

# 金輪牌工業用縫紉機

GOLDEN WHEEL INDUSTRIAL SEWING MACHINE

使用說明書

INSTRUCTION MAUNAL

CSN-1300N SERIES / CSN-1300N 系列

啟翔股份有限公司

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# INDEX

## OPERATION GUIDE

- A、INSTALLATION
- B、MOTOR AND BELT
- C、LUBRICATION OIL
- D、CHANGE OF LUBRICATING OIL
- E、REPLACING OIL FILTER
- F、HOW TO REPLACE THE NEEDLES
- G、THREADING
- H、ADJUSTING THREAD TENSION
- I、ADJUSTING THE NEEDLE THREAD EYELET
- J、ADJUSTING OF TOP COVER THREAD EYELET
- K、ADJUSTING PRESSER FOOT
- L、ADJUSTING THE PRESSURE OF PRESSER FOOT
- M、ADJUSTING STITCH LENGTH
- N、ADJUSTING DIFFERENTIAL FEED RATIO

## ADJUSTMENT GUIDE

- A、ADJUSTING THE HEIGHT OF NEEDLE BAR
- B、POSITION OF NEEDLE AND LOOPER
- C、ADJUSTING TIMING RELATION BETWEEN NEEDLES AND LOOPER
- D、ADJUSTING THE HEIGHT OF REAR NEEDLE GUARD
- E、ADJUSTING FRONT AND REAR NEEDLE GUARD
- F、ADJUSTING THE HEIGHT OF FEED DOG
- G、ADJUSTING THE POSITION OF THE SPREADER
- H、FIXING OF TOP COVER THREAD GUIDE & TOP COVER THREAD EYELET
- I、THE POSITION OF LOOPER THREAD TAKE-UP

# 索引

## 一、使用說明

- |              | PAGE/ |
|--------------|-------|
| A、安裝         | 2-3   |
| B、馬達與皮帶      | 4     |
| C、潤滑油        | 4     |
| D、潤滑油的更換     | 5     |
| E、濾油器之更換     | 5     |
| F、擊針的選用及更換方式 | 6     |
| G、穿線方式       | 6-7   |
| H、拉線鬆緊度的調整   | 8     |
| I、針線過線桿的調整   | 8-9   |
| J、上飾線控線桿的調整  | 9     |
| K、押腳調整       | 9     |
| L、押腳壓力強度的調整  | 10    |
| M、縫目長度的調整    | 10    |
| N、差動比的調整     | 11    |

## 二、調整說明

- |               |       |
|---------------|-------|
| A、針棒高度的調整     | 12    |
| B、針與勾針位置的說明   | 13-14 |
| C、針與勾針的時間關係調整 | 14-16 |
| D、頂針片高度的調整    | 16    |
| E、前後頂針片的調整    | 17    |
| F、送布齒高度的調整    | 18    |
| G、上叉位置的設定     | 18-19 |
| H、上飾線之導線器的固定  | 19-20 |
| I、勾針控制線桿的位置   | 20-21 |



# GOLDEN WHEEL

## 一、使用說明：

### A、安裝 (INSTALLATION)：

- 1、請依本機所附之各式桌板裁製圖，根據實際上之需求，裁製正確桌板。

(Before installing machine, please refer to table cut-out drawing to cut out table correctly.)

- 2、在依序安裝防震膠墊，或支撐架及其他副件

(According to the sequence of installation, fix quake-proof, base-fixed plate and other attachments.)

#### \*注意 (NOTE)：

- (1) 一般桌板 (General table) —

請依右圖所示順序安裝膠墊支架及防震膠墊。(圖 1)

(According to the sequence of Fig.1, install quake-proof Rubber Cushion and the frame of the Cushion. (Fig.1))

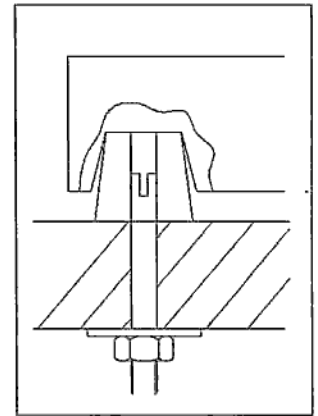
- (2) 下沉式桌板 (Sinking style table) —

請依右圖所示確實安裝機台支架，再安裝膠墊支架及防震膠墊。

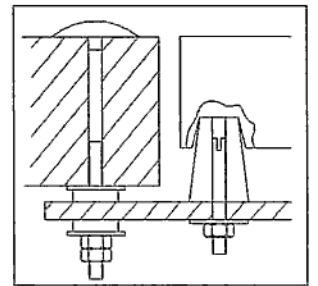
(According to Fig.2 install the machine frame, and again to install the quake-proof Rubber Cushion and the frame of the Cushion.)

- 3、馬達之轉向為順時鐘方向，皮帶支鬆緊度以用手指向內壓 2 cm 為一般標準，同時為了安全起見，請將上、下皮帶蓋蓋上。(圖 3)

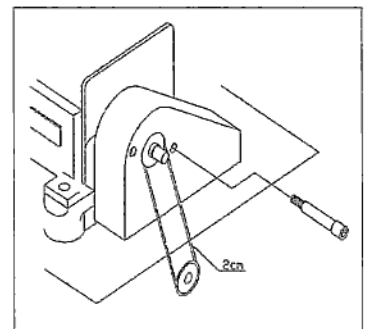
(Be sure that the Motor turning direction is



(Fig. 1)



(Fig. 2)



(Fig. 3)



# GOLDEN WHEEL

clockwise, and the Motor Belt tension can be pressed with finger inward 2 cm. For safety reason, please fasten the Belt Cover. (Fig. 3)

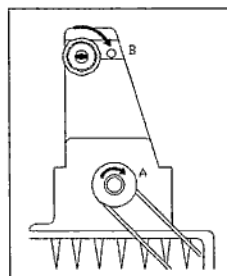
- 4、皮帶輪相對轉速與皮帶尺寸請參照表 1。本機最高的車縫速度為每分鐘 6000 轉，一般轉速為每分鐘 5500 轉（於裝上皮帶輪後，最高轉速為 4500 轉，一般轉速為 4000 轉）。為了提高機台使用壽命，新機於開始使用的前 200 小時（約 1 個月）內，其轉速切勿超過每分鐘 5000 轉。（圖 4）驅動輪與皮帶軸之轉向皆為順時鐘方向。

(For machine is long-life and durable operation, it is recommended that the maximum speed should not exceed 80% of the speed listed on Table 1. Make sure to choose the correct size of Motor Pulley and Belt.)

The turning direction of pulley (A) is clockwise like Handwheel (B). (Fig. 4) Table 1 (表 1)

Machine speed (s. p. m.)	Motor pulley Outer Diameter (mm)		Motor Belt V-BELT, M-TYPE
	60HZ	50HZ	
6000	105	125	36" ↑ 35" ↓ 34"
5500	95	115	
5000	85	105	
4500	80	95	
4000	70	85	

(Fig. 4)



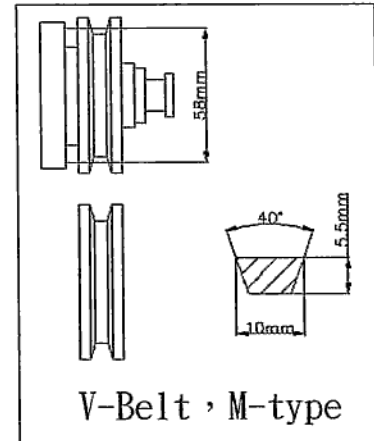


# GOLDEN WHEEL

## B、馬達與皮帶 (MOTOR AND BELT) :

- 1、請依照表 1 所指示之規格安裝馬達，並使用 M 番之 V 型皮帶。

安裝馬達時，馬達驅動輪與機器皮帶輪之中心點須呈一直線。而在使用離合器馬達時，所謂馬達驅動與機器皮帶輪之中心點呈一直線，是指離合器馬達驅動輪，因起動踏板下踏而向左靠列底的狀態下。(圖 5)



(Use Clutch Motor and V-Belt of M-type.

(Fig. 5)

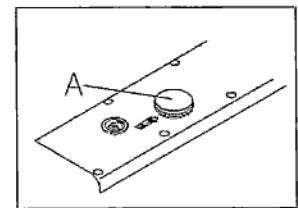
Position Motor so that its center aligns With the center of machine is Pulley when the Pulley is shifted to left the by treading Pedal.) (Fig. 5)

## C、潤滑油 (LUBRICATION OIL) :

- 1、請選用與 Mobil#10 或 Esso#32 同級之潤滑油。

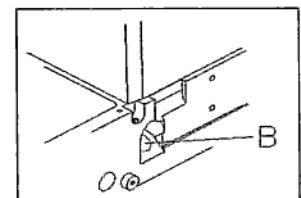
(Please use oil Mobil#10, Esso#32 or its equivalent.)

- 2、在新機使用前請先注入潤滑油。旋開頂蓋上的噴油檢視蓋 (A)，將油緩緩注入機器中，待油滿至油量指示窗 (B) 上下線之間即可。(圖 6)



(Fig. 6)

(As the oil has been completely drained before shipment, please fill lubrication oil first before the new machine to be used.) (To remove Oil Sight Window Plug (A) and fill the oil slowly until the oil



(Fig. 6)

level reach between lines H and L of Sight Gauge (B). (Fig. 6) )

於每天開機操作時，請先檢查噴油狀態是否正常且注意油量是否低



# GOLDEN WHEEL

指示窗下限，若低於下限請隨時補充新油。

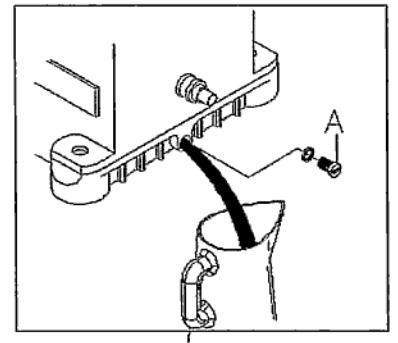
(When you begin operating the machine everyday, please check whether all the lubricating system is in good condition.

If oil is lower under L line of Oil Sight Gauge (B), please supply oil. (Fig.6))

## D、潤滑油的更換 (CHANGE OF LUBRICATING OIL):

- 1、為延長本機的使用壽命，請於開始使用後的一個月內更換第一次新油，以後約每六個月更換一次。

更換潤滑油時，請先取下 V 型皮帶，再將機器自工作台取下。先卸下放油螺絲 (A)，並倒乾油槽內之舊油，此時，注意勿污染 V 型皮帶。待舊油完全排出後，再將放油螺絲鎖緊，在依 C-2 的步驟注入新油。(圖 7)



(Fig.7)

(For machine long-life and durable performance, please replenish lubricating oil after one-month operation and it must be completely changed every six months thereafter.)

(Please remove V-belt from Pulley and remove machine from Table, After removing Screw (A) and draining all the used oil from the Reservoir. When you replenish new oil, take care not to smear V-Belt with oil then tighten Screw without fail. (Fig.7))

## E、濾油器之更換 (REPLACING OIL FILTER):

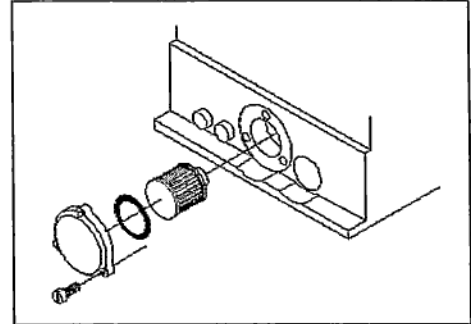
- 1、本機裝有濾油器，新機使用一個月後必須更換新品。此後約每六個月更換一次。(圖 8)

(The machine is equipped with an oil Filter as Fig.8, when Oil



# GOLDEN WHEEL

Filter gets clogged with dirt, the proper lubrication is impossible.)  
(Therefore, please change Oil Filter after one month initial operation and please change Oil Filter every six months thereafter.)



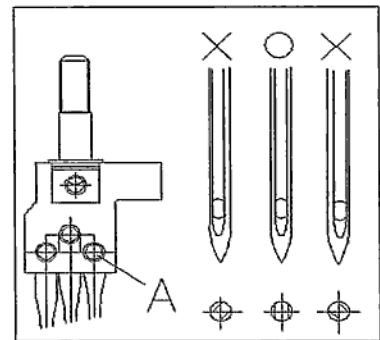
(Fig. 8)

## F、 擊針的選用及更換方式 (HOW TO REPLACE THE NEEDLES):

- 1、 本機使用編號 UY/128GAS 的各式大、小番號擊針或其他相同規格的产品。

(Please use all kinds of model number UY/128GAS of Organ is needle or its equivalent.)

- 2、 在更換擊針時，請先旋開鎖針螺絲 (A)，並取下舊針，再依車縫布料厚薄、質料，選定最合適之擊針，將新針插至針榴之最頂端，且使長溝面被向自己。(圖 9)



(Fig. 9)

(When replacing new needles, loosen

Screw (A), then pull out the used needles,

insert the new ones into the hole of Needle Holder as far as they can go and adjust the Needle Scarf facing rearwards from operator is view.) (Fig. 9)

- 3、 重新將鎖針螺絲鎖緊 (A)。

(Fasten screw (A)).

## G、 穿線方式 (THREADING):

- 1、 請按照圖中所指示的穿線方式，正確穿線。若穿線方式錯誤，將會引



# GOLDEN WHEEL

起斷線、跳針或車縫不平坦等現象。(圖 10)

(Please refer to Fig.10. for threading. Wrong threading may cause thread breakage, stitch skipping, puckering, uneven seam, ect.)

2、 A. B. C... ..擊針線，D...上裝飾線，E... ..下勾針線。(圖 10)  
(A. B. C. are needle threads, D is top covering thread, E is looper thread.)

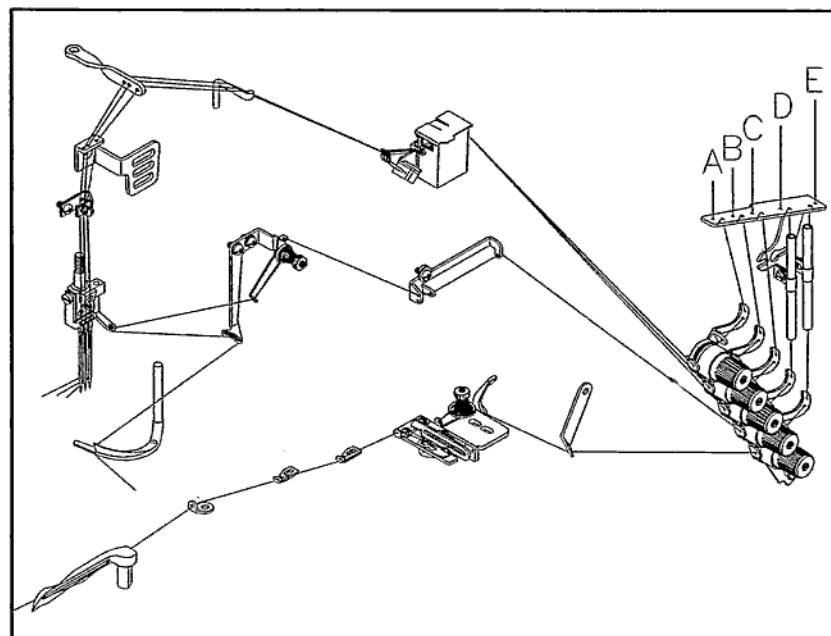
3、 若用三針車縫，則穿線方式如圖所示。若用二針車縫，穿線方式亦相同，所不同者僅是擊針線穿二針而已。(圖 10)

(The illustration Fig.10 Shows the threading for 3-Needle Machine)

(When cotton or nylon threads is used as looper thread, The thread should go through Fig.10-a as shown.)

當下勾針線使用棉線或伸縮尼龍線時，其穿線方式並不相同，請參照圖 10 a 中的正確方式穿線。

(When wooly, nylon or similar thread is used as Looper thread, please refer to Fig 10-a for threading.)



(Fig. 10)



# GOLDEN WHEEL

## H、拉線鬆緊度調整 (ADJUSTING THREAD TENSION) :

拉線的強弱必須根據車縫的布料，厚薄及線與針距的不同，而做調整，將針線控制鈕順時鐘方向旋轉時，線愈緊，反之則愈鬆。

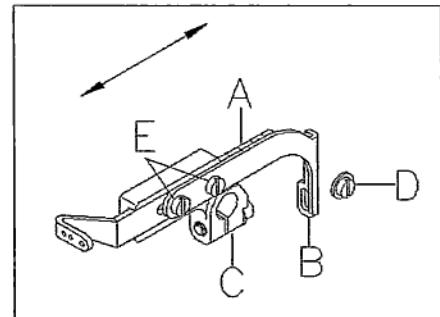
(The tension of the thread depends on a、The material and the thickness of the fabric to be sewn ; b、The threads to be used ; c、The stitch width , stitch length , etc.)

(If you turn the Thread Tension Spring Cap clockwise , thread will be tighter , on contrary , it will be looser.)

(Make the thread tension as weak as possible according to the sewing condition as long as stable seam can be obtained.)

## I、針線過線桿的調整 (ADJUSTING THE NEEDLE THREAD EYELET) :

- 1、當針棒降至最低時，針線提線過線桿 (A) 向左下方傾斜右端上飾線提線過線桿長溝的中心點 (B)，對準上飾線過線桿固定螺絲的中心點，(圖 11) 必要時可放鬆螺絲調整之。



(Fig. 11)

(When the Needle Bar down to the lowest position , the center of groove hole (B) should centralize to the fixing screw of Top Cover Thread Eyelet (D).)

- 2、本機的針線提線過線桿 (A) 上有六個刻度，本機於出廠時皆將針線提線過線桿上由右至左算起的第四個刻度對準托架 C 右端，再連同上飾線提線過線桿一起鎖在托架上。

(Or when the Needle Bar is up to the highest position , the top edge of Needle Thread Take-up and Top Cover Thread Take-Up should



# GOLDEN WHEEL

remain horizontal.)

- 3、 欲將針線調緊些，可將針線提線桿(C)向右方移動，反之則可將針線調鬆些，鬆開 2 個螺絲(E)做以上調整。

(There are six graduations on the Needle Thread Take-Up, the fourth graduation should align with the right end of Bracket.

To adjust it by loosening two Screws (E). (Fig.11) )

## J、 上飾線控線桿的調整 (ADJUSTING OF TOP COVER THREAD EYELET) :

- 1、 除針線控制鈕可調整上飾線之張力外，上飾線過線桿(1)亦可調整上飾線之鬆緊(圖 12)，鬆開固定螺絲(2)，將上飾線過線桿往下移，可將上飾線放鬆，反之，則可將上飾線收緊。

(The tension of top cover thread also as be adjusted by loosening Screw (2) then moving Top Cover Thread Eyelet upward or downward (Fig.12) )

- 2、 當針線控制線桿向左下方傾斜大一點，則可將上飾線放鬆，反之則可將上飾線收緊。

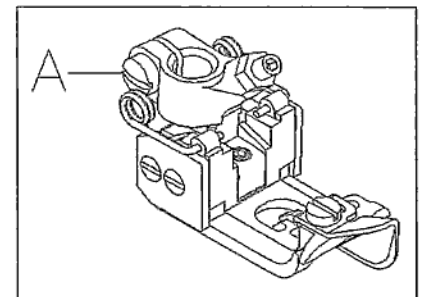
## K、 押腳的調整 (ADJUSTING PRESSER FOOT) :

- 1、 鬆開押腳固定螺絲(A)左右搖動，調整押腳，使針尖位於押腳針孔的正中央，調整好後，再將固定螺絲鎖緊。(圖 13)

(Loosen Screw (A) and adjust Presser Foot left and right to a proper

position where the needles can get

into the center of Presser Foot eyelets. After adjusting, tighten Screw A. (Fig.13) )



(Fig.13)



# GOLDEN WHEEL

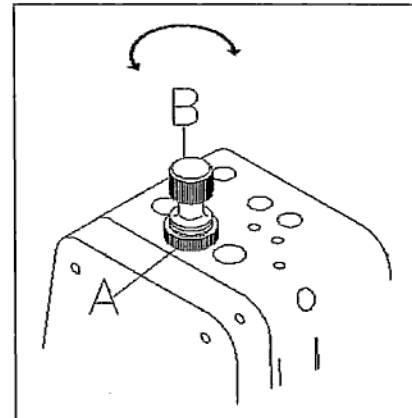
## L、 押腳壓力強度的調整 (ADJUSTING PRESSURE OF PRESSER FOOT) :

- 1、 若要求布料車縫順暢且縫合完美，押腳壓力應盡量輕些。

(Adjust Presser Foot pressure as weak as possible, so that cloth can be sewn smoothly.)

- 2、 鬆開螺帽(A)，轉動螺絲(B)，待其調整至適當壓力後再將螺帽(A)鎖緊。(圖 14)

(To adjust, loosen nut (A), turn screw (B) to a proper pressure, then fasten nut (A). (Fig.14) )

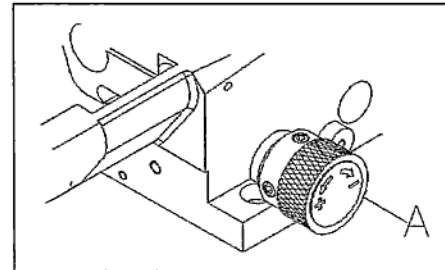


(Fig. 14)

## M、 縫目長度的調整 (ADJUSTING STITCH LENGTH) :

本機的標準縫目為最粗針 1 英吋約 4 針半，最細針 1 英吋約 15 針，採用無階段式調整。

(Stitch length can be adjusted in any range from 1.2 mm~3.6 mm or 7-18 stitches per inch.)



(Fig. 15)

- 1、 將針距調整鈕順時鐘方向旋轉時，則縫目愈密，反之則愈疏。(圖 15)

(Turn Knob A clockwise, the stitch length becomes short, on contrary, it becomes long. (Fig.15) )

- 2、 本機可於機器運轉狀態下，旋轉針距調鈕調整縫目長度，不須停機。

(You can adjust the stitch length at ease when machine is being operated. There is no need to stop the machine.)

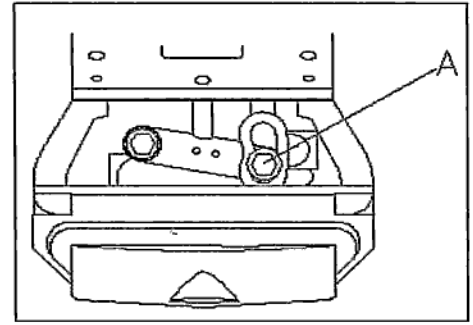


# GOLDEN WHEEL

## N、差動比的調整 (ADJUSTING DIFFERENTIAL FEED RATIO)：

- 1、本機之差動比可從 1：1.7 調整至 1：5.6。

(The differential feed ratio of this machine is adjustable from 1：1.7 to 1：5.6)



(Fig. 16)

- 2、將圓筒上側蓋向左打開，用 3 mm 之內六角扳手放鬆絲(A)上下移動即可調整差動比。(圖 16)

(Open the Upper Cylinder Side Cover and use 3 mm Hexagon Wrench to loosen the Screw (A).)

- 3、將差動驅動連桿往上移動時，則差動齒比主齒傳動速度快，可做摺景車縫，反之，則差動齒比主齒，傳動速度慢，可做伸展布料車縫使用。(Move the Differential Feed Bar upward, the ratio become large to gather the cloth. Move it downward, the ratio become small to stretch the cloth.)



# GOLDEN WHEEL

## 二、調整說明 (ADJUSTMENT GUIDE) :

### A、針棒高度的調整 (ADJUSTING THE HEIGHT OF NEEDLE BAR) :

1、當針棒移到最高點時，左針尖端與針板距離 (Table 2.)

離如附表 2，為針棒之標準高度。

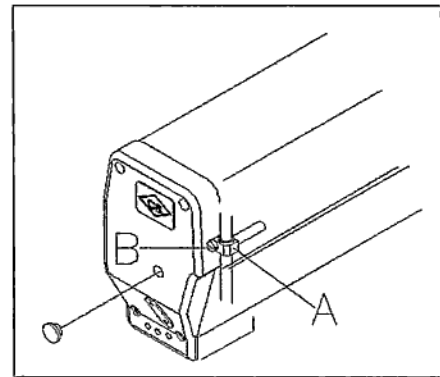
(When the Needle bar is on the top Position, the distance between the Left Needle tip and Stitch Plate should be as table 2.

This is the standard height of Needle Bar.)

規格種類 Needle Gauge	左針高度(MM) Height of Left Needle
240	9.8
248	9.8
356	8.4
364	8.3

2、若要調整針棒高度，請取下止油膠蓋，放鬆針棒連桿(A)上的螺絲(B)，上下調整針棒的高度後在固定之。(圖 17)

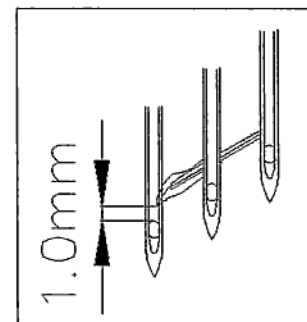
(To adjust the height of Needle Bar, remove the Rubber Seal Plug and loosen the Screw B of Needle Bar (A), adjust the Needle Bar up or down to required height and fix the Screw (B). (Fig.17) )



(Fig.17)

3、當下勾針向左前進與最長針 (左針) 對齊時，勾針針尖底部與針孔上沿距離 1 mm，此一相對位置即為本機針棒之標準高度。(圖 18)

(When the Loper goes though the Left Needle, the Loper tip is 1.0 mm abve the upper end of the Left Needle hole. (Fig.18) )



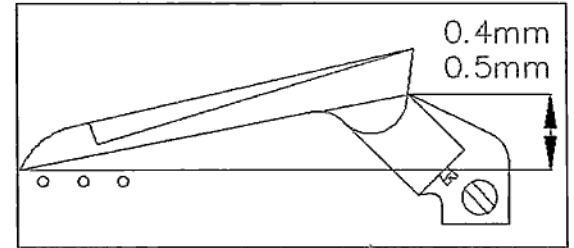
(Fig.18)



# GOLDEN WHEEL

## B、針與勾針位置的說明 (POSITION OF NEEDLE AND LOOPER):

- 1、 將勾針固定於勾針座上，勾針約向前（向操作者方向）偏 0.4 mm ~ 0.5 mm。(圖 19)



(Insert the looper into the

Looper Holder as far as it can go

(Fig.19)

and deflect the Loper to the front about 0.4~0.5 mm. (Fig.19)

- 2、 再將針棒降至最低，且下勾針退至右孔點，此時最短針（右針）與下勾針針尖的距離為 2.7~2.8 mm、不同針距，請參照表 3 做調整。(圖 20)

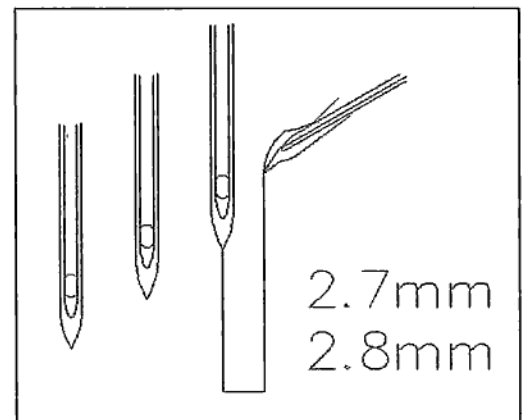
(To move the Needle Bar to the lowest position, at the same time, the Loper retruns to the extreme right end, the distance between Right Needle and the Loper tip is 2.7~2.8 mm. (Fig.20)

Please refer Table 3 for other Needle gauge is adjustment.)

(Table 3)

(Fig.20)

Needle Gauge	Movement of Loper to the Right
4.0 mm A	3.5 mm
4.8 mm B	3.2 mm
5.6 mm C	2.7 mm~2.8 mm
6.4 mm D	2.5 mm~2.7 mm



### \*注意 (NOTE):

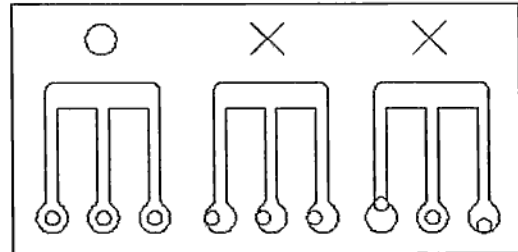
- (1)、針必須完全插入針榴孔中。



# GOLDEN WHEEL

經過調整後，必須確定每一根針是通過針板針孔的正中央。(圖 21)

(Insert the Needles into the Holder as far as they can go. After the adjustment, make sure the needled can get into the center of the Needle Plate

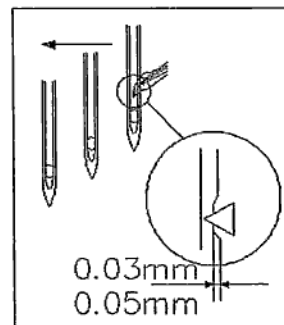


(Fig. 21)

holes, and the gaps are even. (Fig. 21) )

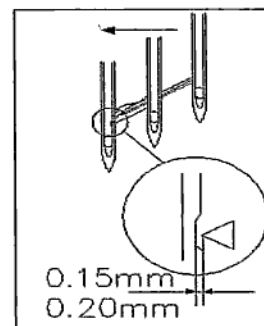
## C、針與勾針的時位關係調整 (ADJUSTING TIMING RELATION BETWEEN NEEDLES AND LOOPER) :

- 1、當勾針向左前進通過右針時，勾針針尖與針應輕微接觸 0.03~0.05 mm。(圖 22)  
(When the Loper moves from extreme right and forward to the Right Needle, the Loper tip shall slightly contact the needle by 0.03~0.05 mm (Fig. 22) )



(Fig. 22)

- 2、當勾針向左前進通過左針時，勾針針尖與針的距離為 0.15~0.20 mm。(圖 23)  
(When the Loper moves to the Needle, the clearance is about 0.15~0.20 mm. (Fig23) )



(Fig. 23)

- 3、當勾針向右退後，左針必須插到勾針斜面積線往上 0.3~0.4 mm (如圖 24) 且當最長針針尖與勾針底部平齊時，勾針針孔中心到左針的距離為 1.5~2.0 mm。(圖 25)

(When the Loper moves backward to Left Needle, the Left Needle



# GOLDEN WHEEL

tip should stick on the slant edge of the Loper by 0.3~0.4 mm. (Fig. 24)

When bottom surface of the Loper aligns with the of Left needle, the distance from the center of Loper

hole to Left Needle edge is about 1.5~2.0 mm Fig. 25))

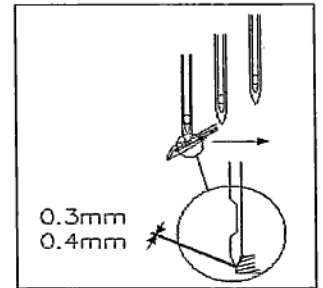
## \*注意 (NOTE):

若欲調整擊針插到勾針斜面之厚、薄，請先將縫製平台，曲軸室上蓋及曲軸室製墊片取下，再放鬆下勾針驅動軸導槽旁的搖臂調整銷鎖上的螺絲(A)，將螺絲往前（操作者方向）推動鎖緊，則擊針插到斜面之厚度減少，反之（圖 25）則愈來愈厚。

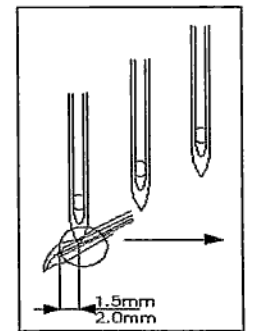
(To adjust feeding amount of the needle sticking on the looper slant edge (Fig. 24), please take off Crank Chamber Cover and Crank Chamber Gasket from the Cloth Plate by adjusting the Screw of Loper Bar Guide (A). Turn screw (A) to operator is direction to fasten, the feeding amount will be less on contarary, it becomes more.)

4、當勾針向右退後經過中針時，此時勾針之針孔與中針的針孔成一直線。(圖 26)

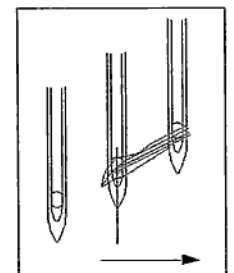
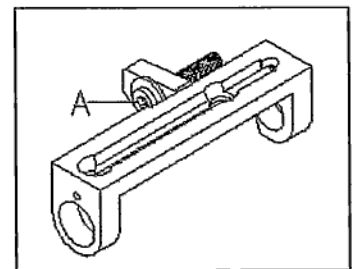
(When the Loper goes backward to the Middle Needle, the hole of the Loper shall align with the hole of the Middle Needle. (Fig. 26))



(Fig. 24)



(Fig. 25)



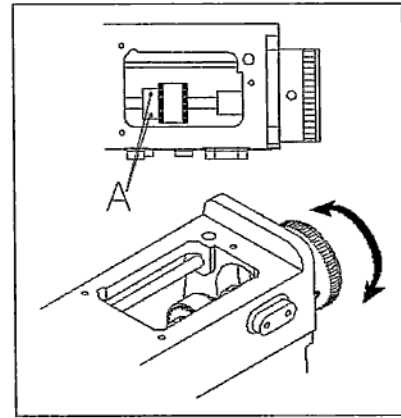
(Fig. 26)



# GOLDEN WHEEL

## \*注意 (NOTE):

若欲調整勾針運轉時間，請先將上蓋取下，放鬆上主軸鏈輪上的螺絲(A)，另一手握住手推輪使其不動，此時將主軸鏈輪往前（操作者方向）推動，則勾針運轉時間延後，反之，則勾針時間提早。(圖 27)



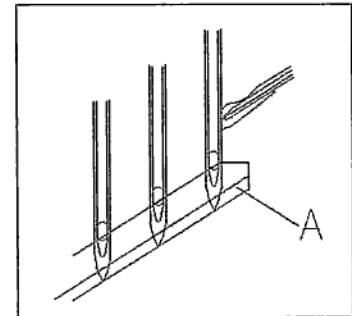
(Fig. 27)

(To adjust the looper is orbit movement, please open Top Cover and loosen the 4 Screws of Upper Shaft Sprocket (A) then hold Hand Wheel still. When slightly turn Shaft Sprocket to operator is direction, the Looper is movement will be delay, on the contrary, it will be expedised. (Fig. 27) )

## D、頂針片高度之調整 (ADJUSTING THE HEIGHT OF REAR NEEDLE GUARD):

- 1、當針棒降至最低時，後頂針片上之稜線(A)與之跟針之針孔成一直線。(圖 28)

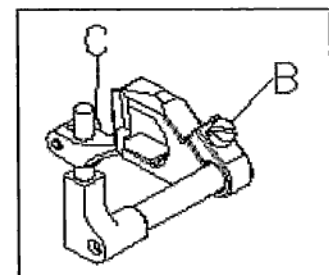
(When the Needle Bar goes down to the lowest position, the line (A) of the Rear Needle Guard should be at the center of needles holes. (Fig. 28) )



(Fig. 28)

- 2、若欲調整頂針片的高度，請放鬆螺絲(B)、(C)調整之，但切勿調太高，以免撞擊送料具。(圖 29)

(Loosen screw (B) and (C) for above adjustment. Caution: Never adjust the Needle Guard too high to contact Feeding Device.)



(Fig. 29)



# GOLDEN WHEEL

## E、前後頂針片之調整 (ADJUSTING FRONT AND REAR NEEDLE GUARD):

- 1、當勾針針尖向左前進，針尖到達右針中心時，此時後頂針片與右針之距離為  $0 \sim 0.05 \text{ mm}$ 。而當勾針針尖到達左針中心時，後頂針片與左針之距離亦為  $0 \sim 0.05 \text{ mm}$ 。(圖 30)

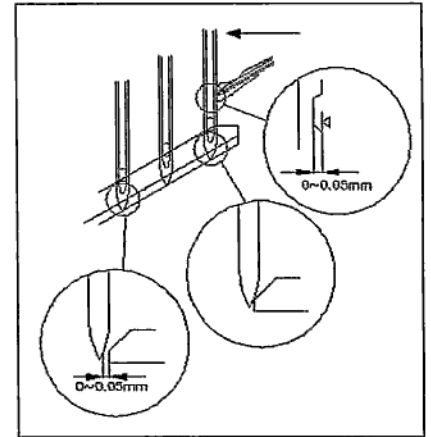
(When Looper tip comes near to the center of Right Needle, make a clearance between Right Needle and Looper  $0 \sim 0.05 \text{ mm}$  by actuating Needle Guard (rear), and adjust a clearance between Left Needle and Guard (rear)  $0 \sim 0.05 \text{ mm}$ . (Fig. 30)

- 2、當勾針針尖向前進，針尖到達左針中心點時，前頂針片約高右針  $1.5 \sim 2.0 \text{ mm}$

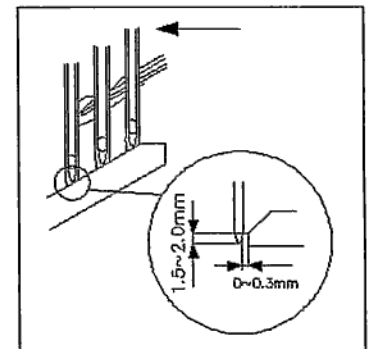
(圖 31)，且左針與前頂針片的距離為  $0 \sim 0.3 \text{ mm}$ ，當勾針針尖退後針尖到達右針中心點時，前頂針片與右針之距離為  $0 \sim 0.3 \text{ mm}$ 。(圖 32)

(When Looper tip shifts to the center of Left Needle, set the Front Needle Guard  $1.5 \sim 2.0 \text{ mm}$  higher than the Left

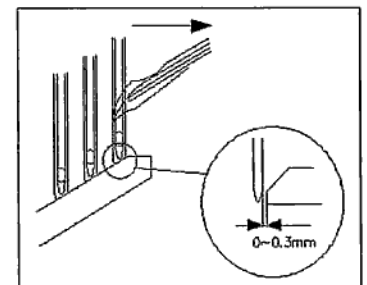
Needle tip. The clearance is  $0 \sim 0.3 \text{ mm}$  between Left Needle, Right Needle and Front Needle Guard. (Fig. 31 & Fig. 32)



(Fig. 30)



(Fig. 31)



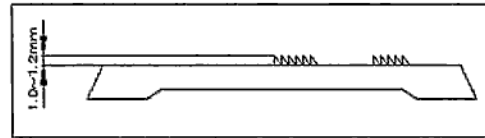
(Fig. 32)



# GOLDEN WHEEL

## F、送布齒高度調整 (ADJUSTING THE HEIGHT OF FEED DOG) :

- 1、當送布齒在最高位置時，送布齒齒尖面與針板面平行，此時主送布齒



(A)與差動送布齒(B)高度相同，且齒面與針板面差 1.0~1.2 mm。

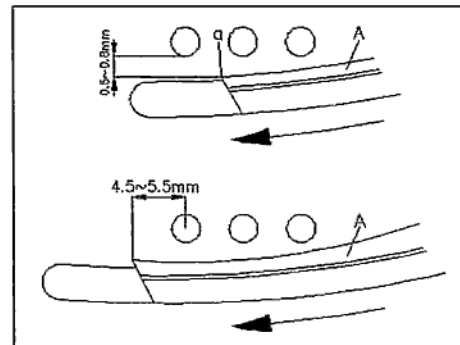
(When Feed Dog are the highest position, the surface of Feed Dog and the surface of Stitch Plate becomes parallel with each other.

At this time, make differential feed dog (A) and main feed dog (B) to be at the same height and adjust the distance from surface of Stitch Plate to the surface of Feed Dog to be 1.0~1.2 mm

(Fig. 33) )

## G、上叉位置的設定 (ADJUSTING THE POSITION OF THE SPREADER) :

- 1、當勾線針(A)向左游走時，其上 a 點之位置與最左車針間之間隙應為 0.5~0.8 mm，且當勾線針(A)游走至最左位置時，其上 a 點與最左邊車針之間隙一定得在 4.5~5.5 mm 之間。



(When Spreader (A) moves from right

(Fig. 34)

to left, provide a clearance of 0.5~0.8 mm between Left Needle and the tip (A) of thread hooking point, and when it comes to the extreme left, the clearance between the center of Left Needle and tip (A) of thread hooking point must be 4.5~5.5 mm. (Fig. 34) )

- 2、勾線針下緣之高度應保持在針板面之上 9~11 mm



# GOLDEN WHEEL

(Adjust the height of undersurface of Spreader (A) above the top surface of Stitch Plate to be 9~11 mm. (Fig. 35) )

- 3、 上述之調整動作可藉由放鬆螺絲(B)與(C)來取得。

(Above adjustment is made by loosening Screw (B) of Spreader and Screw (C) of Spreader Holder. (Fig. 36) )

- 4、 根據所使用之線的不同，必須將車針其勾線針的間隙做以上正確之調整。

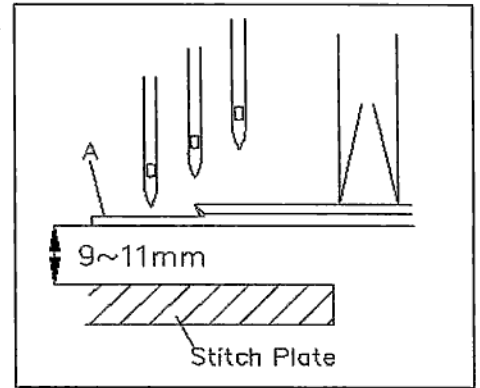
(The above adjustments should be made properly according to the thread to be used.)

## H、 上飾線之導線器的固定 (FIXING OF TOP COVER THREAD GUIDE & TOP COVER THREAD EYELET) :

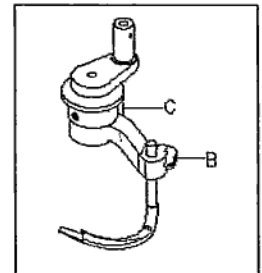
- 1、 當勾線針退至最右位置而能平穩的勾往線時，上飾線之導線器(D)的下緣與彎針(A)的上緣之間間隙應為 0.5 mm。調整完畢後，鎖緊螺絲(E)。

(Provide a clearance of 0.5 mm between undersurface to Top Cover Thread Guide (D) and the top surface

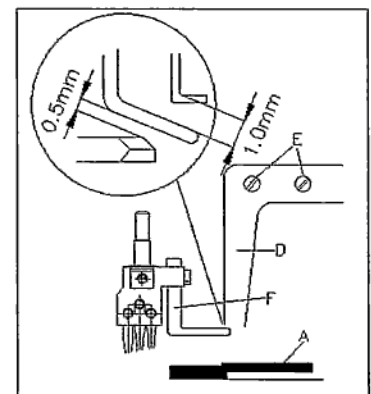
of Spreader (A). At the position, the thread is caught smoothly by thread hooking part when spreader comes to extreme right, tighten screw (E). (Fig. 37) )



(Fig. 35)



(Fig. 36)

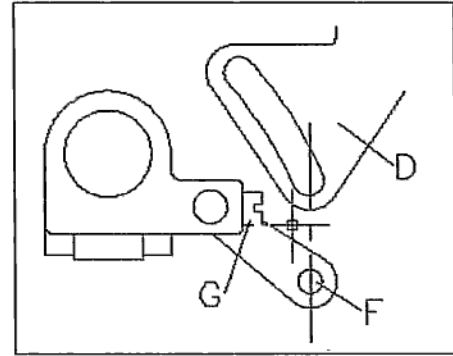


(Fig. 37)



# GOLDEN WHEEL

- 2、 上飾線導線器(D)之上緣與上飾線穿線孔器(F)之下緣間之間隙應為 1.0 mm；同時穿線孔器(F)之線孔應與導線器(D)之長型孔延伸部分在一直線上。調整完畢後，鎖緊螺絲(G)。



(Fig. 38)

(Provide a clearance of 1.0 mm

between top surface of Top Cover

Thread Guide (D) and undersurface of Top Cover Thread Eyelet (F). (Fig. 37) Set the hole of Top Cover Thread Eyelet on the extension line of slot of Top Cover Thread Guide, then tighten screw (G). (Fig. 38) )

※ 根據所使用之線的不同，而必須將上飾線導線器，穿孔器位置作以上正確之調整。

※ The above (1), (2) should be adjusted properly according as the thread to be used.

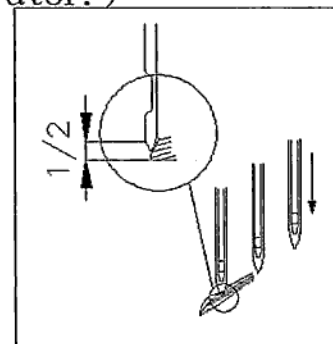
## I、 勾針控制線桿的位置 (THE POSUTUON OF LOOPER THREAD TAKE-UP):

- 1、 (圖 40) 是從操作者左側觀察勾針控線凸輪。

(( Fig.40) is viewed from left side of operator.)

- 2、 當針從最高處下降時，左針大約位於勾針後面之一半的位置時 (圖 39) 勾針針線必須脫離凸輪之最高位置 P。(圖 40)

(When needle comes down from the highest position and the Left Needle tip reaches around 1/2 position of the

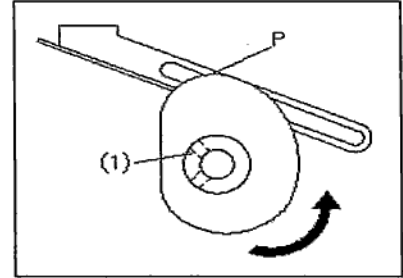


(Fig. 39)



# GOLDEN WHEEL

looper , (Fig. 39) The looper thread should come over the highest position P of the Cam. (Fig. 40) )



3、調整螺絲 (1) 並調整之。

(Fig. 40)

(Turn the screw (1) for above adjustment.)