SiRUBA

使用説明書

INSTRUCTIONS BOOK

DL7600



使用前安全注意事項

1. 為了使用的安全

為了工業用縫紉機以及裝置使用上的安全，請注意下列事項。

1-1 用途與目的

此工業用縫紉機是為了提昇縫製作業的生產性為目的而設計，請勿使用在其它的用途與目的。而所安裝的驅動裝置的安全措施，未獲得確認確實執行之前，請勿使用此針車。

1-2 在使用之前

在使用針車之前，應熟讀各相關使用說明書，按照使用說明書來正確使用，並且也應熟讀裝配的驅動裝置的使用說明書。

1-3 使用環境

在下列的環境之下請勿使用：

- 對於針車的性能會有不良影響的環境溫度與濕度的不良場所。
- 屋外或受到日光直射的場所。
- 在粉塵與腐蝕性氣體與可燃性氣體等的環境中。
- 電壓變動而不穩定，或是在超過規格電壓的 ±10% 的場所。
- 在不能達到使用的馬達的規格之必要電源容量的場所。
- 在會受到輸出功率較大的高周波發信機或是高周波熔接機的周邊等，發生強力電波及磁場的場所。

1-4 開箱與搬運

(1) 由上開始按照順序開箱。
(2) 把針車機頭從襯墊材料搬出的時候，絕對不要拉抬車針附近或過線相關零件。
(3) 搬運針車頭部的時候，應和助手兩人共同作業。
(4) 搬運車台移動的時候，注意不要有過度的撞擊或震動。

SAFETY INSTRUCTIONS

1.For your safety

To ensure your safety while using industrial sewing machine and devices, please follow the safety instructions below.

1-1 Usage and purpose

The sewing machine is designed to improve productive efficiency of sewing work. Do not use for other usage and purpose. Do not use the sewing machine before the installed drive device's safety measures have been confirmed being conducted.

1-2 Before use

Before using the machine, you should read the instruction manuals thoroughly and follow it. Hence, read the installed drive device instruction thoroughly, too.

1-3 Working environment

Do not work in the following environment:

- The environment which its temperature and humidity will cause bad influence to the machine.
- Outdoors or the place which the machine may exposed to sunlight directly.
- Environment contains dust, corrosive gases or flammable gases, etc.
- Place which voltage fluctuation causes unstable, or voltage exceeds ±10% of specification.
- Place where power capacity necessary for the used motor specifications cannot be secured.
- Place where strong electric or magnetic field are generated such as surrounding at large-output high frequency transmitters or high frequency welding machines.

1-4 Unpacking and transportation

(1)Unpacking boxes from top and follows the sequences.
(2)Never pull or lift the parts near the needle or threading parts while removing machine head from the washer.
(3)Find an assistant when carrying machine head.
(4)Be careful do not have overly impact or shock while moving the machine.

2. 安裝與準備

2-1 教育與訓練

裝置針車的操作人員，以及從事指導保全維修的幹部，必須要有正確知識和操作的技能。管理階層應在事前對於作業人員以及幹部的教育與訓練計畫，做好完整的籌劃以及執行。

2-2 教育與訓練

(1) 採用能夠承受針車的自重，以及運轉時的反彈應力強度的檯板與腳架。
(2) 應充分考量配置針車及作業區域的照明，以供能夠順利的從事作業的環境。
(3) 配置裝置的針車在配裝控制箱以及相關件的時候，要注意到與作業人員作業姿勢的關係。
(4) 安裝馬達時，應依照馬達廠商所提供的使用說明書正確安裝。

2-3 電路配線

(1) 在裝設電路完成之前，請勿接上電源接頭。
(2) 連接針車頭部和馬達以及電器裝置的電線接頭，務必確實固定。
(3) 對於連接的電線電纜，勿施加超負荷的壓力。
(4) 在會有動作的機械部份之附近，對於電線電纜的配置，應考安全距離，不可使其接觸或磨擦。
(5) 在針車的頭部指定部位確實接妥接地線。

2-4 在針車運轉之前的注意事項

(1) 在注入潤滑油、矽油、黃油的時候，注意不要接觸到眼睛皮膚等。在保管方面，要避開幼童所能取到的位置。
(2) 針車務必先行注油之後才運轉。
(3) 要切入電源的時候，勿把手伸入車針下方附近及有動作的機械部位。

2.Installation and preparation

2-1 Instruction and training

Operators who assemble the sewing machine and instructors who responsible for repair and maintenance, need to have correct knowledge and operation skills. The managers should prepare and execute the instructions and training plan for the operators and supervisors beforehand.

2-2 Sewing table and motor

(1)Apply the table and foot stool which can withstand machine's weight and intensity of rebound stress while operating.
(2)Should consider sewing machine working area's lighting to provide the environment which operators could work smoothly.
(3)When installing the control box and the related parts of the sewing machine, pay attention the posture about the workers.
(4)Please follow the instruction from motor manufacturer to install the motor.

2-3 Wiring

(1)Before circuit assembly finished, do not connect the plug for power supply.
(2)Must fix the wire of sewing machine head, motor, and electric device securely.
(3)For connected electric cable, do not put excessive force on it.
(4)For electric cord equipment, should keep the safe distance away from moveable mechanic parts to avoid connect or friction.
(5)Connect the ground wire on assigned position of sewing machine head securely.

2-4 Instructions before operation

(1)When pour into lubricant, silicone oil, and grease, be careful do not attach on your eyes and skin. And keep these where children cannot reach.
(2)Before operation, the sewing machine must be lubricated.
(3)Do not put your hand under the needle or near the moving parts of the machine when turn the power on.

(4) 起初開始運轉針車的時候，需要確認針車飛輪的旋轉方向，和飛輪的迴轉標示是否一致。

2-5 針車運轉中的注意事項

(1) 務必在裝妥馬達蓋、護指、護目等的安全保護狀態下運轉針車。
(2) 針車運轉中，在車針下方附近以及有動作的機械部位附近，勿使手、頭髮接近，更不可把物品放置在旁。
(3) 附有切刀裝置的針車，在針車運轉中絕不可把手指伸入切刀部位。
(4) 在不使用針車或作業人員離開針車時，務必關閉電源。
(5) 在使用中發現錯誤動作、異常的聲音或異味的時候，應即刻關閉電源。

2-6 拆卸

(1) 拆卸任何零件或更換的時候，以及進行調整作業的時候，務必先關閉電源。
(2) 要拔掉插頭的時候，不可直接拉扯電線、電纜。
(3) 控制箱內配有高壓負荷，所以在關閉電源之後要等待 5 分鐘以上才可以開蓋。

2-7 保全、檢查與維修

(1) 保全、檢查修理作業的時候，應依照使用說明書來作業。
(2) 執行保全、檢查及維修的作業，應由經過特別訓練的人員來操作。
(3) 在執行保全、檢查及維修的作業時，務必先關閉電源，在確認針車與馬達完全停止的時候才開始作業。
(4) 請客戶勿根據獨自判斷來自行改造針車。
(5) 避免用指定以外的保全維修零件。

(4)When start to operate the sewing machine at first, make sure the rotating direction of pulley tallies with rotating-direction mark.

2-5 Instructions while operating

(1)Be sure to operate the sewing machine with the safeguards such as motor cover, finger guard, and eyes guard, etc.
(2)During operation, do not let your hands or hair near the machine; moreover, put an object beside under the needle or near the moving parts of machine.
(3)Never puts your hand close to the knives part during operation which sewing machine has trimming device.
(4)Must turn off the power without operators or using the sewing machine.
(5)If the machine malfunctions, make abnormal sound or smelling unusual, turn off power immediately.

2-6 Removal

(1)Must turn off power first if disassembling or removing any parts, or doing adjustment.
(2)To pull the plug, do not pull or drag its cable or wire.
(3)A high voltage is applied inside the control box, do not open the cover until wait for five minutes.

2-7 Maintenance, inspection, and repair

(1)Follow the instruction manual to do maintenance, inspection, and repair.
(2)Entrust the specially trained workers to do maintenance, inspection, and repair.
(3)Must turn off the power first and make sure the motor and sewing machine are completely stop, then do the maintenance, inspection, and repair work.
(4)Do not transform the sewing machine by customer's judgment.
(5)Use original parts for maintenance and repair.

3. 警告標誌及警告圖示

為了防止對用戶造成危害，本使用說明書上，記載有下列的警告標誌及圖示。

3-1 危險水準的說明



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。



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。

3-2 警告圖案及標誌的說明



運動部位，謹防工傷事故。



高溫部位，謹防燙傷事故。

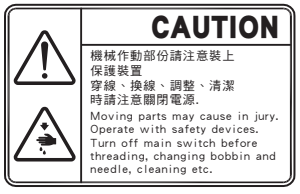


高壓部位，謹防觸電事故。



地線的接線表示。

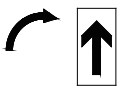
3-3 貼附在針車的警告標示



表示禁止拆卸安全護具，和禁止在投入電源中，另做縫製以外的作業。



貼附在安全護具，但是為了作業性的考量，護指和護目並沒有貼附，但是必要在指定的部位安裝護具備用。



請確認針車飛輪的迴轉方向和標示指向要一致。

3.Caution signs and alert pictorial markings

In order to prevent any danger to customers, this instruction manual contains following alert pictorial markings.

3-1 Illustration of caution signs



It must cause serious injury or death to operator or others, if do not pay attention to the sign and do the wrong operation.



It must cause injury to operator or others or machine damage, if do not pay attention to the sign and do the wrong operation.

3-2 Illustration of alert pictorial markings



Moving part. In case of industrial accident.



High-temperature part. In case of burn accident.

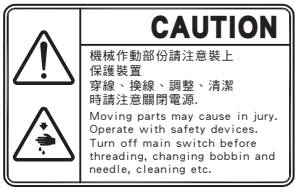


High-voltage part. In case of electric shock.



Indicated earth wire wiring.

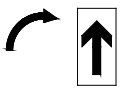
3-3 Warning label on sewing machine



Forbid to remove safeguards, and works except for sewing works while power switch on.



The label is affixed on safeguards. Considering the operation, it is not affixed on the finger guard and eyes guard.



Make sure pulley of sewing machine rotating direction is the same as the sign.

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

索引	INDEX	頁/PAGE
停針位置調整	NEEDLE STOP POSITION ADJUSTMENT	24
控線組彈簧調整	THE THREAD TAKE UP SPRING ADJUSTMENT	26
押具提升桿	MANUAL PRESSER FOOT LIFTING LEVER	27
押具壓力調整	ADJUSTING PRESSER FOOT PRESSURE	27
針與送具時位調整	ADJUST THE TIMING BETWEEN NEEDLE AND FEED DOG	28
送具傾斜度	ADJUSTING THE ANGLE OF TILT OF THE FEED DOG	29
送具高度	ADJUSTING THE HEIGHT OF THE FEED DOG	30
針與梭頭時位關係	CORRELATION BETWEEN NEEDLE AND HOOK	31
押具高度調整	PRESSER FOOT HEIGHT ADJUSTMENT	33
導線片之調整	THE THREAD TAKE UP STROKE ADJUSTMENT	34
腳踏板壓力及行程	ADJUSTING THE TENSION ON PEDAL AND PEDAL STROKE	35
腳踏板調整	ADJUSTING THE PEDAL	36
梭頭油量調整	ADJUSTING THE AMOUNT OF OIL IN THE HOOK	37
操作環境照明	LIGHTENING OF THE OPERATION ENVIRONMENT	38
操作者條件	CONDITIONS OF ALL OPERATORS	38
腳踏板之操作	OPERATING THE PEDAL	39
單觸式倒縫機構	OPERATING THE ONE OUCH TYPE REVERSE FEED STITCHING MECHANISM	40
保養	MAINTENANCE	41
潤滑	OIL LUBRICATION	42
桌板圖	TABLE CUT-OUT DL7000T-T1	47
報廢流程	DEMOLITION PROCEDURE	48

①

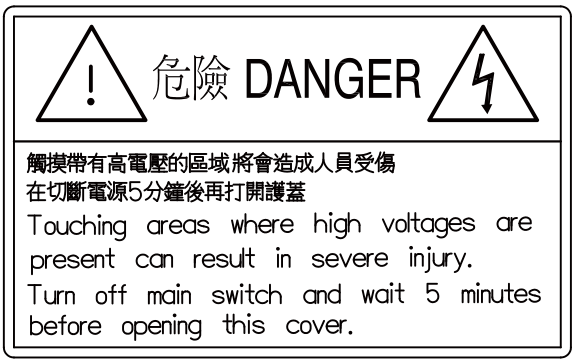


圖1/Fig. 1

②

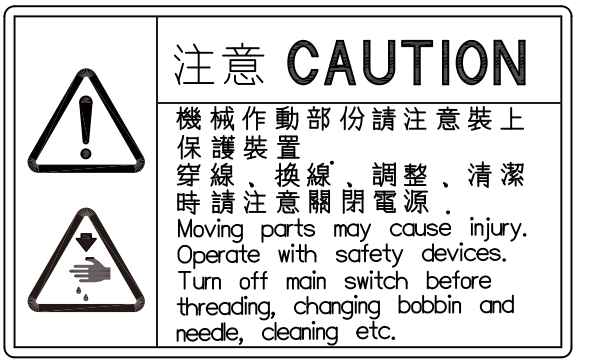


圖2/Fig. 2

③ 必須接地

接駁地線不牢固，是造成觸電或誤動作的原因。

④ 表示轉動方向

安全保護裝置(圖3)
(A) 護指器

③ Must have ground wire.

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

④ Indicates rotating direction.

Safety Protection Device (Fig. 3)
(A) Finger Protector



圖3/Fig. 3

護針安全圖說明

本縫紉機之押具防護裝置如圖所示，為保護操作者之操作安全，嚴禁將此裝置拆卸。

SAFETY ILLUSTRATION OF NEEDLE GUARD

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

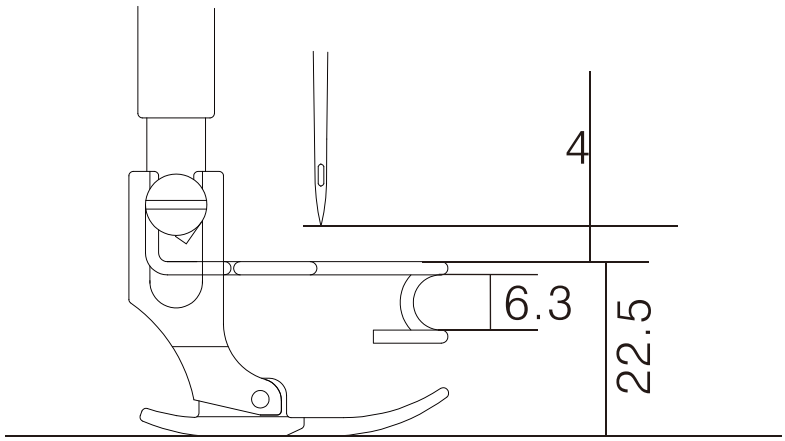


圖4/Fig. 4

搬運 MOVING THE SEWING MACHINE

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

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



圖5/Fig. 5

關於縫紉機的安裝位置 THE INSTALLATION POSITION OF THE SEWING MACHINE

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

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

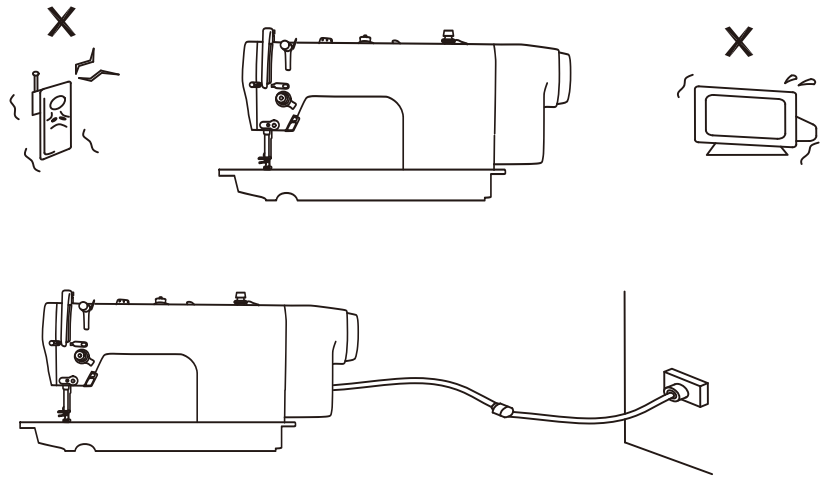


圖6/Fig. 6

各部件名稱 NAMES OF MAJOR PARTS

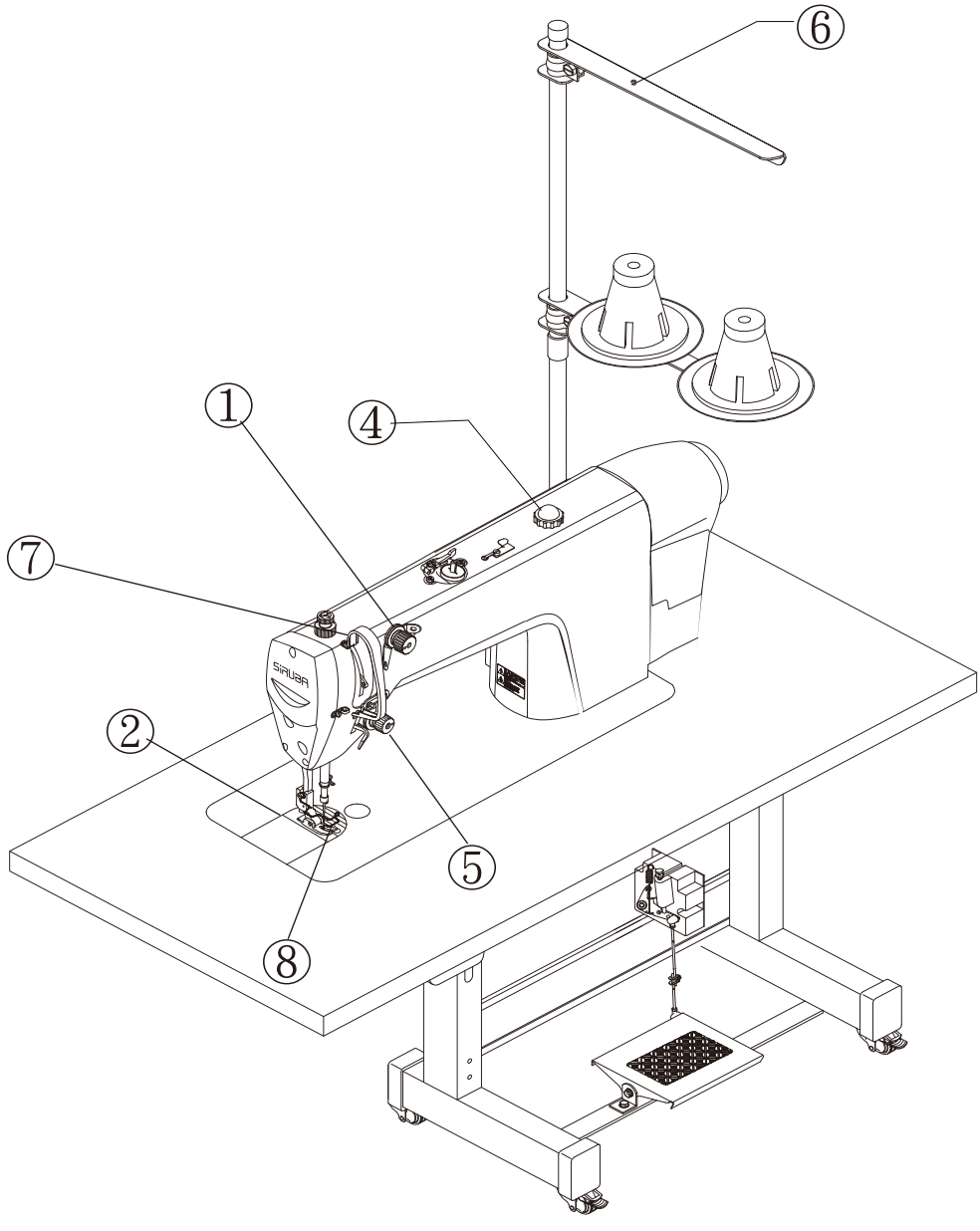


圖7/Fig. 7

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

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

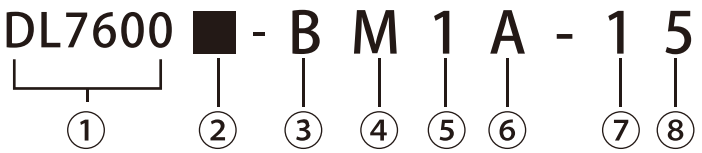
規格 SPECIFICATIONS

種類及規格說明

1. 型號及分類表示

Specifications of machine category

1. Description of the machine name



① 表示機種別：
L= 高速單針下送布平縫車

② 表示車台外觀改良之區分編碼

③ B: 旋轉式切刀系統

④ 用途項目：(表1，表2)

① represents the type of the machine:
L= High Speed One-needle Bottom

② Feed Lockstitch Machine represents the improved machine appearances

③ **B: Rotary trimming system**

④ Purposes: (Table 1, Table 2)

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

表1/Table 1

針棒行程(mm) Needle Bar Stroke		押具揚程(mm) Presser Foot Lift		使用針 Needle
		手動By hand lifter	膝動By knee lifter	
M	30.7	5.5	最大：13 Max：13 一般：10 Normal：10	DBX1 #14
H	35			DBX1 #14

表2/Table 2

⑤ 梭頭代碼：
1：表示高速縫梭頭
2：表示2倍速梭頭
3：表示免加油梭頭
4：表示特殊梭頭

⑥ 無: 代表針板，送具為四條齒

A: 代表針板，送具為三條齒

⑦ 操作盒代碼：
0：表示SIRUBA一般型，無操作盒。

1：表示SIRUBA高級型，有按鍵式操作盒。

⑧ 操作盒之功能碼代碼(表3)：

⑤ Code of the hook:
1：High Speed Hook
2：2-capacity Large Hook
3：Oil-Free Hook
4：Special Hook, Vertical Type

⑥ None: Four teeth rows of the needle plate and the feed dog
A: Three teeth rows of the needle plate and the feed dog

⑦ Code of operation box：
0：SIRUBA normal model without key type operation box
1：SIRUBA advanced model with key type operation box

⑧ Function code of the operation box (Table 3)：

操作盒代碼及形式 Code of the operation box & its functions	功能碼 Function Code	自動切線 Automatically Thread Trimming	快速倒縫 Rapidly Backstitch	撥線 Thread Wiping	自動抬押腳 Auto Presser Foot Lifting	電子夾線器 Electronic Gripper
適用 SIRUBA 高級型有按鍵操作盒(1)之代碼 Suitable for SIRUBA advanced model with operation box (1)	0	○	○	—	—	—
	1	○	○	○	—	—
	2	○	○	—	○	—
	3	○	○	○	○	—
	5	○	○	—	—	○
	6	○	○	—	○	○

表3/Table 3

2. 規格（表4）

2. Specification: (Table 4)

機型Model			DL7600	
車縫布料 Materials			M-中厚布料 Medium-weight	H-厚布料 Heavy-weight
1	車縫速度 (r.p.m.) Sewing speed		Max: 4500 Normal: 4000	Max: 4000 Normal: 3500
2	縫距 Stitch length		0～4	0～5
3	針棒行程 (mm) Needle bar stroke		30.7	35
4	使用針 Needle		DBX1 #14	DBX1 #14
5	押腳壓力 (kgs) Presser foot pressure		5～7	5～7
6	押具提升量 Presser lifter	膝動 Knee-drive	標準10 mm (最大13 mm) Standard: 10 mm (Max.: 13 mm)	
		手動 Hand-drive	5.5 mm	
7	押具Presser foot		可調整性押具Adjustable presser foot	

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

表4/Table 4

關於本機的重要安全注意事項

1. 搬運作業
   (1). 使用全罩二片式的保力龍將機器包裝防護。

   (2). 放入紙箱內。
   (3). 用手推車或二人用雙手抬動搬運。

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

3. 作業中
   機器不要在高於40℃以上的溫度工作。

4.警告
   請注意以下警示建議事項。

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

   在貼有警告標示之處請注意。
   (1). 機械動作部分，請注意裝上保護裝置。
   (2). 穿線、換線、調整、清潔時，請注意關閉電源。

IMPORTANT SAFETY INSTRUCTIONS OF THIS MACHINE

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

注意CAUTION

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

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

縫紉機重36公斤, 安裝工作必須由兩人以上來完成。
The sewing machine weighs 36kg. The installation should be carried out by two or more people.

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

縫紉機頭倒下豎起時, 請用雙手進行操作。單手操作時因縫紉機的重量萬一滑落易導致受傷。
Use both hands to hold the machine head when tilting it back or returning it to its original position. If only using one hand, the weight of the machine head may be too heavy to hold, and may cause human physical injuries.

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

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

油盤安裝 OIL PAN INSTALLATION

1. 油盤必需放置於桌板凹槽中之四角。(圖9)

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

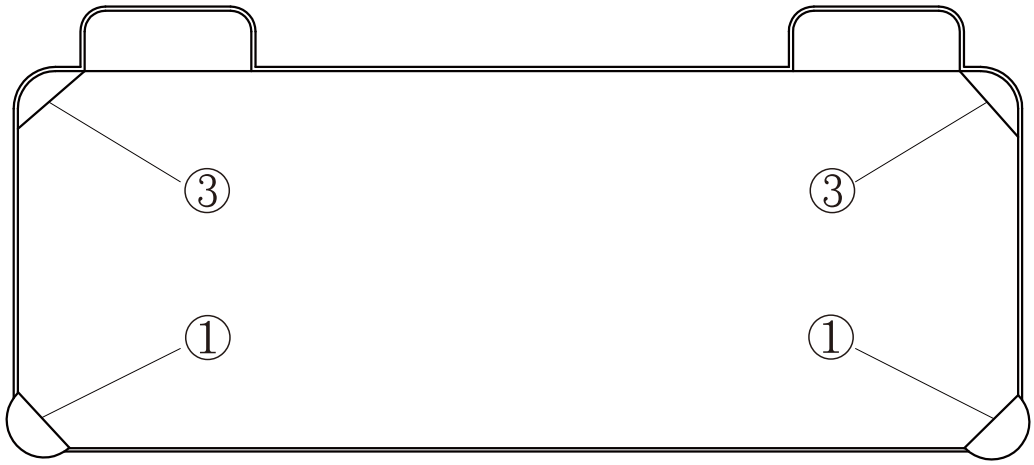


圖9/Fig. 9

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

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

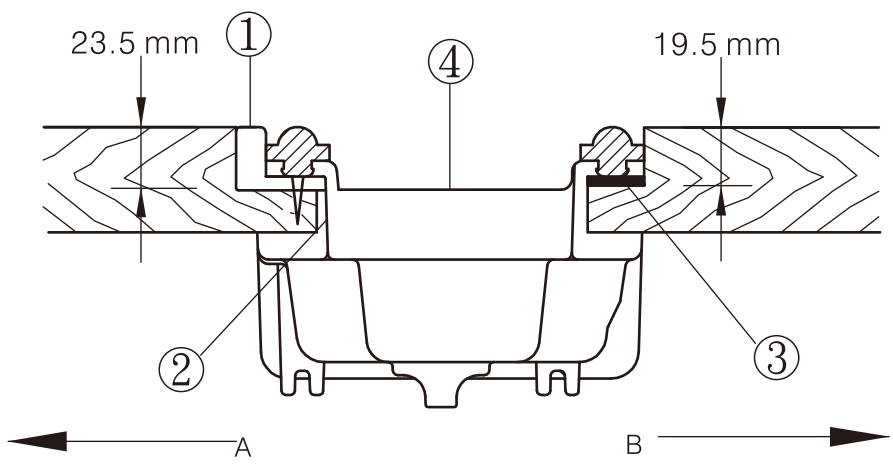


圖10/Fig. 10

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

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

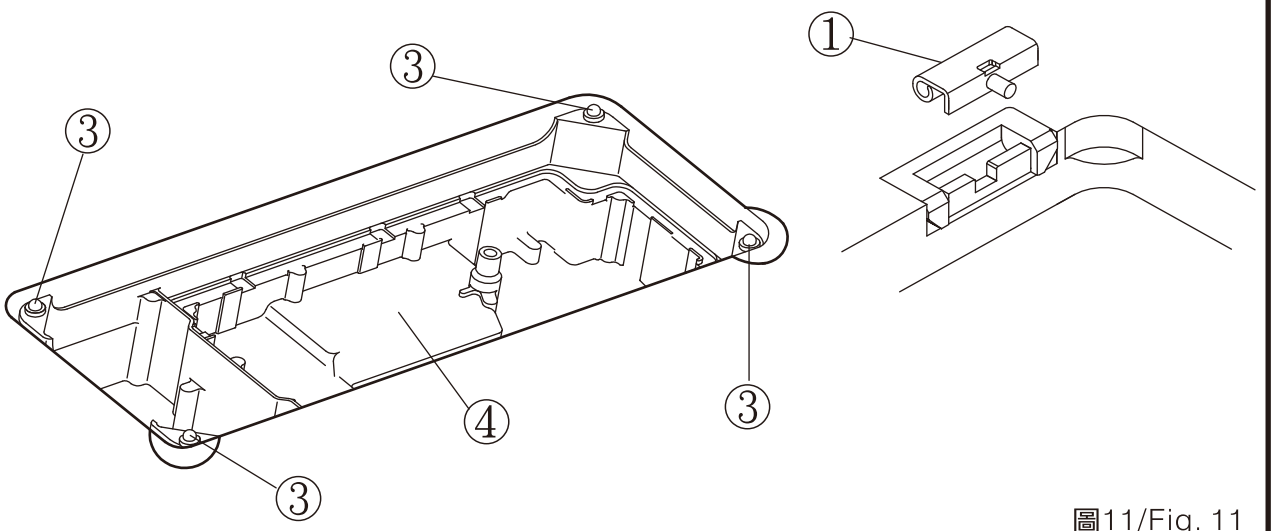


圖11/Fig. 11

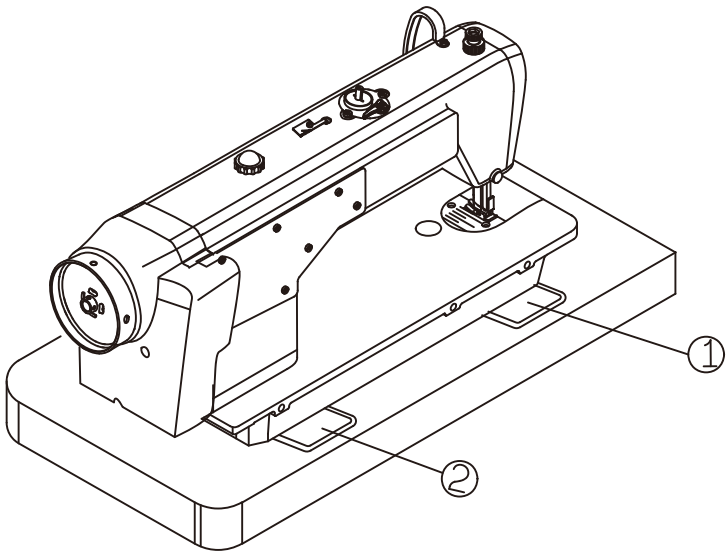


圖12/Fig. 12

針的安裝

請依線規格及布料選用正確型號的針。先關掉電源，再開始安裝針。(圖13)

INSTALLING THE NEEDLE

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

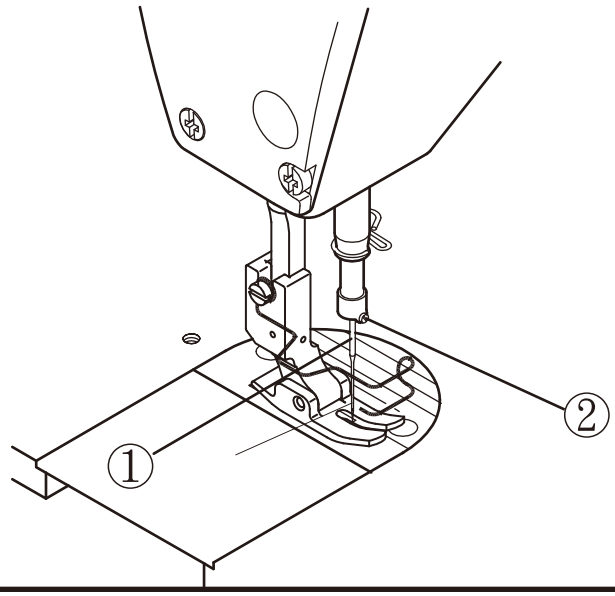
請依線規格及布料選用正確型號的針。先關掉電源，再開始安裝針。(圖13)

1. 轉動手輪使針棒位於行程最高點。

2. 放鬆螺絲②並握住針①，使其針頸內弧部份A正確面向右方B。並檢視針之長溝C確實面向左D。

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

1. Turn the hand wheel to raise the needle bar to its highest position.
2. Loosen screw ②, and hold the needle ① with its indented side A facing exactly to right in direction B, and make sure that long groove C of the needle is facing exactly to the left in direction D.



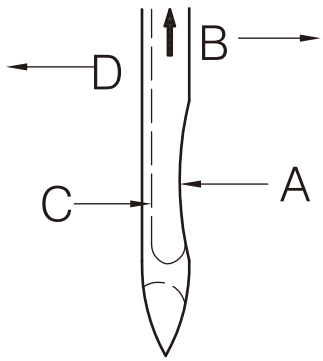


圖13/Fig. 13

梭子之安裝

1. 安裝梭子於梭殼中，使捲線方向為如圖示方向。(圖14)

2. 將針線穿過縫隙 A 處，並朝 C 方向拉線，如此，針線將穿過壓力彈簧①，並由 B 處缺口穿出。

3. 當向 C 拉線時，梭子是順著箭頭所指方向轉動。

SETTING THE BOBBIN

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

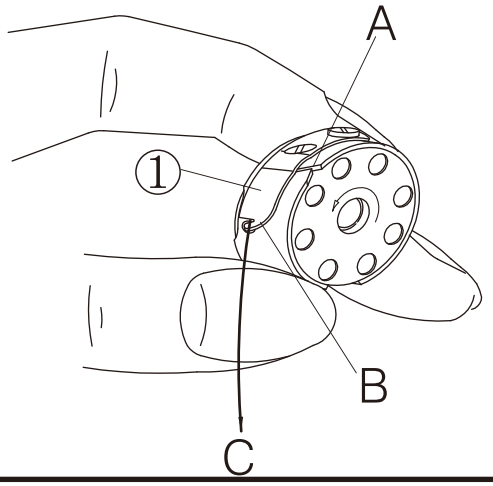


圖14/Fig. 14

線架安裝

1. 安裝線架組，並將其插入桌板孔。(圖16)

2. 鎖緊螺帽①，以固定線架。

THREAD STAND ASSEMBLY

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

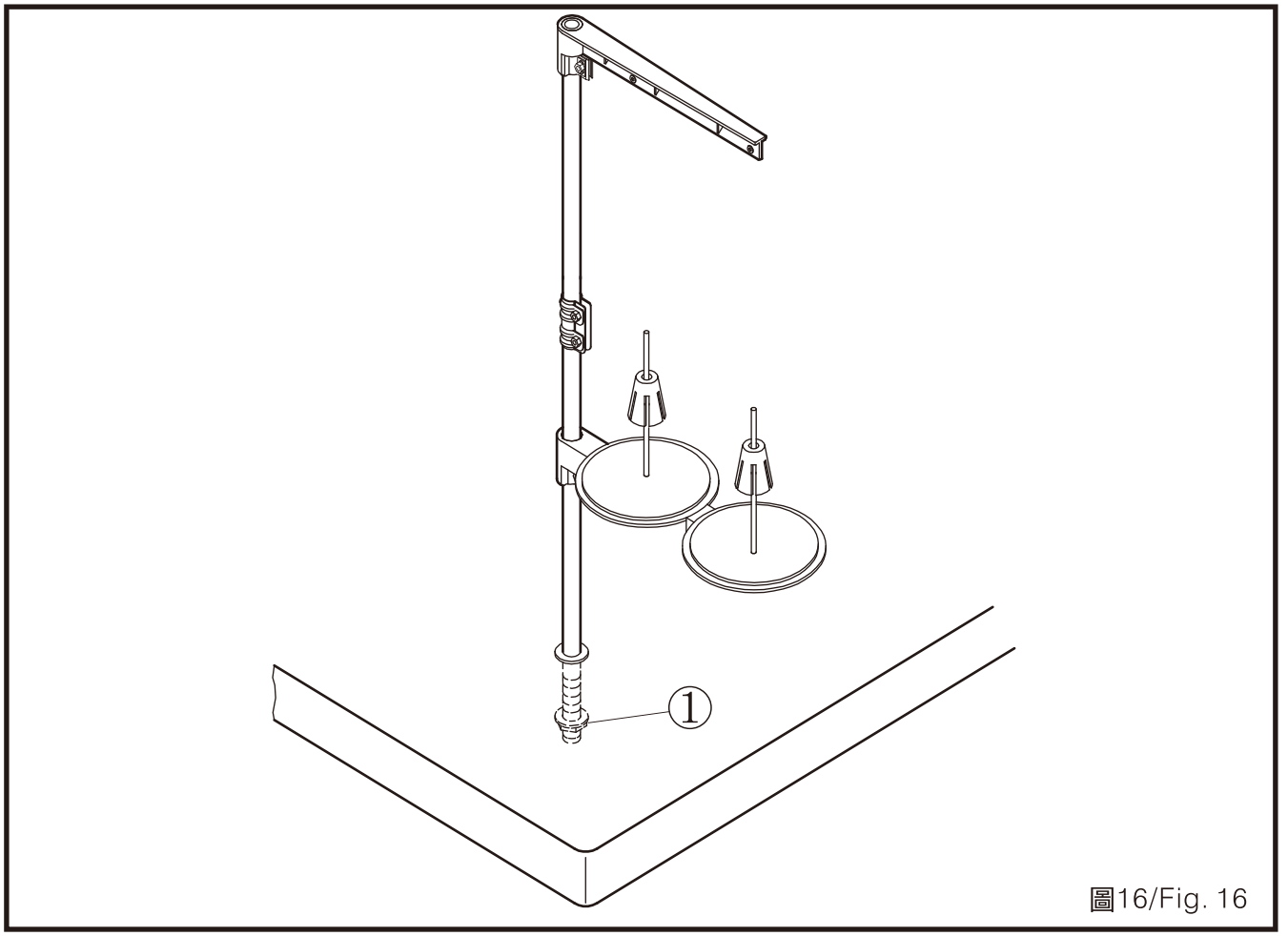


圖16/Fig. 16

機頭穿線 THREADING THE MACHINE

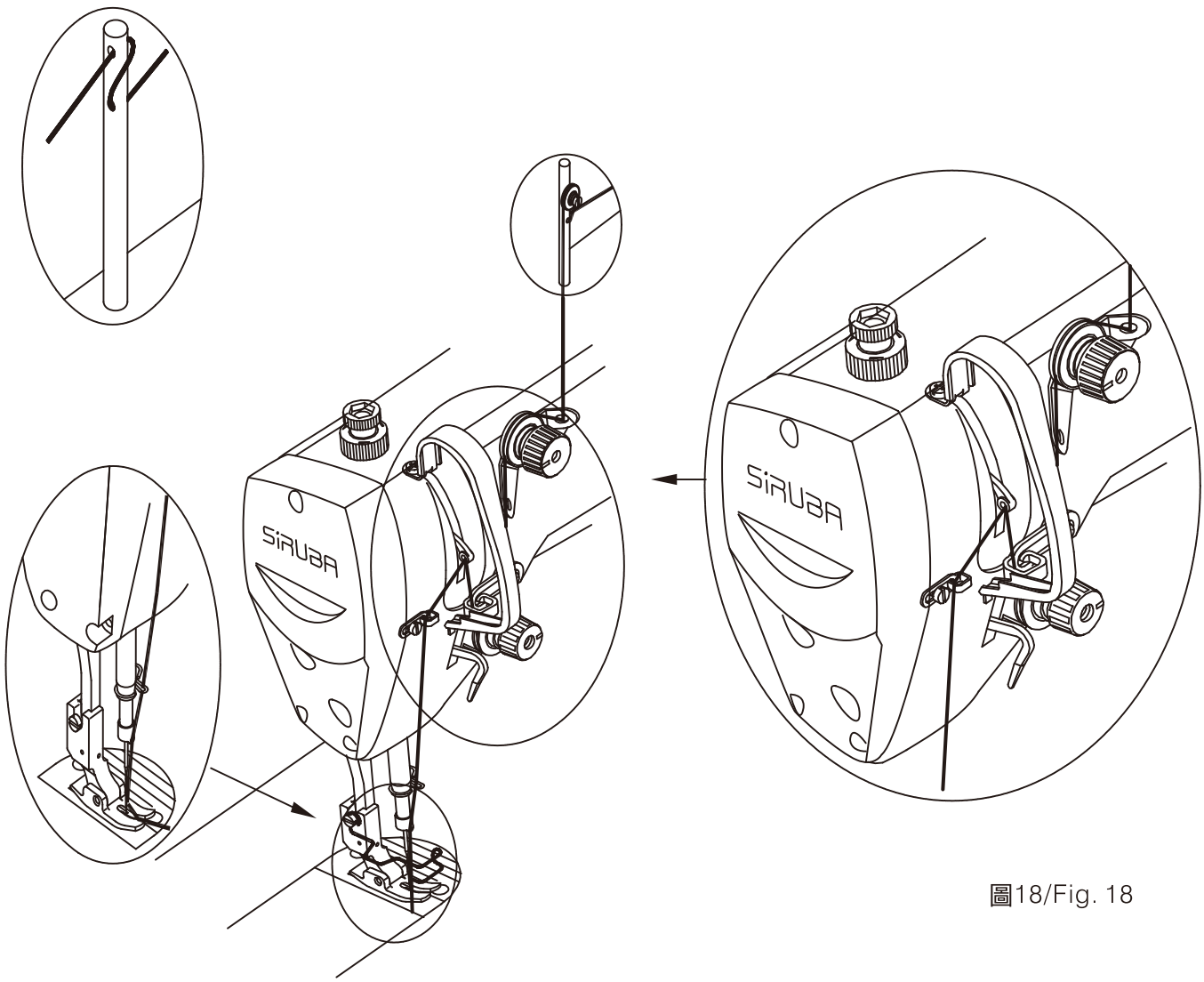


圖18/Fig. 18

針距調整 STITCH LENGTH ADJUSTMENT

+ mm −	針距調整鍵 若點擊，加大或減小針距; 若長按，連續加大或減小針距;
P	功能鍵P鍵 若點擊，進入或退出用戶參數設定界面。 若長按，轉換到密碼輸入界面。輸入正確密碼(2017)，短按S鍵確認，可進入高級參數設定界面P-92 。
S	確認鍵S鍵 對所選參數號內容進行查看和保存：選擇好參數號後按此鍵可以進行查看和修改操作，修改參數值後按此鍵則退出並保存參數。 在主界面長按S鍵，轉換到調試參數項界面P-92,短按+ 、- 鍵切換其他參數P-72 、P129、P-74 、P-75，按S進參數進行調試。
▲	加號鍵 若點擊，增加參數值； 若長按，連續增加參數值；
▼	減號鍵 若點擊，減少參數值； 若長按，連續減少參數值；



圖19/Fig. 19

膝控押具提升器之調整

1. 使用膝控押具提升器，標準的押具提升高度是10mm。(圖20，圖21)

2. 可以使用膝控押具提升器調整螺絲①，將押具提高至13mm。

3. 當押具調整高度超過10mm時，請確認針棒最底部②是否會觸及押具③上部。

ADJUSTMENT OF KNEE-CONTROL PRESSER FOOT LIFTER

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

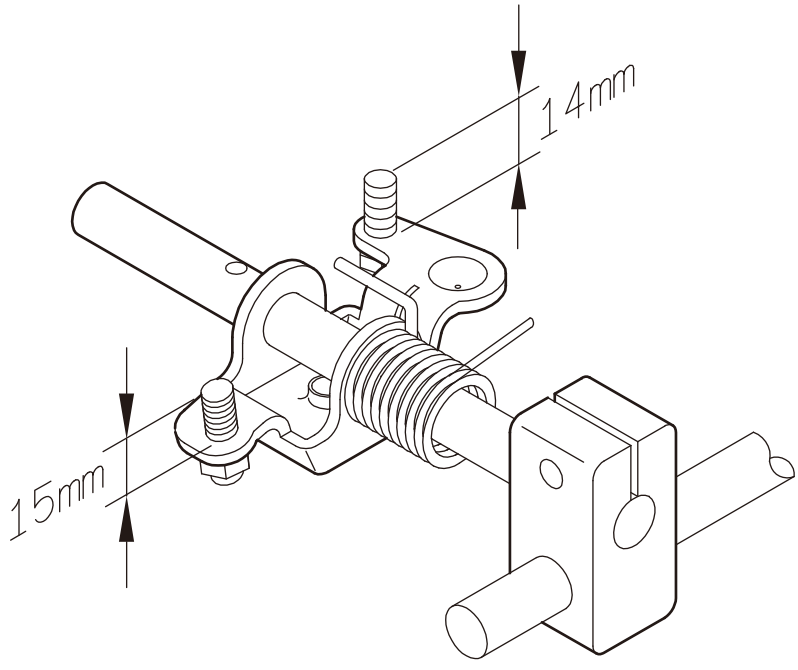


圖20/Fig. 20

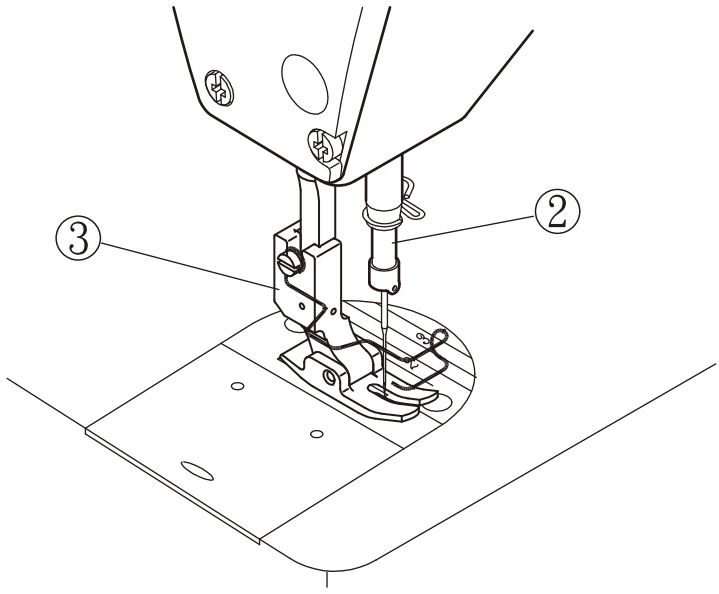


圖21/Fig. 21

針線梭線鬆緊度調整

NEEDLE THREAD/BOBBIN THREAD TENSION ADJUSTMENT

1. 針線鬆緊度調整(圖22)

   (1) 依順時鐘方向(A 方向)轉動針線鬆緊控制鈕①，切線後留在針頭之線量變短。

   (2) 依逆時鐘方向(B 方向)轉動針線鬆緊控制鈕①，線量變長。

   (3) 依順時鐘方向(C 方向)轉動針線鬆緊控制鈕②，針線鬆緊度變緊。

   (4) 依逆時鐘方向(D 方向)轉動針線鬆緊控制鈕②，針線鬆緊度變鬆。

2. 梭線(底線)鬆緊度調整
   (1) 依順時鐘方向(E 方向)轉動鬆緊控制螺絲③，底線鬆緊度變緊。

   (2) 依逆時鐘方向(F 方向)轉動鬆緊控制螺絲③，底線鬆緊度變鬆。

1. Needle thread tension adjustment (Fig. 22)
   (1) The left thread tail on the needle will be shorter after thread trimmed as you turn thread tension nut ①clockwise. (in A direction)
   (2) The left thread tail will be longer, as thread tension nut ① is turned counter clockwise (in B direction).
   (3) Increase the tension on needle thread by turning thread tension nut ② clockwise (in C direction).
   (4) Reduce the tension on needle thread by turning thread tension nut ② counter clockwise (in D direction).
2. Bobbin thread tension adjustment
   (1) The bobbin thread tension will be increased as tension adjust screw ③ is turned clockwise (in E direction).
   (2) The bobbin thread tension will be reduced as screw ③ is turned counter-clockwise (in F direction).

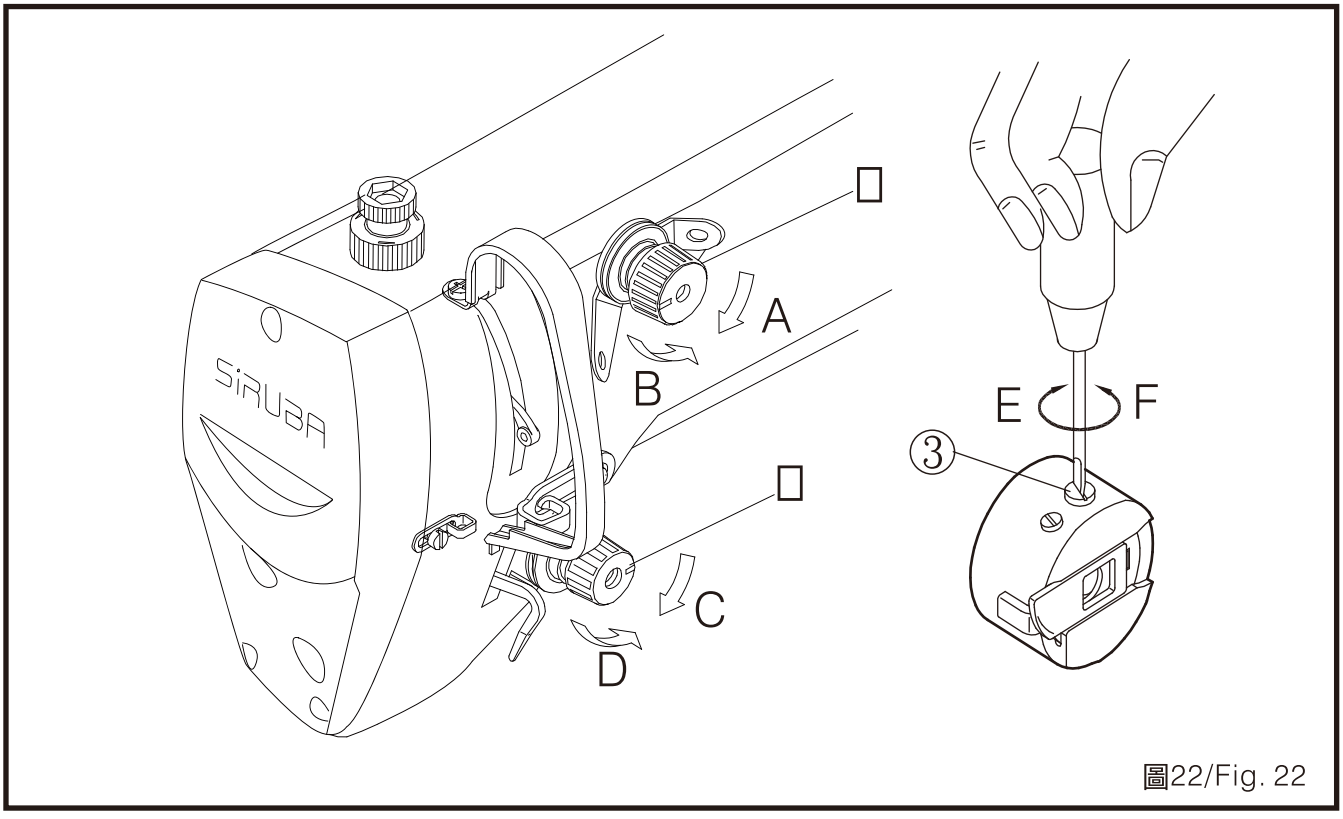


圖22/Fig. 22

停針位置調整 NEEDLE STOP POSITION ADJUSTMENT

更換任一電控、選針盒、主軸電機(包括光柵、編碼器)後都必須進行上定位快捷調整，調試完參數都要按S鍵保存，再長按慢速起縫鍵,屏幕顯示SAVE 保存為出廠默認值。

①在主界面長按S鍵，轉換到調試參數項界面P-92，調節參數到P72項(上停針位)參數，手動轉動手輪至上停針位(挑線桿在高點)(針板面到機針尖9-10mm)，顯示的數值會隨手輪位置變化而變化，按S鍵確認，再按慢速起縫鍵。

控線組彈簧調整

1. 控線組彈簧①行程調整(圖25)

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

   (3) 依逆時鐘方向(B 方向)轉動鬆緊控線鈕③，控線組彈簧行程將減少。

2. 控線組彈簧①拉力調整

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

   (4) 依逆時鐘方向(B 方向)轉動鬆緊控線鈕③，控線組彈簧拉力將減少。

THE THREAD TAKE UP SPRING ADJUSTMENT

1. Adjusting the stroke of thread take up spring ①. (Fig. 25)
   (1) Loosen screw ②.
   (2) The stroke of the thread take-up spring will be increased as the tension knob ③ is turned clockwise (in A direction).
   (3) The stroke will be decreased as the the knob ③is turned counter-clockwise (in B direction).
2. Adjusting the pressure of thread take up spring ①.
   (1) Loosen screw ②, and remove thread tension disks ⑤.
   (2) Loosen screw ④.
   (3) The pressure will be increased as tension knob ③ is turned clockwise (in A direction).
   (4) The pressure will be reduced as tension knob ③ is turned counter clockwise (in B direction).

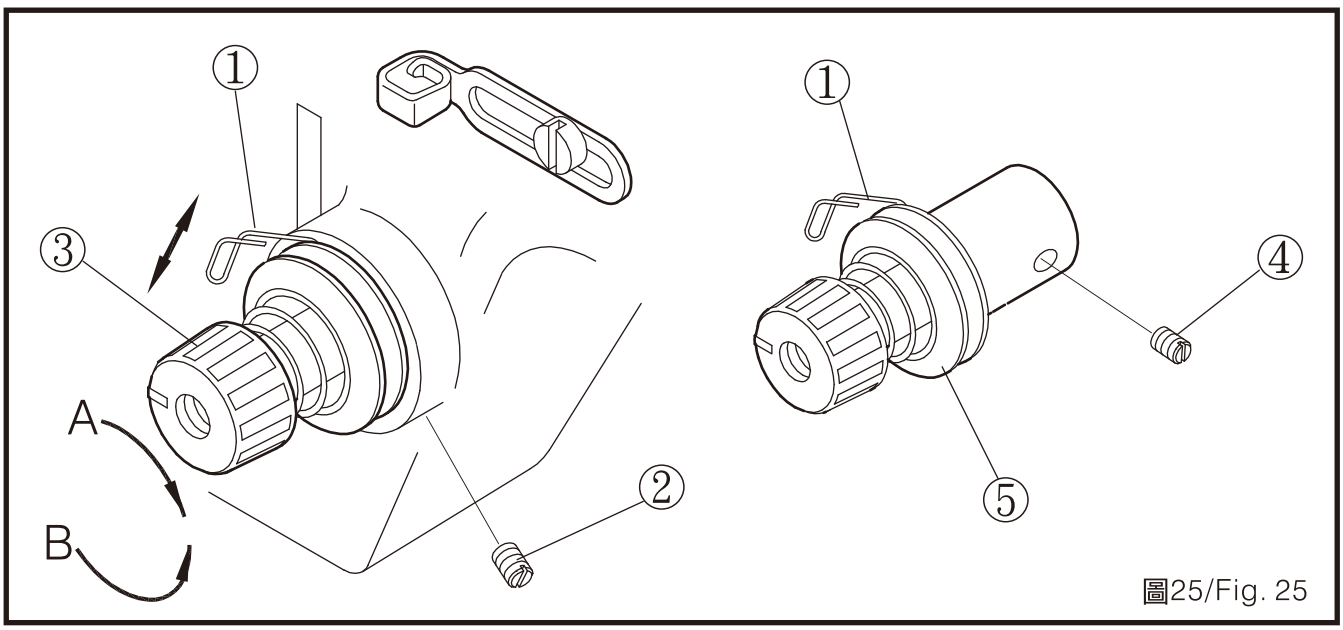


圖25/Fig. 25

押具提升桿

MANUAL PRESSER FOOT LIFTING LEVER

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

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

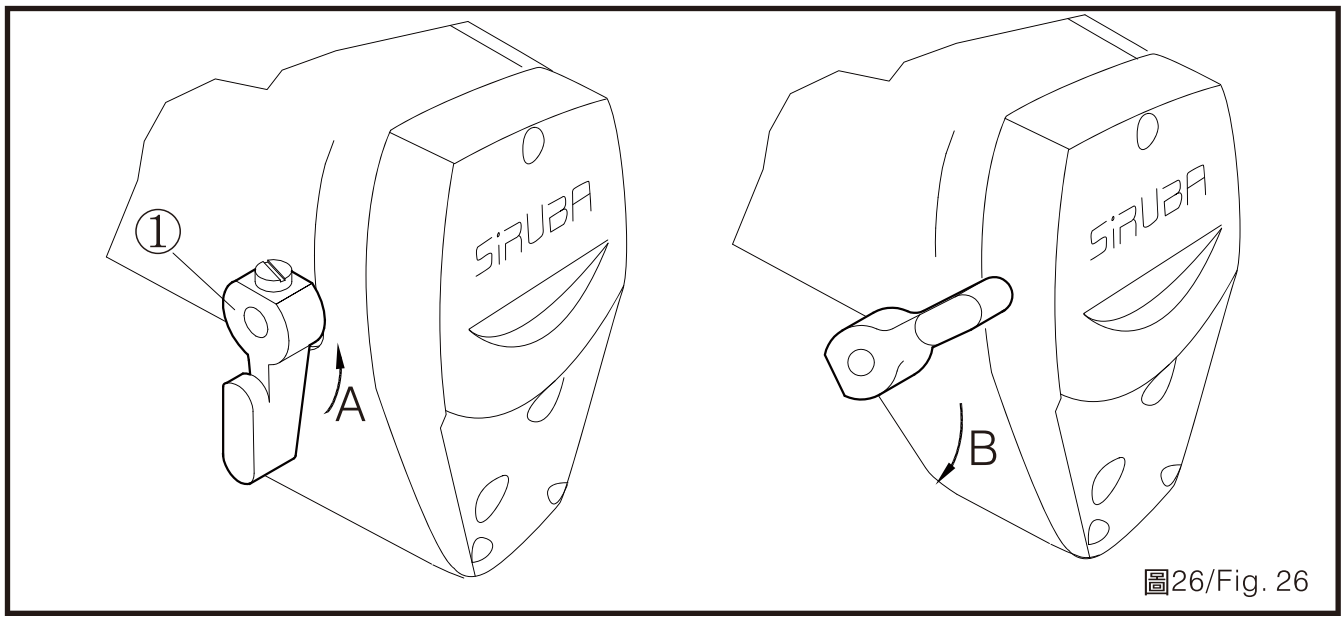


圖26/Fig. 26

押具壓力調整

ADJUSTING PRESSER FOOT PRESSURE

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

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

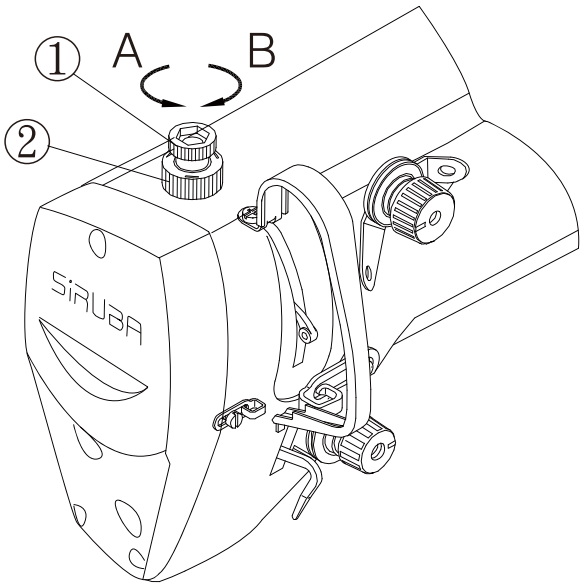


圖27/Fig. 27

針與送具時位調整

1. 放鬆偏心凸輪①上之②及③螺絲，然後依箭頭方向或反箭頭方向轉動偏心凸輪①來確認齒尖位置後，再鎖緊螺絲。(圖28-a/b/c)

2. 一般標準時位調整：當針孔上緣下降至針板面時，將送具齒端上緣及針之針孔上緣調整與針板上緣成一直線。(圖28-a)

3. 提前送具時位調整：如果為了防止送料偏斜，將偏心凸輪①依箭頭方向轉動調整，把送具時位提前。(圖28-b)

4. 延遲送具時位調整：如欲增加車縫緊度，則將偏心凸輪①依反箭頭方向轉動調整，把送具時位延後。(圖28-c)

注意:
不可將偏心凸輪①移動過大，以免可能引起斷針。

ADJUST THE TIMING BETWEEN NEEDLE AND FEED DOG

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

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

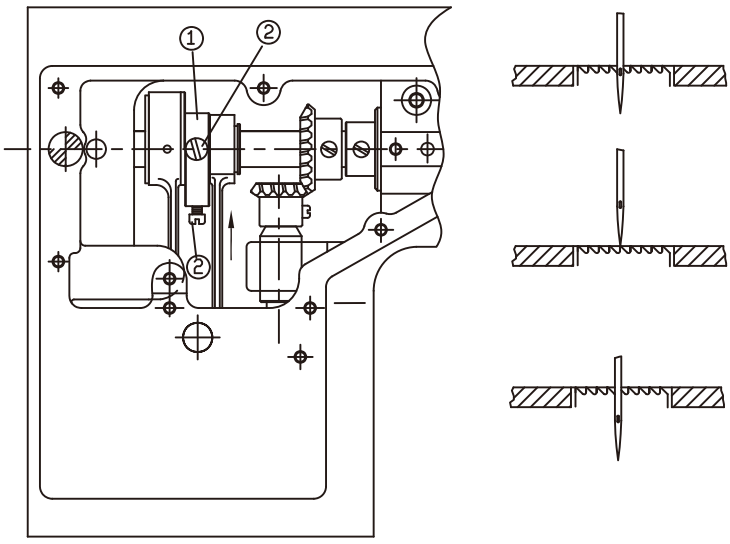


圖28/Fig. 28

送具傾斜度

1. 當在送具偏心軸②上的記號A與稜線B成一直線時，送具之傾斜度成水平狀態。(圖29-a)

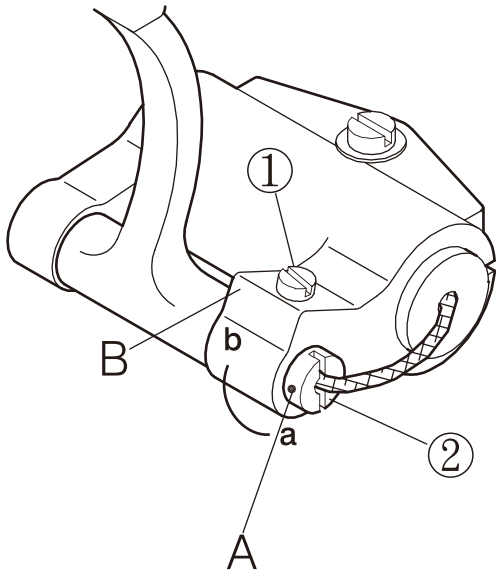
2. 為了避免車縫起皺，用螺絲起子放鬆螺絲①，將送具偏心軸②依箭頭a的方向轉動90度，可抬高送具後緣，呈前傾狀態。(圖29-b)

3. 為了避免布料送料不足，用螺絲起子放鬆螺絲①，將送具偏心軸②依箭頭b的方向轉動90度，可使送具前緣抬高，呈後傾狀態。(厚布料調整時) (圖29-c)

4. 送具傾斜度調整過後，送具高度將會改變，所以送具傾斜度調整後需再檢查其高度。

ADJUSTING THE ANGLE OF TILT OF THE FEED DOG

1. When mark A on the feed dog eccentric shaft ② is aligned with the crest line B, the gradient becomes horizontal. (Fig. 29-a)
2. To prevent the fabric puckering, loosen the screw ① by a screw driver and turn the feed dog eccentric shaft ② 90° toward the arrow direction to reduce the front gradient of the feed dog and to form a tilting-front status. (Fig. 29-b)
3. To prevent uneven fabric feeding, please turn the feed dog eccentric shaft ② 90 degree opposite to the arrow direction. This could decrease the backward tilt angle of the feed dog and to form a tilting - back status. (For adjusting the thick materials). (Fig. 29-c)
4. After adjusting the tilt angle of the feed dog, this will change the height of the feed dog. Therefore, please recheck its height after adjusting the tilt angle of the feed dog.



後端
Back side

前端/
操作員端
Front side/
Operator side

a

b

c

圖29/Fig. 29

送具高度

ADJUSTING THE HEIGHT OF THE FEED DOG

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

   中厚布料： 0.85～0.95 mm (圖30 a)
   厚 布 料： 1.0～1.2 mm (圖30 b)
2. 如果送具太過突出，車縫薄布料時容易引起褶皺。
3. 送具高度調整：
   (1) 放鬆曲柄①螺絲②。
   (2) 上下移動曲柄①使送具座升高或下降來加以調整。
   (3) 調整好之後再鎖緊螺絲②。
4. 滑塊③的端面應該靠緊曲柄①，並避免鬆動，否則曲柄①之開口部份容易因此磨損。

1. The feed dog height (the height the feed dog emerged from the needle plate surface) is set by the fabric thickness as the followings: (Fig. 30-a/b/c)
   Normal fabric： 0.85～0.95 mm (Fig. 30a)
   Heavy fabric： 1.0～1.2 mm (Fig. 30b)
2. If the feed dog is emerged too much, it is very easily to form the puckers when sewing thin fabrics.
3. To adjust the feed dog height：
   (1) Loosen screw ② on crank ①.
   (2) Move the crank ① up and down to move the feed bracket up and down to adjust.
   (3) Lock the screw ② securely after the adjustments.
4. There should be no space between the plain surface of the roller ③ and the crank ①. Also, avoid the situation of parts loosening happening. Otherwise, the opening part of the crank ① will get worn easily

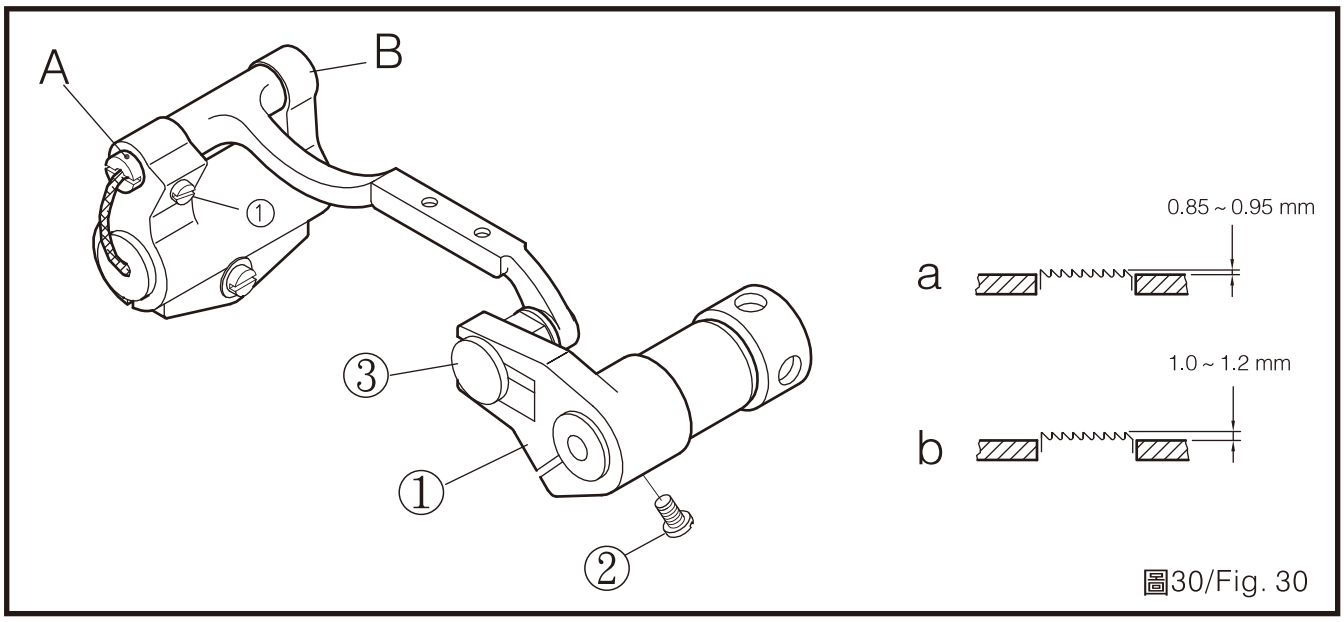


圖30/Fig. 30

針與梭頭時位關係

CORRELATION BETWEEN NEEDLE AND HOOK

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

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

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

1. The timing adjustment between needle and hook is: turn the hand wheel to lower the needle bar down to the lower dead point of its stroke, and loosen the screw ① . (Fig. 31)
   (1) Adjusting the height of needle bar：
   - (DB needle) Align the mark line A on needle bar ② with the bottom edge of needle bar lower bushing ③, and then tighten the setscrew① .
   - (DA needle) Align the mark line C on needle bar ② with the bottom edge of needle bar lower bushing ③, and then tighten the setscrew ①.

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

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

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

2. 更換梭頭時，先確認其零件代號再更換。

注意：

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

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

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

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

Attention：

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

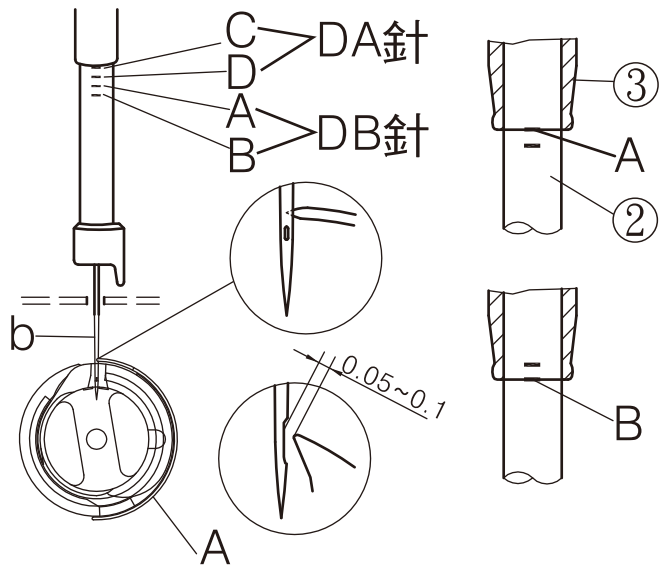


圖31/Fig. 31

押具高度調整

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

PRESSER FOOT HEIGHT ADJUSTMENT

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

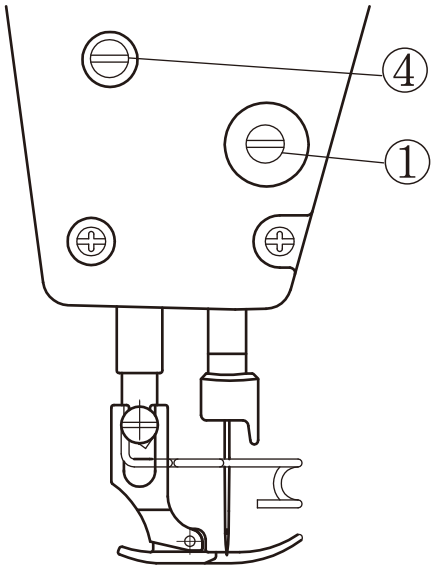


圖32/Fig. 32

導線片之調整

1. 當車縫厚布料時，將導線片①往左(A 方向)移動，以增加挑線桿之拉線量。(圖33)

2. 當車縫薄布料時，將導線片①往右(B 方向)移動，以減少挑線桿之拉線量。

3. 一般導線片①是放在其標線 C 與螺絲中心對齊位置。

THE THREAD TAKE UP STROKE ADJUSTMENT

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

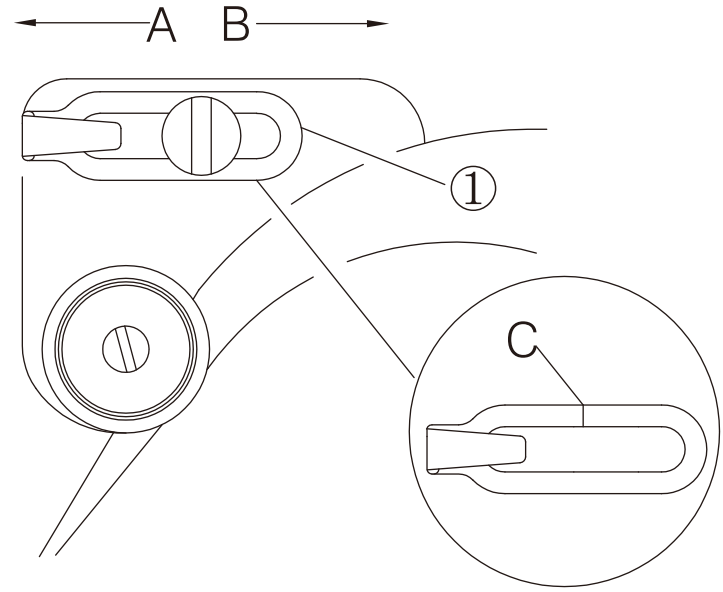


圖33/Fig. 33

腳踏板調整

1. 連接桿安裝(圖35)
   依圖箭頭方向所示，左右移動腳踏板③，使馬達控制桿與連接桿②成一直線。

2. 腳踏板傾斜度調整
   (1) 腳踏板斜度可藉著改變連接桿長度而自由調整。

   (2) 放鬆調整螺絲④調整連接桿②長度。

ADJUSTING THE PEDAL

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

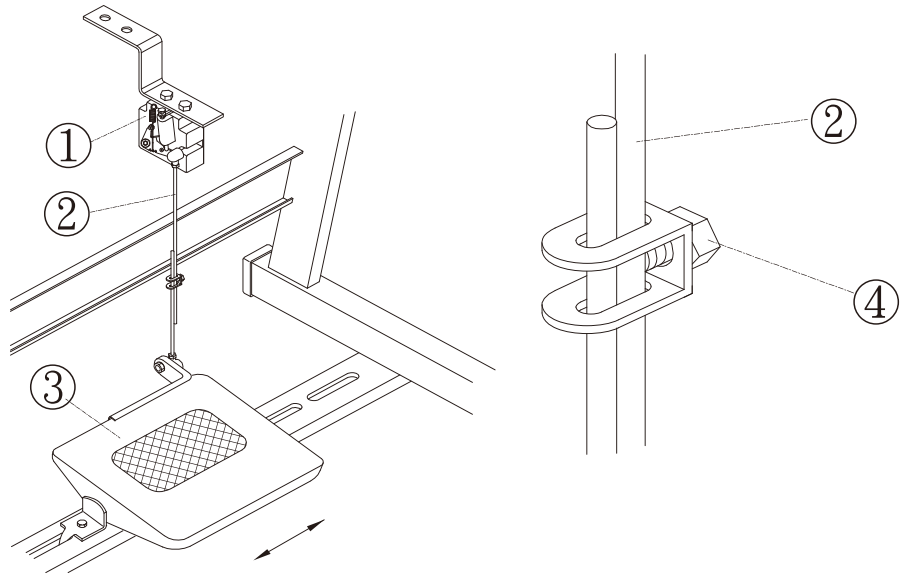


圖35/Fig. 35

腳踏板壓力及行程

1. 腳踏板前踩位置的壓力調整。(圖34)

   (1) 腳踏板壓力可經由改變腳踏板壓力調整彈簧①之安裝位置而改變。

   (2) 將彈簧勾移往左邊，壓力減少。

   (3) 將彈簧勾移往右邊，壓力增加。

2. 腳踏板後踩位置的壓力調整。

   (1) 壓力可經由調整螺絲②調整。

   (2) 將調整螺絲依箭頭方向，壓力增加。

   (3) 將調整螺絲反箭頭方向，壓力減少。

3. 腳踏板行程調整
   當將連接桿③移往左邊孔方向時，腳踏板行程減少。

ADJUSTING THE TENSION ON PEDAL AND PEDAL STROKE

1. Adjusting the front part treading pressure of the pedal. (Fig. 34)
   (1) The pressure of the pedal can be adjusted by changing the mounting position of pedaling pressure adjust spring ①.
   (2) The pressure is reduced when moving the spring hook to left side.
   (3) The pressure is increased when moving the spring hook to right side.
2. Adjusting the rear part treading pressure of the pedal.
   (1) The rear part treading pressure of the pedal can be adjusted by driving the regulator screw ②.
   (2) The pressure is increased when you follow the direction on the screw to drive it.
   (3) The pressure is decreased when you drive the screw by the opposite direction of the arrow on the screw.
3. Adjusting the pedal stroke.
   The pedal stroke is shorter as connecting rod ③ moved to the left holes.

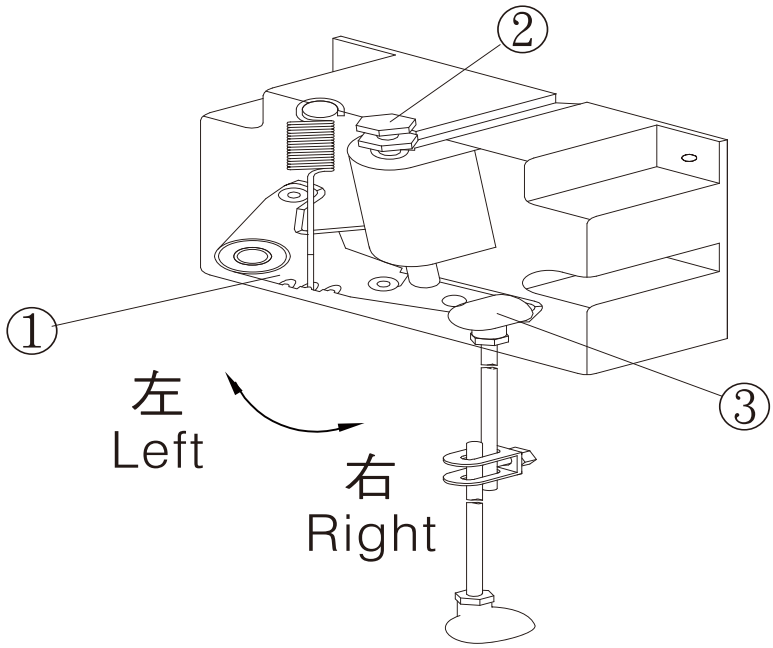


圖34/Fig. 34

梭頭油量調整

1. 轉動裝在梭頭傳動大心上之油量調整螺絲，轉向"＋"號方向(順著 A 方向)油量增加；轉向"－"號方向(順著 B 方向)油量減少。(圖39)

2. 梭頭油量適當調整後，將機器空轉30秒，以重新檢查確認梭頭油量。

ADJUSTING THE AMOUNT OF OIL IN THE HOOK

1. The oil amount adjustment screw is mounted on the hook driving shaft. Turn the screw counter clockwise toward "＋" direction (A direction) to increase the amount of oil supplied in the hook. Turn the screw clockwise toward "－" direction (B direction) to reduce the amount of oil supplied in the hook. (Fig. 39)

2. After the amount of oil in the hook is properly adjusted, run the machine idly for 30 seconds to do oil splashing observation test to reconfirm the amount of oil in the hook.

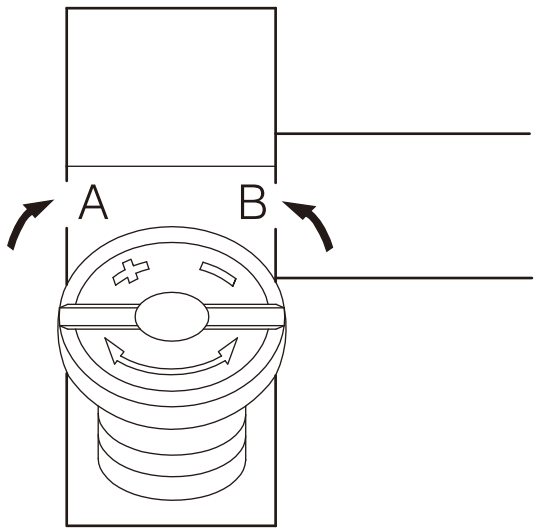


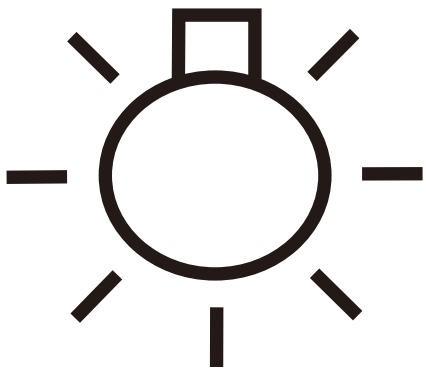
圖39/Fig. 39

操作環境照明

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40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. 40.



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

圖40/Fig. 40

操作者條件

CONDITIONS OF ALL OPERATORS

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

1. Read and understand well the content of this instruction book.
2. Know the functions of major parts and understand the notices.
3. Truely 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 appropiate and proper working suits.
7. Develop the familiarity of how to operate the machine if needed.

腳踏板之操作

腳踏板依以下四步驟操作：(圖41)

1. 輕踩踏板，如B，機器將以低速運轉。

2. 進一步重踩踏板前方時，如A，機器以較高速運轉(如果預先設定有自動倒縫功能，機器將在完成倒縫後再高速運轉)。

3. 踏板恢復至原位置，如C，機器暫停轉動(針在上或下)。

4. 將踏板完全向後踩，如E，機器進行切線動作。

5. 注意事項：
   (1) 如果你的機器附有押具自動提升器，機器停止與切線動作之間會多了一個步驟，即當你輕輕後踩腳踏板，如D，押具向上提升，再往下踩，執行切線動作。

   (2) 當倒縫動作執行時，如果將腳踏板回復到原位置，機器會在倒縫動作完成後才停止。

   (3) 即使機器在高速或低速中，只要立刻將腳踏板往後踩，它都會執行正常的切線動作。

   (4) 如果在機器執行切線動作後，即便立刻將腳踏板恢復原位置C，機器仍將完成切線動作。

OPERATING THE PEDAL

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

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

(5) 當針停在下定位時，如果要將針上提，則將腳踏板後踩一次至D位置即可。

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

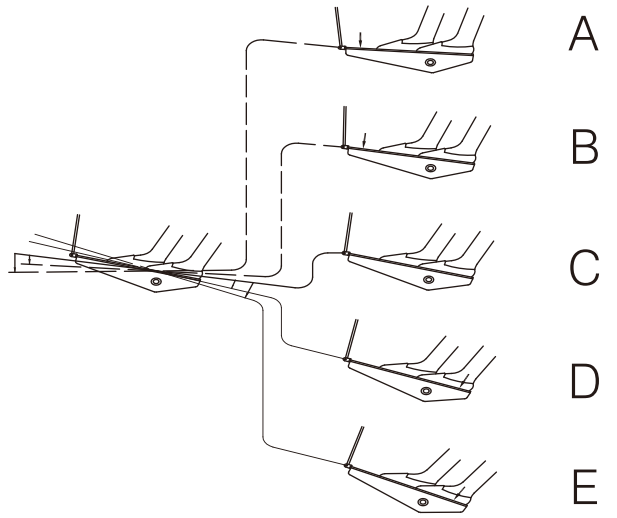


圖41/Fig. 41

單觸式倒縫機構

OPERATING THE ONE TOUCH TYPE REVERSE FEED STITCHING MECHANISM

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

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

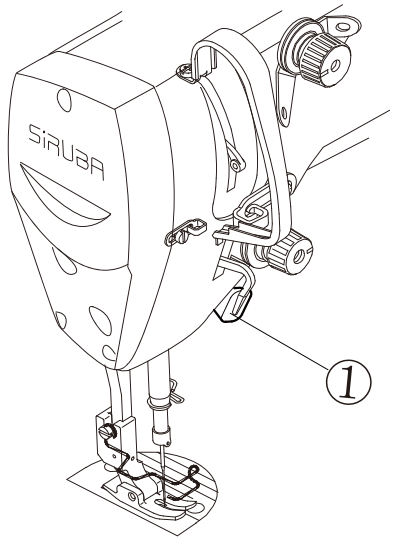


圖42/Fig. 42

注意CAUTION

清潔作業前，請切斷電源。當誤觸起動開關時，縫紉機動作易導致人員受傷。
Turn off the power switch before carrying out cleaning. The machine may operate if the treadle is pressed incautiously, which could result in injury.

加潤滑油和黃油時，務必戴好保護眼鏡和手套，以防潤滑油進入眼中或沾在皮膚上，易引起發炎。
Be sure to wear protective goggles and gloves when handling the lubricating oil and grease so that they do not get into your eyes or onto your skin, otherwise inflammation can be resulted.

潤滑油或黃油不能飲用，否則將會引起嘔吐和腹瀉，將油放在小孩拿不到的地方。
Furthermore, do not drink or eat the oil nor the grease for they can cause vomiting and diarrhea. Keep the oil away of the reach of children.

縫紉機頭倒下或豎起時，請以雙手進行操作。
Use both hands to hold the machine head when tilting or returning it to its original position.

單手操作時，因縫紉機的重量較重，萬一滑落易導致受傷。
If only using one hand to move the machine, the weight of the machine head may cause slipping and you may get hurt.

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

《保養》

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

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

《CLEANING》

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

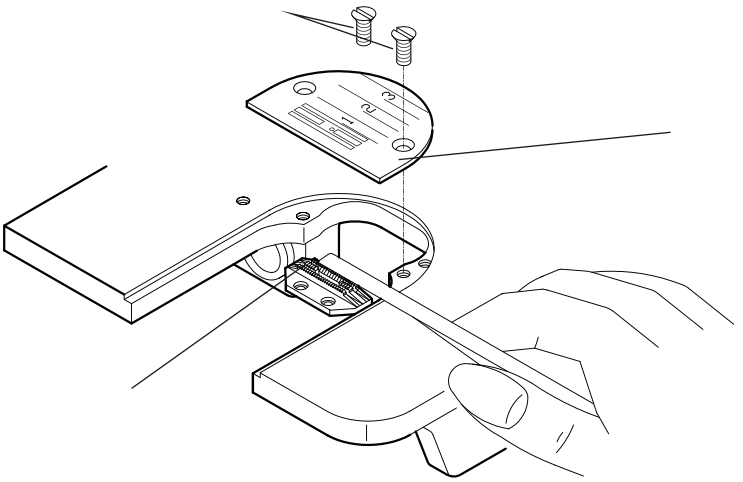


圖43/Fig. 43

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

表6/Table 6

潤滑 OIL LUBRICATION

1. 潤滑說明(圖44)
   (1) 使用專用油注入油盤中，液面到高點Ａ。
   (2) 當液面低於低點Ｂ時，再添加所指定之潤滑油。
   (3) 如果潤滑正常，當機器操作中，你可以從油鏡②中看到噴油現象。

1. Oil lubrication instruction (Fig. 44)
   (1) Fill the oil pan with specified oil up to high mark Ａ.
   (2) Refill the oil pan with the specified oil if the oil level is lower below low mark Ｂ.
   (3) You will see oil splashing via the oil sight window ② if the lubrication functions well when machine runs.

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

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

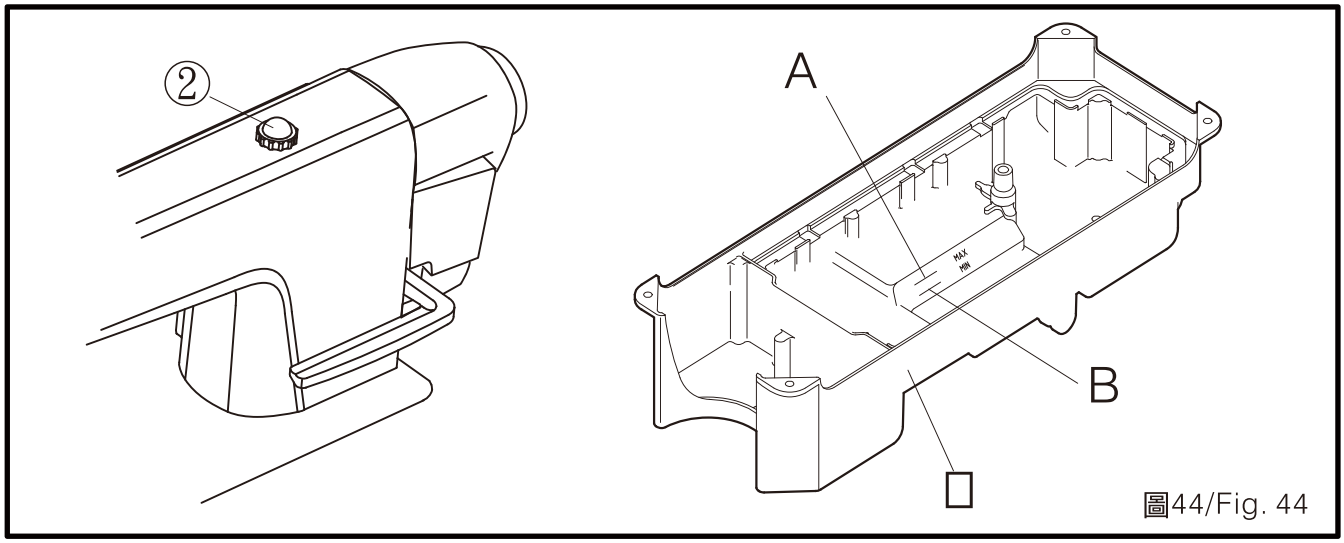


圖44/Fig. 44

2. 針棒 / 挑線桿供油量之調整。(圖45)

(1) 由調整栓①調整針棒曲柄② / 挑線桿③之供油量。

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

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

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

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

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

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

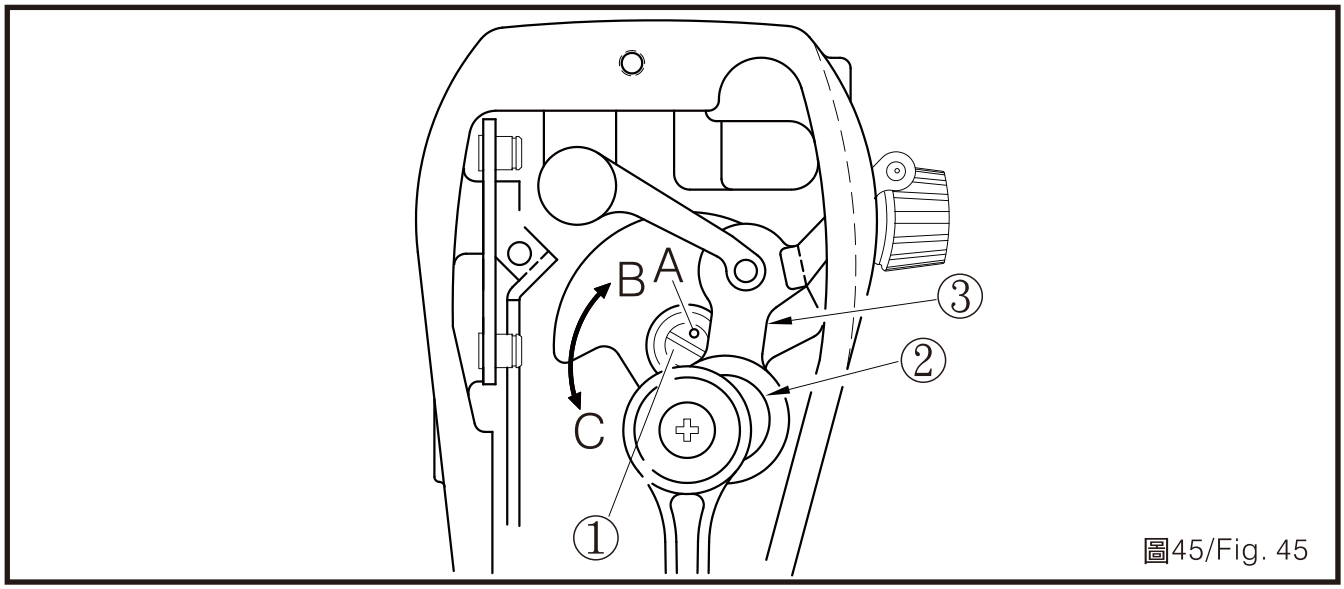


圖45/Fig. 45

3. 梭頭油量(噴油量)之調整

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

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

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

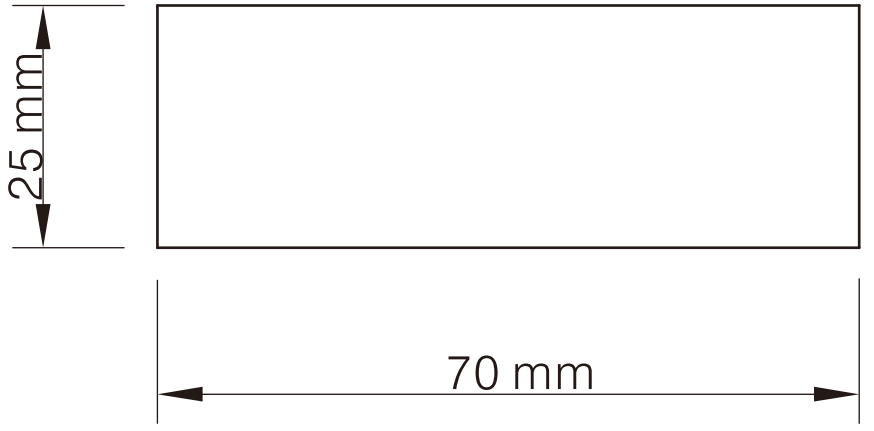


圖46/Fig. 46

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

①梭頭②紙③油盤
④接觸點⑤底座 ⑥襯套

當進行第(2)步驟時，移開滑板並非常小心，勿使手指觸及梭頭。

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

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

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

4. 注意事項：

(1) 如機器尚未充份熱機，請先將機器空轉 3 分鐘暖車。

(2) 在機器運轉中，將油量確認試紙置於梭頭下方。(圖47)

(3) 確認油盤油量(油面)介於『 高 』與『 低 』刻度間。

(4) 必需在 5 秒鐘內完成確認油量之動作(用手錶測時間)。

4. Attentions：

(1) If the machine doesn't warm up enough, please run the machine 3 minutes idly.

(2) While the machine is running, place the oil splashing test paper under the hook. (Fig. 47)

(3) Confirm that the height of the oil level in the oil pan falls between " HI " and " LOW ".

(4) Oil splashing observation test should be completed in 5 seconds.(Use a watch to check the time used.)

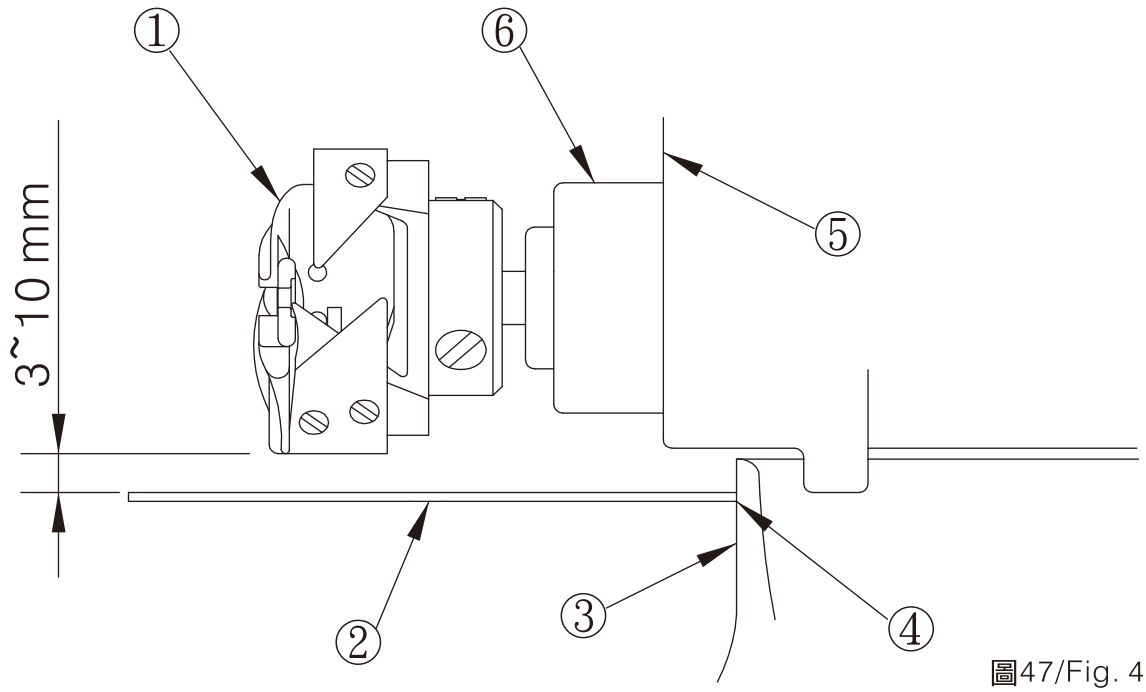


圖47/Fig. 47

5. 適當油量顯示範例(圖48)
梭頭噴油量約1mm適當油量(小)

DL7200–BM : 1.5mm
DL7200–BH : 3mm

梭頭噴油量約2mm適當油量(大)

DL7200–BM : 3mm
DL7200–BH : 6mm

5. A sample of observations indicate the appropriate oil amount. (Fig. 48)
Oil amount in the hook (small) as shown is approximated 1mm.
DL7200–BM : 1.5mm
DL7200–BH : 3mm

Oil amount in the hook (large) as shown is approximated 2 mm
DL7200–BM : 3mm
DL7200–BH : 6mm

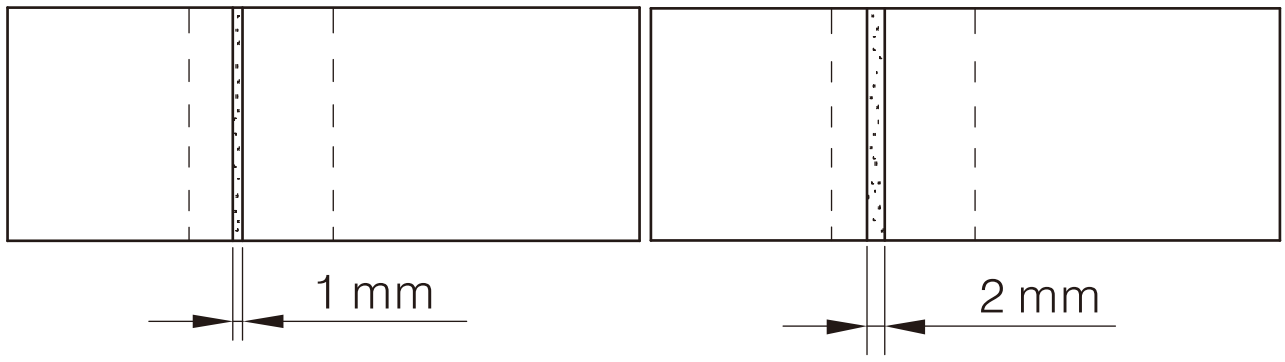


圖48/Fig. 48

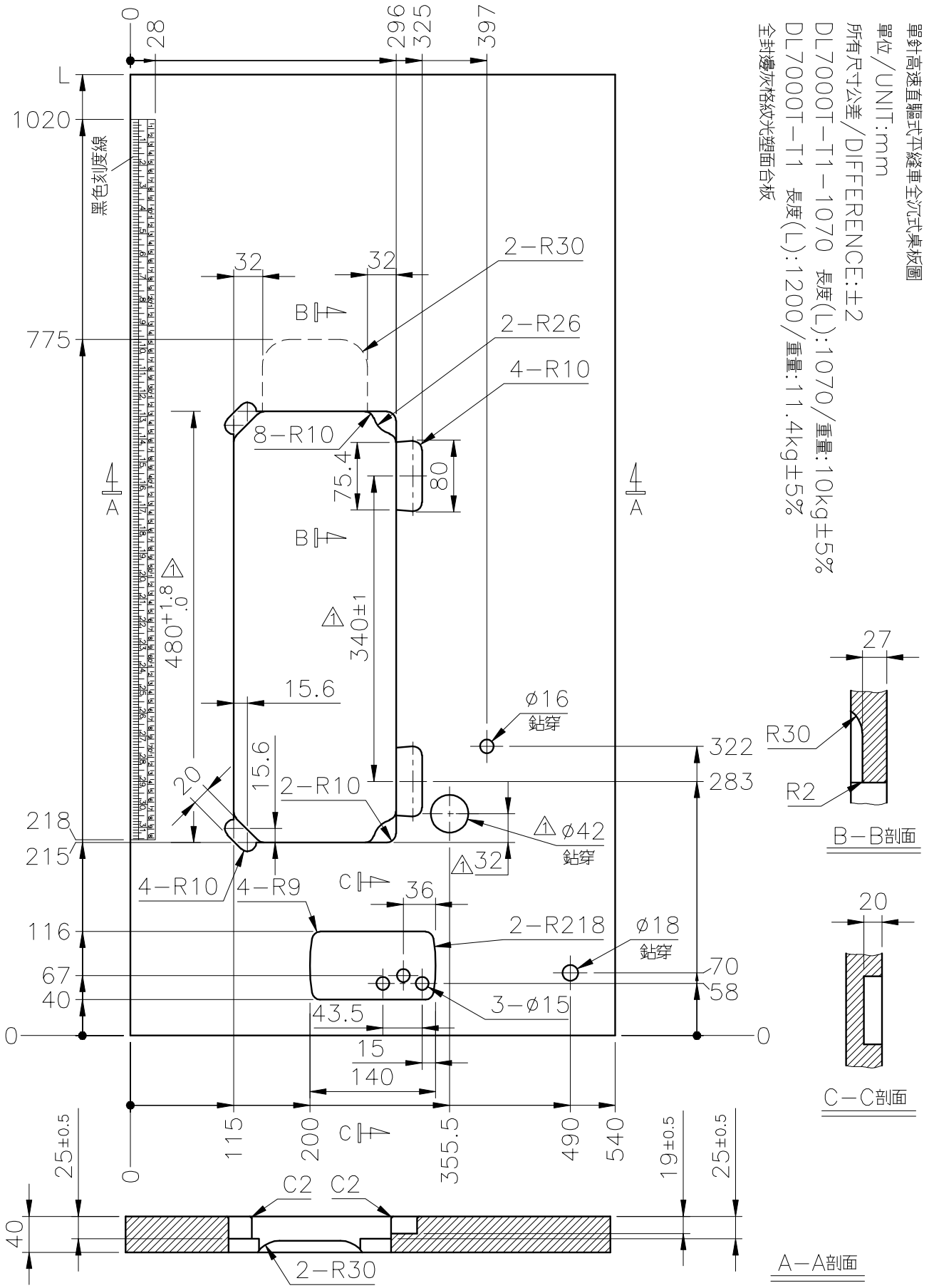
(1) 油量顯示範例必需根據車縫布料與程序加以調整，切勿使梭頭油量過多或過少。油量過少，梭頭將卡住(梭頭將發熱)；油量過多，車縫物將可能沾染油污。

(2) 調整梭頭油量，油量必需達到3次測試都相同(在3張試紙上)。

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

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

SiRUBA	Series	Item Code	Subclass / Remark	Mounting
TABLE CUT - OUT	DL720/DL6800/DL6900 DL7000/DL7200/DL7300 DL7400/DL7500/DL3880 DL380 ⚠1	DL7000T-T1		Fully-submerged
				Date
				2021/04/26



報廢流程

1. 當機器需要被淘汰與報廢時，有一些基本規則必須採納、遵守以保護環境及公眾健康。

2. 所有的機器零組件必須依照下列分類來區分開：

   (1) 所有護套、可伸縮軟管及塑膠或非金屬零件。

   (2) 電器零件：開關、照明器具等。

   (3) 絕緣材料：石棉、彈性/可伸縮橡膠片。

   (4) 金屬：含鐵金屬、銅、青銅與黃銅、其他各種金屬。

3. 以此方法，所有材質可以正確的淘汰，回收再利用或鎔解為可再使用或再處理而不至於危害環境。

DEMOLITION PROCEDURE

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



高林股份有限公司
KAULIN MFG. CO., LTD.

由於對產品的改良及更新，本產品使用說明書中與零件圖之產品及外觀的修改恕不事先通知！
The specification and/or appearances of the equipment described in this instruction book & parts list are subject to change because of modification which will without previous notice.

DL7600.APR.2026