

SIRUBA[®] Sew Reach

使用説明書
INSTRUCTION BOOK

700DFT

988DFT



CE

EC DECLARATION OF CONFORMITY

According to the following EC Directive

Machinery Directive : 98 / 37 / EC , as amended by 89 / 336 / EEC and 73 / 23 / EEC

The undersigned, ROBERT TSAI , representing KAULIN MFG. CO., LTD. 11F 128 Sec. 3 Min Shen E. Road, Taipei , Taiwan ROC., manufacturer, declares that the machine described hereafter :

High Speed Front-Feed Overlock Safety Stitch Machine

Model:700DFT/988DFT

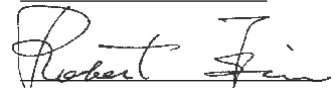
Provided that it is used and maintained in accordance with the generally accepted codes of good practice and the recommendations of the instructions manual, meets the essential safety and health requirements of the Machinery Directive.

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 292 - 1 & - 2 : 1992 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 : SEP. / 11 / 2006

Signature :




Qualification : R&D MANAGER

危險水準的說明 Explanation of Dangerous Level

 危險 Dangerous	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.
 注意 Caution	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.

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

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

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致使用者

- 我們非常感謝您使用本公司出品之超高轉速直針鎖邊縫紉機(拷克車)。
- 請詳細閱讀此說明書，將使您更了解本機器獨特之性能及正確的使用方法，進而提高您縫製的效率及品質。
- 首先，請您注意：請先注入潤滑油及確認馬達之轉向為順時鐘方向，才可以啟動本機器。

TO ALL USERS

- Thank you very much for using our Ultra High Speed Straight Needle Overlock/Safety Stitch Machine.
- Before operating this machine, please read this instruction book amply to understand the functions and features of this machine. This will help you to increase the sewing efficiency and quality.
- Attention: Because this is an ultra high speed machine, please fill the lubrication oil and confirm that the motor turning direction is clockwise before turn the power on.

一般安全事項說明

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

GENERAL SAFETY INSTRUCTIONS

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. 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。

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. 由合格人員來修理器具

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。

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. 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. 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。








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. 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) 穿針線、線導片、天平以及更換梭子時，
- (2) 更換針、押具、針板、送具、頂針片、喇叭、車布導板，以及其他附屬配件時。
- (3) 維修工作時。
- (4) 離開工作場所或工作場所無人看顧時。
- (5) 若使用離合器馬達而無煞車片裝置時，必需待馬達完全停止。



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。

- (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) 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. 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。

 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。


 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. 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) 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。



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。



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。



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。



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。



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



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。



h. 為了避免觸電之危險，請絕不要在移開電源接地線後操作機器。



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



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



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

特別事項

WARNING

為了避免機器故障及損壞，請先確定以下事項：



1. 當您安裝好機器後，做第一次機器操作前，請徹底清潔機器。



2. 清除運送途中累積之灰塵及溢出之油脂。



3. 確定電壓及馬達相數(單相或三相)安裝正確。



4. 確定電源插頭正確地接上電源。



5. 當使用電壓與標示電壓不同時，請勿使用機器。



6. 確定機器轉動方向是否正確。

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.



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 :

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

WARNING TAG

1. 縫紉機上有警告標籤。(圖1)
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。

1. There is a warning tag attached on the sewing machine. (Fig. 1)
2. When using the sewing machine, please follow the instructions of the tag. Please contact the dealer if the tag is fallen off or fuzzy.

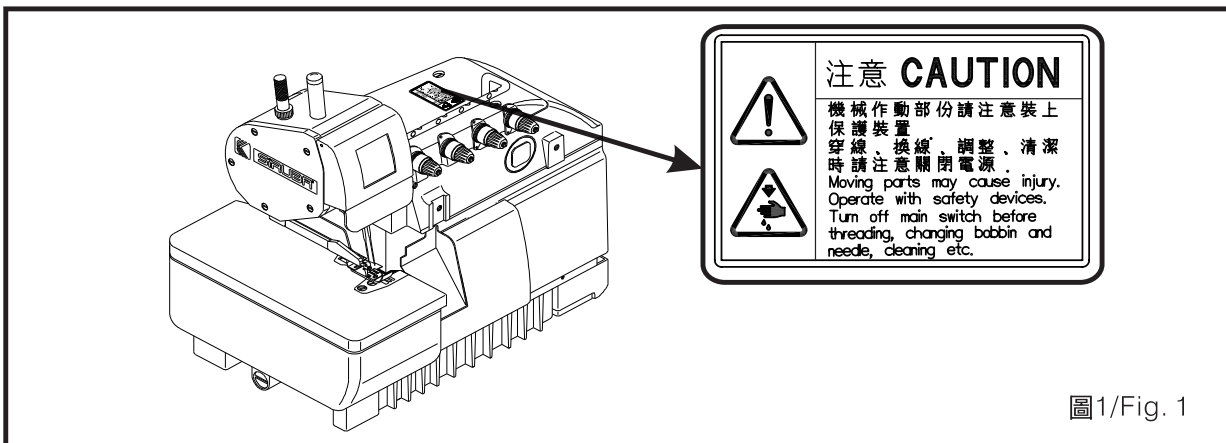


圖1/Fig. 1

3. 安全防護裝置(圖2)

3. Safety protection device (Fig. 2)

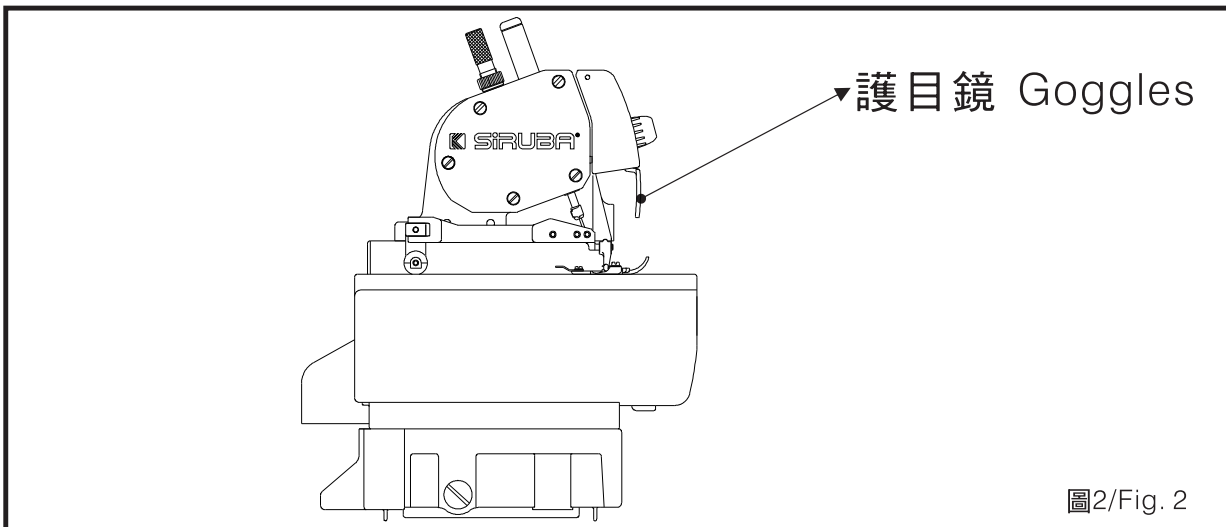



圖2/Fig. 2

4.  表示轉動方向。(圖3)

4.  Indicates rotating direction.(Fig. 3)

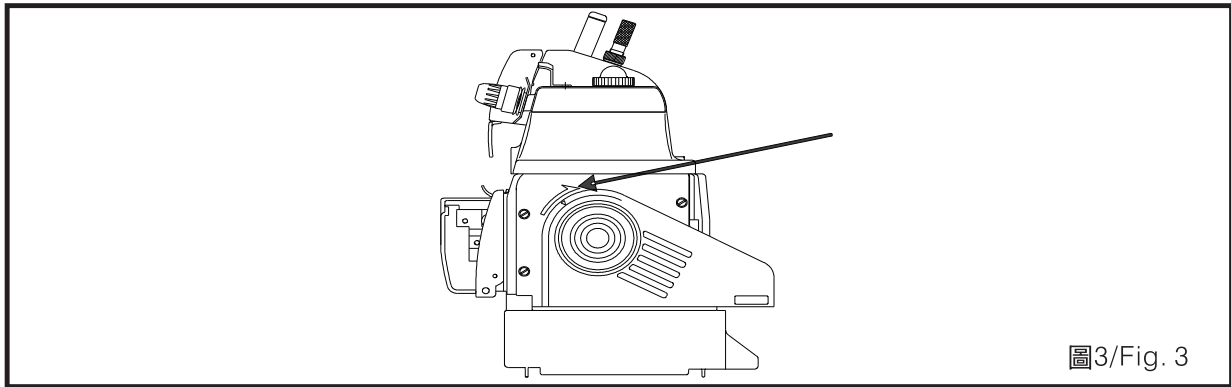


圖3/Fig. 3

規格

SPECIFICATIONS

1.(1)外銷型號分類：

1.(1)Type category for export sale:

757 - DFT - 516 H 2 - 2 4 / GB

①

②

③

④

⑤

⑥

⑦

⑧

① 線數：747為4線，757為5線

② 表示車台機構及外觀改良之區分編碼：

DFT：前綜合送包縫

DRT：後綜合送包縫

① Thread numbers:4 for747, 5 for 757

② Distinguishing code for machine mechanism and improved appearances:

DFT:Front top-feed overlock/safety stitch machine

DRT:Rear top-feed overlock/safety stitch machine

(2)內銷型號分類：

(2)Type category for domestic sale:

988DFT - 4T - 516 H 2 - 2 4 / GB

①

②

③

④

⑤

⑥

⑦

⑧

① 表示車台機構及外觀改良之區分編碼：

988DFT：前綜合送包縫

988DRT：後綜合送包縫

② 線數：4T為4線，5T為5線

① Distinguishing code for machine mechanism and improved appearances:

988DFT:Front top-feed overlock/safety stitch machine

988DRT:Rear top-feed overlock/safety stitch machine

② Thread numbers:4 for4T, 5 for 5T

③ 縫合方式：有514、516兩種型式(圖表1)

③ Sewing types: 514 and 516 (Chart 1)

型式 Type	514	516
圖樣 Pattern		

圖表1/Chart 1

④ 車縫布料

④ Sewing material

⑤ 送具型式

⑤ Feed dog type

⑥ 針寬

⑥ Needle width

⑦ 包邊寬度(表1)

⑦ Seam width (Table 1)

編號 Code	包邊寬度 Seam Width
4	4 mm
5	5 mm
6	6 mm

表1/Table 1

⑧ 搭配外掛多功能輔助件

⑧ Multi-functional attachment

2. 規格說明(表2)

2. Specification (Table 2)

規格 Specification	四線 4-thread		五線 5-thread
	514M2-24	514H4-24	516H4-35
	中厚布 Medium weight material	厚布 Heavy weight material	厚布 Heavy weight material
針寬 Needle width	2	2	3
包縫寬度 Seam width	4	4	5
固縫寬度 Fixed sewing width	6	6	8
差動比 Differential ratio	0.7~2		
針腳長度 Stitch length	3.6	5.0	5.0
壓腳上昇量 Presser foot lift volume	6.0		
針棒行程 Needle bar stroke	26.6		24.6
針離針板最高距 The highest height of needle from needle plate	10.8~11		9.5~9.7
送料具高出針板 Feed dog higher than needle plate	0.8~1.0		
勾針越距 Looper over distance	5.5~6.0		4.5~5.0
KL25 退距 KL25 backward distance	3.0~3.2		3.4~3.6
KM04 退距 KM04 backward distance	—		2.2~2.5
轉速 (S.P.M) Rotation rate	5500		
使用針 Needle	DCX27#11		DCX27#18
噪音值 Noise Level	80 分貝以下 under 80dB		84 分貝以下 under 84 dB

表2/Table 2

安裝

- ⊘ 請讓受過培訓的技術人員來安裝縫紉機。
- ❗ 請委託購買商店或電氣安裝人員進行電氣配線。
- ❗ 縫紉機重約30公斤，安裝工作必須由兩人以上來完成。
- ⊘ 在安裝完成前，請不要連接電源，如果按起動開關，縫紉機動作會導致受傷。
- ⚠ 縫紉機頭進行移機時，請小心操作，單手操作時因縫紉機的重量，萬一滑落易導致受傷。

INSTALLATION

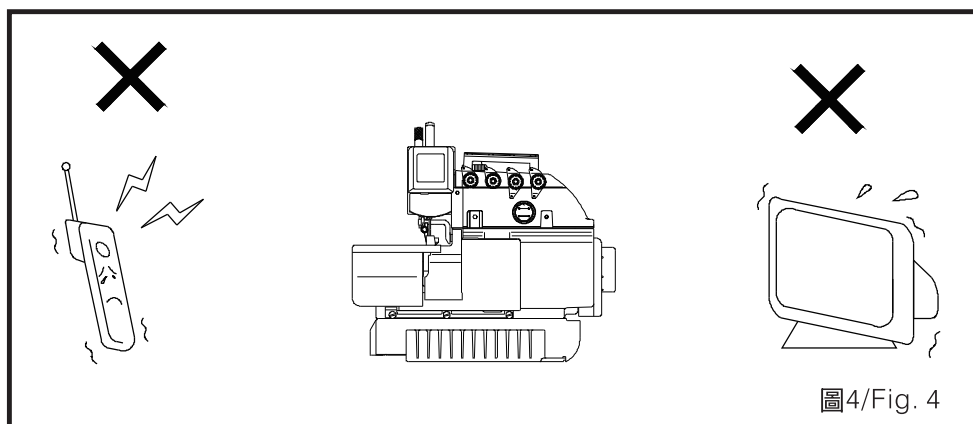
- ⊘ Please have the trained technician to assemble the sewing machine.
- ❗ Please ask the dealer or electrician to do all the electricity wiring works.
- ❗ The sewing machine weights about 30 kgs, therefore, the assembling should be done by more than 2 people.
- ⊘ Before finishing the installation, please do not connect the power switch. If pressed the start switch remissly, this will make the sewing machine functioning and will cause infuries.
- ⚠ When moving the machine head, please be very careful. It will cause injuries easily if the machine slips down because of its weight while using single hand to move the machine.

縫紉機的安裝位置

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，否則這些設備可能會縫紉機的電子干擾所影響。(圖4)

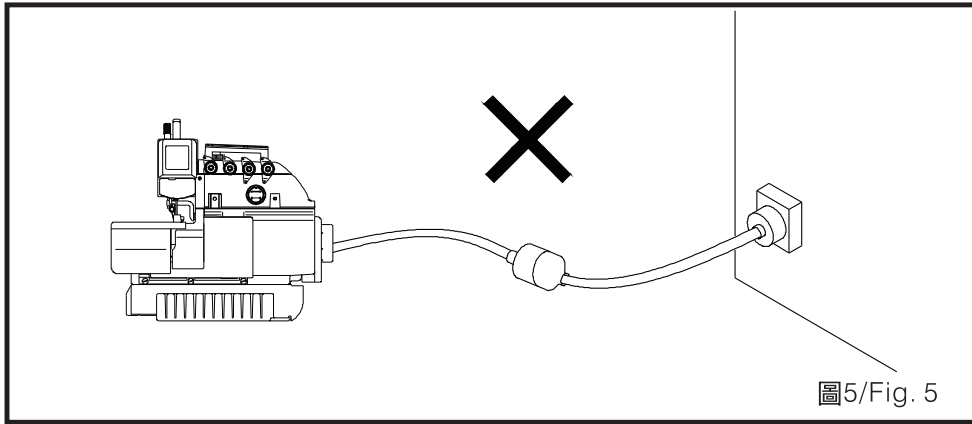
THE INSTALLATION POSITION

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. 4)



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。(圖5)

2. The wire should insert to the AC power socket directly. If using the extension wire, this might cause malfunction. (Fig. 5)



搬運縫紉機

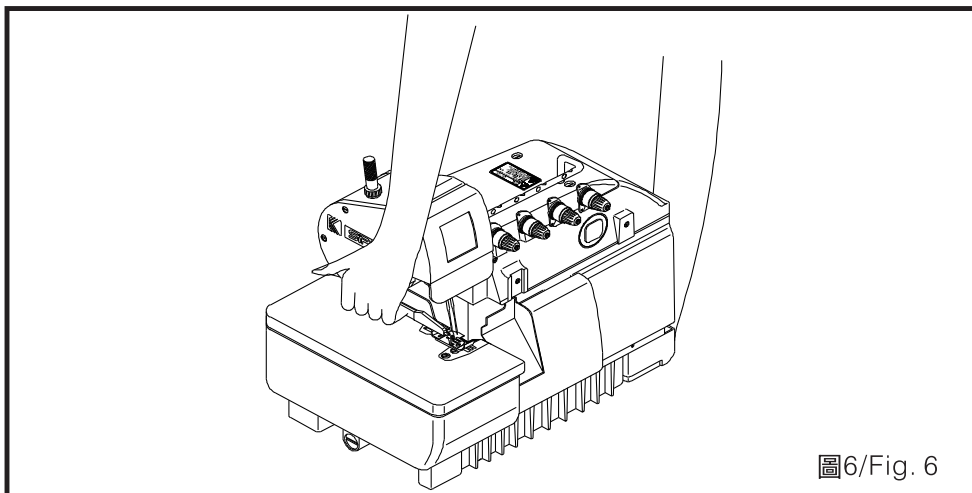
MOVING THE SEWING MACHINE

縫紉機之搬運(圖6)

Moving the sewing machine (Fig. 6)

1. 應按圖示用左手托住前機殼本體，右手撐扶住底盤進行搬運。
2. 搬運時須穿著安全鞋。

1. To move the sewing machine, please follow the figure shows. Using left hand to hold the front machine cover body, and right hand to hold the bottom plate to move.
2. Please wear safety shoes while moving.



機器安裝

INSTALLING THE NEW MACHINE

1. 依本機所附桌板裁製圖及零件組合圖所列之配件，依序安裝防震機座鋁板如安裝為半沉式時，機台針板面與桌面之距離為100 mm，若全沉式則只有5 mm。

1. Install the cushion rubber and the rest board based on the table cut-out diagram. If the table is semi-submerged, the distance between top surface of the needle plate and table top should be about 100 mm. If fully submerged type table, the distance would be only about 5 mm.

- 馬達啟動踏板裝於左邊，押具脚踏板則裝於右邊。
 - 按零件圖示裝置廢料槽及線架。
 - 注意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縮10mm之緊度為宜。
- Install the pedal of the clutch motor on the left side, and the pedal of the presser foot lift on the right side.
 - Install the cloth waste chute and thread stand as parts list shows.
 - Please be noted that the motor turning direction is clockwise. The tension of the motor belt should be 10 mm pressed inwards by a finger.

新機器啟用規定

- 新機器在最初啟用磨合期的四個星期內，請用低於最高速度20%的速度運轉，之後換上新潤滑油，才運轉至最高速度。

OPERATING THE NEW MACHINE

- In the first four weeks of operating this machine, please operate it at the speed of 20% less than the maximum. Then, the machine can be operated at the maximum speed after replacing the lubrication oil.

潤滑油之注入與更換

- 潤滑油之注入(圖7)
 - 將螺絲①旋開，以包裝箱內所附之超高速潤滑油或選用MOBILE#10或AGIP#32等相當之機油加入，使油量指示桿位於油標上下之間即可，然後再鎖緊螺絲①。
 - 開箱新機器或久置未使用，重新要用時，請在針棒、上勾針台等處加油潤滑。

LUBRICATION AND DRAINAGE

- Fill the lubrication oil (Fig. 7)
 - Remove the screw ① and fill in the enclosed ultra high speed lubrication oil or use MOBIL#10 or AGIP#32 or equivalent. Tighten the screw ① when the oil level indicator stops between two marking lines.
 - Please lubricate the needle bar and the upper looper shaft before starting operating a new machine or a long idling machine.

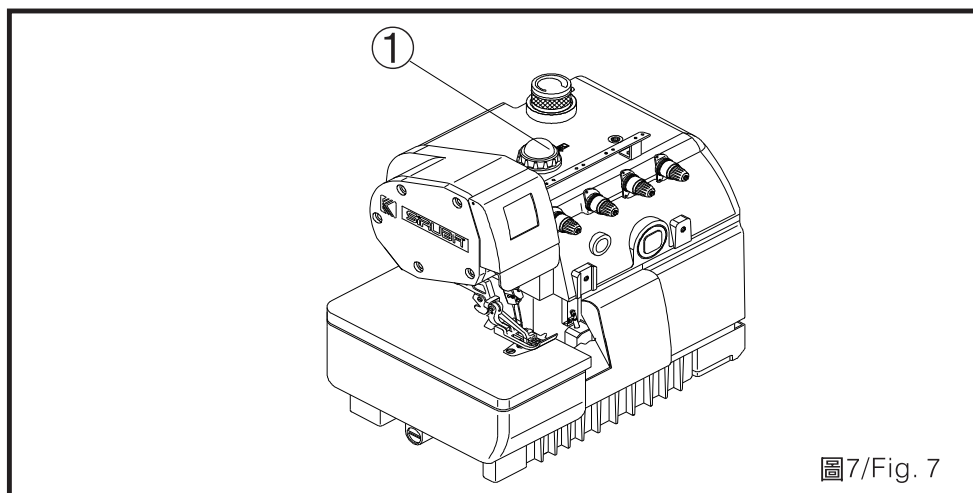


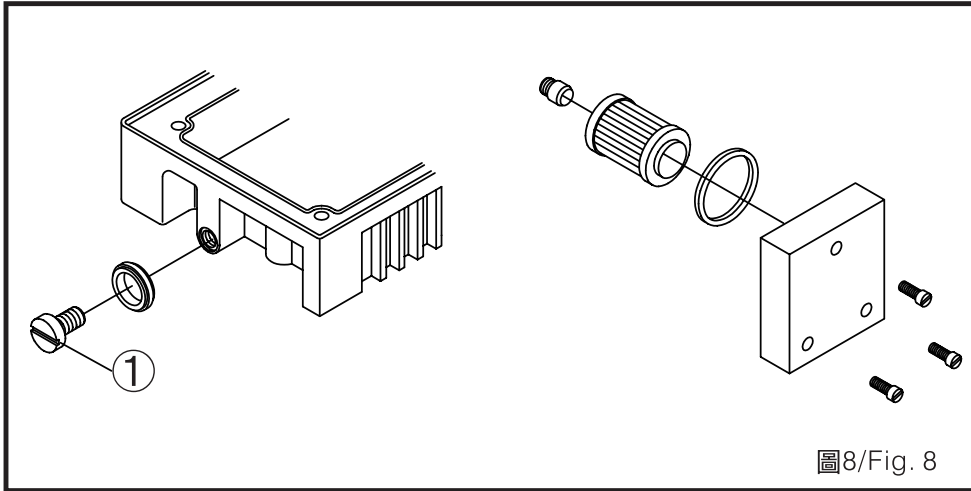
圖7/ Fig. 7

2. 潤滑油之更換(圖8)

- (1) 將螺絲①放鬆旋開，使油槽內的油完全排出後再鎖緊。
- (2) 為延長本機器之壽命，請於開始使用後四星期更換新油，爾後約每四個月更換一次。

2. Drainage and refill the oil (Fig. 8)

- (1) Loosen the screw ① and drain all the oil inside the oil tank. Then, tighten the screw ① again.
- (2) In order to extend the term of usage, please replace the oil after the first four week, and then replace it every four months.



3. 針之冷卻油 使用油：矽油

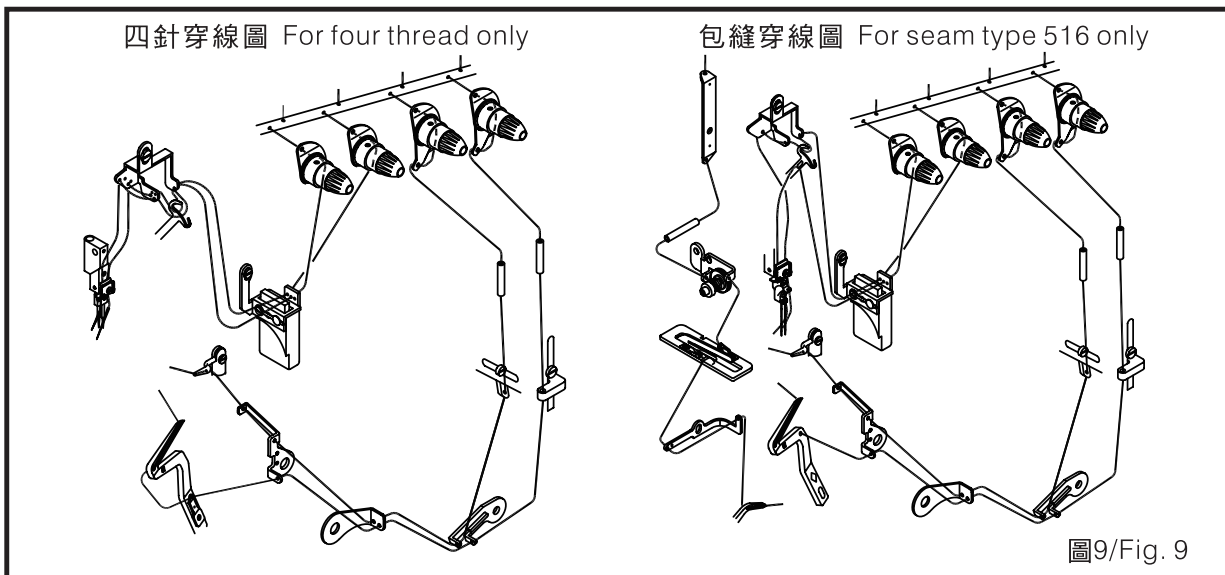
3. Needle cooling lubrication oil: SILICON OIL.

穿線方法

THREADING

請確實按照圖示各種不同縫合情況穿線，錯誤之穿線將引起斷線、跳針及車縫不平坦等現象。(圖9)

Follow the procedures shown in (Fig 9) for threading. Wrong threading may cause thread breaking, stitch skipping, puckering or unexpected sewing. (Fig. 9)



控線調整

控線強弱必須根據縫合材料種類、厚薄、線針距及包邊寬度等之不同而做不同之調整。

1. 調整鈕之控線關係(圖10)

- (1) 第一調整鈕①控制雙環針線或左邊拷克線
- (2) 第二調整鈕②控制包邊針線
- (3) 第三調整鈕③控制上勾針線
- (4) 第四調整鈕④控制下勾針線
- (5) 第五調整鈕⑤控制雙環勾針線

ADJUST THREAD TENSION

The thread tension should be adjusted properly according to the kinds and the thickness of the materials, stitch length, and seam width, etc. In addition, adjust the nuts case by case individually.

1. Thread tension adjusting nuts (Fig. 10)

- (1) The first adjusting nut ① controls double chain stitch threads or the left over-lock needle thread.
- (2) The second adjusting nut ② controls the seam lock needle thread.
- (3) The third adjusting nut ③ controls the upper looper thread.
- (4) The fourth adjusting nut ④ controls the lower looper thread.
- (5) The fifth adjusting nut ⑤ controls the double chain looper thread.

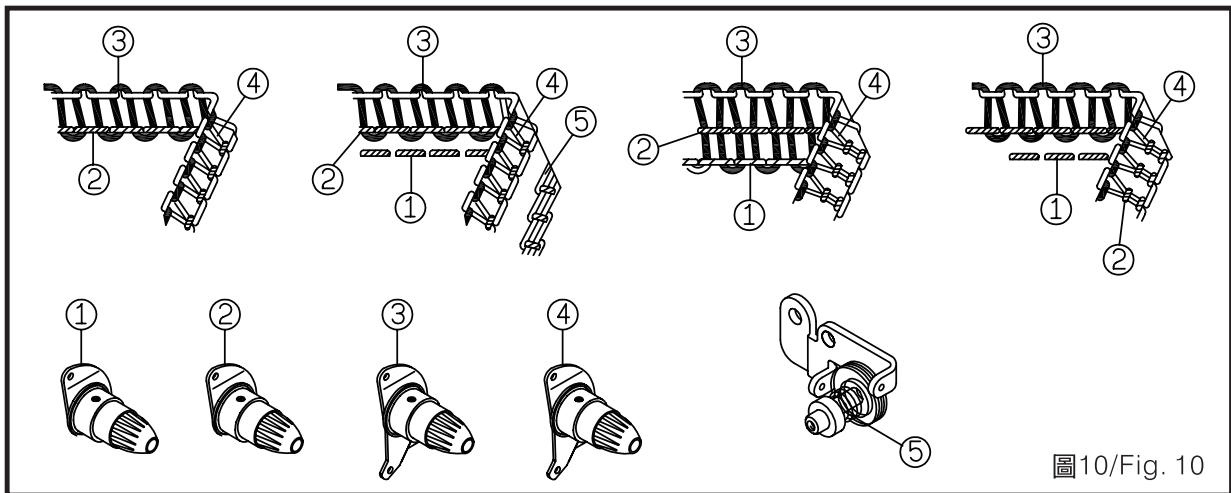


圖10/Fig. 10

2. 針線控線關係(圖11)

- (1) 在縫合方式504、514時，將①、②移至最下端，縫合方式503及505時，將①、②移至最上端，縫合方式503及505時，將①、②移至最上端。
- (2) (+)表示增加針線放線量，(-)表示

2. Needle thread control (Fig. 11)

- (1) When the sewing type is set to 504 or 514, move the nut ① and ② to the lowest point. When the sewing type is 503 or 505, move the nut ① and ② to the highest point.
- (2) The (+) direction indicates to increase the needle thread length, (-) means to decrease the needle thread length.

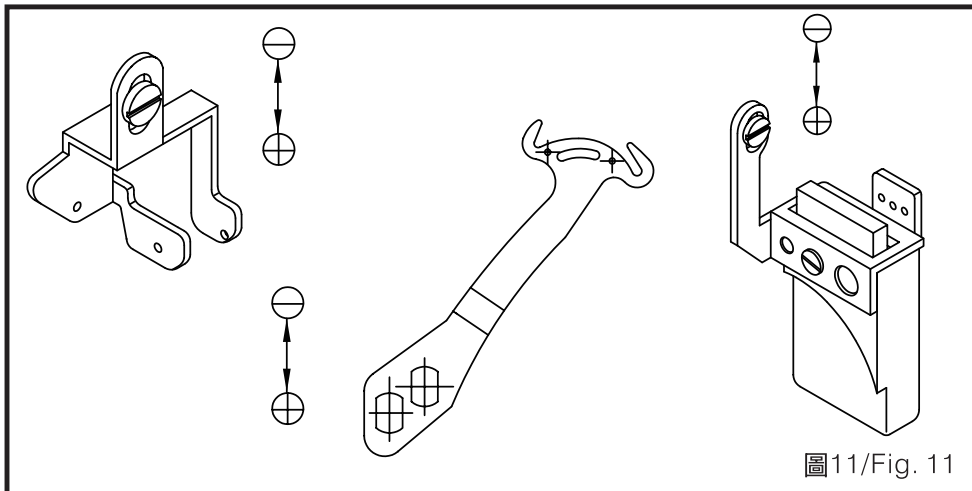


圖11/Fig. 11

減少針線放線量。

3. 勾針控線關係(圖12)

(1) 在縫合方式為512，當上勾針移至最左時，將①及②調整至虛線位置。若縫合方式為503、504、505及上勾針移至最低時，將①及②調整至實線位置。

(2) 固定線導板③如下：

A點：尼龍伸縮線

B點：拷下擺

C點：縫合方式512

(3) 固定線導板④如下：

D點：尼龍伸縮線

E點：拷下擺

註：

(+)方向為縫合線較多，反之則較少。

3、Looper thread control (Fig. 12)

(1) When the sewing type is 512, and upper looper is on the leftest side, adjust ① and ② at the position as the dotted line. When the sewing type is 503, 504, or 505, and upper looper is at the lowest position, set the take-up ① and ② at the position as the continuous line.

(2) Adjust fixed thread guide ③ as the followings:

Point A: for nylon stretchy thread.

Point B: for blind hemming.

Point C: for sewing type 512.

(3) Adjust fixed thread guide ④ as the followings:

Point D: for stretchy thread.

Point E: for blind hemming

NOTE:

The direction (+) is for more thread in sewing seam, and the (-) direction is for less thread in sewing seam.

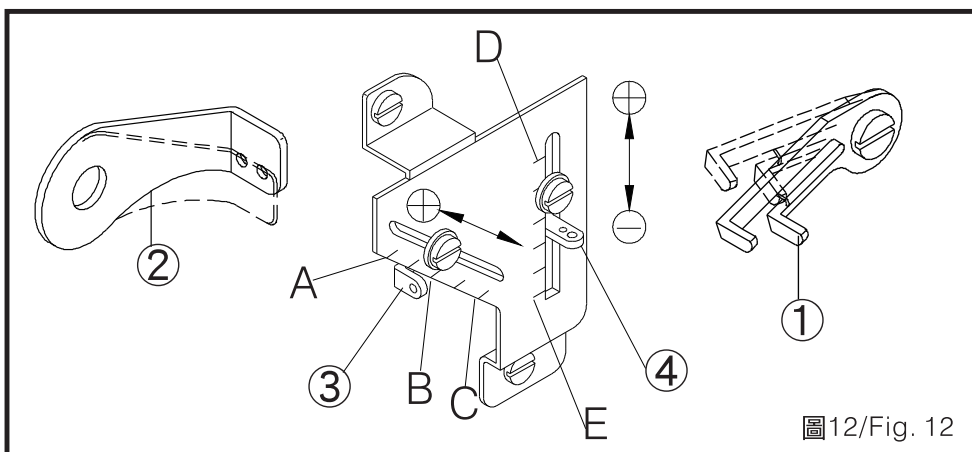


圖12/Fig. 12

換針方法

REPLACE THE NEEDLE

1. 使用DCX27或同規格之針。(圖13)
2. 旋開螺絲①並取下針。
3. 將新針插至針孔最底端，並使針之長溝面向自己。
4. 固定螺絲①

1. Please use the needle DCX27 or the equivalents. (Fig. 13)
2. Loosen the screw ① and take off the needle.
3. Insert the new needle till reaching the end, as well as the long groove faces your side.
4. Tighten the screw ①.

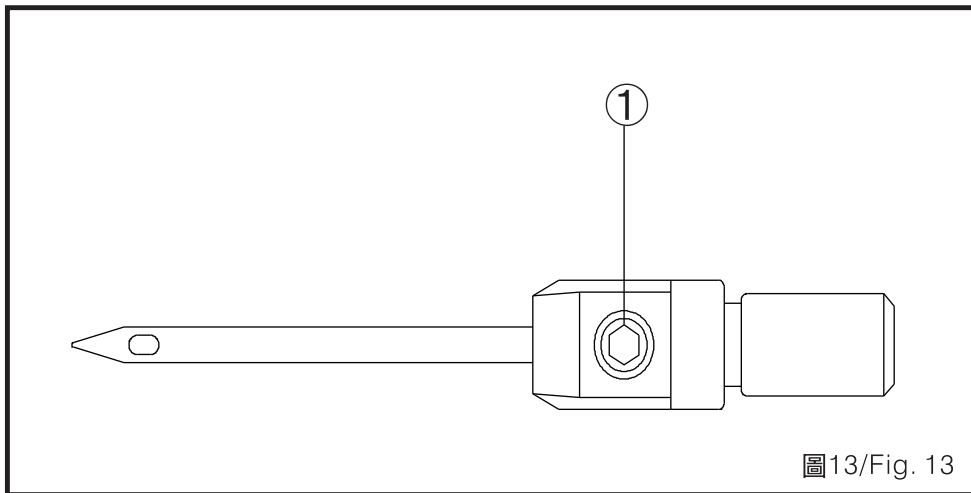


圖13/Fig. 13

針距調整

ADJUST THE STITCH LENGTH

通常依縫合布料，差動比之不同而調整。持續壓下按鈕A並轉動皮帶輪使鈕卡住，再轉動皮帶輪至所需之針距後放開此按鈕。(圖14，表3)

The stitch length is adjusted according to the fabrics, the differential ratio, or other factors. Keep pressing the button A and turn the pulley till the button is locked. Then, release the button after reaching the desired stitch length. (Fig. 14, Table 3)

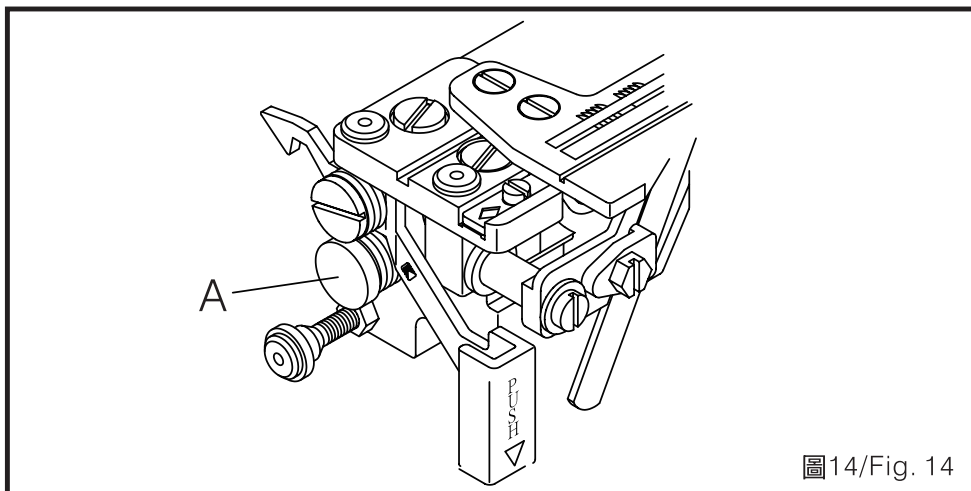


圖14/Fig. 14

Max Dif ratio	Machine type	Pulley scale						
		1	2	3	4	5	6	7
1:2	Seaming	1	1.5	2	2.5	3	3.5	3.8
1:3	Shirring	0.7	1	1.4	1.7	2	2.3	2.5
1:1.3	Serging	1.6	2.3	3.1	3.9	4.7	5.4	5.9
1:4	Special	0.6	0.9	1.2	1.5	1.8	2.1	—

表3/Table 3

差動比調整

ADJUST THE DIFFERENTIAL FEED RATIO

差動比是在主送具以及差動送料具之間運行的比例。

1. 若主送料具之運動程大於差動送料具運動程時，則布料車縫時伸張，反之則收縮。
2. 調整方法為放鬆螺絲①轉動螺絲②順時鐘方向時使布料收縮，反之則伸張，調整後再固定螺絲①。(圖15)

註:

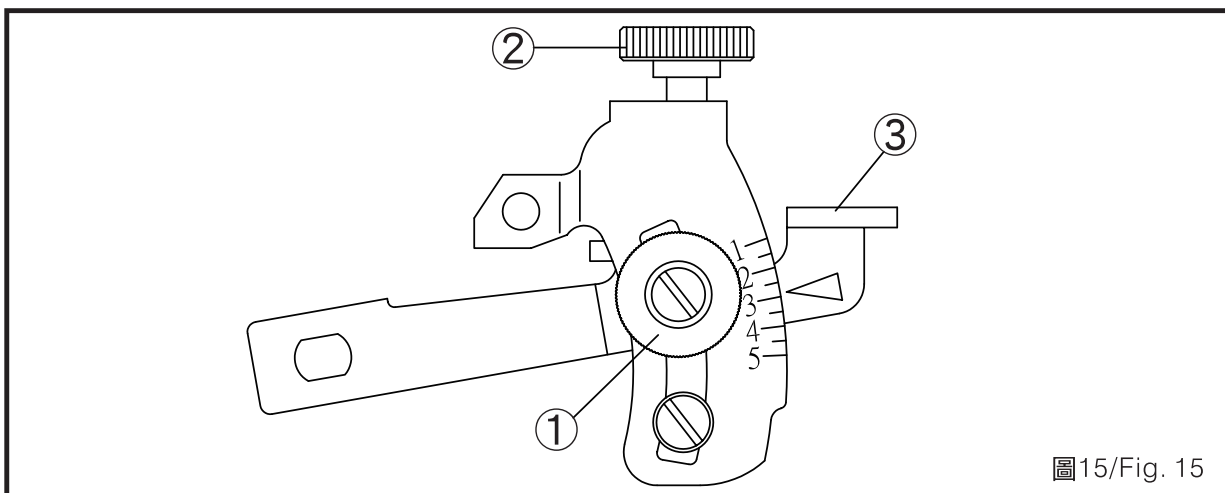
當調整桿③之表面固定在刻劃2時，其差動比為1:1，若將其固定在刻劃2以上時，可使布料伸張至1:0.7。(參考表4)

The differential feed ratio is the ratio of movements between main feed dog and differential feed dog.

1. When the movement of main feed dog is bigger than differential feed dog, the fabric is stretched in sewing and shirred to the contrary .
2. Loosen screw ① and turn the screw ② in clockwise for stretching the fabric, and in reverse direction for shrinking the fabric, and then tighten the screw ①. (Fig. 15)

NOTE:

When the surface of adjusting level ③ be set at the scale 2 , the differential feed ratio is 1:1, and if it is set over the scale 2, it can make the fabric stretch to the ratio 1:0.7. (see Table 4)



Scale		1	2	3	4	5
Differential Feed ratio	1:1.3	—	1:0.7	1:0.9	1:1.1	1:1.3
	1:2	1:0.7	1:1	1:1.4	1:1.7	1:2
	1:3	1:1	1:1.5	1:2	1:2	1:3
	1:4	1:1.1	1:1.6	1:2.3	1:2.3	1:3.3

表4/Table 4

上送具高低行程調整

ADJUST THE HIGH/LOW STROKE OF UPPER FEED DOG

先旋開螺絲①，取下上蓋②，用開口板手③旋鬆螺帽④來調整高低行程。(圖16)

Loosen the screw ① first, and take the upper cover ② off. Use the hexagonal wrench ③ to loosen the nut ④ to adjust the high/low stroke of the upper feed dog. (Fig. 16)

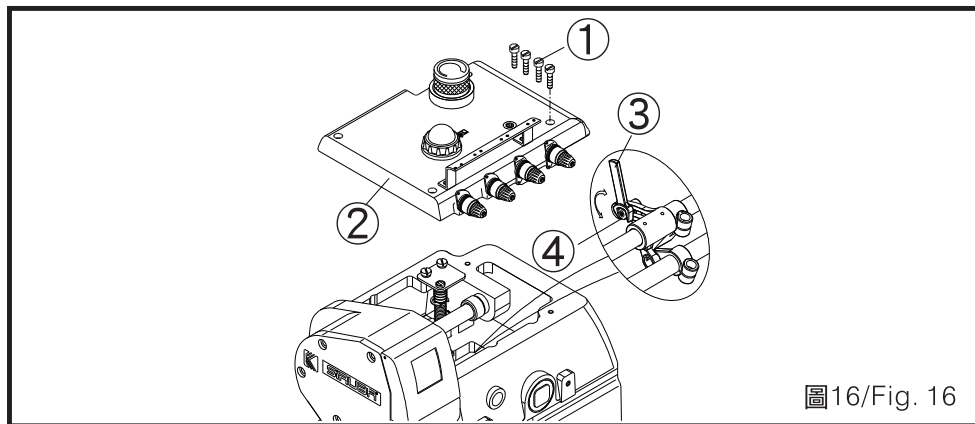


圖16/Fig. 16

上送具前後行程調整

ADJUST THE FRONT/REAR STROKE OF UPPER FEED DOG

旋鬆調整旋鈕①，往順時鐘方向行程越大，反之行程越小。(圖17)

Loosen the adjusting knob ①. The stroke will be large when turning it clockwise, whereas the stroke will be smaller when turning it counter clockwise. (Fig. 17)

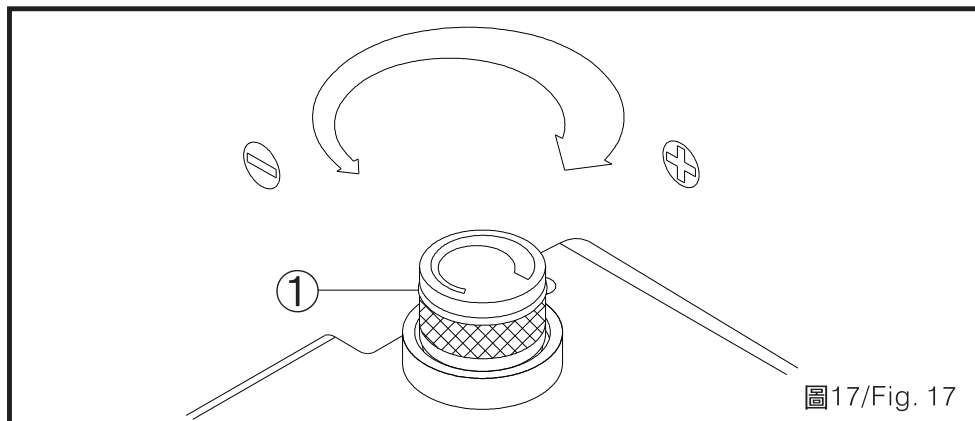


圖17/Fig. 17

故障檢修

TROUBLESHOOTING


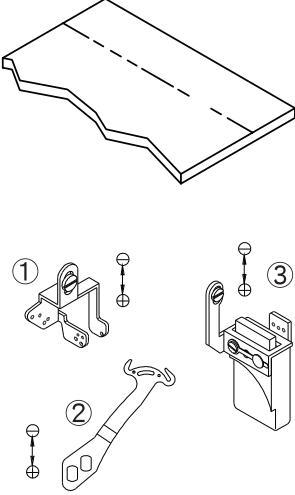


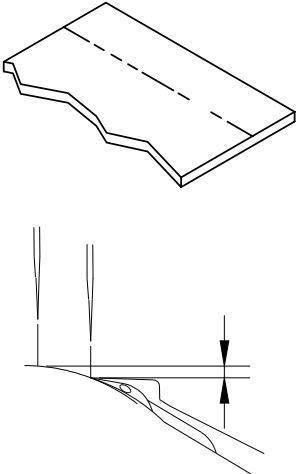
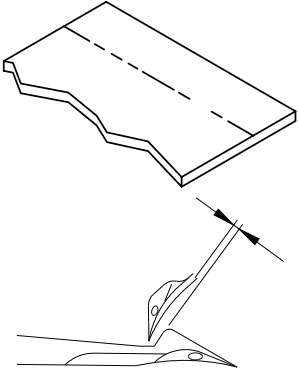

注意CAUTION

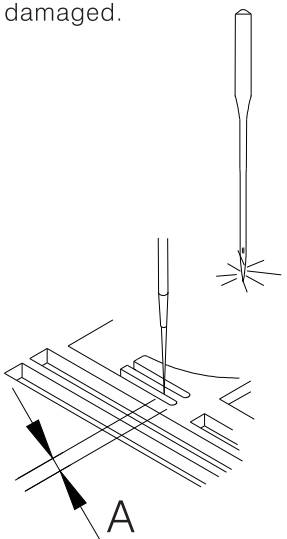
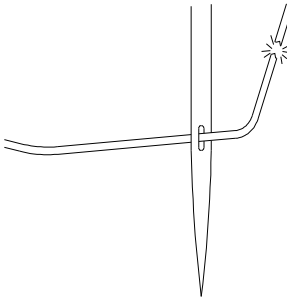


在進行故障檢修查詢之前，請先關閉電源並拔出電源，否則如果誤觸啟動開關，縫紉機會動作，易導致人身傷害。

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 o operators.

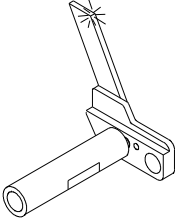
No.	現象 Problem	檢查 Check	調整 Adjustment
1.	<p>針線太過緊密/疏鬆 The needle thread is too tight/loose.</p> 	<p>針線張力是否過大或過小？ Is the tension of the needle thread too loose or too tight?</p>	<p>調整針線張力 Adjust the needle thread tension.</p>
2.	<p>針線的跳針現象 The skipping stitches of the needle thread.</p> 	<ol style="list-style-type: none"> 1. 車針的選擇不對？ Choose the wrong needle? 2. 車針不良？ Bad needle? 3. 車針與左勾針尖端之間有間隙？ Is there any clearance between the needle and the top of the left looper? 4. 張力調整小彈簧不起作用？ Does the small spring of tension adjustment not function? 5. 針線的張力太緊？ Is the needle thread tension too tight? 	<ol style="list-style-type: none"> 1. 選擇配合布料的車針與縫線號碼。 Select the correct needle and thread number that fit the fabrics. 2. 換新車針。 Change a new needle. 3. 調整左勾針尖端與車針之間為±0。 Adjust the clearance between the left looper tip and the needle to be ±0. 4. (1) 小彈簧不起作用時，把彈簧拉緊一點。注意：拉太長則會發生斷線。 If the small spring does not function, pull it to be more tightened. NOTE: the thread broken might occur if pulling the spring too tight. (2) 張力調整盤發生溝槽時，則需更換新調整盤。 If there is any groove existing on the tension adjusting plate, please change a new one. 5. (1) 把針線張力做適度調整。 Loosen the needle thread tension properly. (2) 把針線的線路①調整在最高位置，使針線的勾線器②的針線放出量減少。 Adjust the line ① of the needle thread to the highest position, so that the released volume of the needle thread from the thread hooking ② will be decreased.

No.	現象 Problem	檢查 Check	調整 Adjustment
			(3) 把線路③左傾一點，以增加勾針的線放出量。 Lean the line ③ left a little to increase the released volume of the looper thread.
3.	右勾針線的跳線 The skipping stitches of the right looper thread. 	1. 右勾針與車針的間隙太大？ Is the clearance between the right looper and the needle is too wide? 2. 雙針時，右勾針與左針的間隙太大？ Is the clearance between the right looper and the left needle is too wide when using 2 needles?	1. 右勾針向右退後時，與車針的間隙必須為0.1 mm，此乃使用正規的右勾針。(各機種備有單針、雙針、厚料、薄料用最合適的右勾針。) When the right looper moves right backward, the clearance to the needle has to be 0.1 mm, which is using the correct right looper. (Each model has the most appropriate right looper for 1 needle, 2-needle, thick materials, or thin materials.) 2. 由於右勾針安裝時的左右位置以及右勾針座上下運動位置之雙方關係，調整勾針的運動軌跡，在右勾針下降時，將左針到右針的下降量予以減少。 Because of correlation of the left/right positions while assembling the right looper and up/down moving positions of the light looper seat, adjust the movement path of the looper. When the right looper is descending, decrease the descending amount from the left to the right needle.
4.	左勾針線的跳線 The skipping stitches of the left looper thread. 	1. 左右勾針交叉時，右勾針不會勾到左勾針線？ Does the right looper not hook the left looper thread while they are crossing each other? 2. 右勾針尖端的磨損？ Is the right looper tip worn? 3. 左右勾針交叉時，間隙太大 The clearance is too wide when the left looper and the right looper cross to each other.	1. 換新左勾針。(左勾針尖端磨損，要修正時，不得把頭部突出處予以磨低「磨薄」) Change a new left looper. (When the left looper tip is worn and is to be adjusted/replaced, please do not grind, "making it thinner," the top of the left looper.) 2. 換新勾針或用油石把尖端磨尖。 Change a new looper or sharpen the tip by an oil stone. 3. 換新勾針 Replace with a new looper.
5.	斷針 Needle broken 	1. 車針的選擇不對？ Choose the wrong needle? 2. 押具的安裝不良？ Incorrect presser foot assembly?	1. 在布料不發生針孔的範圍內，使用粗一點的車針。 Use a thicker needle without having the pinholes on the fabrics. 2. 安裝時必須使車針會插進押具落針處中央。 When assembling, make sure that the needle can insert into the center of the needle hole of the presser foot.

No.	現象 Problem	檢查 Check	調整 Adjustment
		3. 送布齒的安裝高低不對？ Is the height incorrect while assembling? 4. 縫線不良？ Bad threading?	3. 調整送布齒的高度為0.8 mm~1.0 mm，同時保持適當的押具壓力。 Adjust the height of the feeding teeth to be about 0.8 mm~1.0 mm. Meanwhile, keep the appropriate presser foot pressure. 4. 縫線有結頭要事先加以處理後，重新穿線。 If there is any connecting part of the thread, please deal with it first before threading.
6.	車針尖端受損 The needle tip is damaged. 	1. 右勾針及車針高低不對？ Are the height positions of the right looper and the needle incorrect? 2. 頂針片太靠近？ Is the ejector plate is too close? 3. 針板安裝位置不對？ Is the assembling position of the needle plate incorrect?	1. 車針在上死點附近時，用手指故意把車針向前彎曲，看看尖端會不會碰到右勾針，然後調整車針高低或右勾針的運動位置。 Move the needle close to the upper dead point, and push the needle forward a little by a finger to see whether the tip touches the right looper. Then, adjust the needle vertical position or the moving position of the right looper. 2. 裡面的頂針片必須在左勾針的尖端到達車針右側面時，就要從車針離開，前面頂針片與車針的間隙必須留大約0.2 mm。 The ejector plate inside must leave from the needle before the left loopertip reaches the right side of the needle. The clearance from the front ejector plate to the needle should be about 0.2 mm. 3. 把針板拉前安裝使A部分的間隙大一點。 Move the needle plate forward a little to assemble in order to widen the clearance A a little.
7.	斷線與縫合不順 Broken thread and rough/uneven stitches 	1. 線架的線孔沒有磨光？ Does the thread hole of the thread stand not polish? 2. 線的選擇錯誤？ Choose the wrong thread? 3. 線的張力調整不好？ Didn't adjust the thread tension correctly?	1. 用紗布把線孔周圍磨光。 Use emery cloth to polish the surroundings of the thread hole. 2. 更換較好的線，使粗細線均勻。 Replace with a better thread to balance the threads. 3. 注意左右勾針的線不要太鬆，要調整一支針線時也要注意到有關的線變化。 Please be noted that the threads of the left/right looper should not be too loose. When adjusting the position of even one needle thread, the related changes of the threads are needed to be noticed.

No.	現象 Problem	檢查 Check	調整 Adjustment
		4. 押具彈簧調整不良？ Incorrect adjustment of the presser foot spring? 5. 切刀磨損？ The trimmer is worn? 6. 差動比未配合？ The differential ratio does not match/fit?	(1) 拉緊針線→左勾針線會鬆→右勾針線會鬆。 Pull the needle thread tightly → the left looper is looser → the right looper is tighter. (2) 拉緊左勾針線→右勾針線會鬆→針線也會鬆。 Pull the left looper thread tightly → the right looper is looser → the needle thread is looser, too. (3) 拉緊右勾針線→左勾針線會鬆→針線會鬆。 Pull the right looper thread tightly → the left looper thread is looser → the needle thread is looser. 4. 調整押具彈性，配合所要用的布料。 Adjust the presser foot flexibility to fit the fabric. 5. 磨利刀口或更換新品。 Sharpen the knife edge or replace with a new one. 6. 調整配合布料的差動送料。 Adjust the differential feeding to match the feeding fabric.
8.	環縫不出線 The thread does not come out when doing chainstitch. 	1. 環勾針線凸輪調整不當 The cam of the chainstitch looper is inappropriate. 2. 控線器不良 The thread tension device doesn't function well. 3. 押具後彈簧安裝不良 The presser foot rear spring wasn't assembled well.	1. 調整適當的凸輪方位 Adjust the cam to an appropriate position. 2. (1) 調整彈簧強度 Adjust the spring strength (2) 拋光或換新 Polish it or replace with a new one 3. 重新調整彈簧或換新，使押具活動自如，並試其壓力。 Readjust the spring or change to a new one to make sure the presser foot can move smoothly and test its pressure.
9.	粗細針不能分 Cannot distinguish the thin/thick thread 	1. 偏心凸輪生鏽 The eccentric is rusty. 2. 偏心凸輪控制彈簧調整不當 The spring of the eccentric is not adjusted appropriately. 3. 與止軸輪配合之滑塊配合不當 The slide block that cooperates with the stopper cam doesn't function well.	1. 清除阻塞部份，使油通到凸輪上。 Clean the stock part so that the oil can reach the cam. 2. 調整適當之緊度，但不可太鬆。 Adjust the tension properly, but should not be too loose. 3. (1) 校正KP09D寬度或磨小KP06F寬度 Correct the width of KP09D or polish the width of KP06F to make it narrower. (2) 更換KP09D/KP06F Change KP09D/KP06F.

No.	現象 Problem	檢查 Check	調整 Adjustment
10.	大聲、異聲 Loud noise, strange noise	1. 布板聲 Sound of fabric plate 2. 心軸鬆動出聲 The main shaft is loose and has noise. 3. 泵浦聲(沙沙聲) Noise of the pump (scratchy sound) 4. 針棒鬆動 The needle bar is loose 5. 連桿上控制間隙之固定勾鬆動、碰撞 The fixed hook of the connecting rod controlling the clearance is loosening or clashing? 6. 上下刀位置不對 Incorrect position of the upper and the lower trimmer. 7. 布板蓋之側蓋碰撞聲 Crashing noise from the side cover of the fabric plate.	1. (1) 調整螺絲適當位置 Adjust the screw to the proper position (2) 調整KB06E的NK26，使布板蓋側蓋靠穩 Adjust NK26 of KB06E to stabilize the side cover of the fabric plate cover 2. 把大心上的銅套之銅面膠清除，重新調整 Clean the copper glue from the copper sleeve of the main shaft and readjust it. 3. 用治具加壓泵浦齒輪，使運轉3~5分鐘即可 Use the fixture to add pressure on the gear of the pump, and keep the pump running 3~5 minutes. 4. 更換新品或磨合其接觸面，使之間隙變小 Replace with a new one or polish the contacting surface to make the clearance smaller. 5. (1) 螺絲加膠 Add glue onto the screw. (2) 溝寬磨大或倒角 Grind the groove to make wider or chamfer. (3) 更換新品 Replace with a new one. 6. 調整上下刀角度 Adjust the angles of the upper and the lower trimmers. 7. 校正布板蓋之側蓋的角度，使之不會撞到下勾針與上刀台。 Correct the angle of the side cover of the fabric plate to keep it from the lower looper and the upper trimmer seat.
11.	不能噴油 The oil does not splash 	1. 泵浦不出油 The oil does not come out from the pump. 2. 上機構不噴油 The upper mechanism does not splash the oil.	1. (1) 重新鎖正確位置 Relock it to the correct position (2) 重新組配泵浦中齒輪與心軸位置 Reassemble the gear of the pump to the main shaft and adjust the position. 2. (1) 清除毛頭，換新出油螺絲 Clean the lints and change the oil releasing screw. (2) 換新濾油器 Change a new filter (3) 清除污穢的東西或換新 Clean the dirt or replace with a new one. (4) 用鐵絲疏通油路 Use a piece of iron wire to clean the oil path through.

No.	現象 Problem	檢查 Check	調整 Adjustment
12.	刀片不利 The knife is not sharp. 	切刀不利 The knife is not sharp.	<ol style="list-style-type: none"> 1. 磨利或更換新品 Sharpen it or replace with a new one. 2. 校正上下刀片座角度 Correct the angles of the upper/lower trimmer seats. 3. 重新正確安裝(按基準調整安裝) Reassemble it correctly (to assemble and adjust it based on the norm standard).

圖表2/Chart 2

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 componenets 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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