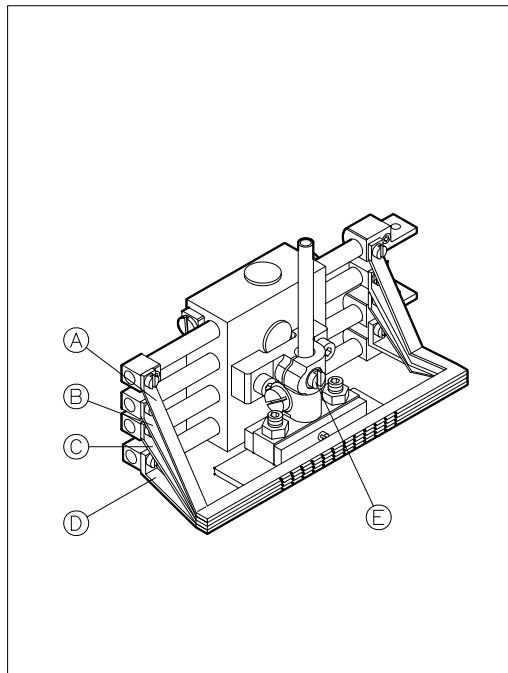


圖9/Fig. 9

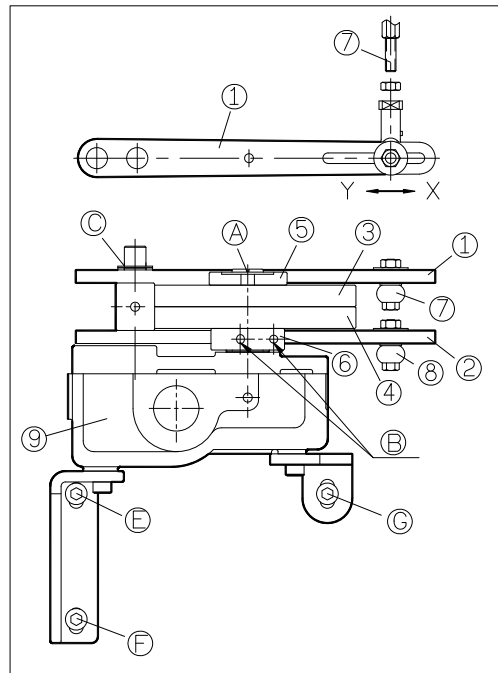


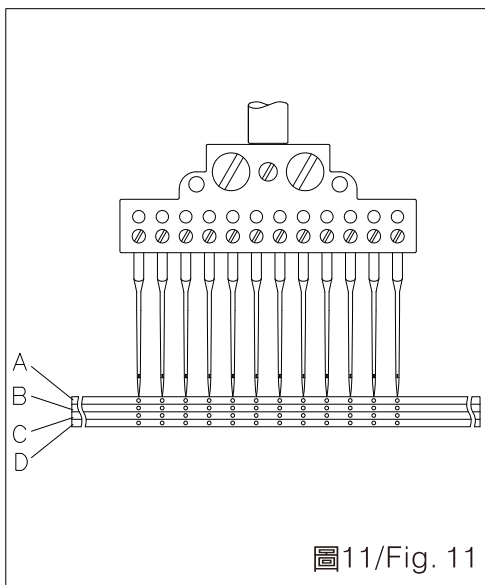
圖10/Fig. 10

## 五. 傳動齒輪箱的調整:

傳動齒輪箱⑨, 可藉由螺絲⑤、⑥、⑦調整傳動齒輪箱⑨上、下、左、右的位置, 如(圖10)。

## 六. 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, 上凸輪花盤裝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⑩方向調整, 可使裝飾推桿行程加大, 往⑪方向則行程變小(圖10)。
- 3.當針之針尖升至最高點, 再由上往下降至, 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10)先放鬆螺絲④, 取下螺絲④及墊片⑤, 再放鬆束環⑥上之兩個M5固定螺絲③調整束環⑥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11)所述, 再依序鎖緊螺絲③及④。



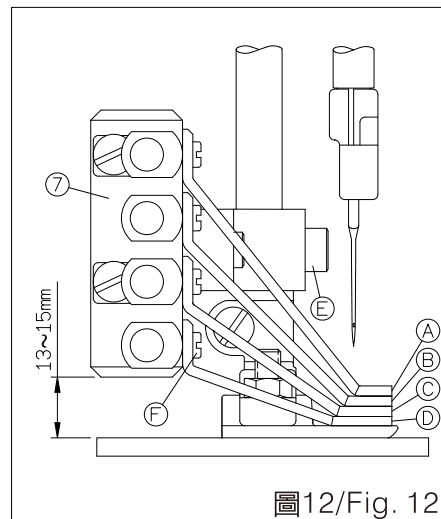
The adjustment of the driving gear box:

The position of the driving gear box⑨ can be adjusted by the screws ⑤, ⑥, ⑦. (figure 10)

When you adjust cams, No.602L is attached to the upper ornamentation cam, and No.101 is attached to the lower ornamentation cam. After you adjust the timing and the position of cams, you do not need to make any adjustment if you change the ornamentation cams.

Put the upper connecting rod⑦ and the lower connecting rod⑧ in the oval holes of the upper rocking bar① and the lower rocking bar②. Adjusting in the direction of ⑩ will enlarge the stroke of the push rod while adjusting in the direction of ⑪ will reduce the stroke of the push rod. (figure 10)

When the needle point rises to the highest point and lowers to the top surface of the first topmost ornamental thread push rod④, adjust the four ornamental thread push rods so that the center of the thread hole on each push rod and the center of the needle are aligned. At that time, the timing and the position are correct. When you make an adjustment (figure 10), loosen the screw④, take out the washer⑤, and loosen the two M5 setscrews on the collar⑥ to adjust the angle of the collar⑥ (ornamentation cams will turn simultaneously). The positions of the needle and the ornamental thread push rod should be as figure 11 illustrates, and then tighten the screws③ and④ in order.





## 七. 裝飾線推桿的調整:

### 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13~15mm, 後鎖緊螺絲⑤(圖12)。

(2) 安裝上最低位置的裝飾線推桿①, 並使推桿下緣與押具面上緣約0.2mm的間隙, 能左右順暢滑動, 不會與押具面磨擦, 裝飾線推桿①的內側與針外緣須為1.5~2.0mm(圖13)。

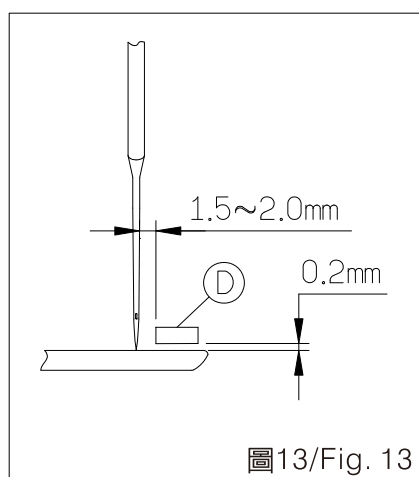


圖13/Fig. 13

(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⑤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⑤(圖14)。

(4) 當裝飾線推桿左右高低不平時, 可調整二個螺絲⑥使左右高度與押具保持約0.2間隙後再鎖緊螺絲⑥(圖14)。

The adjustment of the ornamental thread push rod:

### Adjust the height

Adjust the distance between the base of the ornamental thread push rod ① and the needle plate so that the distance between them is 13~15mm, and then tighten the screw ⑤. (figure 12).

Install the ornamental thread push rod ① in the lowest position. The distance between the bottom surface of the push rod and the top surface of the presser foot should be 0.2mm so that the push rod can move smoothly without touching the presser foot. The distance between the ornamental thread push rod ① and the needle should be 1.5~2.0mm. (figure 13)

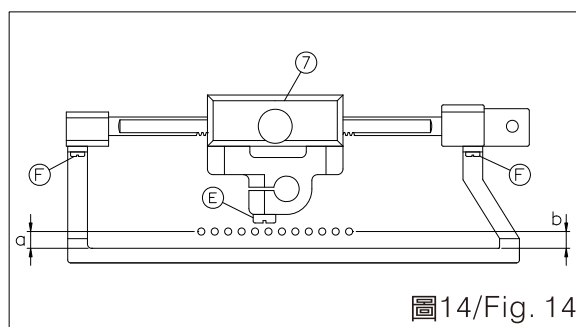


圖14/Fig. 14

When the inside line of the ornamental thread push rod is not parallel with the line connecting the right most needle and the left most needle, you can slightly loosen the screw ⑤ to adjust the position of the base ⑦. When the distance between the ornamental thread push rod and the left needle and that between the ornamental thread push rod and the right needle are the same (i.e.  $a=b$ ), tighten the screw ⑤. (figure 14)

If the ornamental thread push rod is not level, adjust the two screws ⑥. When the distance between the right side of the push rod and the presser foot and that between the left side of the push rod and the presser foot are 0.2mm, tighten the screw ⑥. (figure 14)

- (5)依序裝上裝飾線推桿 C、B、A、D 並依安裝之要點, 確認各推桿是否可滑動暢, 上下桿間不可磨擦太大。

Attach the ornamental thread push rods ③, ②, ①, ④ in order. Check to see if each push rod can move smoothly. The upper and lower rods should not touch each other.

## 2. 左右位置的調整

Adjust the position

- (1)轉動手輪使裝飾線推桿 ④ 位移至左死點時, 調整裝飾線推桿 ④ 的位置, 使最左針針尖對準 ④ 之左邊第5個線孔中心, 調整 ③ 的位置, 使最右針針尖對準 ③ 之右邊第5個線孔中心(圖15)。

When you turn the hand wheel to make the ornamental thread push rod ④ move to the left dead point, adjust the position of the ornamental thread push rod ④ so that the point of the left most needle levels at the center of the fifth thread hole on ④ from the left, and adjust the position ③ so that the point of the right most needle levels at the fifth thread hole on ③ from the right. (figure 15)

- (2)再轉動手輪使裝飾線推桿 ④ 位移至右死點, 此時最右針位於 ④ 右邊第4個線孔中心。最左針位於 ③ 左邊第4個線孔中心, 如(圖16)。

Turn the hand wheel again to make the ornamental thread push rod ④ move to the right dead point. The right most needle will be at the center of the fourth thread hole on ④ from the right, and the left most needle will be at the center of the fourth thread hole on ③ from the left. (figure 16)

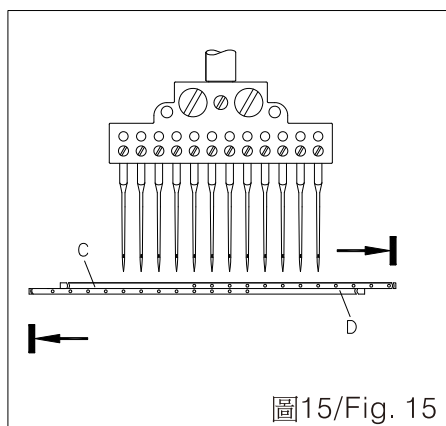


圖15/Fig. 15

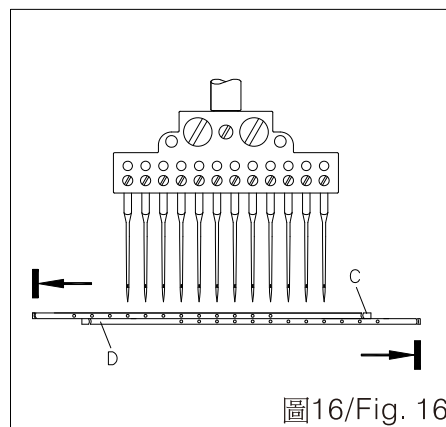


圖16/Fig. 16

- (3)轉動手輪使裝飾線推桿 ② 位移至左死點時, 調整裝飾線推桿 ② 的位置, 使最左針針尖對準 ② 之左邊第2個線孔中心。調整 ① 的位置, 使最右針針尖對準 ① 之右邊第2個線孔中心, 如(圖17)。

Turn the hand wheel to make the ornamental thread push rod ② move to the left dead point. Adjust the position of the ornamental thread push rod ② so that the point of the left most needle levels at the center of the second thread hole on ② from the left. Adjust the position of ① so that the point of the right most needle levels at the center of the second thread hole on ① from the right. (figure 17)

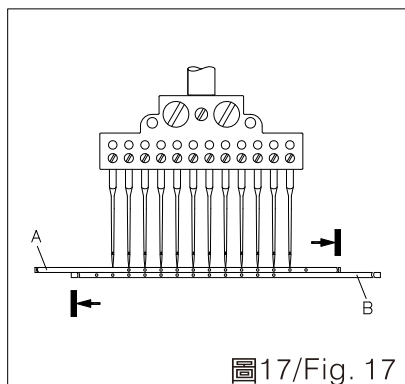


圖17/Fig. 17

(4)再轉動手輪使裝飾線推桿 ② 位移至右死點,此時最右針位於 ② 的右邊第2個線孔中心。最左針位於 ① 左邊第2個線孔中心,如(圖18)。

Turn the hand wheel to make the ornamental thread push rod ② move to the right dead point. The right most needle will be at the center of the second thread hole on ② from the right, and the left most needle will be at the center of the second thread hole on ① from the left. (figure 18)

(5)繼續轉動手輪使裝飾線推桿 ①、②、③、④ 各孔上下疊一致,此時最右針在最右邊線孔的中心。最左針在最左邊線孔的中心,如(圖11)。

Keep turning the hand wheel to align the holes on the ornamental thread push rods ①, ②, ③, and ④. The right most needle will be at the center of the right most thread hole, and the left most needle will be at the center of the left most thread hole. (figure 11)

註:此時,裝飾線推桿基座兩旁距離齒條端的距離為50mm,如(圖19)。

Note: The distance between the base of the ornamental thread push rod and the edge of the rack is 50mm. (figure 19)

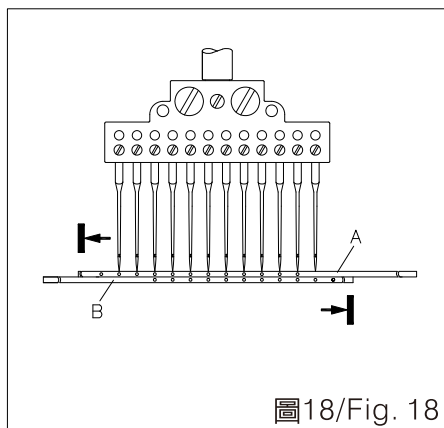


圖18/Fig. 18

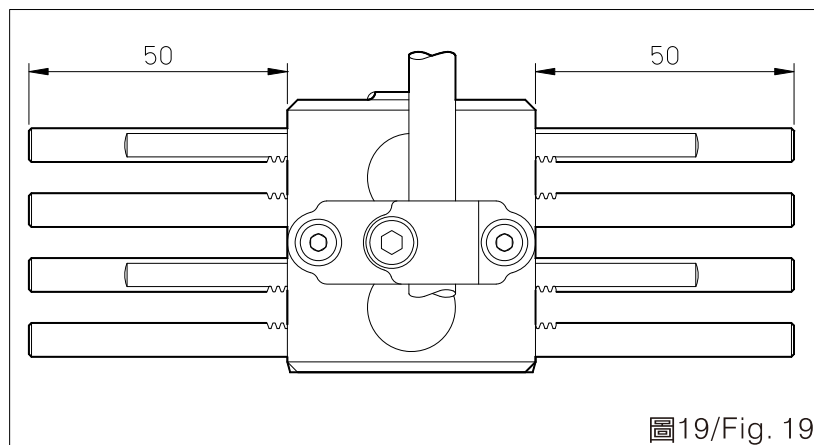


圖19/Fig. 19

八. 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 adjustment of the needle height, the interval between the needle and the looper, the timing and the position, the needle guard, the wiper, and the thread tension shaft for VSM is the same as that for the general model.

## 九.VSQ規格調整:

### 1.送具齒的高度:

將送具齒的高度調整與針板面②高  
1~1.2mm”(圖20)。

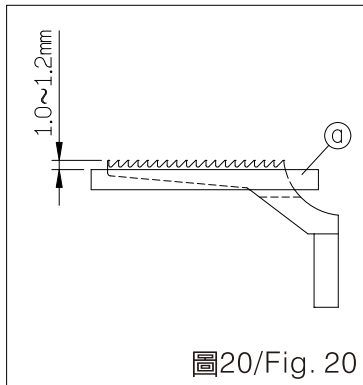


圖20/ Fig. 20

### 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②之距離12.3mm (圖21)。

調整時:

- (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。
- (2)調整針棒 ①至上述間隙再鎖緊螺絲  
①, 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22)

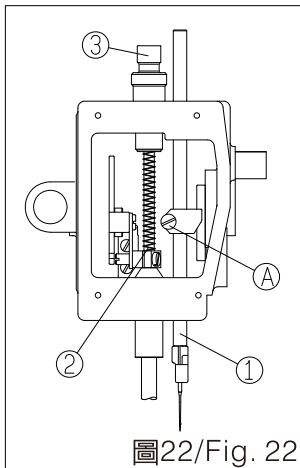


圖22/ Fig. 22

註:

押具壓縮彈簧②:

- (1)逆時針調整螺絲③可以減低彈簧壓  
力來車縫薄布料。
- (2)順時針調整螺絲③可以增加彈簧壓  
力來縫車厚布料。(圖22)

The adjustment for VSQ

The height of the feed dog:

Adjust the height of the feed dog so that the  
distance between the feed dog and the  
needle plate② is 1~1.2mm. (figure 20)

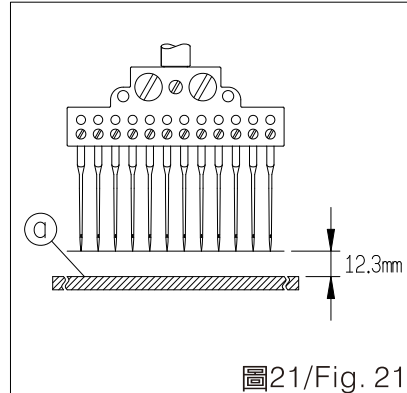


圖21/ Fig. 21

The height of the needle bar

When the needle rises to the highest point,  
the distance between the needle point and  
the needle plate ② is 12.3mm. (figure 21)

Adjustment:

Turn the hand wheel to raise the needle bar  
to the highest point, and then loosen the  
screw ① of the needle bar.

Adjust the needle bar 1 so that the distance  
between the needle point and the needle  
plate is 12.3mm, and then tighten the screw  
①. When the needle bar is lowered to the  
lowest point, the needle should be at the  
center of the needle hole. (figure 22)

Note:

The compression spring ②:

Adjusting the screw ③ counterclockwise  
will decrease the compression of the spring  
to sew the light weight material.

Adjusting the screw ③ will increase the  
compression of the spring to sew the heavy  
weight material. (figure 22)

### 3. 勾針安裝

- (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當3.3mm。(圖23)
- (2) 勾針調整為: 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DVK-20#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23)

### The installation of the looper

The height of the looper: When the looper is at the back dead point, the distance between the looper and the needle plate is 3.3mm. (figure 23)

The adjustment of the looper: When the needle bar is at the bottom dead point, loosen the screw Ⓐ to adjust the looper holder ①. The distance between the looper point and the needle is a. When the needle is DVK-20#21, a is 1.8mm. When the needle is DVK-20#18, a is 2.0mm. Tighten the screw Ⓐ after the adjustment. (figure 23)

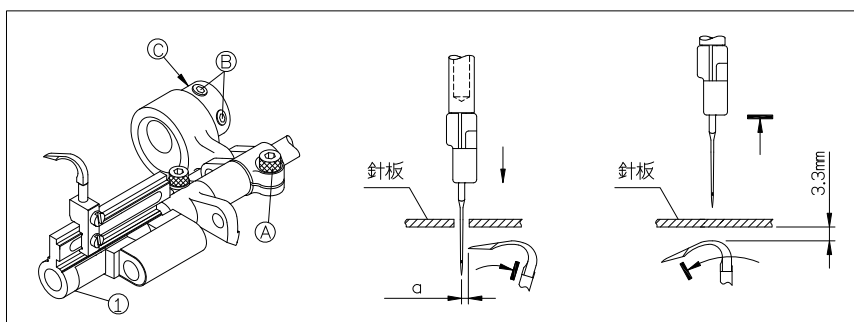


圖23/Fig. 23

### 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24)

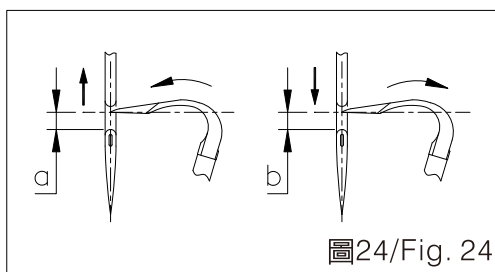


圖24/Fig. 24

- (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25)

### The timing-position relation between the needle and the looper

Adjust the timing and the position of the needle and the looper. When the looper moves backward from the front dead point, the distance between the eye of the needle and the looper point touching the center of the needle is a. When the looper moves forward from the back dead point, the distance between the eye of the needle and the looper point touching the center of the needle is b. If the timing and the position are correct, a equals b. (figure 24)

Adjust the angle of the looper: When the looper arrives at the center of the needle, the interval between the looper and the needle is 0~0.05mm. (figure 25)

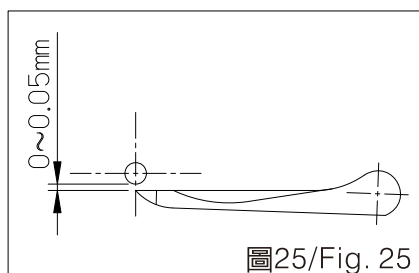


圖25/Fig. 25

## 種類及規格說明

## TYPES AND SPECIFICATIONS

### 1. 型號分類表示

S P 0 0 8 - 0 4 6 4 - 2 5 4 P / W L

① ② ③ ④ ⑤ ⑥

(1). 高速多針雙重鏈式環縫車

(2). 表示針數

04 (4針) 12 (12針)

(3). 針之間距(等距)(表1/圖26)

### 1. Description

(1). High speed cylinder bed looper in line with feed multineedle double chainstitch machine with puler.

(2). Indicate the number of the needle.

04 (4 needles) 12 (12 needles)

(3). Interspace of needles (equal space). (Table 1/ Fig. 26)

型式 TYPES	四針總針距 (C) TOTAL WIDTH OF THE FOUR NEEDLS (C)
064	3/4"
085	1"
095	1 1/8"
106	1 1/4"
127	1 1/2"

表1/Table 1

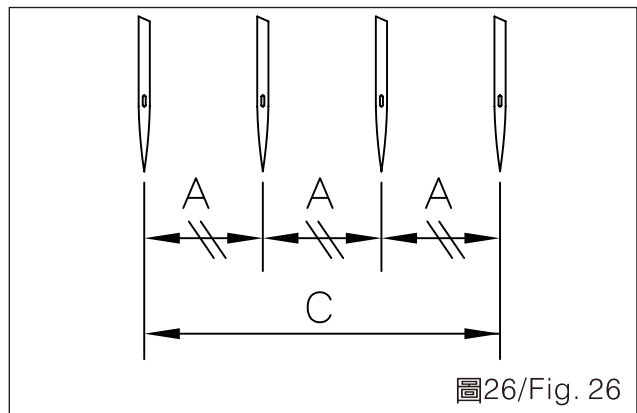


圖26/ Fig. 26

(4). 針之間距(不等距)(表2/圖27)

a. 左右最內二針之中心距如圖示之B。

b. 各針中心等距則此欄不表示。

c. A之尺寸標示於表2欄內。

(4). Interspace of needles (unequal space) (Table 2/ Fig. 27).

a. The interspace from center to center of the two center needles is shown as B in Fig. 27.

b. For equal distance of each needle the length will not show in this table.

c. The length of A are shown in Table 2.

型式TYPES	A	B	A
0448-191	3/16"	3/4"	3/16"
0448-222	3/16"	7/8"	3/16"
0448-254	3/16"	1"	3/16"
0464-191	1/4"	3/4"	1/4"
0464-127	1/4"	1/2"	1/4"
0464-254	1/4"	1"	1/4"

表2/Table 2

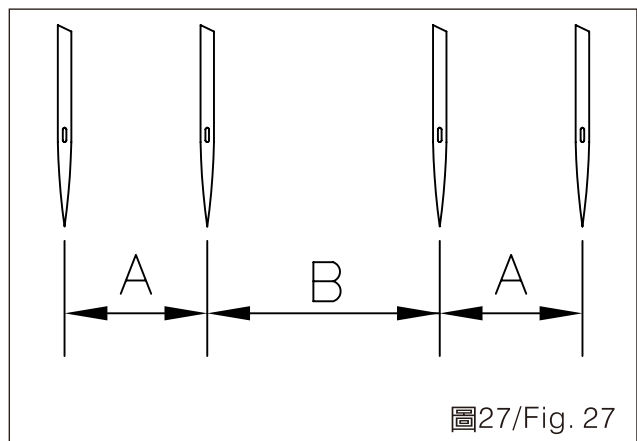


圖27/ Fig. 27

- (5). 後拉滾輪之有無  
有後拉滾輪則加P，無則不寫。

- (5). Rear puller  
The description will contain a P if the machine equips a rear puller.  
Otherwise, the description will not contain a P.

- (6). 標示附件  
WL-前拉滾輪

- (6). Indicates the accessory  
WL-front puller

## 2. 種類(表3)

## 2. Models (Table 3)

	機 種 Models	針 距 Stitch length	總 針 寬 Total width of the needles
四 等 針 ( 等 距 ) Four needles (equal distance)	04064	1/4"	3/4"
	04085	0.33"	1"
	04095	3/8"	1 1/8"
	04106	1.42"	1 1/4"
	04127	1/2"	1 1/2"
四 不 等 針 ( 不 等 距 ) Four needles (unequal distance)	0464-127	1/4-1/2-1/4"	1"
	0448-191	3/16-3/4-3/16"	1 1/8"
	0464-191	1/4-3/4-1/4"	1 1/4"
	0448-222	3/16-7/8-3/16"	1 1/4"
	0448-254	3/16-1-3/16"	1 3/8"
	0464-254	1/4-1-1/4"	1 1/2"
十 二 針 Twelve needles	12048	3/16"	2 1/16"
	12064	1/4"	2 3/4"
十 三 針 Thirteen needles	13032	(1/4-1/8-1/8-1/4)*3	2 1/4"
	13064	1/4"	3"

表3/Table 3

## 3. 規格

- (1). 縫跡形式：雙環縫式多針縫(2~13針)
- (2). 針數：2~12針
- (3). 線數：4~24線
- (4). 使用針：Organ Uo 113 #11~#18.  
Schmetz Uy113GS #70~#160
- (5). 針寬：如表3
- (6). 針棒行程：34 mm
- (7). 縫目範圍：每吋(25.4mm) 6~24針
- (8). 最高縫速：最大4500 S.P.M.
- (9). 給油方式：全自動給油潤滑方式
- (10). 潤滑油：Agip #32, Mobil #10或  
Esso #32
- (11). 重量：42公斤重
- (12). 安裝：上乘式及下乘式兩種

## 3. Specifications

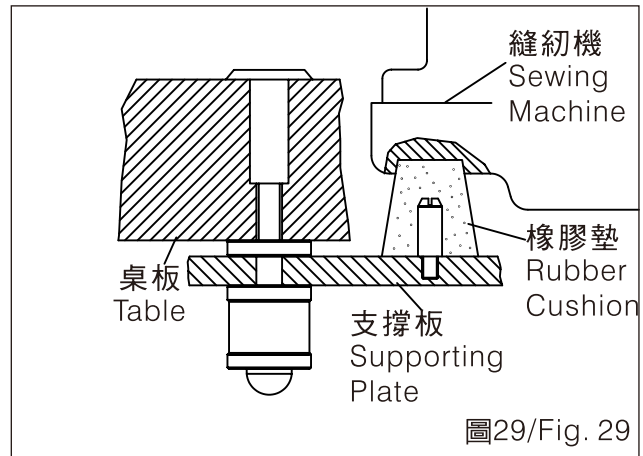
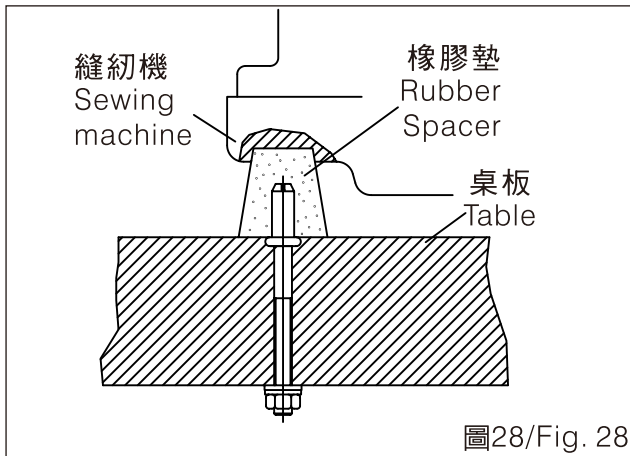
- (1). Stitch type: multi-needle double chainstitch sewing (2~13 needles)
- (2). Number of needle: 2~12 needles
- (3). Number of thread: 4~24 threads
- (4). Needle to be used: Organ Uo113 #11~ #18, Schmetz Uy113GS #70~ #160
- (5). Needle distance: see table 3
- (6). Needle bar stroke: 34 mm
- (7). Stitch length: 6~24 needles per inch (25.4 mm)
- (8). Sewing speed: MAX 4500 S.P.M.
- (9). Lubrication: Auto-lubrication style
- (10). Lubrication oil: Agip #32, Mobil #10, or Esso #32
- (11). Weight: 42 Kg
- (12). Installation: Two types, non-merged and submerged.



## 機器如何安裝

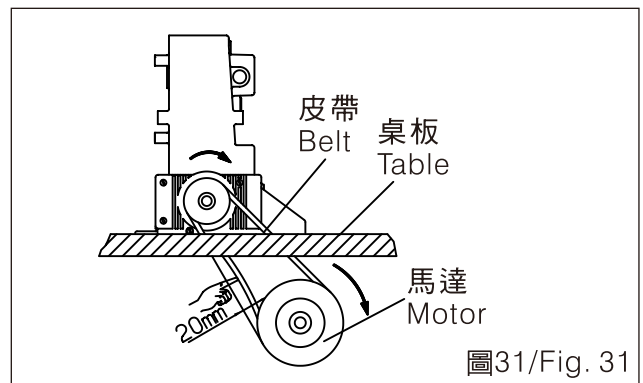
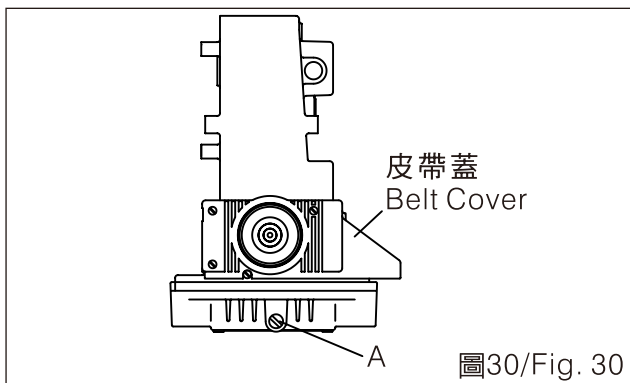
## HOW TO INSTALL THE MACHINE

1. 依本機器所附桌板裁製圖及零件組合圖所列之配件，依序安裝防震基座及線架（如圖28，圖29所示）



2. 馬達之轉向為順時針方向，皮帶之鬆緊度以用手指能向內壓20 mm為宜，同時為安全起見，請務必鎖上皮帶蓋。（如圖30，圖31所示）

2. The motor operating direction is clockwise. The best tightness is to be able to press the belt in 20 mm by a finger. Meanwhile, for the safety, please lock the belt cover. (Fig. 30, Fig. 31)



3. 皮帶輪及縫合轉速，請參照表4。

3. Please refer to Table 4 to see the operating speed of the belt wheel.

馬達轉速(每分鐘轉速) Motor Speed (S.P.M.)	馬達皮帶輪的外徑 (mm) Outer Diameter of the Motor Belt Wheel (mm)	
	60Hz	50Hz
4,500	ø90	ø105
4,000	ø80	ø95
3,500	ø70	ø85

表4/Table 4



注意：

- (1). 使用新機器最初一個月運轉速度約為最高速之80%，並請選擇正確的馬達皮帶輪尺寸。(表4)
- (2). 桌板厚度約為50 mm。
- (3). 馬達規格：離合器馬達，3相2極400瓦特(1/2HP)。
- (4). 皮帶規格：M型V字皮帶。

NOTE:

- (1). In the first month, the max speed of the new machine is 80% of it original speed. Please choose the correct size of the motor belt. (Table 4)
- (2). Table thickness is about 50 mm.
- (3). The specification of the motor: clutch motor, 3 phase, 2 poles, 400 W (1/2HP)
- (4). The specification of the belt: M type, V belt.

## 潤滑油之注入與更換

## FILL AND CHANGE THE LUBRICATION OIL

新機器運裝前均已將油倒盡，因此機器使用前必須加入潤滑油

The oil is empty in each new machine before shipping. Therefore, it is necessary to fill the lubrication oil before using.

潤滑油之注入(圖32)

- \* 將A旋開，以包裝箱內所附之超高速潤滑油或選用MOBIL #10或ESSO #32等級之潤滑油加入，使油窗C位於上油標線即可，然後再鎖緊A。

1. Fill the lubrication oil (Fig. 32)

- \* Loosen A, and fill it with the super high-speed lubrication oil attached with the packing box. Or, you may use MOBIL #10, ESSO #32, or equivalents. When the oil reaches the high oil line of the oil inspection lens C, lock A tightly.

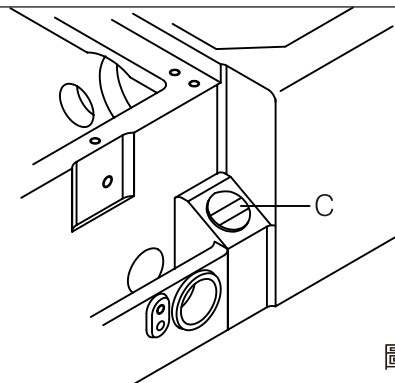
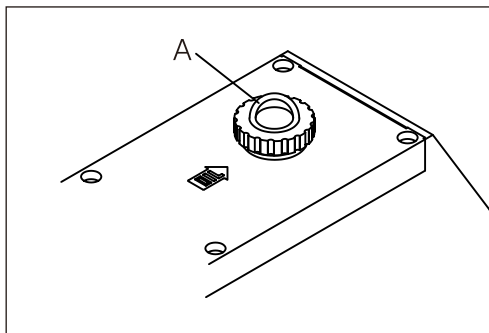


圖32/Fig. 32

2. 潤滑油之更換

- \* 將螺絲A鬆開，使油槽之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後更換新油，爾後約每四個月更換一次。

2. Change the lubrication oil:

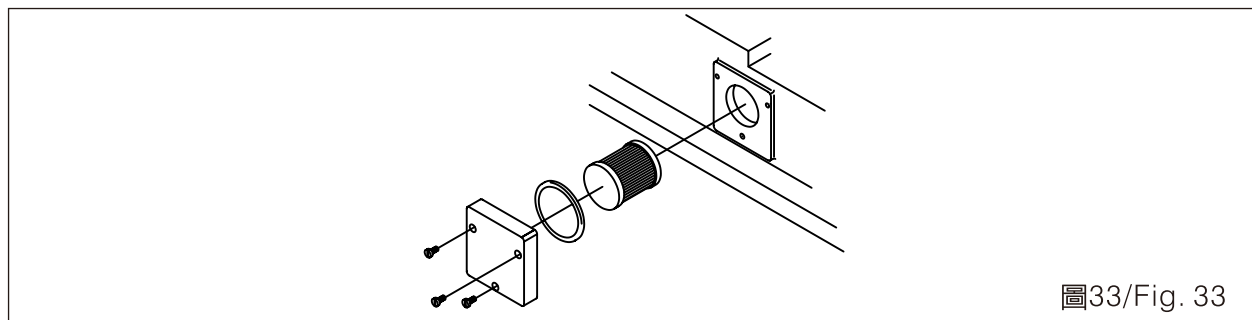
- \* Loosen screw A, and re-lock it after the oil in the oil tank has emptied.
- \* For extending the term of use, please change the oil after 4 weeks after first use. Then, change the lubrication oil every 4 months.

3. 濾油器之更換(圖33)

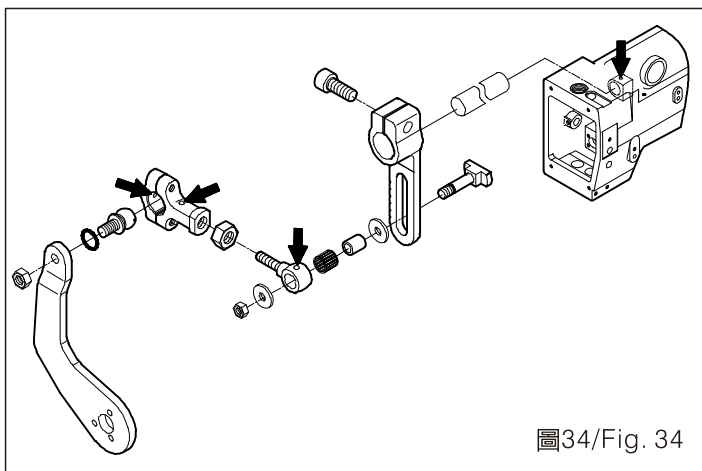
- \* 本機器特別裝有濾油器，約每使用一個月後應卸下清洗，必要時得更換新品。

3. Change the oil filter (Fig. 33)

- \* This model has equipped an oil filter especially. This filter should be cleaned every one month, and should change a new one if necessary.



定期加潤滑油,周期為一星期。(需按時加油的孔) Add the lubrication regularly; the cycle is one week. (The holes needed to be added the oil.)



## 針之更換

## CHANGE THE NEEDLE

\* 選用針之規格與尺寸請參照表5。

\* Please refer Table 5 to know the specifications and the sizes of the needles.

針的規格系統 NEEDLE SYSTEM	針的尺寸 NEEDLE SIZE
Schmetz UY113GS	#70 ~ #160
Organ Uo113	#11 ~ #18

表5/Table 5

\* 旋開螺絲A並取下針。(圖35)

\* Loosen screw A and take off the needle (Fig. 35)

\* 將新針插入針座之針孔最底端，並使針之凹槽向著自己。

\* Insert the new needle into the needle hole of the needle seat until the needle reaches to the bottom. In addition, turn the needle to have the groove on the needle facing you.

\* 車如果針穿裝不正確，不但會引起跳針、斷線，還會損壞勾針，務必注意。

\* If installed the needle incorrectly, it will cause skipped stitches, broken threads, and will break the needle. Please be very careful about this.

\* 重新鎖緊螺絲A。

\* Retighten the screw A.

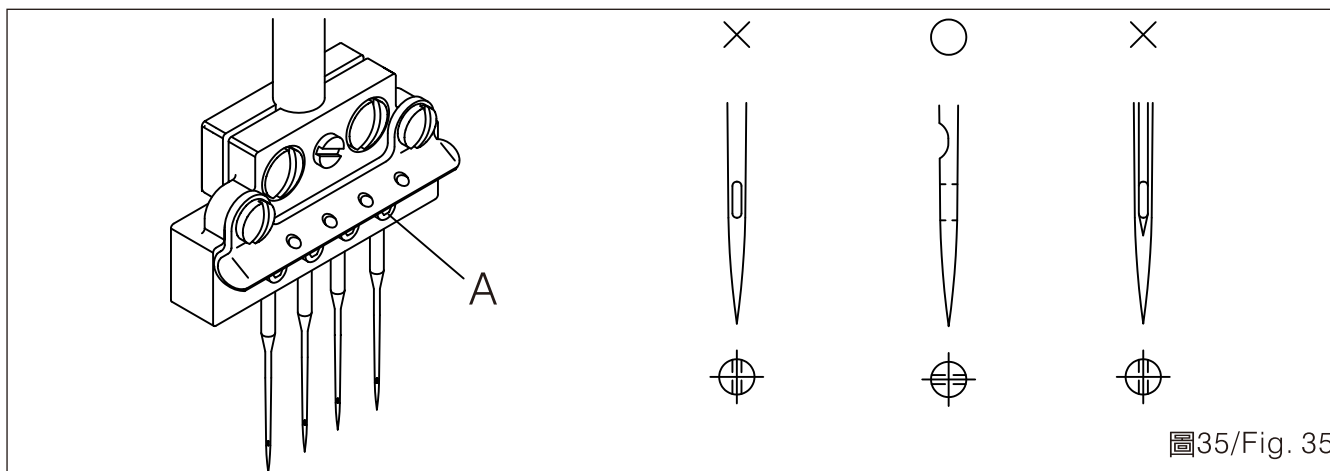


圖35/Fig. 35

## 穿線方法

## THREADING

1. 請確實按照圖示作好針之穿線，錯誤之穿線將引起斷線，跳針或車縫不平坦等現象。(圖36)

1. Please thread as the figure illustrated, otherwise, it may cause thread-broken, skipped stitches, or uneven stitches. (Fig. 36)

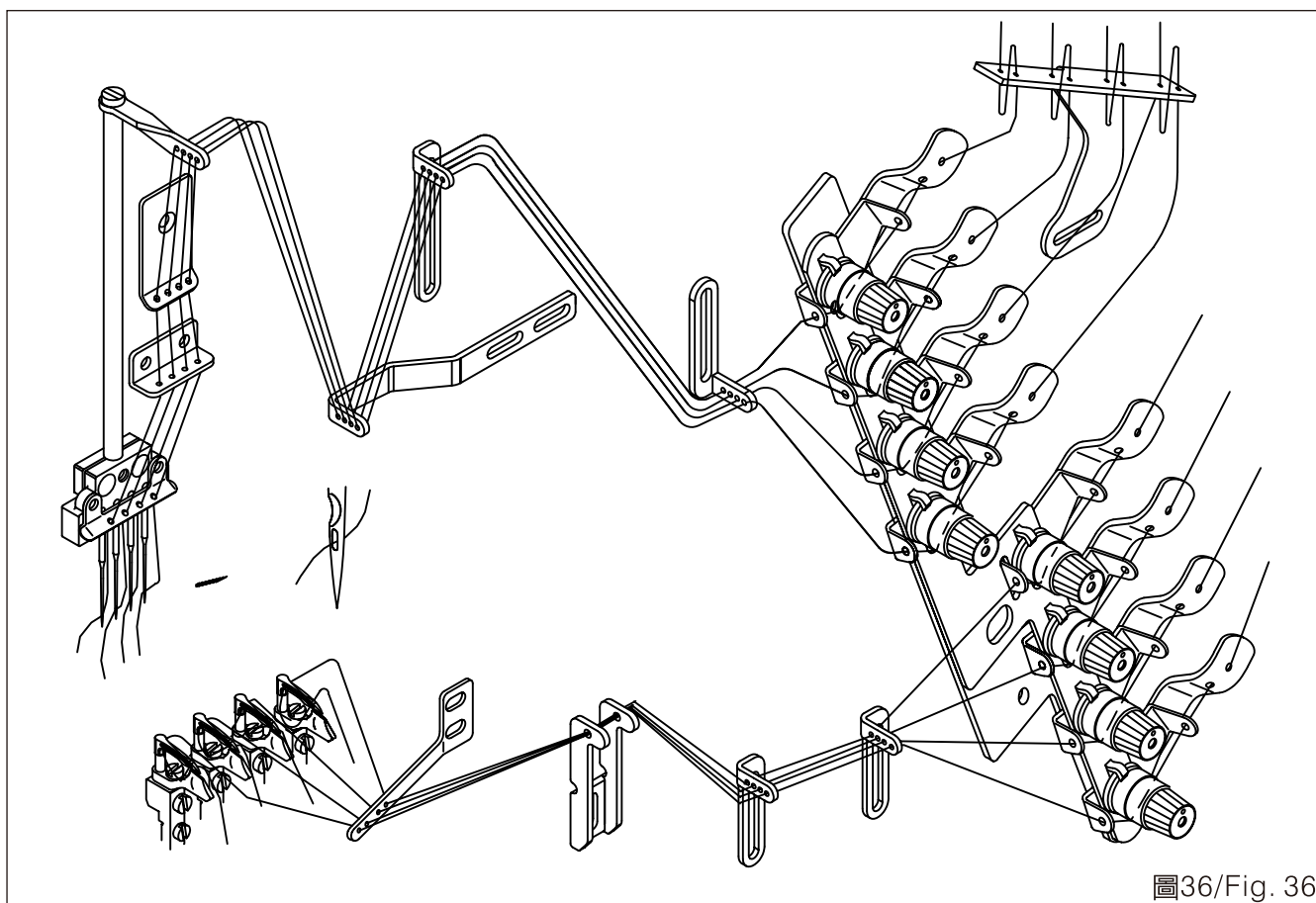


圖36/Fig. 36

2. 在穿勾針線時，應將鉤針座引出軸沿箭頭方向拉出使鉤針座向前彈出，然後進行穿線。(圖37)

2. When threading, the leading shaft of the looper holder should be pull out as the arrow direction, so that the looper holder will slightly move forward. Then, proceed threading. (Fig. 37)

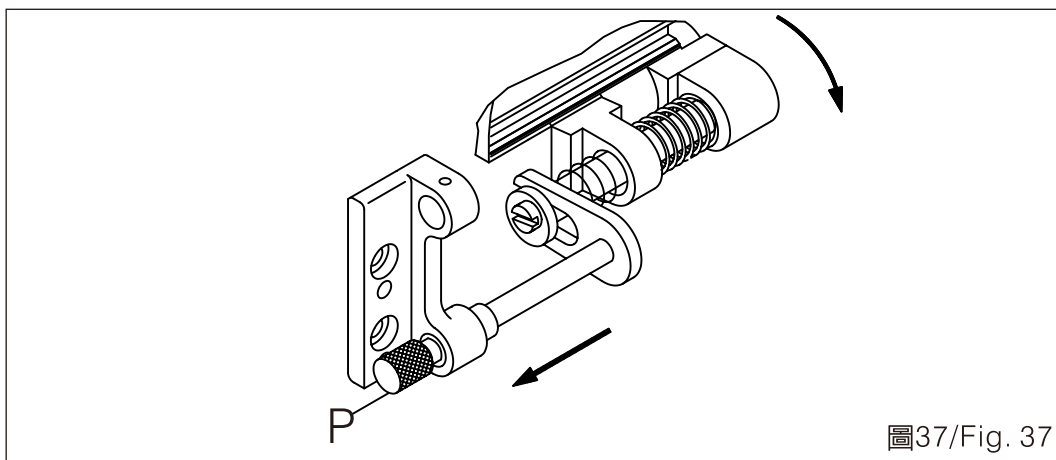


圖37/Fig. 37

## 控線調整

控線強弱必須根據車縫布料層數線的種類與車縫的針距等不同而做不同之調整。(圖36)

- \* 將控線鈕順時針方向旋轉時，線越緊，反之則越鬆。

針控線桿之調整(圖38)

- \* 針線控線桿B 依縫線使用種類來選擇使用之狀態，放鬆螺絲A將B上下移動調整，在使用伸展性大的縫線時將B上移，反之下移。

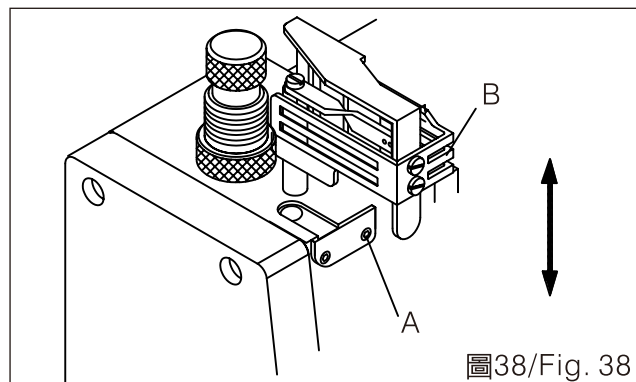


圖38/Fig. 38

## THREAD CONTROL ADJUSTMENT

The thread tension strength should be adjusted differently according to the fabric, the layers amount of the sewing fabric, and the stitch length. (Fig. 36)

- \* Rotate the thread control knob clockwise, and the thread tension will be tighter. Otherwise, the tension will be looser.

Adjust the needle thread control rod (Fig. 38)

- \* Based on thread types to adjust the needle thread control rod B to the best using status. Loosen screw A to move B up or down to adjust. Move B upward when using high extensibility thread. Otherwise, move B downward when using low extensibility thread.

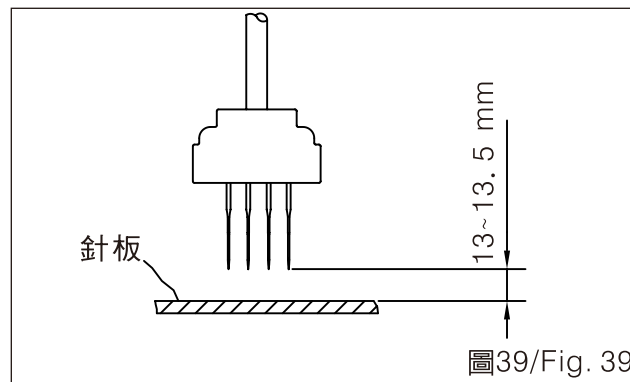


圖39/Fig. 39

## 針高度之調整

- \* 當針棒上升至上死點時，調整針尖與針板面之距離為13~13.5 mm(圖39)

## ADJUST THE NEEDLE HEIGHT

- \* When the needle bar rises to the upper dead point, adjust the distance from pinpoint to the surface of the needle plate to be 13~13.5 mm. (Fig. 39)

- \* 打開上方之側蓋橡膠塞A，並鬆開螺絲B，上下調整針棒之高度後再固定之。(圖40)

注意：經過調整後，必須確定每一根針是通過針板的針孔中央。(圖41)

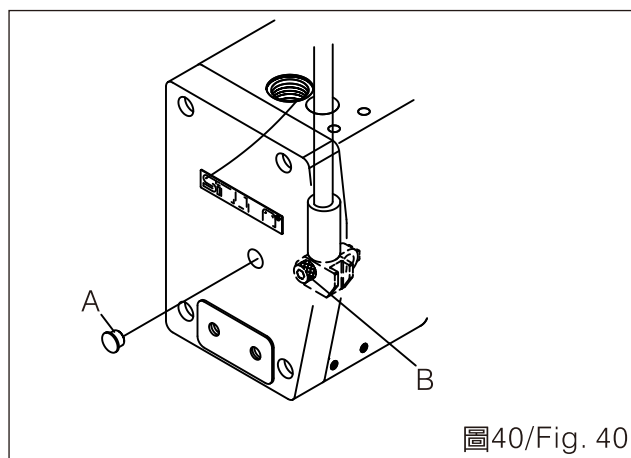


圖40/Fig. 40

- \* Open the rubber plug A of side cover on the top, and loosen screw B. Then fix it after adjust the height of the needle bar up and down. (Fig. 40)

Note: Make sure that every needle is through the central of the needle hole of the needle plate after adjustment. (Fig. 41)

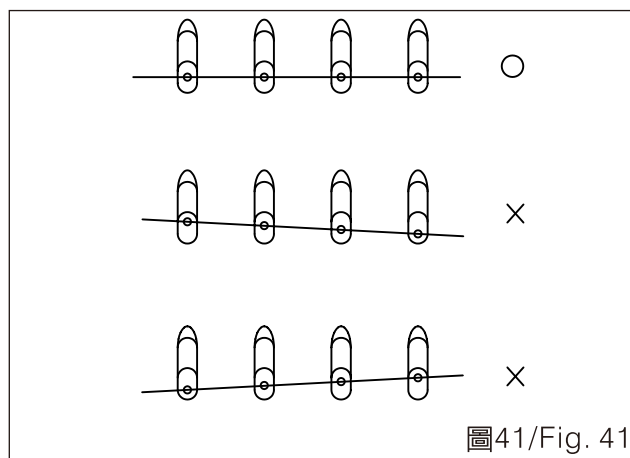


圖41/Fig. 41

## 護針片調整

放鬆螺絲A，調整護針片，使其與針之間隙為0~0.1 mm(圖42)後，再鎖緊螺絲A。

## ADJUST THE NEEDLE GUARD PLATE

Loosen screw A, and adjust the distance from the needle guard plate to the need to be 0~0.1 mm. Then, tighten the screw A. (Fig. 42)

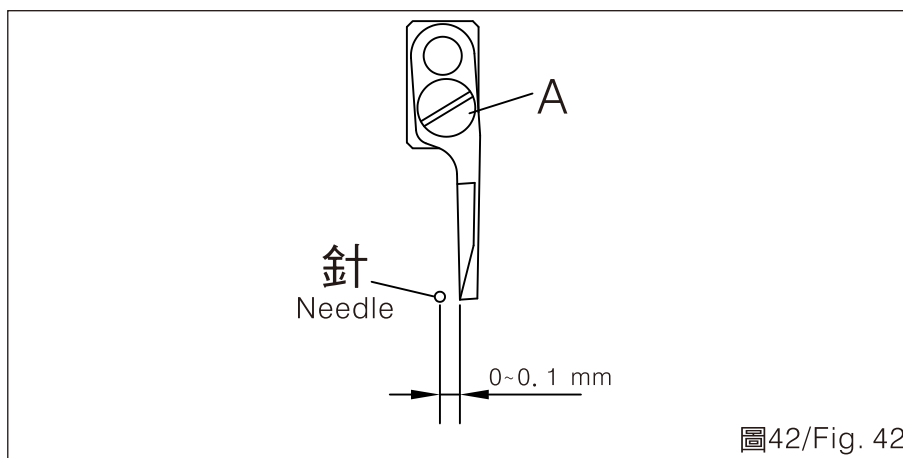


圖42/Fig. 42

## 針與勾針之調整

## ADJUST THE NEEDLE AND THE LOOPER

1. 將勾針完全插入勾針座內稍微鎖緊。(圖43)
2. 轉動皮帶輪使針上升，並使勾針前進至左側中心線。(圖44)

1. Insert the looper into the looper holder completely, and tighten it a little. (Fig. 43)
2. Turn the belt pulley to raise the needle and to move the looper forward to the left central line of the needle. (Fig. 44)

3. 調整勾針尖與針側之間隙為 $0\sim 0.05\text{mm}$ 。

4. 再鎖緊螺絲A。

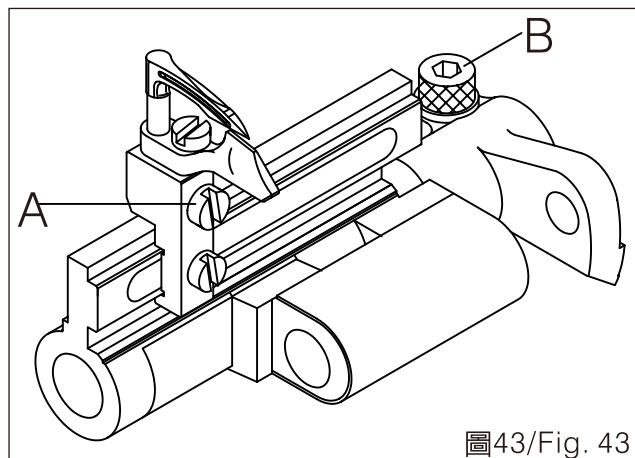


圖43/Fig. 43

3. Adjust the looper so that the distance between the looper top and the needle side is  $0\sim 0.05\text{ mm}$ .

4. Retighten the screw A.

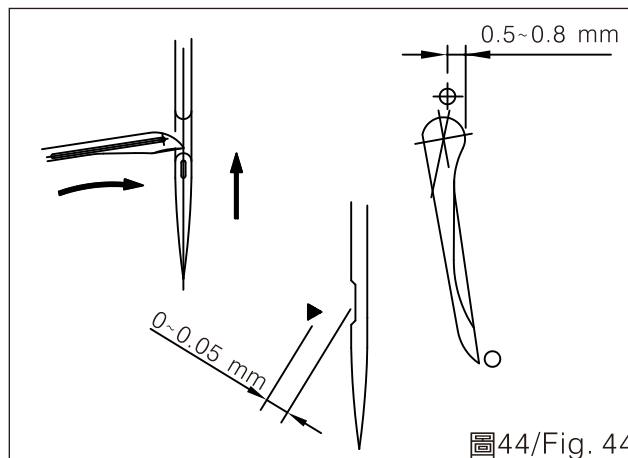


圖44/Fig. 44

## 勾針調整

當針位於下死點時，勾針尖端與針中心線之間隙為 $2.8\text{mm}$ 。(圖45)

調整時將勾針底座驅動桿固定螺絲B放鬆，前後調整勾針座後再鎖緊螺絲B。(圖43)

## ADJUST THE LOOPER

When the needle locates at the lower dead point, the distance from the looper top to the central line of the needle is  $2.8\text{ mm}$ . (Fig. 45)  
For the adjustment, please loosen the fixed screw B of the drive rod of the looper seat, adjust the looper seat back and forth, and then retighten the screw B. (Fig. 43)

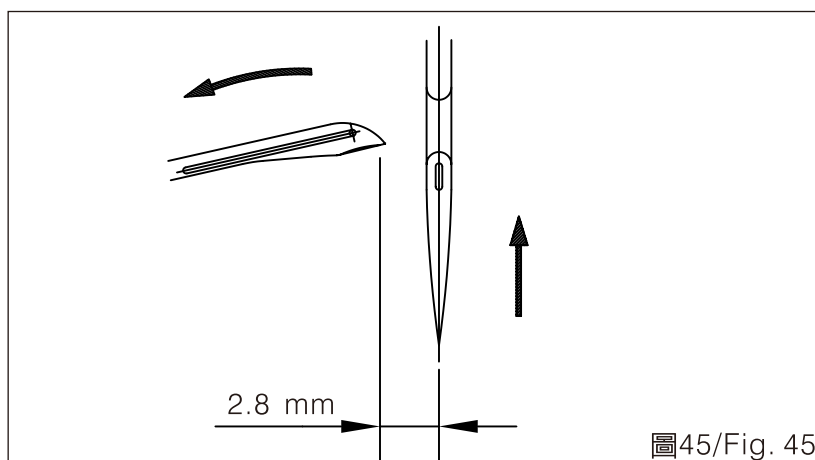


圖45/Fig. 45

## 針與勾針之時位關係

針由下死點開始往上移，且勾針由後死點往前移至如(圖46)A所示之位置時，勾針尖與針

## TIMING POSITION OF THE NEEDLE AND THE LOOPER

When the needle starts moving up from the lower dead point, and the looper starts moving forward from the rear dead point to the position A show as the Fig. 46, the

孔上方之距離為1.5mm。

針棒由上方往下移時，勾針由前死點往後移至如(圖46)B所示位置時，勾針與針孔上方之距離為3mm，以上即為正確之關係位置，即勾針在針中心位置往回時，差1.5mm。

調整時，將偏心凸輪A的固定螺絲B放鬆，前後調整即可調整其間之時位關係(圖47)。

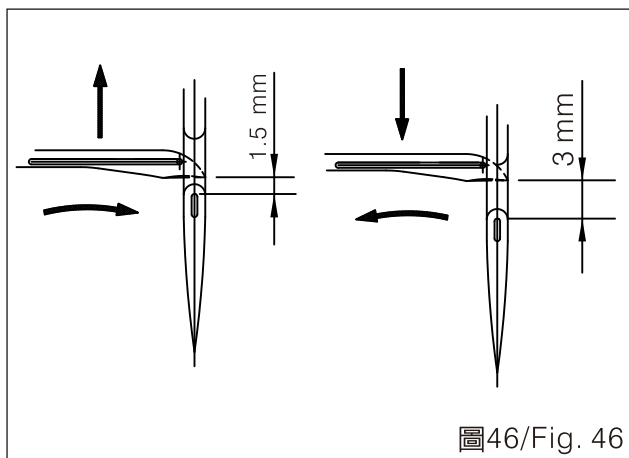


圖46/Fig. 46

distance from the looper top to the upper point of the needle hole is 1.5 mm. When the needle moves down, and the looper moves backward from the front to the position B shown as Fig. 46, the distance from the looper to the upper point of the needle hole is 3 mm. That is the correct relationship position, which means the looper is 1.5 mm away from the needle central position.

While adjusting, loosen the fixed screw B of the eccentric A and move the eccentric A back and forth to adjust the time correlation position. (Fig. 47)

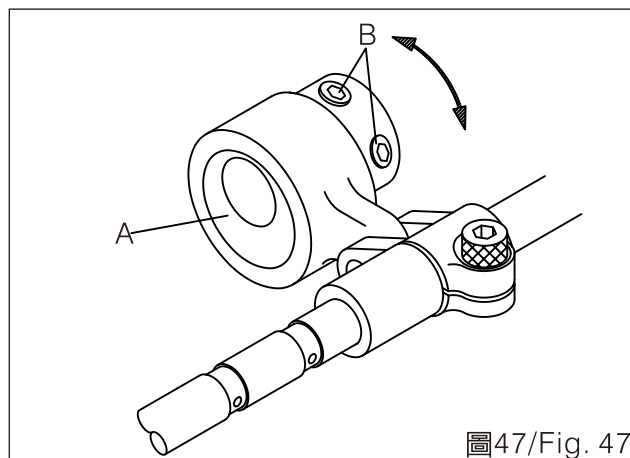


圖47/Fig. 47

## 撥線桿之固定

撥線桿A與車針之間隙為0.2~0.4 mm。(圖48)

當針棒於下方位置時，將撥線桿A固定螺絲B(圖49)放鬆調整至(圖48)所示之尺寸，並注意各桿之平行，再鎖緊。

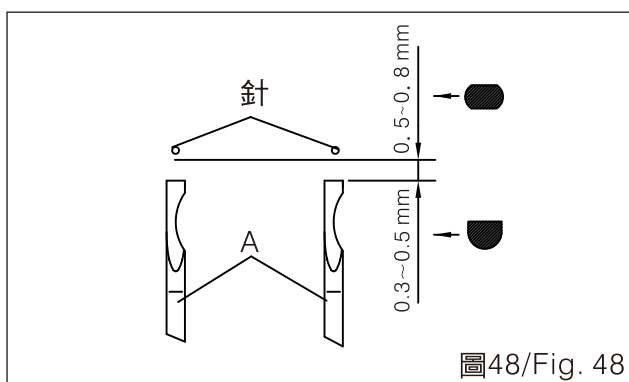


圖48/Fig. 48

## FASTEN THE THREAD WIPER

The distance between the thread wiper A and the needle is 0.2~0.4mm. (Fig.43)

When the needle locates at lower position, loosen the fixed screw B on the thread wiper A (Fig. 49), adjust the wiper to the size show as Fig. 48. Be careful of the parallel of each wiper, and then retighten the screw B.

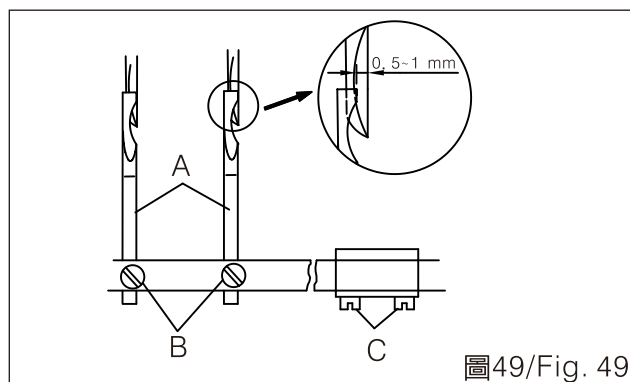


圖49/Fig. 49



## 勾針與撥線桿之關係

當撥線桿A於左死點位置時，撥線桿A右端與勾針右端二者之間隙為0.5~1 mm。(圖49)而勾針與撥線桿A之間隙為0~0.1 mm。(圖50)

調整時：

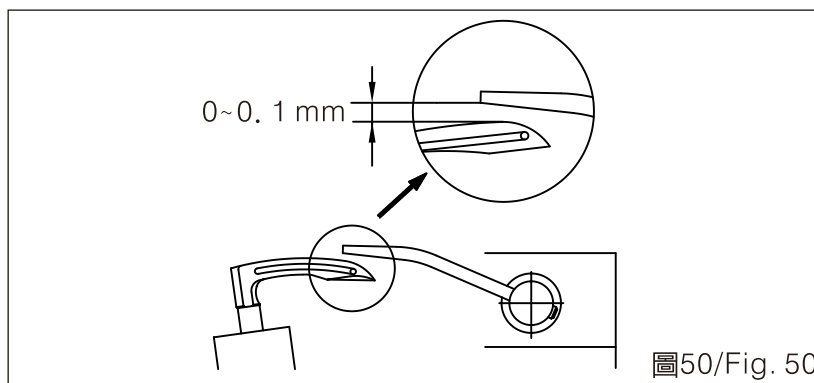
1. 先放鬆再稍鎖緊撥線桿心軸固定螺絲C(圖49)
2. 旋轉皮帶輪使撥線桿心軸連桿移到左死點。
3. 調整使符合上述條件，再鎖緊螺絲C。

## THE RELATIONSHIP BETWEEN LOOPER AND THREAD WIPER

When the thread wiper A is at the left dead point, the distance from the right side of the thread wiper A to the right side of the looper is 0.5~1 mm(Fig. 49). As well as it is 0~0.1 mm from the looper to the thread wiper A. )Fig. 50)

When adjusting:

1. Loosen the fixed screw C of the thread wiper main shaft, and then retighten it a little. (Fig. 49)
2. Turn the belt wheel to move the thread wiper main shaft connecting rod to the left dead point.
3. Adjust the device to match the conditions describing above and relock screw C.

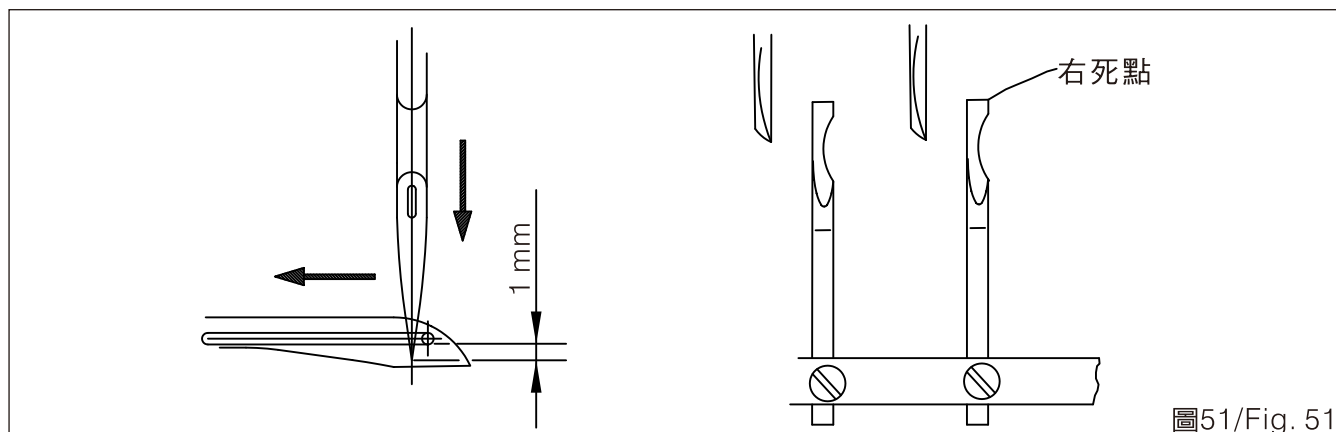


## 針、勾針與撥線桿之時位關係

當針尖下降至勾針孔間隙約1mm，撥線桿A正好由右死點向左移。(圖51)

## TIMING POSITION AMONG NEEDLE, LOOPER, AND THE THREAD WIPER

When the needle top moves down to be 1 mm lower than the looper hole, the thread wiper A will right move to the left from the right dead point. (Fig. 51)





## 勾針線控線桿之調整

當針棒由上死點下降至車針位於勾針背面的中心位置時，勾針線控線桿A也正好由下死點往上抬起。(圖52)

調整時：

1. 放鬆偏心凸輪F固定螺絲C前後調整至正確方位，再鎖緊螺絲C，往前轉變快，往後轉變慢。
2. 微調整時，放鬆螺絲E，將線導片B上下移動調整再鎖緊螺絲E。

線的出線量因所使用的線而異，其出線量為：

棉線，SP線：7~15 mm (D) (圖53)

伸縮尼龍線：10~15 mm (D) (圖53)

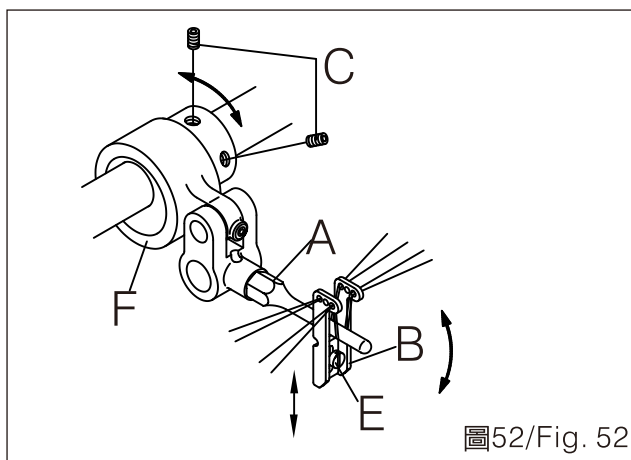


圖52/Fig. 52

## ADJUST THE LOOPER THREAD CONTROL ROD

When the needle bar goes down from the upper dead point and the needle locates at the central of the looper rear side, the looper thread control rod A just happens to move upward from the lower dead point. (Fig. 52)  
Adjusting:

1. Loosen the fixed screw C of the eccentric F, and adjust it back and forth to the right position. Then, retighten the screw C. Turn the screw forward, the eccentric will be faster, whereas turn it backward, the eccentric will be slower.
2. For doing micro-adjustment, loosen screw E, and move the thread guide B up and down to adjust. Then retighten the screw E.

The threading amount will be different because of the thread used.

The amount is:

Cotton, SP thread: 7~10 mm (D) (Fig. 53)

Elastic Nylon thread: 10~15 mm (D)  
( Fig. 53)

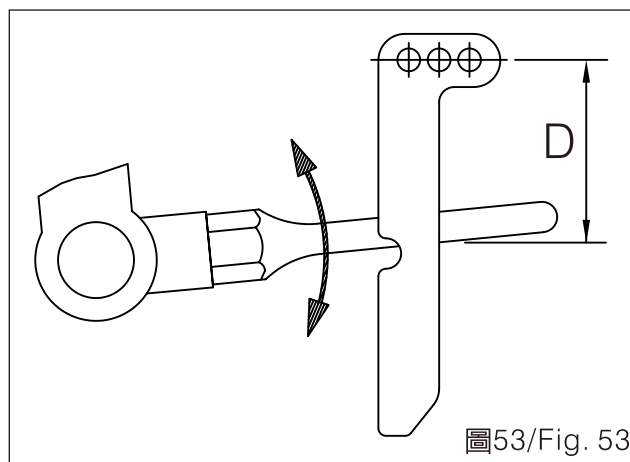


圖53/Fig. 53

## 送具調整

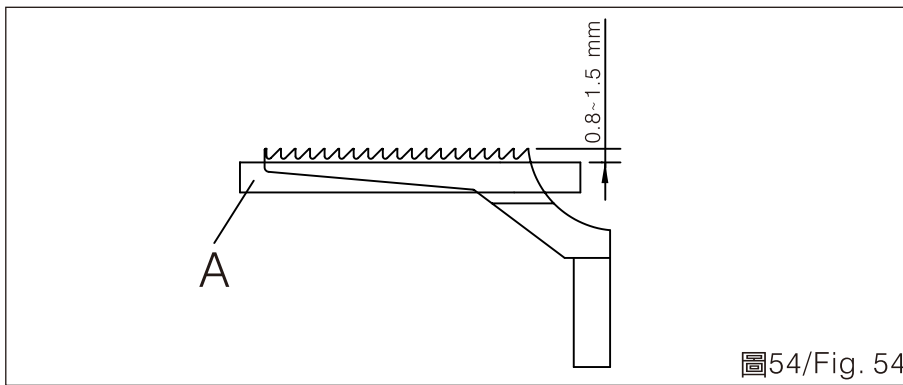
高度調整(圖54)

送具C升至最高點時，送具齒間面與針板面之距離為0.8~1.5 mm，平均為1.2 mm。

## ADJUST THE FEED DOG

Adjust the height (Fig. 54)

When the feed dog C moves to the upper dead point, the distance from the top of the teeth plate to the surface of the needle plate is 0.8~1.5 mm, as well as the average value is 1.2 mm.

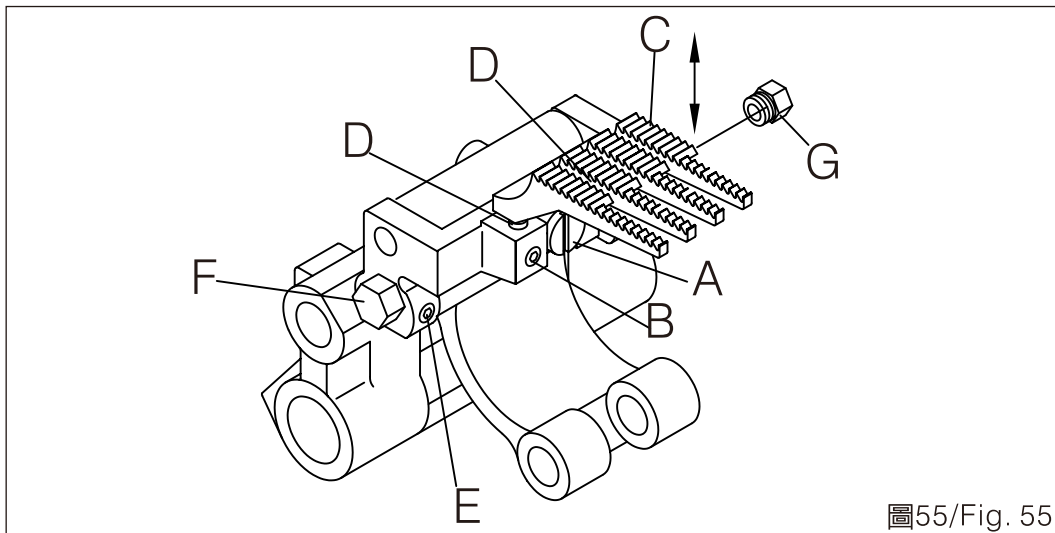


調整時參照(圖55)

1. 放鬆送具C固定螺絲A。
2. 上下移動送具C使符合上述條件時，再鎖緊螺絲A。
3. 將高度固定銷D之固定螺絲B放鬆，調整固定銷至頂，直至送具C底部再鎖緊螺絲B。
4. 此時亦應確認送具C左右方向的平行。

When doing adjustment, please refer to Fig.  
55

1. Loosen the fixed screw A of the feed dog C.
2. Move the feed dog C up and down to match the condition mentioned above, and then tighten the screw A.
3. Loosen the fixed screw B of the height fixed pin D, and move the fixed pin to top. Lock the screw B after the pin D reach the bottom of the feed dog C.
4. At this moment, please confirm the parallel between the left and the right side of the feed dog C.



## 送具平行調整

## ADJUST THE FEED DOG'S PARALLEL

送具上升至上死點時應與針板平行(圖54)

When the feed dog moves to the upper dead point, it should parallel the needle plate. (Fig. 54)

調整時：

固定螺栓F，將螺帽G放鬆，調整送料具螺絲E，使送料具C與針板面平行，再鎖緊螺帽G。(圖55)

For adjustments: (Fig.55)

Fasten the bolt F, and loosen the screw nut G. Then, adjust the screw E of the feed dog, so that the feed dog C can parallel the need plate. Tighten screw nut G after that.

## 縫目之調整

壓下按鈕A，並轉動皮帶輪，使按鈕卡住針具距調整組，再轉動皮帶輪至所需之縫目後，放開此按鈕(圖56)

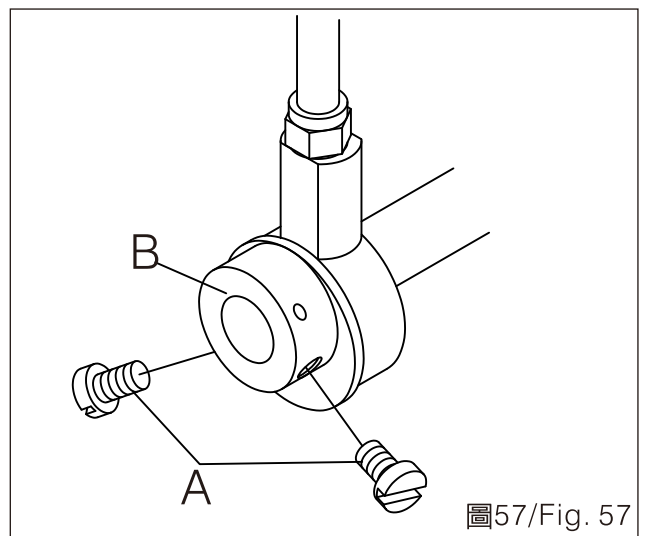
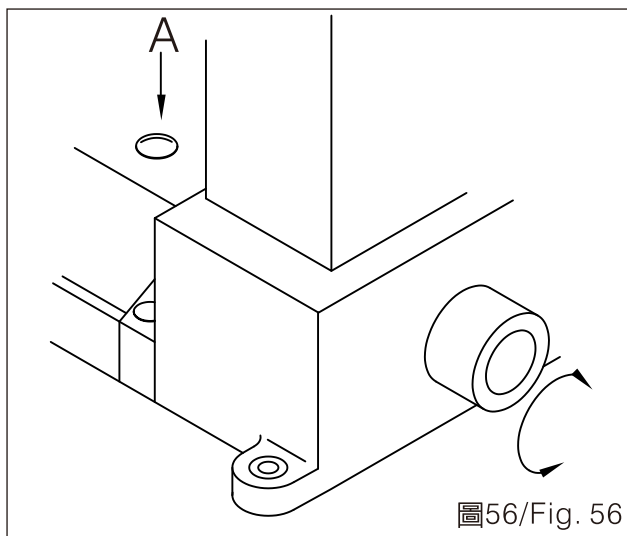
調長縫目時，將皮帶輪往順時針方向旋轉，反之則小。

調整縫目時，馬達須在停止狀態。

## ADJUST THE STITCH

Press the button A, and roll the belt wheel to make the button lock the needle distance adjustment set. After rotate the belt wheel to the desired stitch, release the button A. (Fig. 56)

For longer stitch, rotate the belt wheel clockwise. Turn the wheel counter clockwise to have shorter stitch thereagainst. The motor must stay at dormant status while adjusting the stitch.



## 後控引輪調整

與針棒時位關係(圖57)

當針棒由下死點往上移24mm時，後拉引輪開始轉動，即為正確之時位關係。

調整時：

1. 放鬆偏心凸輪B之固定螺絲A後，再稍鎖緊。

## ADJUST THE REAR CONTROL GUIDING WHEEL

The correlation with the needle bar (Fig. 57)  
When needle bar moves up from the lower dead point about 24 mm, the rear control guiding wheel starts rotating, and this is the correct timing correlation position.

When adjusting:

1. Loosen the fixed screw A on the eccentric B a little, and then retighten a little.

2. 旋轉皮帶輪至上述條件後，再鎖緊螺絲A，往前轉時間變快，往後轉則變慢。

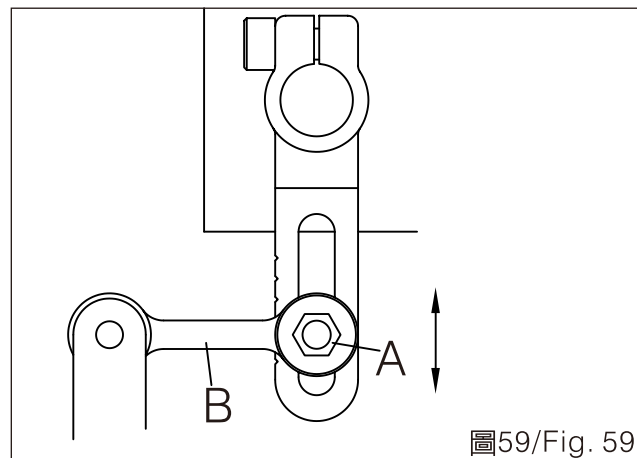
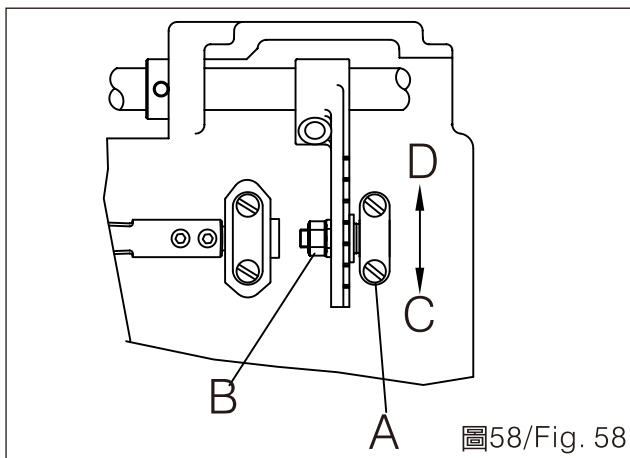
2. Rotate the belt wheel to be as the conditions mentioned above, and then lock screw A. Turning it forward will shorten the moving time, whereas turning it backward will extend the moving time.

## 後拉滾輪供給量之調整

## ADJUST THE SUPPLEMENT OF THE REAR PULL WHEEL

1. 取下上蓋。
2. 放鬆連桿A上之螺帽B。(圖58)
3. 將連桿A前後移動，往前移(C方向)則供給量少，往後移(D方向)則供給量大。
4. 供給量依縫紉情形適當調整。
5. 微量調整時，放鬆螺帽A將連桿B上下移動，往上量少，往下量多。(圖59)

1. Take off the upper cover.
2. Loosen the screw B on the connecting rod A. (Fig. 58)
3. Move the connecting rod A back and forth. Move forward means less supplements, and move backward means more supplements.
4. Adjust the supplements appropriately based on the sewing conditions.
5. When doing micro-adjustment, loosen screw A and move the connecting rod up and down to adjust. Move upward means more supplements, and move downward means less supplements. (Fig. 59)

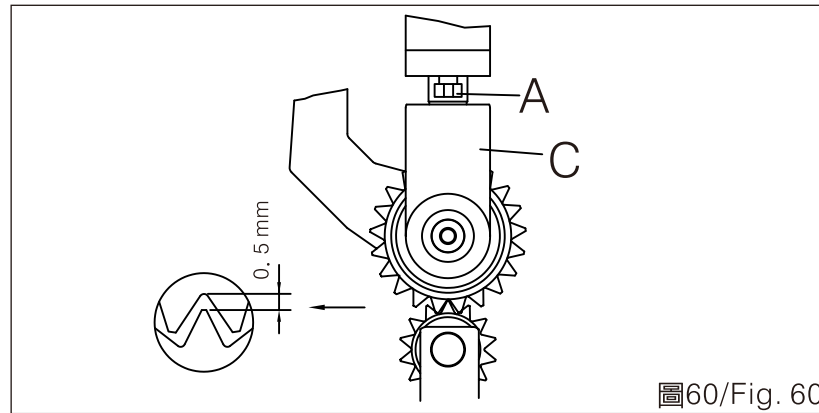


## 上下滾輪間隙調整

## ADJUST THE DISTANCE BETWEEN UPPER AND LOWER GEAR

將上滾輪放至最低點，上滾輪與下滾輪之齒間隙為0.5 mm，且兩滾輪平行。(圖60)

Place the upper gear down to the lower dead point. The distance between the teeth of the upper and lower gear is 0.5mm, as well as they are parallel. (Fig. 60)



調整時：

1. 兩滾輪平行之調整 (圖60)

將螺絲A放鬆，調整兩滾輪平行後，稍鎖緊螺絲A，上下移動固定座C，使上下滑動順暢，再鎖緊螺絲A。

2. 間隙0.5 mm之調整(圖 61)

如圖61所示，將螺帽D及螺絲H放鬆，調整螺絲H，使上下滾輪之間隙為0.5 mm再鎖緊螺帽D，稍放鬆螺絲K並調整連桿J，使螺絲L與連桿J之長圓孔下方間隙為0.5 mm，再鎖緊螺絲K。

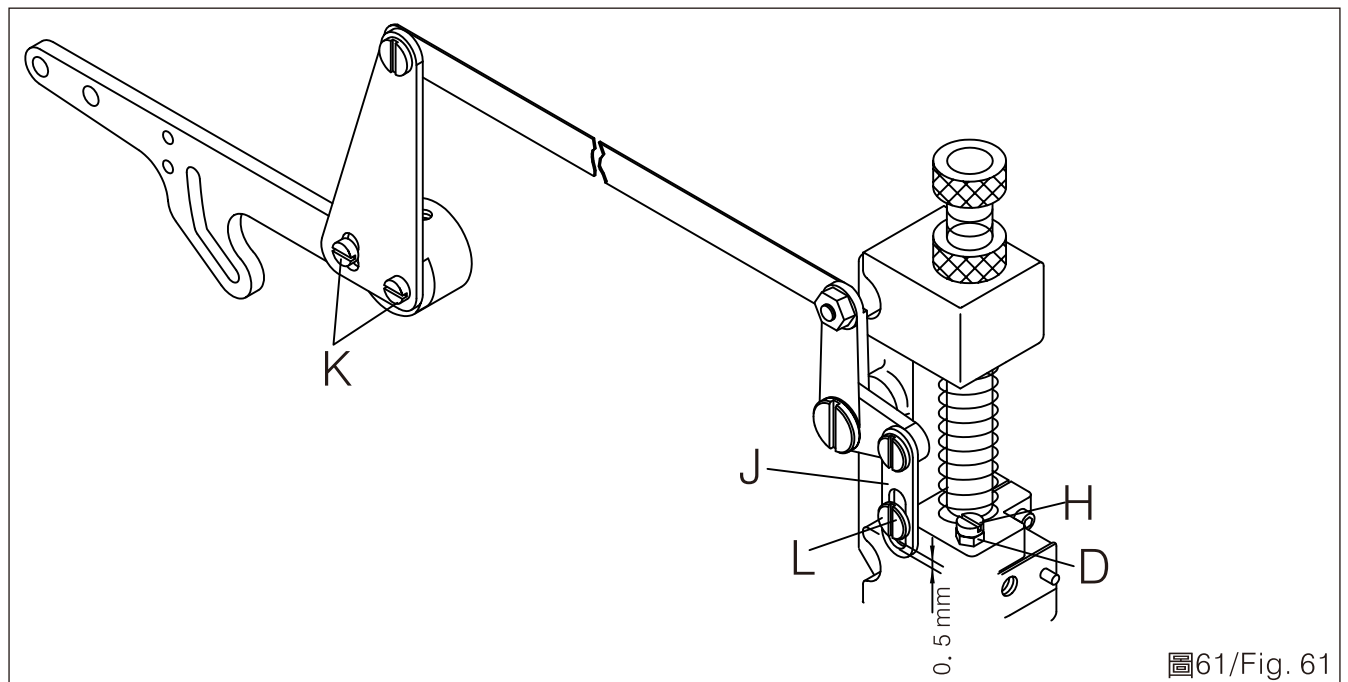
When adjusting:

1. Adjust the parallel condition of the two gears. (Fig. 60)

Loosen screw A to parallel the 2 gears, and then tighten the screw A a little. Move the fixed seat C up and down to make sure the movement is smooth, and retighten the screw A tightly.

2. Adjust the distance of 0.5 mm. (Fig. 61)

As shown in Fig. 61, loosen the screw nut D and screw nut H to adjust screw H to make the distance between upper and lower gear is 0.5 mm. Then, tighten the screw D. Loosen screw K a little, and adjust the connecting rod J to keep a distance of 0.5 mm from the screw L to the bottom of the long round hole of the connecting rod J. Then, retighten screw K.



3. 上滾輪壓力之調整(圖62)  
 將壓力調整螺絲A往順時針方向轉動，則  
 壓力加大，反之則減小。

3. Adjust the pressure of the upper gear.  
 (Fig. 62)  
 Rotate the pressure adjustment screw A  
 clockwise, and the pressure will increase.  
 Otherwise, the pressure will decrease.

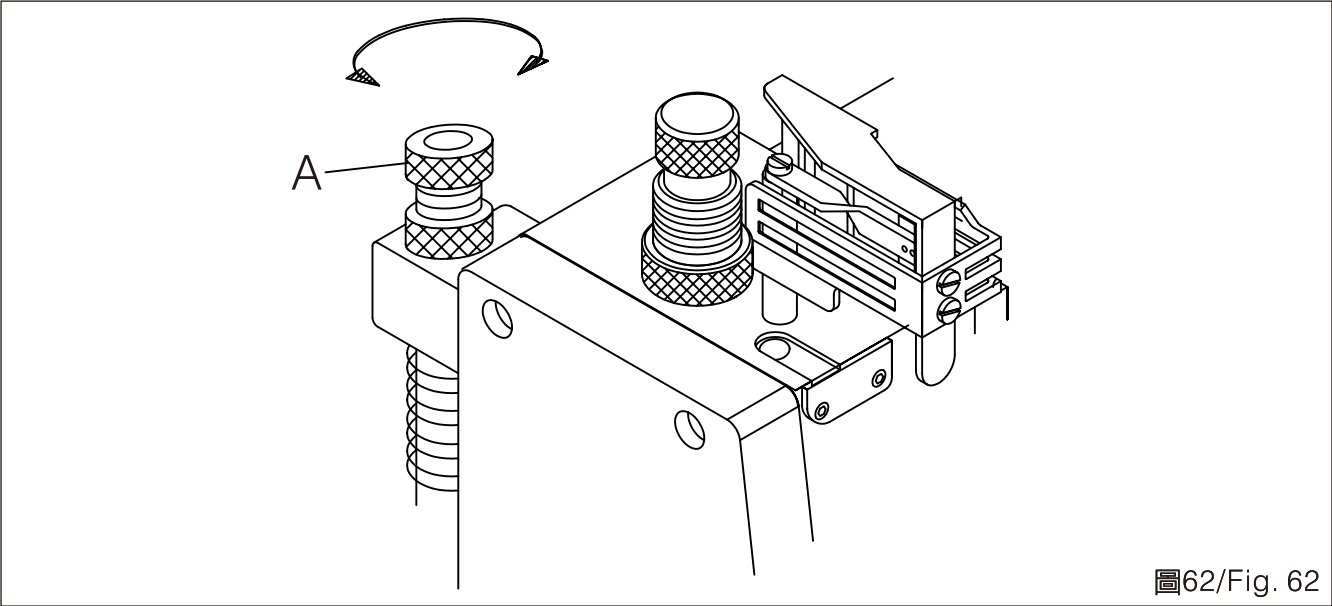


圖62/Fig. 62

4. 上下滾輪之使用請參照表6

4. For the use of the upper and lower gear,  
 please refer Table 6.

布料 Fabric	使用齒輪 Gear	上輪 Upper gear	下輪 Lower gear
平織布料 Woven fabric		平輪 Flat wheel	平輪 Flat gear
薄布料 Thin fabric		27 齒 27 teeth	16 齒 16 teeth
厚布料 Thick fabric		22 齒 22 teeth	14 齒 14 teeth

表6/Table 6

## 1. 手工潤滑

首次使用附帶VSC裝置的縫紉機以及暫停使用時，請對加油孔①，②用注油壺進行手工潤滑，用包裝箱內所附之潤滑油 LA705每月對齒輪進行手工潤滑。

## 1. Manual lubrication

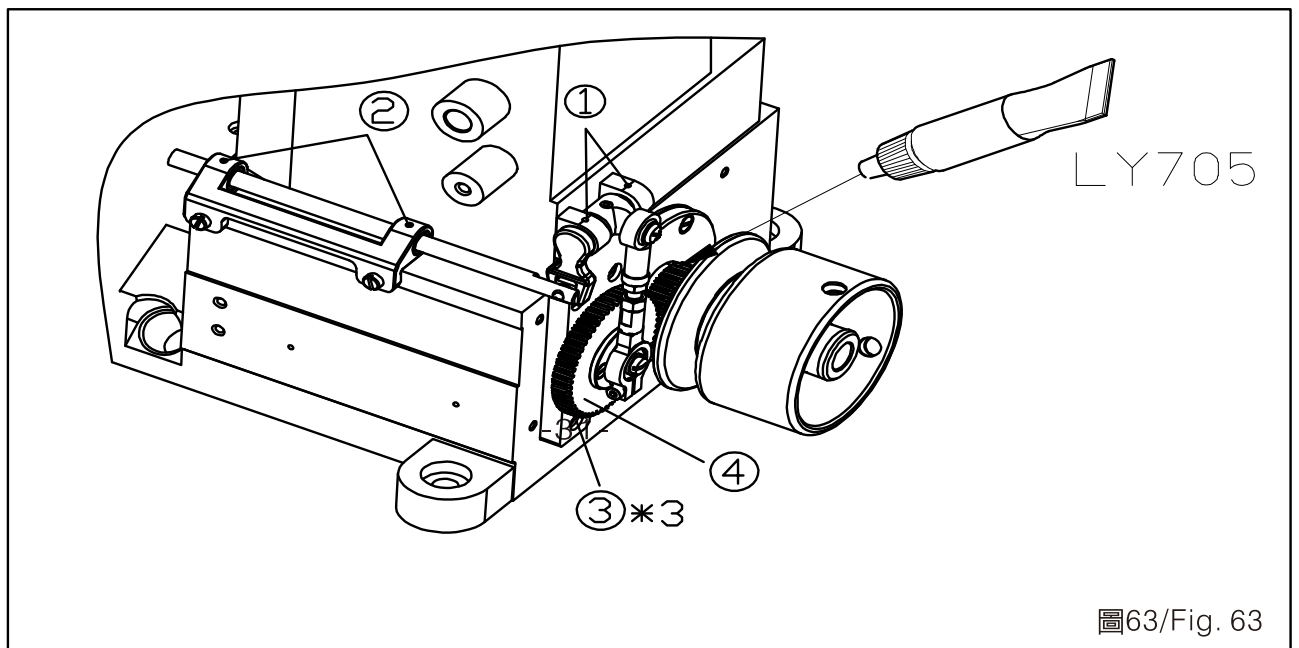
When you use the sewing machine with VSC device for the first time or when you stop it temporarily, please lubricate holes① and② manually with the oil filler. Use lubricant LA705 in the packing box to lubricate the gear every month.

## 2. 齒輪的調整

將螺絲③\*3鬆開，使針棒位於上死點，調整齒輪④使其上面的記號線上下垂直，兩個齒輪間隙適當，固鎖螺絲③\*3。

## 2. Adjust the gear

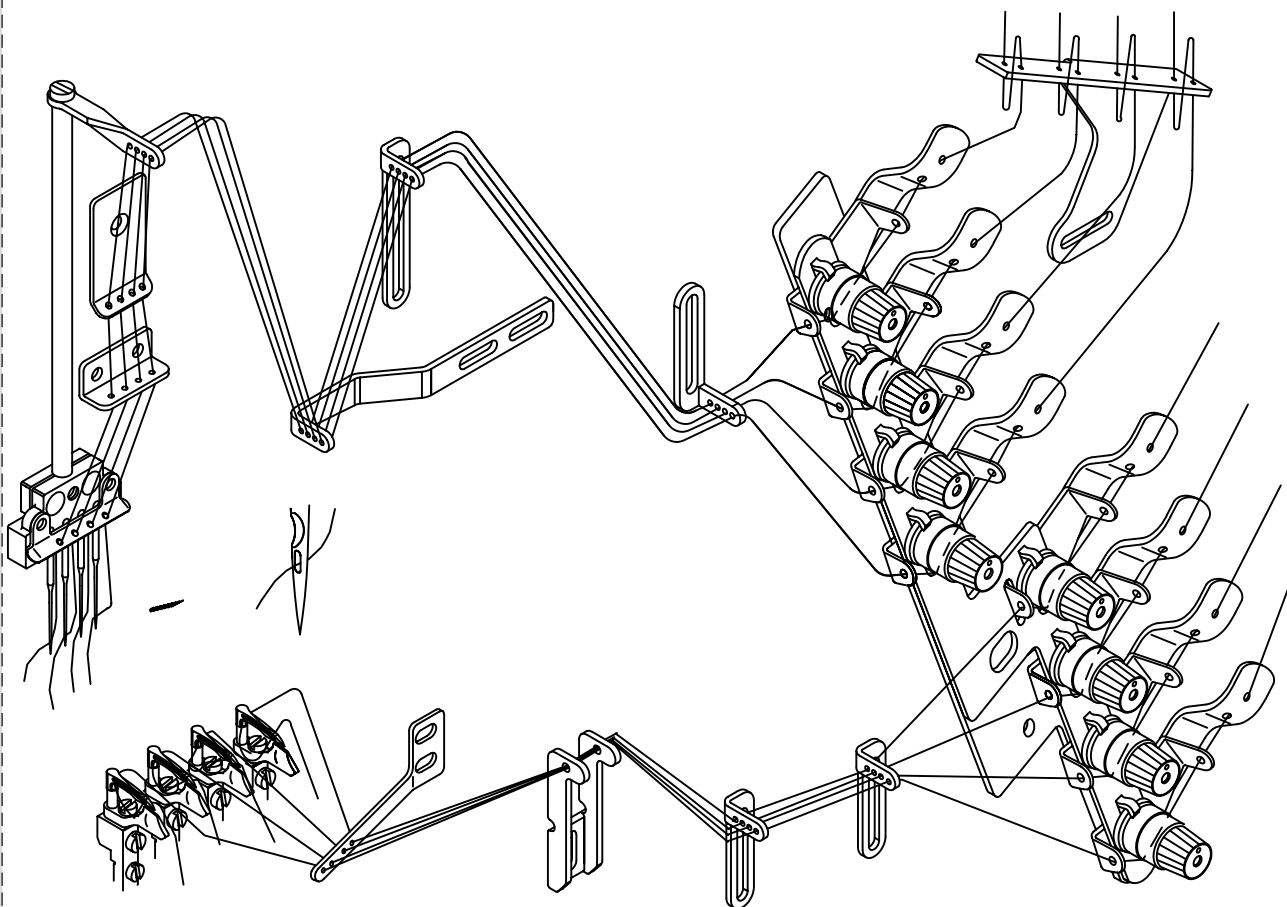
Loosen screws③\*3, raise the needle bar to the top dead center, and adjust gear④ to make the line on it vertical. When the interval between the two gears is proper, tighten screws③\*3.





四針穿線圖

THREADING DIAGRAM FOR 4 NEEDLES



十二針穿線圖

THREADING DIAGRAM FOR 12 NEEDLES

