

SIRUBA®

銀箭牌工業用縫紉機
INDUSTRIAL SEWING MACHINE

L918

使用說明書 INSTRUCTION BOOK



CE



高林股份有限公司
KAULIN MFG. CO., LTD.

EC DECLARATION OF CONFORMITY

According to the following European Directive

Machinery Directives:98/37/EC(MD), Low Voltage Directive: 2006/95/EC
and Electromagnetic Compatibility Directive: 2004/108/EC.

The undersigned, ROBERT TSAI, representing KAULIN MACHINERY AND ELECTRONIC INDUSTRIAL (NONGBO) CO., LTD. No. 16 Longtanshan Rd. Daqi Tw, Beilun District, Ningbo City, Zhejiang Province, P. R. China, manufacturer, Declares that the machine described hereafter:

High Speed One Needle Bottom Feed
Lockstitch Machine

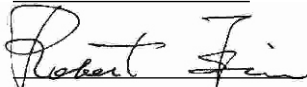
Model:L918

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 : the European Standard EN ISO 10821:2005, EN 60204-1:2006 Safety of machinery; basic concepts, general principles for design.

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: Oct/01/2008

Signature: 

Qualification: R&D MANAGER



本使用說明書內容適用於以下機型：

The content of this instruction book is for the models:

L918-L1/L918-M1/L918-H1

危險水準的說明

Explanation of Dangerous Level

 <p>危險 Dangerous</p>	<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 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>
 <p>注意 Caution</p>	<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 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		<p>運動部位, 謹防工傷事故 Moving part, beware of industrial accident</p>
		<p>高壓部位, 謹防觸電事故 High voltage, beware of electric shock</p>
		<p>高溫部位, 謹防燙傷事故 High temperature, beware of burns</p>
指示標幟 Instruction Label		<p>禁止 Prohibited</p>
		<p>地線的接線表示 Indication of ground wiring</p>

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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**
不要讓訪客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。穿戴護髮套以包含住長髮。
- 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 visitors 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

IMPORTANT SAFETY INSTRUCTIONS

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。

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. 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。

-  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或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

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。

WARNING

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.

警告標籤

- 縫紉機上有下列警告標籤。(圖1, 圖2)
- 當使用縫紉機時，請遵守標籤上的說明。如果標籤脫落或模糊不清，請和購買商店聯繫。

WARNING TAG

- The following warning tags will be attached on the sewing machine. (Fig. 1, Fig. 2)
- When using the sewing machine, please follow the instructions of the tags. Please contact the dealer if any of the tags is fallen off or fuzzy.



圖1/Fig. 1

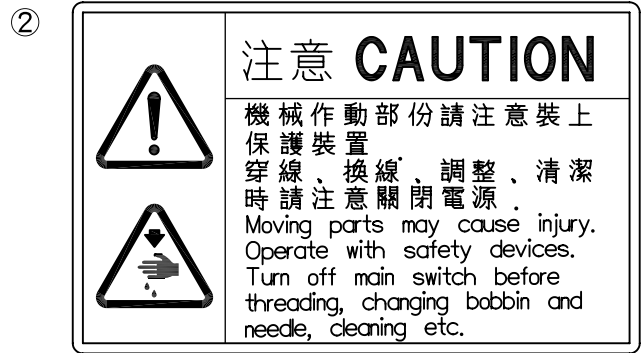




圖2/Fig. 2


③  必須接地

接駁地線不牢固，是造成觸電或誤動作的原因。


④  表示轉動方向

安全保護裝置(圖3)

(A) 護指器

③  Must have ground wire.

A loosen or a did not connect well ground wire is the reason causing electronic shock or malfunction.

④  Indicates rotating direction.

Safety Protection Device (Fig. 3)

(A) Finger Protector

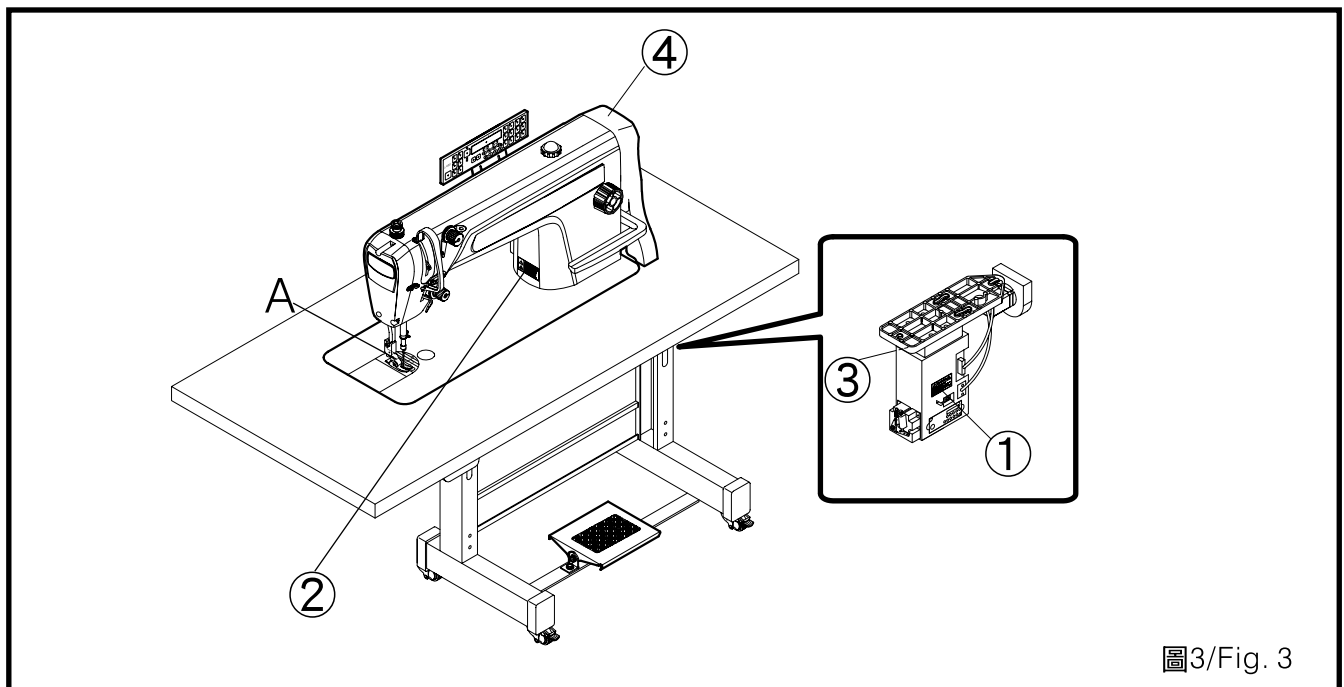


圖3/Fig. 3

護針安全圖說

本縫紉機之押具防護裝置如圖所示，為保護操作者之操作安全，嚴禁將此裝置拆卸。

SAFETY ILLUSTRATION OF NEEDLE GUARD

The presser foot protection device is as shown as the figure 4. For safety of all operators, this device is restricted to disassemble.

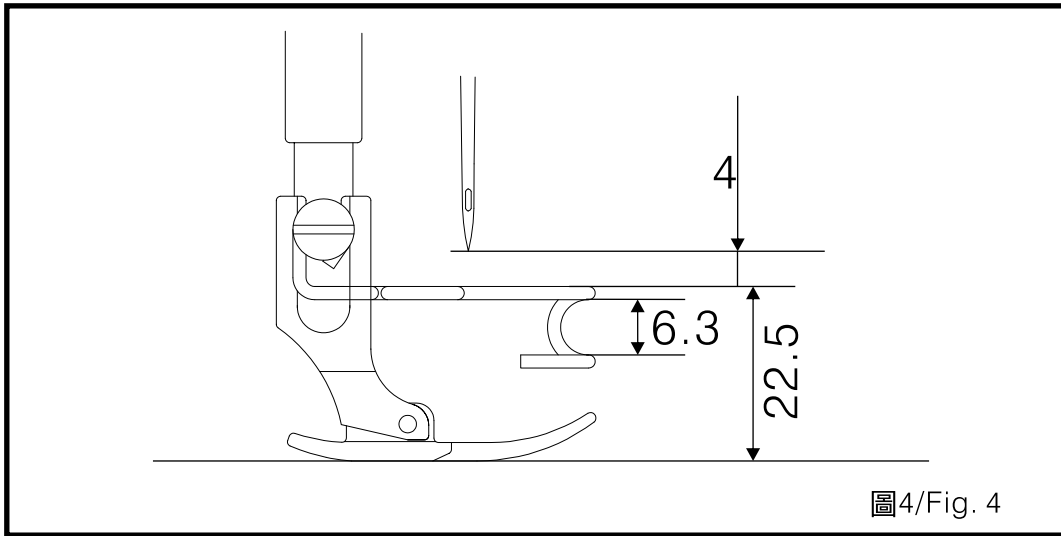


圖4/Fig. 4

搬運

MOVING THE SEWING MACHINE

1. 請由兩人用手托住機殼本體進行搬運。
2. 用手扶住馬達蓋A部，使手輪不能轉動。
3. 搬運時，請穿著安全鞋。(圖5)

1. The machine should be carried by two people as shown in the figure.
2. Hold the motor cover A by hand, so that the pulley will not rotate.
3. Please wear a pair of skidproof shoes while moving the sewing machine. (Fig. 5)

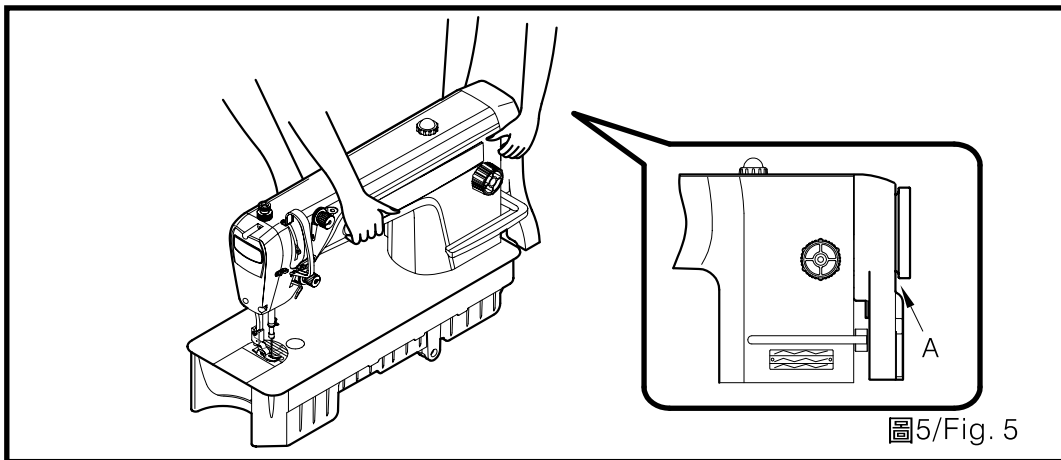


圖5/Fig. 5

關於縫紉機的安裝位置

THE INSTALLATION POSITION OF THE SEWING MACHINE

1. 勿將該縫紉機置於設備附近，如電視機、收音機或無線電話等，否則這些設備可能被縫紉機的電子干擾所影響。(圖6)
2. 應將縫紉機直接插入AC電源插座，如果使用延長線，可能會造成操作故障。

1. Please do not install the sewing machine near the equipments, such as Television, Radio, or Wireless Telephone. Or these equipments will experience electronic interference. (Fig. 6)
2. The wire should insert to the AC power socket directly. If using the extension wire, this might cause malfunction.

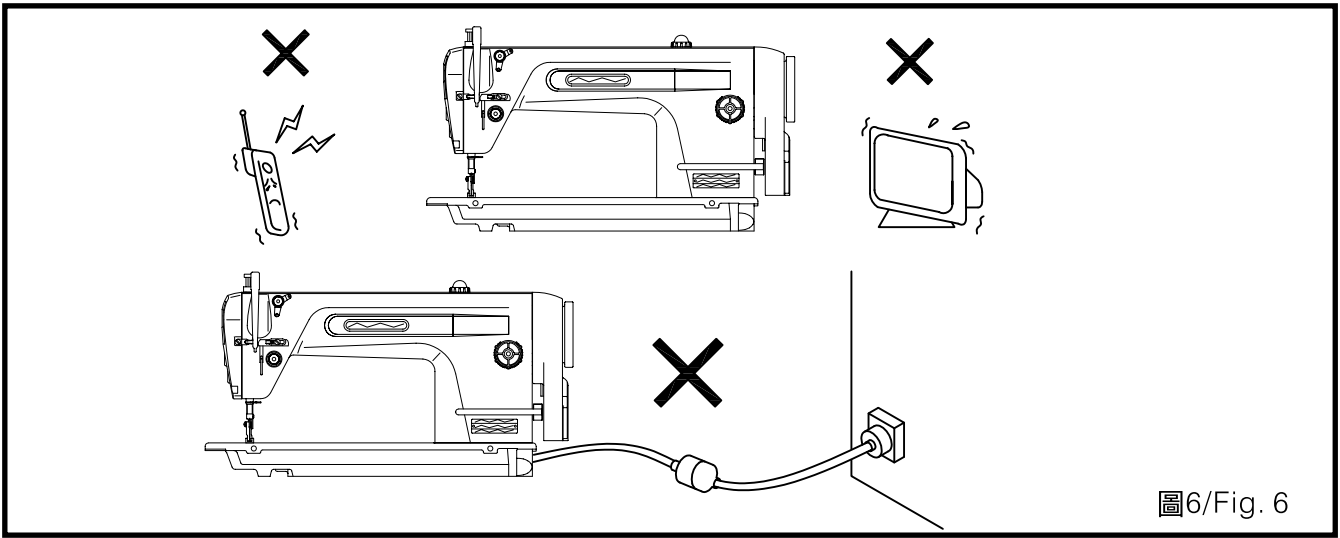


圖6/Fig. 6

各部件名稱

NAMES OF MAJOR PARTS

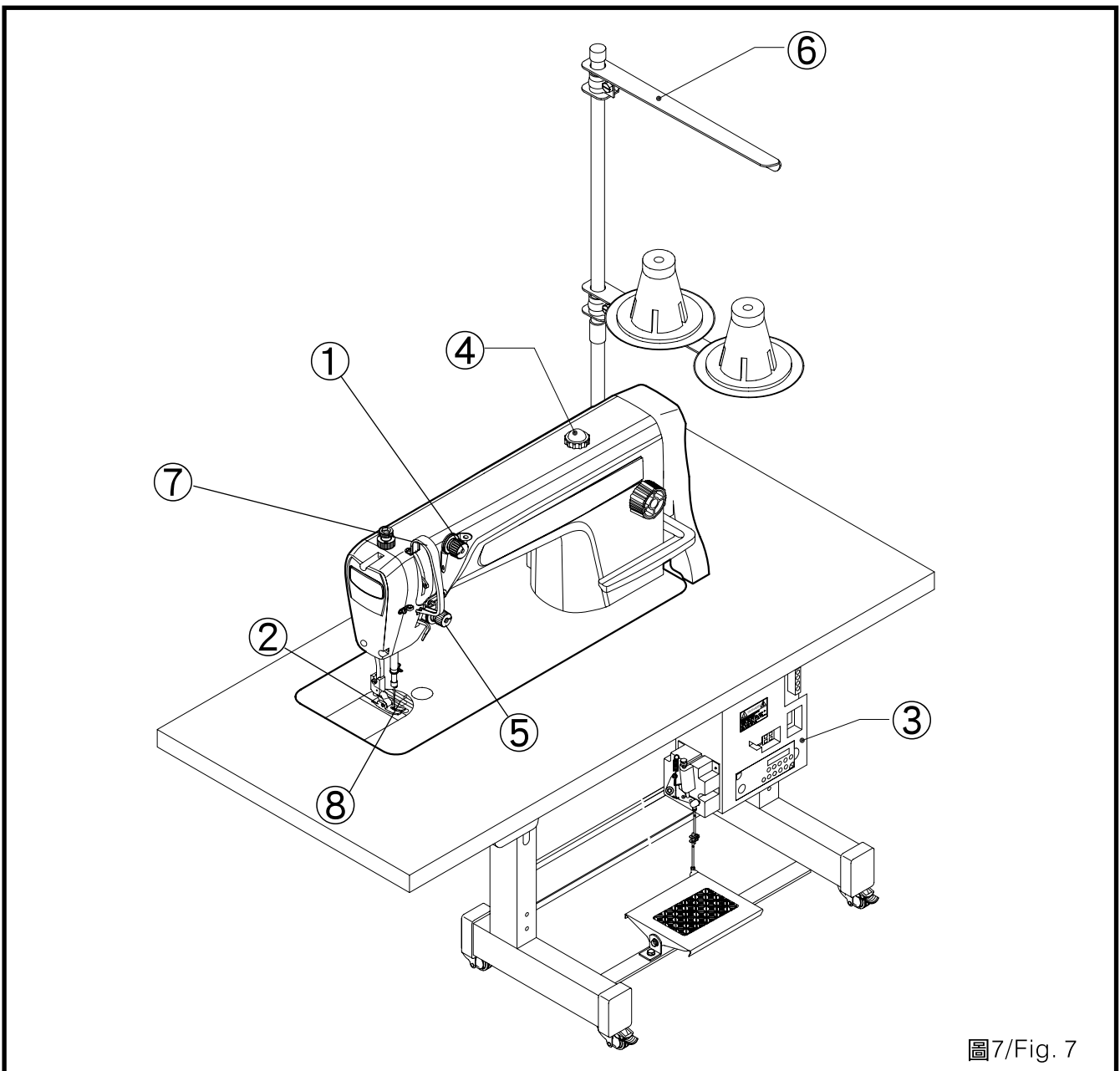


圖7/Fig. 7

- ① 導線片
- ② 押具
- ③ 控制箱
- ④ 油鏡
- ⑤ 拉線鬆緊調整組
- ⑥ 線架
- 安全保護裝置
- ⑦ 挑線桿防護罩
- ⑧ 護指器

- ① Thread Guide
- ② Presser Foot
- ③ Control Box
- ④ Oil Windows
- ⑤ Thread Tension Adjusting Set
- ⑥ Thread Stand
- Safety Protection Devices
- ⑦ Thread Take-up Cover
- ⑧ Finger Guard

規格

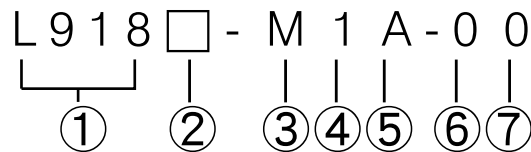
SPECIFICATIONS

種類及規格說明

Specifications of machine category

1. 型號及分類表示

1. Description of the machine name



① 表示機種別：

L= 高速單針下送布平縫車

① represents the type of the machine:

L= High Speed One-needle Bottom Feed Lockstitch Machine

② 表示車台外觀改良之區分編碼，由F然後G，以英文字母排列如L918F。

② represents the improved machine appearances that are arranged from letter F. Ex: L918F

③ 用途項目：(表1，表2)

③ Purposes: (Table 1, Table 2)

編號Code	用途 Application	車縫速度 r.p.m Max Sewing Speed	縫距(mm) Max Stitch Length
L	用於薄布料 For light-weight materials	4000	0~4
M	用於中厚布料 For medium-weight materials	Max : 5000 一般 : 4500	0~5
H	用於中厚布料至厚布料 For medium to heavy-weight materials	Max : 4000 一般 : 3500	0~6

表1/Table 1

針棒行程(mm) Needle Bar Stroke		押具揚程(mm) Presser Foot Lift		使用針 Needle
		手動By hand lifter	膝動By knee lifter	
L	29	5.5	最大 : 13 Max : 13 一般 : 10 Normal : 10	DAX1 #9
M	30.7			DBX1 #11
H	35			DBX1 #21

表2/Table 2

- ④ 梭頭代碼：
- 1：表示高速縫梭頭
 - 2：表示2倍速梭頭
 - 3：表示免加油梭頭
 - 4：表示特殊梭頭
- ⑤ 無：代表針板・送具為四條齒
- A：代表針板・送具為三條齒
- C：代表針板・送具為三條齒，針棒及襯套選用LG04F/LG104F或LG07F/LG107F(鋁材)
- ⑥ 操作盒代碼：
- 0：表示SIRUBA一般型，無操作盒。
 - 1：表示SIRUBA高級型，有按鍵式操作盒。
- ⑦ 操作盒之功能碼代碼(表3)：
- ④ Code of the hook:
- 1 : High Speed Hook
 - 2 : 2-capacity Large Hook
 - 3 : Oil-Free Hook
 - 4 : Special Hook, Vertical Type
- ⑤ None : Four teeth rows of the needle plate and the feed dog
- A : Three teeth rows of the needle plate and the feed dog
- C : Three teeth frows of the needle plate and the feed dog, the needle bar and the bushing use LG04F/LG104F or LG07F/LG107F (aluminous material)
- ⑥ Code of operation box :
- 0 : SIRUBA normal model without key type operation box
 - 1 : SIRUBA advanced model with key type operation box
- ⑦ Function code of the operation box (Table 3) :

操作盒代碼及形式 Code of the operation box & its functions	功能碼 Function Code	自動切線 Automatically Thread Trimming	快速倒縫 Rapidly Backstitch	1 撥線 Thread Wiping	2 自動抬押腳 Auto Presser Foot Lifting	操作盒 Operation Box
適用 SIRUBA 高級型有按鍵操作盒(1)之代碼 Suitable for SIRUBA advanced model with operation box (1)	0	○	○	—	—	L-900
	1	○	○	○	—	
	2	○	○	—	○	
	3	○	○	○	○	

表3/Table 3

2. 規格 (表4)

2. Specification: (Table 4)

機型Model		L918		
車縫布料 Materials		L-薄布料 Light-weight	M-中厚布料 Medium-weight	H-厚布料 Heavy-weight
1	車縫速度 (r.p.m.) Sewing speed	4000	Max: 5000 Normal: 4500	Max: 4000 Normal: 3500
2	縫距 Stitch length	0~4	0~5	0~6
3	針棒行程 (mm) Needle bar stroke	29	30.7	35
4	使用針 Needle	DAx1 #9~10	DBx1 #11~14	DBx1 #20~23
5	押腳壓力 (kgs) Presser foot pressure	4~5	5~7	5~7
6	押具提升量 Presser lifter	膝動 Knee-drive	標準10 mm (最大13 mm) Standard: 10 mm (Max.: 13 mm)	
		手動 Hand-drive	5.5 mm	
7	押具Presser foot	可調整性押具Adjustable presser foot		

8	送具Feed dog	3排齒或4排齒 3 teeth rows or 4 teeth rows		
		可調整送具斜度feed dog slope is adjustable		
9	送料具高度(mm) Presser foot height	0.7~0.8	MIA 0.9~1.1 0.75~0.85	1.0~1.2
10	送布方式Feeding	上下前後搖擺底送方式 Up/down and front/rear rocking bottom feeding		
11	挑線桿Thread take-up lever	連桿方式Connecting rod		
12	挑線桿行程(mm) Thread take-up lever stroke	59.2±1		59.5±1
13	加油方式Lubrication	完全自動加油Fully automatic lubricating		
14	回油方式Oil recycle	柱塞泵方式Pillar plug pump		
15	潤滑油Lubricant	提供之專用油Provided specified lubricant		
16	撥線裝置Thread wiping device	選擇配置(Optional Device)		
17	自動回針裝置Auto-stitch back device	標準配置(Standard Device)		
18	馬達輸送Motor	額定輸出 400W (1/2 HP) 最大輸出 550W (3/4 HP) Regulated output: 400W (1/2HP), Max. output: 550W (3/4 HP)		
19	使用電源Power	3相/單相 3 Phases/single phase		
20	電磁線圈驅動電源 Electromagnetic drive power	DC-24V		
21	切線方式Trimming type	平面咬合式 Horizontal engaged trimming type		

表4/Table 4

3. L900電控操作盒功能說明：(表5)

3. Description of the functions of L-900 operation box: (Table 5)

功能 Applicatons	圖樣與說明 Figures & Descriptions	
起縫/縫畢選擇鍵 Start/End Tacking Selection		起縫單趟自動回針鍵 Start Tacking 1 Time Setting
		起縫雙趟自動回針鍵 Start Tacking 2 Times Setting
		縫畢單趟自動回針鍵 End Tacking 1 Time Setting
		縫畢雙趟自動回針鍵 End Tacking 2 Times Setting
車縫樣式選擇鍵 Pattern Selection		自由縫 Free Stitching Setting
		定針車縫 Stitching Number Setting
		重複縫樣式 Overlapped Stitching
		四角縫樣式 Rectangular Stitching
		V 型縫樣式 V Type Stitching
		U 型縫樣式 U Type Stitching

功能選擇鍵 Optional Functions Selection		單觸發自動車縫鍵 One Shot Automatic Stitching
		自動切線鍵 Automatic Thread Trimming
		車縫順序選擇鍵 Stitching Sequence
		提補針縫 Needle UP/DOWN

表5/Table 5

關於本機的重要安全注意事項

IMPORTANT SAFETY INSTRUCTIONS OF THIS MACHINE

1. 搬運作業

- (1). 使用全罩二片式的保力龍將機器包裝防護。
- (2). 放入紙箱內。
- (3). 用手推車或二人用雙手抬動搬運。

2. 儲存作業

- (1). 機器不使用時，應用防塵套將其罩上。
- (2). 避免儲存於高於45°C以上的高溫。

3. 作業中

機器不要在高於40°C以上的溫度工作。

4. 警告

請注意以下警示建議事項。

- (1). 工作區域是危險的。
- (2). 當機器還在運作的時候絕對不要去碰觸針。
- (3). 當在送布料的時候要多加小心。
- (4). 不要把手指放在針與傳送布料的轉具之間。

在貼有警告標示之處請注意。

- (1). 機械動作部分，請注意裝上保護裝置。
- (2). 穿線、換線、調整、清潔時，請注意關閉電源。

1. Transportation

- (1). The machine packed with two piece covers that made of expanded polystyrene to protect it.
- (2). Put the machine into a carton.
- (3). Use a cart or by two men's hands to move it.

2. Storage

- (1). The machine must use duster cover to cover it when it did not work.
- (2). The machine avoid to storage in the temperature more than 45°C.

3. Working

The machine doesn't work over 40°C.

4. Warning

Pay attention to this warning advice as the followings:

- (1). Working area is dangerous.
- (2). Never touch the needle if the machine is still running.
- (3). Be careful if you infeed fabric.
- (4). Do not insert your finger between needle and roller for transportation on fabric.

Pay attention to the warning sticker.

- (1). Movable parts must be enclosed with guard when you operate.
- (2). Pull out the plug from socket when you adjust, thread, change bobbin and needle clean.



注意CAUTION



請讓受過培訓的技術人員來安裝縫紉機。

Machine installation should only be carried out by a qualified technician.



請委託購買商店電氣專業人員進行電氣配線。

Contact your dealer or a qualified electrician for any electrical work that may need to be done.



縫紉機重48公斤, 安裝工作必須由兩人以上來完成。

The sewing machine weighs 48kg. The installation should be carried out by two or more people.



在安裝完成前, 請不要連接電源, 如果誤按啟動開關, 縫紉機動作會導致受傷。

Do not connect the power cord until installation is complete. The machine may operate if the treadle is depressed by mistake, which could result in injury.

縫紉機頭倒下豎起時, 請用雙手進行操作。單手操作時因縫紉機的重量萬一滑落易導致受傷。



Use both hands to hold the machine head when tilting it back or returning it to its

original position. If only using one hand, the weight of the machine head may be too heavy to hold, and may cause human physical injuries.

1. 依本機器所附桌板裁製圖及零件組合圖所列之配件, 依序安裝防震機座, 線架。

1. Please refer to table cut-out drawing and parts lists to install the anti-shock base and the thread stand.

2. 馬達之轉向為順時鐘方向, 皮帶之鬆緊度以用手指向內壓下2公分為宜, 同時為了安全起見, 請務必鎖上皮帶蓋。(圖8)

2. The turning direction of the motor is clockwise. As to the tension of the belt should be 2 cm while using a finger to press inward. In addition, for safety concern, please lock the belt cover tightly. (Fig. 8)

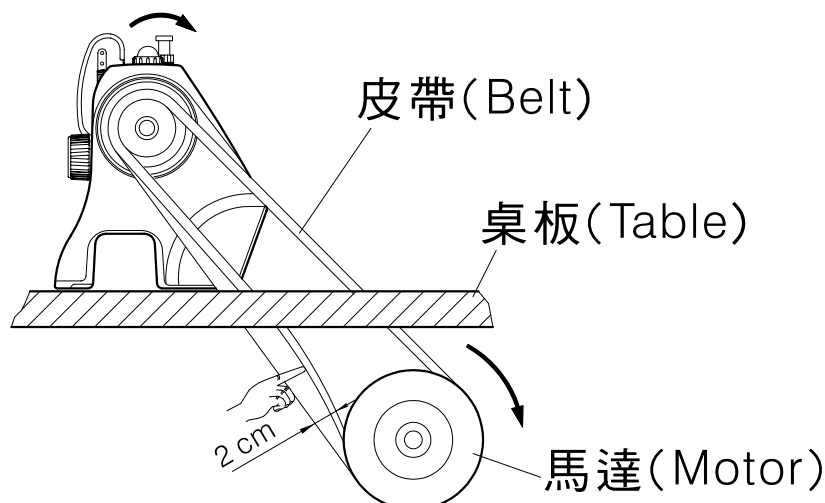


圖8/Fig. 8

3. 皮帶輪與縫紉速度請參照表4。

注意：

- (1) 使用新機器，最初一個月的運轉速度約為最高轉速的80%，請選擇正確的馬達皮帶輪尺寸。(如表6)

- (2) 桌板厚度約40 mm

註：

皮帶尺寸會因為選用馬達的形式、廠家不同而有所差異。

3. Please refer to Table 4 to check the belt size and the speed of sewing.

ATTENTION:

- (1) The operating speed is about 80 % of the max. speed for a newly machine during the first month. Please choose the correct size of the motor belt. The max. speeds and the belt sizes are listed on Table 6.

- (2) The standard thickness of the table is about 40 mm.

Note:

The belt size is different based on the choosing motor and the brand.

馬達皮帶輪之外徑(mm) Outer diameter of the motor belt wheel	轉速 (s.p.m.) Rotating Speed		皮帶長度(inch) Belt Length
	50Hz	60Hz	
125	5060		44"
120	4850		43"
115	4630		
110	4440		
105	4250	5040	42"
100	4000	4780	
95	3820	4540	
90	3610	4320	
85	3390	4000	41"
80	3160	3790	
75	2950	3520	
70	2740	3260	
65	2600	3060	

表6/Table 6

註：

- (1) 馬達使用標準輸出400W (1/2馬力)的離合馬達。
- (2) 皮帶使用M型形皮帶。
- (3) 馬達皮帶輪的有效直徑為外徑減5 mm。
- (4) 馬達的轉動方向從皮帶輪側看為逆時針。請注意：不要讓縫紉機反轉。

NOTE:

- (1) The motor is standard clutch motor with 400W (1/2 HP) output.
- (2) The adopted belt is M type V-shape.
- (3) The efficient diameter of the motor belt wheel is the value after the outer diameter minus 5 mm.
- (4) The motor rotating direction is counter clockwise when viewing from the side of the belt wheel. Attention: please do not counter-rotate the machine.

1. 油盤必需放置於桌板凹槽中之四角。(圖9)

1. The corners of the oil reservoir has to be placed on the four corners at the cut out groove of the machine table. (Fig. 9)

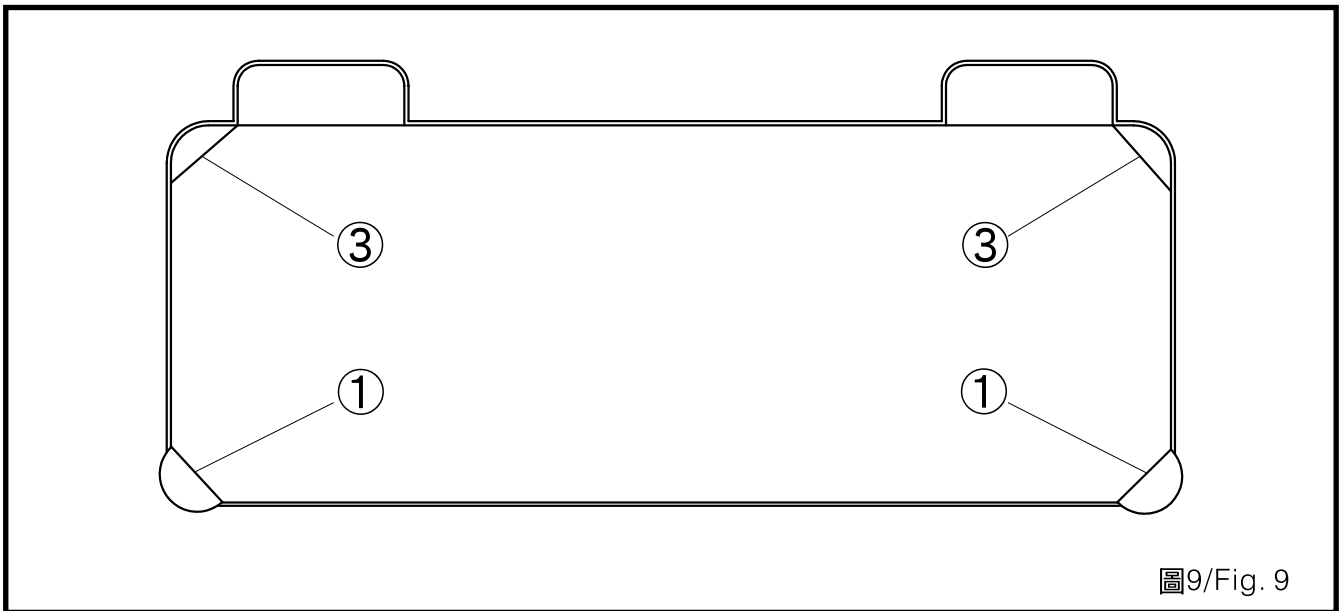


圖9/Fig. 9

2. 用下圖所示之釘子②，將兩個橡皮墊①固定於A邊(操作員方向)，再用底質為橡膠之膠帶將兩個緩衝墊③固定於B邊(有鉸鍊的方向)，然後再將油盤④放上。(圖10)

2. Use nails ② as illustrated to fix two rubber seats ① on side A (the operator's side). Use rubber based adhesive to fix two cushion seats ③ on the hinge side (side B). Place oil reservoir ④ on the fixed seats. (Fig. 10)

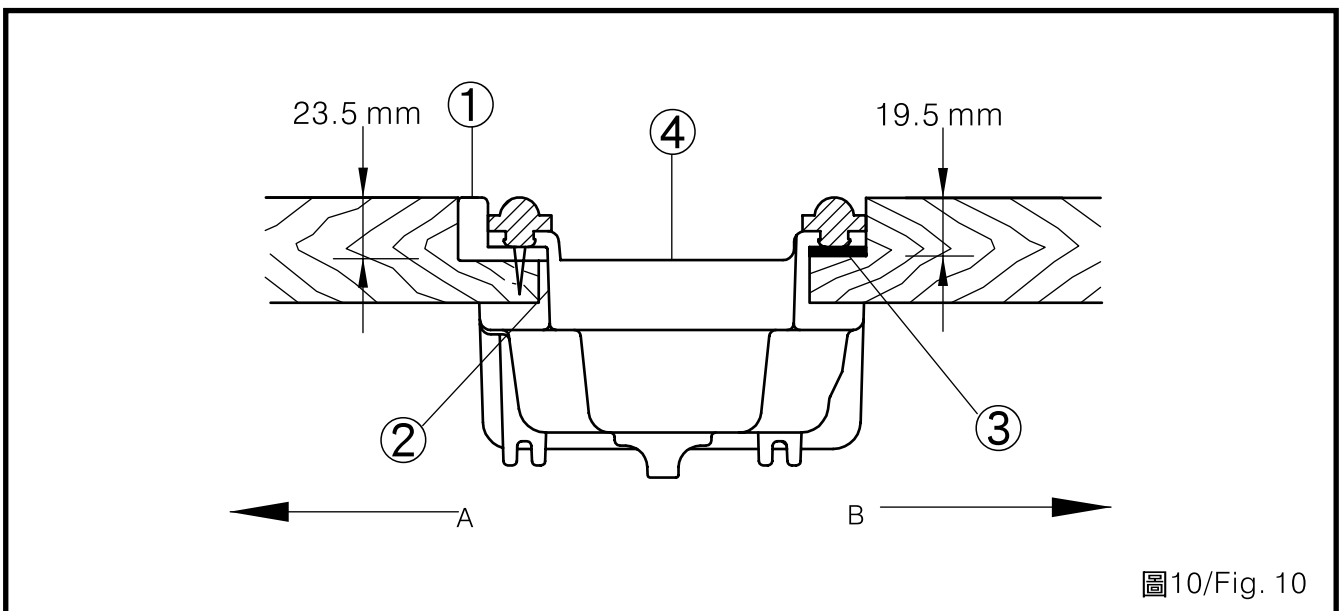
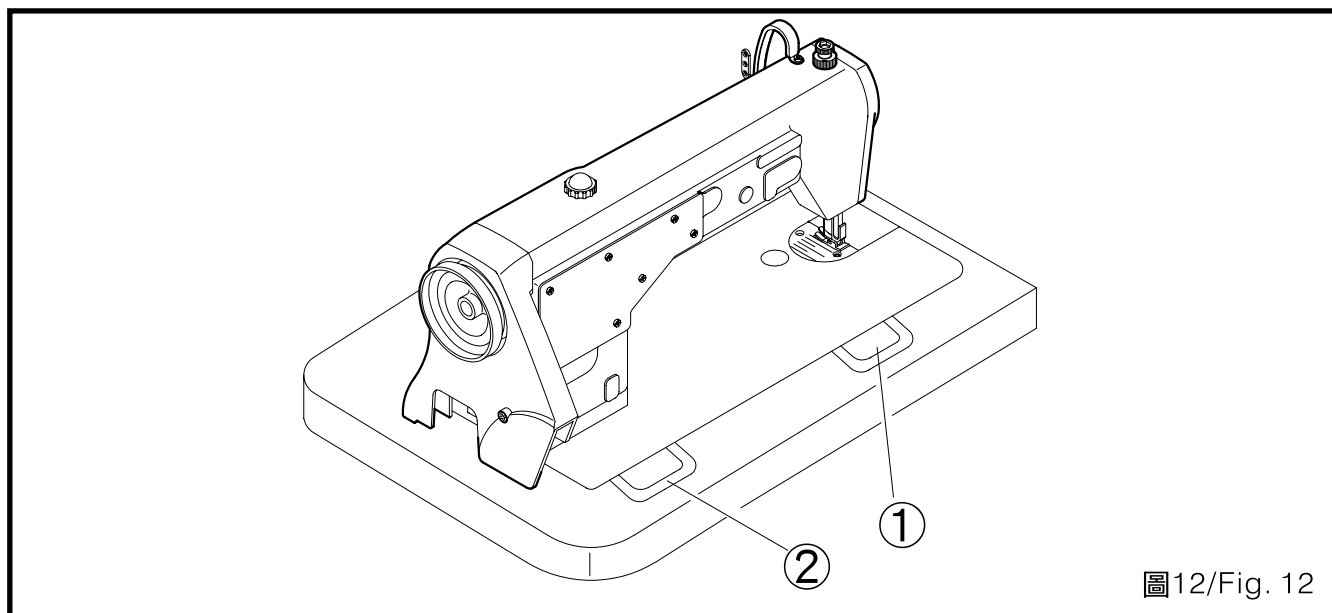
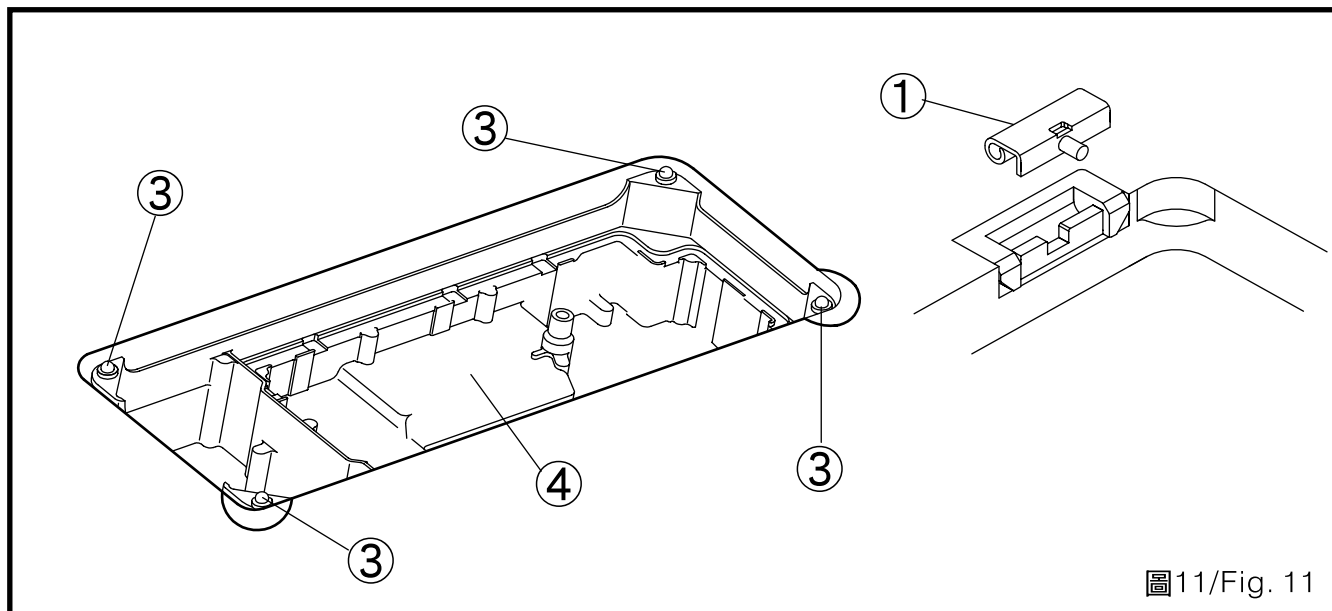


圖10/Fig. 10

3. 在將機頭放進四個角的緩衝墊③之前，先將鉸鍊①裝進機座兩個固定孔中，再將機頭安裝於桌板相對裝有橡膠墊②之二個開口中。(圖11，12)

3. Place the hinge ① into the two fixing holes before placing the machine head onto the four cushions ③ of the desk. Then, install the machine head onto the machine bed that has two openings with rubber cushion② of each. (Fig. 11, 12)



針的安裝

請依線規格及布料選用正確型號的針。先關掉電源，再開始安裝針。(圖13)

INSTALLING THE NEEDLE

Choose a right needle size according to the type of the thread and the type of the material used. Turn the power off before placing the needle. (Fig. 13)

1. 轉動手輪使針棒位於行程最高點。
2. 放鬆螺絲②並握住針①，使其針頸內弧部份 A 正確面向右方 B。並檢視針之長溝 C 確實面向左 D。
3. 依箭頭方向，將針插入針鑿並插到底。
4. 確實鎖緊螺絲②。

1. Turn the hand wheel to raise the needle bar to its highest position.
2. Loosen screw ②, and hold the needle ① with its indented side A facing exactly to right in direction B, and make sure that long groove C of the needle is facing exactly to the left in direction D.
3. Place the needle into the hole on the needle bar all the way to the end of the hole in the arrow direction.
4. Firmly lock screw ②.

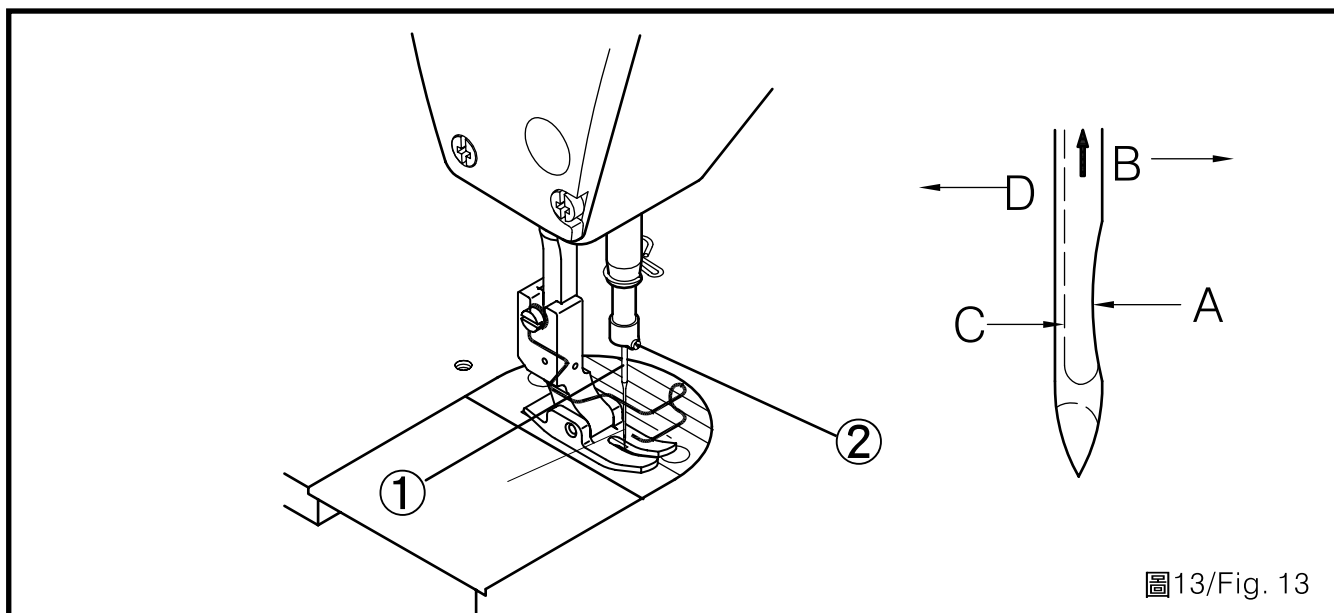


圖13/Fig. 13

梭子之安裝

SETTING THE BOBBIN

1. 安裝梭子於梭殼中，使捲線方向為如圖示方向。(圖14)
2. 將針線穿過縫隙 A 處，並朝 C 方向拉線，如此，針線將穿過壓力彈簧①，並由 B 處缺口穿出。
3. 當向 C 拉線時，梭子是順著箭頭所指方向轉動。

1. Set the bobbin in the bobbin case in the way that the thread wound direction is clockwise. (Fig. 14)
2. Pass the thread through thread slit A, and pull the thread in direction C. The thread will be pulled under the tension spring ① and will be pulled out from notch B.
3. Be sure the bobbin rotates in the direction as the arrow shows when thread is pulled toward C.

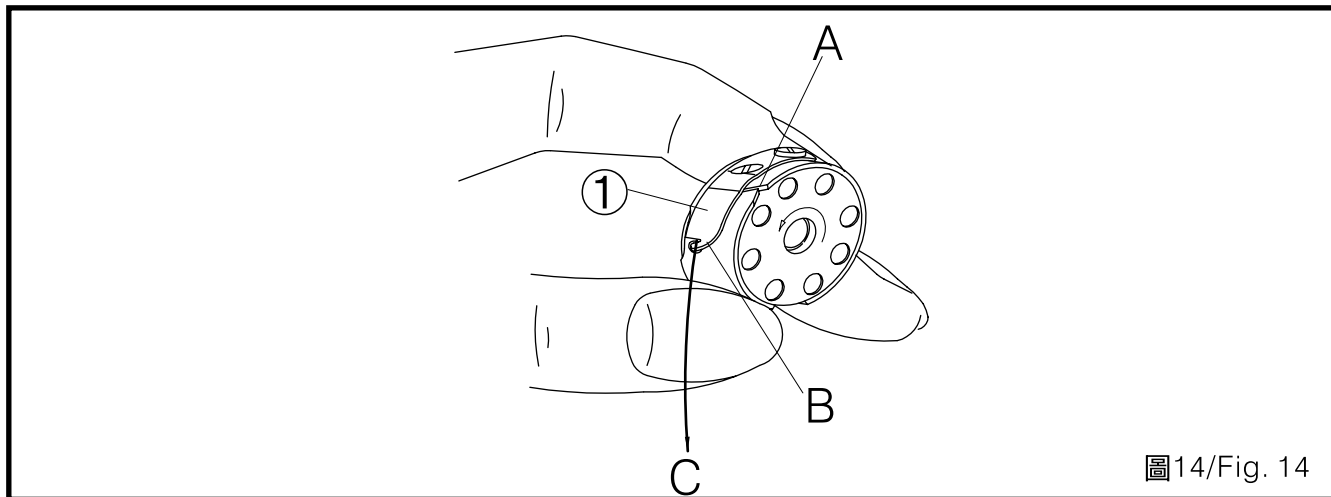


圖14/ Fig. 14

切線刀安裝

COUNTER KNIFE ADJUSTMENT

當上固定刀①變鈍時，請依 C 圖所示將上固定刀①再磨銳，並正確重新安裝。(圖15)

When the counter knife ① becomes dull, sharpen the counter knife ① as illustrated in C, and reinstall it properly. (Fig. 15)

1. 當上固定刀①安裝位置往 A 方向移動時，切線後線長增加。
2. 當上固定刀①安裝位置往 B 方向移動時，切線後線長減少。

1. Moving the mounting position of counter knife to the right (in direction A) from its standard mounting position will have longer thread tail after trimming.
2. Moving the mounting position to the left (in direction B) will have shorter thread tail.

注意：

當重磨刀片時，拿握刀子要特別小心。

Attention :

Be sure to sharpen the counter knife with care.

- a · 活動刀
- b · 針中心
- c · 標準：4.0 mm

- a · Moving knife
- b · Center of needle
- c · Standard : 4.0 mm

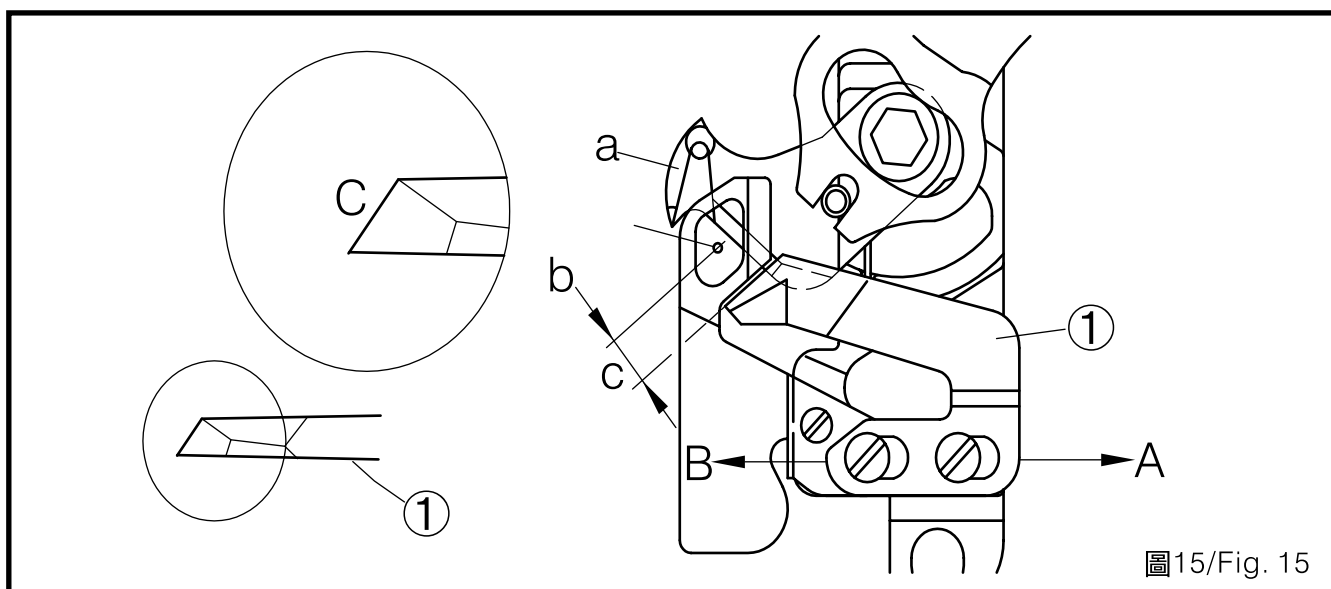


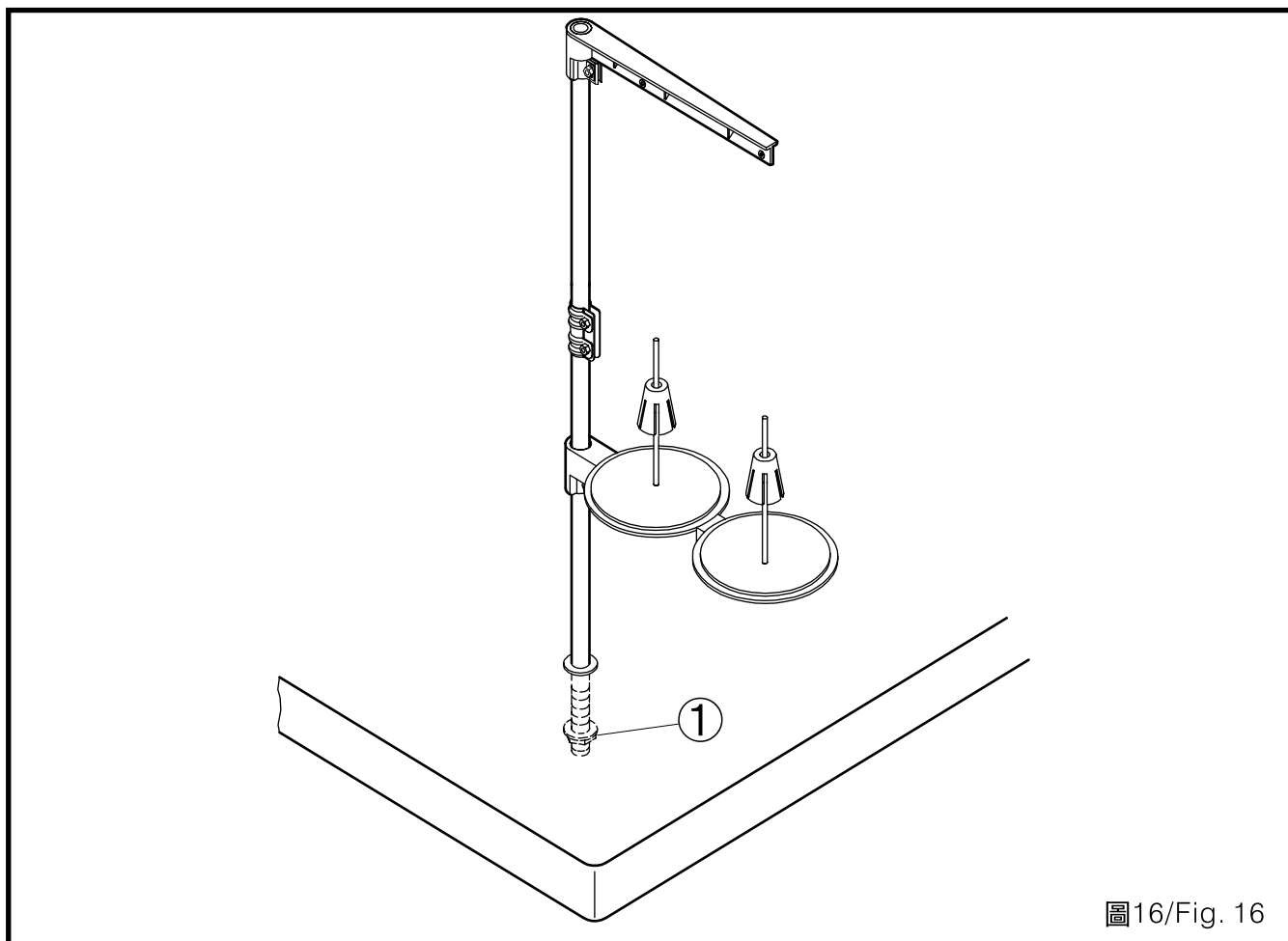
圖15/ Fig. 15

線架安裝

THREAD STAND ASSEMBLY

1. 安裝線架組，並將其插入桌板孔。(圖16)
2. 鎖緊螺帽①，以固定線架。

1. Assemble the thread stand set before installing. Place the thread stand set onto the hole on the table top. (Fig. 16)
2. Fix the thread stand with a nut ① locked under the table top.

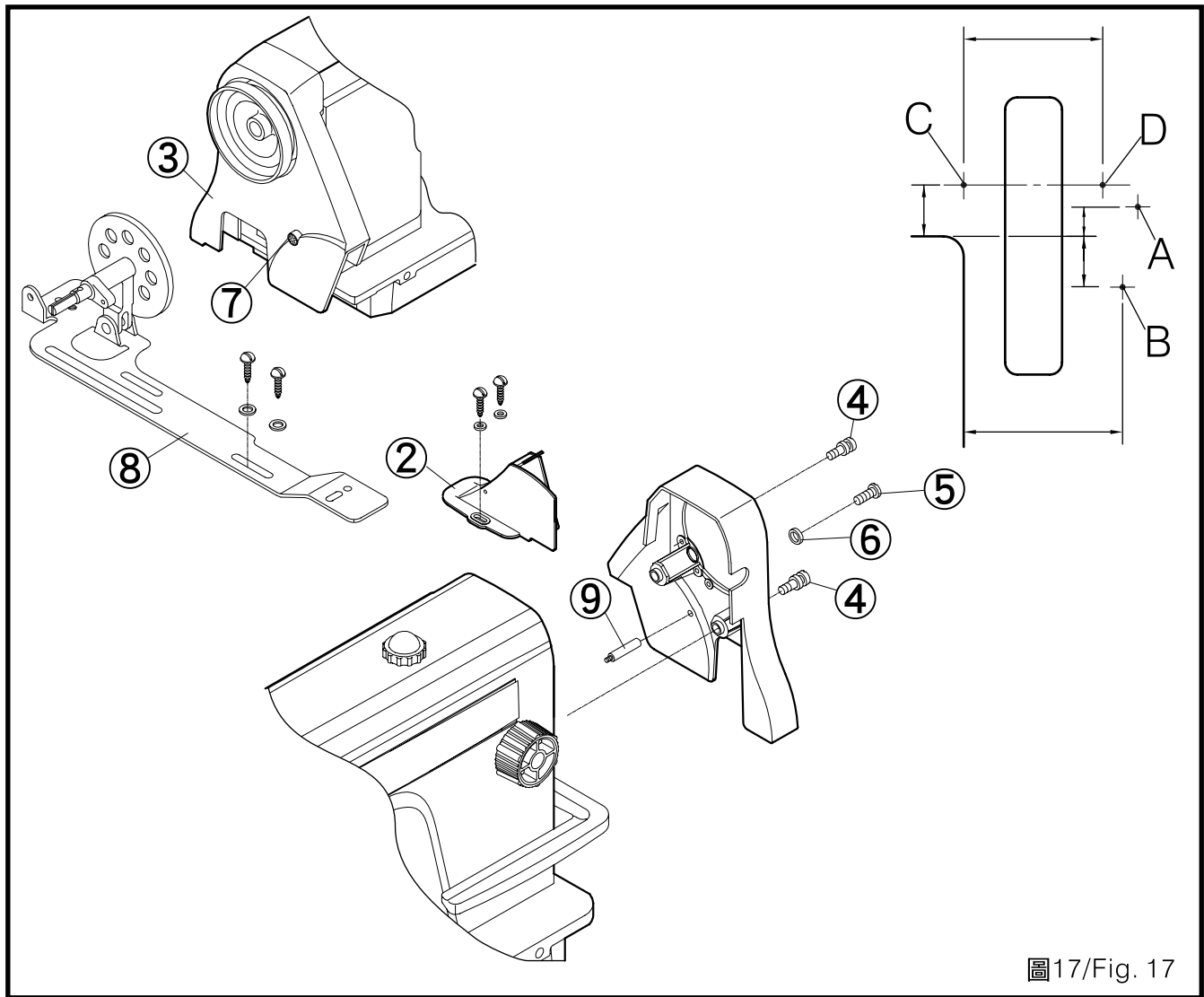


皮帶蓋及梭子捲線器之安裝

THE BELT COVER AND THE BOBBIN WINDER MOUNTING

1. 在桌上鑽四個定位孔 A、B、C、D。(圖17)
2. 將皮帶蓋支撐桿，裝入栓孔中。
3. 將皮帶蓋③傾斜，由手輪後方成對角線裝上手輪。
4. 將皮帶蓋②，放在 C、D 兩定位孔上。

1. Grinding holes A, B, C, D on the table top. (Fig. 17)
2. Insert the belt cover support into the bolt hole on the machine.
3. Tilt the belt cover ③ then you can install the hand wheel diagonally from the rear of the hand wheel.
4. Put belt cover ② on locating holes C and D.



5. 用④、⑤螺絲及⑥墊片，將皮帶蓋固定於機體上並鎖緊。

6. 將⑦裝上皮帶蓋③。

7. 向後移動皮帶蓋②，使其橡膠墊觸及皮帶蓋③以木螺絲及墊片，將皮帶蓋②固定。

8. 將梭子捲線器⑧固定於定位孔 A、B 上。

5. Use screws ④, ⑤ and washer ⑥ to fix the belt cover on the machine body and lock the screws tightly.

6. Place the ⑦ to the belt cover ③.

7. Move the belt cover ② backward and have its rubber cushion touch the belt cover ③. Fix the belt cover ② by wooden screw and cushion.

8. Mount bobbin winder ⑧ to holes A and B on the table top.

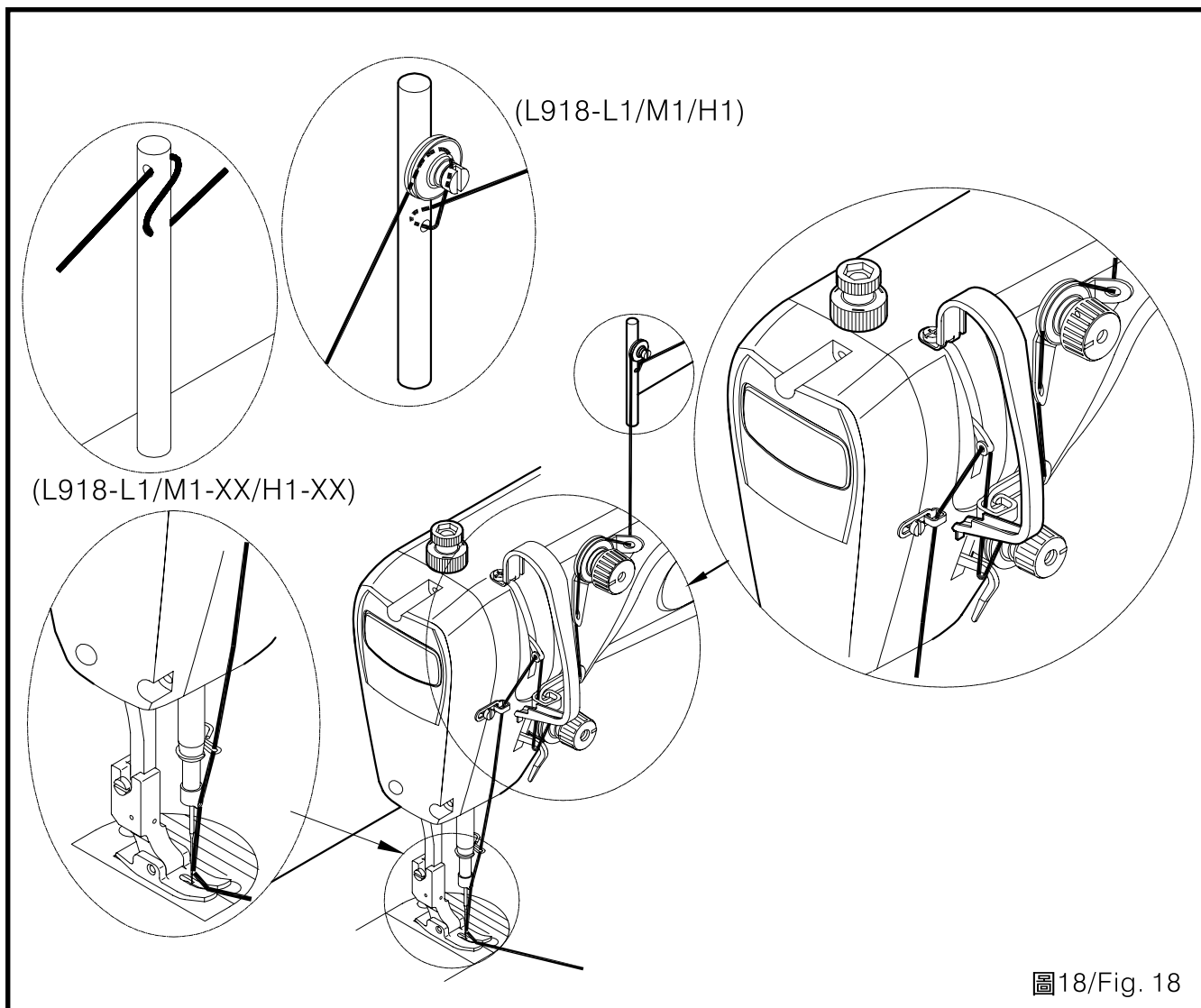


圖18/Fig. 18

針距調整

STITCH LENGTH ADJUSTMENT

1. 依箭頭指示方向轉動縫距調整鈕①，並將所需數字對準標點A。(圖19)
2. 調整鈕上刻度單位是公釐。
3. 當要調整縫距時，轉動縫距調整鈕①，同時將搖桿②往下壓。

1. Turn stitch length dial ① as the arrow indicates to have the desired number align with mark A on the machine. (Fig.19)
2. The calibration on the dial is millimeters.
3. Press the feed lever ② down and turn the stitch length adjustment dial ① to change stitch length.

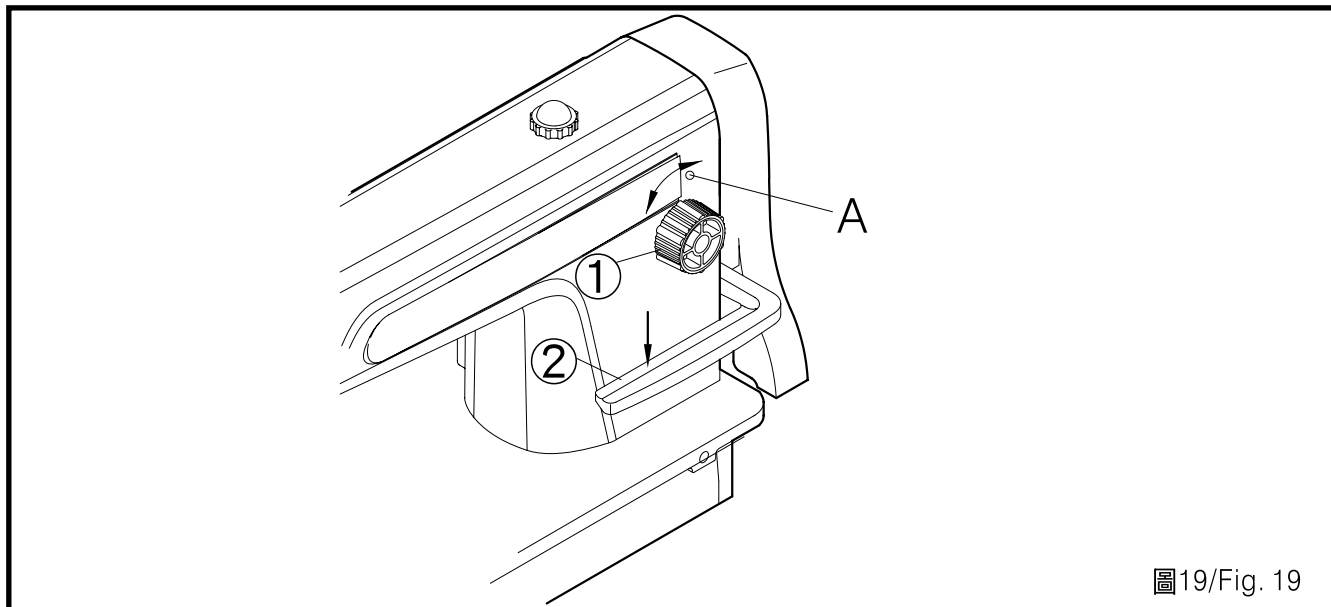


圖19/Fig. 19

膝控押具提升器之調整

ADJUSTMENT OF KNEE-CONTROL PRESSER FOOT LIFTER

1. 使用膝控押具提升器，標準的押具提升高度是10mm。(圖20，圖21)
2. 可以使用膝控押具提升器調整螺絲①，將押具提高至13mm。
3. 當押具調整高度超過10mm時，請確認針棒最底部②是否會觸及押具③上部。

1. The standard lifting height is 10 mm by using knee-control presser foot lifter. (Fig.20, Fig. 21)
2. By adjusting the screw ① at the knee controller, the presser foot can be lifted up to 13mm.
3. When the presser foot is adjusted to be lifted over 10mm, assure the bottom end of the needle bar ② in its lower position③ does not hit the presser foot.

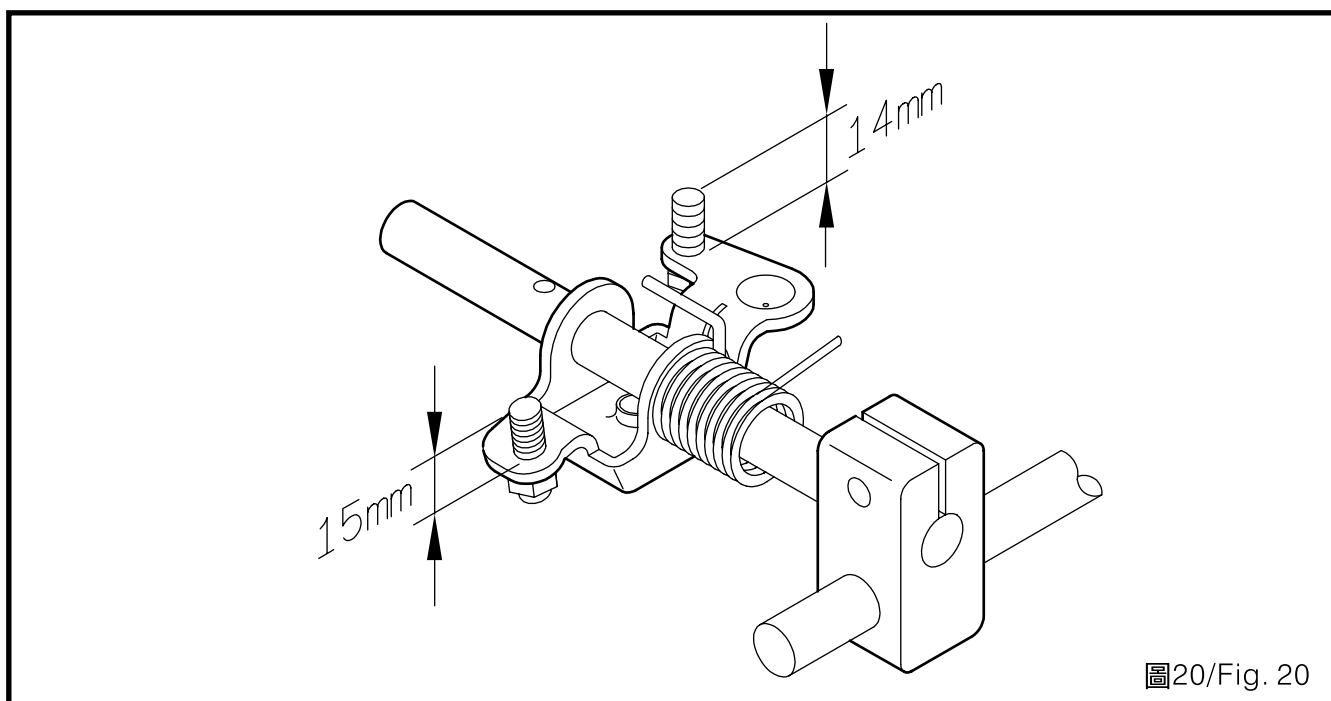


圖20/Fig. 20

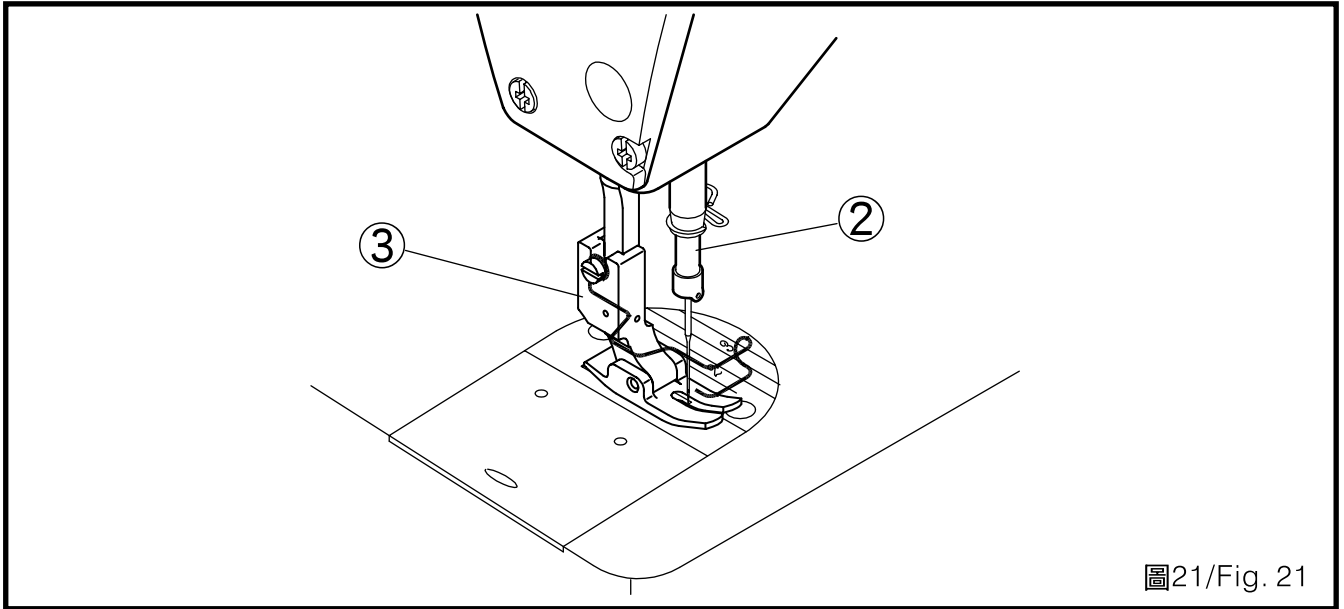


圖21/Fig. 21

針線梭線鬆緊度調整

NEEDLE THREAD/BOBBIN THREAD TENSION ADJUSTMENT

1. 針線鬆緊度調整(圖22)

- (1) 依順時鐘方向(A方向)轉動針線鬆緊控制鈕①，切線後留在針頭之線量變短。
- (2) 依逆時鐘方向(B方向)轉動針線鬆緊控制鈕①，線量變長。
- (3) 依順時鐘方向(C方向)轉動針線鬆緊控制鈕②，針線鬆緊度變緊。
- (4) 依逆時鐘方向(D方向)轉動針線鬆緊控制鈕②，針線鬆緊度變鬆。

2. 梭線(底線)鬆緊度調整

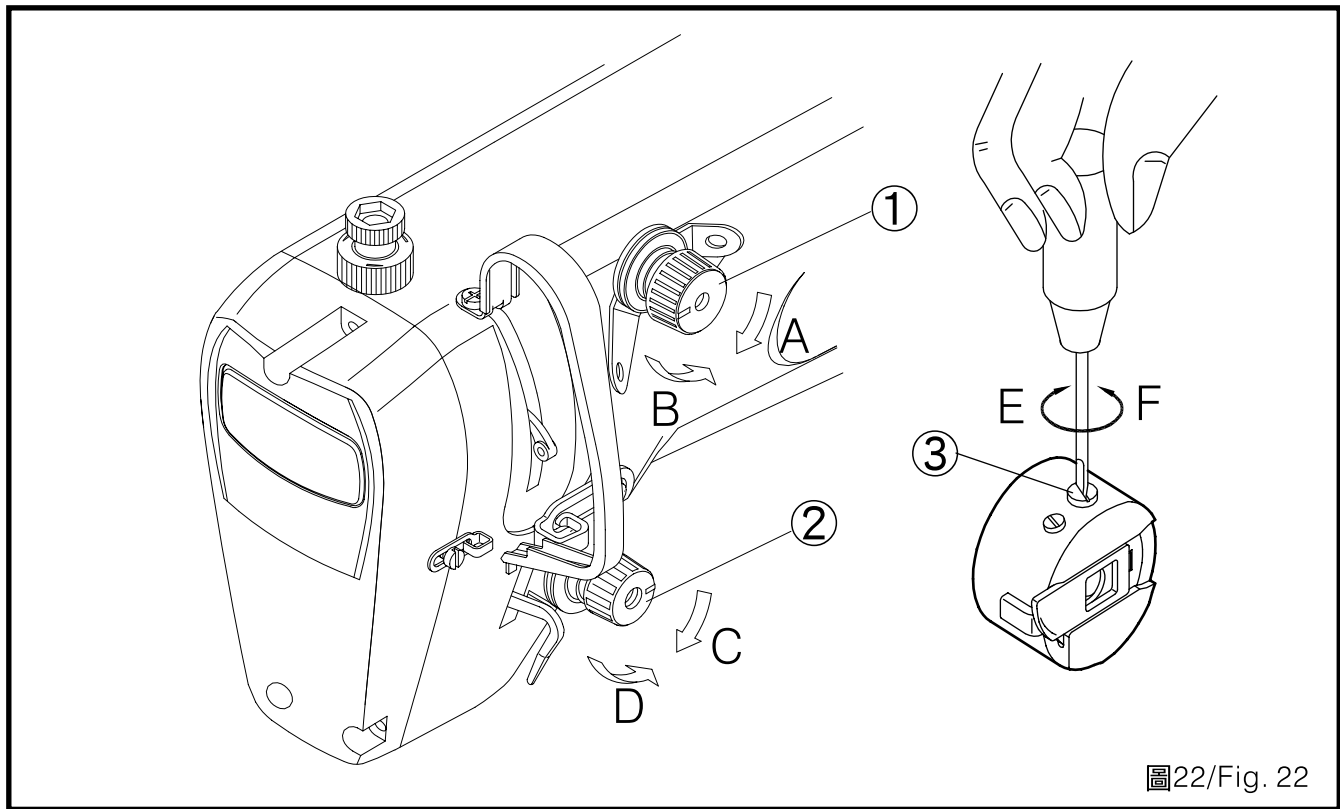
- (1) 依順時鐘方向(E方向)轉動鬆緊控制螺絲③，底線鬆緊度變緊。
- (2) 依逆時鐘方向(F方向)轉動鬆緊控制螺絲③，底線鬆緊度變鬆。

1. Needle thread tension adjustment (Fig. 22)

- (1) The left thread tail on the needle will be shorter after thread trimmed as you turn thread tension nut ① clockwise. (in A direction)
- (2) The left thread tail will be longer, as thread tension nut ① is turned counter clockwise (in B direction).
- (3) Increase the tension on needle thread by turning thread tension nut ② clockwise (in C direction).
- (4) Reduce the tension on needle thread by turning thread tension nut ② counter clockwise (in D direction).

2. Bobbin thread tension adjustment

- (1) The bobbin thread tension will be increased as tension adjust screw ③ is turned clockwise (in E direction).
- (2) The bobbin thread tension will be reduced as screw ③ is turned counter-clockwise (in F direction).



停針位置調整

1. 切線後，車針上定位(圖23)

- (1) 標準定針位置：針標準停止位置，將機頭上之標記 A 與手輪上之標記 B 對齊即可。
- (2) 停針時間調整：將車針停在最高點，放鬆螺絲①，在橢圓孔內調整螺絲。

- 將螺絲往 C 方向轉動，車針停止時間提前。
- 將螺絲往 D 方向轉動，車針停止時間延後。

NEEDLE STOP POSITION ADJUSTMENT

1. Needle "UPPER" stop position after trimming. (Fig. 23)

- (1) Standard Stop Position : the standard needle stop point is simply to align the mark A on the machine head with the mark B on the hand wheel.
- (2) Timing Adjustment of Needle Stop : Stop the needle at its upper dead point, and then loosen the screw ① and adjust the screw in the elliptic hole.

- Move the screw in direction C to advance the needle stop timing.
- Move the screw in direction D to delay the needle stop timing.

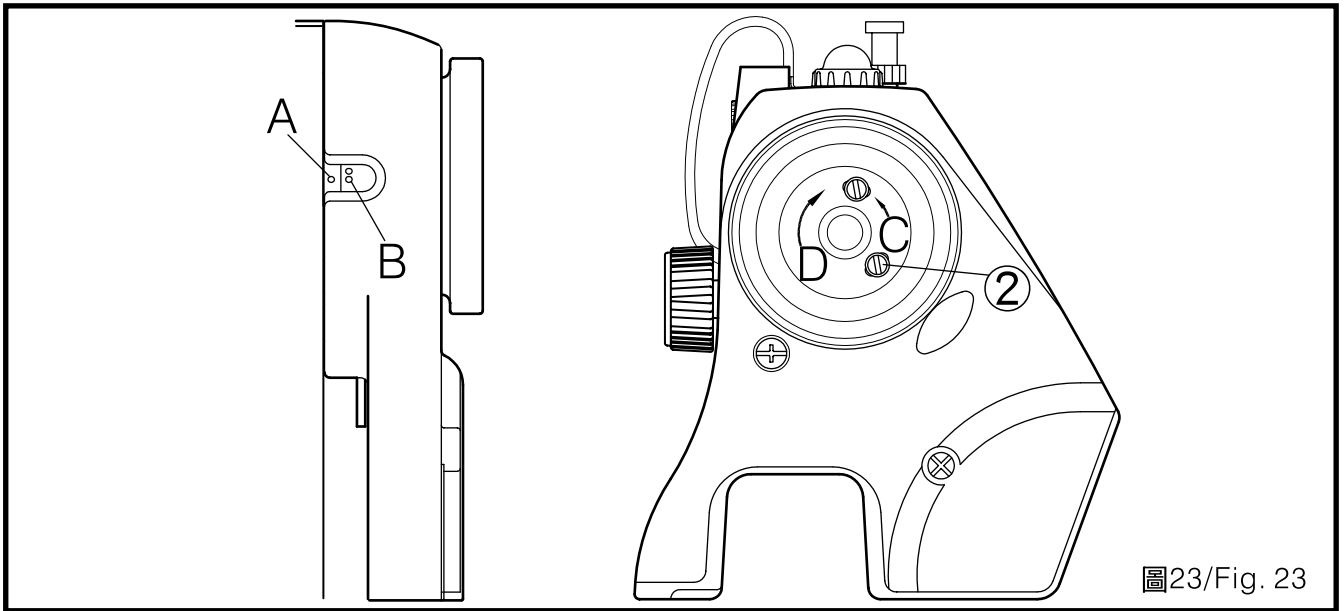


圖23/Fig. 23

2. 車針下定位(圖24)

當腳踏板前踩後，再回到原位置，車針之下停位置，將車針①停於最低點，放鬆螺絲②在橢圓孔內調整螺絲。

- (1) 將螺絲往 A 方向轉動，車針停止時間提前。
- (2) 將螺絲往 B 方向轉動，車針停止時間延後。

2. Needle "DOWN" stop position (Fig. 24)

When treading the pedal forward and returned to the neutral position, the needle DOWN stop position can be adjusted as the followings. Stop the needle ① at its lower dead point, and then loosen the screw ② and adjust the screw in the elliptic hole.

- (1) Move the screw in direction A to advance the needle stop timing.
- (2) Move the screw in direction B to delay the needle stop timing.

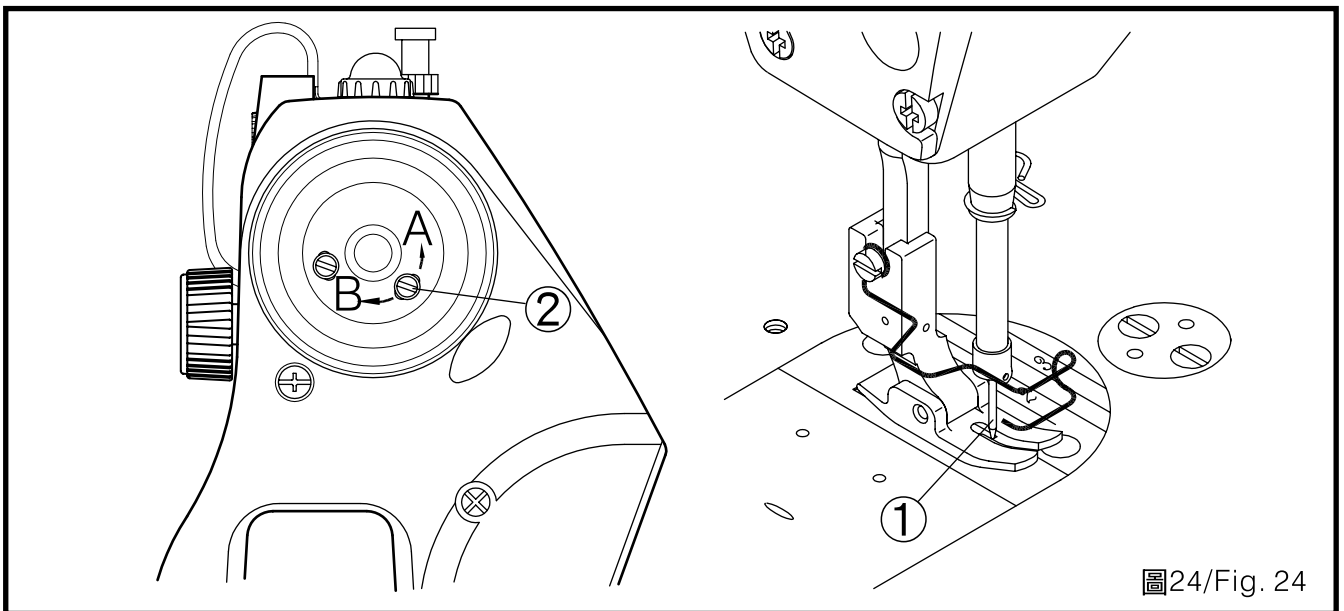


圖24/Fig. 24

注意！以上調整：

- (1) 螺絲放鬆後，請勿操作機器。
- (2) 只放鬆螺絲，請勿拆下螺絲。

Attention ! About above adjustments:

- (1) Do not operate the machine after screws are loosened.
- (2) Do not remove screw; only loosen the screw.

控線組彈簧調整

THE THREAD TAKE UP SPRING ADJUSTMENT

1. 控線組彈簧①行程調整(圖25)

- (1) 放鬆螺絲②。
- (2) 依順時鐘方向(A方向)轉動鬆緊控線鈕③，控線組彈簧行程將增加。
- (3) 依逆時鐘方向(B方向)轉動鬆緊控線鈕③，控線組彈簧行程將減少。

2. 控線組彈簧①拉力調整

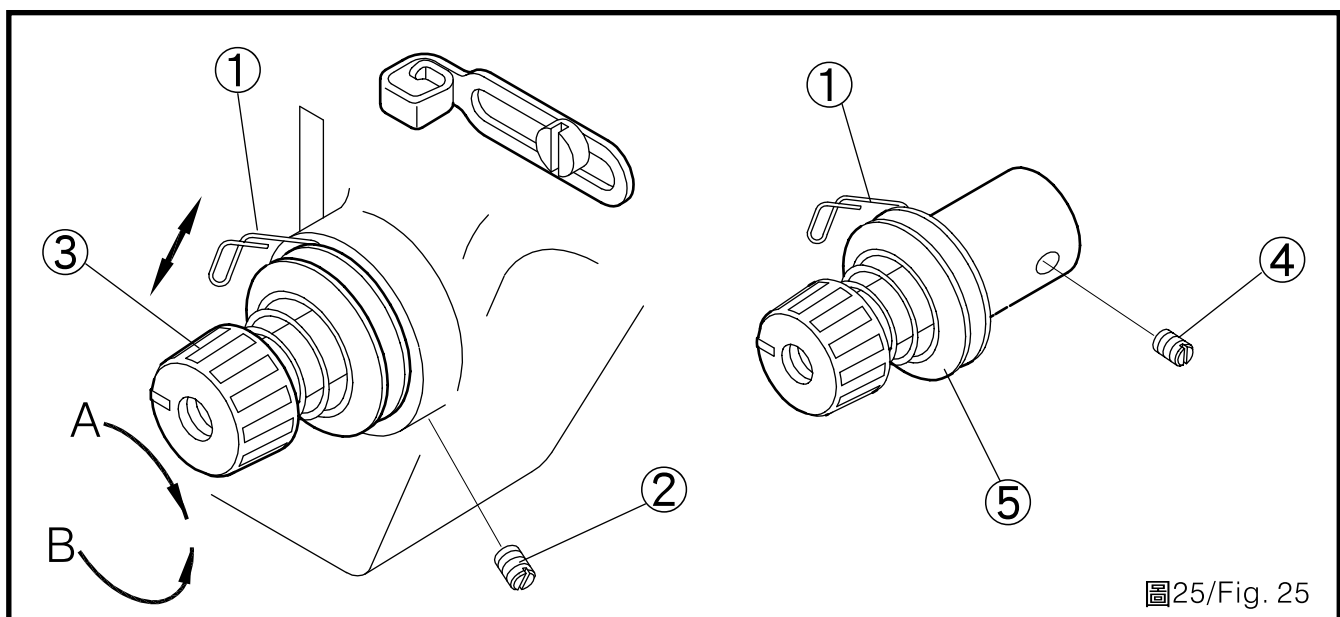
- (1) 放鬆螺絲②，同時將控線彈簧組⑤拆下。
- (2) 放鬆螺絲④。
- (3) 依順時鐘方向(A方向)轉動鬆緊控線鈕③，控線組彈簧拉力將增加。
- (4) 依逆時鐘方向(B方向)轉動鬆緊控線鈕③，控線組彈簧拉力將減少。

1. Adjusting the stroke of thread take up spring ①. (Fig. 25)

- (1) Loosen screw ②.
- (2) The stroke of the thread take-up spring will be increased as the tension knob ③ is turned clockwise (in A direction).
- (3) The stroke will be decreased as the the knob ③ is turned counter-clockwise (in B direction).

2. Adjusting the pressure of thread take up spring ①.

- (1) Loosen screw ②, and remove thread tension disks ⑤.
- (2) Loosen screw ④.
- (3) The pressure will be increased as tension knob ③ is turned clockwise (in A direction).
- (4) The pressure will be reduced as tension knob ③ is turned counter-clockwise (in B direction).

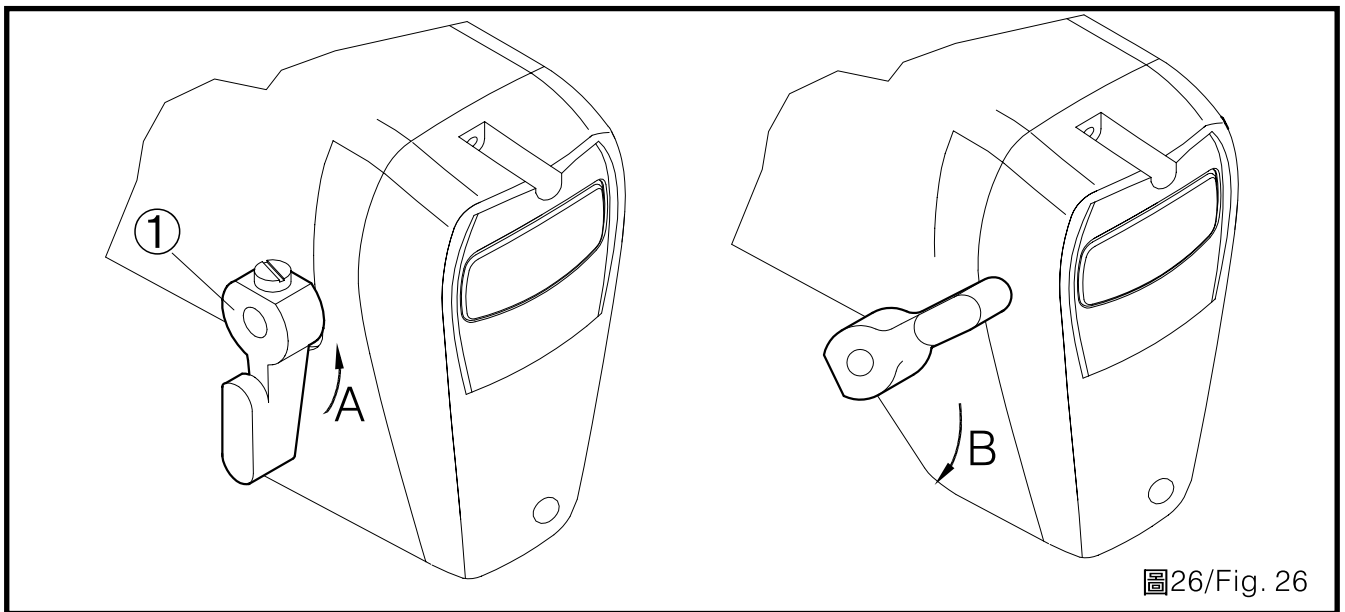


押具提升桿

MANUAL PRESSER FOOT LIFTING LEVER

1. 將機器停止，順著 A 方向轉動押具提升桿 ①。(圖26)
2. 押具將上提升約 5.5 mm，並固定之。當順著 B 方向往下轉動押具提升桿 ①時，押具將降回至原位置。

1. Stop the machine and turn the presser foot lifting lever ① up (in A direction) to keep it up. (Fig. 26)
2. The presser foot will be lifted up to about 5.5 mm and will remain at that position. Turn hand lifter lever ① down (in B direction) to release presser foot to its original position.

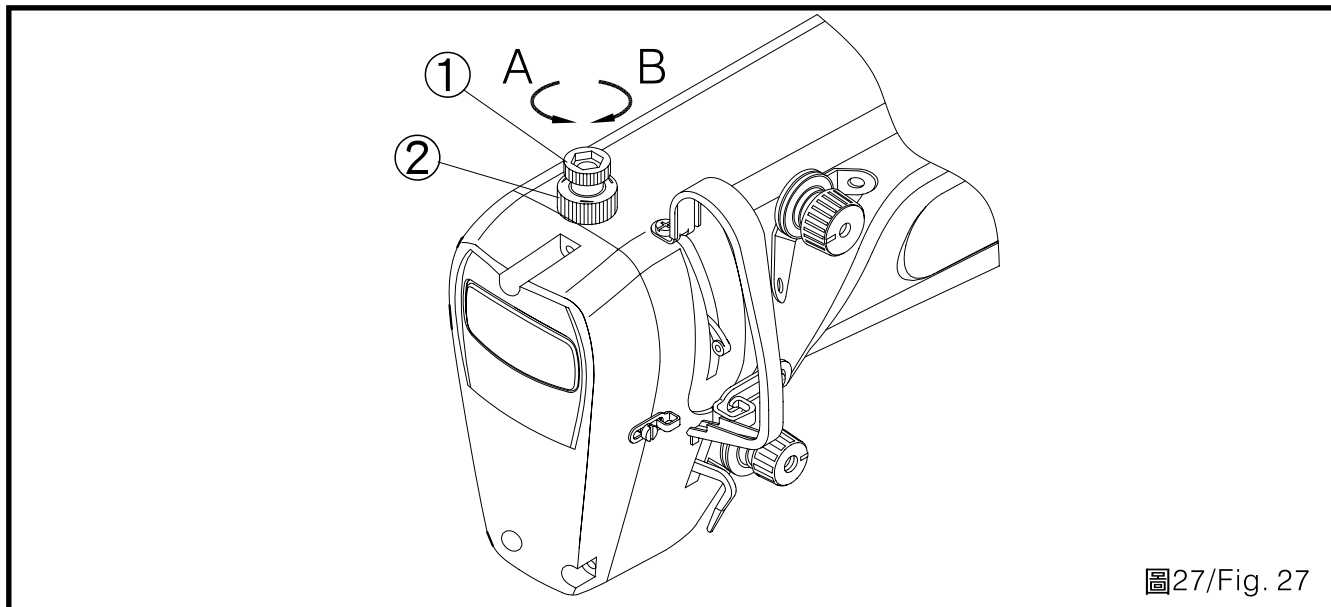


押具壓力調整

ADJUSTING PRESSER FOOT PRESSURE

1. 放鬆螺母 ②，依順時鐘方向(A 方向)轉動押具壓力調整鈕 ①時，壓力增加。(圖27)
2. 依逆時鐘方向(B 方向)轉動押具彈力調整鈕 ①時，壓力減少。
3. 調整完畢，鎖緊螺母 ②。一般布料押具壓力調整鈕之調整壓力為 5 kg，厚布料為 7 kg。(依布料之厚薄，適當調整押具之壓力，才能得到最佳之車縫效果)

1. Loosen nut ②, Turn presser spring regulator ① clockwise (in A direction) to increase the presser foot pressure. (Fig. 27)
2. Turn presser spring regulator ① counter clockwise (in B direction) to reduce the presser foot pressure.
3. Lock nut ② after adjustment is done. For regular fabric, the normal pressure of the presser foot should be set at 5kg, for heavy fabric is 7kg. (To have the best sewing result, please adjust the proper presser foot pressure according to the material.)



針與送具時位調整

1. 放鬆偏心凸輪①上之②及③螺絲，然後依箭頭方向或反箭頭方向轉動偏心凸輪①來確認齒尖位置後，再鎖緊螺絲。(圖28-a/b/c)
2. 一般標準時位調整：當針孔上緣下降至針板面時，將送具齒端上緣及針之針孔上緣調整與針板上緣成一直線。(圖28-a)
3. 提前送具時位調整：如果為了防止送料偏斜，將偏心凸輪①依箭頭方向轉動調整，把送具時位提前。(圖28-b)
4. 延遲送具時位調整：如欲增加車縫緊度，則將偏心凸輪①依反箭頭方向轉動調整，把送具時位延後。(圖28-c)

注意：

不可將偏心凸輪①移動過大，以免可能引起斷針。

ADJUST THE TIMING BETWEEN NEEDLE AND FEED DOG

1. Loosen screws ② and ③ on the feed eccentric cam ①, move the feed eccentric cam ① in the direction of the arrow or the opposite direction of the arrow, and lock the screws firmly. (Fig. 28-a/b/c)
2. Standard timing adjustment: when the upper side of the needle hole travels down to the needle plate surface, adjust the upper sides of the feed dog teeth and the needle hole to be at the same level of the needle plate upper surface. (Fig. 28-a)
3. Antedated timing adjustment: to prevent the fabric deflected from feeding, turn the eccentric cam ① by the arrow direction to antedate the feed timing. (Fig. 28-b)
4. Delayed timing adjustment: to increase the stitch tension, extend the feed timing by turning the feed eccentric cam ① in the opposite direction of the arrow. (Fig. 28-c)

Attention:

Please do not move the feed eccentric cam ① too far to avoid needle breakage.

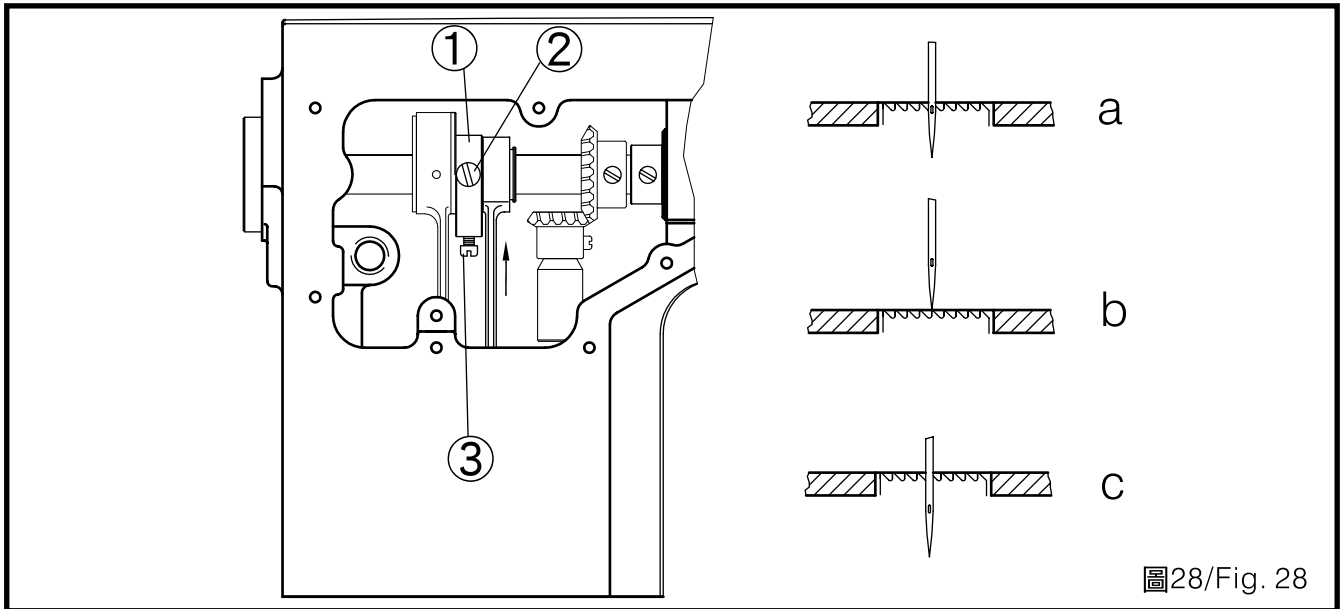


圖28/ Fig. 28

送具傾斜度

ADJUSTING THE ANGLE OF TILT OF THE FEED DOG

1. 當在送具偏心軸②上的記號A與稜線B成一
直線時，送具之傾斜度成水平狀態。(圖
29-a)
 2. 為了避免車縫起皺，用螺絲起子放鬆螺絲
①，將送具偏心軸②依箭頭a的方向轉動
90度，可抬高送具後緣，呈前傾狀態。
(圖29-b)
 3. 為了避免布料送料不足，用螺絲起子放鬆
螺絲①，將送具偏心軸②依箭頭b的方向
轉動90度，可使送具前緣抬高，呈後傾狀
態。(厚布料調整時)(圖29-c)
 4. 送具傾斜度調整過後，送具高度將會改
變，所以送具傾斜度調整後需再檢查其高
度。
1. When mark A on the feed dog eccentric
shaft ② is aligned with the crest line B,
the gradient becomes horizontal. (Fig. 29-
a)
 2. To prevent the fabric puckering, loosen
the screw ① by a screw driver and turn the
feed dog eccentric shaft ② 90° toward
the arrow direction to reduce the front
gradient of the feed dog and to form a
tilting-front status. (Fig. 29-b)
 3. To prevent uneven fabric feeding, please
turn the feed dog eccentric shaft ② 90
degree opposite to the arrow direction.
This could decrease the backward tilt
angle of the feed dog and to form a tilting -
back status. (For adjusting the thick
materials). (Fig. 29-c)
 4. After adjusting the tilt angle of the feed
dog, this will change the height of the feed
dog. Therefore, please recheck its height
after agjusting the tilt angle of the feed
dog.

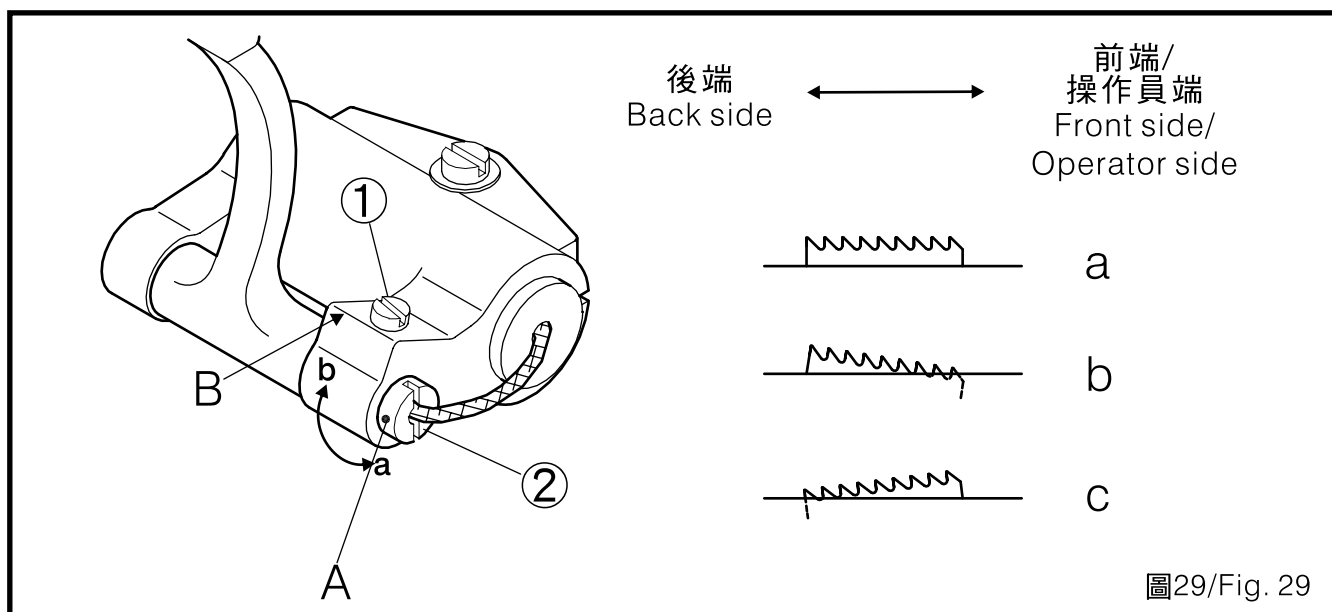


圖29/Fig. 29

送具高度

ADJUSTING THE HEIGHT OF THE FEED DOG

1. 送具高度(送具超出針板面的高度)在出廠時依照布料厚薄調整如下：(圖30-a/b/c)

薄布料： 0.70 ~ 0.80 mm (圖30-a)

中厚布料： 0.75 ~ 0.85 mm (圖30-b)

厚布料： 1.15 ~ 1.25 mm (圖30-c)

2. 如果送具太過突出，車縫薄布料時容易引起褶皺。

3. 送具高度調整：

(1) 放鬆曲柄①螺絲②。

(2) 上下移動曲柄①使送具座升高或下降來加以調整。

(3) 調整好之後再鎖緊螺絲②。

4. 滑塊③的端面應該靠緊曲柄①，並避免鬆動，否則曲柄①之開口部份容易因此磨損。

1. The feed dog height (the height the feed dog emerged from the needle plate surface) is set by the fabric thickness as the followings: (Fig. 30-a/b/c)

Thin fabric : 0.70 ~ 0.80mm (Fig. 30-a)

Normal fabric : 0.75 ~ 0.85mm (Fig. 30-b)

Heavy fabric : 1.15 ~ 1.25mm (Fig. 30-c)

2. If the feed dog is emerged too much, it is very easily to form the puckers when sewing thin fabrics.

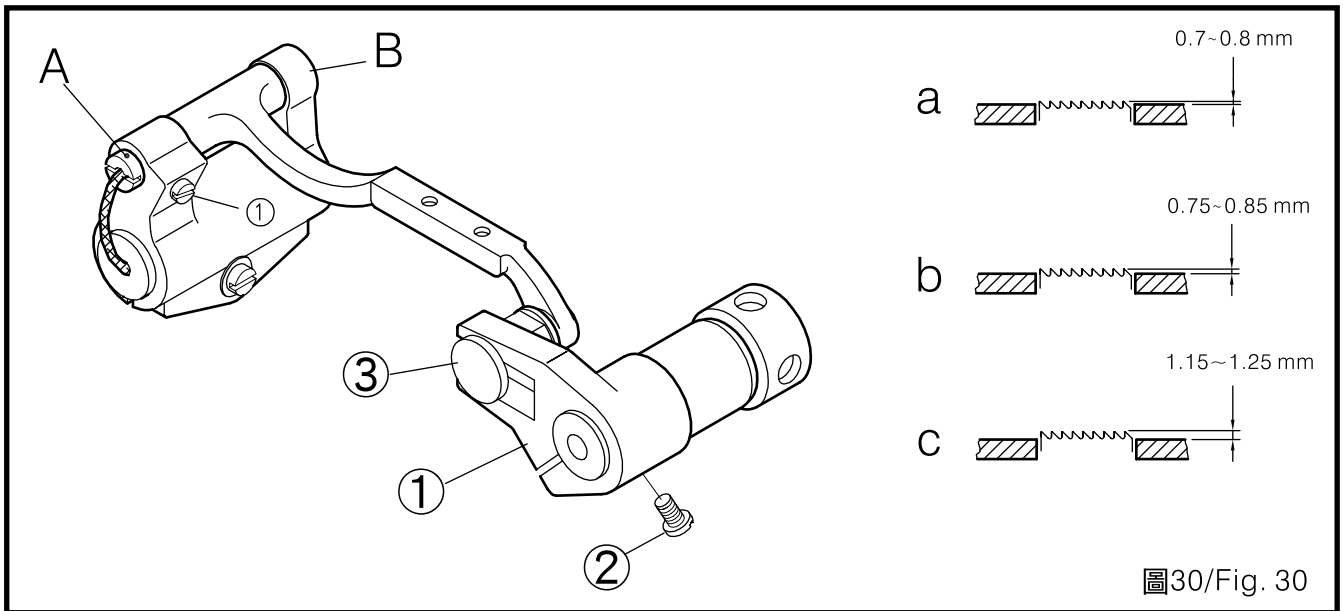
3. To adjust the feed dog height :

(1) Loosen screw ② on crank ①.

(2) Move the crank ① up and down to move the feed bracket up and down to adjust.

(3) Lock the screw ② securely after the adjustments.

4. There should be no space between the plain surface of the roller ③ and the crank ①. Also, avoid the situation of parts loosening happening. Otherwise, the opening part of the crank ① will get worn easily



針與梭頭時位關係

CORRELATION BETWEEN NEEDLE AND HOOK

1. 針與梭頭時位調整如下：轉動手輪使針棒降至最低點(下死點)，並放鬆螺絲①。(圖31)

1. The timing adjustment between needle and hook is: turn the hand wheel to lower the needle bar down to the lower dead point of its stroke, and loosen the screw ①. (Fig. 31)

(1) 調整針棒高度：

(1) Adjusting the height of needle bar：

- (DB針)將針棒②上之標線 A 對齊針棒下襯套③底部，然後鎖緊固定螺絲①。
- (DA針)將針棒②上之標線 C 對齊針棒下襯套③底部，然後鎖緊固定螺絲①。

- (DB needle) Align the mark line A on needle bar ② with the bottom edge of needle bar lower bushing ③, and then tighten the setscrew ①.
- (DA needle) Align the mark line C on needle bar ② with the bottom edge of needle bar lower bushing ③, and then tighten the setscrew ①.

(2) 調整梭頭之位置：

(2) Adjusting the position of the hook：

- (DB針)放鬆梭頭之3個固定螺絲，轉動手輪將針棒②上之標線 B 對齊針棒下襯套③底部。

- (DB needle) Loosen the three setscrews on the hook, and turn the hand wheel to align the mark line B on ascending needle bar ② with the bottom edge of needle bar lower bushing ③.

- (DA針)放鬆梭頭之3個固定螺絲，轉動手輪將針棒②上之標線D對齊針棒下襯套③底部。

(3) 經上述調整步驟後，將梭頭尖⑤與針中心④對齊，且車針與梭頭尖之間隙應為 0.05 ~ 0.10 mm 最為適當。

2. 更換梭頭時，先確認其零件代號再更換。

注意：

如果梭尖與針之間隙太短使得梭尖碰觸針，則梭尖將會容易受損；如果間隙過大，將容易引起跳針。

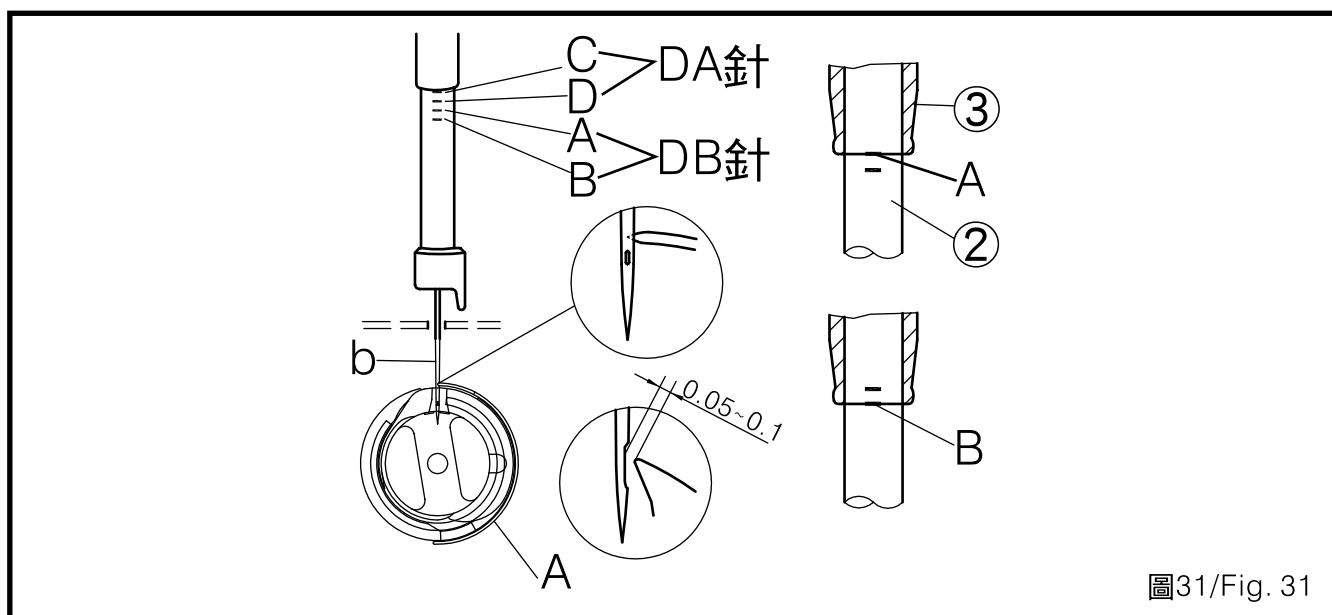
- When a DA needle is used loosen the three setscrews on the hook, turn the hand wheel, and align marker line D on ascending needle bar ② with the bottom edge of needle bar lower bushing ③.

(3) After the adjustments mentioned above are done, align hook blade point ⑤ with the needle center ④. Keep it at the ideal clearance of 0.05 ~ 0.1 mm between the needle and the hook.

2. Confirm the part number is correct before replacing hooks.

Attention :

If the clearance between the hook tip and the needle is less than the identified value, the hook tip will touch the needle and cause the damage of the hook tip happened easily. If the clearance is too wide, stitch skipping will occur easily.



押具高度調整

1. 放鬆固定螺絲①，並調整押具高度及角度。(圖32)
2. 調整後，確實鎖緊固定螺絲①。

PRESSER FOOT HEIGHT ADJUSTMENT

1. Loosen screw ①, and adjust the height of presser foot and its orientation. (Fig. 32)
2. After adjustment, lock the screw ① securely.

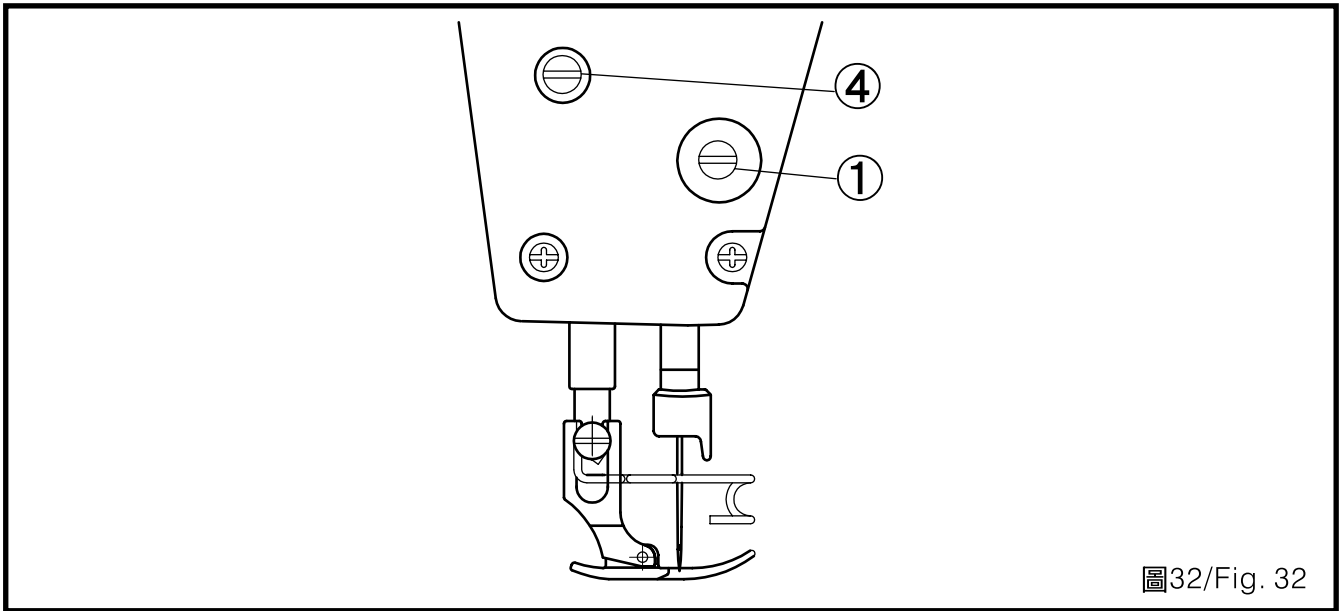


圖32/Fig. 32

導線片之調整

THE THREAD TAKE UP STROKE ADJUSTMENT

1. 當車縫厚布料時，將導線片①往左(A方向)移動，以增加挑線桿之拉線量。(圖33)
2. 當車縫薄布料時，將導線片①往右(B方向)移動，以減少挑線桿之拉線量。
3. 一般導線片①是放在其標線C與螺絲中心對齊位置。

1. Move thread guide ① to the left (in direction A) to increase the amount of thread pulled out by the thread take-up when sewing heavy fabric. (Fig. 33)
2. Move thread guide ① to the right (in direction B) to decrease the amount of thread pulled out by the thread take-up when sewing light-weight materials.
3. In general, thread guide ① is positioned to have the marker line C aligned with the center of the screw.

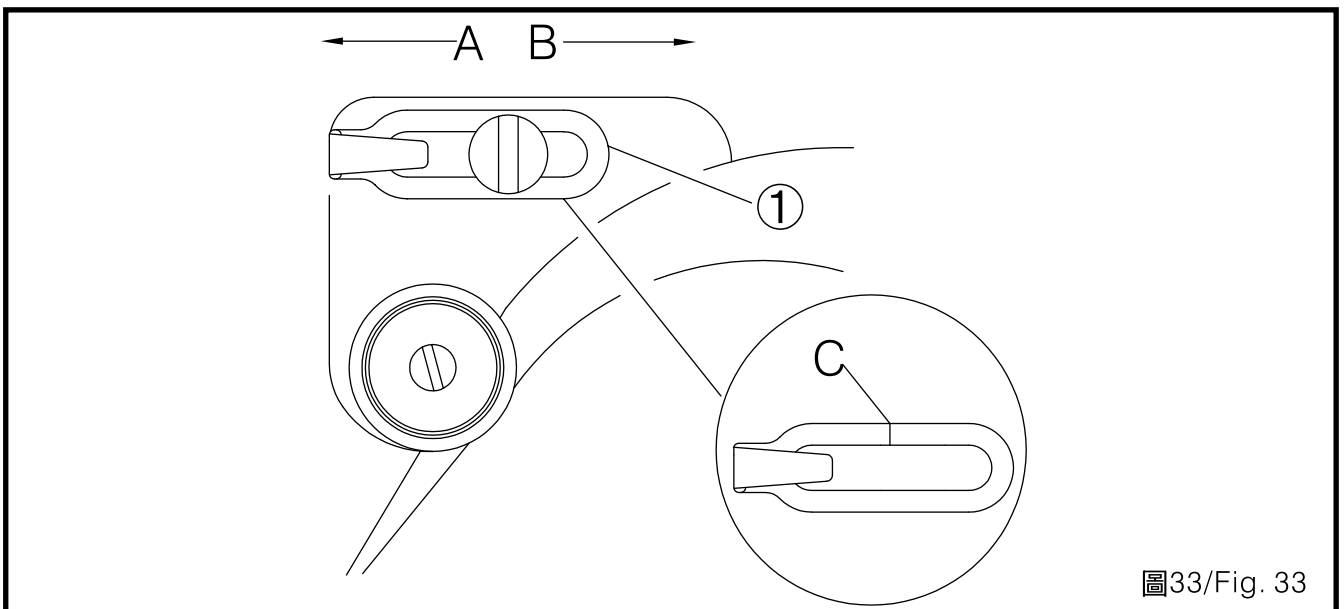


圖33/Fig. 33

腳踏板壓力及行程

ADJUSTING THE TENSION ON PEDAL AND PEDAL STROKE

1. 腳踏板前踩位置的壓力調整。(圖34)

(1) 腳踏板壓力可經由改變腳踏板壓力調整彈簧①之安裝位置而改變。

(2) 將彈簧勾移往左邊，壓力減少

(3) 將彈簧勾移往右邊，壓力增加。

2. 腳踏板後踩位置的壓力調整。

(1) 壓力可經由調整螺絲②調整。

(2) 將調整螺絲依箭頭方向，壓力增加。

(3) 將調整螺絲反箭頭方向，壓力減少。

3. 腳踏板行程調整

當將連接桿③移往左邊孔方向時，腳踏板行程減少。

1. Adjusting the front part treading pressure of the pedal. (Fig. 34)

(1) The pressure of the pedal can be adjusted by changing the mounting position of pedaling pressure adjust spring ①.

(2) The pressure is reduced when moving the spring hook to left side.

(3) The pressure is increased when moving the spring hook to right side.

2. Adjusting the rear part treading pressure of the pedal.

(1) The rear part treading pressure of the pedal can be adjusted by driving the regulator screw ②.

(2) The pressure is increased when you follow the direction on the screw to drive it.

(3) The pressure is decreased when you drive the screw by the opposite direction of the arrow on the screw.

3. Adjusting the pedal stroke.

The pedal stroke is shorter as connecting rod ③ moved to the left holes.

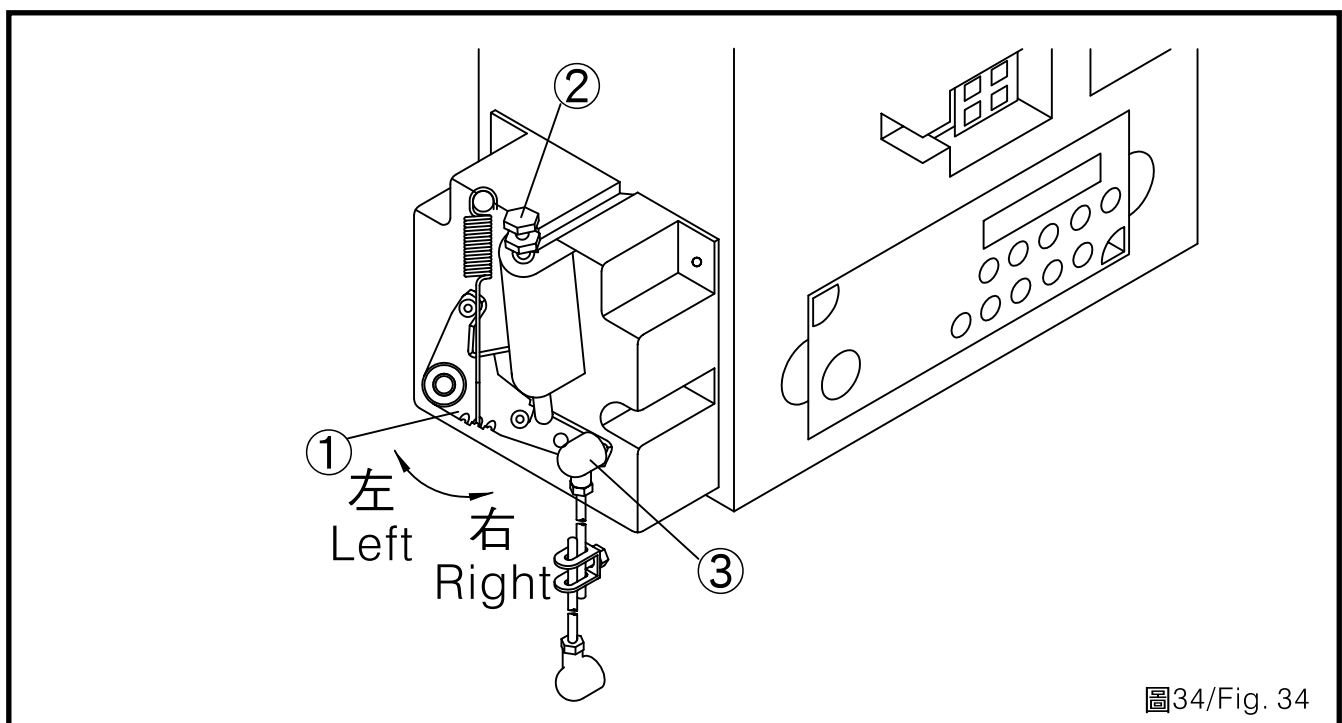


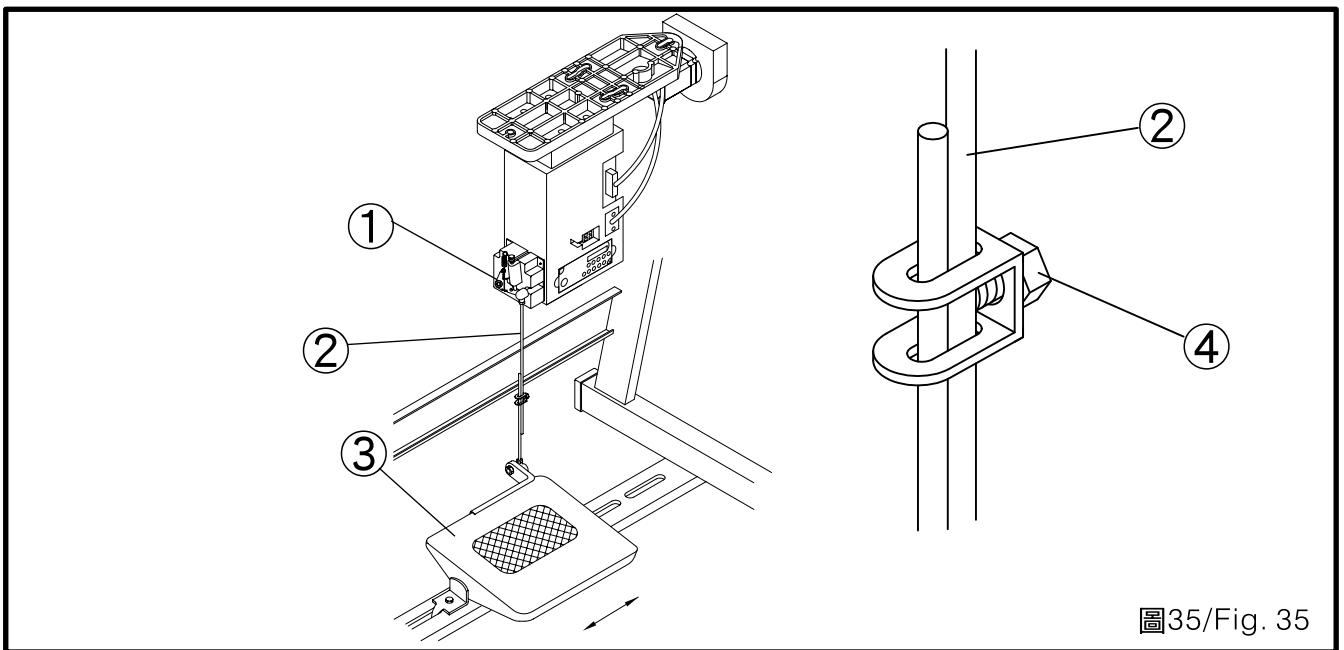
圖34/Fig. 34

腳踏板調整

ADJUSTING THE PEDAL

1. 連接桿安裝(圖35)
依圖箭頭方向所示，左右移動腳踏板③，
使馬達控制桿與連接桿②成一直線。
2. 腳踏板傾斜度調整
 - (1) 腳踏板斜度可藉著改變連接桿長度而
自由調整。
 - (2) 放鬆調整螺絲④調整連接桿②長度。

1. Install the connecting rod. (Fig. 35)
Move the pedal③ left and right as the
arrow shows in the figure in order to align
the motor control lever ① with the
connecting rod ②
2. Adjusting the slope of the pedal.
 - (1) The tilt degree can be changed and
adjusted freely by changing the length of
the connecting rod.
 - (2) The length of the connecting rod ② is
adjusted by loosening the adjusting
screw ④.



撥線桿

ADJUSTING THE THREAD WIPER

1. 撥線桿位置(圖36, 37, 38)
請依車縫布料厚薄，調整撥線桿位置。

調整步驟如下：
 - (1) 依正常轉動方向轉動手輪，使得手輪
上之白點標記①對齊機頭上之標記
②。

1. The thread wiper location (Fig. 36, 37, 38)
Please adjust the thread wiper according
the the thickness of the materials.
The adjusting steps are as the followings.
 - (1) Turn the hand wheel in normal rotating
direction, so that the white mark ① can
align with the mark ② on the machine
head.

(2) 調整撥線桿平坦部位與針中心距離1 mm，鎖緊撥線桿調整螺絲⑤，使撥線桿被其鎖圈⑥壓住及固定。

(3) 不用撥線桿時，請將其開關⑦切掉。

(2) Adjust the flat straight part of the thread wiper in a distance of 1 mm from the center of the needle. Lock the adjust screw ⑤ of the thread wiper, so that the thread wiper can be fixed and firmly pressed by its collar ⑥.

(3) Please turn off the thread wiper switch ⑦, when there is not necessary to use the thread wiper.

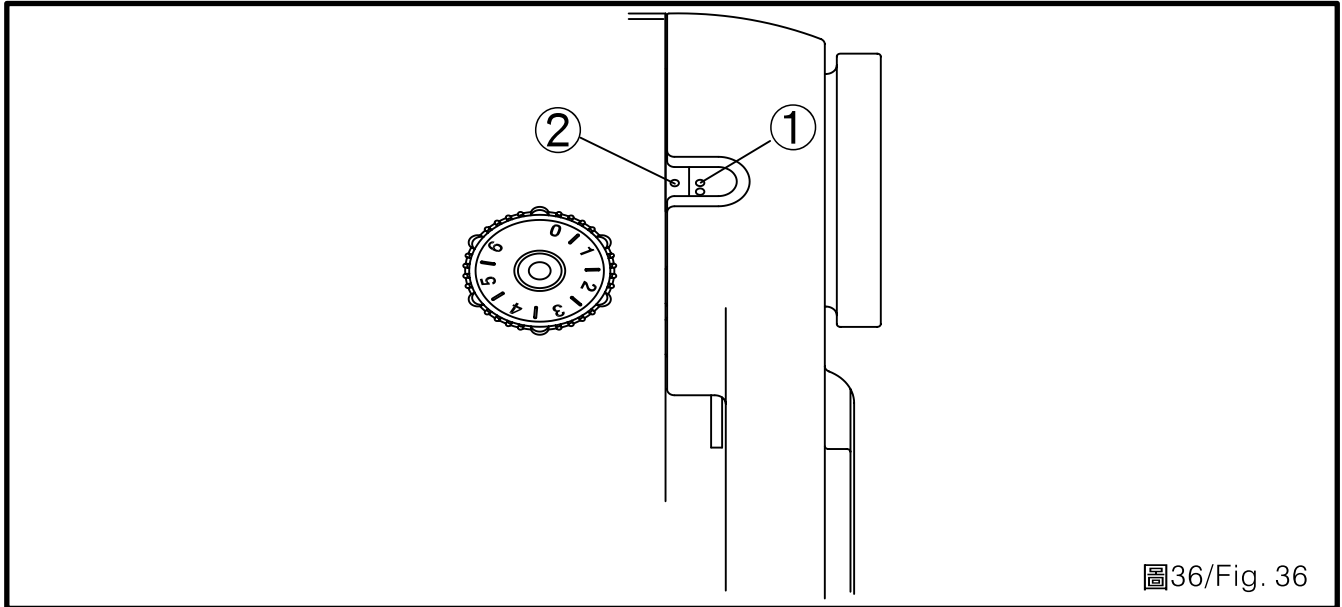


圖36/Fig. 36

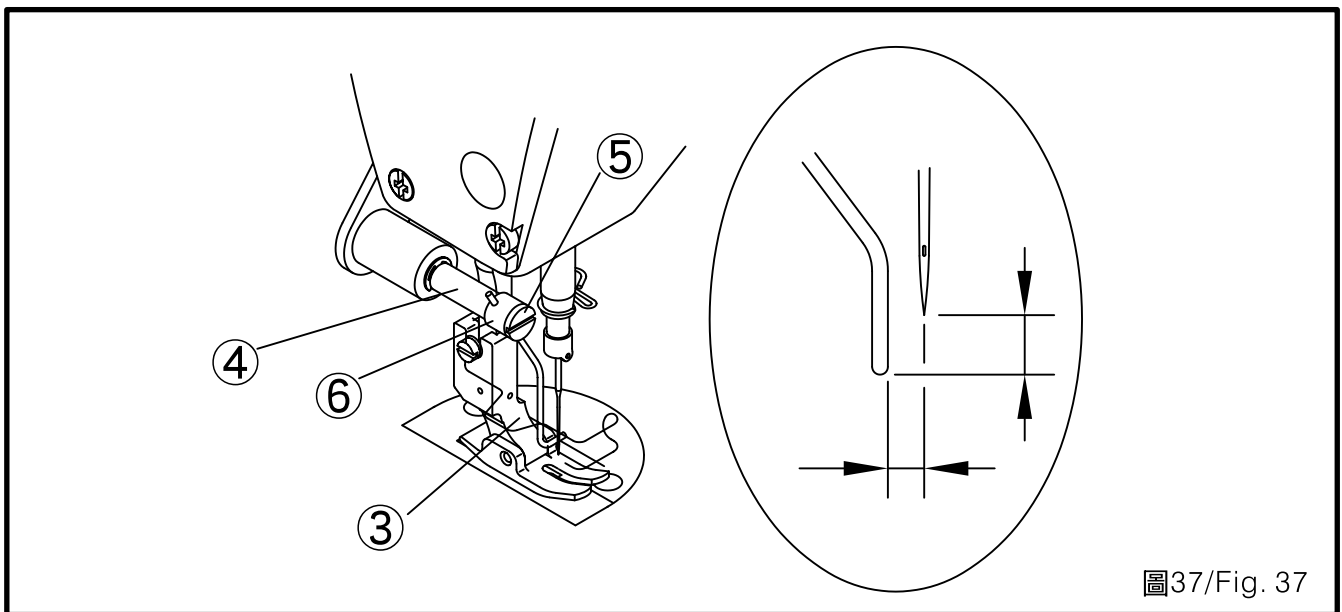


圖37/Fig. 37

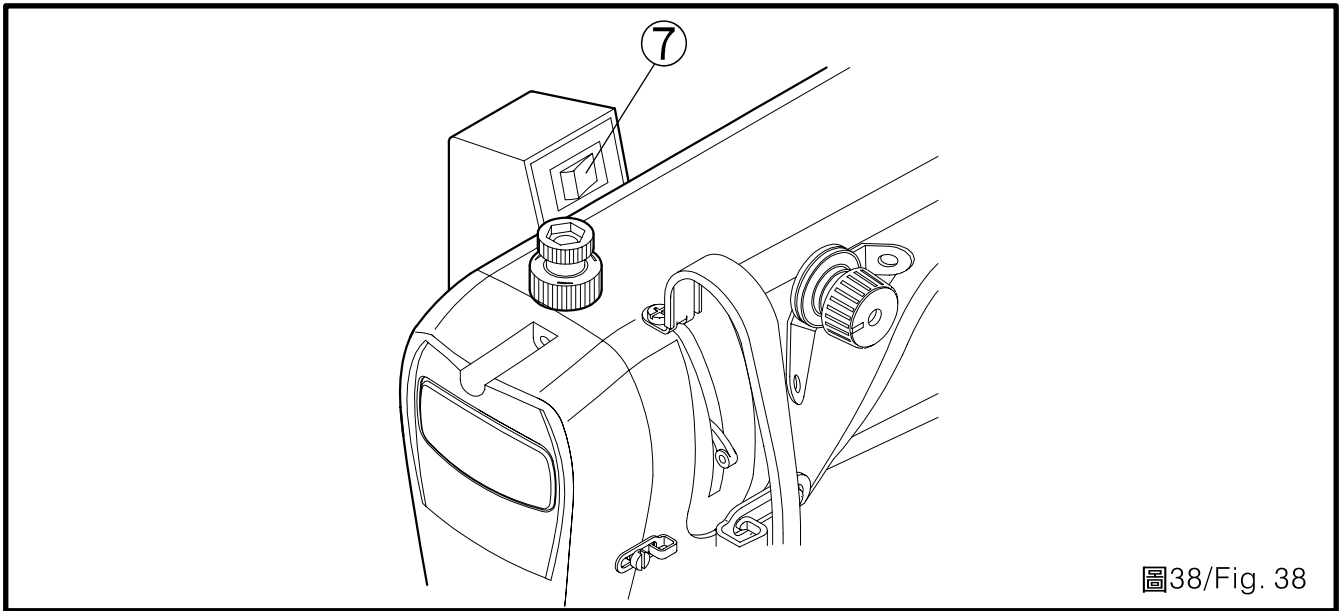


圖38/Fig. 38

梭頭油量調整

ADJUSTING THE AMOUNT OF OIL IN THE HOOK

1. 轉動裝在梭頭傳動大心上之油量調整螺絲，轉向"+"號方向(順著 A 方向)油量增加；轉向"- "號方向(順著 B 方向)油量減少。(圖39)
2. 梭頭油量適當調整後，將機器空轉30秒，以重新檢查確認梭頭油量。

1. The oil amount adjustment screw is mounted on the hook driving shaft. Turn the screw counter clockwise toward "+" direction (A direction) to increase the amount of oil supplied in the hook. Turn the screw clockwise toward "-" direction (B direction) to reduce the amount of oil supplied in the hook. (Fig. 39)
2. After the amount of oil in the hook is properly adjusted, run the machine idly for 30 seconds to do oil splashing observation test to reconfirm the amount of oil in the hook.

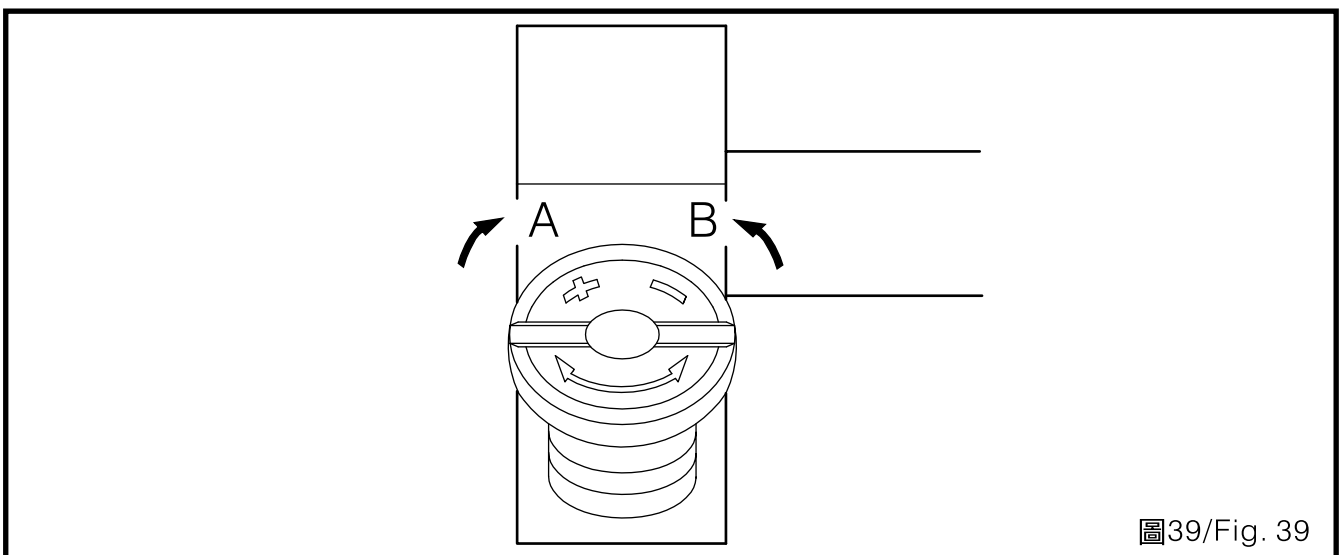


圖39/Fig. 39

操作環境照明

提供一個警示標誌，告知使用者：工業用縫紉品或是縫紉系統必須在該縫紉區域未啟動照明裝置前，禁止插電或通電；照明裝置的最大輸入功率應該能夠輕易辨識，當照明裝置被重置或移動的時候，警示標誌也應設置在照明裝置插座上或是附近。警示標示如圖40所示

LIGHTENING OF THE OPERATION ENVIRONMENT

Provide a warning that an industrial sewing unit or sewing system must always be unplugged from the local lighting of the sewing area before relamping, the marking of maximum rated input of a lamp shall be easily discernible while the lamp is being replaced indicated on or near the lamp socket as shown on Fig. 40.



操作者條件

1. 熟讀並了解使用說明書內容。
2. 認識機器各部功能及注意事項。
3. 了解各警告標籤之意義。
4. 了解熟悉機器之操作方式。
5. 操作者須保持精神狀態良好。
6. 操作者須穿著合宜適當之工作服。
7. 視需要培養操作者使用機器之熟練度。

CONDITIONS OF ALL OPERATORS

1. Read and understand well the content of this instruction book.
2. Know the functions of major parts and understand the notices.
3. Truly realize the meanings of all warning tags.
4. Realize and be familiar with how to operate this machine.
5. Operators have to keep well mental status.
6. Operators shall wear appropriate and proper working suits.
7. Develop the familiarity of how to operate the machine if needed.

腳踏板依以下四步驟操作：(圖41)

1. 輕踩踏板，如B，機器將以低速運轉。
2. 進一步重踩踏板前方時，如A，機器以較高速運轉(如果預先設定有自動倒縫功能，機器將在完成倒縫後再高速運轉)。
3. 踏板恢復至原位置，如C，機器暫停轉動(針在上或下)。
4. 將踏板完全向後踩，如E，機器進行切線動作。
5. 注意事項：
 - (1) 如果你的機器附有押具自動提升器，機器停止與切線動作之間會多了一個步驟，即當你輕輕後踩腳踏板，如D，押具向上提升，再往下踩，執行切線動作。
 - (2) 當倒縫動作執行時，如果將腳踏板回復到原位置，機器會在倒縫動作完成後才停止。
 - (3) 即使機器在高速或低速中，只要立刻將腳踏板往後踩，它都會執行正常的切線動作。
 - (4) 如果在機器執行切線動作後，即便立刻將腳踏板恢復原位置C，機器仍將完成切線動作。

The foot pedal is operated as the following 4 steps. (Fig. 41)

1. Lightly tread the front part of the foot pedal shown as B in Fig. 32, machine runs at low sewing speed.
2. Further, tread the front part of the foot pedal shown as A, Machine runs at high sewing speed. (The machine runs at high speed after it completes the backstitch if the automatic backstitch has been preset.)
3. Reset the pedal to its original position, shown as C. Machine will stop (with the needle up or down.)
4. Fully depress the back part of the pedal shown as E, so that machine trims threads.
5. Attentions：
 - (1) One extra step is given between the machine stop and thread trimming steps if your machine is equipped with the auto presser foot lifter. When you lightly depress the back part of the pedal, shown as D, the presser foot goes up. The thread trimmer actuates if you further tread the back part of the pedal.
 - (2) Machine will stop after completing the backstitch if you relocate the pedal to its neutral position during executing the automatic backstitch.
 - (3) Whether the machine is under high speed or low speed sewing, you can make the machine doing thread trimming any time by tread down the back part of the pedal to do so.
 - (4) Even if you reset the foot pedal to its neutral position C immediately after the machine started thread trimming action, the machine will completely perform thread trimming.

(5) 當針停在下定位時，如果要將針上提，則將腳踏板後踩一次至D位置即可。

(5) When the machine stops and makes the needle located at the lower dead end, tread the back part of the foot pedal once to D if you want to bring the needle up.

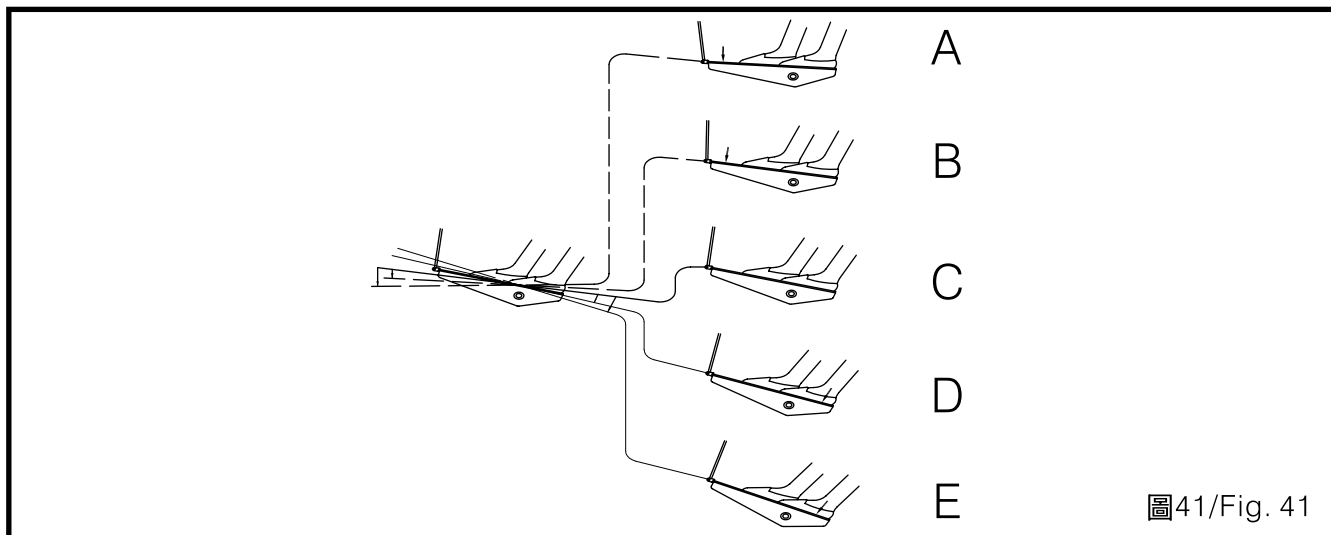


圖41/Fig. 41

單觸式倒縫機構

OPERATING THE ONE TOUCH TYPE REVERSE FEED STITCHING MECHANISM

1. 按下開關①，機器啟動倒縫功能(圖42)。
2. 只要開關持續被按著，機器繼續執行倒縫功能。
3. 開關放鬆，機器即恢復一般車縫功能。

1. Press the switch lever ① to start the back stitch function. (Fig. 42)
2. As long as the switch lever is pressed, the sewing machine will continue doing back stitch.
3. Release the switch lever, and the sewing machine will resume the normal sewing function.

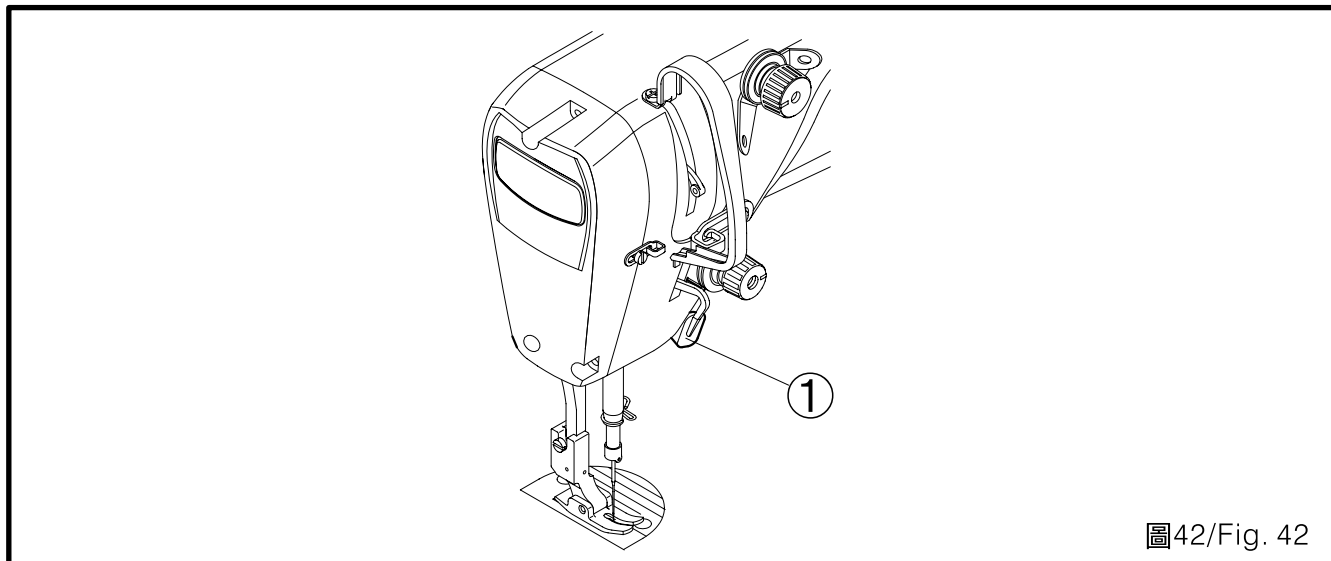


圖42/Fig. 42



注意CAUTION



清潔作業前，請切斷電源。當誤觸起動開關時，縫紉機動作易導致人員受傷。

Turn off the power switch before carrying out cleaning. The machine may operate if the treadle is pressed incautiously, which could result in injury.



加潤滑油和黃油時，務必戴好保護眼鏡和手套，以防潤滑油進入眼中或沾在皮膚上，易引起發炎。

Be sure to wear protective goggles and gloves when handling the lubricating oil and grease so that they do not get into your eyes or onto your skin, otherwise inflammation can be resulted.



潤滑油或黃油不能飲用，否則將會引起嘔吐和腹瀉，將油放在小孩拿不到的地方。

Furthermore, do not drink or eat the oil nor the grease for they can cause vomiting and diarrhea. Keep the oil away of the reach of children.

縫紉機頭倒下或豎起時，請以雙手進行操作。

Use both hands to hold the machine head when tilting or returning it to its original position.



單手操作時，因縫紉機的重量較重，萬一滑落易導致受傷。

If only using one hand to move the machine, the weight of the machine head may cause slipping and you may get hurt.

為了保持縫紉機的機能，且能長久的使用，請每日加以保養。另外，縫紉機如果長時間未使用，請進行以下的保養後再使用。

For keeping the machine quality and lengthening the usage term of this sewing machine, please maintain it everyday. In addition, before first use after a long idling time, please follow the following steps to maintain.

《保養》

1. 抬起押具
2. 將兩個螺絲①拆下，然後拆下針板②。
3. 以軟毛刷清除送布牙③上的布屑。(圖43)
4. 清潔後將針板②裝上。
5. 後傾斜縫紉機頭部
6. 定期保養項目(表7)

《CLEANING》

1. Raise the presser foot.
2. Remove the two screws ①, and then remove the needle plate ②.
3. Use a soft brush to clean dust and lints on the feed dog teeth ③. (Fig. 43)
4. Install the needle plate ② after doing the above cleaning.
5. Tilt back the machine head.
6. Periodical Maintenance Items (Table 7)

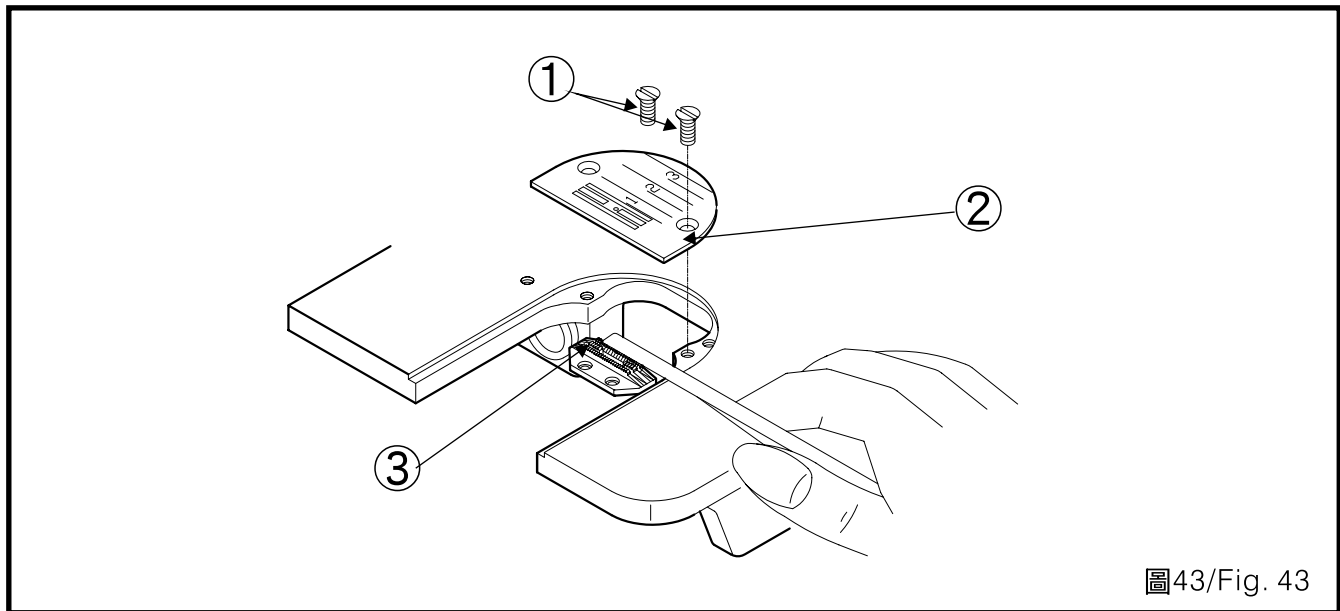


圖43/Fig. 43

保養循環 Maintenance Cycle	保養項目Maintenance Items
每天 Daily	1. 清潔送料具上之棉絮 Clean the lint on the feed dog.
	檢查油盤是否有足夠之液態油。(油量在油鏡之上、下兩紅漆記號間) 2. Check if there has enough liquid oil inside the oil pan. (The amount should be between the red up and down paint mark of the oil level gauge.)
	3. 保持機器及操作台清潔 Keep the machine and the operation table clean.
每週 Weekly	1. 保持電源外觀乾淨 Keep the power cords looking clean and neat.
	2. 保持操作面板乾淨 Keep the operational panel clean.
	3. 檢查電源零件是否鬆脫或在正確位置 Check if the power parts is loosening or still at the right position.
每三個月 Quarterly	1. 更換油盤內之液態油 Replace the liquid oil inside the oil pan.
每年 Annually	1. 檢查傳動皮帶是否疲乏或毀損 Check the transmission belt to see if it is weariful or damaged.

表7/Table 7

潤滑

OIL LUBRICATION

1. 潤滑說明(圖44)

- (1) 使用專用油注入油盤中，液面到高點 A。
- (2) 當液面低於低點 B 時，再添加所指定之潤滑油。
- (3) 如果潤滑正常，當機器操作中，你可以從油鏡②中看到噴油現象。

1. Oil lubrication instruction (Fig. 44)

- (1) Fill the oil pan with specified oil up to high mark A.
- (2) Refill the oil pan with the specified oil if the oil level is lower below low mark B.
- (3) You will see oil splashing via the oil sight window ② if the lubrication functions well when machine runs.

(4) 當新機器第一次運轉，或經過一段時間未使用，前10分鐘試車之轉速，請保持在3,000到3,500 S.P.M.之間。

(4) When running the machine first time or after a period of idling time, please run your machine at 3,000 S.P.M. to 3,500 S.P.M. for about 10 minutes.

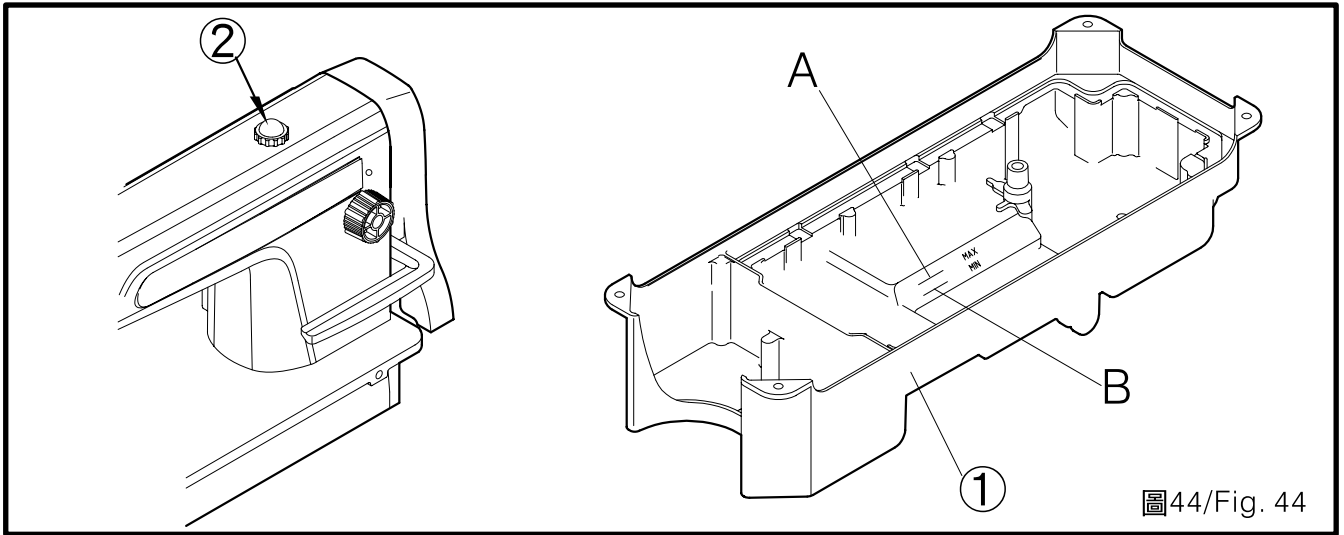


圖44/Fig. 44

2. 針棒 / 挑線桿供油量之調整。(圖45)

2. Oil supply adjustment for needle bar/thread take-up lever (Fig. 45)

(1) 由調整栓①調整針棒曲柄② / 挑線桿③之供油量。

(1) Turning adjust pin ① to adjust the supplied oil volume to the needle bar crank ② and the thread take-up ③.

(2) 將調整栓①順著 B 方向調整，使 A 點靠近針棒曲柄②，則供油量減少。

(2) To decrease supplied oil amount, turn the adjust pin ① in direction B to make the mark A close to the needle bar crank ②.

(3) 將調整栓順著 C 方向調整，使 A 點離開針棒曲柄②，則供油量增加。

(3) To increase the supplied oil amount, turn the adjust pin ① in direction C to make the mark A away from the needle bar crank ②.

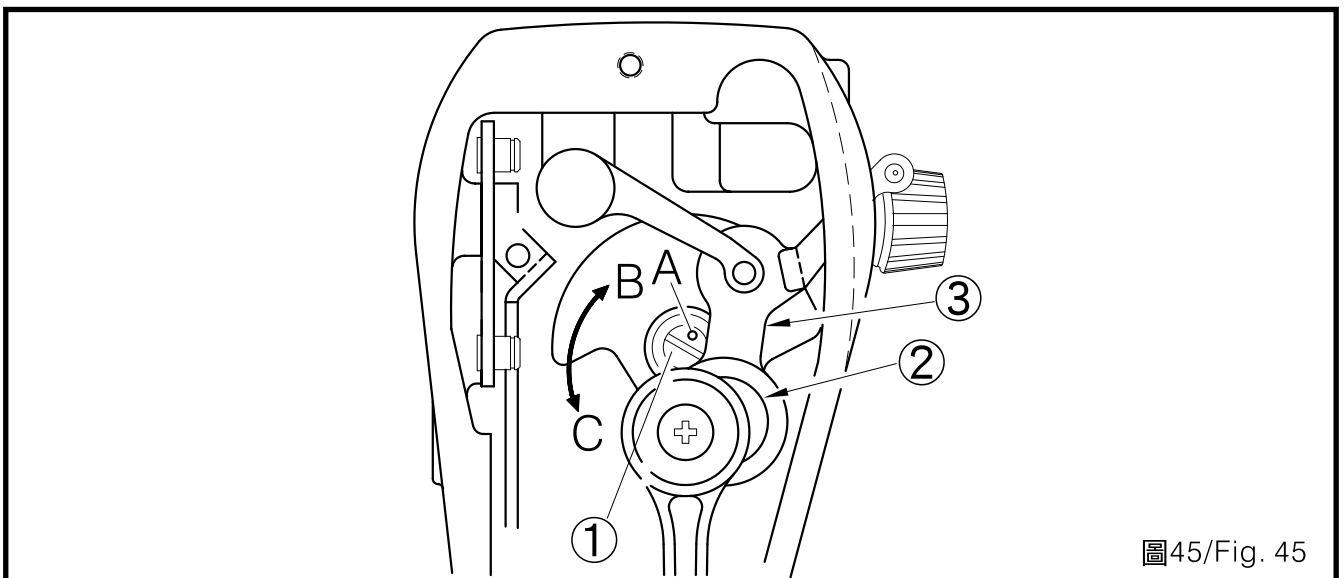
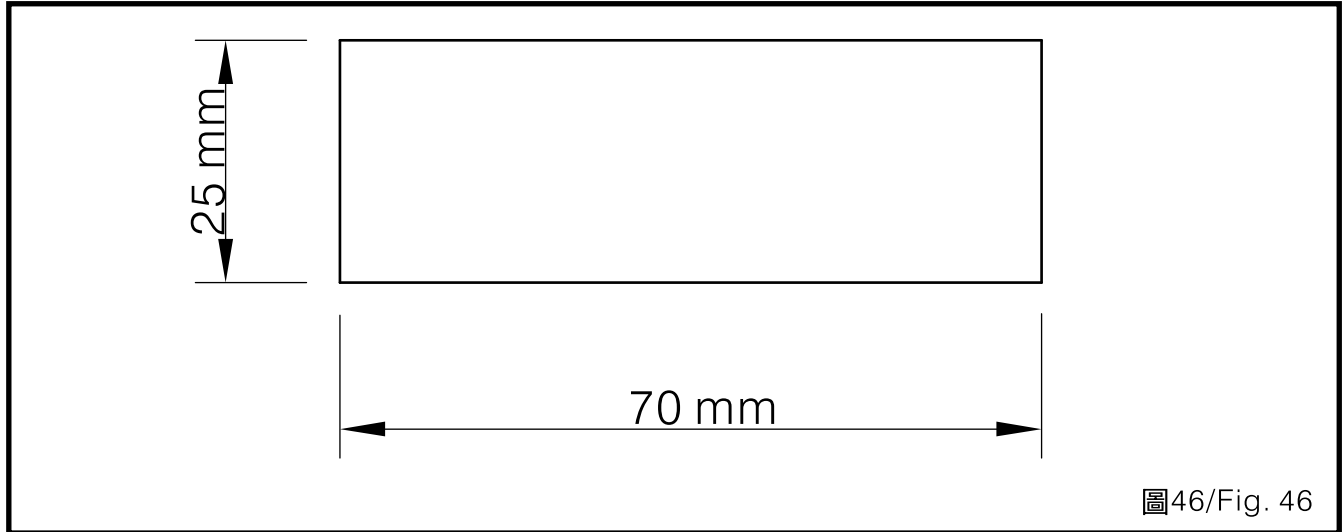


圖45/Fig. 45

3. 梭頭油量(噴油量)之調整

- (1) 油量確認試紙。約25mm × 70mm，
可使用任何材質之試紙。(圖46)



3. Adjust the oil amount of the hook (oiling amount).

- (1) Oil splashing test paper is about 25mm × 70mm. Any material of test paper is accepted. The material will not affect results. (Fig. 46)

- (2) 確認油量位置。將試紙靠緊油盤壁，
將油量確認試紙置於梭頭下方。(圖
47)

①梭頭②紙③油盤
④接觸點⑤底座⑥襯套

當進行第(2)步驟時，移開滑板並非常小心，
勿使手指觸及梭頭。

4. 注意事項：

- (1) 如機器尚未充份熱機，請先將機器空
轉 3 分鐘暖車。
- (2) 在機器運轉中，將油量確認試紙置於
梭頭下方。(圖47)
- (3) 確認油盤油量(油面)介於『高』與
『低』刻度間。
- (4) 必需在 5 秒鐘內完成確認油量之動作
(用手錶測時間)。

- (2) Confirm the oil amount. Place the test
paper under the hook and fit the paper
closely against to the wall of the oil
pan. (Fig. 47)

①HOOK ②PAPER ③OIL PAN
④TOUCHING ⑤BASE ⑥BUSHING

When doing step (2), carefully remove the
sliding plate and do not touch the hook with
fingers.

4. Attentions :

- (1) If the machine doesn't warm up
enough, please run the machine 3
minutes idly.
- (2) While the machine is running, place
the oil splashing test paper under the
hook. (Fig. 47)
- (3) Confirm that the height of the oil level
in the oil pan falls between "HI " and "
LOW ".
- (4) Oil splashing observation test should
be completed in 5 seconds.(Use a
watch to check the time used.)

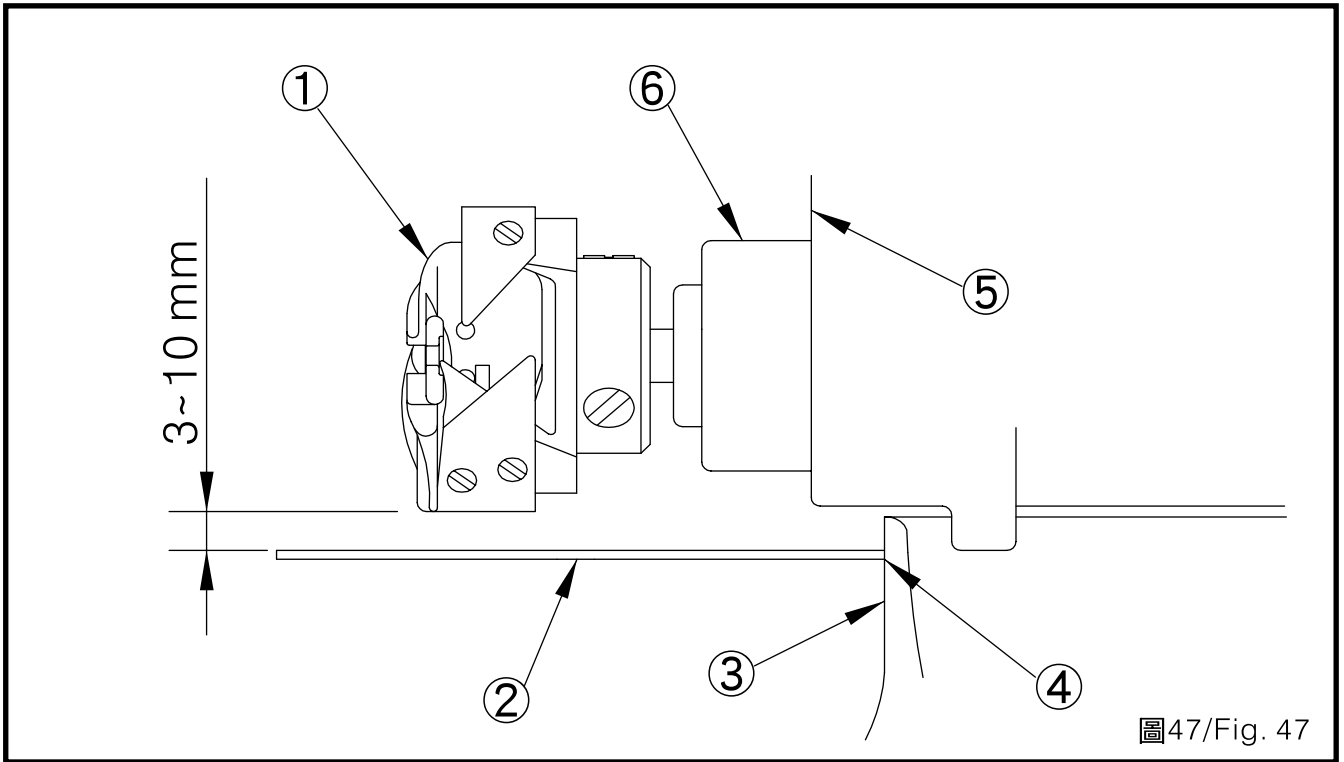


圖47/Fig. 47

5. 適當油量顯示範例(圖48)

梭頭噴油量約1mm適當油量(小)

L918-H : 3mm

L918-M : 1.5mm

L918-L : 0.5mm

梭頭噴油量約2mm適當油量(大)

L918-H : 6mm

L918-M : 3mm

L918-L : 1mm

5. A sample of observations indicate the appropriate oil amount. (Fig. 48)

Oil amount in the hook (small) as shown is approximated 1mm.

L918-H : 3mm

L918-M : 1.5mm

L918-L : 0.5mm

Oil amount in the hook (large) as shown is approximated 2 mm

L918-H : 6mm

L918-M : 3mm

L918-L : 1mm

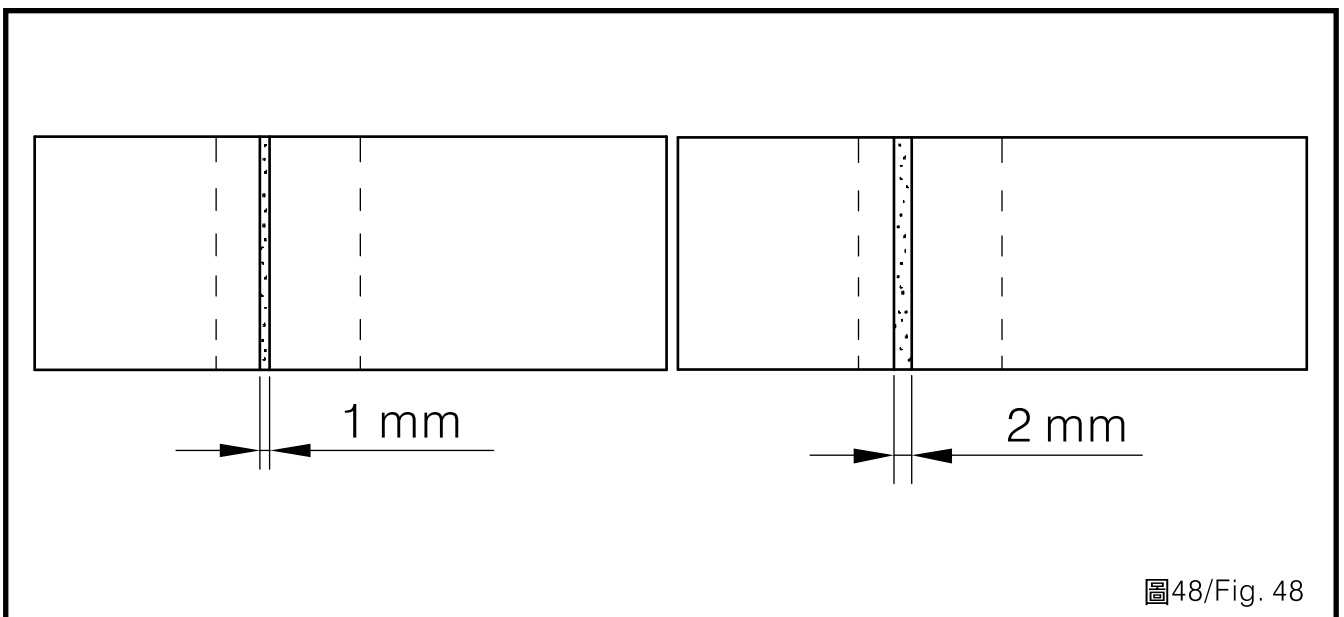


圖48/Fig. 48

(1) 油量顯示範例必需根據車縫布料與程序加以調整，切勿使梭頭油量過多或過少。油量過少，梭頭將卡住(梭頭將發熱)；油量過多，車縫物將可能沾染油污。

(2) 調整梭頭油量，油量必需達到3次測試都相同(在3張試紙上)。

(1) The amount of oil in the hook (ref. to the sample shown on Fig.9) should be adequately adjusted according to the sewing materials and processes. Insufficient amount of oil will cause the hook to cease and overheat. Excess amount of oil may cause the sewing product stained with oil.

(2) Adequate adjustment should be reached in the way that same oil splashing observation will be collected in 3 times on separate paper.

故障檢修

TROUBLESHOOTING



注意CAUTION

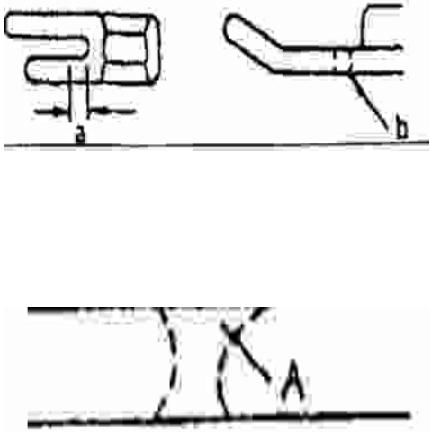


在進行故障檢修查詢之前，請先關閉電源並拔出電源，否則如果誤觸啟動開關，縫紉機會動作，易導致人身傷害。

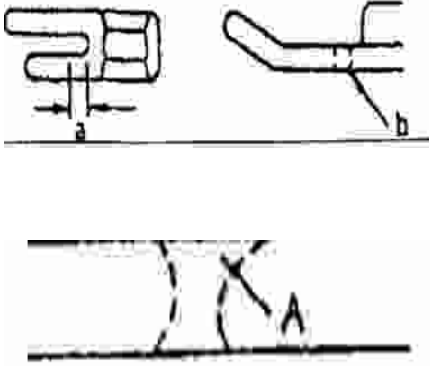
Before processing the troubleshooting, please turn off the power switch and unplug the electronic cord. Otherwise, if touching the start switch incautiously, the sewing machine will function and will probably cause injuries happened to operators.

No.	問題 Problem	可能原因 Possible Causes	檢查調整 Check & Adjust
1.	跳針 Skipped stitch 剪線後留在針尖處的針線頭太短 The needle thread leftover on needle tip after trimming is too short	針線過線部位不正常，剪線時針線張力太強 The needle thread guide is incorrect. The tension of the needle thread is too strong when trimming. 第一夾線器的縫線張力太強 The thread tension of the first thread clamp is too strong.	檢查針線過線部位，調整過線桿上的纏繞針線狀況以及插線架座的過線桿位置 Check the needle thread guide. Adjust the thread on the thread guide lever and the position of the thread guide lever on the thread stand. 將第一夾線器的夾線螺母向左轉動，減小張力 Turn the thread clamp nut of the 1st thread clamp left to reduce the tension.

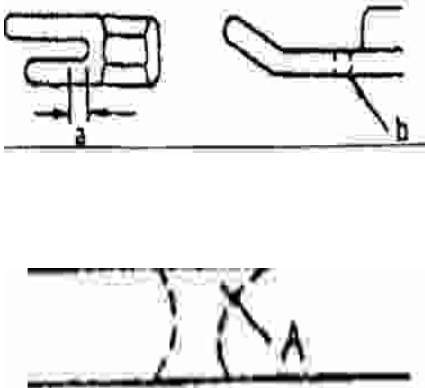
No.	問題 Problem	可能原因 Possible Causes	檢查調整 Check & Adjust
		<p>剪線時，第二夾線器的漂浮量不充足 The raising volume of the 2nd thread clamp is not enough while trimming.</p> <p>凸輪定位過早 The cam positions too early.</p> <p>因底線壓桿位置不對，剪線時針線脫出 Because of the incorrect position of the lower thread press rod, the needle thread escapes from the needle while trimming.</p> <p>定刀離機針太靠近，刀頭太尖 The fixed trimmer is too close to the needle. The trimmer tip is too sharp.</p> <p>切刀擋線板、動刀或梭子有毛病 Trimmer, thread holding plate, movable trimmer or bobbin has problems.</p> <p>標準凸輪定時過早 The timing of the standard cam is too early.</p>	<p>向右推入底線壓桿時，檢查第2夾線器的漂浮量應在0.5~1 mm之間。用底板下面的調節螺母。其次再檢查一下夾線器平行鬆弛否。不符合要求時，請試著轉動夾線簧180°或修正彈簧的傾斜度 When pushing the lower thread press rod right, check the lifting volume of the 2nd thread clamp to be about 0.5~1.0 mm. Check the parallel of the thread clamp by the adjusting nut under the lower desk plate. If the parallel is not qualified, please try to rotate the thread clamp spring 180° or correct the slope of the spring.</p> <p>檢查和調整凸輪的定時配合 Check and adjust the timing of the cam.</p> <p>檢查底線壓桿緊固螺釘的鬆緊狀態 Check the tension of the fixed screw of the lower thread press rod.</p> <p>取下針板，檢查定刀位置或修正動刀的傷底部位 Remove the needle plate, and check the position of the fixed trimmer or fix where the movable trimmer is damaged.</p> <p>檢查梭子和擋線板孔部分的傷底，如有損傷處，可用砂紙磨平。如損傷太嚴重時，應調換新零件 Check the damaged part of the bobbin and the thread holding plate hole. If there are burrs, polish them with the carborundum paper. If the damage is too serious, please replace it with a new one.</p> <p>調至符合化纖線（特殊）的定時要求。 Adjust to the timing that is suitable for chemical fiber threads.</p>
2.	<p>跳針 Skipped stitch</p> <p>機針、針板或押腳使用不當、或者押腳壓力太小 Improper use of the needle, the needle plate, or the presser foot, or the pressure of the presser foot is too small.</p>	<p>押腳的a尺寸太大，或b部分的送料口太大，故縫好的針線壓不住針板孔的A部分送料口太大 The size a of the presser foot is too wide, or the feeding entrance of section b is too large, therefore the seamed needle thread cannot be held. The feeding entrance, A, of the needle plate hole is too large.</p>	<p>檢查押腳a、b部位針板的A部分形狀。其技術要求是： Check the parts a and b, and the shape of the part A of the needle plate.</p> <p>1. 在特里科布料使用化纖線時，必須$a < 0.8$ mm，b、A部的$r < 0.3$ mm。 1. When using chemical fiber threads on the toric cloths, the $a < 0.8$ mm, $b < 0.3$ mm, and the r of A is less than 0.3 mm.</p>

No.	問題 Problem	可能原因 Possible Causes	檢查調整 Check & Adjust
		 <p>機針太粗 The needle is too thick.</p> <p>針板孔太大 The needle plate eyelet is too big.</p> <p>押腳壓力太小 The pressure of the presser foot is too small.</p>	<p>2. 使用化纖線時，必須$a < 1.2$ mm，b、A部的送料口應小。</p> <p>2. When using chemical fiber threads, $a < 1.2$ mm. Also, the clearance between parts b and A should be as small as possible.</p> <p>3. 使用棉線時，只要縫線鬆緊正常，a、b、A部的送料口應小。</p> <p>3. When using the cotton threads, make the clearance of a, b, and A as small as possible, but do not making the tension improper.</p> <p>4. 布料越薄，布的密度越疏，縫線越容易滑動，針距越小，a、b、A部送料口應取小號的為好。</p> <p>4. The thinner the materials, the thicker the density. In addition, the needle thread will slip easily. The smaller the needle number, the smaller the clearance of a, b, and A.</p> <p>只要縫線鬆緊度正常，機針以細號的為好。 Use the needle as small as possible as long as the thread tension keeps in normal. 調換孔小的針板。 Replace it with a needle plate with smaller eyelet. 在不使送布力減弱的前提下，採用調壓螺釘增大壓力。 Strength the tension by adjusting the presser foot adjusting screw, but not to reduce the feeding strength (the fabric shall not be gathered.)</p>
3.	<p>跳針 Skipped stitch</p> <p>梭尖勾不住針線，出現跳針 The hook tip cannot hook the needle thread and form skipped stitch</p>	<p>梭子與機針定位不良 The locations of the bobbin and the needle are not well.</p>	<p>檢查針桿高度，應按照針桿刻度線2.0 mm的要求配合。使用針織品面料時，應稍許降下針桿，推遲定時配合 Check the height of the needle bar. Please try to reach the requirement of 2.0 mm mark line of the needle bar. When using the knitting fabrics, please lower down the needle bar a little and delay the timing.</p>

No.	問題 Problem	可能原因 Possible Causes	檢查調整 Check & Adjust
		<p>挑線簧的張力和運動量太大 The tension of the thread take-up spring is too strong, and its movement is too strong, too.</p> <p>梭尖被磨平 The hook tip is worn to be flat.</p> <p>機針未被裝好 The needle is not assembled well.</p>	<p>減小張力和運動量(標準為5~7 mm) Reduce the tension and the movement. (The standard is 5~7mm)</p> <p>修正梭尖或掉換梭子 Fix the hook tip or replace the bobbin.</p> <p>調整機針的傾斜度，發現機針彎曲時，應及時換掉 Adjust the slope of the needle. When the needle is bent, please replace it on time.</p>
4.	<p>跳針 Skipped stitch</p> <p>起縫時底線頭太短 The start of the bobbin thread is too short when sewing starts</p>	<p>因梭心空轉，底線前端被拉入梭心套內 Because of the bobbin idle running, the front end of the bobbin thread is pulled into the bobbin case.</p> <p>梭心壓板壓力太大 The pressure of the bobbin thread press plate is too strong.</p> <p>梭子有傷痕，底線被剪得太短 There is scratch on the bobbin, or the bobbin thread is trimmed too short.</p> <p>起縫時縫速太快 The sewing speed is too fast at the beginning.</p>	<p>1. 加大梭心壓板的壓力。 1. Increase the pressure of the bobbin thread press plate.</p> <p>2. 加大底線張力。 2. Increase the bobbin thread tension.</p> <p>減小壓力，確認梭心應能空轉。 Reduce the pressure until the bobbin can perform idle running.</p> <p>修正梭子的傷痕部份，或調換梭子。 Polish and grind the scratch, or replace a new bobbin.</p> <p>緩慢啟動(800 spm)，先縫1~2針 Slow starts (800spm), and stitches 1~2 stitches first.</p>
5.	<p>起縫時面線頭露出布面 The thread lint comes out of the fabric at the beginning.</p> <p>剪線後留在針尖處面線頭留得太長 The needle thread leftover on the needle is too long.</p>	<p>第1夾線器張力太小 The first tension adjusting disc is too weak.</p> <p>剪線凸輪定時太遲 The timing of the trimming cam is too slow.</p> <p>固定刀後退量過大 The fixed trimmer moves backward too much.</p>	<p>加大第1夾線器張力 Strengthen the first tension adjusting disc.</p> <p>檢查和調整凸輪的定時配合 Adjust the timing of the cam.</p> <p>調整固定刀 Adjust the fixed trimmer.</p>
6.	<p>起縫處的布料背面不整潔 Too many lints in the back of the fabric when starting stitching.</p> <p>機針、針板或壓腳不合適，使剪線後針尖處的針線短不了 Improper needle, needle plate, or the presser foot. The lint cannot be shortened after trimming.</p>	<p>押腳的a尺寸太大，或b部分的送料口太大，故縫好的針線壓不住針板孔的A部分送料口太大 The size a of the presser foot is too wide, or the feeding entrance of section b is too large, therefore the seamed needle thread cannot be held. The feeding entrance, A, of the needle plate hole is too large.</p>	<p>檢查押腳a、b部位針板的A部分形狀。其技術要求是： Check the parts a and b, and the shape of the part A of the needle plate.</p> <p>1. 在特里科布料使用化纖線時，必須$a < 0.8$ mm，b、A部的$r < 0.3$ mm。 1. When using chemical fiber threads on the toric cloths, the $a < 0.8$ mm, $b < 0.3$ mm, and the r of A is less than 0.3 mm.</p>

No.	問題 Problem	可能原因 Possible Causes	檢查調整 Check & Adjust
		 <p>機針太粗 The needle is too thick.</p> <p>針板孔太大 The needle plate eyelet is too big.</p> <p>押腳壓力太小 The pressure of the presser foot is too small.</p>	<p>2. 使用化纖線時，必須$a < 1.2$ mm，b、A部的送料口應小。</p> <p>2. When using chemical fiber threads, $a < 1.2$ mm. Also, the clearance between parts b and A should be as small as possible.</p> <p>3. 使用棉線時，只要縫線鬆緊正常，a、b、A部的送料口應小。</p> <p>3. When using the cotton threads, make the clearance of a, b, and A as small as possible, but do not making the tension improper.</p> <p>4. 布料越薄，布的密度越疏，縫線越容易滑動，針距越小，a、b、A部送料口應取小號的為好。</p> <p>4. The thinner the materials, the thicker the density. In addition, the needle thread will slip easily. The smaller the needle number, the smaller the clearance of a, b, and A.</p> <p>只要縫線鬆緊度正常，機針以細號的為好。 Use the needle as small as possible as long as the thread tension keeps in normal. 調換孔小的針板。 Replace it with a needle plate with smaller eyelet. 在不使送布力減弱的前提下，採用調壓螺釘增大壓力。 Strengthen the tension by adjusting the presser foot adjusting screw, but not to reduce the feeding strength (the fabric shall not be gathered.)</p>
7.	<p>起縫時縫線從針孔中脫出 The needle thread falls off from the needle at the beginning of sewing.</p> <p>(剪線後針尖處針線長度留得不夠) (The needle thread leftover on the needle tip is not enough after trimming.)</p>	<p>因凸輪定時配合太遲，第1夾線器張力太大，活動刀與固定刀在交合前就已剪線（中途剪線） Because the timing of the cam is too late, and the tension of the first thread tension adjusting disc is too strong, the thread has been trimmed before the movable and the fixed trimmers come across to each other. (Trimming in the midway.)</p>	<p>停下電機，在機針處在下停位時，用手將底線壓桿推入梭心套，再用手緩慢朝操作者方向轉動上輪。待剪線動作後，在挑線桿上死點位置停止。此時，針尖處針線的長度若比踏板操作剪線後留在針尖處的針線長度短10 mm以上時，即為中途剪線現象。應提早剪線凸輪的定時配合，減小第1夾線器的張力。</p>

No.	問題 Problem	可能原因 Possible Causes	檢查調整 Check & Adjust
		<p>底線壓桿插入梭心套的深度稍淺一些，故針線往往從底線壓桿中脫出 The thread of the thread control set doesn't pass the bobbin center and this causes the thread broken often.</p> <p>固定刀的磨法不對頭（太尖）時，只由固定刀剪線 The trimmer is over used and functions abnormally.</p> <p>切線擋線板、活動刀或梭子部位有傷痕。 There is a flaw on thread trimming guard, movable trimmer, or the bobbin.</p> <p>機針太粗 The needle is too thick.</p>	<p>Stop the motor, and push the thread control set toward the bobbin. Turn the pulley toward your direction (or tread the pedal to turn the pulley) to lift the needle to the upper dead point. If the the remaining thread is less than 10 mm, this means the lint is too short. Set the trimming time short and reduce the thread tension to solve this problem. 調整底線壓桿 Correct the position of the thread control set.</p> <p>重新磨刀或調換切刀 Sharpen the knife or change a new one.</p> <p>修正傷痕部位或調換零件 Fix the damaged part or replace a new one.</p> <p>調換為細針 Replace with a thin needle.</p>
8.	<p>起縫時縫線從針孔中脫出 The needle thread falls off from the needle at the beginning of sewing.</p> <p>剪線後針線立即從針孔內脫出 The lint falls from the needle tip as soon as trimming.</p>	<p>凸輪定時過早，故連針邊的針線也剪掉了 The cam timing is too early, which causes the thread on the needle tip being trimmed.</p>	<p>如發生剪線後針線立即從針孔內脫出時，是因為活動刀擴線不良而剪斷了留在機針附近的針線。此時，應取下針板，使剪線後針線留出約20 mm長度。在此狀態下，將剪線凸輪定時配合推遲 Because the trimmer functions abnormal, the thread on the needle tip is trimmed. Open the plate, and there will have a thread about 20 mm remaining inside. slow down the trimmer cam to adjust it.</p>
9.	<p>起縫時的縫線張力不良(起縫時的針線張力太小) The needle thread tension is incorrect. (The needle thread tension is too small at the beginning of sewing.)</p>	<p>底線壓桿未安裝正確 The bobbin thread pressing lever is not assembled correctly.</p> <p>因梭心空轉，起縫時底線張力太小 Because the bobbin is idle running, the bobbin thread tension is too loose while starting sewing.</p> <p>低、針線張力太小 The tensions of the bobbin thread and needle thread are too loose.</p>	<p>調整底線壓桿 Adjust the bobbin thread pressing lever.</p> <p>調整底線壓桿。採用帶彈簧的梭心套。 Adjust the bobbin thread pressing lever. Use a bobbin case with a spring.</p> <p>加大底針線張力。 Increase the tensions of the bobbin thread and needle thread.</p>

No.	問題 Problem	可能原因 Possible Causes	檢查調整 Check & Adjust
		<p>壓腳和針板不合適 The presser foot doesn't not match with the needle plate.</p> 	<p>檢查壓腳a、b部位針板的A部分形狀。其技術要求是： Check the parts a and b, and the shape of the part A of the needle plate.</p> <ol style="list-style-type: none"> 1. 在特里科布料使用化纖線時，必須$a < 0.8$ mm，b、A部的$r < 0.3$ mm。 1. When using chemical fiber threads on the toric cloths, the $a < 0.8$ mm, $b < 0.3$ mm, and the r of A is less than 0.3 mm. 2. 使用化纖線時，必須$a < 1.2$ mm，b、A部的送料口應小。 2. When using chemical fiber threads, $a < 1.2$ mm. Also, the clearance between parts b and A should be as small as possible. 3. 使用棉線時，只要縫線鬆緊正常，a、b、A部的送料口應小。 3. When using the cotton threads, make the clearance of a, b, and A as small as possible, but do not making the tension improper. 4. 布料越薄，布的密度越疏，縫線越容易滑動，針距越小，a、b、A部送料口應取小號的為好。 4. The thinner the materials, the thicker the density. In addition, the needle thread will slip easily. The smaller the needle number, the smaller the clearance of a, b, and A.
10.	<p>縫料起皺(因縫縮、縫歪引起了線圈附近的縫料產生皺紋) The material is puckering while sewing. (Because of the puckers or incorrect line, the materials has puckers on it.)</p>	<p>機針太粗 The needle is too thick.</p> <p>梭線張力太大，過線道不通暢 The bobbin thread tension is too strong. The thread path is not smooth.</p> <p>梭線張力太大，梭子定時配合太遲 The bobbin thread tension is too strong. The bobbin timing is too late.</p>	<p>儘可能採用細號機針或KN針（普通針）。例如DB×1#11→DB×1KN#9 Use thin needles as possible or KN needle (Normal). EX: DB×1#11→DB×1KN#9</p> <p>修正過線道 Fix the thread path.</p> <p>以不跳針為前提，盡量提前縮子時間配合，改善收、放線動作 Shorten the bobbin timing as much as possible to improve the process. However, there should be no stitch skipping.</p>

No.	問題 Problem	可能原因 Possible Causes	檢查調整 Check & Adjust
		<p>梭線張力太大，送料定時配合太早 The bobbin thread tension is too strong. The feeding timing is too early.</p> <p>挑線桿行程太大 The thread take-up stroke is too large.</p> <p>夾線彈簧行程太短 The stroke of the thread tension adjusting disc is too short.</p> <p>使用了不光滑的縫線 Use the unsmooth threads.</p> <p>壓腳壓力太大 The pressure of the presser foot is too much.</p> <p>壓腳背面加工性不良 The bottom of the presser foot is not smooth.</p> <p>使用了不易滑動的布料 The fabric is difficult to be fed.</p> <p>縫料帶皺，針板孔太大 Wrinkles on the feeding tapes; the needle plate hole is too large.</p> <p>縫料帶皺，壓腳底面的送料槽太大 Wrinkles on the feeding tapes; the tool withdrawal groove in the back of the presser foot is too large</p> <p>縫料帶皺，壓腳平行度不良 Wrinkles on the feeding tapes; the presser foot is not parallel.</p> <p>針尖已破損 The needle tip is damaged.</p> <p>送料不順，送料具高度太高 Feeding is not smooth. The feed dog is too high.</p> <p>送料不順，送料具齒的尖端已磨損 Feeding is not smooth. The tips of the feed dog teeth are worn.</p> <p>送料具齒的間距太疏 The clearance between each feed dog tooth is too wide.</p>	<p>相對於機針，推遲送料動作，以達到送料收緊的目的 Compared to the needle, delaying the feeding to achieve the purpose of tensing the feeding.</p> <p>向右移動車殼上的擋線板，減小由挑線桿提供的針線量 Move the thread guide on the machine arm right to reduce the supplying thread amount of the thread take-up.</p> <p>加大夾線彈簧行程 Increase the stroke.</p> <p>採用乙烯類化纖線 Use the ethylene fiber threads.</p> <p>在能正常送料的前提下，壓力盡量調至最小限度。如使壓腳能稍浮起，則更有效果 Adjust the pressure of the presser foot to the min. (Not to influence the feeding) If the presser foot can be lifted a little, the effects will be better.</p> <p>用砂紙等磨平滑 Grind it by a grinding roller.</p> <p>採用聚四氟乙烯處理或“尼達柯斯”處理過的壓腳 Use the Teflon presser foot or the presser foot with nitric special treatment.</p> <p>採用孔小的針板 Use the needle with a smaller needle eyelet.</p> <p>採用送料槽尺寸小或無槽的壓腳 Use the presser foot with a smaller tool withdrawal groove or with no groove.</p> <p>調換壓腳或壓桿 Replace the presser foot or the presser lever.</p> <p>調換新機針 Replace with a new needle.</p> <p>在不影響送料前提下降低送料具的高度 Lower down the height of the feed dog without influencing the feeding.</p> <p>將送料具齒尖端磨平 Polish the tips of the feed dog teeth.</p> <p>採用細間距的送料具 Use the feed dog with smaller clearance.</p>

No.	問題 Problem	可能原因 Possible Causes	檢查調整 Check & Adjust
		<p>送料具牙傾斜度不良 The slope of the feed dog teeth is poor.</p> <p>送料具牙平行度不良 The feed dog doesn't have well parallel situation.</p> <p>速度太快 The sewing speed is too fast.</p> <p>其他原因 Others</p>	<p>使送料具牙前端上翹，改善前引導的效果 Make the front part of the feed dog up to improve the effects of front guiding. 調換新送料具 Replace with a new one.</p> <p>降低縫速 Slow down the speed.</p> <ol style="list-style-type: none"> 1. 採用前引導滾輪輔助送料裝置 1. Use a front roller to assist the feeding device. 2. 用手將縫料適量朝後拉輔助作業 2. Pull the fabric backward properly to assist the operation. 3. 採用鋁製梭心（編號為 B9117552A000） 3. Use aluminum bobbin (code: B9117552A000)
11.	<p>縫料潛移，在送料方向上，上下兩層縫料出現送料錯位 The materials are departed. The upper and lower layers has departed in feeding.</p>	<p>送料不良，送料具位置太高 The feed dog is too high.</p> <p>送料不良，送料具齒尖端部已被磨平 The feed dog teeth are blunt.</p> <p>送料不良，送料具齒間距太疏 The stitch length of the feed dog is too wide.</p> <p>送料不良，送料具的傾斜度不夠 The slope of the feed dog is not enough.</p> <p>送料不良，送料時間配合過遲 The feeding timing is too late.</p> <p>壓腳不良，壓腳壓力太大 The pressure of the presser foot is too strong.</p> <p>壓腳不良，壓腳底面加工不良 The bottom of the presser foot is not smooth.</p> <p>壓腳不良，加工對象是難以滑動的縫料 The fabric is difficult to be fed.</p> <p>縫速太快 The sewing speed is too fast.</p>	<p>在不影響送料的前提下，盡量降低送料具的高度 Without influencing the feeding, lower down the height of the feed dog as much as possible. 將送料具牙齒磨尖 Sharpen the feed dog teeth.</p> <p>調換為細間距的送料具 Replace with a feed dog with narrower stitch length.</p> <p>調整送料具的傾斜度，使其前端呈下傾 Adjust the slope of the feed dog to make the front part to be lower.</p> <p>重新調整送料具的時間配合 Readjust the timing of the feed dog.</p> <p>將壓腳壓力調至最小限度（以不影響送料動作為前提）。如能使壓腳稍許浮起，則效果更佳 Adjust the pressure of the presser foot to the min. (Not to influence the feeding) If the presser foot can be lifted a little, the effects will be better.</p> <p>用砂紙等磨平滑 Grind it by a grinding roller.</p> <p>使用經聚四氟乙烯以及其他方式處理過的壓腳部件 Use the teflon presser foot or the presser foot with nitric special treatment.</p> <p>降低轉速 Slow down the rotating speed.</p>

No.	問題 Problem	可能原因 Possible Causes	檢查調整 Check & Adjust
12.	<p>結線圈，在縫線之交合點上，縫料正反面出現突發性線圈</p> <p>The sewed thread is not firm and forms balloons. The threads hooking position is on or under the fabric and forms balloons.</p>	<p>縫線張力太小 The thread tension is too small.</p> <p>夾線簧調節不良，行程太短 The thread clamp spring is not adjusted well. The stroke is too small.</p> <p>夾線簧調節不良，縫線張力太小 The thread clamp spring is not adjusted well. The thread tension is too small.</p> <p>夾線簧調節不良，夾線簧車殼面碰撞 The thread clamp spring touches the bobbin case.</p> <p>挑線桿行程太大 The stroke of the thread take-up lever is too wide.</p> <p>梭子部分不良，梭子配合時間過早 The bobbin timing is too early.</p> <p>梭子部分不良，梭子配合時間太短 The bobbin timing is too short.</p> <p>梭子部分不良，梭子與梭壓板間隙太小 The clearance between the bobbin and the bobbin thread press plate is too narrow.</p> <p>梭子部分不良，梭子部位油量太小 The lubricant at the bobbin section is too less.</p> <p>梭子部分不良，梭子部件不良（被勾住） The bobbin doesn't function well.</p> <p>針線過線部分不良，線道不暢 The thread cannot pass the thread path smoothly.</p> <p>針線過線部分不良，線道部分有點瑕疵 There are flaws of the thread path.</p> <p>針線過線部分不良，針線在通過線道過程中被勾住 The quality of the thread path is poor. The needle thread is hooked while passing the thread path.</p>	<p>檢查和調整縫線張力 Check and adjust the thread tension.</p> <p>加大行程 Increase the stroke.</p> <p>加大張力 Increase the tension.</p> <p>使其夾線簧車殼面不相碰 Adjust them to not to touch to each other.</p> <p>向右移動車殼上的擋線板，減小由挑線桿提供的針線量 Move the thread guide on the machine arm right to reduce the supplying thread amount of the thread take-up.</p> <p>使用短棉紗線時，符合標準要求或稍許推遲一點 The standard timing is when using cotton threads. Or, you may adjust the timing to be later a little.</p> <p>使用化纖線時，應符合標準要求或稍許提早一點 While using the chemical fiber threads, it should reach the requirements or be earlier a little.</p> <p>加大梭子與梭壓板之間間隙，使梭子脫線順利 Increase the clearance from the bobbin to the bobbin thread press plate in order to make the thread come out smoothly from the bobbin.</p> <p>增加油量，使其適中 Add the oil to make it properly.</p> <p>若梭子部件質量出現毛病，應調換 If the quality of the bobbin is bad or poor, please replace it.</p> <p>修正線道 Correct the thread path.</p> <p>修正或磨平過線道 Grind or polish the thread path.</p> <p>修正或磨平過線道 Grind or polish the thread path.</p>

No.	問題 Problem	可能原因 Possible Causes	檢查調整 Check & Adjust
		<p>梭心或梭心套部件不良，梭心或梭心套部件上的位置配合不良，底線常被勾住 The bobbin thread is usually dragged because of the mis-located of the bobbin and the bobbin case.</p> <p>梭心或梭心套部件不良，梭心在繞線時質量不良 The quality of wound thread of the bobbin is poor.</p> <p>梭心或梭心套部件不良，梭子套上的張力調節簧不良 The tension spring of the bobbin doesn't function well.</p> <p>梭心或梭心套部件不良，梭心套內的底線空轉 The bobbin thread inside the bobbin case is idle running.</p> <p>送料不良，送料時間配合不良，送料具齒高度太低 The feeding timing is incorrect, or the feed dog is too low.</p> <p>壓腳不良，壓腳出現浮起現象 The presser foot is improper. The presser foot lifting phenomenon happens.</p> <p>夾線器不良，壓腳底面的送料槽太小或者沒有溝槽(粗線、間距大時) The thread tension adjusting disc is improper. The feeding groove in the bottom of the presser foot is too small or has no groove (for thick threads or wide clearance).</p> <p>夾線器不良，夾線器出現浮起現象 The thread tension adjusting disc is improper. The lifting phenomenon happens.</p> <p>針板孔太小 The needle plate hole is too small.</p> <p>相對於縫線來講，機針太細 Compared to the thread, the needle is too thin.</p>	<p>調換梭心或梭心套 Replace with a new bobbin or a bobbin case.</p> <p>縫線張力是否太強或太弱，質量不好時應重新繞線 Is the thread tension too strong or too weak? If the quality is poor, please rewind the thread.</p> <p>調換梭心套 Replace with a new bobbin case.</p> <p>使用裝有彈簧的防空轉用梭心，或在梭心套內填一塊薄布，以防止空轉 Use the bobbin case with spring or place a piece of thin fabric inside the bobbin to prevent idle running.</p> <p>對照標準要求，稍許推遲(使用棉線短紗線時)或提早(使用化纖線時)送料動作的同時，將送料具高度調高(最高不超過1 mm) When using cotton threads and reeled pongee threads, adjust the feeding timing closer a little than the standard one. In addition, when using chemical fiber threads, raise the feed dog height earlier. (The max is 1 mm.)</p> <p>調整壓腳高度 Adjust the height of the presser foot.</p> <p>採用送料槽尺寸大的壓腳 Use the presser foot with bigger feeding groove.</p> <p>按照規格，調整夾線器的浮線動作時間 Adjust the thread lifting timing of the thread tension adjusting disc based on the specification.</p> <p>採用孔大的針板 Use a needle plate with bigger hole.</p> <p>調換機針或縫線中的某一方 Replace whether the needle or the thread.</p>

No.	問題 Problem	可能原因 Possible Causes	檢查調整 Check & Adjust
		<p>機針不良，針尖有疵點 The needle is improper. There are flaws at the needle tip.</p>	<p>調換機針(在使用化纖線時，以採用針尖成圓形的針等為好) Replace with a new needle. (When using chemical fiber threads, it is better to use the needle with round tip.)</p>
13.	<p>跳針，出現局部性不能構成線圈影響整個縫線的完整和美觀 Skipped stitch. Cannot form loops partially, which effects the completion and the beauty of the entire sewing thread.</p>	<p>機針不良，機針彎曲 The needle is improper. The needle is bent. 機針不良，機針安裝方向不對頭 The needle is improper. The assembled direction of the needle is incorrect. 機針不良，針尖被磨鈍 The needle is improper. The needle tip is worn to be blunt. 機針不良，相對於縫線，機針太細或太粗 The needle is improper. The needle is too thick or too thin compared to the needle thread. 梭子方面不良，梭尖已被磨平或已破損 The hook tip is broken or worn. 梭子方面不良，梭子動作時間配合不良 The hook timing is incorrect.</p> <p>梭子方面不良，針桿高度不良 The height of the needle bar is incorrect.</p> <p>梭子方面不良，梭尖與機針之間的空隙過大 The bobbin functions poorly. The clearance between the hook tip and the needle is too wide. 梭子方面不良，線環形成的動作不穩定 The bobbin is poor. The motion of forming balloon is unstable. 針線張力太大 The tension of the needle thread is too strong. 縫紉機轉速太快 The rotating speed of the sewing machine is too fast.</p>	<p>調換新機針 Replace with a new needle.</p> <p>調整方向，重新安裝 Adjust the direction and re-assemble it.</p> <p>調換新機針 Replace with a new needle.</p> <p>根據縫線性能要求，換上合適機針 Replace with a proper needle based on the requirements of sewing. 修正梭尖部份或調換新梭子 Correct the hook tip or change a new hook. 重新進行調整(根據不同的縫料、縫線的條件。使用化纖線或厚料時，動作時間應稍早些，使用薄料時，動作時間稍遲 Readjust. (According to the materials of fabrics and the threads, readjust to the proper timing. Generally, normal chemical fiber threads and thick materials need an earlier timing, whereas the thin materials need a later timing.) 相對於梭尖動作上下調整(一般來講，使用化纖線時應調高些，使用薄料時應稍調低些) Adjust the hook tip up and down. (For normal chemical fibers, adjust it upper. For thin materials, adjust it lower.) 將空隙盡量調小 Adjust the clearance as small as possible.</p> <p>將縫線繞在機針上 Wind the thread on the needle.</p> <p>減小張力，使用冷卻裝置 Reduce the tension and adopt the cooling device. 降低縫速 Slow down the sewing speed.</p>

No.	問題 Problem	可能原因 Possible Causes	檢查調整 Check & Adjust
		<p>因機針彎曲造成送料配合不良 The feeding is not correct because the needle is bent.</p> <p>夾線簧未調節好，夾線簧行程太大 The thread clamp spring is not adjusted well. The stroke of the thread clamp is too wide.</p> <p>夾線簧未調節好，夾線器張力太大 The thread clamp spring is not adjusted well. The tension of the thread clamp is too strong.</p> <p>不符合縫料性能的要求，壓腳出現浮起現象 Not match the requirement of the sewing. The presser foot starts lifting.</p> <p>不符合縫料性能的要求，針板孔太大 Not match the requirements of sewing. The needle plate eyelet is too big.</p> <p>不符合縫料性能的要求，壓腳底面送料槽太大 Not match the requirements of sewing. The feeding groove in the bottom of the presser foot is too large.</p> <p>壓腳平行度不良 The parallel situation of the presser foot is not good.</p>	<p>調換機針，重新調整配合位置 Replace with a new needle. Readjust the positions.</p> <p>減小行程 Narrow the stroke.</p> <p>針對不良部位，縮短行程或減小張力 Narrow the stroke or reduce the tension on poor sections.</p> <p>根據使用的縫料特性，調整壓腳高度 Adjust the height of the presser foot based on the characteristics of the materials.</p> <p>盡量使用針板孔小的針板 Use the needle plate with small needle plate eyelet as possible.</p> <p>採用送料槽小的或無槽溝的壓腳 Use the presser foot with smaller feeding groove or no feeding groove.</p> <p>重新調整壓腳或壓緊桿 Readjust the presser foot or the presser foot lever.</p>
14.	<p>斷針線，在縫製過程中，出現針線破裂或斷線現象 The needle thread is broken. The needle thread is broken or worn-off during sewing.</p>	<p>穿引線部位不良(包括針板、送料具、壓腳等部件)，過線道不順暢 Problems happened in threading. (Including needle plate, feed dog, presser foot, and so on.) The thread path is not smooth.</p> <p>穿引線部位不良(包括針板、送料具、壓腳等部件)，過線道部分有點疵點 Problems happened in threading. (Including needle plate, feed dog, presser foot, and so on.) There are some flaws in the thread path.</p> <p>穿引線部位不良(包括針板、送料具、壓腳等部件)，縫線被過線道部位勾住 Problems happened in threading. (Including needle plate, feed dog, presser foot, and so on.) The needle thread is hooked by the part of the thread path.</p> <p>針線張力不良，針線張力太大或太小 The tension of the needle thread is poor. The needle thread tension is too strong or too weak.</p>	<p>修正過線道 Fix the thread path.</p> <p>修正過線道 Fix the thread path.</p> <p>修正過線道 Fix the thread path.</p> <p>將針線張力調至適中 Adjust the needle thread tension properly.</p>

No.	問題 Problem	可能原因 Possible Causes	檢查調整 Check & Adjust
		<p>針線張力不良，第一夾線器張力太小 The needle thread tension is not well. The tension of the first thread clamp is too small.</p> <p>夾線簧調節不良，夾線簧行程太大或太小 The thread clamp spring is not adjusted well. The stroke of the thread clamp spring is too wide or too narrow.</p> <p>機針彎曲 The needle is bent.</p> <p>機針有傷庇 There is flaw on the needle.</p> <p>機針不良，針尖部分被磨平 The needle is poor, and the needle tip is worn to be flat.</p> <p>機針安裝方向不對 The needle is assembled in wrong direction.</p> <p>相對於縫線，機針太細或太粗 The needle is too thick or too thin to the needle thread.</p> <p>機針尖部過於太尖 The needle tip is too sharp.</p> <p>梭子部位不良，底線過線部位有疵點 Malfunction of bobbin. There is a flaw on the bobbin thread path.</p> <p>梭子部位不良，梭尖已被磨平或破損 Malfunction of bobbin. The hook tip is worn to be flat or damaged.</p> <p>梭子部位不良，梭子與梭子壓板之間空隙太小 Malfunction of bobbin. The clearance between the bobbin and the bobbin thread pressing plate is too small.</p>	<p>調至適當張力 Adjust to the proper tension.</p> <p>重新調整夾線簧行程，重新調整夾線器張力 Readjust the stroke of the thread clamp spring. Readjust the tension of the thread clamp.</p> <p>調換機針 Replace a new needle.</p> <p>調換機針 Replace a new needle.</p> <p>調換機針 Replace a new needle.</p> <p>取下後重新安裝 Remove the needle and re-assemble it.</p> <p>調換機針 Replace a new needle.</p> <p>調換使用針尖呈圓形的原形針 (KN、S、J、B、U、Y) Replace with the needle that has round tip (KN、S、J、B、U、Y).</p> <p>修正過線部位上的疵點 Correct the flaw on the thread path.</p> <p>修正梭尖部份或調換新梭子 Correct the hook tip or replace a new bobbin.</p> <p>加大間隙，使脫線順利 Enlarge the clearance so that the thread can be off from the bobbin easier.</p>
15.	<p>在縫製過程中，出現針線斷裂或斷線現象 The needle thread is broken or worn-out during sewing.</p>	<p>梭子部位油量太少 The lubricated oil is too less in the bobbin.</p>	<p>油量調至適中 Adjust the lubricated oil volume properly.</p>
16.	<p>倒縫時斷線 The thread is broken when back stitching.</p>	<p>機針未安裝好，機針被裝歪 The needle is not assembled well. The needle is assembled off the center.</p>	<p>針的長槽一側應安裝面向正左方，或者將長槽稍許面向操作者一側為宜 The side having a long groove of the needle should face straight forward. Or, turn the long groove side facing the operator a little.</p>

No.	問題 Problem	可能原因 Possible Causes	檢查調整 Check & Adjust
17.	<p>空縫時斷線 The thread is broken while idle running.</p>	<p>機針未安裝好，機針被裝歪 The needle is not assembled well. The needle is assembled off the center.</p> <p>切刀擋線板位置不對 The location of the trimmer guard is incorrect.</p> <p>針桿太低 The needle bar is too low.</p>	<p>機針的長槽一側應安裝面向正左方，或者將長槽一側稍許面向操作者一側約10°之內 The side having a long groove of the needle should face straight forward. Or, turn the long groove side facing the operator a little within 10°.</p> <p>使機針正好下落在孔的中心 Make the needle stitching at the center of the eyelet.</p> <p>提高針桿高度 Lift the needle bar higher.</p>
18.	<p>線跡不正規，縫線不直，部分線跡偏斜 The stitches are abnormal, the sewing line is not straight, and part of the stitches are not in a straight line.</p>	<p>針線張力太大 The tension of the needle thread is too strong.</p> <p>機針彎曲 The needle is bent.</p> <p>針尖已被磨平 The needle tip is worn flatly.</p> <p>機針太細 The needle is too thin.</p> <p>機針太長 The needle is too long.</p> <p>縫速太快 The sewing speed is too fast.</p> <p>送料具牙平行度不良 The feed dog teeth are not in parallel.</p> <p>送料具牙被裝歪 The feed dog wasn't assembled well.</p> <p>送料具左右鬆動 The feed dog is loose in left and right directions.</p> <p>壓腳有浮起現象 The presser foot is lifting.</p> <p>壓腳平行度不良 The presser foot doesn't have well parallel situation.</p> <p>壓腳壓力太小 The pressure of the presser foot is too less.</p> <p>針線穿線方法不對 Incorrect threading of the needle thread.</p> <p>針桿的線鉤不良 The thread hook of the needle bar is poor.</p>	<p>減小張力 Reduce the tension.</p> <p>調換機針 Replace it with a new needle.</p> <p>調換機針 Replace it with a new needle.</p> <p>採用粗規格針，KN針(一節針)時改用二節針 Use the needle with thicker specification. When using the needle, KN (single section), please replace it with a needle that has two sections.</p> <p>採用短針，或使用桿柄部長的針(DA×1) Use a short needle, or use the needle with longer bar section (DA×1).</p> <p>降低縫速 Slow down the sewing speed.</p> <p>調換送料具 Replace a new feed dog.</p> <p>重新正確安裝送料具 Re-assemble the feed dog correctly.</p> <p>消除鬆動現象 Solve the loose situation of the feed dog.</p> <p>調整壓腳高度 Adjust the height of the presser foot.</p> <p>調整壓腳或壓緊桿部件 Adjust the presser foot or the parts of the presser foot bar.</p> <p>加大壓腳壓力 Increase the pressure of the presser foot.</p> <p>修正穿線部位 Correct the threading.</p> <p>試用B1418227T00，B1418552A00備件 Try the B1418227T00, and B1418552A00.</p>

No.	問題 Problem	可能原因 Possible Causes	檢查調整 Check & Adjust
19.	<p>斷底紗 The lower thread is broken.</p>	<p>機針溫度太高 The temperature of the needle is too high. 機針太粗 The needle is too thick.</p> <p>針尖已磨損 The needle tip is worn. 針尖形狀不良(選針不妥) The needle tip has bad shape. (incorrect needle is chosen)</p> <p>布料張力太大，針板孔太小 The tension of the fabric is too much; the needle plate hole is too small. 布料張力太大，壓腳壓力太大 The tension of the fabric is too much; the pressure of the presser foot is too much. 布料張力太大，送料具太高 The tension of the fabric is too much; the feed dog is too high.</p>	<p>使用機針冷卻裝置 Use the needle cooling device.</p> <p>儘可能使用細針 Try to use a thinner needle as possible. 調換機針 Replace the needle.</p> <p>1. 使用圓頭針(KN、S、J、B、U、Y)等 1. Use the needle with round tip (KN, S, J, B, U, or Y, etc) 2. 降低轉速(防止機針發熱) 2. Lower down the rotating speed. (To prevent the needle getting hot)</p> <p>使用針孔大的針 Use a needle with a larger needle eyelet.</p> <p>盡量減小壓力 Try to reduce the pressure as much as possible.</p> <p>1. 盡量降低高度 1. Try to lower down the height. 2. 濕度保持65%上下 2. Keep the humidity around 65%. 3. 儘量放大間距 3. Enlarge the stitch length as long as possible.</p>
20.	<p>收線不好 Imperfect thread winding</p>	<p>梭子油量太多或太少 The oil on the bobbin is too much or too less. 梭子不良(被勾住、過線道不良等) Bad bobbin (been hooked, bad thread path, etc.) 梭心與梭心套嵌合不良造成底線出現不良 The bobbin doesn't assemble well into the bobbin case and this makes the functions of the lower thread poor. 梭心繞線不良造成的底線被勾住 The bobbin doesn't wind thread well and cause the lower thread being hooked.</p> <p>梭心套內底線空轉 The lower thread is idle running inside the bobbin case.</p> <p>梭心套張力調節簧不良 The tension adjusting spring of the bobbin doesn't function well.</p>	<p>使油量適中 Make it well situated.</p> <p>調換梭子、修正過線道 Replace the bobbin and fix the thread path.</p> <p>調換梭心或梭心套 Replace the bobbin or the bobbin case.</p> <p>調整底線繞線張力或底線繞線夾器的位置 Adjust the lower thread winding tension or adjust the location of the lower thread winding clamp. 使用防空轉用的帶彈簧梭心或在梭心套內放入薄布以防空轉 Use a bobbin with idle-running-proof spring or place a thin fabric inside the bobbin to prevent idle running. 調換梭心套 Replace the bobbin case.</p>

No.	問題 Problem	可能原因 Possible Causes	檢查調整 Check & Adjust
		<p>梭心套內的梭心裝入方法不對 The assembly of the bobbin into the bobbin case is incorrect.</p> <p>行程太大或太小 The stroke is too wide or too narrow.</p> <p>張力太大或太小 The tension is too much or too less.</p> <p>過線道不順暢 The surface of the thread path is not smooth.</p> <p>過線道有傷疵 Blemishes exist on the thread path.</p> <p>被過線道勾住 Hooked by the thread path.</p> <p>縫料帶皺紋，針板孔太大 Wrinkles on the feeding tapes; the needle plate hole is too large.</p> <p>縫料帶皺紋，壓腳背面的退刀槽太大 Wrinkles on the feeding tapes; the tool withdrawal groove in the back of the presser foot is too large.</p> <p>縫料帶皺紋，壓腳平行度不良 Wrinkles on the feeding tapes; the presser foot is not parallel.</p> <p>縫料帶皺紋，送料牙平行度不良 Wrinkles on the feeding tapes; the feed dog is not parallel.</p> <p>縫料帶皺紋，壓腳浮起 Wrinkles on the feeding tapes; the presser foot is lifting.</p>	<p>1. 加大梭心壓板的壓力 1. Enlarge the tension of the pressing plate of the bobbin.</p> <p>2. 加大底線張力 2. Enlarge the tension of the lower thread.</p> <p>調整行程 Adjust the stroke.</p> <p>調整張力 Adjust the tension.</p> <p>修正過線道 Fix the thread path.</p> <p>修正過線道 Fix the thread path.</p> <p>修正過線道 Fix the thread path.</p> <p>使用針孔小的針 Use the needle with a smaller needle eyelet.</p> <p>使用退刀槽小的或無退刀槽的壓腳 Use the presser foot with a smaller tool withdrawal groove or with no groove.</p> <p>調換壓腳或壓桿 Replace the presser foot or the presser lever.</p> <p>調換送料牙 Replace the feed dog.</p> <p>1. 調整壓腳高度 1. Adjust the height of the pressure foot.</p> <p>2. 向右移動車殼過線桿，減小挑線桿的針線供給量 2. Move the thread guide lever right to reduce the needle thread supplying volume.</p> <p>3. 使用過線桿D1113-126-WAO 3. Use the thread guide lever D1113-126-WAO</p>
21.	梭心有傷疵 The bobbin is damaged.		<p>1. 使用與針#11對應的11141355(舊DAC型梭子) 1. Use the bobbin 11141355, the old DAC model bobbin, which is corresponding with the needle #11.</p> <p>2. 使用粗針時，修正護針部 2. While using thick needles, please adjust the needle guard.</p>

No.	問題 Problem	可能原因 Possible Causes	檢查調整 Check & Adjust
22.	起縫時，縫線從針孔中脫出(起縫時底面線難以交合) The needle thread falls off from the needle at the beginning of sewing. (The needle doesn't cross the bobbin thread while starting sewing.)	起縫速度太快，使底面難以交合。 The speed is too fast at the beginning so that the needle and the bobbin thread cannot cross to each other.	慢速起動(800spm)，先縫1~2針。 Slow starting (800spm). Sew 1~2 stitches first.
23.	剪底線，不剪面線（最後一針跳針） The needle thread can not be trimmed, whereas the bobbin thread can be trimmed. (Skipped at the last stitch.)	機針安裝方法不對頭。 The needle in the needle clamp is assembled incorrectly. 夾線簧的行程太大。 The stroke of the thread take-up spring is too wide. 梭子定時配合不良。 The hook timing is incorrect.	檢查機針的裝法以及是否彎曲。 Adjust the assembly of the needle, and check if the needle is bent. 減小夾線簧行程，以5~7 mm為宜。 Lower down the thread take-up stroke about 5~7 mm. 以低速啟動，檢查跳針現象，校正梭子的時間配合（梭子定時配合應比一般平縫機稍快一些，位置調在2.0 mm） Confirm if the thread skips while it is at low thread control sewing. Readjust the stroke of the hook. (This standard is 2 mm faster.)
24.	剪底線，不剪面線（刀刀某一部份剪切不良） The needle thread can not be trimmed, whereas the bobbin thread can be trimmed. (A certain part of the trimmer is not sharp.)	剪線時，安定與動刀切刃部未完全吻合（定刀的安裝角度、位置、刀尖面斜度與動刀刃部不吻合）。 The trimming parts of the movable and the fixed trimmer cannot engage with each other completely while trimming. (The assembled angle, position, and the slope of the trimmer tip don't match with the movable trimmer.)	取下針板，用手移動切刀，試著剪切三根#50棉線，一起剪三根不能剪斷時： Remove the needle plate, and move the trimmer by one hand. Try to trim 3 cotton threads of #50. If the threads cannot be trimmed, please confirm： 1. 確認定刀刃部。 1. the trimmer tip 2. 修正定刀尖的傾斜角。 2. The slope of the fixed trimmer tip. 3. 重新調整定刀的定裝位置。 3. Readjust the assembled position of the fixed trimmer.
25.	剪面線，剪不斷底線（動刀後退量不足） The needle thread can be trimmed, whereas the bobbin thread cannot be trimmed. (The backward volume of the movable trimmer is not enough.)	動刀後退量調節不良（切刀動作軸的左右位置或剪線凸輪的左右位置不良）。 The movable knife cannot return to the origin fully. The adjustment of the movable knife is incorrect. The relative positions of the two knives are incorrect. 未按規定使用了其他類梭子。 The assigned hook is not used in the machine.	檢查切刀的后退量，調整剪線凸輪的左右位置，以使切刀后退量達到3.0~3.5 mm範圍。 Check the movable trimmer and all relative process. Adjust the engage range of the two trimmers to be 3.0~3.5 mm. 檢查梭子上有無底線引槽，若沒有引槽，應掉換梭子。 Check the hook to see if there has the hook thread guiding line. If there has no guiding line, please change a new one.

No.	問題 Problem	可能原因 Possible Causes	檢查調整 Check & Adjust
26.	撥線器碰不到機針 The thread wiper cannot reach the needle.	撥線器安裝高度不良 The assembled height of the thread wiper is incorrect.	重新調整撥線器的安裝位置。 Readjust its assembled position.

表8/Table 8

報廢流程

DEMOLITION PROCEDURE

1. 當機器需要被淘汰與報廢時，有一些基本規則必須採納、遵守以保護環境及公眾健康。
2. 所有的機器零組件必須依照下列分類來區分開：
 - (1) 所有護套、可伸縮軟管及塑膠或非金屬零件。
 - (2) 電器零件：開關、照明器具等。
 - (3) 絕緣材料：石棉、彈性/可伸縮橡膠片。
 - (4) 金屬：含鐵金屬、銅、青銅與黃銅、其他各種金屬。
3. 以此方法，所有材質可以正確的淘汰，回收再利用或鎔解為可再使用或再處理而不至於危害環境。

1. When the machine needs to be eliminated and demolished, certain basic rules must be observed to protect the environment and public health.
2. ALL machine components must be divided according to categories as the followings:
 - (1) All sheathes, flexible hosing and plastic or non-metal components.
 - (2) Electricity components: switches, or lighting components.
 - (3) Insulation materials: rock wool, and flexible rubber strips.
 - (4) Metals: ferrous metals, copper, bronze and brass, various.
3. In this way, all materials can be eliminated correctly, recycled, or melted down for re-use or disposed of so that they do not harm the environment.



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