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SHING LING®

星菱牌工業用縫紉機

INDUSTRIAL SEWING MACHINE

縱直筒型多針綑縫機

Feed-on Type Cylinder Bed Interlock Machine



FW-777

使用說明 & 零件手冊

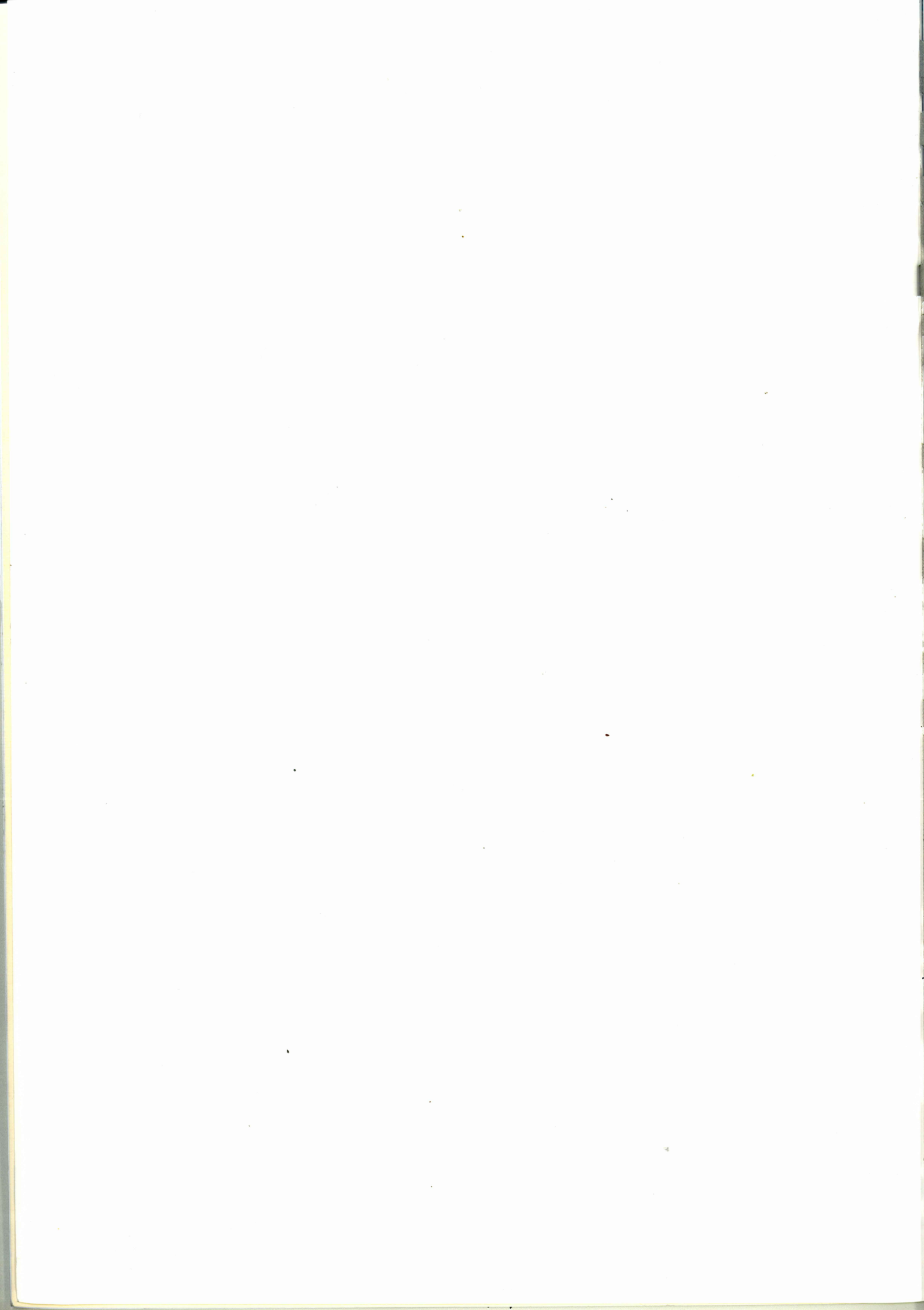
Instruction & Spare parts Book

星菱縫機股份有限公司



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SHING LING SEWING MACHINE CO., LTD.



一、使用說明：

OPERATION GUIDE

A. 安裝：

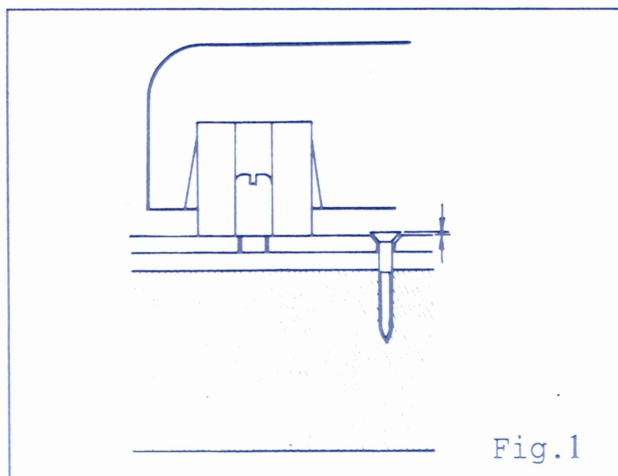
1. 請依本機配件盒內所附之正確桌板尺寸裁製圖，裁製桌板。

2. 再依序安裝防震襯墊、底座固定板及其他副件。

*注意：

(1) 防震襯墊及底座固定板切勿鎖死。於鎖緊後仍要保留些許的彈性，以利減震。另外，襯墊及底座固定板的一邊要緊臨皮帶孔。(圖1)

(2) 在安裝腳架時，前腳請比後腳稍微調高2cm。(圖2)



A. INSTALLATION :

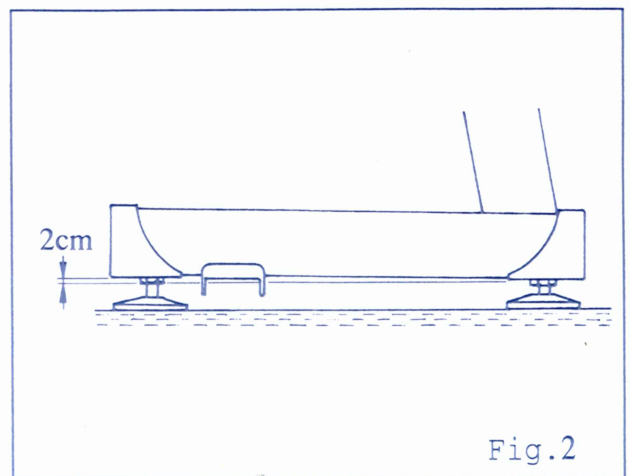
1. Before installing machine, please refer to table cut-out drawing. To cut-out the table correctly.

2. According to the sequence of installation, to fix quake-proof sheet, base-fixed plate and others attachment.

*Remarks:

(1) Don't screw the quake-proof sheet and base-fixed plate too hard, please keep some elasticity for quake-proof. In additional, one of their side must be closed the belt hole. (Fig.1)

(2) When installing foot stand, the front feet must be 2cm higher than rear feet. (Fig.2)

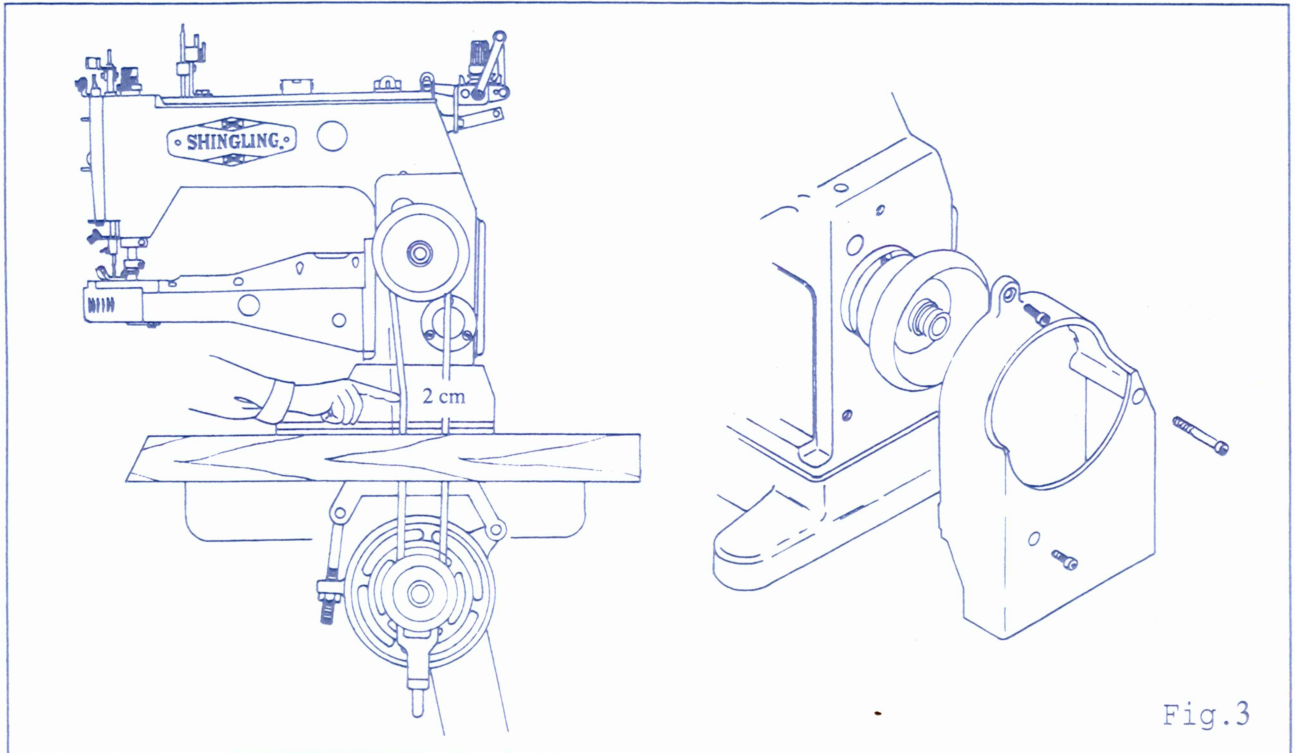




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3. 馬達之轉向為順時鐘方向，皮帶之鬆緊度以用手指向內壓下2cm為一般標準，同時為了安全起見，請將皮帶蓋蓋上。(圖3)

3. Be sure that the motor turning direction is clockwise, and the motor belt tension can be pressed with finger inward 2cm. For safety reason, please fasten the belt cover. (Fig.3)



4. 皮帶輪與轉速請參照表1。

4. Regarding machine speed and motor pulley diameter, please refer to table 1.

Table 1 (表1)

MACHINE SPEED (S.P.M.) 轉速/分	MOTOR PULLEY OUTER DIAMETER(MM)		NEEDLE POSITIONER (定位馬達)	MOTOR BELT V-BELT, M-TYPE (CLUTCH MOTOR)
	60Hz	50Hz		
3,500	75	90	70	38"
3,000	65	80	60	36"
2,700	55	70	50	35"



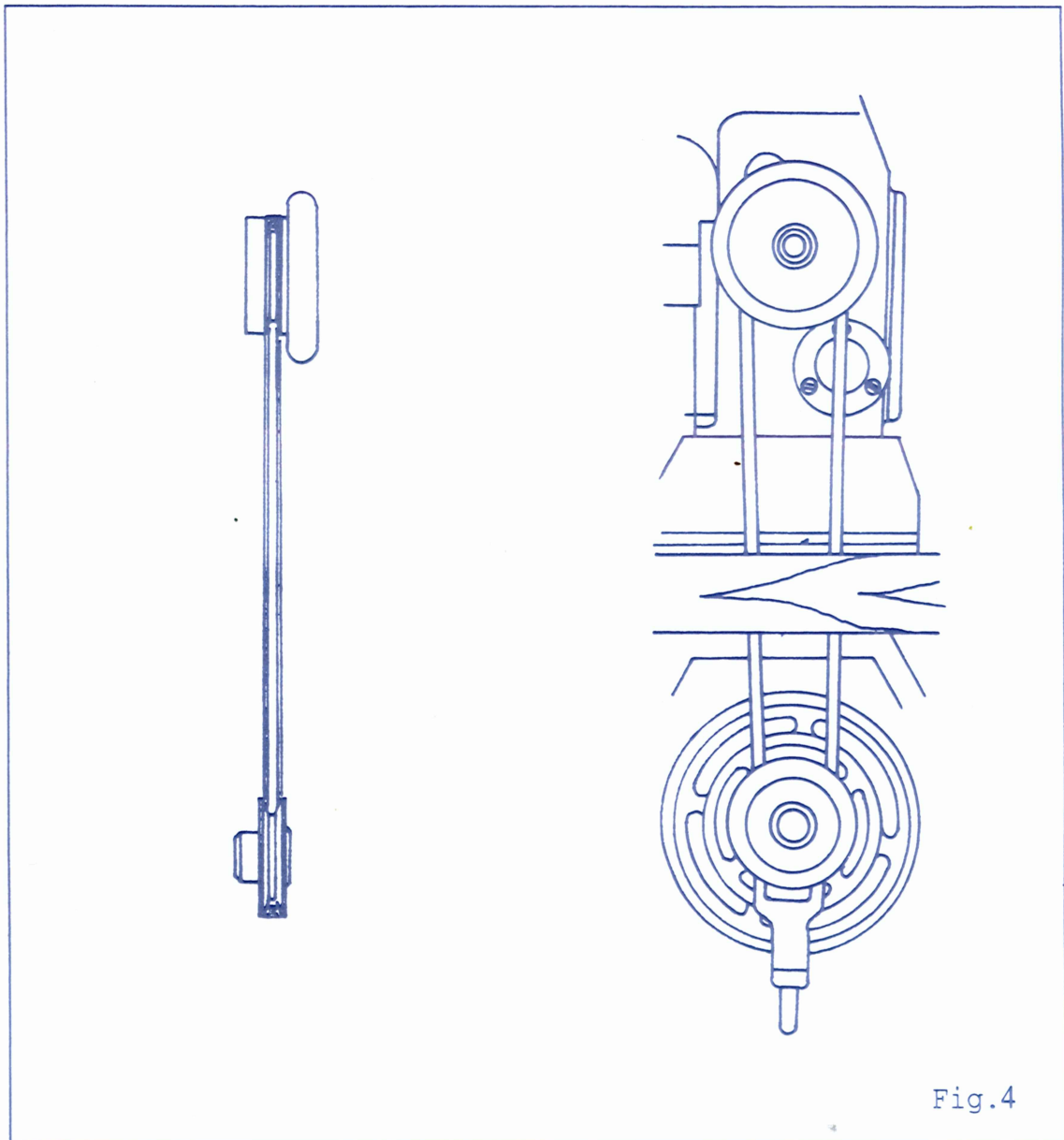
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B. 馬達與皮帶：

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。
2. 馬達位置的安裝請安裝於機台之正下方，馬達驅動輪必須與機器皮帶輪呈垂直。(圖4)

B. MOTOR AND BELT :

1. Please follow the table 1 to install motor. Use a V belt of M type.
2. The center of both motor's and machine's pulley must be aligned in vertically when install the motor. (Fig4)





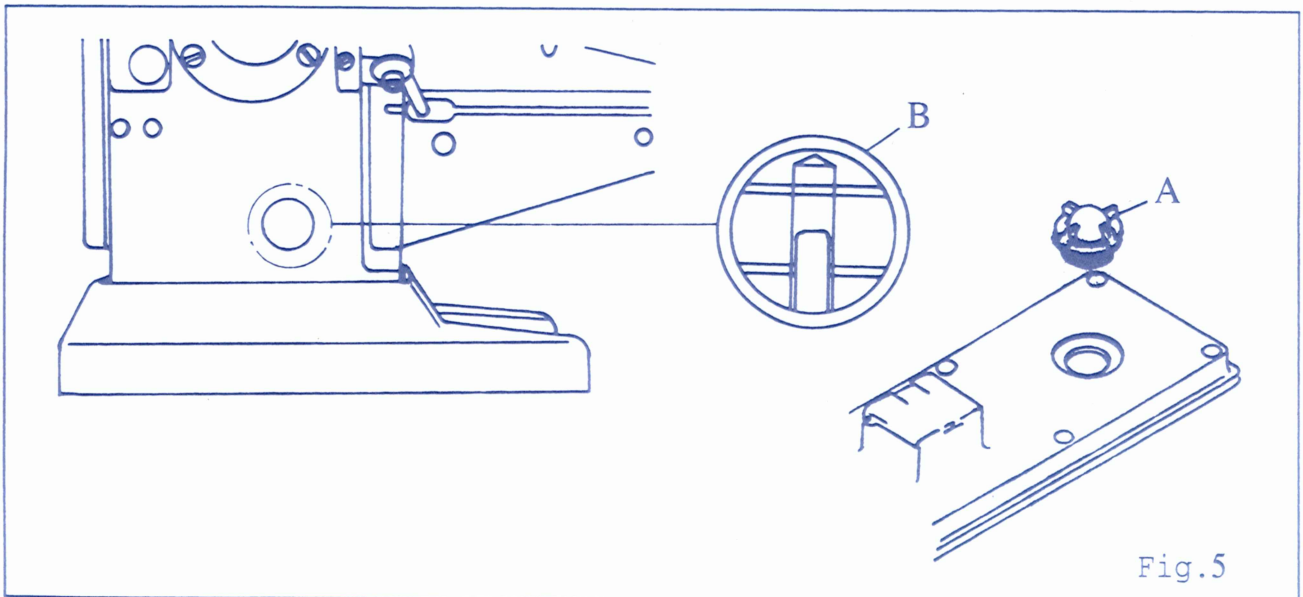
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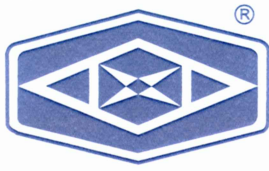
C. 潤滑：

1. 請選用與MOBIL #10同級之潤滑油。
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，待油量滿至油標指示窗 (B) 上下線之間即可。(圖5)
3. 於每天開機操作時，請先檢查噴油狀態是否正常，且注意油標是否低於指示窗之下限，若低於下限請隨時補充新油。

C. LUBRICATION OIL：

1. Please use MOBIL #10 or it's equivalent.
2. Before operating the new machine, to remove Oil Sight Window (A) and fill the oil slowly until the oil level reaches between lines H and L of Oil Sight Gauge (B). (Fig 5)
3. When you begin operating the machine in everyday, please check whether all the lubricating system is at normal condition. If oil level is lower than line L of Oil Sight Gauge, please supply oil.





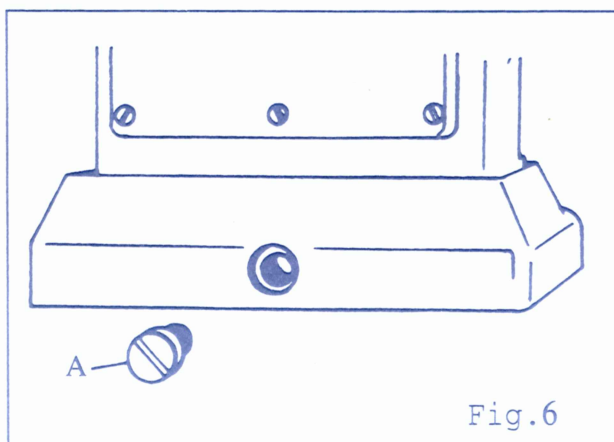
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D. 潤滑油的更換：

1. 將放油螺絲(A)鬆開，使油槽內的舊油完全排出後，再將放油螺絲鎖緊（圖6）再依C-2的步驟注入新油。
2. 為延長本機的使用壽命，請於開始使用的一個月內更換第一次的新油，以後約每6個月更換新油一次。

E. 濾油器的更換：

本機裝有濾油器，新機使用一個月後必須更換新品。此後，僅需每6個月更換一次。（圖7）

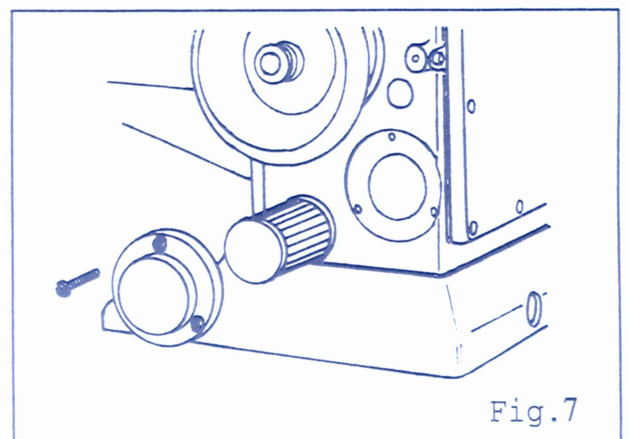


D. OIL CHANGE：

1. Remove screw (A) and drain all the oil from the tank. After draining, tighten screw (A) without fail. Please refer to C-2 for replenishing oil. (Fig 6)
2. For the long life of machine, change lubrication oil completely after one month of intial operation. After that, change lubrication oil every six months.

E. REPLACING OIL FILTER：

This machine is equipped with an Oil Filter, to change the Oil Filter after one month of intinal operation. After that, please change Oil Filter every six months. (Fig 7)





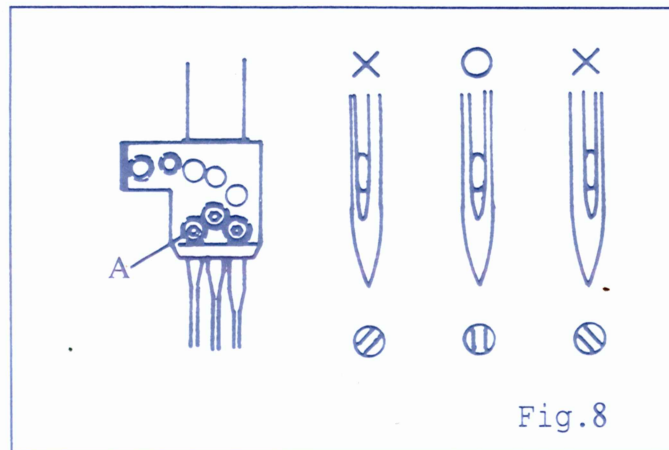
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F. 換針方式：

1. 請選用TVx7，11番的針或其他相同規格之針。
2. 旋開鎖針螺絲(A)，並取下舊針，將新針插至針座之最頂端，且使長溝面向自己。(圖8)
3. 重新將鎖針螺絲鎖緊(A)。

F. HOW TO REPLACE THE NEEDLES：

1. Please use the TVx7 of Organ's needle or it's equivalent.
2. Loosen screw (A), then pull out the used needles. Insert the new needles into the holder holes as far as they can go, and let the long groove of the needle face you. (Fig 8)
3. Fasten screw (A).



G. 穿線方式：

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，將會引起斷線、跳針或車縫不平坦等現象。(圖9)

G. THREADING：

1. Threading should be made correctly. Referring to the illustration. (Fig 9)
Wrong threading may cause thread breaking, skipping stitch or puckering.



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2. A.B.C..... 擊針線， D..... 上網線， E..... 勾針線。

2. A. B. C.....needle thread, D..... top cover thread, E.....looper thread.

3. 若用三針車縫，穿線方式如圖所示。若用二針車縫，穿線方式相同，所不同者，僅是擊針線穿二針而已。（圖9）

3. The threading for three needles machine is shown in the illustration below. For two needles machine, threading is the same except two needles threaded. (Fig 9)

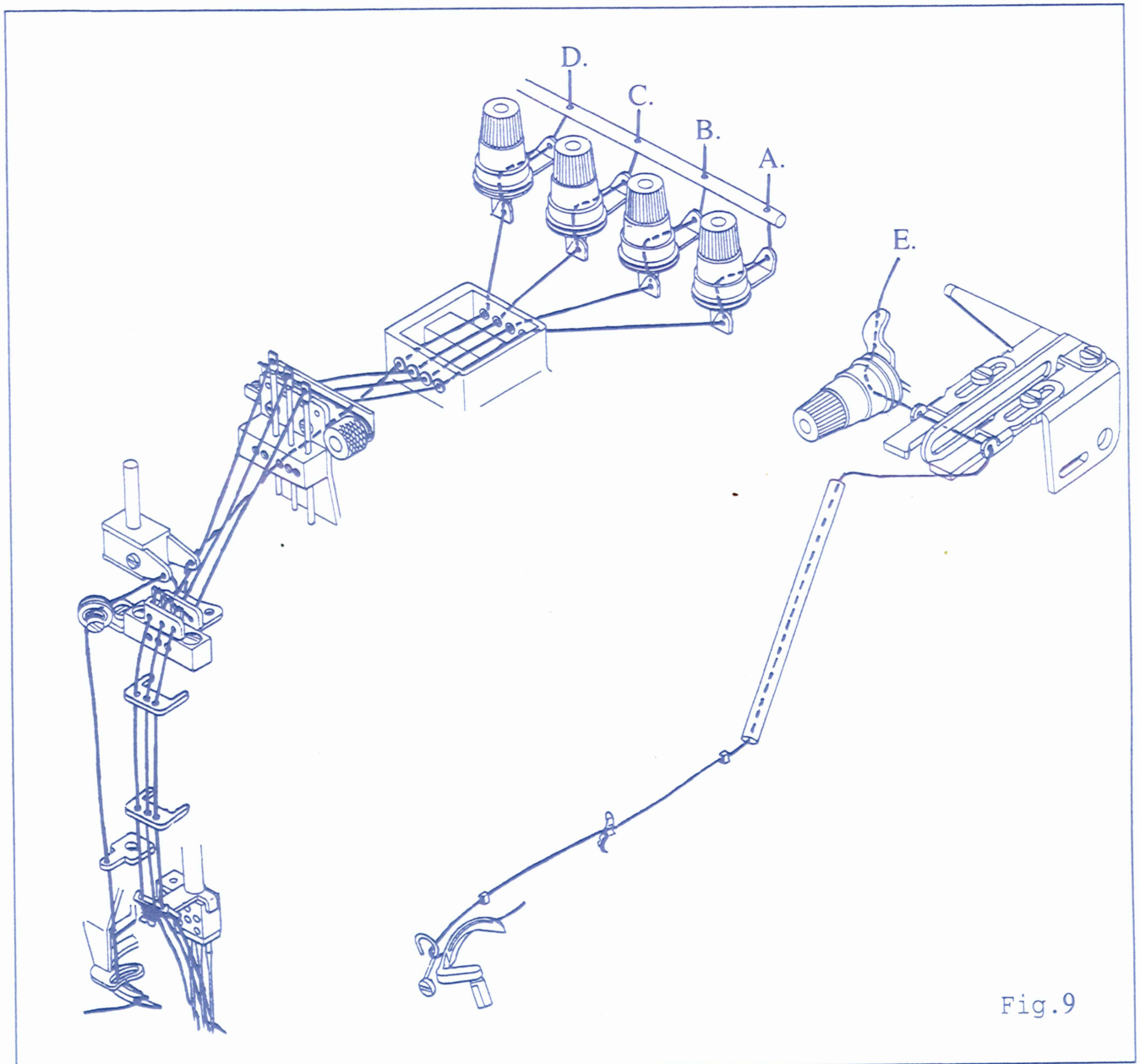


Fig.9



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H. 拉線鬆緊度的調整：

1. 拉線的強弱必須根據車縫的布料、厚薄及線與針距等的不同而做調整。
2. 將針線控制鈕順時鐘方向旋轉時，線愈緊，反之則愈鬆。（圖10）

H. ADJUSTING THREAD TENSION :

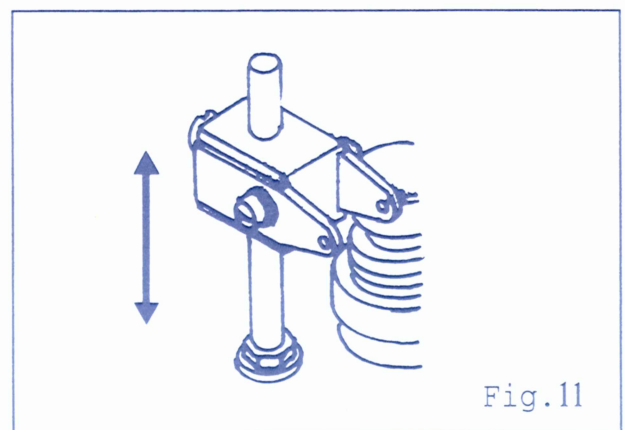
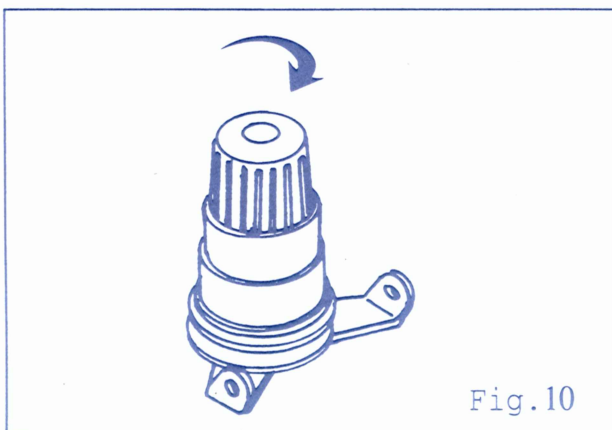
1. The tensions of thread should be adjusted for according to what types and thicknesses of fabrics being sewed; what types of threads being used; how many stitches you need in one inch.
2. Turning the Thread Tension Knob clockwise, thread will be tighter. (Fig 10) On the contrary, turning it counter-clockwise will be looser.

I. 上網線控線桿的調整：

除了針線控線鈕可調整上網線之鬆緊外，上網線控線桿亦可用來調整上網線之鬆緊，控線桿升愈高則線愈鬆，愈低則線愈緊。（圖11）

I. ADJUSTING SPREADER THREAD TAKE-UP :

The Spreader Thread Take-Up could adjust the tension of top-cover thread except the Thread Tension Knob. When The Spreader Thread Take-Up move upward, the tension of top-cover thread will be looser. If the Spreader Thread Take-Up move downward, the tension of top-cover thread will be tighter. (Fig 11)





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J. 縫目長度的調整：

1. 本機的標準縫目為最粗針1英吋7針，最細針1英吋14針，採用無階段式調整方式。
2. 請將止油膠蓋(B)打開，用本機所附之10mm之梅花扳手予以調整。縫目調整螺(A)放鬆往下降鎖緊則縫目愈細，若往上升鎖緊則縫目愈粗。(圖12)

K. 押腳壓力強度之調整：

1. 若要求布料推送順暢且縫合完美，押腳壓力應儘量輕些。
2. 鬆開螺母(A)，轉動螺絲(B)，調整其適當壓力後再鎖緊螺母(A)。(圖13)

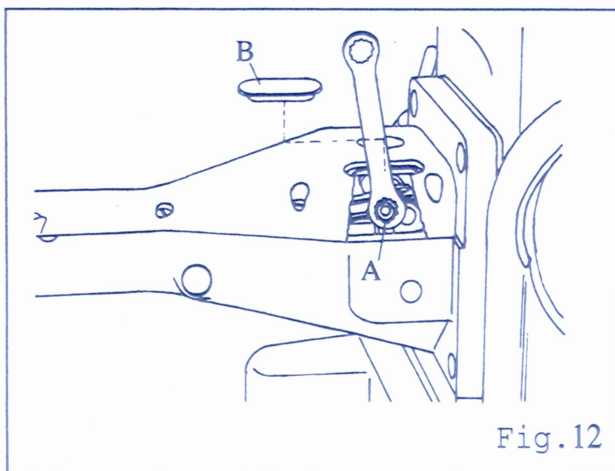


Fig.12

J. ADJUSTING STITCH LENGTH :

1. The standard stitch length can be adjusted variably in range from min. 7 stitches to max. 14 stitches per inch.
2. Please take-out Rubber Plug (B) and use 10mm ring spanner to adjust the stitch length on the arm. Loosen nut (A), move the indicator downward to decrease the stitch length, move the indicator upward to increase the stitch length. (Fig 12)

K. ADJUSTING THE PRESSURE OF PRESSER FOOT :

1. Pressure of Presser Foot should be as weak as possible, so that cloth can be feeded and sewed smoothly.
2. To increase the pressure of Presser Foot, to turn Adjusting Screw (B) clockwise after loosening Lock Nut (A) and to decrease the pressure turn Screw (B) counterclockwise. (Fig 13).

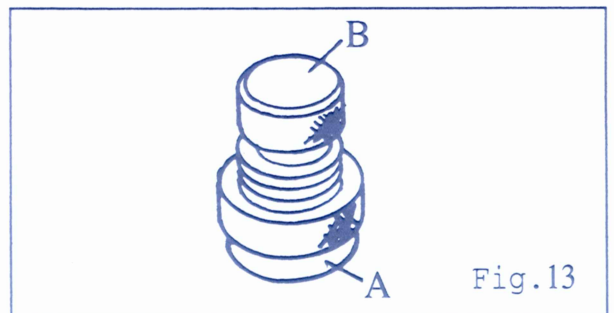


Fig.13

二、調整說明：

ADJUSTMENT GUIDE

A. 針棒高度之調整：

1. 先將針棒升到最高處，此時最長針的針尖與針板的距離為10.2mm ~ 10.4mm。(圖14)
2. 若需調整時，請先打開機頭前蓋之止油膠蓋，放鬆針棒連桿(A)上的螺絲(B)，上下調整針棒的高度後再固定之。(圖15)

*注意：

- (1) 針必須完全裝入針錐孔最頂端。
- (2) 經過針棒高度調整後，必須要確定每一根針皆通過針板的針孔正中央，不可以偏斜，且三根針需成平行。(圖16)

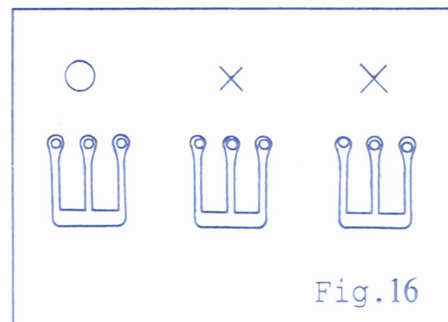
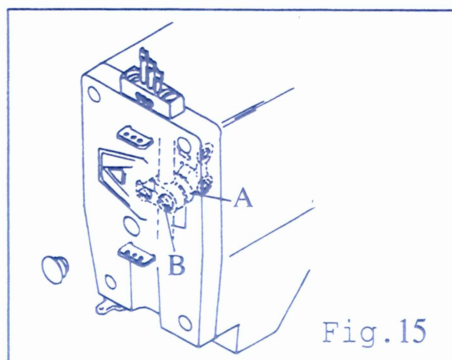
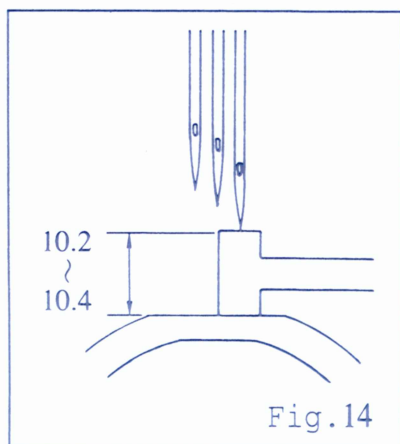
A. THE HEIGHT OF NEEDLE BAR :

1. Please lift the Needle Bar to the highest position. During this time, the standard height between the longest right needle point and the Needle Plate are 10.2 ~ 10.4mm. (Fig 14).
2. If you want to adjust the height of Needle Bar, please remove the rubber plug of front cover and loose the screw(B) on Needle Bar Rod(A).

Adjust the Needle Bar up or down to require height and fix the screw (A). (Fig 15)

* Remarks:

- (1) Be sure insert the needle into the Needle Holder as far as it can go.
- (2) After the Needle Bar adjustment, make sure that every needle passes through the center of the needle hole on the Needle Plate. Besides, the three needles must be in parallel and the gap must be even. (Fig 16)





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B. 勾針角度退距：

1. 將勾針固定於勾針座上，勾針約向右傾斜0.7mm ~ 0.8mm。
(圖17)
2. 再將針棒降至最低點，此時勾針與最左針之距離為3.7mm ~ 3.9mm。
(圖18)

B. POSITION OF NEEDLE AND LOOPER :

1. Fix the Loper on the Loper Holer, make sure Loper deflect to the right about 0.7mm~0.8mm. (Fig 17)
2. Please move the Needle Bar to the lowest position, setting the distance between the point of Loper and shortest left needle is 3.7mm~3.9mm.(Fig18)

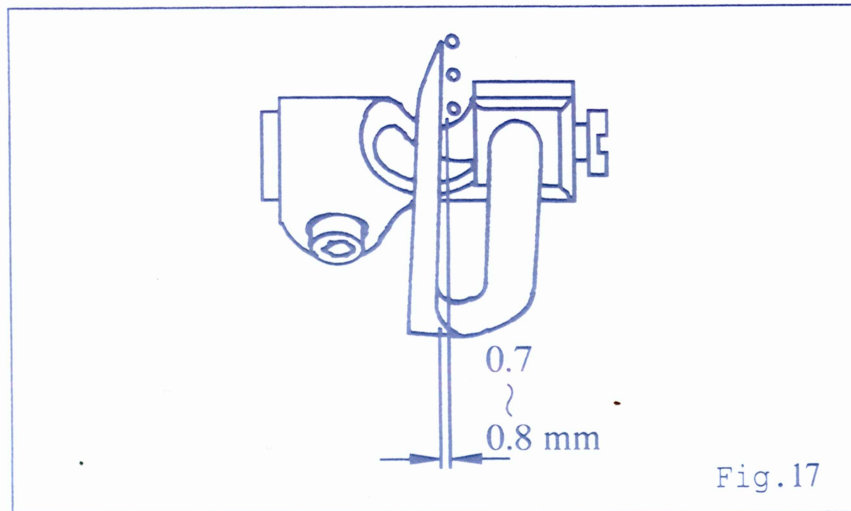


Fig.17

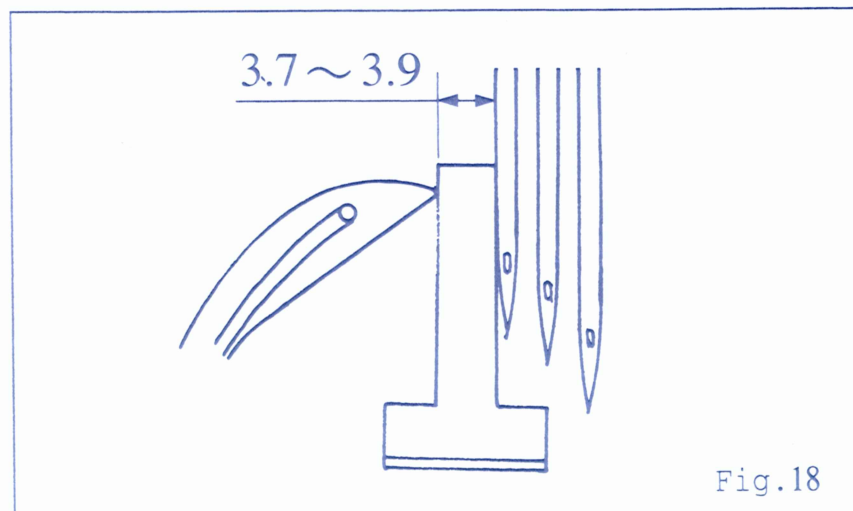


Fig.18



C. 針與勾針的時位關係調整：

1. 當勾針前進通過左針時，勾針針尖與針的距離為0.01mm。

(圖19)

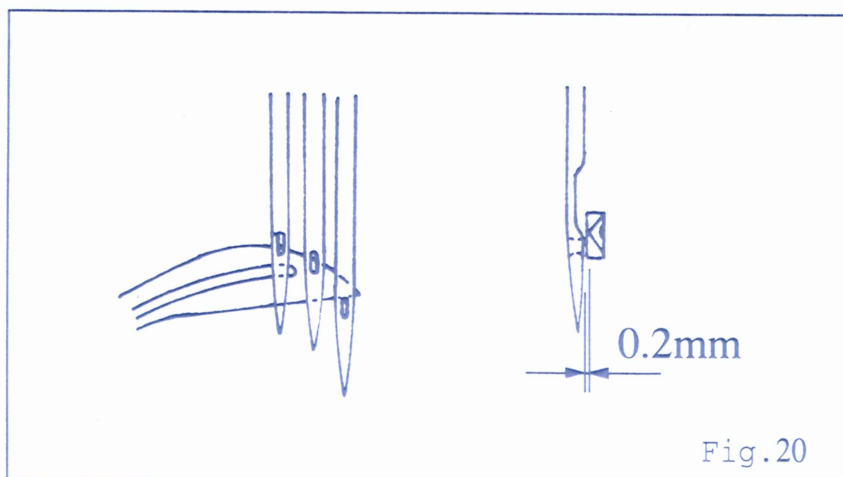
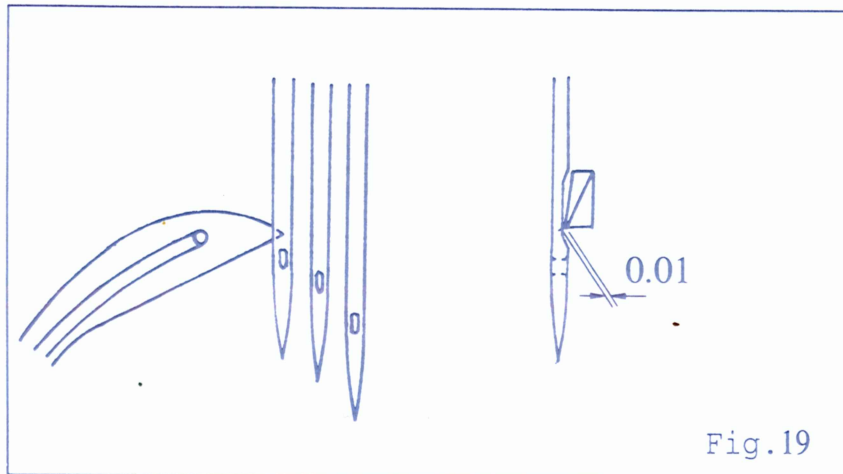
2. 當勾針前進通過右針超過0.1mm時，勾針底端與針孔上沿接觸(圖20)，而此時勾針與針的間隙為0.2mm。(圖20)

C. TIMING OF NEEDLE AND LOOPER :

1. When the tip of Looper meets the left needle, the clearance between them should be 0.01mm. (Fig 19)

(Fig 19)

2. When the tip of Looper passes behind the right needle over 0.1mm, the bottom of Lopper hole touch with the top of right needle hole, the clearance between them should be 0.2mm. (Fig 20)





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3. 當勾針退後時，右針必須插到勾針斜面稜線往上 1/4 處。(圖21)

3. When the Loper reversed, the right needle stick on 1/4 be high of the Loper's slant edge. (Fig 21)

*注意：

鬆開下勾針前後移動控制桿上之螺母(A)，將控制桿上、下調動，即可調整擊針插到勾針斜面的厚、薄。(圖22)

*Remark:

Loosen the nut (A) of Loper Front-Rear Control Shaft, move the Shaft upward or downward, it could adjust the needle to stick on the Loper thicker or thinner. (Fig 22)

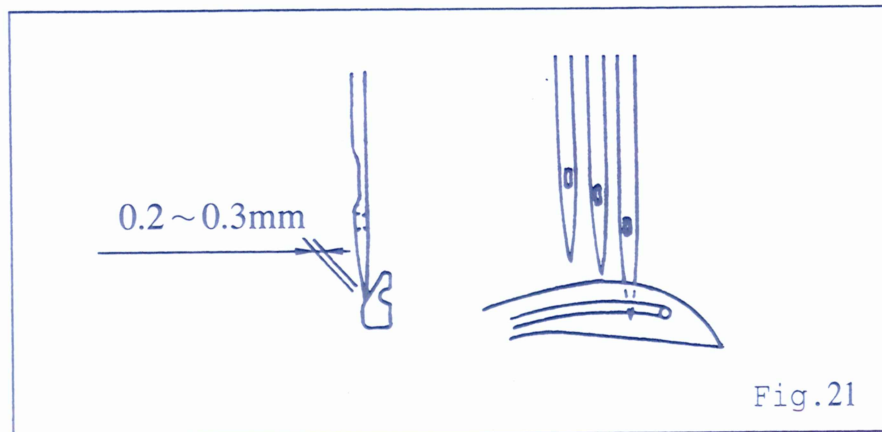


Fig.21

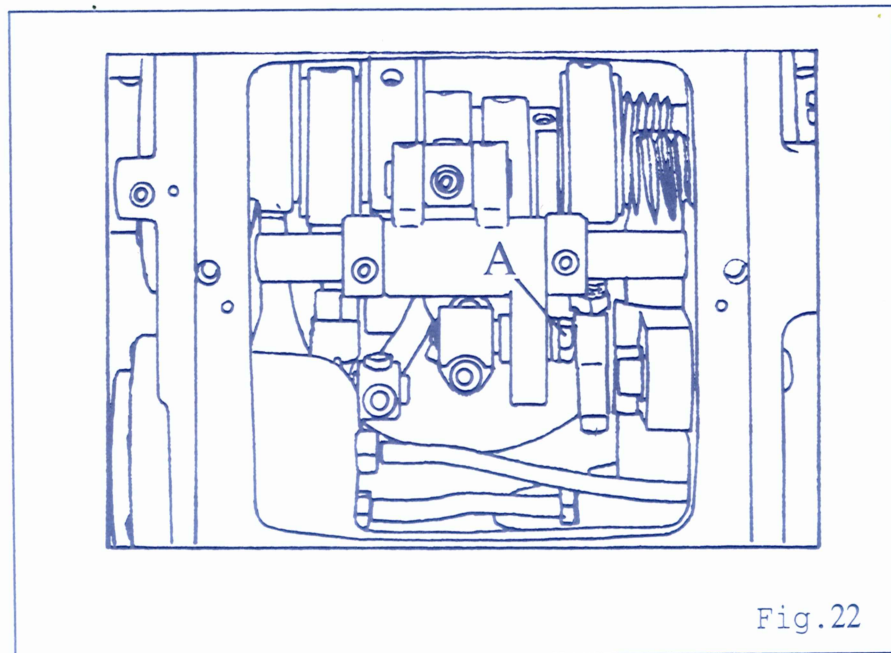


Fig.22



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4. 當勾針往後退，勾針孔經過右針時，勾針針孔須與右斜針孔對齊。
(圖23)

* 注意：

放鬆勾針左右移動時間凸輪(B)上的三顆螺絲，往前、後移動，即可調整勾針左、右移動時間的快、慢。
(圖22-1)

4. When the Loper is returned to pass the right needle, Loper hole aligns with right needle hole. (Fig 23)

*Remark:

Loosen the three screws on the Loper Timing Control Cam(B), move the Cam toward or backward, it could adjust the timing of Loper faster or slower. (Fig 22-1)

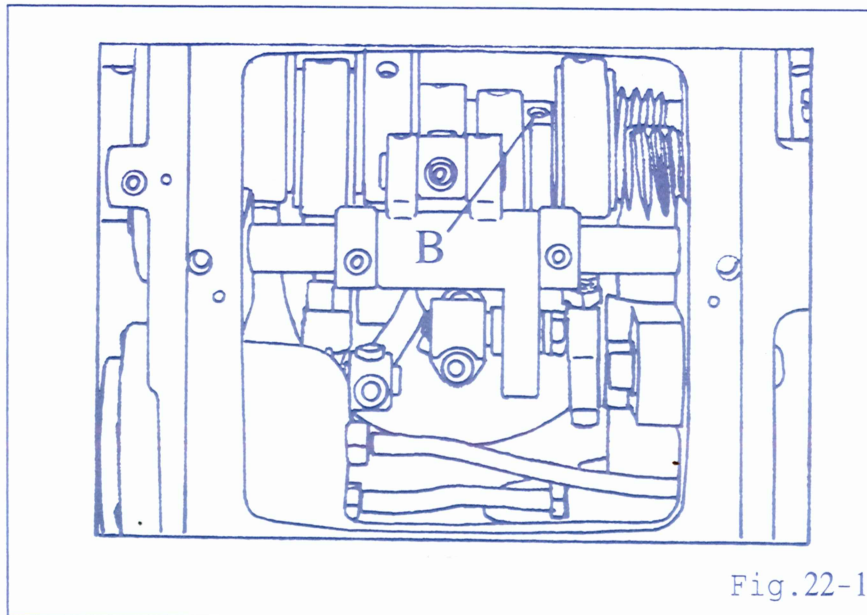


Fig.22-1

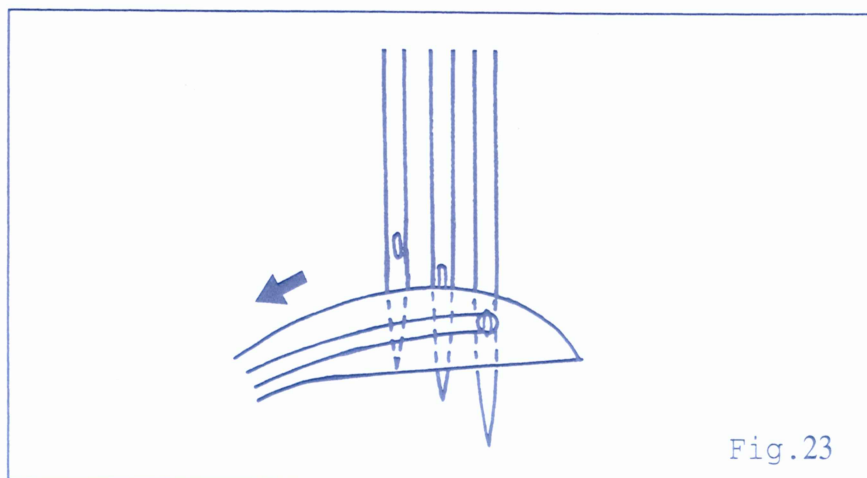
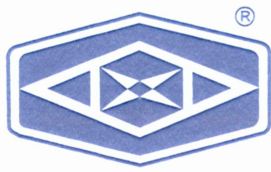


Fig.23



D. 頂針片之調整：

當送料具移動到最前端時，頂針片必須維持水平，且頂針片尖端與左針的間隙應為0.05mm。(圖24)

D. ADJUSTING THE NEEDLE

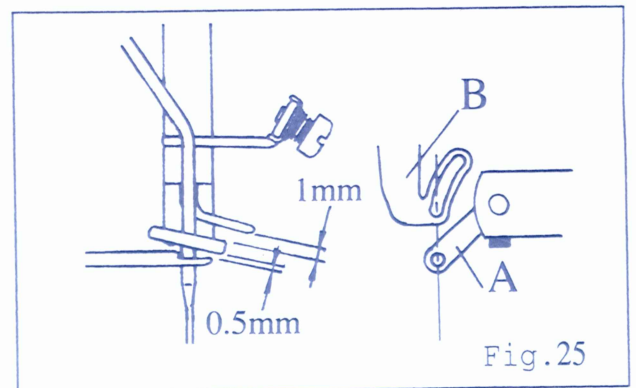
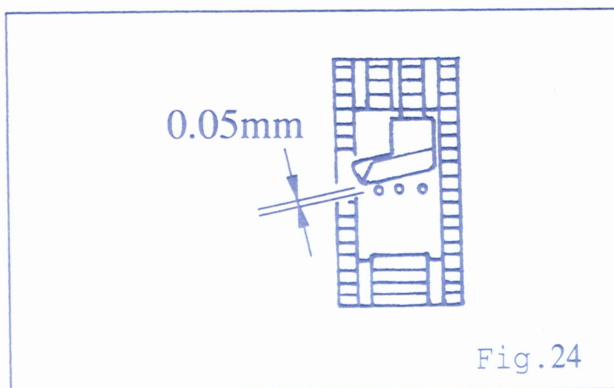
When the Feed Dog move to the frontest position, the Needle Guard should remain horizontal. Besides, the clearance between the tip of Needle Guard and left needle should be 0.05 mm. (Fig 24)

E. 上勾針位置的調整：

1. 把針棒降到最低，此時上網線導線片(A)與上網線導線板(B)的間隙為1mm，而導線板(B)與上勾針的間隙為0.5mm，且上網線導片(A)的導孔與上網線導線板(B)的長溝、上勾針針尖的彎處，三者必須對齊。(圖25)

E. ADJUSTING THE POSITION OF SPREADER :

1. Please move the Needle Bar to its lowest position, adjust the clearance between Thread Guide Pin (A) and Thread Guide Plate (B) to 1mm. In the meantime, adjust a clearance between Thread Guide Plate (B) and Spreader to 0.5mm. Please make sure that the concavity of the Spreader align with the thread hole of Guide Pin(A) and the groove of Guide Plate (B). (Fig 25)





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2. 當針棒升至最高時，上勾針針尖前進到最右點，此時，上勾針針尖到右針的間隙為4mm。而當上勾針針尖經過右針時，兩者的間隙為0.1mm。（圖26）

2. When the Needle Bar lifts to the highest position and the Spreader moves to extreme right, the distance between the right needle and the hook's point of Spreader is 4mm. When the Spreader passes the right needle, the clearance between the hook's point of Spreader and right needle is 0.1mm. (Fig 26)

F. 押腳提升高度之調整：

欲提升或降低押腳，可先放鬆螺母(A)，再以內六角扳手調整螺絲(B)，螺絲(B)調高則押腳高度降低，調低則押腳高度升高。（圖27）

*注意：

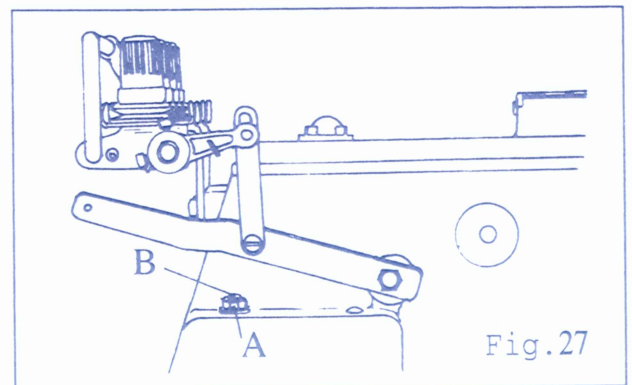
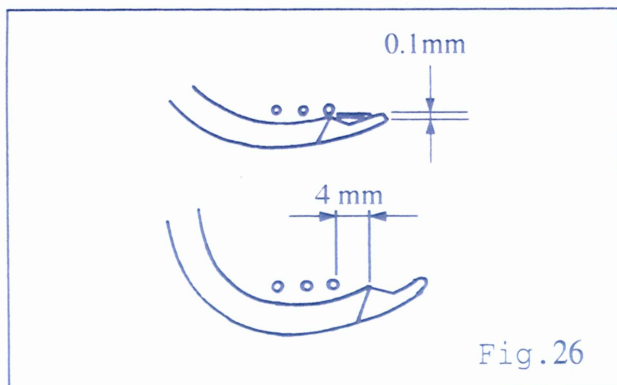
- (1) 調高押腳時，請小心不可調得太高以免押腳碰撞上勾針。
- (2) 在未安裝上勾針狀態下，押腳也不可以調得太高，以免押腳壓不到布料。

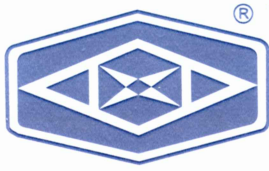
F. ADJUSTING THE HEIGHT OF PRESSER FOOT :

If you want to adjust the height of Presser Foot, Loosen the nut (A), turn the screw (B) higher by hexagon wrench to decrease the height. On the contrary, turn the screw (B) lower to increase the height. (Fig 27)

* Remark:

- (1) Please don't adjust the Presser Foot too high. Or, it will hit the Spreader.
- (2) Even the Spreader doesn't install. Please don't adjust the Presser Foot too high, it will cause the Presser Foot not press the fabric well.





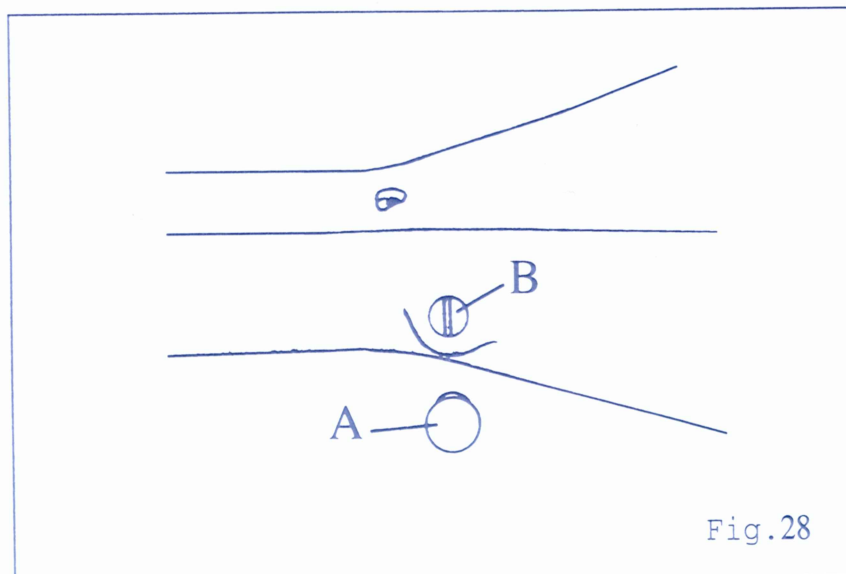
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G. 送料具高度之調整：

1. 本機在出廠時，已將送料具高度調在一般位置。若因車縫布料厚薄不同，而欲調整送料具高度時，可先將止油膠蓋(A)取下，再以螺絲起子轉動送料具高度調整螺絲(B)調整之。(圖28)
2. 一般送料具高度調整螺絲(B)的溝槽皆在垂直狀況，其順時針轉15度，為本機最高點，反之，則為最低點。

G. ADJUSTING THE HEIGHT OF FEED DOG :

1. The height of Feed Dog have been adjusted in standard position at the time of shipment. According to the difference thickness of fabric, if you want to adjust the height of Feed Dog, please take-out the Rubber Plug (A) and turn the screw (B) to adjust by flat screw driver. (Fig 28)
2. The groove of screw (B) is in vertical normally. Turn it clockwise to 15 degree is the highest position of Feed Dog. On the contrary, it is the lowest position.





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H. 勾針控線組之調整：

1. 當針棒升至最高點，將分線盤(A)的平面部調整呈45度角，且平面邊緣輕輕接觸穿過的線。分線盤須位於控線組中間溝槽的正中央。(圖29)
2. 當線穿過勾針底線控制鈕及勾針控線組中的導線片(B、C)時要呈一直線，且導線片(B、C)前端的穿線孔要位於控線組的中央，並對準刻痕。(圖30)

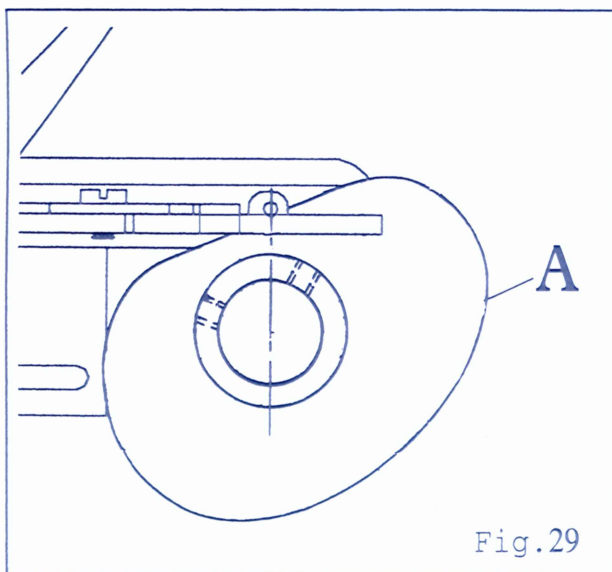


Fig. 29

H. ADJUSTING LOOPER THREAD TAKE-UP :

1. When the Needle Bar lift to the highest position, the flat of Looper Thread Take-Up (A) touch the thread while it locates at 45 degree. The Looper Thread Take-Up should be set at middle of channel. (Fig 29)
2. When the thread through the Looper Thread Tension Knob and two Thread Eyelet (B.C) in a line, the front thread hole of Looper Thread Eyelet(B.C) locate at middle of channel and align with the nick. (Fig 30)

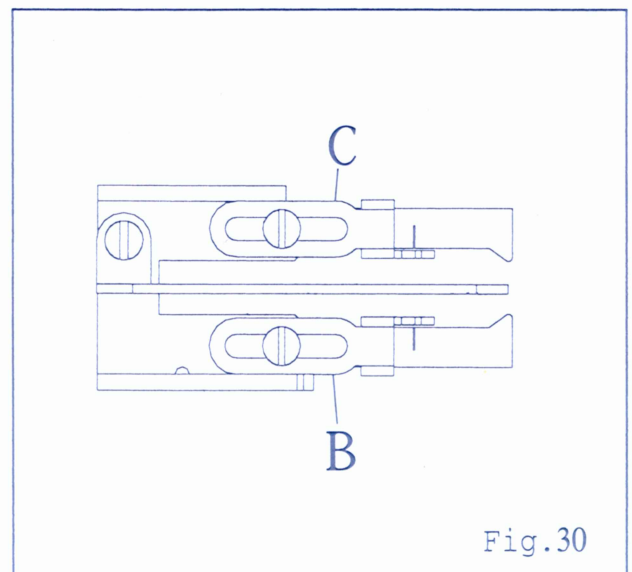


Fig. 30

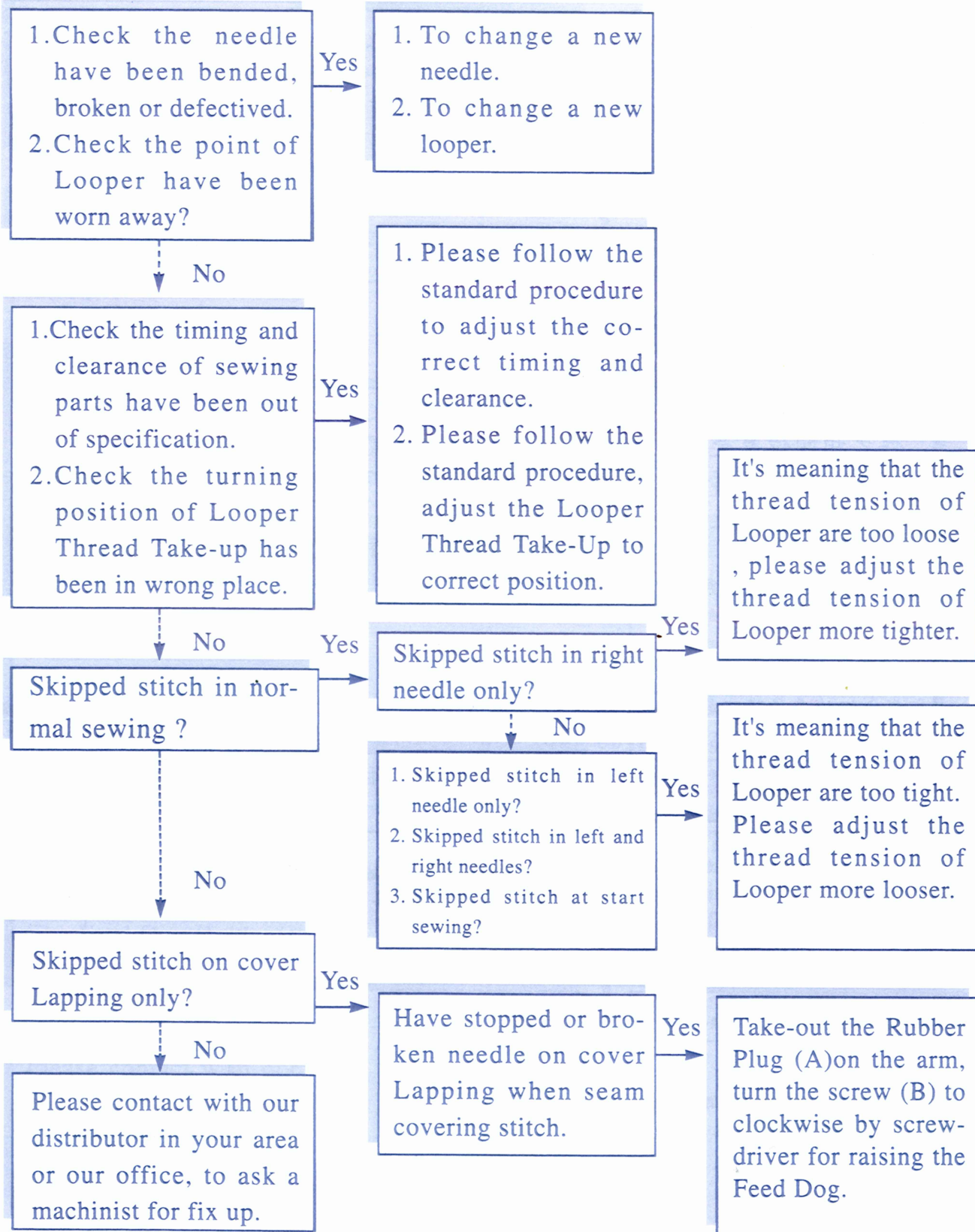
三、簡易故障排除：

A. 跳針：



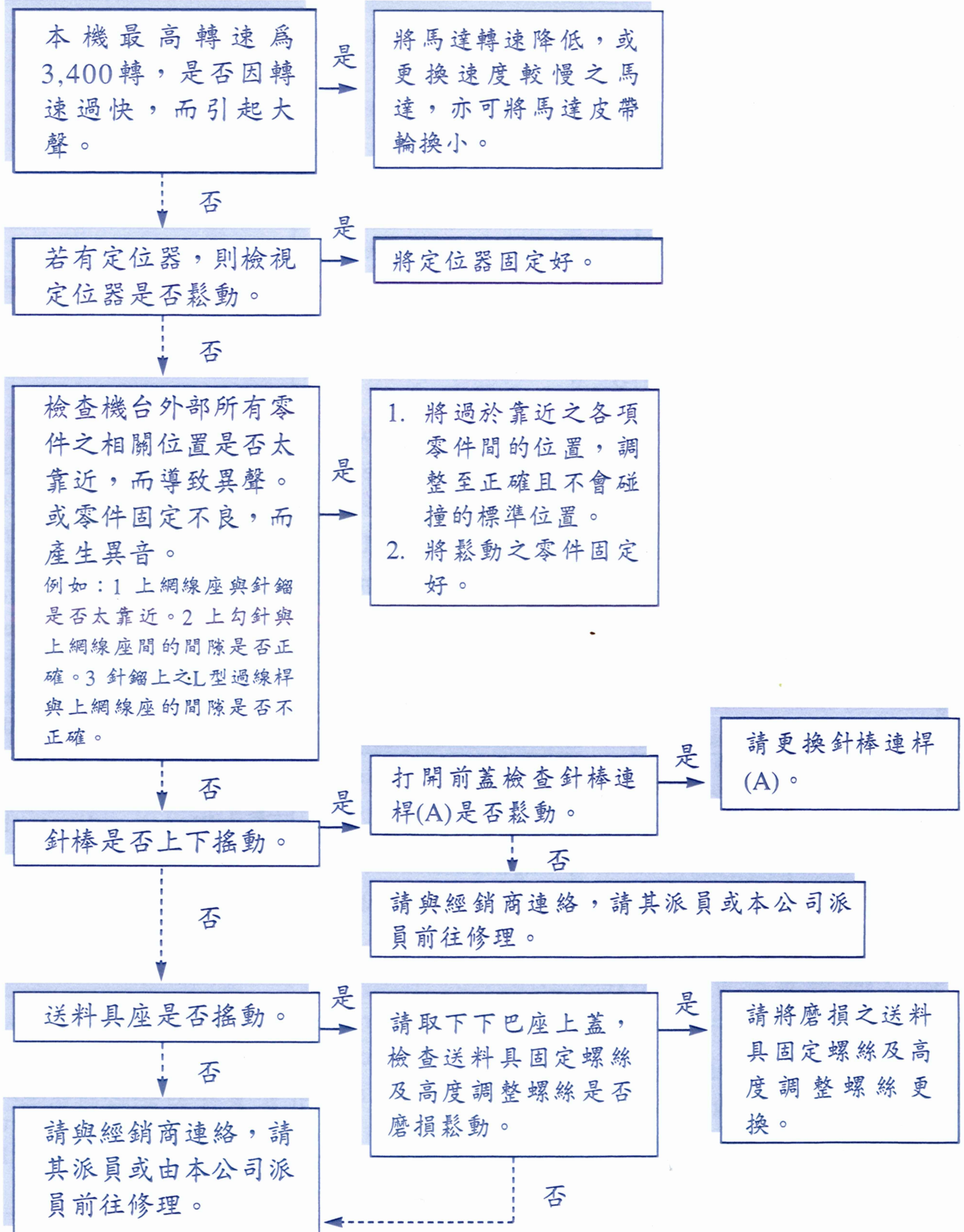
≡、MAINTENANCE GUIDE :

A. SKIPPED STITCH :



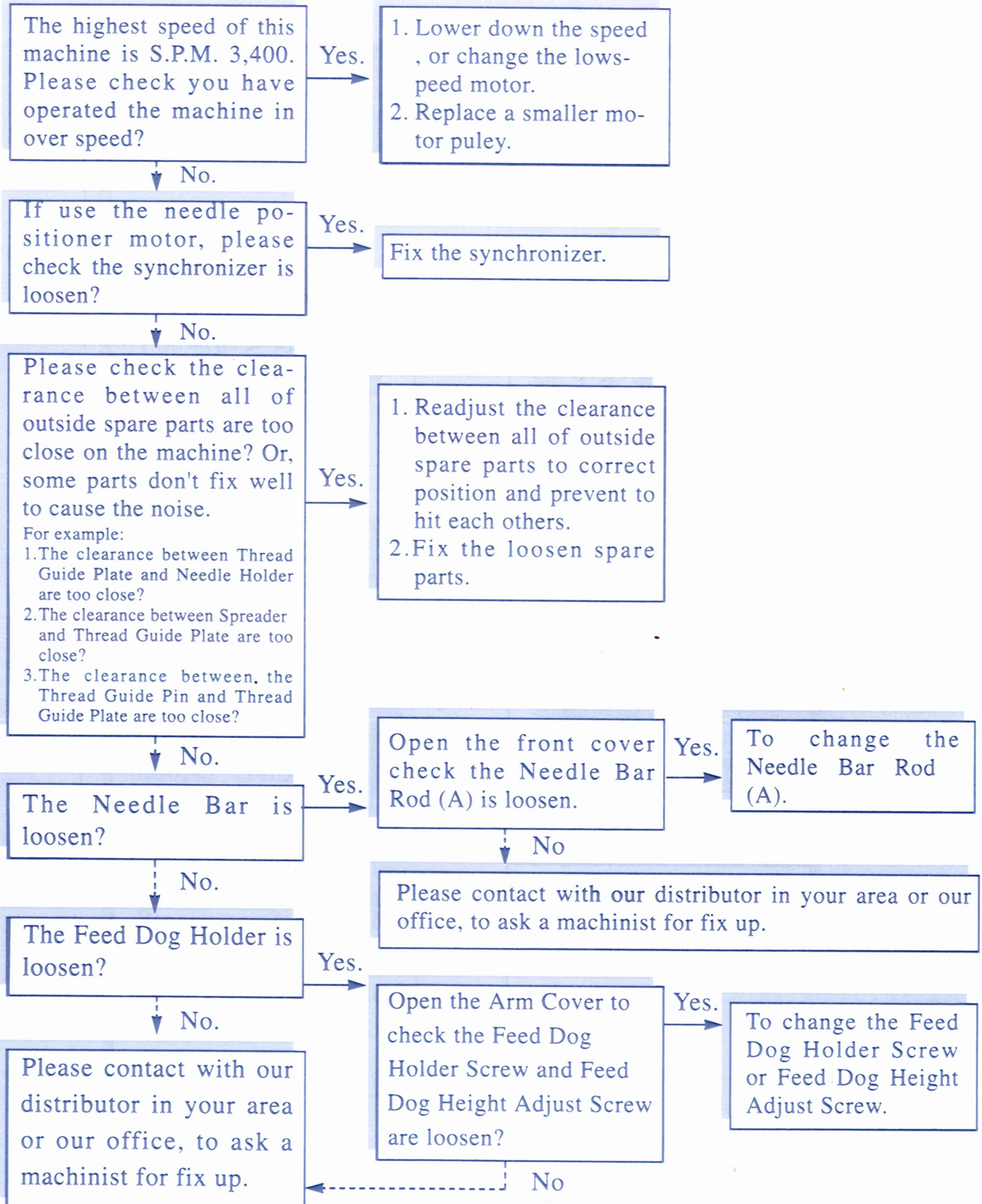
三、簡易故障排除：

B. 雜音或車縫大聲：



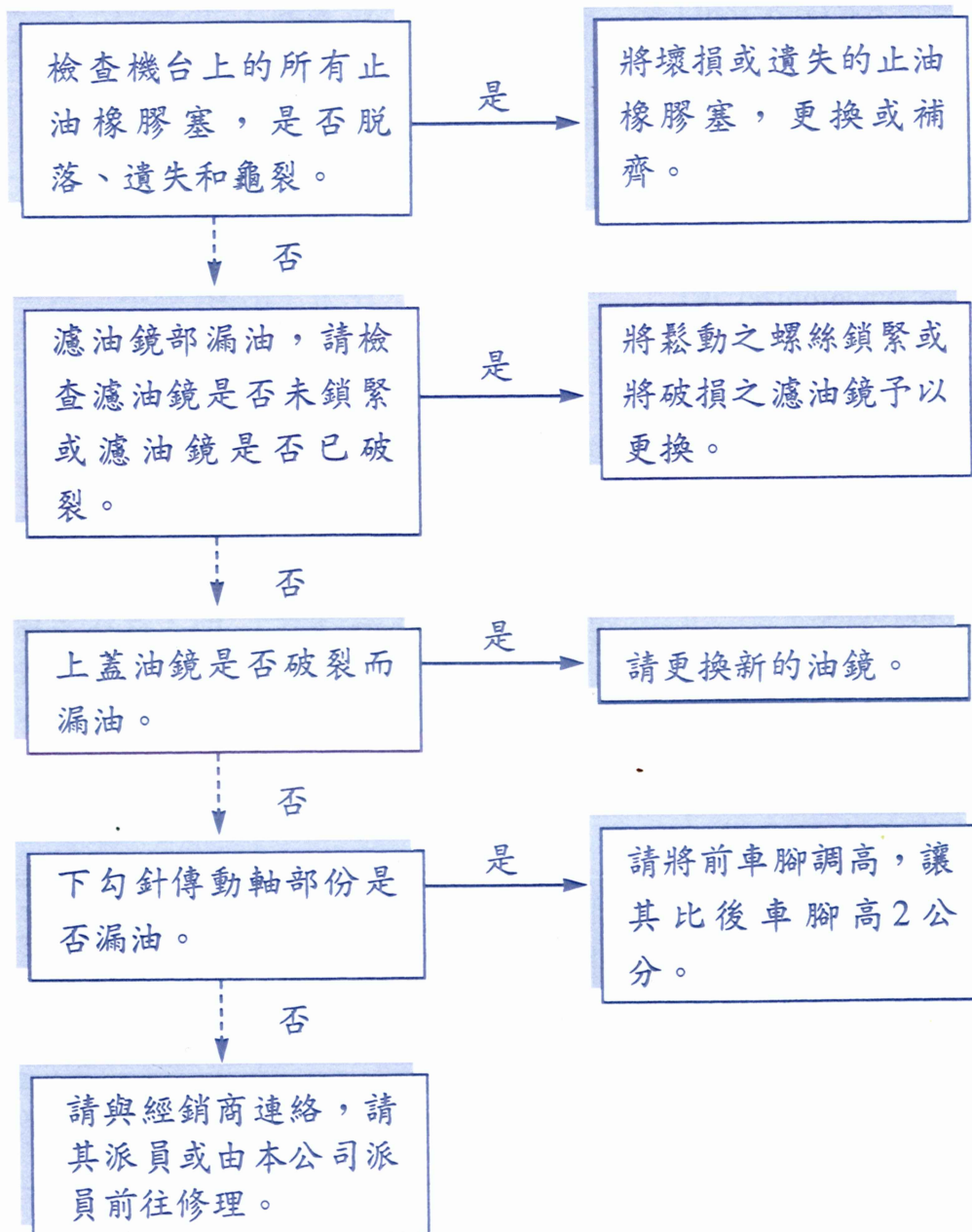
≡、MAINTENANCE GUIDE :

B. NOISE OR LOUDLY SEAMING :



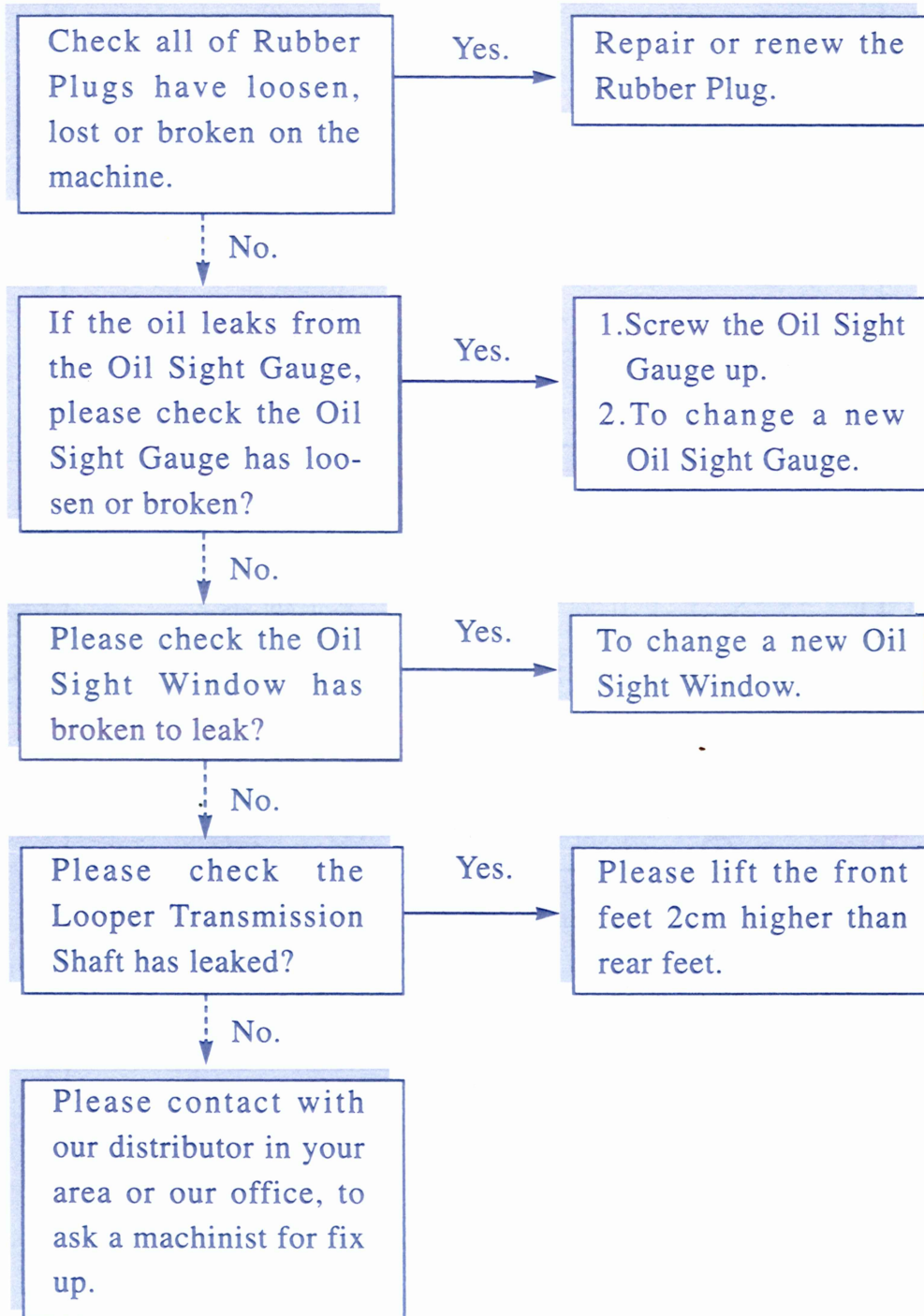
三、簡易故障排除：

C. 漏油：



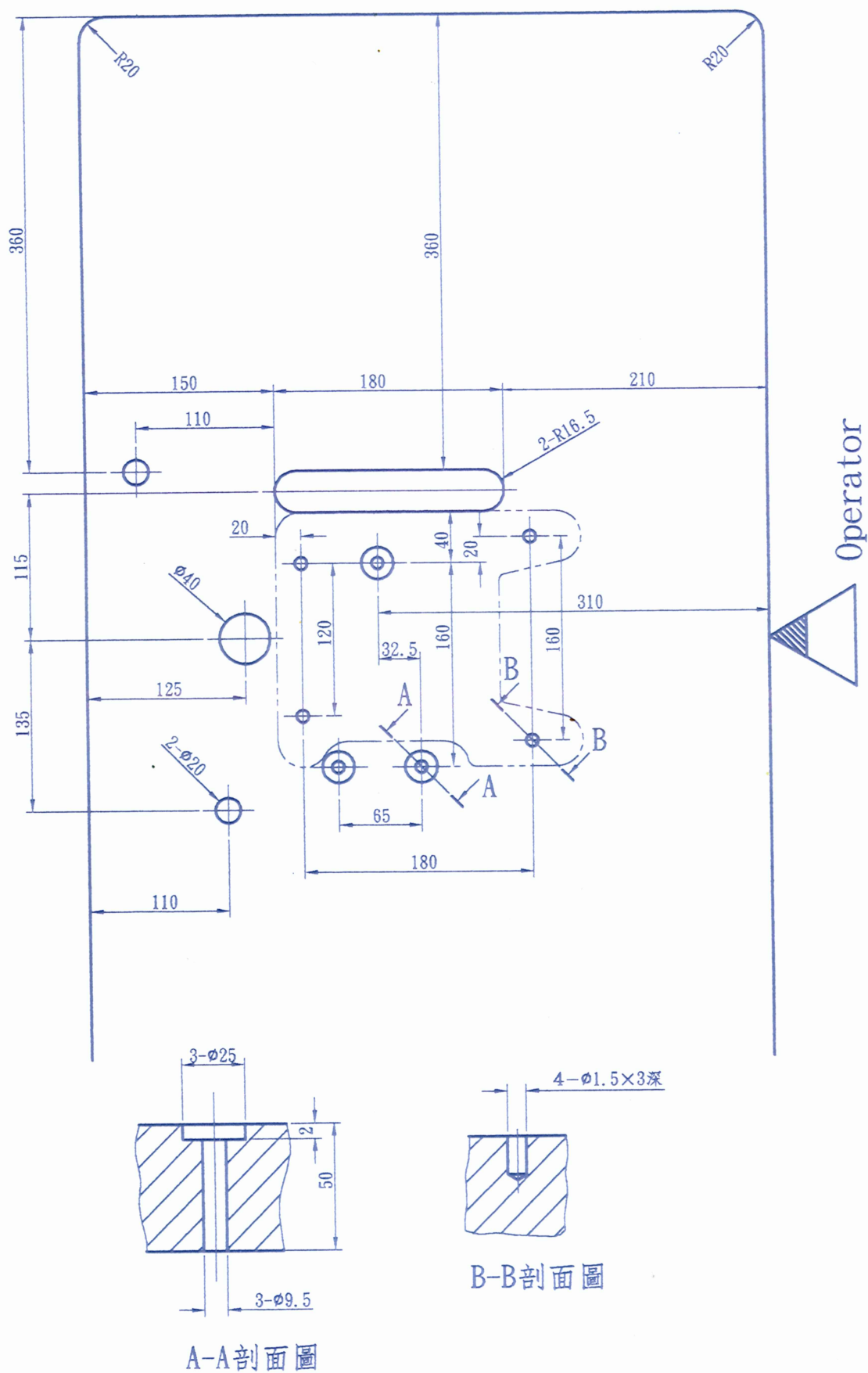
≡ 、 MAINTENANCE GUIDE :

C. LEAKING :



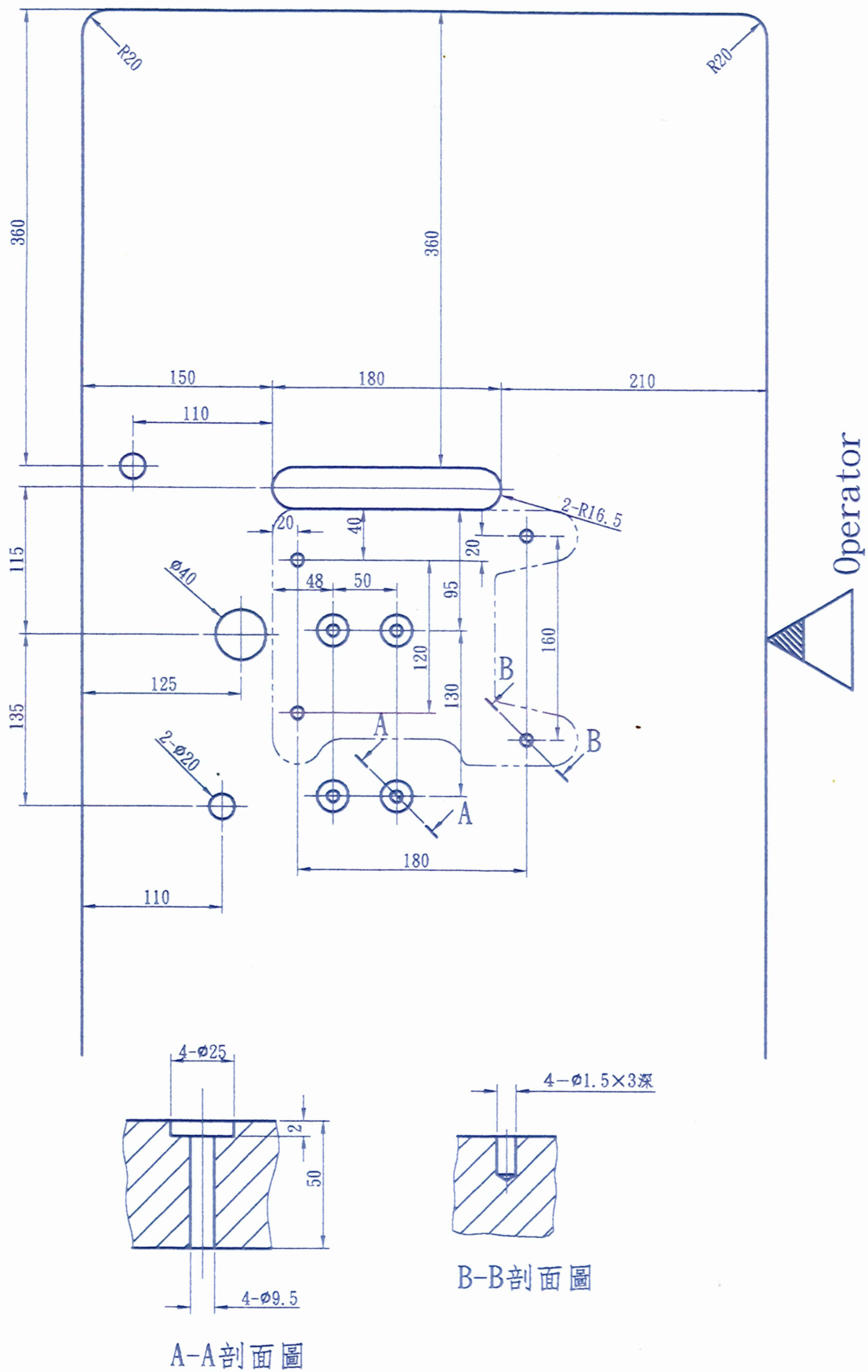
四、桌板圖：

A. 車台安裝位置圖〔電子馬達〕：



四、桌板圖：

B. 車台安裝位置圖〔普通馬達〕：



零件手冊

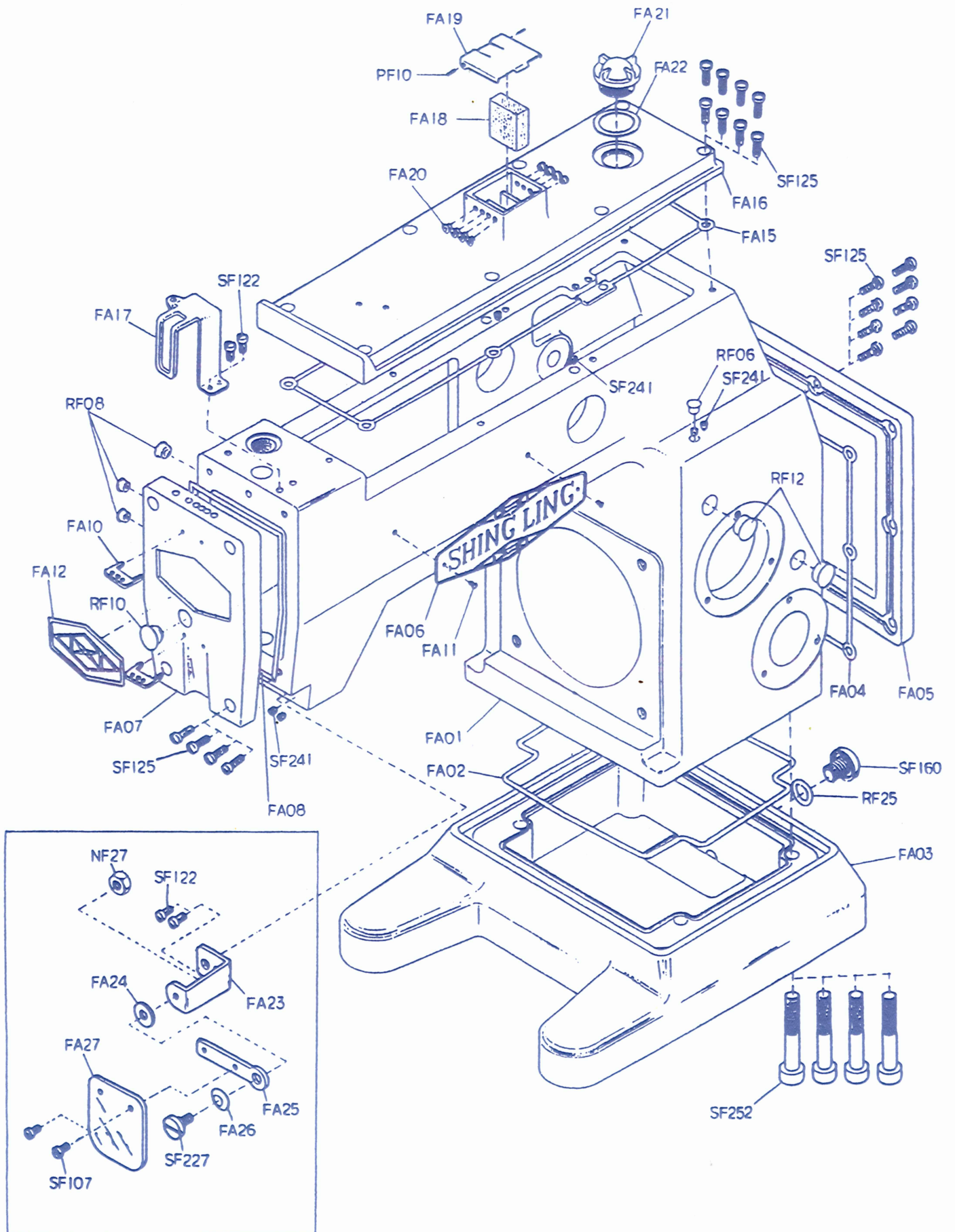
Spare parts Book

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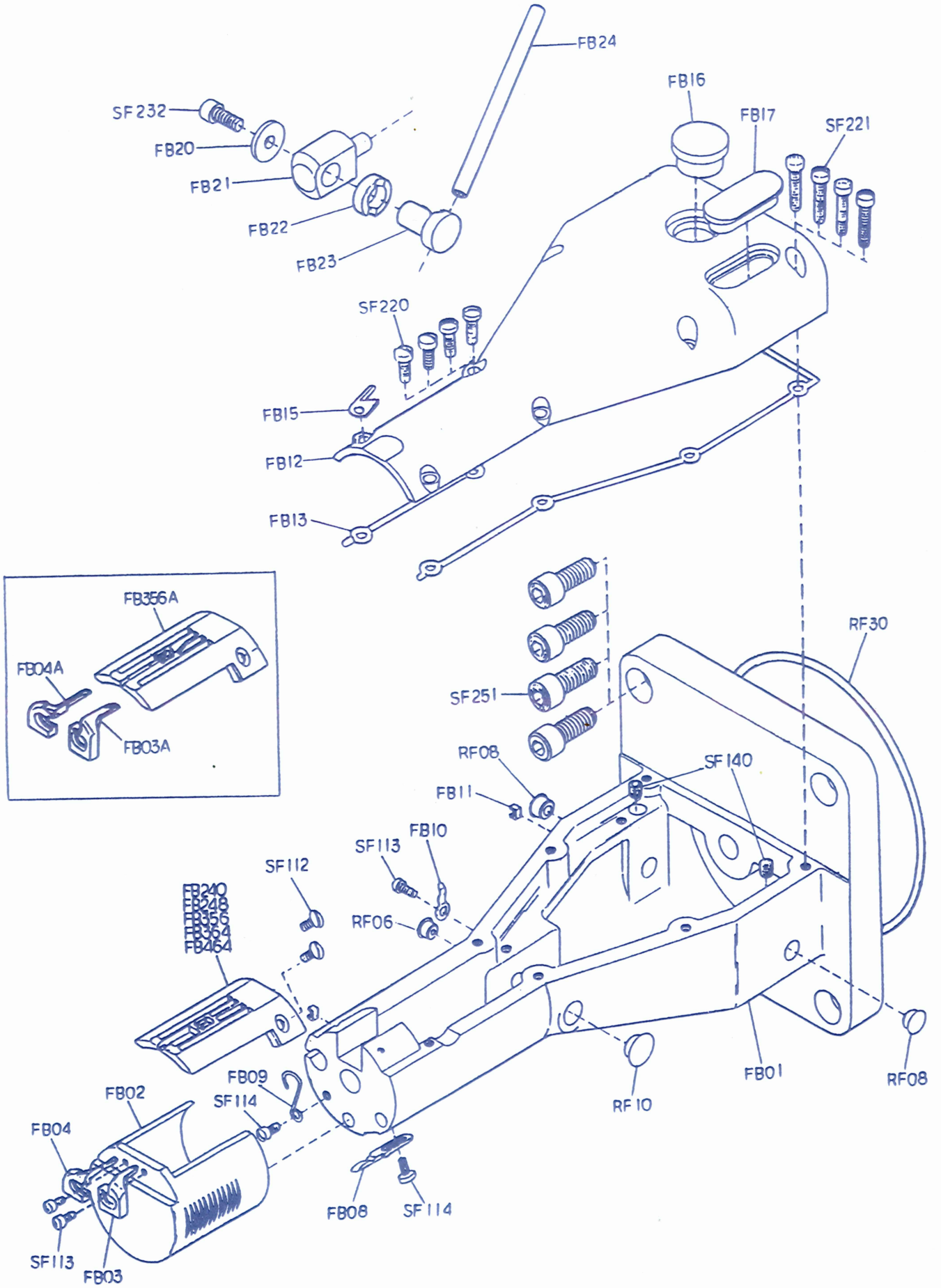
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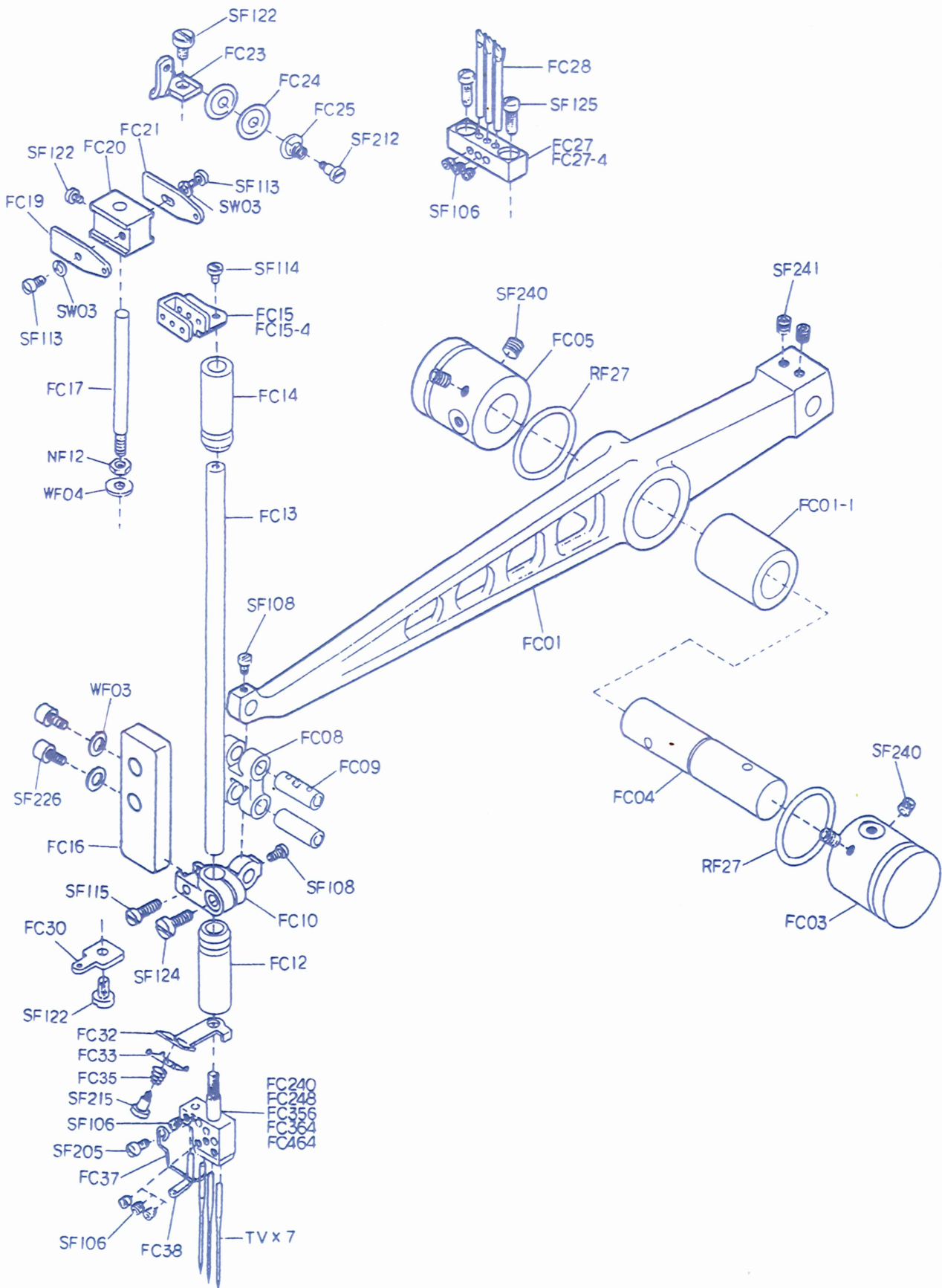
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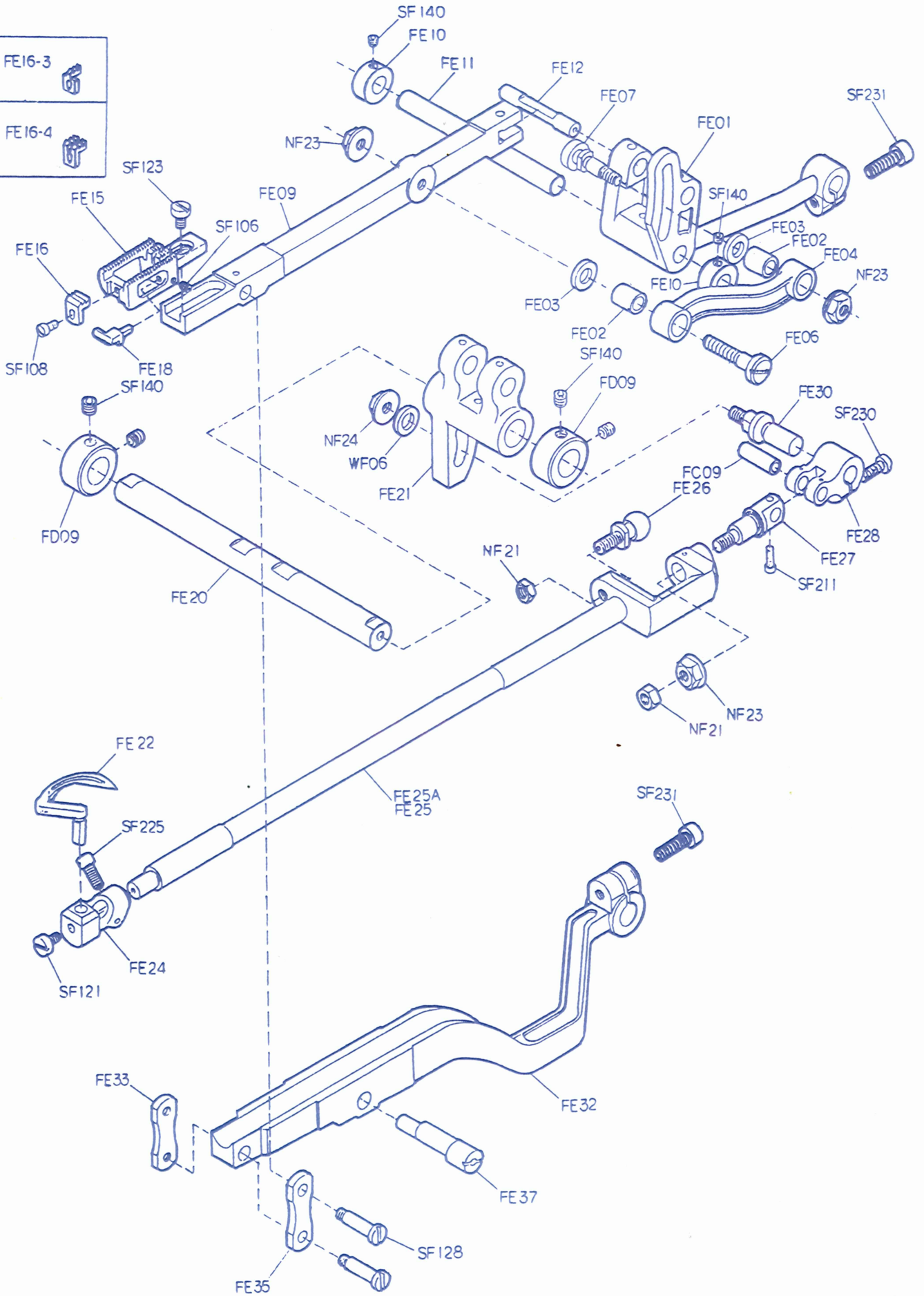


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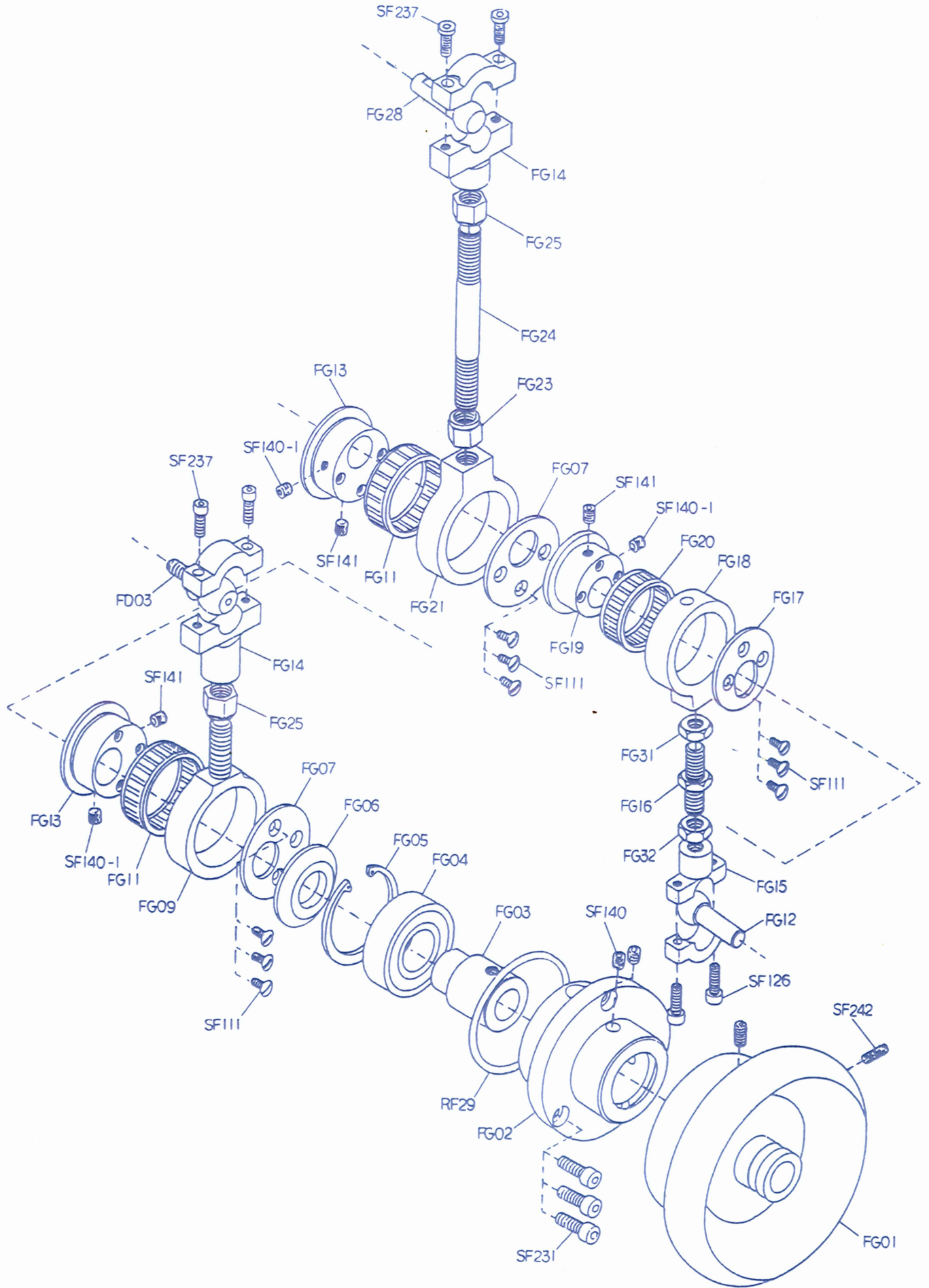


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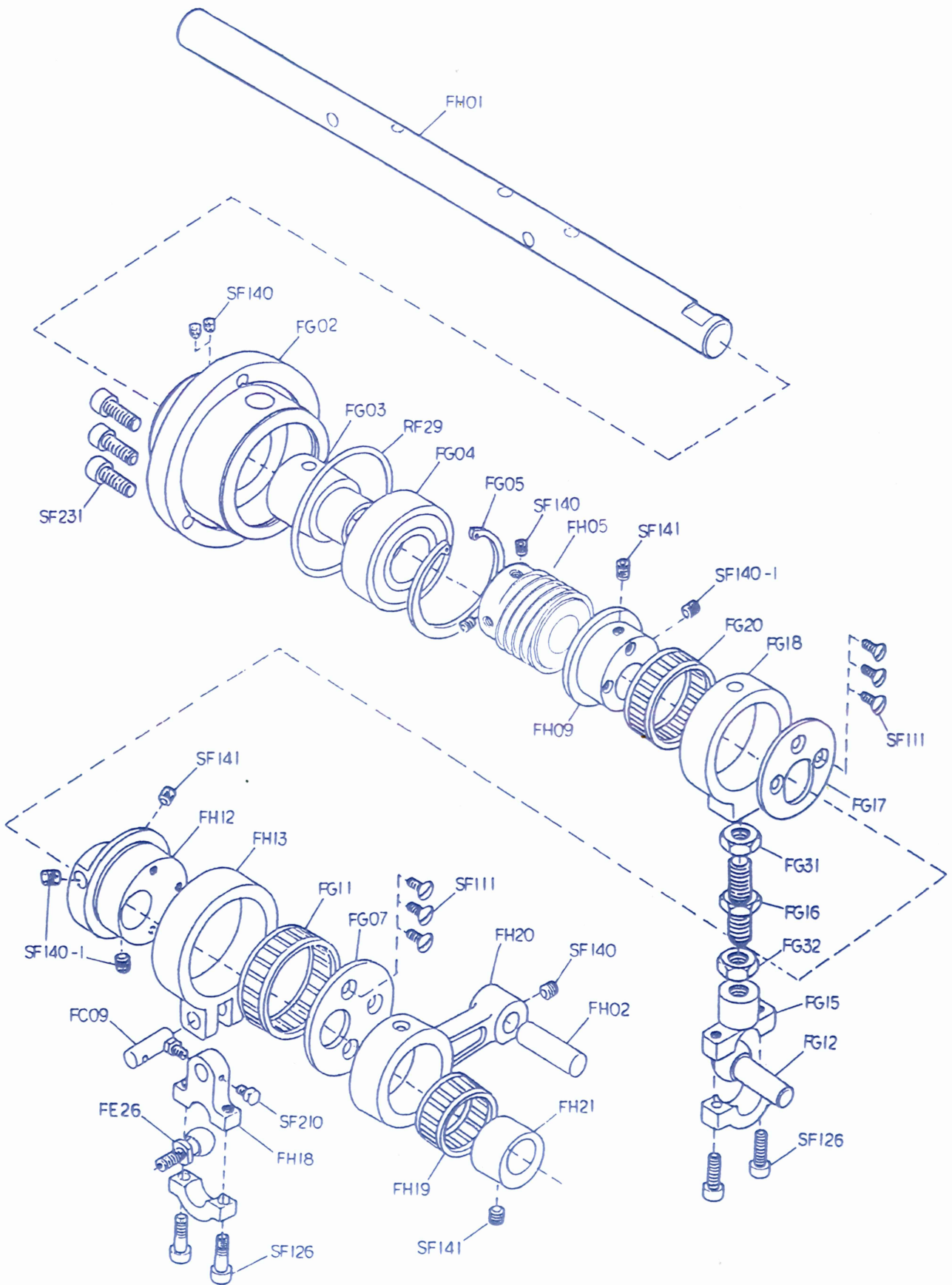
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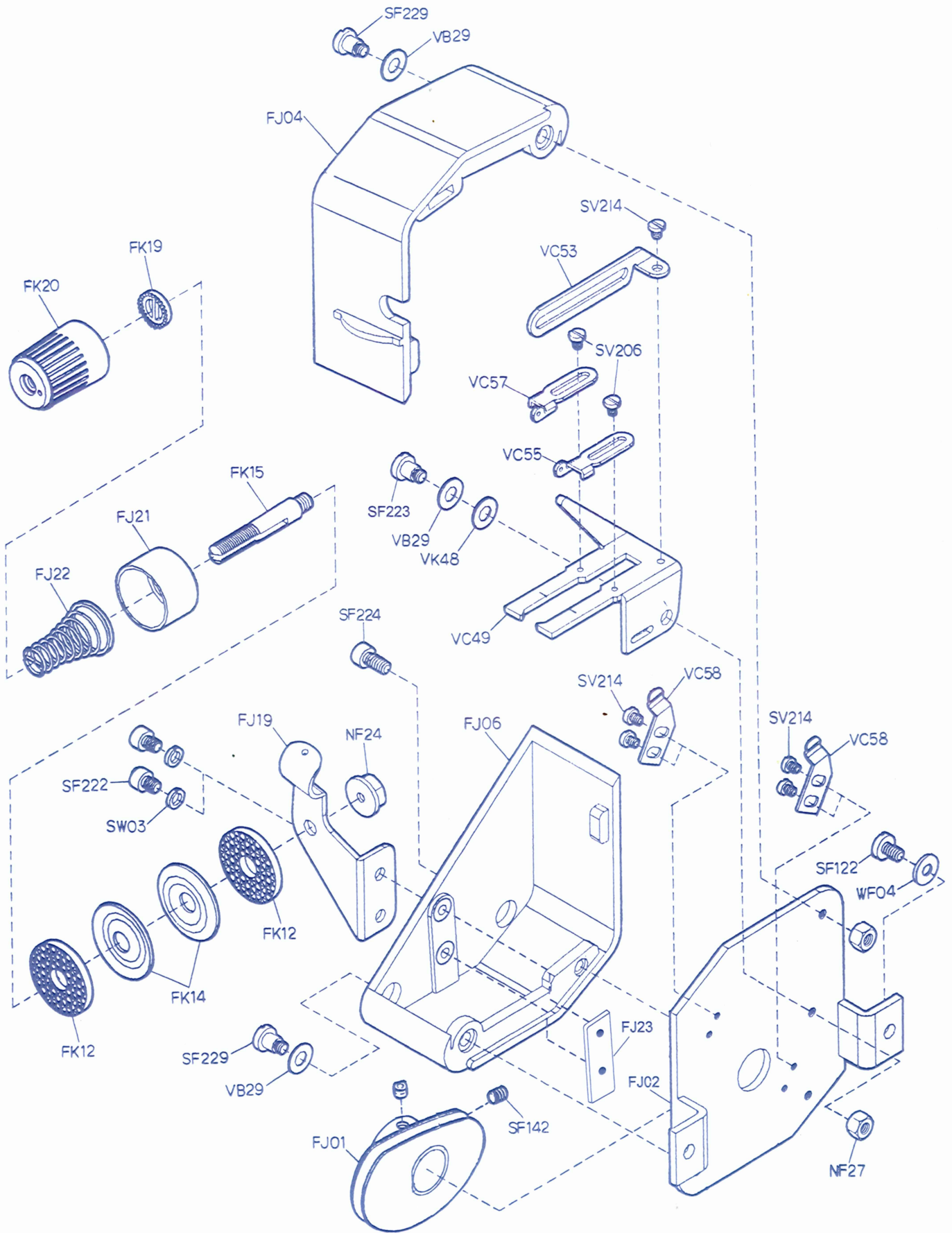
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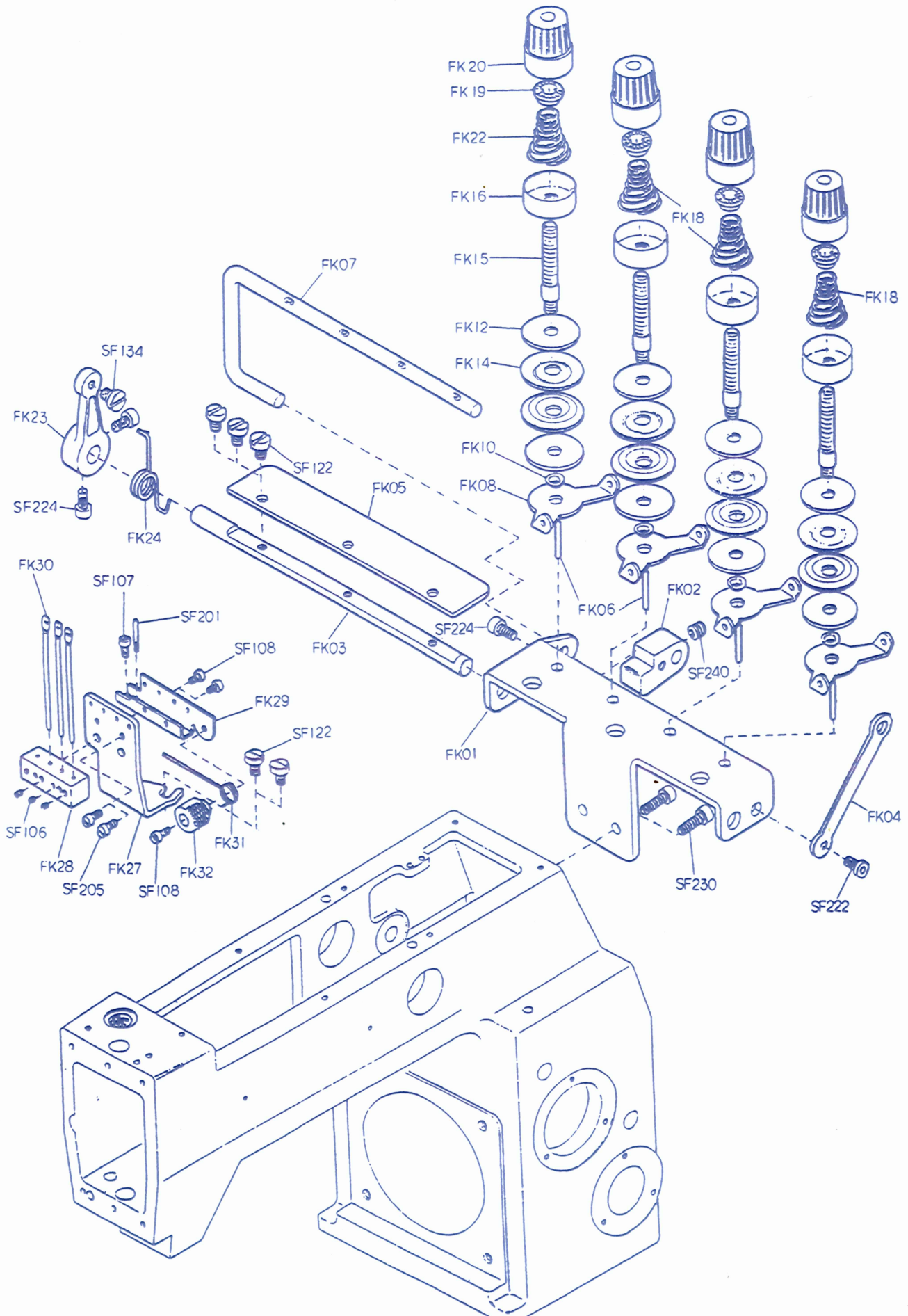
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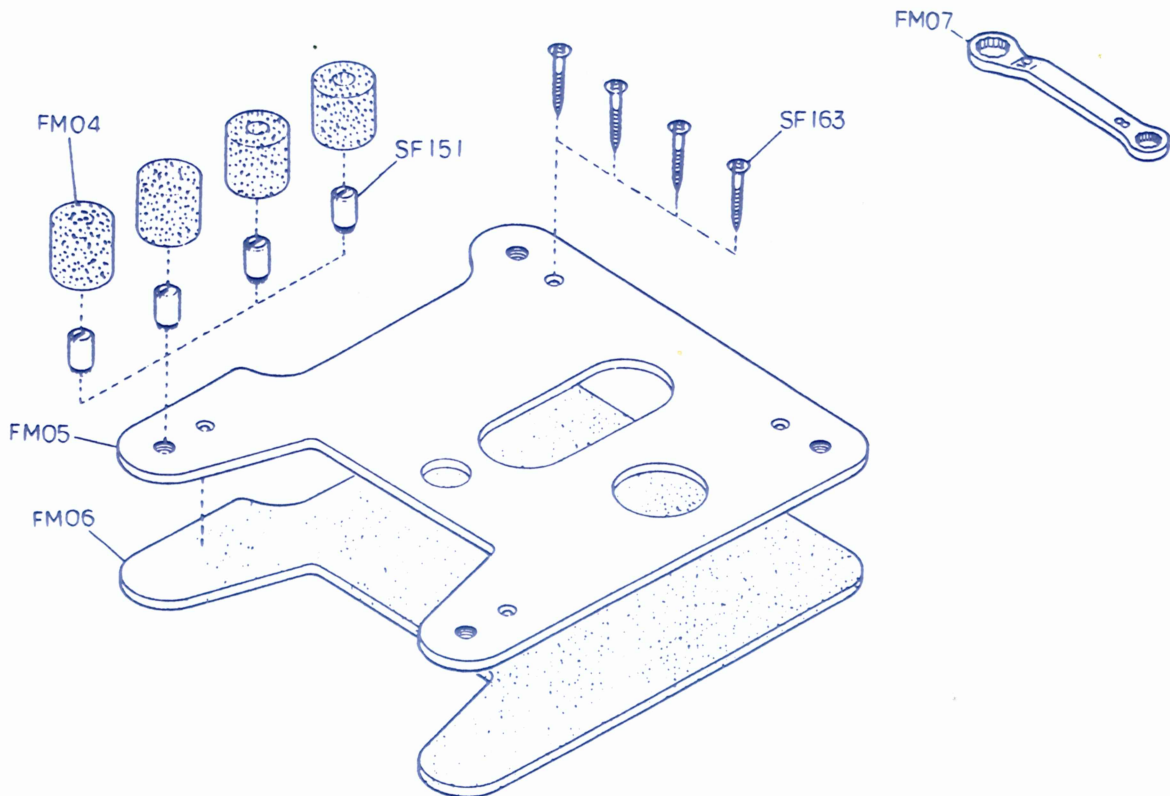
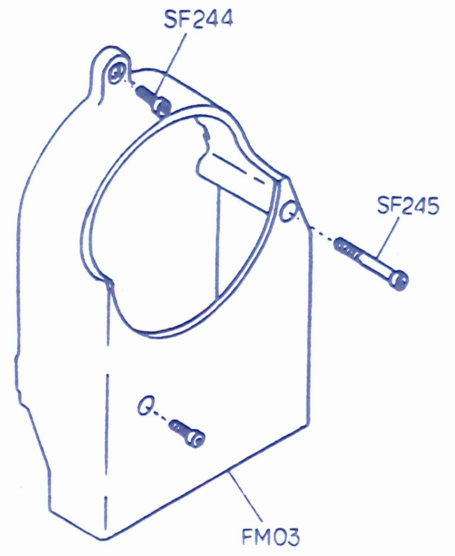
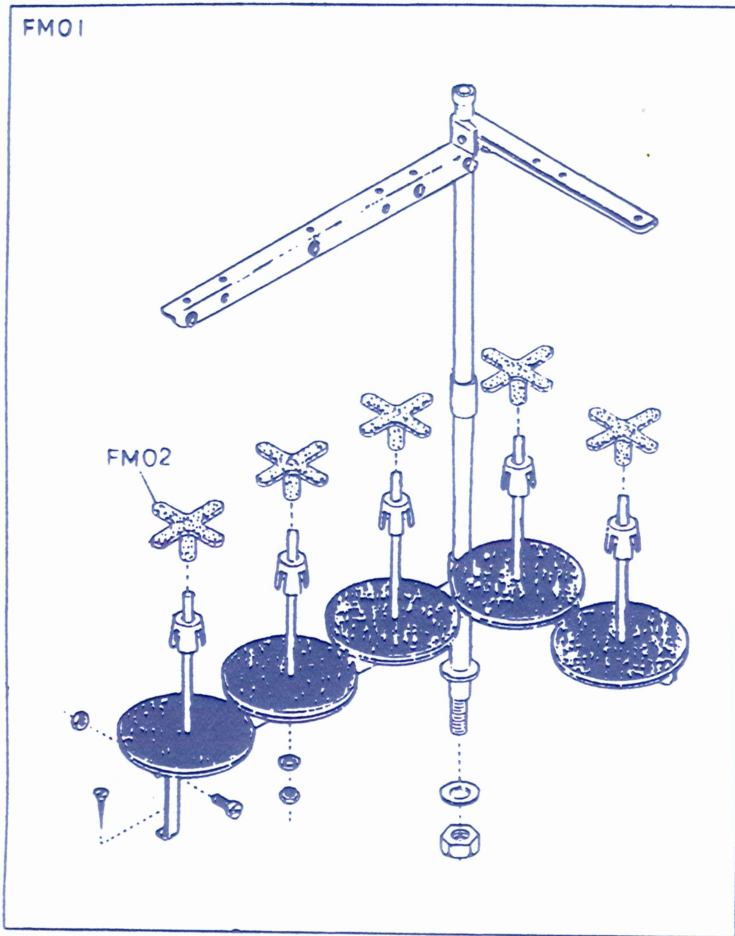


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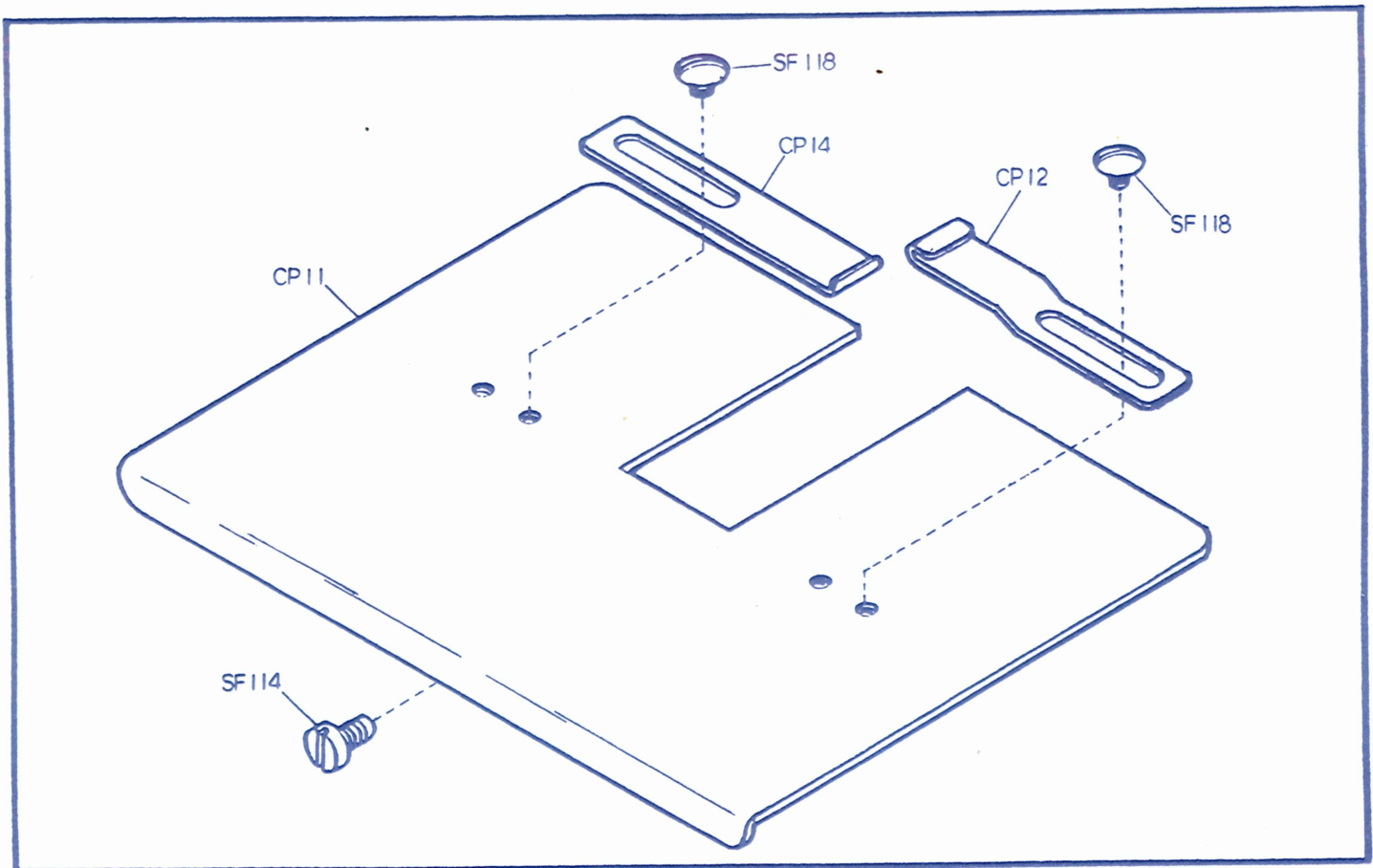
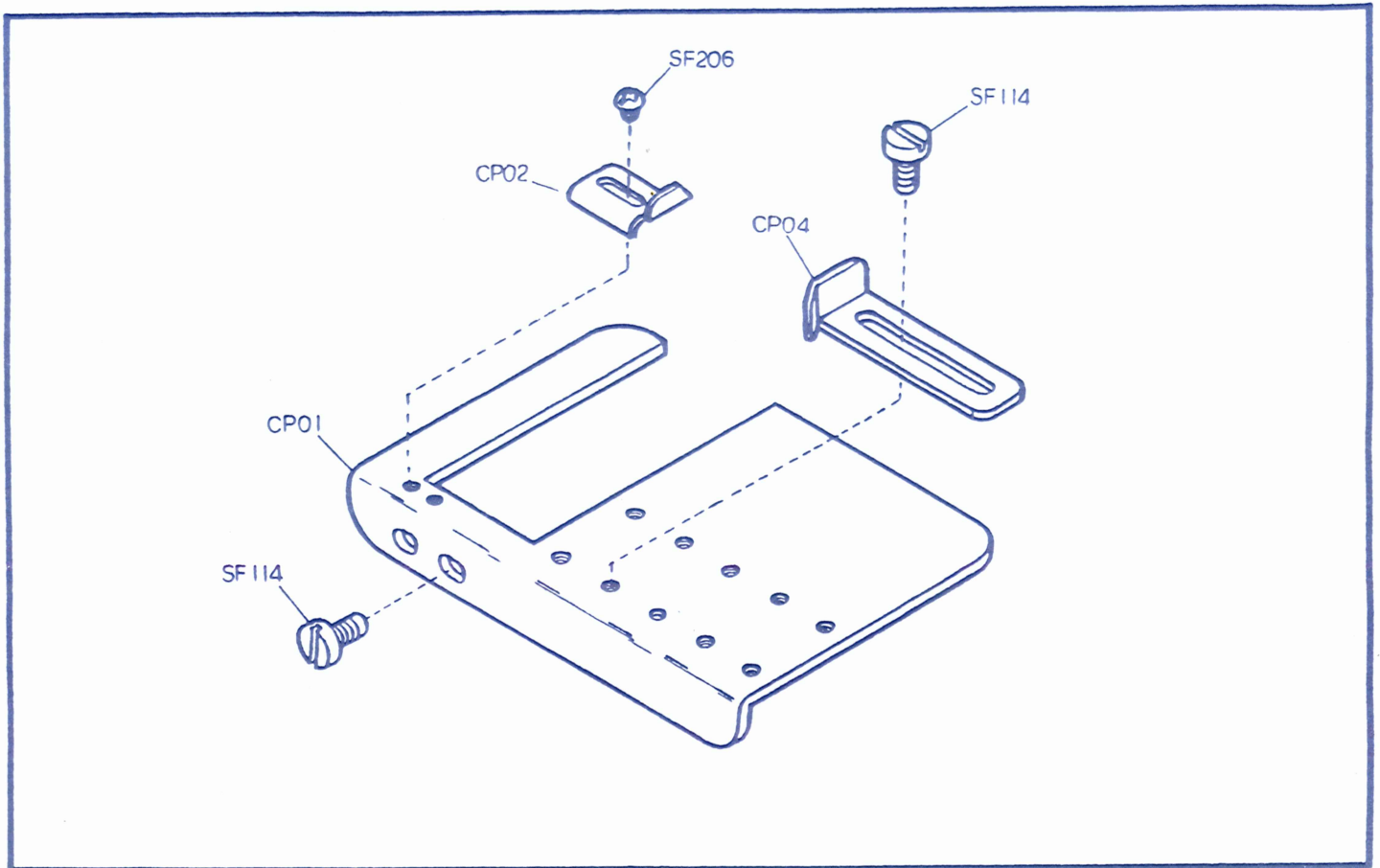


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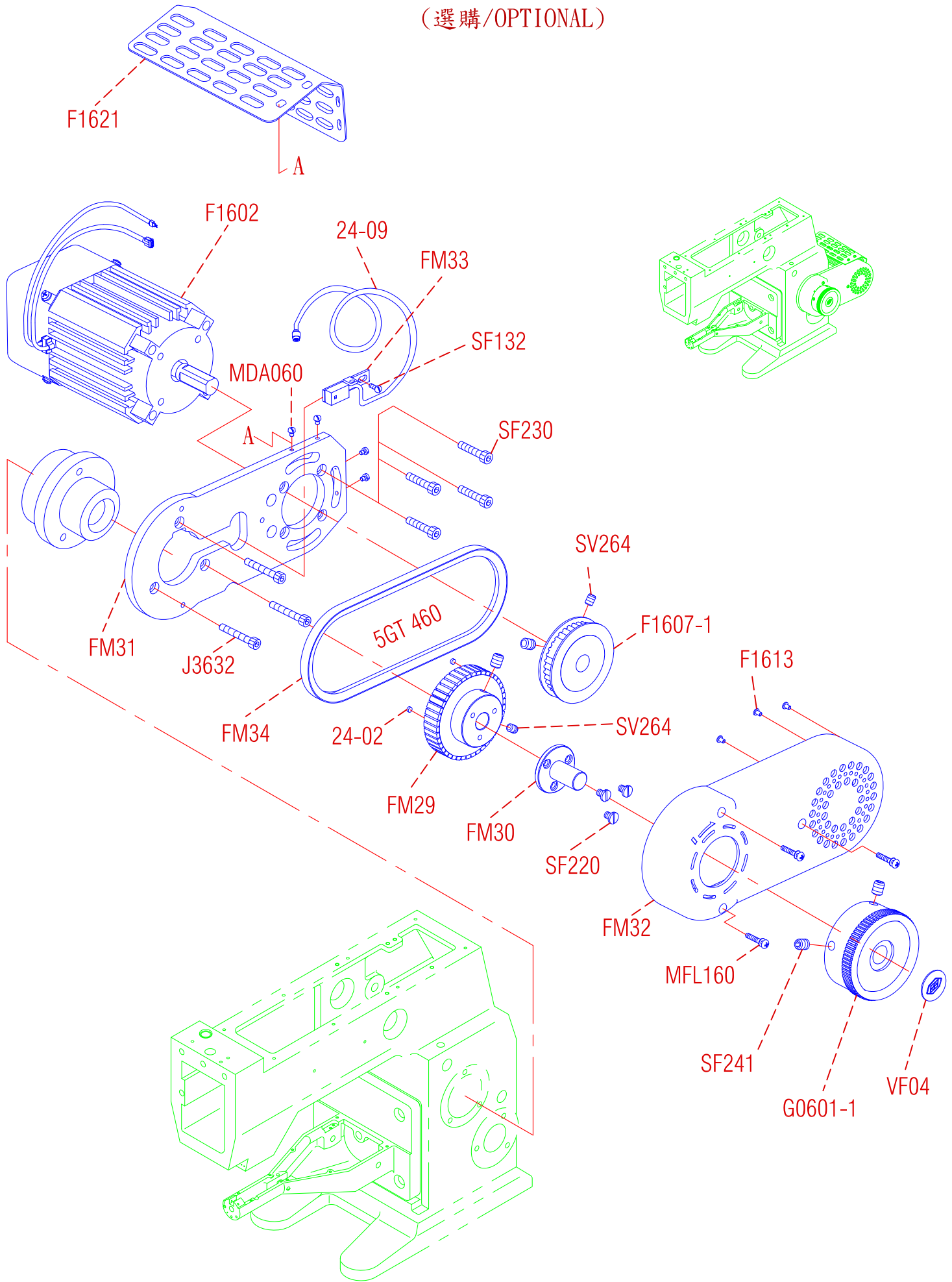


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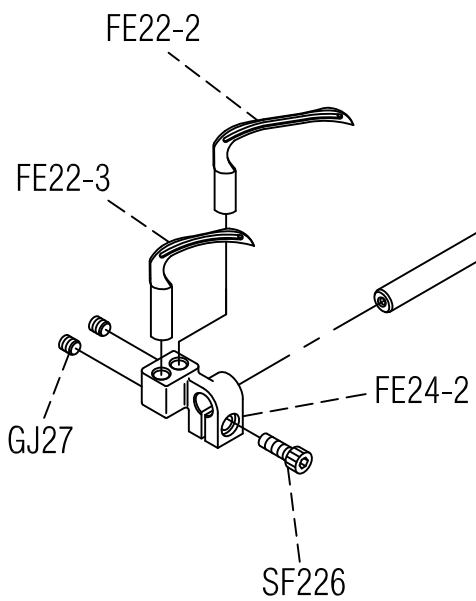
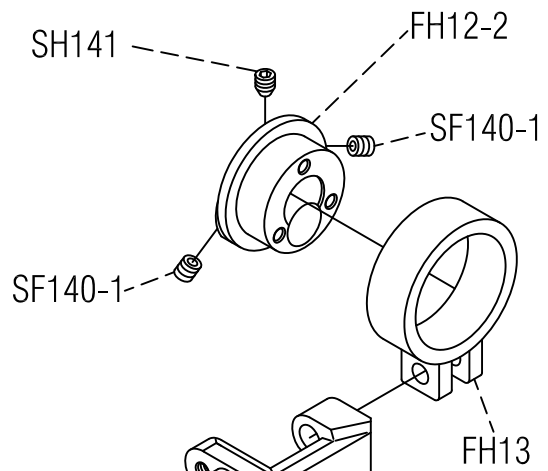
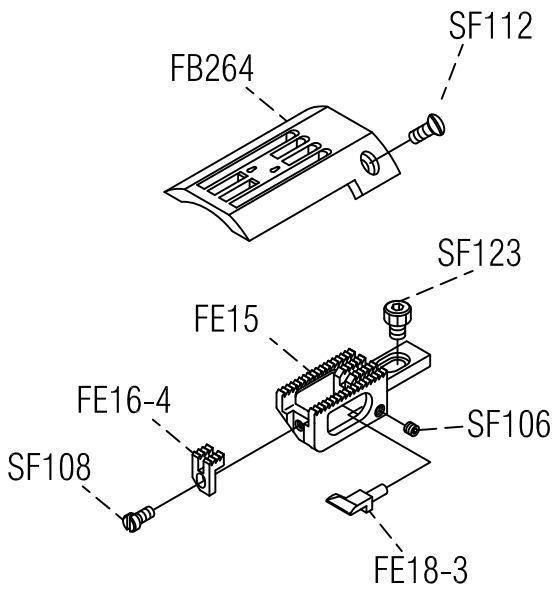
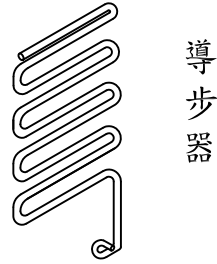
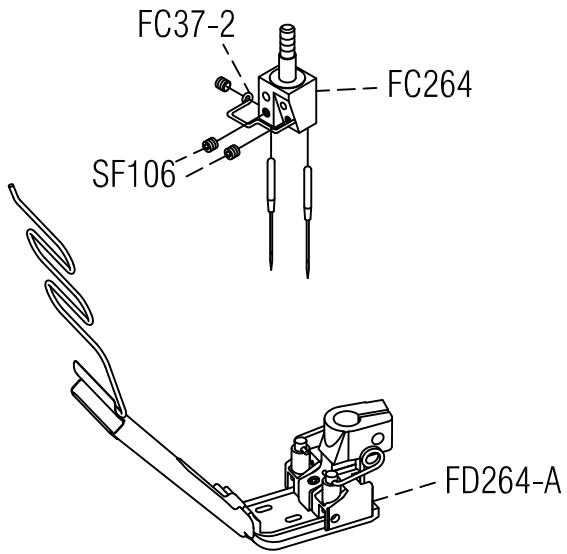
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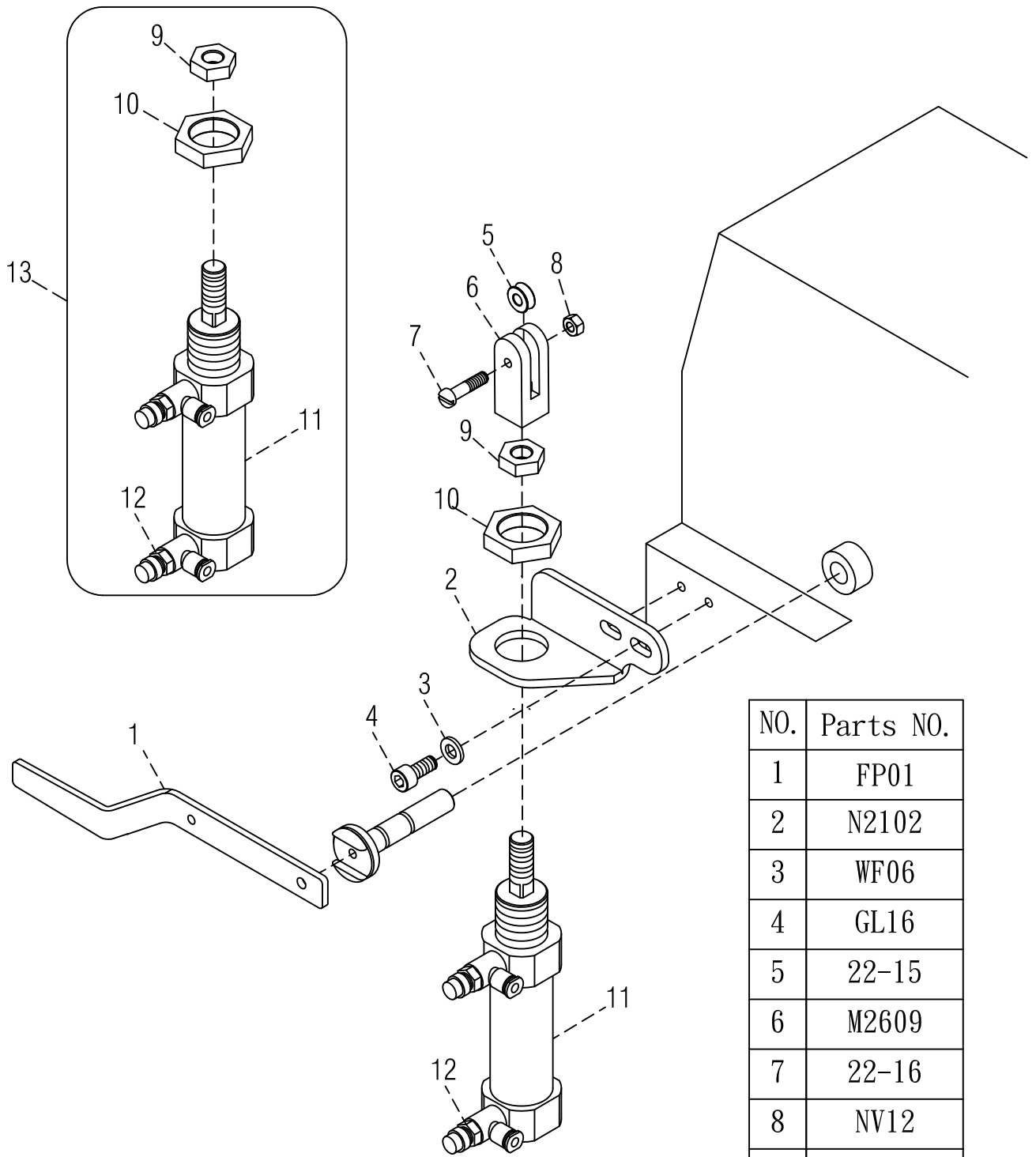
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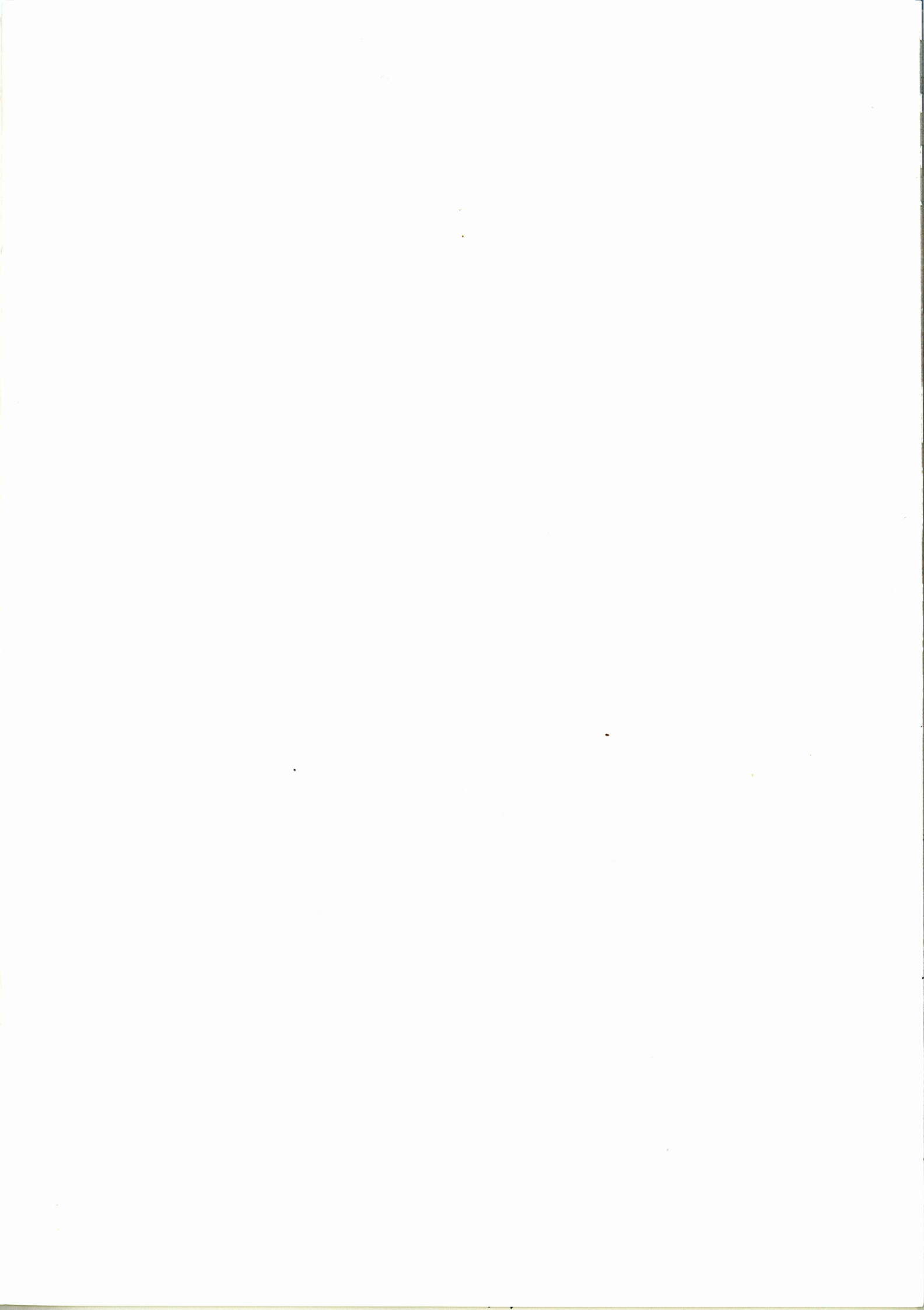
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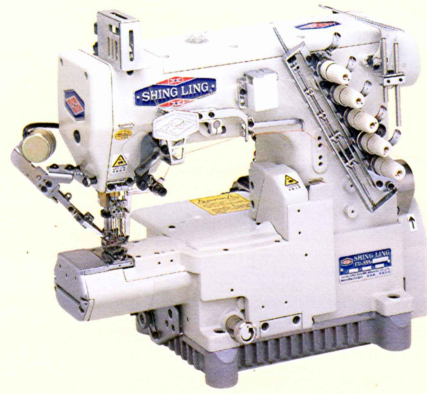


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3	WF06
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5	22-15
6	M2609
7	22-16
8	NV12
9	M2604
10	M2603
11	J3225
12	M2618
13	J3224





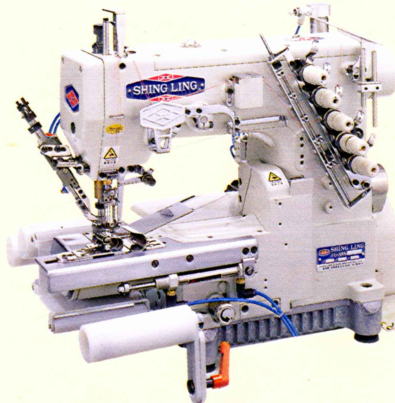
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VG-888 EST



FW-777



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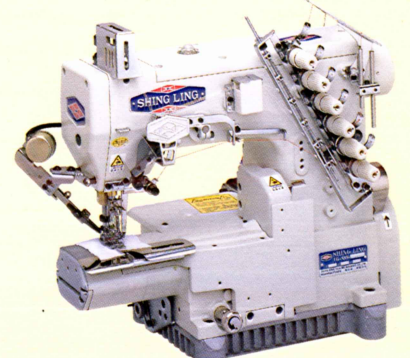
VG-888 N600



FG-797



VG-888 S320



VG-888 CB464EST



FG-798



SL-7102/7204/7205



SL-8500N



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工業用縫紉機

製造廠：星菱縫機股份有限公司
SHING LING SEWING MACHINE CO., LTD

* 本手冊所記載的規格式樣或外觀，因加以改良，有時不預告即加以變更，敬請見諒。
The Specification and The Outware Appearance in this manual are subject to change without notifications.