



特別事項 WARNING

- 為了避免機器故障及損壞，請先確定以下事項：
- 當您安裝好機器後，做第一次機器操作前，請徹底清潔機器。
 - 清除運送途中累積之灰塵及溢出之油垢。
 - 確定電壓及馬達相數(單相或三相)安裝正確。
 - 確定電源插頭正確地接上電源。
 - 當使用電壓與標示電壓不同時，請勿使用機器。
 - 確定機器轉動方向是否正確。
- Please confirm the followings to avoid malfunction or damage to this machine.
- After installing the machine, and before the first operation, please clean it completely.
 - Clean all dust and overflowed oil during transportation.
 - Confirm that the voltage and the phase (single or 3 phase) of motor are set correctly.
 - Confirm that the power plug is correctly connected to the power supply.
 - Never use the machine when the local voltage type is different from the marked voltage on the nametag attached on the machine.
 - Confirm that the rotating direction of the machine pulley is correct.

警告 WARNING

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

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

警告標籤 WARNING TAG

1. 安全防護裝置(圖2)
2. 表示轉動方向。(圖3)

T. Safety protection device (Fig. 2)
2. Indicates rotating direction. (Fig. 3)

搬運縫紉機 MOVING THE SEWING MACHINE

縫紉機之搬運(圖5)
1. 應按圖示用左手托住前機殼本體，右手撐扶住底座進行搬運。

Moving the sewing machine (Fig. 5)
1. To move the sewing machine, please follow the figure shows. Using left hand to hold the front machine cover body, and right hand to hold the bottom plate to move.

搬運時須穿著安全鞋。
2. 搬運時須穿著安全鞋。

2. Please wear safety shoes while moving.

2. 依本機所附裝機殼圖及零件組合圖所列之配件，依序安裝防震機座墊板(圖10)。

2. Please refer to the attached table cut-out drawing and the parts list to assemble the anti-shock machine aluminum plate (1) in order. (Fig. 10)

本體與車板不得干涉
The machine and the machine bed shall not interfere with each other.

5. 注意馬達之轉向為順時鐘方向，皮帶(1)之鬆緊度以用手指向內壓下約10 mm之緊度為宜。皮帶輪(2)大小與車縫轉速請參照表3及圖13。

5. Please be noted that the turning direction of the motor is clockwise. The best tension of the motor belt (1) is that the belt can be pressed in about 10 mm by a finger. Please refer to Table 3 and Fig. 13 about the size of the pulley (2) and the sewing speed.

3. 裝置導布筒及線架。(圖11)
3. Assemble the waste disposal set and the thread stand. (Fig. 11)

4. 馬達啟動踏板(1)裝於左邊，押具腳踏墊(2)則裝於右邊。(圖12)
4. Assemble the motor starting pedal (1) to the left side, and the presser foot pedal (2) to the right side. (Fig. 12)

Machine (S.P.M.)	Motor pulley Diameter(mm)	60Hz	50Hz
6,000	95	115	
6,500	105	125	
7,000	110	135	
7,500	120	145	

圖3/Table 3

控線調整 ADJUST THREAD TENSION

線張力必須根據縫合布料種類、布料厚薄、線及包邊寬度等之差異而做不同的調整。順時針旋轉力控制螺帽，線張力加大，反之減弱。

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

- 調整鈕之控線關係(圖23)
(1) 第一調整鈕(1)控制雙環針線或左邊時克線
(2) 第二調整鈕(2)控制包邊針線
(3) 第三調整鈕(3)控制上勾針線
(4) 第四調整鈕(4)控制下勾針線
(5) 第五調整鈕(5)控制雙環勾針線

2. 針線控線關係(圖24、圖25)
(1) 在縫合方式504、512、514時，將過線組(1)移至最下處，縫合方式516時，則將過線組(1)、(2)移至最上處。

2. Needle thread control (Fig. 24, Fig. 25)
(1) When the sewing type is 504, 512, or 514, move the threading part (1) to the lowest part. When the sewing type is 516, move the threading part (1) and (2) to the highest point.

縫紉機的安裝位置 THE INSTALLATION POSITION

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)

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. 應將縫紉機直接插入AC電源插座，如果使用延長線，可能會造成操作故障。(圖7)

2. The wire should insert to the AC power socket directly. If using the extension wire, this might cause malfunction. (Fig. 7)

6. 確保使用者的安全，一定要緊上皮帶保護蓋(3)。

6. To ensure the safety of the operators, please tighten the belt protection cover (3) tightly.

照明設備 LIGHTENING EQUIPMENT

貼心使用者設計的照明設備，其採用不發熱、壽命長之發光二極體LED燈具，讓使用者更方便於穿線。(圖14)

A thoughtful lightening equipment is designed for the operators. Non-heating and long life LED lamps are adopted so that the operators can thread easily. (Fig. 14)

新機器啟用規定 HOW TO OPERATE THE NEW MACHINE

- 新機器在最初啟用磨合期的四個星期內，請用低於最高速度20%的速度運轉，之後換上新潤滑油，才可運轉至最高速度。
- 定期之清潔保養，確保延長機器之使用壽命。

1. Please operate this machine in 80% of the maximum speed in the first four weeks for engagement. After four weeks, please do not operate under the maximum speed until replacing the new lubrication oil.
2. Periodically maintain and clean the machine to ensure and extend the usage term of the machine.

潤滑油之注入與更換 LUBRICATION AND DRAINAGE

- 潤滑油之注入(圖15)
(1) 將螺絲(1)旋開，以包裝箱內所附之超高速潤滑油或選用ESSO#32 (或MOBIL#10)等相當之機油加入，使油量指示標位於油標上下之間即可，然後再鎖緊螺絲(1)。
- 潤滑油之更換(圖16)
(1) 將螺絲(1)放鬆後，使油槽內的油完全排出後再鎖緊。
(2) 為延長本機器之壽命，請於開始使用後四星期更換新油，爾後約每四個月更換一次。

1. Fill the lubrication oil (Fig. 9)
(1) Remove the screw (1), and fill it with the attached ultra high speed lubricating oil, or choose ESSO #32 (or MOBIL #10) or equivalent. Tighten the screw (1) after the oil level indicator locates between the two marking lines.
(2) To extend the usage term, this machine has equipped an oil filter. Please disassemble and clean it every month, as well as change it if needed. (Fig. 17)

4. 更換線軸控制螺帽(圖27)
(1) 調整螺絲導致線環不穩定(鬆垮或成形不足)時。
(2) ⊕表示增加針線放線量。
(3) ⊖表示減少針線放線量。

4. Chainstitch thread cam control (Fig. 27)
(1) Adjusting the lower thread causes the thread ring unstable (too loose or didn't form a thread ring).
(2) ⊕ means to have more thread amount while sewing.
(3) ⊖ means to have less thread amount while sewing.

3. 勾針控線關係(圖26)
(1) 若縫合方式為503、504、505及上勾針移至最低時，將(1)及(2)調整至⊕位置。若縫合方式為505時，則移至⊖位置。
(2) 固定線導板(3)、(4)如下：
⊕方向為縫合線較多，反之較少。

3. Looper thread control (Fig. 26)
(1) When the sewing type is 503, 504, 505, and the upper looper is on the lowest point, adjust (1) and (2) at the position of ⊕.
(2) Adjust fixed thread guide plate (3) and (4) as the following:
The direction ⊕ is for more thread in sewing seam, and the ⊖ direction is for less thread in sewing seam.

換針方法 REPLACE THE NEEDLE

- 使用DCX27或同規格之針。(圖28)
- 旋開螺絲(1)並取下針。
- 將新針插至針孔最底端，並使針之長溝面向自己，固定螺絲(1)。

1. Please use the needle DCX27 or the equivalents. (Fig. 28)
2. Loosen the screw (1) and take off the needle.
3. Insert the new needle till reaching the end, as well as the long groove faces your side. Tighten the screw (1).

規格說明 SPECIFICATION

1. 外銷型號分類
747 K - 514 M 2 - 2 4 CT

1. Description
① Thread numbers Four types: 737, 747, 757, 767
② Machine type Description
989 - 4T - 514 M 2 - 2 4 CT

型式 TYPE	504	512	514	516	504+401
圖形 PATTERN					

④ 縫紉布料
F: 輕薄布料
L: 薄布料
M: 中厚布料
H: 厚布料
X: 特厚布料

④ Sewing materials
F: Fine weight material
L: Light weight material
M: Medium weight material
H: Heavy weight material
X: Extra heavy weight material

⑤ 送具型式
⑥ 針寬
⑦ 包邊寬度 (表1)

⑤ Feed dog type
⑥ Needle width (Table 1)
⑦ Seam width (Table 1)

編號 Code	包邊寬度 Seam Width
3	3mm
4	4mm
5	5mm
6	6mm

表1/Table 1

⑧ 配件
⑧ Attachment

(2) 潤滑油之更換(圖16)
(1) 將螺絲(1)放鬆後，使油槽內的油完全排出後再鎖緊。
(2) 為延長本機器之壽命，請於開始使用後四星期更換新油，爾後約每四個月更換一次。

2. Drainage and refill the oil (Fig. 16)
(1) Loosen the screw (1) and drain all the oil inside the oil tank. Then, tighten the screw (1) again.
(2) In order to extend the term of usage, please replace the oil after the first four week, and then replace it every four months.

(3) 針之冷卻油
使用油：矽油(圖18)

3. Needle cooling lubrication oil: SILICON OIL. (Fig. 18)

穿線方法 THREADING

請確實按照圖示穿線，錯誤之穿線將引起斷線、跳針及車縫不平坦...等現象。(圖19-22)

Follow the procedures for threading. Wrong threading may cause thread breaking, stitch skipping, puckering or unexpected sewing. (Fig. 19-22)

鑲蓋調整 RBPU/C/E/B/S/E/B/E/LL/LENGTH

通常依縫合布料，差數比等之不同而調整。持續壓下按鈕(1)並轉動壓帶輪使針卡住，再轉動壓帶輪至所需之針距後按開此按鈕。(圖29、表4)

The stitch length is adjusted according to the fabrics, the differential ratio, or other factors. Keep pressing the button (1) and turn the pulley till the button is locked. Then, release the button after reaching the desired stitch length. (Fig. 29, Table 4)

axi Diff ratio	Machine type	1	2	3	4	5	6	7
M	1:2	0.6	1.13	1.66	2.19	2.72	3.25	3.8
	1:3	0.6	1.03	1.46	1.89	2.32	2.71	3.2
	1:1.3	0.8	1.5	2.2	2.9	3.6	4.3	5
	1:4	0.6	1.02	1.44	1.66	2.28	2.7	-

表4/Table 4

規格說明 SPECIFICATION

機型 Model 700K/988

最高轉速 Max Stitch Speed 7500rpm

噪音值 Noise Level 82分貝以下

縫距 Stitch Length 4/5/6 mm

針桿行程 Stroke of the needle bar 24.3±0.2 mm

押具揚程 Presser Foot Lift 5.5 mm

押具壓力 Presser Foot Pressure 5kg

送具高度(高出針板面) Feed Dog Height (over the needle plate) 0.7-0.9 mm

送具齒寬度 Teeth Width of the Feed Dog 1.6 mm

縫目調整裝置 Stitch Adjusting Device 按鈕調整 Button Adjustment

押具裝置 Presser Foot Device 彈簧式、旋鈕調整型 Spring type, Knob Adjustment Type

加油方式 Oil Filling 儲油槽儲存方式、毛氈、棉線毛細管自動供油 Oil tank storage type. Automatic oil supply by felt, cotton thread capillary action.

回油方式 Oil Return Solution 偏心泵 Eccentric Pump

使用油 Oil for Use 提供專用油(MOBIL#10) Provide Specific Oil (MOBIL #10)

表2/Table 2

3. 針之冷卻油
使用油：矽油(圖18)

3. Needle cooling lubrication oil: SILICON OIL. (Fig. 18)

穿線方法 THREADING

請確實按照圖示穿線，錯誤之穿線將引起斷線、跳針及車縫不平坦...等現象。(圖19-22)

Follow the procedures for threading. Wrong threading may cause thread breaking, stitch skipping, puckering or unexpected sewing. (Fig. 19-22)

差數比調整 ADJUST THE DIFFERENTIAL FEED RATIO

若主送具之運動行程大於差數送具運動行程時，布料車縫時會伸張，反之則會收縮。

If the stroke of the main feed dog is larger than the stroke of the differential feed dog, the fabric will be extended while sewing. Otherwise, it will be shrunk.

- 調整方法一：
放鬆調整鈕(1)，當調整鈕(2)向下調整時使布料收縮，反之則伸張，調整後再鎖調整鈕(1)。(圖30、表5)

2. 調整方法二：
(1) 鬆開螺絲(4)，並從機台後方移開外蓋(5)。
(2) 鬆開螺絲(6)，上下移動連桿(7)。

2. Adjust solution 2:
(1) Loosen the screw (4) and remove the cover (5) from the rear side of the machine bed.
(2) Loosen the nut (6), and move the connecting rod (7) upward and downward.

Scale	1	2	3	4	5
Differential feed ratio	1:1.3	-	1:0.7	1:0.9	1:1.1
	1:2	1:0.7	1:1	1:1.14	1:1.17
	1:3	1:1	1:1.5	1:2	1:2.5
	1:4	1:1.1	1:1.6	1:2.3	1:3

表5/Table 5

安裝 INSTALLATION

注意 CAUTION

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

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

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

在安裝完成前，請不要連接電源。如果誤接啟動開關，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.

縫紉機頭倒下暨起時，請用雙手進行操作。單手操作時因縫紉機的重量單一滑落導致受傷。
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. 縫紉機拆箱搬運過程中，不可扶持布蓋板(1)下方。(圖9)
1. While moving the sewing machine after opening the box, please do not hold the below side of the cloth cover (1). (Fig. 9)

只有三線-737/988-3T For Three Thread Only 737

四線-747/988-4T For Four Thread Only 747

伸張 Stretch
收縮 Shrink

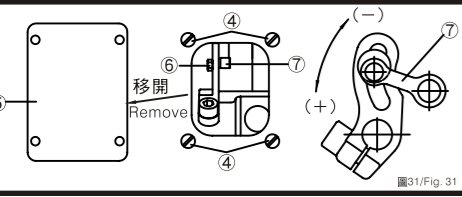
2. 調整方法二：
(1) 鬆開螺絲(4)，並從機台後方移開外蓋(5)。
(2) 鬆開螺絲(6)，上下移動連桿(7)。

2. Adjust solution 2:
(1) Loosen the screw (4) and remove the cover (5) from the rear side of the machine bed.
(2) Loosen the nut (6), and move the connecting rod (7) upward and downward.

欲增加差動比，把連桿往(+)方向移動。
To increase the differential feed ratio, move the connecting rod (+) direction.

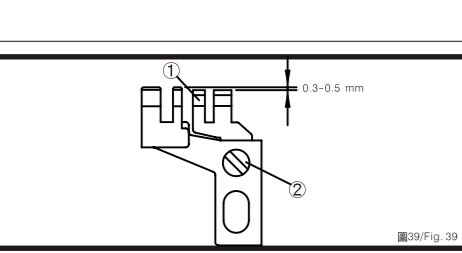
欲減少差動比，把連桿往(-)方向移動。
To decrease it, move the connecting rod (-) direction.

(3) 在調整過後，把外蓋5放回機台後方並鎖緊螺絲4。(圖31)
(3) After adjusting, put the cover 5 back to the rear of the machine bed and tighten the screw 4. (Fig. 31)



更換切刀 REPLACE THE TRIMMERS

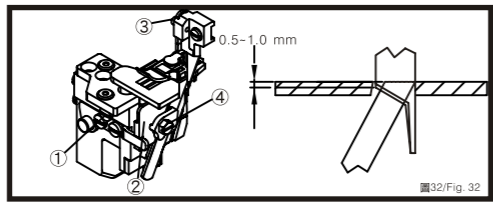
- 更換上切刀(圖32)
(1) 放鬆螺絲1將下刀座2向左邊推，鬆緊螺絲1。
(2) 取下螺絲3，換上新刀片後，輕輕鎖上螺絲3。
(3) 轉動皮帶輪使上刀移至下死點，調整上刀高低使上刀與下刀相交約0.5-1.0 mm，鎖緊螺絲3。
- 更換下切刀(圖32)
(1) 放鬆螺絲1將下刀座2向左邊推，鬆緊螺絲1。
(2) 放鬆螺絲4，取下舊刀片換上新刀。
(3) 調整下刀之刀口與針板面平齊後，鎖緊螺絲4。
(4) 放鬆螺絲1，使下刀座還原位置，並試驗上下刀能確實剪斷車縫線，鎖緊螺絲1。



針與勾針之關係 THE RELATIONSHIP BETWEEN NEEDLE AND LOOPER

- 針與上勾針之關係(圖40)
當上勾針移至最左時，勾針尖與針中心距離4.4-4.7 mm，雙針時其左針中心與勾針尖距離約5.4-5.7 mm。
- 針與下勾針之關係
(1) 當下勾針移至最左時，勾針尖與針中心距離約3.7-3.9 mm (雙針時以左針為主)。(圖41)
- 針與下勾針之關係
(1) 當下勾針由左向右至針中心時(雙針時以左針為主)，針與前撞針片之間隙為0.1-0.2 mm。

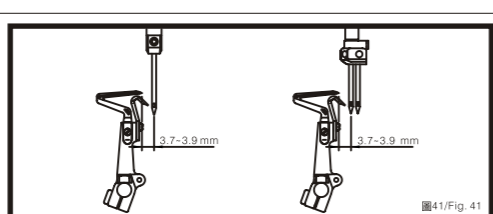
No.	現象 Problem	檢查及調整 Exam and Adjustment
2.	針線的跳線現象 The Skipping Stitch of Needle Thread	●針線的張力太緊? The tension of the needle thread is too tight? ①把針線張力的速度調整。 ②鬆弛針線的張力。 (1)Loosen the tension of the needle thread properly. (2)Adjust the tension of the needle thread to the proper position, so that the release amount of the needle thread from thread hooking will decrease. (3)Lean the line (C) a little to increase the release amount of the looper thread.
3.	右勾針線的跳線 The Skipping Stitch of the Right Looper Thread	●右勾針與左針的間隙太大? The space between the right looper and needle is too wide? ●右勾針向右退後時，和車針的間隙必須1mm，乃使用正規的右勾針。(備有單針、雙針、厚料、薄料用各種適合的右勾針) When the right looper turn right and backward, the distance to the needle has to be 0.1 mm, which is using the correct right looper. (The appropriate right looper for each type, such as single need, 2 needles, materials, and thin fabrics, are included) ●雙針時，右勾針與左針的間隙大? The distance is too wide between the right and left needle when using 2 needles? ●由於右勾針安裝時的左右位置以及右勾針上下運動量之雙方關係，予以調整在勾針的運動軌跡。在右勾針下降時，將左針到右針的下落量予以減少。Because the correlations of the left/right position of the right looper while assembling and the up/down moving position of the right looper seat, adjust the movement path of the looper. When the right looper descends, decrease the descending amount from left needle to right needle.
4.	左勾針線的跳線 The Skipping Stitch of Left Looper	●左右勾針交叉時，右勾針不會碰到左勾針? The right looper didn't hook the left looper thread while they are crossing each other? ●換新左勾針。(左勾針尖端磨損，要修正時，不得把頭部凸出處予以磨取(磨薄)) Change the new left looper. (The top of the left looper is worn. When fix and replace, the protrusion to the looper top shall not be worn.



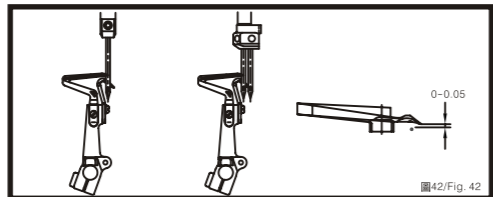
- 更換下切刀(圖32)
(1) 放鬆螺絲1將下刀座2向左邊推，鬆緊螺絲1。
(2) 放鬆螺絲4，取下舊刀片換上新刀。
(3) 調整下刀之刀口與針板面平齊後，鎖緊螺絲4。
(4) 放鬆螺絲1，使下刀座還原位置，並試驗上下刀能確實剪斷車縫線，鎖緊螺絲1。
- 更換上切刀(圖32)
(1) 放鬆螺絲1，並移動上切刀 holder 2 到左。然後，鎖緊螺絲1。
(2) 取下螺絲3，並放上新的上切刀。然後，鎖緊螺絲3。
(3) 轉動皮帶輪使上刀移至下死點，調整上刀高低使上刀與下刀相交約0.5-1.0 mm，鎖緊螺絲3。
- 調整上刀高低使上刀與下刀相交約0.5-1.0 mm，鎖緊螺絲3。
(4) 放鬆螺絲1，並移動上切刀 holder 2 到左。然後，鎖緊螺絲1。
(5) 調整下刀之刀口與針板面平齊後，鎖緊螺絲4。
(6) 放鬆螺絲1，使下刀座還原位置，並試驗上下刀能確實剪斷車縫線，鎖緊螺絲1。

包邊寬度調整 ADJUST THE HEM WIDTH

- 轉動皮帶輪，將上刀移至下死點。(圖33)
(1) Turn the pulley to move the upper trimmer to the lower dead point. (Fig. 33)
- 放鬆螺絲1，向左移動下刀座2後，暫時鬆螺絲1。
(2) Loosen the screw 1 and move the lower trimmer holder 2 to the left, and then tighten the screw 1 a little.
- 放鬆螺絲3，移動上刀座向左或向右，直到達到所要的包邊寬度後再鎖緊螺絲3。
(3) Loosen the screw 3, and move the upper trimmer holder 2 left or right till reaching the desired width. Then, tighten the screw 3.
- 放鬆螺絲1，使下刀座位置還原，並測試能切斷車縫線後，鎖緊螺絲1。
(4) Loosen the screw 1 and return the lower trimmer to its original position. Test if the upper and the lower trimmer can cut the thread exactly, and then tighten the screw 1.

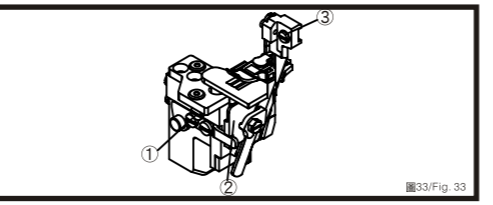


- 針與下勾針之關係(圖42)
當上下勾針相交時，兩勾針量接近，但不可摩擦碰撞。其間隙A點為0.5 mm，B點為0.2 mm。
- 針與下勾針之關係(圖43)
當上下勾針由左向右至針中心時(雙針時以左針為主)，針與前撞針片之間隙為0.1-0.2 mm。

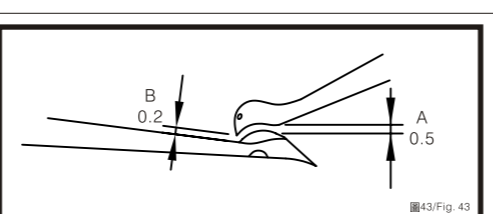
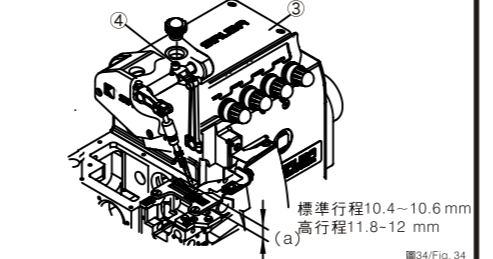


- 針與環縫針片之關係(圖44)
當環縫針片移至最左時，勾針尖端與針中心距離為1.4-1.6 mm。
- 針與環縫針片之關係(圖45)
當針在下死點時，針與前撞針片之間隙為0.1-0.2 mm。

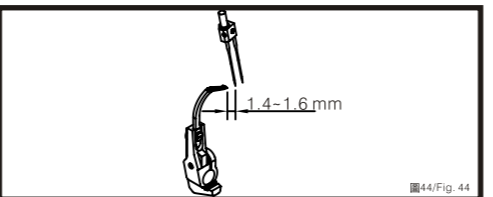
No.	現象 Problem	檢查及調整 Exam and Adjustment
4.	左勾針線的跳線 The Skipping Stitch of Left Looper	●右勾針尖端磨損? The wear of the right looper top? ●換新右勾針或用油石把尖端磨尖。 Change a new looper or use the oil stone to wear the top.
5.	斷針 Needle Broken	●車針的選擇不對? Choose the wrong needle? ●在布料不發生針孔的範圍內，使用稍粗一點的車針。Use thick needle within the range that there will be no pinhole occurred on the fabric. ●車針的安裝不對? Bad assembling of the presser foot? ●安裝時必須使用車針會插進彈簧落針處中央。 During assembly, make sure the needle can insert to the central point of the presser foot. ●線架的安裝高低不對? Wrong assembling height of the feeding teeth? ●調整送布齒的高度為 0.8mm-1mm，同時保持適當的彈簧壓力。 Adjust the height of the feeding teeth to be around 0.8 mm to 1 mm. Meanwhile, keep the appropriate presser foot pressure. ●線線不對? Bad threading? ●線線有結頭要事先加以處理後，重新穿線。 If there is any connecting part of the thread, it needs to be dealt first. Then, rethreading.
6.	車針尖端受損 The Top of the Needle Damaged	●右勾針及車針高低不對? The right looper and the needle have wrong height position? ●車針在上死點附近時，用手指故意把車針向前彎曲，看看尖端會不會碰到右勾針，然後調整車針高低或右勾針的運動位置。 When the needle moves close to the upper dead point, push the needle forwards a little by finger. See whether the top of the needle touches the right looper or not. Then adjust the height of the needle position or the moving position of the right looper.



- 針高度之調整
(1) 放鬆螺絲1，左右移動，使3與2吻合，且2能上下活動輕順，鎖緊螺絲5。
(2) 調整適當壓力，螺絲1順時方向旋轉時，壓力加大，反之減弱。
(3) 放回上蓋3，並且密合鎖緊。
- 調整：
(1) 打開上蓋3。
(2) 放鬆螺絲4，移動針棒至所需高度，鎖緊螺絲4。
(3) 放回上蓋3，並且密合鎖緊。

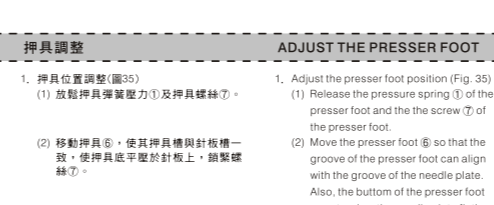


- 針與環縫針片之關係(圖44)
當環縫針片移至最左時，勾針尖端與針中心距離為1.4-1.6 mm。
- 針與環縫針片之關係(圖45)
當針在下死點時，針與前撞針片之間隙為0.1-0.2 mm。

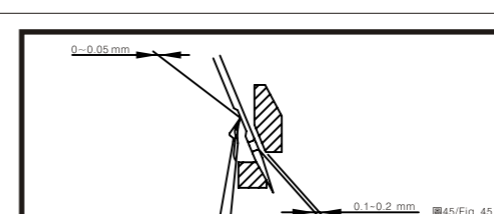
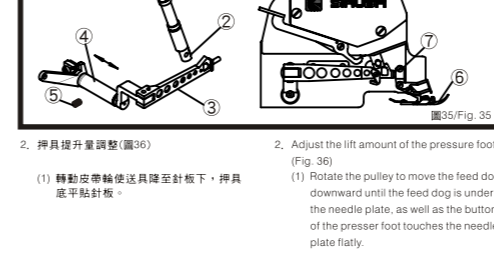


- 針與環縫針片之關係(圖45)
當針在下死點時，針與前撞針片之間隙為0.1-0.2 mm。
- 針與環縫針片之關係(圖46)
當針在下死點時，針與前撞針片之間隙為0.1-0.2 mm。

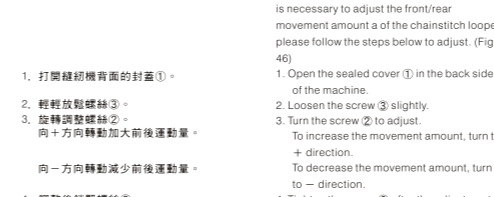
No.	現象 Problem	檢查及調整 Exam and Adjustment
6.	車針尖端受損 The Top of the Needle Damaged	●車針尖端太緊? The cjector plate is too close? ●裡面的頂針片必須在左勾針的尖端到達車針右側面時，就要從車針離開。前面頂針片與車針的間隙必須大約0.2mm。 The cjector plate inside must leave from the needle before the top of the left looper reaches the right side of the needle. The distance between the front cjector plate to the needle is about 0.2 mm. ●針板安裝位置不對? Incorrect needle plate assembling position? ●把針板拉前安裝使A部分的間隙大一點。 When assembling the needle plate, pull it forwards a little so that the space of part A can be larger.
7.	斷線與線合不順 Broken Thread and Rough/Uneven Stitch	●線架的線孔沒有磨光? The thread hole of the thread stand did not polish? ●用砂布把線孔周圍磨光。 Use emery cloth to polish the surroundings of the thread hole. ●線的選擇錯誤? Choose the wrong thread? ●更換較好的線，使細線均勻。 Change a better thread to balance the threads. ●線的張力調整不好? Cannot adjust to the best thread tension? ●注意左右勾針的線不要太鬆，要調整一支針線時也要注意有關的線變化。 Please be noted that the threads of the left/right looper should not be too loose. When adjust the position of one needle, the related changes of the threads are needed to be noticed. A. 拉緊螺絲→左勾針線會鬆→右勾針線會緊。 Pull the needle thread tightly→the left looper is looser→the right looper is tighter B. 拉緊左勾針線→右勾針線會鬆→針線也會鬆。 Pull the left looper thread tightly→the right looper is looser→the needle thread is looser, too. C. 拉緊右勾針線→左勾針線會鬆→針線會鬆。 Pull the right looper thread tightly→the left looper thread is looser→the needle thread is looser



- 押具位置調整(圖35)
(1) 放鬆螺絲1，左右移動，使3與2吻合，且2能上下活動輕順，鎖緊螺絲5。
(2) 調整適當壓力，螺絲1順時方向旋轉時，壓力加大，反之減弱。
(3) 放回上蓋3，並且密合鎖緊。
- 調整：
(1) 打開上蓋3。
(2) 放鬆螺絲4，移動針棒至所需高度，鎖緊螺絲4。
(3) 放回上蓋3，並且密合鎖緊。

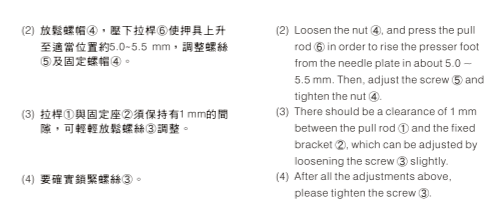


- 針與環縫針片之關係(圖44)
當環縫針片移至最左時，勾針尖端與針中心距離為1.4-1.6 mm。
- 針與環縫針片之關係(圖45)
當針在下死點時，針與前撞針片之間隙為0.1-0.2 mm。

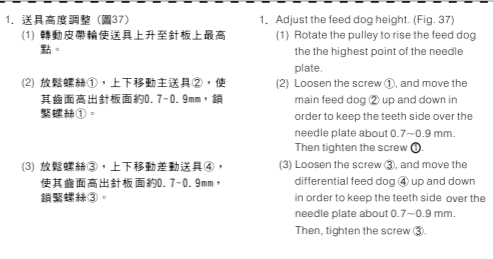


- 針與環縫針片之關係(圖45)
當針在下死點時，針與前撞針片之間隙為0.1-0.2 mm。
- 針與環縫針片之關係(圖46)
當針在下死點時，針與前撞針片之間隙為0.1-0.2 mm。

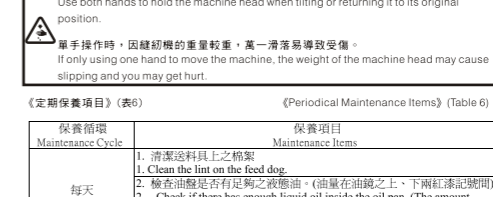
No.	現象 Problem	檢查及調整 Exam and Adjustment
6.	車針尖端受損 The Top of the Needle Damaged	●車針尖端太緊? The cjector plate is too close? ●裡面的頂針片必須在左勾針的尖端到達車針右側面時，就要從車針離開。前面頂針片與車針的間隙必須大約0.2mm。 The cjector plate inside must leave from the needle before the top of the left looper reaches the right side of the needle. The distance between the front cjector plate to the needle is about 0.2 mm. ●針板安裝位置不對? Incorrect needle plate assembling position? ●把針板拉前安裝使A部分的間隙大一點。 When assembling the needle plate, pull it forwards a little so that the space of part A can be larger.
7.	斷線與線合不順 Broken Thread and Rough/Uneven Stitch	●線架的線孔沒有磨光? The thread hole of the thread stand did not polish? ●用砂布把線孔周圍磨光。 Use emery cloth to polish the surroundings of the thread hole. ●線的選擇錯誤? Choose the wrong thread? ●更換較好的線，使細線均勻。 Change a better thread to balance the threads. ●線的張力調整不好? Cannot adjust to the best thread tension? ●注意左右勾針的線不要太鬆，要調整一支針線時也要注意有關的線變化。 Please be noted that the threads of the left/right looper should not be too loose. When adjust the position of one needle, the related changes of the threads are needed to be noticed. A. 拉緊螺絲→左勾針線會鬆→右勾針線會緊。 Pull the needle thread tightly→the left looper is looser→the right looper is tighter B. 拉緊左勾針線→右勾針線會鬆→針線也會鬆。 Pull the left looper thread tightly→the right looper is looser→the needle thread is looser, too. C. 拉緊右勾針線→左勾針線會鬆→針線會鬆。 Pull the right looper thread tightly→the left looper thread is looser→the needle thread is looser



- 押具位置調整(圖35)
(1) 放鬆螺絲1，左右移動，使3與2吻合，且2能上下活動輕順，鎖緊螺絲5。
(2) 調整適當壓力，螺絲1順時方向旋轉時，壓力加大，反之減弱。
(3) 放回上蓋3，並且密合鎖緊。
- 調整：
(1) 打開上蓋3。
(2) 放鬆螺絲4，移動針棒至所需高度，鎖緊螺絲4。
(3) 放回上蓋3，並且密合鎖緊。

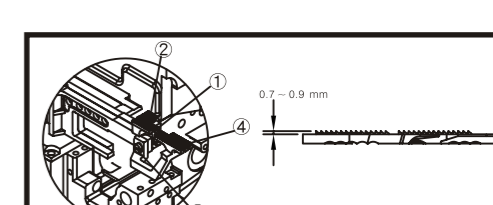


- 針與環縫針片之關係(圖44)
當環縫針片移至最左時，勾針尖端與針中心距離為1.4-1.6 mm。
- 針與環縫針片之關係(圖45)
當針在下死點時，針與前撞針片之間隙為0.1-0.2 mm。

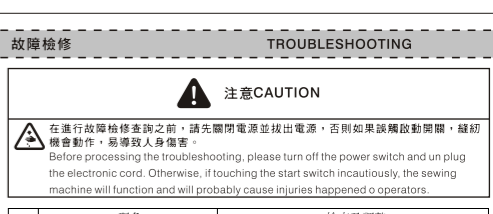
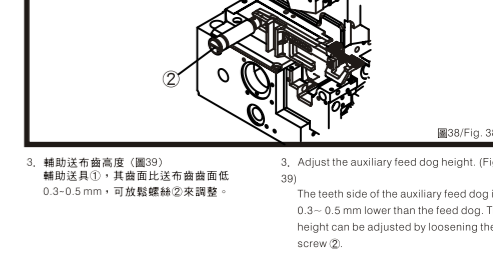


- 針與環縫針片之關係(圖45)
當針在下死點時，針與前撞針片之間隙為0.1-0.2 mm。
- 針與環縫針片之關係(圖46)
當針在下死點時，針與前撞針片之間隙為0.1-0.2 mm。

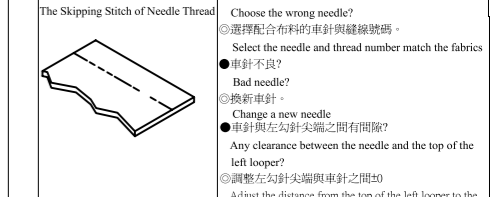
No.	現象 Problem	檢查及調整 Exam and Adjustment
7.	斷線與線合不順 Broken Thread and Rough/Uneven Stitch	●彈簧彈簧調整不良? Incorrect adjustment of the presser foot spring? ●調整彈簧彈性配合所要用的布料。 Adjust the presser foot flexibility to fit the fabric. ●切刀磨損? The knife is worn? ●更換較好的線，使細線均勻。 Sharpening the knife or changing a new one. ●差動比未配合? The differential ratio not match? ●調整布料的方向。 Adjust the differential feeding to match the feeding fabric.
8.	線線不出線 The Thread does not Come Out When Doing Chainstitch	●環勾針線凸輪調整不好? The cam of the chainstitch looper is not appropriate? ●調整適當的凸輪角度。 Adjust the cam to an appropriate position. ●線線器不良? Thread tension device does not work well? ●調整彈簧強度。 (Adjust the spring strength (2)Polishing or changing a new one ●彈簧彈簧調整不良? The presser foot rear spring did not assemble well? ●重新調整彈簧或換新，使彈簧活動自如，並試其壓力。 Readjust the spring or change a new one to make sure the presser foot can act smoothly and test its pressure.
9.	粗細針不能分 Cannot Separate the Thin and Thick Thread	●偏心輪生鏽? The eccentric is rusty? ●清除阻塞部分使油到凸輪上。 Clean the stuck part so the the oil can reach the cam. ●偏心凸輪控制彈簧調整不當? Inappropriate adjustment of the eccentric cam control spring? ●調整適當之張緊，但不可太鬆。 Adjust to the proper tension, but should not be too loose.



- 送具水平調整(圖38)
(1) 這具曲的齒輪在運轉的過程中，必須保持針板面水平。
(2) 調整時放鬆螺絲1，旋轉後軸輪2，齒面呈水平後固定螺絲1。
- 調整送具高度(圖39)
(1) 旋轉送具1，其齒面比送布齒面低0.3-0.5 mm，可放鬆螺絲2來調整。



- 針與環縫針片之關係(圖44)
當環縫針片移至最左時，勾針尖端與針中心距離為1.4-1.6 mm。
- 針與環縫針片之關係(圖45)
當針在下死點時，針與前撞針片之間隙為0.1-0.2 mm。



- 針與環縫針片之關係(圖45)
當針在下死點時，針與前撞針片之間隙為0.1-0.2 mm。
- 針與環縫針片之關係(圖46)
當針在下死點時，針與前撞針片之間隙為0.1-0.2 mm。

No.	現象 Problem	檢查及調整 Exam and Adjustment
9.	粗細針不能分 Cannot Separate the Thin and Thick Thread	●與止輪輪配合之滑塊配合不當? Inappropriate match with the slide block of the stopper cam? ●校正正板蓋之側蓋的角度，使之不會碰到下勾針刀片。 Correct the angle of the side cover of the fabric plate cover to keep it from the lower looper and the upper knife seat.
10.	大聲、異聲 Loud Noise, Strange Noise	●布板蓋之前蓋碰撞聲? Crashing noise form the side cover of the fabric plate cover? ●校正正板蓋之側蓋的角度，使之不會碰到下勾針刀片。 Correct the angle of the side cover of the fabric plate cover to keep it from the lower looper and the upper knife seat.
11.	不能噴油 The Oil Does Not Splash	●泵浦不出油? The oil does not come out from the pump? ●(1)重新修正位置。 (1)Reck to it to the correct position (2)重新配置泵浦中齒輪與心軸位置。 (2)Reassemble the gear of the pump to the main shaft and adjust the position. ●上機機不噴油? Upper mechanism does not splash the oil? ●(1)清除頂頭換出油螺絲。 (1)Clean the lints and change the oil releasing screw. (2)換新濾油器。 (2)Change a new filter (3)清除污穢的東西或換新。 (3)Clean the dirt or change a new one (4)用鐵絲通油路。 (4)Use the iron wire to clean through the oil path.
12.	刀片不利 The Knife Is Not Sharp	●刀片不利? The knife is not sharp? ●(1)磨利或換新品。 (1)Polish or change a new one (2)校正上下刀片角度。 (2)Correct the angle of the upper and lower knife seat (3)重新正確安裝(按基準調整安裝) (3)Reassemble it correctly (to assemble and adjust based on the norm) ●上下刀位置不對? Incorrect position of the upper and the lower knife? ●調整上下刀片角度。 Adjust the angles of the upper and the lower knife.

圖表2/Chart 2