



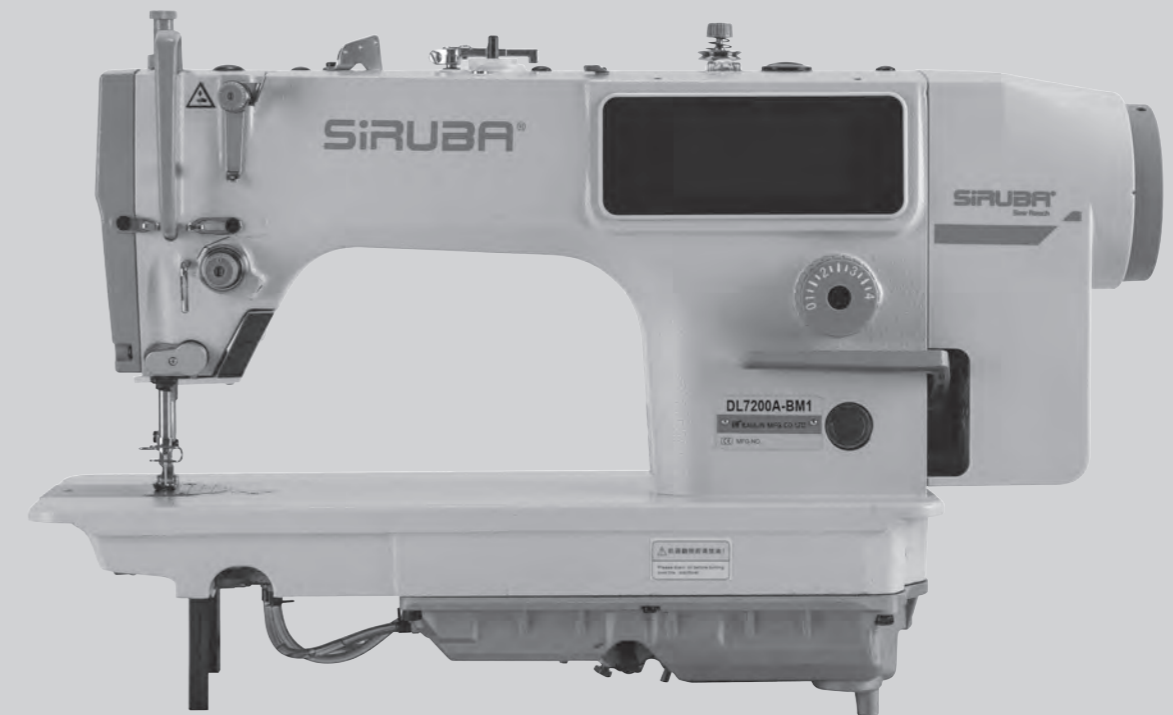
DL7200A-Q

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

DL7200A-Q

高林股份有限公司 KAULIN MFG. CO., LTD.

使用說明書 INSTRUCTION BOOK



The specification and/or appearances of the equipment described in this instruction book are subject to change because of modification without previous notice.

LY1503



 高林股份有限公司
KAULIN MFG. CO., LTD.



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:

DL7200A-BM1-XX/DL7200A-BH1-XX

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		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

索引	INDEX	頁/PAGE
一般安全事項說明	GENERAL SAFETY INSTRUCTIONS	1
重要安全事項說明	IMPORTANT SAFETY INSTRUCTIONS	3
特別事項	WARNING	7
警告標籤	WARNING TAG	7
護針安全圖說	SAFETY ILLUSTRATION OF NEEDLE GUARD	8
搬運	MOVING THE SEWING MACHINE	9
關於縫紉機的安裝位置	THE INSTALLATION POSITION OF THE SEWING MACHINE	9
各部件名稱	NAMES OF MAJOR PARTS	10
規格	SPECIFICATIONS	11
關於本機的重要安全 注意事項	IMPORTANT SAFETY INSTRUCTIONS OF THIS MACHINE	14
安裝	INSTALLATION	15
油盤安裝	OIL PAN INSTALLATION	16
針的安裝	INSTALLING THE NEEDLE	17
梭子之安裝	SETTING THE BOBBIN	19
線架安裝	THREAD STAND ASSEMBLY	20
機頭穿線	THREADING THE MACHINE	21
針距調整	STITCH LENGTH ADJUSTMENT	21
膝控押具提升器之調整	ADJUSTMENT OF KNEE-CONTROL PRESSER FOOT LIFTER	22
針線梭線鬆緊度調整	NEEDLE THREAD/BOBBIN THREAD TENSION ADJUSTMENT	23
停針位置調整	NEEDLE STOP POSITION ADJUSTMENT	24
控線組彈簧調整	THE THREAD TAKE UP SPRING ADJUSTMENT	26
押具提升桿	MANUAL PRESSER FOOT LIFTING LEVER	27

索引	INDEX	頁/PAGE
押具壓力調整	ADJUSTING PRESSER FOOT PRESSURE	27
針與送具時位調整	ADJUST THE TIMING BETWEEN NEEDLE AND FEED DOG	28
送具傾斜度	ADJUSTING THE ANGLE OF TILT OF THE FEED DOG	29
送具高度	ADJUSTING THE HEIGHT OF THE FEED DOG	30
針與梭頭時位關係	CORRELATION BETWEEN NEEDLE AND HOOK	31
押具高度調整	PRESSER FOOT HEIGHT ADJUSTMENT	33
導線片之調整	THE THREAD TAKE UP STROKE ADJUSTMENT	34
腳踏板壓力及行程	ADJUSTING THE TENSION ON PEDAL AND PEDAL STROKE	35
腳踏板調整	ADJUSTING THE PEDAL	36
雙刀切綫調整	ADJUSTING THE DOUBLE KNIFE	36
梭頭油量調整	ADJUSTING THE AMOUNT OF OIL IN THE HOOK	41
操作環境照明	LIGHTENING OF THE OPERATION ENVIRONMENT	42
操作者條件	CONDITIONS OF ALL OPERATORS	42
腳踏板之操作	OPERATING THE PEDAL	43
單觸式倒縫機構	OPERATING THE ONE TOUCH TYPE REVERSE FEED STITCHING MECHANISM	44
保養	MAINTENANCE	45
潤滑	OIL LUBRICATION	46
報廢流程	DEMOLITION PROCEDURE	50
桌板圖	TABLE CUT-OUT	51

一般安全事項說明

GENERAL SAFETY INSTRUCTIONS

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及配件及注意機器電源是否已開啟，以免導致人員受傷。



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



- 11. 一般維修及檢查工作必須由受過適當訓練的人員為之。



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



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



- 14. 機器使用一段時間，必需定期清理。

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



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



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



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



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




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





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




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


 15. 為使機器能正常操作及減少噪音，機台務必平放地上，機器避免在強烈噪音的環境下操作。


 16. 選用適當的電源插頭，並由電子技師將其按裝在機器上，且插頭必需插在接地線之插座上。


 17. 機器只允許被使用於指定用途上，其他用途是不允許的。


 18. 修改或變更機器必需依照安全規定及標準，同時採取有效的安全措施，本公司不承擔任何私自因修改或變更機器所引起損壞之責。


19. 警告提示以兩種符號標示：


 (1) 對操作員或服務人員之傷害危險，也為了避免觸電之危險，請勿打開馬達電器箱之外蓋，也不要觸摸電器箱裡面之零件。


 (2) 必需特別注意事項
a. 絕對不可在移開皮帶蓋，手指保護蓋或安全配件後，進行機器操作，以免導致人員受傷。

 b. 為了避免被機器纏住，當機器運轉中，您的手、頭髮及衣服，需遠離手輪，皮帶及馬達；此外這些部位周圍不可放置任何物品，以免導致人員受傷。


 15. In order to operate properly and to reduce the noise, please place the machine flat and level on the ground. Avoid operating the sewing machine at a noisy surrounding.


 16. Select a proper power plug and install it by an electrician. Please connect the power plug to a grounded receptacle.

 17. This machine can only be used for the designed purpose. Other uses of this machine are not allowed.

 18. Any modification or conversion made on this machine must be conformed with the safety standards and regulations. Precaution is necessary. No responsibility will our company take for damages caused by any modification or conversion of this machine without permission.

19. Two safety warning signs are applied as warning signs:

 (1) For the safety of operators and service persons, please don't open the cover of any electronic control boxes of motor or other devices and don't touch any components inside to avoid electrical shock hazards.

 (2) Always keep in mind :
a. Please never operate this machine without belt cover, finger guard or any safety device to avoid physical injury.
b. Please keep your hair, fingers and cloths away from the hand wheel, V belt and motor while the machine is in operation, as well as never put anything near these parts, to prevent the risk of injuries by tangled into them.



- 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.



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.



圖1/Fig. 1

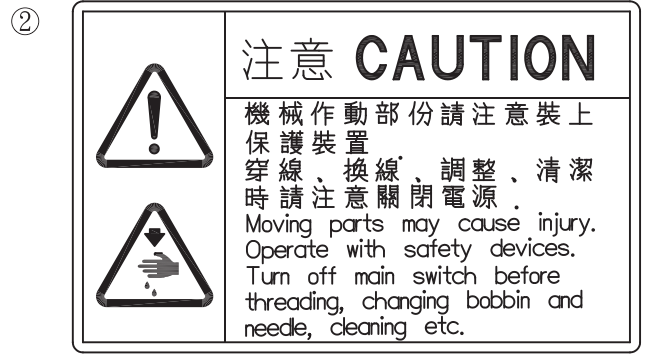


圖2/Fig. 2


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

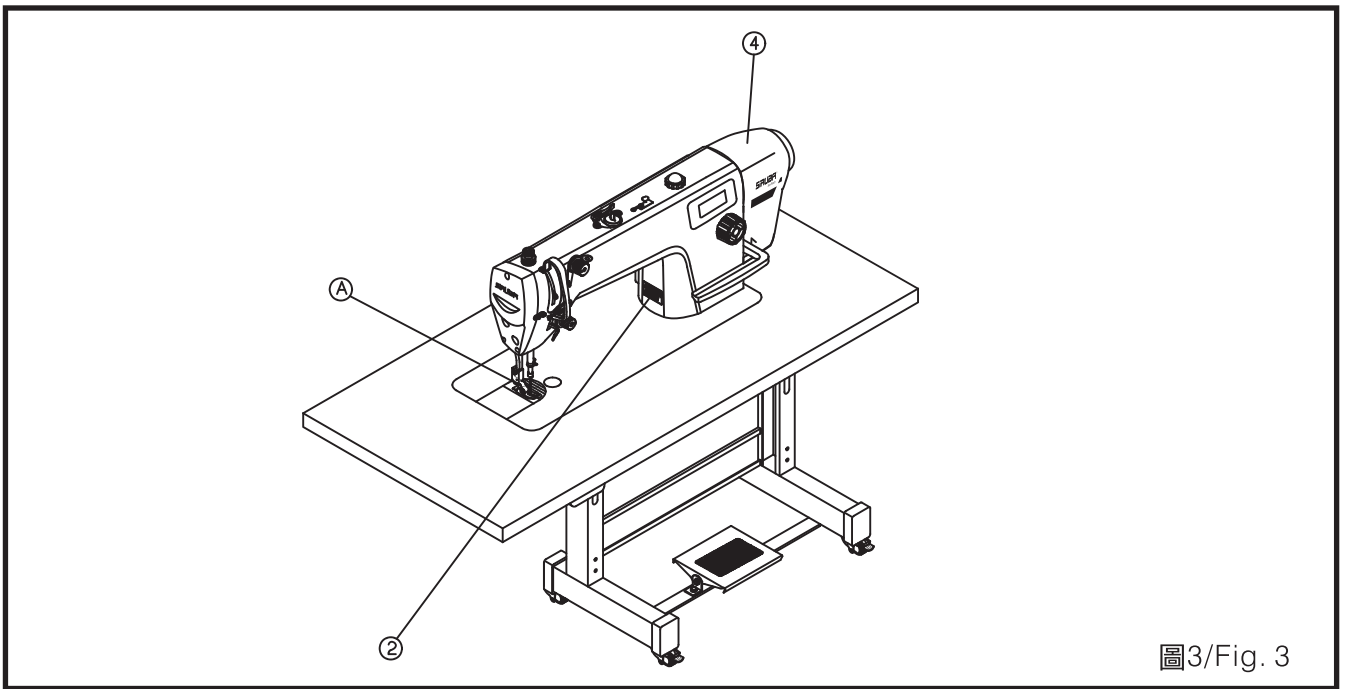


圖3/Fig. 3

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.

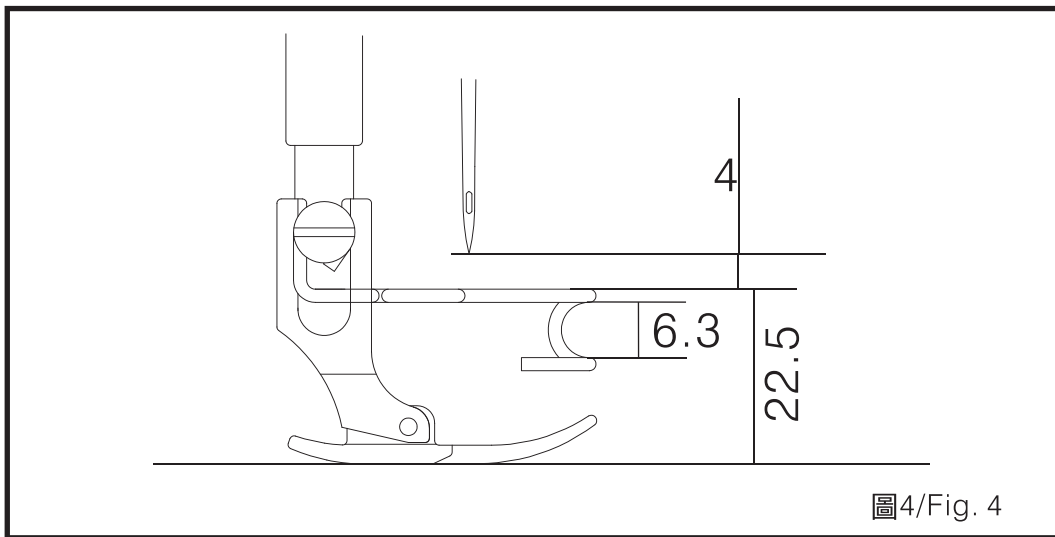


圖4/Fig. 4

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)

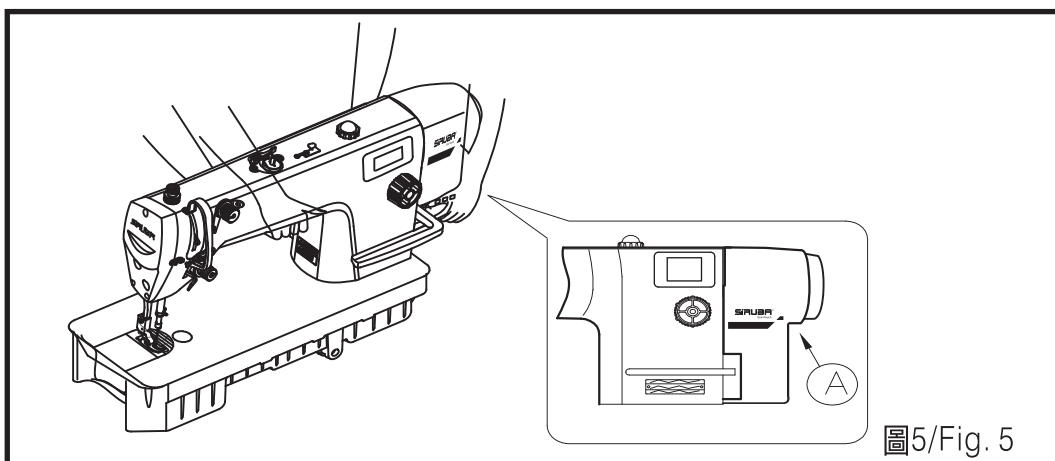


圖5/Fig. 5

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.

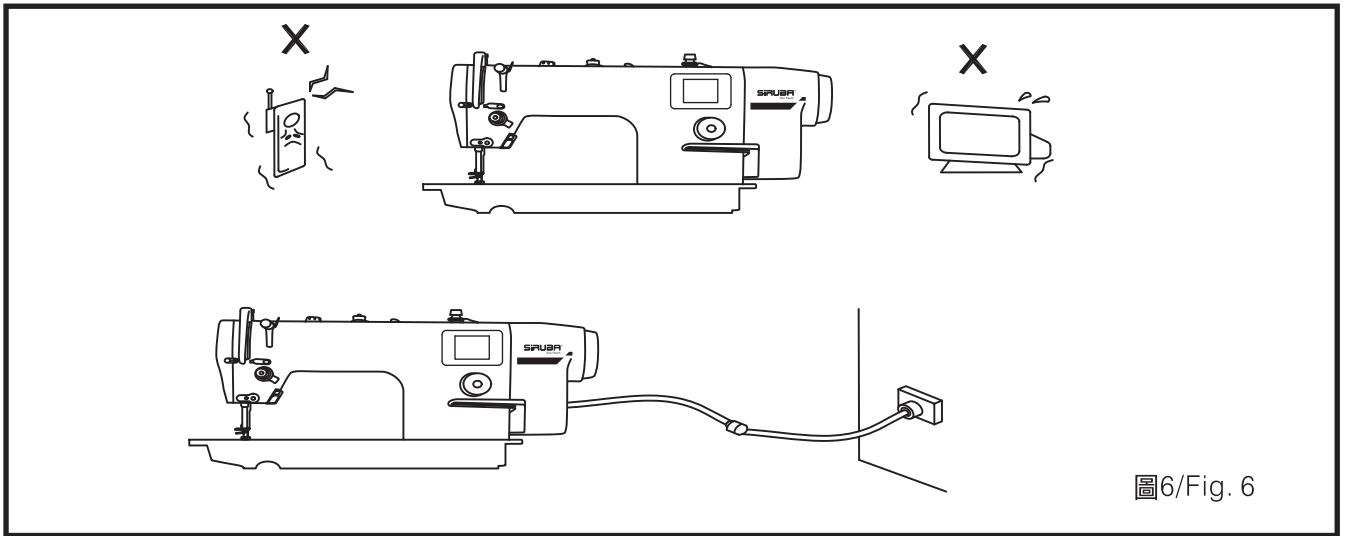


圖6/Fig. 6

各部件名稱

NAMES OF MAJOR PARTS

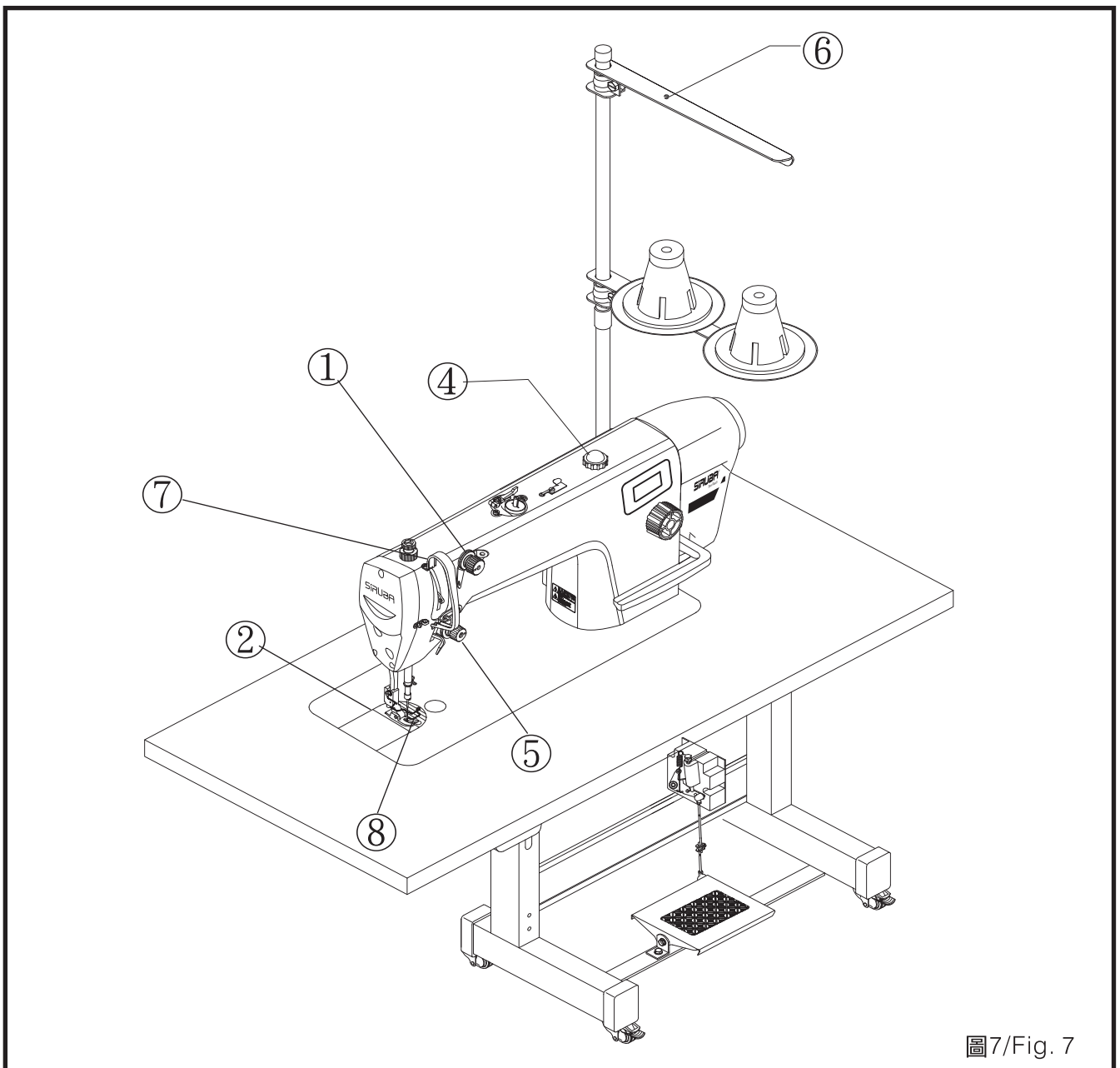


圖7/Fig. 7

- ① 導線片
- ② 押具
- 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
- ④ Oil Windows
- ⑤ Thread Tension Adjusting Set
- ⑥ Thread Stand
- Safety Protection Devices
- ⑦ Thread Take-up Cover
- ⑧ Finger Guard

規格

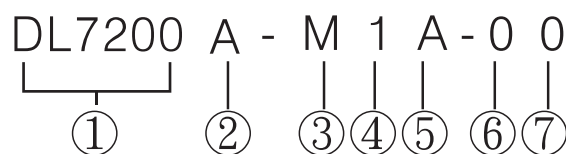
SPECIFICATIONS

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。

② represents the improved machine appearances

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
M	用於中厚布料 For medium-weight materials	Max : 4000 一般 : 4000	0~4
H	用於中厚布料至厚布料 For medium to heavy-weight materials	Max : 4000 一般 : 3500	0~5

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	
M	30.7	5.5	最大 : 13 Max : 13 一般 : 10 Normal : 10	DBX1 #14
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

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

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	電子夾綫器 Electronic Gripper
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	○	○	—	—	—
	1	○	○	○	—	—
	2	○	○	—	○	—
	3	○	○	○	○	—
	5	○	○	—	—	○
	6	○	○	○	—	○

表3/Table 3

2. 規格 (表4)

2. Specification: (Table 4)








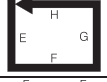


機型Model		DL7200A	
車縫布料 Materials		M-中厚布料 Medium-weight	H-厚布料 Heavy-weight
1	車縫速度 (r.p.m.) Sewing speed	Max: 4500 Normal: 4000	Max: 4000 Normal: 3500
2	縫距 Stitch length	0~4	0~5
3	針棒行程 (mm) Needle bar stroke	30.7	35
4	使用針 Needle	DBx1 #14	DBx1 #20~23
5	押腳壓力 (kgs) Presser foot pressure	5~7	5~7
6	押具提升量 Presser 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	BMI 0.9 ~ 1.1	BHI 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. 電控操作盒功能說明：(表5)

3. Description of the functions of 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36公斤, 安裝工作必須由兩人以上來完成。

The sewing machine weighs 36kg. 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.

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%, 請選擇正確的馬達帶輪尺寸。(如表6)

- (2) 桌板厚度約40 mm

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.

註：

皮帶尺寸會因為選用馬達的形式、廠家不同而有所差異。

Note:

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

油盤安裝

OIL PAN INSTALLATION

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)

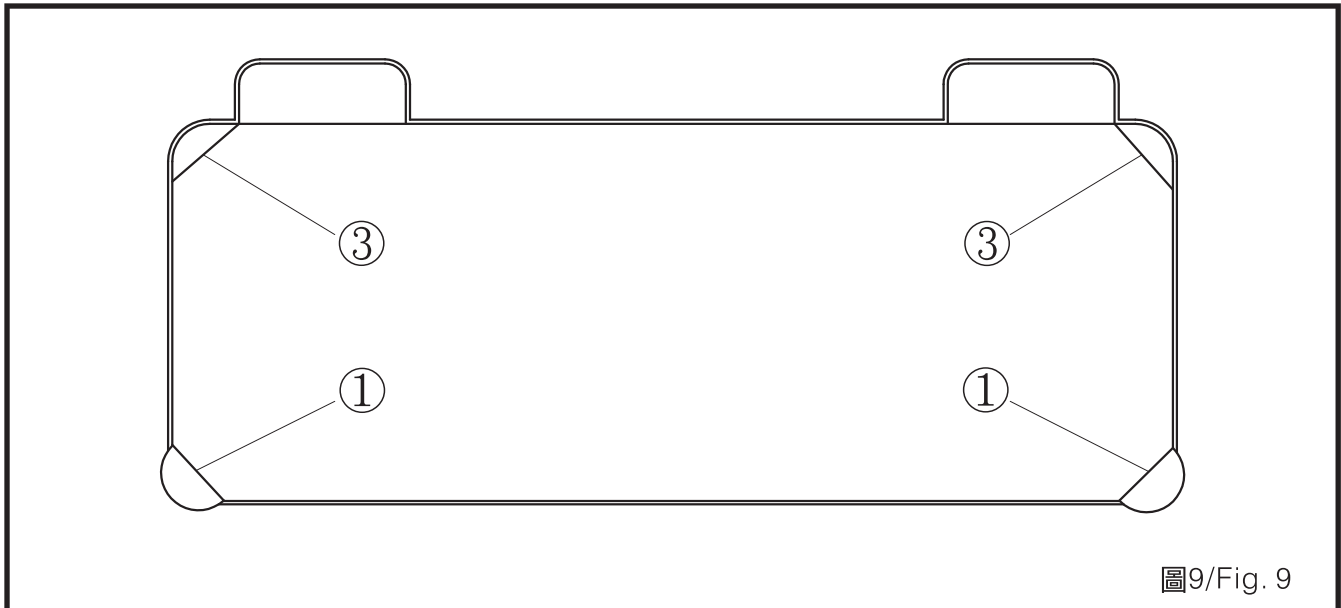


圖9/Fig. 9

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)

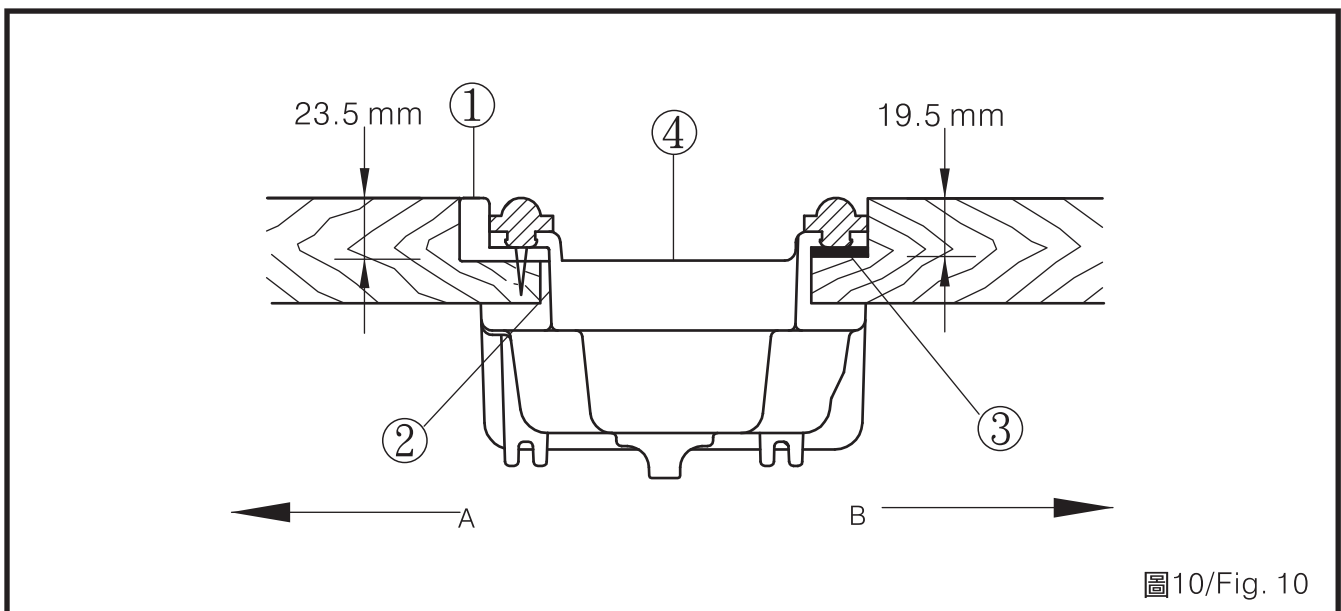
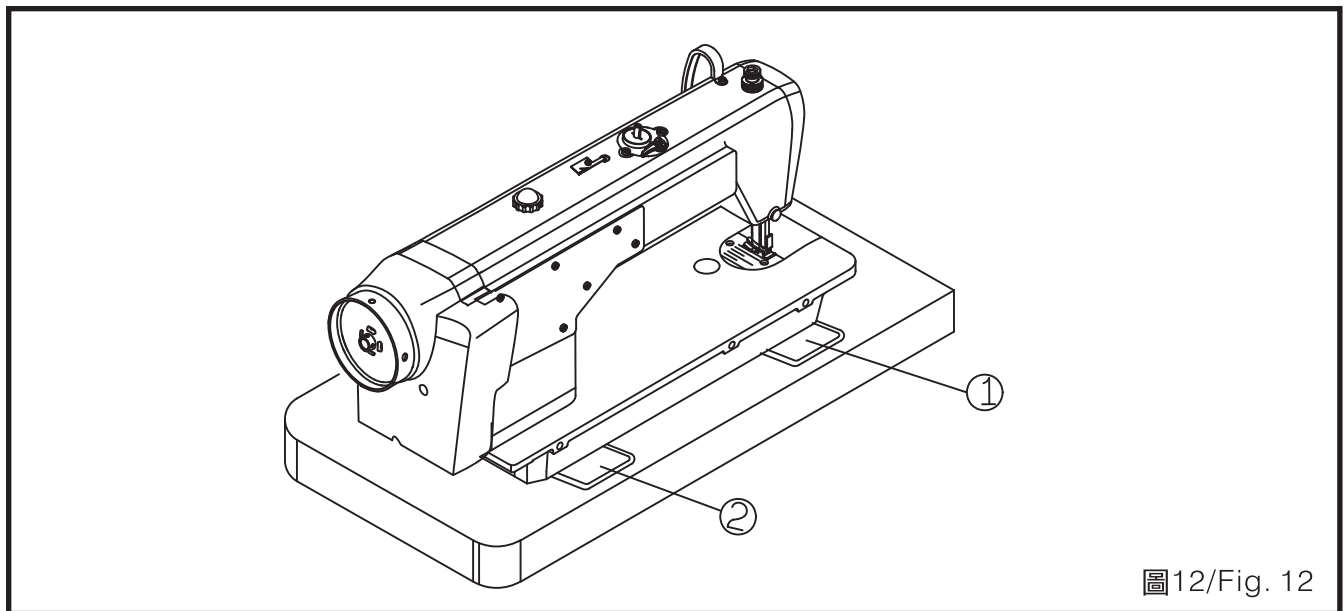
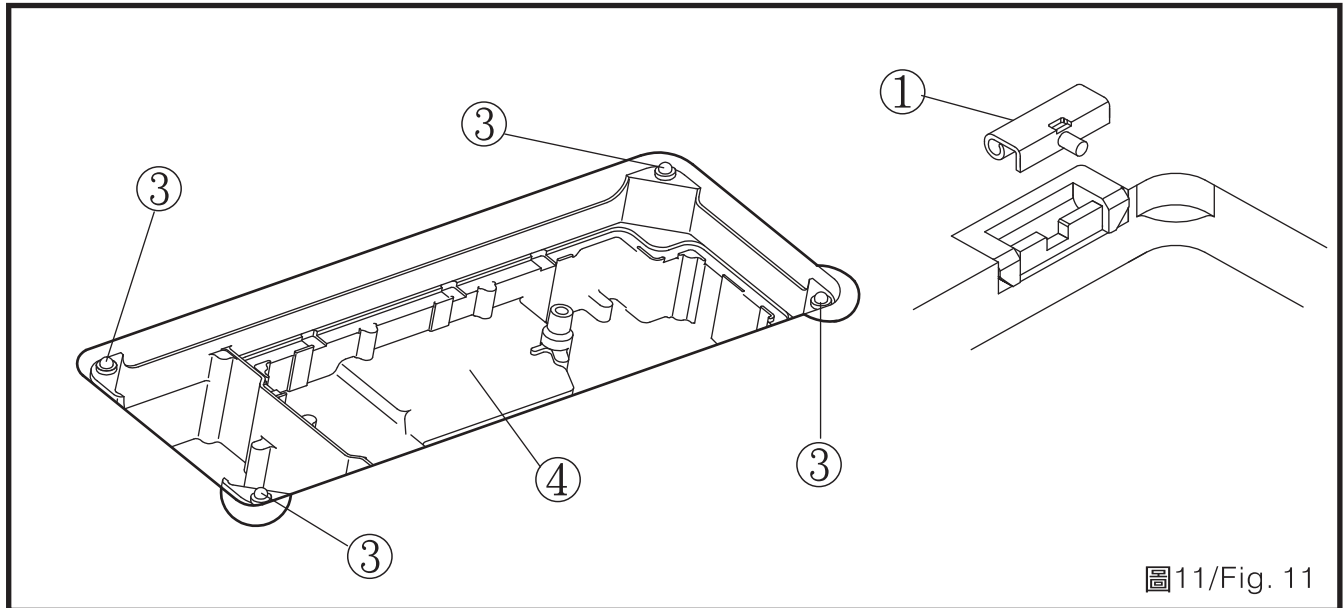


圖10/Fig. 10

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

INSTALLING THE NEEDLE

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)

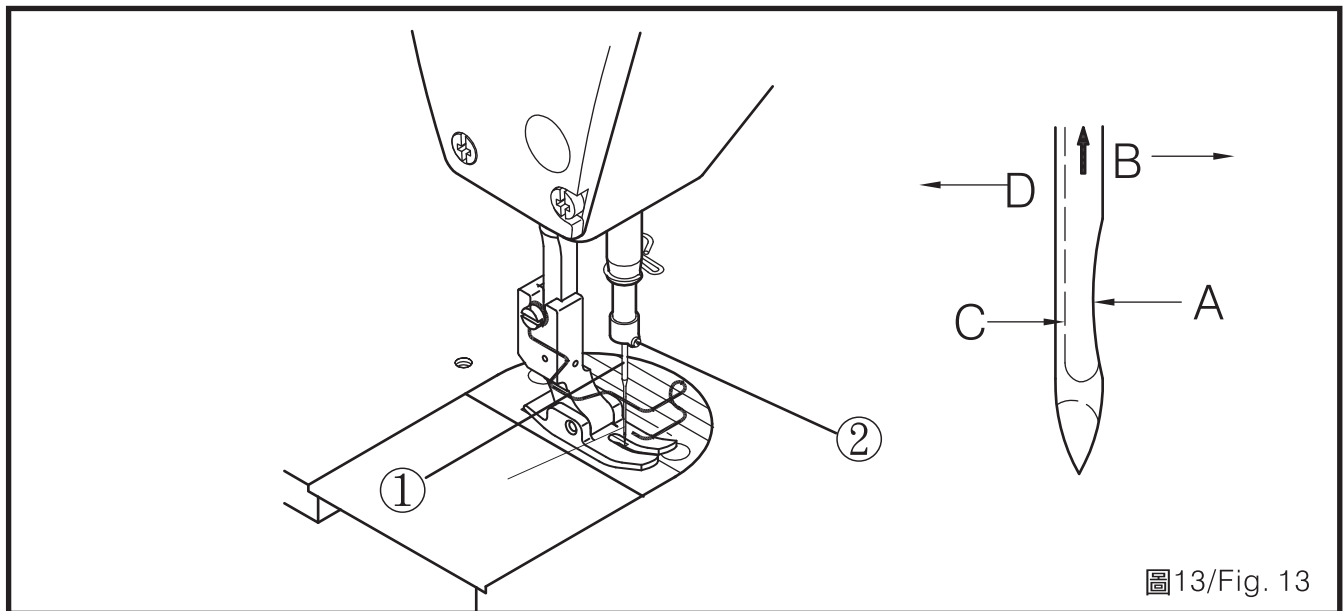
Choose a right needle size according to the type of the thread and the type of the material used. Turn the power off before placing the needle. (Fig. 13)

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)

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。

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. 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.



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.

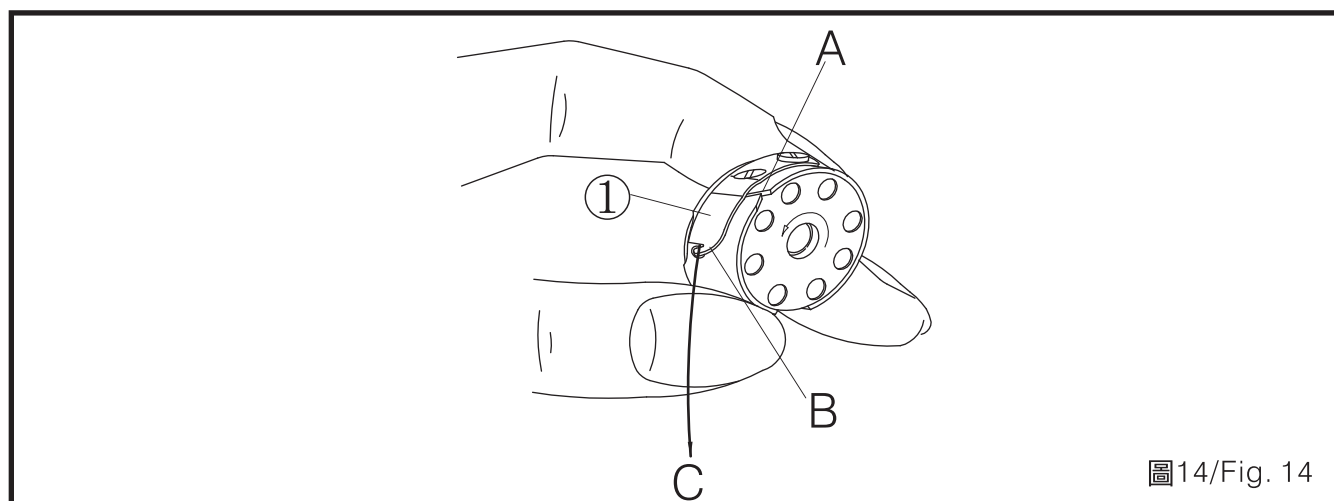


圖14/Fig. 14

線架安裝

THREAD STAND ASSEMBLY

1. 安裝線架組，並將其插入桌板孔。(圖16)

1. Assemble the thread stand set before installing. Place the thread stand set onto the hole on the table top. (Fig. 16)

2. 鎖緊螺帽①，以固定線架。

2. Fix the thread stand with a nut ① locked under the table top.

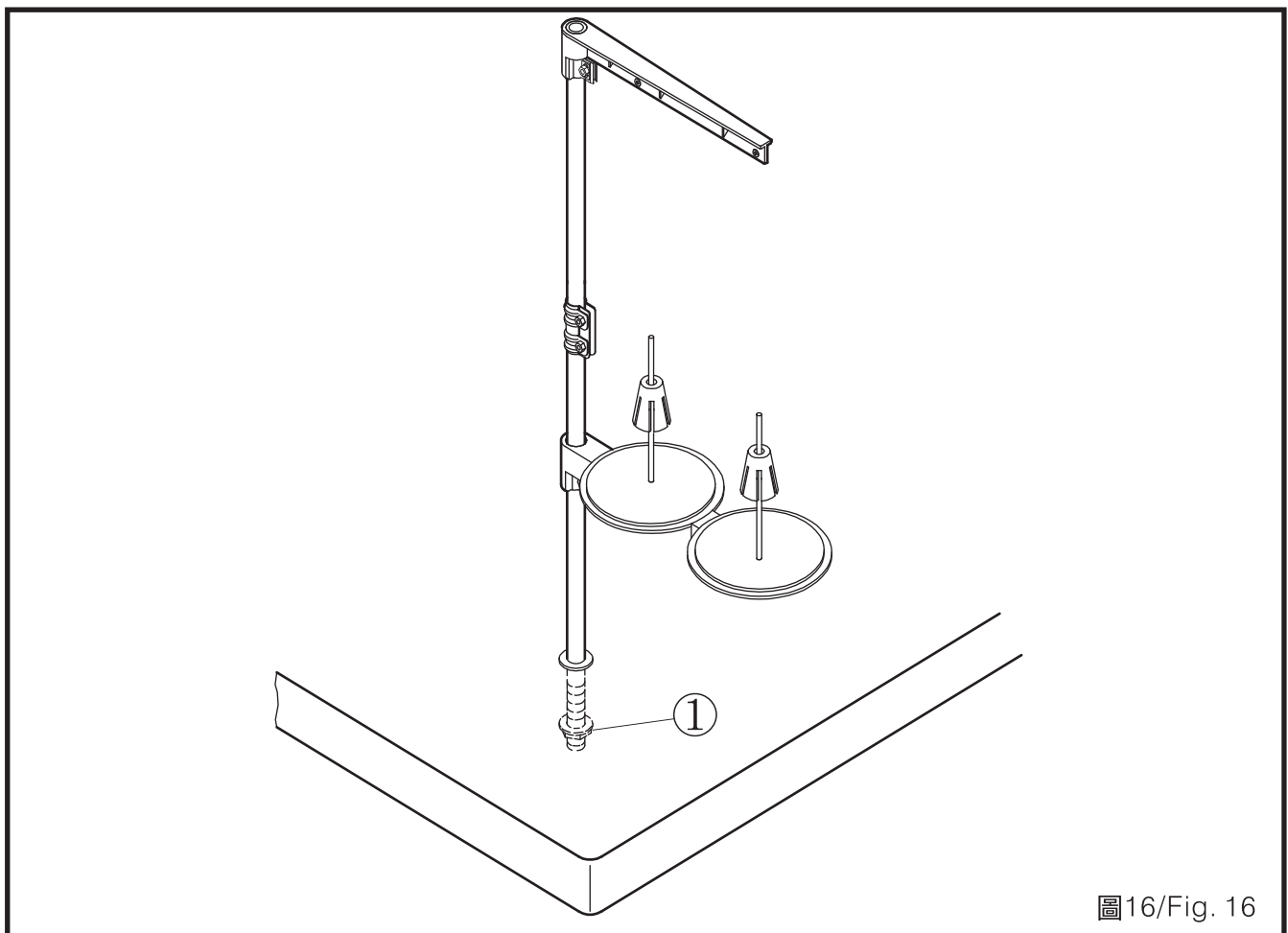


圖16/Fig. 16

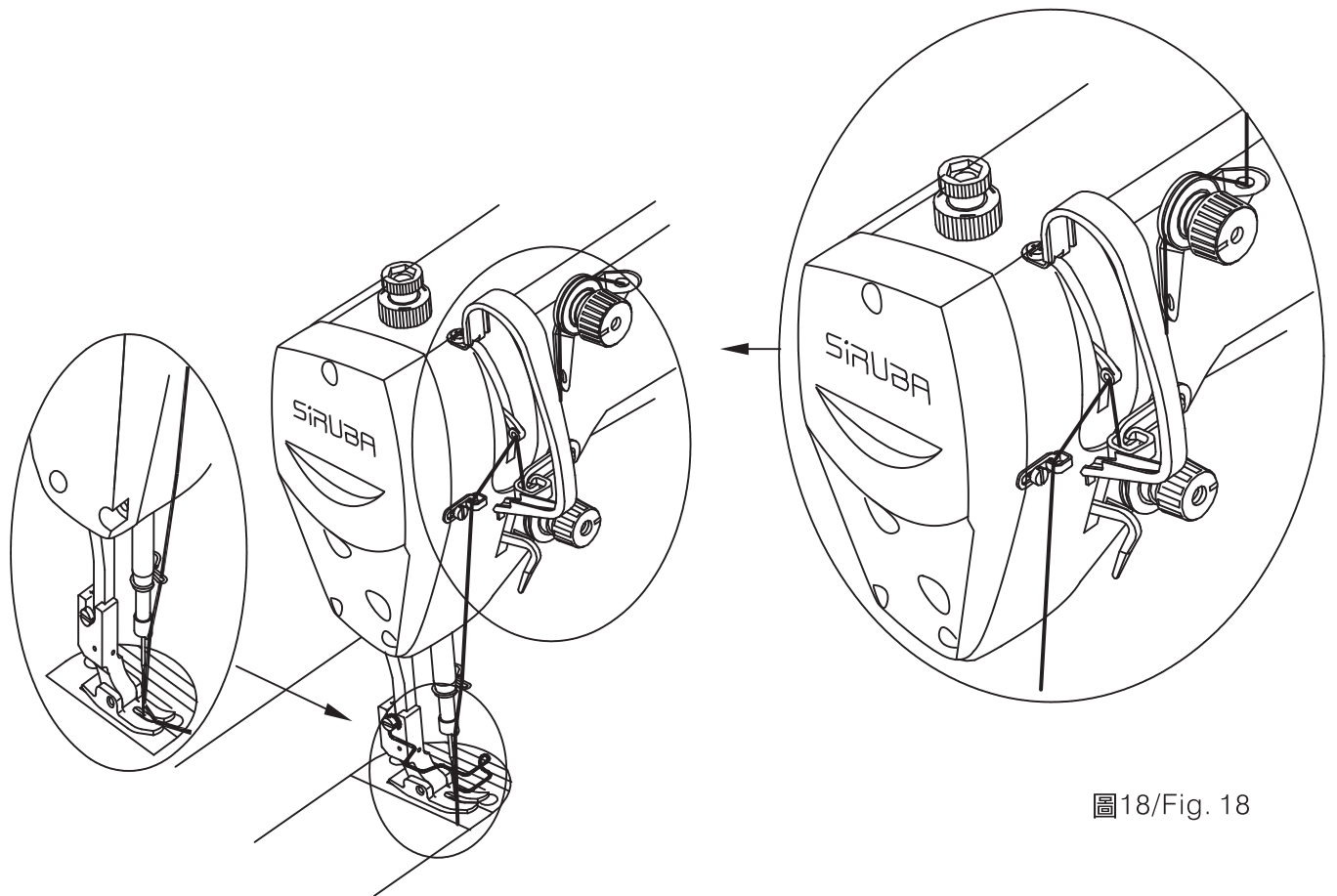


圖18/Fig. 18

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.

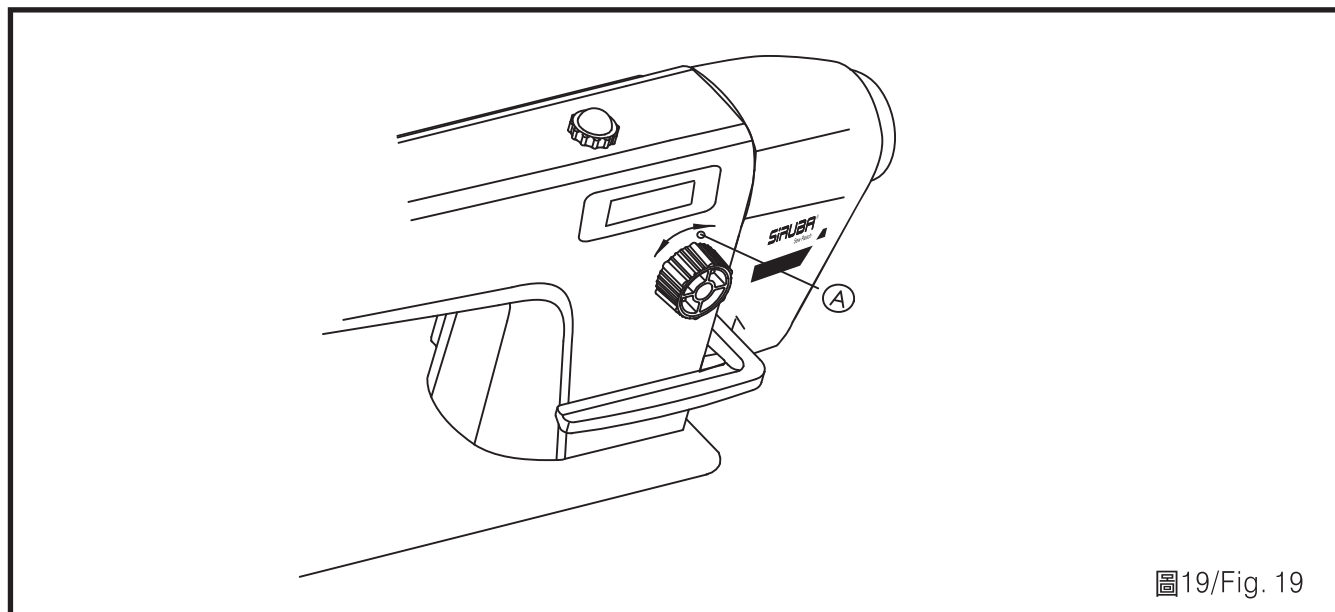


圖19/Fig. 19

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.

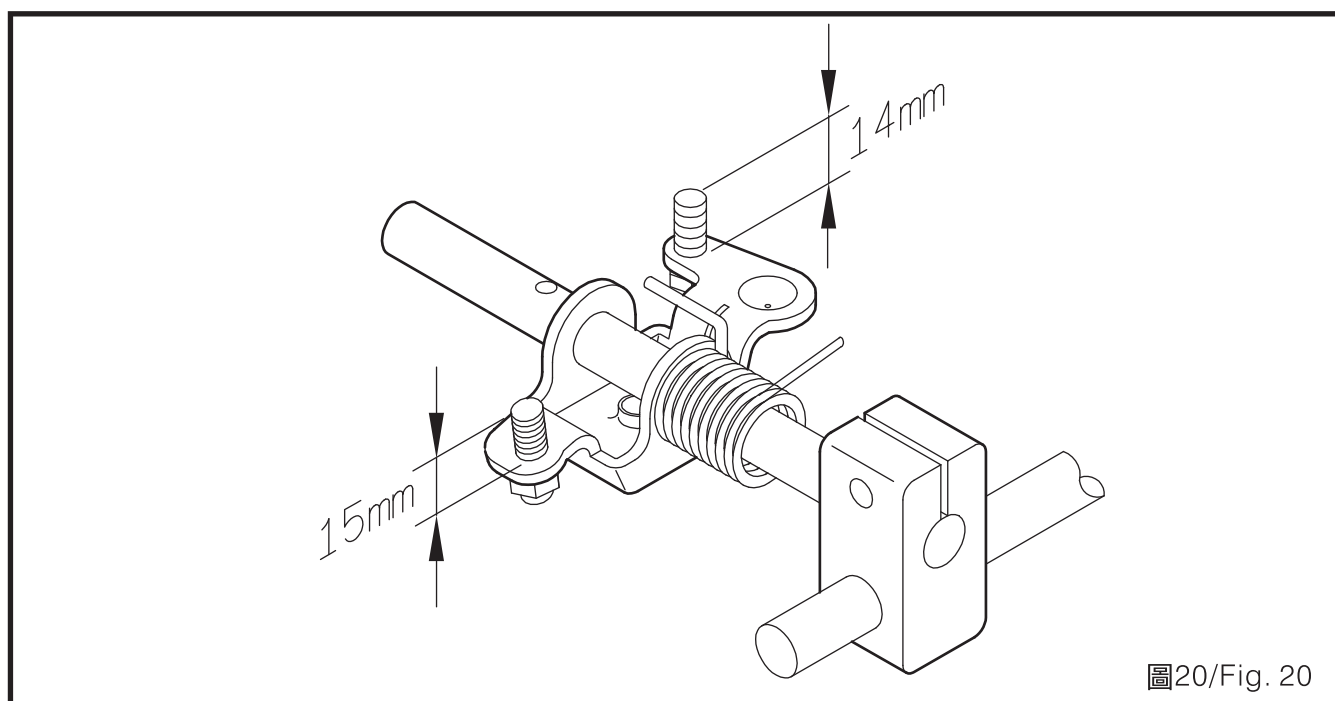


圖20/Fig. 20

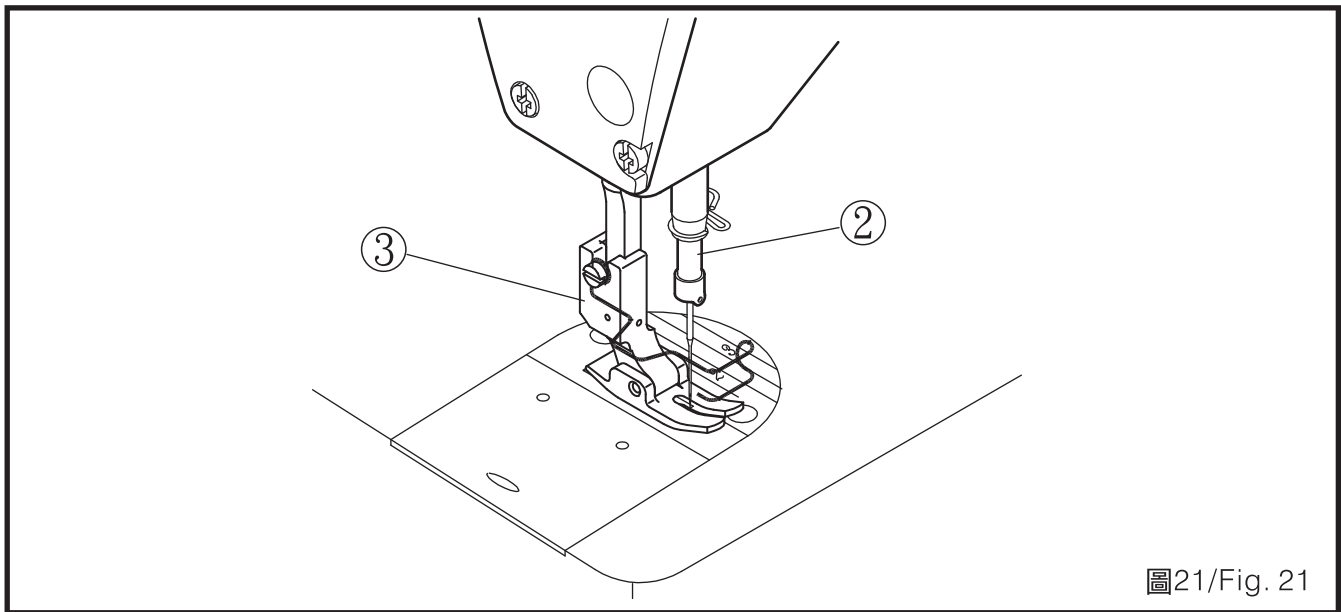


圖21/Fig. 21

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).

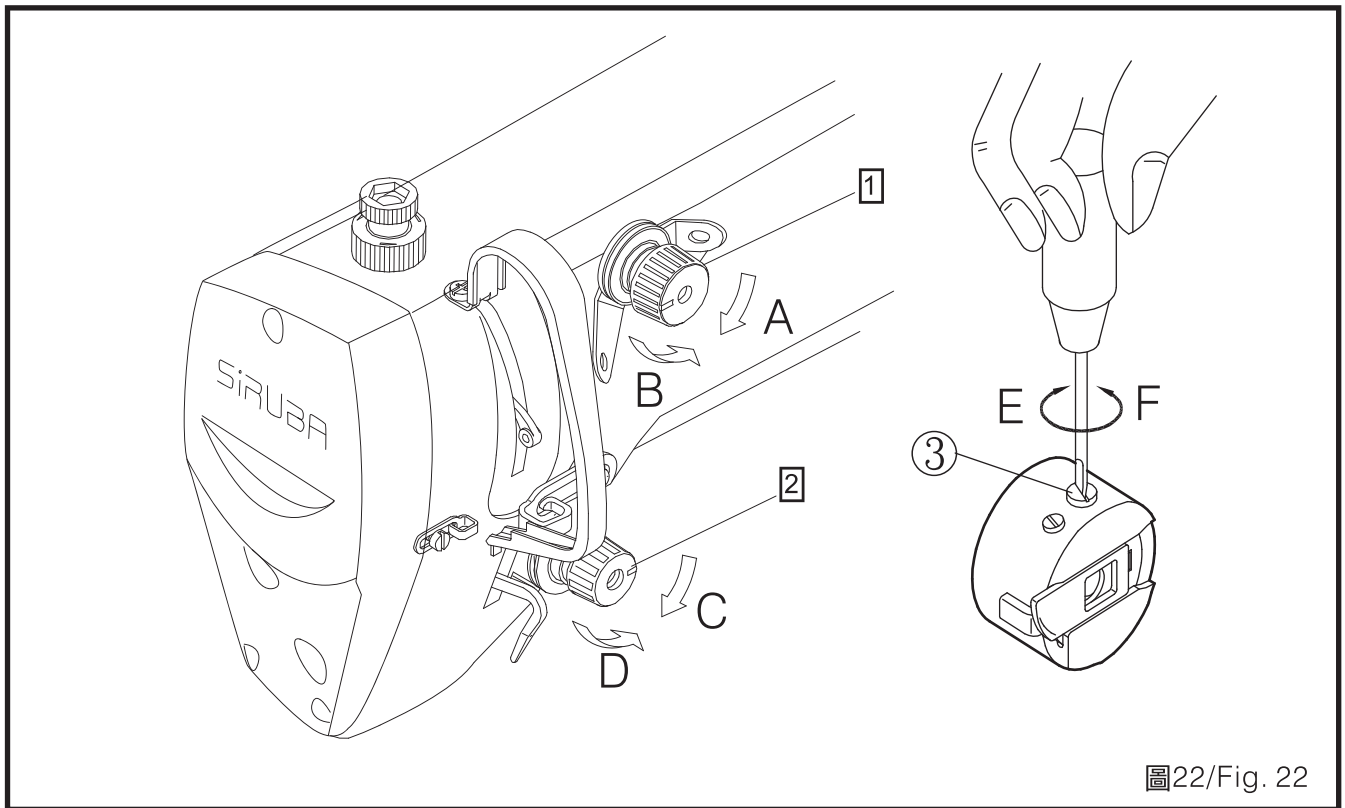


圖22/Fig. 22

停針位置調整

NEEDLE STOP POSITION ADJUSTMENT

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。

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.

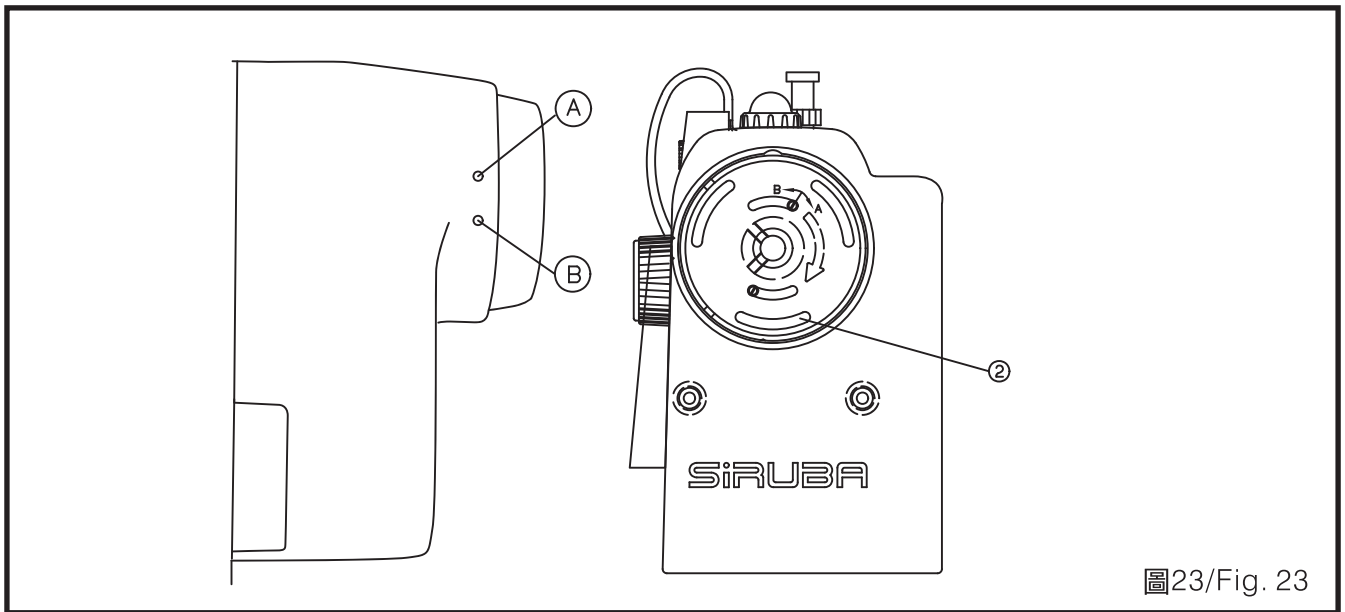


圖23/Fig. 23

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.

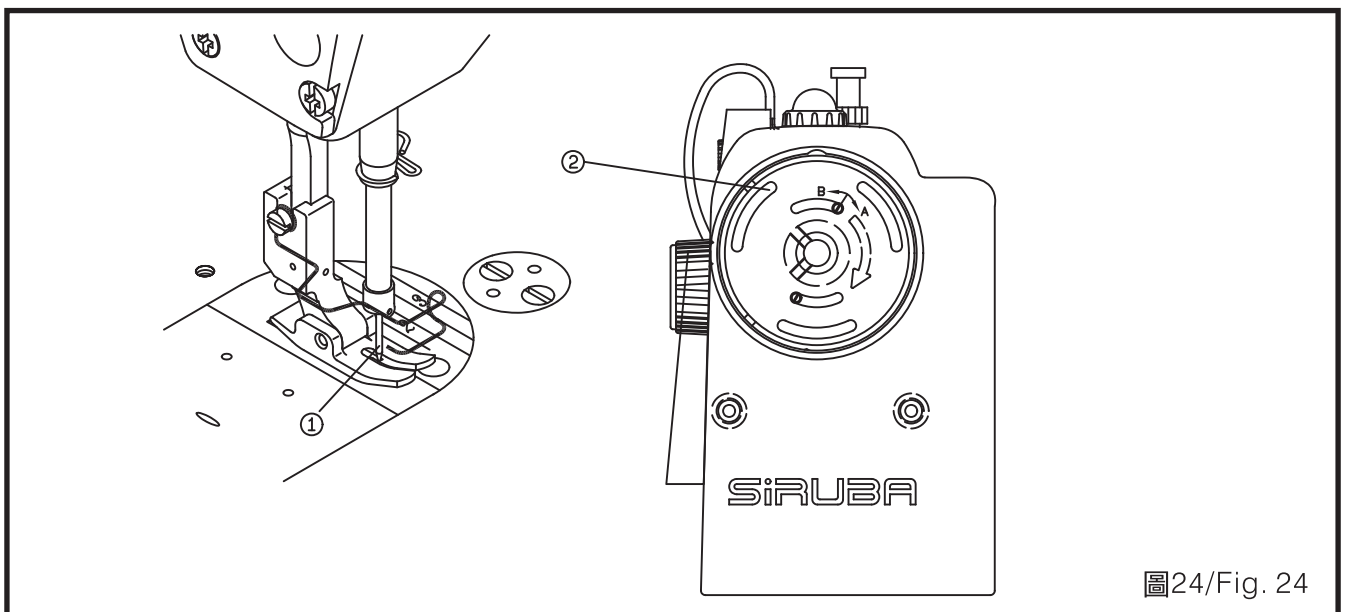


圖24/Fig. 24

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

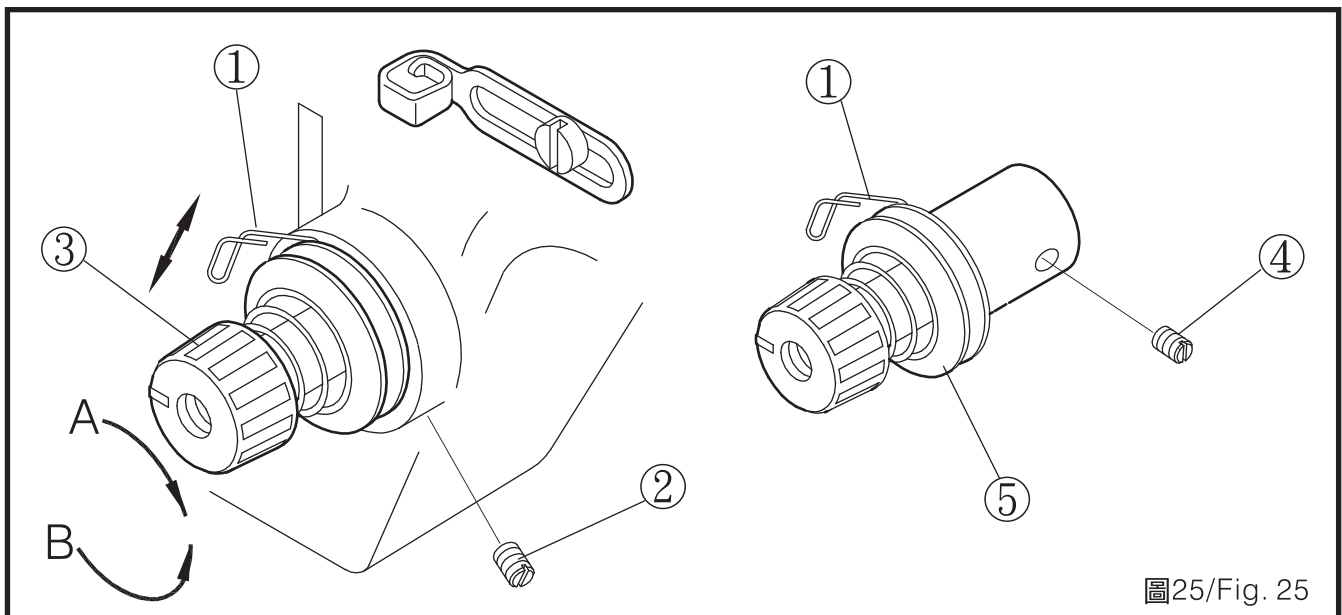
- (1) 放鬆螺絲②，同時將控線彈簧組⑤拆下。
- (2) 放鬆螺絲④。
- (3) 依順時鐘方向(A方向)轉動鬆緊控線鈕③，控線組彈簧拉力將增加。
- (4) 依逆時鐘方向(B方向)轉動鬆緊控線鈕③，控線組彈簧拉力將減少。

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).

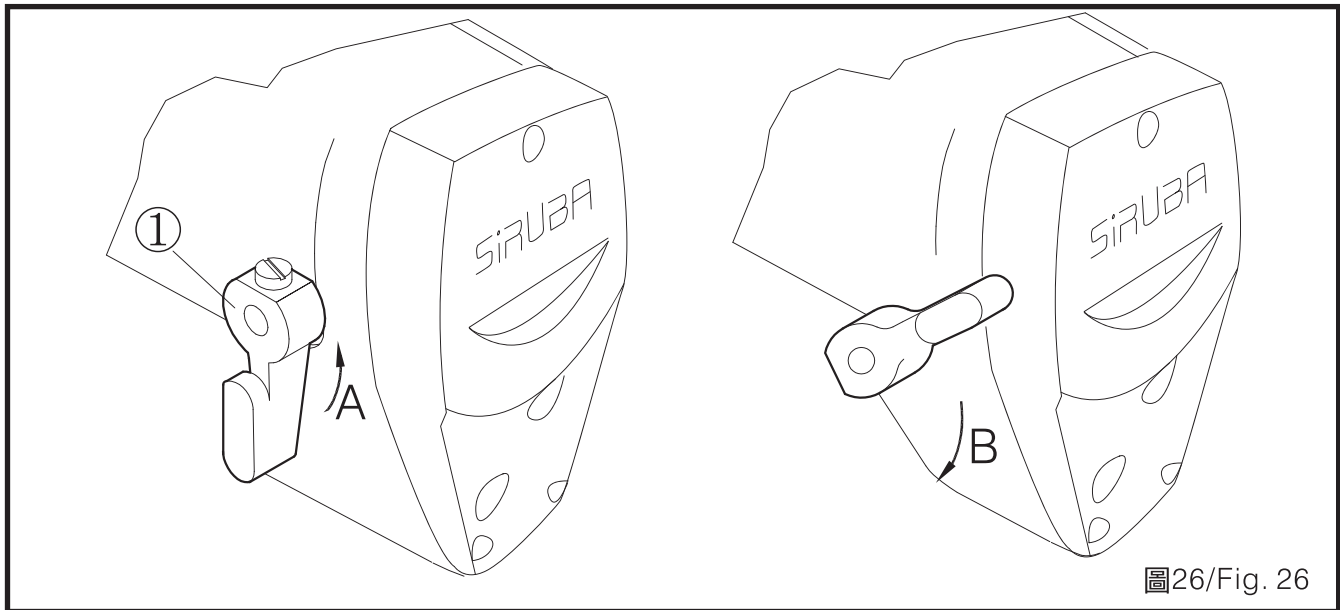


押具提升桿

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.)

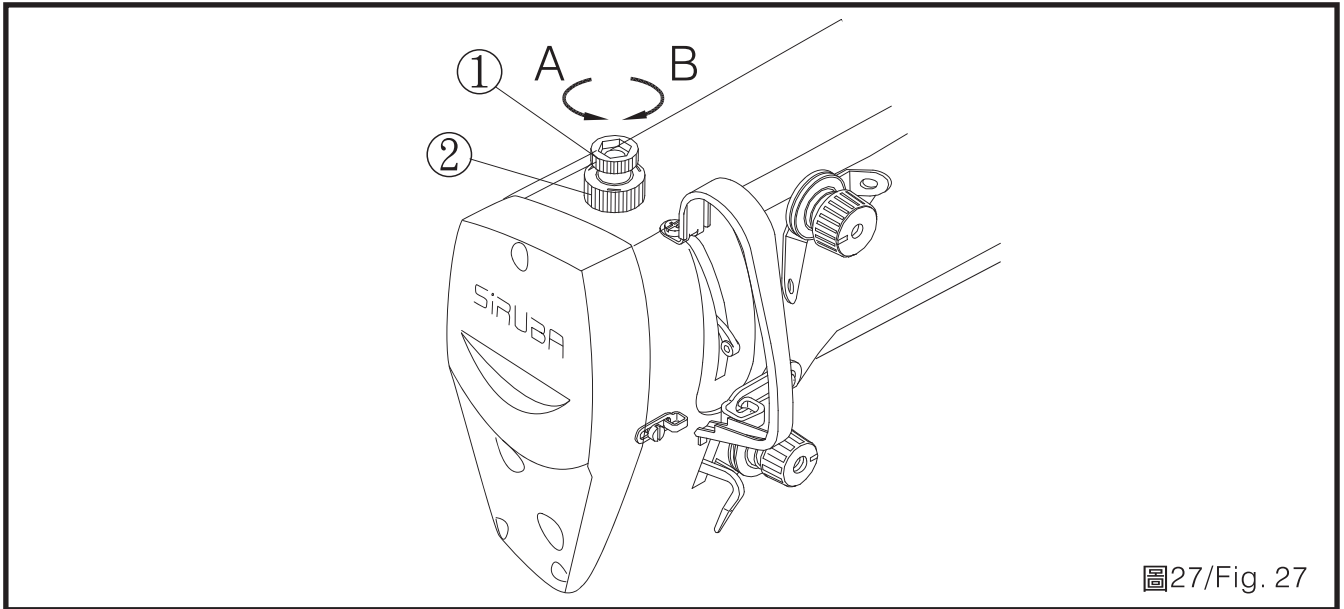


圖27/Fig. 27

針與送具時位調整

ADJUST THE TIMING BETWEEN NEEDLE AND FEED DOG

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。

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.

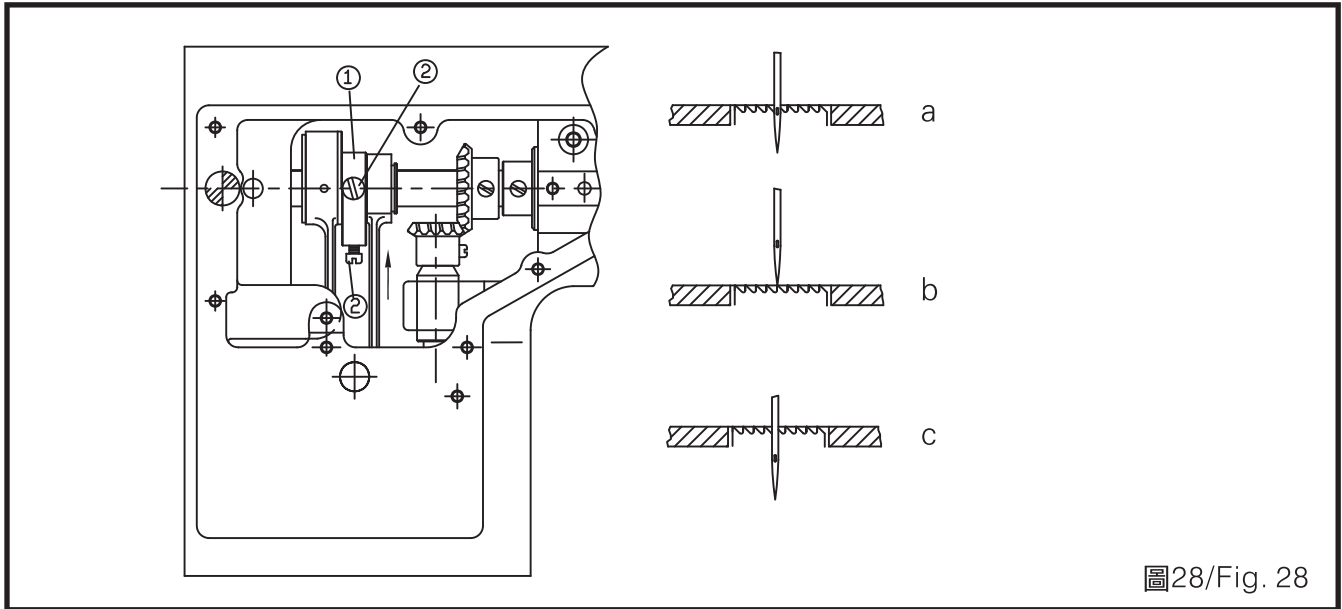
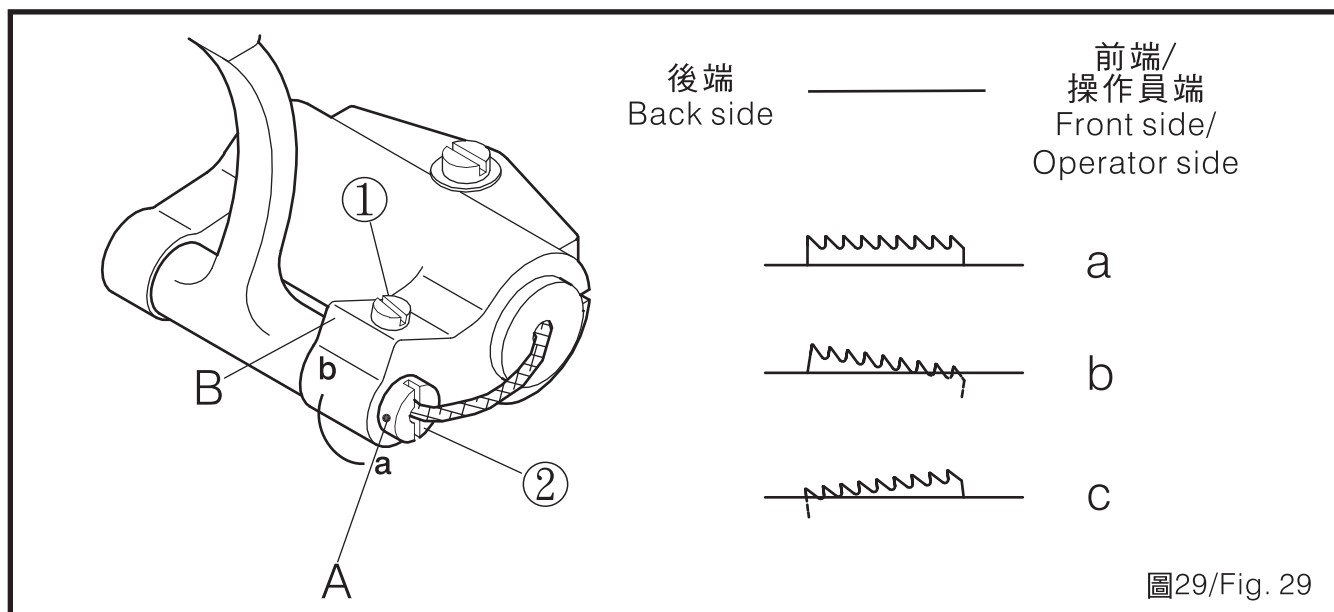


圖28/Fig. 28

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 adjusting the tilt angle of the feed
dog.



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)

中厚布料： 0.85 ~ 0.95 mm (圖30 a)

厚布料： 1.0 ~ 1.2 mm (圖30 b)

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)
Normal fabric : 0.85 ~ 0.95 mm (Fig. 30a)
Heavy fabric : 1.0 ~ 1.2 mm (Fig. 30b)
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

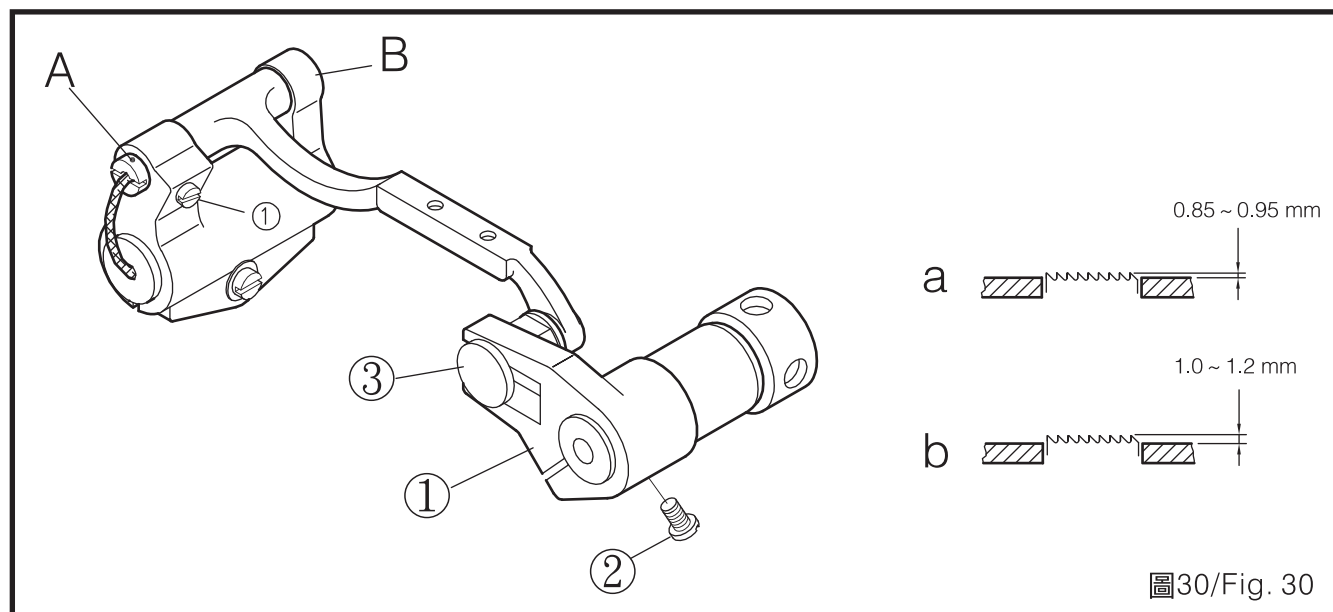


圖30/Fig. 30

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) 調整針棒高度：

- (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。

(2) 調整梭頭之位置：

- (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。

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) Adjusting the height of needle bar :

- (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) Adjusting the position of the hook :

- (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。

· 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) 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。

(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 ~ 0.1mm between the needle and the hook.

2. 更換梭頭時，先確認其零件代號再更換。

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

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。

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.

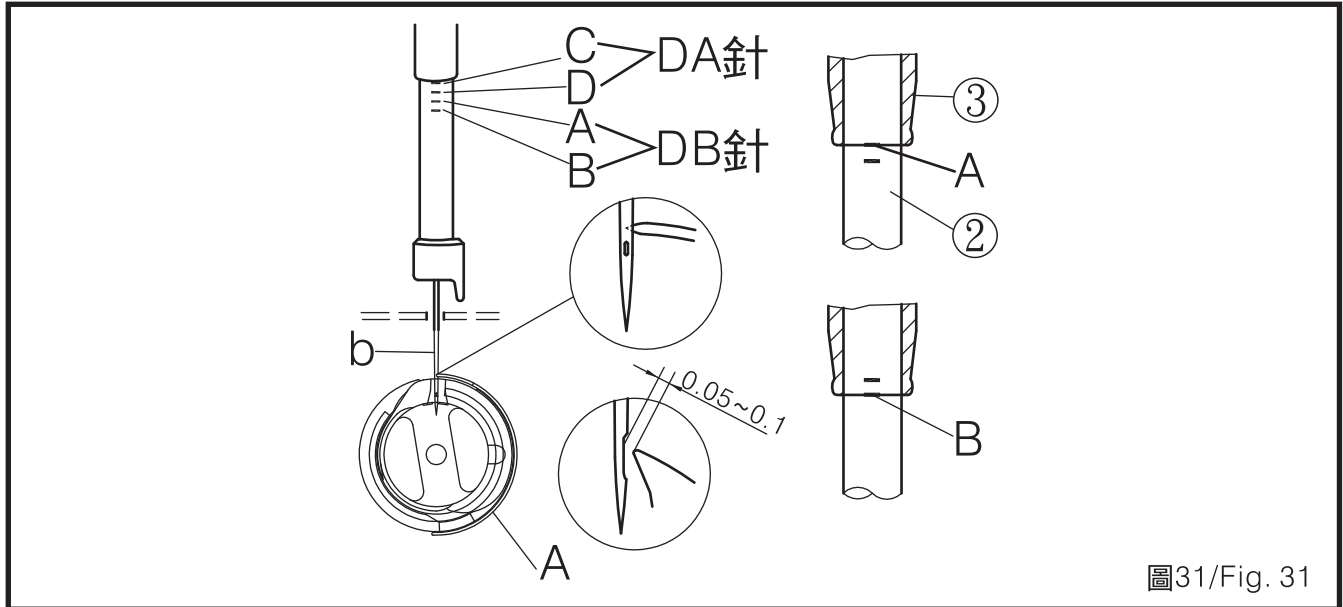


圖31/ Fig. 31

押具高度調整

PRESSER FOOT HEIGHT ADJUSTMENT

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。

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

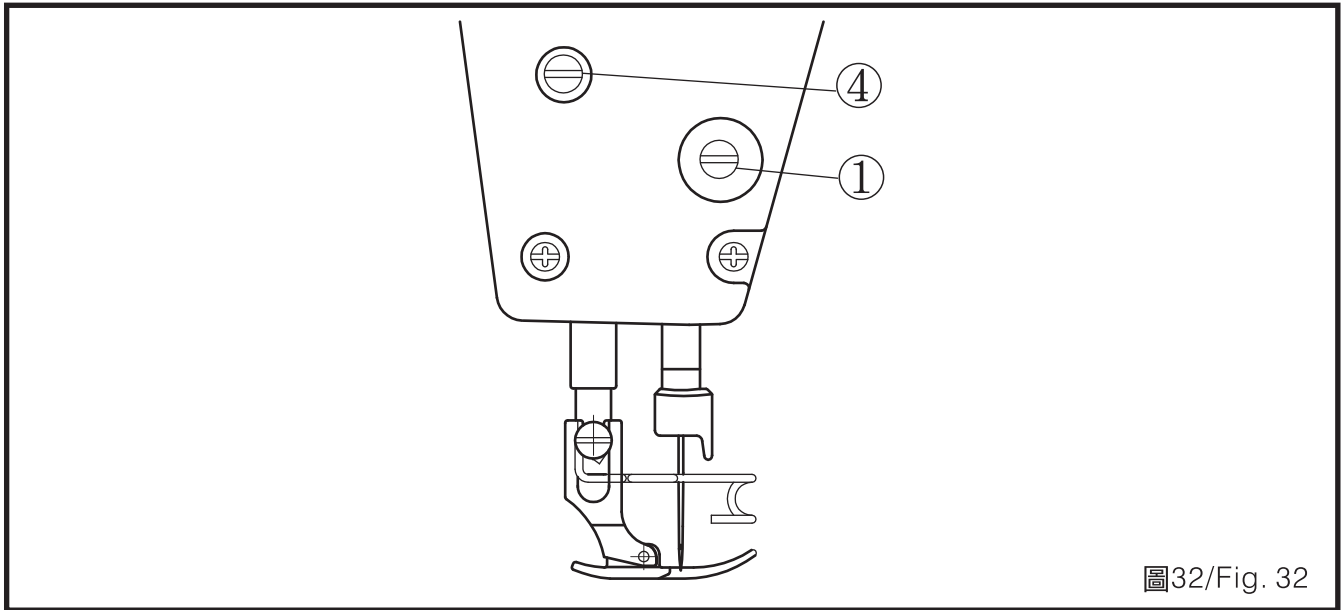


圖32/Fig. 32

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.

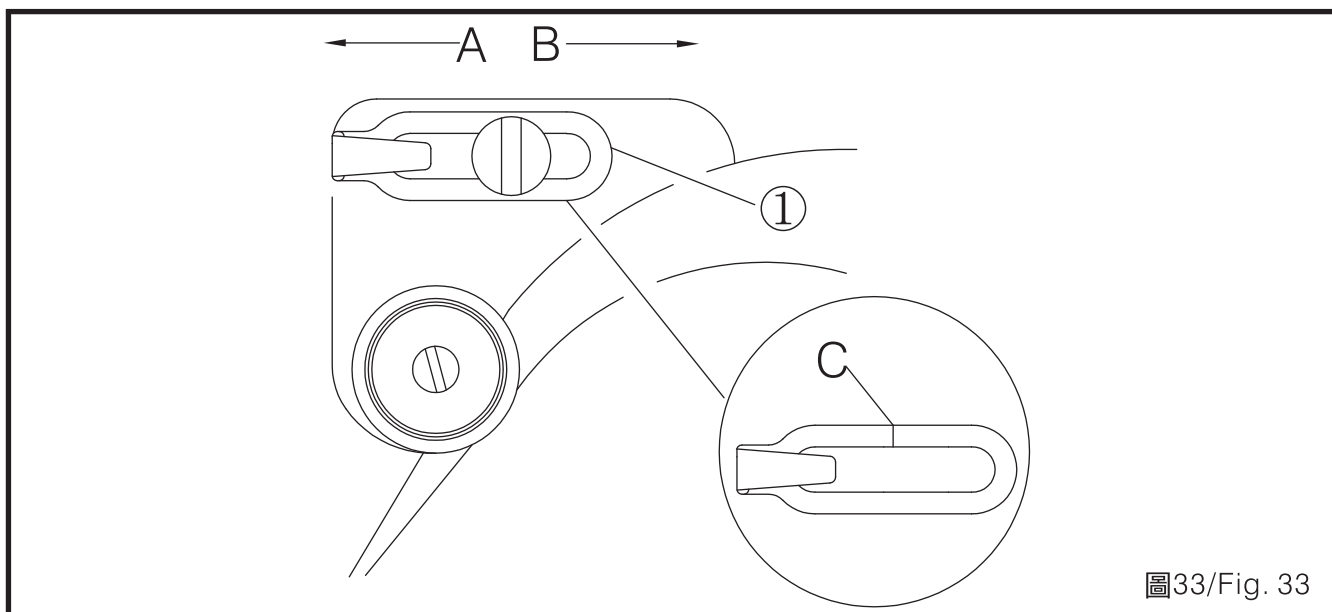


圖33/Fig. 33

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.

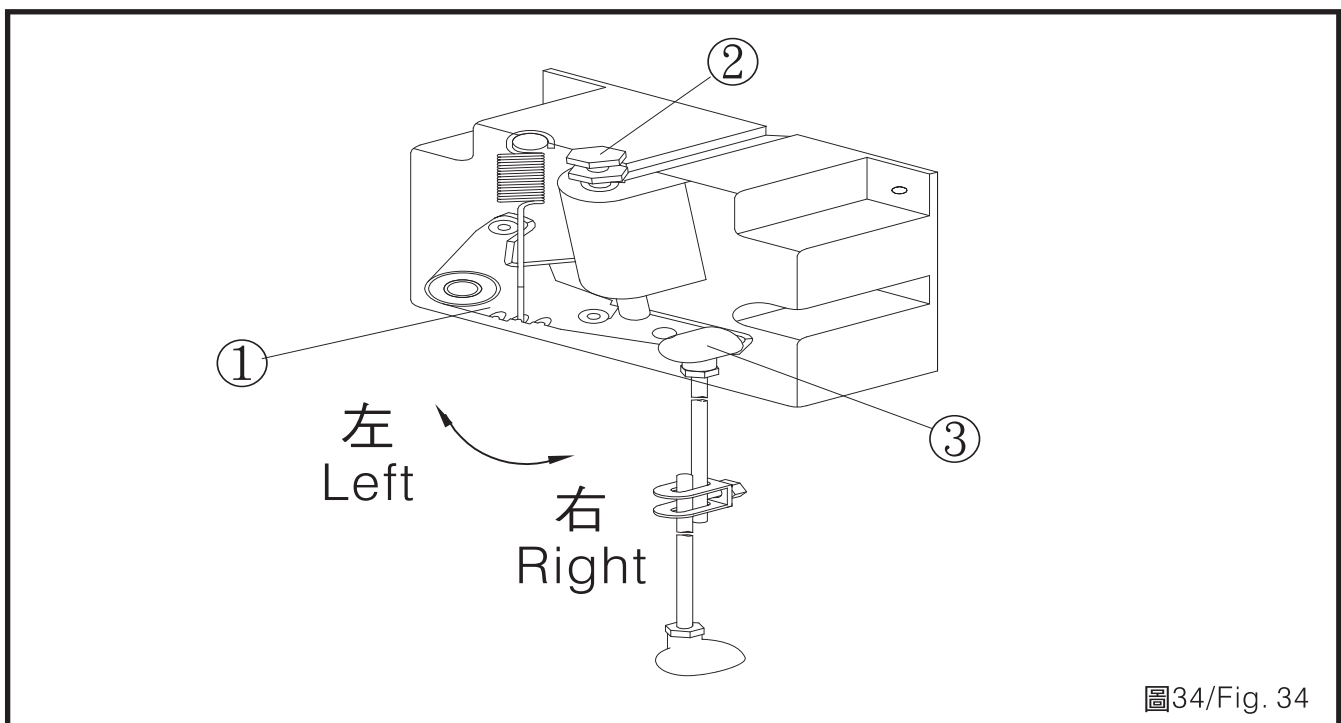


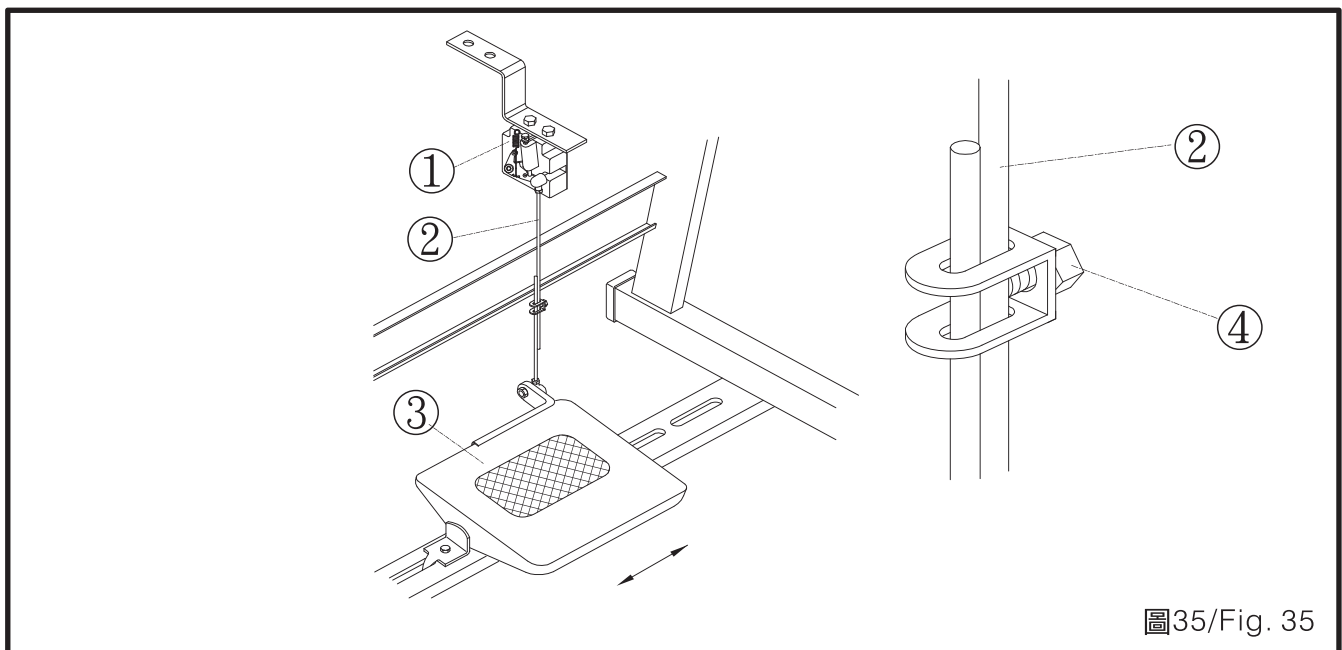
圖34/Fig. 34

腳踏板調整

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。

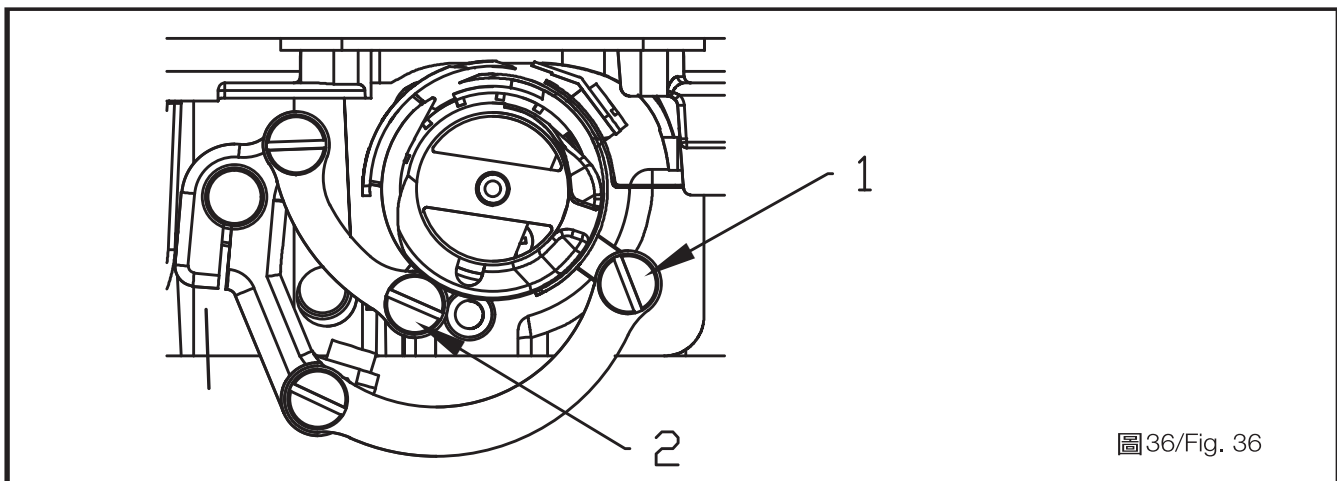
ADJUSTING THE PEDAL

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.



雙刀切綫調整

ADJUSTING THE DOUBLE KNIFE



1. 關閉電源。
2. 取下壓腳、針板、送布牙。
3. 把機頭放到。
4. 鬆開上動刀連杆螺釘 (1) 和下動刀連杆螺釘(2)。
(使上下動刀座與針杆結構可以獨立動作。

1. Switch off the power.
2. Take down presser foot, needle plate and feed dog
3. Put down machine head
4. Loosen the screw (1) for upper knife connecting rod and the screw (2) for lower knife connecting rod. Cmake it possible for lower and upper knife bracket and needle bar structure to move independently.

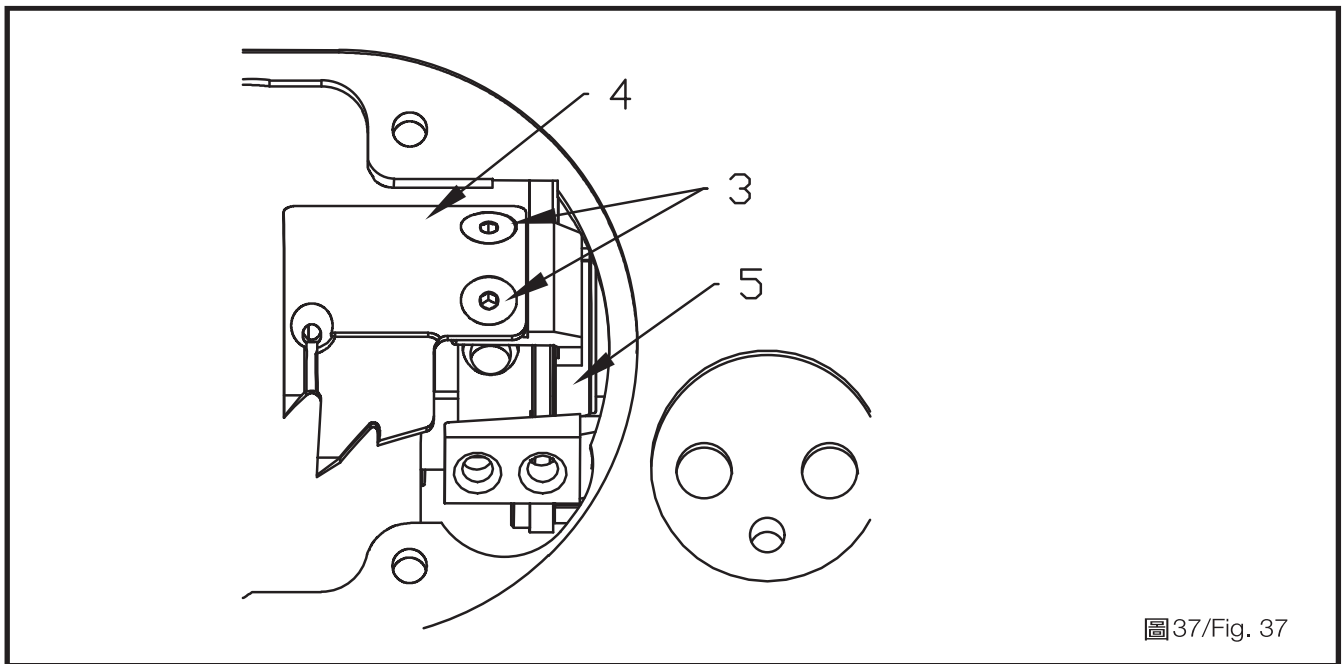


圖37/ Fig. 37

5. 用螺絲 (3) 將下動刀 (4) 安裝到下刀架(5)上。

5. Install the lowermoving knife (4) on lower knife bracket (5) with screw (3)

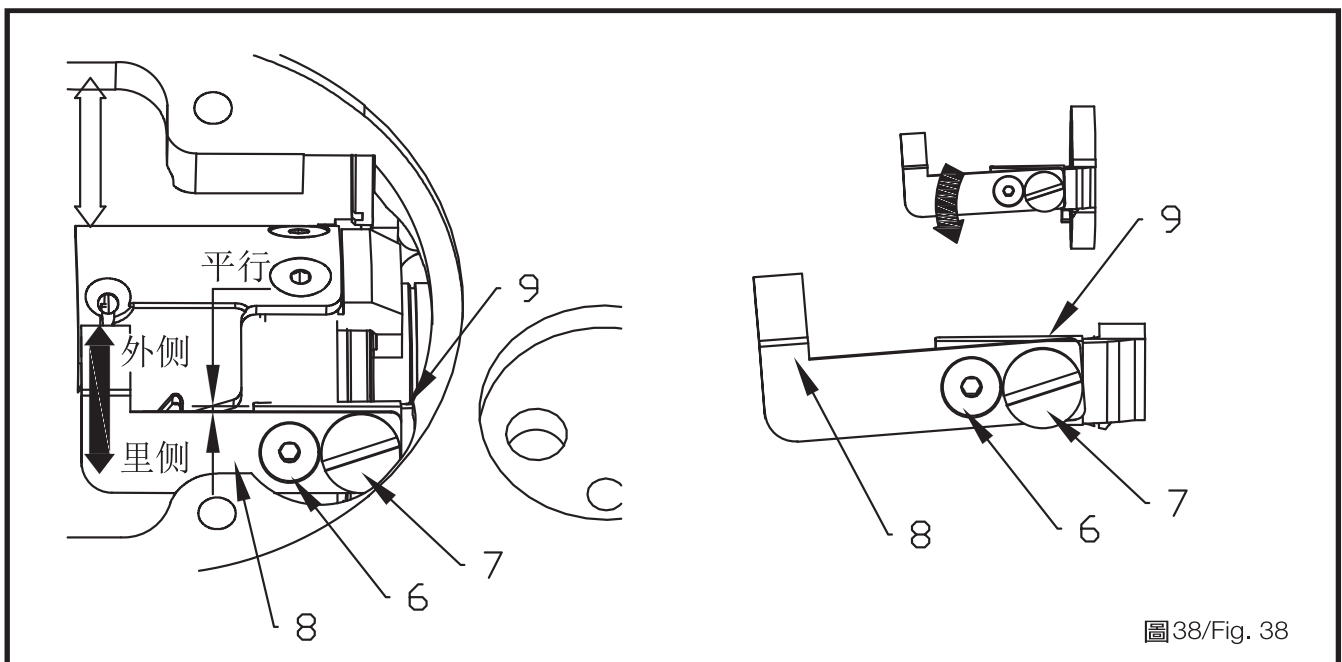


圖38/ Fig. 38

6. 用螺絲 (6) 和 (7) 將上動刀 (8) 安裝 上。

* 上動刀 (8) 安裝到上動刀架 (9) 時, 要使動刀柄與動刀架面基本平行。

* 上動刀 (9) 向裏側傾斜時刀面壓力上升, 向外側傾斜時刀面壓力下降。

* 調整後請手動上下動刀架, 確認是否可以正常切綫。

* 使用粗綫或不能切綫時, 請將上動刀 (8) 向裏面傾斜。

* 將上動刀 (8) 安裝到上動刀架 (9) 時要略微露出刀架的平面 (對打0.3mm) 向裏面傾斜。

(螺絲 (6) 因爲是平頭形狀, 上動刀 (8) 可以以螺絲中心傾斜。)

7. 以針尖爲中心, 上動刀 (8) 和下動刀 (4) 交錯時, 請調整上下動刀架使刃部平行交錯。

6. Install upper moving knife (8) with screw (6) and (7)

* When installing upper moving knife (8) on upper knife bracket (9) make moving knife crank and moving knife surface parallel.

* When the upper knife is leaning toward inside, the knife pressure is rising. When it is reverse, pressure is down.

* After adjusting upper and lower moving knife bracket make sure whether thread cutting is normal

* When using thick thread or no thread cutting, make upper knife (8) lean toward inside

* When installing upper knife (8) on upper knife bracket (9), make upper moving knife surpass bracket surface (0.3mm) and lean toward inside

Upper moving knife (8) can lean with the screw as center, for screw (6) is flat head

7. When upper moving knife and lower moving knife meet with needle point as center, adjust upper and lower knife bracket for making cutter edge parallel

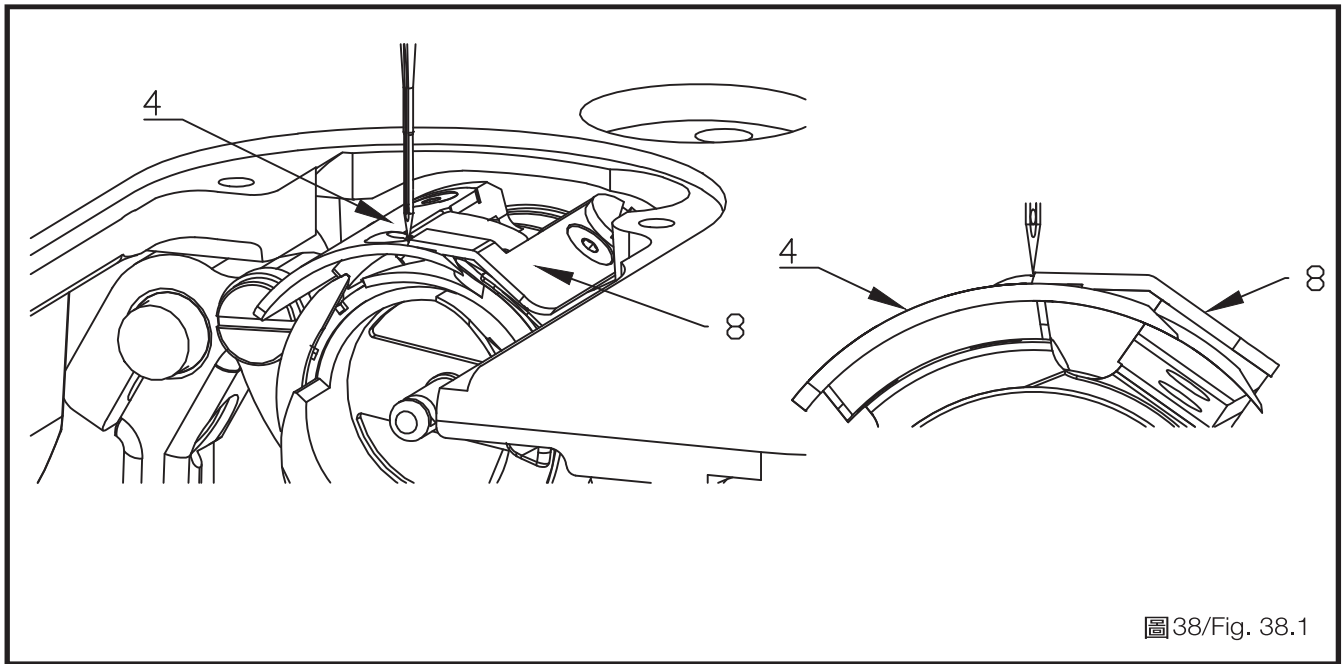


圖38/Fig. 38.1

8. 擰緊動刀連杆螺絲 (1) (2) 固定動刀位置。

8. Tighten screw (1) and (2) for fitting moving knife position.

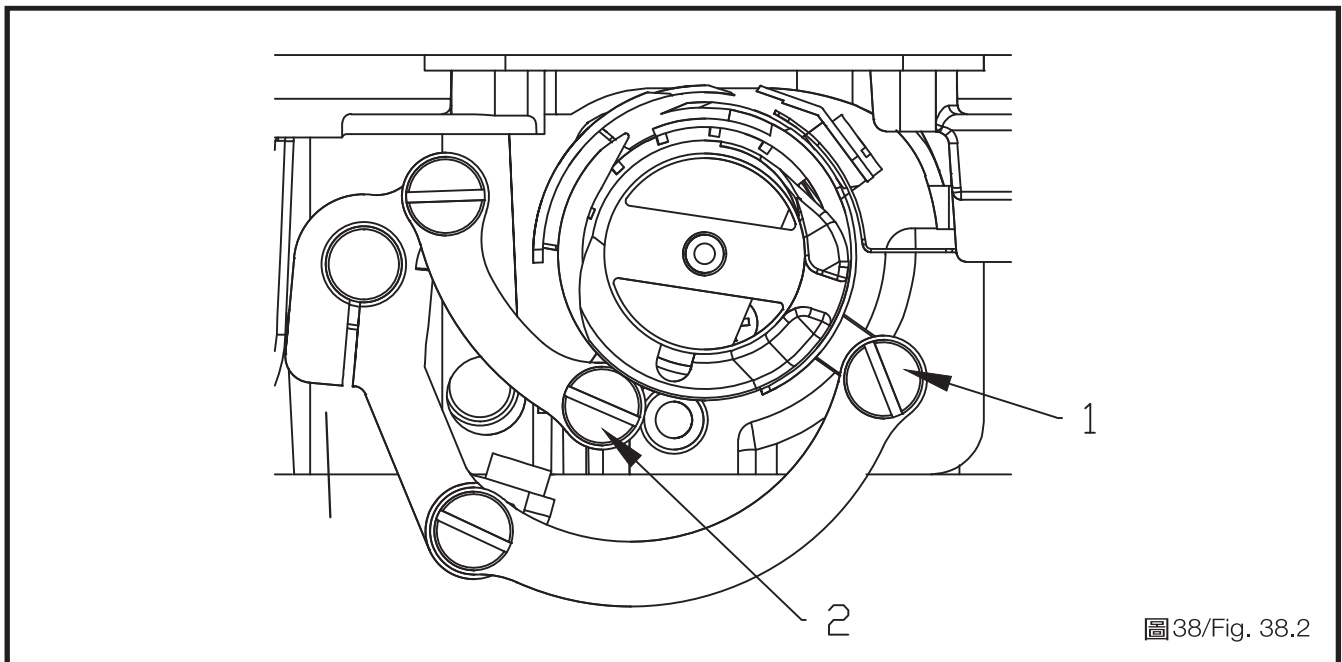


圖38/Fig. 38.2

9. 保持切綫電磁鐵ON的狀態轉動手輪，根據切綫凸輪 (10) 調整切綫凸輪滾珠 (11) 的最大移動位置。

9. When turning on the cutting solenoid, move the handwheel. Based on cutting cam (10) adjust cutting cam rolling ball (11) moving distance.

* 請注意切綫電磁鐵不要中途OFF回位。

* Don't switch off the cutting solenoid in adjustment.

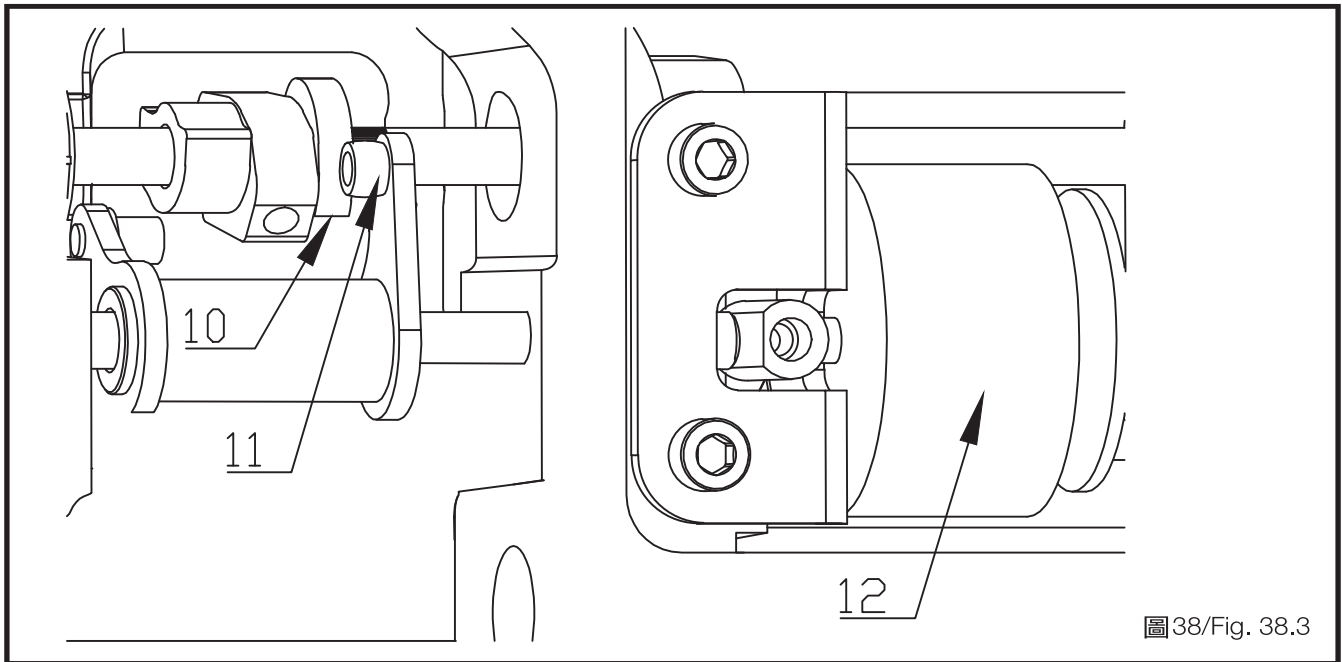


圖38/Fig. 38.3

10. 調整上下動刀的最大咬合是2mm。

- * 移動切刀驅動曲柄（14），使下動刀（4）的記號（13）中心與上動刀（8）的刀尖部分吻合。
- * 請注意上動刀（8）的刀尖部分不能超過記號（13）。

10. Adjust the lower and upper knife, with biggest occlusion 2 mm.

- * Move knife drive crank (14), make center mark (13) of lower moving knife (4) and edge of upper moving knife (8) match exactly.
- * Cutter edge of upper moving knife (8) can not surpass center mark (13)

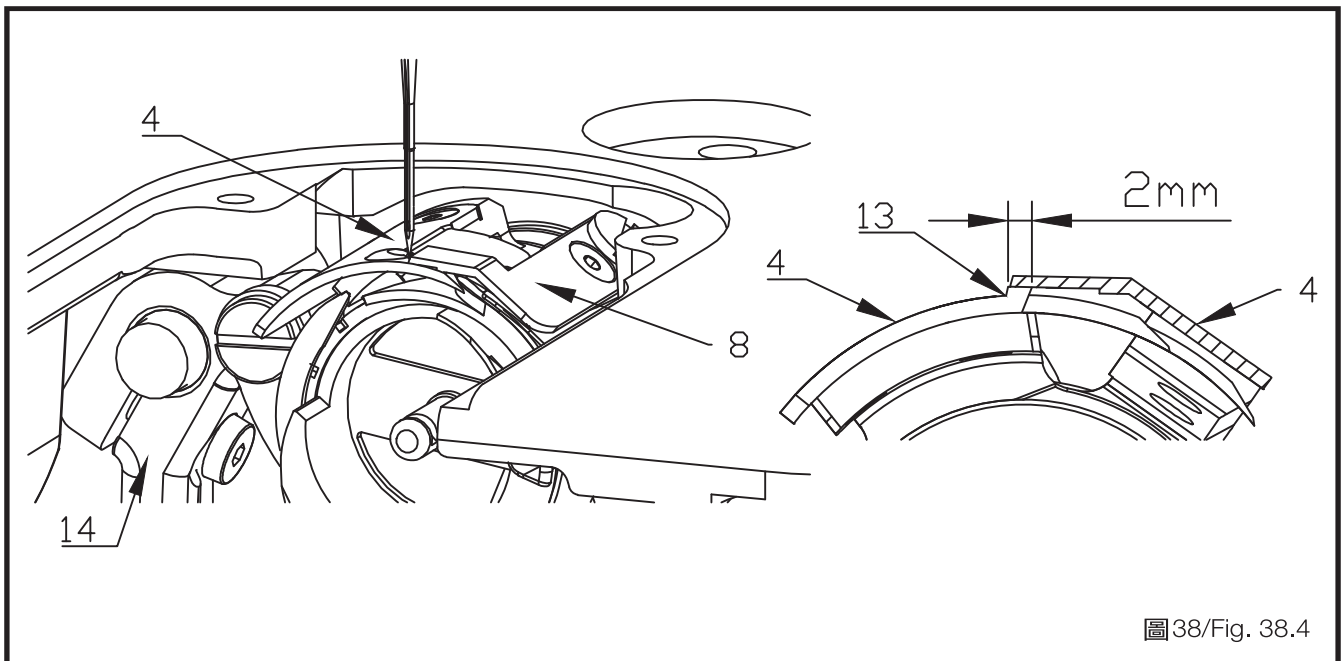


圖38/Fig. 38.4

11. 擰緊切刀驅動曲柄螺釘 (15) 。

10. Tighten hnife drive crank screw (15)

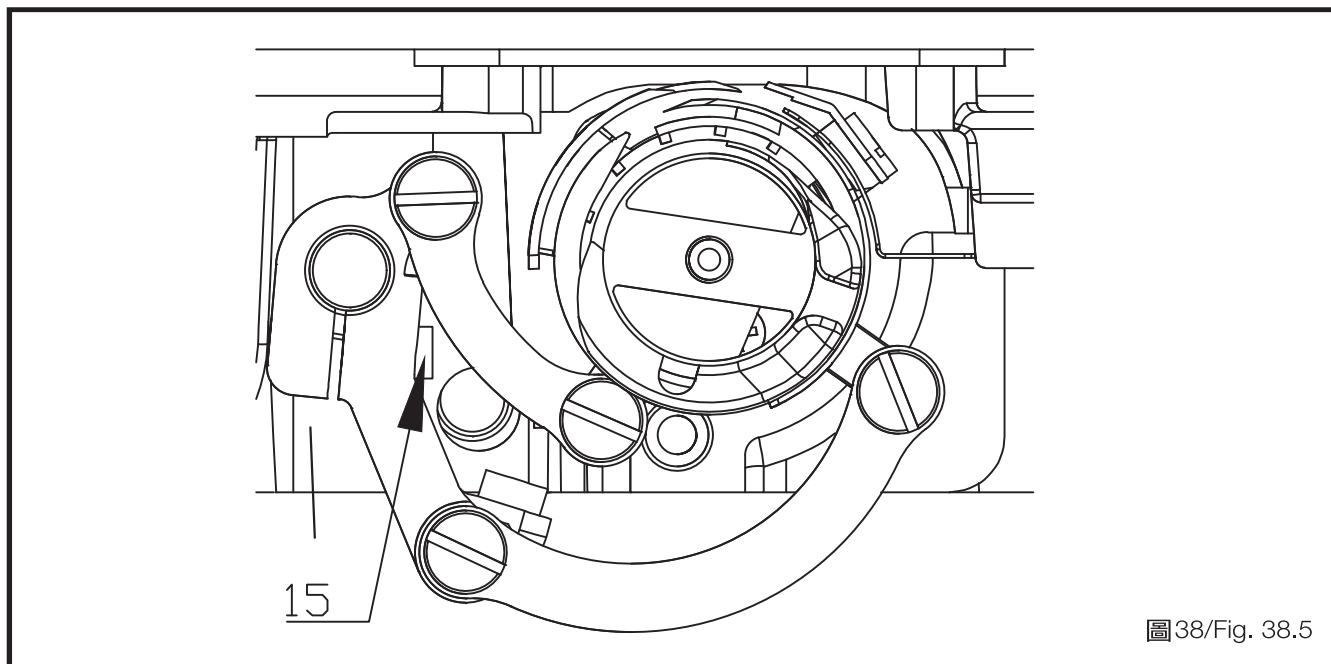


圖38/Fig. 38.5

梭頭油量調整

ADJUSTING THE AMOUNT OF OIL IN THE HOOK

1. 旋梭油量調節：用一字螺絲刀旋轉1（旋梭油量調節螺釘）。向+方向旋轉，旋梭供油量加大。向-方向旋轉，旋梭供油量減小。
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. Hook oil adjusting: Move screw 1 with minus screw driver. Toward "+", hook oil supplying is much. Toward "-", hook oil supplying is little.
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.

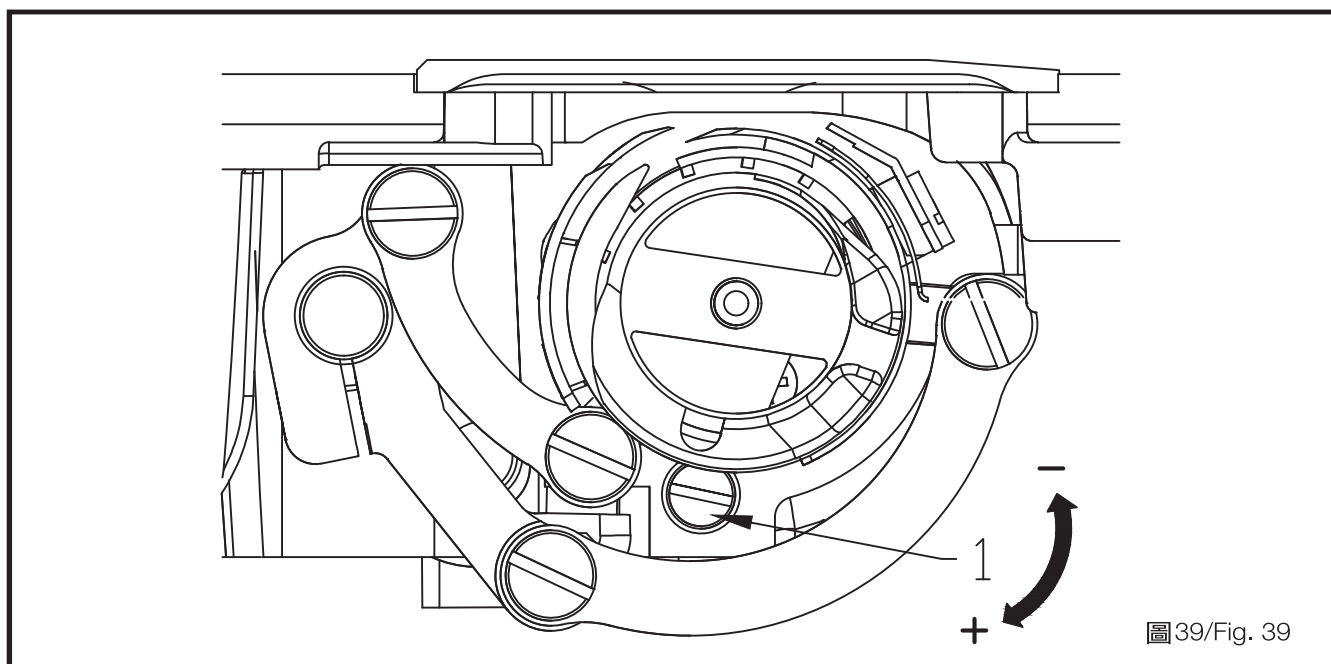


圖39/Fig. 39

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

CONDITIONS OF ALL OPERATORS

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。

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.

腳踏板之操作

OPERATING THE PEDAL

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.

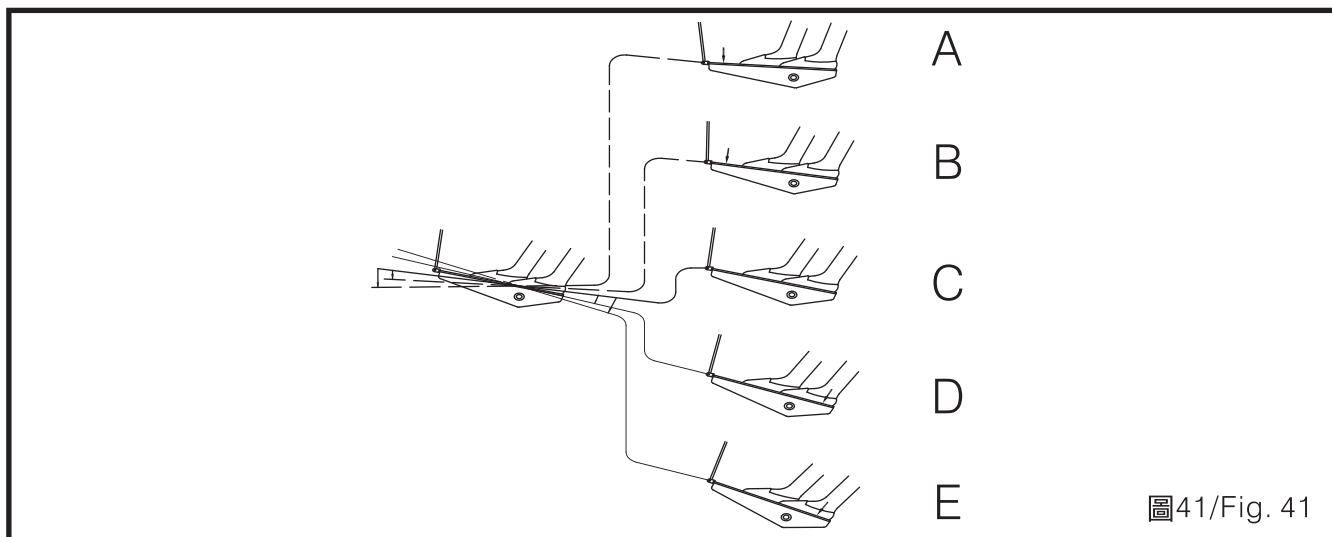


圖41/Fig. 41

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.

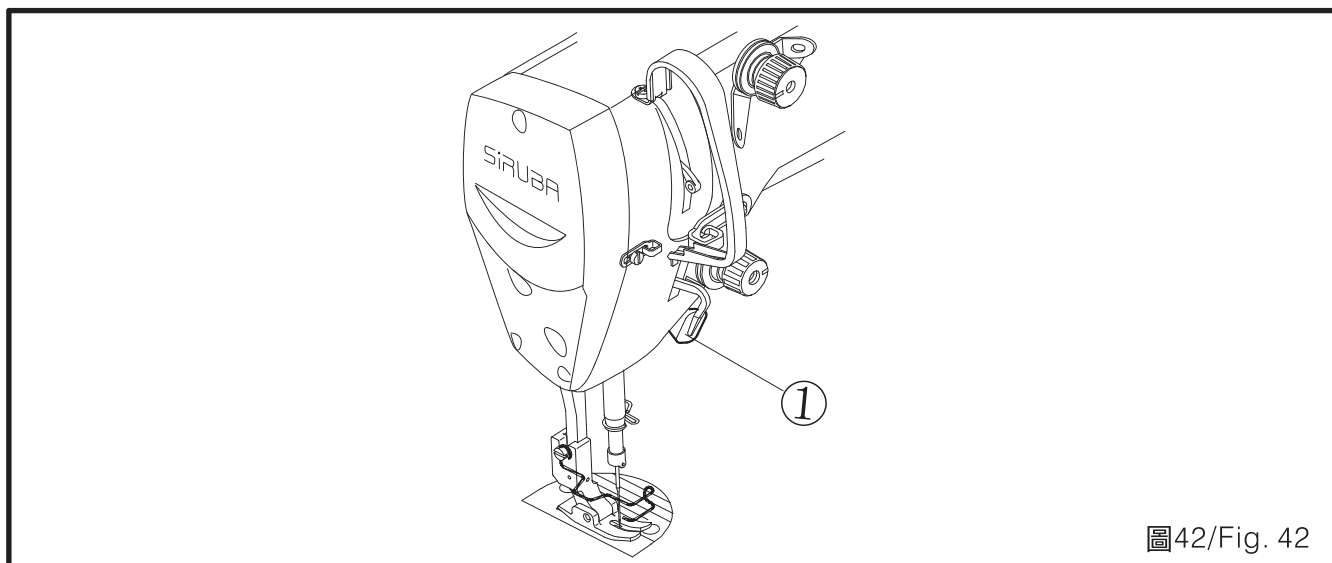


圖42/Fig. 42



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)

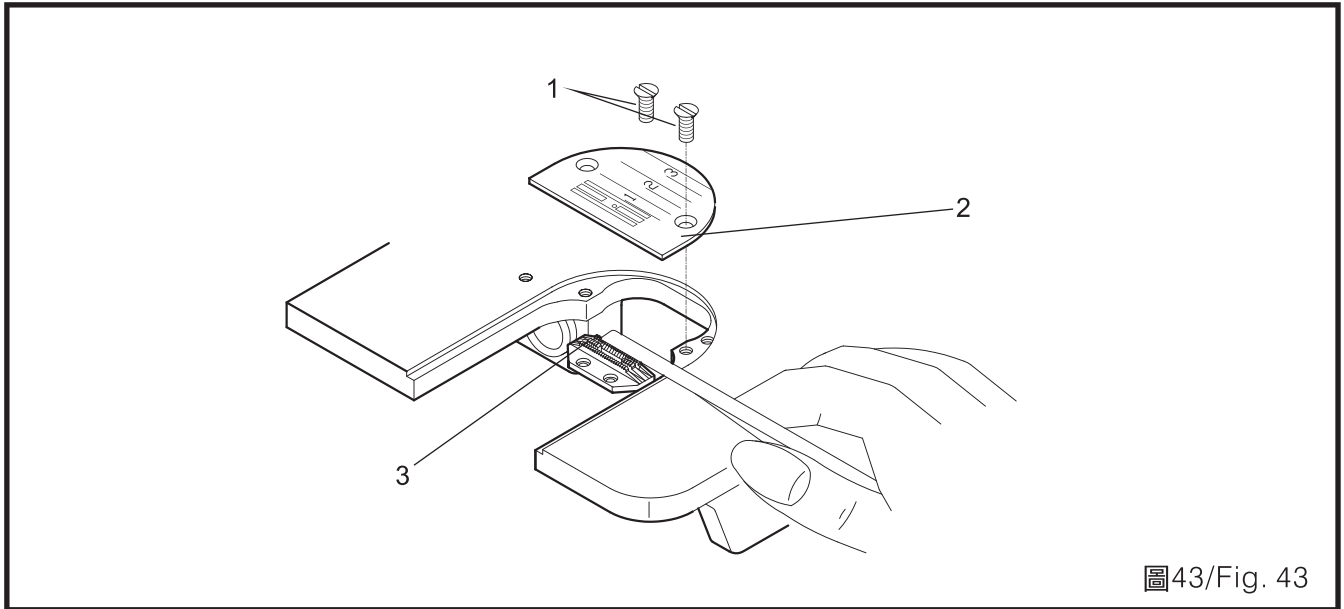


圖43/Fig. 43

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.

表7/Table 7

潤滑

OIL LUBRICATION

1.潤滑說明 (圖44)

(1) 將縫紉機油從1注油口加入，通過2可視油窗觀察油位高度，加油高度在油量上綫與油量下綫之間為宜。

(2) 如果潤滑正常，當機器操作中，可以從油鏡A中看到噴油現象；

1 Oil lubrication instruction (Fig.44)

(1).Pour oil from No.1 oil hole,and look at the oil height from No.2 oil window, keep the oil surface between the lower and upper oil mark;

(2) You will see oil splashing via the oil sight window A if the lubrication functions well when machine runs.

(3) 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。

(3) 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.

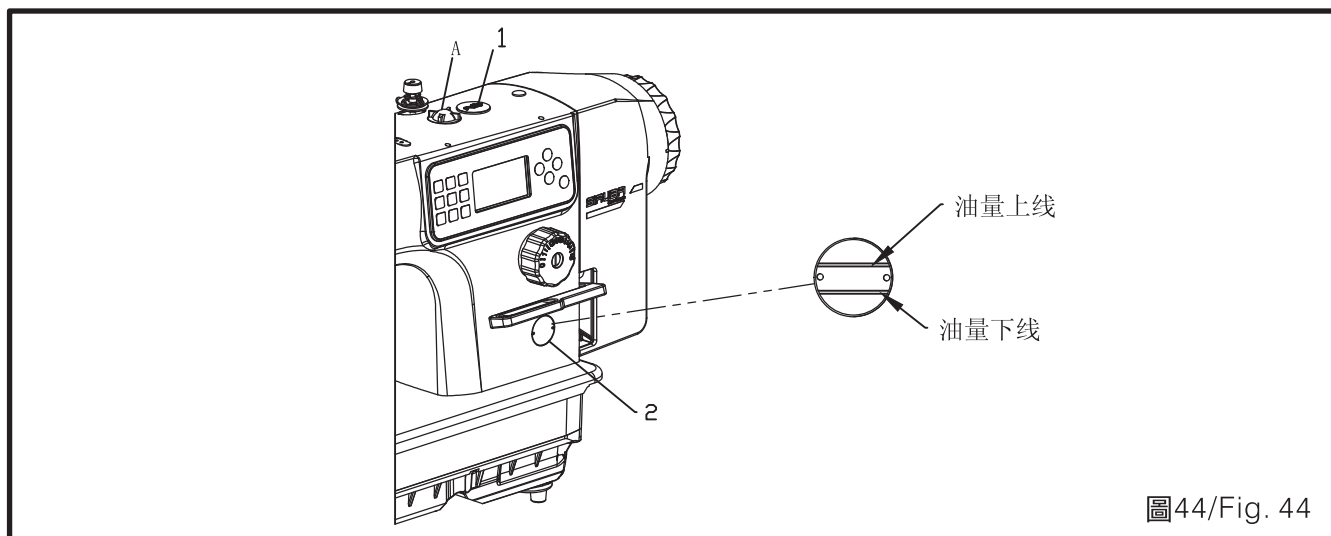


圖44/Fig. 44

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.

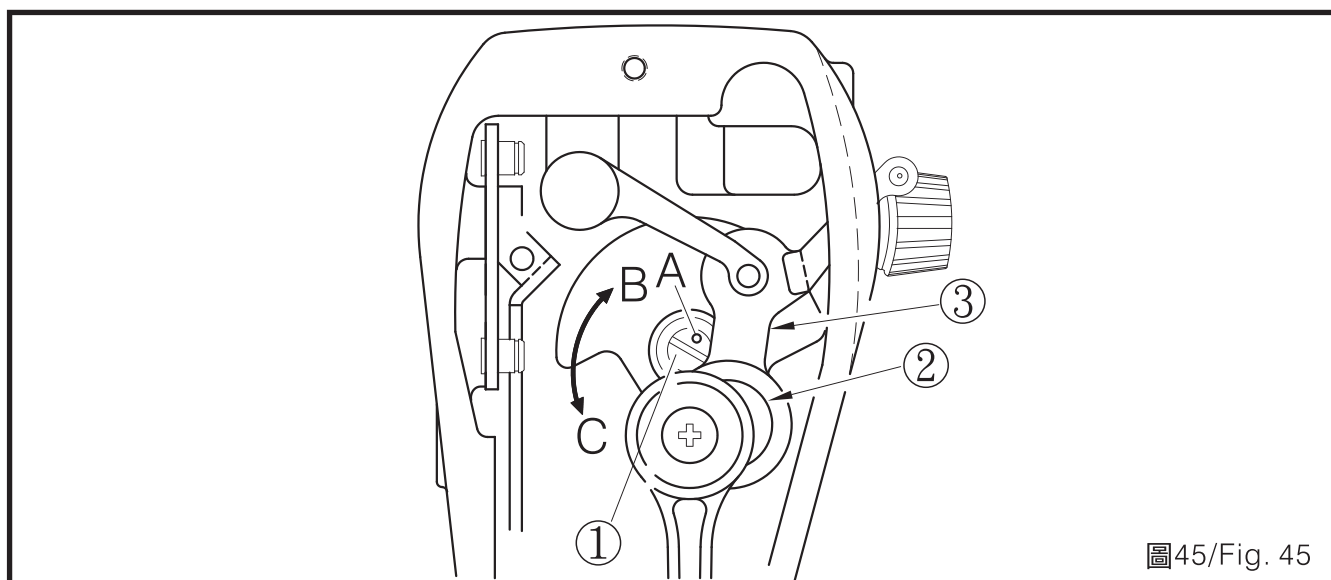


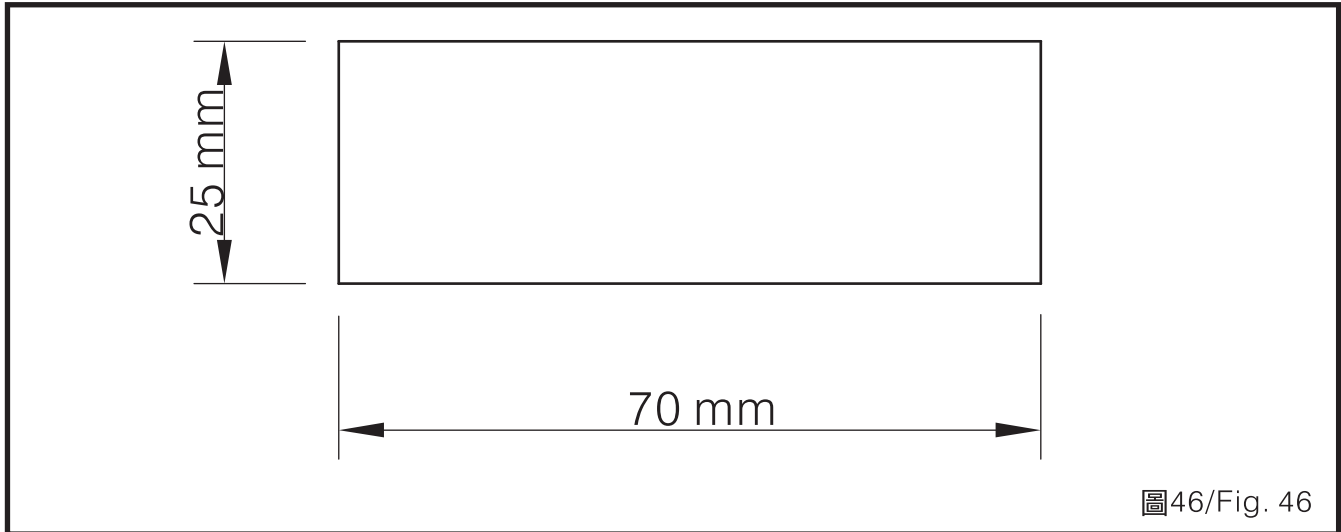
圖45/Fig. 45

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.)

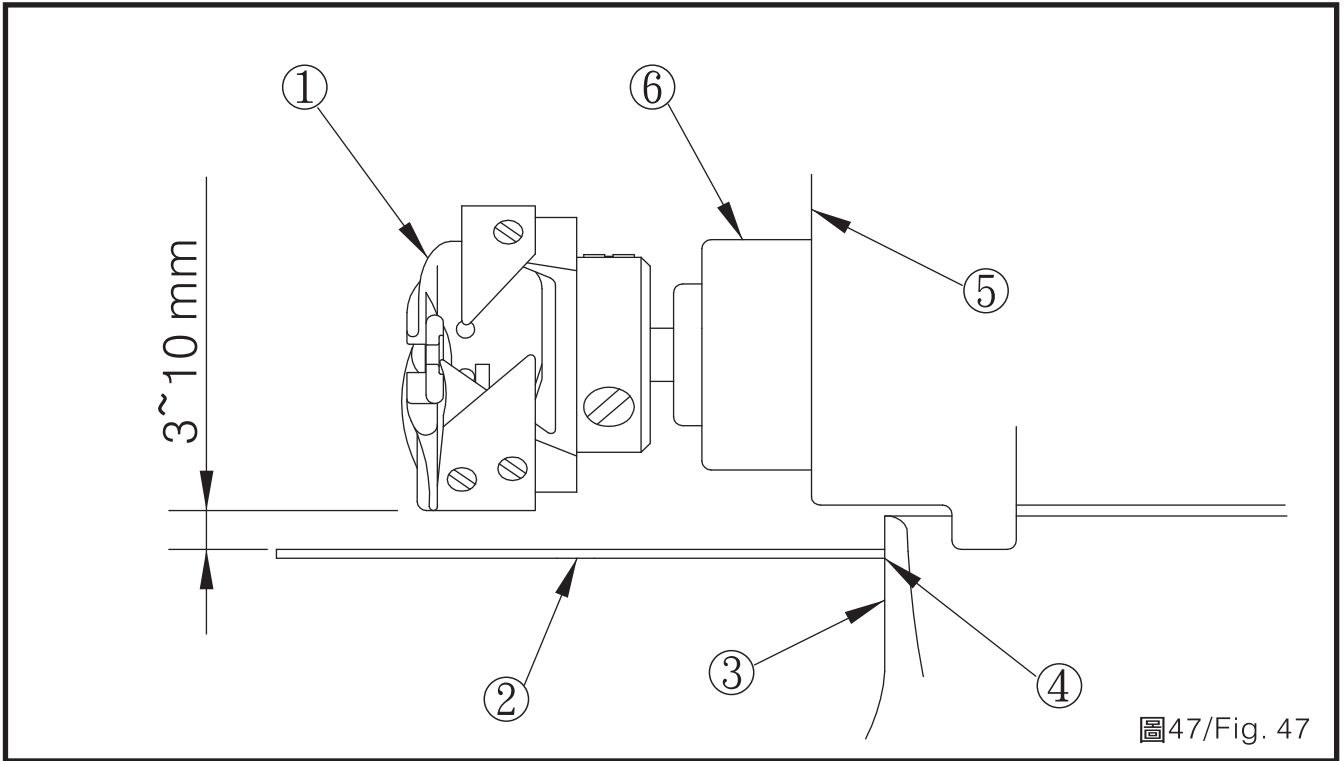


圖47/Fig. 47

5. 適當油量顯示範例(圖48)

梭頭噴油量約1mm適當油量(小)

DL7200-BM : 1.5mm

DL7200-BH : 3mm

梭頭噴油量約2mm適當油量(大)

DL7200A-BM : 3mm

DL7200A-BH : 6mm

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

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

DL7200A-BM : 1.5mm

DL7200A-BH : 3mm

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

DL7200A-BM : 3mm

DL7200A-BH : 6mm

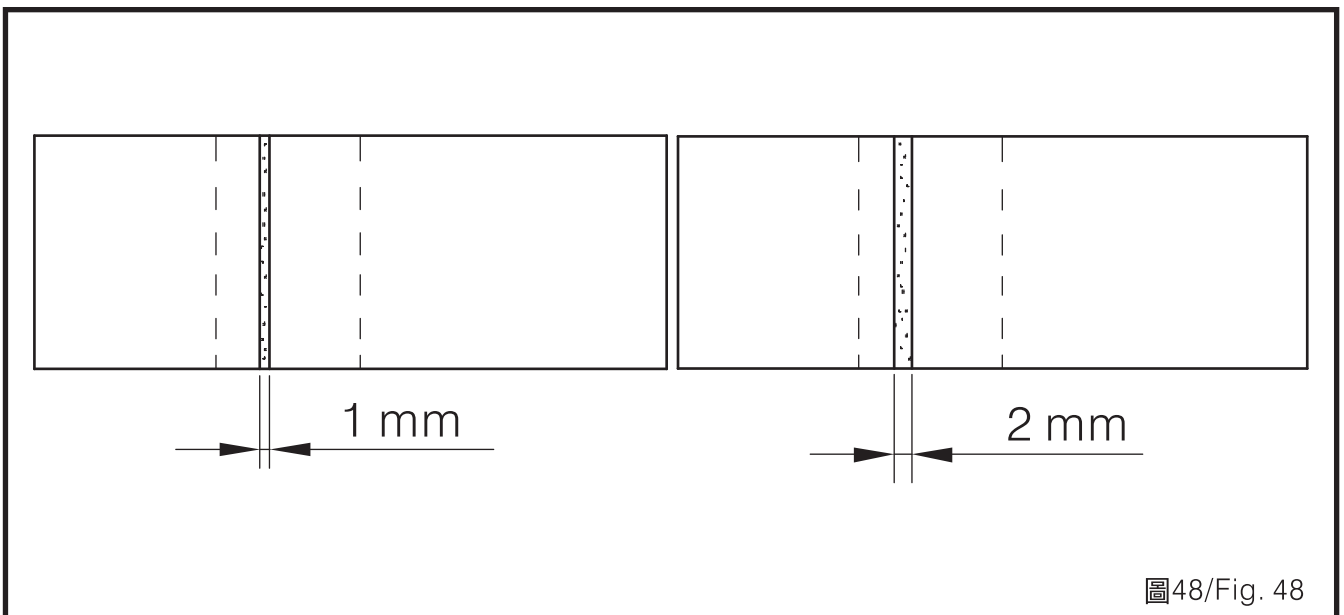


圖48/Fig. 48

- (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.

報廢流程

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。

DEMOLITION PROCEDURE

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.

單針高速平縫下乘式車板圖
 TABLE CUT-OUT SEMI-SUBMERGED
 單位/UNIT: mm
 所有尺寸公差/DIFFERENCE: ±2
 DL7200T-T1 長度(L): 1200 / 重量: 11.4kg ± 5%
 全封邊 灰格紋光塑面台板

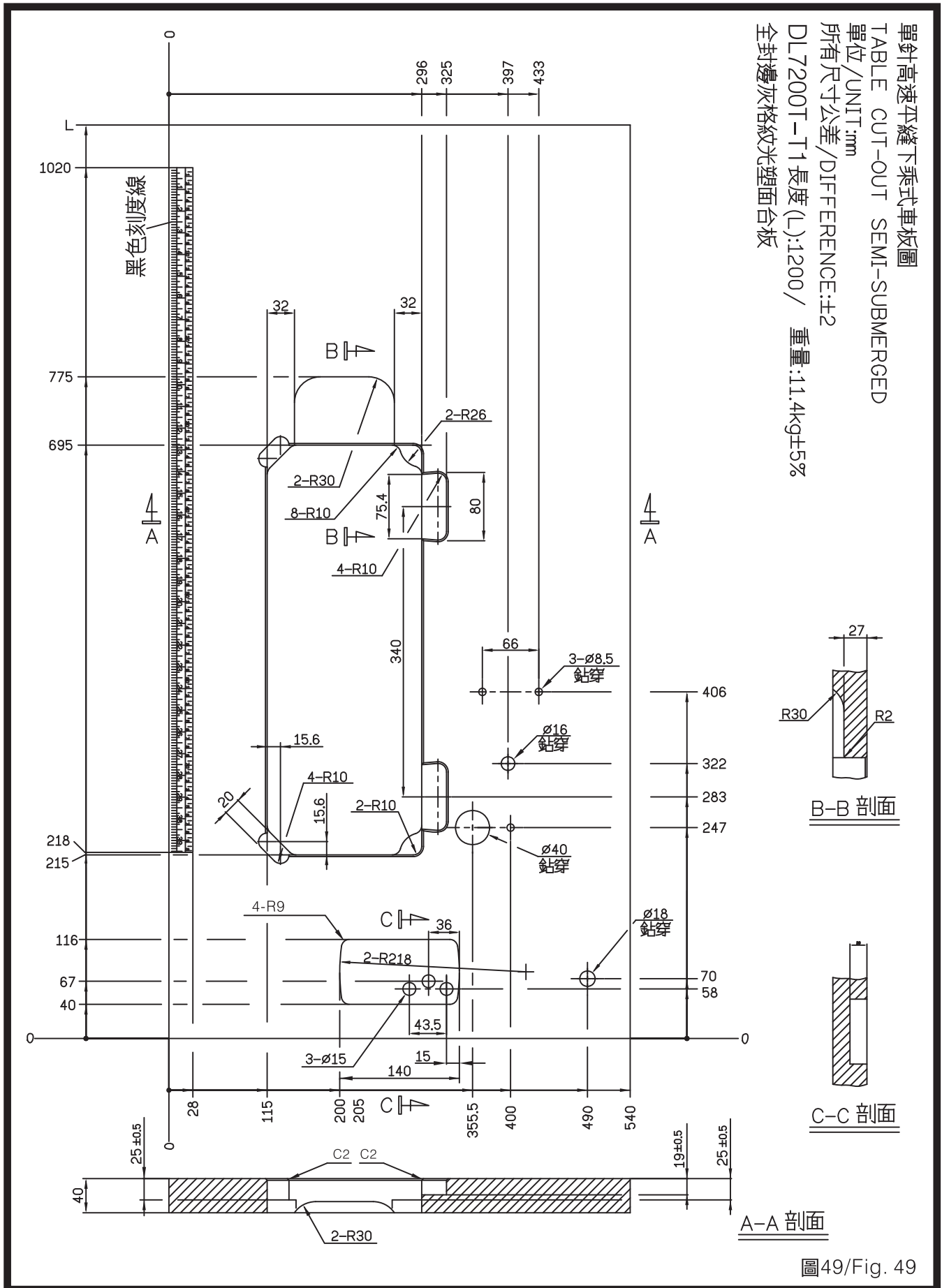










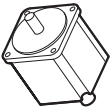


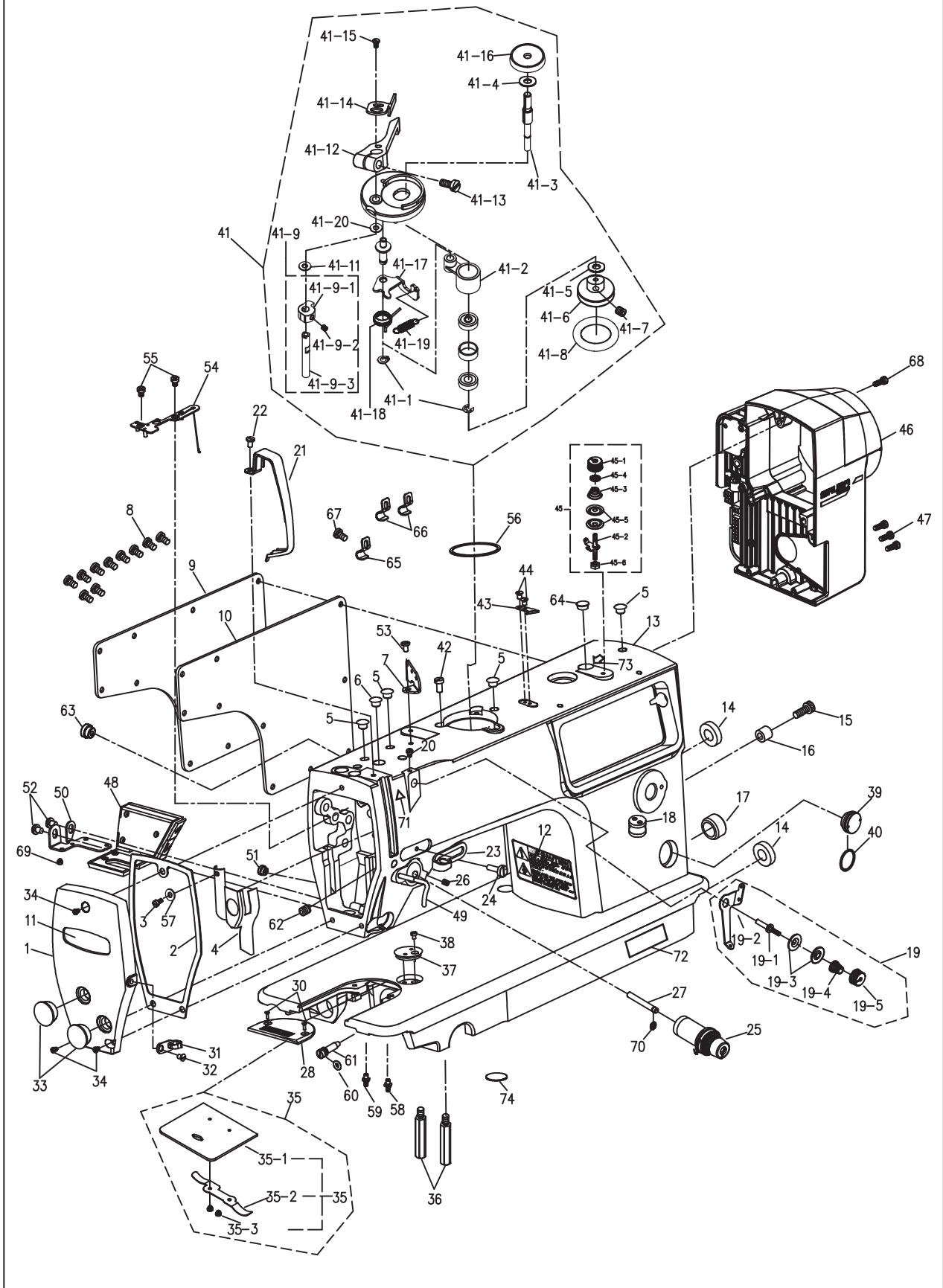
圖49/ Fig. 49

											
MODEL	SUB-CLASS	NEEDLE PLATE	FEED DOG	PRESSER FOOT	HOOK ASM	BOBBIN CASE ASM	BOBBIN	NEEDLE	HAND WHEEL	MOTOR	
機 型	規 格	針 板	送 具	押 具	梭 頭	梭 殼	梭 子	針 號	手 輪	馬 達	
DL7200A-BM1-10 ~ DL7200A-BM1-16	中厚布料 至 厚布料	E1704	D1701	P1701	G1121	G1202	G1303	DBX1#14	LH1500-E	BHL-439P0035A	
DL7200A-BM1-10 ~ DL7200A-BM1A-16	厚布料	E1704D	D1702	P1701	G1125J	G1202	G1303	DBX1#21	LH1500-E	BHL-439P0035A	
DL7200A-BH1-10 ~ DL7200A-BH1-16	厚布料	E1711	D1711	P1711	G1125J	G1202	G1303	DBX1#21	LH1500-E	BML-437P0035A	
DL7200A-BH1A-10 ~ DL7200A-BH1A-16	厚布料	E1711D	D1711D	P1711D	G1125J	G1202	G1303	DBX1#21	LH1500-E	BML-437P0035A	

規格件表 CONVERSION CHART

1. 機殼部件

MACHINE FRAME & MISCELLANEOUS COVER COMPONENTS

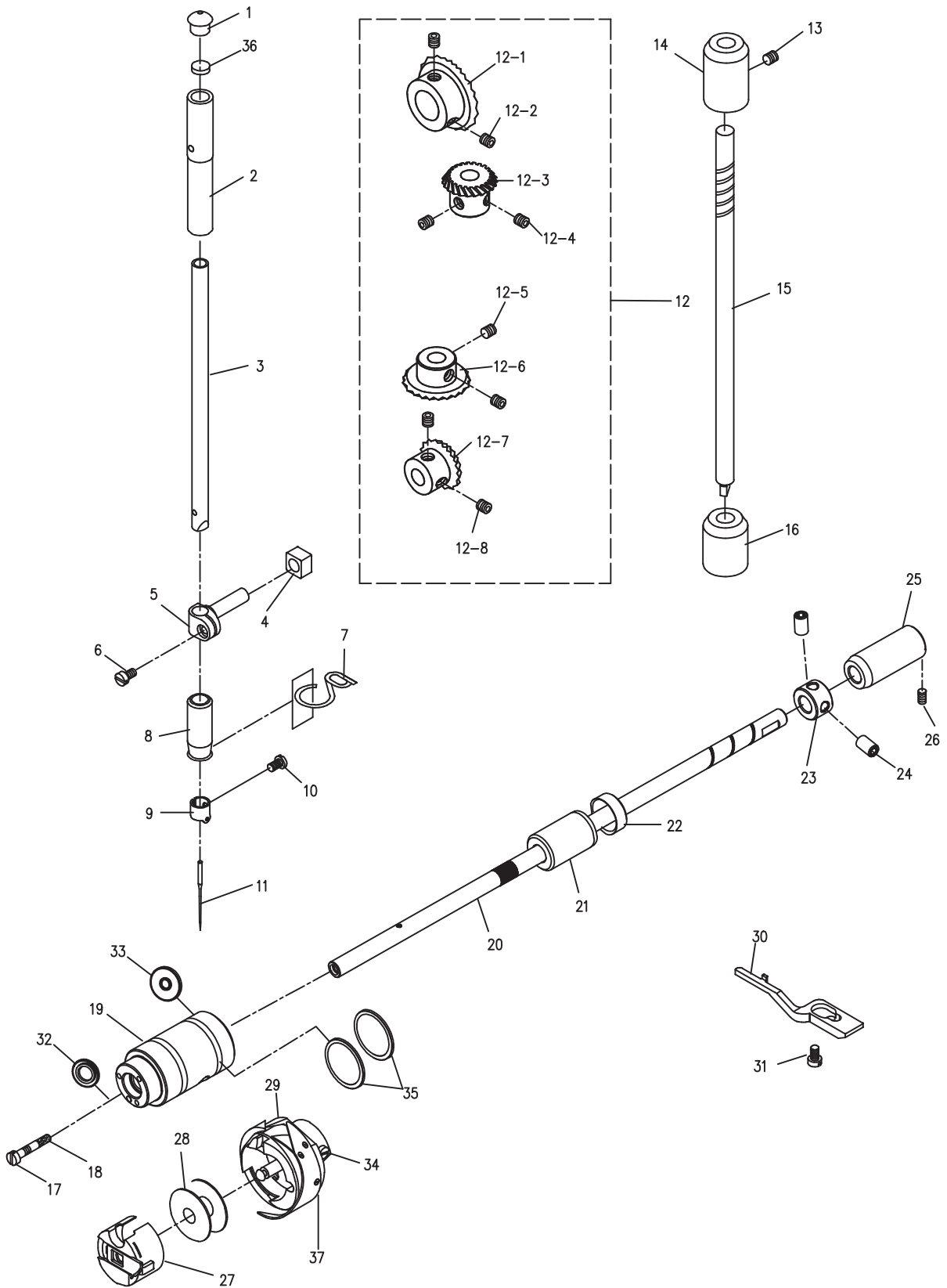


1.機殼部分/MACHINE FRAME&MISCELLANEOUS COVER COMPONENTS					
序號 Ref.No.	新圖號 new part No.	名稱 Part name	Name of parts	數量 Qty	備注 Note
1	6900A01001	面板	Face plate	1	
2	6900A01002	面板墊	Face plate agsket	1	
3	S073184404	防油板螺釘	Screw 1/8 × 44 L=4	1	
4	280001004	面部防油板	Arm oil shifld	1	
5	991001005	挑綫連杆銷孔塞	Rubber plug	4	
6	991001006	針杆曲柄螺孔塞	Rubber plug	1	
7	991001007	三眼過綫板	Thread guide rod	1	
8	S094762809	後窗板螺釘	Screw 3/16 × 28 L=9	11	
9	920001009	後窗板	Side plate	1	
10	920001009	後窗板墊	Gasker	1	
11	280001011	面板商標牌	Face plate	1	
12	720001012	安全指示牌	Safety lable	1	
13	720001013	機殼組件	Machine cover	1	
14	991001014	送料調節器孔塞	Rubber plug	1	
15	S184782818	倒縫限位套緊固螺釘	Screw 3/16 × 28 L=18	1	
16	991001016	倒縫限位套	Reverse feed lever stopper	1	
17	991001017	下軸盲孔塞	Rubber plug	1	
18	991001018	導綫過綫套	Magnet cord rubber	1	
	991001018-1	導綫過綫套	Magnet cord rubber	1	
19	991001019	小夾綫器組件	Thread tension asm	1	
19-1	991001019-1	小夾綫螺釘	Small clip line screw	1	
19-2	991001019-2	小夾綫過綫板	Thread tension guide	1	
19-3	991001019-3	小夾綫板	Thread tension disk	2	
19-4	991001019-4	小夾綫簧	Thread tension spring	1	
19-5	991001019-5	小夾綫螺母	Thread tension nut	1	
20	S114374006	小夾綫組件支架螺釘	Screw 11/64 × 40 L=6	1	
21	991001021	挑綫防護罩	Thread take-up lever cover	1	
22	S094762806	挑綫防護罩螺釘	Screw 3/16 × 28 L=6	1	
23	991001023	右綫鈎	Arm thread guide right	1	
24	S074374006	右綫鈎螺釘	Screw 11/64 × 40 L=6		
25	280001025	夾綫器組件	Thread tension asm	1	
26	S115952807	夾綫器支緊螺釘	Screw 15/64 × 28 L=7	1	
27	280001027	鬆綫釘	Tension releasing	1	
28	991001028	針板 (薄料/4排牙)	Throat plate	1	
	991001028D	針板 (大針距/3排牙)	Throat plate	1	
	0303D	針板 B2.6(大旋梭/3排牙)	Throat plate	1	
30	S044374006	針板螺釘	Screw 11/64 × 40 L=6	2	
31	991001031	左綫鈎	Arm thread guide left	1	
32	S074374006	左綫鈎螺釘	Screw 11/64 × 40 L=6	1	
33	991001033	面板調節孔塞	Rubber plug	2	
34	S094762808	面板螺釘	Screw 3/16 × 28 L=8	3	
35	991001035	推板組件	Slide plate asm	1	
35-1	991001035-1	推板	Slide plate	1	
35-2	991001035-2	推板簧	Bed slide spring	1	
35-3	S082385602	推板簧螺釘	Screw 3/32 × 56 L=2.2	2	
36	280001036	底板支柱	Bed slide spring	2	
37	991001037	卷邊器	Ruler stopper	1	
38	S074374006	卷邊器螺釘	Screw 11/64 × 40 L=6	1	
39	280001039	油窗	Oil sight window	1	
40	280001040	油封	O ring	1	
41	991001041	繞綫器組件	Winder assembly	1	
41-1	991001041-1	擋圈E4	Ring E4	2	
41-2	991001041-2	繞綫軸基座	Bobbin base	1	
41-3	991001041-3	繞綫軸	Spool	1	
41-4	991001041-4	O型圈P9	O ring	1	

41-5	991001041-5	平墊圈S6	Flat washer	1	
41-6	991001041-6	繞綫輪	Winding wheel	1	
41-7	991001041-7	螺釘M5X5	Screw M5x5	2	
41-8	991001041-8	橡皮墊圈29	Rubber washer	1	
41-9	991001041-9	梭芯夾凸輪組件	Shuttle cam asm.	1	
41-9-1	991001041-9-1	梭芯夾凸輪	Shuttle cam	1	
41-9-2	991001041-9-2	螺釘M5X5	Screw M5x5	1	
41-9-3	991001041-9-3	梭芯夾軸	Shuttle clamp shaft	1	
41-11	991001041-11	平墊圈S6	Flat washer	2	
41-12	991001041-12	梭芯壓臂柄	Shuttle arm handle	1	
41-13	991001041-13	螺釘M4X12	Screw	1	
41-14	991001041-14	梭芯夾	Bobbin clip	1	
41-15	991001041-15	螺釘SM4.76	Screw	2	
41-16	991001041-16	梭芯座	Bobbin base	1	
41-17	991001041-17	繞綫杠杆	Winding lever	1	
41-18	991001041-18	彈簧	Spring	1	
41-19	991001041-19	彈簧	Spring	1	
41-20	991001041-20	O型密封圈S5	O type sealing ring	1	
42	M080500810	繞綫器螺釘	Bobbin screw	3	
43	991001043	割綫刀	Knife	1	
44	S093574005	割綫刀螺釘	Knife screw	2	
45	991001045	繞綫夾綫器組件	Thread tension asm.	1	
45-1	991001045-1	夾綫螺母	Tension nut	1	
45-2	991001045-2	夾綫螺釘	Tension post	1	
45-3	991001045-3	夾綫彈簧	Tension spring	1	
45-4	991001045-4	夾綫板	Thread tension disk presser	2	
45-5	991001045-5	過綫板	Thread tension guide	1	
45-6	991001045-6	夾綫螺母(下)	Tension nut	1	
46	6900A01046	電控(A)琦星	Motor cover	1	
47	M180500835	電控緊固螺釘	Screw	3	
48	3801202101	倒縫燈開關組件	Reverse seam lamp switch assembly	1	
49	28001049	大綫勾	Presser bar thread guide	1	
50	991001050	倒縫燈開關支架	Switch support for reverse seam lamp	1	
51	280001065	電子鬆綫器過綫橡膠塞	Rubber plug	1	
52	S094762806	倒縫燈開關固定螺釘	Screw	2	
53	S074374007	三眼綫勾螺釘	Screw	1	
54	991001054	油綫板組件	Oil plate assembly	1	
55	S093574016	油綫板固定螺釘	Screw	2	
56	991001056	繞綫器墊片	Bobbin Washer	1	
57	991001057	防油板墊片	Grease plate gasket	1	
58	280001058	回油管接頭(下軸)		1	
59	280001059	進油管接頭(下軸)	Inlet pipe joint (lower shaft)	1	
60	280001060	油量調節螺釘O型圈	O-Ring	1	
61	280001061	油量調節螺釘	Screw	1	
62	S15357406	大綫勾緊定螺釘	Screw	1	
63	280001063	操作面板出綫橡膠塞	Rubber plug	1	
64	991001058	橡膠塞	Rubber plug	3	
65	280001065	夾綫1		1	
66	280001066	綫夾2		2	
67	S094762806	綫夾螺釘	Screw	1	
68	M180500825	電控緊固螺釘	Screw	1	
69	M090300506	燈開關支架螺釘	Screw	4	
70	280001069	O型圈	O-ring	1	
71	280001070	安全標示	Marking	1	
72	280001071	機器翻倒說明	Marking	1	
73	280001072	注油標示	Oiling Marking	1	
74	280001074	檢驗標示	Test Marking	1	

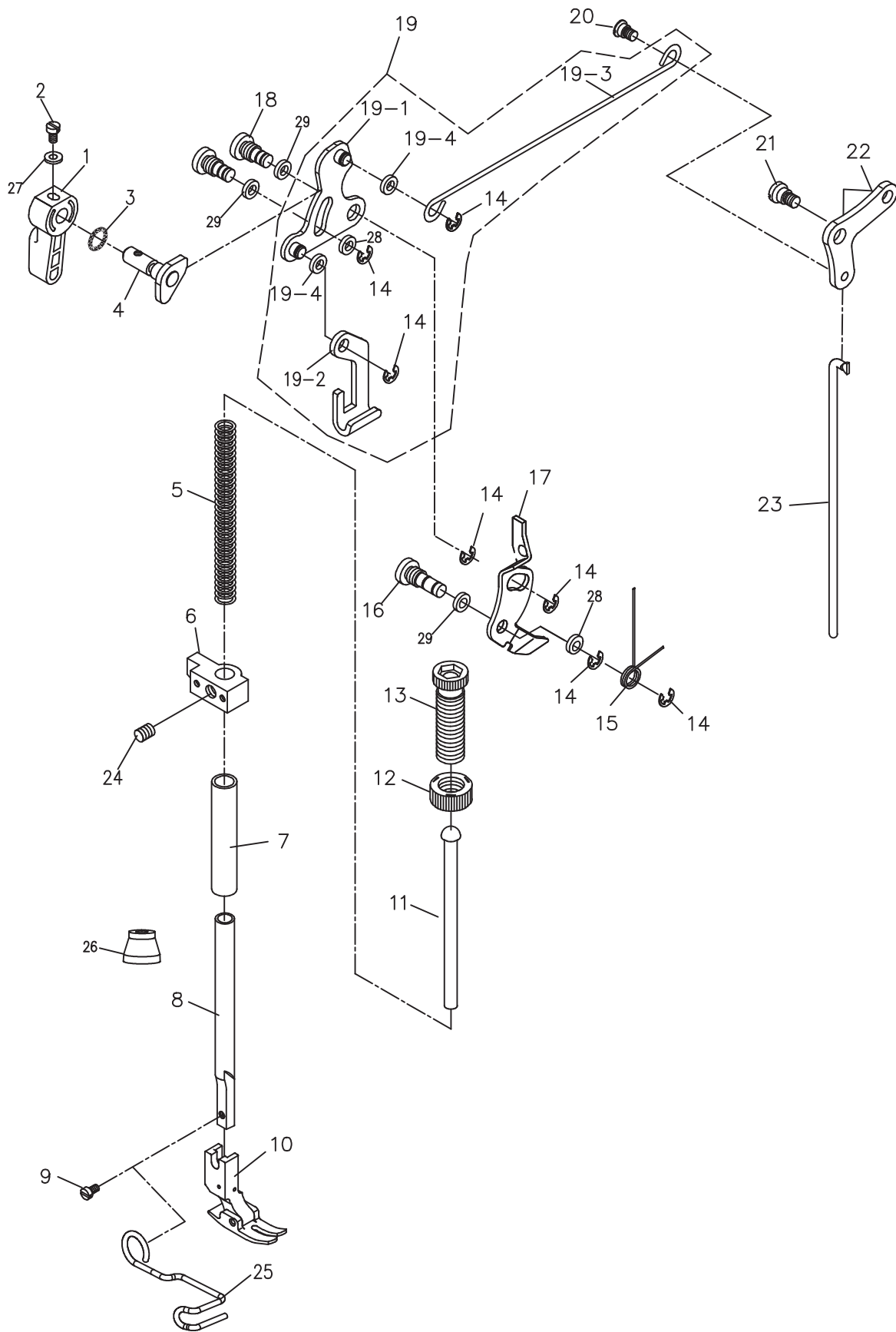
2.上軸/挑綫部件/MAIN SHAFT&THREAD-UP LEVER COMPONENTS					
序號 Ref.No.	新圖號 new part No.	名稱 Part name	Name of parts	數量 Qty	備注 Note
1	991002001	挑綫連杆銷螺釘	Screw 15/64 × 28 L=10.5	1	
2	991002002	挑綫連杆銷	thread take-up crank shaft	1	
3	991002003	曲柄油量限制氈	Roller felt	1	
4	991002004	挑綫連杆組件	thread take-up lever asm	1	
	991002004H	挑綫連杆組件(厚料)	thread take-up lever asm	1	
	991002004D	挑綫連杆組件(鋁制厚料)	thread take-up lever asm	1	
4-1	991002004-1	挑綫杆	take-up lever	1	
	991002004-1H	挑綫杆	take-up lever	1	
	991002004-1D	挑綫杆	take-up lever	1	
4-2	991002004-2	挑綫連杆	Pick line connecting rod	1	
	991002004-2H	挑綫連杆	Pick line connecting rod	1	
	991002004-2D	挑綫連杆	Pick line connecting rod	1	
5	991002005	挑綫杆滾針軸承	Needle bearing	2	
6	991002006	挑綫曲柄	Needle bar crank	1	
	991002007H	挑綫曲柄(厚料)	Needle bar crank	1	
7	991002007	針杆連杆	Needle bar crank rod	1	
8	991002008	挑綫曲柄左旋螺釘	Left screw 9/64 × 40 L=4.8	1	
9	991002009	針杆曲柄組件	Counter weight	1	
	991102009H	針杆曲柄組件(厚料)	Counter weight	1	
9-1	S127142816	針杆曲柄緊固螺釘	Screw 9/32 × 28 L=16	1	
9-2	S116354006	挑綫曲柄定位螺釘	Screw 1/4 × 40 L=6	2	
9-3	991002009-3	定位螺絲O型圈	Rubber ring	1	
9-4	S077142815	針杆曲柄定位螺釘	Screw 9/32 × 28 L=15.5	1	
9-5	991002009-5	針杆曲柄	Counter weight	1	
10	991002010	送料偏心輪組件	Feed drive eccentric cam asm.	1	
10-1	S076354011	送料偏心輪螺釘	Screw 1/4 × 40 L=11	2	
10-2	991002010-2	送料偏心輪	Feed drive eccentric cam	1	
11	S093574006	送料偏心輪蓋板螺釘	Screw 9/64 × 40 L=6	2	
12	991002012	上軸後套	Mainshaft back sleeve	1	
13	991002013	上軸後套油封	Oil seal of mainshaft back sleeve	1	
14	991002014	拾牙連杆軸擋圈	Snap ring	1	
15	991002015	上軸擋圈	Thrust collar asm	1	
16	S116354006	上軸擋圈螺釘	Screw 1/4x40 L=6	2	
17	991002017	上軸前軸套	Main shaft front bushing asm.	1	
18	991002018	上軸中軸套	Bushing intermediate	1	
19	991002019	挑綫杆橡皮套	Rubber	1	
20	991002020	挑綫連杆銷供油綫	Thread take-up crank shaft felt	1	
21	M140500806	手輪螺釘	Screw	2	
22	720002022	手輪	Hand wheel	1	
23	991002023	上軸	Main shaft	1	
24	991002024	上軸油量調節銷	Oil amount adjusting pin	1	
25	991002025	上軸油量調節銷O型圈	Rubber ring	1	
26	991002026	送料偏心輪蓋板	Thrust collar	1	
27	S145952808	上軸中軸套螺釘	Screw	1	
28	991002028	聯軸器(A)	Connect block A	1	
29	M140601008	連軸器螺釘	Screw M6 × 6	3	
30	991002030	聯軸器(B)	Connect block B	1	
31	M140601006	聯軸器(B)固定螺釘	Screw	3	
32	72002032A	直驅電機組件(鮑麥克斯)	Motor asm.	1	
33	M180500822	電機安裝螺釘M5X25	Screw	4	
34	991002034	電機安裝螺釘墊片	Washer	4	
35	W220801605	墊片	Washer	1	

3. 針杆/豎軸/下軸部件
 NEEDLE BAR, UPRIGHT SHAFT & HOOK DRIVING SHAFT COMPONENTS



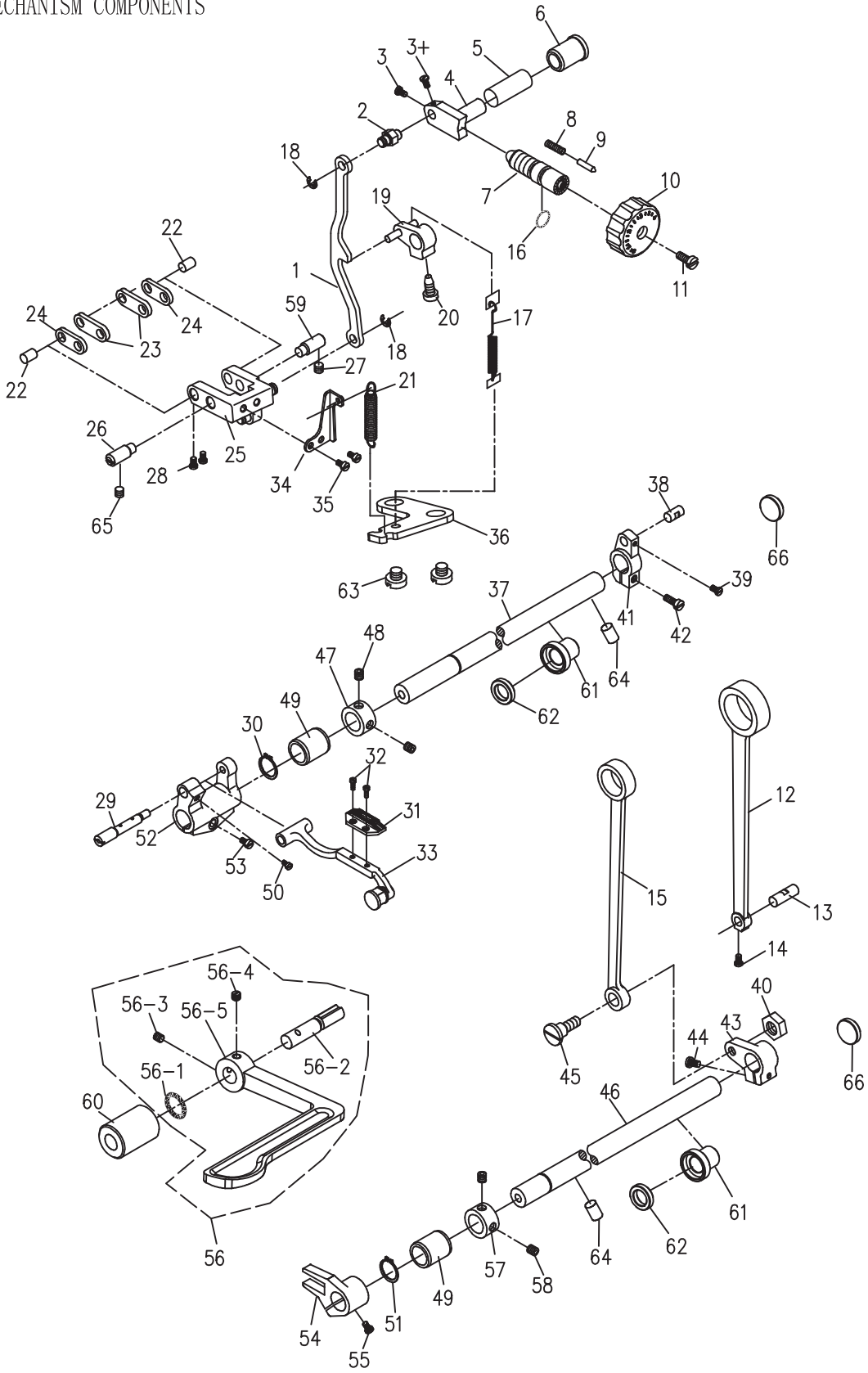
3.針杆/豎軸/下軸部件/NEEDLE BAR, UPRIGHT SHAFT&HOOK DRIVING SHAFT COMPONENTS					
序號 Ref.No.	新圖號 new part No.	名稱 Part name	Name of parts	數量 Qty	備注 Note
1	991003001	針杆上孔塞	Cap	1	
2	991003002	針杆上套	Needle bar bushing upper	1	
3	991003003	針杆	Needle bar	1	
	991003003H	針杆(厚料)	Needle bar	1	
4	280002004	針杆連接柱滑塊	Slide block	1	
5	991003004	針杆連接柱	Needle rod holder asm.	1	
6	S073574007	針杆連接柱螺釘	Screw 9/64 × 40 L=7.5	1	
7	991003007	針杆下套綫鈎	Needle bar thread guide	1	
8	991003008	針杆下套	Needle bar bushing lower	1	
9	991003010	針杆過綫環	Needle bar thread guide	1	
10	S083184405	機針螺釘	Screw 1/8 × 44 L=4.8	1	
11	991003011	機針 DBX1 #14	Needle DBx1 #14	1	
	991003011H	機針 DPx5 #21	Needle DPx5 #21	1	
12	991003012	傘齒輪組件	Gear pinion asm.	1	
12-1	991003014	上軸傘齒輪	Gear asm.	1	
12-2	S116354008	傘齒輪螺釘	Screw 1/4 × 40 L=8	2	
12-3	991003016	豎軸上傘齒輪	Pinion asm.	1	
12-4	S116354008	傘齒輪螺釘	Screw 1/4 × 40 L=8	2	
12-5	S116354008	傘齒輪螺釘	Screw 1/4 × 40 L=8	2	
12-6	991003019	豎軸下齒輪	Gear asm.	1	
12-7	991003021	下軸傘齒輪	Pinion asm.	1	
12-8	S116354008	傘齒輪螺釘	Screw 1/4 × 40 L=8	2	
13	S145952804	豎軸上套緊固螺釘	Screw	1	
14	991003017	豎軸上軸套	Upright shaft bushing,lower	1	
15	991003014	豎軸	Upright shaft	1	
16	991003017	豎軸下軸套	Upright shaft bushing,lower	1	
17	991003028	下軸限油螺釘	Oil seal screw	1	
18	991003027	下軸限油芯	Oil wick	1	
19	280002019	下軸前軸套	Lower shaft front metal	1	
20	991003022	下軸	Lower shaft	1	
21	991006047	下軸中套	Lower axle sleeve	1	
22	280002022	下軸中套油封	Oil Seal	1	
23	991003020	下軸擋圈	Thrust collar asm.	1	
24	S074374005	下軸擋圈螺釘	Screw 11/64 × 40 L=5	2	
25	991003018	下軸後軸套	Bushing rear	1	
26	S145952808	下軸後軸套螺釘	Screw	1	
27	991003030	梭殼	Bobbin case	1	
28	991003029	梭芯	Bobbin	1	
29	991003015	旋梭	Hook asm.	1	
30	991003023	旋梭定位勾	Bobbin case holder	1	
31	S084374011	旋梭定位勾螺釘	Screw SM11/64 × 40 L=11	1	
32	930002021	下軸前套油封(前)	oil seal	1	
33	030305068	下軸前套油封(後)	oil seal	1	
34	991003032	旋梭螺釘	Screw	3	
35	280003035	O型圈	O ring	2	
36	280003036	針杆油氈	Linoleum	1	
37	991003037	螺釘	Screw	1	

4. 壓杆部件
HAND LIFTER COMPONENTS



4.壓杆部件/ HAND LIFTER COMPONENTS					
序號 Ref.No.	新圖號 new part No.	名稱 Part name	Name of parts	數量 Qty	備注 Note
1	991004001	壓腳扳手	Hand lifter	1	
2	991004002	壓腳扳手螺釘	Screw 9/64 × 40 L=10	1	
3	991004003	壓腳扳手軸O型圈	Rubber ring	1	
4	991004004	壓腳扳手凸輪部件	hand lifter cam asm	1	
5	991004029	調壓簧	Presser adjurting spring	1	
	991004029H	調壓簧(厚料)	Presser adjurting spring H	1	
6	280004006	壓杆導架	Presser bar guide bracket	1	
7	991004005	壓杆軸套	Presser bar bushing lower	1	
8	991004031	壓杆	Presser bar	1	
9	S073574011	壓腳螺釘	Screw 9/64 × 40 L=11	1	
10	991004009	壓腳部件	Presser foot asm	1	
	991004009H	壓腳部件(厚料)	Presser foot asm	1	
	991004009D	壓腳部件(大旋梭)	Presser foot asm	1	
11	991004033	調壓導杆	Presser guide bar	1	
12	280004012	調壓螺母	Presser adjurting screw nut	1	
	280004012H	調壓螺母(厚料)	Presser adjurting screw nut H	1	
13	280004013	調壓螺釘	Presser spring regulator	1	
	280004013H	調壓螺釘	Presser spring regulator H	1	
14	991004008	擋圈	E-ring 5	7	
15	991004022	鬆綫頂板復位簧	Tension release return spring	1	
16	991004026	鬆綫頂板螺紋銷	Tension release shaft	1	
17	280004017	鬆綫頂板	Thread tension relerse wire	1	
18	991004007	前杠杆螺紋銷	Link shaft	2	
19	280004019	前杠杆組件	Knee lifting cross rod asm	1	
19-1	280004019-1	抬壓腳前杠杆	Hand lifter link	1	
19-2	991004032-2	壓腳升降板	Lifting lever	1	
19-3	991004032-3	抬壓腳拉杆	Knee lifting cross rod	1	
19-4	280004019-4	墊圈	Washer	2	
20	991004010	抬壓腳拉杆螺釘	Hinge screw	1	
21	991004011	後杠杆軸拉螺釘	Hinge screw	1	
22	991004013	抬壓腳後杠杆	Lifting lever link	1	
	991004013-H	抬壓腳後杠杆(厚料)	Lifting lever link(Thick material)	1	
23	280004023	抬壓腳頂杆	Knee lifter connecting rod	1	
24	S126354006	導架螺釘	Screw	1	
25	991004036	壓腳保護架	Fender bracket	1	
26	991004041	擋油帽	Cup	1	
27	991004042	墊片	Washer	1	
28	W220630707	墊片	Washer	2	
29	991004039	橡膠墊片	Washer	3	

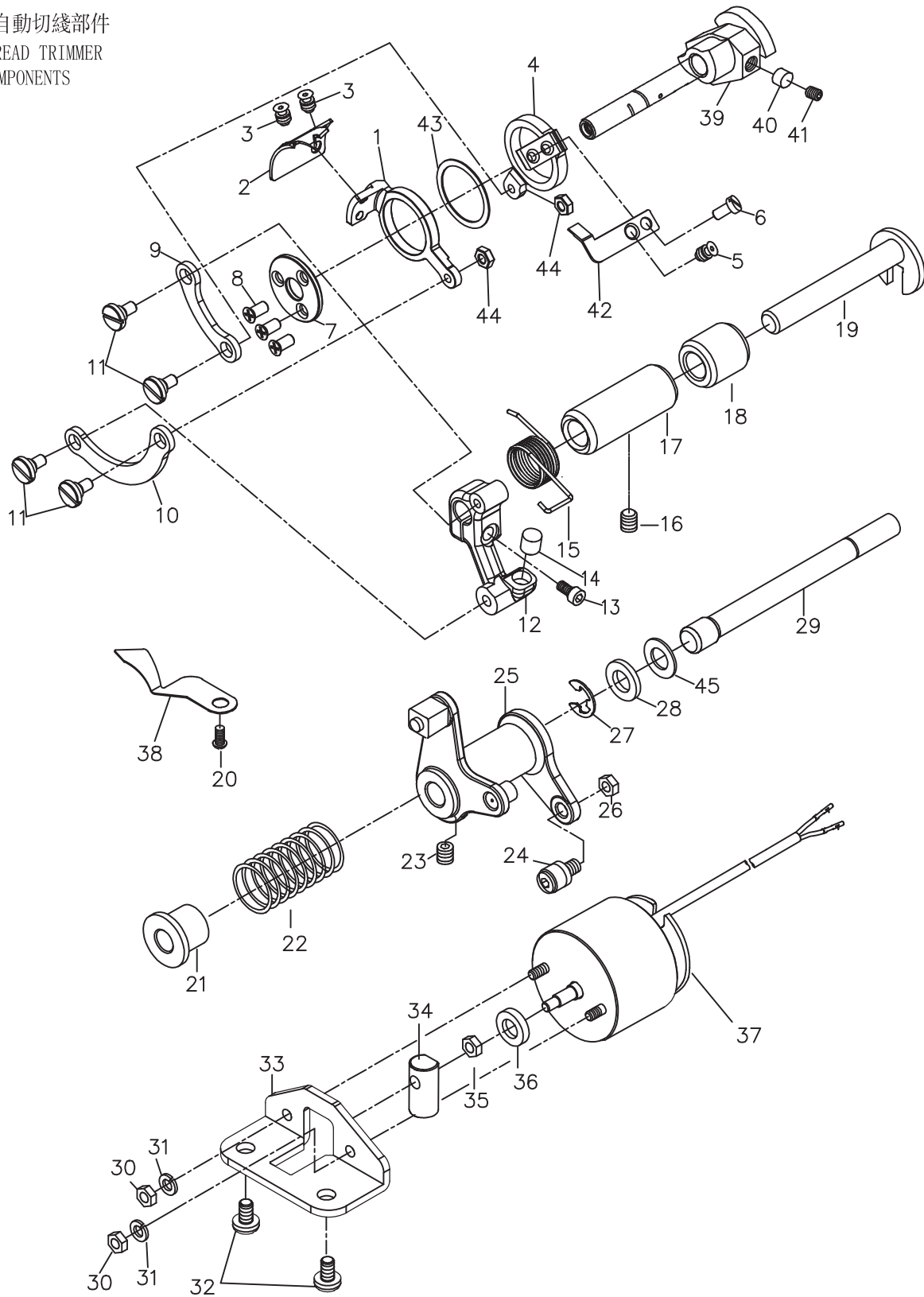
5. 送料部件
FEED MECHANISM COMPONENTS



5.送料部件/FEED MECHANISM COMPONENTS					
序號 Ref.No.	新圖號 new part No.	名稱 Part name	Name of parts	數量 Qty	備注 Note
1	991005001	倒送料連杆	Feed adjust rod	1	
	991005001D	倒送料連杆(大旋梭)	Feed adjust rod(big hook)	1	
2	991005002	倒送料連杆銷	Feed regulator pin	1	
3	S093574006	倒送料連杆銷螺釘	screw	2	
3+	M140500806	送料調節器緊固螺釘	screw	2	
4	991005004	送料調節器	Feed regulator	1	
	991005004D	送料調節器(大針距)	Feed regulator (Big needle distance)	1	
5	991005005	送料調節器軸套	Feed regulator bushing	1	
6	991005006	送料調節器軸	Feed regulator shaft	1	
7	991005007	針距調節螺杆	Feed regulator screw	1	
8	991005008	止動銷彈簧	Spring	1	
9	991005009	止動銷	Feed adjustpin	1	
10	280005010	針距旋鈕(0-5)	Needle distance knob(0-5)	1	
11	S074762818	針距旋鈕螺釘	Screw 3/16 × 28 L=18	1	
12	991005012	送料連杆	Rocker shaft connecting rod	1	
13	991005013	送料連杆銷	Walking foot long pin	1	
14	S073574005	送料連杆銷螺釘	Screw 9/64 × 40 L=4	1	
15	991005015	拾牙連杆	Connecting rod	1	
16	991005016	針距調節螺杆O型圈	Rubber ring	1	
17	991005017	擺動板座復位簧	Feed reverse spring	1	
18	991005018	擋圈E5	E-ring 5	2	
19	991005019	倒送料曲柄組件	Feed reverse arm asm.	1	
	991005019D	倒送料曲柄組件(大針距)	Feed reverse arm asm(Big needle	1	
20	S074762815	倒送料曲柄螺釘 Screw 3/16 × 28 L=14	Feed reverse arm screw	1	
21	991005021	倒送料拉簧	Spring	1	
22	991005022	短擺動板連接銷	Walking foot short pin	2	
23	991005023	長擺動板	Connecting link long pin	2	
24	991005024	短擺動板	Connecting link short pin	2	
25	991005025	擺動座	Feed adjust link asm	1	
26	991005026	擺動板座右銷	Adjusting link fulcrum shaft	1	
27	991002001	右銷螺釘	Screw 15/64 × 28	1	
28	S123574005	連杆銷螺釘	Screw 9/64 × 40 L=5	2	
29	991005029	牙架偏心銷	Feed bar shaft	1	
30	991005030	送布軸軸用擋圈	Retaining ring	1	
31	991005031	送布牙	Feed dog	1	
	991005031H	送布牙(厚料/3排牙)	Feed dog	1	
	991005031D	送布牙(大針距/3排牙)	Feed dog	1	
	0303D	送布牙(大旋梭/3排牙)	Feed dog	1	
32	S073184406	送布牙螺釘	Screw 1/8 × 44 L=6	2	
33	991005033	牙架部件	Feed bar asm	1	
	991005033D	牙架部件(大旋梭)	Feed bar asm	1	
34	991005034	擺動板座右復位板	Adjusting link spring guide	1	
35	S074374007	復位板緊固螺釘	Screw 11/64 × 40 L=7	2	
36	991005036	拉簧固定板	Feed spring hood	1	

37	991005037	送布軸	Feed rocker shaft	1	
38	991005038	送布曲柄銷	Walking foot middle pin	1	
39	S073574006	曲柄銷螺釘	Screw 9/64 × 40 L=8	1	
40	N217142805	拾牙連杆軸位螺母	Nut 9/32 × 28	1	
41	991005041	送布曲柄	Feed rocker shaft crank	1	
	991005041D	送布曲柄 (大針距15mm)	Feed rocker shaft crank	1	
42	S074762815	送布曲柄螺釘	Screw 3/16 × 28 L=15	1	
43	991005043	拾牙後曲柄	Lifting rocker asm.	1	
44	S074762815	拾牙後曲柄螺釘	Screw 3/16 × 28 L=15	1	
45	991005045	拾牙連杆軸位螺釘	Hinge screw	1	
46	991005046	拾牙軸	Feed driving shaft	1	
47	991005047	送布軸擋圈	Thrust collar asm.	1	
48	S126354004	送布軸擋圈螺釘	Screw 1/4 × 40 L=4	2	
49	991005049	送布、拾牙軸前軸套	Feed rocker shaft bushing	2	
50	S084374007	牙架銷螺釘	Screw 11/64 × 40 L=7	2	
51	991005051	拾牙軸軸用擋圈	Retaining ring	1	
52	991005052	牙架座 (牙架曲柄)	Feed bar crank asm.	1	
53	S074762812	牙架座螺釘	Screw 3/16 × 28 L=12	1	
54	991005054	拾牙叉	Driving shaft crank asm.	1	
55	S084374012	拾牙叉螺釘	Screw 11/64 × 40 L=12	1	
56	280005056	倒送料扳手組件	Reverse feed control lever asm.	1	
56-1	991005056-1	倒送料軸O型圈	Rubber ring	1	
56-2	991005056-2	倒送料軸	Feed reverse shaft	1	
56-3	S145952808	倒送料扳手螺釘	Screw	1	
56-4	S145952810	倒送料扳手定位螺釘	Screw	1	
56-5	280005056-5	倒送料扳手	Reverse frnd control lever	1	
57	991005047	拾牙軸擋圈	Thrust collar	1	
58	S126354004	拾牙軸擋圈螺釘	Screw 1/4x40 L=4	2	
59	991005059	擺動軸板座右銷	Adjusting link fulcrum shaft	1	
60	991005060	倒送料軸軸套	Axle Sleeve	1	
61	280005061	送布、拾牙中套	Axle Sleeve	2	
62	280005062	送布、拾牙中套油封	Oil Seal	2	
63	S075952810	拉簧固定板螺釘	Screw	2	
64	991005064	油氈	Linoleum	2	
65	991005065	左銷螺釘	Screw	1	
66	280005066	橡膠塞	Rubber stopper	2	

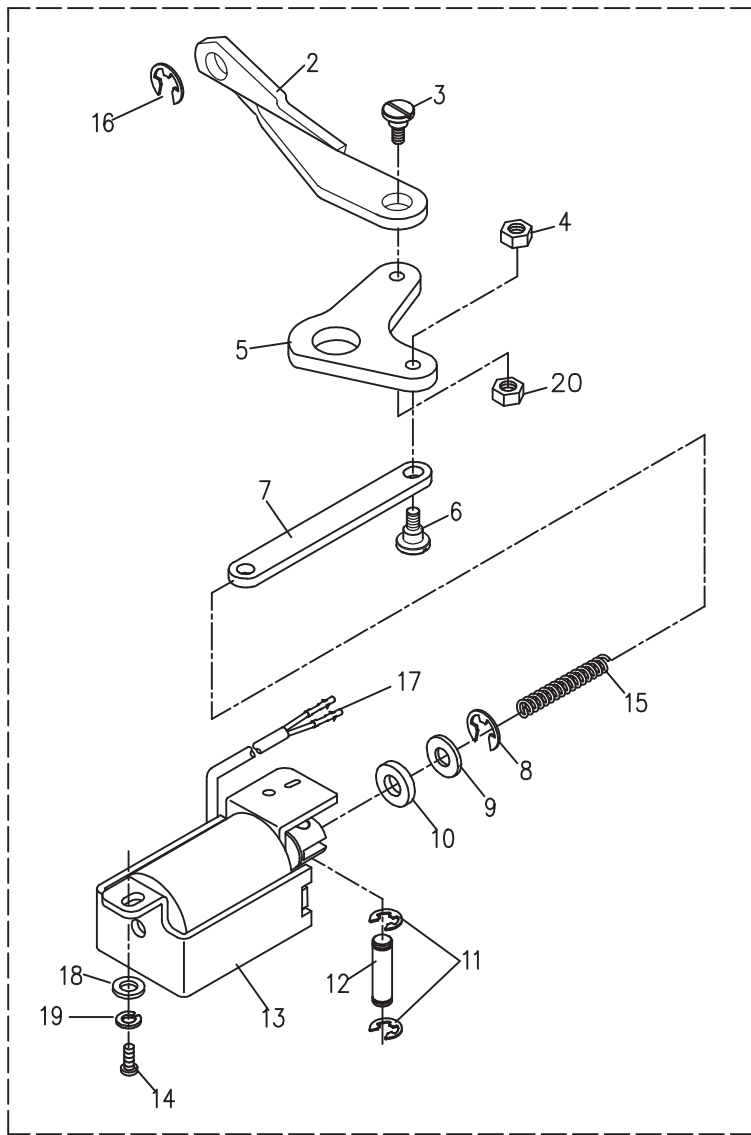
6. 自動切綫部件
THREAD TRIMMER
COMPONENTS



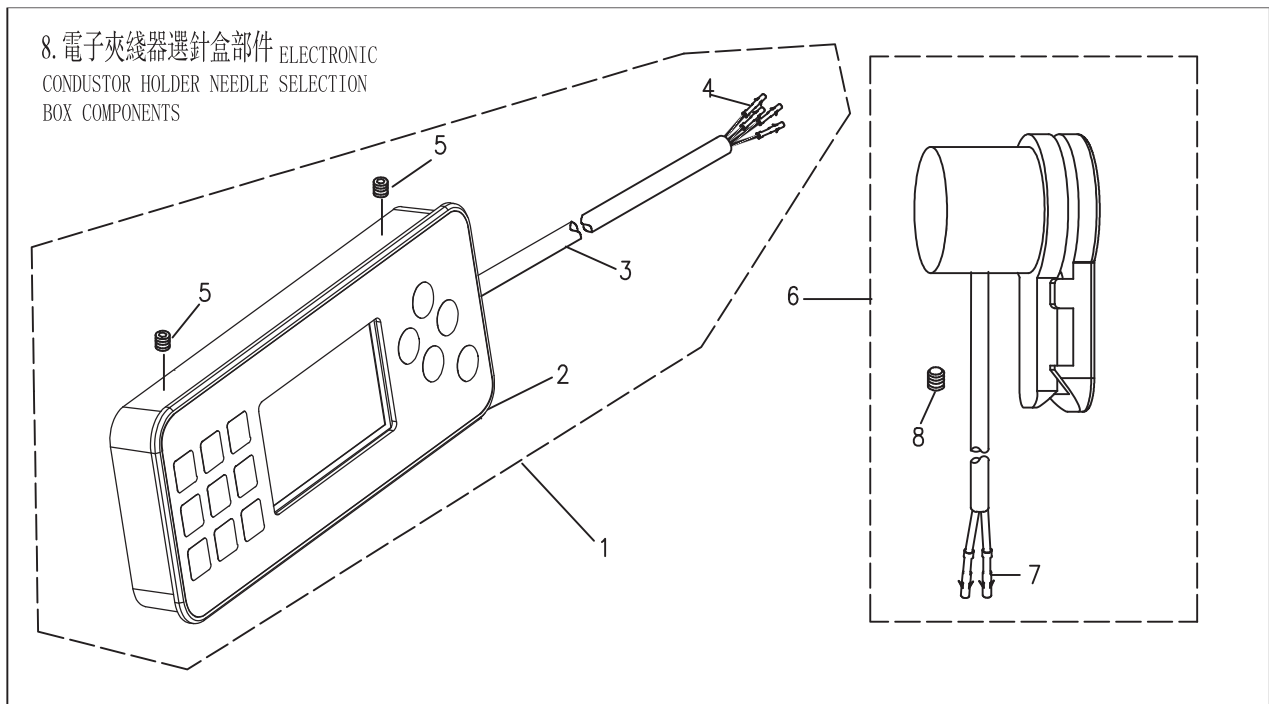
6.自動切綫部件/THREAD TRIMMER COMPONENTS					
序號 Ref.No.	新圖號 new part No.	名稱 Part name	Name of parts	數量 Qty	備注 Note
1	280006001	下動刀架	Lower tool rest	1	
2	280006002	下動刀	Under the knife	1	
3	S047374005	下動刀固定螺釘	Screw	2	
4	280006004	上動刀架	Upper tool carrier	1	
5	S074374005	上動刀固定螺釘	Screw	1	
6	S047374005	上動刀緊固螺釘	Screw	1	
7	280006007	刀架壓板	Tool holder plate	1	
8	M050300507	刀架壓板螺釘	Screw	3	
9	280006009	下動刀架連杆	Lower tool carrier rod	1	
10	280006010	上動刀架連杆	Upper movable knife rest connecting rod	1	
11	280006011	刀架固定軸位螺釘	Axial screw	4	
12	280006012	切刀驅動曲柄	Thread shear rock arm	1	
13	S184763214	螺釘SM3/16" x32 L=14	Screw SM3/16x32 L=14	1	
14	280006014	驅動曲柄止動塊	Positioning block	1	
15	991006014	彈簧	Spring	1	
16	S145952806	螺釘SM11/64" x40	Screw	1	
17	280006017	切綫軸套	Axle sleeve	1	
18	991006018	驅動曲柄軸襯套	Short bush	1	
19	280006019	切刀驅動曲柄軸	Cutter crank shaft	1	
20	S073574006	螺釘SM9/64" x40 L=5	Screw SM9/64x40 L=6	1	
21	991006026	扭簧端蓋	Spring cover	1	
22	991006027	切綫凸輪復位彈簧	Spring	1	
23	S116354006	螺釘SM11/64" x40	Screw	1	
24	991006030	滾柱	Roll shaft assy	1	
25	991006028	切綫凸輪曲柄組件	Thread shear rock arm shaft	1	
26	991006031	螺母	Nut	1	
27	991006033	擋圈E6	Retaining ring	1	
28	991006034	電磁鐵緩衝墊	Magnetic plug cushion mat	1	
29	280006029	切刀驅動軸	Thread shear shaft	1	
30	991006039	螺母M4	Nut M4	1	
31	991006048	墊圈4.5x8x0.5	Washer 4.5x8x0.5	2	
32	S075952810	螺釘	Screw	2	
33	991006040	切綫電磁鐵支架	Magnetic plug cushion mat	1	
34	991006035	切綫電磁鐵頂銷	Magnetic plug pin	1	
35	991006036	螺母SM1/4" x40	Nut	1	
36	991006037	墊圈	Washer	1	
37	991006044	剪綫電磁鐵組件	Electromagnet	1	
38	280006040	分綫片	Dividing strip	1	
39	280006041	剪綫凸輪	Thread shear cam	1	
40	991006020	切綫凸輪墊	Pole	2	
41	S156354010	螺釘SM1/4" x40 l=10	Screw	2	
42	280006044	上動刀	The knife	1	
43	280006045	墊片	Shim	1	
44	N210400703	螺母	Nut	2	
45	991006049	墊片		1	

7. 自動倒縫部件
AUTOMATIC REVERSE
FEED COMPONENTS

1



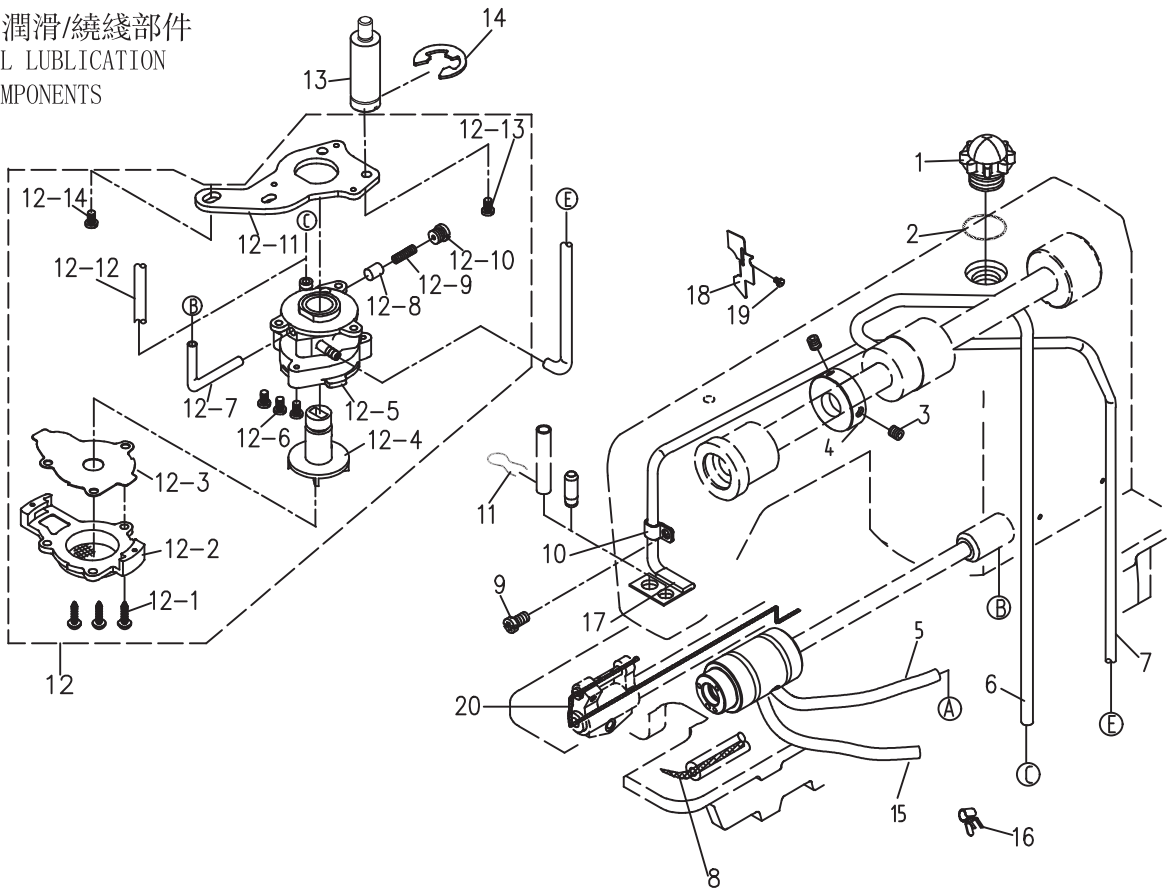
7.自動倒縫部件/AUTOMATIC REVERSE FEED COMPONENTS					
序號 Ref.No.	新圖號 new part No.	名稱 Part name	Name of parts	數量 Qty	備注 Note
1	991007001	自動倒縫部件	Reverse feed switch asm.	1	
2	991007002	自動倒縫拉杆	Reverse feed connecting shaft	1	
	991007002H	自動倒縫拉杆	Reverse feed connecting shaft	1	
3	991007003	自動倒縫拉杆螺釘	Reverse feed connecting shaft	1	
4	991007004	螺母	Nut	2	
5	991007005	倒縫曲柄	Connecting arm	1	
6	991007006	倒縫曲柄螺釘	Connecting arm screw	1	
7	991007007	倒縫電磁鐵連杆 (57mm)	Reverse feed connecting link	1	
	991007007D	倒縫電磁鐵連杆(大旋梭, 大針距) (55mm)	Reverse feed connecting link	1	
8	991007008	倒縫電磁鐵擋圈	E-ring 20	1	
9	991007009	墊片	Washer 16x24x2.6	1	
10	991007010	橡膠墊片	Rubber plunger	1	
11	991007011	連接銷卡簧	E-ring 4	2	
12	991007012	倒縫電磁鐵連接銷	Plunger arm pin	1	
13	991007013	倒縫電磁鐵	Reverse feed magnet asm.	1	
14	S075952812	電磁鐵緊固螺釘	Screw 15/64x28 L=12	2	
15	991007015	連杆定位簧	Plunger spring	1	
16	991007017	卡簧	E-ring	1	
17	991007018	導綫插針	Pin contact	2	
18	991007019	平墊片	Washer	2	
19	991007020	彈簧墊片	Spring washer	2	
20	991007021	螺母	Nut	1	



8.電子夾綫器，選針盒部件/ELECTRONIC CONDUSTOR HOLDER
 NEEDLE SELECTION BOX COMPONENTS

序號 Ref.No.	新圖號 new part No.	名稱 Part name	Name of parts	數量 Qty	備注 Note
1	6900A08001	選針盒組件	Needle selection box asm.	1	
2	7200A08002	選針盒	Needle selection box	1	
3	991008003	電綫	2-core cabtyre cord	1	
4	991008004	插針	Contact pin	1	
5	S144374006	螺釘	Screw SM11/64"x40 L=6	2	
6	991008005	電子夾綫器組件	Electroni conductor holder asm.	1	
7	991008006	插針	Contact pin	1	
8	S124762805	電子夾綫器固定螺釘	Screw SM3/16X28 L=5	1	

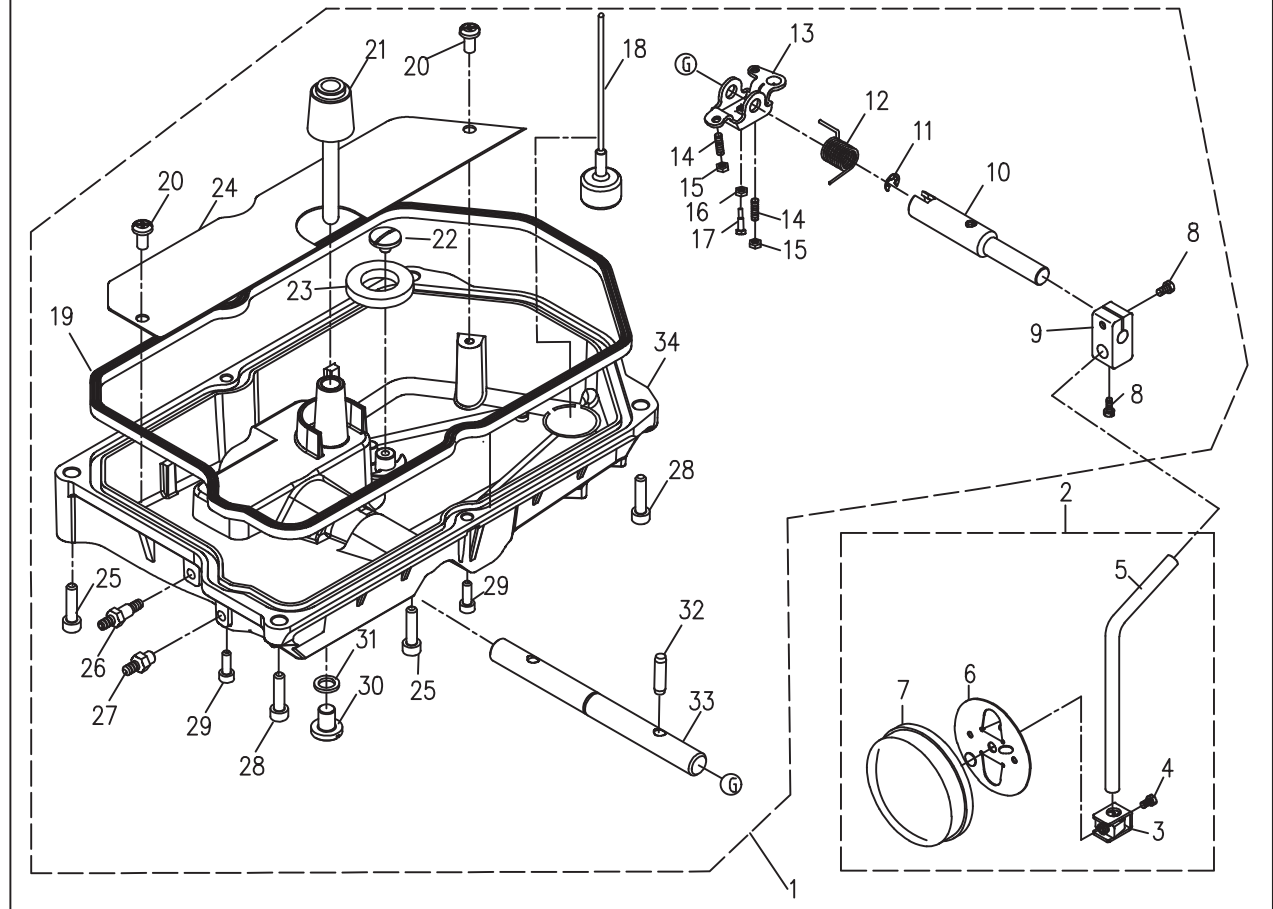
9. 潤滑/繞綫部件
OIL LUBRICATION
COMPONENTS



9.潤滑/繞綫部件/OIL LUBRICATION COMPONENTS					
序號 Ref.No.	新圖號 new part No.	名稱 Part name	Name of parts	數量 Qty	備注 Note
1	991009001	油窗	Oil sight window	1	
2	991009002	油窗O型圈	Rubber ring	1	
3	S144374006	繞綫器驅動輪螺釘	Screw	2	
4	991009016	繞綫器驅動輪	Bobbin pulley	1	
5	280009005	進油管	Oil tube	1	
6	280009006	上軸供油管	Main shaft oil tube	1	
7	991009006	回油管	Oil return tube asm	1	
8	991009008	送布油綫	Oil wick	1	
9	S094762806	回油管夾螺釘	Screw 3/16x28 L=6	1	
10	991009007	回油管夾	Holder	1	
11	991009005	回油氈夾	Oil felt presser	1	
12	280009009	油泵部件	Lubricating oil pump asm	1	
12-1	991009012-4	油泵蓋螺釘	Screw D=3 l=10	3	
12-2	991009012-5	油泵蓋	Lubricating oil pump cover	1	
12-3	991009012-6	油泵葉輪托板	Oil pump impeller cover	1	
12-4	991009012-3	油泵葉輪	Oil pump impeller	1	
12-5	991009012-2	油泵體	Oil pump	1	
12-6	M070300508	油泵安裝螺釘	Screw M3 L=8	3	
12-7	991009012-10	下軸供油管	Hook driving shaft oil tube	1	
	991009012-10+	下軸供油管(四自動)	Hook driving shaft oil tube	1	
12-8	991009012-7	回油柱塞	Plunger	1	
12-9	991009012-8	柱塞簧	Plunger spring	1	
12-10	991009012-9	柱塞螺釘	Plunger screw	1	
12-11	991009012-1	油泵安裝板	Oil pump installing base	1	
12-12	280009012	小油管 (30長)	Rubber joint	1	
12-13	S074374010	油泵螺釘	Screw	1	
12-14	S075952810	油泵螺釘	Screw	1	
13	991009013	油泵連接螺柱	Oil pump support,large	1	
14	991009017	卡簧	Circlip	1	
15	280009015	回油管	Oil recovery tube	1	
16	280009016	油管夾	Oil pipe clamp	4	
17	991009019	油氈	Linoleum	1	
18	991009018	擋板	baffle	1	
	991009018S	擋板 (四自動)	baffle	1	
19	S094762806	擋板螺釘	baffle screw	1	
20	991009020	拾牙油綫	Oil line	1	

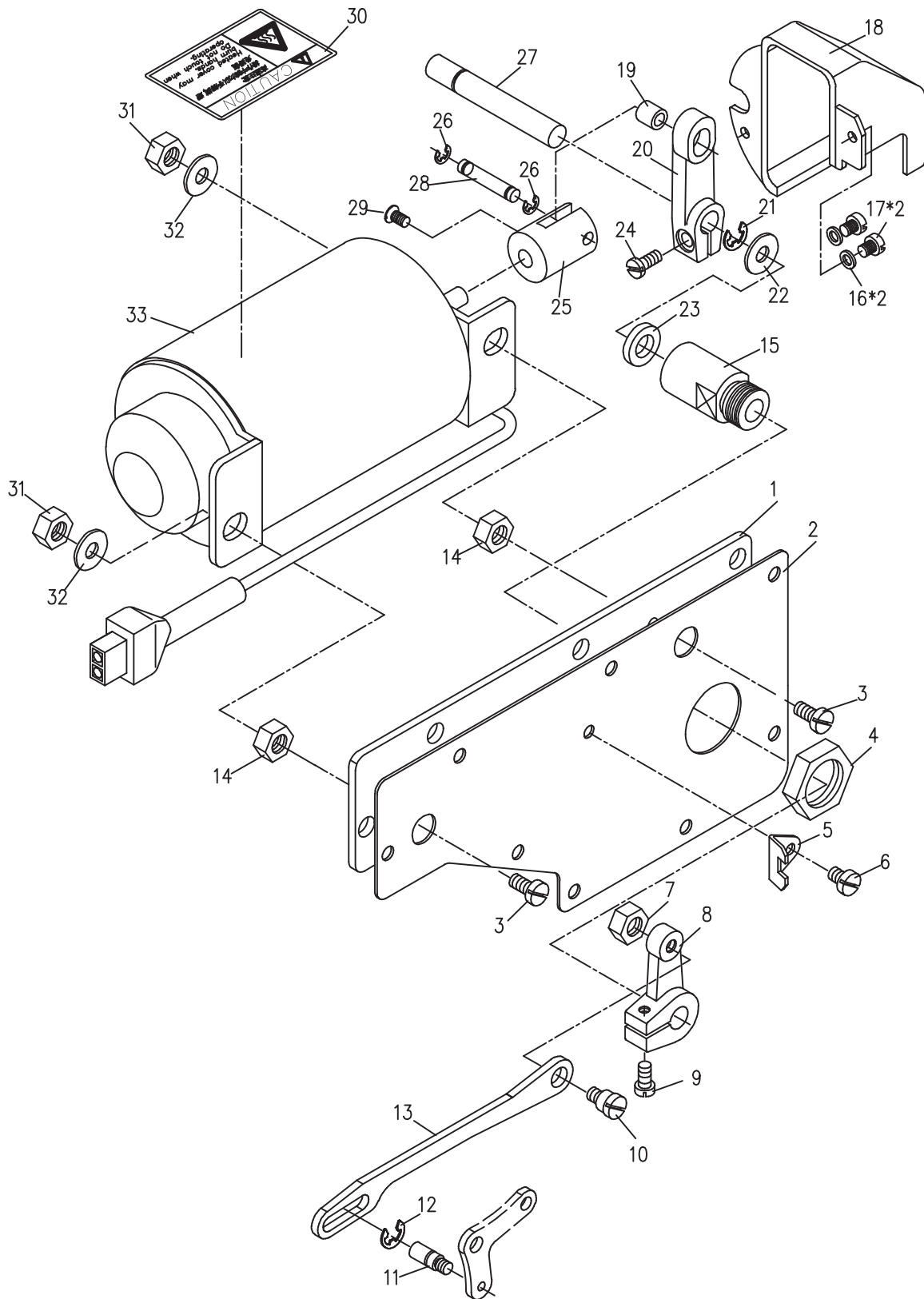
10. 油盤部件

OIL RESERVOIR COMPONENTS



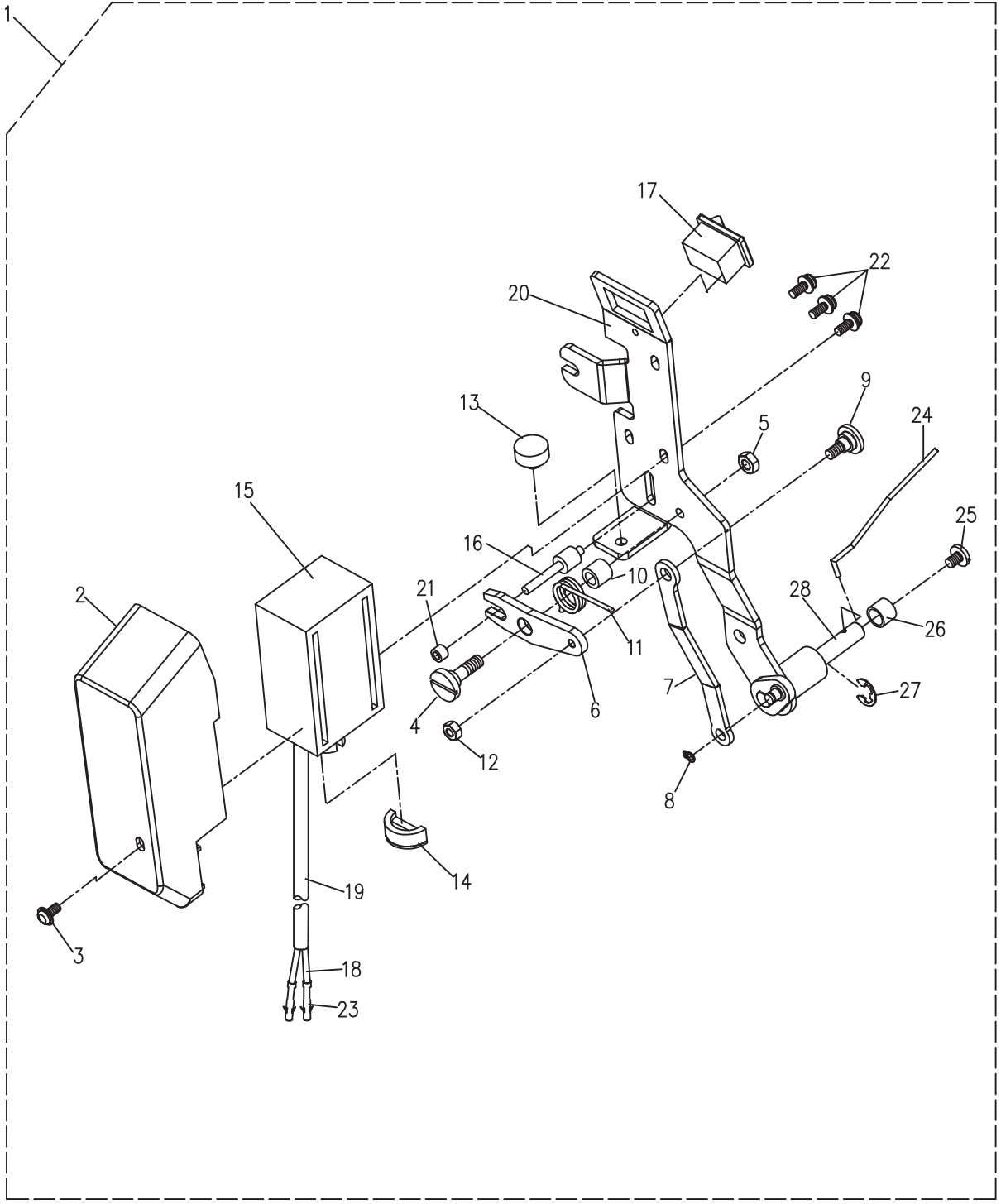
10.油盤部件/OIL RESERVOIR COMPONENES					
序號 Ref.No.	新圖號 new part No.	名稱 Part name	Name of parts	數量 Qty	備注 Note
1	280010001	油盤組件	Oil reservoir asm	1	
2	991010016	操縱杆部件	Knee pan plate asm	1	
3	991010020	操縱杆接頭	Knee pan plate support	1	
4	M190601012	接頭螺釘	Screw M6 L=12	1	
5	991010017	操縱杆	Knee pan upright shaft	1	
6	991010019	操縱板	Knee pan plate	1	
7	991010016	操縱杆軟墊	Knee pan plate cover	1	
8	991010010	操縱杆接頭螺釘	Screw	2	
9	991010009	拾壓脚操縱杆接頭	Vertical shaft fitting arm	1	
10	280010010	拾壓脚軸連接杆	Lifting the foot shaft connecting rod	1	
11	280010011	拾壓脚軸開口擋圈	E-ring 10	1	
12	280010012	雙向曲柄扭簧	Spring	1	
13	280010013	拾壓脚雙向曲柄	Knee lifting rotating arm	1	
14	M120601030	雙向曲柄限位調節螺釘	Screw M6 L=30	2	
15	N210601006	雙向曲柄限位調節螺母	Nut M6	2	
16	N210601006	雙向曲柄螺母	Nut M6	1	
17	M190601018	雙向曲柄螺釘	Screw M6 L=17.5	1	
18	280010018	油浮標	Floating oil	1	
19	280010019	油盤密封墊	Oil pan gasket	1	
20	S073574007	擋油板固定螺釘	Screw M4 L=8	2	
21	280010023	拾壓脚蘑菇頂杆	Knee lifter push rod	1	
22	280010024	磁鐵固定螺釘	Screw SM4.76X28 L	1	
23	280010025	磁鐵	Magnet	1	
24	280010026	擋油板	Oil baffle plate	1	
25	M180601040	油盤安裝螺釘A	Screw	2	
26	280010028	供油接頭	Oil supply joint	1	
27	280010029	回油接頭	Return oil joint	1	
28	M180601020	油盤安裝螺釘B	Screw	2	
29	M180400714	油盤安裝螺釘C	Screw	2	
30	280010032	排油螺釘	Screw	1	
31	720001025	排油螺釘密封圈	Sealing ring	1	
32	280010036	拾壓脚軸銷	Pin	1	
33	280010037	拾壓脚軸	Lifting foot shaft	1	
34	280010038	油盤	Oil pan	1	

11. 自動抬壓脚組件(外置式)
 AUTO LIFTER COMPONENTS(External)



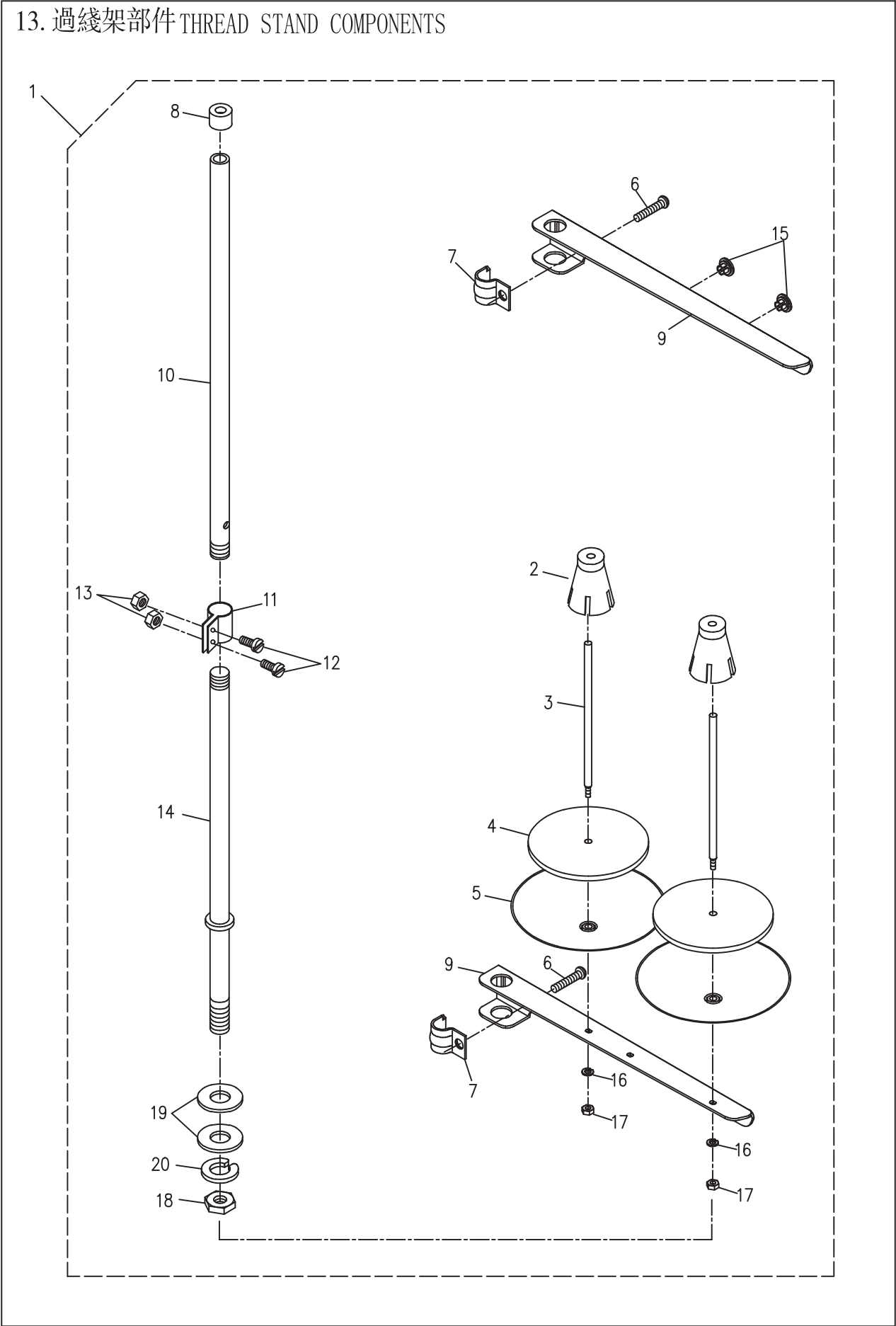
11.自動抬壓腳組件（外置式）/ AUTO LIFTER COMPONENTS(External)					
序號 Ref.No.	新圖號 new part No.	名稱 Part name	Name of parts	數量 Qty	備注 Note
1	7200A11001	後窗板	After the shutters	1	
2	7200A11002	後窗板墊	The shutters pad	1	
3	S095952812	後窗板螺釘	Screw	2	
4	N210161504	抬壓腳軸套螺母	Nut	1	
5	991011005	抬壓腳杠杆限位板	Lifting lever limit plate	1	
6	991011006	抬壓腳杠杆限位板螺釘	Screw	1	
7	N215952803	螺母	Nut	1	
8	991011008	抬壓腳杠杆後曲柄	Lift the lever to drive the crank	1	
9	S184762812	螺釘	Screw	1	
10	991011010	軸位螺釘	Screw	1	
11	991011011	抬壓腳後杠杆連接銷	Pin	1	
12	E320501008	卡簧	Circlip	1	
13	991011013	抬壓腳後杠杆連接杆	Lever lever after lifting the foot	1	
14	991011014	螺母	Nut	2	
15	991011015	抬壓腳軸套	Presser foot collar	1	
16	N220450805	墊片	Washer	2	
17	M070400705	螺釘	Screw	2	
18	991011018	防護罩	shield	1	
19	991011019	滑塊	The slider	1	
20	991011020	抬壓腳杠杆前曲柄	The crank	1	
21	E320801610	卡簧	Circlip	1	
22	W220951810	墊片	Washer	1	
23	991011023	油封	Oil seal	1	
24	991011024	螺釘	Screw	1	
25	991011025	電磁鐵接頭	Fork type connector	1	
26	E320400908	卡簧	Circlip	2	
27	991011027	抬壓腳後杠杆驅動軸	Lift the pin drive shaft	1	
28	991011028	銷	Pin	1	
29	991011029	螺釘	Screw	1	
30	991011030	警示標籤	Security label	1	
31	720001025	螺母	Nut	2	
32	W220681910	墊片	Washer	2	
33	991011033	抬壓腳電磁鐵	electromagnet	1	

12. 撥綫部件
THREAD DRAWING UNIT



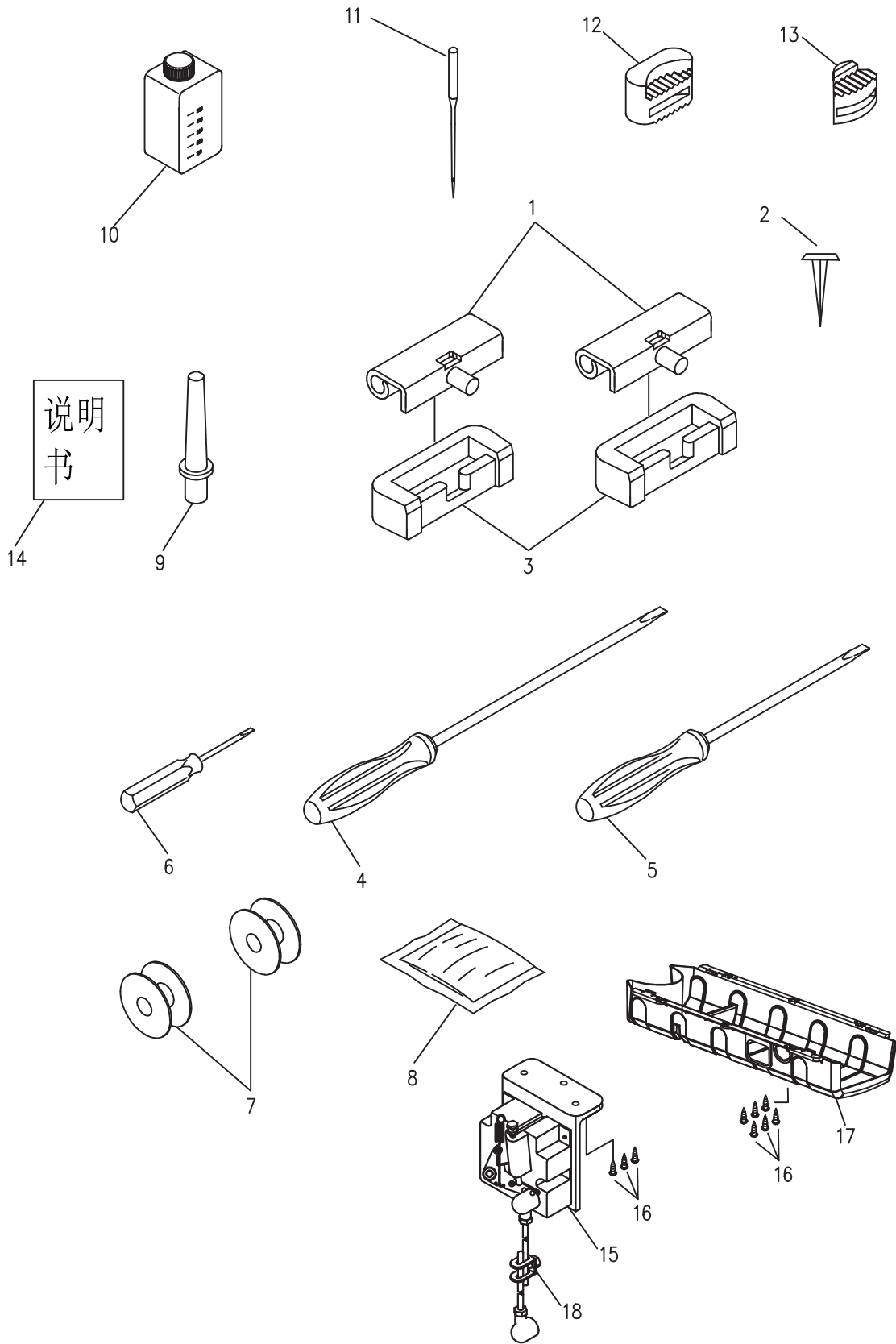
12.撥綫部件/THREAD DRAWING UNIT					
序號 Ref.No.	新圖號 new part No.	名稱 Part name	Name of parts	數量 Qty	備注 Note
1	991012001	撥綫部件	Wiper asm.	1	
2	991012002	撥綫支架殼	Wiper cover	1	
3	991012003	撥綫殼緊固螺釘	Screw M3	1	
4	991012004	傳動板軸位螺釘	Hinge screw	1	
5	N213574003	螺母	Nut 9/64x40	1	
6	991012006	撥綫傳動板	Wiper link A	1	
7	991012007	撥綫拉杆	Wiper link B	1	
8	991012008	擋圈	E-ring	1	
9	991012009	拉杆軸位連接螺釘	Wiper link B,hinge screw	1	
10	991012010	傳動板滾柱	Wiper hinge screw collar	1	
11	991012011	傳動板復位簧	Wiper spring	1	
12	N214374003	傳動板軸位螺母	Nut 11/64x40	1	
13	991012013	鐵芯定位墊	Wiper rubber A	1	
14	991012014	鐵芯月牙墊	Wiper rubber B	1	
15	991012015	撥綫電磁鐵組件	Wiper solenoid	1	
16	991012016	傳動銷	Wiper solenoid shaft	1	
17	991012017	開關	Power switch	1	
18	991012018	導綫	Electric wire	1	
19	991012019	導綫管	2-core cabtyre cord	1	
20	991012020	撥綫座組件	Wiper base asm	1	
21	991012021	傳動銷定位塊	Wiper link collar	1	
22	991012022	電磁鐵緊固螺釘	Screw	3	
23	991012023	插針	pin contact	2	
24	991012024	撥綫杆	Wiper	1	
25	S073574005	撥綫杆緊固螺釘	Screw 9/64X40 L=5	1	
26	991012026	撥綫杆緊固套	Wiper collar	1	
27	991012027	撥綫驅動軸擋圈	E-ring	1	
28	991012028	撥綫驅動軸	Wiper driving shaft asm	1	

13. 過綫架部件 THREAD STAND COMPONENTS



13.過綫架部件/THREAD STAND COMPONENTS					
序號 Ref.No.	新圖號 new part No.	名稱 Part name	Name of parts	數量 Qty	備注 Note
1	991013001	過綫架部件	Thread stand asm	1	
2	991013002	綫團防鬆墊	Spool retainer	2	
3	991013003	綫盤釘	Spool pin	2	
4	991013004	綫盤輪墊	Spool rest cushion	2	
5	991013005	綫盤	Spool rest	2	
6	M090601016	綫架過綫夾螺釘	Screw M6 × 16	2	
7	991013007	綫架過綫夾	Thread guide arm joint	2	
8	991013008	綫架杆頂防護橡皮	Spool rest rod rubber cap	1	
9	991013009	綫架過綫杆	Spool rest arm	2	
10	991013010	綫架杆上節	Spool rest rod upper	1	
11	991013011	接架杆接頭	Spool rest rod joint	1	
12	M090500814	接架杆接頭螺釘	Screw M5 × 14	2	
13	N210500805	接架杆接頭螺母	Nut M5	2	
14	991013014	綫架杆下節	Spool rest rod lower	1	
15	991013015	過綫圈	Thread guide	2	
16	991013016	綫盤釘彈簧墊	Spring washer	2	
17	991013017	綫盤釘螺母	Nut M5	2	
18	991013018	綫架杆緊固螺母	Nut M6 × 1.5	1	
19	991013019	綫架杆緊固螺母墊圈	Washer 16 × 30 × 2.6	2	
20	991013020	緊固螺母彈簧墊圈	Spring washer	1	

14. 附件
ACCESSORIES



14.附件/ACCESSORIES					
序號 Ref.No.	新圖號 new part No.	名稱 Part name	Name of parts	數量 Qty	備注 Note
1	991014001	機頭連接鉤組件	Machine hinge plate asm.	2	
2	991014002	機頭連接鉤座釘	Nail	4	
3	991014003	機頭連接鉤座	Machine hinge plate	2	
4	991014004	螺絲刀 (大)	Screw driver,large	1	
5	991014005	螺絲刀 (中)	Screw driver.mendium	1	
6	991014006	螺絲刀 (小)	Screw driver.small	1	
7	991014007	梭心	Bobbin	2	
8	991014008	機頭罩	Macgube head cover	1	
9	991014009	機頭支柱	Macgube rest cover	1	
10	991014010	油箱部件	Oil reservoir asm.	1	
11	991014011	機針 DBx1 #14	Needle DBx1 #14	2	
	991014011H	機針 DPx5 #21	Needle DPx5 #21	4	
12	991014012	防震墊(A)	quakeproof washer A	2	
13	991014013	防震墊(B)	quakeproof washer B	2	
14	280014014	說明書	Instruction book	1	
15	991014017	控速器	speed controller	1	
16	991014018	控速器托架安裝螺釘	speed controller screw	9	
17	280015019	托盤	Tray	1	
18	991014019	控速器拉杆組件	speed controller pull rod	1	

⚠安全指示

- 1) 在安装或使用本产品前，使用者必须详细阅读本操作手册。
- 2) 本产品须由受过正确训练的人员来安装或操作。安装作业时必须关闭所有电源，切记不可带电操作。
- 3) 所有标有⚠符号的指示，必须特别注意并按照说明书上的执行，以免造成不必要的损害。
- 4) 为安全起见，禁止以延长线作电源座供应二项以上的电器产品使用。
- 5) 在连接电源线时，必须确定工作电压低于 AC 250V，且符合本产品标识中规定的额定电压值。
※注意：电控箱电源规格如为 AC220V 时，请勿插接至 AC380V 的电源插座上，否则将出现异常且电机无法动作。此时请立即关闭电源开关，重新检查电源。持续供应 380V 超过五分钟以上，将可能烧损电控箱内器件，而危及人身安全。
- 6) 请不要在日光直接照射的场所、室外及室温 45°C 以上或 0°C 以下的场所操作。
- 7) 请不要在暖气（电热器）旁、有露水的场所及在相对湿度 10% 以下或 90% 以上的场所操作。
- 8) 请不要在灰尘多的场所、具有腐蚀性物质的场所及有挥发性气体的场所操作。
- 9) 请注意所有电源线、信号线、接地线等接线时不要受压或过度扭曲，以确保使用安全。
- 10) 电源线的接地端须以适当大小的导线和接头连接到生产工厂的系统地线，此连接必须被永久固定。
- 11) 所有可转动的部分，必须以所提供的零件加以防范露出。
- 12) 在安装完成第一次开电后，先关闭切线功能以低速操作缝纫机并检查转动方向是否正确、运转是否稳定。
- 13) 在进行以下操作前，请先关闭所有电源：
 1. 在控制箱与马达上插拔任何连接插头时。
 2. 穿针线时。
 3. 翻抬缝纫机机头时。
 4. 修理或做任何机械上的调整时。
 5. 机器闲置不用时。
- 14) 修理或高层次的保养工作，仅能由受过训练的机电技师来执行。
所有维修用的零件，须由本公司提供认可，方可使用。
- 15) 使用本产品请远离高频电磁波和电波发射器等，以免所产生的电磁波干扰伺服驱动装置而发生误动作。
- 16) 请不要以不适当物体来敲击或撞击本产品及各装置。

保修期限

本产品保修期限为购买日期起一年内或出厂月份起两年内。

保修内容

本产品在正常情况使用且无人操作失误的前提下，于保修期间无偿为客户维修使能正常操作。

















但以下情况于保修期间将收取维修费用：

1. 不当使用包括误接高压电源、将产品移做其它用途、自行拆卸、维修、更改、或不依规格范围使用、进水进油及插入异物于本产品。
2. 火灾、地震、闪电、风灾、水灾、盐蚀、潮湿、异常电压及其它天灾或不当场所造成的损害。
3. 客户购买后摔落本产品，或客户自行运输（或托付运输公司）造成的损害。

* 本产品在生产及测试上皆尽最大努力和严格控制使其达到高品质及高稳定的标准，但外部的电磁或静电干扰或不稳定的供应电源，仍可能对本产品造成影响或损害，因此操作场所的接地系统一定要确实做好，并建议用户安装故障安全防护装置（如漏电保护器）

1. 按键显示及操作说明

1.1 按键说明

名称	按键	注明
功能参数编辑键		进入或退出功能参数的编辑。
参数查看保存键		对所选参数号内容进行查看和保存；选择好参数号后按此键可以进行查看和修改操作，修改参数值后按此键则退出并保存参数。
参数递增键		增大参数。
参数递减键		减小参数。
起始回缝键		若点击，切换执行起始回缝 B 段、执行起始回缝（A、B 段）1 次或执行起始回缝（A、B 段）2 次； 若长按，增加屏幕背光亮度。
终止回缝键		若点击，切换执行终止回缝 C 段、执行终止回缝（C、D 段）1 次、执行终止回缝（C、D 段）2 次； 若长按，降低屏幕背光亮度。
模式切换键		若点击，切换自由缝模式、一段定针缝模式、连续回缝模式和多段定针缝模式。
自动触发键		1. 在自由缝的式样中：按下此键无功能。 2. 在定针缝的式样中按下此键：当踏板一经往前踏下触发，则自动执行 E, F 段或 G, H 段中所设定的针数，直到段内针数完成后自动停止。再逐一触发踏板，则自动执行下一段所设定的针数直到自动完成切线、扫线等动作为止。相应图标不亮时，表示关闭相应功能。 3. 若长按，可恢复出厂设置。
抬压脚键		1.  图标亮时，切完线后压脚自动抬起。 2.  图标亮时，车缝中马达停止时压脚自动抬起。 3. 当 2 个图标都亮时，切完线后和车缝中马达停止时压脚都自动抬起。 4. 当 2 个图标都不亮时，无自动抬压脚功能。
夹线功能键/松线功能键		若点击，设定使用或取消夹线功能、松线功能。
切线键		若点击，设定使用或取消切线功能。
慢速起缝键		若点击，设定使用或取消慢速起缝功能。
停针位键		若点击，切换缝制后机针的停止位置（上停针位/下停针位）。
补针键		若点击，可进行补针动作。

2. 辅助功能

2.1 恢复出厂设置

在主界面下，长按自动触发键可恢复出厂设置。

2.2 停针位快捷设置

在主界面下，点击 P 键进入参数，将参数调至 P72 项，手动转动手轮至所需的上停针位，显示的数值会随手轮位置变化而变化，按 S 键可保存当前位置（数值）为上停针位，同时自动计算下停针位。

2.3 锁屏功能

在主界面下，当无操作时间达到 P27-N01 项设置的时间 (s) 时会自动锁屏，或长按 S 键可进行手动锁屏。锁屏“LOCK”状态下，点击 S 键解锁。

3. 参数表

参数项	中文说明	范围	初始值	内容值名称说明与备注
P01	最高转速 (rpm)	100-3700	3700	车缝时的最高转速设定
P02	加速曲线调整 (%)	10-100	80	控速器爬升斜率设定 斜率值愈大，速度愈陡；斜率值愈小，速度愈慢
P03	针停定位选择	UP/DN	DN	UP: 上停针；DN: 下停针
P04	起始回缝速度 (rpm)	200-3200	1800	前段回缝 (起始回缝) 时的速度设定
P05	终止回缝速度 (rpm)	200-3200	1800	后段回缝 (终止回缝) 时的速度设定
P06	连续回缝速度 (rpm)	200-3200	1800	连续回缝时的速度设定
P07	慢速起缝速度 (rpm)	200-1500	400	慢速起缝时的速度设定
P08	慢速起缝针数	0-99	2	慢速起缝时的针数设定
P09	自动定针缝速度 (rpm)	200-3700	3700	触发自动功能键按下时的速度设定
P10	定针缝后自动执行终止回缝功能	ON/OFF	ON	ON: 在执行完最后一段定针缝后，将自动执行终止回缝动作。即在任何缝制模式下，终止回缝前不能作补针功能。 OFF: 在执行完最后一段定针缝后，将无法自动执行终止回缝功能，必须重新再作前或全后踏动作时始可。
P11	手按回缝时功能模式选择	J/B	J	J: JUKI 方式 (在车缝中和中途停止时均执行倒缝) B: BROTHER 方式 (即在车缝中执行倒缝动作，在停止时执行补针动作)
P12	起始回缝运动模式选择	0-3	1	0: 受踏板控制，可任意停止与启动； 1: 轻触踏板，自动执行回缝动作； 2: 停顿，装饰缝模式
P13	起始回缝结束模式选择	CON/STP	CON	CON: 起始回缝段完成后，自动连续下一段功能 STP: 起始回缝段针数完成后自动停止
P14	慢速起缝功能设定	ON/OFF	OFF	
P15	补针方式	0-4	2	0: 半针；1: 一针；2: 连续补半针；3: 连续补一针； 4: 连续补针，快速停车
P16	手动倒缝限速	0-3200	0	数值为 0 时功能关闭
P17	自动计件选择	0-50	0	0: P41 项计数器不自动计数 1-50: 计数器切线次数
P18	起始回缝补偿 1	0-200	131	起始回缝 A 段针迹补偿，0~200 动作逐步滞后；数值越大，A 短最后一针越长，B 段第一针越短
P19	起始回缝补偿 2	0-200	158	起始回缝 B 段针迹补偿，0~200 动作逐步滞后；数值越大，B 段最后一针越长
P20	终止回缝运动模式选择	1-3	1	1: 轻触踏板，自动执行回缝动作； 2: 停顿，装饰缝模式；
P21	踏板前踩运行位置	30-1000	520	
P22	踏板回中位置	30-1000	420	
P23	踏板抬压脚位置	30-1000	255	
P24	踏板剪线位置	30-500	130	
P25	终止回缝补偿 3	0-200	131	终止回缝 C 段针迹补偿，0~200 动作逐步滞后；数值越大，C 段第一针越短
P26	终止回缝补偿 4	0-200	158	终止回缝 D 段针迹补偿，0~200 动作逐步滞后；数值越大，C 段最后一针越长，D 段第一针越短
P27-N01	锁屏时间 (s)	0-300	120	参数值为 0 时，锁屏功能无效。
P27-N04	语音选择	0-2	1	0: 关闭；1: 中文；2: 英文；
P27-N05	语音播报选择	0-3	2	0: 关闭； 1: 有开机语，无按键音； 2: 无开机语，有按键音； 3: 有开机语和按键音

P27-N10	背光亮度	0-3	2	
P27-N11	背光变暗时间	0-200	30	参数值为 0 时，背光亮度不变。
P28	连续回缝运动模式选择	0-3	1	0: 受踏板控制，可任意停止与启动； 1: 轻触踏板，自动执行回缝动作； 2: 停顿，装饰缝模式
P29	切线停车力度	1-45	20	
P30	过厚力度	0-100	0	数值越大力度越大，调整过大可能会引起电机异常。
P31	剪线力度	0-100	40	数值越大力度越大，调整过大可能会引起电机异常。
P32	连续回缝补偿 5	0-200	131	起始回缝 A (C) 段针迹补偿，0~200 动作逐步滞后； 数值越大，A (C) 段最后一针越长；B (D) 段第一针越短
P33	连续回缝补偿 6	0-200	158	起始回缝 B (D) 段针迹补偿，0~200 动作逐步滞后； 数值越大，B (D) 段最后一针越长，C 段第一针越短
P34	定针缝运动模式选择	A/M	A	A: 轻触脚踏板，即自动执行定针缝动作 M: 受脚踏板控制，可任意停止与启动
P36	松线功能设定	0-11	5	0: 关闭 1~11: 松线力度逐步变大
P37	自动拨线/夹线功能设定	0-11	8	0: 关闭 1: 拨线功能 2~11: 夹线功能，数值越大动作力度越大
P38	自动切线功能设定	ON/OFF	ON	ON: 打开 OFF: 关闭
P39	中途停车自动抬压脚设定	UP/DN	DN	UP: 开启 DN: 关闭
P40	切线自动抬压脚设定	UP/DN	DN	UP: 开启 DN: 关闭
P41	计数器显示	0-9999		车缝完成件数显示；长按减号键可计数清零；
P42	信息显示			N01 电控版本号 N02 选针盒版本号 N03 转速 N04 脚踏板 AD 值 N05 机械角度（上定位） N06 机械角度（下定位） N07 母线电压 AD 值 N12 膝靠位置感应器 AD 值
P43	马达转动方向设定	CCW/CW	CCW	CW: 顺时针方向 CCW: 逆时针方向
P44	正常停车力度	1-45	12	
P45	回缝出力的周期信号 (%)	1-50	25	回缝动作时，以周期性省电输出，避免电磁铁发烫
P46	切线后，反转提针功能选择	ON/OFF	OFF	ON: 开启 OFF: 关闭
P47	切线后，反转提针角度的调整	50-200	160	切完线后，由上针位算起，以反向运转作提针的角度调整。
P48	最低速度（定位速度） (rpm)	100-500	210	最低速度限制调整
P49	切线速度 (rpm)	100-500	300	调整切线周期时的电机速度
P50	抬压脚全额出力的工作时间 (ms)	10-990	150	
P51	压脚出力的周期信号 (%)	1-50	25	压脚动作时，以周期性省电输出，避免电磁铁发烫
P52	延迟马达启动，保护压脚 下放时间 (ms)	10-990	120	踩下时延迟启动时间，以配合自动抬压脚放下的确认
P53	半后踏抬压脚功能取消	ON/OFF	OFF	ON: 半后踏时，无抬压脚 OFF: 半后踏时，有抬压脚

P54	切线动作时间 (ms)	10-990	200	切线时序所需的动作时间
P55	拨 / 扫线动作时间/	10-990	30	拨 / 扫时序的动作时间
P56	开电后自动找上定位	0-2	1	0: 始终不找上定位 1: 始终找上定位 2: 若电机已经处于上定位时不再找上定位
P57	拾压脚保护时间 (s)	1-120	10	拾压脚保持时间后强制关闭
P58	上定位调整	0-1439	40	上定位调整, 数值减少时会提前停针, 数值增加时会延迟停针
P59	下定位调整	0-1439	750	下定位调整, 数值减少时会提前停针, 数值增加时会延迟停针
P60	测试速度 (rpm)	100-3500	3500	设置测试速度
P61	A 项测试	ON/OFF	OFF	持续运行测试模式
P62	B 项测试	ON/OFF	OFF	全功能启停测试模式
P63	C 项测试	ON/OFF	OFF	无定位、无功能启停测试模式
P64	测试时测试运行时间	1-250	30	
P65	测试时测试停止时间	1-250	10	
P66	机头保护开关	0-2	1	0: 不检测 1: 检测零信号 2: 检测正信号
P67	剪线保护开关	ON/OFF	OFF	OFF: 不检测 ON: 检测
P71	压脚释放缓冲占空比(%)	0-50	0	压脚下放时的力度调整
P72	上定位快捷调整	0-1439		调整上停针位, 显示的数值会随手轮位置变化而变化, 按“S”键可保存当前位置(数值)为上停针位
P73	下定位快捷调整	0-1439		调整下停针位, 显示的数值会随手轮位置变化而变化, 按“S”键可保存当前位置(数值)为下停针位
P76	倒缝全额出力时间(ms)	10-990	250	倒缝开始动作时, 全额出力的动作时间
P78	夹线器起夹角度	5-359	100	
P79	夹线器结束角度	5-359	270	
P80	剪线进刀角度	5-359	18	剪线进刀角度设置(下定位为 0° 计算)
P81	剪线开始加力角度	5-359	120	剪线加力角度设置(下定位为 0° 计算, 需大于 P80 项参数值)
P82	剪线退刀角度	5-359	175	剪线退刀角度设置(下定位为 0° 计算, 需大于 P81 项参数值)
P84	过厚开始加力角度	0-359	9	
P85	过厚结束加力角度	0-359	57	
P92	电机电角度校正		160	查看说明书 1.5 章节 读取编码器起始角度, 出厂已设置, 请勿随意更改(参数值不可手动更改, 随意更改会导致控制箱、电机出现异常或损坏)
P93	半反踏功能延迟时间	10-900	100	
P99	终止回缝补偿 C1	0-250	120	剪线后防脱线头模式下, 终止回缝结束为 C 段时回缝一针的补偿
P100	终止回缝补偿 D1	0-250	175	剪线后防脱线头模式下, 终止回缝结束为 D 段时回缝一针的补偿
P101	松线开始角度	1-359	30	松线开始角度(下定位为 0° 计算)
P102	松线结束角度	1-359	180	松线结束角度(下定位为 0° 计算, 需大于 P101 项参数值)

P117	压脚释放缓冲延迟时间 (ms)	0-990	12	
P119	电磁铁过流保护选择	0-1	0	0: 不检测 1: 检测
P120	油位报警开关检测	0-1	0	0: 不检测 1: 检测
P121	剪线模式选择	0-3	0	0: 普通模式 1: 短线头模式 2: 剪线后防脱线头模式 3: 短线头和防脱线头模式
P122	剪线后防脱线头模式, 剪线前倒缝动作的时机	0-1439	830	参数值越大剪线前一针的针距越大
P123	剪短线头模式, 剪线过程中倒缝动作的时机	0-100	0	
P124	膝靠抬压脚释放缓冲占空比 1	0-50	1	当膝靠位置感应器检测到 AD 值处于 P125 项所设的 AD 值 1 与 P126 项所设的 AD 值 2 之间时输出阻力。数值越大阻力越大。
P125	膝靠感应器 AD 值 1	0-1023	30	影响压脚抬升效果
P126	膝靠感应器 AD 值 2	0-1023	960	影响压脚释放效果
P127	膝靠抬压脚抬升助力占空比 2	0-50	30	当膝靠位置感应器检测到 AD 值大于 P126 项所设 AD 值 2 时输出助力。参数值为 0 时关闭助力。数值越大助力越大。

注: 参数初始值仅供参考, 实际参数值以实物为准。

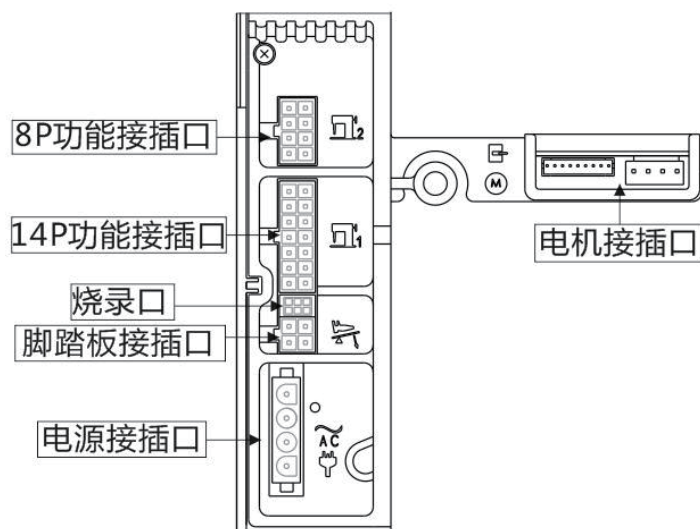
4. 错误代码表

错误码	问题描述	解决措施
E01	超电压	关闭系统电源, 检测供应电源电压是否正确。(或是否超过使用规定的额定电压)。 若正确, 请更换控制箱并通知售后服务。
E02	低电压	关闭系统电源, 检测供应电源电压是否正确。(或是否低于使用规定的额定电压)。 若正确, 请更换控制箱并通知售后服务。
E03	CPU 通信异常	关闭系统电源, 检查控制面板的连线是否松动或脱落, 将其恢复正常后重启系统。若仍不能正常工作, 请更换控制箱并通知售后服务。
E05	控速器接触异常	关闭系统电源, 检查控速器接头是否松动或脱落, 将其恢复正常后重启系统。若仍不能正常工作, 请更换控速器并通知售后服务。
E07	电机堵转	转动机头手轮观察是否卡住。如卡住则先排除机械故障。 如转动正常, 检查电机编码器接头和电机电源线接头是否松动。如有松动请修正。 如接触良好, 检查供应电源电压是否异常或转速设置过高。如有请调整。 若仍不能正常工作, 请更换控制箱并通知售后服务。
E08	手动倒缝动作时间超过 15 秒	倒缝电磁铁吸合时间过长, 重启产品即可。 若重启产品后还是报 E-08, 请检查手动倒缝开关是否损坏。
E10	电磁铁过流保护	关闭系统电源, 检查电磁铁(电磁阀)是否损坏或短路。
E09 E11	定位信号异常	关闭系统电源, 检查电机编码器接口是否松动或脱落, 将其恢复正常后重启系统。若仍不能正常工作, 请更换电机并通知售后服务。
E14	编码器信号异常	关闭系统电源, 检查电机编码器接口是否松动或脱落, 将其恢复正常后重启系统。若仍不能正常工作, 请更换电机并通知售后服务。
E15	电力模块不正常过流保护	关闭系统电源, 再重新开启。若仍不能正常工作, 请更换控制箱并通知售后服务。
E17	机头保护开关没到正确位置	关闭系统电源, 检查机头是否掀开, 控制箱内滚珠开关是否移位或损坏。

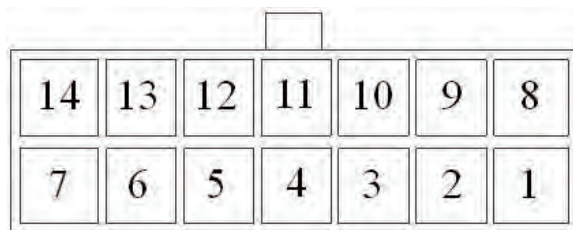
E20	电机启动失败（电角度错误）	关闭系统电源，检查电机编码器接口和电机电源接口是否松动或脱落，将其恢复正常后重启系统。若仍不能正常工作，请更换控制箱并通知售后服务。
oil	油量过低	关闭电源，检查缝纫机油量是否过低，将油量加满后重启系统。若仍不能正常工作，请更换油位感应器并通知售后服务。

5 端口示意图

5.1 端口示意图

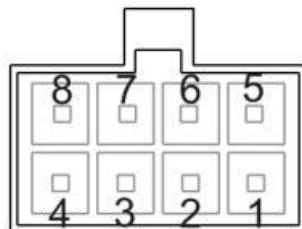


5.2 14P 功能端口对应表




1. 剪线电磁铁：1、8（+32V）
2. 夹线（扫线）电磁铁：2、9（+32V）
3. 松线电磁铁：3、10（+32V）
4. LED灯：4（DGND）、11（+5V）
5. 倒缝按键：5（信号）
6. 倒缝电磁铁：6、13（+32V）
7. 补针按键：7（信号）
8. 风扇：12（DGND）、14（+5V）

5.3 8P 功能端口对应表



1. 油位感应：5（+5V）、6（DGND）、2（信号）
2. 压脚位置感应：1（+5V）、7（DGND）、3（信号）
3. 压脚电磁铁：4、8（+32V）

Safety Instruction

- 1) Users are required to read the operation manual completely and carefully before installation or operation.
- 2) The product should be installed and pre-operated by well-trained persons
- 3) All the instruction marked with sign , must be observed or executed; Otherwise, bodily injuries might occur.
- 4) For perfect operation and safety, it is prohibited that using extension cable with multi-outlet for power connection
- 5) When connecting power supply cords to power sources, it is necessary to make sure that the power voltage is lower than 250V AC and matches the rated voltage indicated on the motor's name plate.
 ※Attention: If the Control Box is AC 220V system, please don't connect the Control Box to AC 380V power outlet. Otherwise, the error will occur and motor will not work. If that happens, please turn off the power immediately and check the power voltage. Continue supply 380V power over 5 minutes might damage the fuse F2, burst the electrolytic capacitors and the power module U14 of the main board and even might endanger the person safety.
- 6) Please don't operate in direct sun light, outdoors area and where the room temperature is over 45°C or below 0°C.
- 7) Please avoid operating near the heater at dew area or at the humidity below 10% or above 95%.
- 8) Please don't operate in area with heavy dust, corrosive substance or volatile gas.
- 9) Avoid power cord being applied by heavy objects or excessive force, or over bend.
- 10) The earth wire of power cord must be connected to the system ground of the production plant by proper size of conductions and terminals. This connection should be fixed permanently.
- 11) All the moving portions must be prevented to be exposed by the parts provided.
- 12) Turing on the machine in the first time, operate the sewing machine at low speed and check the correct rotation direction.
- 13) Turn off the power before the following operation:
 1. Connecting or disconnecting any connectors on the control box or motor.
 2. Threading needle.
 3. Raising the machine arm.
 4. Repairing or doing any mechanical adjustment.
 5. Machine is out of work.
- 14) Repairing and high level maintenance work should only be done by electronic technicians with appropriate training.
- 15) All the spare parts for repairing work must be provided or approved by the manufacturer.
- 16) Don't use any objects to hit or ram the product.

Guarantee Time

Warranty period of this product is 1 year dated from purchasing, or within 2 years from ex-factory date.

Warranty Detail

Any trouble found within warranty period under normal operation, it will be repaired free of charge.

However, maintenance cost will be charged in the following cases even if within warranty period:





















1. Inappropriate use, including: wrong connecting high voltage, wrong application, disassemble, repair, modification by incompetent personnel, or operation without the precaution, or operation out of its specification range, or inserting other objects or liquids into the product.
2. Damage by fire, Earth quake, lighting, wind, flood, salt corrosive, moisture, abnormal power voltage and any other damage cause by the natural disaster or by the inappropriate environments.
3. Dropping after purchasing or damage in transportation by customer himself or by customer's shipping

* Note: We make our best effort to test and manufacture the product for assuring the quality. However, it is possible that this all a failsafe device. (Such as residual current breaker).

agency.

1 Button Displays and operating instructions

1.1 Key Description

Name	Key	Indicate
Function Parameter Edit		Press this key to enter or exit function parameter edit mode.
Setting Parameter Check And Save		For the content of the selected parameters check and save: after select parameter press this key to check and modify operation, after modified parameter value press this key to exit and save the parameter.
Parameter Increase		Parameter increase
Parameter Decrease		Parameter decrease
Start Back-Tacking Selection		Execution starting back seam B segment or execution starting back seam (A, B segment) 1 Execution starting back seam (A, B segment) 2 times. If long press, can increase screen backlighting brightness.
End Back-Tacking Selection		Execution terminates back seam C segment or execution terminates back seam (C, D segment) 1 Execution terminates back seam (C, D segment) 2 time. If long press, can decrease screen backlighting brightness.
Mode Shift Key		If click, shift to free sewing, constant stitch sewing, continuous back seam shortcuts and multi-section set needle shortcuts.
Auto Function		1. under the free sewing mode: press this key no function. 2. Under the Constant-Stitch Sewing mode press this key: As the treadle is toed down, it will automatic performs E,F or G,H section by section, after finished section stitches, it will stop automatically. When the treadle is toed down again, it will automatically execute next section stitches of setting till finished trimming, wiper and so on action. The LED OFF indicate the corresponding function is turn off. 3. If long press, can restore factory setting.
Automatic Presser Foot Lifting Setting		1. Automatic presser foot lifting after trimming function when  icon is lighting. 2. Automatic presser foot lifting after pause function when  icon is lighting. 3. Automatic presser foot lifting after pause function or trimming function when  icon and  icon are lighting. 4. Presser Foot is inactive when  icon and  icon are not lighting.
Clamp Function Setting / Loose Line Function Key		Set used or cancelled clamp function and loose line function.
Thread Trimming		If click, set used or cancelled thread trimming function.
Slow Launch Setting		If click, set used or cancelled slow launch function.
Needle Stop Position Selection		If click, the needle stop position after shift the sewing mode (Up position / Down position)
Fill Up Needle		If click, set used or cancel fill up needle function.

2 Auxiliary function

2.1 Restore Factory Setting

On the main interface long-press one-shot sewing key, restore factory setting.

2.2 Needle Stop Position Function Setting

In the main interface, click the P key to enter the parameters, and set the parameters to P72. Manually rotate the handwheel to up position. The value displayed will change with the change of the wheel position. Press S key to save the current position (value) as the upper pin stop and calculate down position automatically.

2.3 Lock Screen Function

In the main interface, when no operation time reaches the time (s) set by item p27-n01, the lock screen will be automatically locked, or long-press "S" key to lock screen. In the lock screen "LOCK" state, click the "S" key to unlock.

3 Parameter List

No.	Items	Range	Default	Description
P01	Maximum Sewing Speed (rpm)	100-3700	3700	Maximum speed of machine sewing
P02	Set accelerated curve (%)	10-100	80	Set the acceleration slope
P03	Needle UP/ DOWN	UP/DN	DN	UP: Needle Stops at Up Position DN: Needle Stops at Down Position
P04	Start Back-Tacking Speed (rpm)	200-3200	1800	Set Start Back-Tacking Speed
P05	End Back-Tacking Speed (rpm)	200-3200	1800	Set End Back-Tacking Speed
P06	Bar-Tacking Speed (rpm)	200-3200	1800	Set Repeat Bar-Tacking Speed
P07	Soft Start Speed (rpm)	200-1500	400	Set Soft Start Speed
P08	Stitch Numbers for Soft Start	0-99	2	Soft Start Stitches Setting
P09	Automatic Constant-Stitch Sewing Speed (rpm)	200-3700	3700	Speed adjustment for automatic constant-stitch sewing
P10	Automatic End Back-Tacking Sewing	ON/OFF	ON	ON: After last seam of constant stitch sewing, it will automatic execute the End Back-Tacking sewing function. When turn on, the Stitch-Correction is invalid. OFF: Automatic End Back-Tacking will not execute after last seam, but can be done by pedal manually.
P11	Back-Tacking Mode Selection	J/B	J	J:JUKI Mode (Press TB switch will activate reverse solenoid when either machine is stopped or running). B: BROTHER Mode (Press TB switch will activate reverse solenoid only when machine is running).
P12	Start Back-Tacking running mode selection	0-3	1	0:Could be arbitrarily stop and start 1:Automatically perform actions 2:Pause mode

No.	Items	Range	Default	Description
P13	Ending mode of Start Back-Tacking	CON/STP	CON	CON: Start Back-Tacking is completed automatically continued for next action. STP: After the number of stitches is completed, stop automatically.
P14	Slow start function selection	ON/OFF	OFF	
P15	Mending stitch mode	0-4	2	0:half stitch; 1: one stitch; 2: continuous half stitch; 3: continuous one stitch; 4: continuous one stitch, quick stop.
P16	Back-Tacking speed limit	0-3200	0	When the parameter is 0, the speed limit function is OFF.
P17	Auto count selection	0-50	0	0: P41 item counter not count automatically. 1-50: P41 item counter increment count automatically.
P18	Start Back-Tacking compensation 1	0-200	131	Stitch Balance for end back-tacking A section, 0~200 action gradually delay; the large value, the longer of the A section last stitch, and the shorter of the B section first stitch.
P19	Start Back-Tacking compensation 2	0-200	158	Stitch Balance for end back-tacking B section, 0~200 action gradually delay; the large value, the longer of the B section first stitch.
P20	End Back-Tacking running mode selection	1-3	1	1: Automatically perform actions 2: Pause mode
P21	The position of the pedal for running	30-1000	520	
P22	The position of the pedal for the stop	30-1000	420	
P23	The position of the pedal for lifting presser foot	30-1000	255	
P24	The position of the pedal for thread trimming	30-500	130	
P25	End Back-Tacking compensation 3	0-200	131	Stitch Balance for end back-tacking C section,0~200 action gradually delay; the large value, the shorter of the C section first stitch.
P26	End Back-Tacking compensation 4	0-200	158	Stitch Balance for end back-tacking D section,0~200 action gradually delay; the large value, the longer of the C section last stitch, and the shorter of the D section first stitch.
P27-N0 1	Lock screen clock	0-300	120	When the parameter value is 0, the lock screen function is invalid.
P27-N0 4	Speech selection	0-2	1	0: OFF 1: Chinese 2: English
P27-N0 5	Voice broadcast selection	0-3	2	0: OFF 1: With welcome speech but without key tone 2: With key tone but Without welcome speech 3: With welcome speech and key tone
P27-N1 0	Backlight brightness settings	0-3	2	

No.	Items	Range	Default	Description
P27-N1 1	Backlight extinguishing time setting	0-200	30	When the parameter value is 0, the backlight brightness remains the same.
P28	Bar-Tacking running mode selection	0-3	1	0: Could be arbitrarily stop and start 1: Automatically perform actions 2: Pause mode
P29	The rate of thread trimming stop	1-45	20	
P30	The strength of the motor torque when sewing	0-100	0	The larger the value the greater the intensity, the adjustment is too large may cause the motor abnormalities.
P31	The strength of the motor torque when thread trimming	0-100	40	The larger the value the greater the intensity, the adjustment is too large may cause the motor abnormalities.
P32	Bar-Tacking compensation 5	0-200	131	Stitch Balance for start back-tacking A (C) section, 0~200 action gradually delay; the large value, the longer of the A (C) section last stitch; the shorter of the B(D) section first stitch.
P33	Bar-Tacking compensation 6	0-200	158	Stitch Balance for start back-tacking B (D) section, 0~200 action gradually delay; the large value, the longer of the B (D) section last stitch; the shorter of the C section first stitch.
P34	Constant-Stitch Sewing running mode selection	A/M	A	A: Automatically perform actions M: Could be arbitrarily stop and start
P36	Thread slacking function selection	0-11	5	0: OFF 1-11: The strength of thread slacking
P37	Automatic thread wiping function / Automatic thread clamping function selection	0-11	8	0 : OFF 1: Automatic thread wiping Function 2-11: Automatic thread clamping Function and the strength of automatic thread clamping.
P38	Automatic thread trimming function selection	ON/OFF	ON	ON: ON OFF: OFFF
P39	Automatic presser foot lifting when pause function selection	UP/DN	DN	UP: ON DN: OFF
P40	Automatic presser foot lifting after trimming function selection	UP/DN	DN	UP: ON DN: OFF
P41	Counter display	0-9999		Display the quantity of finished sewing piece.
P42	Information Display			N01 The control system version number N02 The panel version number N03 Speed N04 The pedal AD N05 The mechanical angle(up position) N06 The mechanical angle(down position) N07 Busbar voltage AD N12 Kneeling device position sensor AD
P43	Direction of Motor Rotation	CCW/CW	CCW	CW: Clockwise CCW: Counter Clockwise

No.	Items	Range	Default	Description
P44	The rate of normal stop	1-45	12	
P45	Back-tacking operation duty cycle (%)	1-50	25	Back-tacking operate in duty cycle to save electricity and protect the electromagnet from over-heat.
P46	Motor stop with a reverse angle after trimming function	ON/OFF	OFF	ON: ON OFF: OFF
P47	Adjust the reverse angle when motor stop after trimming	50-200	160	Adjusting at reverse direction after trimming.
P48	The minimum speed Limit (rpm)	100-500	210	Adjust the minimum speed
P49	Thread trimming speed (rpm)	100-500	300	Adjust thread trimming speed
P50	Toot lifter operation time to full output(ms)	10-990	150	
P51	Presser foot lifter operation duty cycle (%)	1-50	25	Presser foot lifter operate in duty cycle to save electricity and protect the electromagnet from over-heat.
P52	Motor starting delay time (ms)	10-990	120	Delay the start time, with automatic presser foot down.
P53	Half back pedaling lifting presser foot function to cancel	ON/OFF	OFF	ON: Function to cancel OFF: Half back pedaling lifting presser foot
P54	Thread trimming action time (ms)	10-990	200	Completion of the thread trimming action required time.
P55	Thread wiping action time (ms)	10-990	30	Completion of the thread wiping action required time.
P56	Power on and positioning	0-2	1	0: always not to find the up needle position 1: always to find the up needle position 2:If the motor is not into the up needle position, it will find the up needle position
P57	Hold time of presser foot lifter (s)	1-120	10	Forced shut-down after hold time.
P58	Up needle position adjustment	0-1439	40	Up position adjustment, the needle will advance stop when the value decreased, the needle will delay stop when the value increased.
P59	Down needle position adjustment	0-1439	750	Down position adjustment, the needle will advance stop when the value decreased, the needle will delay stop when the value increased.
P60	Testing Speed (rpm)	100-3500	3500	Setting testing speed.
P61	Testing A	ON/OFF	OFF	Continuous running testing.
P62	Testing B	ON/OFF	OFF	Start and stop testing with all functions.
P63	Testing C	ON/OFF	OFF	Start and stop testing without all function.
P64	Running Time of Testing B and C	1-250	30	
P65	Stop Time of Testing B and C	1-250	10	

No.	Items	Range	Default	Description
P66	Machine protection switch selection	0-2	1	0: Disable 1: Testing zero signal 2: Testing positive signal
P67	Thread trimming protection switch selection	ON/OFF	OFF	OFF: Disable ON: Enable
P71	Presser foot release operation duty cycle (%)	0-50	0	The buffer force of presser foot release operation.
P72	Up needle position adjustment	0-1439		Hand rotation manual to the appropriate position, press S key to save.
P73	Down needle position adjustment	0-1439		Hand rotation manual to the appropriate position, press S key to save.
P76	Back-tacking operation time to full output(ms)	10-990	250	Back tacking start action, full output action times.
P78	The start angle of thread clamping	5-359	100	
P79	The stop angle of thread clamping	5-359	270	
P80	The start angle of thread trimming	5-359	18	Shear line infeed id angle setting(under defined as 0°)
P81	The angle of the motor start to increase torque when thread trimming	5-359	120	Torque angle of thread trimming setting(Down position as 0°, the value need greater than the P80 parameter item)
P82	The stop angle of thread trimming	5-359	175	Feeder back angle of thread trimming setting Down position as 0°, the value need greater than the P80 parameter item)
P84	The angle of the motor start to increase torque when sewing	0-359	9	
P85	The angle of the motor stop to increase torque when sewing	0-359	57	
P92	Correct the electrical angle of motor		160	Review the user manual 1.5 Reading the initial Angle of encoder, the factory default was set, please do not change the values (parameter value cannot be changed manually, random change it will result the control box and motor abnormal or damaged).
P93	The delay time of the half back pedaling function	10-900	100	
P99	End Back-Tacking compensation C1	0-250	120	Prevent taking off the thread after thread trimming mode, compensation for C part of End Back-Tacking.
P100	End Back-Tacking compensation D1	0-250	175	Prevent taking off the thread after thread trimming mode, compensation for D part of End Back-Tacking.
P101	The start angle of thread slacking	1-359	30	Song line start angle (defined as 0°under calculation)
P102	The stop angle of thread slacking	1-359	180	Loose wire end angle (defined as 0°under calculation)

No.	Items	Range	Default	Description
P117	The delay time of the presser foot release damping force (ms)	0-990	12	
P119	Electromagnet overcurrent protection selection	0-1	0	0: OFF 1: ON
P120	The oil level alarm switch selection	0-1	0	0: OFF 1: ON
P121	Thread trimming mode selection	0-3	0	0: Normal mode 1: Small thread end mode 2: Prevent taking off the thread after thread trimming mode 3: Small thread end mode and prevent taking off the thread after thread trimming mode
P122	Prevent taking off the thread after thread trimming mode, timing of back-tacking operation before thread trimming	0-1439	830	The greater the value, the greater the one stitch before thread trimming.
P123	Small thread end mode, timing of back-tacking operation when thread trimming	0-100	0	
P124	Kneeling presser foot release buffer operation duty cycle 1	0-50	1	The greater the value the greater the resistance.
P125	Kneeling device position sensor AD 1	0-1023	30	Affect the presser foot lift effect.
P126	Kneeling device position sensor AD 2	0-1023	960	Affect the presser foot release effect.
P127	Presser foot lifter power assisting operation duty cycle 2	0-50	30	As the knee-press position sensor testing AD value is greater than P126 item that setting AD value as 2 output assistance. Close the power assisting function when the parameter value is 0. The greater the value the greater the power.

Note: the initial value of parameters is for reference only, and the actual value of parameters is subject to the real object.

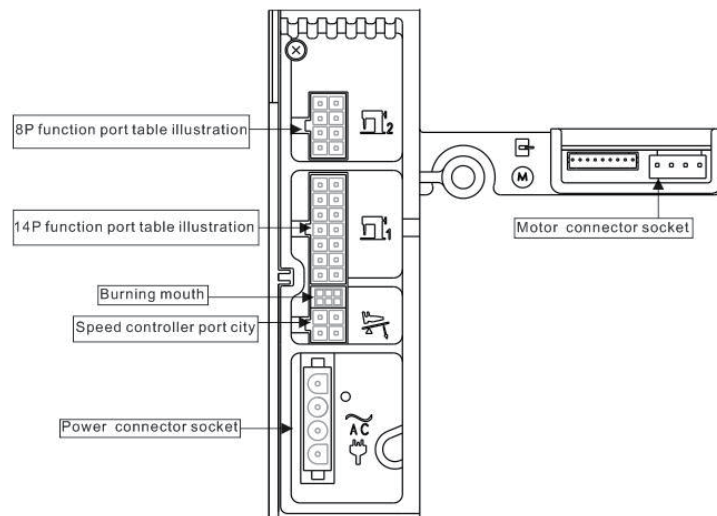
4 Error Code List

Error Code	Problem	Status / Measurement
E01	Over-voltage	Turn off the system power supply, and detect whether the supply voltage is correct. (Or exceed the rated voltage.) If correct, please replace the control box and inform the factory
E02	Low-voltage	Turn off the system power supply, and detect whether the supply voltage is correct. (Or exceed the rated voltage specified in use.) If correct, please replace the control box and inform the factory
E03	CPU communication error	Turn off the machine, please check if the operation panel in bad connection or is too loose. To get it right and turn on. If there are still errors, please replace the control box and call for customer service.
E05	Speed control unit connection is abnormal	Turn off the system power supply, please check the speed control unit connector if loose or fall off, Will resume normal after the restart system If you still cannot work normally, please replace the speed control unit and notify the manufacturer.
E07	Motor locked-rotor error	Turn the machine handwheel, check if it is stuck. If it is stuck, you have to rule out the mechanical failure. If turn normal, check if the encoder and motor in bad connection or is too loose. If yes, please correct. If connection well, check if the power supply voltage is abnormal or sewing speed is too high. If yes, please adjust. If there are still errors, please replace the control box and call for customer service.
E08	Function step motor abnormal	Check P42 parameter N14 value, 0: communicate abnormal; 2: back-tacking step over current 4: back-tacking step start can't find original point. 16: trimming step over current 32: trimming step can't find original point, shut off system power, observe step motor whether stuck or not. If stuck the first except the machine head machinery fault. If normal please check the step motor connector if loose or fall off, renew to normal then restart system. If still not work, please replace the motor and notify the manufacture.
E10	Solenoid over-current protection	Turn off the system power supply, please check the solenoid (solenoid valve) connector or solenoid (solenoid valve) is broken or not.
E09 E11	Positioning signal error	Turn off the machine, please check if the encoder in bad connection or is too loose. To get it right and turn on. If there are still errors, please replace the control box and call for customer service.

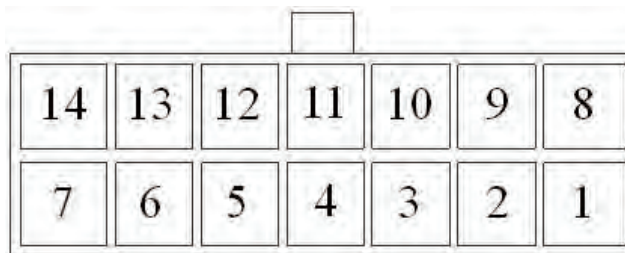
E14	Encoder signal error.	Turn off the system power supply, please check motor encoder connector if loose or fall off, renew to normal then restart system. If still not work, please replace the motor and notify the manufacture.
E15	Power module abnormal over current protection	Turn off the system power supply, and then restart the machine. If still not work, please replace the control box and notify the manufacture.
E16	Trimming step motor abnormal	Please check trimming mechanism return correct position or not; please check trimming setting correct or not.
E17	The sewing table safety switch is not in the correct position	Turn off the system power supply, please check machine head is open or not, the machine head switch is damage or not.
E20	Motor failed to start(Electrical angle error)	Turn off the machine, please check if the encoder and motor in bad connection or is too loose. To get it right and turn on. If there are still errors, please replace the control box and call for customer service.
oil	Low oil	Turn off the machine, check if the oil is too little. To fill it up and turn on. If there are still errors, please replace the control box and call for customer service.

5 Port Outline Diagram:

5.1 Port Description



5.2 14P function port description



1.Thread trimming electromagnet: 1、8 (+32V)

2.Thread wiping/ thread clamping electromagnet: 2、9 (+32V)

3.Thread slacking electromagnet: 3、10 (+32V)

4.LED Light: 4 (DGND) 、11 (+5V)

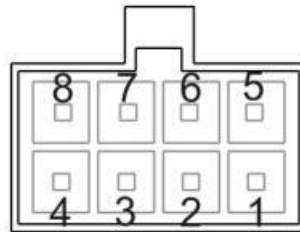
5.Reverse stitch key: 5 (signal)

6.Back-tacking electromagnet: 6、13 (+32V)

7.Mending stitch key: 7 (signal)

8.Fan: 12 (DGND) 、14 (+32V)

5.3 8P function port description



1.Oil level sensor: 5 (+5V) 、6 (DGND) 、2 (signal)

2.Presser foot position sensor: 1 (+5V) 、7 (DGND) 、3 (signal)

3.Presser foot electromagnet: 4、8 (+32V)