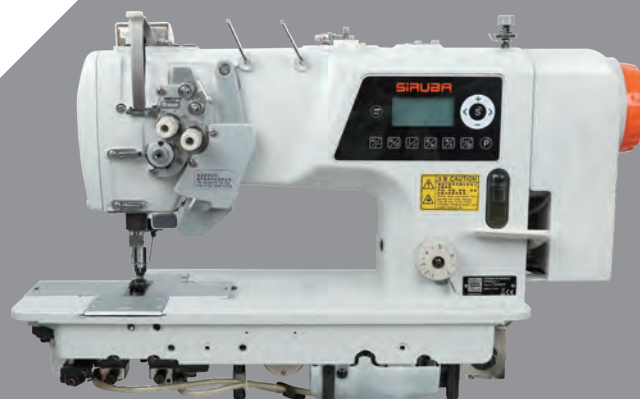


SIRUBA

使用説明書

INSTRUCTION BOOK

■ DT8600



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 $\pm 10\%$ 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 $\pm 10\%$ 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。

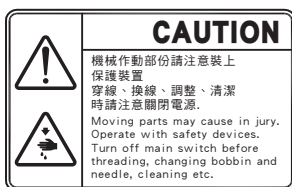


高壓部位，謹防觸電事故。



地線的接線表示。

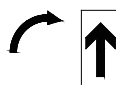
3-3 貼附在針車的警告標示



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.

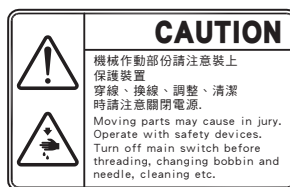


High-voltage part. In case of electric shock.



Indicated earth wire wiring.

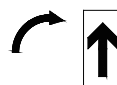
3-3 Warning label on sewing machine



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

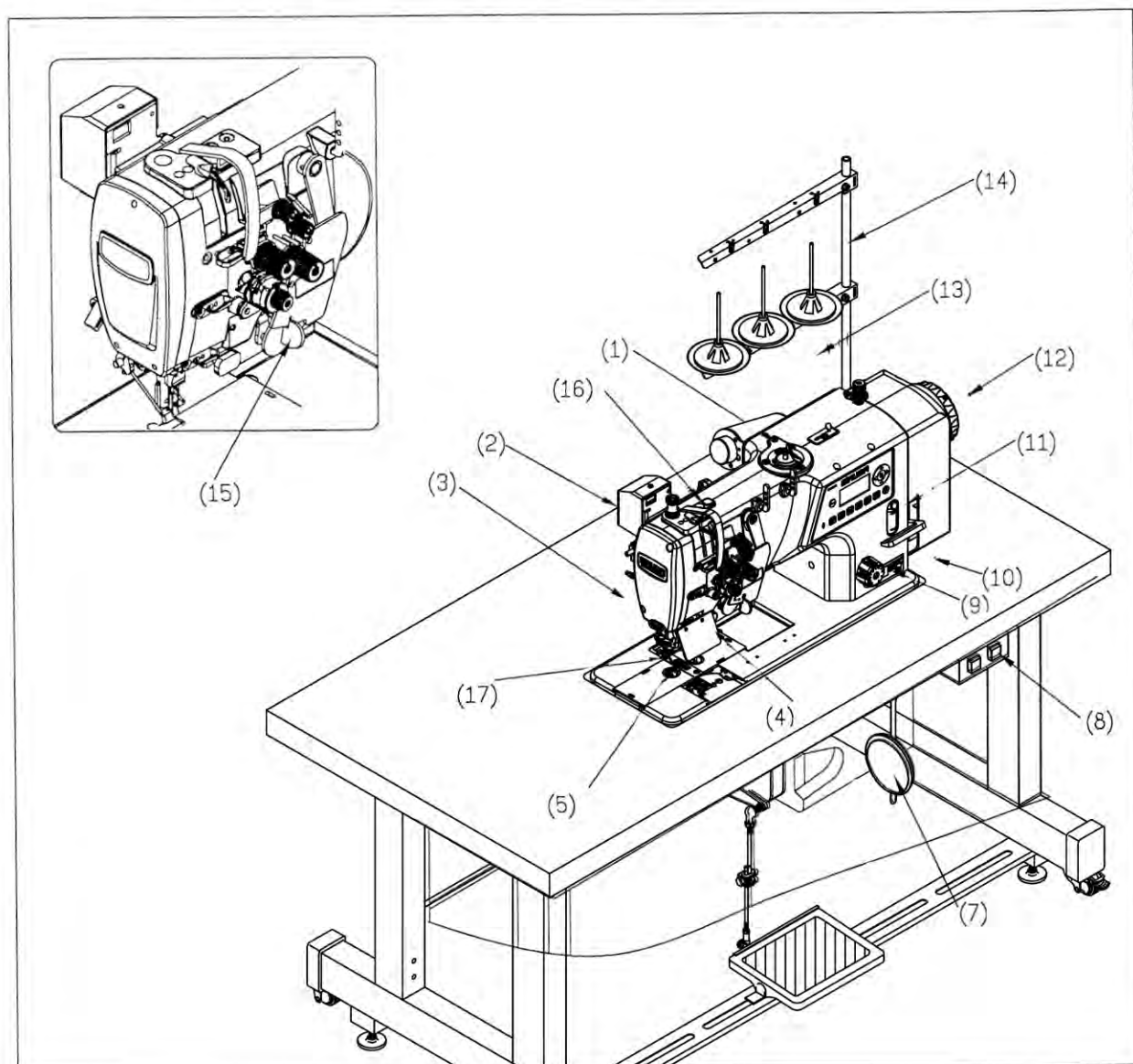


The label is affixed on safeguards. Considering the operation, it is not affixed on the finger guard and eyes guard.



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

2. 各部件名稱 Names of major parts



- | | |
|---------------------------------|--|
| (1) 梭芯繞線裝置 Bobbin winder | (2) 掃線裝置 Thread wiper |
| (3) 壓腳扳手 Lifting lever | (4) 倒縫裝置按鈕(調節器) Quick reverse (Actuator) |
| (5) 壓腳 Presser foot | (8) 電源開關 Power switch |
| (7) 膝控碰塊 Knee lifter assembly | (10) 倒縫扳手 Reverse lever |
| (9) 針距旋鈕 Stitch length dial | (12) 縫紉機手輪 Machine pulley |
| (11) 油量計視窗 Oil gauge window | (14) 線架 Cotton stand |
| (13) 操作盒 Operation box | |
| (15) 定位杆 Stop lever(8450, 8750) | |

安全保護裝置 Safely devices

- | | |
|----------------------------------|-----------------------|
| (16) 挑線杆防護罩 Thread take-up cover | (17) 護指器 Finger guard |
|----------------------------------|-----------------------|

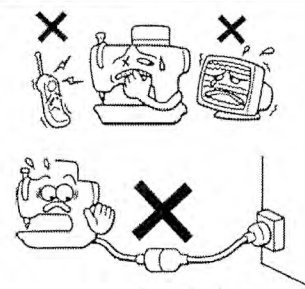
3. 安裝方法 INSTALLATION

注意 CAUTION

- | | |
|---|--|
| <p> 請讓受過培訓的技術人員來安裝縫紉機</p> <p> 請委託購買商店或電氣專業人員進行電氣配線</p> <p> 縫紉機重量約45Kg，安裝工作必須由兩人完成。</p> <p> Machine installation should only be carried out by a qualified technician.</p> <p> Contact your brother dealer or a qualified electrician for any electrical work that may need to be done</p> <p> The sewing machine weighs approximately 45Kg, the installation should be carried out by two or more people.</p> | <p> 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。</p> <p> 縫紉機頭倒下或豎起時，請用雙手進行操作。單手操作時因縫紉機重量萬一滑落易導致受傷。</p> <p> 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</p> <p> Use both hands to hold the machine head when tilting it back or returning it to its original position, if only one hand is used, the weight of the machine head may cause your hand to slip, and your hand may get injured.</p> |
|---|--|

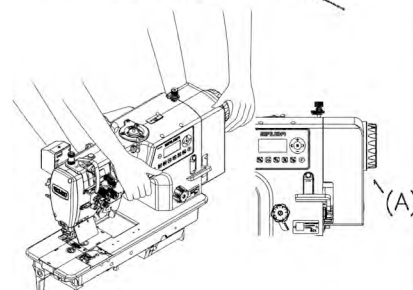
關於縫紉機的安裝位置 About the machine set-up location

- 勿將該縫紉機置於其他設備附近，如電視機、收音機或無線電話等，否則這些設備可能會受縫紉機的電子原件干擾所影響。
- 應將縫紉機置於插入AC電源插座。如果使用延長線可能會造成操作故障。
- Do not set up sewing machine near other equipment such as televisions, radios or cordless telephone, otherwise such equipment may be affected by electronic interference from the sewing machine
- The sewing machine should be plugged directly into an AC wall outlet operation problems may result if extension cords are used.



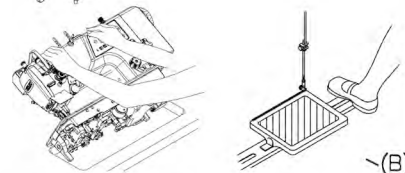
搬運縫紉機 Carrying the machine

- 應按圖示由兩人用手拖住機殼本體進行搬運
- * 還是用手扶住馬達蓋(A)部，使手輪不能轉動。
- The machine should be carried by the arm by two people as shown in the illustration.
- Hold the motor cover(A) by hand also so that pulley does not rotate



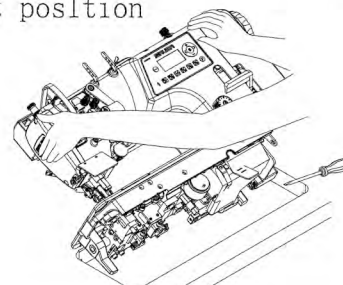
向後傾斜縫紉機頭部 Tilting back the machine head

- 用腳踏住(B)部分，不讓臺板移動，然後用雙手推動機殼本體使縫紉機頭部後傾。
- Hold section(B) with your foot so that the table does not move, and then push the arm with both hands to tilt back the machine head.



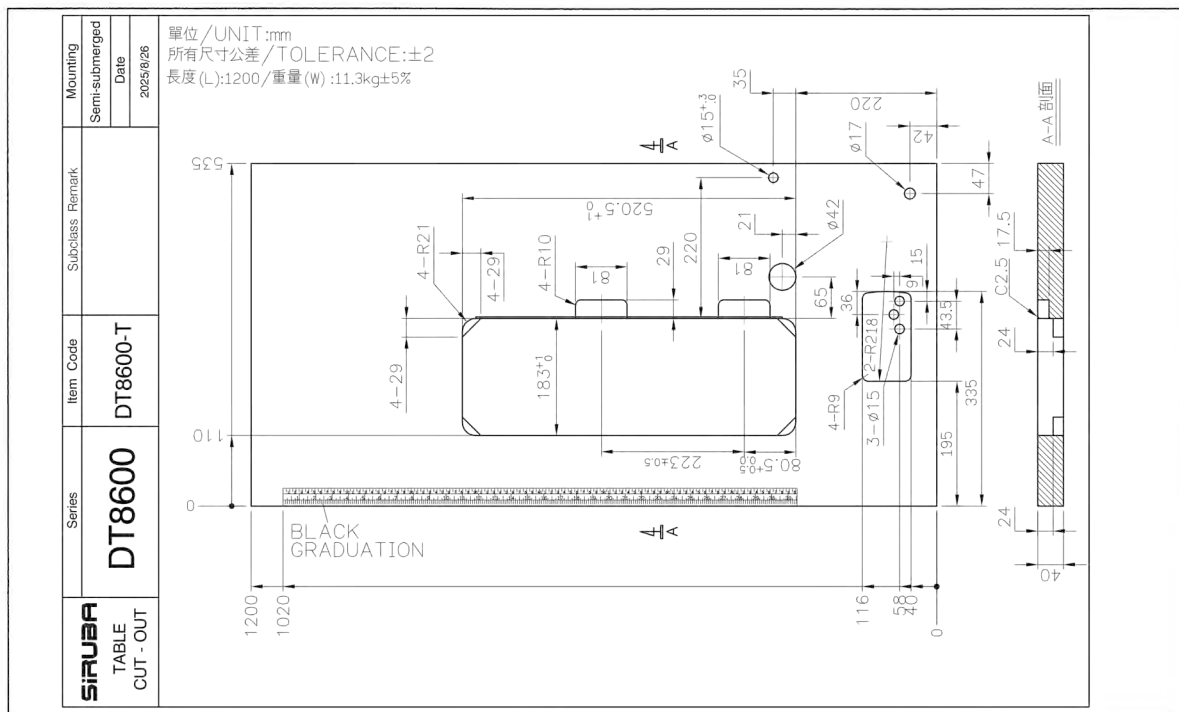
將縫紉機頭部 Returning the machine head to the upright position

- 清除臺板開孔附件的所有工具等物料。
- 用左手扶住面板，用右手輕輕的將縫紉機頭部返回至直立位置。
- Clear away any tools, etc. which may be near the table holes.
- While holding the face plate with your left hand, gently return the machine head to the upright position with your right hand.

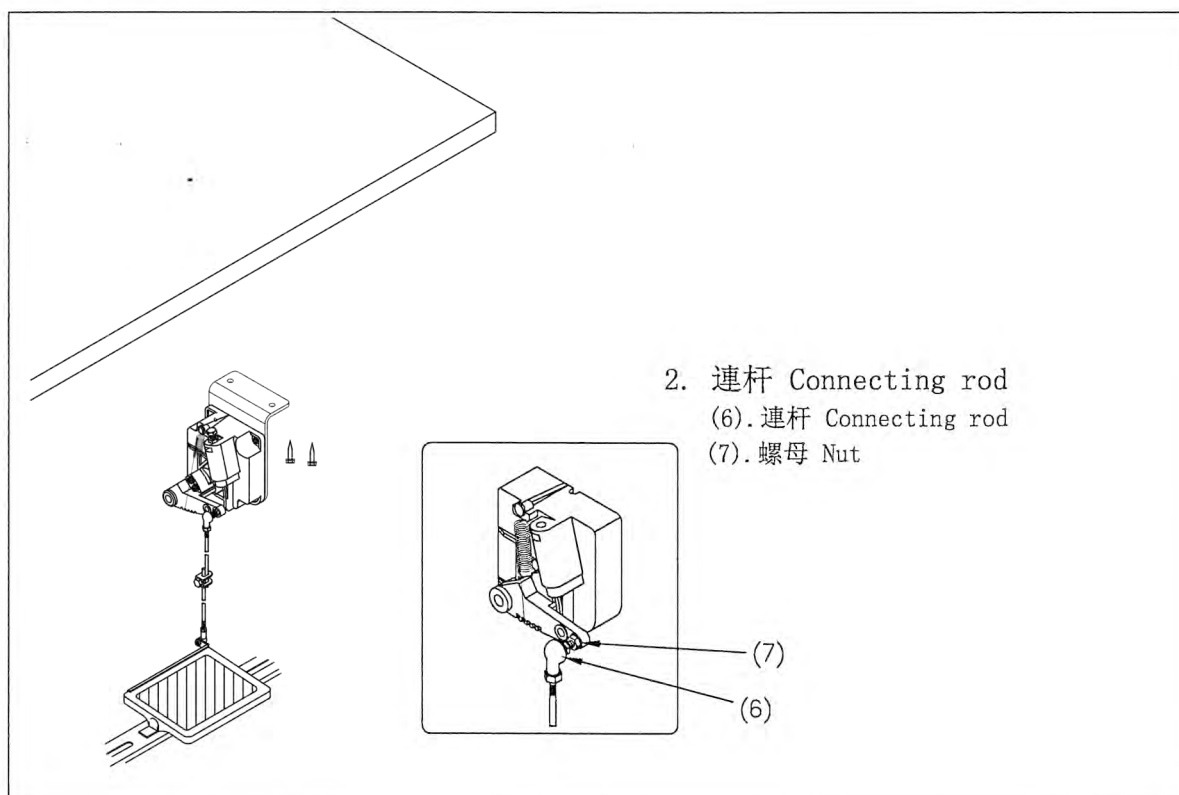


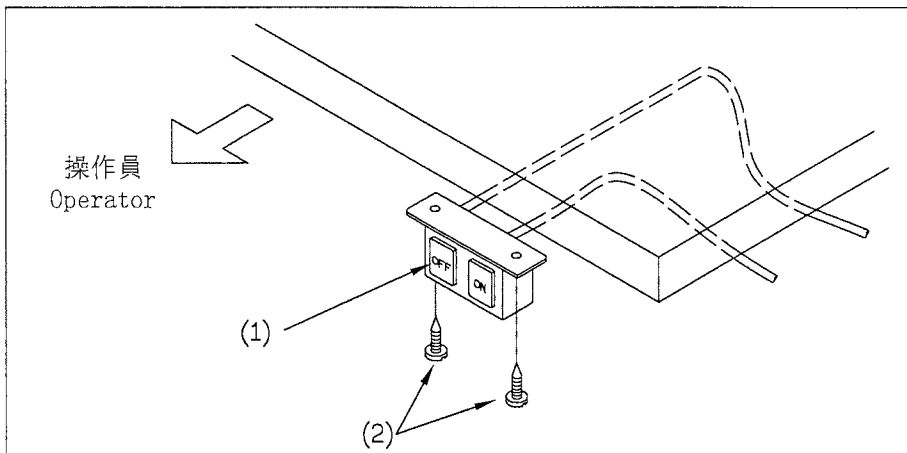
3-1. 臺板加工圖 Table processing diagram

- 臺板的厚度應達到40mm，能夠承受縫紉機的重量，並經得起縫紉機的振動。
- 請在如圖所示的位置上鑽孔
- The top of the table should be 40 mm in thickness and should be strong enough to hold the weight and with-stand the vibration of the sewing machine.
- Drill holes as indicated in the illustration below



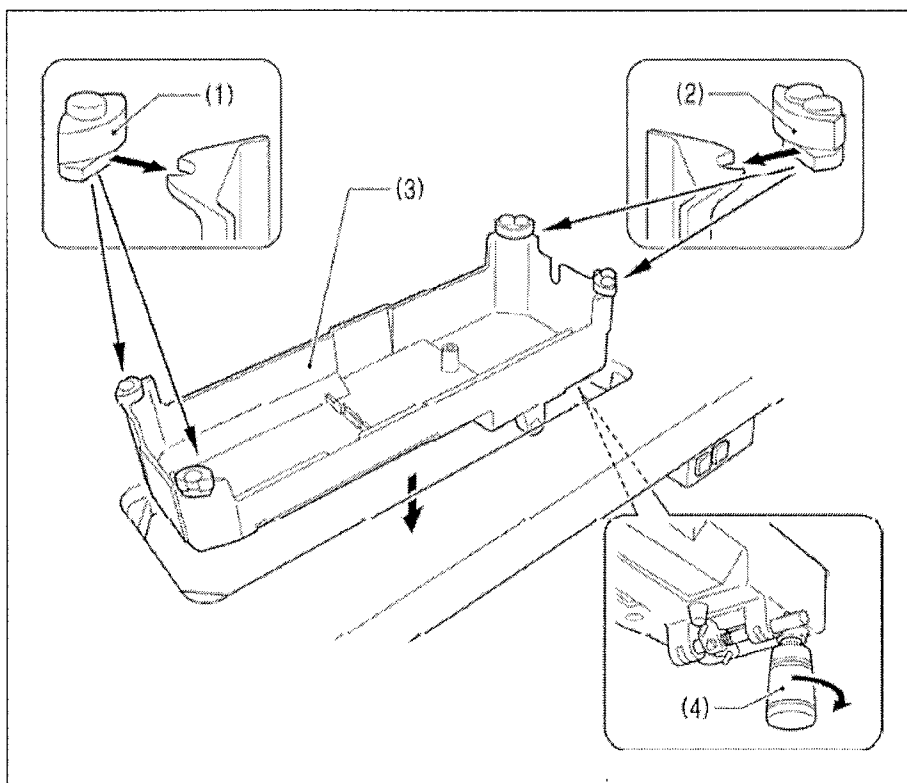
3-2. 安裝方法 Installation





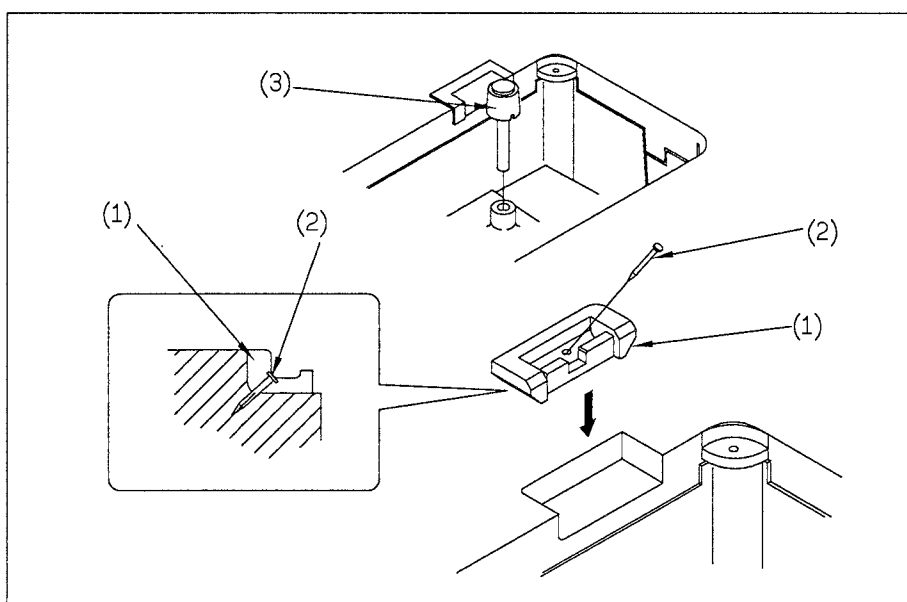
3. 電源開關 Power switch

- (1). 電源開關
- (2). 螺釘2個
- (1). Power switch
- (2). Screws 2 pcs



4. 油盤 Oil pan

- (1). 頭部防震墊塊(左)2個
- (2). 頭部防震墊塊(右)2個
- (3). 油盤
- (4). 注油器
- (1). Head cushions(left) 2 PCS
- (2). Head cushions(right) 2 PCS
- (3). Oil pan
- (4). Oiler

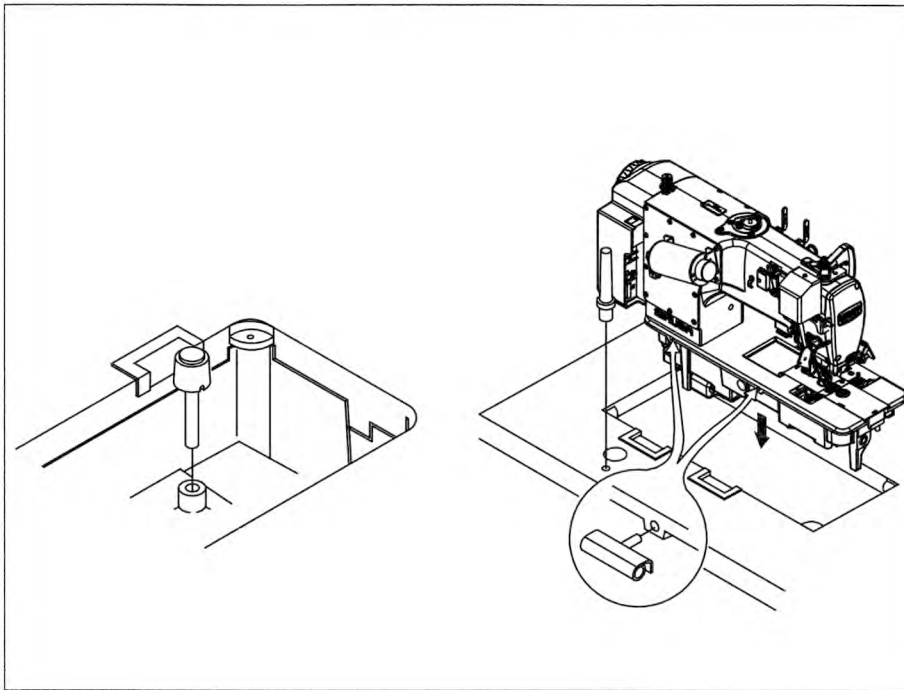


5. 機殼鉸鏈 Rubber cushions

- (1). 機殼鉸鏈套2個
- (2). 釘4個
- (1). Rubber cushions 2 PCS
- (2). Nails 2 PCS

6. 膝控提升杆 Knee lifter complying bar

- (3). 膝控提升杆
- (4). Knee lifter complying bar



7. 縫紉機頭部 Machine head

(1). 機殼鉸鏈2個

(2). 縫紉機頭部

(3). 機頭支撐杆

(1). Hinges 2 pcs

(2). Machine head

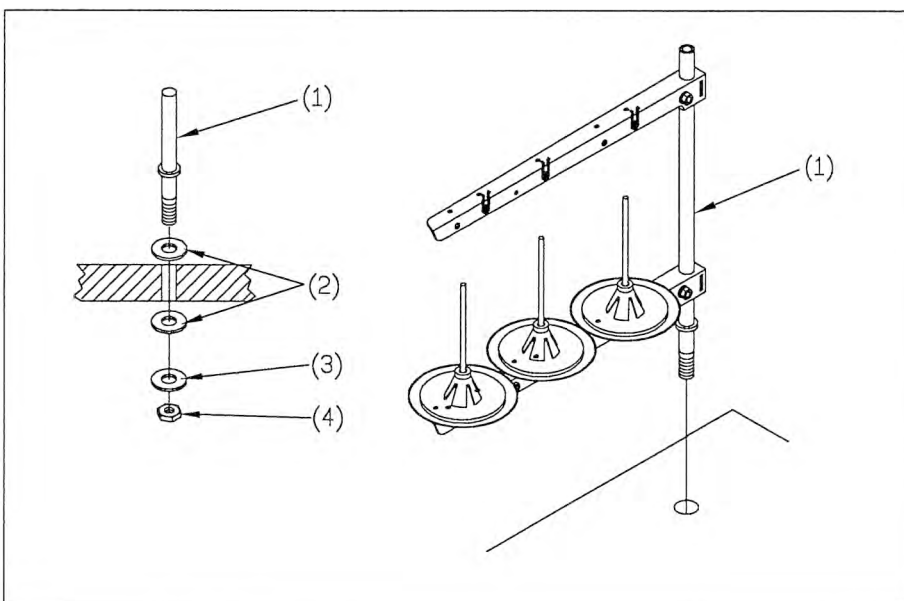
(3). Head reat

注意:

將機頭支撐杆(3)安全、穩定的插入臺板開孔。如果機頭支撐杆(3)未被插入到位，則縫紉機頭部在向後傾斜時因不夠穩定而發生危險。

NOTE:

Tap the head reat (3) securely into the table hole, if the head reat (3) is not pushed in as far as it will go, the machine head will not be sufficiently stable when it is tilted back.



9. 線架 Cotton stand

(1). 線架

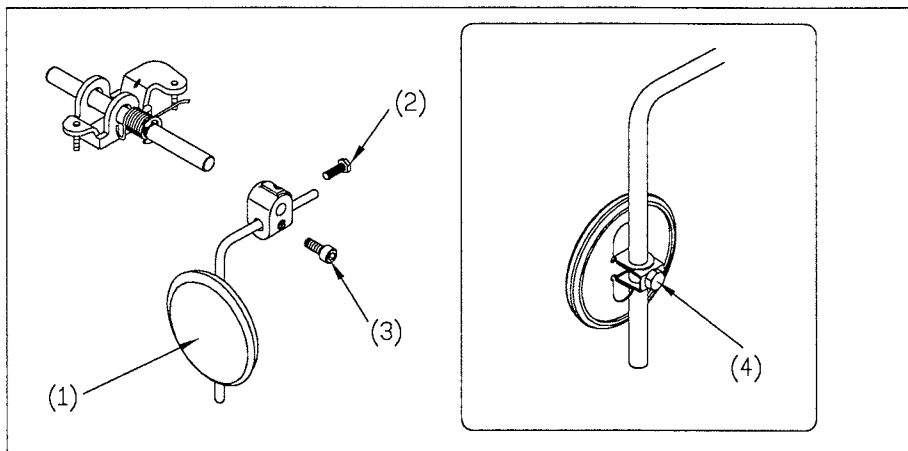
(1). Cotton stand

注意:

將螺母(4)擰緊以便將兩個機殼鉸鏈套(2)和墊片(3)加緊，使線架(1)不會活動。

NOTE:

Securely tighten the nut (4) so that the two rubber cushions (2) and the washer (3) are securely clamped and so that the cotton stand (1) does not move.



10. 膝控碰块 Knee lifter plate

(1). 膝控碰块

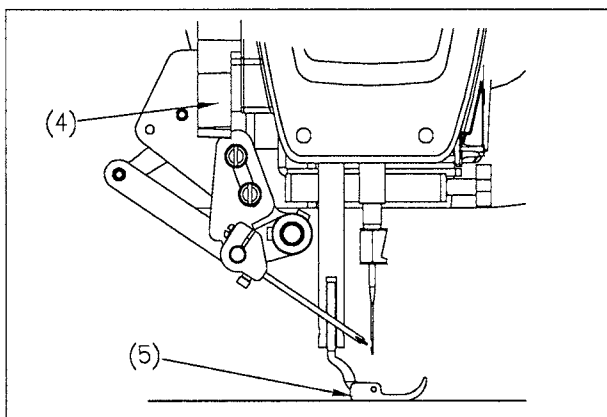
(2). 螺栓

(1). Knee lifter plate

(2). Bolt

* 鬆開螺栓(3)和螺栓(4)，將膝控碰塊(1)移至易于使用的位置。

* Loosen the bolt (3) and the bolt (4), and move the knee lifter plate (1) to a position where it is easy to use.



〈調整抬押杠杆〉〈Knee lifter adjustment〉

(1). 轉動手輪以使送布牙處於針板的下方。

(2). 用壓腳扳手(4)放下壓腳(5)

(1). Turn the machine pulley so that feed dog is below the top of the needle plate.

(2). Lower the presser foot (5) by using the lifting lever (4).

(3). 鬆開螺母(6)。

(4). 轉動螺釘(8)進行調節，以便用手在輕壓膝控碰塊(1)時抬壓杠杆(7)游隙量為2mm。

(5). 擰緊螺母(6)

(6). 鬆開螺母(9)

(7). 轉動螺釘(10)值至螺釘頭與抬壓杠杆(7)的間隙為5mm

(8). 轉動調節螺釘(10)進行調節，以便在完全壓下膝控碰塊(1)時，壓腳(5)處在針板上方13mm範圍內的位置

(9). 完成調節後，將螺母(9)擰緊。

(3). Loosen the nut (6).

(4). Turn the screw (8) to adjust so that amount of play in the knee

lifter (7) is approximately 2mm when the knee lifter plate (1) is gently pressed.

(5). Securely tighten the nut (6)

(6). Loosen the nut (9)

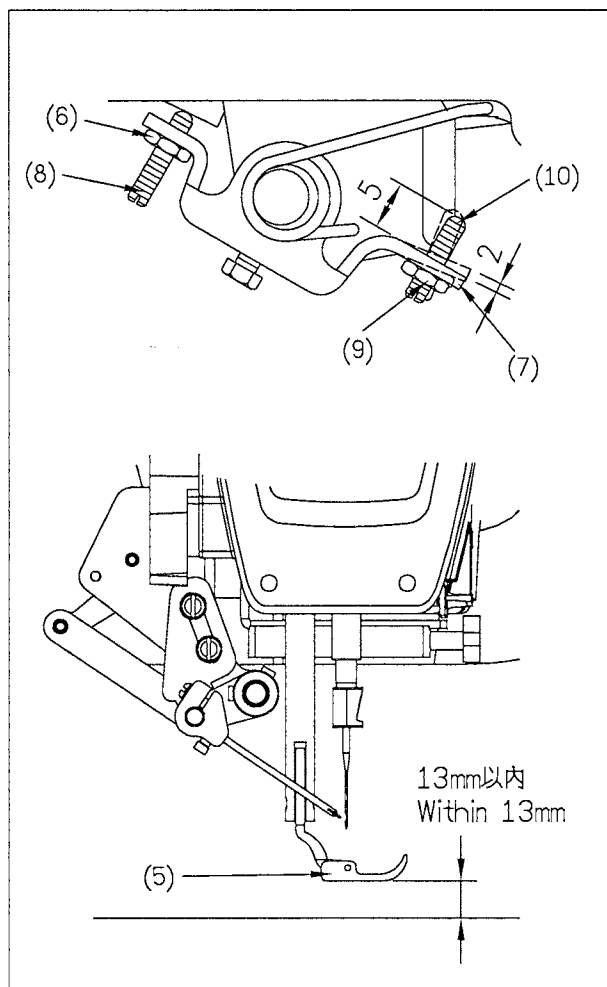
(7). Turn the screw (10) until the distance between the end of the

screw (10) and the knee lifter (7) is approximately 5mm

(8). Turn the adjusting screw (10) to adjust so that the presser foot

(5) is at the desired position within a distance of 13mm of the needle plate when the knee lifter plate (1) is fully pressed.

(9). After adjustment is completed, securely tighten the nut (9).

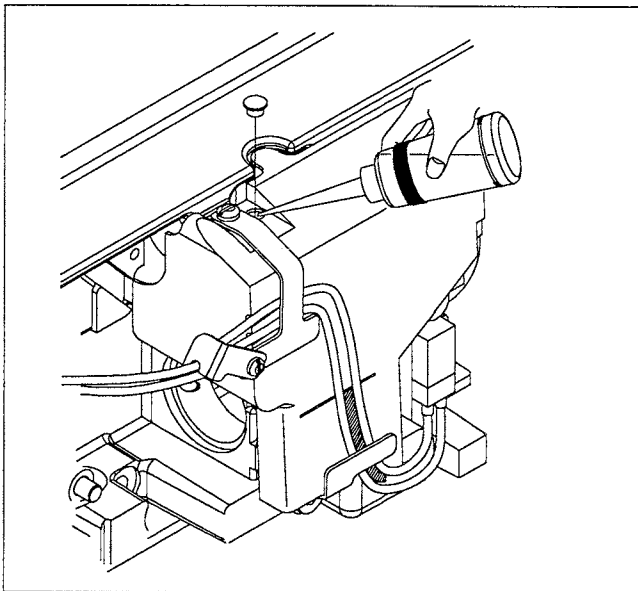


3-3. 加油方式 Lubrication

⚠ 注意 CAUTION

- ⊘ 在加油未完成前，請勿插上電源。
當誤按啟動開關時，縫紉機動作會導致人員受傷。
- ⊘ 使用潤滑油和黃油時，務必帶好保護眼睛和保護手套等，以防潤滑油落入眼睛中或粘在皮膚上，這是引起發炎的原因。
另外，潤滑油和黃油不能飲用，否則會引起嘔吐或腹瀉。
將油放在小孩拿不到的地方。
- ⊘ Do not connect the power cord until lubrication has been completed, otherwise the machine may if the treadle is depressed by mistake, which could result in injury.
- ⊘ be sure to wear protective goggles and gloves when handling the lubtcatating oil and grease, so that they do not get into your eyes or onto your skin. otherwise inflammation can result.
Furthermore, do not drink the oil or eat the grease under any circumstances, as they can cause vomiting and diarrhea.
keep the oil out of the reach of children.

- ． 必須經常潤滑縫紉機，第一次使用縫紉機或長時間未使用縫紉機時，要補充機油。
- ． 請使用規定的潤滑油。
- ． The sewing machine should always be lubricated and the oil supply replenished before it is used for the first time, and also after long periods of non-use.
- ． Use only the lubricating oil



<給油蓋添加機油><Lubricating via the oil cover>

1. 向後傾斜縫紉機機頭。
2. 拆下橡皮塞(1)。
3. 用隨帶的油壺(2)給油蓋添加(3)添加潤滑油，直至液位達到基準線(4)位置。

注意：

添加潤滑油時請不要超過基準線(4)。否則等縫紉機頭部倒下時，潤滑油可能會溢出。

4. 將橡皮塞(1)裝回原處。
5. 將縫紉機頭部返回至原位。

* 當潤滑油液位下降到油量計視窗(5)的下部(6)以下時，請務必補充潤滑油。

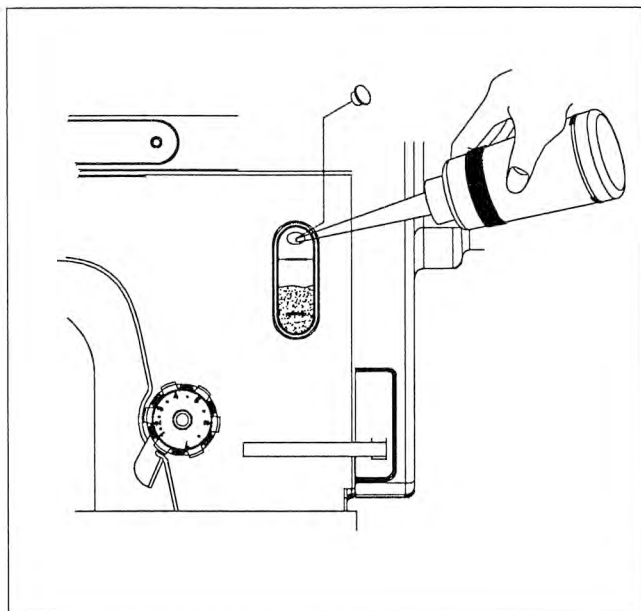
1. Tilt back the machine head
2. Remove the rubber cap (1)
3. Use the accessory oiler (2) to pour lubricating oil into the oil cover (3) until the lever reaches the reference the reference line (4).

NOTE:

Do not fill with lubricating oil past the reference line (4), if you pour in too much lubricating oil, it may spill out when the machine head is tilted back.

4. replace the rubber cap (1)
5. Return the machine head drop to its original position

* If the lubricating oil level drops the bottom (6) of the oil gauge window (5), be sure to add more oil.



＜給油箱添加機油＞<Lubricating via the oil tank>

1. 拆下橡皮塞(1)。
2. 用隨帶的油壺(2)給油蓋添加(3)添加潤滑油，直至液位達到基準線(4)位置。
3. 將橡皮塞(1)裝回原處。

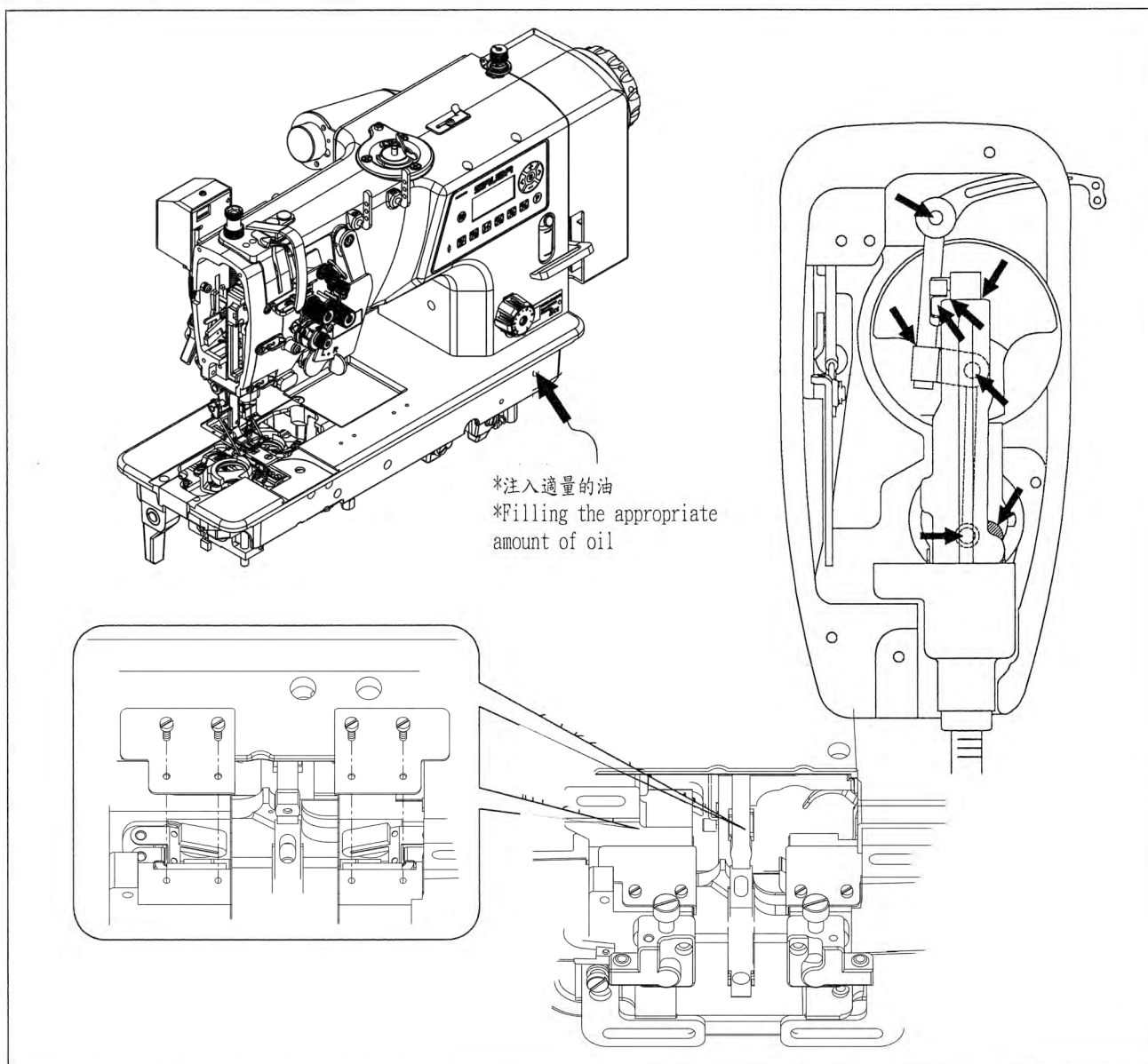
* 當潤滑油液位下降到油量計視窗(5)的下部(6)以下時，請務必補充潤滑油。

1. Remove the rubber cap (1)
2. Use the accessory oiler (2) to pour in lubricating oil until the oil lever reaches the top reference line (4) of the oil gauge window (3)
3. Replace the rubber cap (1)

* If the lubricating oil lever drops below the bottom reference line (5), be sure to add more oil.

■ 注油 Lubrication

在每個箭頭標記處注入1-2滴潤滑油。 Apply 1-2 drops of oil to the places indicated by the arrows



3-4. 連接電纜 Connecting the cords

危險 DANGER



打開控制箱蓋時，先關閉電源開關將電源插頭從插座上拔下來，至少等待5分鐘後，再打開控制箱蓋。觸摸帶有高電壓的區域將會造成人員受傷。

Wait at least 5 minutes after turning off the power switch and disconnecting the power cord from the wall outlet before opening the face plate of the control box. touching areas where high voltages are present can result in severe injury.

注意 CAUTION



請委託購買商店或電氣專業人員進行電氣配線。



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。



必須接地

接駁地線不牢固，是造成觸電或誤動作的原因。

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

Do not connect the power cord until all cords have been connected

The machine may operate if the treadle is depressed by mistake, which could result in injury

Be sure to connect the ground, if the ground connection is not secure, you run a high risk of receiving a serious electric shock, and problems with correct may also occur.

3-5. 操作測試（腳踏板的操作方法）Test operation(operating the treadle)

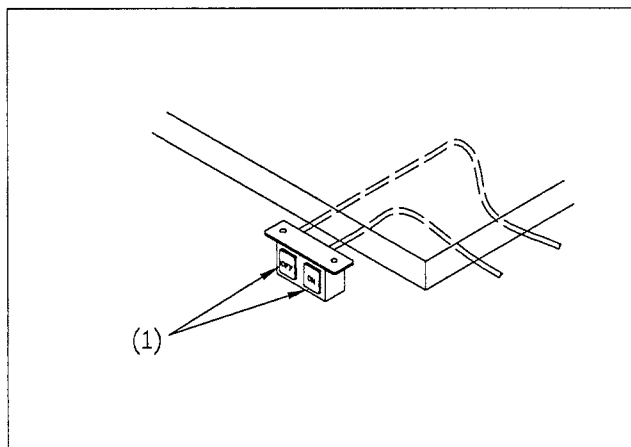


注意 CAUTION



縫紉過程中，不要觸碰任何運動部件或將物件靠在運動部件上，因為這會造成人員受傷或縫紉機損壞。

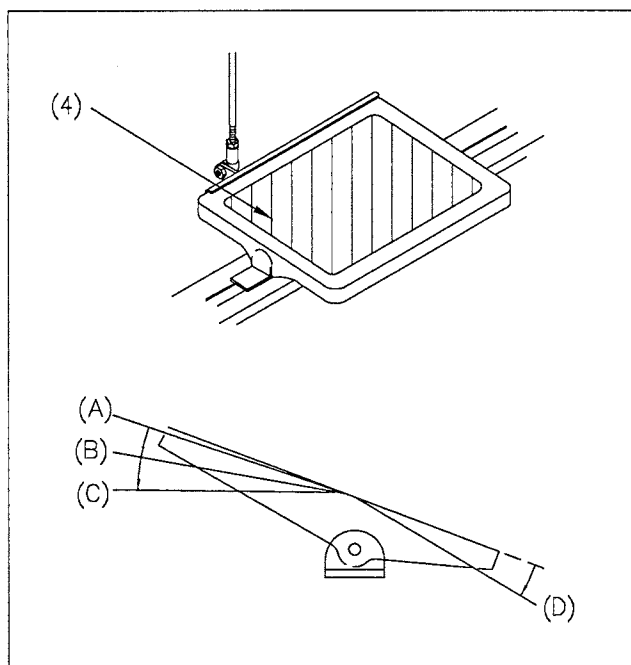
Do not touch any moving parts or press any objects the machine while sewing, as this may result in personal injury or damage to the machine.



〈打開電源〉〈Turning on the power〉

按ON(打開)電源開關(1)

Press the ON power switch (1)



〈操作測試〉〈Tset operation〉

1. 檢查將腳踏板(4)輕壓到位置(B)時縫紉機的低速縫紉狀態。
 2. 更進一步將腳踏板(4)輕壓到(C)時縫紉機的高速縫紉狀態。
 3. 向前壓下腳踏板(4)後，檢查在腳踏板(4)返回到空檔位置(A)時機針是否降至針板下。(當已設置機針向下位置時)
 4. 如果將腳踏板(4)壓到位置(D) (如果備有剪線功能則在剪線後)，隨後機針升至針板上方並停止。
1. Check that the machine sews at low speed when the treadle (4) is gently pressed to position(B).
2. Then check that it sews at high speed when the treadle (4) is gently pressed to position(C)
3. After pressing the treadle (4) forward. check that the needle (4) lowered to the top of the needle plate when the treadle (4) is returned to the neutral position (A). (when needle down stopping has been set)
4. If the treadle (4) is pressed to position (D). (thread trimming is carried out for models with thread trimmer), and the needle rises above the needle plate and stops.

4. 縫紉前的準備。PREPARATION BEFORE SEWING

4-1. 機針的安裝方法。Installing the needle



注意 CAUTION

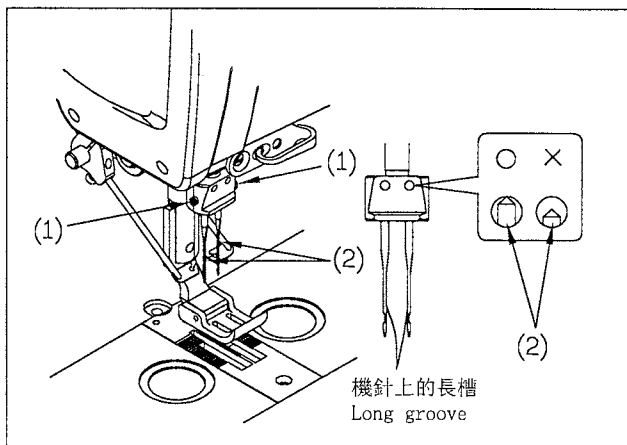


安裝機針前，請切斷電源

當誤按動啟動開關時，縫紉機動作會導致人受傷

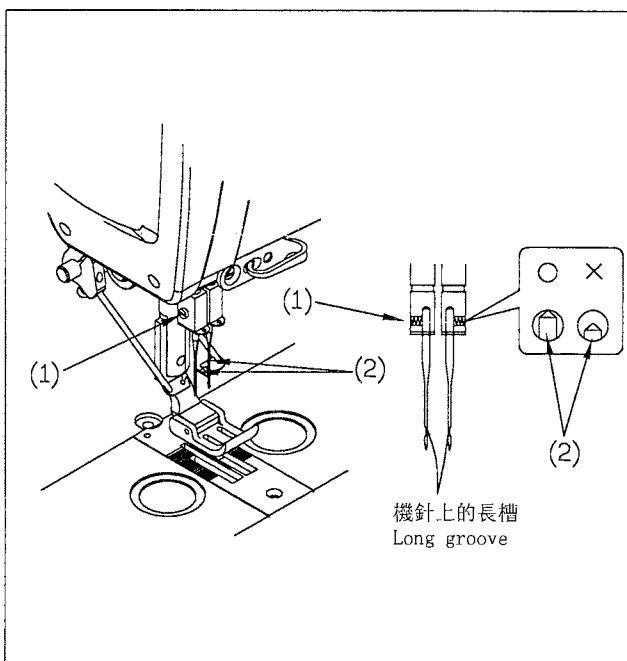
Turn off the power switch before installing the needle

The machine may operate if the treadle is depressed by mistake, which could result in injury.



1. 轉動縫紉機手輪，將針杆移至最高位置
2. 鬆開螺釘(1)
3. 將機針(2)上的長槽朝內側，筆直插到底並擰緊止動螺釘(1)

1. Turn the machine pulley to move bar to its highest position.
2. Loosen the screws (1)
3. Insert the needle (2) straight in as far it will go so that the long groove is facing inward, and then securely tighten the screws (1)



<操作測試> <Test operation>

1. 檢查將腳踏版(4)輕壓到位置(B)時縫紉機的低速縫紉狀態。
 2. 更進一步將腳踏版(4)輕壓到(C)時縫紉機的高速縫紉狀態。
 3. 向前壓下腳踏版(4)後，檢查在腳踏版(4)返回到空槽位置(A)時機針是否降至針板下。(當已設置機針向下位置時)
 4. 如果將腳踏版(4)壓到位置(D) (如果備有剪線功能則在剪線後)，隨後機針升至針板上方並停止。
1. Check that the machine sews at low speed when the treadle (4) is gently pressed to position (B).
 2. Then check that it sews at high speed when the treadle (4) is gently pressed to position (C)
 3. After pressing the treadle (4) forward, check that the needle (4) lowered to the top of the needle plate when the treadle (4) is returned to the neutral position (A). (when needle down stopping has been set)
 4. If the treadle (4) is pressed to position (D). (thread trimming is carried out for models with thread trimmer), and the needle rises above the needle plate and stops.

4-2. 梭芯的裝拆方法 Removing the bobbin



注意 CAUTION

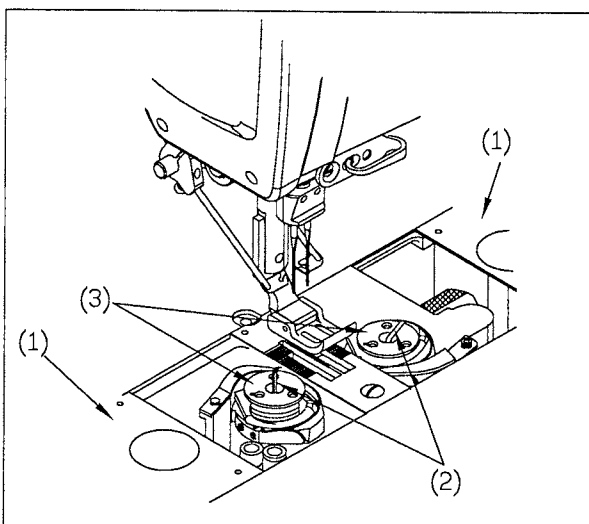


取出梭芯時，請切斷電源

當誤按動啟動開關時，縫紉機動作會導致人員受傷。

Turn off the power switch before removing the bobbin

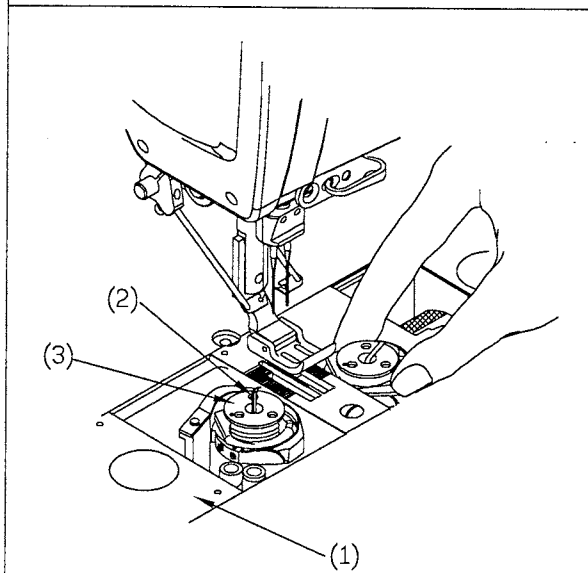
The machine may operate if the treadle is depressed by mistake, which could result in injury.



〈掛鉤式〉〈Latch type〉

1. 將滑板(1)左右分開
2. 將旋梭的握手(2)提起之後，取出梭芯(3)

1. Open the slide plate (1) by moving them to the right and left.
2. Pull the rotary hook latches (2) upward then remove the bobbins (3)



〈梭芯套式〉〈Bobbin case type〉

1. 將滑板(1)左右分開
2. 將旋梭的握手(2)提起之後，取出梭芯套(3)
3. 取出梭芯。

1. Open the slide plate (1) by moving them to the right and left.
2. Lift pull the latch (2) of the rotary hook, and then remove the bobbin case (3)
3. remove the bobbin

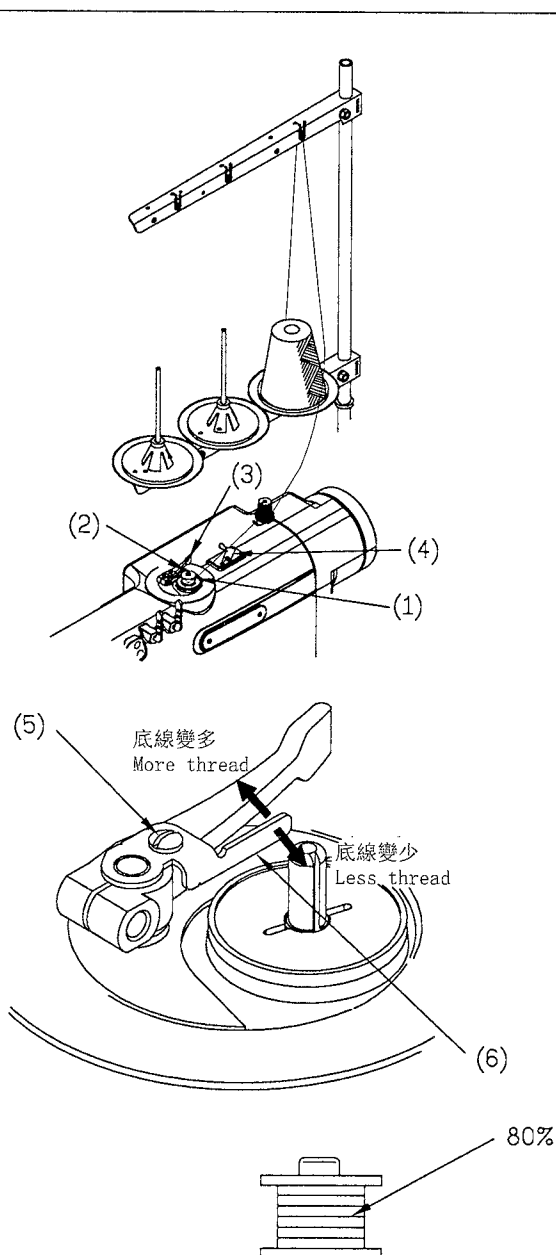
4-3. 底线的绕线方法 Winding the lower thread

! 注意 CAUTION



在卷线过程中，不要触碰任何运动部件或将物件靠在运动部件上，因为这会导致人员受伤或缝纫机损坏。

Do not touch any moving parts or press any objects against the machine while winding the lower, as this may result in personal injury or damage to the machine.



1. 打开电源开关
2. 将梭芯(1)置于梭芯卷线轴(2)上
3. 按箭头所示的方向将线在梭芯(1)上卷绕几次
*请确认各部分的机线应没有鬆動
4. 将梭芯压臂柄(3)推向梭芯(1)
5. 用压脚扳手将压脚抬起
6. 踏下脚踏板，随即开始卷绕底线
7. 地线卷绕一旦完成，梭芯压臂柄(3)将自动返回
8. 底线卷绕之後，将梭芯拆下，用切刀(4)将线剪断

1. Turn on the power switch.
2. Place the bobbin (1) onto the bobbin winder shaft (2)
3. Wind the thread several times around the bobbin (1) in the direction indicated by the arrow
* Check that the thread is not loose anywhere along the thread path
4. Push the bobbin presser arm (3) toward the bobbin (1)
5. Raise the presser foot with the lifting lever
6. Depress the treadle, lower thread winding will then start
7. Once winding of the lower thread is completed, the bobbin presser arm (3) will return automatically.
8. After the thread has been wound on remove the bobbin and cut the thread with the knife (4)

*鬆開螺釘(5)，移動梭芯壓杆(6)調節卷繞在梭芯上的底線量。

注意：

卷繞在梭芯上的底線量最多應為梭芯容量的80%

*Loosen the screw (5) and move the bobbin presser (6) to adjust the amount of thread wound onto the bobbin.

NOTE:

The amount of thread wound onto the bobbin should be a maximum of 80% of the bobbin capacity.

4-4. 梭芯的裝取方法 Installing the bobbin



注意 CAUTION

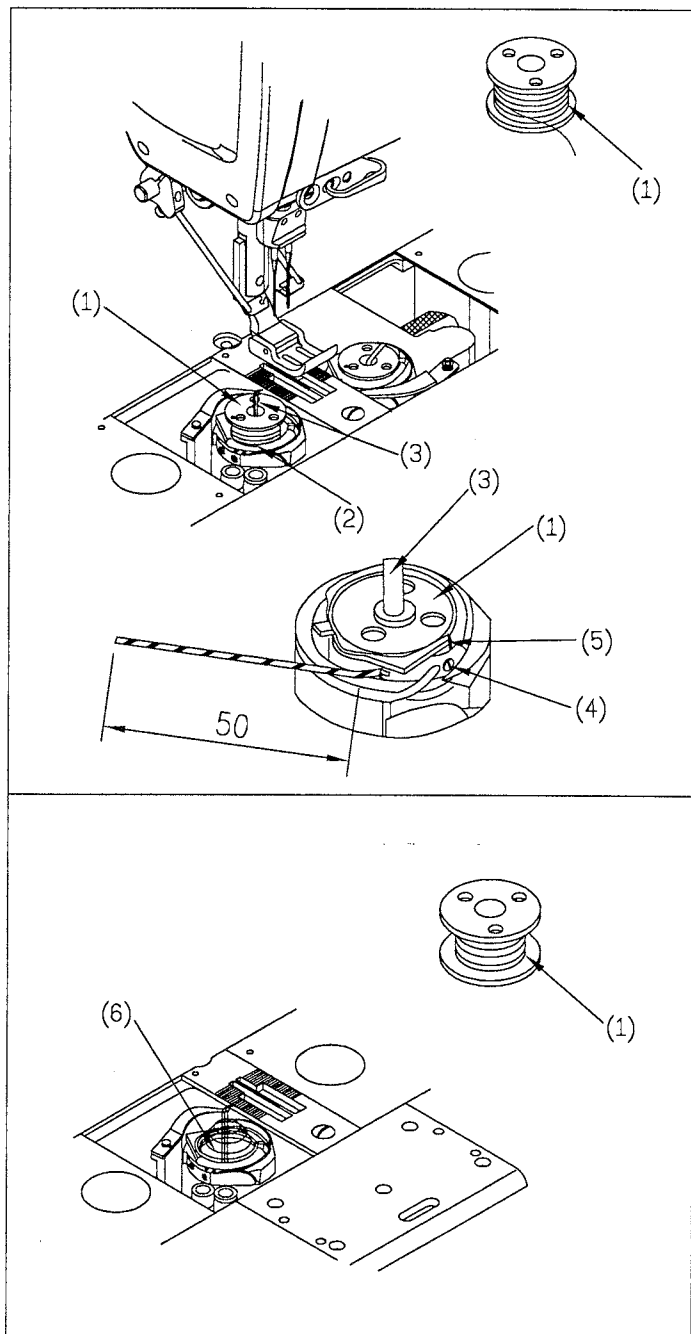


取出梭芯時，請切斷電源

當誤按動啟動開關時，縫紉機動作會導致人員受傷。

Turn off power switch before installing the bobbin

The machine may operate if the treadle is depressed by mistake which could result in injury



〈掛鉤式〉〈Latch type〉

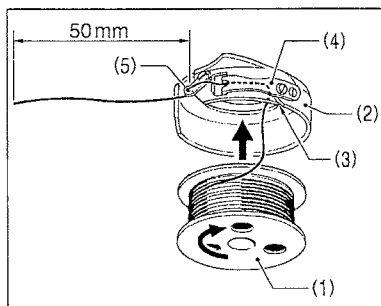
1. 將線的繞向置於如圖所示方向，然後將梭芯(1)放在旋梭(2)內。
2. 將旋梭的掣手(3)倒下。
3. 轉動縫紉機的皮帶輪，使旋梭(2)轉到能見到張力彈簧(4)的位置
4. 將線穿過旋梭的線槽(5)，是它通過張力彈簧(4)的下面
5. 將線拉出約50mm
6. 關閉滑板

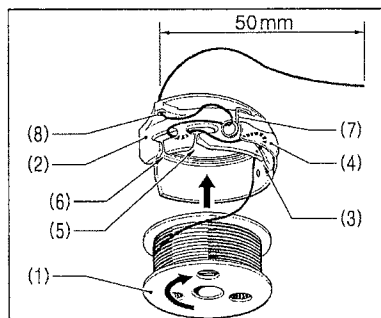
1. Insert the bobbin (1) into the rotary hook (2) so that the winder direction is as shown in the illustration
2. Return the rotary hook latch (3) to its original position
3. Turn the machine pulley to rotate the rotary hook (2) until the tension spring (4) is visible.
4. Pass the thread through slit (5) in the rotary hook and then pass it under the thread tensioning spring
5. Pull out the thread to a length of approximately 50mm
6. Close the slide plates

- * 旋梭中有旋梭空轉防止簧(6)，旋梭空轉防止簧(6)可防止梭芯在剪線等情況下空轉。
- * 使用規格的輕合金製成的梭芯(1)

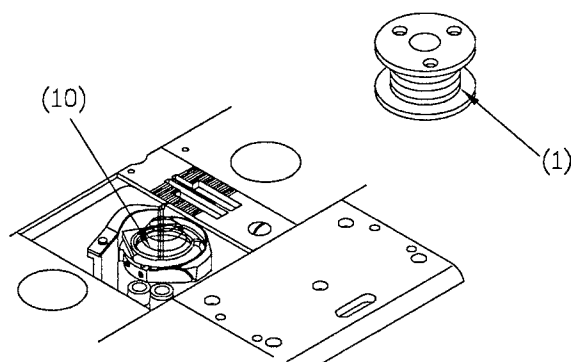
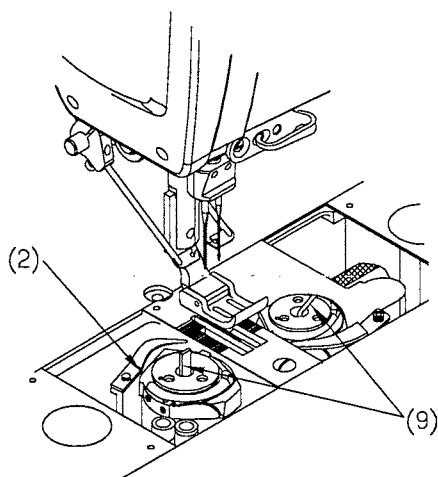
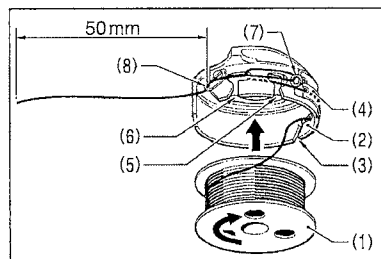
- * There is an anti-spin spring (6) inside the rotary hook, the anti-spin spring (6) prevents the bobbin from racing at times such as during thread trimming.
- * Use bobbins (1) made of light alloy as specified

<A>





<C>



<梭芯套式> <Bobbin case type>

1. 將線的繞向置於如圖所示方向，然後將梭芯(1)放入梭芯套(2)內。

2. 梭芯套(2)有(A)、(B)、(C)三種

請根據所使用的梭芯套(2)的形狀，按下述進行穿線。

(A):

1). 將線穿過線槽(3)，是它通過張力彈簧(4)的下面

2). 將線穿過線孔(5)，並拉出約50mm

(B)、(C):

1). 將線穿過線槽(3)，是它通過張力彈簧(4)的下面

2). 將線穿過線槽(5)、(6)，使它勾在底線張力彈簧(7)

上

3). 將線穿過線孔(8)，將並拉出約50mm

3. 將梭芯套(2)放入旋梭內

4. 將旋梭的捏手(9)倒下

5. 關閉滑板

1. Insert the bobbin (1) into the bobbin case (2) so that the winder direction is as shown in the illustration

2. There are three of cap (2) (A)、(B) and (C):

Thread the thread by one of the following methods in accordance with the shape of the bobbin case (2) being using.

(A):

1). Pass the thread through slot (3) and under the thread tension spring (4)

2). Pass the thread through the thread hole (5) and pull out about 50mm

(B)、(C):

1). Pass the thread through slot (3) and under the thread tension spring (4)

2). Pass the thread slots (5) and (6), and then through the spring (7)

3). Pass the thread through the thread hole (8) and pull out about 50mm

3. Insert the bobbin (2) into the rotary hook

4. Push latch (9) of the rotary hook flat

5. Close the slide plates

* 旋梭中有旋梭空轉防止簧(10)，旋梭空轉防止簧(10)可防止梭芯在剪線等情況下空轉。

* 使用規格的輕合金製成的梭芯(1)

* There is an anti-spin spring (10) inside the rotary hook, the anti-spin spring (10) prevents the bobbin from racing at times such as during thread trimming.

* Use bobbins (1) made of light alloy as specified

4-5. 面線的穿法 Threading the upper thread



注意 CAUTION



在穿線過程中，請切斷電源

當誤按動啟動開關時，縫紉機動作會導致人員受傷。

Turn off power switch before threading the upper thread

The machine may operate if the treadle is depressed by mistake, which could result in injury

- * 在穿引面線之前轉動手輪，抬高挑線杆(1)，這樣會使穿引更加容易，並防止面線在縫紉開始前脫落。
- * 先穿左側的線。

* Turn the machine pulley and raise the thread take-up (1) before the thread, this will make threading easier and it will prevent the thread from coming out at the sewing start

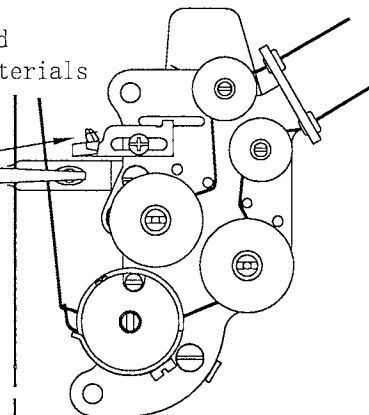
- * Thread the left-side first.

〈中厚料、厚料〉

Light-weight and heavy-weight materials

线不穿过

Do not pass the thread through

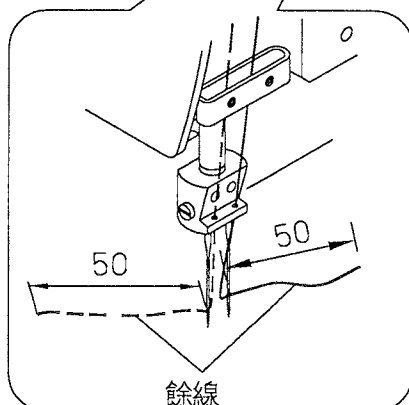
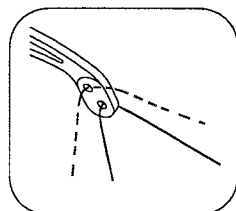
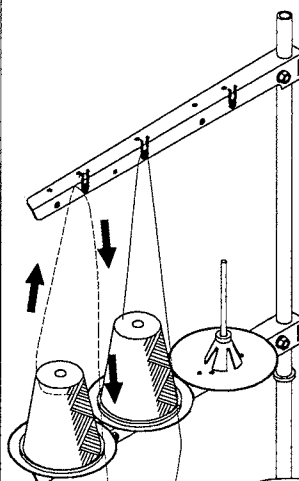
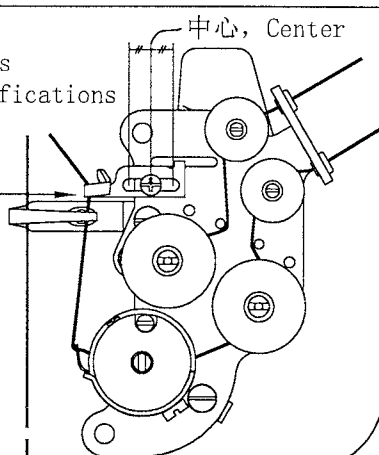


〈薄料、女士内衣〉

Light materials foundation specifications

线穿过

Pass the thread through



如下所述，將張力盤鬆開，線就容易穿過

〈備有剪線功能〉

按下送線板 (2)

〈沒有剪線功能〉

按下松線板 (2)，或者用押腳扳手或膝控將押腳抬起。
If the tension discs are opened as follows, the thread will become easier to thread.

〈Models with thread trimmer〉

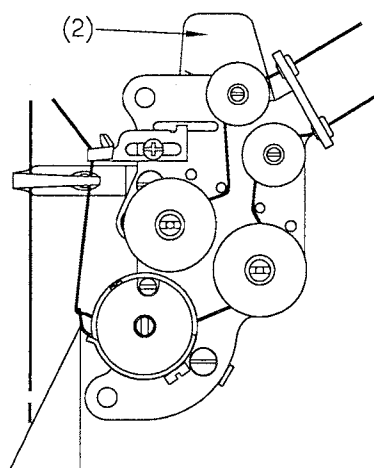
Press the tension release plate (2)

〈Models with thread trimmer〉

Press the tension release plate (2), or operate the lifting lever or the knee lifter the presser foot

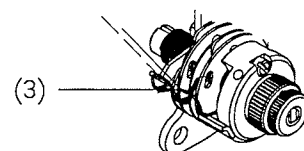
切實使線通過各張力盤之間

The thread can be passed securely in between the tension discs

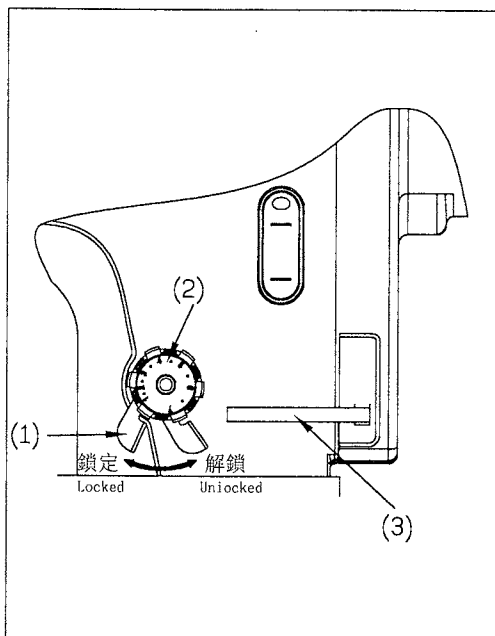


使線穿過鎖爪 (3) 的內側

Pass the thread on the inside of the tab (3)



4-6. 針距的調節方法。 Adjusting the stitch length



1. 向右旋轉鎖住旋鈕扳手(1)直至聽到“喀嚓”聲，以解除鎖定。
2. 順時針或逆時針轉動針距旋鈕(2)，使所需針距處在旋鈕最高的位置。

· 數字越大，針距越大

(旋鈕上的數字用於參考值，實際的針距視縫紉面料的種類和厚度而定，在觀察縫紉好的針距的同時進行調節)

· 按設定值從大到小的方向轉動針距旋鈕(2)同時，如果將倒縫扳手(1)推至中央位置，會使旋鈕轉動更加容易。

3. 將鎖住旋鈕扳手(1)向左轉到底予以鎖定。

* 確認針距旋鈕(2)不能轉動

- 1.Unlock the stitch length dial (2) by turning the dial lock lever (1) to the right until a click is heard

- 2.Turn the stitch length dial (2)clockwise or counter clockwise so that the desired stitch is at the uppermost position on the dial

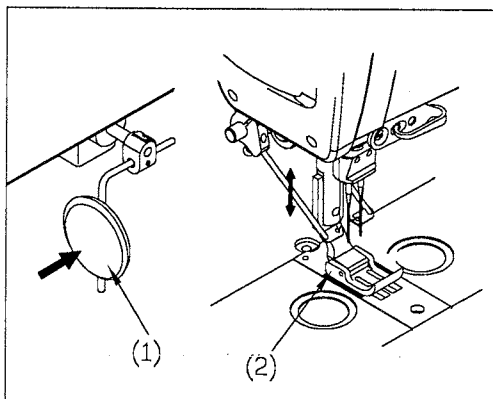
· The larger the number, the longer the stitch length will be (the numbers on the dial are for use as a guide ,the length of the finished stitches vary depending on the type and thickness of material being sewn,adjust while looking at the finished stitches.)

· When turning the stitch length dial (2)from a larger setting to a smaller setting,it will be easier to turn the dial, if the reverselever (3) is pushed to the halfwaydown position

- 3.Turn the dial lock lever (1) firmly to the left to lock the stitch length dial (2)

· Check that the stitch length dial (2) does not rotate.

4-7. 膝控碰塊的使用方法 Using the knee lifter

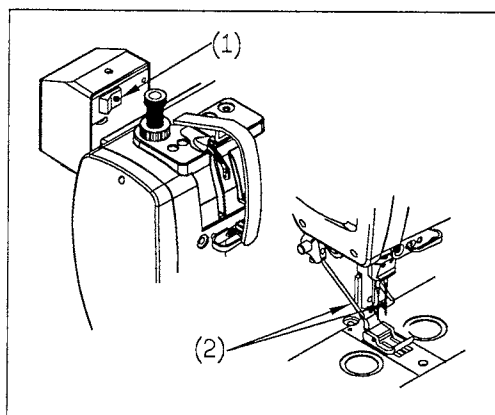


1. 按動膝控碰塊(1). 可抬高押具(2)

- 1.The presser foot (2) can be raised by pressing the knee lifter plate (1)

4-8. 掃線裝置的使用方法 (僅限備有剪線功能)

Using the thread wiper (Models with thread trimmer only)



將掃線器開關(1)按至■側

線被剪斷後，用掃線杆(2)將線向上拉起

Press the thread wiper switch (1) to the ■side

After thread trimming is carried out, the thread wiper (2) will pull up the thread

4-9. 角形縫製方法。Corner sewing method(T-8452, T-8752)

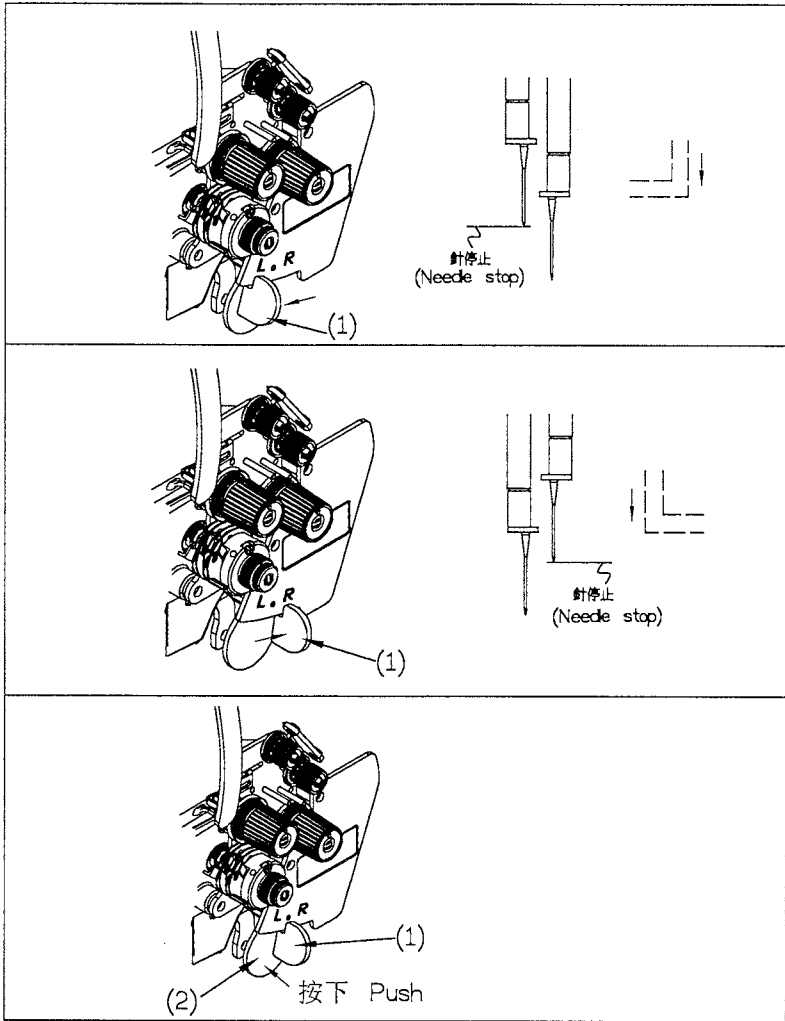
注意:

要想本縫紉機作為單針縫紉機使用時，請把不使用的一側的機針拆掉後再進行縫紉。請不要使用下述的針杆停止方法，否則可能會導致縫紉機損壞。

NOTE:

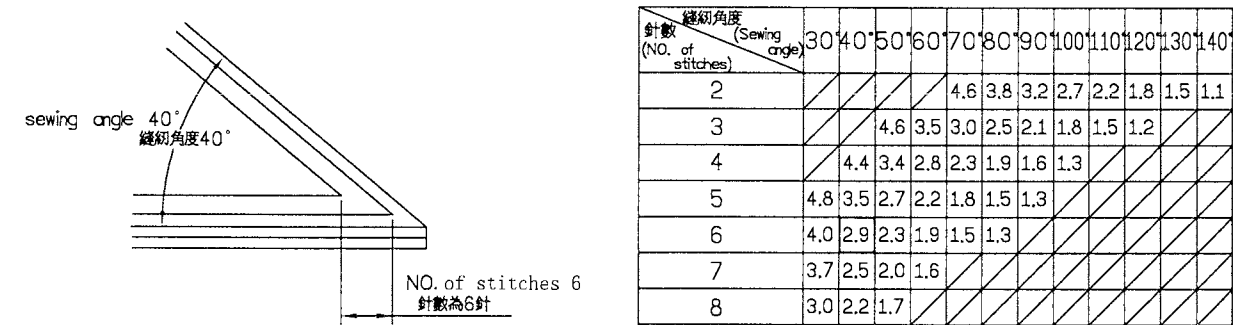
If using this machine in place of single-needle machine,remove the needle which is not being used.in such cases, do not use the procedures given below to stop the unused needle bar from moving.otherwise damage to the machine may result.

4-9-1. 針杆(左、右)的停針方法 To stop the needle bars(right and left)



- 請在機針扎在步上的位置停止後再操作定位杆。
- 當一側的機針停止時，請將縫紉機速度控制在1000rpm以內。
- .Operate the stop lever after the needle has penetrated the mateerial and has stopped moving.
- .Do not sew at speeds of over 1000rpm white one the needle bars been stopped
- <左側定位杆的停止操作>
- 將定位杆(1)置於L位置
- <To stop opertation of the left needle bar>
- Move the stop lever (1) to the “L” position
- <右側定位杆的停止操作>
- 將定位杆(1)置於R位置
- <To stop opertation of the right needle bar>
- Move the stop lever (1) to the “R” position
- <要恢復雙針縫紉時>
- 將壓杆(2)按下
- 定位杆(1)將自動返回到原來的位置
- <To resume twin-needle sewing>
- Press rhe push lever (2)
- The stop lever (1) will then return to its originat position automatically

4-9-2. 針數速查表 Lumber of stitches: quick-reference guide



<針寬1/4的情況>
為了縫製出美麗的角形，請根據上表決定針跡長度。此外，通過決定縫製角度和針跡長度，就可知道一側1根針縫製的針數。
<For 1/4 needle width>
Determine the stitch length from the chart above to make beautiful comer stitching,the number of stitches of the outer needle varies according to the combination of sewing angle and stitch length. EXAMPLE: For a sewing angle of 40° and a stitch length of 2.9mm, the number of stitches becomes 6.

5. 縫紉 SEWING

! 注意



為了安全起見，在使用本縫紉機之前，請安裝保護裝置
如果為安裝這些安全裝置就使用縫紉機，會造成人身傷害及縫紉機的損壞



發生下列情況時，請切斷電源
否則誤按動啟動開關，縫紉機動作會導致受傷

- . 機針穿線時
- . 更換機針或梭芯時
- . 縫紉機不使用，或人離開縫紉機時



縫紉過程中，不要觸碰任何運動部件或將物件靠在運動部件上，因為這會導致人員受傷或縫紉機損壞



縫紉機頭倒下或豎起時，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。

! CAUTION



Attach all safety devices before using the sewing machine, if the machine is used without these devices injury may result



Turn off the power switch at the following times
The machine may operate if the treadle is depressed by mistake, which could result in injury

- . When threading the needle
- . When replacing the bobbin and needle
- . When not using the machine and when leaving the machine unattended

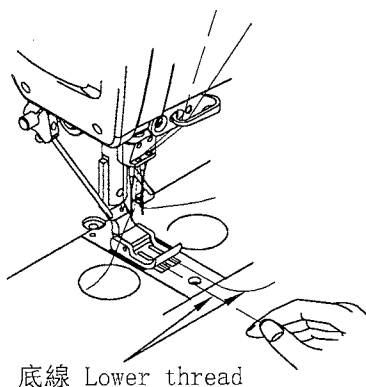


Do not touch any of the moving parts or press any objects against the machine while sewing, as this may result in personal injury or damage to the machine

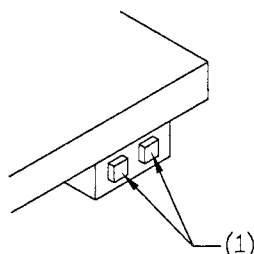


Use both hands to hold the machine head when tilting it back or returning it to its back or returning it to its original. if only one hand is used, the weight of the machine head may cause your hand to slip, and your hand may get caught.

5-1. 縫紉 Sewing

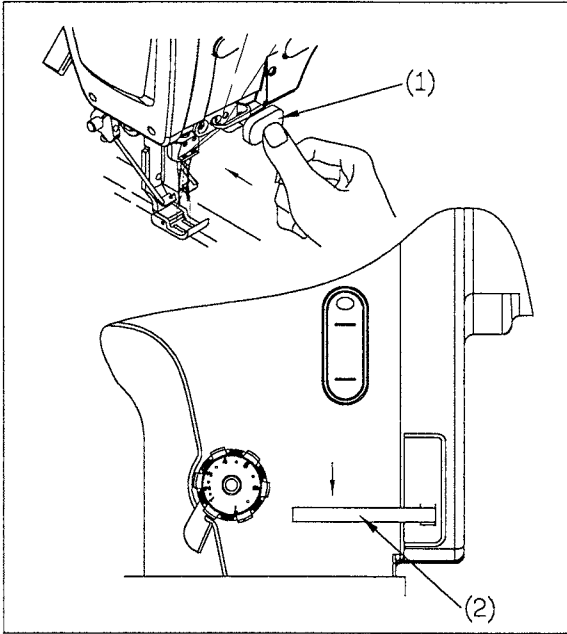


1. 一邊用手指握住面線2根，一邊用手把縫紉機手輪朝自己身邊方向轉動，以將底線拉到送布齒的上面
 2. 將底線朝自己身邊方向拉，確認底線應能平穩的拉出。
1. While hold the two upper threads with your fingers, turn the machine pulley by hand toward you until the lower threads come out onto the feed dog.
2. Pull the lower threads toward you and check that they pull out smoothly.



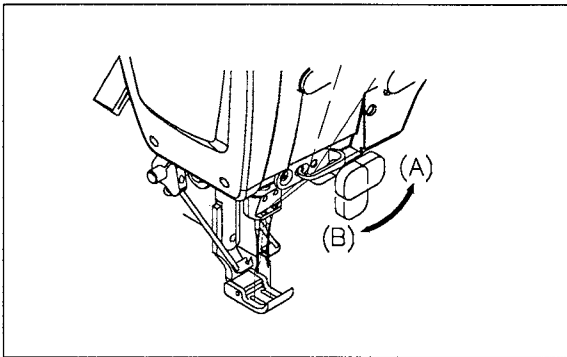
3. 按下ON(打開)電源開關(1)
Press the ON power switch (1)
4. 踏下腳踏板開始縫紉
Depress the treadle to start sewing

5-2. 倒縫加固的方法 Backtacking



按下倒縫裝置按鈕(1)或倒縫扳手(2)時，送料方向將會相反。釋放時，送料方向恢復正常。

When the actuator (1) or the reverse lever (2) is pressed during sewing, the feed direction will be reversed. when it is released, the feed direction will return to normal.



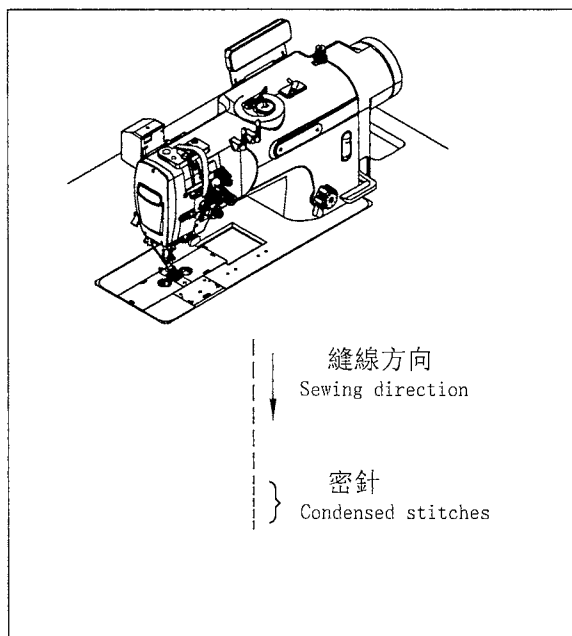
〈倒縫裝置按鈕的旋轉功能〉

倒縫裝置按鈕可以如圖所示旋轉90°，請將A和B設定在容易操作的位置。

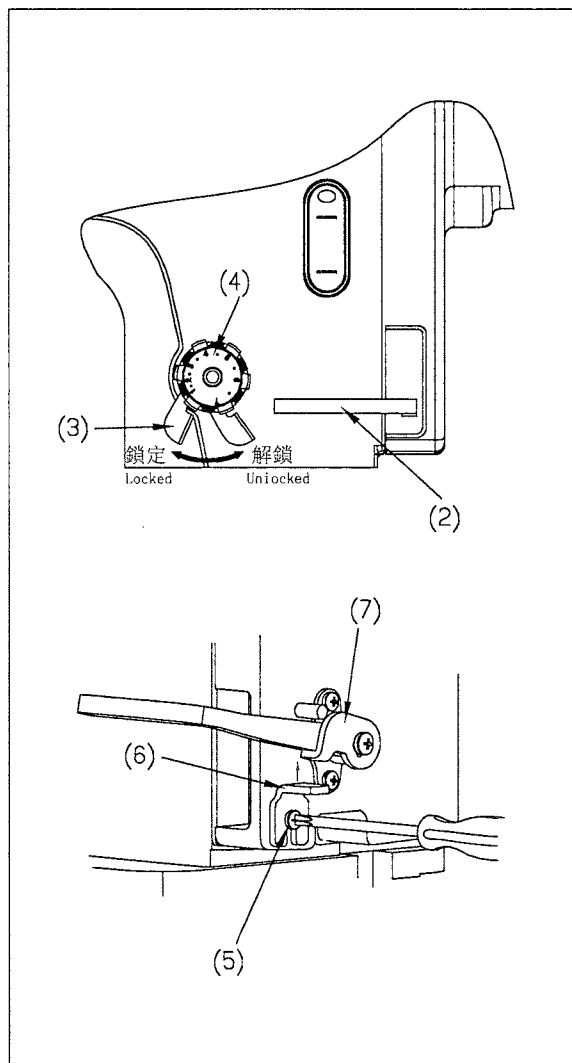
〈Actuator rotation function〉

The actuator can be rotated 90 degrees as shown in the lustration. select the position <A or B> that is easier to use

5-3. 縫紉密針的方法 Sewing condensed stitches



- ． 如果縫紉時按調節器(1)或倒縫扳手(2)，可以用小的針跡長度縫紉針跡(前向)
- ． 在縫紉前，如下所述為密針設定針跡長度
- ． If you press the actuator (1) or the reverse (2) while sewing is in progress, you can sew stitches (forward direction) with small stitch lengths
- ． Before carrying out sewing, set the length for condensed stitches as follows.



<設定>

1. 向右轉動鎖住旋鈕扳手(3)以進行解鎖
2. 把針距旋鈕(4)轉到將用於密針的針跡長度
3. 鬆開固定螺釘(5)，抬起手輪製動器(6)直至碰到倒縫扳手(7)為止
4. 擰緊固定螺釘(5)，並固定手輪製動器(6)

<Setting>

1. Unlock the stitch length dial (4) by turning the dial lock lever (3) to the right
2. Turn the stitch length dial (4) to the stitch length to be used for condensed stitches
3. Loosen the screw (5) and lift up the stopper (6) until it touches the reverse stitching lever plate (7)
4. Tighten the screw (5) to secure the stopper (6)

<縫紉>

1. 把針距旋鈕(4)恢復到正常縫紉的針跡長度
2. 向左旋轉鎖住旋鈕扳手(3)予以鎖定
3. 開始縫紉
4. 在要開始密針縫紉的位置，按調節器(1)或倒縫扳手(2)，(按住調節器(1)或倒縫扳手(2)時進行密針縫紉)
- * 要停止密針縫紉，返回到倒縫功能時，請降下手輪製動器(6)直至碰不到倒縫扳手(7)為止。

<Sewing>

1. Return the stitch length dial (4) to the stitch length for normal sewing
2. Turn the dial lock lever (3) firmly to the left to lock the stitch length dial (4)
3. Start sewing
4. At the position where you would like to start sewing condensed stitches, press the actuator (1) or the reverse lever (2)

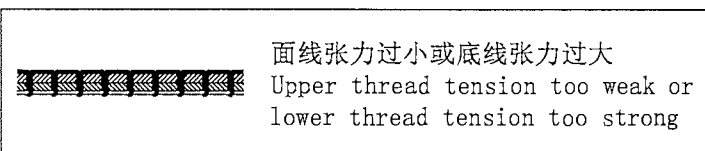
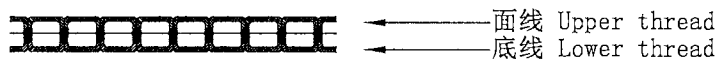
(Condensed stitches are sewn while the actuator (1) or reverse lever (2) is being pressed)

To stop sewing condensed stitches and return to using the backtack function, lower the stopper (6) so that it does not touch the reverse stitching lever plate (7).

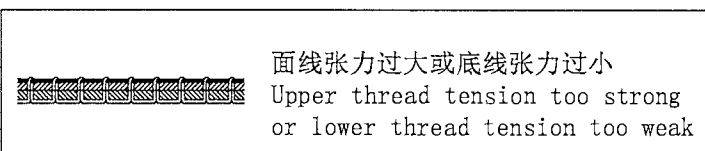
6. 縫紉效果 THREAD TENION

6-1. 调节线张力 Adjusting the thread tension

正确的针迹 Good even stitches

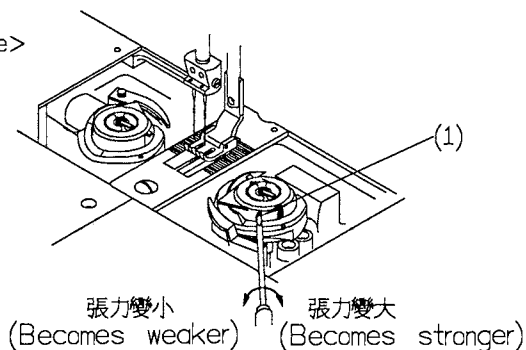


增大面线张力，减少底线张力
Increase the upper thread tension. decrease the lower thread tension

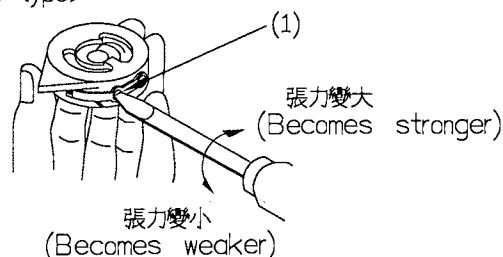


减小面线张力，增大底线张力
Decrease the upper thread tension. increase the lower thread tension

<搭勾式>
<Latch type>



<梭芯套式>
<Bobbin case type>

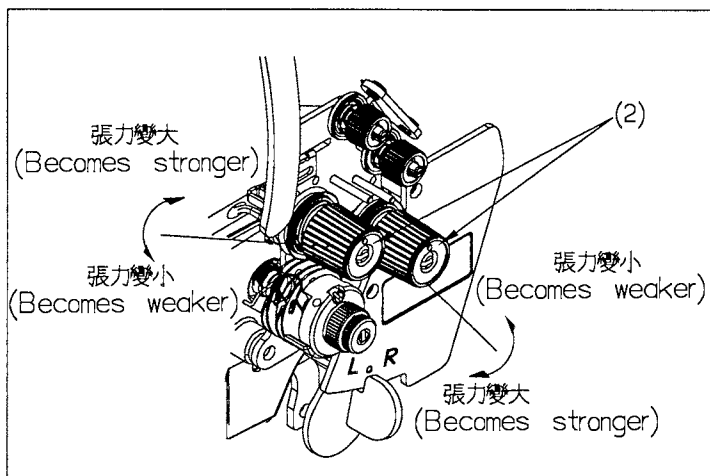


<底线张力> <Lower thread tension>

注意 CAUTION

在进行底线的张力调整前先关闭电源开关，如果误踩下踏板，缝纫机动作会导致人员受伤
Turn off the power switch before adjusting the lower thread tension
The machine may operate if the treadle is depressed by mistake, which could result in injury.

轉動底線張力螺絲(1)進行調節
Turn the adjusting screw (1) to adjust



<面線張力>

在底線張力調節之後，調節面線張力以使針腳均勻平整。

1. 降下押具
2. 轉動夾線螺母(2)進行調節

<Upper thread tension>

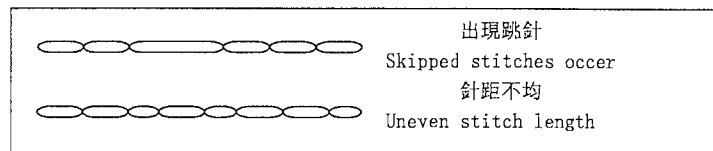
After the thread tension has adjusted, adjust the upper thread tension so that a good, even stitch is obtained

1. Lower the presser foot
2. Adjust by turning the tension nut (2)

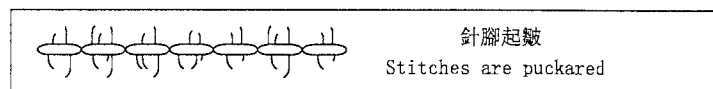
6-2. 调节壓腳壓力 Adjusting the presser foot pressure

正确的针迹 Good even stitches

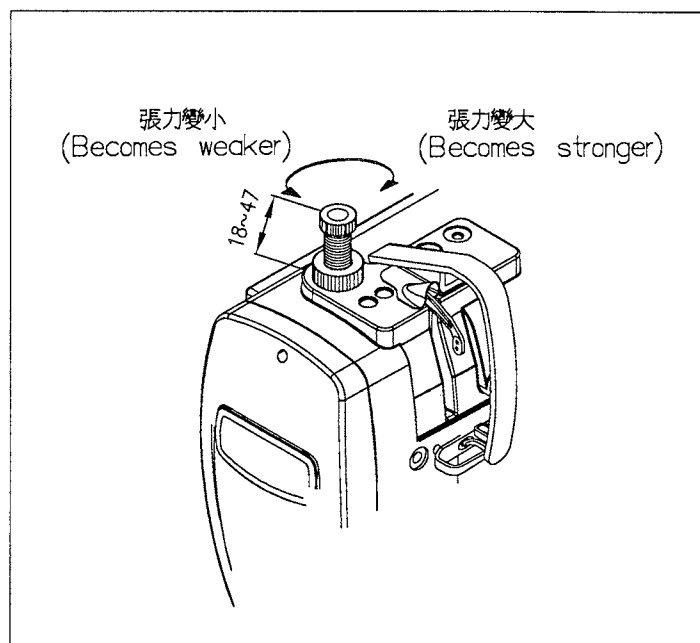
面线 Upper thread



增加壓力 Increase the pressure



減小壓力 Decrease the pressure



盡可能的減少押具壓力，但須有足夠壓力使面料不致滑動。(以下表的“押具調節螺釘高度”為大致標準進行調節)

1. 鬆開調節螺母 (1)
2. 轉動壓力調節螺桿 (2) 以調節押具壓力
3. 擰緊調節螺母 (1)

The presser foot pressure should be as weak as possible, but strong enough so that material does not slip. (Refer to “Adjusting screw height” in the table below as a guide to adjustment)

1. Loosen the adjusting nut (1)
2. Turn the presser adjusting screw (2) to adjust the presser foot pressure
3. Tighten the adjusting nut (1)

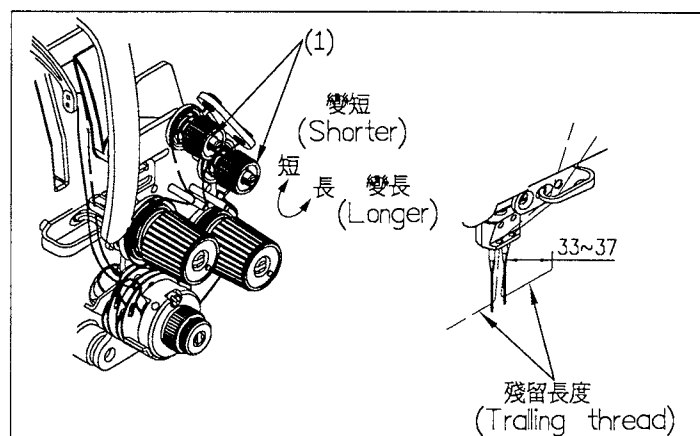
參考值 Reference values

用 途	壓腳調節螺釘高度
女士內衣用	約34mm
適用較薄的和中厚的面料	約34mm
適用與較厚的面料	約29mm

Use	Adjusting screw height
For foundation	Approx:34mm
For light-weight and medium-weight materials	Approx:34mm
For heavy-weight materials	Approx:29mm

6-3. 剪線後面線殘留長度的調節(僅限備有剪線功能)

Adjusting the trailing length after thread trimming (Models with thread trimming only)



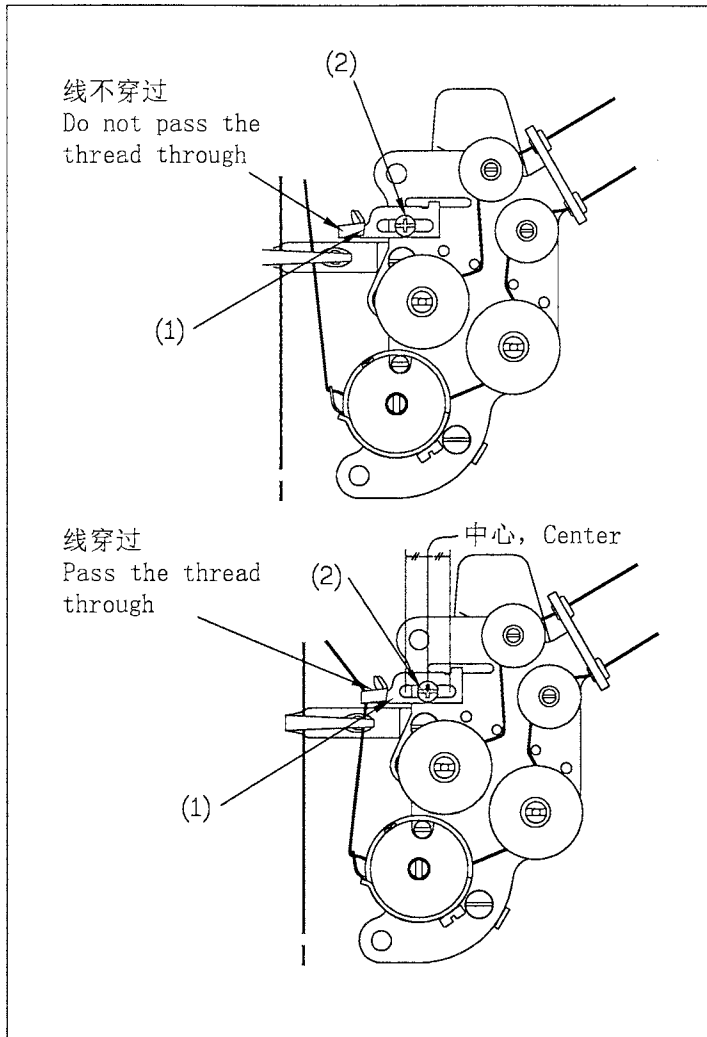
- 剪線時，線張力鬆弛，僅用夾線器 (1) 施加張力
- 面線的標準長度是33-37mm
- 如果增加夾線器 (1) 的張力，切線後面線殘留長度將會減少，減少張力，長度將會增加

轉動夾線器 (1) 進行調節

- At the time of thread trimming, the thread tension is loosened and tension is applied by the pretension (1) only.
- The standard trailing length for the upper thread is 33-37mm
- If the tension of the pretension (1) is increased, the lengths of the threads trailing from the needle tips will be reduced, if the tension is reduced, the lengths will be increased

Adjust by turning the prerension

6-4. 挑線量的調節 Adjusting the thread take-up amount



採用向線量調整器(1)穿過線的方法來調節挑線量

The thread take-up amount is adjusted by how the thread is passed through the thread amount adjuster (1)

<標準線量調整器(1)的使用方法>

<Using the standard thread amount adjuster (1)>

使線不穿過線量調整器(1)，鬆開固定螺釘(2)，將線量調整器(1)移向右側

Do not pass the thread through the thread amount adjuster (1), loosen the screw (2) and slide the thread amount adjuster (1) to the right-side position
使線穿過線量調整器(1)

固定螺釘(2)被置於調整範圍的中間位置時，就是線量調整器(1)的標準位置

For foundation specifications Pass the thread through the thread amount adjuster (1)

The standard position of the thread amount adjuster (1) is when the screw (2) is in center of the adjustment range.

<挑線量的調整>

<Adjusting the thread take-up amount>

使線穿過線量調整器(1)進行調節，越將線量調整器(1)向右移則挑線量越少

When the thread has been passed through the thread amount adjuster (1), the thread take-up amount becomes less when the thread amount adjuster (1) is moved to the right

使線不穿過線量調整器(1)為較好的情況

It is better not to pass the thread through the thread amount adjuster (1):

- 用女士內衣規格的縫紉機縫製厚布料時
- 要加長針跡等而挑線量不夠時
- When sewing heavy materials using a sewing machine with foundation specifications
- When the thread take-up amount is not enough, such as, when the stitch length is increased
- 使線穿過線量調整器(1)為較好的情況
- It is better to pass the thread through the thread amount adjuster (1):
- 使用帝特綸等易滑的機線時
- 縫製薄的布料時
- 以2mm以下的針跡長度進行縫紉時
- 在以上述3種條件進行縫紉的情況下，為了防止發生跳線，毛巾針跡等機線鬆緊不良和斷線時
- When sewing with slippery thread such as synthetic yarns
- When sewing light materials
- When sewing with a stitch length of 2mm or less
- When sewing under any of the above three conditions and you would like to prevent skipped stitches, thread tightening problems such as looping, or thread breakages.

7. 保養 CLEANING



注意 CAUTION



在開始清潔前，請切斷電源
當誤按動啟動開關時，縫紉機動作會導致人員受傷



使用潤滑油和黃油時，務必戴好保護眼睛和保護手套，以防潤滑油落入眼中或粘在皮膚上。這是引起發炎的原因
另外，潤滑油和黃油不能飲用，否則會引起嘔吐或腹瀉
將油放在小孩拿不到的地方



縫紉機頭倒下或豎起時，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
Turn off the power switch before carrying out cleaning
The machine may operate if the thread is depressed by mistake, which could result in injury



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



Furthermore, do not drink the oil or eat the grease under any circumstances, as they can cause vomiting and diarrhea
keep the oil out the reach of children



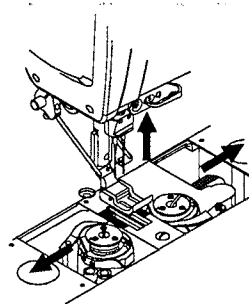
Use both hands to hold the machine head when titing it back or returning it to its original position if only one hand is used, the weight of the machine head may cause to silp. and your hand may get caught.

7-1. 日常清潔程序

為了保持縫紉機的機能，而且能長久的使用，請每天保養。另外，縫紉機如果長時間沒使用，請在進行如下的保養後在使用。

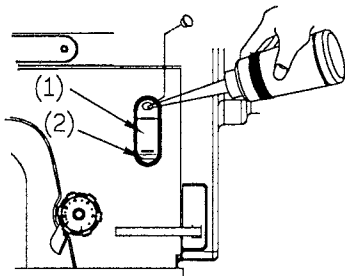
The following cleaning operations should be carried out each day in order to maintain the performance of this machine and to ensure a long service life.

Furthermore if the sewing machine has not been used for a long period of time, carry out the following cleaning procedures before using if again



<保養><Cleaning>

1. 轉動縫紉機的皮帶輪，將機針置於最高位置
 2. 將滑板左右分開
 3. 取出梭芯
 4. 清除旋梭內的線頭
 5. 安裝梭芯和梭芯套
1. Turn the machine pulley to move the needle to the needle up stop position
 2. Open the slide plates at the left and right
 3. Remove the bobbin
 4. Clean the thread scraps from the rotary book
 5. Install the bobbin and the bobbin case



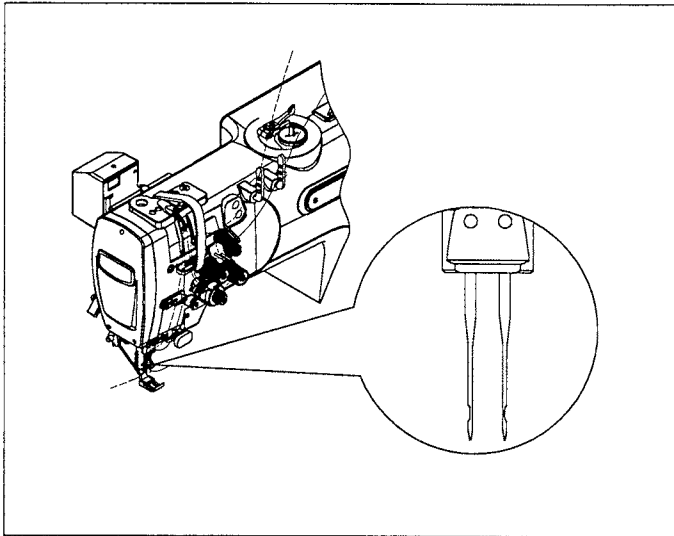
<給油箱添加機油> <Filling the oil tank>

只是用規定的潤滑油

1. 當潤滑油的液位下降到油量計視窗(1)的下基線(2)以下時，應添加潤滑油

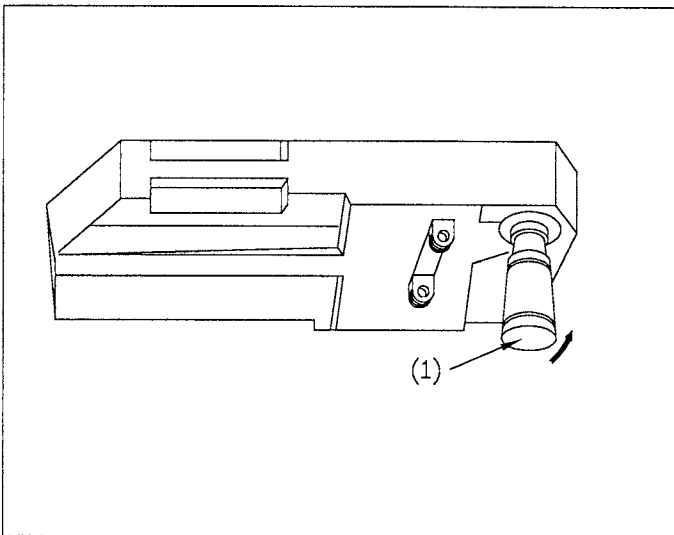
Use only the lubricating oil

1. If the lubricating oil level drops below the bottom reference line (2) of the oil gauge window (1), be sure to add more oil



〈檢查〉〈Checking〉

1. 如果機針彎曲或針尖斷裂，應予以更換
2. 檢查上線是否穿引正確
3. 進行試縫
1. Replace the needle if it is bent or if the tip is broken
2. Check that the upper thread have been threaded correctly
3. Carry out a test sewing

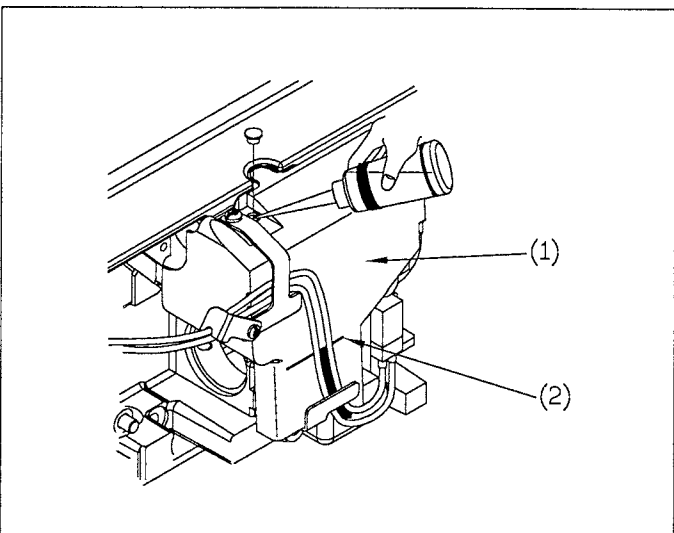


〈廢油〉〈Draining lubricating oil〉

1. 當注油器(1)內積滿了潤滑油時，請擰松注油器(1)，將它拆下，倒掉潤滑油。
2. 將注油器(1)擰入油盤
1. If the oil (1) has filled with oil, unscrew the oller (1) and dispose of the oil inside
2. Screw the oller (1) back into the oil pan.

7-2 給油盤添加機油（每6個月）

Lubricating via the oil cover (every 6 months)



〈微量加油型〉

1. 大致每6個月一次，給油蓋(1)補充潤滑油

〈針杆無油型〉

基本上在補充潤滑油的同時，也應給油蓋(1)補充潤滑油
只使用規定的潤滑油：

1. 將縫紉機頭倒下
2. 給油蓋(1)添加潤滑油，直至液位到達基準線(2)位置
3. 將縫紉機頭部返回原位

〈Minimum lubrication specflcations〉

Pour lubricating oil into the cover (1) about once every six months

〈Semi dry specflcations〉

Pour lubricating oil into cover (1) about as often as grease is applied

Use only the lubricating oil

1. Tilt back the machine head
2. Pour lubricating oil into the oil cover (1) until the oil lever reaches the reference line (2)
3. Return the machine head to its normal position.

8. 旋梭供油量的調整

ADJUSTING THE ROTARY HOOK LUBRICATION AMOUNT



注意 CAUTION

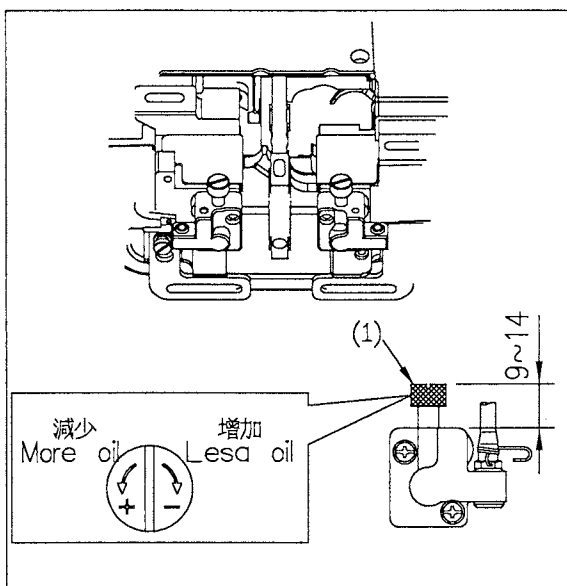


在檢查旋梭供油量時，手指和油量測試紙不能碰到旋梭和送布機構等運動零件，是導致人員受傷的原因。

Be careful not to touch your fingers or the lubrication amount check sheet against moving parts such as the rotary hook or the feed mechanism when checking the amount of oil supplied to the rotary hook, otherwise injury may result.

如更換了旋梭或要變更縫紉速度時，請按照下列步驟調整旋梭的供油量。

Use the following procedure to check the amount of oil being supplied to the rotary hook when replacing the rotary hook or when changing the sewing speed.



〈供油量調整的大致標準〉

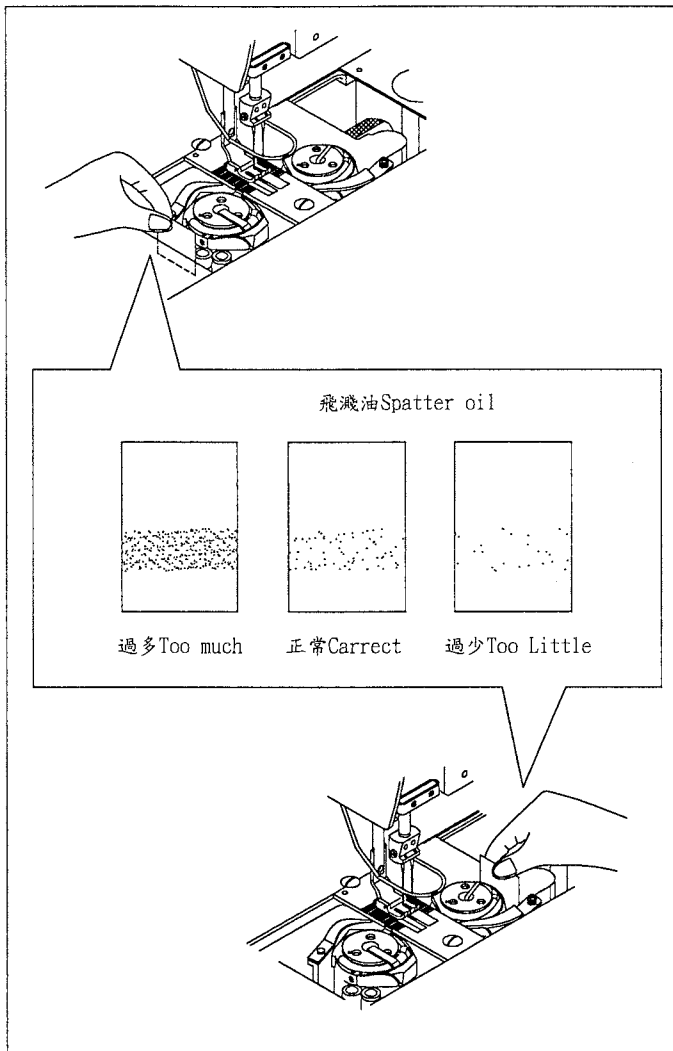
1. 將縫紉機頭部倒下

2. 轉動油量調節螺釘(1)，將其高度調整到9-14mm

〈Order to lubrication adjustment〉

1. Tilt back the machine head

2. Turn the oil adjusting screw (1) to adjust the height to within 9-14mm.



<供油量的確認>

1. 切斷電源開關
2. 拆去挑線杆至機針上的線
3. 取下機針和梭芯
4. 用抬押具扳手抬起押具
5. 接通電源開關
6. 以縫紉機實際縫紉時的轉速進行約1分鐘的空轉，適當的斷續運轉
7. 將油量測試紙(2)插入旋梭的左側並握住，以實際縫紉時的縫紉機轉速使縫紉機運轉8秒。(對油量測試紙(2)的紙質沒有什麼要求)。
8. 確認飛濺到紙上的油量

<Checking the lubrication amount>

1. Turn off the power switch
2. Remove the thread from all points from the thread take-up to the needle
3. Remove the needle and the bobbin
4. Use the lifting lever to lift the presser foot
5. Turn on the power switch
6. Run the machine at the normal sewing speed for approximately 1 minute without sewing any material
7. Place the lubrication amount check sheet (2) to the of the rotary hook (the right side of the rotary hook), and hold it in place while running the sewing machine at the normal sewing speed for approximately 8 seconds. (any type of paper can be used as the lubrication amount check sheet) (2)
8. Check the amount of oil which has spattered onto the sheet

<供油量的調整>

1. 將縫紉機頭部倒下
2. 轉動油量調節螺釘(1)，調整供油量。
 - 向左轉動油量調節螺釘(1)，油量增加
 - 向右轉動油量調節螺釘(1)，油量減少
3. 參照上述[供油量的確認]所述來檢查供油量。
*請反復進行油量調整螺釘的調整及供油量的確認，直到獲得適當的供油量為止
4. 在進行了約2小時的縫紉後，請再次檢查供油量。

<Adjusting the lubrication amount>

1. Tilt back the machine head
2. Turn the adjusting screw (1) to adjust the lubrication amount
 - If the rotary hook adjusting screw (1) is turned counterclockwise, the lubrication amount becomes greater.
 - If the rotary hook adjusting screw (1) is turned clockwise, the lubrication amount becomes smaller.
3. Check the lubrication amount again according to the procedure given in checking the lubrication amount above.
 - Turn the adjusting screw (1) and check the lubrication amount repeatedly until the lubrication amount is correct.
4. Check the lubrication again after the sewing machine has been used for approximately two hours.

9. 常見故障與調整

- 你在要求維修或服務前，先檢查以下各點
- 如果以下方法仍然不能解決問題，關閉電源開關，向受過訓練的技術人員或經銷商諮詢。

⚠ 危險



打開控制箱蓋時，先關閉電源開關並將電源插頭從插座上撥下來，至少等待5分鐘，再打開控制箱蓋，觸摸帶有高電壓的區域將會造成人員受傷。

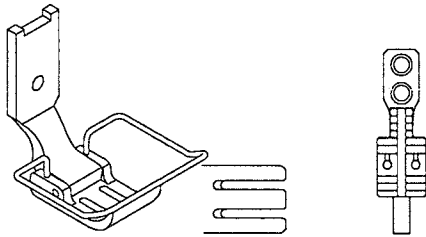
⚠ 注意

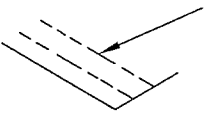
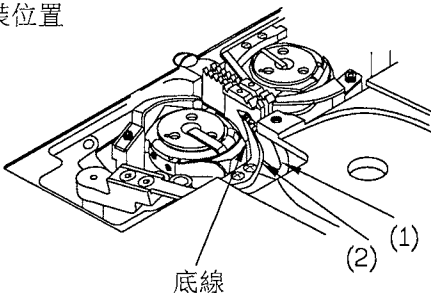
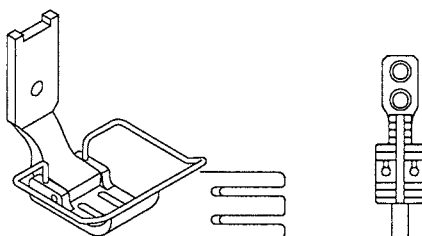


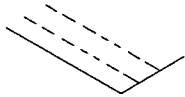
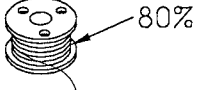
在進行故障查詢之前，請先關閉電源開關並斷開電源線，否則如果誤按動啟動開關，縫紉機會動作，導致人身傷害。

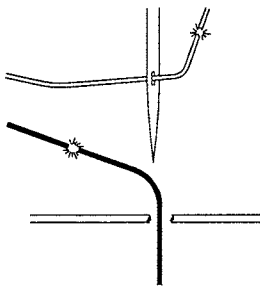
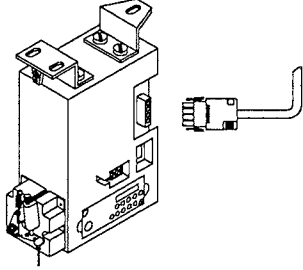
9-1. 縫紉

“頁碼”欄目中帶有“*”記號的只能由合格的技術人員進行檢查。

現象	檢查及調整	參照頁
1 面線不夠緊密  底線不夠緊密 	· 縫紉機針線是否穿引正確？ 如果穿引不正確，應正確穿引機線 · 面線張力或底線張力是否太弱？ 調節面線張力或底線張力 · 取線彈簧的動作範圍是否太大？ 降低取線彈簧止動器的位置。 當使用中厚布料的縫紉機時，根據布料種類等不同可能會出現縫線不夠緊密的情況。 在此情況下，請換上後面有間隙的押具，或者換上帶溝的送布牙齒。 	15-19 25 ●
2 布料下出現環結等不良 	· 線路是否不夠光滑？ 用細粒銼刀或砂紙將線路打磨光滑 · 梭芯是否旋轉流程？ 拉出底線檢查機線張力是否鬆弛，或更換梭芯或梭芯套 · 挑線量是否過多？ 調整挑線量	27

	現 象	檢查及調整	參照頁
3	縫紉時出現跳針 	- 機針是否彎曲？針尖是否鈍化？ 如果機針彎曲或斷裂，應予以更換 - 機針是否安裝正確？ 如果機針安裝不正確，應正確加以安裝 - 縫紉機線是否穿引正確？ 如果穿引不正確，應正確穿引機線 - 押具壓力是否過小？ 調整壓腳壓力 - 機針是否太細？ 更換大一號的機針 - 壓腳是否太高？ 調整壓腳高度 - 挑線簧是否太弱？ 調整挑線簧的張力？ - 挑線量是否過多？ 整挑線量	13 15-19 26 * * 27
4	縫紉開始時出現跳針 縫紉開始時出現脫線 	- 挑線簧張力是否過大？ 減小挑線簧張力 - 挑線簧工作範圍是否過大？ 升高取線彈簧製動器的位置 - 剪線後，面線殘留量是否過短？ 調整張力 - 機針是否剪切齊整？ 將定刀磨快，或視需要更換定刀和動刀 - 機針是否過粗？ 使用比現在機針小一號的機針 - 縫紉開始時，縫紉速度是否過快？ 使用慢起動功能 - 機針上升停止位置是否太高？ 調整機針的上升停止位置 - 剪線後，底線是否被底線夾住彈簧(1)壓住了？ 當底線沒有被底線夾住彈簧(1)壓住時，應調整動刀(2)的安裝位置  底線 (2) (1) 2947M - 在縫製薄的布料、中厚布料時，是否使用了後面有間隙的壓腳或帶溝的送布牙？ 應使用後面無間隙的押具 應使用不帶溝的押具 	* * 26 * * *

	現 象	檢查及調整	參照頁
5	線跡不平整 	- 壓腳壓力是否過小？ 調整壓腳壓力 - 送布牙高度是否太低？ 調整送布牙高度 - 梭芯是否有劃痕？ 如果梭芯受損，用油磨石打磨光滑，或予以更換	26 *
6	大量的皺褶(張力過大) 	- 面線張力是否過大？ 儘量減少面線張力 - 底線張力是否過大？ 儘量減小底線張力 - 挑線簧張力是否過大？ 儘量減小挑線簧張力 - 挑線簧工作範圍是否過大？ 儘量升高取線彈簧製動器的位置 - 壓腳壓力是否過大？ 調整壓腳壓力 - 縫紉速度是否過快？ 使用縫紉速度控制鍵逐漸降低縫紉速度 - 挑線量是否過少？ 調整挑線量	25 25 * * 26 27
7	線縫不合 	壓腳壓力是否過大？ 調整壓腳壓力	26
8	在縫紉開始時底線糾結纏繞，剪線時梭芯空轉 	- 拉出底線時，梭芯旋轉方向是否正確？ 安裝梭芯，使其朝旋梭相反方向旋轉 - 梭芯上卷繞的機線是否過多？ 梭芯卷繞量不應超過80%  - 是否已加裝旋梭空轉防止簧？(僅限備有剪線功能) 加裝旋梭空轉防止簧 - 梭芯轉動是否流暢？ 如果梭芯轉動不流暢，應更換梭芯 - 是否使用了本公司規定的輕合金梭芯以外的其他梭芯？ 使用本公司規定的梭芯	16 15 16-17 16-17

	現 象	檢查及調整	參照頁
9	面線和底線的斷裂 	- 機針是否彎曲或針尖是否斷裂？ 如果機針彎曲或斷裂，應予以更換 - 機針是否安裝正確？ 如果機針安裝不正確，應正確加以安裝 - 縫紉機線是否穿引正確？ 如果穿引不正確，應正確穿引機線 - 是否已給油箱添加機油？ 如果潤滑油的液位下降到油量計視窗的下基線以下，應添加機油 - 面線和底線張力是否過大或過小？ 調整面線或底線張力 - 旋梭部分是否沾有灰塵和線頭？ 進行旋梭的清潔 - 斷線是否因為挑線簧工作範圍太小而鬆動？ 調整取線彈簧製動器的位置 - 旋梭、送布牙或其他部件是否受損？ 如果這些部件受損，用油磨石打磨光滑，或更換受損部件 - 線路是否受損？ 如果線路受損，用砂紙打磨光滑或更換受損部件 - 挑線量是否適當？ 調整挑線量	13 15-19 8-9 25 28-29 * * * 27
10	剪線不正確	動刀端頭是否有傷痕和彎曲？ 更換動刀	*
11	斷針 	- 縫紉過程中是否在送入或拉出面料時用力過度？ - 機針是否彎曲？針尖是否斷裂或針孔是否被堵住？ 更換機針 - 機針是否在送布牙齒的機針孔中心上下運動？ 確認機針的下落情況。如果機針不在送布牙齒的機針孔中心上下運動，應重新安裝送布牙齒 注意 如果斷針不慎掉入縫紉衣物中，會有很大的危險。 請盡可能找出機針的殘骸，直至找齊整枚機針。	13 * *
12	打開電源並踩下腳踏板時，縫紉機不工作	電源插頭是否從控制箱上斷開？ 將插頭插牢 	11

9. TROUBLESHOOTING

.Please check the following before for repairs or service

.Before opening the face plate of the control box, touching areas where high voltages are present can result in severe injury.



DANGER



Wait at least 5 minutes after turning off the power switch and disconnecting the wall outlet before opening the face plate of the control box, touching areas where high voltages are present can result in severe injury



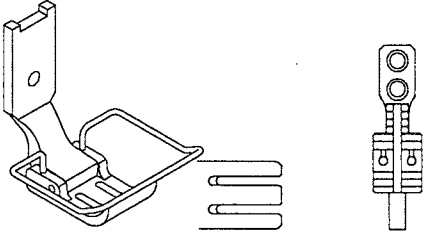
CAUTION

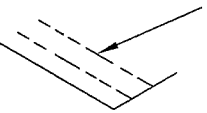
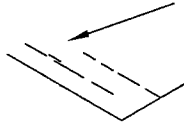
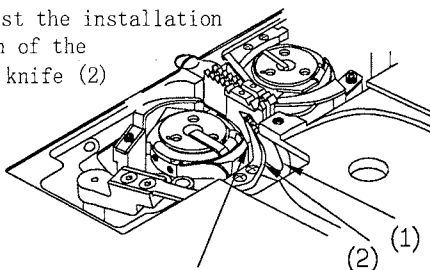
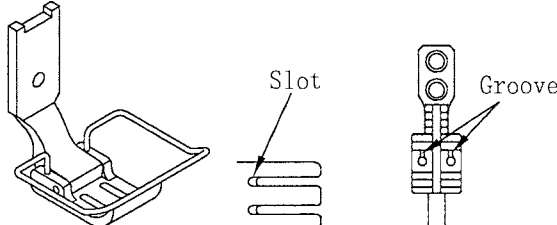


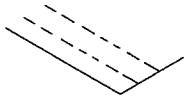
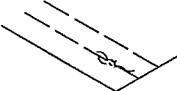
Turn off the power switch and disconnect the power cord before carrying out troubleshooting, the machine may operate if the treadle is depressed by mistake, which could result in injury

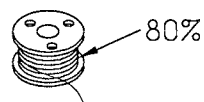
9-1. SEWING

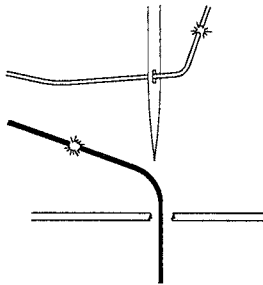
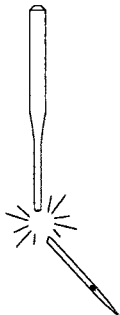
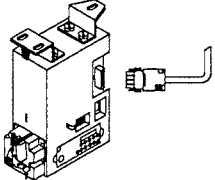
Item with “*” in the “page” column should only be checked by a qualified technician.

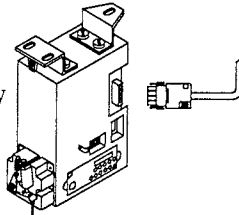
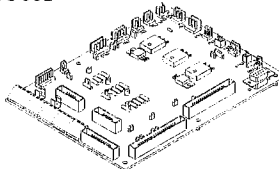
	Problem	Possible cause	Page
1	Upper thread is not tight	. Hes the thread been threaded incorrectly? If the thread is threaded incorrectly, thred it correctly . Is the thread tension or lower thread tension too weak? Adjust the upper thread tension or lower thread tension . Is the thread take-up spring operating range too small? Lower the position of the stopper	15-19
	 Lower thread is not tight 	If using a sewing machine with medlum-weigh material specification, poor thread tightening may occur depending on the type of material being sewn 	25
2	Loops appear in sean 	. Is the thread path not smooth enough? Use a file with a fine grain or sandpaper to polish smooth the thread path . Is the bobbin not turning smoothly? Pull out the lower thread to check that there is no slackness in the thread, or replace the bobbin or bobbin case . Is the thread take-up amount too large? Adjust the thread take-up amount	27

	Problem	Possible cause	Page
3	Skipped stitches occur while sewing 	. Is the needle tip bent? is the needle tip blunt? If the needle tip is bent or broken, replace the needle . Is the machine properly threaded? If it is incorrect, thread the thread correctly . Is the machine properly threaded? If it is incorrect, thread the thread correctly . Is the presser foot pressure? Adjust the presser foot pressure . Is the needle too high? Replace the needle with a needle that is one rank thicker . Is the presser foot too high? Adjust the height of the presser foot . Is the thread take-up spring too weak? Adjust the tension of the thread take-up spring? . Is the thread take-up amount too large? Adjust the thread take-up amount	13 15-19 26 * * 27
4	Skipped stitches at sewing start Thread unravelling at sewing start 	. Is the thread take-up spring tension too strong? Reduce the tension of the thread take-up spring . Is the thread take-up spring operating range too large? Raise the position of the stopper . Are the trailing lengths of the upper threads too short after thread trimming? Adjust the pretension . Are the threads not being trimmed cleanly? Sharpen the fixed knives, or replace the fixed and movable knives if necessary . Is the needle too wide? Try using a needle with a count that is one lower than the current needle . Is the sewing speed too fast at the sewing start? Use the slow start feature . Is the needle up stop position too high? Adjust the needle up stop position . Is the lower thread pressed by the plate spring (1) after thread trimming? If the lower thread is not pressed by the plate spring (1), adjust the installation position of the movable knife (2)  Lower thread (2) (1) 2947M . If sewing light or medium-weight materials, is a presser foot with slots on the underside or grooved feed dog being used? Use a presser foot without slots Use a feed dog without grooves  Slot Grooves	* * 26 * *

	Problem	Possible cause	Page
5	Unaven sean 	. Is the presser foot pressure too weak? Adjust the presser foot pressure . Is the feed dog too low? Adjust the feed dog height . Is the bobbin scratched? If the bobbin is damaged, smooth it with an oiled grindstone or replace it	26 *
6	Large degree of puckering(excess tension) 	. Is the upper thread tension too strong? Make the upper thread tension as weak as possible . Is the lower thread tension too strong? Make the lower thread tension as weak as possible . Are the thread take-up spring tensions too strong? Make the thread take-up spring tension as weak as possible . Is the thread take-up operating range too large? Move the stopper to as high a position as possible . Is the presser foot pressure too strong? Adjust the presser foot pressure . Is the sewing speed too fast? Use the sewing speed control keys to gradually reduce the sewing speed . Is the thread take-up amount too small? Adjust the thread take-up amount	25 25 * * 26 27
7	Material allpage 	. Is the presser foot pressure too strong? Adjust the presser foot pressure	26
8	Lower thread is tangled at the sewing start Spinning of bobbin during thread trimming 	. Is the bobbin spinning direction correct when the lower is being pulled? Set the bobbin so that it turns in the opposite direction to the rotary hook . Is there too much thread wound onto the bobbin? The bobbin winding amount should not be more than 80% . Is the anti-spin spring attached? (Models with thread trimmer) Attach the anti-spin spring . Is the bobbin turning smoothly? If the bobbin is not turning smoothly, replace the bobbin . Is a bobbin other than the light-alloy bobbins specified by our company being used? Use only bobbins which are specified by our company	16 15 16-17 16-17



	Problem	Possible cause	Page
9	Upper and lower thread are breaking 	. Is the needle bent or is the needle tip broken? Replace the needle if it is bent or broken . Is the needle properly installed? If it is incorrect, install the needle correctly . Is the machine properly thread? If it is incorrect, thread the thread correctly . Is the oil tank filled with lubricating oil? If the level of lubricating oil is below the bottom reference line add more oil . Is the upper or lower thread tension too weak or too strong? Adjust the upper thread or lower thread tension . Is the rotary hook blocked with dust or thread scraps? Clean the rotary hook . Is the upper thread may be loose because the thread take-up spring operating range is too small Adjust the position of the stopper . Is the rotary hook, feed dog or other part damaged? If they are damaged, smooth them with an oiled grindstone or replace the damaged parts . Is the thread path damaged? If the thread path is damaged, smooth it with sandpaper or replace the damaged part . Is the thread take-up amount correct? Adjust the thread take-up amount	13 15-19 8-9 25 28-29 * * * 27
10	Incorrect thread trimming	. Is the movable knife damaged or bent? Replace the movable knife	*
11	Broken needle 	. Is the material being pushed or pulled with excessive force during sewing? . Is the needle bent, is it needle tip broken, or is the needle hole blocked? Replace the needle . Does the needle drop into the center of the needle hole in the feed dog? Check the needle drop position, if the needle does not drop into the center of the needle hole in the feed dog, reinstall the feed dog . If the needle bar has rotated, rotate the needle bar to the correct position Caution . It is extremely dangerous to leave any pieces of broken needle sticking in the material, if the needle breaks, search for all pieces until the whole of the needle is found again.	13 * *
12	Machine does not operate when power is turned on and thread is pressed	. Is the power supply connector disconnected from the control box? Insert the connector securely 	11

	Problem	Possible cause	Page
13	Machine does not operate at high speed	. Is the sewing speed setting or backtack speed setting incorrect? Use the sewing speed control keys to set the high speed.	
14	Machine stops during sewing	. Is the fixed stitch key turned on ? Press the fixed stitch key so that the indicator turns off . Is the power supply voltage too low? Check the power supply (If the power cord is too long or too many appliances are being run from a single outlet, this may cause voltage drops which will in turn cause the reset function to activate and stop the machine, even if the power supply itself is normal)	*
15	Nothing appears on the operation panel display	. Is the power supply connector disconnected from the control box? Insert the connector securely 	11
		. Is the operation panel connector inside the control box disconnected? Insert the connector securely 	11



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The specification and/or the equipment described in the instruction book and parts list
are subject to change because of modification with out previous notice
DT8600.APR.2026