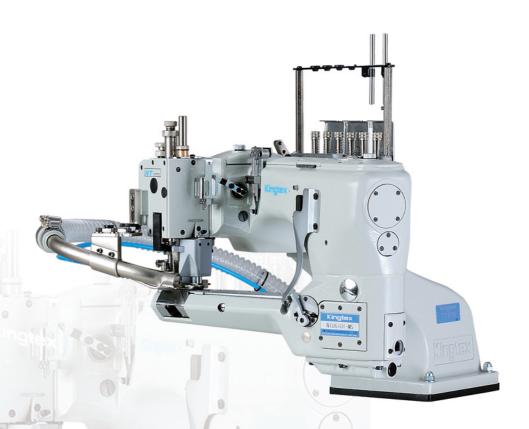


寶獅牌工業用縫紉機 INDUSTRIAL SEWING MACHINE

MODEL NTD67



## 4-NEEDLE, 6-THREAD FLAT-SEAMER, FEED-OFF-THE-ARM MACHINE

**User Manual** 



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#### 前言

感謝您購買使用 NT 系列縫紉機,為了使縫機發揮最高的使用效率,請參照本說明書所揭載的各項說明及安全注意事項。

本說明書裡的各項解說及相關數值是以 NTD67-12M5 為基準。

其他各系列機型雖然部份零件有所差異,本說明書也能適用。

本說明書內容均屬於本公司所有的智慧財產,非經許可不得轉載、複印。

本說明書內容僅為提供資訊,如有任何變更不做預告,同時所提供的資訊本公司不負任何法律責任。

Thank you very much for purchasing Kingtex brand of NT series machine. this instruction manual describes daily routine Maintenance and safety precautions to keep the machine in the best possible conditions. Please study this manual very carefully before operating the machine.

#### 安全注意事項

- 1. 電源線一定要確實的固定,並接好地線。
- 2. 在做清掃、調整、維修等工作時,一定要切斷電源,同時等到馬達完全停止後, 才可進行。
- 3. 新的縫機在使用後的第一個月或使用後 150 小時內,轉速請勿超過 3000RPM。
- 4. 請使用正確的潤滑油 VG68/ISO。
- 5. 請在使用前,各活動關節部位滴少許潤滑油。
- 6. 請在每次使用後,清理縫機上的線絮布屑。

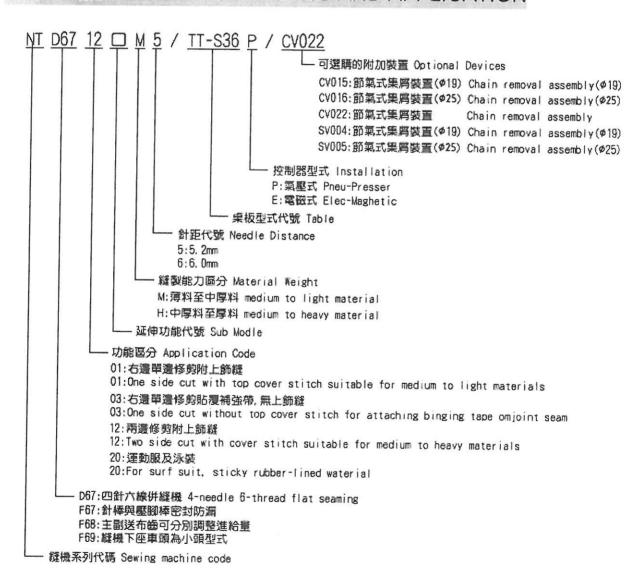
#### FOR SAFETY

- 1. Use maximum caution when you connect Power Cord to Machine as well as when you check the machine before switching power on.
- 2. Turn off Motor Switch whenever you leave the work table.
- 3. Turn off Motor Switch in the event of power failure.
- 4. Make sure Motor has completely stopped when attempting to clean, inspect, threading, replace Needles, etc.

#### 1. 基本規格 SPECIFICATION

縫機型式 Model	NTD67	NTF67	NTF68	
線跡型式 Stitch Type	ISO607			
最高轉速 Max Sewing Speed	3800RPM	3500RPM	3500RPM	
縫目節距 Stitch Length	10 - 16 針/吋 , 1.6 - 2.5mm/每針			
縫針型式 Needle Sys tem	縫製用針 FL*118GCS/Organ			
WE J 全式   Needle Sys telli	控制用針 FLG-1/Organ			
總針距 Needle Distance	5.2mm(13/64"	), 6.0mm(15	/64")	
壓腳提昇量 Presser Foot Lift	6mm 標準值			
差動比 Differential Ratio	最大縮縫1:	1.5 , 最大何	申縫 1:0.7	
潤滑油 Lubricating Oil	VG68/ISO			

#### 2. 機型編號 MODEL NUMBERING AND APPLICATION



#### 3. 使用前準備 INSTALLATION

NT 系列縫機,隨著不同的驅動方式及不同的附件裝置,有幾種組裝方式:

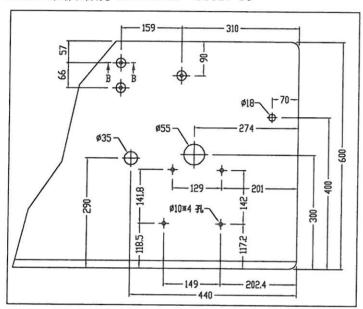
- 氣壓式壓腳提昇裝置 Pneu- presser foot lifter
- 電磁式壓腳提昇裝置 Elec- presser foot lifter

以下說明裝程序

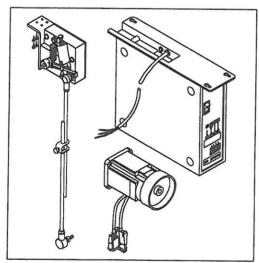
#### 3-1 車板圖 Table cutting diagram

TTS36 車板尺寸圖 Table dimensions 1200\*600\*40

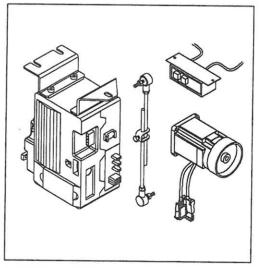
TTS36 桌板編號 Table NO.: 66817-10



#### TTS36 控制箱 Control box



氣壓式控制箱 (/MN056H) Pneu control box 電磁式控制箱 (/MN057H) Elec control box



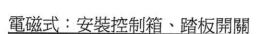
氣壓式控制箱 (/MN052H) Pneu control box 電磁動式控制箱 (/MN053H) Elec control box

#### 3-2 組裝順序

- (1) <u>氣壓式:安裝控制箱、集屑袋、</u> 踏板開關、空壓元件集成組
  - 車板(66817-10)固定於腳架上。
  - 控制箱,踏板開關,空壓元件集成組 及集屑袋安裝,固定於車板底面。
  - 踏板開關連接於腳架踏板上。

#### 3-2 Installation step by step

- (1) Pneumatic Type: Installation of control box, lint collector, pedal switch, compressed air set.
  - Install table (66817-10) onto stand.
  - Install control box, pedal, compressed air set and lint collector underneath the table.
  - Linking pedal switch with pedal.



- 車板(66817-10)固定於腳架上。
- 控制箱,踏板開關,固定於車板底面。
- 踏板開關連接於腳架踏板上。

### Electric Type: Installation of control box and pedal switch.

- Install table (66817-10) onto stand.
- Install control box, pedal switch underneath the table.
- Linking pedal switch with pedal.

## Padel switch 路板開開 控制箱 Control box

Padel switch

空壓元件集成組 Compressed air set Waste bas

踏板開關

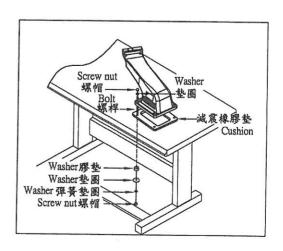
控制箱 Control box

#### (2) 安裝縫機承座

- 減震膠墊對準車板的螺絲孔(注意正反面)。
- 縫機承座置於減震墊上。
- 螺桿\*4 穿過固定孔兩端鎖緊固定螺帽。

#### (2) Installation of machine support

- Make sure cushion is aiming at the screw hole on table.
   (please make sure the correct side of cushion.)
- Put machine support onto cushion.
- Insert bolt thru machine support, cushion, table and tighten screw nuts properly.



#### (3) 安裝縫機

- 避免縫機墜落造成損害,請由助手協助安裝。
- 將縫機安裝於承座上鎖緊固定螺絲 M10\*2。

#### (3) Installing of machine head

- Please use two people to install machine head, in order to prevent machine head damage from dropping.
- Install machine head onto support by fix screw (M10\*2)

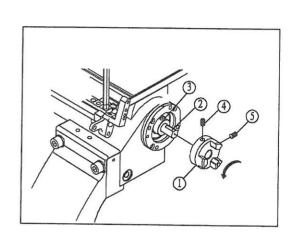
# Washer 整图 Fix screw 固定螺絲

#### (4) 安裝連軸器

- 連軸器(左)①穿入主軸②貼緊襯套③。
- 正轉方向第一顆固定螺絲④對正主軸 上的第一顆螺絲槽鎖緊後,再鎖緊固定 螺絲⑤。

#### (4) Installation of shaft connector

- Insert shaft connector (Left) ① thru shaft② close next to cushion③.
- Clockwise turning shaft connector, tightening the fix screw onto the flat surface on shaft. then, tightening fix screw .



#### (5) 安裝直驅馬達座

● 定位銷⑧對正後,將直驅馬達座⑥ 套入主軸軸承座⑦鎖緊固定螺絲⑨M5\*4。

## (5) <u>Installation of direct drive servo</u> motor bracket

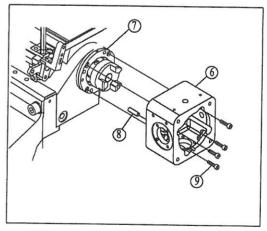
Align pin® on motor bracket, insert into shaft bracket⑥
 and tightening fix screws⑨ (M5\*4).

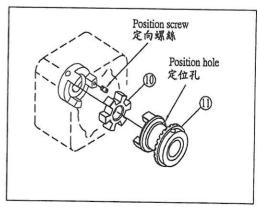
#### (6) 安裝緩衝墊及連軸器(右)

- 套入緩衝墊⑩。
- 定位孔對正定向螺絲套入連軸器(右)①,左右連軸器及緩衝墊需完全密合。

## (6) <u>Installation of cushion and shaft</u> <u>connector (Right)</u>

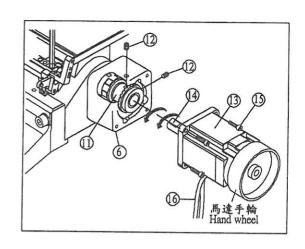
- Insert cushion 10 onto shaft.
- insert shaft connector (Right) thru position hole and position screw. please make sure both left and right shaft connectors and cushion should be tighten closely.





#### (7) 安裝直驅馬達

- 旋轉連軸器組①使正轉第一顆螺絲孔,對正上方直驅馬達座⑥的穿孔。
- 直驅馬達③正轉第一個螺絲槽④向上,電源線⑥向下。
- 直驅馬達穿入連軸器組①後,由直驅馬達座⑥,上方及側面的穿孔輕鎖
   固定螺絲⑫M5\*2,使螺絲對正螺絲槽平面,鎖緊固定螺絲⑬M6\*4。
- 由直驅馬達座⑥上方及側面的穿孔鎖緊固定螺絲⑫M5\*2。



#### (7) Installation of mini servo motor

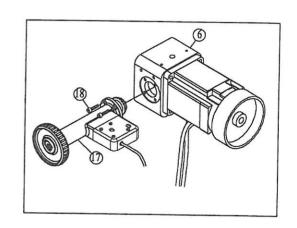
- Counter-clock turning shaft connector set① and make sure first screw hole align to the screw hole on motor bracket⑥.
- Make sure flat surface on servo motor (3) shaft (4) toward up and power cord (6) toward down.
- After inserting servo motor into shaft connector set① tightening fix screw② (M5\*2) lightly thru the screw holes on the top and side from servo motor bracket⑥ and make sure screws align with the flat surface of servo motor shaft and then, tightening fix screws⑤ (M6\*4) around servo motor.
- Tightening screws (2) (M5\*2) from the screw holes on top and side of servo motor.

#### (8) 安裝安全開關手輪組

● 裝入手輪組⑪至馬達座⑥,鎖緊固定 螺絲®M4\*4。

#### (8) Installation of hand wheel set

- Inserting hand wheel set① into servo motor bracket⑥.
- Then, tightening screws (M4\*4).



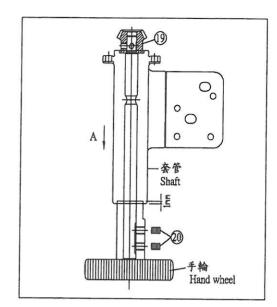
#### (9) 安裝手輪及調整

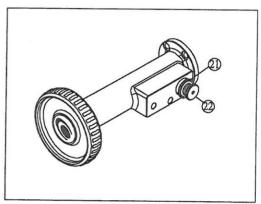
- 齒輪⑩向 A 方向退出靠於套管,將手輪 穿入心軸,手輪放入套管約 1mm,螺絲孔 對正軸上螺絲槽,以⑩M5\*2 螺絲固定。
- 放鬆螺帽②,放鬆或旋緊螺椿②,可調整固定手輪的壓力,調整後再將螺帽②鎖緊。
- 手輪推入後,須可固定於齒輪結合的位置, 不可自動彈出。

#### ※車縫時手輪必須退出,使齒輪脫離

## (9) <u>Installation of hand wheel and its</u> <u>Adjustment</u>

- Gear 19 Move gear 19 toward A direction and lean against pipe, then, insert hand wheel thru shaft and pipe around 1 mm distance, align screw holes toward the flat surface on shaft, then, tightening screws 20 (M5\*2) in order to fix hand wheel.
- Loosening nut②, loosen or tighten stud②, able to adjust the pressure of hand wheel, after adjustment, tighten nut②.
- once pushed in hand wheel, it should bite properly with the gear and can not be bounced back.

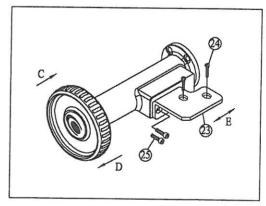


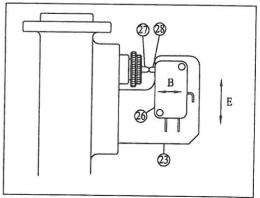


#### \* When operate the sewing machine, hand wheel must be pulled out.

#### (10) 安裝手輪及調整

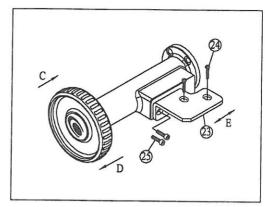
- 放鬆固定螺絲徑②。
- 安全開關座②可沿E方向調整移動, 使安全開關按鈕②對正頂桿②,調查後 所緊固定螺絲②。
- 安全開關20可沿 B 方向調整移動,調整 按鈕按壓量:
  - a. 手輪推入時(C方向:齒輪嚙合) 頂桿②須退開按鈕②,不得按壓按鈕②。
  - b. 手輪拉出時(D 方向:齒輪脫離) 頂桿②伸出按壓開關按鈕②,按鈕必須 按壓到發出 "卡達"聲,調整後鎖緊 固定螺絲④。
- ※ 使用前須確認手輪推入時, 馬達無法運轉

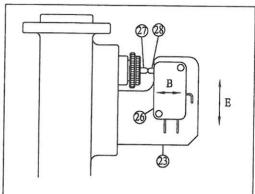




## (10) <u>Installation of hand wheel and</u> its adjustment:

- Loosening fix screws 24,25.
- Safety switch base can be moved toward E direction aligning switch button with pushing pin and then, tighten fix screws.
- Safety switch can moving along B direction, in order to adjust push button pressure.
  - a. When pushing in hand wheel, (pushing toward C direction, gear bited), pushing pin should apart from switch button.
  - b. when pulling out hand wheel, (pulling toward D direction, gears apart from each other), pushing pin② should stick out and touching safety switch button②, till heard the "Click" sound, then, tightening fix screws after the adjustment.





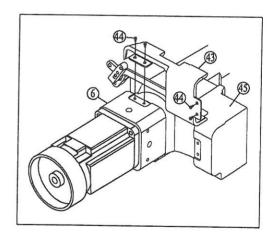
# Prior to using this machine, please make sure, by the time when hand wheel been pushed in, the servo motor will not operate.

#### (11) 安裝封蓋

● 安裝封蓋④於馬達座⑥及針棒機構箱④上, 用螺絲⑭M4\*4 固定

#### (11) Installation of cover

• Installing cover 43 onto motor base 6 and sewing head 45, by using screws 44, (M4\*4)

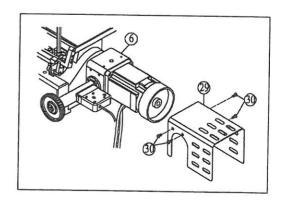


#### (12) 安裝馬達護罩

● 安裝馬達護罩②於馬達座⑥上, 用螺絲③M4\*4固定

#### (12) <u>Installation of servo motor cover</u>

• Installing servo motor cover ② onto motor base ⑥ by using screws ③, (M4\*4)

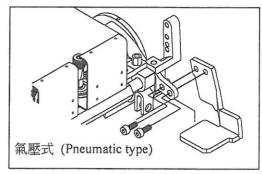


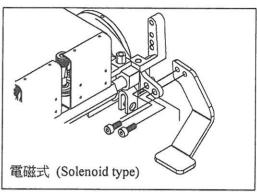
#### (13) 安裝壓板

● 安裝壓板於支架上,鎖緊固定螺絲 M5\*2

#### (13) <u>Installation of bracket</u>

• Installing foot lifter bracket onto machine bracket by tightening fix screws (M5\*2).



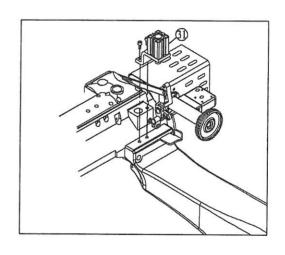


#### (14) 安裝氣壓缸組(氣壓式)

● 安裝氣壓缸組③於縫機承座上,鎖緊 固定螺絲 M6\*2。

## (14) <u>Installation of air cylinder set</u> (pneumatic type)

• Installing cylinder set ① onto machine bracket and then, tightening fix screws (M6\*2).

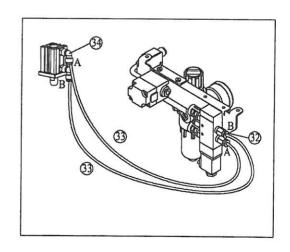


#### (15) 連接空壓管路(氣壓式)

- 附 ψ 4 空壓管 2 條③。
- ③一端連結電磁閥②,一端連接氣壓缸 接頭④。

## (15) <u>Connecting compressed air pipes</u> (<u>Pneumatic type</u>)

- There have two compressed air pipes of  $\psi$  4 3 inside accessories box.
- One end of air pipe 3 connect to electromagnetic valve asm. 3, the other end connect to the a adaptor 4 of compressed air cylinder.

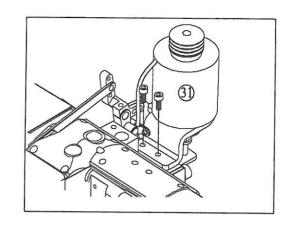


#### (16) 安裝磁力線圈組(電磁式)

安裝磁力線圈組③於縫機承座上, 用螺絲 M6\*2 鎖緊。

## (16) <u>Installation of presser foot</u> lifter solenoid

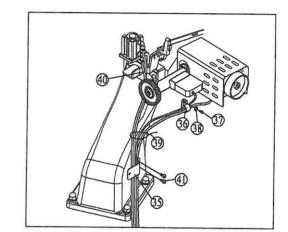
• Installing presser foot lifter solenoid onto machine bracket by tightening fix screws (M6\*2).



#### (17) 安裝集線護罩

#### 氣壓式:

- 馬達及安全開關電線穿過線夾鉤,用 M4 螺絲勁及墊圈③,固定於縫機承座。
- 安裝集線護罩③,鎖緊固定螺絲④M5\*2 於縫機承座。
- 將電線及其他管線置於集線護罩③5內。
- 用束線帶⑨將空壓管⑩綁於馬達電線上, 加以固定。



#### (17) Installation of wire cover

#### Pneumatic type:

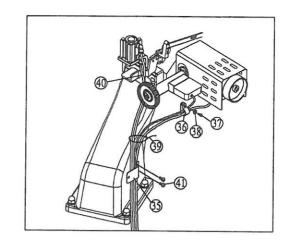
- Passing the electricity wires from servo motor and safety switch thru thread pipe stay and tightening thread pipe stay by M4 screw and washer and onto machine bracket.
- Installing wire cover ③, by tightening Fix screws ④ (M5\*2) onto machine support bracket.
- Collecting electricity wires and other wires and pass it thru inside of wire cover (3).
- Tightening air pipes and electricity wires together by wire strip and passing thru wire cover.

#### 電磁式:

- 馬達、安全開關及磁力線圈電線,穿過線夾③,用 M4 螺絲④及墊圈③,固定於縫機承座。
- 安裝集線護罩②,鎖緊固定螺絲③M5\*2 於縫機承座。
- 將電線及其他管線置於集線護罩②內。

#### Solenoid type:

• The wires from servo motor, safety switch and solenoid passing thru thread pipe stay 33 and to be attached to machine support bracket by screws 34 and washer 35 via wire cover.

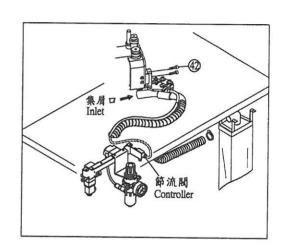


- Installing wire cover<sup>32</sup>, by tightening fix screws<sup>36</sup> (M5\*2) onto machine support bracket.
- Collecting electricity wires, other wires and airpipes and passing thru wire cover ②.

#### (18) 安裝集屑裝置

#### 氣壓式:

- 將 CV015 / CV016 的集屑管組用螺絲@M5\*2 鎖緊。
- 集屑口對正壓腳出屑處,且不得與裁片、壓腳有所干涉,以及不影響縫機操作。
- 空壓管依圖示插入節流閥。
- 集屑管插入集屑袋接頭。
- 節流閥設定節流閥可調整集屑口的吸屑力,對較薄的裁片,可適度減小吸屑力,可避免縫製上的困擾。



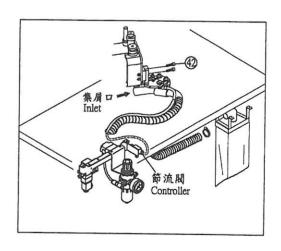
#### (18) Installing of lint collector

#### Pneumatic type:

- Tightening lint collector of CV015 / CV016 by screws (42) (M5\*2).
- Inlet of lint collector should be line up with output from waste chute. of presser foot, and can not have Any interference with presser foot and machine sewing operation.
- Inserting air pipe into speed controller according to illustration.
- One end of suction pipe should be inserted into waste bag.
- The setting of speed controller:

  The suction power from speed controller is able to be adjusted according to different types of fabrics.

  For light weight materials, the suction power should be adjusted, smaller in order to avoid the sewing difficulty.

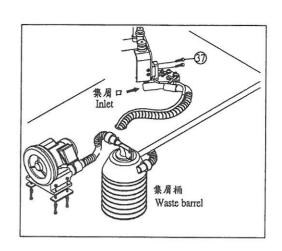


#### 電磁式:

- 將 SV004 / SV005 的集屑管組用螺絲③M5\*2 鎖緊。
- 集屑口對正壓腳出屑處,且不得與裁片、壓腳有所干涉,以及不影響縫機操作。
- 將集屑管接於集屑桶。

#### Electromagnetic type:

- Tightening suction pipes of SV004 / SV005 by screws (M5\*2).
- The inlet of suction pipe should be line up with output from waste chute of presser foot and can not interference with sewing fabrics, presser foot and sewing operation.
- One end of suction pipe should be connected with waste drum.



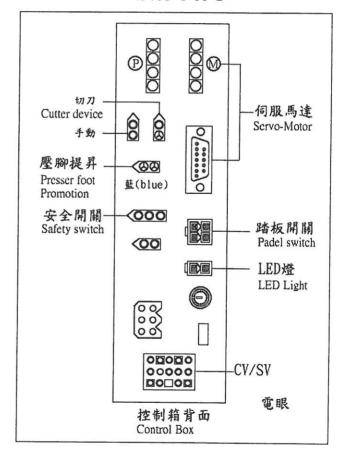
#### (19) 連接控制箱與各作動件

將各控制線信號線依序插入控制箱背面對應的接頭裡。

## (19) Connecting control box and its operations and its movement

 Inserting signal wires onto the back side of control box by connecting related wires with correspondent adaptors in sequence.

TD715-4-36-2



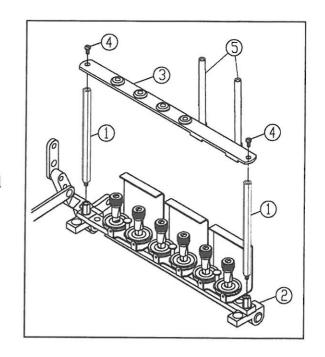
#### (20) 安裝導線架

將支柱①鎖在承座②上,將導線板③鎖在 支柱①上,調整導線管⑤,使縫線能很順暢 的流動。

#### Setting thread eyelets

Set the thread guide plate supports ① on the thread tension support ② and fix the thread guide plate ③ on the supports ① with the screws ④.

Adjust the thread pipes properly, so the threads can be run smoothly without entangling.



#### 4. 潤滑

#### 4-1 添加潤滑油

必須使用 VG68/ISO 或同等級的潤滑油。 打開注油孔孔塞①、②,加入潤滑油, 注意加入潤滑油的同時,觀察油面指標③ 及油面計④不可超出上限,完成後請再次 鎖緊①、②注油孔塞,並於使用縫機時, 經常檢查油面高度。

#### 4. Lubrication

#### 4-1 Lubricating

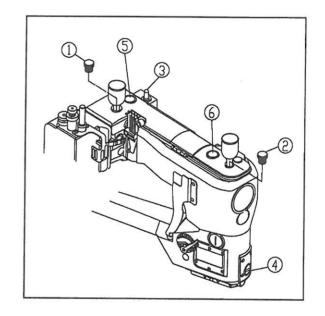
Remover the plug screws ① and ② where indicated "OIL" and supply oil. pouring Oil VG68/ISO thru the plug screw ①,

supply oil until the oil level indicator reaches the upperline in the oil sight gauge 3.

Pouring oil thru the plug screw<sup>2</sup>, supply oil to the upper line in the oil sight auger <sup>4</sup>.

Check the oil level between the lines in the oil sight gauges and before running the machine. if it is under the lines, supply adequate oil.

Check the oil splashes from the nozzle inside the oil sight top windows 5 and 6 when starting to run the machine.



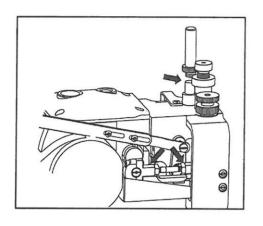
#### 4-2 外裝活動件潤滑

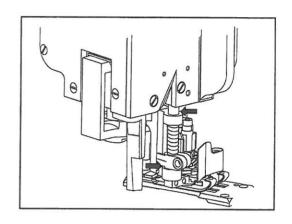
新機器使用前或是長時間沒有使用的縫機,在使用前,請參照圖的部位添加少許潤滑油。

#### ※注意,太多的潤滑油會順流到上切刀及壓腳底,導致裁片受到污染。

#### 4-2 Replenishing oil

Replenish a drop of oil from the points indicated arrows with an oilier (in accessories box) if needed. If oil leaks around the presser foot and the upper knife, it can cause oil stain on the material. Be sure to wipe it out completely.





#### 4-3 確認潤滑工作正常

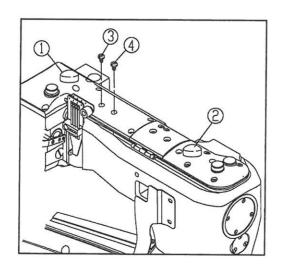
新機器或是長期未使用的縫機,啟動運轉時請觀察循環油視窗①、②,

注意是否有油噴出。

如果在①或②油窗上沒有看到循環油噴出,請停止縫機,將③、④螺樁卸下, 在孔內注入些許潤滑油,鎖回螺樁③、④後再重新啟動縫機。

#### 4-3 Checking lubricating of oil

Pour oil if oil does not circulate completely when installing a new machine or running a machine which has not been used for a while, remove the plug screws 3 of the pump driven gear to pour oil. Run the machine after resetting them 3.



#### 4-4 添加矽油

使用化纖線或是化纖類裁片,發生熔解或跳線的情形時, 可使用矽油來冷卻

- 1. 將羊毛氈座①放入矽油槽②裡
- 2. 添加矽油於油槽內
- 3. 蓋回護蓋③

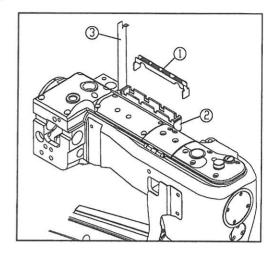
#### 4-4 Needle sp container

Needle sp container is equipped as standard to prevent thread breakage and skip stitch when running the machine at high speed or using synthetic thread and/or synthetic fabric. Fix the felts ①, (included inside the accessories box), into the sp container ② when using.

Use dimethyl silicone oil.

Open the oil cup lid and check the oil amount.

If not sufficient, supply oil into the sp container ②.



#### 4-5 更換 / 潤滑油

新機器使用 150 小時或是開始使用後最初 1 個月,請更換潤滑油。

參照附圖 A、B。

圖A,取下皮帶蓋打開卸油孔塞,殘油滴盡後重新裝回孔塞及皮帶蓋。

圖 B,打開卸油孔塞,殘油滴盡後,重新裝回孔塞。

#### 4-5 Changing oil

When using a new machine, change the ubricating oil after running for 200 hours (for about one month).

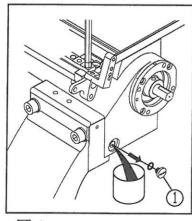


圖 A

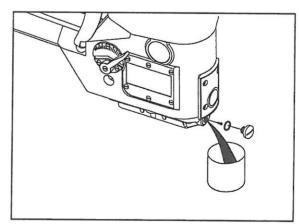


圖 B

#### 5. 縫針

#### 5-1 縫針系統

NTD67 使用的縫針為 FL\*118GCS/Organ 與 FLG-1/Organ, 依照裁片的性質及厚度, 選擇適當的縫針。

#### 5. Proper operation

#### 5-1 Needle system

Sewing needle:

0rgan

FL × 118GCS

Retainer needle:

0rgan

FLG-1 FLG-8 (with scarf)

#### 縫針/控制用針 號數與粗細對照表

Select the proper retainer needle in size depending on thickness and type of the material.

Japanese(日本) standard	8	9	10	11	12	-	14
Metric(公制) standard	60	65	70	75	80	-	90

#### 5-2 縫針安裝

注意,在安裝縫針時,一定要切斷電源,

同時確認馬達已經完成停止。

縫針的針柄上刻有兩個平槽,安裝縫針時,必須確認 針柄推進到定位孔底,

平槽對正螺絲孔後再鎖緊固定螺絲。控制用針安置在最右邊。

#### 5-2 Needle change

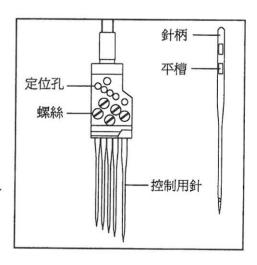
Before installing the needles, ALWAYS turn the motor switch OFF and check the motor had already stopped completely.

The shank of the needle includes the flat part.

Insert needle into the inmost point of the needle clamp and tighten them with the screws.

#### Replacing needle

- 1. Raise the needles at the highest point.
- 2. Loosen screws and remove the old needle(s).
- 3. The flat part face front, insert new needle into the needle clamp as far as they go. Tighten the screw securely.



#### 5-3 穿線

#### 注意,在穿線的時候縫機一定要完全停止。

造成縫製品上的瑕疵,穿線錯誤是很重要的原因之一,請特別注意。 下圖中,每一條縫線穿過線孔的路徑 1、2、3、4 為針線,5 為上飾線, 6 為下結線鈎線。

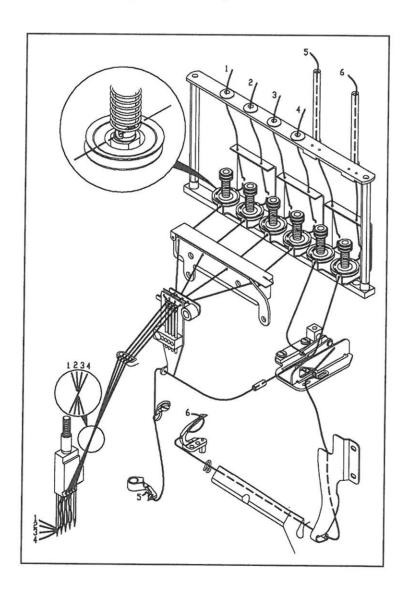
#### 5-3 Threading

#### Threading

Wrong threading is one of reasons for causing the deficits of sewing products

#### Thread diagram

1,2,3,4 are Needle thread, trim the knots of thread neatly before passing through the eyes of the needles. 5 is top cover thread, 6 is lower looper thread.



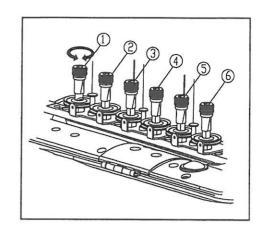
#### 5-4 縫線張力控制

依照裁片的特性,縫線的類別,線跡的寬度, 縫目的大小,各種不同的縫製需要來調整, 各條縫線的張力。 旋鈕向右(順時針)張力加大 旋鈕向左(逆時針)張力減小

#### 5-4 Thread tension

Adjust the thread tension with the tension adjusting nuts ① - ⑥ depending on fabric type, thread type, seam width, stitch length, and other sewing conditions.

- To tighten the thread tension, turn the nuts clockwise.
- To loosen the thread tension, turn the nuts counterclockwise.



#### 6. 壓腳

#### 6-1 壓腳壓力

在穩定的縫製作業之下,壓腳的壓力愈輕愈好,放鬆固定螺帽① 旋鈕②向右(順時針)壓力加大 旋鈕②向左(逆時針)壓力減小 調整後再確認鎖緊固定螺帽①

#### 6. Presser foot

#### 6-1 Pressure of presser foot

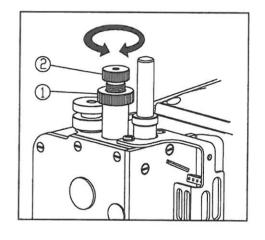
Keep the pressure as low as possible for stable stitches. Loosen the lock nut ① and turn the adjusting screw② to adjust the pressure.

- To increase the pressure, turn the adjusting screw clockwise.
- To decrease the pressure, turn the adjusting screw counterclockwise.

#### 6-2-1 壓腳高低位置設定

壓腳底面稍微懸浮於針板面上,在縫製作業時,可有以下的效果。

- a 可使裁片順暢的輸送
- b 可避免裁片被送布齒刮傷
- c 可延長底面彈性壓板的壽命
- d 可減少噪音振動
- e 可以微調疊縫的寬度



#### 6-2-1 Up-and-down position of presser foot

Following effective results will be obtained by slightly raising the presser foot.

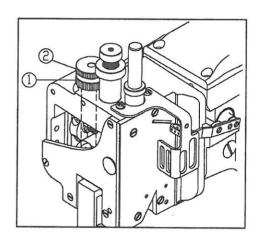
- (a) Prevent of fabric from jamming
- (b) Prevent fabric from damaging
- (c) Increases durability of presser foot spring plate
- (d) Reduction of vibration and noise
- (e) Easier for fine adjustment of lapped fabric width

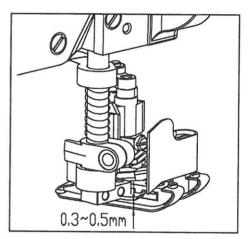
#### 6-2-2 設定方式

- 1. 將針棒降到最低點
- 2. 放鬆固定螺帽①旋轉旋鈕②,調整壓腳底面 與彈性壓板間的間隙為 0.3~0.5mm 調整後確認 鎖緊固定螺帽

#### 6-2-2

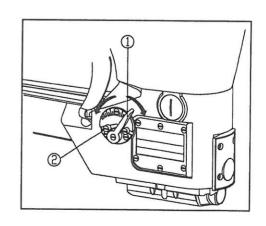
- (1) Position the needle at its lowest point.
- (2) Loosen the lock nut and turn the adjusting nut counterclockwise to raise the presser foot.
- (3) Adjust the clearance between the bottom of the presser foot and the presser foot spring plate to 0.3 0.5 mm.
- (4) Tighten the lock nut@ securely.





#### 7. 調整送布齒差動比

向左或向右搬動差動扳手①可變換差動比, 在刻記 4"與"5"之間, 主送布齒與副送布齒差動比為 1:1。 向"9"方向搬動差動比加大(縮縫) 向"1"方向搬動差動比減小(伸縫) 螺椿②用來限制扳手的搬動範圍



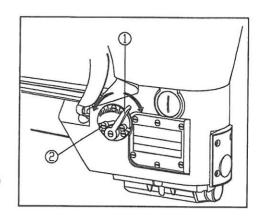
#### 7. Adjusting differential feed dog

Move the differential feed operating lever right or left to adjust differential feed dog.

The lever between the graduations "4" and "5" makes the equal movement of the main feed dogs and the differential feed dogs.

To make normal differential, move the lever to "9" .(shrinkage)

To make reverse differential, move the lever 0 to 1" (stretch) The screw 0 is for restrain the lever 0 movement and keeping the differential movement within its limitation.



#### 8. 調整縫目節距

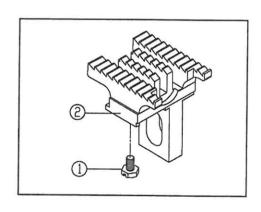
縫目節距範圍 1.6~2.5mm

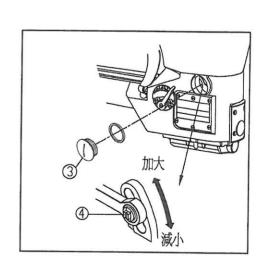
- ※ 注意,先調整差動比調整後再調整縫目 節距。
- ※ 如果是加大縫目節距,必須先把後導針器 鬆開後退
- 1. 放鬆固定螺絲①,退開後導針器②。
- 2. 打開孔塞③
- 3. 放鬆螺樁④向上移動加大節距,向下移動 減小節距
- 4. 完成後鎖緊螺椿④及孔塞③
- 5. 重新設定後導針器的位置

#### 8. Adjusting stitch length

Stitch length ranges 1.6 - 2.5mm as standard and can be adjusted infinitely.

- (1) Loosen the screw and move the needle guard (rear) most backward. Then tighten it slightly.
- \* This procedure is skipped if decreasing the stitch length.
- (2) Remove the plug screw 3.
- (3) Loosen the screw to adjust the stitch length.
- To increase stitch length, move the screw upward.
- To decrease stitch length, move the screw downward.
- (2) Tighten the screw securely and reset the plug screw .
- (3) Adjust the position of the needle guard (rear) and tighten the screw securely.





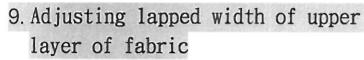
#### 9. 調整上裁片的疊縫寬度

#### 9-1 設定固定刀片的標準位置

- 1. 安置固定刀片①的刀尖 A 點必須對準 左側第一支針。
- 2. 活動刀片②擺動到最左邊,上下刀嚙合量 為 0.5mm,此時為上下刀安裝的標準位置。

#### 9-2 調整上裁片的疊縫寬度

- 1. 在左右移動固定刀片,同時伸縮活動刀片②保持固定嚙合量為 0.5mm,這樣就可以變更裁片的疊縫寬度。
- 放鬆螺絲⑤及④可移動固定刀片與活動刀片,
   注意,調整後必須確認螺絲再次鎖緊。

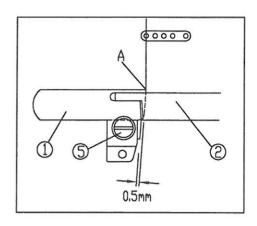


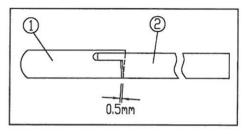
For the standard position of the lower knife  $\mathbb{O}$ , adjust the distance between the lower knife  $\mathbb{O}$  tip and the lower knife clamp  $\mathbb{O}$  to 0-0.5 mm.

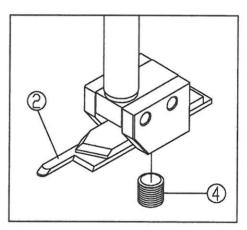
For the standard position of the upper knife<sup>3</sup>, the biting between the upper knife<sup>3</sup> and the lower knife<sup>1</sup> is 0.5 mm when the upper knife<sup>3</sup> is at the extreme left.

To move the fabric edge right or left, position the lower knife  $\mathbb{O}$ , and then move the upper knife to engage between the knives to 0.5 mm.

Loosen the screws @ and ⑤ to adjust the lower and the upper knives.







#### 10. 設定裁片疊向導模

#### NT67 標準疊向為左疊縫

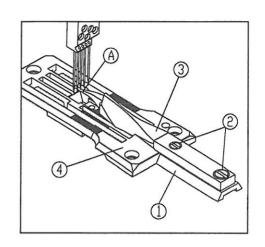
#### 10-1 標準設定位置

導模的尖端 "A" 對正四支針的中間,如果在必要時放鬆螺絲②,可修正尖端 "A" 的位置,導模座①推向前與針板外緣接觸,依裁片的厚度可稍稍退開一點。

#### 10. Use of lap former

Align the point A of the lap former with the center of four needles.

Depending on lapped edges of the fabrics or fabric feeding. loosen the screws and adjust the position. Set the position where the lap former slide block touches and stops in the front of the stitch plate. Depending on fabric thickness, adjust the position slightly toward the operator.



#### 11. 使用時各項調整

#### 11-1 針線張力調整梢

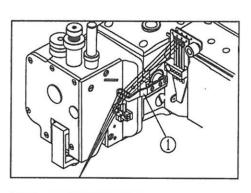
每一條針線各對應一支調整梢,可分別調整 針線上線環的大小

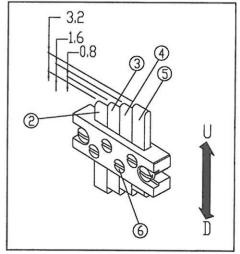
#### 11-1-1 標準設定位置

- 1. 降下揚線臂①到最低點。
- 2. 設定調整梢②端面與最右針針線輕輕接觸。
- 3. 設定調整梢③比②高 0.8mm。
- 4. 設定調整梢④比②高 1.6mm。
- 5. 設定調整梢⑤比②高 3.2mm。
- 6. 確認四支調整梢端面水平後,再確實鎖緊 螺絲⑥。

#### 11-1-2 變更調整梢的高低位置,可調整 針線線環的大小

- 1. 調整梢向上(U方向)針線線環加大。
- 2. 調整梢向下(D方向)針線線環減小。





#### 11. Adjustments

#### 11-1 Needle thread tension

Each of four needles has the needle thread strike-off pin which can adjust the thread tension respectively.

#### 11-1-1 Standard set position

- (1) Position the needle thread take-up at the lowest point.
- (2) Set the top of pin even with the needle thread of the fourth right needle.
- (3) Set the pin 3 even with or 0.8 mm higher than the pin 2.
- (4) Set the pin @ 1.6 mm higher than the pin @.
- (5) Set the pin 3.2 mm higher than the pin 2.
- (6) Tighten the screws © securely.

Note: Check the top of the pins are horizontally.

## 11-1-2 By changing the High / Low position of strike off pin, can changing the size of needle thread loops.

Loosen the screws 6 and move the pins up or down to adjust the needle thread loop.

- To make the loop larger, move the pins in the direction "U".
- To make the loop smaller, move the pins in the direction "D".

#### 11-2 針線導線梢

#### 11-2-1 標準設定值

- 1. 最右針的導線梢①其導線孔對正支架② 上的導線孔。
- 2. 設定導線梢③比①低 5mm。
- 3. 設定導線梢④比①低 9mm。
- 4. 設定導線梢⑤比①低 15mm。 確認導線梢線孔垂直支架後,鎖緊螺絲⑥。

#### 11-2-2 變更導線梢的高低位置可調整

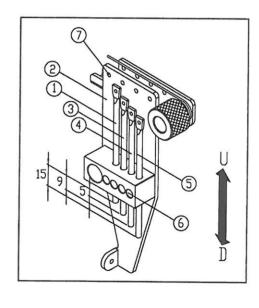
#### 針線的張力

- 1. 向上(U方向)針線較緊。
- 2. 向下(D 方向)針線較鬆。

#### 11-2 Needle thread eyelet

#### 11-2-1 Standard setting

- (1) Make height of the right needle thread eyelets ① to align their eyes with the eyes ⑦ of the needle thread eyelet holder ②.
- (2) Set the eyelet 3 5 mm lower than the eyelet 0.
- (3) Set the eyelet 9 mm lower than the eyelet 0.
- (4) Set the eyelet 15 mm lower than the eyelet 0.



#### 11-2-2 How to adjust thread tension

Loosen the screws 6 to adjust the needle thread tension.

- To tighten needle thread, move the eyelets in the direction "D".
- To loosen needle thread, move the eyelets in the direction "U".

#### 11-3 線環抑制彈簧

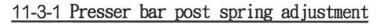
在縫製作業途中,如果要取出裁片,反轉手輪時, 線環抑制彈簧可使縫針外側不致產生線環。

#### 11-3-1 調整方法

放鬆螺絲②旋轉旋鈕③,使簧線①末端下降 距水平線 3mm 後鎖緊螺絲②。

#### 11-3 The stitch unlock spring

If need to take out sewing pieces during sewing operation, Turn hand wheel counter – clock wise, the stitch unlock spring can prevent the thread loops will not be created outside the needle from happening.



The end of needle thread presser spring should be 3 mm lower than the threads horizontal position. To make adjustment, loosen screw and turn knob. After this adjustment, tighten screw.

#### 12. 下結線鈎縫線張力

下結線鈎揚線凸輪設定說明,觀測方向如圖

#### 12. Adjusting looper thread tension

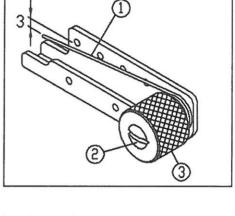
Looper thread take-up guide setting explaination and the observation direction is as diagram A

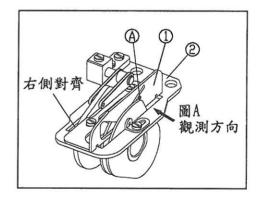
#### 12-1 標準設定位置

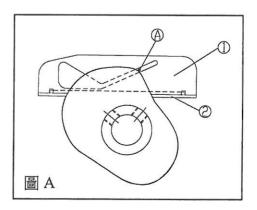
先將導線板<sup>①</sup>與座板<sup>②</sup>的右側對齊

## 12-1 Position of looper thread take-up guide:

Align the looper thread take-up guide with the right side of the eyelet supporting plate.







#### 12-2 揚線時序

針棒由上死點下降 2.8mm 時,揚線凸輪上的縫線 正好通過 A 點。

時序提前可增加揚線量,時序延後可減少揚線量。

#### ※注意:

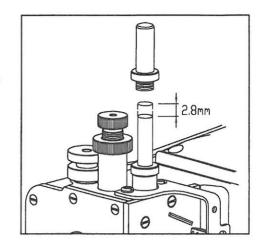
- (1) 在調整揚線凸輪的時序時,不可造成 軸向的移動,以免與其它零件干涉。
- (2) 揚線時序調整過度時會造成跳針。

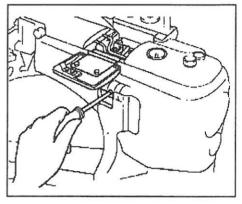
#### 12-2 Timing of looper thread take-up:

Position the looper thread take-up @ as its standard position that looper thread passes thru the point A when the needle bar @ is 2.8 mm lower from its highest point.

Loosen the screws 5 to adjust it.

- To increase the looper thread take-up amount, fasten the timing.
- To decrease the looper thread take-up amount, delay the timing.





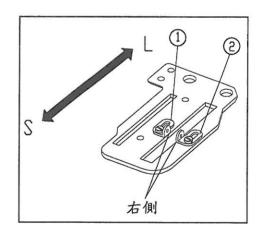
#### 12-3 設定導線孔位置

導線孔①、②推向最右側,如右圖標準位置。 向 L 方向移動增加揚線量 向 S 方向移動減少揚線量

## 12-3 Position of looper thread take-up eyelet:

Set the looper thread take-up eyelets ① and ② at the extreme right as standard. To increase the looper thread take-up amount, move them in the direction "L".

• To decrease the looper thread take-up amount, move them in the direction "S".



#### 13. 飾縫結線鈎張力

飾縫結線鈎揚線凸輪設定說明時,觀測方向如右圖

#### 13-1 標準設定位置

#### 13-1-1 導線孔安裝位置

導線孔①距座板上面 4.4mm, 放鬆螺絲③可調整

導線孔的位置。

導線孔向下調整,可增加揚線量。

導線孔向上調整,可減少揚線量。

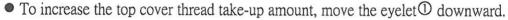
#### 13. Top cover thread tension

The top cover thread take-up setting and observation direction are seen as in Fig. B

#### 13-1-1 Position of thread take-up eyelet:

The standard position is 4.4 mm. from the top of the eyelet supporting plate to thread take-up eyelet 2.

Loosen the screw and move the eyelet up Or down to adjust it.



■ To decrease the top cover thread take-up amount, move the eyelet ① upward.

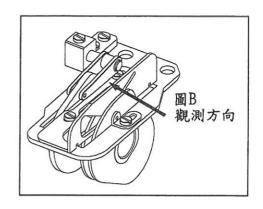
#### 13-1-2 揚線時序

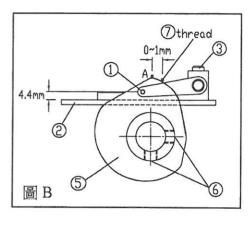
上飾線⑦被掛線鈎④鈎到時,上飾線在揚線凸輪上距 A 點 0~1mm,調整時可放鬆螺絲⑥來調整。

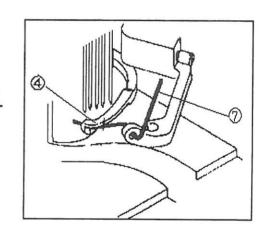
#### 13-1-2 Timing of top cover thread take-up:

The moment when the top cover thread is hooked by the top cover thread hook 4, the thread is at the distance 0 - 1.0 mm apart from the top 4 of the take-up 5.

Loosen the screws 6 to adjust it.







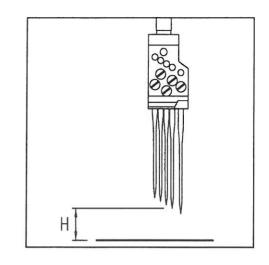
#### 14. 設定針高

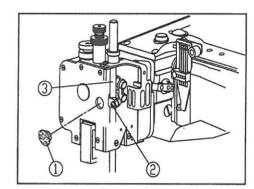
針棒在行程的最高點,由左邊算起第4支針 距針板面高度為:

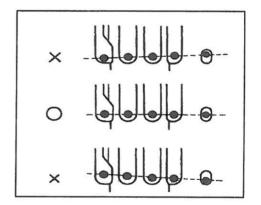
機型	高度 H
NT67-□M5	13.5
NT67-□M6	12.7

調整時拿下孔塞①,放鬆螺絲②,上下移動 針棒③到適當的位置,完成後確實鎖緊螺絲②, 再放回孔塞①。

※注意,移動針棒且不可使針棒轉動造成 縫針與針板干涉。







#### 14. Setting Height of needle

Setting the height "H" of the needle from the top of the stitch plate to the tip of the fourth needle from the left when the needle is at the highest point.

 Needle distance
 Height (H)

 R: 5.2 mm
 13.49 mm

 S: 6.0 mm
 12.7 mm

#### Adjusting height:

- (1) Remove the seal plug ①.
- (2) Loosen the screw 2.
- (3) Move the needle bar up or down to adjust the height.
- (4) Tighten the screw 2 securely.
- (5) Reset the seal plug ①.

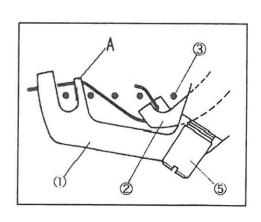
X Caution: When moving needle bar, please make sure, there is no interference between needles and needle plate.

#### 15. 調整上飾線掛線鈎與撥線器

#### 15-1 撥線器設定位置

撥線器①擺向最左邊,其叉部 "A" 將上飾線頂出線環,使第1、2支針(由左邊算起) 通過線環的前面。

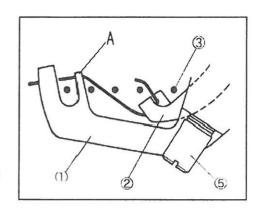
調整時放鬆螺絲⑤移動撥線器,完成後必須 確實鎖緊螺絲⑤。



## 15. Adjusting Top cover thread carrier and hook

#### 15-1 Setting Top cover thread carrier:

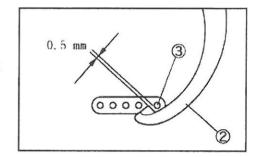
Position the top cover thread carrier to Its leftist side, its fork tip will push top cover thread out from needle thread loop, so that the top cover thread loop formed when the hook passes behind the first and the second needles from the left, by the time when the carrier comes most nearly to the needle. loosen the screw to adjust it.



#### 15-2 掛線鈎設定位置

掛線鈎②擺向最右邊時,其鈎部與定位針(最右針) 間隙為 0.5mm。

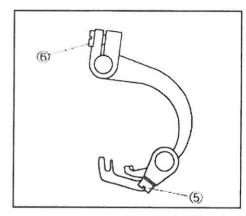
掛線鈎向左擺動與撥線器①交會時,間隙為 0.4~0.7mm 調整時放鬆螺絲⑥,移動掛線鈎②完成後, 必須確實鎖緊螺絲⑥。



#### 15-2 Setting top cover thread hook:

When the top cover thread hook comes most near to the top cover thread carrier, make the clearance between them to 0.4 - 0.7 mm during one rotation. When the hook moves at the extreme right, make the clearance between the hook and the retainer to 0.5 mm.

Loosen the screw 6 to adjust them.



#### 16. 下結線鈎

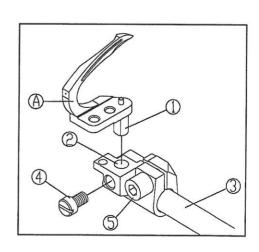
#### 16-1 安裝

下結線鈎柄部①完全插入承座的孔內②, 同時 A 面垂直擺動軸③,鎖緊固定螺絲④。

#### 16. Looper

#### 16-1 Installation:

Insert the looper into the hole of the looper holder inmost position and tighten the screw securely.



#### 16-2 下結線鈎與針的相互關係

#### 16-2-1 下結線鈎與針的左右位置

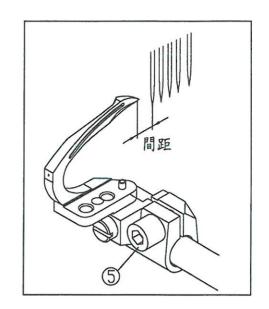
下結線鈎擺動到最左邊時,其鈎尖與最左針中心間距如附表。放鬆螺絲⑤調整間距後,確實再鎖緊。

針距	間距
5.2	4.76
6.0	4.36

## 16-2 Distance between looper and needle: 16-2-1 Standard setting position

The standard distance between the looper tip and the center of the left needle is 4.2 – 4.8 mm, when the looper is at the extreme left.

Loosen the screw to adjust it.



#### 16-2-2 下結線鈎與針的前後位置

下結線鈎在針的後方由左向右擺動,當鈎尖擺動 到左針中心時,間隙為 0~0.05mm。

放鬆螺絲⑤旋轉螺絲⑥右旋可使鈎尖貼近縫針, 左旋可使鈎尖遠離縫針,調整後,確認間隙 再鎖緊螺絲⑤

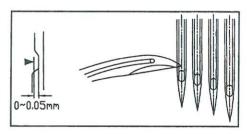
## <u>16-2-2 Front-and-rear position of looper</u> and needle:

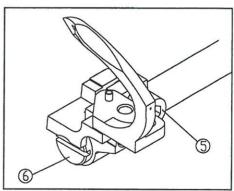
When the looper moves from the left to the right, it passes behind the needle.

Adjusting its position when the looper tip comes closely to the center of the left needle with the clearance of 0 - 0.05 mm but without touching the needle.

Loosen the screw<sup>⑤</sup> and turn the adjusting screw<sup>⑥</sup> to adjust.

- To move forward, turn the screw 6 clockwise.
- To move backward, turn the screw 6 counter-clockwise.





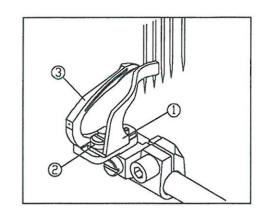
#### 17. 前導針器

#### 17-1 標準設定位置

當下結線鈎由左向右擺動到左針中心時, 前導針器與針的間隙為 0,放鬆螺絲②調整後 再確實鎖緊。

#### 17-2 確認方法

旋轉手輪,下結線鈎由左向右擺動,從縫針 的背後掃掠過,確認鈎尖擺動到左邊第一支針 的中心時其間隙為0,同時導針器與針的間隙 也為0。

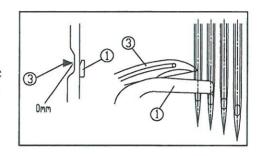


#### 17. Needle guard (front)

#### 17-1 Standard setting position:

Push the needle guard(front) os that the clearance between the needle and the looper is 0 mm, when the looper tip comes at the center of the left needle.

Loosen the screw to adjust it.



#### 17-2 Checking

Check the looper tip touches the back of the needle and the needle does not swing to the right, when the looper<sup>3</sup> moves from the left to the right while rotating the hand wheel.

#### 18. 後導針器

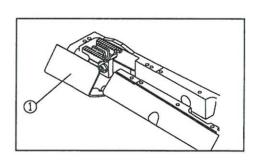
後導針器在最接近縫針時,其間隙為 0.05~0.1mm, 打開下結線鈎護蓋①,放鬆螺絲②調整後導針③, 再確實鎖緊螺絲。

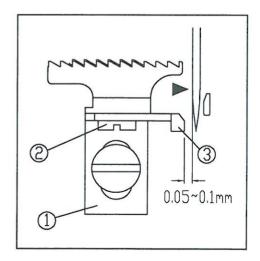
#### 18. Needle guard(rear)

#### 18-1 Standard setting position:

Make the standard clearance between the needle guard(rear) and the left needle to 0.05 - 0.1 mm, when they meet most closely.

Open the looper cover and loosen the screw to adjust it. check the needle does not swing to the right when the looper moves from the left to the right while rotating the hand wheel.





#### 19. 設定送布齒高度

#### 19-1 安裝送布齒

主送布齒③差動送布齒①是分別由螺絲②及④ 來固定的。

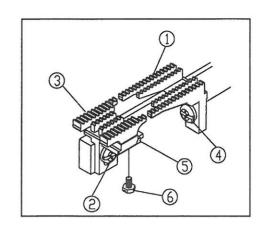
先將後導針器⑤推向最後方,輕輕鎖緊螺絲⑥。

#### 19. Height of feed dog

#### 19-1 Installation:

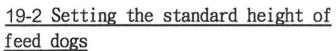
Fix the differential feed dog ① and the main feed dog ③ with the screws ② and ④ respectively.

Set the needle guard(rear) on the main feed dog and tighten it at the most rear position with the screw slightly. Note: See "section 18 Needle guard(rear)" to adjust it.



#### 19-2 設定送布齒高度標準設定位置

送布齒運行到行程的最高點,如右圖, 其主送布齒的 A 點浮出針板面 1.2~1.5mm。 副送布齒則順著主送布齒的齒面斜度平順的安裝, 必要做齒面高度微調時,可放鬆固定螺絲⑦, 旋轉偏心梢®來升降送布齒的齒面高度。



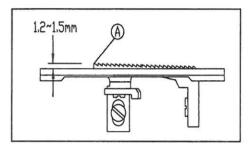
Setting the height from the top of the stitch plate to the tip of teeth of the main feed dog A to 1.2 - 1.5 mm when the feed dog is at its highest position.

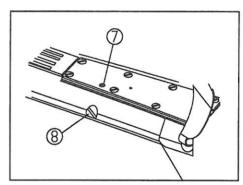
Align the differential feed dog evenly with the main feed dog.

Make micro - adjustment of height of the main feed dogs, and the differential feed dogs with the feed bar eccentric pin 8, near the center of the cylinder bed.

Loosen the screw and move the pin to adjust it.

- To raise the feed dog, turn the pin® clockwise.
- To lower the feed dog, turn the pin® counter-clockwise.





#### 20. 更換壓腳組

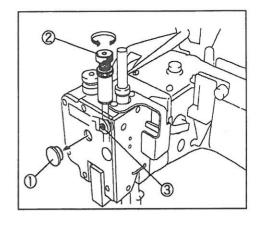
#### 20-1 請依照以下順序取下壓腳組

- 1. 取下孔塞①取下所有的縫針。
- 2. 取下調整螺椿②放鬆螺絲③。

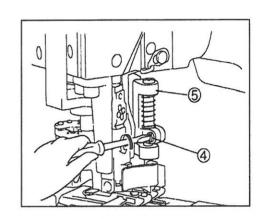
#### 20. Replacing presser foot

#### 20-1 Removing:

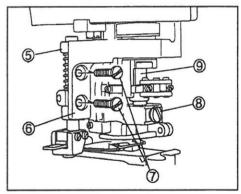
- (1) Remove all needles and the seal plug ①.
- (2) Loosen the adjusting screw and then the screw form the presser bar connecting bracket.



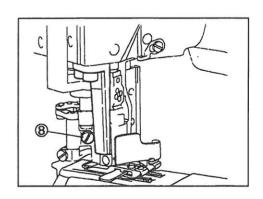
- 3. 放鬆螺絲④釋放活動刀片的壓力。
- (3) Loosen the screw form the knife holder guide collar to be free the complete set including the upper knife, the knife holder, and the knife holder shank.



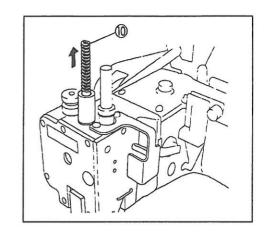
- 4. 取下螺絲⑦取下活動刀架組⑤。
- (4) Loosen two screws of form the knife holder bracket to remove the knife holder guide collar set and the upper knife.



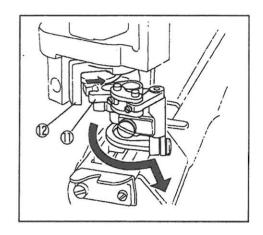
- 5. 放鬆壓腳棒固定螺絲®。
- (5) Loosen the screw® on the back of the presser foot.



- 6. 旋轉手輪將針棒升到最高點。將壓力彈簧 與壓腳棒⑩同時抽出。
- (6) Rotate the hand wheel to raise the needlebar at its highest point.
  - Remove the adjusting screw② and keep the presser bar⑤ and the presser spring⑩ upward when taking off from the presser foot.



- 7. 將驅動梢⑫與驅動叉⑪脫離。
- 8. 依箭頭指示方向旋轉壓腳組,即可取出壓腳組。
- (7) Remove the carrier/hook driving segment on the carrier/hook driving sleeve.
- (8) Turn the presser foot set to the left and remove it through the presser foot guides (left) and (right) backward as shown as arrow direction.

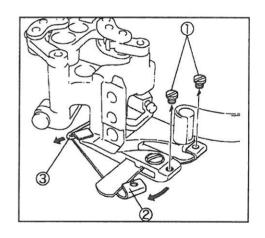


#### 20-2 更換彈性壓板

- 1. 取下螺絲①。
- 依箭頭方向先取下一邊的彈性壓板,再取下 另一邊。
- 3. 更換後依反方向再次裝回壓板

## 20-2 Replacing presser foot spring plate: Removing:

- (1) Remove the screws ①.
- (2) Remove the presser foot spring plates 2 from the presser foot.
- (3) Remove each plate of from the spring plate holder.



#### Resetting

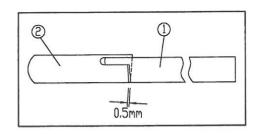
- (1) Reset each presser foot spring plate 2 with the spring plate holder 3.
- (2) Reset the plates parallel each other underneath the presser foot 2.
- (3) Tighten the screws ① securely.

#### 21. 調整更換修邊刀

#### 21-1 上下刀之間的迫緊壓力

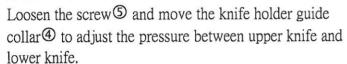
縫針在行程的上死點,上刀擺向最左邊, 壓腳貼緊針板面,上下刀嚙合最大時,上刀架內面 與定位叉下面之間的間隙為 lmm。

放鬆螺絲⑩,上下移動定位叉⑪,可變換迫緊壓力調整後必須確認上下刀片,沒有與壓腳干涉。



## 21. Replacing and adjusting knives 21-1 Pressure between upper knife and lower knife:

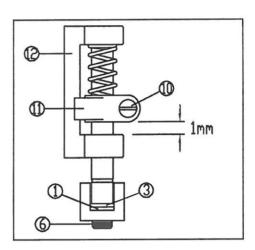
When the needle is at its highest point and the upper knife is at the extreme left, the presser foot touches the stitch plate, and the upper knife touches the lower knife closely. The standard clearance between the bearings of the knife holder shank support and the knife holder guide collar is 1.0 mm.



- To increase the pressure, move the collar 4 Up ward.
- To decrease the pressure, move the collar downward.

Note: Align the front sides of the upper and the lower knives and can not touching the presser foot.

After checking, tighten the knife holder guide collar with the screw.



#### 21-2 更換刀片

#### 21-2-1 更換上刀片

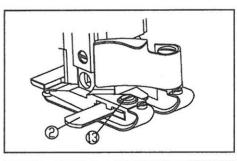
放鬆螺絲⑥即可抽出上刀片,更換後確實鎖緊螺絲⑥。

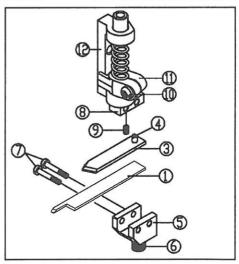
#### 21-2-2 更換下刀片

放鬆螺絲③即可抽出下刀片②,更換後確實鎖緊螺絲③。

微調上下刀的剪切角度,分解①③④⑤⑥⑦露出螺絲⑨,微調螺絲⑨的凸出量,可改變上刀水平方向的剪切角度。

※注意,螺椿④不可凸出壓板③的底面。





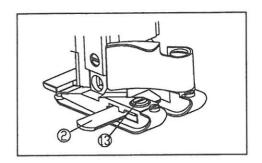
#### 21-2-1 Changing the knives:

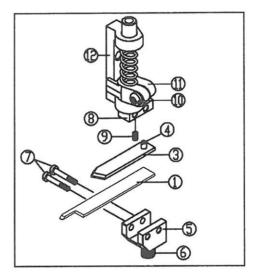
- (1) Loosen the screws and to remove the upper knife.
- (2) Loosen the screw to remove the lower knife.
- (3) Reset the lower knife with the screw.
- (4) Reset the upper knife with the screw. See "9" Adjusting lapped width of upper fabric" for engagement of the nives.
- (5) Adjust the knife holder guide collar (4), referring to above "Pressure of upper knife".

#### 21-2-2 Adjusting knives

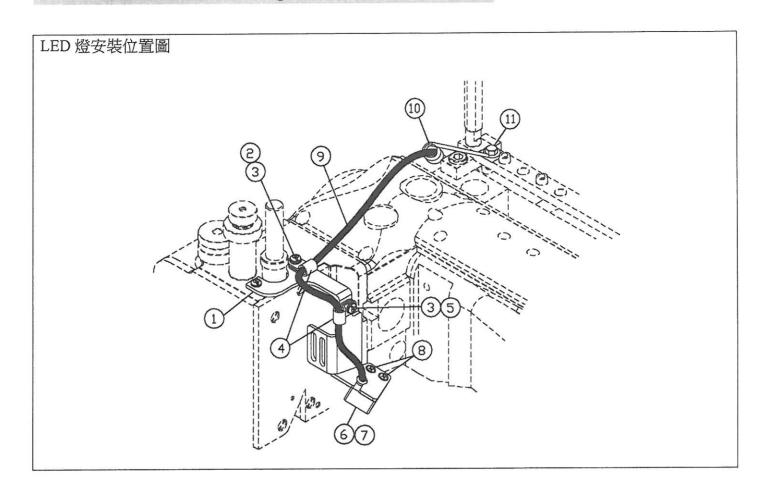
Remove the parts ① to ⑤ first. and turn the screw ⑥ to adjust the engaging angles between upper knife and lower knife.

When adjusting, make sure the screw can not out from the flat bottom of knife support and then, insert it into the bracket hole and tighten it.





#### 22.LED 燈安裝位置 LED light installation position





NTD7701 4-Needle, 6-Thread Flat-Seamer, Feed-Off-The-Arm Machine



MT4512P-050 / PMD / FR01 12-Needle Double Chain Stitch Machine (Lower Feed Metering Device \ Elastic hemmer )



#### UHU9304/TR025 Automatic chain cutter device direct-drive cylinder bed top feed overlock fitted with labor-saving rib folder



CXM2085-0-356M Attaching Pre-Closed Flat Knit Elastic Band Onto Waists Of Tubular Goods (With Right Knife, Rear Puller & Chips Suction Pipe)

