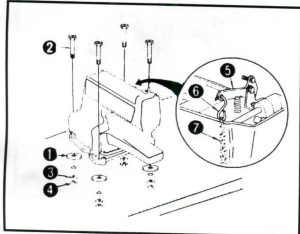


注意 爲了防止意外的起動造成的事故，請開掉電源，確認馬達確實停止轉動後再進行。

WARNING:
To protect against possible personal injury due to abrupt start of the machine, be sure to start the following work after turning the power off and ascertaining that the motor is at rest.

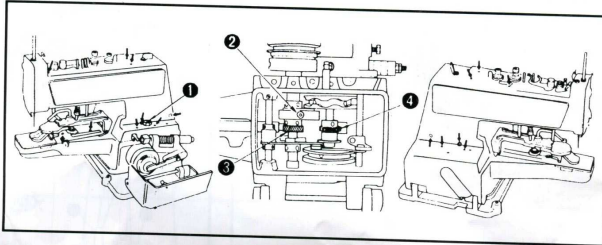
1. 縫紉机的安装 INSTALLATION OF MACHINE HEAD



1. 把防震膠墊 1 放到機台上，然後把機頭放到上面，用固定螺絲 ②、墊片 ③、螺母 ④ 固定好。然後把 S 型掛鉤 ⑥ 和鐵連 ⑦ 安裝到起動環 ⑤ 上。

1. Put rubber cushion ① on the table, place the machine head on the rubber cushion and fix it to the table using screws ②, plain washers ③ and nuts ④. Attach "S" chain hook ⑥ and chain ⑦ to stop motion trip lever ⑤.

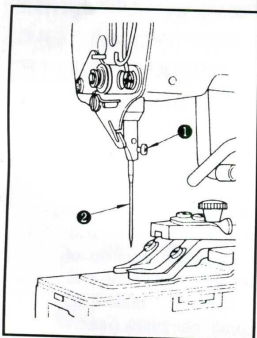
2. 加油 LUBRICATION



1. 把 T10# 新機油加入到箭頭部。(每周 1-2 次)
2. 擰鬆安裝螺絲 ①，放倒縫紉機，把潤滑脂加到螺旋齒輪 ③ 和滑輪 ④ 上。
3. 每周檢查 1 次機座安裝臺內的加油毛氈上面是否吸滿油，不够時請加油。同時請往曲軸部 ② 上也加油。

1. Apply T10# to the components shown by the arrows. (Once or twice a week)
2. Loosen connecting screw ①, tilt the head backward and apply some grease to driving worm gear ③ and gear ④.
3. Check, approximately once a week, that oil amount is sufficient to reach the top of the oil felt placed inside the bed mounting base. If the amount of oil is insufficient, add an adequate amount of oil. At this time, also apply oil to crank rod ②.

3. 机针的安装方法 ATTACHING THE NEEDLE



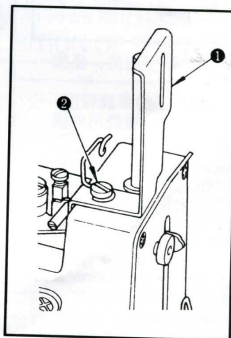
★標準機針爲 FY-372 使用 TQ x 7# 16, FY-373 使用 TQ x 7# 20 機針。

1. 擰鬆機針固定螺絲 ①，手拿機針把機針 ② 長溝轉到面前。
2. 把機針 ② 插到針杆孔的深處。
3. 擰緊機針固定螺絲 ①。

★ Use a standard needle of TQx7 # 16 for FY-372 and TQx7 # 20 for FY-373.

1. Loosen screw ①
2. Insert needle ② up into the needle hole in the needle bar until it comes in contact with the deepest end of the needle hole.
3. Tighten screw ① firmly.

4. 针杆护板的安装方法 ATTACHING THE NEEDLE BAR GUARD



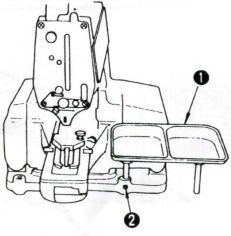
1. 擰鬆固定螺絲 ②，并把它卸下；
2. 把針杆罩 ① 安裝到第二道綫器下面；
3. 用固定螺絲 ② 固定起來。

1. Loosen screw ② and remove the thread guide No. 2.
2. Place needle bar guard ① under the thread guide No. 2.
3. Fix the thread guide No. 2 and needle bar guard ① together using screw ②.

注意 為了防止意外的起動造成的事故，請關掉電源，確認馬達確實停止轉動後再進行。

WARNING:
To protect against possible personal injury due to abrupt start of the machine, be sure to start the following work after turning the power off and ascertaining that the motor is at rest.

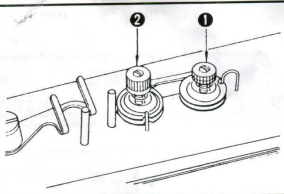
5. 鈕扣托盤的安裝方法
ATTACHING THE BUTTON TRAY ASSEMBLY



把鈕扣盤1插進機座的前部右側的孔上，并把固定螺絲2擰緊固定。如果，右側抓鈕扣不方便的話，請改裝到左側。

Insert the posts of button tray ① in hole on the right of the machine sub-base and tighten each setscrew ②. You may use also the installation hole on the left if the operator wants.

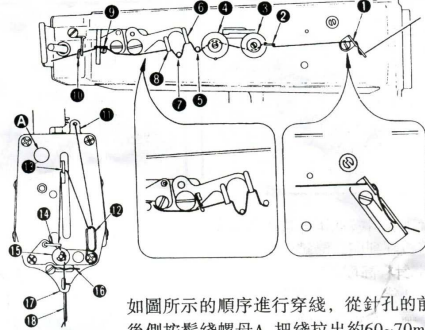
7. 夾線器
THREAD TENSIN ADJUSTMENT



第一張力螺母①是調整釘扣強度用的，僅能調節極小的張力。
第二張力調整螺母②是調整背面的緊線程度，其張力比第一張力螺絲①強，根據使用的機綫、布料、鈕扣厚度等情況進行調整。

Tension post No. 1 ① is used to adjust the thread tension to sew on the button and a relatively low tension will be enough. Tension post No. 2 ② is used to adjust the thread tension applied to the root of the button sewing stitches. This tension must be determined according to the type of thread, fabric and thickness of the button and must be higher than that of tension-post No. 1 ①. Turn the tension nuts clockwise to increase or counterclockwise to reduce the thread tension. Turn the adjusting nut clockwise to increase or counterclockwise to reduce the tension.

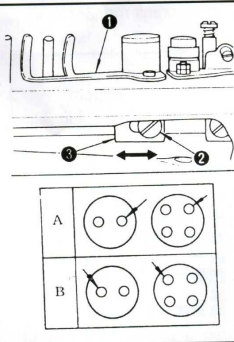
6. 穿綫方法
THREDDING THE MACHINE



如圖所示的順序進行穿綫，從針孔的前側向後側拉鬆綫螺母A，把綫拉出約60~70mm左右。

Thread the machine in the order of ① to ⑱ as illustrated and pass the thread through the needle eye from the front for 60 to 70 mm as you depress nipper releasing knurled thumb nut A.

8. 撥綫杆的調節
ADJUSTMENT OF THE THREAD PULL-OFF LEVER



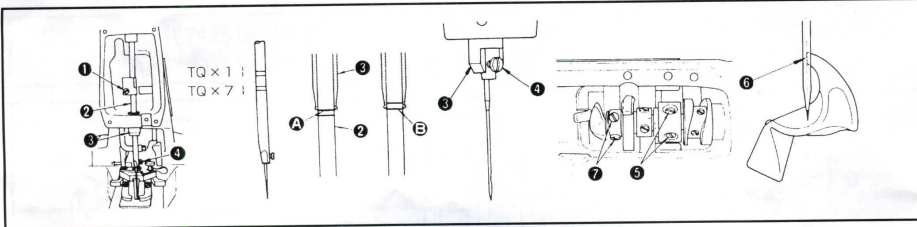
調節綫調節杆①實，請把螺絲刀插進左側面板上的孔中，擰鬆固定螺絲②，然後左右移動綫調節杆的活動滑塊③進行調整。縫制結束，如果頭從A部箭頭的孔中露出時，請把綫調節杆活動滑塊③向左移動，如果綫頭從B部箭頭的孔中露出時，請把滑塊向右移動，不讓綫頭露出來。

Adjustment of the thread pull-off lever ①, insert a screw driver through an opening in the machine arm side cover (left), loosen screw ② and adjust the position of nipper bar block (rear) ③ to the left or the right. If the end of thread is drawn from arrow hole A in the button after sewing, change the position of nipper bar block ③ to the left. Move the lever to the right when the thread end comes out from arrow hole B.

注意 為了防止意外的起動造成的事故，請關掉電源，確認馬達確實停止轉動後再進行。

WARNING:
To protect against possible personal injury due to abrupt start of the machine, be sure to start the following work after turning the power off and ascertaining that the motor is at rest.

9. 机针与线钩的关系 NEEDLE-TO-LOOPER RELATION



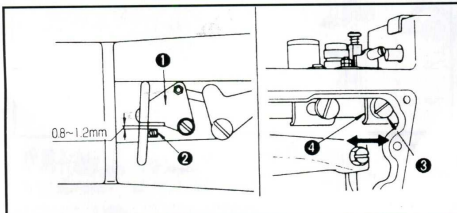
★機針和彎針按如下方法進行調整。

1. 把踏板踩到底，沿轉動方向轉動驅動皮帶輪，讓針杆落到最下點，然後擰緊固定螺絲①。
(決定針杆高度。)
2. TQ×1 機針時，使用上方的2條刻綫，TQ×7機針時，使用下方的2條刻綫，把其中的上刻綫 A對準針杆下端塊③的下端，然後擰緊固定螺絲①。這時應讓機針固定螺絲 4 進入到避免與針杆下端塊③相碰的溝槽裏。
(決定彎針的位置。)
3. 擰緊固定螺絲5，轉動皮帶驅動輪，把針杆②的2條一組的刻綫中的下綫B對準針杆下端③的下端。
4. 在此狀態，把彎針的針尖⑥對準機針的中心，然後擰緊固定螺絲⑤。
5. 擰緊固定螺絲⑦，把彎針間隙條整為 0.05-0.1mm，再擰緊螺絲⑦。

★ Adjust the needle-to-looper relation as follows:

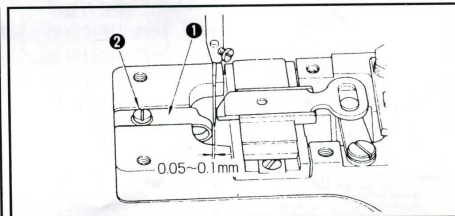
1. Depress the pedal fully forward, turn the needle driving pulley in the normal sewing direction to bring down the needle bar to the lowest point of its stroke and loosen screw①. (Adjusting the needle bar height)
2. Adjust the height of the needle bar using top two lines engraved on the needle bar for the TQx1 needle and using the bottom two lines for the TQx7 needle. Align the upper line A with the bottom end face of needle bar bushing (lower)③ and tighten screw① in the way that needle clamp screw④ rests in the slot of the needle bar bushing (lower)③. (Looper position)
3. Loosen screws⑤ and turn by hand the needle driving pulley until lower line B of two lines aligns with the bottom end face of needle bar bushing (lower)③.
4. By keeping the machine in this state, align looper blade ⑥ with the center of the needle and tighten screws 5.
5. Loosen screw⑦ and provide a 0.05 to 0.1 mm clearance between the looper and the needle. Tighten screw⑦.

10. 拔针器的调整 ADJUSTMENT OF THE NIPPER



運轉時，把拔針器的方塊②和拔針器①的間隙調整為0.8~1.2mm，不讓拔針器①往壓住機綫。調節方法是，擰鬆固定螺絲③，左右移動拔針器活動滑塊④。

11. 针导向器的位置 POSITION OF THE NEEDLE GUIDE



在針杆最下點，擰鬆螺絲②，左右移動針導向器①，把機針和針導向器①的間隙調整為0.05~0.1mm。

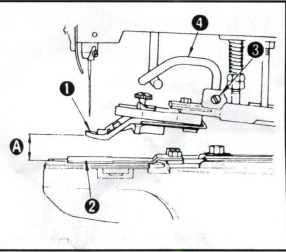
Provide a 0.8 to 1.2 mm clearance between nipper ① and nipper block ② to prevent the nipper from nipping the thread while stitching. Loosen screw ③ and move nipper bar block ④ to the left or the right.

Loosen screw ② and provide a 0.05 to 0.1 mm clearance between the needle guide ① and the needle by moving the needle guide ① to the left or the right when the needle is in the lowest position.

注意 為了防止意外的起動造成的事故，請關掉電源，確認馬達確實停止轉動後再進行。

WARNING: To protect against possible personal injury due to abrupt start of the machine, be sure to start the following work after turning the power off and ascertaining that the motor is at rest.

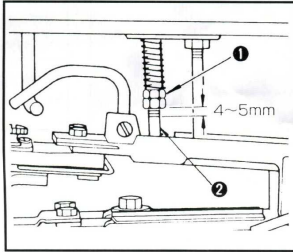
12. 抓扣裝置的高度 HEIGHT OF THE BUTTON CLAMP



在斷開位置，鈕扣抓腳①的底面和布壓腳下板②上面的間隔A，372的標準為12mm，373的標準為9mm。

The standard clearance ④ between the bottom face of button clamp jaw lever (1) and the top face of feed plate (2) is 12 mm for 373 and 9 mm for 372. Loosen screw (3) and adjust the height of button clamp lifting hook (4).

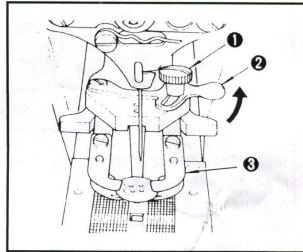
13. 布壓腳壓力的調節 WORK PRESSING FORCE



布壓腳的壓力，以在轉動螺母①2個螺母的下端和壓腳壓力調節杆②的螺絲部間隙為4~5mm時為標準。

The standard work pressing force is obtained by providing a 4 to 5 mm clearance between the bottom face of nut (1) and the bottom end of the screw of pressure adjusting bar (2).

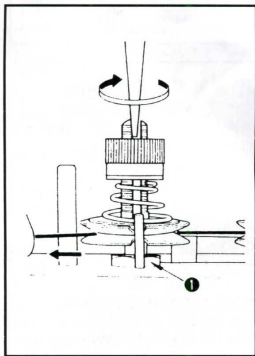
14. 抓腳打開拔杆的調節 ADJUSTMENT OF THE BUTTON CLAMP STOP LEVER



在斷開狀態，擰鬆固定螺絲①，用抓腳打開發杆②開關打開抓腳③，把鈕扣設定到正確的位置。讓鈕扣容易放進取出，然後擰緊螺絲①。

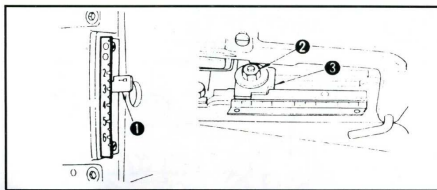
Set the machine for stop-motion state, loosen clamp screw (1), place a button correctly in the sewing position and adjust button clamp stop lever (2) to permit the button properly to rest on button clamp jaw levers (3). Tighten clamp screw (1) after determining the distance between the left and right jaw levers (3).

15. 松線同步時間的調整 TIMING OF THREAD TENSION RELEASE



沿箭頭方向拉機線，轉動驅動皮帶輪，有一個第二線張力盤浮起，機線迅速拔出的點。此時，從針杆上端塊上面到針杆上端的高度為54~56mm時為標準。特別是頻繁發生下列現象時，進行如下調節。擰鬆螺母①，把螺絲刀插入第二線張力杆，沿箭頭方向轉動的話，針杆高度變低，向相反方向轉動，則變高。

16. 兩個孔和四個孔的調整方法 SETTING FOR 2-OR 4-HOLE BUTTONS



首先量一下鈕扣孔間隔有幾mm，4眼鈕扣的豎送量和橫送量值應設為相同。

★豎送量

向下壓豎送調節杆①，2眼鈕扣時設到0的位置，4眼鈕扣時根據測定值設定。

★橫送量

擰鬆螺母②，把指針③對準相應的測定值刻度，然後擰緊螺母②。

(注意)請確認機針準確地落入鈕扣各孔的中心後再運轉縫紉機。

注意 為了防止意外的起動造成的事故，請關掉電源，確認馬達確實停止轉動後再進行。

WARNING:
To protect against possible personal injury due to abrupt start of the machine, be sure to start the following work after turning the power off and ascertaining that the motor is at rest.

現象	針杆高度 Z
1. 布料裏側的緊綫不好時。	稍稍高一點。
2. 斷開時，機綫中途斷綫時。	稍稍高一點。
3. 經常斷綫時。	稍稍低一點。

Measure the distance between two holes in a button and set equally crosswise and lengthwise feed regulators for 4-hole buttons.

★ Lengthwise feed

Push down lengthwise feed adjusting lever (1) and set it to "0" for 2-hole buttons or a corresponding amount for 4-hole buttons.

★ Crosswise feed

Crosswise nut (2) and set pointer (3) to a corresponding amount indicated by the crosswise feed graduation plate. Tighten firmly nut (2). (Caution) Before operating the machine, ensure that the needle enters the center of each hole in the button.

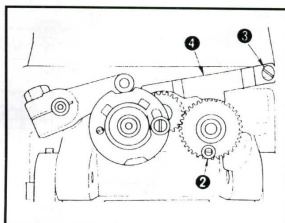
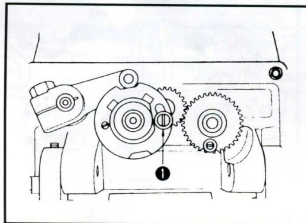
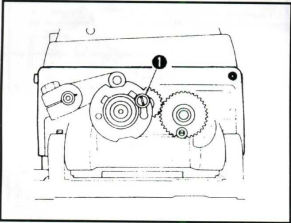
Troubles	Needle bar height z
1. When the stitch made on the wrong side of the work-piece is too loose;	Make the needle bar slightly higher.
2. When the thread is broken at the time of stop-motion;	Make the needle bar slightly higher.
3. When the thread is broken frequently	Make the needle bar slightly lower.

Turn the needle driving pulley as you draw the thread in the direction of the arrow as illustrated and you will find a point at which the tension disc on the tension post No. 2 release the thread. At this moment, the standard distance from the top end of the needle bar down to the top end of the needle bar bushing (upper) is 54 to 56 mm. Relation of the needle bar height (above-mentioned distance; 54 to 56 mm) to the timing of thread tension release is adjustable by turning the tension post No.2; loosen nut (1), insert the blade of a screw driver to the top slot of the tension post No. 2 and turn it in the direction of the arrow to lower the needle bar, (to reduce the said distance), and vice versa. Your adjustment is required when following troubles are frequency;

17. 針數 SETTING A NUMBER OF STITCHES

變更針數時，打開左側防護罩，用針數調節旋鈕(1)和針數調節撥杆(4)(選購品)進行調整。另外，下圖是卸下預備停止裝置後的圖示，不卸下來也能變換針數。

To change the number of stitches, open the left-hand side cover and change the number of stitches using stitch number adjusting knob (1) and stitch number adjusting lever (4) (optional). The illustration gives the machine with the auxiliary stop device removed. The number of stitches can be changed with ease with the auxiliary stop device attached.



★ 8針(6針)的調整方法
設定為8針時，請把針數調節旋鈕(1)向前拉出然後轉到圖示的位置。

★ 16針(12針)的調節方法
在設定為8針的狀態下，把針數調節旋鈕(1)再繼續向右轉，把針數調節旋鈕(1)設定到圖示的位置。

★ 32針(24針)的調節方法
設定為16針的狀態下，針數調節齒輪螺絲(2)轉到下側時，用螺絲(3)(選購品)安裝上針數調節撥杆(4)(選購品)。

注意 為了防止意外的起動造成的事故，請關掉電源，確認馬達確實停止轉動後再進行。

WARNING:
To protect against possible personal injury due to abrupt start of the machine, be sure to start the following work after turning the power off and ascertaining that the motor is at rest.

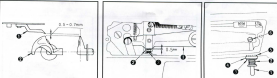
- ★ 8 stitches (6 stitches) When the stitch number adjusting knob (1) is being set as shown in the illustration.
- ★ 16 stitches (12 stitches) When the stitch number adjusting knob (1) has arrived at the right-hand side position.
- ★ 32 stitches (24 stitches) When the stitch number adjusting knob (1) is being set as shown in the illustration.

18. 英寸綫裝置的調整 AUTOMATIC THREAD TRIMMER



調整前刀位置及調整
調整前刀位置及調整，以確保前刀與綫頭之間的距離為1.5-2mm。調整前刀位置及調整，以確保前刀與綫頭之間的距離為1.5-2mm。

Position of the sewing head
When the machine stops in the state of "stop-motion" and its button clamp assembly rests in the top position, make sure that the standard clearance of 1.5 to 2 mm between thread trimmer connecting screw (1) and the end face of the ed in thread plate (2). This clearance is determined gauge (3) which is placed at accurately place. If the thread trimmer, remove the back of thread trimmer from the back edge of the distance marking connecting screw (1) in the same direction. When you tighten the nut (4) ensure that gauge (3) stays in repeating position.



- ★ 調整前刀位置及調整
調整前刀位置及調整，以確保前刀與綫頭之間的距離為1.5-2mm。調整前刀位置及調整，以確保前刀與綫頭之間的距離為1.5-2mm。
- ★ 調整前刀位置及調整
調整前刀位置及調整，以確保前刀與綫頭之間的距離為1.5-2mm。調整前刀位置及調整，以確保前刀與綫頭之間的距離為1.5-2mm。
- ★ 調整前刀位置及調整
調整前刀位置及調整，以確保前刀與綫頭之間的距離為1.5-2mm。調整前刀位置及調整，以確保前刀與綫頭之間的距離為1.5-2mm。

★ Height of the moving knife thread separation nail

There must be a 0.5 to 0.7 mm clearance between looper blade point ② and thread separation nail ①. If nail ① does not provide the necessary clearance, bend the nail slightly and adjust the clearance.

★ Clearance between the button clamp lifting lever and the adjusting screw

Provide a 0.5 mm clearance between button clamp lifting lever ① and adjusting screw ② and the tighten nut ③.

★ How to set the L-shaped lifting rod

Put moving knife push-back spring ②, stop-motion rubber cushion ④ and stop-motion rubber cushion washer ⑤, in this order, to L-shaped lifting rod ①. After making sure that the stop-motion mechanism has engaged completely, fix the L-shaped lifting rod by tightening screw ⑥ in the way that the end face of the stop-motion rubber cushion washer comes into close contact with the jaw of the machine arm.

19. 规格 SPECIFICATIONS

	372	373	377
Sewing speed	Max. 1,500 s.p.m		Max. 1,500 s.p.m (Normal. 300 s.p.m)
Number of stitches	8, 16 and 32 stitches (6, 12 and 24 by changing the cam)		8, 16, 32
Feed amount	Lateral feed 2.5 to 6.5 mm Longitudinal feed 0 to 6.5mm		
Button size	10 to 28 mm		
Needle used	TQx7, TQx1 #16 (#18, #20)	TQx7, TQx1 #20 (#18)	TQx1 #16 (#14) (TQx7 #16 to #20)
Lubricating oil	T10#		

	372	373	377
縫紉速度	最高每分鐘 1,500針		最高每分鐘 1,500針 (常用每分鐘 1,300針)
針數	8,16,32針(更換凸輪後可為6,12,24針)		8,16,32針
送布量	橫向送布2.5 ~ 6.5mm 豎送布0 ~ 6.5mm		
鈕扣尺寸	10 ~ 28mm		
使用針號	TQx7, TQx1 #16 (#18, #20)	TQx7, TQx1 #20 (#18)	TQx1 #16 (#14) (TQx7 #16 to #20)
機油	T10#		

21. 故障原因及对策

故障	原因	对策
1 断线	① 穿线顺序不正确。 ② 穿线时线头未穿入穿线孔。 ③ 穿线时线头未穿入穿线孔。 ④ 穿线时线头未穿入穿线孔。 ⑤ 穿线时线头未穿入穿线孔。	调整穿线顺序。 将穿线头穿入穿线孔。 将穿线头穿入穿线孔。 将穿线头穿入穿线孔。 将穿线头穿入穿线孔。
2 断线不良	① 穿线顺序不正确。 ② 穿线时线头未穿入穿线孔。 ③ 穿线时线头未穿入穿线孔。 ④ 穿线时线头未穿入穿线孔。 ⑤ 穿线时线头未穿入穿线孔。	调整穿线顺序。 将穿线头穿入穿线孔。 将穿线头穿入穿线孔。 将穿线头穿入穿线孔。 将穿线头穿入穿线孔。
3 断线且穿线困难	① 穿线顺序不正确。 ② 穿线时线头未穿入穿线孔。 ③ 穿线时线头未穿入穿线孔。 ④ 穿线时线头未穿入穿线孔。 ⑤ 穿线时线头未穿入穿线孔。	调整穿线顺序。 将穿线头穿入穿线孔。 将穿线头穿入穿线孔。 将穿线头穿入穿线孔。 将穿线头穿入穿线孔。
4 断线且断线不良	① 穿线顺序不正确。 ② 穿线时线头未穿入穿线孔。 ③ 穿线时线头未穿入穿线孔。 ④ 穿线时线头未穿入穿线孔。 ⑤ 穿线时线头未穿入穿线孔。	调整穿线顺序。 将穿线头穿入穿线孔。 将穿线头穿入穿线孔。 将穿线头穿入穿线孔。 将穿线头穿入穿线孔。
5 断线且断线不良	① 穿线顺序不正确。 ② 穿线时线头未穿入穿线孔。 ③ 穿线时线头未穿入穿线孔。 ④ 穿线时线头未穿入穿线孔。 ⑤ 穿线时线头未穿入穿线孔。	调整穿线顺序。 将穿线头穿入穿线孔。 将穿线头穿入穿线孔。 将穿线头穿入穿线孔。 将穿线头穿入穿线孔。
6 断线且断线不良	① 穿线顺序不正确。 ② 穿线时线头未穿入穿线孔。 ③ 穿线时线头未穿入穿线孔。 ④ 穿线时线头未穿入穿线孔。 ⑤ 穿线时线头未穿入穿线孔。	调整穿线顺序。 将穿线头穿入穿线孔。 将穿线头穿入穿线孔。 将穿线头穿入穿线孔。 将穿线头穿入穿线孔。
7 断线且断线不良	① 穿线顺序不正确。 ② 穿线时线头未穿入穿线孔。 ③ 穿线时线头未穿入穿线孔。 ④ 穿线时线头未穿入穿线孔。 ⑤ 穿线时线头未穿入穿线孔。	调整穿线顺序。 将穿线头穿入穿线孔。 将穿线头穿入穿线孔。 将穿线头穿入穿线孔。 将穿线头穿入穿线孔。

22. 针缝型式

5, 16, 32 针



21. TROUBLES AND CORRECTIVE MEASURES

TROUBLES	CAUSES	CORRECTIVE MEASURES
1. Thread breakage.	(1) The yoke slide does not move in the correct way. (2) The thread tension post No. 2 fails to release the thread at correct timing. (3) The thread nipper catches the thread. (4) The needle dose not enter the center of the holes in the button. (5) The needle is too thick for the diameter of the hole in the button.	(1) Adjust the timing of the motion of the yoke slide at each end. (2) Make the thread release timing slightly earlier. (3) Adjust the position of the nipper bar block. (4) Adjust the button clamp jaw lever holder. (5) Replace the needle by a thinner one.
2. Buttons are not sewn tightly.	(1) The yoke slide does not move in the correct way. (2) The thread tension post No. 2 fails to release the thread at correct timing. (3) The thread tension post No.2 does not give sufficient tension. (4) The needle dose not enter the center of the holes in the button. (5) The work pressing force is too high or too low	(1) Adjust the timing of the motion of the yoke slide at each end. (2) Make the thread release timing slightly earlier. (3) Tighten the tension nut of tension post No. 2. (4) Adjust the button clamp jaw lever holder. (5) Adjust the work pressing force properly.
3. The first stitch trails relatively long thread from the right side of the button.	The thread pull-off lever does not work properly.	Adjust the thread pull-off lever by the nipper bar block (rear).
4. Thread trimming failure in the state of stop-motion.	(1) The thread tension post No. 2 fails to release the thread at correct timing. (2) The needle hits the edge of the holes in the button. (3) The button clamp assembly does not rise to the necessary height. (4) The thread nipper catches the thread or too low. (5) The work pressing force is too high.	(1) Make the thread release timing slightly later to give more tension to the stitches. (2) Adjust the button clamp jaw lever holder. (3) Provide a 12 mm clearance between the feed plate and the button clamp jaw levers when rised. (4) Adjust the nipper bar block. (5) Adjust the work pressing force by the pressure adjusting nut.
5. Thread trimming failure.	(1) The moving knife does not separate the thread on the fabric with its separation nail. (2) The needle does not enter the center of the holes in the button. (3) The last stitch skips. (4) The moving knife separation nail is too high or too low.	Adjust the position of the moving knife. Adjust the button clamp jaw lever holders. Adjust the looper. Adjust the height of the moving knife thread separation nail.
6. The needle thread is cut in two places on the wrong side of the fabric.	(1) The moving knife is set in wrong place. (2) The moving knife thread separation nail is too high or too low.	Adjust the position of the moving knife when the machine is in the stop-motion state. Adjust the height of the thread separation nail.
7. Buttons trails too long thread after thread trimming.	(1) Timing of the moving knife motion is wrong. (2) The button clamp assembly rises too much.	Adjust the position of the moving knife. Reduce the button clamp lift down to 9 mm.

22. STITCH FORMATION

8. 16. 32 針

