



BH790

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



BH790

高林股份有限公司 KAULIN MFG. CO., LTD.

使用說明書 INSTRUCTION BOOK



危險水準的說明
Explanation of Dangerous Level

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

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

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

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一般安全事項說明

警告！

當使用這台機器，基本安全預防應恆被遵守，以減輕火災、電擊、或是個人傷害的風險。包含以下注意事項。在操作這台機器之前，請閱讀所有說明並且謹記於心。

- 1. 保持工作場所清潔**
雜亂的環境與椅子會招引危害。
- 2. 考量工作場所環境**
勿暴露電源於雨水之中、勿在濕氣重的地方或潮濕的場所使用機械器具。保持工作場所良好整齊。當有引發火災或爆炸危險時，勿使用電源工具。
- 3. 免於電擊危害**
避免身體接觸地線或是接地表面。(即：管線，發熱物體，以及冷凍庫)
- 4. 勿使孩童接近**
不要讓訪客碰觸工具或是延伸管線
- 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。

GENERAL SAFETY INSTRUCTIONS

Warning!

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

- 1. Keep work area clean**
Cluttered areas and benches invite injuries.
- 2. Consider work area environment**
Do not expose power to rain. Do not use machine tools in damp or wet locations. Keep work area well lit.
Do not use power tools where there is risk to cause any fire or explosion.
- 3. Guard against electric shock**
Avoid body contact with earthed or grounded surfaces (e.g. Pipes, radiators, ranges refrigerators.)
- 4. Keep children away**
Do not let visitors touch the tool or extension code.
- 5. 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. **中斷機器電源**
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，都可能導致個人傷害的危險。
12. **由合格人員來修理事具**
所以的修理工作應該由合格的人員使用原始個別零件來作修理。

連接電源的特別警示

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








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

SPECIAL WARNING FOR ELECTRIC CONNECTION!

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








重要安全事項說明

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

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


IMPORTANT SAFETY INSTRUCTIONS


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


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


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


- (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. 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。


 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. 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。


 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. 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。


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


 11. 一般維修及檢查工作必須由受過適當訓練的人員為之。


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


 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。


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


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


 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. 機器使用一段時間，必需定期清理。


 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。


 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. 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。

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

 17. 機器只允許被使用於指定用途上，其他用途是不允許的。


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


 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。


 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. 警告提示以兩種符號標示：


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


 (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。

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

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

 (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. 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。

 b. Please keep your hair, fingers and cloths away from the hand wheel, V belt and motor while the machine is in operation, as well as never put anything near these parts, to prevent the risk of injuries by tangled into them.



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



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



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



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



e. 當放置或抬起機頭時，小心勿將手置於機器中，以免導致人員受傷。



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



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



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



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



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



h. 為了避免觸電之危險，請絕不要在移開電源接地線後操作機器。



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



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



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

特別事項

為了避免機器故障及損壞，請先確定以下事項：



1. 當您安裝好機器後，做第一次機器操作前，請徹底清潔機器。



2. 清除運送途中累積之灰塵及溢出之油脂。



3. 確定電壓及馬達相數(單相或三相)安裝正確。



4. 確定電源插頭正確地接上電源。



5. 當使用電壓與標示電壓不同時，請勿使用機器。



6. 確定機器轉動方向是否正確。



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

WARNING

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



1. After installing the machine, and before the first operation, please clean it completely.



2. Clean all dust and overflowed oil during transportation.



3. Confirm that the voltage and the phase (single or 3 phase) of motor are set correctly.



4. Confirm that the power plug is correctly connected to the power supply.



5. Never use the machine when the local voltage type is different from the marked voltage on the nametag attached on the machine.



6. Confirm that the rotating direction of the machine pulley is correct.



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

警告標籤

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

WARNING TAG

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

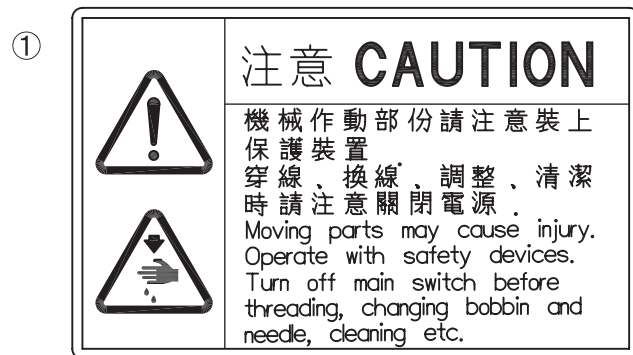


圖1/Fig. 1

② 必須接地

接駁地線不牢固，是造成觸電或誤動作的原因。

② 必須接地

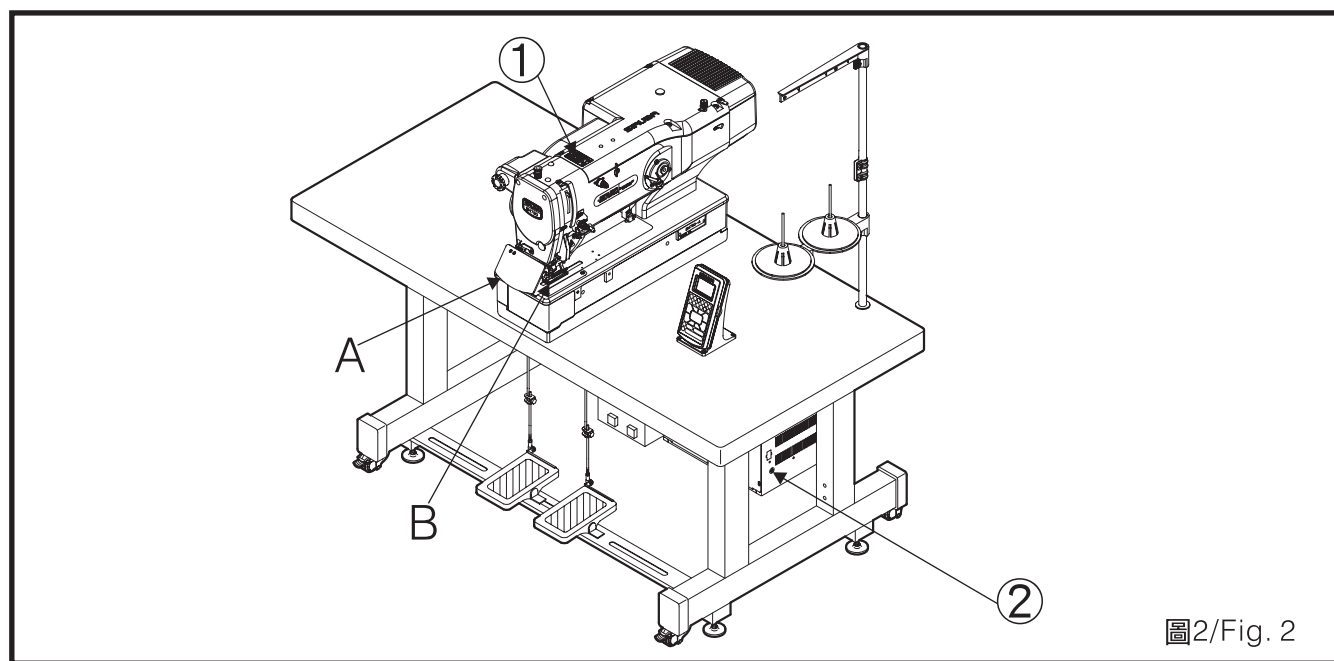
A loosen or a did not connect well ground wire is the reason causing electronic shock or malfunction.

安全保護裝置(圖2)

- (A) 護指器
- (B) 護目鏡

Safety Protection Device (Fig. 2)

- (A) Finger Protector
- (B) Goggle

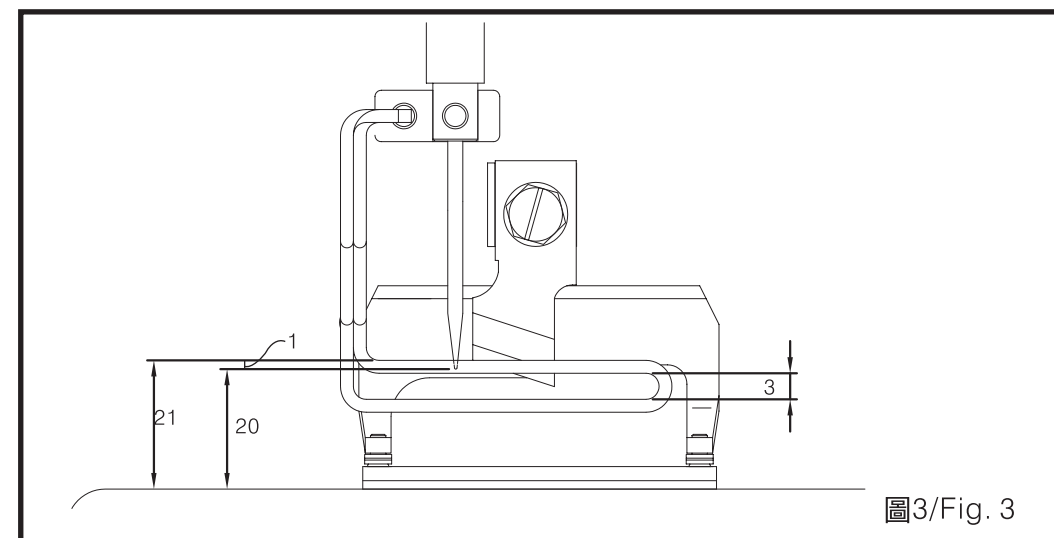


護針安全圖說

SAFETY ILLUSTRATION OF NEEDLE GUARD

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。

The presser foot protection device is as shown as the figure 3. For safety of all operators, this device is restricted to disassemble.

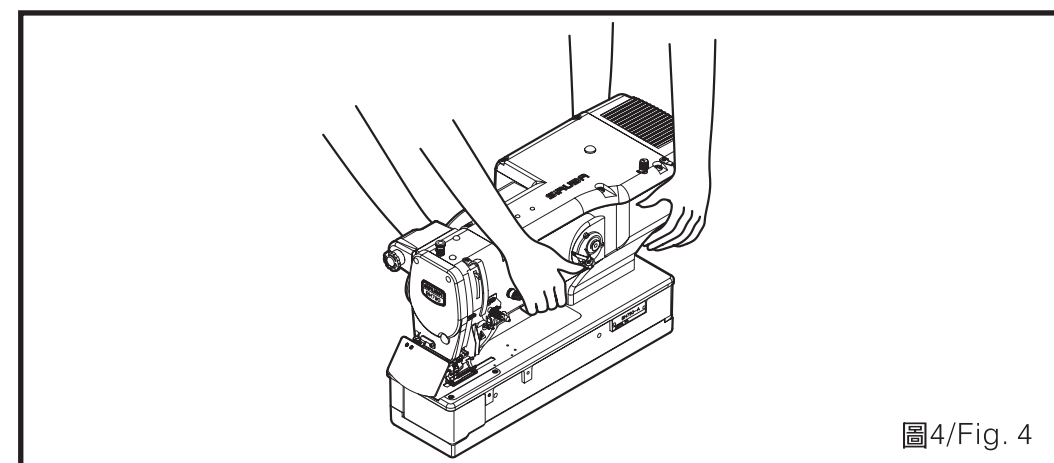


搬運

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。
3. 搬運時，請穿著安全鞋。(圖4)

1. The machine should be carried by two people as shown in the figure.
2. Hold the motor cover firmly.
3. Please wear a pair of skidproof shoes while moving the sewing machine. (Fig. 4)



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

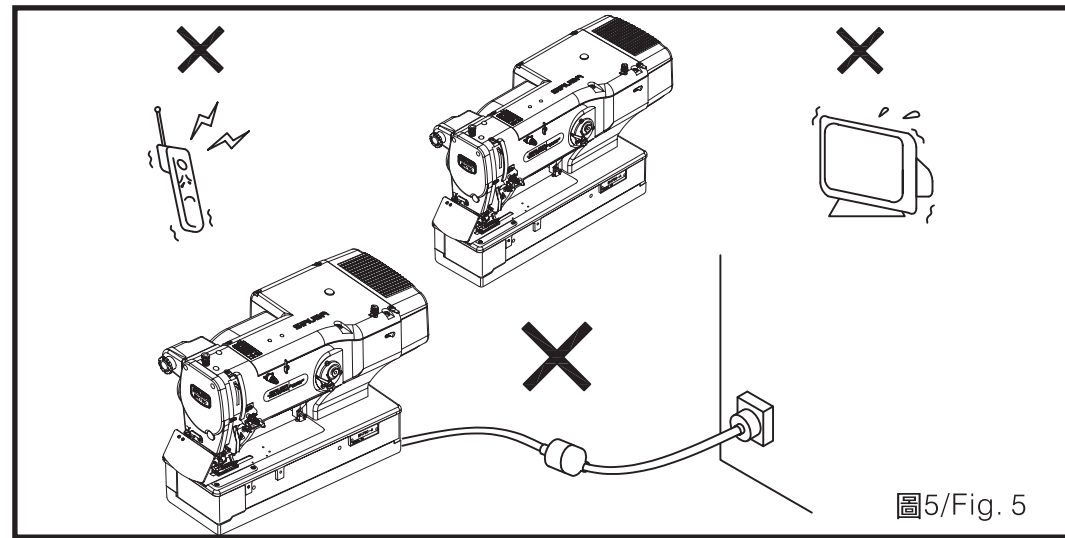


圖5/Fig. 5

各部件名稱

NAMES OF MAJOR PARTS

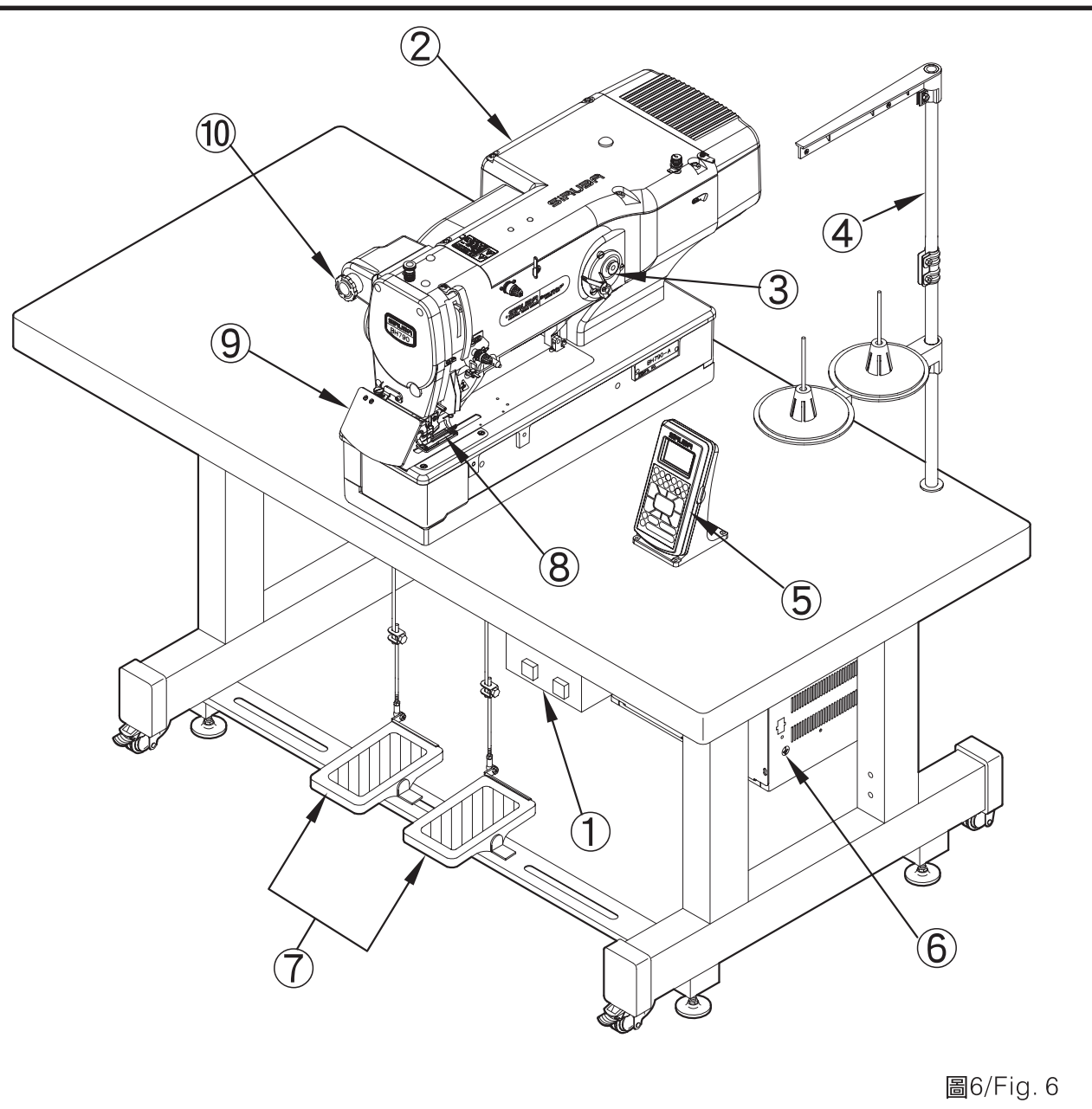


圖6/Fig. 6

- ① 電源開關
- ② 縫紉機機頭
- ③ 捲線器
- ④ 線架
- ⑤ 控制盒
- ⑥ 接地線
- ⑦ 左/右踏板
- 安全防護裝置
- ⑧ 護針片
- ⑨ 護目鏡
- ⑩ 緊急開關

- ① Power Switch
- ② Machine Head
- ③ Thread Winder
- ④ Thread Stand
- ⑤ Control Panel
- ⑥ Ground Wire
- ⑦ Left/Right Pedal
- Safety Protection Devices
- ⑧ Finger Protector
- ⑨ Eye Protector
- ⑩ Emergency Stop

規格

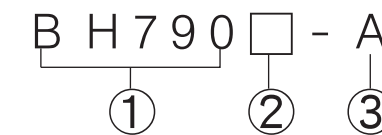
SPECIFICATIONS

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：
高速電子平縫鎖眼機

① represents the type of the machine:
Computer-controlled, high-speed,
lockstitch buttonholing machine.

②表示車台外觀改良之區分編碼，由D然後E，以英文字母排列如BH790D

② represents the improved machine
appearances that are arranged from
letter D. Ex: BH790D

③用途項目：(表1)

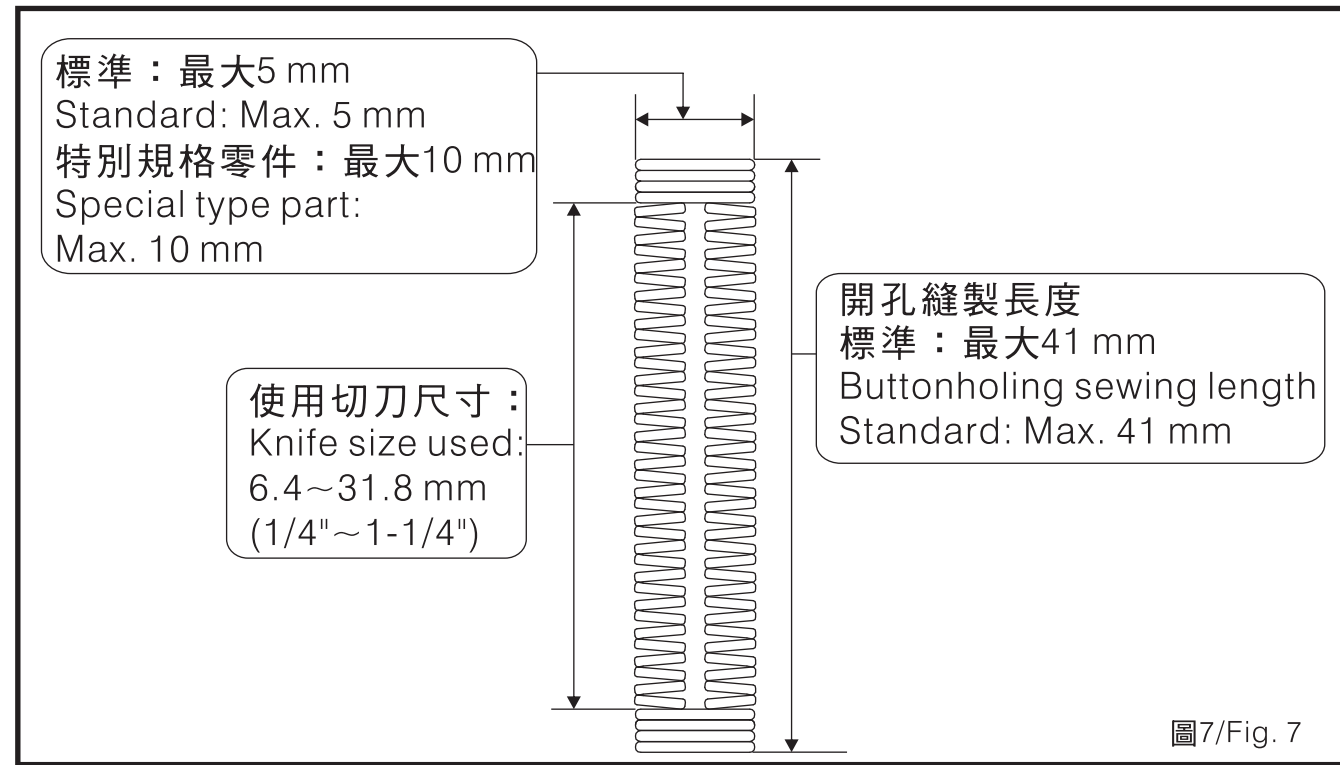
③ Applications: (Table 1)

編號Code	用途Application
A	襯衣、襯衫、工作服、女裝等棉布鈕扣眼 Buttonholing of cloth such as men's shirts, blouses, work uniforms, ladies' wear, etc.
B	針織毛衣、毛衣、羊毛衫、平針針織物等針織品的鈕扣眼 Buttonholing of knits such as knitted underwear, sweaters, cardigans, jersey, etc.

表1/Table 1

2. 鈕扣扣眼尺寸(圖7)

2. Buttonholing size (Fig. 7)



3. 產品規格(表2)

3. Specifications (Table 2)

縫紉速度Sewing speed	最高速度：3600rpm Maximum speed: 3600 rpm
使用機針Needle	DPX5#11J~#14J
使用旋梭Hook	DP型全旋轉旋梭 DP Type full-rotary hook
押腳提升量 Presser foot lift value	14 mm
標準縫製形狀 Standard sewing shape	30種 30 kinds
記憶圖案數 Number of patterns stored in memory	99個圖案 99 patterns
電源Motor used	單相220/230/240V、1000VA Single phase 220/230/240V、1000VA
加油方式 Lubrication system	油壺儲存方式棉線毛細管自動供油 Automatic lubricating system
旋梭給油調整機構 Hook lubricating mechanism	油量螺絲調整Oil amount adjusting screw
使用油Oil	SIRUBA專用油SIRUBA sewing machine oil

表2/Table 2

4. 標準車縫圖形表(圖表1)

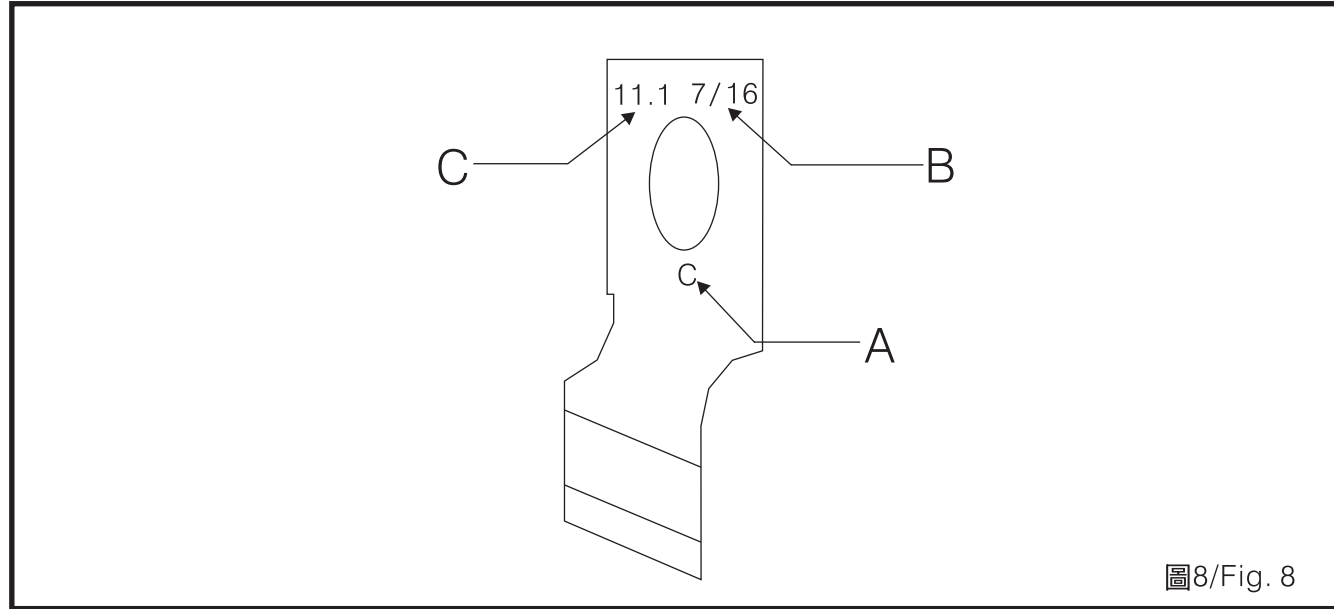
4. Standard sewing shape list (Chart 1)

1. 角型 Square Type	2. 圓型 Round Type	3. 輻射角型 Radial Square Type	4. 輻射型 Radial Type	5. 輻射直線加固 Bar-Tacking Type	6. 半月型 Semilunar Type
7. 圓角型 Round Square Type	8. 輻射流動加固 Bar-Tacking Type	9. 圓頭鉤眼角型 Eyelet Square Type	10. 圓頭鉤眼輻射型 Eyelet Radial Type	11. 圓頭鉤眼直線加固型 Bar-Tacking Type	12. 圓頭鉤眼流動加固型 Bar-Tacking Type
13. 半月角型 Square Semilunar Type	14. 半月直線加固型 Bar-Tacking Type	15. 半月流動加固型 Bar-Tacking Type	16. 圓頭鉤眼半月型 Eyelet Semilunar Type	17. 圓頭鉤眼圓型 Eyelet Round Type	18. 角型輻射 Square Radial Type
19. 角半月型 Square Semilunar Type	20. 角圓型 Square Round Type	21. 角直線加固型 Bar-Tacking Type	22. 角流動加固型 Bar-Tacking Type	23. 輻射半月型 Radial Semilunar Type	24. 輻射圓型 Radial Round Type
25. 半月輻射型 Semilunar Radial Type	26. 半月圓型 Semilunar Round Type	27. 加固縫 Bar-Tacking	28. 加固右切斷 Bar-Tacking, Right Cut	29. 加固左切斷 Bar-Tacking, Left Cut	30. 加固中央切斷 Bar-Tacking, Center Cut

圖表1/Chart 1

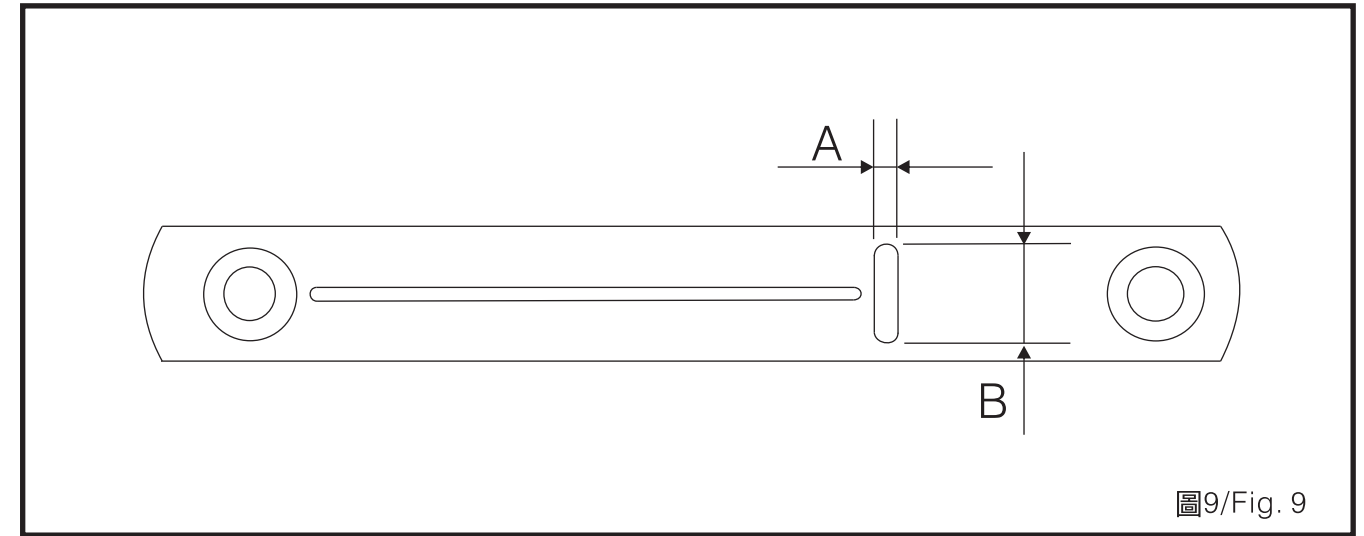
5. 相關零件規格(圖8~10, 表3~5)

5. Specifics of related parts (Fig. 8~10, Table 3~5)



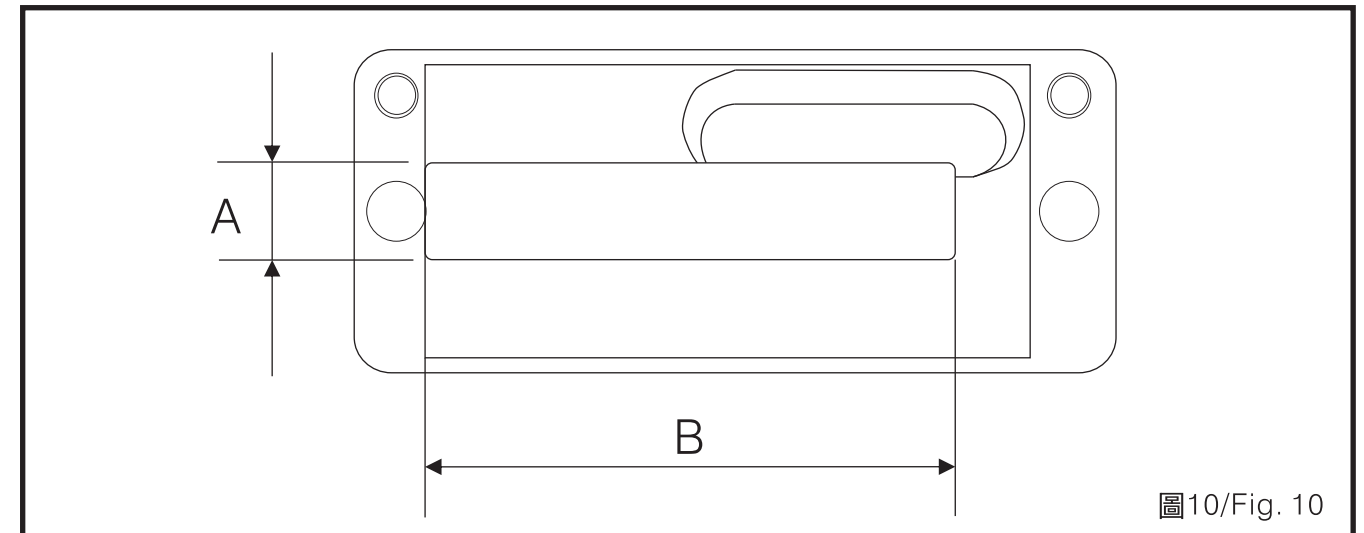
A零件代號 Parts Number	B切布刀尺寸(英吋) Fabric Trimmer Size (Inch)	C切布刀尺寸(mm) Fabric Trimmer Size (mm)
BL724A	1/4	6.4
BL724B	3/8	9.5
BL724C	7/16	11.1
BL724D	1/2	12.7
BL724E	9/16	14.3
BL724F	5/8	15.9
BL724G	11/16	17.5
BL724H	3/4	19.1
BL724I	7/8	22.2
BL724J	1	25.4
BL724K	1-1/4	31.8

表3/Table 3



規格 Specification	擺動幅度 Swing Range	零件代號 Parts Number	5 mm (AXB)	零件代號 Parts Number	5 mm (AXB)
標準(A) Standard (A)		E201A	1.4*6.2	E202A	1.4*7.4
針織物用(B) For knitting (B)		E201B	1.2*6.2	E202B	1.2*7.4

表4/Table 4



規格 Specification	擺動幅度 Swing Range	5 mm		6 mm	
	尺寸(A*B) Size	零件代號1 Parts Number 1 (4*25)	零件代號2 Parts Number 2 (5*35)	零件代號3 Parts Number 3 (5*41)	零件代號4 Parts Number 4 (6*41)
標準(A) Standard (A)		P570A	P571A	P572A	P573A
針織物用(B) For knitting (B)		P570B	P571B	P572B	

表5/Table 5

關於本機的重要安全注意事項

IMPORTANT SAFETY INSTRUCTIONS OF THIS MACHINE

- 搬運作業
 - 使用全罩二片式的保力龍將機器包裝防護。
 - 放入紙箱內。
 - 用手推車或二人用雙手抬動搬運。
- 儲存作業
 - 機器不使用時，應用防塵套將其罩上。
 - 避免儲存於高於45°C以上的高溫。
- 作業中
機器不要在高於40°C以上的溫度工作。
- 警告
請注意以下警示建議事項。
 - 工作區域是危險的。
 - 當機器還在運作的時候絕對不要去碰觸針。
 - 當在送布料的時候要多加小心。
 - 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。

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

- Transportation
 - The machine packed with two piece covers that made of expanded polystyrene to protect it.
 - Put the machine into a carton.
 - Use a cart or by two men's hands to move it.
 - Storage
 - The machine must use duster cover to cover it when it did not work.
 - The machine avoid to storage in the temperature more than 45°C.
 - Working
The machine doesn't work over 40°C.
 - Warning
Pay attention to this warning advice as the followings:
 - Working area is dangerous.
 - Never touch the needle if the machine is still running.
 - Be careful if you infeed fabric.
 - Do not insert your finger between needle and roller for transportation on fabric.
- Pay attention to the warning sticker.
- Movable parts must be enclosed with guard when you operate.
 - Pull out the plug from socket when you adjust, thread, change bobbin and needle clean.

安裝

INSTALLATION



注意CAUTION



請讓受過培訓的技術人員來安裝縫紉機。
Machine installation should only be carried out by a qualified technician.



請委託購買商店電氣專業人員進行電氣配線。
Contact your dealer or a qualified electrician for any electrical work that may need to be done.



縫紉機重48公斤，安裝工作必須由兩人以上來完成。
The sewing machine weighs 48kg. The installation should be carried out by two or more people.



在安裝完成前，請不要連接電源，如果誤按啟動開關，縫紉機動作會導致受傷。
Do not connect the power cord until installation is complete. The machine may operate if the treadle is depressed by mistake, which could result in injury.



縫紉機頭倒下豎起時，請用雙手進行操作。單手操作時可能會因縫紉機的重量過重而滑落，而導致受傷。
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. 電源線的連接

(1) 電壓規格

在電壓表示標籤上寫有電源規格。請參考電壓注意標籤和額定規格標牌，並請依據規格選接電線。

(2) 單相200V、220V和240V的連接(圖11)

1. Connect the power cords

(1) The specification of voltage

The power specification is indicated on the voltage indication tag. Please refer to voltage notification tag and the standard specification tag to choose the correct power cords to install.

(2) Connecting single phase 200V, 220V, and 240V. (Fig. 11)

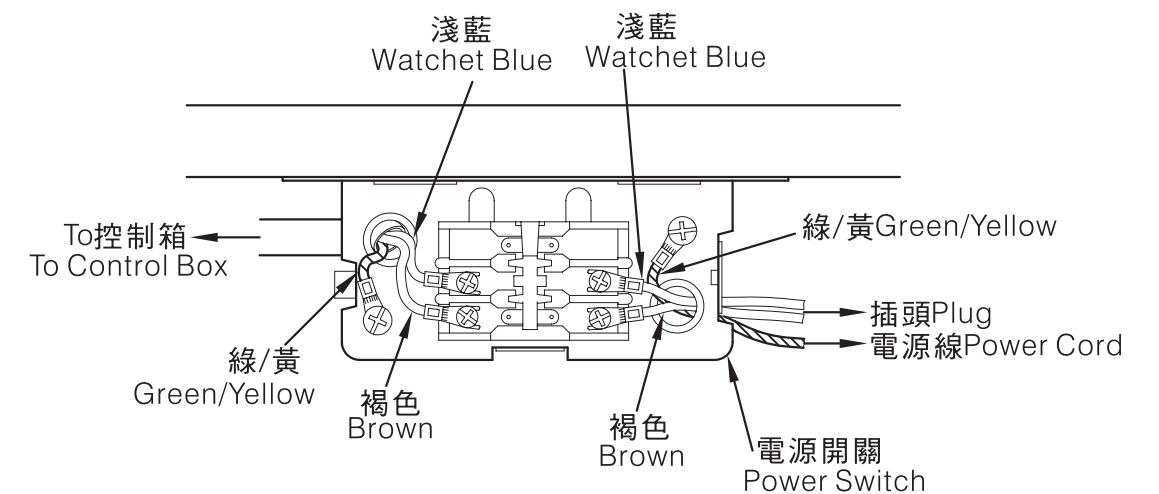
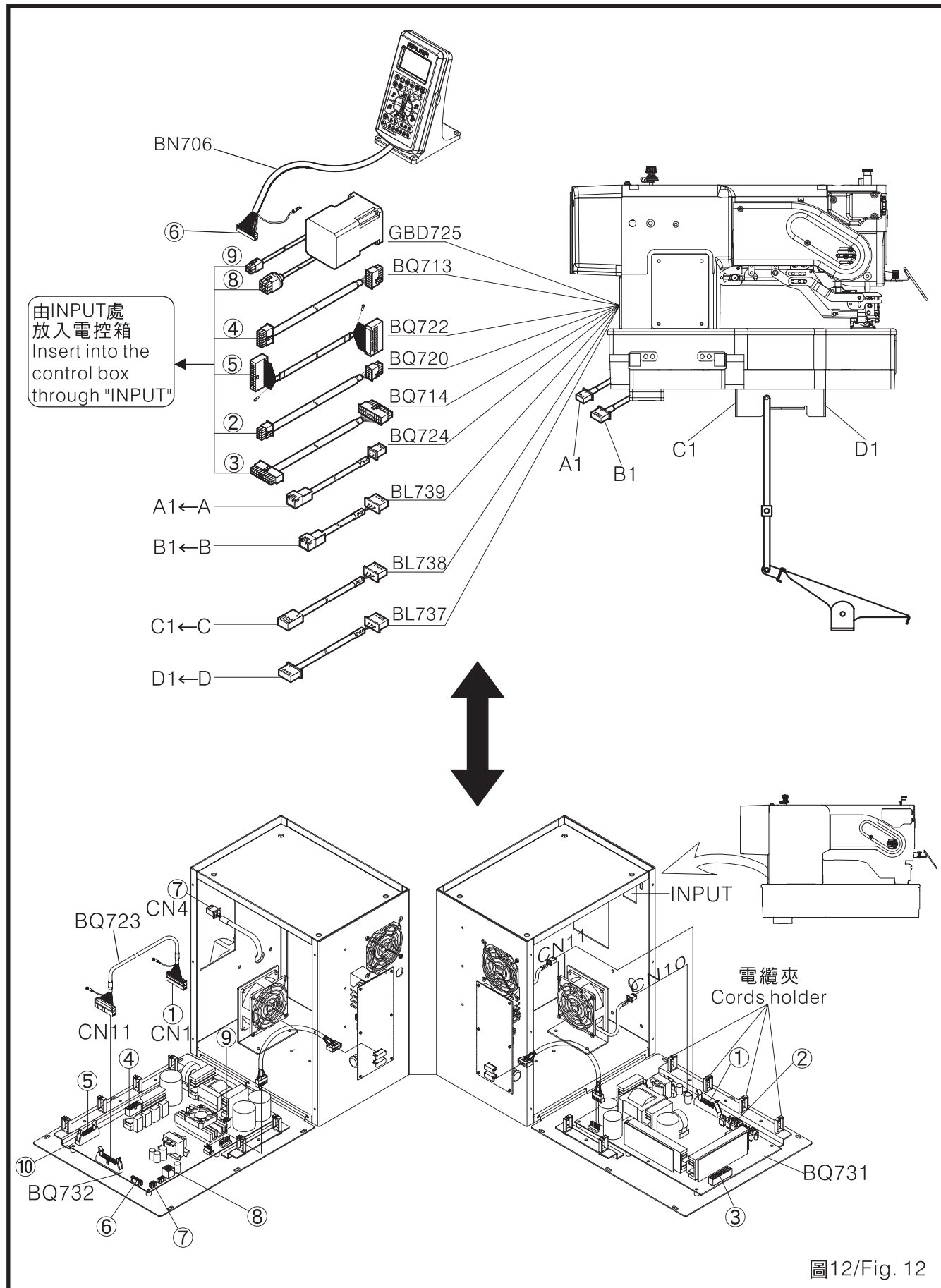


圖11/Fig. 11

(3) 電纜的連接(圖12)

(3) Connect the cords . (Fig. 12)



- 如圖12所示，將機體後方I/O電路板的電纜線(BQ724，BL739，BL738，BL737)依照A←→A1，B←→B1，C←→C1，D←→D1的方式對接。
- 將電纜線BN706，GBD725，BQ713，BQ722，BQ720，BQ714由INPUT處放入電控箱內。
- 依照電纜線圖示號碼(圖12上圖)與電路板上的接頭(圖12下圖)連接。
- 將電纜線整理整齊之後，放入電纜夾內。
- 用螺絲將BN706⑦與BQ732⑩的接地線固定於BQ732上⑦跟⑩的位置。

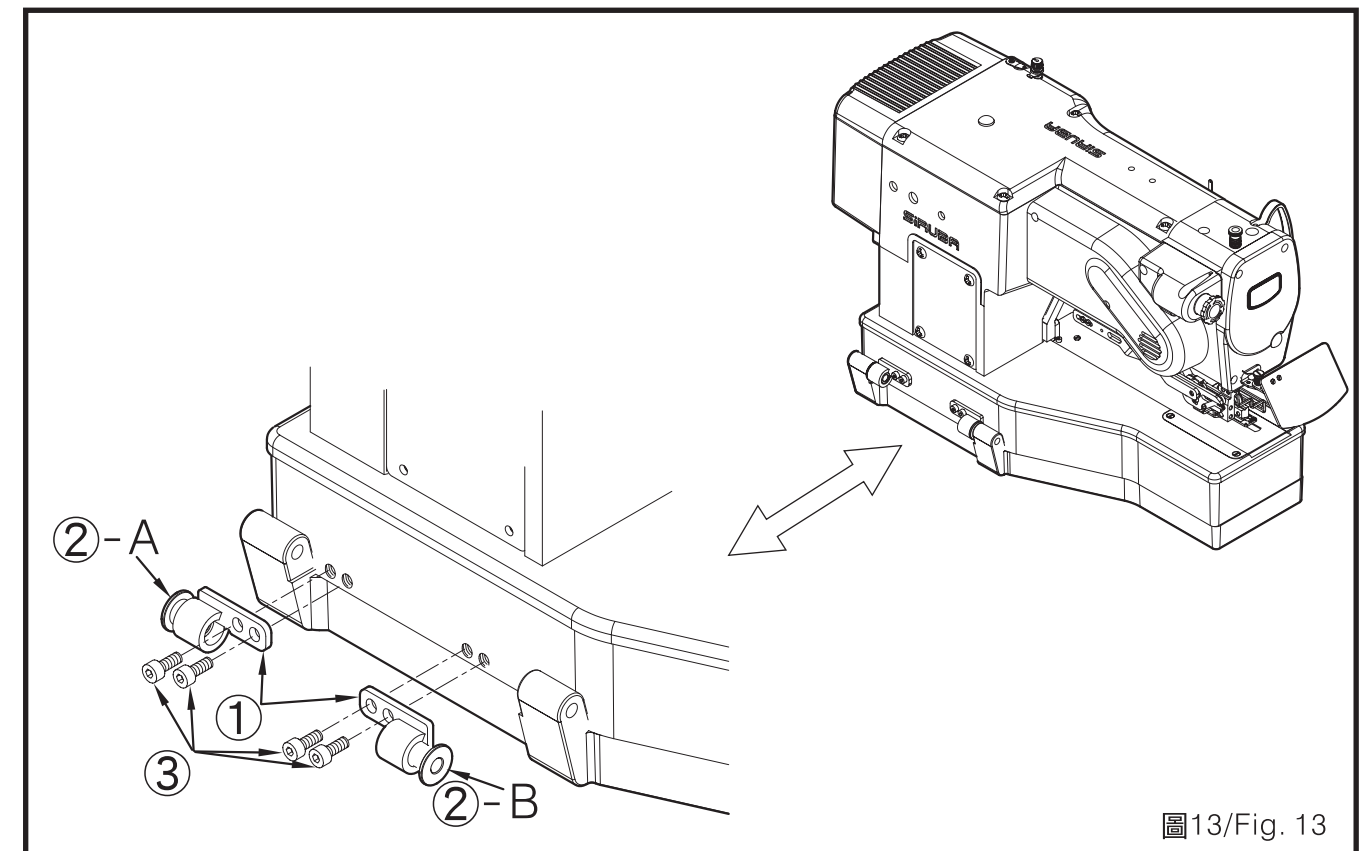
- As Fig. 12 shows, connect the cords (BQ724, BL739, BL738, and BL737) on the I/O circuit board by the order of A to A1, B to B1, C to C1, and D to D1.
- Insert the cords, BN706, GBD725, BQ713, BQ722, BQ720, and BQ714 into the electric control box through the hole of "INPUT".
- Connect the cords (upper figure in Fig. 12) to the connector on the circuit board (lower figure in Fig. 12)
- Gather the cords, and put them into the cords holder.
- Fix the ground wires of BN706 ⑦ and BQ732 ⑩ on ⑦ and ⑩ on BQ732 by screws.

2. 縫紉機主體的安裝(圖13)

2. Assemble the machine body (Fig. 13)

- 將鉸鍊板①與軸承座②(②-A為橡膠，②-B為金屬)如圖裝到機座上，然後用螺絲③將鉸鍊板①鎖緊固定。

- Place the hinge plate ① and the bearing seat ② (②-A is rubber, ②-B is metal) onto the machine body as the figure shown. Then, fix the hinge plate ① with the screws ③.



注意：

請不要把②-A與②-B的位置裝反，否則，放倒縫紉機時會發生危險。

NOTE:

Please DO NOT confuse the assembling places of -A and -B. Otherwise, it might cause dangers while tilting down the sewing machine.

(2) 縫紉機放倒的方法(圖14)

(2) Tilt the sewing machine. (Fig. 14)

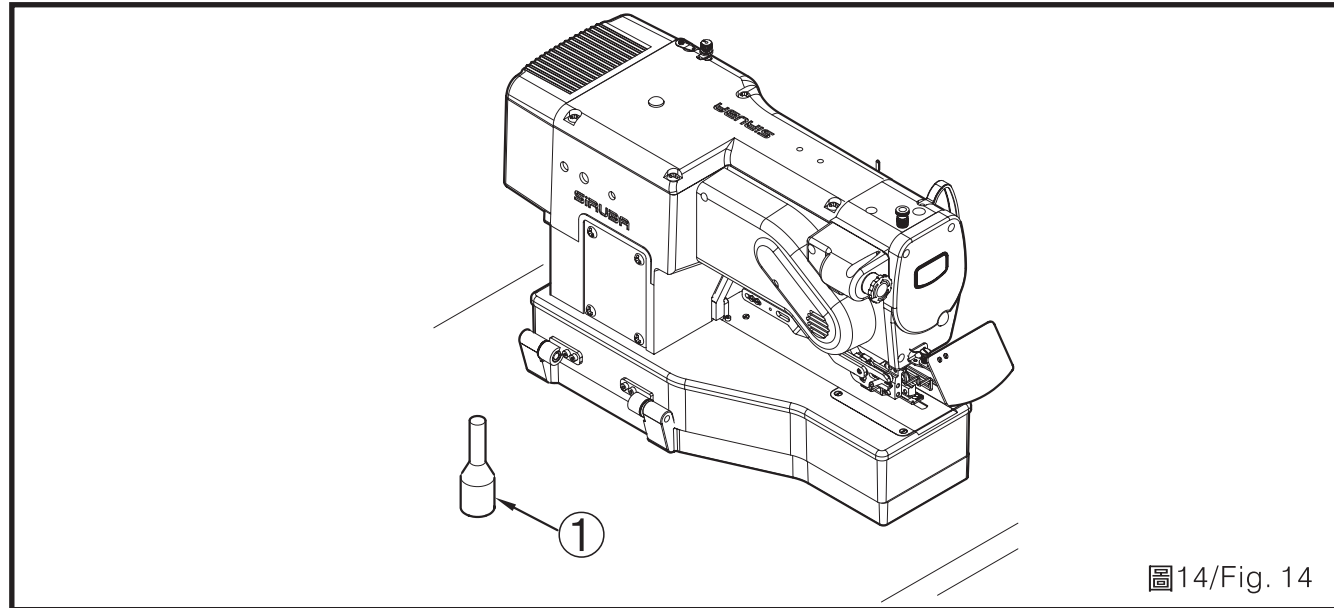


圖14/Fig. 14

放倒縫紉機時，請輕輕的放倒。讓機頭支撐桿①支撐住縫紉機。

Please tilt the sewing machine lightly so that the head support bar ① can hold and support the machine head.

注意：

1. 放倒縫紉機之前，請先確認機台上是否裝有機頭支撐架。

NOTE:

1. Before tilting down the sewing machine, please confirm that if there is a head support bar on it.

2. 為了防止縫紉機突然倒下，請勿在不平坦的地方放倒縫紉機。

2. In order to prevent injuries or damages from the dropping of the machine head, please DO NOT tilt the sewing machine at where there's not flat and level.

3. 連接安全開關(圖15)

把安全開關插頭①連接到機頭側的插頭②上。

3. Connect the safety switch (Fig. 15)

Connect the safety switch connector ① to the connector ② of the machine head side.

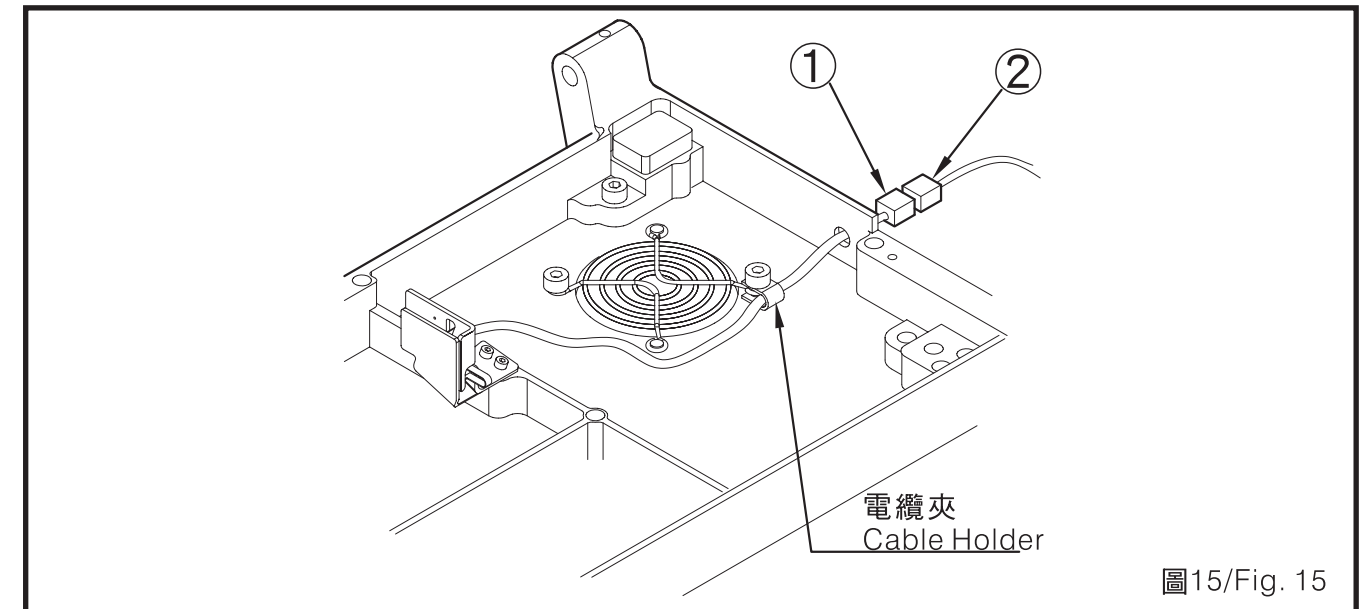


圖15/Fig. 15

4. 安裝旋梭防油板(圖16)

(1) 用固定螺絲①把旋梭防油板③安裝到油盤②上。

4. Assemble the hook oil-proof plate (Fig. 16)

(1) Assemble the hook oil-proof plate ③ onto the oil reservoir ② by the screw ①.

(2) 當放倒/抬起縫紉機時，請注意固定好，不要碰到旋梭防油板③。

(2) When tilting or raising the sewing machine, please make sure to hold it nicely from touching the hook oil-proof plate ③.

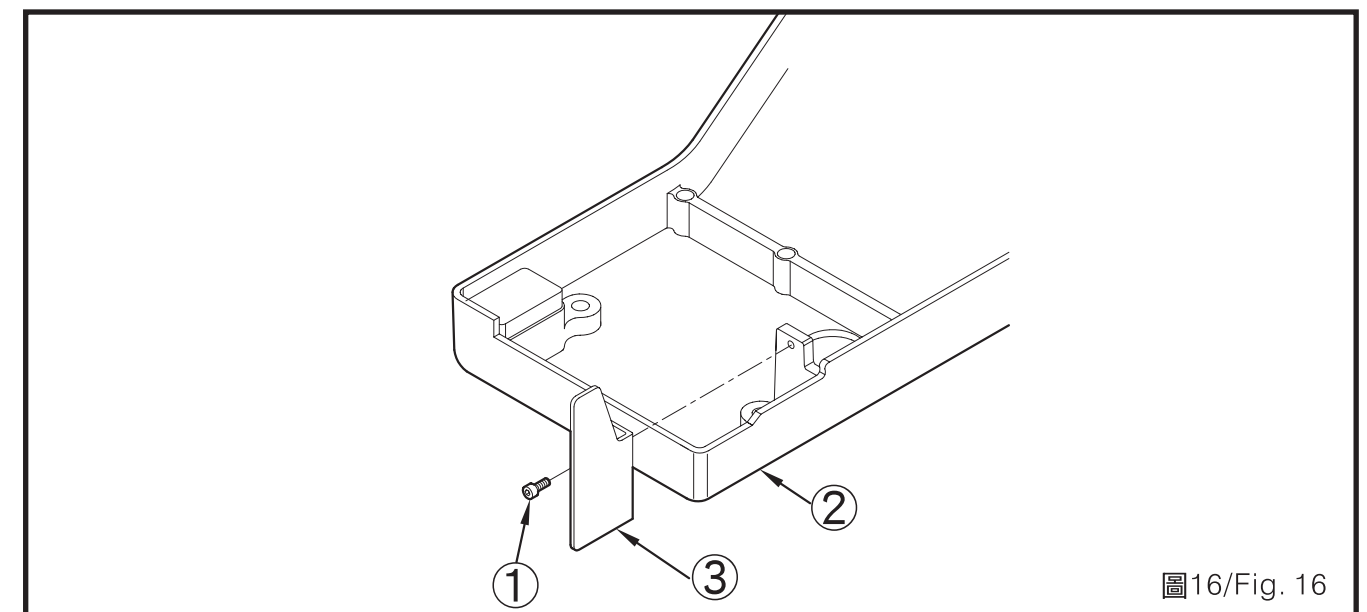


圖16/Fig. 16

5. 安裝操作盒(圖17)

請把操作盒固定座①用木螺絲②固定到桌板上，然後把電纜線穿過桌板孔③。

5. Install the operation panel (Fig. 17)

Please fix the operation panebracket ① on the table with the wooden screw ②. Then, pass the cable through the table hole ③.

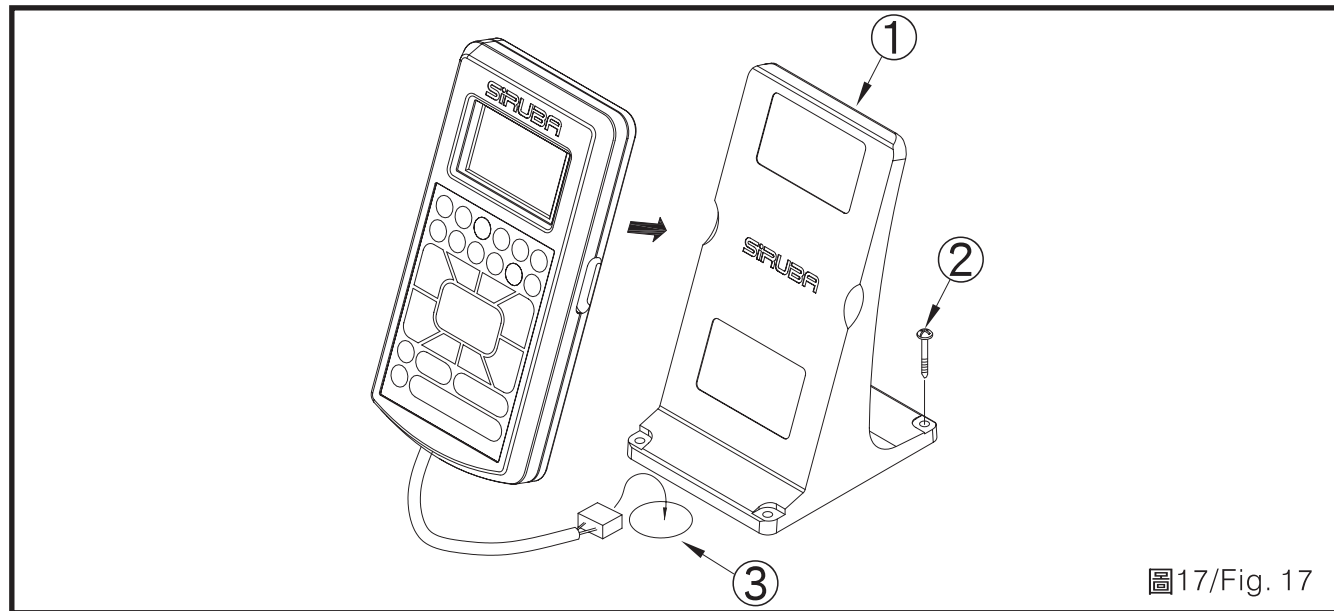


圖17/18 Fig. 17

6. 電線的處理(圖18)

- (1) 一邊慢慢的放倒縫紉機頭，一邊確認電纜是否有被勾住。
- (2) 確認之後，再用電線固定板①固定電線。

注意：
當放倒縫紉機時，請確認機頭支桿②是安裝在機台上的

6. Gather and keep the cables steady (Fig. 18)

- (1) Please tilt the machine head slowly. On the other hand, confirm if the cables are hooked or jammed.
- (2) After confirmation, keep the cables steady by using the cable holding plate ①.

NOTE:
While tilting the machine, please make sure the machine head support bar ② is already assembled.

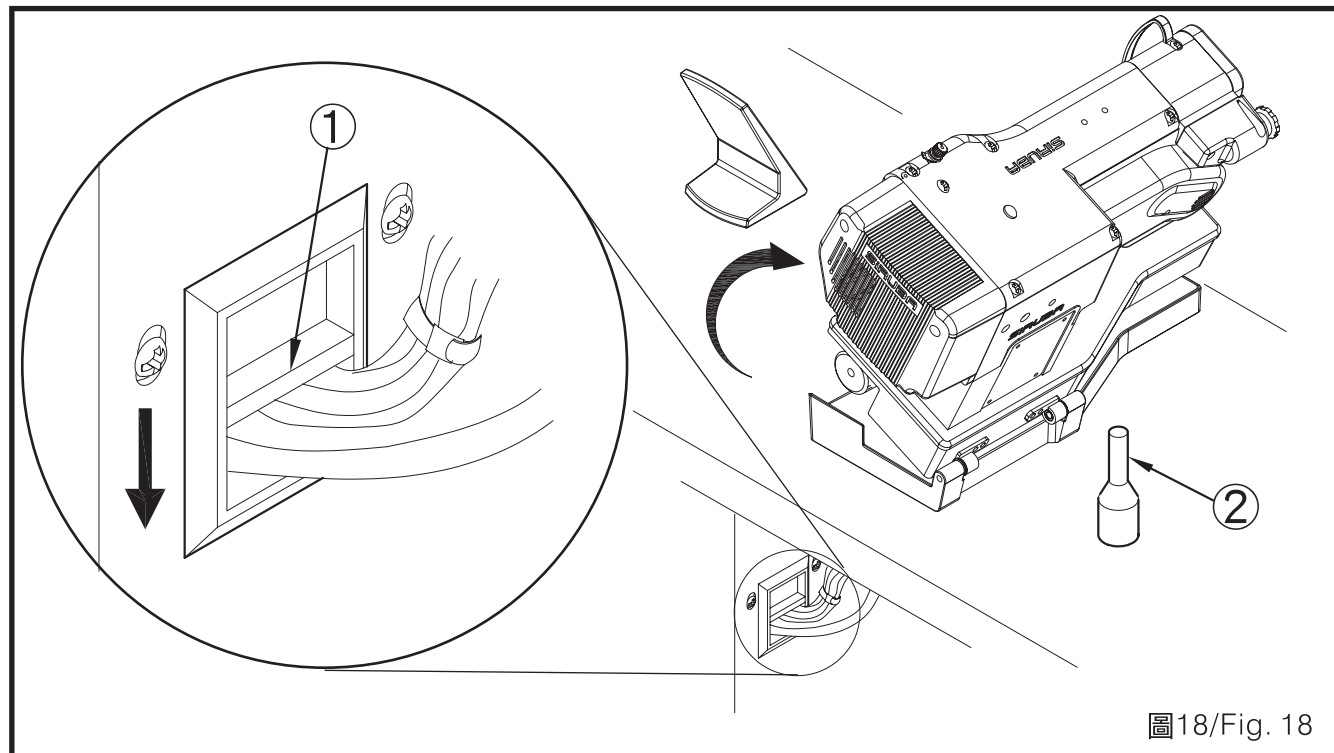


圖18/19 Fig. 18

7. 安裝護目鏡(圖19)
在使用縫紉機之前，請一定要先安裝護目鏡①。

7. Assemble the eye protector (Fig. 19)
Before operating the sewing machine, please assemble the eye protector first.

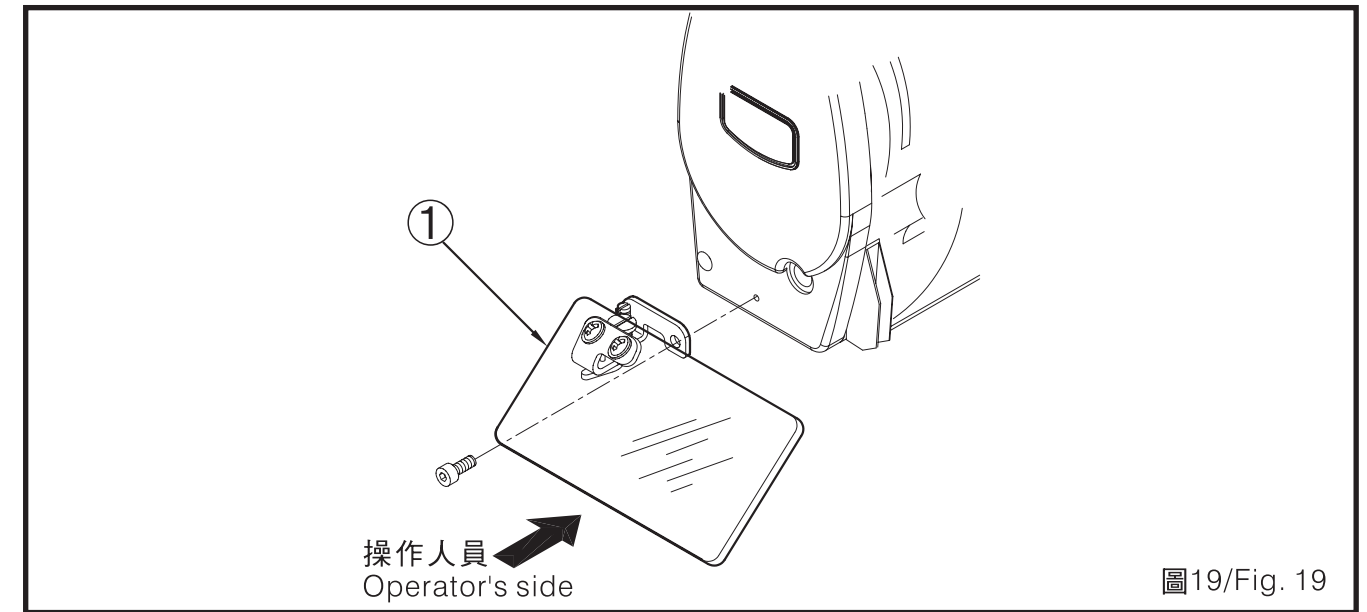


圖19/20 Fig. 19

8. 安裝線架(圖20)

- (1) 如圖安裝線架於機台右上方的孔內。
- (2) 鎖緊螺帽①，固定線架，使其不會鬆動。

8. Assemble the thread stand (Fig. 20)

- (1) Assemble the thread stand into the hole at the upper right side of the table.
- (2) Tighten the nut ① to keep the thread stand steady and still.

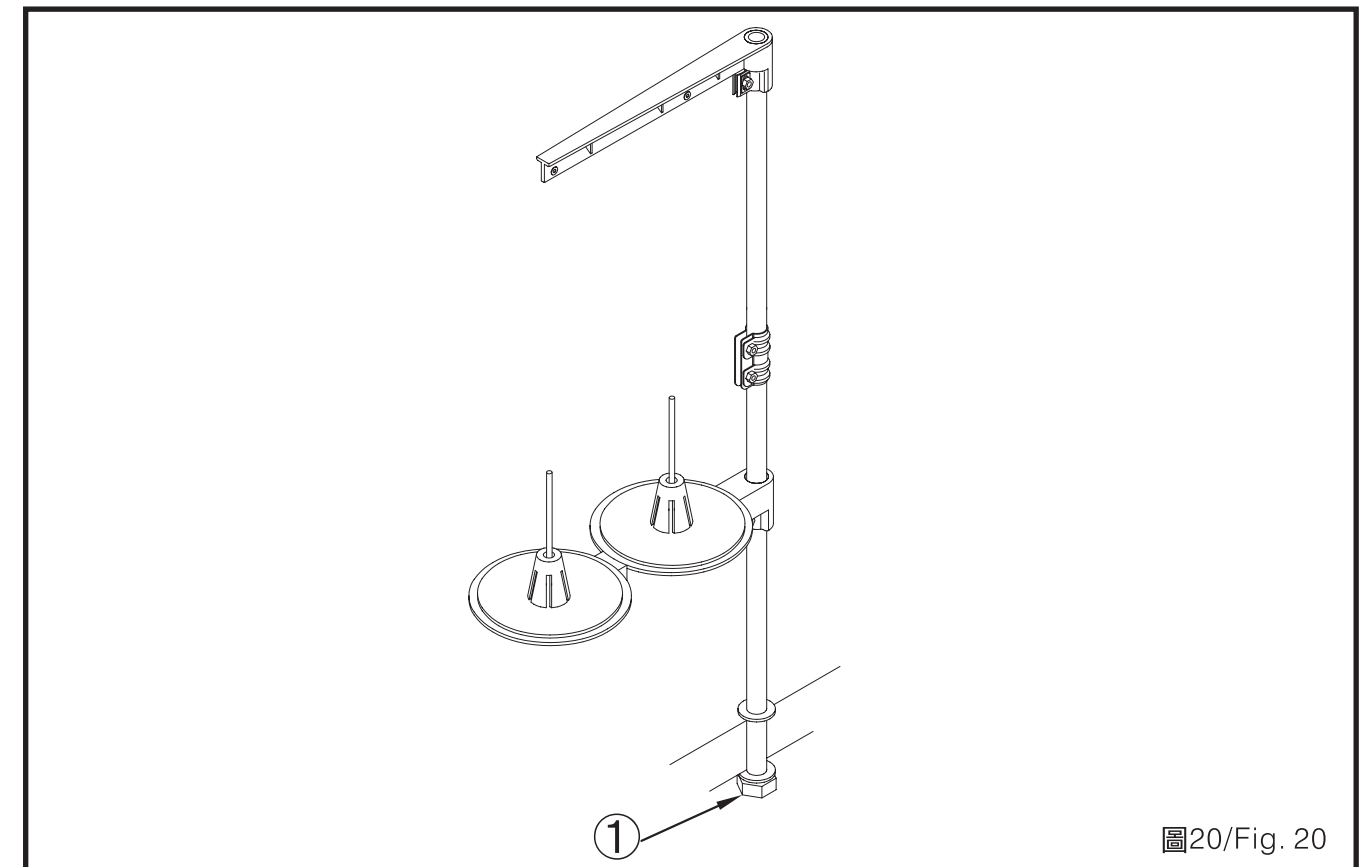


圖20/21 Fig. 20

9. 安裝機針(圖21)

- (1) 把機針凹部橫向轉向前側A。
- (2) 然後把機針插進針桿孔底部，鎖緊機針固定螺絲①。

注意：

為了防止機器突然啟動，造成人身事故，請在安裝前關閉電源，確認馬達確實停止運轉之後再進行。

9. Install the needle (Fig. 21)

- (1) Turn the indent part of the needle to make the indent part facing the front side, A.
- (2) Then, insert the needle into the end of the needle bar hole. After that, tighten the fixed screw ①.

NOTE:

In order to prevent the physical injuries and other possible damages from starting operating accidentally, please turn off the power before installing. Also, the motor has to stop completely.

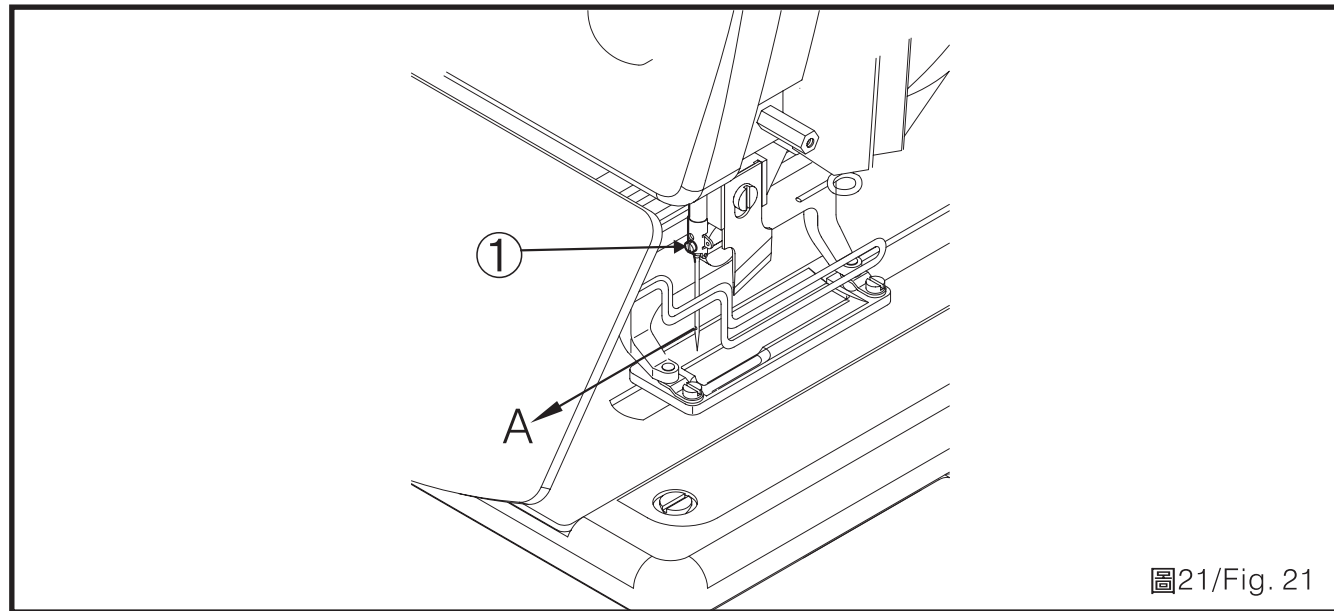


圖21/ Fig. 21

10. 上線穿線(圖22)

- (1) 如圖所示依數字順序進行穿線。
- (2) 請使用所附之穿線器以便穿線。
- (3) 使用機線不同，穿線方法也不同。

10. Threading the upper thread. (Fig. 22)

- (1) Please follow the numerical sequence in the figure to thread.
- (2) Please use the attached threader to thread conveniently.
- (3) For different threads, the threading solution might vary.

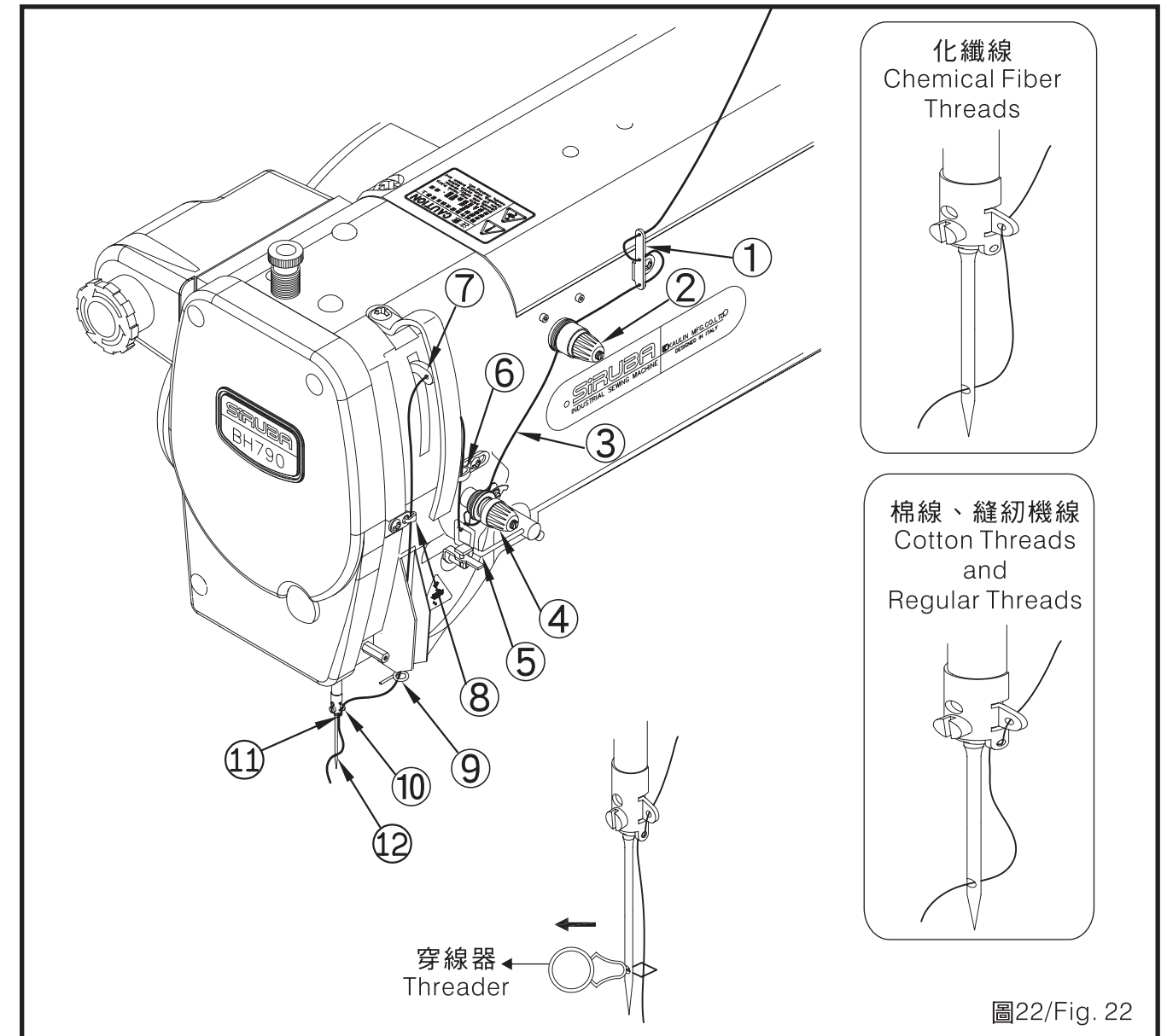


圖22/ Fig. 22

11. 梭殼穿線(圖23)

- (1) 請依照箭頭所指示方向把梭心放入梭殼內。
- (2) 把梭線穿過穿線口①，然後從張力彈簧②下方穿過去，再次穿過穿線口③，從④把線拉出來。
- (3) 請注意，在進行鎖眼縫和鋸齒邊縫時，④的穿線方法不同。

11. Thread through the bobbin case (Fig. 23)

- (1) Please follow the indicated direction the arrow shows in the figure to thread in the bobbin thread.
- (2) Pass the bobbin thread through the threading slit ①, and then thread under the tension spring ② to pass the bobbin thread through the threading slit ③ again. Pull the thread out from ④.
- (3) Please be noted that the threading solution of ④ is different while doing purl stitching and whip stitching.

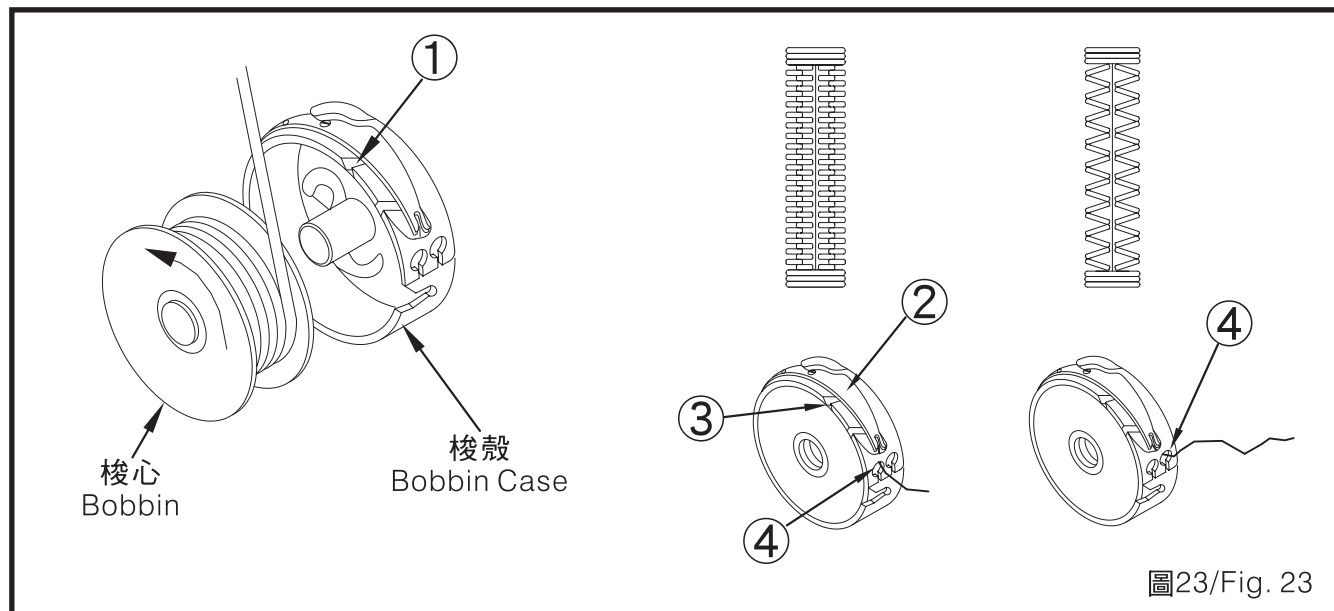


圖23/Fig. 23

12. 安裝梭殼(圖24)

- (1) 拿起梭殼並且將梭殼門柄置於兩指之間。
- (2) 將梭殼放入旋梭中軸①中，當梭殼到達預定位置時，會聽到一聲喀嚓的響聲。

12. Install the bobbin case (Fig. 24)

- (1) Take the bobbin case and place the bobbin latch lever between two fingers.
- (2) Place the bobbin case onto the hook shaft ①. When the bobbin case reaches the preset position, there will be a "click" sound.

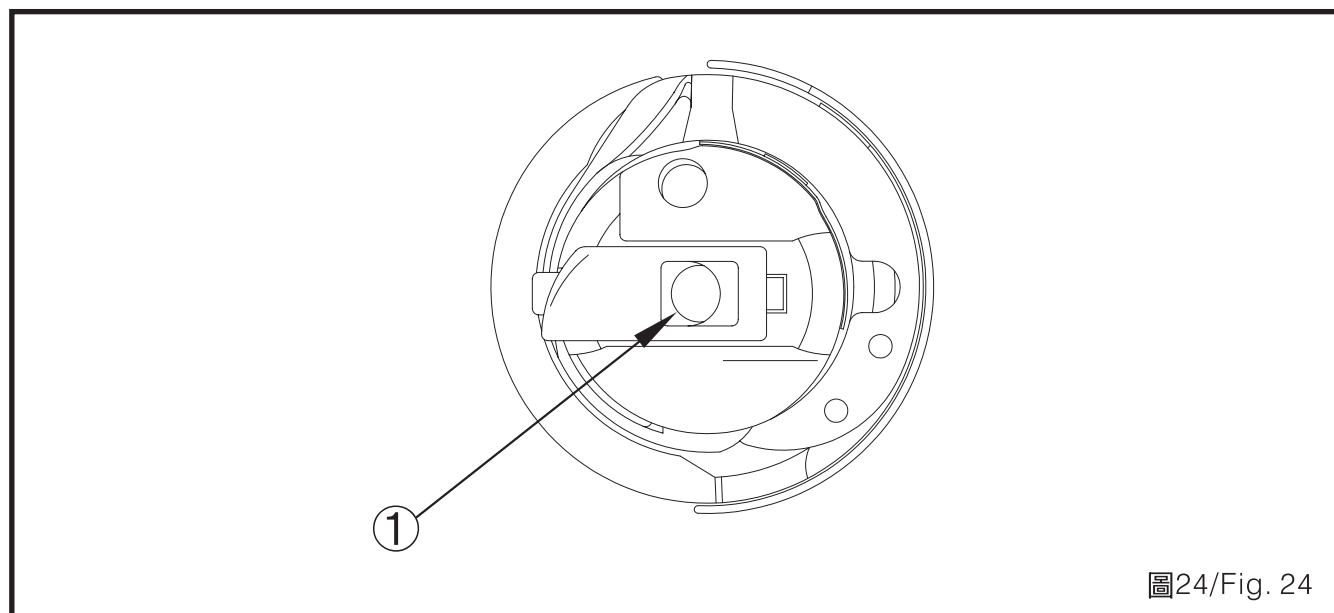


圖24/Fig. 24

注意：

- (1) 如果梭殼沒有在規定的位置上，縫紉時梭心會飛出來，上線會繞到旋梭軸上。

NOTE:

- (1) If the bobbin case is not at the preset position, the bobbin will escape from the bobbin case while sewing, whereas the needle thread will twist on the hook shaft.

- (2) 因為標準旋梭和乾式旋梭的形狀不一樣，所以不能通用。

- (2) Because the shapes of the standard hook and dry hook are different, there is no possibility to switch to use.

13. 安裝切刀(圖25)

- (1) 卸下切刀固定螺絲②之後，就可以把切刀①和墊片一起卸下。
- (2) 替換切刀①之後，如圖把切刀①和針板上面的距離調整至1~2 mm，然後確實地套上墊片，並鎖緊固定。

13. Install the trimmer (Fig. 25)

- (1) After disassemble the trimmer fix screw, the trimmer ① and washer can be remove easily.
- (2) After replacing the trimmer ①, adjust the clearance between the trimmer ① and the needle plate surface to be 1~2 mm. Then, put on the washer, and tighten the screw firmly.

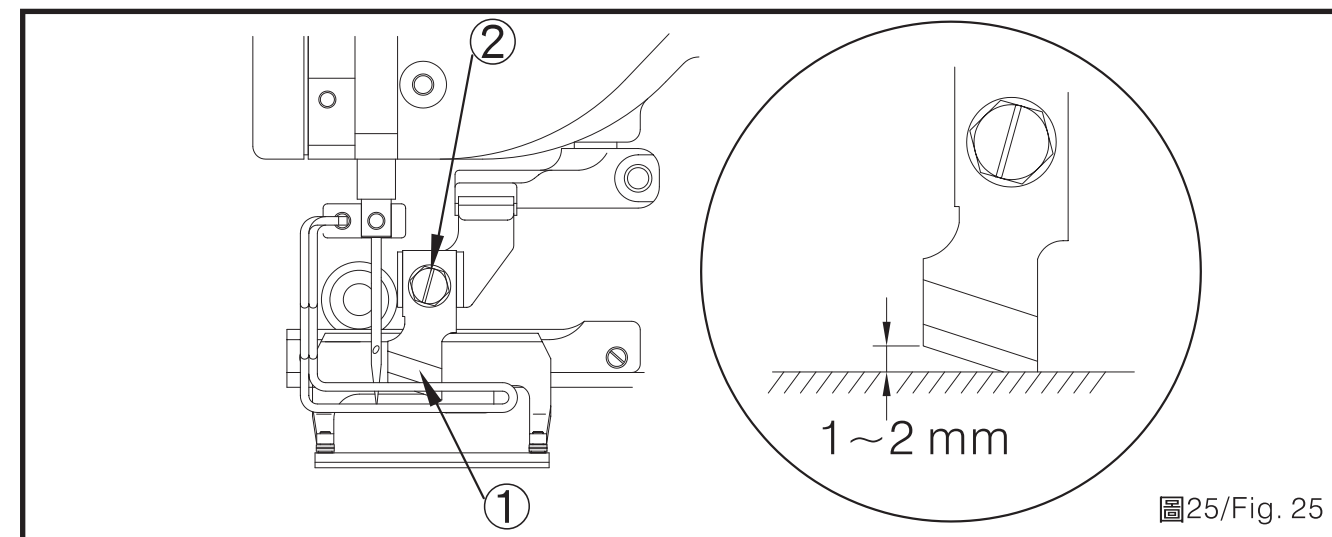


圖25/Fig. 25

潤滑

LUBRICATION

1. 加油(圖26)

將SIRUBA專用油注入油槽直到油面到達MAX記號①。

1. Add oil (Fig. 26)

Add the SIRUBA specified machine oil into the oil reservoir until the oil plane surface reaches the MAX mark ①.

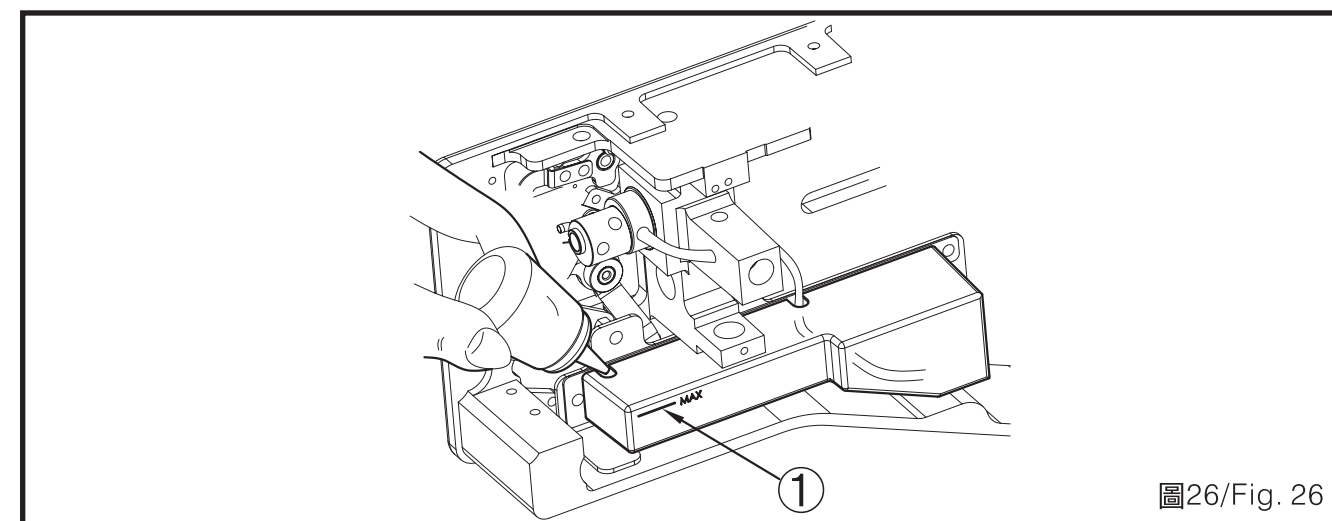


圖26/Fig. 26

2. 調整旋梭油量(圖27)

- (1) 旋鬆油量調節固定螺母②，然後用油量調節螺絲③進行調節。
- (2) 鎖緊油量調節螺絲③，則油量減少。反之則增加油量。
- (3) 調節油量後，請用固定螺母②固定。
- (4) 在安裝新縫紉機或要使用長時間沒有使用的縫紉機之前，請先取下梭殼，並在旋梭邊槽加2~3滴機油。

2. Adjust the lubrication amount on the hook (Fig. 27)

- (1) Loosen the oil amount adjusting fixed nut ②, and then, adjust the oil amount by turning the oil amount adjusting screw ③.
- (2) Tighten the oil amount adjusting screw ③ will decrease the oil amount, whereas loosen it will increase the oil amount.
- (3) After adjusting, please fix it by the fixed nut ②.
- (4) Before assembling a new sewing machine or using a long-idle machine, please take off the bobbin case first, and drop 2~3 drops of machine oil on the side groove of the hook.

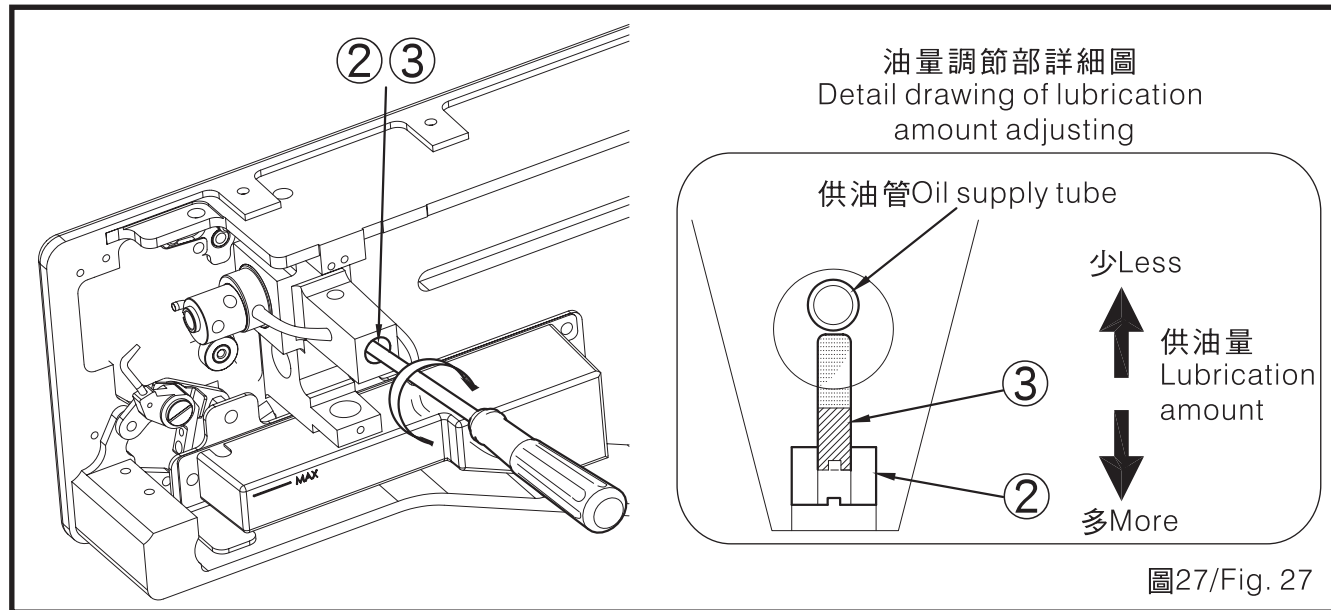


圖27/Fig. 27

調整底線張力

ADJUST THE BOBBIN THREAD TENSION

1. 在梭殼穿線口①把底線拉出之後，依照下列方法調整底線張力。(圖28，表6)
2. 把線張力螺絲②向右轉動，底線張力變強；向左轉動，底線張力變弱。

1. After pulling out the bobbin thread from the bobbin case slit ①, adjust the tension by the followings. (Fig. 28, Table 6)
2. Turn the thread tension adjusting screw ② rightward will increase the thread tension, whereas turn it leftward will decrease the thread tension.

3. 當使用化纖線時，請稍微減弱張力。而當使用棉紗線時，請稍微加強線張力。
4. 因本機種裝有防止空轉彈簧，所以裝上旋梭之後的線張力請再調整加強0.05N左右。

3. When using the chemical fiber threads, please decrease the thread tension a little. When using the cotton fiber threads, please increase the thread tension a little.
4. Because there is a idle-running-proof spring designed of this model, the thread tension should be increased about 0.05N after assembling the hook.

直鎖眼縫 Purl Stitching	0.05N~0.15N	拿梭線頭輕輕上下擺動時，梭殼就稍稍下降。 When taking the bobbin thread, and swinging it up and down slightly, the bobbin case will descend a little.
鋸齒邊縫 Whip Stitching	0.15N~0.3N	拿梭線頭用稍微強一點的力量擺動時，梭殼才會下降。 When taking the bobbin thread, the bobbin case will descend only by swinging it with a slightly stronger strength.

表6/Table 6

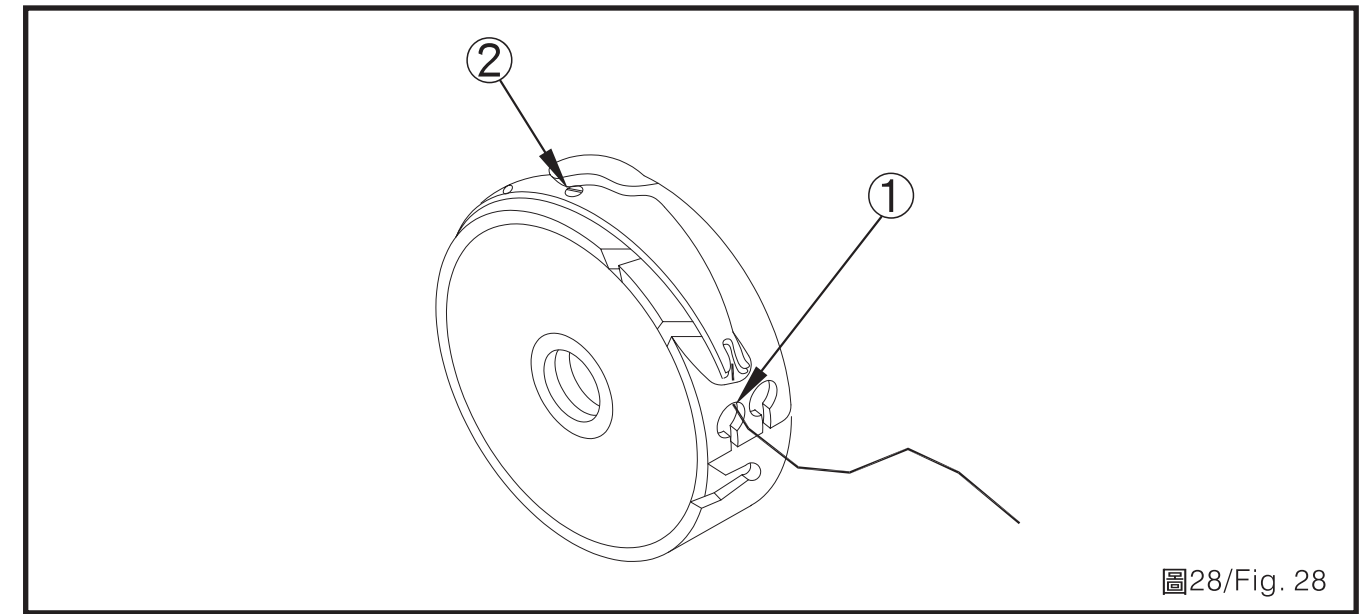


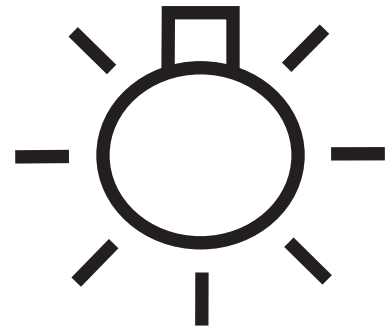
圖28/Fig. 28

操作環境照明

LIGHTENING OF THE OPERATION ENVIRONMENT

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29所示

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. 29.



最大流明……510 流明
 Maximum…… 510 Lum
 最小流明…… 430 流明
 Minimum…… 430 Lum

圖29/Fig.29

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.

操作

OPERATION

1. 操作盒開關說明(圖30)

不同的背光顏色有以下三種狀態：

- (1) 藍色：輸入模式→可以變更數據
- (2) 綠色：縫製模式→可以縫製的狀態。
- (3) 黃色：異常狀態→表示發生某種異常。

1. Description of the operation panel (Fig. 30)

Different back light has different status:

- (1) Blue: INPUT mode→DATA is changeable.
- (2) Green: SEWING mode→Ready to sew.
- (3) Yellow: ERROR status→Some error happens.

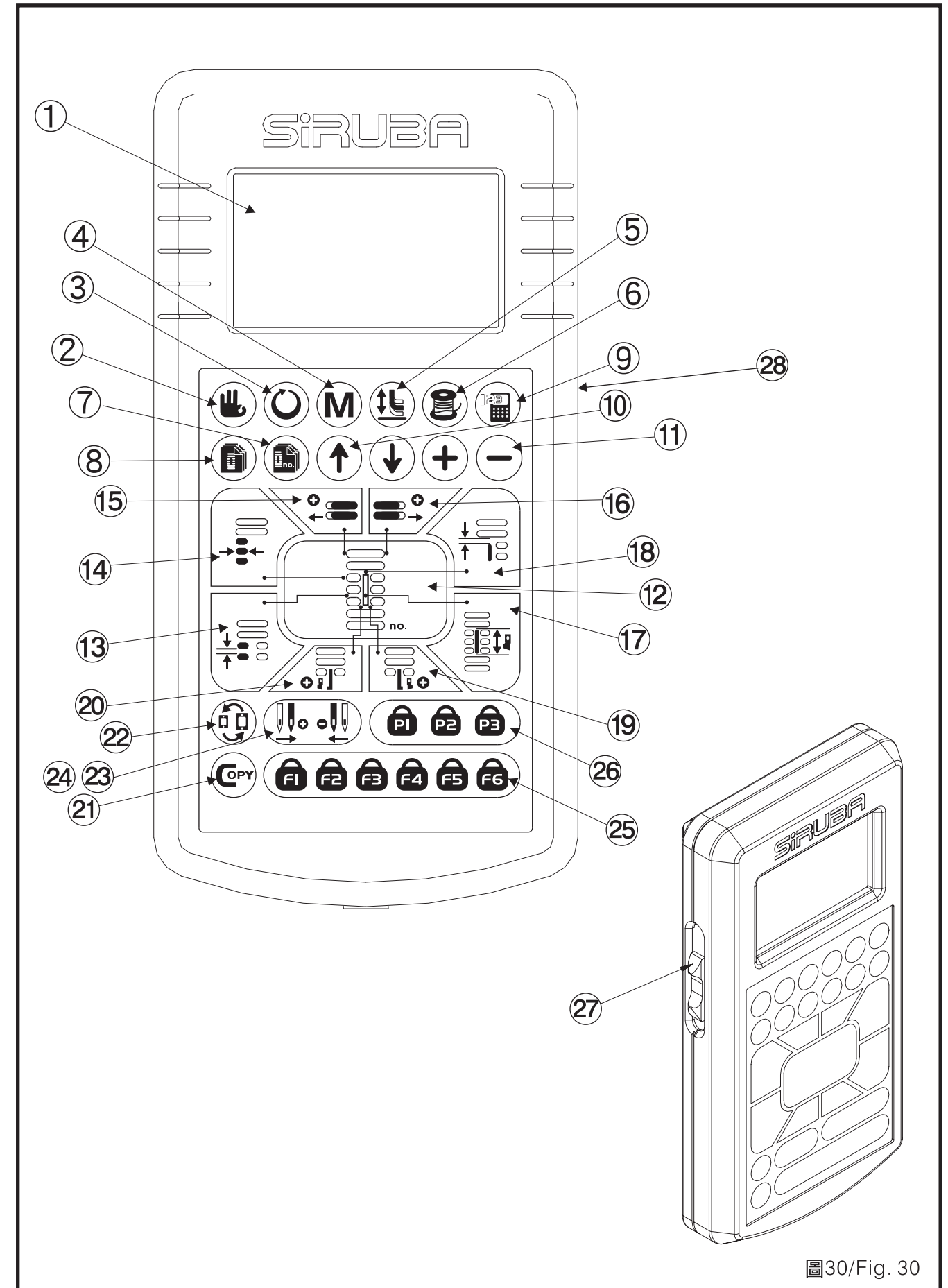
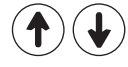

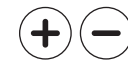

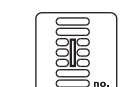











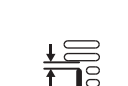


圖30/Fig. 30

2. 操作控制盒機能一覽表。(圖表2)

2. Functions list of the operation panel.
(Chart 2)

編號 NO.	名稱 Name	機能 Function	編號 NO.	名稱 Name	機能 Function
1.	液晶顯示面板 LCD Display	顯示花樣、編號、形狀等各種資料。 Display various data, such as patterns, NO., or shapes, etc.	10.	項目選擇鍵 Item Selection Key 	選擇花樣編號、參數項目編號。 Select item such as pattern number, item number, etc.
2.	準備鍵 Ready Key 	在縫製開始時按下此鍵，每按一下就在縫製準備完畢狀態和數值設定狀態之間切換。 Press this key when starting sewing. Each press will switch between the ready for sewing status and the data setting status.	11.	數值變更鍵 Data Change Key 	變更各種數值。 Press the keys to change the data value.
3.	復位鍵 Reset Key 	在進行解除錯誤，移動送布初期位置，以及計數器歸零時，請按此鍵。 For releasing errors, travelling the feeding mechanism to its origin, and zeroing the the counter, please press this key.	12.	花樣形狀鍵 Pattern Selection Key 	選擇縫製之花樣形狀並顯示。 Select the shapes of the pattern and display.
4.	模式鍵 Mode Key 	變更存儲器開關數值時請按此鍵。 Please press this key for changing data of the memory switches.	13.	平行部縫距鍵 Pitch Key 	選擇平行部縫距。 Select the pitch at the parallel section.
5.	押腳鍵 Presser Key 	控制壓腳下降/上升。 Control the lowering/lifting of the presser foot.	14.	平行部寬幅鍵 Width Key 	選擇平行部寬幅。 Select the width at the parallel section.
6.	捲線鍵 Winding Key 	按下這個按鍵，為捲線模式。 Press this key will change to the winding mode.	15.	左加固部寬幅鍵 Left Width Key 	選擇左加固部寬幅補正。 Select the left side of width compensation at the bar-tacking section.
7.	參數項目鍵 Item Key 	選擇參數項目 Select the item display.	16.	右加固部寬幅鍵 Right Width Key 	選擇右加固部寬幅補正。 Select the right side of width compensation at the bar-tacking section.
8.	花樣編號鍵 Pattern No. Key 	選擇花樣編號。 Select the pattern number.	17.	切布長度鍵 Fabric Trimming Length Key 	選擇切布長度 Select the trimming length of the fabrics while bar-
9.	計數鍵 Counter Key 	選擇計數。 Select counter display.	18.	間隙鍵 Clearance Key 	選擇切布刀與上加固部間隙補正。 Select clearance display of the clearance compensation between the fabric trimmer and the upper bar tacking.

編號 NO.	名稱 Name	機能 Function	編號 NO.	名稱 Name	機能 Function
19.	切布槽右寬幅鍵 Trimming Groove Right Width Key 	選擇切布槽寬幅右補正 Select the right width compensation of the trimmer groove.	24.	後退鍵 Backward Key 	1針1針的送布後退。 Make the feeding mechanism travelling backward stitch by stitch.
20.	切布槽左寬幅鍵 Trimming Groove Left Width Key 	選擇切布槽寬幅左補正 Select the left width compensation of the trimmer groove.	25.	花樣功能鍵 Pattern Registration Key 	花樣設置快捷鍵。 只需要用快捷鍵就可以顯示任意的花樣設定。 Short-cut key for patterns to registrate. An optional pattern display is available by simply setting it with one of the short-cut key.
21.	複製鍵 Copy Key 	在花樣進行複製時選擇。 Press this key for copying	26.	參數項功能鍵 Item Registration Key 	參數項設置快捷鍵。 顯示任意的模板、縫製花樣及調整數值，只需使用快捷鍵即可。 Short-cut key for item to registrate its parameter. Optional patterns, sewing parameters, or data adjustments are available by just simply setting this short-cut key.
22.	押腳選擇鍵 Presser Foot Selection Key 	選擇押腳類型。 Select the type of the presser foot.	27.	速度調節鈕 Speed Adjusting Key	往上提升速度，往下減緩速度。 Increase the speed by lifting upward, as well as decrease the speed by lowering downward.
23.	前進鍵 Forward Key 	1針1針送布前進。 Make the feeding mechanism travelling forward stitch by stitch.	28.	液晶調整旋鈕 LCD Adjusting Knob	可以調整液晶顯示明暗度。 Adjust the brightness of the LCD is available by pressing this key.

圖表2/Chart 2

縫紉機的基本操作說明

BASIC OPERATION DESCRIPTIONS OF THE SEWING MACHINE

1. 打開電源開關

首先請確認被設定的押腳類型A和實際安裝的押腳類型是否一樣。確認和設定方法請參閱『輸入押腳類型』。

1. Turn on the power switch

First of all, please make sure that the set presser foot type A is exactly the same with the assembled one. Please refer to 『Input the presser foot type』 to confirm and learn how to set.

2. 選擇縫製圖案編號(圖31)

- (1) 打開電源之後，被選擇的圖案①閃爍。
- (2) 想變更時，按項目選擇鍵②來上下選擇想縫製的編號。
- (3) 出廠時，在『變更縫製數據』內記載的圖案1~7是已被登記好的，因此可以從中選擇所需圖案。(沒有登記的圖案號碼不會顯示)

2. Select the sewing pattern number (Fig. 31)

- (1) After turning on the power, the selected pattern ① will flash.
- (2) For changing the pattern, please press the item selection key ② to choose the desired pattern number.
- (3) After manufactured, the recorded patterns mentioned in 『Chang Data Sewing』 are set in original. Therefore, there are 7 patterns available to choose. (Patterns without recorded will not show.)

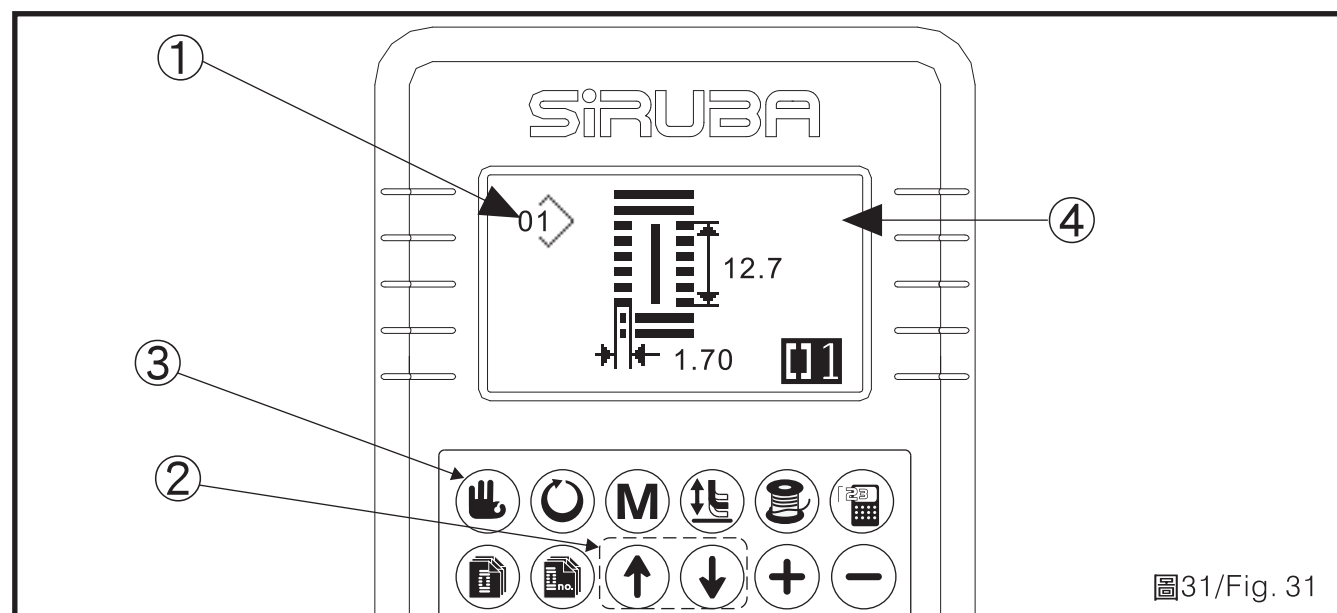


圖31/Fig. 31

3. 進入可以縫製狀態(圖31)

按下準備鍵③，液晶螢幕④的背景燈會由藍色轉成綠色，成為可縫製狀態。

3. Ready to sew status (Fig. 31)

After pressing the ready key, the back light of the LED screen will turn to green from blue and become the ready to sew status.

4. 開始縫製

- (1) 把縫製物放到押腳下，踩動踏板，縫紉機開始縫製。
- (2) 出廠時的設定為雙踏板規格，踏板操作的方法有三種，請選擇喜歡的操作方法使用。

4. Start sewing

- (1) Place the material under the presser foot, and press the pedal. Then, the sewing machine will start sewing.
- (2) The pedal specification is set to be bi-pedal. There are 3 operation solutions. Please choose your desired way.

操作踏板

HOW TO OPERATE THE PEDAL

本縫紉機有三種踏板的操作方法，請選擇作業效率高及慣用的操作方法使用。

There are 3 different ways of pedal operation. Please choose the most efficient and usable operation solution to you.

1. 踏板類型的設定方法(圖32)

1. Setting pedal type. (Fig. 32)

(1) 叫出踏板類型的設定參數

(1) Call the parameter to set the pedal type

- a. 在輸入模式的狀態下，持續按住模式鍵3秒鐘以上後，會顯示存儲器開關(2級)的編輯畫面。

- a. Under the status of INPUT mode, if pressing the Mode Key more than 3 seconds, the edit screen of input and memory switch (level 2) will appear.

- b. 如果踏板類型選擇參數沒有顯示，請按項目選擇鍵。

- b. If the pedal type selection parameter didn't display, please press the item select key.

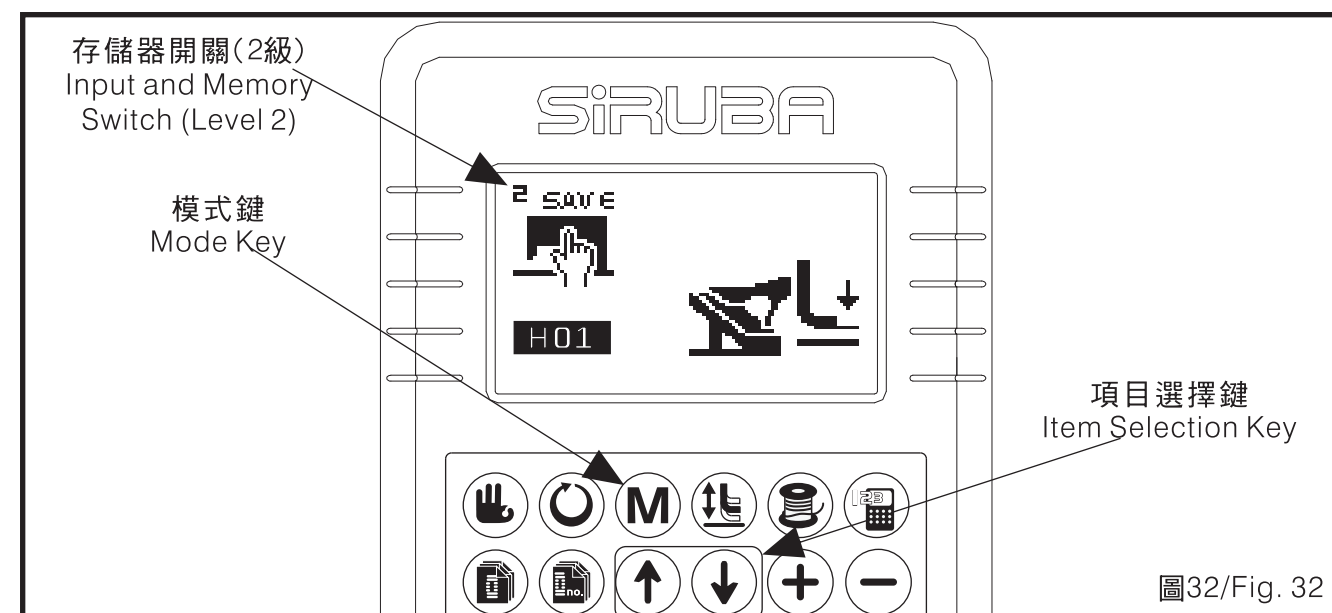


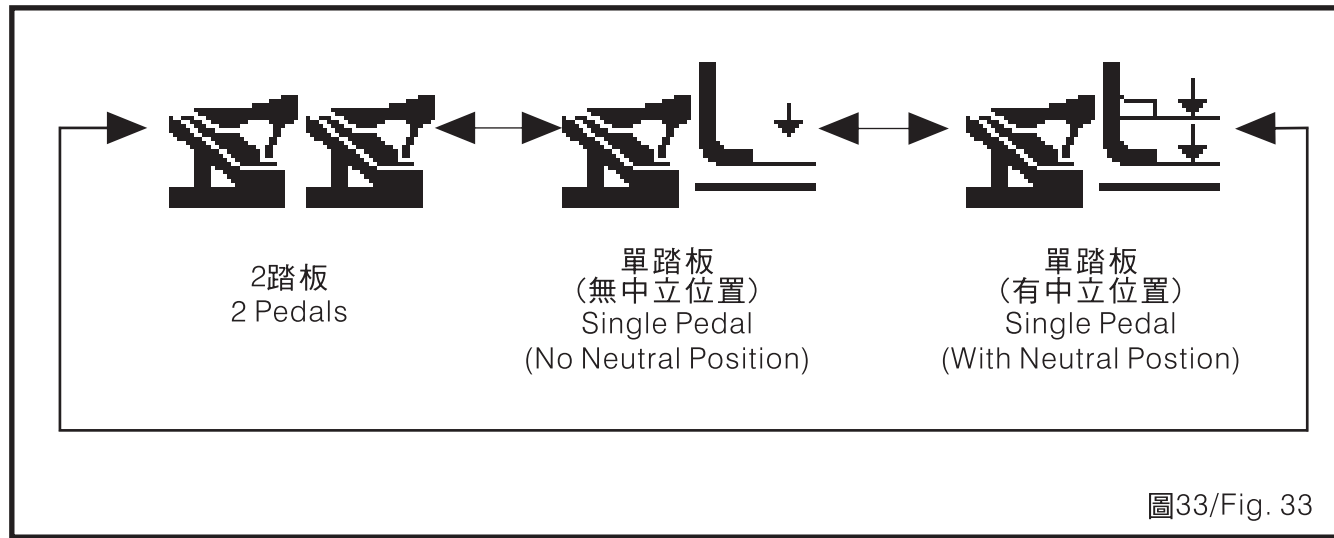
圖32/Fig. 32

(2) 選擇踏板類型

(2) Select the pedal type

- a. 按下數據變更鍵會如圖所示變更圖樣，請依照喜好選擇。(圖33)

- a. Press the data change key will change the pedal figure as shown in the figure. Please select your desired one. (Fig. 33)



b. 踏板類型的動作說明(表7)

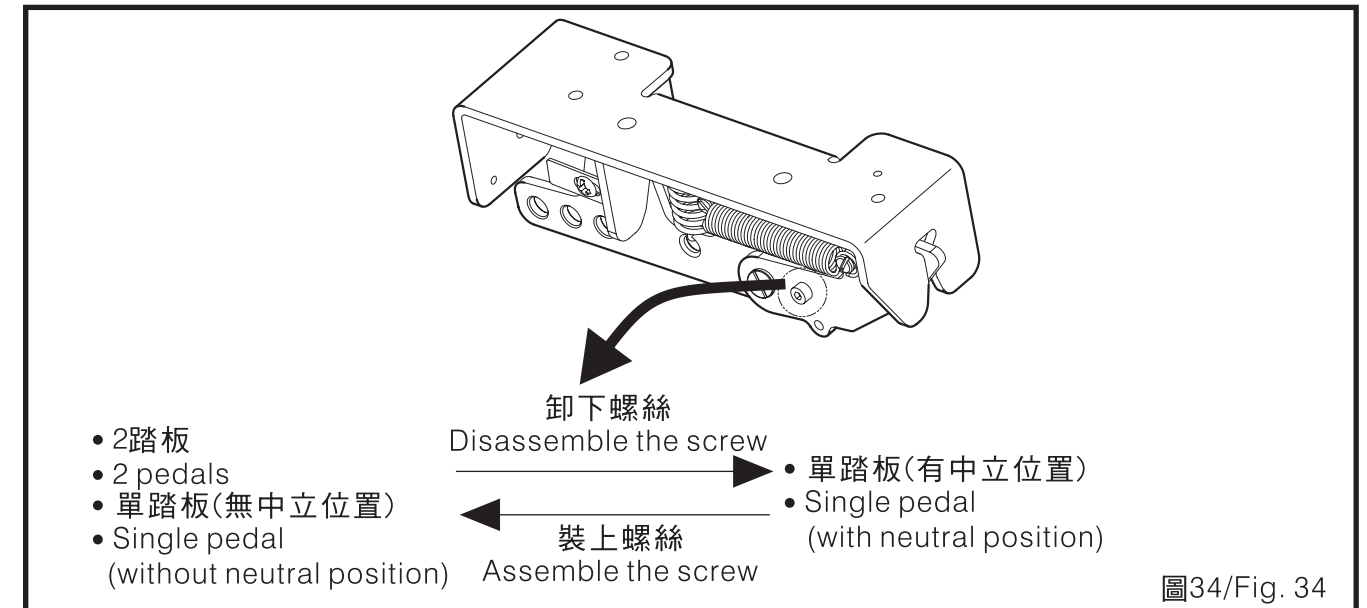
b. Descriptions of pedal motion of each pedal type. (Table 7)

2踏板 2 Pedals	單踏板 (無中立位置) Single Pedal (No Neutral Position)	單踏板 (有中立位置) Single Pedal (With Neutral Position)
<p>初期位置Initial position 押腳中立位置②或縫製位置③。 The presser foot stays at the neutral position ② or sewing position ③.</p> <p>1. 放置縫製物 Place the sewing material 押腳上升高度最多僅能是左側踏板的踩踏量 The max lifting height of the presser foot only can be the left pedal pressed value.</p> <p>2. 縫製開始 Start sewing 踩右側踏板開始縫製 Press the right pedal to start sewing.</p> <p>3. 縫製終了 Finish sewing 押腳自動上升到中立位置② The presser foot will travel to the neutral position ② automatically.</p> <p>布料 Fabrics</p>	<p>初期位置Initial position 押腳在最高位置①。 The presser foot is at the highest position ①.</p> <p>1. 放置縫製物 Place the sewing material</p> <p>2. 確認放置的縫紉物 Confirm the placed sewing material. 踩右側踏板到1級之後，押腳下降到放布位置③。 After pressing the right pedal to level 1, the presser foot will travel to sewing position ③.</p> <p>3. 縫製開始 Start sewing 踩右側踏板到2級之後開始縫製 Press the right pedal to level 2 to start sewing.</p> <p>4. 縫製終了 Finish sewing 押腳自動上升到最高位置① The presser foot will travel to the highest position ① automatically.</p>	<p>初期位置Initial position 押腳在最高位置①。 The presser foot is at the highest position ①.</p> <p>1. 放置縫製物 Place the sewing material</p> <p>2. 確認放置的縫紉物 Confirm the placed sewing material. 踩右側踏板到1級之後，押腳下降到中立高度②。 Press the right pedal to level 1, and the presser foot will travel to the neutral position ②.</p> <p>3. 確認縫製開始 Confirm to start sewing 踩右側踏板到2級之後，押腳下降到縫紉位置③。 After pressing the right pedal to level 2, the presser foot will travel to the sewing position ③.</p> <p>4. 縫製開始 Start sewing 踩右側踏板到3級之後，縫製開始。 Press the right pedal to level 3, the sewing starts.</p> <p>5. 縫製終了 Finish sewing 押腳自動上升到最高位置① The presser foot will travel to the highest position ① automatically.</p>

表7/Table 7

2. 踏板開關的設定(圖34)
請依照存儲器開關的設定情況安裝圖中的螺絲或拆卸螺絲。

2. Configure the pedal switch (Fig. 34)
Please assemble or disassemble the screw shown in the figure upon the configuration of the input and memory switch.

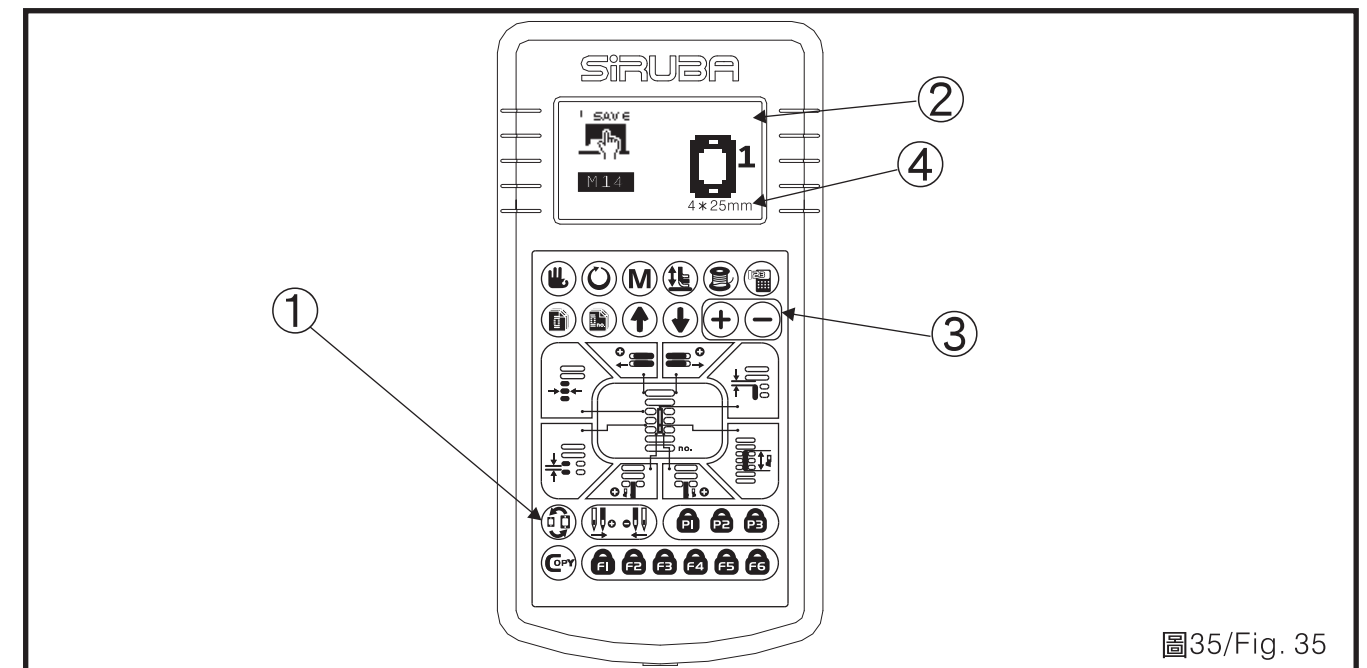


押腳設定

CONFIGURE THE PRESSER FOOT

1. 押腳類型的設定方法(圖35)
(1) 叫出押腳類型的設定參數
按押腳選擇鍵①，顯示存儲器開關(等級1)的編輯畫面②。

1. Set the types of the presser foot. (Fig. 35)
(1) Call the parameters to set the types of the presser foot.
Press the Presser Foot Selection Key ① to show the editing screen of the input and memory switch (level 1) ②.



(2) 選擇押腳類型

a. 按下數值變更鍵③後，圖面會依照圖36所示變更。(圖36)

(2) Choose the presser foot type

a. After pressing the Data change key ③, the screen will change as figure 36. (Fig. 36)

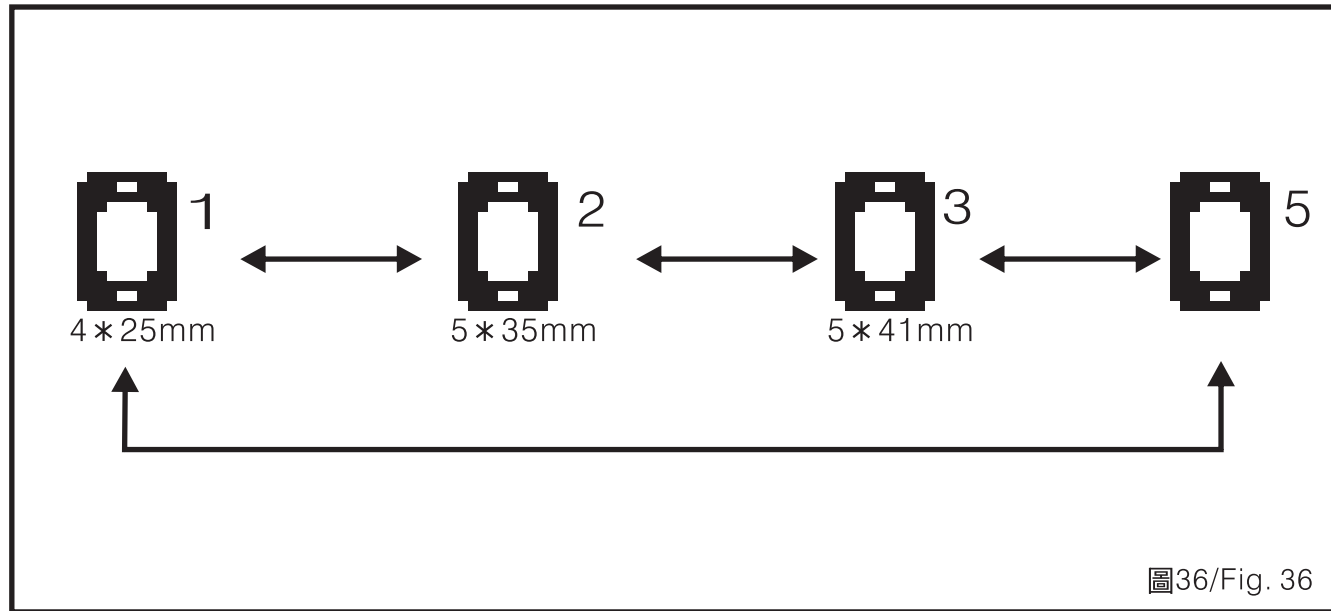


圖36/Fig. 36

b. 請參考圖表3設定安裝在縫紉機上的押腳類型④。

b. Please refer to Chart 3 to set the type ④ of the presser foot on the sewing machine.

押腳圖示 Presser foot icon	類型Type	押腳零件代號 Presser foot part code	
		標準 Standard	針織物 Knitting
 1 4*25mm	第1型 Type 1	標準 Standard	P570A
		針織物 Knitting	P570B
 2 5*35mm	第2型 Type 2	標準 Standard	P571A
		針織物 Knitting	P571B
 3 5*41mm	第3型 Type 3	標準 Standard	P572A
		針織物 Knitting	P572B
 5	第5型 Type 5	P573A	

圖表3/Chart 3

註：

(1) 使用1~3型以外的押腳頭時，請設定為第5型。

NOTE:

(1) When using the presser foot other than type 1~3, please set the type as type 5.

(2) 請根據所使用的存储器開關(1級)的押腳尺寸寬度和押腳尺寸長度來設定變更。

(2) Please set and save the changes according to the presser size width and the presser size length of the input and memory switch (level 1).

(3) 當第5型擺動寬度在6 mm以上，長度在41 mm以上時，需要更換押腳曲柄、送布板等零件。

(3) When the swing width is over 6 mm, swing length is over 41 mm of the type 5, there will be a need to change the presser crank and the fabric feeding plate, etc.

圖案選擇

SELECT THE PATTERN

1. 從選擇畫面選擇(圖37)

1. Choose from the selection screen (Fig. 37)

(1) 設定為輸入模式
液晶顯示①的背景顏色為藍色輸入模式時，可以變更圖案。背景照明為綠色縫製模式時，請按準備鍵②變換為輸入模式。

(1) Set to be input mode
When the back light color of LCD screen ① is blue-the input mode, pattern, the pattern is changeable. When the back light color of LCD screen is green- the sewing mode, please press ready key ② to switch to input mode.

(2) 叫出圖案選擇畫面
按花樣編號鍵③，顯示圖案選擇畫面。被選擇的花樣編號鍵會閃爍。

(2) Call pattern selection
Pressing the pattern No. key ③ will show the pattern selection screen. The selected pattern No. key will flash.

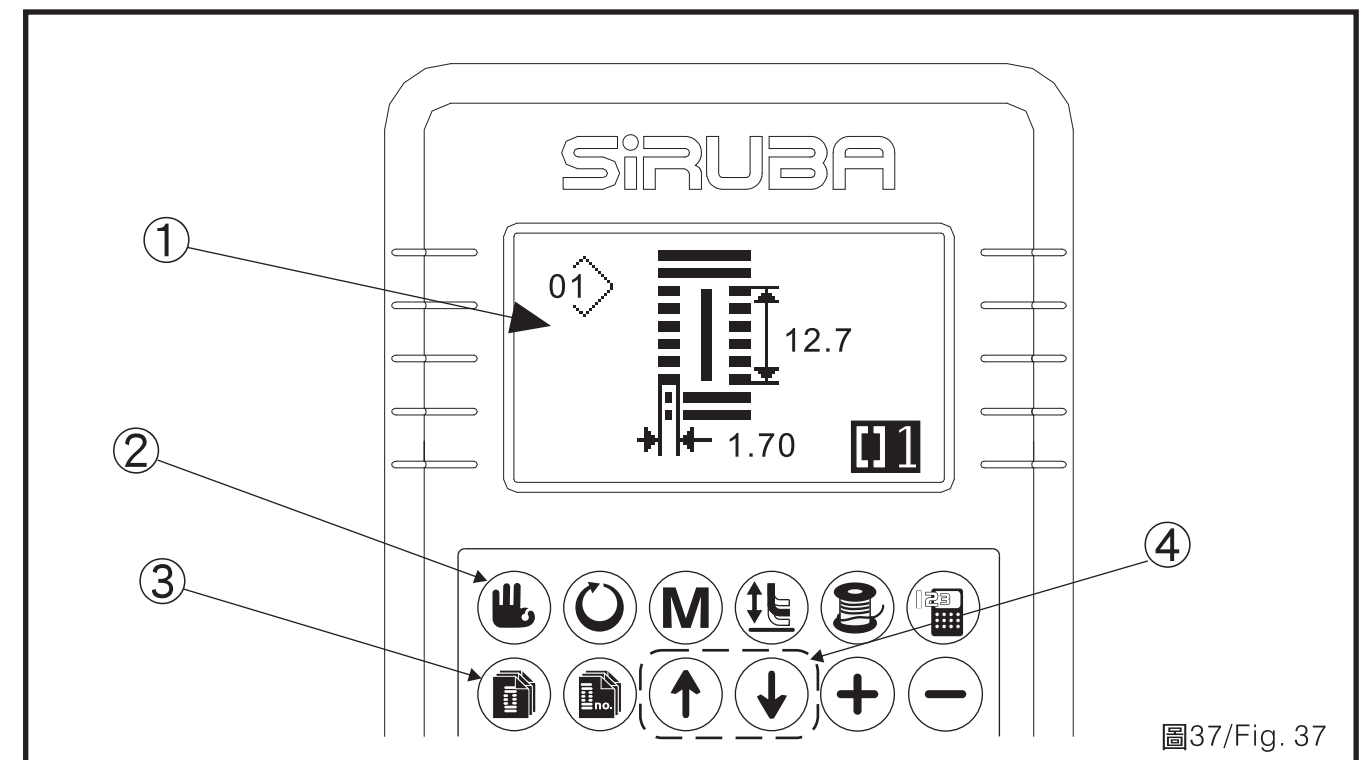


圖37/Fig. 37

(3) 依序選擇所需畫面
按項目選擇鍵④，已被登記的圖案會依次顯示，請選擇想縫製的花樣編號。

(3) Select needed pattern by order
Press the item selection key ④, and the registered patterns will appear in sequence. Please select the desired pattern code at this time.

2. 用登記鍵選擇
本縫紉機可以登記喜好的圖案編號。花樣登記好之後，只需要按此按鍵便可以選擇花樣。

2. Select by registered key
The favored pattern numbers can be registered in the memory of the sewing machine. After registered, you can select your desired patterns as you like by simply pressing this key.

上線張力

NEEDLE THREAD TENSION

1. 在輸入模式下，按下參數項目鍵①，即可進入參數選擇模式A。(圖38)

1. Press Item Key ① under the input mode will be led to parameters selection mode A. (Fig. 38)

2. 以項目選擇鍵②上下選擇。

2. Choose by press the Item Selection Key ② up and down.

3. 參數項目C51~C54可設定平行部張力。

3. The parameter number C51~C54 are for setting the parallel section tensions.

4. 參數項目C55與C56可設定加固部張力。

4. The parameter number C55 and C56 are for setting the tensions of bar-tacking sections.

5. 各參數的初期值皆設定為3。

5. The initial set value of each parameter is set to be 3.

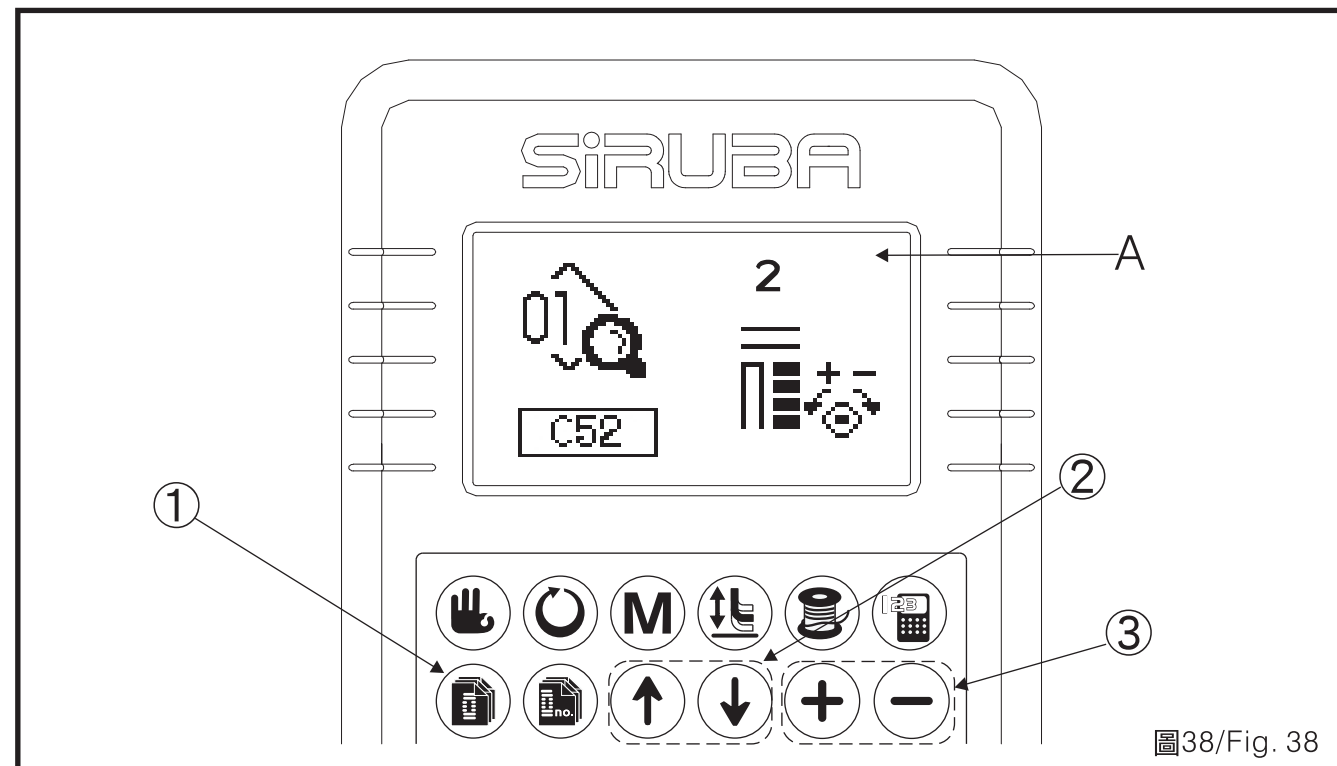


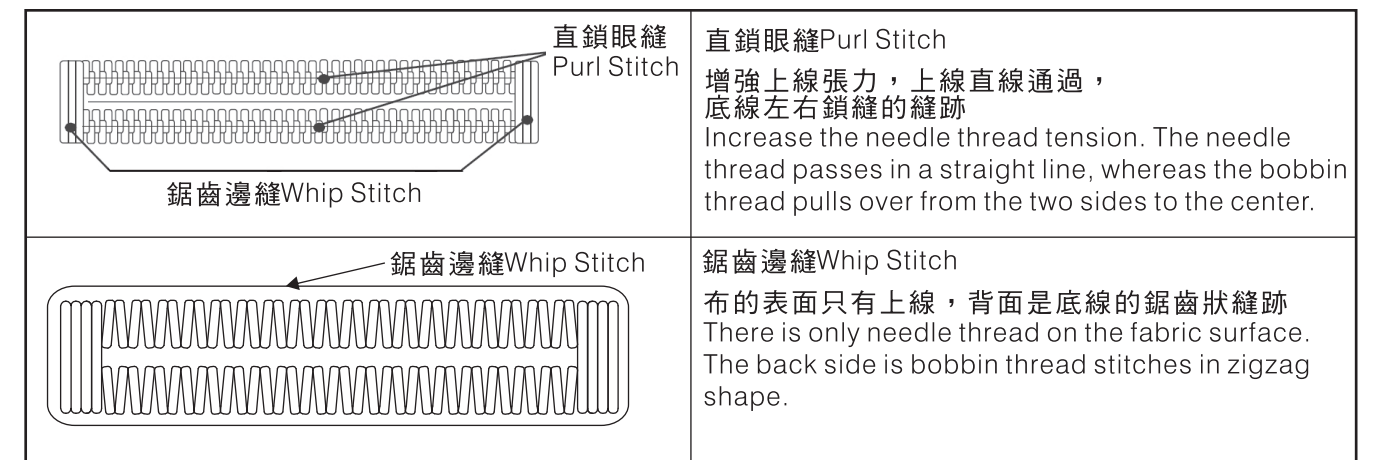
圖38/Fig. 38

6. 表9為操作盒的初期設定值。以數值變更鍵③來調整張力。

6. Table 9 shows the initial set value of the operation panel. Adjust the tension by the Data Change Key ③.

		⊖	初期值 Initial Value	⊕
直鎖眼縫 Purl Stitch	平行部張力 Parallel Section Tension	降低聚起高度 Crest is lowered	3	提升聚起高度 Crest is raised
	加固張力 Bar-Tacking tension	降低張力 Decrease thread tension	3	提高張力 Increase thread tension
鋸齒邊縫 Whip Stitch	平行部張力 Parallel Section Tension	降低張力 Decrease thread tension	3	提高張力 Increase thread tension
	加固張力 Bar-Tacking tension	降低張力 Decrease thread tension	3	提高張力 Increase thread tension

表9/Table 9



圖表4/Chart 4

操作計數器

OPERATE THE COUNTER

1. 設定計數器值(圖39)

1. Set the counter value (Fig. 39)

(1) 叫出計數器設定畫面

(1) Call the counter setting screen

a. 在輸入模式下按下計數鍵①會顯示出設定計數器畫面。

a. The counter setting screen will appear after pressing the Counter Key ① under the input mode.

b. 若為縫製模式下，(液晶背景顏色為綠色)請按準備鍵②轉變成輸入模式(背景顏色轉為藍色)。

b. If the mode is sewing mode, which the back light is green, please press Ready Key ② to transfer to input mode, which the back light is blue.

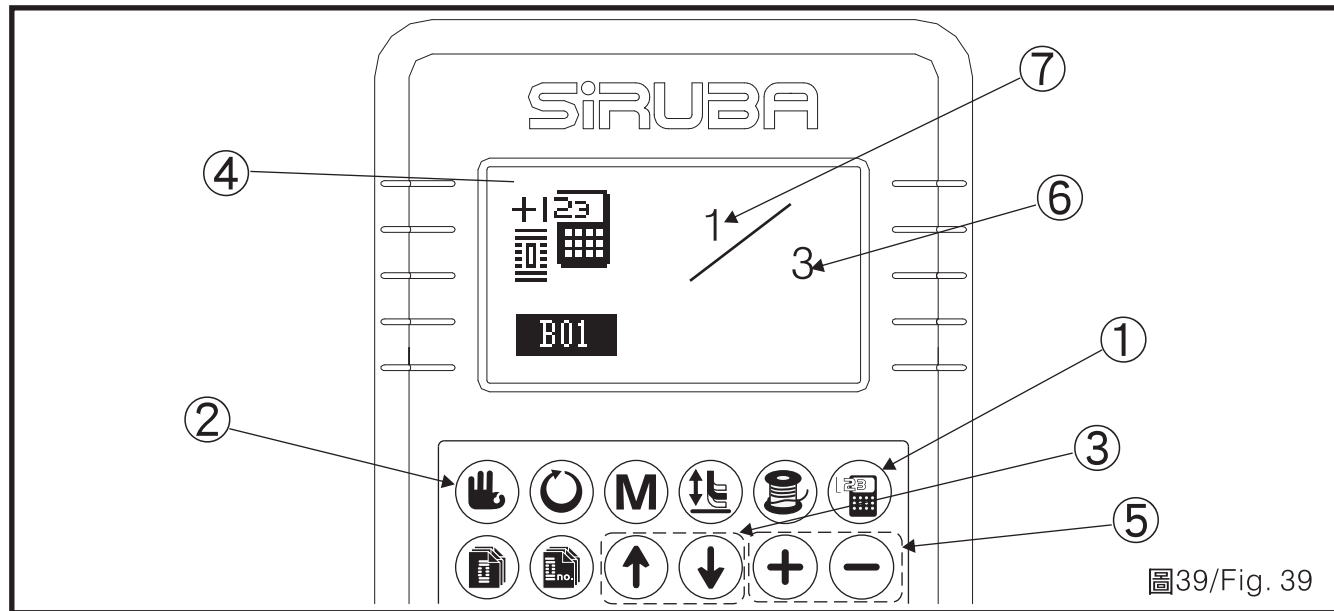


圖39/Fig. 39

(2) 選擇計數器類別

- a. 按項目選擇鍵③，表示計數器類別的圖標④會閃爍。
- b. 按數據變更鍵⑤，從圖表5中選擇適當的計數器。(圖表5)

(2) Select the counter type

- a. Press the Item Selection Key ③, the figure ④ represented the counter type will flash.
- b. Press the Data Change Key ⑤, and select the proper counter type. The types are listed and shown in Chart 5.

	縫製加數計數器 Sewing counter-PLUS counting	每完成一個形狀的縫製之後，在現有值上加1。 Plus 1 on current value after a single pattern is finished.
	縫製減數計數器 Sewing counter-MINUS counting	每完成一個形狀的縫製之後，在現有值上減1。 現有值達到0之後，顯示減數計數器的畫面。 Minus 1 on current value after a single pattern is finished. Once the current value reaches 0, the minus counter screen will appear.
	件數加數計數器 Sewing pieces counter-PLUS counting	每進行一個週期或一個連續縫製之後，現有值加1。 現有值達到設定值之後，顯示出加數計數器畫面。 Plus 1 on current value after one set cycle or a continuous sewing is finished. Once the current value reaches the set value, the plus counter screen will appear.
	件數減數計數器 Sewing pieces counter-MINUS counting	每進行一個週期或一個連續縫製之後，現有值減1。 現有值達到0之後，顯示出減數計數器畫面。 Minus 1 on current value after one set cycle or a continuous sewing is finished. Once the current value reaches 0, the minus counter screen will appear.
	不使用計數器 Doesn't use the counter	

圖表5/Chart 5

- (3) 變更計數器設定值
選擇計數器類別之後，再按一次項目選擇鍵③，此時計數器設定值⑥會閃爍，用數據變更鍵⑤來上下輸入設定值。

(4) 變更計數器現值

- a. 完成設定值之後，按項目選擇鍵③。此時計數器現值⑦會閃爍。
- b. 按復位鍵⑧可以清除圖中所顯示計數器的值。另外，用數據變更鍵⑤也可以進行數值編輯。

2. 縫製作業中，如果計數器達到加數條件之後，會顯示出如圖40一樣的畫面。此時，按下復位鍵⑧，將計數器重新歸零之後，會返回縫製模式，並且重新計數。

- (3) Change the set value
After choosing the type of the counter, please press the Item Selection Key ③ again. At this time, the set value ⑥ will flash. Change the value by pressing the Data Change Key ⑤ up and down to get the desired value.

(4) Change the current value

- a. After setting the set value, press the Item Selection Key ③. At this time, the current value ⑦ of the counter will flash.
- b. Press Reset Key ⑧ can clear the current value as shown in the figure. Besides, using Data Change Key ⑤ can process value editing.

2. If the counter value reaches the set condition during sewing, a screen as shown as figure 40 will appear. At this time, press the Reset Key ⑧ to reset the counter value. Then, it will return to sewing mode and re-count the value.

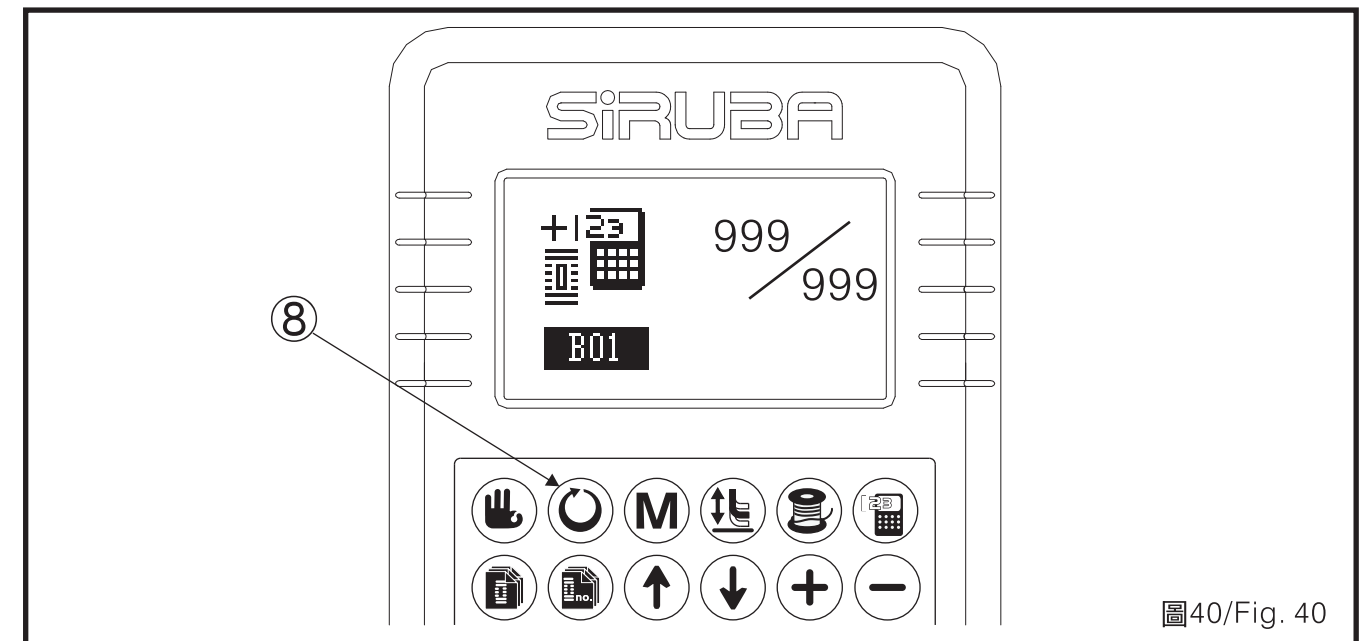


圖40/Fig. 40

初期值模式

INITIAL VALUE MODE

本縫紉機原始設定有30種縫製形狀。在開始編制新縫製數據時，使用複製初期值的方法會比較便利。

There are 30 original patterns set inside the machine. At the beginning, for setting new sewing data, it will be more convenient to copy the original patterns.

1. 設定為輸入模式(圖41)

- (1) 圖案輸入變更只可以在輸入模式下執行。
- (2) 在背景顏色為綠色的縫製模式時，請按準備鍵①變換為輸入模式。

1. Set to be the input mode (Fig. 41)

- (1) It is only available to change the pattern input under the input mode.
- (2) If the mode is sewing mode, which its back light is green, please press Ready Key ① to transfer to input mode.

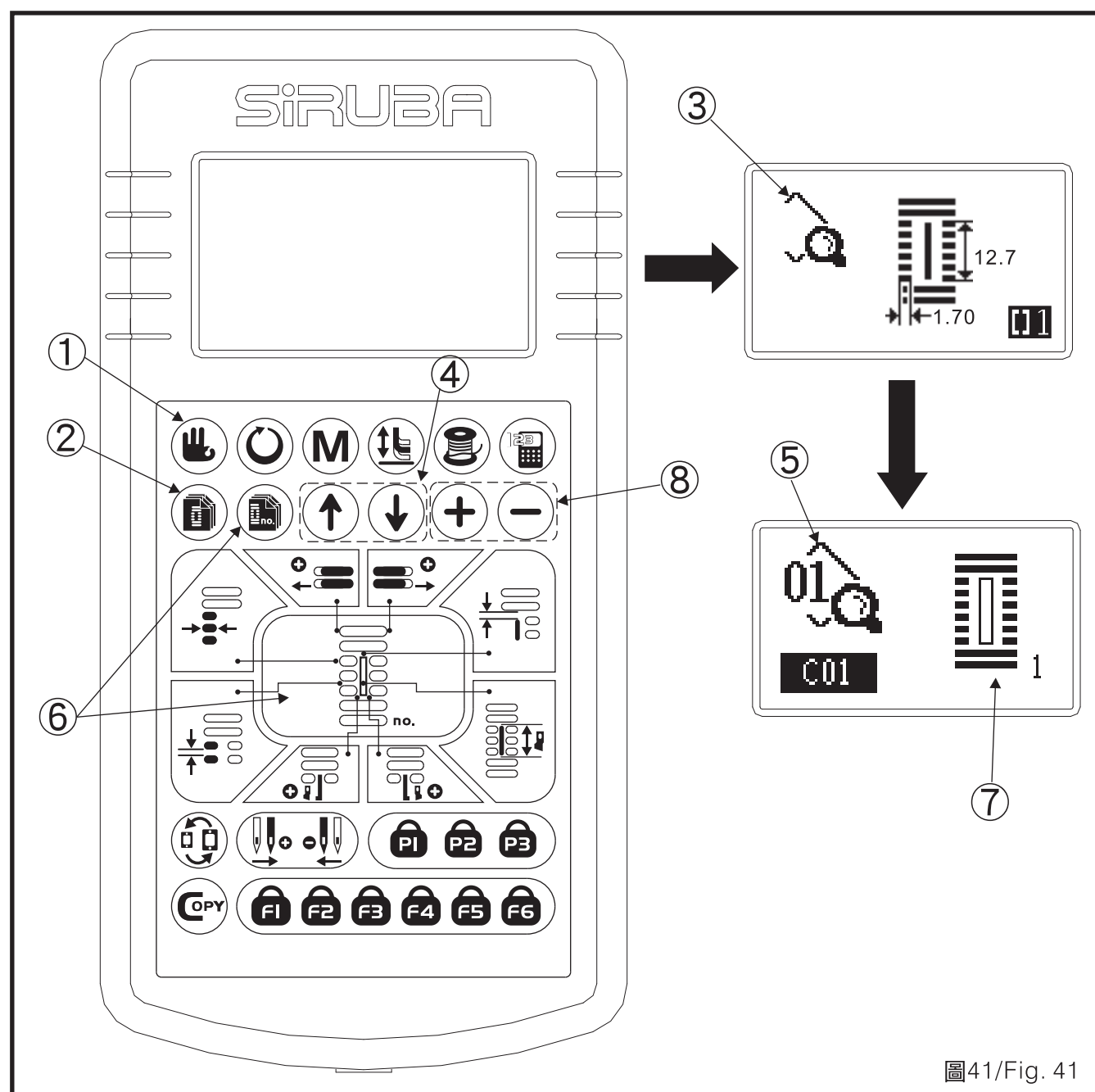


圖41/Fig. 41

2. 叫出初期值模式

- (1) 按下花樣編號鍵②後，顯示出圖案選擇畫面。
- (2) 此時，被選擇的圖案編號③會閃爍。按項目選擇鍵④來選擇初期值圖案⑤。

2. Call the initial value mode

- (1) After pressing the Pattern No. Key ②, the pattern selection screen will appear.
- (2) At this time, the selected pattern number ③ will flash. Press the Item Selection Key to select the initial pattern ⑤.

3. 選擇形狀

- (1) 按下參數項目鍵⑥之後，會顯示形狀選擇畫面，而此時被選擇的形狀⑦會閃爍。
- (2) 使用數據變更鍵⑧來選擇縫製的形狀。
- (3) 一般會有7種原始形狀可以選擇，但是如果升級了形狀選擇等級，則會有最高達30種形狀可以選擇。

3. Select the pattern

- (1) After pressing the Item Key ⑥, the pattern shape selection screen will appear. At this time, the selected pattern shape ⑦ will flash.
- (2) Select the sewing pattern shape by pressing the Data Change Key ⑧.
- (3) Generally, there are 7 original pattern shapes available for selecting. However, the selectable pattern shapes could be up to 30 if the pattern selection level is upgraded.

4. 進行試縫

按下準備鍵①轉換為縫製模式之後，可以縫製選擇的形狀。

4. Performing test-sewing

After pressing Ready Key ① to transfer to sewing mode, the selected pattern shape is able and ready for sewing.

注意：

初期值圖案僅僅可以編輯上線張力數據。如果變更形狀，要再次叫出新圖案就必須返回初期值。

NOTE:

Only the needle thread tension value of the initial value pattern can be edited. If attempting to change its shape and recall it, it is necessary to return to the initial value.

5. 複製初期值圖案

以上步驟可以將選擇及確認好的圖案複製到一般圖案中。

5. Copy the initial value pattern

The steps mentioned above can copy the selected and confirmed patterns to regular patterns.

變更縫製數據

CONFIGURE THE SEWING DATA

1. 購買時的縫製數據

本機種在出廠時已內建11種圖案，其縫製數據只有角型的切布長度之初期值不同。(表10)

1. The initial sewing data

There are 11 patterns already set inside the memory of this model after production. Only the initial values of the fabric cutting length of the square types are different. (Table 10)

圖案編號 Pattern No.	切布長度 Fabric Cutting Length
1	6.4 mm (1/4 inch)
2	9.5 mm (3/8 inch)
3	11.1 mm (7/16 inch)
4	12.7 mm (1/2 inch)
5	14.3 mm (9/16 inch)
6	15.9 mm (5/8 inch)
7	17.5 mm (11/16 inch)
8	19.1 mm (3/4 inch)
9	22.2 mm (7/8 inch)
10	25.4 mm (1 inch)
11	31.8 mm (1 1/4 inch)

表10/Table 10

2. 縫製數據的變更方法(圖42)

(1) 設定為輸入模式

輸入模式之背光顏色為藍色，若背光顏色為綠色，請按準備鍵①改變模式為輸入模式。

2. Change the sewing data (Fig. 42)

(1) Set to be input mode

The back light of the input mode is blue. If the back light color is green, please press Ready Key ① to change to input mode.

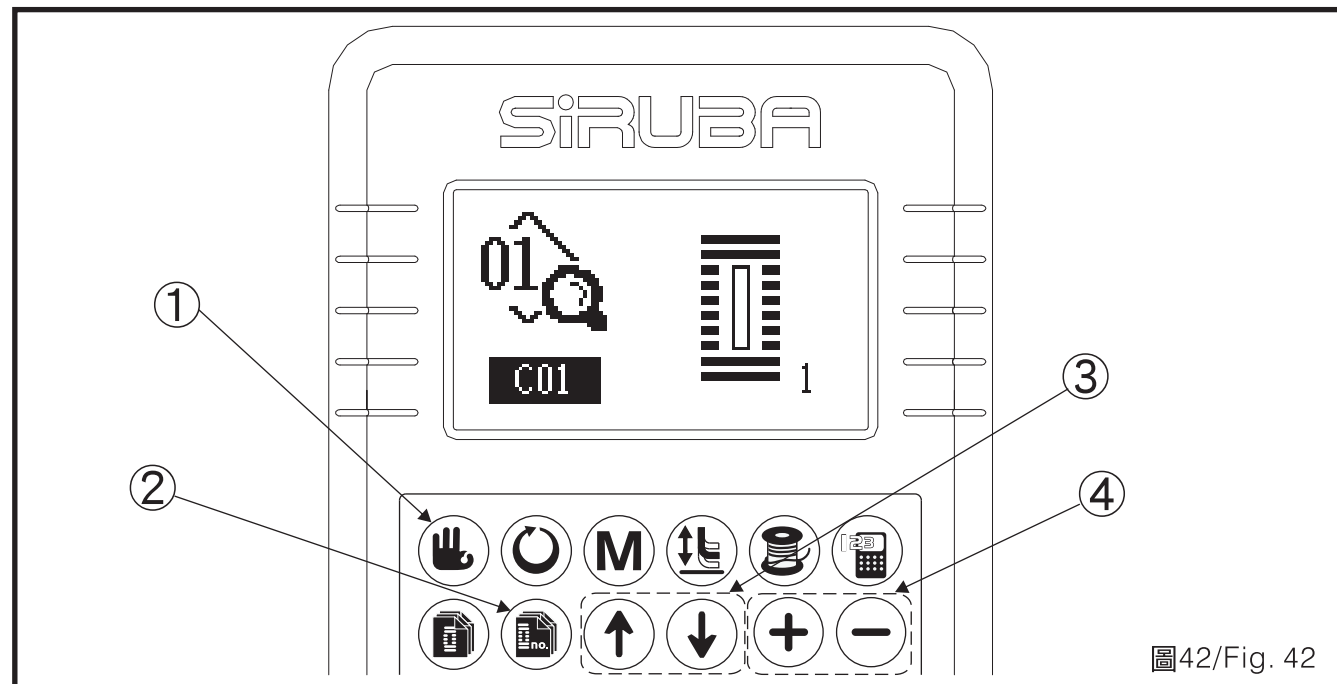


圖42/Fig. 42

(2) 叫出縫製數據編輯畫面
按參數項目鍵②顯示現在圖案編號的縫製數據編輯畫面。

(3) 選擇變更的縫製數據
按項目選擇鍵③，選擇想變更的數據項目。

注意：

有些形狀不使用的數據項目和沒有設定功能的數據項目皆不會被顯示。

(4) 變更數據

a. 縫製數據包含變更數值的數據項目及選擇圖案的數據項目。

b. 縫製數據編號為黑底字體，則可使用數值變更鍵④來上下增減設定值的數據。

c. 如縫製數據編號為反白字體，則可使用數值變更鍵④來上下選擇圖形。

(2) Call sewing data editing screen
Press Item Key ② to show the sewing data editing screen of current pattern number.

(3) Select sewing data for changing
Press the Item Selection Key ③ to select the data item that you will to change.

NOTE:

Some data item that are not used in some shapes and has no setting functions will not be shown.

(4) Change data

a. The sewing data include the data items, which the data are changeable, and pattern items, which the patterns are selectable.

b. If the sewing data are black characters, please use Data Change Key ④ to change its data values.

c. If the sewing data are white characters, please use Data Change Key ④ to change its pattern shapes.

設定縫製數據狀態

CONFIGURE THE SEWING DATA STATUS

出廠時的設定是使用頻率低的縫製數據項目為不能編輯的狀態。如果縫製物需要進行更細部的設定，請將該縫製數據項目設定為可以編輯之狀態。

The original setting is that the low- using- frequency sewing data items are set to be un- editable status. If the sewing materials need to be set in more detailed, please set the sewing data item to editable status.

1. 設定為輸入模式(圖43)

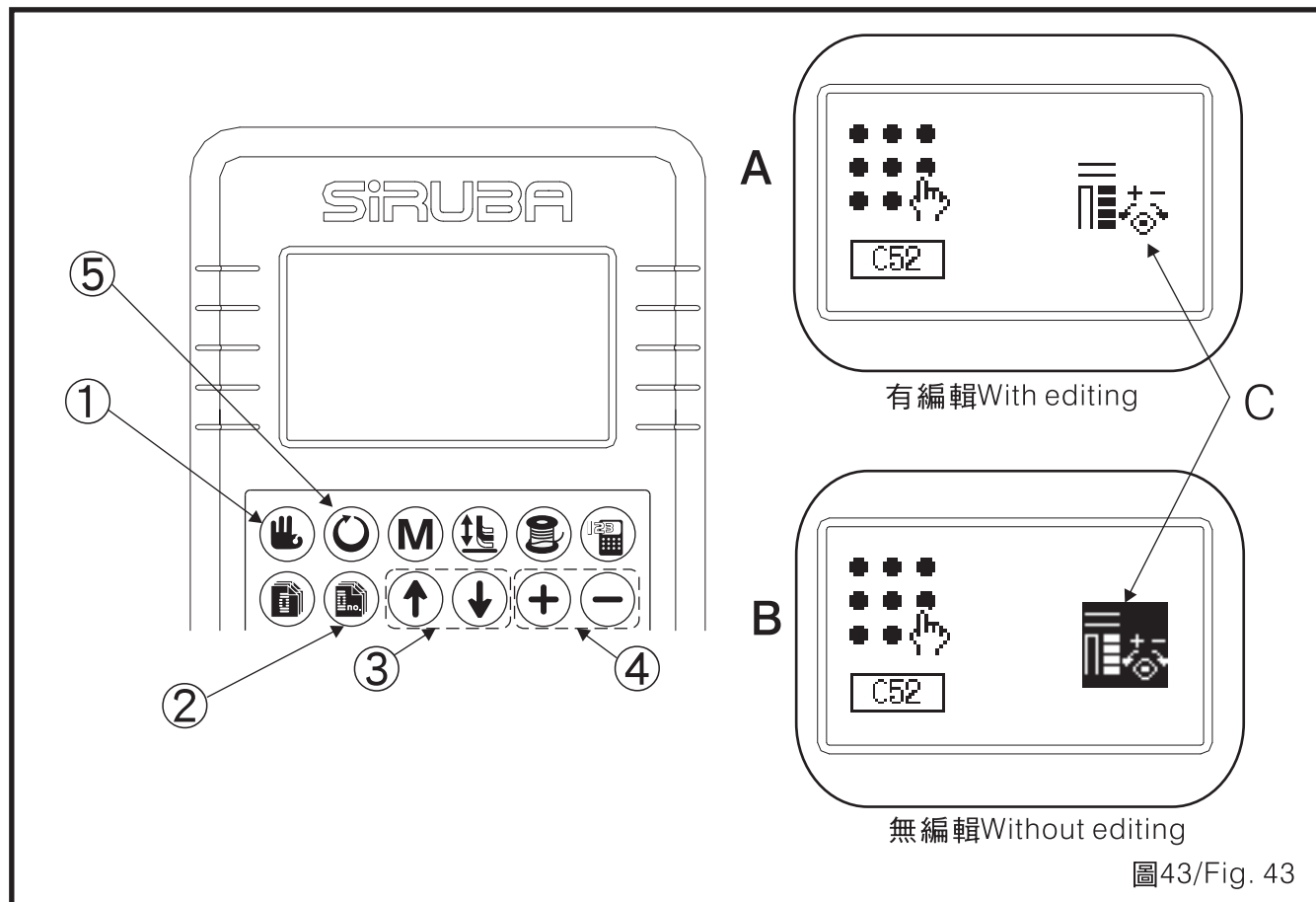
(1) 當液晶顯示的背景照明為藍色(輸入模式)時，可以設定。

(2) 當背景照明為綠色(縫製模式)時，請按準備鍵①變換為輸入模式。

1. Set to be input mode (Fig. 43)

(1) When the LCD back light is blue (the Input Mode), that means the sewing data is editable.

(2) When the LCD back light is green (the Sewing Mode), please press the Ready Key ① to transfer to input mode.



2. 叫出縫製數據有編輯或無編輯的變換畫面
按參數項目鍵②三秒鐘後，會顯示出數據
有編輯或無編輯的變換畫面。如圖43的
A與B。

3. 選擇想變換的縫製數據
按項目選擇鍵③，選擇想變換的縫製數據
項目C。此時，僅可以選擇可以變換的項
目。

4. 變換有編輯或無編輯狀態

(1) 按數值變更鍵④之後，選擇的縫製數
據圖標顯示C可以反覆反轉或不反
轉。

(2) 反轉顯示：可編輯
不反轉顯示：不可編輯

(3) 返回步驟3，則可以轉換複數的縫製數
據項目。

2. Call the changeover display figure of
sewing data with/without editing.
After pressing the Item Key ② 3 seconds,
the screen will appear the changeover
display figure of sewing data with/without
editing, such as A and B in Fig. 43.

3. Select the sewing data that you would like
to change.
Press the Item Selection Key ③ to select
the sewing data item C that you would like
to change. At this time, you can only
select the changeable items.

4. Change over to with/without editing status

(1) After pressing the Data Change Key ④
, the selected sewing data icon C can
repeat the changeover of reverse/non-
reverse.

(2) Reverse: Editable
Non-reverse: Editing is not available.

(3) Back to step 3, and plural data item
can be changed over.

5. 保存設定的數據

(1) 按準備鍵①之後，變為保存狀態，兩
秒鐘之後便會返回原來的畫面。

(2) 按復位鍵⑤，則不保存設定而返回原
來的畫面。

5. Save the set data

(1) After pressing the Ready Key ①, it will
become the saving status. Also, it will
return to the previous display after 2
seconds.

(2) If you press the Return Key ⑤, it will
not save the settings and return to the
previous display.

縫製數據一覽表

SEWING DATA LIST

縫製項目一覽表(圖表6)

1. 按下項目鍵之後，顯示縫製項目。

2. 縫製數值為1~99的99個圖案的可輸入
的項目，可按每種圖案進行輸入。購買
時，為不能選擇設定有/無編輯數據的狀
態。使用時，請根據需要變換為有編輯
的狀態後再使用。

Sewing data list. (Chart 6)

1. After pressing the Item Key, the sewing
items will display.

2. The sewing data are those that can be
inputted to 99 patterns from 1~99, and
can be inputted to each pattern. When
purchasing this sewing machine, please
be noted that this machine is at the status
that the data cannot be selected as
"with/without edit." Before using, please
change the status to "with edit" according
to your needs.

編號 NO.	項目 Item	設定範圍 Setting Range	編輯單位 Edit Unit	備註 Remarks
C01	縫製形狀 Sewing shape 可以從縫紉機所具有的30種縫製形狀中選擇形狀 This item selects the shape from among the sewing shapes of 30 different kinds which the sewing machine has. ※購入時，只能選擇標準的7種縫製形狀。 ※Only 7 kinds of standard sewing shapes can be selected at the time of your purchase. 增加形狀種類時，請進行存儲器開關參數項目H04縫 製形狀等級的設定。 When increasing the kinds of shapes, perform setting of H04 Sewing Shape Selection Level of memory switch data.	1~30	1	—
C02	切布長度 Fabric trimming length 設定切布刀切斷縫製品的長度。 This item sets the length of fabric trimming. 但是，加固形狀(C01的形狀No.27、28、29、30) 時，只能設定縫製長度。 However, for bar-tack shapes (No. 27, 28, 29, and 30 of C01), you can only set the sewing length.	3.0~120.0	0.1 mm	—
C03	右切刀槽寬度 Right trimmer groove width. 設定切布刀和右平行部的間隙。 This item sets the clearance between fabrics trimmer and right parallel section.	-2.00~2.00	0.05 mm	—

編號 NO.	項目 Item	設定範圍 Setting Range	編輯單位 Edit Unit	備註 Remarks
C04	左切刀槽寬度 Left trimmer groove width. 設定切布刀和左平行部的間隙。 This item sets the clearance between fabrics trimmer and left parallel section.	-2.00~2.00	0.05 mm	—
C05	左包邊寬度 Left overlapping width. 設定左平行部的包邊寬度。 This item sets the overlapping width of left parallel section.	0.1~5.00	0.05 mm	—
C06	左右形狀比率 Ratio of right and left shapes 設定以切刀位置為中心的右側形狀的擴大縮小率。 This item sets enlargement/reduction ratio of right side shape, which sets the trimmer position as the center.	50~150	1 %	—
C07	平行部間隔 Clearance of the parallel section 設定左右平行部的縫製間隔。 This item sets sewing pitch of left and right parallel sections.	0.200 ~ 2.500	0.025 mm	—
C08	第2加固部長度 2nd bar-tacking length 設定面前的加固部長度。 This item sets length of bar-tacking on the front side. 角型下 Bottom of square type  直線加固下 Bottom of straight bar-tacking  流動下 Bottom of flow 	0.2~5.0	0.1 mm	—
C09	第1加固部長度 1st bar-tacking length 設定裡側加固部的長度。 This item sets length of bar-tacking on the rear side. 角型上 Top of square type 	0.2~5.0	0.1 mm	—
C10	加固部右寬度修正 Compensation of right bar-tacking width 調整加固部的右側外型和包縫部。 This item adjusts right side outer shape of bar-tacking section in terms of overlapping section. 第1加固、第2加固均被修正。 1st and 2nd bar-tacking are revised 角型上 Top of square type  角型下 Bottom of square type  直線加固下 Bottom of straight bar-tacking 	-1.00~1.00	0.05 mm	—
C11	加固部左寬度修正 Compensation of left bar-tacking width 調整加固部的左側外型和包縫部。 This item adjusts left side outer shape of bar-tacking section in terms of overlapping section. 第1加固、第2加固均被修正。 1st and 2nd bar-tacking are revised 角型上 Top of square type  角型下 Bottom of square type  直線加固下 Bottom of straight bar-tacking 	-1.00~1.00	0.05 mm	—

編號 NO.	項目 Item	設定範圍 Setting Range	編輯單位 Edit Unit	備註 Remarks
C12	流動加固部左對稱 Left flow bar-tacking offset 設定形成流動加固形狀的加固部的長度。 This item sets length to form bar-tacking section of the bar-tacking flow shape.	0.00~3.00	0.05 mm	*1
C13	流動加固部右對稱 Right flow bar-tacking offset 設定形成流動加固形狀的加固部的長度。 This item sets length to form bar-tacking section of the bar-tacking flow shape.	0.00~3.00	0.05 mm	*1
C14	圓頭扣眼形狀長度 Eyelet shape length 設定從圓頭扣眼形狀的圓頭扣眼中心到上側的長度。 This item sets the length from the upper side of the eyelet to the center of the eyelet.	1.0~10.0	0.1 mm	*1
C15	圓頭扣眼形狀針數 Number of stitches of eyelet shape 設定圓頭扣眼形狀的上部90度中的縫製條數。 This item sets the stitch number of eyelet shape in the range of upper 90° (half of the upper part).	1~8	1	*1
C16	圓頭扣眼寬度 Eyelet width 設定圓頭扣眼形狀的內側橫尺寸。 實際的落針處為加算上C04切刀槽左寬度的尺寸。 This item sets cross size of the inside of eyelet shape. Actual needling point is the dimension to which C04 left trimmer groove width is added.	1.0~10.0	0.1 mm	*1
C17	圓頭扣眼長度 Eyelet length 設定圓頭扣眼形狀的內側豎尺寸。 This item sets the lengthwise size of the inside of eyelet shape.	1.0~10.0	0.1 mm	*1
C18	圓型形狀長度 Length of round type shape 設定圓型形狀的中心到上側的長度 This item sets upper length from the center of round type. 圓型上 Top of round type  圓型下 Bottom of round type  放射上 Top of radial type  放射下 Bottom of radial type  半月上 Top of semilunar type  半月下 Bottom of semilunar type 	1.0~5.0	0.1 mm	*1
C19	放射形狀針數 Number of stitches of radial shape 設定放射形狀的上部90° 中的縫製條數。 This item sets number of stitches in the upper 90° part of radial shape (the upper half of the radial shape).	1~8	1	*1

編號 NO.	項目 Item	設定範圍 Setting Range	編輯單位 Edit Unit	備註 Remarks
C20	放射形狀加固 Reinforcement of radial shape 設定有/無放射形狀的加固縫。 This item sets with/without reinforcement stitching of radial shape.  無without  有with	—	—	*1*2
C21	加固部間隔 Clearance at bar-tacking section 設定加固部的縫製間隔。 This item sets sewing clearance of bar-tacking section 角型上  角型下  Top of square type Bottom of square type 圓型上  圓型下  Top of round type Bottom of round type 半月上  半月下  Top of semilunar type Bottom of semilunar type 直線加固  流動下  Bottom of straight bar-tacking Bottom of flow bar-tacking	0.200~2.500	0.25 mm	—
C22	第1間隙 1st clearance 設定第1加固和切刀槽間隙。 This item sets the clearance between 1st bar-tacking and knife groove. 適用於全形狀。Applied to all shapes. 	0.0~4.0	0.1 mm	—
C23	第2間隙 2nd clearance 設定第2加固和切刀槽間隙。 This item sets the clearance between 2nd bar-tacking and knife groove. 適用於全形狀。Applied to all shapes. 	0.0~4.0	0.1 mm	—
C31	單/雙重 Single/ double stitching 選擇單縫、雙重縫。 This item selects single or double stitching  x1  單 Single 雙 Double	—	—	—
C32	選擇交叉雙重縫 Cross double stitching selection 設定雙重縫時，請選擇是重疊縫製 平行部的落針還是進行交叉縫製。 This item selects overlapping stitching or cross stitching at the needle entry of parallel section when setting double stitching.  雙重縫 Double Stitching  交叉縫 Cross Stitching	—	—	*3
C33	修正雙重縫寬度 Compensation of double stitching width 設定雙重縫時，設定第1圈的包縫寬度縮小量。 This item sets the amount to narrow overlapping width of 1st cycle when setting double stitching. 	0.0~2.0	0.1 mm	*3
C51	左平行部張力 Left parallel section tension 設定左平行部的上線張力。 This item sets needle thread tension at left parallel section. 	1~3	1	—

編號 NO.	項目 Item	設定範圍 Setting Range	編輯單位 Edit Unit	備註 Remarks
C52	右平行部張力 Right parallel section tension 設定右平行部的上線張力。 This item sets needle thread tension at right parallel section. 	1~3	1	*2
C53	左平行部張力（雙重縫的第一圈） Left parallel section tension (1st cycle of double stitching) 雙重縫時，設定第一圈的左平行部上線張力。 This item sets needle thread tension at left parallel section of 1st cycle at the time of double stitching. 	1~3	1	*2, *3
C54	平行部張力（雙重縫的第一圈） Right parallel section tension (1st cycle of double stitching) 雙重縫時，設定第一圈的右平行部上線張力。 This item sets needle thread tension at right parallel section of 1st cycle at the time of double stitching. 	1~3	1	*2, *3
C55	第1加固部張力 Tension at 1st bar-tacking section 設定第1加固部的上線張力。 This item sets needle thread tension at 1st bar-tacking section. 	1~3	1	—
C56	第2加固部張力 Tension at 2nd bar-tacking section 設定第2加固部的上線張力。 This item sets needle thread tension at 2nd bar- tacking section. 	1~3	1	*2
C57	縫製開始上線張力的設定 Setting of needle thread tension at the start of sewing 設定縫製開始加固縫的上線張力。 This item sets needle thread tension of tie stitching at the start of sewing. 	1~3	1	—
C62	縫製開始加固縫針數 Number of stitches of tie stitching at the start of sewing 設定縫製開始加固縫的針數。 This item sets number of stitches of tie stitching at the start of sewing. 	0~8	1針 1 Stitch	—
C63	縫製開始加固縫間隔 Sewing pitch of tie stitching at the start of sewing 設定縫製開始加固縫的間隔。 This item sets sewing pitch of tie stitching at the start of sewing. 	0.00~0.70	0.05 mm	*2
C64	縫製開始加固縫的寬度 Tie stitching width at the start of sewing 設定縫製開始的加固縫寬度。 This item sets tie stitching width at the start of sewing. 	0.0~3.0	0.1 mm	—

編號 NO.	項目 Item	設定範圍 Setting Range	編輯單位 Edit Unit	備註 Remarks
C65	縫製開始加固縫的豎向修正 Lengthwise compensation of tie stitching at the start of sewing. 設定縫製開始加固縫的豎方向開始位置。 This item sets start position of tie stitching in lengthwise direction at the start of sewing.	0.0~5.0	0.1 mm	*2
C66	縫製開始加固縫的橫向修正 Crosswise compensation of tie stitching at the start of sewing 設定縫製開始加固縫的橫方向開始位置。 This item sets start position of tie stitching in crosswise direction at the start of sewing.	0.0~2.0	0.1 mm	*2
C67	縫製結束加固縫寬度 Tie stitching width at the end of sewing 設定縫製結束加固縫的寬度。 This item sets tie stitching width at the end of sewing	0.1~1.5	0.1 mm	—
C68	縫製結束加固縫針數 Number of stitches of tie stitching at the end of sewing 設定縫製結束加固縫的針數。 This item sets number of stitches of tie stitching at the end of sewing.	0~8	1針 1 Stitch	—
C69	縫製結束加固縫豎向修正 Lengthwise compensation of tie stitching at the end of sewing 設定縫製結束加固縫的豎方向開始位置。 This item sets start position of tie stitching in lengthwise direction at the end of sewing.	0.0~5.0	0.1 mm	*2
C70	縫製結束加固縫橫向修正 Crosswise compensation of tie stitching at the end of sewing 設定縫製結束加固縫的橫方向開始位置。 This item sets start position of tie stitching in crosswise direction at the end of sewing.	0.0~2.0	0.1 mm	*2
C81	切刀動作 Trimmer motion 設定一般的切布刀有/無動作。 This item sets "with/without" of normal fabric trimmer.	—	—	—
C83	雙重縫的第1圈切刀 Trimmer motion at 1st cycle of double stitching 雙重縫時，設定第1圈的切布刀有/無動作。 This item sets "with / without motion " of fabric trimmer at 1st cycle when double stitching is performed.	—	—	*2, *3

編號 NO.	項目 Item	設定範圍 Setting Range	編輯單位 Edit Unit	備註 Remarks
C84	最高速度限制 Maximum speed limitation 設定縫紉機最高轉速。 This item sets max. speed limitation of the sewing machine. 數值編輯的最大值為存儲器開關項目H07最高轉速限制速度的設定的轉速。 The maximum value of data edit is equal to the number of revolutions of H07 Maximum speed limitation of the memory switch data.	400~3600	100 rpm	—
C86	前進間隔 Pitch of going 設定條形衣褶形狀 (C01的形狀No.27、28、29、30) 前進側的縫製間隔。 This item sets sewing pitch of going side of bar-tacking shape (Shape Nos. 27,28,29 and 30 of C01).	0.200~2.500	0.025 mm	—
C87	前進寬度 Width of going 設定條形衣褶形狀 (C01的形狀No.27、28、29、30) 前進側的縫製寬度。 This item sets width of going side of bar-tacking shape (Shape Nos. 28,28,29 and 30 of C01).	0.1~3.0	0.05 mm	—
C88	返回間隔 Pitch of coming 設定條形衣褶形狀 (C01的形狀No.27、28、29、30) 返回側的縫製間隔。 This item sets sewing pitch of coming side of bar-tacking shape (Shape Nos. 27,28,29 and 301 of C01).	0.200~2.500	0.025 mm	—
C89	返回寬度 Width of coming 設定條形衣褶形狀 (C01的形狀No.27、28、29、30) 返回側的縫製寬度。 This item sets width of coming side of bar-tacking shape (Shape Nos.27,28,29 and 30 of C01).	0.1~3.0	0.05 mm	—

圖表6/Chart 6

- * 1 : 不同的形狀有不同的顯示。
Different shape has different display.
- * 2 : 設定為有編輯之後被顯示。請參照有/無編輯縫製數據的設定方法。
It will display after it is set to with edit. Refer to "How to set sewing data with/without edit."
- * 3 : 選擇功能之後才會顯示出來。
Display only after the function is selected

複製縫製圖案

已登記的圖案編號的數據可以複製到沒有使用到的編號中。因為圖案的設定是禁止重寫複製，所以需要重寫時，請先把圖案消去後再進行複製。

COPY SEWING PATTENS

The registered patterns can be copied to other pattern numbers that have not been used. In addition, the patterns are not able to rewrite or copy in their original settings. Therefore, if there is a need to rewrite the pattern, please erase the pattern first before copying another pattern.

1. 設定為輸入模式(圖44)
 - (1) 當液晶顯示的背景照明為藍色(輸入模式)時，可以設定。

- (2) 當背景照明為綠色(縫製模式)時，請按準備鍵①變換為輸入模式。

2. 選擇要複製的原圖案編號

- (1) 在圖案選擇畫面中選擇所想要複製的原圖案編號。(請參照『圖案選擇』的內容)

- (2) 編制新圖案數據時，複製初期值圖案會比較方便。(請參照『初期值模式』的內容)

3. 叫出複製畫面

- 按下複製鍵②後，顯示出複製畫面A。

4. 選擇複製位置的圖案編號

- (1) 沒有被使用圖案編號B此時會閃爍。按數據變更鍵③來選擇想複製的編號。

- (2) 如果想消除圖案時，請選擇垃圾箱圖案來消除。

5. 開始複製

- (1) 按下準備鍵①之後開始複製，複製兩秒鐘後，會從複製圖案編號被選擇的狀態返回輸入狀態。

- (2) 按下復位鍵④則放棄複製而返回原來畫面。

註：

循環數據及連續縫製數據也可以用同樣的方法進行複製。

1. Set to be input mode (Fig. 44)

- (1) When the LCD back light is blue (the Input Mode), that means the sewing data is editable.

- (2) When the LCD back light is green (the Sewing Mode), please press the Ready Key ① to transfer to input mode.

2. Select the pattern number you desired to copy

- (1) Select the desired original pattern in the pattern selecting figure. (Please refer to "SELECT THE PATTERN" about how to select the desired pattern.)

- (2) When editing a new pattern data, it would be more convenient if you copy the original patterns. (Please refer to "INITIAL VALUE MODE" about the initial value.)

3. Call the copy status

- The copy status A will appear by simply pressing the Copy Key ②.

4. Select the pattern number where you would like to copy to.

- (1) At this time, the pattern B will flash. Press the Data Change Key to select the pattern number ③ that you desired to copy.

- (2) If you are not going to continue, and would like to erase the pattern, please select the TRASH CAN icon to erase the pattern.

5. Start to copy

- (1) Start copying after pressing the Ready Key ①. After 2 seconds, the status will return to input mode.

- (2) If pressing the Reset Key ④, that means you give up copying and choose to return to the original status.

NOTE:

For data cycling and continuous stitch data, they can also use the same solution to perform copying.

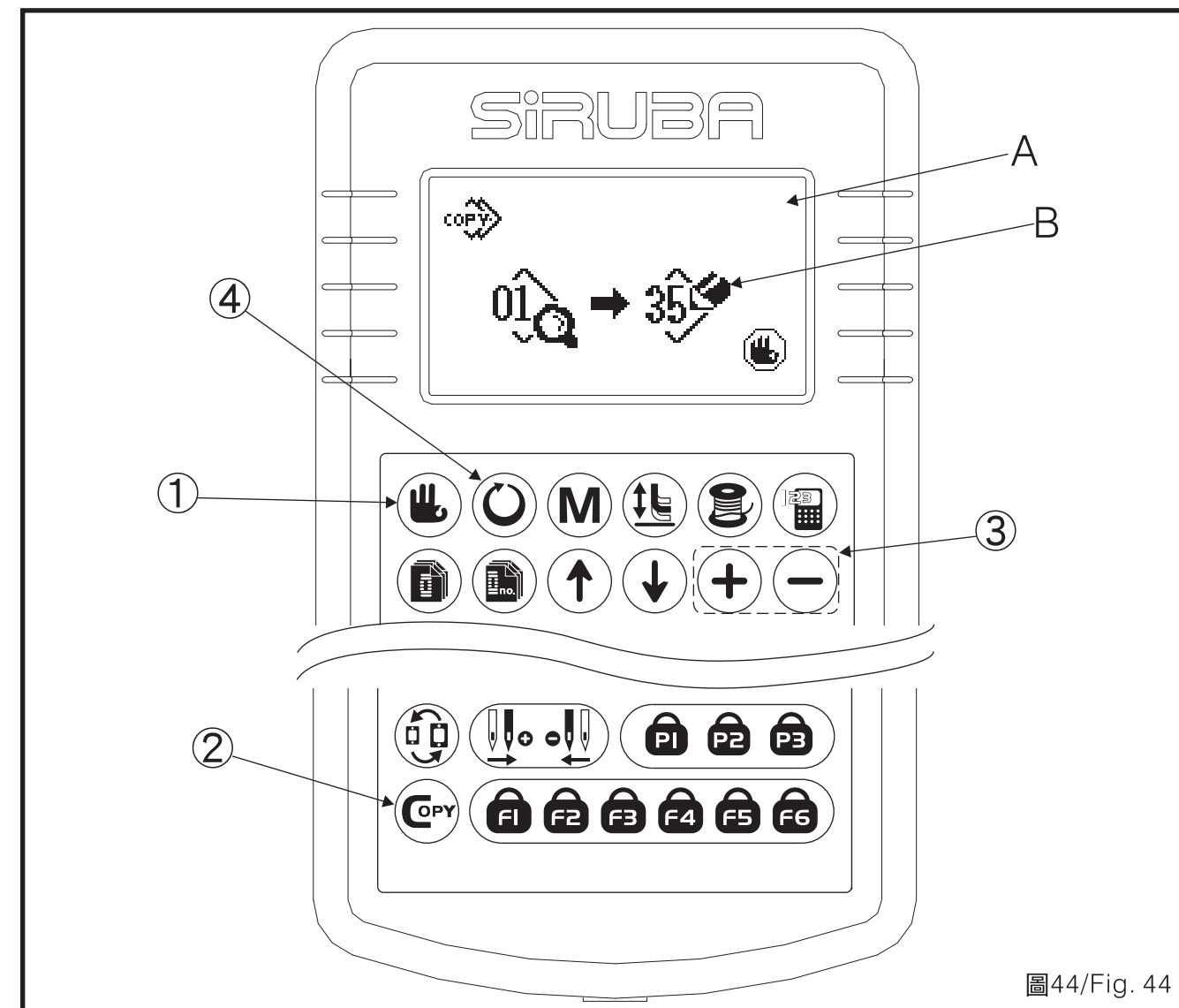


圖44/Fig. 44

花樣功能鍵

頻繁使用的圖案號碼可以登記到花樣功能鍵中。只要在輸入模式中按下花樣功能鍵，就可以選擇被登記的圖案。

1. 登記方法

(1) 設定為輸入模式(圖45)

- a. 當液晶顯示的背景照明為藍色(輸入模式)時，可以設定。
- b. 當背景照明為綠色(縫製模式)時，請按準備鍵①變換為輸入模式。

PATTERN REGISTRATION KEY

High frequently used pattern numbers can be registered into the Pattern Registration Key. You can select the registered pattern by simply pressing the Pattern Registration Key.

1. How to register

(1) Set to be input mode (Fig. 45)

- a. When the LCD back light is blue (the Input Mode), that means the sewing data is editable.
- b. When the LCD back light is green (the Sewing Mode), please press the Ready Key ① to transfer to input mode.

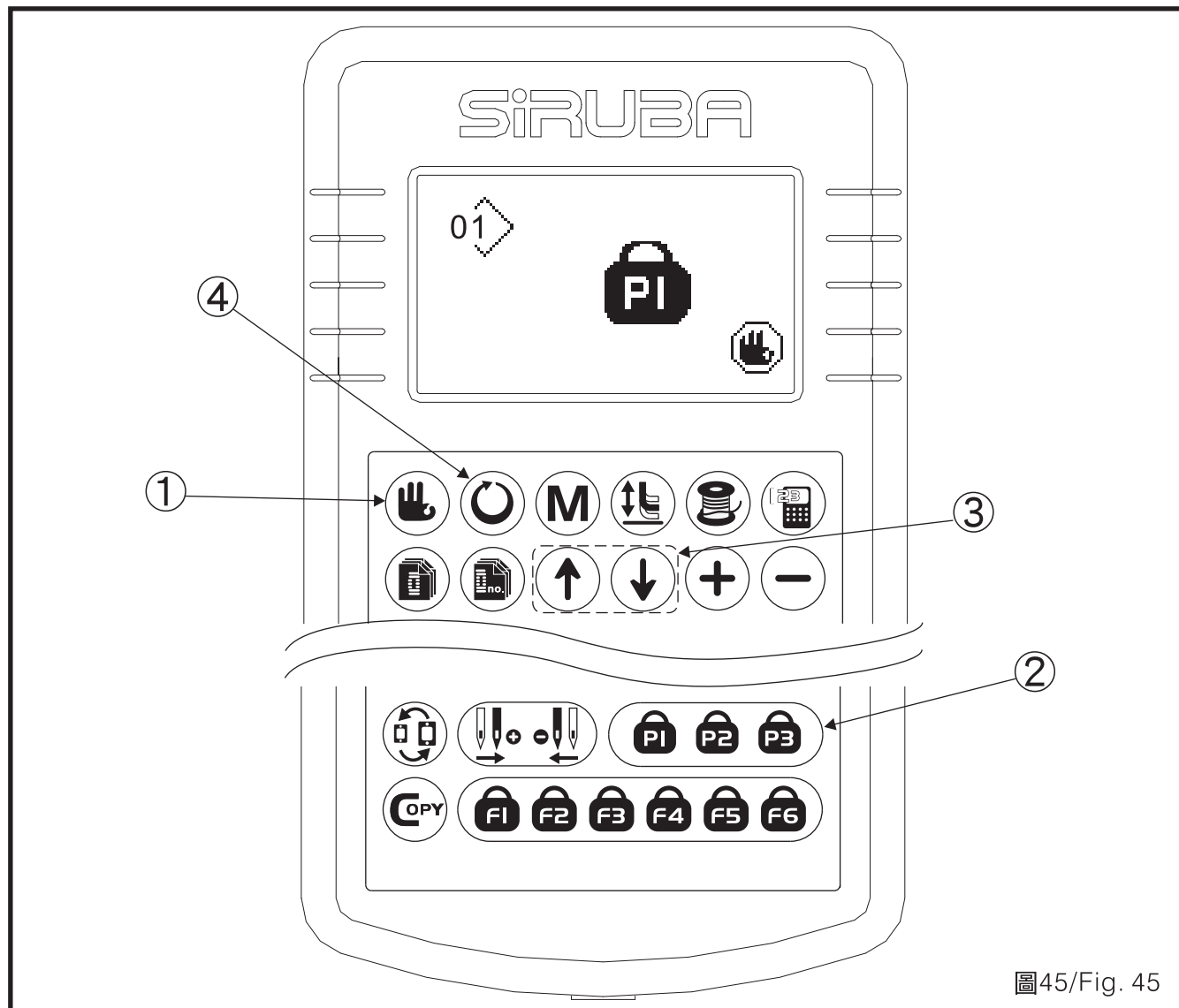


圖45/Fig. 45

(2) 叫出圖案登記畫面
按下想登記圖案編號的花樣功能鍵 (P1~P3)②，3秒鐘之後，即會顯示圖案登記畫面。

(3) 選擇圖案編號
a. 可選用的圖案編號此時會閃爍，用項目選擇鍵③來選擇想登記的圖案編號。
b. 如果想消除圖案，請選擇垃圾箱圖案來消除。

(2) Call the pattern register mode
Press the Pattern Registration Key (P1~P3) ② that you desired to register. After 3 seconds, the pattern register mode will appear.
(3) Select the pattern number
a. The selectable pattern number will flash at this time. Press the Item Selection Key ③ to choose the pattern number that you desired to register.
b. If you want to erase the pattern, please select the Trash Can Icon.

(4) 開始登記
a. 按下準備鍵①後則開始登記入花樣功能鍵②。兩秒鐘後會返回到輸入畫面。
b. 如不登記，按下復位鍵④後，就會返回原來畫面。

2. 出廠時的登記狀態(表11)

登記鍵 Register Key	登記圖案編號 Registered Pattern Number
P1	圖案1 Pattern Number 1
P2	圖案2 Pattern Number 2
P3	圖案3 Pattern Number 3

表11/Table 11

參數項功能鍵

頻繁使用的參數項可以登記到參數項功能鍵中。只要在輸入模式中按下參數項功能鍵，就可以選擇被登記的參數。另外，此鍵不但可以設定參數，還可以登記圖案編號，因此可以使用與前項的花樣功能鍵同樣的方法來進行登記。

1. 設定為輸入模式(圖46)
(1) 當液晶顯示的背景照明為藍色(輸入模式)時，可以設定。
(2) 當背景照明為綠色(縫製模式)時，請按準備鍵①變換為輸入模式。

(4) Start to register
a. The pattern will be registered into the Pattern Registration Key ② after pressing the Ready Key ①. The mode will return to input mode after 2 seconds.
b. If you would not to register, please press the Reset Key ④, and the screen will return to its previous mode.

2. The register status at the time of delivery (Table 11)

ITEM REGISTRATION KEY

High frequently used item parameters can be registered into the Item Registration Key. You can select the registered item by simply pressing the Item Registration Key. Besides, this key can not only set the parameters, but also register the pattern numbers. Therefore, you may use the same setting method as the previous section to register.

1. Set to be input mode (Fig. 46)
(1) When the LCD back light is blue (the Input Mode), that means the sewing data is editable.
(2) When the LCD back light is green (the Sewing Mode), please press the Ready Key ① to transfer to input mode.

2. 叫出參數登記畫面
按下想登記參數的參數項功能鍵 (F1~F6)②，3秒鐘之後，即會顯示參數登記畫面。

3. 選擇參數
 - (1) 可選用的參數此時會閃爍，用項目選擇鍵③來選擇想登記的參數。
 - (2) 可以登記的項目是縫製數據和存儲器開關(等級1)的參數與圖案編號。

- (3) 如果想消除圖案，請選擇垃圾箱圖案來消除。

4. 開始登記
 - (1) 按下準備鍵①後則開始登記入參數項功能鍵②。兩秒鐘後會返回到輸入畫面。

- (2) 如不登記，按下復位鍵④後，就會返回原來畫面。

2. Call the item register mode
Press the Item Registration Key (F1~F6) ② that you desired to register. After 3 seconds, the item register mode will appear.
3. Select the item parameter
 - (1) The selectable item will flash at this time. Press the Item Selection Key ③ to choose the item that you desired to register.
 - (2) The registrable items are sewing data, parameters of memory switches (Level 1), and pattern numbers.
 - (3) If you want to erase the pattern, please select the Trash Can Icon.
4. Start to register
 - (1) The pattern will be registered into the Item Registration Key ② after pressing the Ready Key ①. The mode will return to input mode after 2 seconds.
 - (2) If you would not to register, please press the Reset Key ④, and the screen will return to its previous mode.

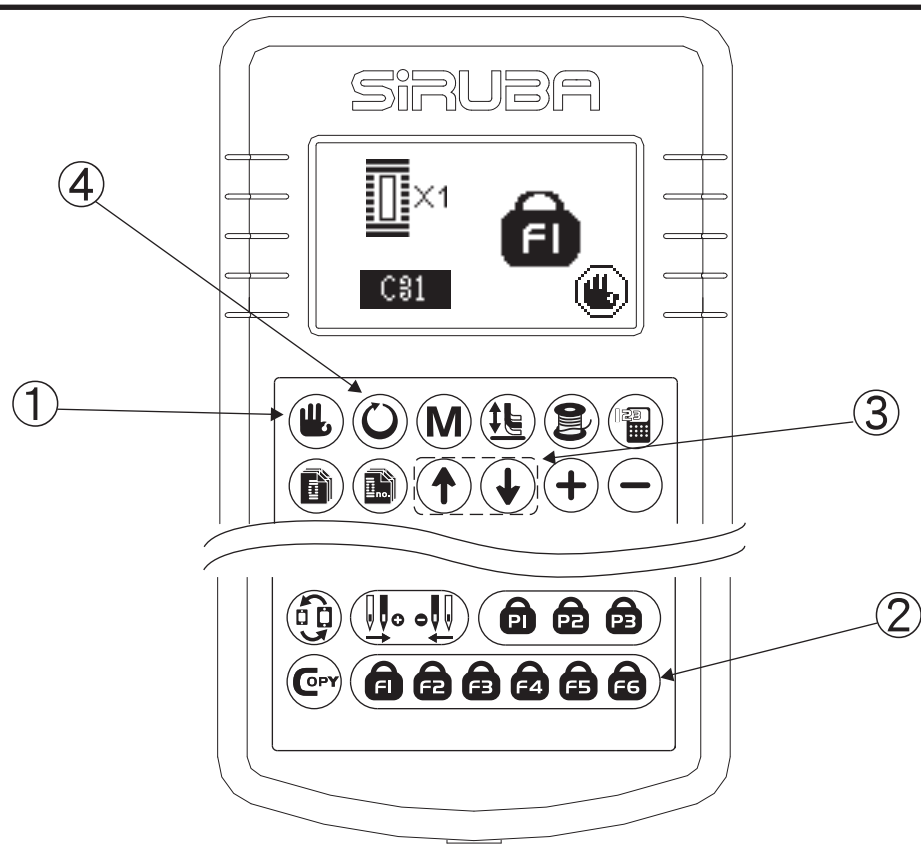


圖46/Fig. 46

進行連續縫製

PERFORM CONTINUOUS SEWING

1. 本縫紉機可以在不提昇押腳的情況下，連續縫製複數圖案。
2. 一個循環中最多可以自動縫製六個形狀。最多可登記20個數據。
3. 如有需要，請複製使用。
4. 連續縫製數據的選擇
 - (1) 先設定為輸入模式(圖47)
 - a. 當液晶顯示的背景照明為藍色(輸入模式)時，可以設定
 - b. 當背景照明為綠色(縫製模式)時，請按準備鍵①變換為輸入模式。
 - (2) 叫出圖案選擇畫面
按下參數項目鍵②之後，顯示圖案選擇畫面，而此時被選的花樣③會閃爍顯示。

1. This model can continuously sew plural patterns without lifting the presser foot.
2. Each cycle can have a maximum of 6 shapes of auto-sewing, as well as 20 data in maximum.
3. If there is a need, please copy the pattern data for continuous sewing.
4. Selection of continuous sewing data
 - (1) Set to be input mode (Fig. 47)
 - a. When the LCD back light is blue (the Input Mode), that means the sewing data is editable.
 - b. When the LCD back light is green (the Sewing Mode), please press the Ready Key ① to transfer to input mode.
 - (2) Call the pattern selection screen
After pressing the Item Key ②, the pattern selection screen will appear. At this time, the chosen pattern ③ will flash.

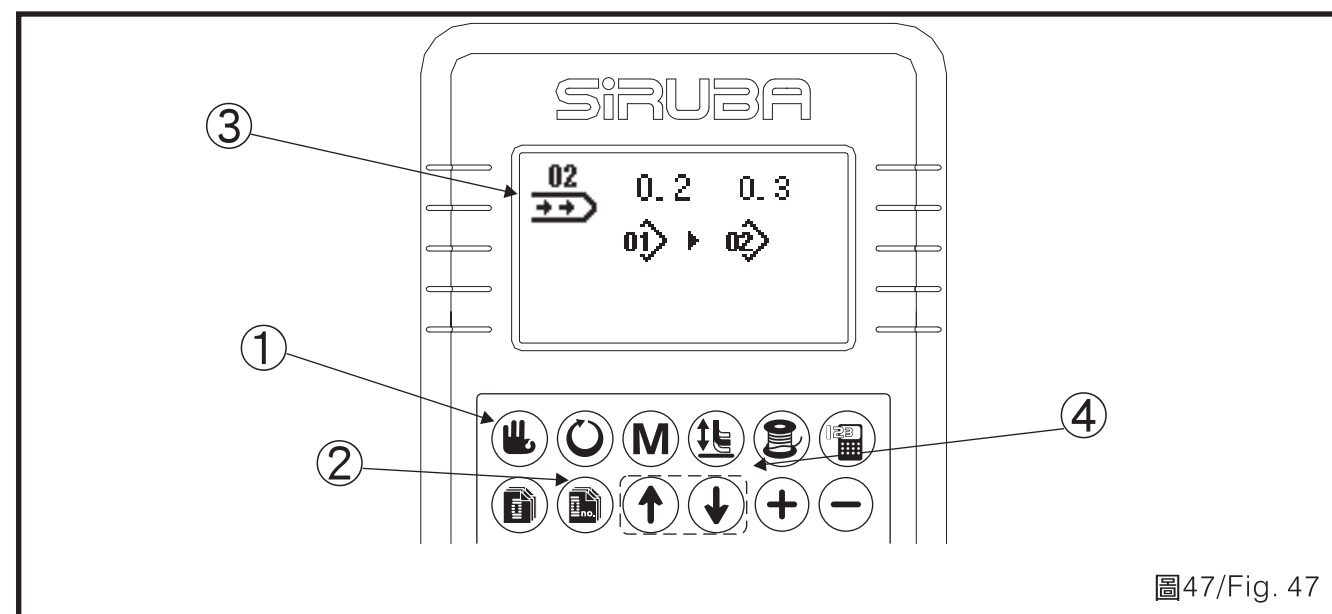


圖47/Fig. 47

(3) 選擇連續縫製數據
 按下項目選擇鍵④之後，已被登記的圖案會依次變換顯示。在最後的登記圖案編號之後會顯示已被登記的循環數據編號以及連續縫製編號。請在此選擇想縫製的連續縫製數據編號。

(4) 進行縫製
 選擇連續縫製數據之後，按下準備鍵①轉換為綠色背光的縫製模式。

註：
 由於出廠時僅登記了連結數據編號，而沒有輸入縫製圖案，因此，不會成為可以縫製的狀態。第一次設定時，請先繼續以下步驟。

5. 連續縫製數據的編輯方法

- (1) 先設定為輸入模式(圖48)
 - a. 當液晶顯示的背景照明為藍色(輸入模式)時，可以設定。
 - b. 當背景照明為綠色(縫製模式)時，請按準備鍵①變換為輸入模式。

(3) Select the continuous sewing data
 After pressing the Item Selection Key ④, the registered patterns will change over in order. Coming after the last registered pattern number is the registered cycling data numbers and continuous sewing pattern numbers. Please select your desired continuous sewing data at this time.

(4) Perform sewing
 After selecting the continuous sewing data, please press Ready Key ① to transfer to the sewing mode, which the back light is green.

NOTE:
 For only the continuous sewing data No. 1 is registered at the very beginning, the status will not transfer to the sewing status at the first time of this operation. Therefore, for your first time set up, please process the following processes first.

5. Editing the continuous sewing data

- (1) Change to input mode (Fig. 48)
 - a. When the back light of the LCD is blue (the input mode), that means the data is editable.
 - b. When the back light of the LCD is green (the sewing mode), please press Ready Key ① to transfer to input mode.

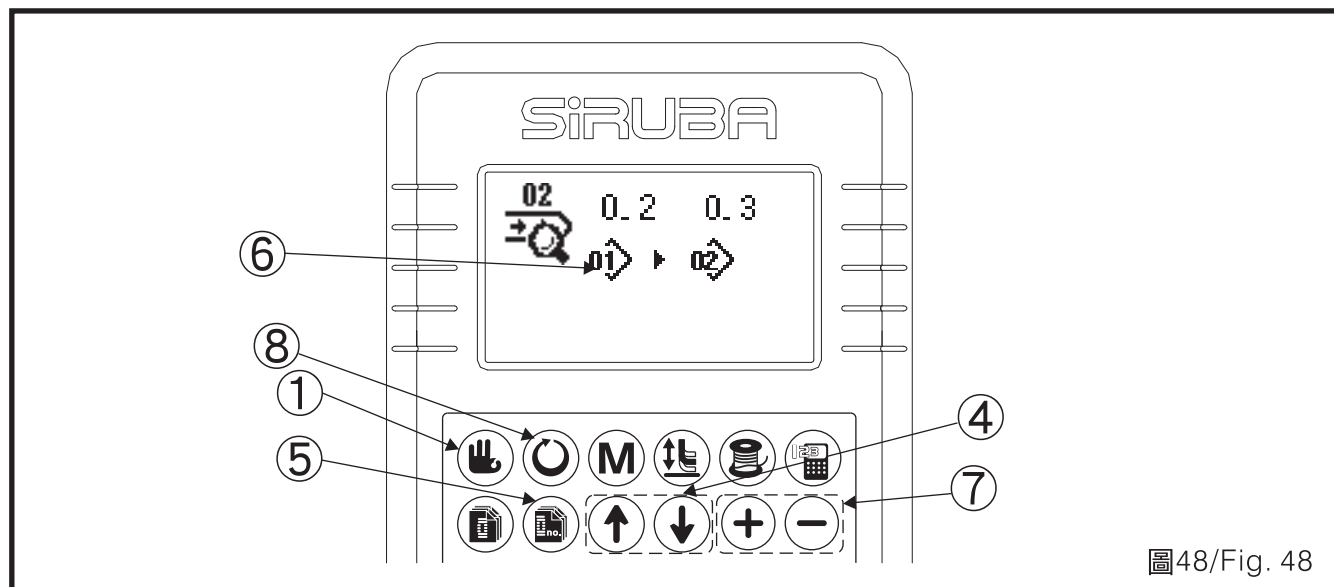


圖48/Fig. 48

(2) 叫出要編輯的連續縫製數據編號
 在圖案選擇畫面下，按下項目選擇鍵④。此時，已被登記的圖案會依次變換顯示。在最後的登記圖案編號之後會顯示已被登記的循環數據編號以及連續縫製編號。請在此選擇想縫製的連續縫製數據編號。

(3) 更改連續縫製數據為編輯狀態
 按參數項目鍵⑤之後，可以改變為編輯狀態。此時，最初縫製的圖案編號⑥會閃爍。

(4) 選擇編輯要點
 按下項目選擇鍵④之後，依圖案編號→空送量→圖案編號→空送量的順序依次移動顯示編輯。在進入到最後編輯要點之後，會顯示出追加指示指標。

(5) 變更選擇的編輯要點的數據
 a. 按數值變更鍵⑦來變更欲編輯之要點。
 b. 編輯要點為圖案編號時：圖案編號會顯示成為可以選擇的狀態。

編輯要點為空送時：

在±120 mm的範圍內可以編輯數值。

c. 按復位鍵則會消除編輯要點的圖案數據。

(6) 重複步驟(4)與步驟(5)來編輯數據。

(2) Call the continuous sewing data number that you desire to edit.
 Press Item Selection Key ④ in pattern selection screen. At this time, the registered patterns will change over in order. Coming after the last registered pattern number are the registered cycling data numbers and the continuous sewing pattern numbers. Please select your desired continuous sewing data number.

(3) Change the continuous sewing data to editing status
 After pressing the Item Key ⑤, the status will change to editing status. At this time, the initial sewing pattern number ⑥ will flash.

(4) Select the edit point
 After pressing the Item Selection Key ④, you can edit in order of pattern number→jump feed amount→pattern number→jump feed amount. When processing to the last editing point, an indication icon of adding will appear.

(5) Change data of selected edit points
 a. Press Data Change Key ⑦ to edit the point.
 b. When the edit point is pattern:
 The pattern number will be shown as editable.
 When the edit point is jump feed amount:

The value is editable within ±120 mm.

c. Press Reset Key will erase the the pattern and data of the edit point.

(6) Repeat step (4) and (5) to edit the data.

注意：

在輸入完成，進入連續縫製時，所有的數據應在押腳尺寸的範圍內。如果超過押腳尺寸，將會顯示範圍錯誤。因此，請務必正確輸入押腳尺寸。

NOTE:

When finishing inputting and starting continuous sewing, all data should fall within the range of the presser foot size. If the data value is over the presser foot size, an error icon will appear. Therefore, please input the correct presser foot size correctly.

設定循環縫製

CONFIGURE CYCLING SEWING

1. 此項設定是設定縫紉機依次縫製複數的循環縫製圖案數據，最多可輸入15種圖案，最大可登記20個數據。
2. 請在縫製物上有複數不一樣的鈕扣眼時使用。
3. 如有需要，請複製使用。
4. 選擇循環數據
 - (1) 先設定為輸入模式(圖49)
 - a. 當液晶顯示的背景照明為藍色(輸入模式)時，可以設定
 - b. 當背景照明為綠色(縫製模式)時，請按準備鍵①變換為輸入模式。

1. This configuration is to configure the cycle sewing data that enables the machine to sew plural patterns in order. The input patterns can be as many as 15, as well as 20 data can be input in maximum.
2. Please process this configuration when there are plural different bottomholings.
3. If there is any need, please copy the patterns and data for use.
4. Selection of cycling sewing data
 - (1) Set to be input mode (Fig. 49)
 - a. When the LCD back light is blue (the Input Mode), that means the sewing data is editable.
 - b. When the LCD back light is green (the Sewing Mode), please press the Ready Key ① to transfer to input mode.

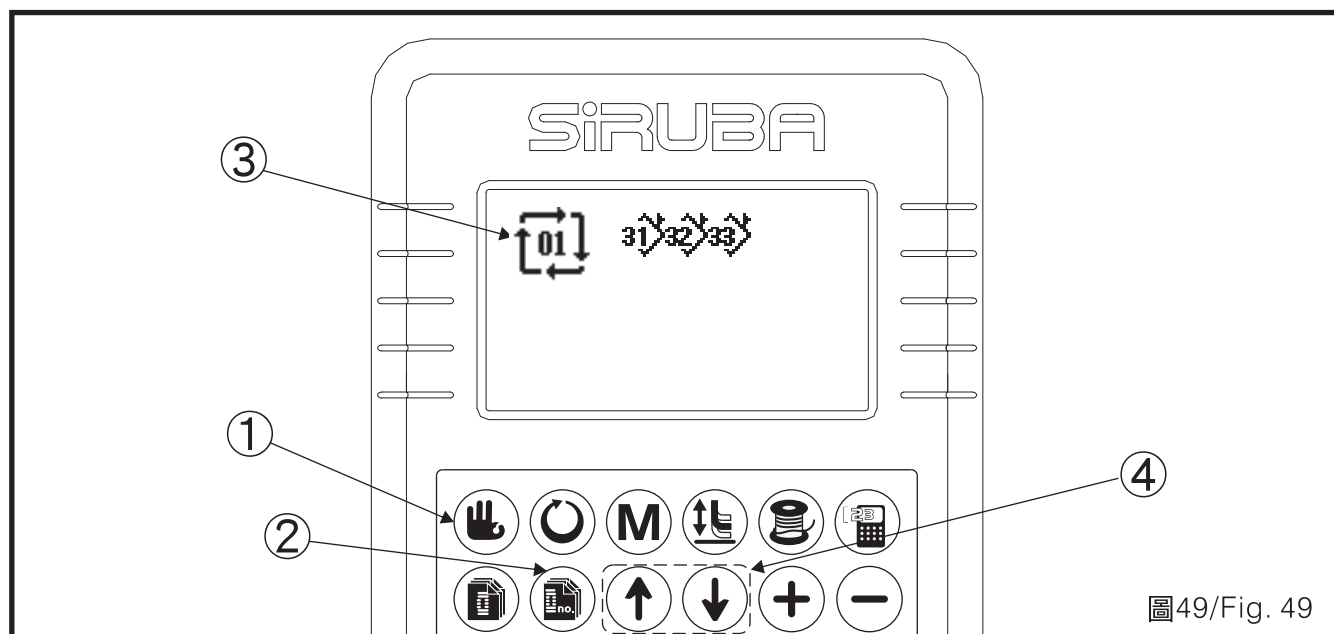


圖49/Fig. 49

- (2) 叫出編輯的循環縫紉數據編號

按參數項目鍵②後，顯示圖案選擇畫面。此時，被選擇的花樣編號③會閃爍。

- (3) 選擇循環縫製數據
按項目選擇鍵④之後，被登記的圖案會依次變更顯示。在最後的登記圖案編號之後會顯示已被登記的循環數據編號以及連續縫製編號。請在此選擇想縫製的循環數據編號。

- (4) 進行縫製
選擇循環數據之後，按準備鍵①，液晶螢幕的背景顏色會變為綠色的縫製模式。

註：

出廠時僅登記了循環數據編號第一號，沒有輸入縫製圖案，因此不會成為縫製狀態。第一次設定時，請先依照以下步驟進行設定。

5. 連續縫製數據的編輯方法

- (1) 先設定為輸入模式(圖50)
 - a. 當液晶顯示的背景照明為藍色(輸入模式)時，可以設定。
 - b. 當背景照明為綠色(縫製模式)時，請按準備鍵①變換為輸入模式。

- (2) Call the edit cycling sewing data screen
After pressing the Item Key ②, the pattern selection screen will appear. At this time, the chosen pattern number ③ will flash.

- (3) Select the cycling sewing data
After pressing the Item Selection Key ④, the registered patterns will change over in order. Coming after the last registered pattern number is the registered cycling data numbers and continuous sewing pattern numbers. Please select your desired cycling sewing data at this time.

- (4) Perform sewing
After selecting the cycling sewing data, please press Ready Key ① to transfer to the sewing mode, which the back light is green.

NOTE:

For only the cycling sewing data No. 1 is registered at the very beginning, the status will not transfer to the sewing status at the first time of this operation. Therefore, for your first time set up, please process the following processes first.

5. Editing the continuous sewing data

- (1) Change to input mode (Fig. 50)
 - a. When the back light of the LCD is blue (the input mode), that means the data is editable.
 - b. When the back light of the LCD is green (the sewing mode), please press Ready Key ① to transfer to input mode.

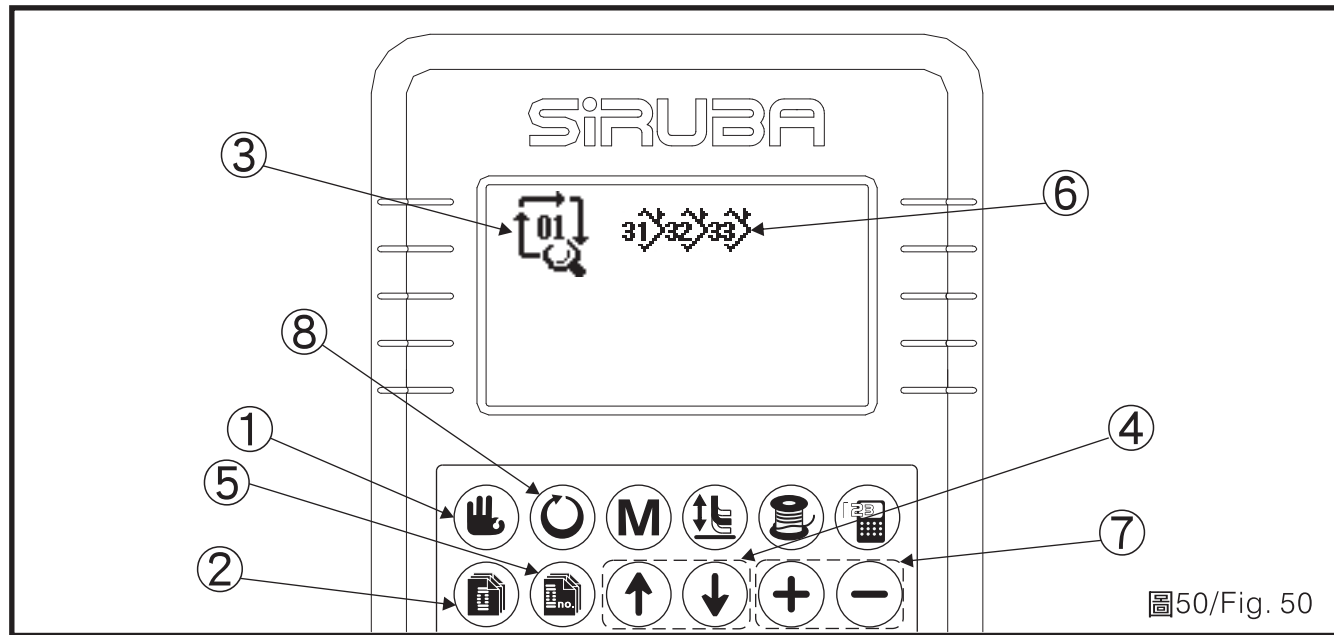


圖50/Fig. 50

(2) 叫出要編輯的循環縫製數據編號在圖案選擇畫面下，按下項目選擇鍵④。此時，已被登記的圖案會依次變換顯示。在最後的登記花樣編號之後會顯示已被登記的循環數據編號以及連續縫製編號。請在此選擇想縫製的循環縫製數據編號。

(2) Call the cycling sewing data number that you desire to edit. Press Item Selection Key ④ in pattern selection screen. At this time, the registered patterns will change over in order. Coming after the last registered pattern number are the registered cycling data numbers and the continuous sewing pattern numbers. Please select your desired cycling sewing data number.

(3) 更改循環縫製數據為編輯狀態按參數項目鍵⑤之後，可以改變為編輯狀態。此時，最初縫製的圖案編號⑥會閃爍。

(3) Change the cycling sewing data to editing status After pressing the Item Key ⑤, the status will change to editing status. At this time, the initial sewing pattern number ⑥ will flash.

(4) 選擇編輯要點按下項目選擇鍵④之後，編輯要點會依次移動閃爍。在進入到最後編輯要點之後，會顯示出追加指示指標。

(4) Select the edit point After pressing the Item Selection Key ④, the edit point will flash in order. When processing to the last editing point, an indication icon of adding will appear.

(5) 變更選擇的編輯要點的數據
a. 按數值變更鍵⑦來變更欲編輯之要點。
b. 當顯示已被登記的花樣編號之後，可以進行選擇。

(5) Change data of selected edit points
a. Press Data Change Key ⑦ to edit the point.
b. When the registered pattern number is shown, the selection is available now.

c. 按復位鍵⑧則會消除編輯要點的圖案數據。

c. Press Reset Key ⑧ will erase the pattern and data of the edit point.

(6) 重複步驟(4)與步驟(5)來編輯數據。

(6) Repeat step (4) and (5) to edit the data.

設定切刀尺寸

CONFIGURE THE TRIMMER SIZE

1. 本縫紉機所安裝的切刀尺寸是由操作面板來進行設定，如欲縫製各式形狀時，請先進行設定。

1. The trimmer size is set by the operation panel, and for multiple sewing shapes without replacing the trimmer, please process the configurations first.

2. 設定

2. Configuration

(1) 先設定為輸入模式(圖51)

(1) Set to be input mode (Fig. 51)

a. 當液晶顯示的背景照明為藍色(輸入模式)時，可以設定。

a. When the LCD back light is blue (the Input Mode), that means the sewing data is editable.

b. 當背景照明為綠色(縫製模式)時，請按準備鍵①變換為輸入模式。

b. When the LCD back light is green (the Sewing Mode), please press the Ready Key ① to transfer to input mode.

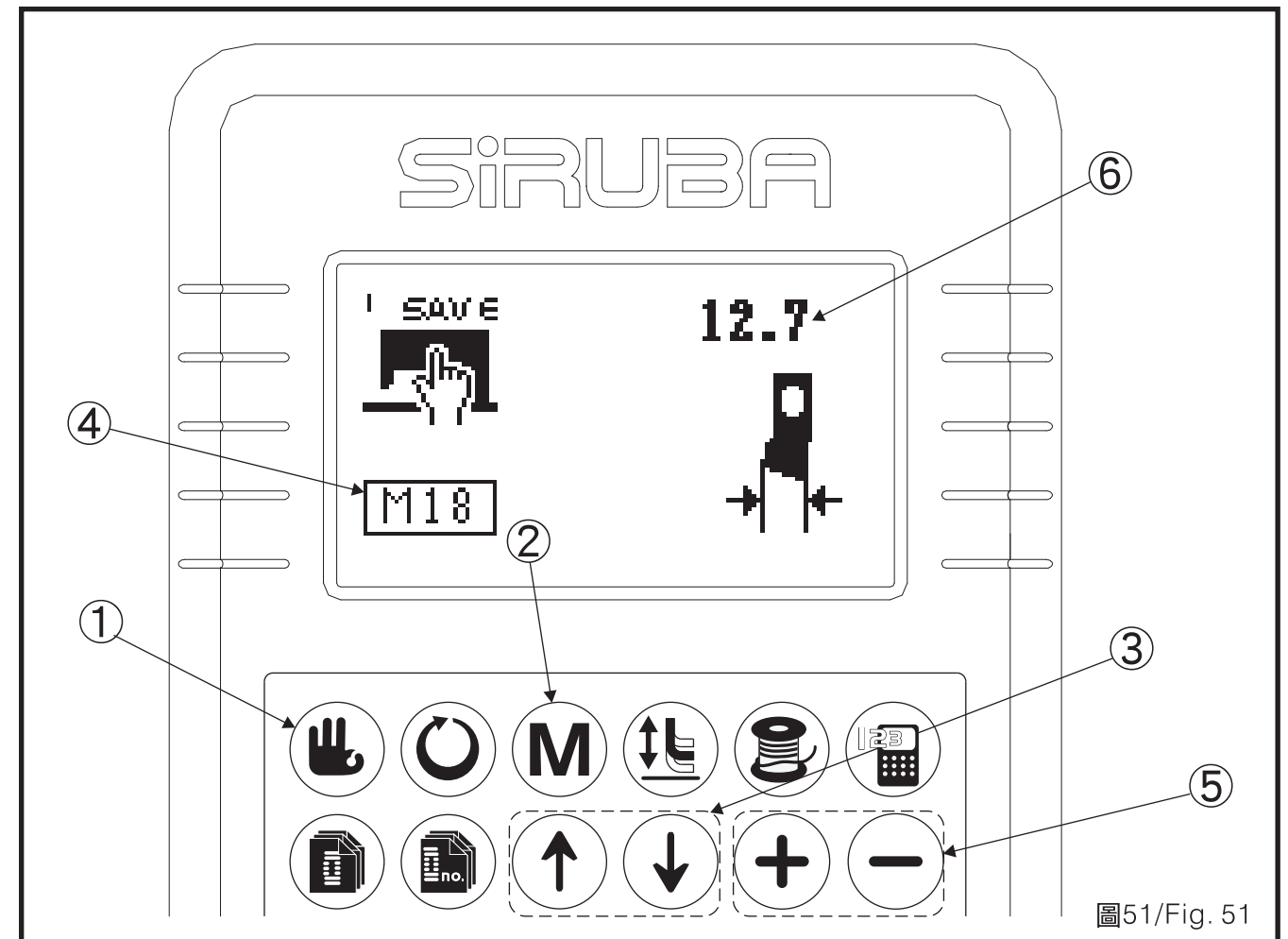


圖51/Fig. 51

- (2) 輸入切布刀尺寸
 - a. 按模式鍵②顯示存儲器開關數據(等級1)編輯畫面。
 - b. 按項目選擇鍵③叫出項目M18-切布刀尺寸④。
 - c. 用數值變更鍵⑤設定安裝的切布刀尺寸⑥。
 - d. 切布刀尺寸等資料請參考圖表7與圖表8。
- (3) 進行縫製
 - a. 按準備鍵①之後，液晶螢幕背景顏色成為綠色的縫製模式。
 - b. 如果扣眼尺寸C02與切刀尺寸M18不同，將會顯示出錯誤68的訊息。

- (2) Enter the trimmer size
 - a. Press Mode Key ② to show the editing screen of Memory Switch Data (Level 1).
 - b. Press Item Selection Key ③ to call the item M18-Size of the Fabric Trimmer ④.
 - c. Configure the installed fabric trimmer size ⑥ by Data Change Key ⑤.
 - d. Please refer to chart 7 and chart 8 for other information of the fabric trimmer size.
- (3) Process sewing
 - a. After pressing Ready Key ①, the LCD back light will turn to green, the sewing mode.
 - b. If the buttonhole size, item C02, is different from the trimmer size, M18, an error information: E68 will appear on the screen.

存儲器開關數據

MEMORY SWITCH DATA

1. 先設定為輸入模式(圖52)
 - (1) 當液晶顯示的背景照明為藍色(輸入模式)時，可以設定
 - (2) 當背景照明為綠色(縫製模式)時，請按準備鍵①變換為輸入模式。
2. 叫出存儲器開關數據編輯畫面
 - (1) 按模式鍵②之後，顯示出存儲器開關數據(等級1)的編輯畫面A。
 - (2) 繼續按模式鍵②5秒鐘後，會顯示出存儲器開關數據(等級2)的編輯畫面B。

1. Set to be input mode (Fig. 52)
 - (1) When the LCD back light is blue (the Input Mode), that means the sewing data is editable.
 - (2) When the LCD back light is green (the Sewing Mode), please press the Ready Key ① to transfer to input mode.
2. Call the editing display of Memory Switch Data
 - (1) After pressing Mode Key ②, the screen will appear the editing display A of Memory Switch Data (Level 1).
 - (2) After keeping pressing Mode Key ② over 5 seconds, the editing display B of Memory Switch Data (Level 2) will appear.

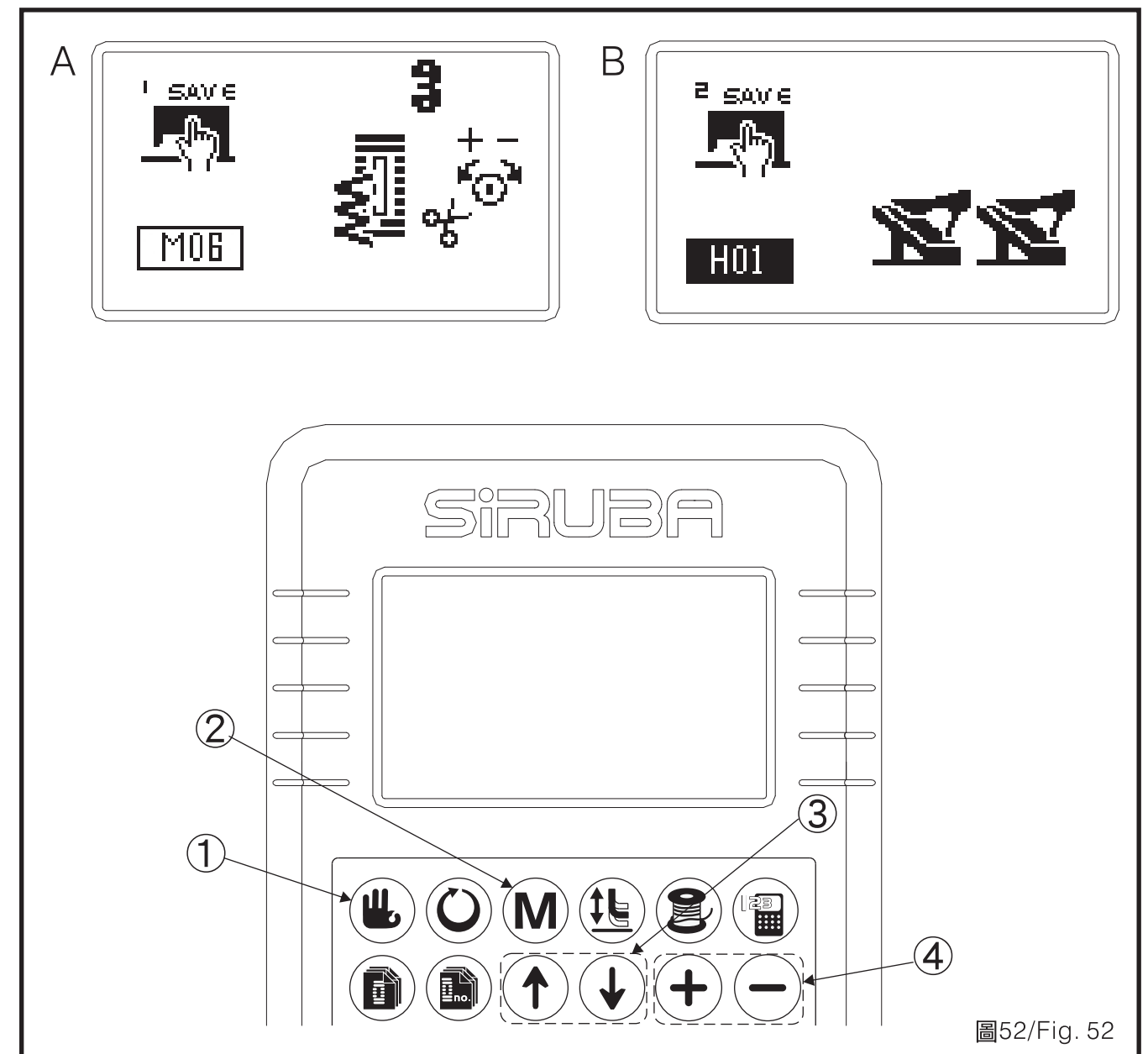


圖52/Fig. 52

3. 選擇要變更的存儲器開關數據
按項目選擇鍵③來選擇想變更的數據項目。
4. 變更數據
 - (1) 存儲器開關數據中，有變更數值的數據項目和圖形選擇的數據項目。
 - (2) 變更數值的數據項目以數值變更鍵④來增減變更設定值。
 - (3) 變更圖形的數據項目以數值變更鍵④來選擇圖形。

3. Select the memory switch data to edit
Press the Item Selection Key ③ to choose the data item that you would like to change.
4. Change the data
 - (1) In the Memory Switch Data, there are two kinds of data items. One is to change the data value, and another is to select the figure.
 - (2) The data item of changing data value is changed by pressing the Data Change Key ④.
 - (3) The data item of changing figure is selected by pressing the Data Change Key ④.

5. 存儲器開關數據

(1) 等級1(圖表7)

☆存儲器開關項目(等級1)是縫紉機通用的動作參數，是所有的縫製圖案適用的參數。

編號 NO.	項目 Item	設定範圍 Setting Range	編輯單位 Edit Unit	初期值 Initial Value
M06	縫製結束上線張力的設定 Setting needle thread tension when finishing sewing.	1~3	1	3
M07	切線時的上線張力的設定 Setting needle thread tension when trimming the thread.	1~3	1	3
M09	慢速起動速度的設定 - 第1針 Slow-start speed setting - 1st stitch	400~3600	100 rpm	400 rpm
M10	慢速起動速度的設定 - 第2針 Slow-start speed setting - 2nd stitch	400~3600	100 rpm	600 rpm
M11	慢速起動速度的設定 - 第3針 Slow-start speed setting - 3rd stitch	400~3600	100 rpm	1800 rpm
M14	壓腳種類 Presser foot type 請設定壓腳的種類。→ 5. 輸入壓腳類型 Set the type of presser foot. → 5. Input presser foot type	— (1, 2, 3, 5)	—	1型 Type 1
M15	壓腳尺寸寬度 Presser size width M14壓腳類型設定為5型後，請輸入壓腳的寬度。 Input presser width when setting the type 5 of M14 presser foot.	3.0~5.0	0.1 mm	3.0 mm
M16	壓腳尺寸長度 Presser size length M14壓腳類型設定為5型後，請輸入壓腳的長度。 Input the presser length when setting the type 5 of M14 presser foot.	10.0~120.0	0.5 mm	10.0 mm
M17	縫製開始位置(送布方向) Sewing start position (feeding direction) 設定與壓腳相對的縫製開始位置。 根據布層調整開始位置時進行設定。 Setting when adjusting the cloth layers start position.	2.5~110.0	0.1 mm	2.5 mm
M18	切布刀尺寸 Size of the fabric trimmer. 請輸入使用的切刀尺寸。 Input the trimmer size that is used.	3.0~32.0	0.1 mm	32.0 mm

5. Memory Switch Data

(1) Level 1(Chart 7)

☆Memory switch data (level 1) is a common motion data for each sewing machine and sewing pattern.

編號 NO.	項目 Item	設定範圍 Setting Range	編輯單位 Edit Unit	初期值 Initial Value
M20	斷線檢測功能為無效/有效 Thread breakage inspection is ineffective/effective  無效 Ineffective  有效 Effective	—	—	有效 Effective
M21	準備鍵ON時壓腳位置的選擇(上/下) Select the position of the presser foot when ready key is ON (up/down). 設定按了準備鍵後的壓腳位置。 Set the position of the presser foot after the ready key is pressed.  上 Up  下 Down	—	—	壓腳上升 The presser foot is up.
M22	循環縫製結束時壓腳位置的選擇(上位置/下位置) Select the presser foot position (up/down) when finishing cycle sewing. 設定1循環縫製結束之後的壓腳位置。 (僅在單踏板設定時有效) Setting presser foot position when finishing a sewing cycle. (only available for one pedal settings)  上 Up  下 Down	—	—	壓腳上升 The presser foot is up.
M23	上線切線動作開始的距離 Needle thread trimming motion start distance 輸入從開始縫製到上線切刀開始張開動作為止的距離。 Input the distance from the sewing starts to the releasing motion of needle thread trimmer starts. 	0~10.0	0.1 mm	1.0 mm
M24	底線切線動作開始的距離 Bobbin thread trimming motion start distance 輸入從開始縫製到底線切刀開始張開動作為止的距離。 Input the distance from the sewing starts to the releasing motion of bobbin thread trimmer starts. 	0~10.0	0.1 mm	1.5 mm
M25	更新計數單位 Counter updating unit 設定更新縫製計數的單位。 Set the sewing counter update unit 	1~30	1	1
M26	總計數：不顯示/顯示 Total number of stitches: Non-display/Display  不顯示 Non-display  顯示 Display	—	—	顯示 Display

圖表7/Chart 7










(2) 等級2 (圖表8)

☆持續5秒鐘按模式開關，變成可以編輯的狀態。

(2) Level 2 (Chart 8)

☆Press Mode switch for 5 seconds to the sewing possible status

編號 NO.	項目 Item	設定範圍 Setting Range	編輯單位 Edit Unit	初期值 Initial Value
H01	踏板選擇 Selecting pedal 設定踏板的類型。→ 3. 踏板的使用方法 Set the pedal type → 3. Using method of pedal  雙踏板 2-pedal 單一踏板 1-pedal (no intermediate position) 單一踏板 1-pedal (with intermediate position)	—	—	雙踏板 2-pedal
H02	參數設定變更：許可/禁止 Parameter setting change: Permitted/Prohibited  禁止 Prohibited 許可 Permitted	—	—	變更許可 Permitted
H03	禁止選擇壓腳種類的機能：許可/禁止 Prohibit to select presser type: permitted/prohibited. M04 設定禁止壓腳種類的變更。 Set the prohibition of changing M04 presser foot type.  禁止 Prohibited 許可 Permitted	—	—	變更許可 Permitted
H04	縫製形狀選擇等級 Sewing shape selection level 可以擴大可以縫製的縫製形狀數 (最大30種形狀) Number of sewing shapes which can be sewn can be increased. (Max. 30 shapes)  no.	— (7/20/30)	—	7種形狀 7 Shapes
H05	切布匹刀動力 Power of fabric trimmer 設定切布刀的輸出動力。 Set the output power of fabric trimmer. 0：最小動力→3：最大動力 0: Min. power→3: Max. power 	0~3	1	1
H07	最大縫製轉速的設定 Set the limitation of max. sewing speed. 設定縫紉機的最高轉速。 Limit the max. speed of sewing machine  max	400~3600	100 rpm	3600 rpm
H10	每次基準點檢索機能 Function of origin retrieval each time 縫製結束後或循環縫結束後，進行原點檢索。 Origin retrieval is performed after completing a sewing cycle or finishing the sewing.  無原點檢索 Without 縫製結束後 After sewing 循環結束後 After a cycle	—	—	無 Without

編號 NO.	項目 Item	設定範圍 Setting Range	編輯單位 Edit Unit	初期值 Initial Value
H15	Y送布馬達基準點補正 Y-feed motor origin compensation 	-120~400	1脈衝 1 pulse (0.025 mm)	0
H16	針擺動馬達基準點補正 Needle-rocking motor origin compensation 	-10~10	1脈衝 1 pulse (0.025 mm)	0
H17	壓腳提昇馬達基準點補正 Presser lifter motor origin compensation 	-350~40	10脈衝 10 pulse (0.5 mm)	0
H20	切布刀返回動力 Return power of the fabric trimmer 設定切布刀返回時的輸出動力。 This item sets output power at the time of returning the fabric trimmer. 	0~3	1	1
H21	縫製開始底線切線刀的開放量 Release amount of bobbin thread trimmer at the start of sewing 設定縫製開始底線切線刀的開放量。 This item sets the amount of releasing the bobbin thread trimmer at the start of sewing. 	0~30	1脈衝 1 pulse (0.025 mm)	15
H22	押腳速度的設定 Configure the speed of the presser foot.  speed	1~3	1	—
H23	上線切線調整模式開始 Start the needle thread trimming adjustment mode 用準備鍵ON開始上線切線動作的調整。 Needle thread trimming adjustment motion starts with Ready key ON. 	1: -20~+20 2: -190~-160 3: 0~40 4: 60~100	— (pulse)	1: 0 2: -180 3: 20 4: 80
H24	底線切線調整模式開始 Start the bobbin thread trimming adjustment mode. 用準備鍵ON開始底線切線動作的調整。 Bobbin thread trimming adjustment motion starts with Ready key ON. 	1: -80~-40 2: -20~+20 3: 80~125 4: -20~+20	— (pulse)	1: -70 2: 0 3: 100 4: 0
H25	傳感器確認模式開始 Sensor check mode starts 用準備鍵ON開始確認傳感器。 Sensor check starts with Ready key ON. 	—	—	—
H26	蜂鳴器設定：開啟/關閉 Set the buzzer: On/Off 開啟：  關閉：  On: Off:	—	—	開啟 On

圖表8/Chart 8

繞底線

WINDING THE BOBBIN THREAD

1. 安裝梭心(圖53)
把梭心插到繞線軸①上，依序穿線如圖所示。然後，依箭頭方向按下梭線導線器②。
 2. 設定為繞底線模式
在縫製狀態或在輸入狀態下，按繞線鍵③之後會進入繞線模式畫面C。
 3. 開始繞線
踩踏右側踏板之後，縫紉機開始轉動並開始捲繞底線。
 4. 停止縫紉機
 - (1) 捲繞完底線之後，梭線導線器②會被解除。
 - (2) 請按繞線鍵③讓縫紉機停止轉動回到一般模式；或者踩踏右側踏板讓縫紉機停止轉動。
 - (3) 取下梭心，用切線固定板④切線。
 - (4) 如果需要捲繞數個梭心時，請在第(2)階段踩踏右側踏板之後，再踩動右側踏板，則縫紉機會在原本的繞線模式停止，並且可以繼續繞線動作。
 5. 調節底線繞線量
在調整線量時，請旋鬆固定螺絲⑤，把調節板⑥往A方向(減少線量)或B方向(增加線量)移動，然後再鎖緊螺絲⑤。
1. Place the bobbin (Fig. 53)
Insert the bobbin into the bobbin winder shaft ①, and threading as the figure shows. Then, press the bobbin thread guide ② as the arrow directs.
 2. Set to be bobbin thread winding status
Whether it is under the sewing mode or the input mode, you can easily enter the thread winding status C by simply press the Winding Key ③.
 3. Start winding
After treading the right pedal, the sewing machine will start action of winding the bobbin thread.
 4. Stop the sewing machine
 - (1) After finishing winding, the bobbin thread guide ② will be released.
 - (2) Please press the Winding Key ③ to stop the sewing machine and return to the previous mode. Or, you may tread the right pedal to stop the sewing machine.
 - (3) Remove the bobbin, and cut the thread by the thread trimmer retaining plate ④.
 - (4) If multiple bobbins need to be wound, please tread the right pedal at step (2) and tread the right pedal after that. The machine will stop at the thread winding mode, and you may continue the winding.
 5. Adjust the bobbin thread winding amount
For adjusting the thread winding amount, please loosen the setscrew ⑤, and move the adjust plate ⑥ toward direction A (to decrease the amount) or direction B (to increase the amount). After that, please tighten the screw ⑤.

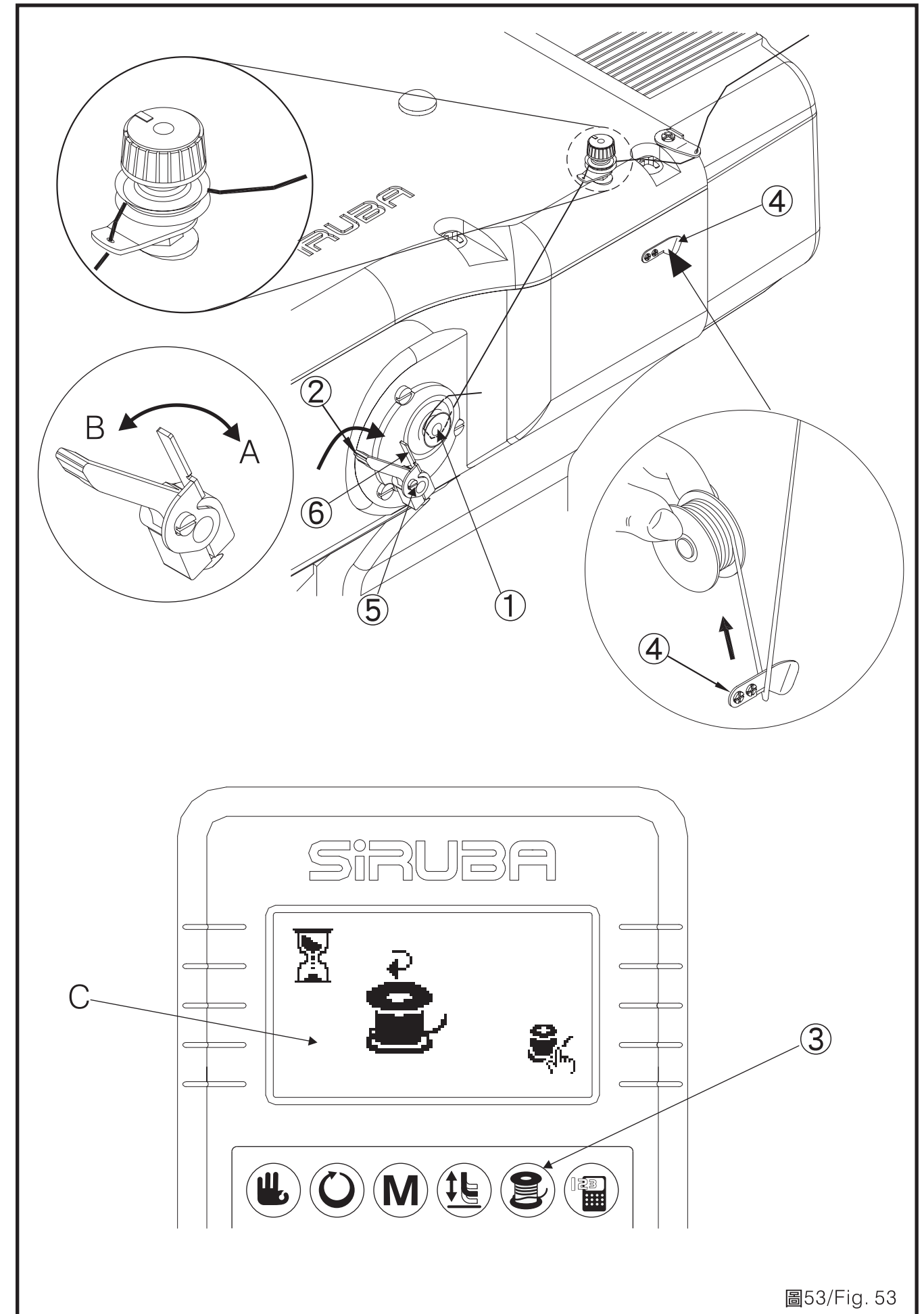


圖53/Fig. 53

緊急開關的操作

MOVEMENTS AFTER THE EMERGENCY STOP IS PRESSED

- 在縫製進行中，如果按下緊急開關，縫紉機就會中斷縫製並且停機。此時LCD會顯示錯誤顯示畫面A，通知緊急開關已被按下。(圖54)
- 途中繼續進行縫製
 - 解除錯誤
旋開緊急開關以解除錯誤，然後會顯示出步驟動作畫面B。
 - 返回運針
按後退鍵②，則押腳會一針針的返回。按前進鍵③，押腳會一針針的前進。請運行押腳到要重新縫製的位置。
 - 重新開始縫製
踩右踏板之後，重新開始縫製動作。
- 從最初開始縫製
 - 解除錯誤
旋開緊急開關以解除錯誤，然後會顯示出步驟動作畫面B。
 - 返回縫製物開始位置
按下復位鍵①，則會返回到縫製物的開始位置。
 - 從最初開始縫製

- When the emergency stop is pressed during sewing, the sewing machine will stop immediately and suspend. At this time, there would be an error information A displayed on LCD, which is to inform that the emergency stop has been pressed. (Fig. 54)
- Continue sewing in the middle
 - Release the error information
Release the emergency stop to release the error information. Then, there would be a steps movement display B.
 - Move the presser foot back or forth
The presser foot will move back step by step after pressing the Backward Key ②. On the contrary, the presser foot will move forward step by step after pressing the Forward Key ③. Please move the presser foot to where you would like the sewing movement start again.
 - Re-start sewing
After treading the right pedal, it will restart sewing.
- Continue sewing from the very beginning
 - Release the error information
Release the emergency stop to release the error information. Then, there would be a steps movement display B.
 - Return to the very beginning location
Press Reset Key ①, and it will return to the initial start location.
 - Re-start sewing from the very beginning.

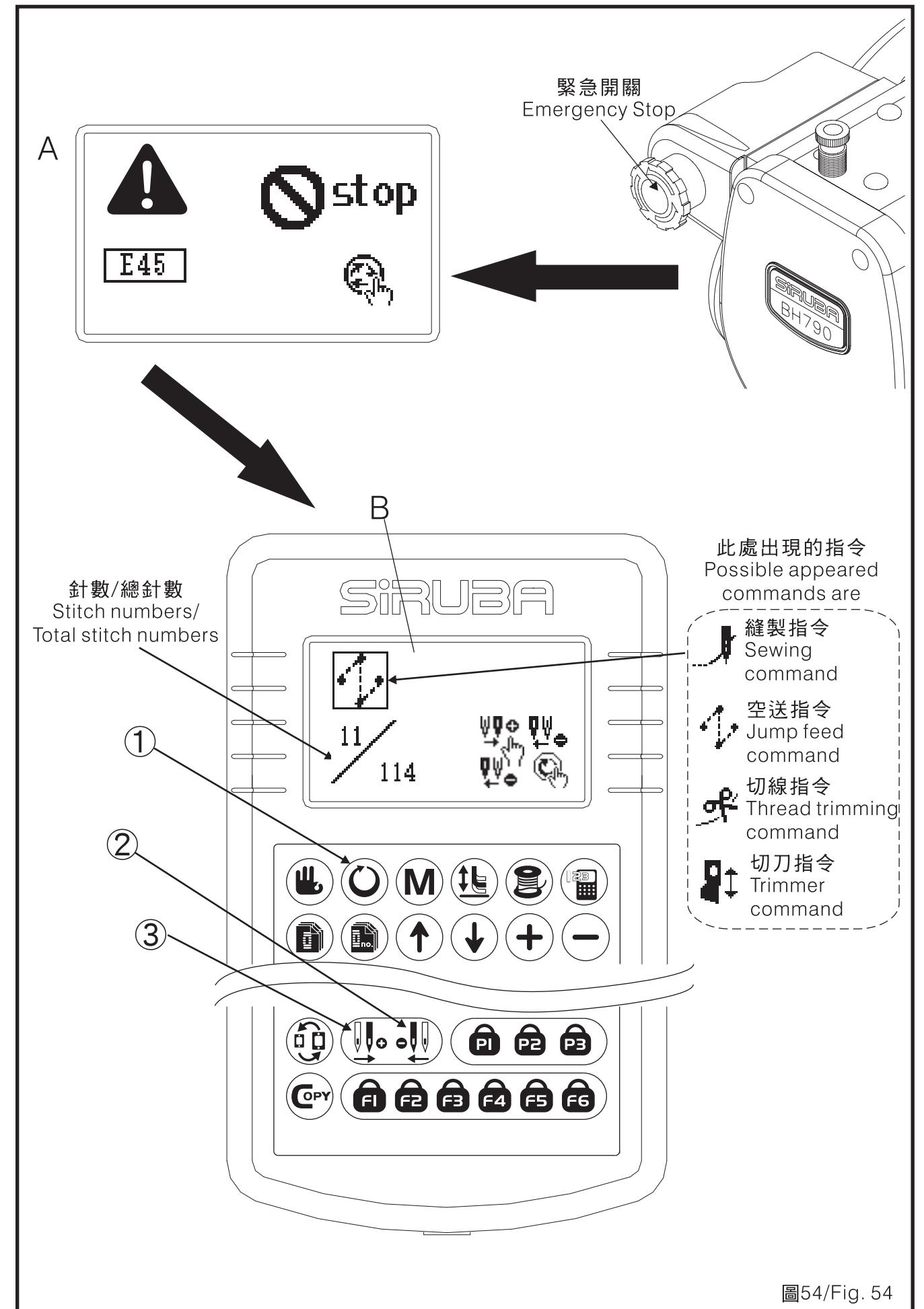


圖54/Fig. 54



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.

1. 為了保持縫紉機的機能,且能長久的使用,請每日加以保養。

2. 另外，定期保養請參照下表。(表12)

1. For keeping the machine quality and lengthening the usage term of this sewing machine, please maintain it everyday.

2. In addition, for your reference, please see the following table of periodical maintenance. (Table 12)

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.
	2.	保持機器及操作台清潔 Keep the machine and the operation table clean.
每週Weekly	1.	保持電源線外觀乾淨 Keep the power cords looking clean and neat.
	2.	保持操作面板乾淨 Keep the operation table clean.
	3.	檢查電源零件是否鬆脫或在正確位置 Check if the power parts are loosening or still at the right position.
每三個月Quarterly	1.	檢查潤滑油 Check the lubrication oil.
每年Annually	1.	檢查傳動皮帶是否疲乏或毀損 Check the transmission belt to see if it is wearful or damaged.

表12/Table 12



注意CAUTION



在進行簡易維修調整之前，請先關閉電源並拔出電源，否則如果誤觸啟動開關，縫紉機會動作，易導致人身傷害。
Before processing the simple maintenance or adjustments, please turn off the power switch and unplug the electronic cord. Otherwise, if touching the start switch incautiously, the sewing machine will function and will probably cause injuries happened o operators.

1. 機針與旋梭的同步調整

(1) 當機針落在針板孔中央時進行調整。

(2) 針桿高度(圖55)

a. 把針桿降到最低點。

b. 把同步尺1的部份①如圖插入針板和針桿下端之間。針桿碰到規尺。

c. 旋鬆針桿套管固定螺絲②，決定針桿高度。

1. Adjust the synchronization of needle and the hook

(1) Adjust this when the needle travels to the center of the needle plate hole.

(2) The needle bar height (Fig. 55)

a. Move the needle bar to the lowest point.

b. Insert the part ① of the synchronize ruler 1 in between the needle plate and the lower part of the needle bar. Make the needle bar touch the ruler.

c. Loosen the setscrew ② of the needle bar sleeve to determine the needle bar height.

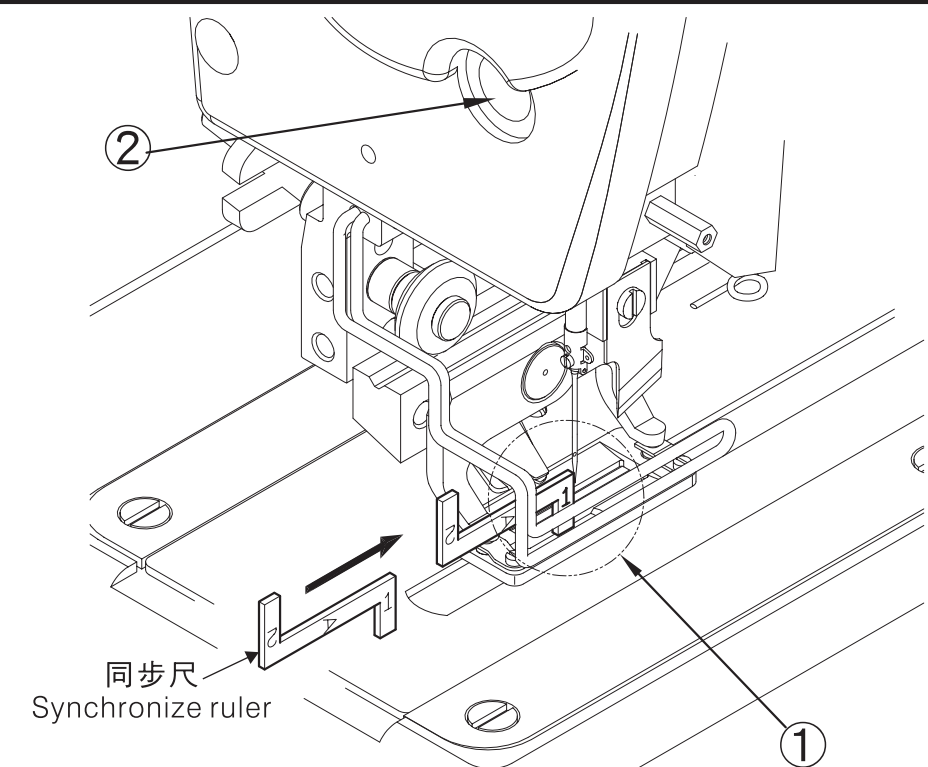


圖55/Fig. 55

(3) 機針和旋梭的同步(圖56)

(3) Synchronize the needle and the hook. (Fig. 56)

- a. 如箭頭所示方向轉動手輪，讓機針從最下端開始往上移動。
- b. 把同步尺2的部份③插入針板和針桿下端之間，讓針桿頂到規尺。

- a. Rotate the pulley as the arrow shows in the figure. Move the needle from the lowest point upward.
- b. Insert the part ③ of the synchronize ruler 2 in between the needle plate and the lower part of the needle bar. Make the needle bar touch the ruler.

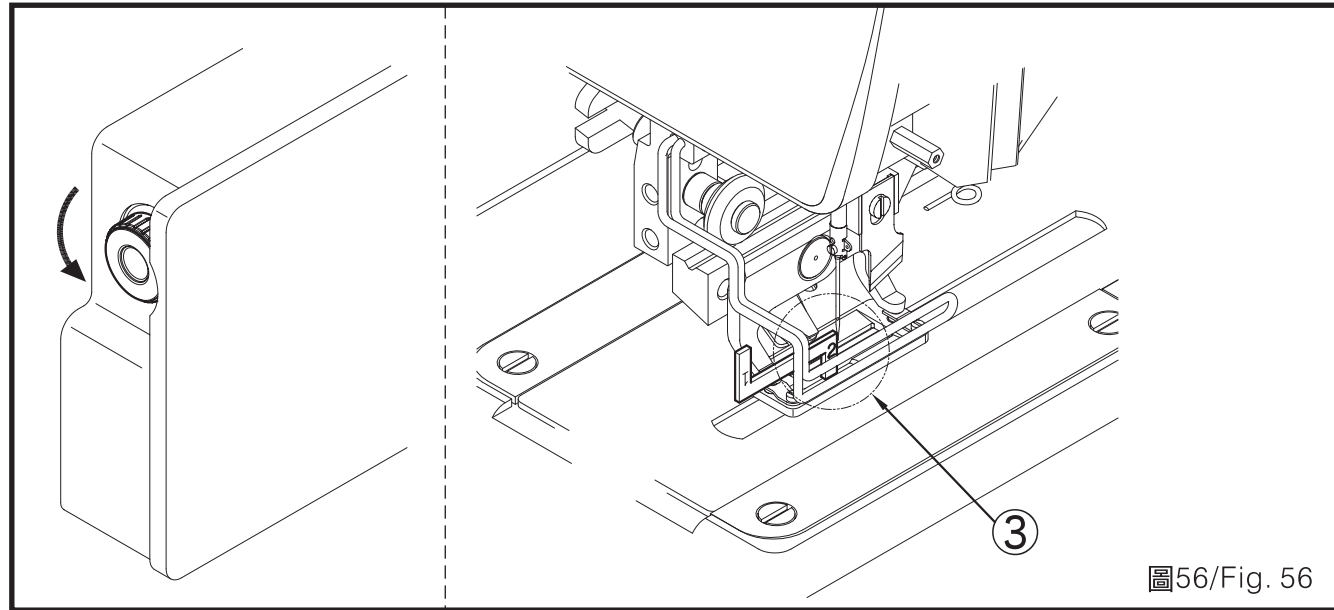


圖56/Fig. 56

- c. 旋鬆軸套固定螺絲④，把旋梭尖調整到機針的中心。(圖57)

- c. Loosen the setscrew ④ of the sleeve, and adjust the hook tip to the center of the needle. (Fig. 57)

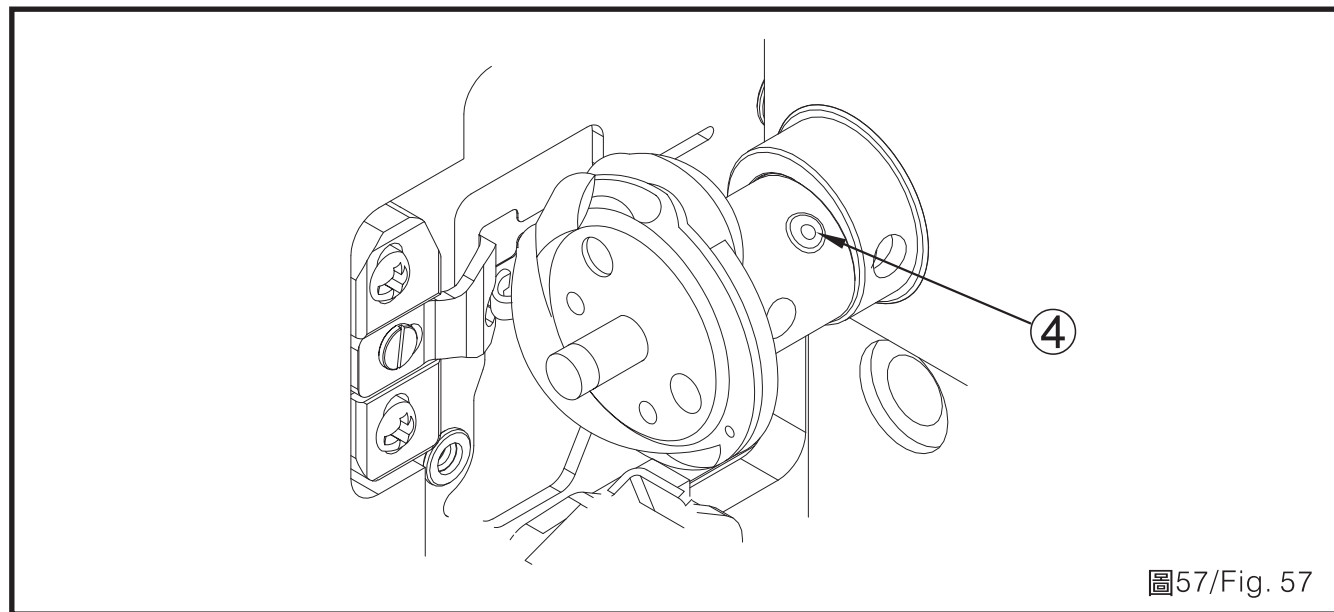


圖57/Fig. 57

- d. 此時，機針與旋梭尖の間隙約為0.05 mm。(圖58)

- d. At this time, the clearance between the needle and the hook tip is about 0.05 mm. (Fig. 58)

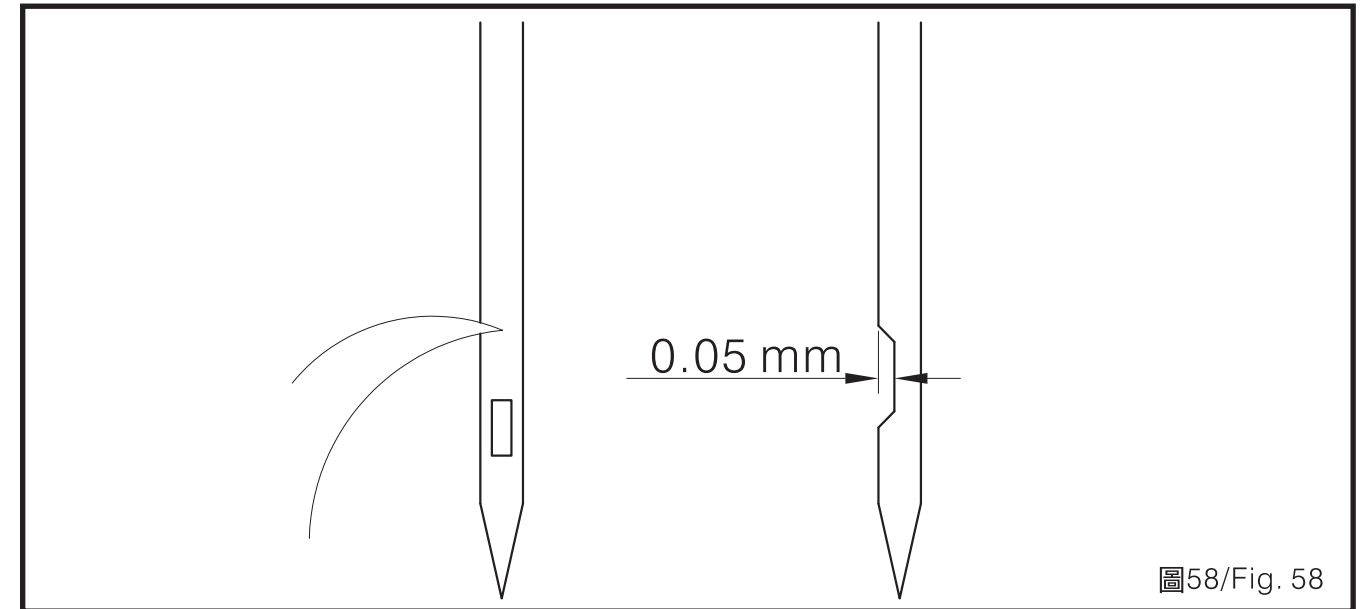


圖58/Fig. 58

- (4) 內旋梭的固定調整(圖59)
用固定螺絲①把內旋梭固定器②的前端和內旋梭③的端面咬合量調整為0~0.2 mm。

- (4) Set and adjust the bobbin case positioning stopper (Fig. 59)
Adjust the engaging/overlap amount of the end of the bobbin case position stopper ② and the inner hook ③ to be 0~0.2 mm by the setscrew ①.

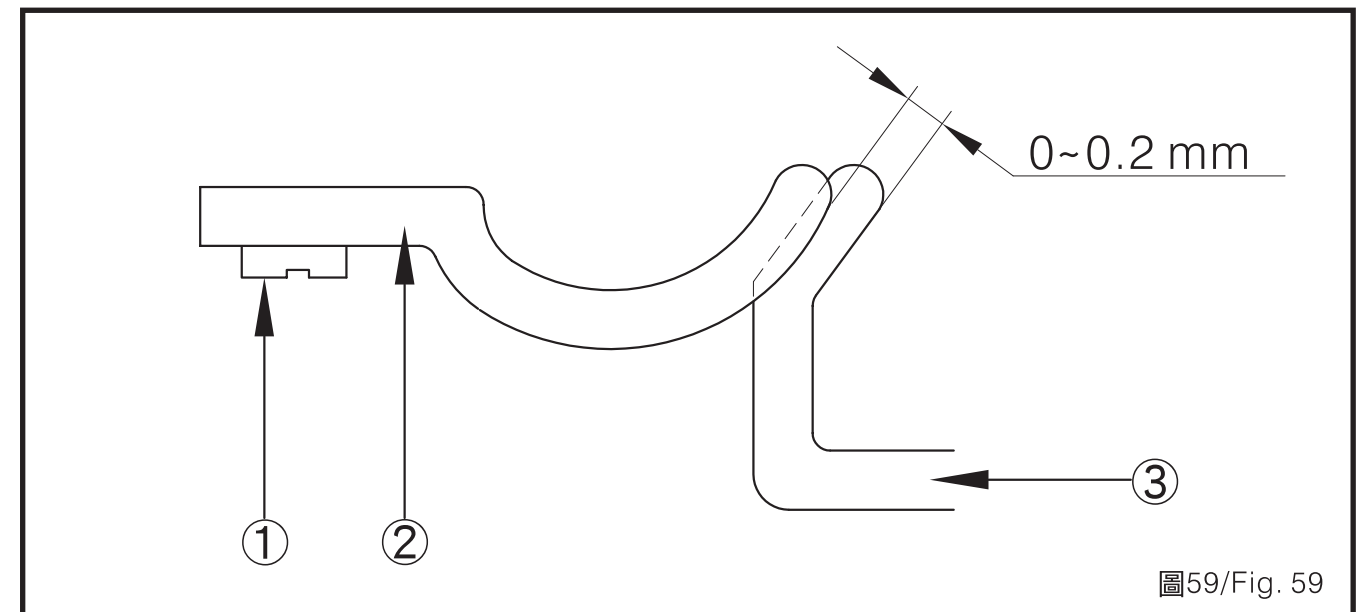


圖59/Fig. 59

2. 調整上線切線

(1) 調整上線切刀切線力

- 如果上線切刀切線力不穩定，開始縫紉時上線容易跳線。
- 上線切線力弱時-旋鬆螺絲①，卸下上線切刀②。(圖60)

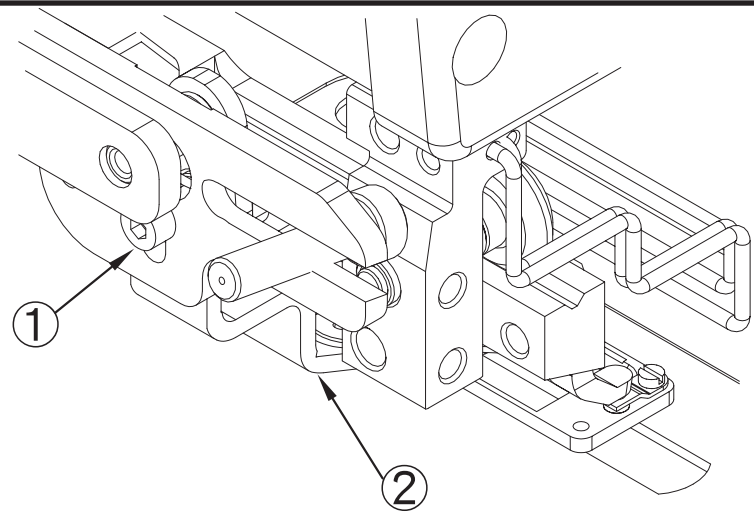


圖60/Fig. 60

- 用手把壓線彈簧前端輕輕弄彎，使壓線彈簧③與上切刀④之間沒有接觸間隙。(圖61)

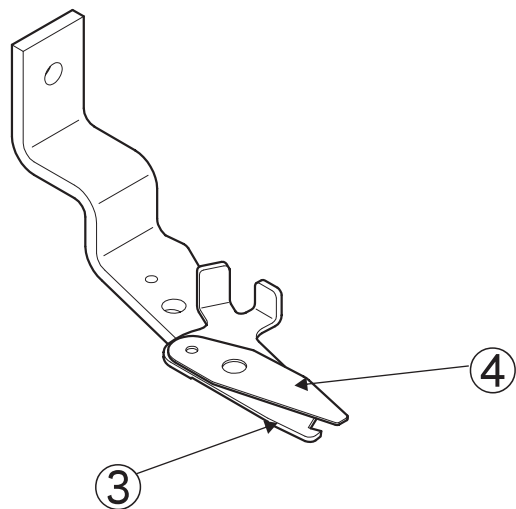


圖61/Fig. 61

2. Adjust the needle thread trimming function

(1) Adjust the needle thread trimmer

- If the needle thread trimmer trims unstable, the needle thread will skip away easily.
- If the needle thread trimmer cannot trim the thread smoothly, please loosen the screw ① to disassemble the needle thread trimmer ②. (Fig. 60)

- Bend the front end of the thread pressing spring slightly by hand, so that there should be no clearance between the thread pressing spring ③ and the needle thread trimmer ④. (Fig. 61)

(2) 上切刀的安裝高度(圖62)

- 放鬆上切刀安裝螺絲①，調整上切刀的安裝角度。
- 盡量使上切刀不接觸押腳，如此上線切線的餘線量較短。
- 縫製多層布料時，押腳會傾斜，請把位置稍微提高，不讓切刀與押腳相碰撞。

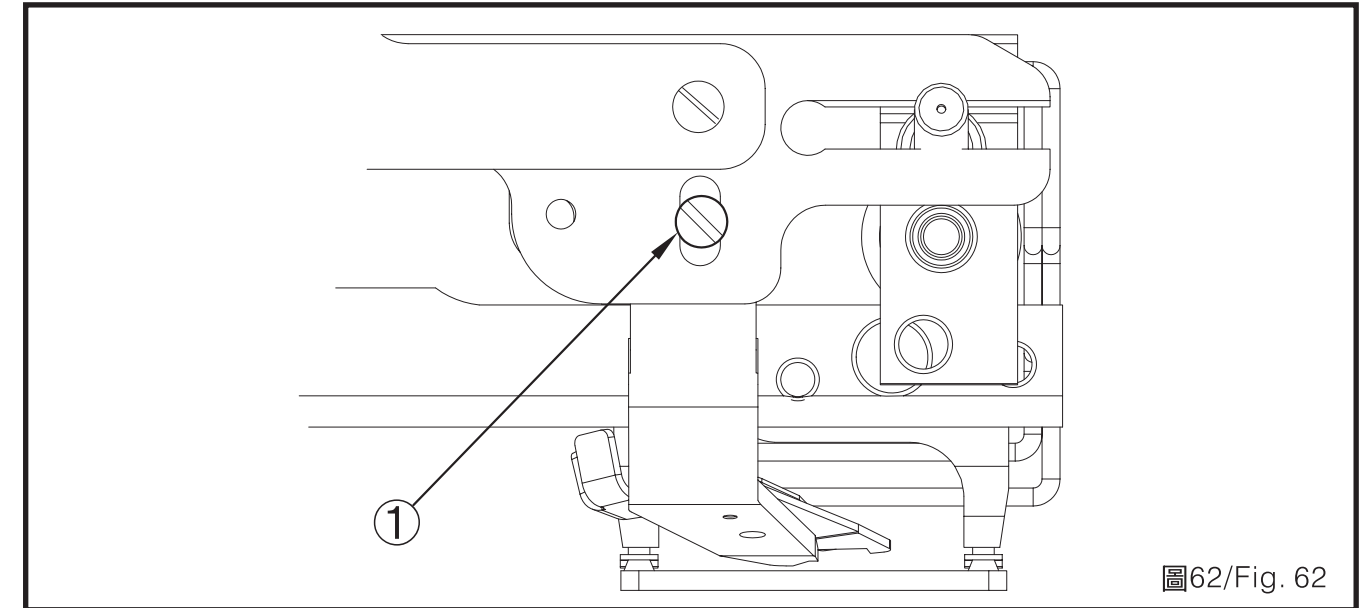


圖62/Fig. 62

註：

更換上線切刀之後，請確認在上線切線調整模式下(存儲器開關等級2：H23)，切刀是否正常動作。

3. 調整押腳壓力(圖63)

押腳壓力是經由押腳調節螺絲①來調節。順時針鎖緊調節螺絲①，可增加押腳壓力，布不容易摺起。

(2) The assembled height of the needle thread trimmer. (Fig. 62)

- Loosen the needle thread trimmer setscrew ① to adjust the assembling angle.
- Try not to make the needle thread trimmer contacting the presser foot. By this adjustment, the leftover amount of the needle thread will be shorter.
- While sewing multi-layer fabrics, the presser foot will be aslope. Please adjust the height to be a little higher. The needle thread trimmer should not contact the presser foot.

NOTE:

After replacing the needle thread trimmer, please confirm that if the needle thread trimmer can function normally and well under the needle thread trimming adjustment mode. (Memory Switch Level 2: H23)

3. Adjust the presser foot pressure (Fig. 63)

The pressure is adjusted by the presser foot regulating screw ①. Tightening the screw clockwise can increase the presser foot pressure and prevent fabric puckering.

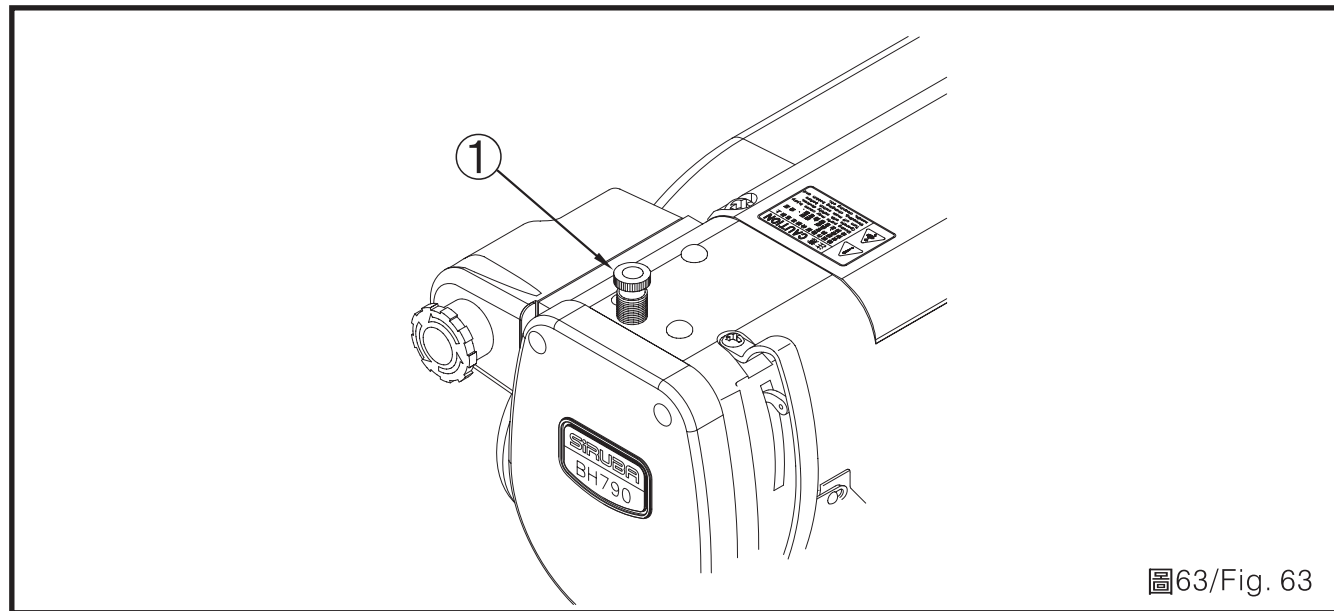


圖63/Fig. 63

4. 調整旋梭壓片(圖64)

在縫紉機停止的狀態下，放鬆螺帽①，把機台前端和旋梭壓腳②之間的距離調整為8~15 mm。然後用止動器螺絲③調整位置，之後再鎖緊螺帽①。

4. Adjust the bobbin pressing plate (Fig. 64)

When the sewing machine is stopped, loosen the nut ①, and adjust the distance between the front end of the table and the bobbin presser ② to be 8~15 mm. Then, tighten the nut ① after adjusting the position by the stopper screw ③.

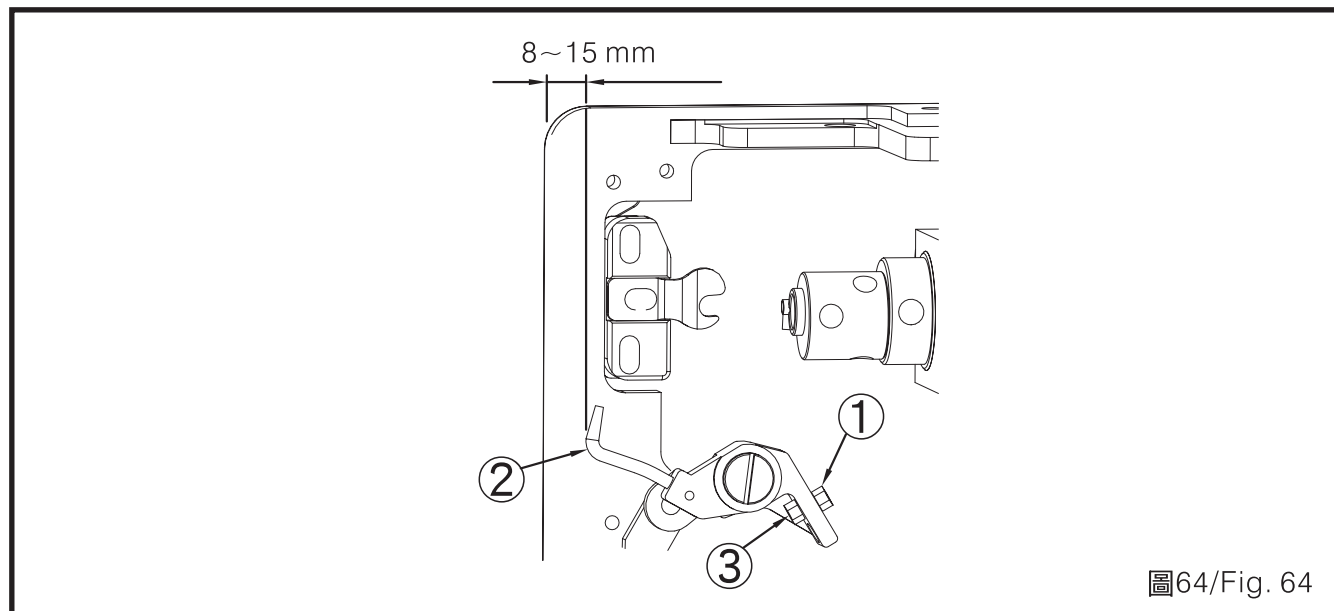


圖64/Fig. 64

5. 線的張力

(1) 挑線彈簧(直鎖眼縫)(圖65)

a. 挑線彈簧①的挑線量為8~10 mm，起始強度設定為0.06~0.1N左右較為恰當。

5. Thread tension

(1) Thread take-up spring (purl stitch) (Fig. 65)

a. The thread take-up amount is 8~10 mm of the thread take-up spring ①. The proper start strength is better to set to 0.06~0.1N.

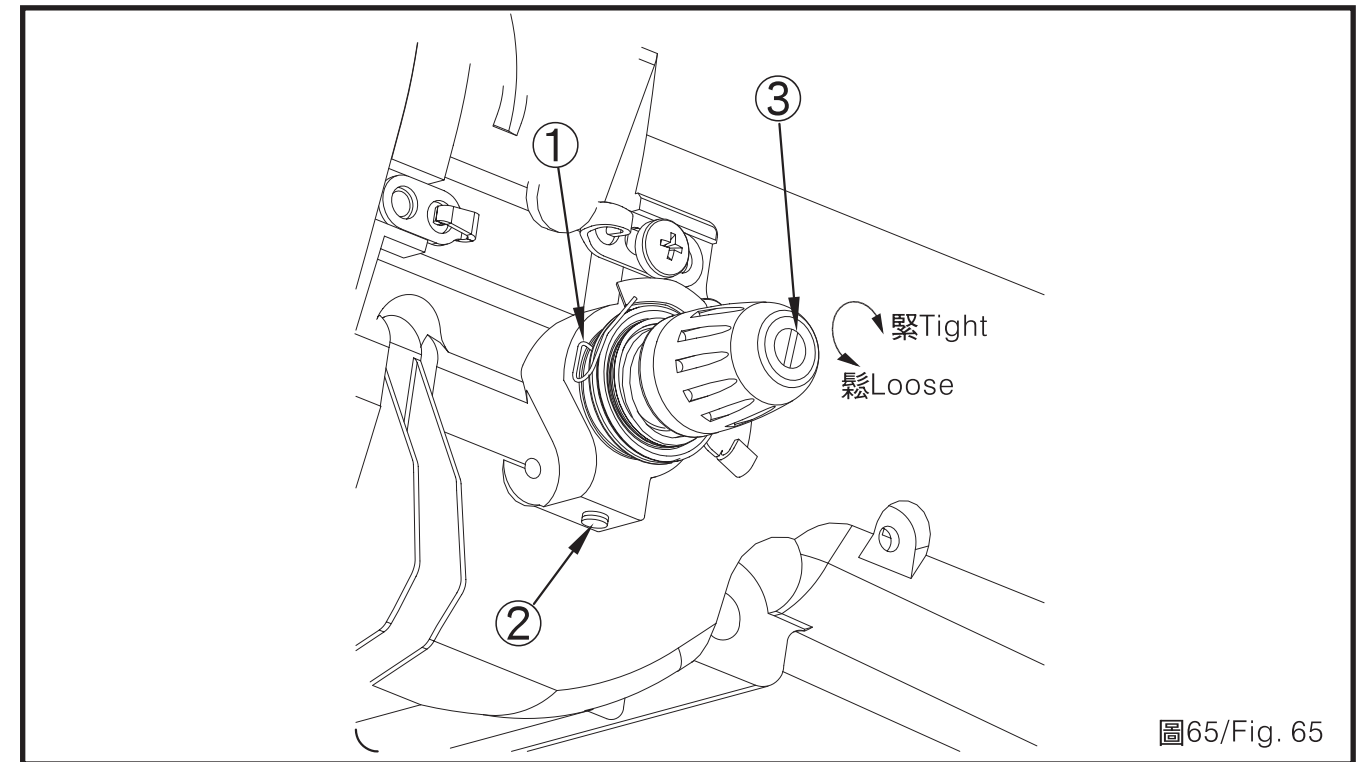


圖65/Fig. 65

b. 改變挑線彈簧的動作量時，請旋鬆螺絲②，把細螺絲起子插到③的地方轉動調節。

b. For changing the take-up amount, please insert the thin screwdriver into ③ at where the figure show to loosen the screw ② to adjust.

c. 改變挑線彈簧的強度時，請在螺絲②旋緊的狀態下，把細螺絲起子插到③的地方轉動調節。

c. For changing the take-up strength, please insert the screwdriver into ③ at where the figure show to adjust when the screw ② is tightened.

d. 向右轉動→挑線彈簧強度變強

d. Turn right→Increase the strength of the take-up spring.

向左轉動→挑線彈簧強度變弱

Turn left→Decrease the strength of the take-up spring.

(2) 挑線桿挑線量的調整(圖66)

(2) Adjust the take-up amount of the thread take-up lever (Fig. 66)

依據布料厚度來調整挑線桿的挑線量。

Adjust the thread take-up amount by the fabric thickness.

a. 縫厚料時，放鬆導線器①的固定螺絲②，向左移動導線器①。

a. For sewing thick materials, please loosen the setscrew ② of the thread guide ①, and movet the thread guide ① left.

b. 縫薄料時，向右移動導線器①，則挑線桿的挑線量變少。

b. For sewing thin materials, please move the thread guide ① right and the thread take-up amount of the thread take-up lever will be decreased.

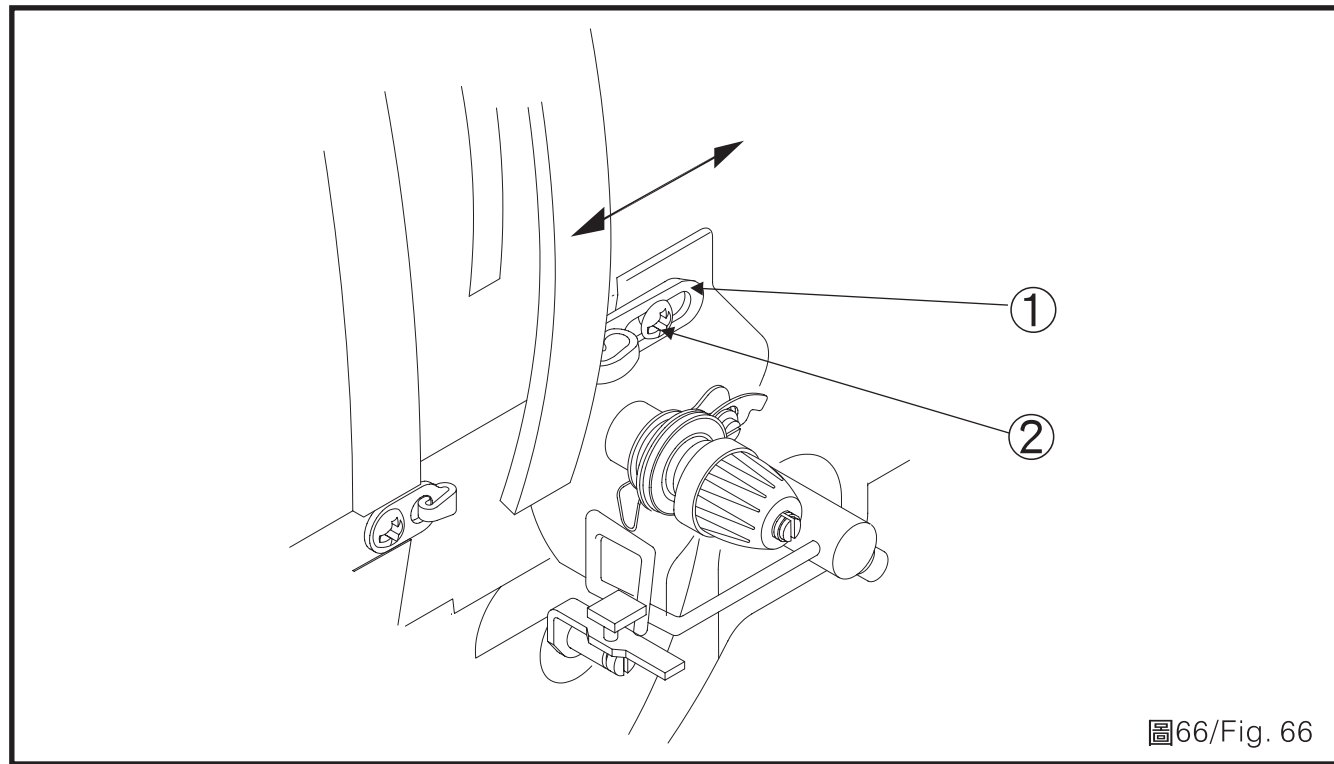


圖66/Fig. 66

6. 清掃風扇保護網(圖67)

- (1) 沿箭頭方向拉卸保護網①。
- (2) 用水沖洗清理保護網①。
- (3) 安裝回原來位置。

6. Clean the fan protector (Fig. 67)

- (1) Remove the fan protector ① as the arrow shows.
- (2) Clean and wash the fan protector ① by clean water.
- (3) Assemble the fan protector ① back to its original position.

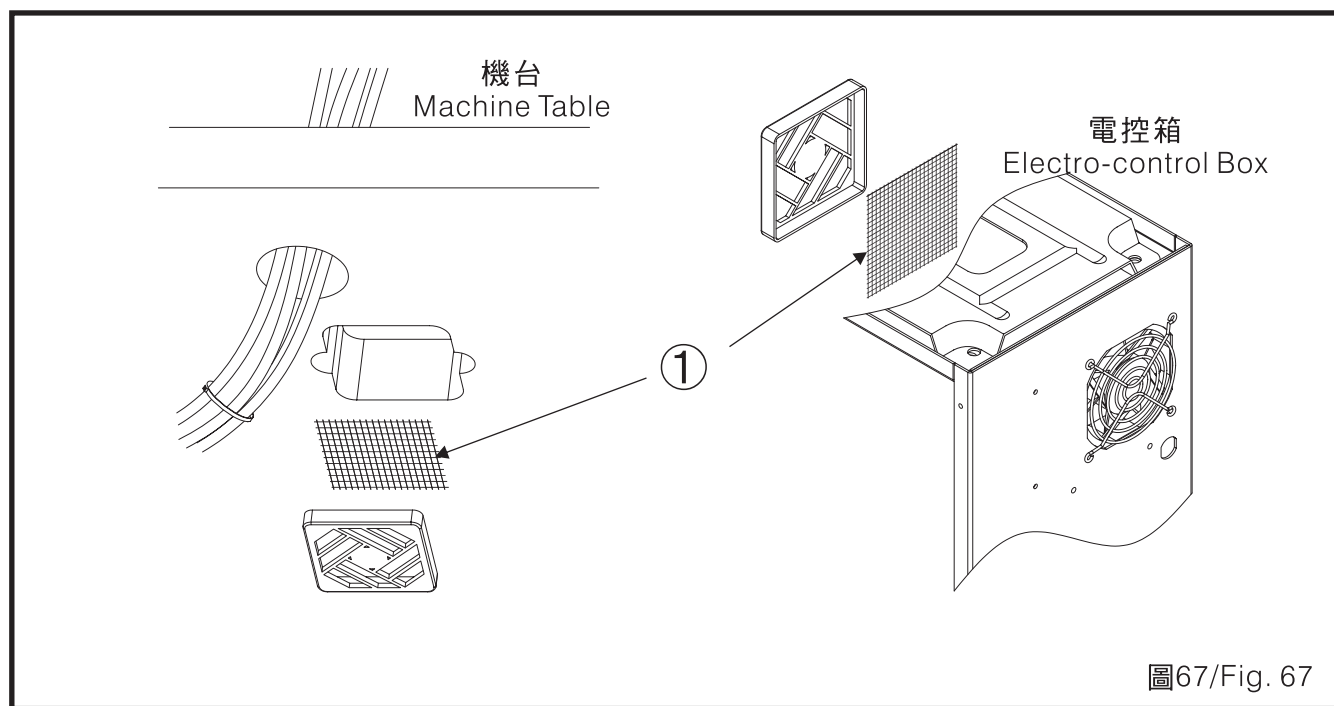


圖67/Fig. 67

7. 保險絲(圖68)

7. Fuses (Fig. 68)

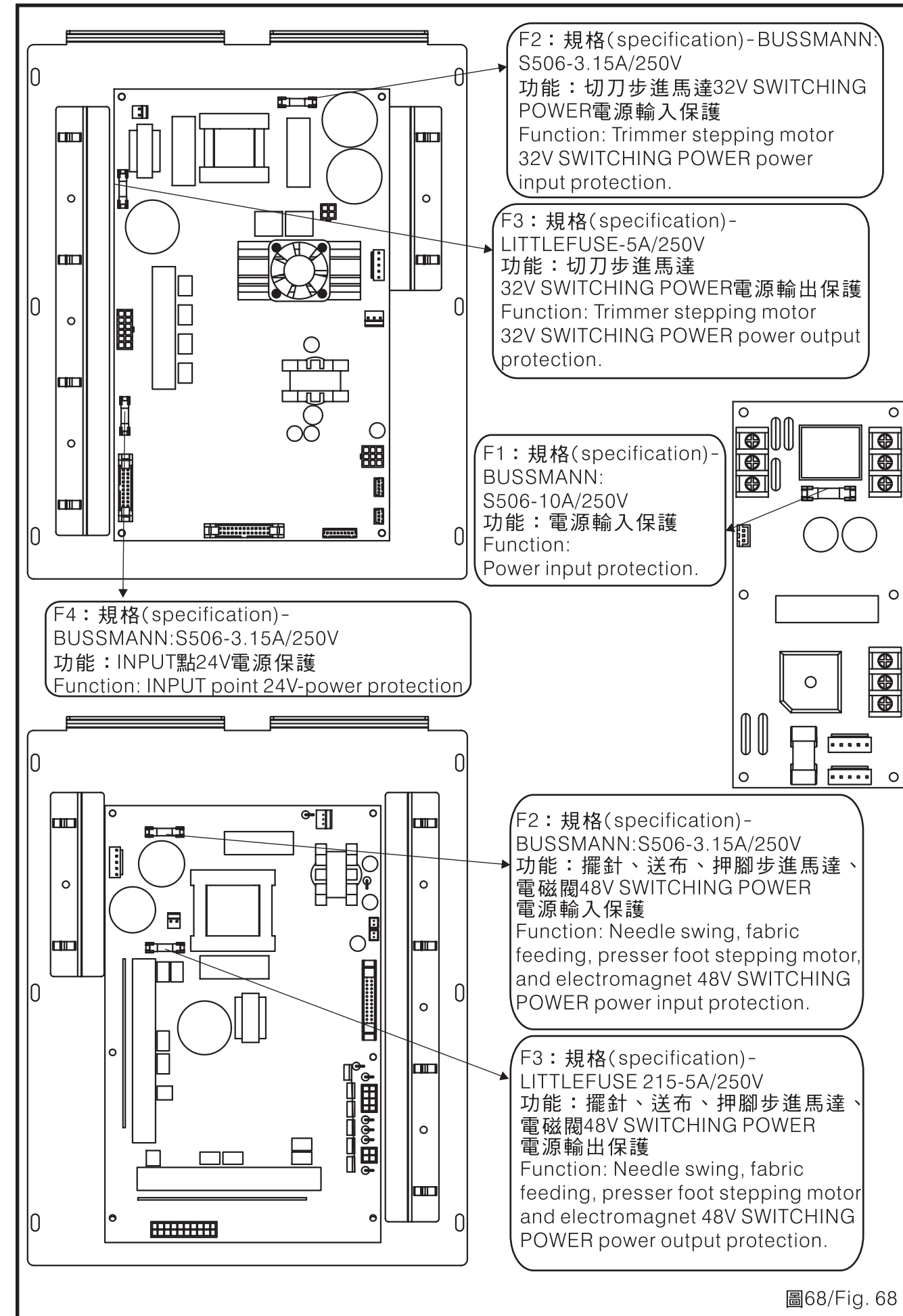


圖68/Fig. 68

錯誤代碼表

ERROR CODES LIST

錯誤代碼如下表所示(表13)

The error codes are as listed as the following table. (Table 13)

錯誤代碼 Error Code	錯誤內容 Error Content	復位方法 How to Return
001	低電壓Low voltage	關閉電源Power Off
002	過電壓Over voltage	關閉電源Power Off
003	主軸馬達被鎖定(過負載) The main shaft motor is locked (over-loaded)	關閉電源Power Off
004	主軸馬達IPM異常IPM of the main shaft is error	關閉電源Power Off
005	主軸馬達傳感器不良，位置傳感器不良The motor sensor or the positioning sensor of the main shaft is error.	關閉電源Power Off
006	監視器時間超過Watch dog time out	關閉電源Power Off
007	參數錯誤-電子齒輪比沒有在0.02~50之間 Incorrect parameter-the electro-gear ratio doesn't fall in 0.02~50.	關閉電源Power Off
010	主軸馬達電流過大The current of main shaft motor is exceeded.	關閉電源Power Off
011	差異值過大The variation is over range.	關閉電源Power Off
012	過速度Over speed	關閉電源Power Off
013	瞬間輸入脈波過大Over instantaneous input pulse	關閉電源Power Off
016	讀取馬達電流數值錯誤Error in reading the motor current value	關閉電源Power Off
033	放倒機頭進行確認Tilt the machine head to confirm	按復位鍵解除 Press Reset Key
034	切布刀傳感器錯誤Error in the sensor of fabric trimmer	按復位鍵解除 Press Reset Key
035	主軸Z向傳感器異常Error in Z-phase sensor of main shaft	關閉電源Power Off
037	機針擺動馬達原點檢索錯誤 Needle rocking motor origin retrieval error	關閉電源Power Off
038	Y送馬達原點檢索錯誤Y-feed motor origin retrieval error	關閉電源Power Off
039	上線切線馬達原點檢索異常 Needle thread trimming motor origin retrieval error	關閉電源Power Off
040	押腳馬達原點檢索錯誤Presser foot motor origin retrieval error	關閉電源Power Off
041	底線切線馬達原點檢索異常 Bobbin thread trimming motor origin retrieval error	關閉電源Power Off
042	布切刀不能返回原位時 The fabric trimmer cannot travel back to its origin	關閉電源Power Off

錯誤代碼 Error Code	錯誤內容 Error Content	復位方法 How to Return
043	切刀下降指令與切線動作相碰 The order of lowering the trimmer encounters the trimming motion.	按復位鍵解除 Press Reset Key
044	針桿上位置偏離 The upper position of the needle bar diverges from origin.	按復位鍵解除 Press Reset Key
045	停止開關Stop	按復位鍵解除 Press Reset Key
046	斷線檢測錯誤Error in thread breakage sensing	按復位鍵解除 Press Reset Key
060	存儲器開關數據錯誤(checksum err) Error of the Memory Switch Data (checksum err)	關閉電源Power Off
061	機頭部連接電路板EEPROM不能寫入 Defectiveness of EEPROM of head connecting P.C.B.	關閉電源Power Off
062	操作盤與主CPU間通訊異常 Abnormal communication between panel and main CPU	關閉電源Power Off
063	圖案數據尺寸超過Exceed size of the pattern data	按復位鍵解除 Press Reset Key
064	縫製數據錯誤Incorrect sewing data	按復位鍵解除 Press Reset Key
065	圓頭扣眼長度錯誤Incorrect length of the eyelet	按復位鍵解除 Press Reset Key
066	圓頭扣眼形狀錯誤Incorrect shape of the eyelet	按復位鍵解除 Press Reset Key
067	流動加固補正錯誤Error in bar-tacking of tape part	按復位鍵解除 Press Reset Key
068	切刀尺寸錯誤 Incorrect trimmer size	按復位鍵解除 Press Reset Key
069	下縫的押腳尺寸超過Exceeded presser foot size when basting	按復位鍵解除 Press Reset Key
070	縫製結束加固縫的押腳尺寸超過Exceeded presser foot size of the bar-tacking in the end of the sewing	按復位鍵解除 Press Reset Key
071	縫製開始加固縫的押腳尺寸超過Exceeded presser foot size of the bar-tacking in the beginning of the sewing	按復位鍵解除 Press Reset Key
072	押腳尺寸錯誤(僅寬方向，右側) Incorrect presser foot size (only width, right)	按復位鍵解除 Press Reset Key
073	押腳尺寸錯誤(僅寬方向，左側) Incorrect presser foot size (only width, left)	按復位鍵解除 Press Reset Key
074	押腳尺寸錯誤(長度方向，面前) Incorrect presser foot size (length, front)	按復位鍵解除 Press Reset Key
075	押腳尺寸錯誤(寬方向，左右) Incorrect presser foot size (width, left and right)	按復位鍵解除 Press Reset Key
076	押腳尺寸錯誤(長度方向，裡側) Incorrect presser foot size (length, inner)	按復位鍵解除 Press Reset Key
077	底線切線開放量發生錯誤 The leftover amount of bobbin thread after trimming is incorrect	按復位鍵解除 Press Reset Key
078	踏板相似值境界設定錯誤Configuration of pedals is error	按復位鍵解除 Press Reset Key

表13/Table 13



注意CAUTION



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

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

問題 Problem	原因 Reason	處理方法 Solution
1. 上線斷線 The needle thread is breaking	1. 平行部線張力過強 The parallel part tension of the thread is too strong. 2. 挑線彈簧的強度過強，移動量過大 The strength of the thread take-up spring is too strong. The movement is too wide. 3. 旋梭尖部分有毛刺，有傷痕 The hook tip has burrs, or scrapes. 4. 旋梭的同步時間不對 The synchronized timing of the hook is incorrect. 5. 線道上有傷痕 There is a scrape of burr on thread path. 6. 機針安裝不良 The needle doesn't assemble correctly. 7. 機針過細 The needle is too thin. 8. 機針的前端有傷痕 The front part of the needle is damaged.	1. 調弱平行部線張力 Weaken the parallel part tension of the thread. 2. 減弱挑線彈簧的彈力或縮小移動量 Weaken the spring strength of the thread take-up spring or narrow its moving amount. 3. 磨平旋梭尖的毛刺或更換旋梭 Polish the burrs of the hook tip or change a new one. 4. 用同步規尺調整旋梭的同步時間 Adjust the synchronized timing of the hook by the synchronized ruler. 5. 磨平傷痕與毛刺 Polish the damages and burrs. 6. 調整機針的朝向與高度 Adjust the direction of the needle and its height. 7. 更換較粗的機針 Change with a thicker needle. 8. 更換機針 Change the needle with a new one.
2. 上線脫線 The needle thread slips off	1. 上線切刀過早張開 The needle thread trimmer opens too early. 2. 開始縫紉部分的線無法勾到(開始縫紉的張力過強) The needle cannot be hooked at the beginning of sewing. (The thread tension of starting sewing is too strong) 3. 上線穿線方法不對 The threading path of the needle thread is incorrect. 4. 開始縫紉的速度過快 The sewing speed at the beginning is too fast.	1. 把上線切刀張開時間調晚 Delay the opening time of the needle thread trimmer. 2. 減弱始縫張力 Weaken the needle thread tension. 3. 重新正確穿線 Re-thread correctly. 4. 設定為慢速啟動 Set to be slow-start.

問題 Problem	原因 Reason	處理方法 Solution
3. 平行部縫跡不均勻 Uneven stitches at parallel section	1. 平行部線張力過弱 The thread tension is too weak at parallel section. 2. 底線張力過強 The bobbin thread tension is too strong. 3. 始縫張力過弱 The pre-tension is too weak.	1. 加強平行部線張力 Increase the thread tension at parallel section. 2. 減弱底線張力(直線鎖縫為0.05~0.1N) Decrease the bobbin thread tension. (Purl stitching-0.05~0.1N) 3. 增強張力 Increase the pre-tension.
4. 始縫縫跡不均勻 Uneven stitches at the beginning section	1. 平行部線張力過弱 The thread tension is too weak at parallel section. 2. 上線切刀位置過高 The needle thread trimmer locates too high. 3. 挑線彈簧的移動量過大 The movement of the thread take-up spring is too wide.	1. 加強平行部張力 Increase the thread tension at parallel section. 2. 在不碰到押腳的情況下，盡量降下切刀 Lower down the thread trimmer as much as possible without touching the presser foot. 3. 減少挑線彈簧的移動量 Decrease the movement amount of the thread take-up spring.
5. 加固縫部份的上線從布下面露出，並結成團狀 The needle thread of bar-tacking section appears on the wrong side in clump condition.	1. 加固部縫線張力過弱 The thread tension at bar-tacking section is too weak. 2. 底線張力過強 The bobbin thread tension is too strong. 3. 因成放射型狀，所以針數較多 The stitch numbers is more because of its radial shape. 4. 結束縫的張力過弱 The thread tension is too weak in the end.	1. 加強加固部縫線張力 Increase the thread tension at the bar-tacking section. 2. 減弱底線張力(0.05~0.1N) Decrease the bobbin thread tension. (To be 0.05~0.1N) 3. 減少針數 Reduce the stitch numbers. 4. 加強結束縫張力 Increase the thread tension in the end of sewing.
6. 縫跡鼓起 The stitches are bunched.	1. 底線張力過弱 The bobbin thread tension is too weak. 2. 底線從梭殼脫出 The bobbin thread falls off from the bobbin case.	1. 加強底線張力 Increase the bobbin thread tension. 2. 重新正確穿梭線 Re-thread the bobbin thread. 3. 底線捲繞量不要過多 Do not wind too much bobbin thread.
7. 鎖眼綻出 Incorrect button-holing	1. 鈕扣孔比押腳小 The button eyelet is small than the presser foot. 2. 縫製薄料時皺縮 The fabric is puckering while sewing light-weight materials. 3. 機針安裝不好 The needle is not assembled well. 4. 機針彎曲 The needle is bent. 5. 旋梭尖部有毛刺或傷痕 There is burr of damage at the hook tip.	1. 把押腳更換成較小的 Replace the presser foot with a smaller one. 2. 延遲機針與旋梭的同步時間(把針桿下降0.5 mm左右) Delay the synchronization time of the needle and the hook. (Lower down the needle bar about 0.5 mm) 3. 重新調整機針的方向跟高度等 Readjust the needle direction or height, etc. 4. 更換機針 Replace the needle with a new one. 5. 磨平梭尖或更換旋梭 Polish the hook tip or replace with a new hook.

問題 Problem	原因 Reason	處理方法 Solution
8. 線綻開 Thread is frayed.	1. 固定縫針數少 Stitch numbers of affixing stitch is less. 2. 固定縫寬度太寬 The width of affixing stitch is too wide.	1. 增加縫製結束的加固縫針數 Increase the stitch numbers at the end of sewing. 2. 減少縫製結束的加固縫寬度 Narrow the width at the end of sewing.
9. 縫製結束後，上線留線量過長 The needle thread leftover is too long after finishing sewing.	1. 固定縫寬度過窄 The width of affixing stitch is too narrow. 2. 固定縫張力過弱 The tension of affixing stitch is too weak.	1. 使縫製加固縫寬度變寬 Increase the width of affixing stitching while sewing. 2. 加大縫製結束時的張力 Increase the thread tension at the end of sewing.
10. 始縫時上線斷線，或背面線跡不好看 The needle thread breaks at the beginning, or the stitches at the back side are not beautiful.	1. 始縫張力過弱 The needle thread tension at the beginning is too weak.	1. 加強始縫張力 Increase the needle thread tension.
11. 切線完後切刀仍然動作 Trimmer functions even when the needle thread is cut.	1. 切線檢測板並沒有良好調整 Thread breakage detect plate is not adjusted properly.	1. 調整檢測板(參考服務手冊) Adjust the detect plate. (Refer to the service manual)
12. 斷針 Needle broken	1. 機針是否彎曲 Is the needle bent? 2. 機針和旋梭尖是否相碰 Does the needle touch the hook tip? 3. 上線切刀張開時是否碰到機針 Does the needle thread trimmer touch the needle when it opens. 4. 機針是否落入針板孔的中心 Does the needle fall into the center of the needle plate hole? 5. 機針的停止位置過低，上線切線刀閉合時是否會碰到機針 The needle stop position is too low, and the needle thread trimmer touches the needle when it closes.	1. 更換機針 Replace with a new needle. 2. 調整機針和旋梭的同步時間 Adjust the synchronization of the needle and the hook. 3. 調整上線切刀的安裝位置 Adjust the assembled position of the needle thread trimmer. 4. 重新調整針板座的安裝位置 Re-adjust the assembled position of the needle plate base.

表14/Table 14

桌板圖

TABLE CUT-OUT OF BH790-T1

單針電子鎖眼縫紉機上乘式桌板圖

BH790 TABLE CUT-OUT SEMI-SUBMERGED

單位/UNIT:mm

所有尺寸公差/DIFFERENCE:±2

BH790-T1-1070長度(L):1070/重量

BH790-T1長度(L):1200/重量

全封邊灰格紋光塑面台板

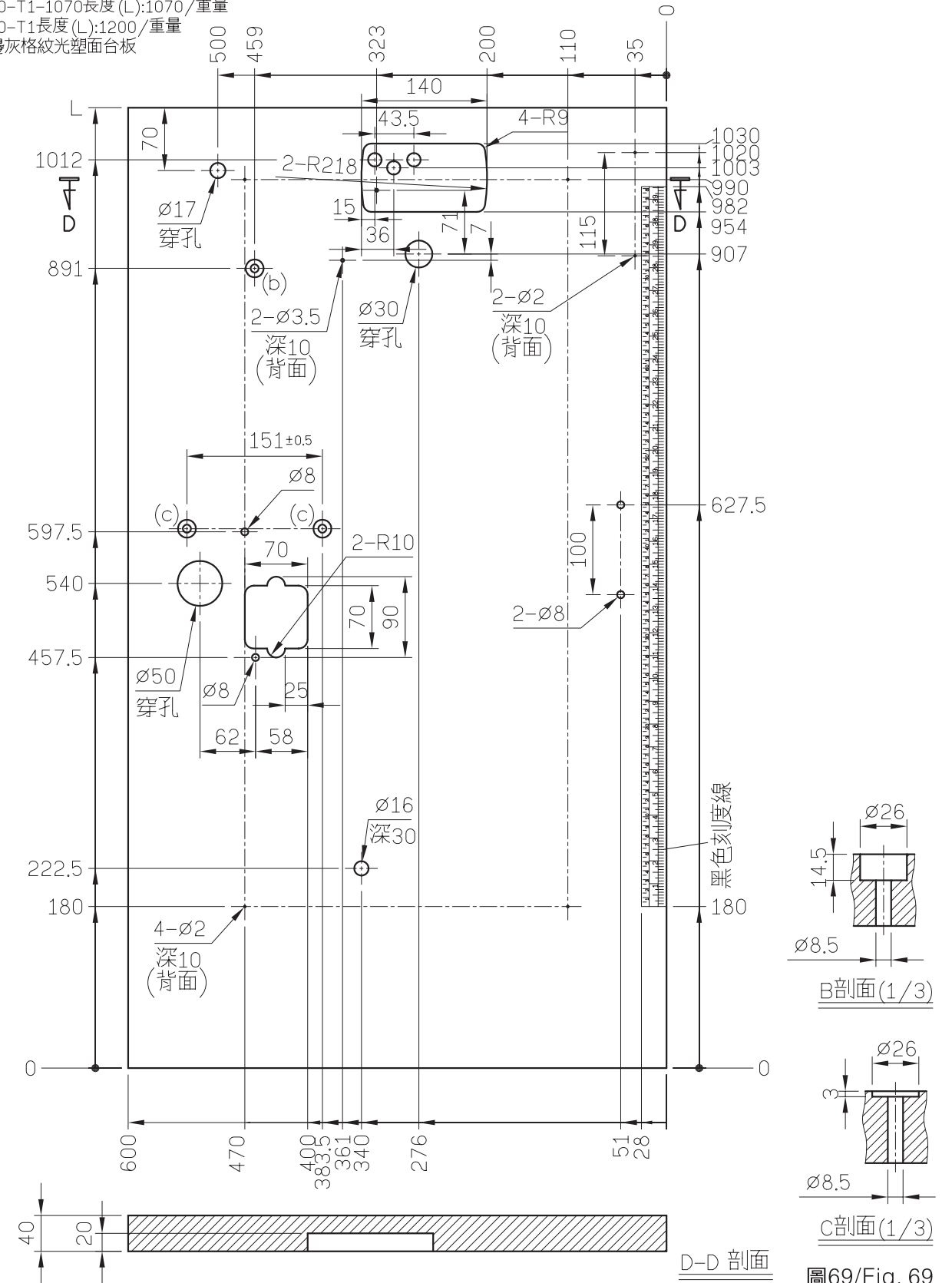


圖69/Fig. 69

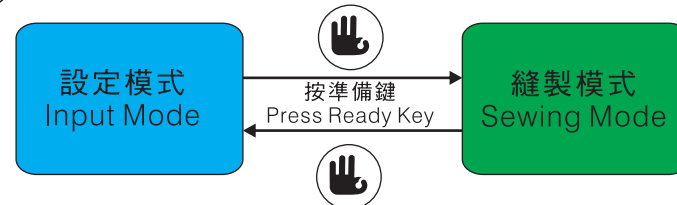
報廢流程

DEMOLITION PROCEDURE

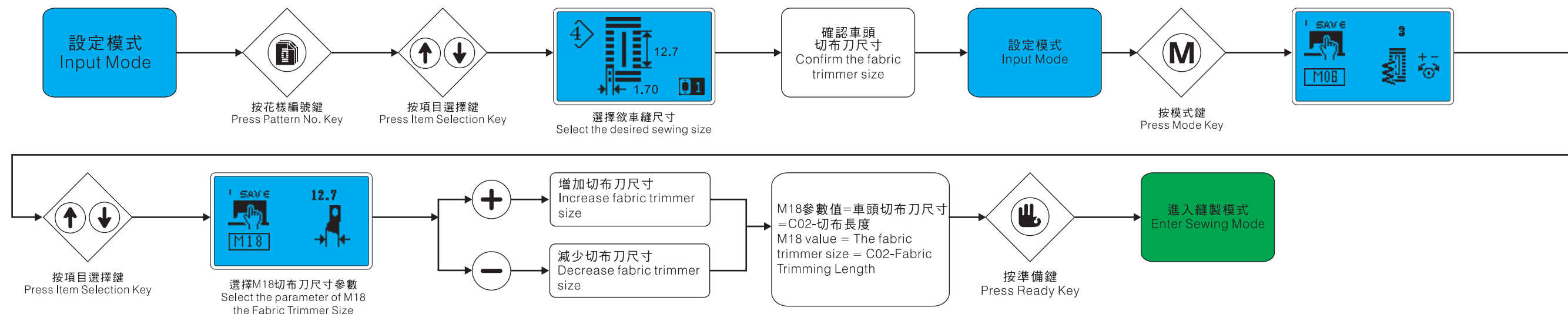
1. 當機器需要被淘汰與報廢時，有一些基本規則必須採納、遵守以保護環境及公眾健康。
 2. 所有的機器零組件必須依照下列分類來區分開：
 - (1) 所有護套、可伸縮軟管及塑膠或非金屬零件。
 - (2) 電器零件：開關、照明器具等。
 - (3) 絕緣材料：石棉、彈性/可伸縮橡膠片。
 - (4) 金屬：含鐵金屬、銅、青銅與黃銅、其他各種金屬。
 3. 以此方法，所有材質可以正確的淘汰，回收再利用或鎔解為可再使用或再處理而不至於危害環境。
1. When the machine needs to be eliminated and demolished, certain basic rules must be observed to protect the environment and public health.
 2. ALL machine componenets must be divided according to categories as the followings:
 - (1) All sheathes, flexible hosing and plastic or non-metal components.
 - (2) Electricity components: switches, or lighting components.
 - (3) Insulation materials: rock wool, and flexible rubber strips.
 - (4) Metals: ferrous metals, copper, bronze and brass, various.
 3. In this way, all materials can be eliminated correctly, recycled, or melted down for re-use or disposed of so that they do not harm the environment.

附表II - 簡易操作流程示意圖/APPENDIX II - SIMPLE OPERATION FLOWCHART

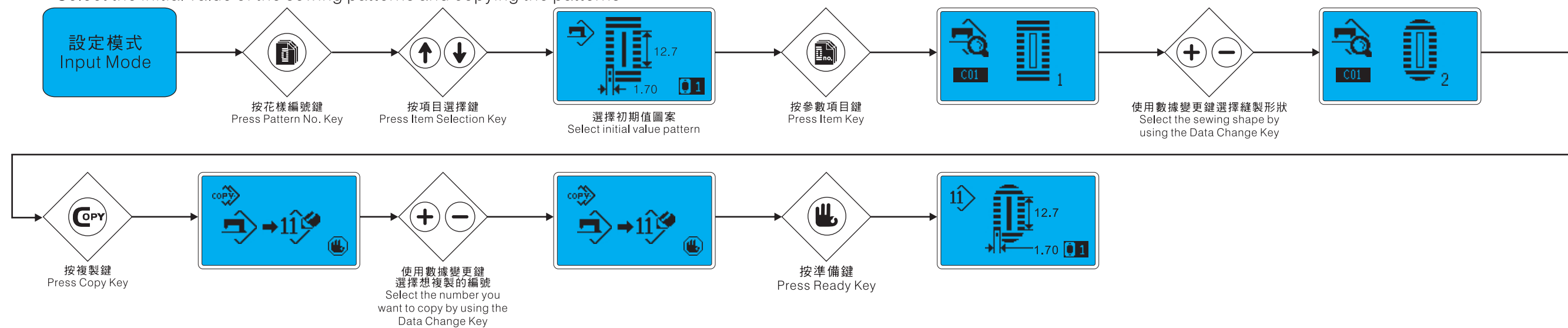
① 模式切換Exchange modes



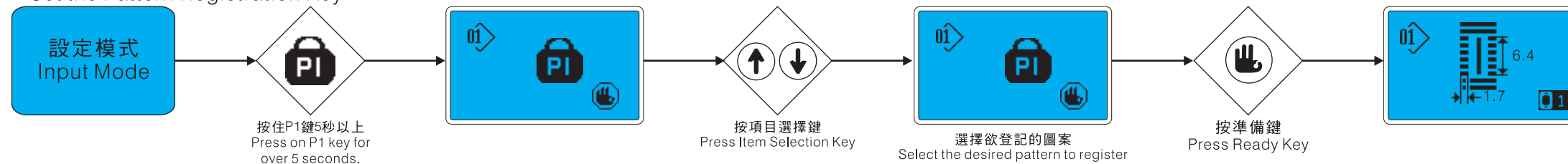
② 選擇縫紉圖案(角型有11個車縫長度)，切布刀尺寸要與參數M18的切布刀尺寸相同
Select the sewing patterns (11 sewing lengths for Square shape), the size of fabric trimmer should as the same as the size of fabric trimmer of the parameter M18.

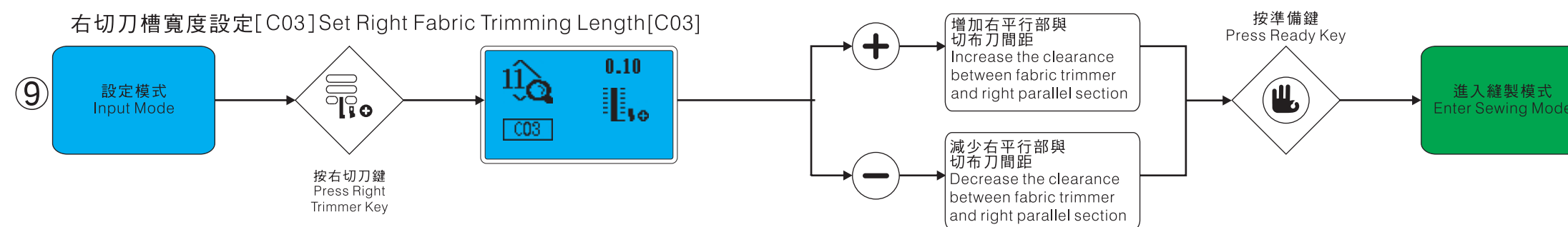
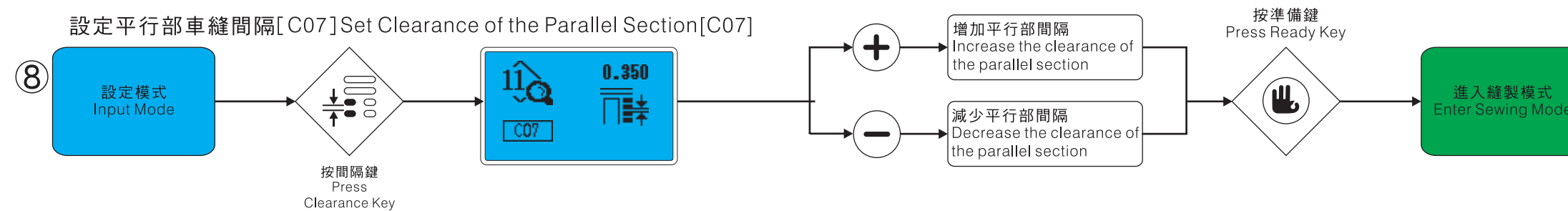
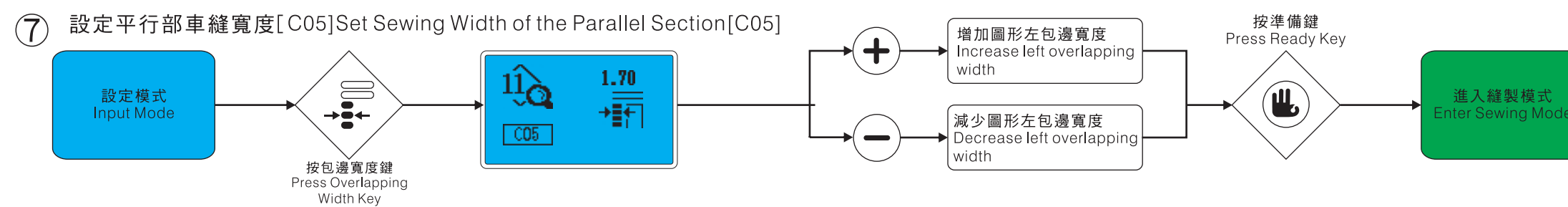
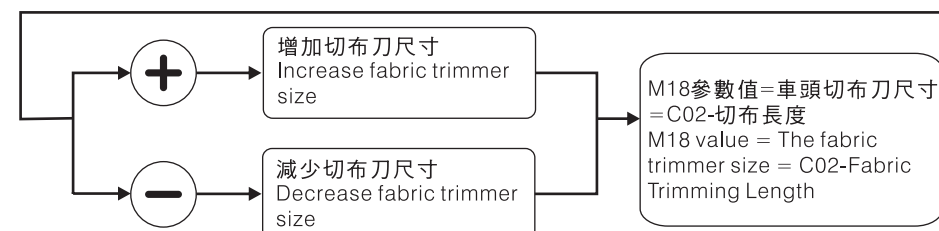
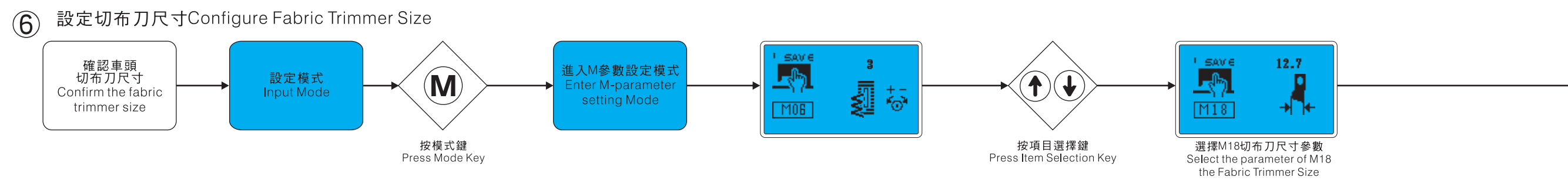
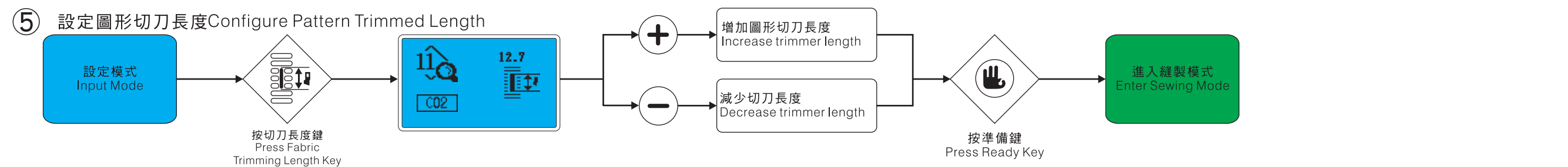


③ 選擇初期值縫紉圖案並複製圖案
Select the initial value of the sewing patterns and copying the patterns

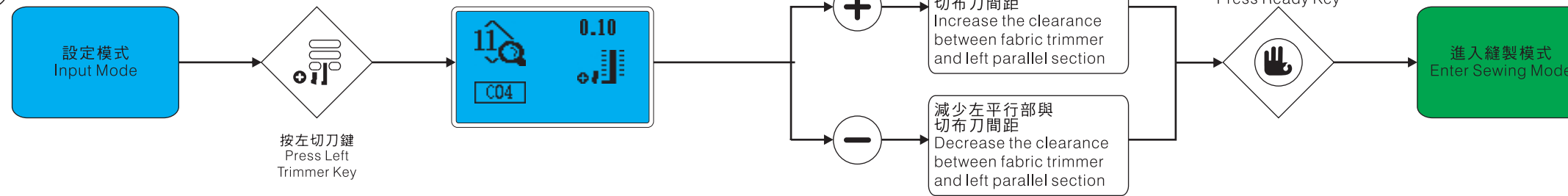


④ 設定圖案登記鍵
Set the Pattern Registration Key

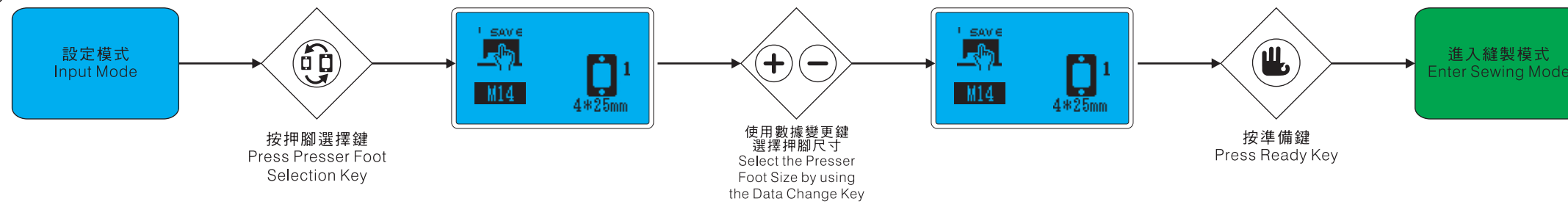




⑩ 左切刀槽寬度設定[C04] Set Left Fabric Trimming Length[C04]



⑪ 押腳選擇設定[M14] Set the Presser Foot[M14]



⑫ 執行繞線功能Execute Winding Function

