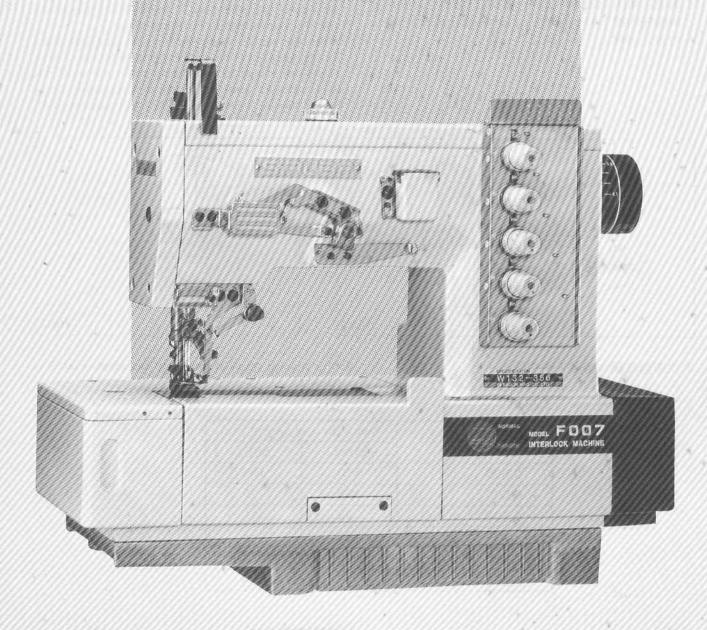
# 

F007



使用説明書&零件圖 INSTRUCTION & PARTS BOOK

IDM - ORIGINAL



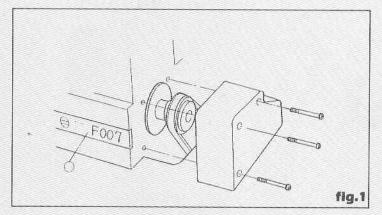
高林股份有限公司 KAULIN MFG. CO., LTD.

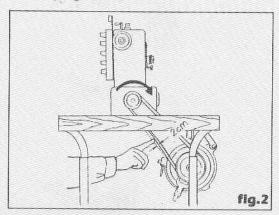
## 機器如何安裝

- 1.依本機器所附桌板裁製圖及零件組合圖所列之配件,依序安裝防震機座,線架及廢料槽(FR装置才有)
- 2.馬達之轉向為順時針方向,皮帶之鬆緊度以用手 指能向內壓下20mm為宜,同時為安全起見請皮 帶蓋必須鎖上。(圖1.2)

# **Installation Procedures:**

- The assembly of this sewing machine should follow the directions and the assembly plan according to the sequence of the assembly numbers. The first step is to fasten the sewing machine's quake-proof base securely to the table. Step 2, assemble the spool rack and the waste chute (only FR has this).
- 2. When the machine is viewed from the right side, the turning direction of the pulley is clockwise; the tension of the belt should be adjusted so that it will be 20mm bent backward when the middle of it is pressed. For safety reasons, make sure that the belt guard is fixed to the machine. (figure 1.2)





3.皮帶輪及縫台轉速,請參照表(1)。

The working speed of the pulley and stitch is listed in table 1.

Table 1

Machine speed	Motor pulley outer diameter (mm)		
(s.p.m.)	60Hz	50Hz	
6,500	110	135	
6,000	105	125	
5,500	95	115	
5,000	85	105	
4,500	80	95	
4,000	70	85	

#### 注意:

- 1.使用新機器最初一個月運轉速度約為最高速(如 表1)之80%,並請選擇正確的馬達皮帶輪尺寸 (如表1)。
- 2. 桌板厚度約50mm
- 3. 馬達規格:離合器馬達・3相2極400瓦特 (1/2 HP)。
- 4.皮帶規格: M型V字皮帶。

# Remarks:

- During the first month of using the machine, the maximum speed shouldn't exceed 80% of the speed listed in Table 1. Make sure to choose the correct size of motor pulley. (TABLE 1)
- 2. If the standard thickness of table is about 50mm.,
- Specifications of motor: Clutch motor, 3 phase, 2 pole, and 400 watts (1/2 H.P.).
- 4. Specifications of belt: M type, V belt.

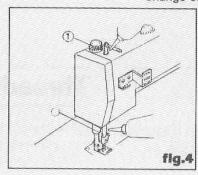
新機器運裝前均已將油倒盡,因此機器使用前必須 加入潤滑油。

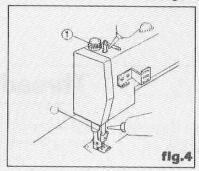
#### (1)潤滑油之注入(圖3,4):

- \*將螺絲(1)旋開,以包裝箱內所附之超高 速潤滑油或選用MOBIL #10或ESSO #32等 級之潤滑油加入,使油量指示桿位於上下油 標線之間即可,然後再鎖緊螺絲(1)。
- \*開箱之新機器或久置未使用而重新要用時, 請在針棒上下部份加油潤滑。

#### (2)潤滑油之更換(圖5):

- \*將螺絲(1)鬆開,使油槽之油完全排出後 再鎖緊。
- \*為延長本機器之壽命,請於開始使用四個星 期後更換新油,爾後約每四個月更換一次。





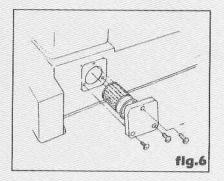
# flq.5

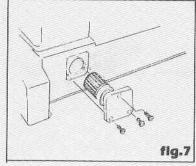
#### (3)濾油器之更換(圖6.7):

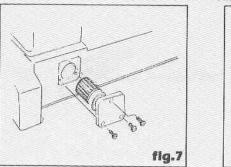
\*本機器特別裝有濾油器,約每使用一個月 後應卸下清洗, 必要時得更換新品。

fla.3

(4)針與線之冷卻與潤滑(圖8):使用矽油注滿 (1)(2)油槽以防止斷線。







# (1) How to fill oil (figure 3 and 4): \* Loosen and take out screw (1), then apply the

The oil has been drained from the machine before delivery... Therefore, before starting the machine for the first time,

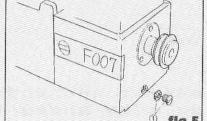
- Utra-high-speed lubricant included in the packing carton, or Mobil #10, or ESSO #32 lubricant, until the oil level reaches between line H and L in the oil level indicating window, then fasten screw (1).
- \* Before starting a brand new machine or a machine which has not been used for more than a couple of weeks, lubricate the needle bar.
- (2) How to change oil (figure 5):

How to Use

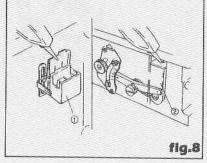
fill the machine with oil.

**Lubricating Oil** 

- \* Loosen screw 1, drain all the oil from the tank, then fasten the screw.
- \* For extending the lifespan of the machine, change oil after the initial 4 week operation. After that, change oil every four months.



- (3) How to replace the oil filter (fig. 6.7):
  - \* This machine is equipped with an oil filter, and the filter must be cleaned every month. Replace the filter if necessary.
- (4) Lubricate the needles and the threads (fig. 8): fill reservoir (1) and (2) with silicone oil to prevent the threads from breaking.



# 針之更換

- \*選用針之規格與尺寸請參照(表2)。
- \*旋開螺絲(1)並取下針。
- \*將新針插至含針孔最底端,並使針之長溝面向自己。
- \*重新鎖緊螺絲(1)。(圖九)

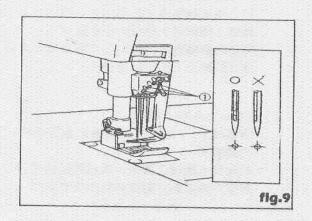
# How to Replace the Needles

- \* See Table 2 for the sizes and the specifications of the needles.
- \* Lossen screw (1), 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 9)
- \* Fasten screw (1).

#### NEEDLE SYSTEM AND SIZE

Table 2

NEEDLE SYSTEM		NEEDLE SIZE			
		2-needle	3-needle		
Schmetz	UY128GAS	# 65	# 70		
Organ	128GAS	# 9	# 10		

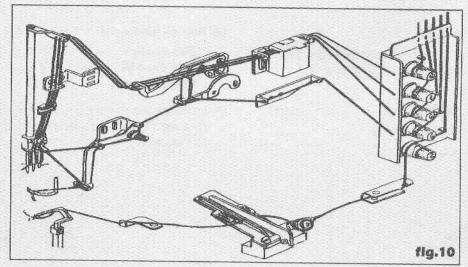


# 穿線方法

請確實按照圖示各種不同縫合情況穿線,錯誤之穿 線將引起內斷線,跳針或車縫不平坦等現象(圖十)

# **Threading**

Follow the procedures shown in figure 10 for threading. Wrong threading may cause thread's breaking, skipping stitch or unexpected sewing.



控線強弱必須根據車縫材料種類,厚薄,及線與針 距等不同而做不同之調整。(圖11)

\*將控線鈕(1)順時鐘方向旋轉時,線越緊,反之則 越鬆。

#### (1)針控線桿之調整

(圖12)

- 轉動針棒處於最低位置時,控線桿擺臂(1)的上 邊必須成水平,調整時可放鬆螺絲(4)。
- 2.將螺絲(2)鬆開,調整AB兩點的距離後再鎖緊。
  - 註:欲調緊針線時,將控線桿(3)向左方向 移動;

欲調鬆針線時,將控線桿(3)向右方向 移動。

3. 張線桿(5)不要移動。

#### (2)張線桿調整(天平)(圖13)。

- \*當張線桿(1)調至最高點,另一張線桿(2) 上的小孔(A)必須與張線桿(1)上之長 溝底同高。
- \*調整時:鬆開螺絲(3)及(4),上下移動 張線桿(2)。

# Adjusting Thread Tension

The tensions of the threads should be adjusted according to: (fig 11)

- The types and the thicknesses of the fabrics being sewed;
- 2. The threads:
- 3. the needle gauge.

If you turn the thread tension knob clockwise, thread will ge tighter.

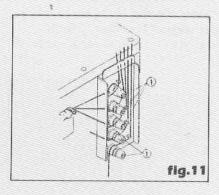
If you turn it counter-clockwise, thread will get loose.

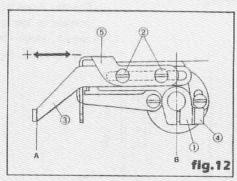
- (1) Adjusting Needle Thread Takeup (fig 12):
  - When the needle bar is in the lowest position, the top edge of the needle thread takeup should remain horizontal. To adjust the position of the takeup, lossen the screw (4) first.
  - Loosen screw (2) and adjust the length between point A and B to 75mm, then fasten screw (2) tightly.

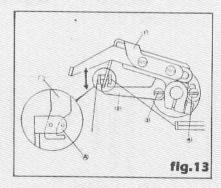
Note:

To tighten the needle thread, turn the needle thread takeup (3) toward the left. To loosen, turn it toward the right.

- Do not move the spreader thread take-up (5) when making above adjustments
- (2) Adjusting spreader thread takeup (fig 13):
  - \* When the spreader thread takeup (1) is adjusted to the top, the small hole of the other spreader thread takeup (A) must be at the same level with the long groove of the spread thread takeup (1).
  - \*To adjust, loosen screw (3) and (4), and move the spreader thread takeup (2) up or down.





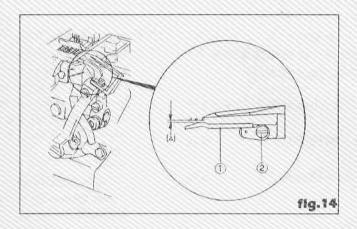


## 前頂針片調整

- \* 如圖14
- \*當勾針從最右點前進至最左點時,勾針通過針的 後面,前針護片(1)則在針的前面通過。
- \* 針和前針護片間之空隙必須儘可能小至只讓線通 過即可。
- \*調整時:鬆開內(2)螺絲和針護片前後移動。

# Adjusting the Needle Guard

- \* fig 14
- \* When the looper goes from the right exact point to the left exact point, it passes behind the needles, and the front needle guard (1) is in front of the needles.
- \* The clearance between the needles and the front needle guard should remain so close that only the needle threads can pass through.
- \* To adjust, loosen the screw (2), and move the front needle guard back or forth.



### 勾針控線盤之調整

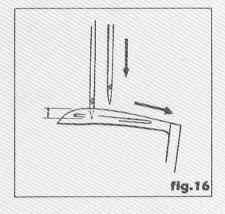
當左針針尖在如下位置時,勾針控線盤即將勾針線 放鬆。

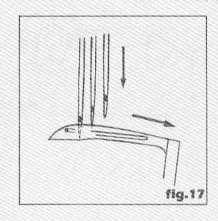
1.對二針機型,左針針端在勾針 2/3之處;(圖16) 2.對三針機型,左針針端與勾針下緣等高。(圖17) 調整時:鬆開螺絲(1),轉動勾針控線盤(2)。 勾針控線盤之調整(圖18)。

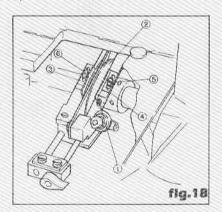
# Adjusting the Looper Thread Cam

The looper thread cam should release the thread of the looper when the point of the left needle is in the following positions:

- 1. For the 2-needle model: while the end of the left needle is in 2/3 position of the looper. (fig. 16)
- For the 3-needle model: the end of the left needle is vertical to the lower edge of the looper. (fig 17)
   To adjust, loosen the screw (1), then turn the looper thread cam. (2) (fig 18)







## 導線板之調整

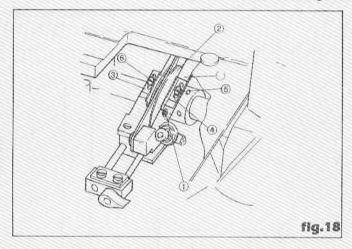
兩導線板(3)(4)依架上之記號安裝,使其兩導線孔成一直線。(圖18)

當勾針在最左邊時,經過兩導線板之勾針線僅有些微之緊度

# Adjusting the Thread Guides

When the looper is at the left exact point, the looper thread between the two guides should be slightly tensioned. (fig 18)

According to the aligning mark on the bracket (3), adjust the two thread guides (3) and (4) to the level which the eyes of the two thread guides are parallel.



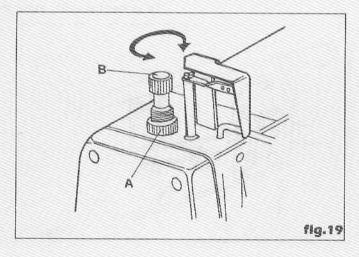
## 押具壓力強度之調整

# Adjusting the Pressure Of the Pressor Foot

在布料推送順暢且縫合完美之情況下,押具壓力儘 量輕些。

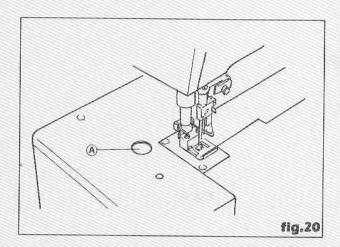
\* 鬆開螺母A,轉動螺絲B,調整其適當壓力後再 鎖緊螺母A。(圖19) pressure of the presser foot should be as light as possible, so that cloth can be fed and sewed smoothly.

To adjust, loosen nut A, turn screw B for required suitable pressure, then fasten nut A. (fig 19)



## 針距之調整

- \*壓下按鈕口(A),並轉動皮帶輪,使按鈕卡住針 距調整組,再轉動皮帶輪至所需之針距後放開此按 鈕。
- \*欲調長針距時,將皮帶輪順時針方向旋轉;反之 則小。(圖20、21)



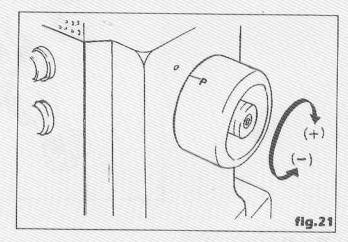
## 差動比調整

本機器之差動比可從1:05調整至1:1.3。鬆開螺母(1),上下移動來調整差動比(圖22)

- \*車縫時,要伸張布料,則將調整桿(2)往上移。
- \*車縫時,需摺景則將調整桿(2)往下移。

# Adjusting Stitch Length

- \* Press the button (A), then turn the handwheel until the button stick in with the stitch length regulator, then adjust the handwheel to desired stitch length. In the end, release the button.
- Turn the handwheel clockwise to increase the stitch length.
- \* Turn the handwheel counter-clockwise to decrease the stitch length. (fig 20, 21)

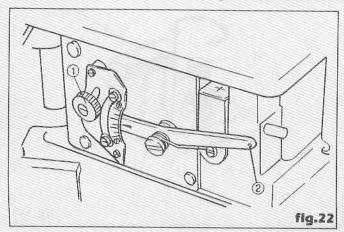


# Adjusting the Differential Feed Ratio

The differential feed ratio of this machine is adjustable from 1:05 to 1:1.3. (fig 22)

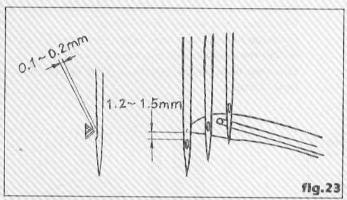
To adjust the ratio, loosen the nut (1), move the indicator up or down.

To strectch the cloth, move the indicator (2) upward; To gather the cloth, move the indicator (2) downward.



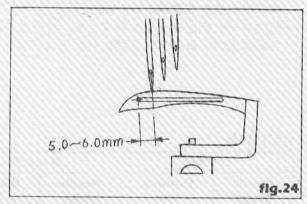
## 針與勾針調整

- \*當上勾針移至最左邊針之針中心點時,勾針尖端 與最左針之針眼之距離約1.2-1.5mm,且針與 勾針的空隙約0.1-0.2mm。(圖22)
- \*當左針下降至針尖與勾針上沿齊時,勾針眼之中 心與左針中心線距離約5.0-6.0mm。(圖23)



# Adjusting Needle and Looper

- \* When the looper point is behind the centerline of the left needle, the length between the looper point and the top of the left needle eye should be 1.2-1.5mm. The clearance between the needle and the looper should be 0.1-0.2mm. (fig 22)
- \* When the left needle goes down and its point is flush with the looper blade, the length between the center of the looper eye and the centerline of the extreme left needle should be 5.0 to 6.0mm. (fig 23)



### 針高度調整

- \*當針棒升至最高處時,左針與針板之標準距離請 參照表3°(圖26)
- \*打開上方之側蓋螺絲(1),並鬆開螺絲(2), 上下調整針棒之高度後再固定之。(圖25)
- 注意:(1)經過調整後,必須確定每一根針是通過針板的針孔中央。(圖27)
  - (2)當針棒在最高點時,皮帶輪上之刻劃 點P必須與機頭上之標示點A對齊。

# NEEDLE HEIGHT Table 3

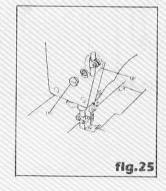
	2-needle	3-needle		
Needle gauge	Left needle height (a)	Needle gauge	Left needle height (a)	
4.0mm	9.3mm	5.6mm	8.5mm	

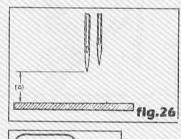
# **Adjusting Needle Height**

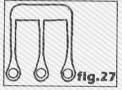
- \* When the needle bar is lifted to the highest position, the standard settings between the left needle point and the needle plate are listed in Table 3. (fig 26)
- Remove the cap screw (1), loosen the screw (2), adjust the needle bar up or down to desired height, then fix it. (fig 25)

#### Remarks:

- After the adjustments, make sure that every needle passes through the center of the needle hole in the needle plate, and the gap is even. (fig 27)
- When the needle bar is in its highest position, the mark P on the handwheel should meet the mark A on the machine head.







### 勾針之固定

標準的勾針裝配(如表4)。

- \*右針中央線到勾針針尖之距離,請參照表5。當 勾針移至最右點,先將勾針移至最左點後再按下 列步驟調整:
- 1.參照表4,調整A的距離(圖29)
- \*鬆開螺絲(1)並左右移動勾針座(2);(圖30)
- 2. 針與勾針之間隙(圖31、32)
- \* 當勾針針端位於左邊針中央線的後方時,左邊針 與勾針針端的空隙約0.1-0.2mm。
- \*假如是三針機器時,當勾針尖位於中間針之針中心的後面時,針與勾針之間隙是0.-0.05mm。

# Setting the Looper

The standard settings of the looper and the distance between the centerline of the right needle and the looper point are listed in Table 4

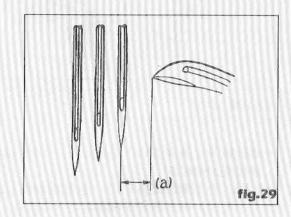
To adjust, push the looper to its right exact point, then follow the procedures below:

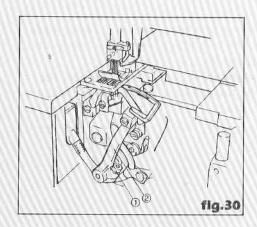
- 1. Install the looper, refer to (fig.28)
- Adjust the distance of (a) (Tab4) (fig 29) Loosen the screw
   and move the looper holder right or left (fig. 30)
- 3. Clearance between the needle and the looper: When the looper point is behind the centerline of the left needle, the clearance between the left needle and the looper point should be 0.1-0.2mm. For three needle machines, when the looper point is behind the centerline of the middle needle, the clearance between the needle and the looper should be 0-0.05mm.

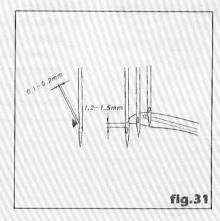
LOOPER SETTING

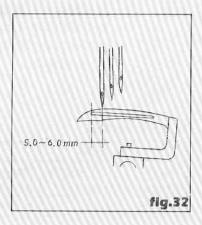
Table 4

2-	needle	3-needle		
Needle gauge	Distance (a)	Needle gauge	Distance (a)	
4.0mm	4.0∼4.3mm	5.6mm	3.2∼3.5mm	

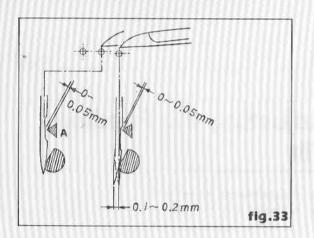






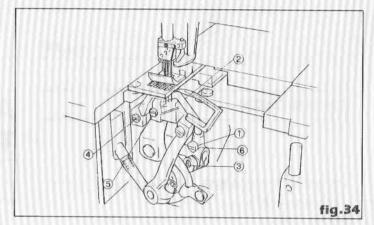


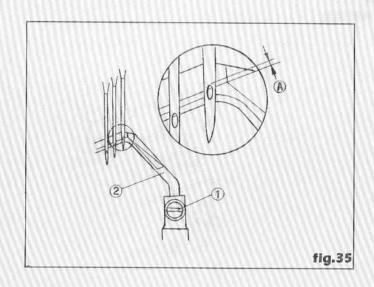
- \*當勾針尖端在右針中央線之後方時,頂針片在它們之間的活動空隙是0-0.05mm,並且與中間針及勾針針端的活動空間也是0-0.05mm。(圖33)
- (1)為了得到空隙0-0.05mm,請鬆開螺絲(3),並前後移動頂針片座(6)。(圖34)
- (2)當針在最低點時,頂針片之延線A是位於右針眼的1/3位置。(圖35)
  - \*調整時鬆開螺絲(2),使頂針片(1)上 列移動。



# Adjusting the Needle Guard

- \* When the looper point is behind the right needle, the centerline of the needle guard should have a clearance of about 0-0.05mm between the looper point and the right needle. (fig. 33) And it is also the same clearance of 0-0.05mm between the middle needle and the looper point when the looper point is in the rear of the centerline of the middle needle.
- In order to gain a clearance about 0-0.05mm, loosen the screw (3), then move the needle guard (6) back or forth. (fig 34)
- 2) When the needle is in Below the top of its lowest position, the line (A) of the needle guard is located 1/3 be low the top of the right needle eye. To adjust, loosen the screw (2) first, then move the needle guard upwards or downwards. (fig 35)

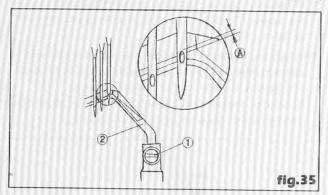




## 送料具高度調整

- \*(1)主送料具上升至最高位置是0.8-1.0mm。 (圖36)
- \*調整差動送料具 B點與主送料具A點同樣高度。

調整時鬆開螺絲(4)(5),並上下移動送料具。 (圖34)



## 送料具傾斜調整

\*當送料具升至最高點時,送料具齒尖成一直線, 且與針板平行。

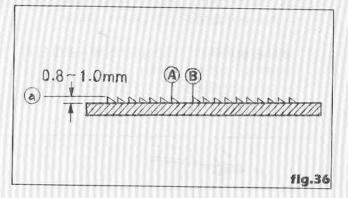
調整時:(圖37)

- 1.卸下螺絲(1)及上蓋(2)(3)。
- 2. 鬆開螺絲(4),並轉動螺絲(5),以調整送料 齒傾斜角度。

# Adjusting the Hight of Feed Dog

- \* The height is 0.8-1.0mm when it is in the highest position. (fig 36)
- \* Adjust the differential feed dog so that the point (B) is at the same height as the point (A) of the main feed dog.

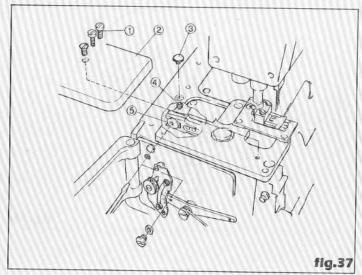
To adjust, loosen the screws (4) (5), and move the feed dog upwards or downwards. (fig.34)



# Adjusting the Feeding Tilt

The straight line (a), crossing the whole feed dog tooth tips, is parallel with the needle plate when the feed dog is raised to the highest position.

To adjust, remove the 3 screws (1) and the cover (2) (3). Loosen the screw (4) and turn the screw (5) to adjust the feeding tilt. (fig 37)



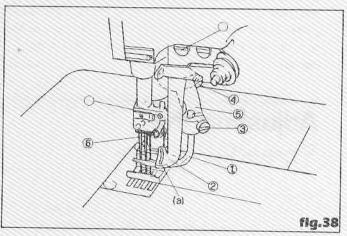
# 裝飾線勾針之設定

高度: 距離針板8.3-8.7mm (圖39)

裝飾線勾針(1)移動時,其開口必須在針前約0.5 mm處通過裝飾線導板(B)之線溝(圖40),且裝飾線勾針(1)移至最左時,勾槽與左針距約3.5-4.0 mm。(圖41)

#### 調整時:

- 1.鬆開螺絲(3)(4),轉動勾針桿(5),及前 後移動裝飾勾針(1),然後固定位置,鎖緊螺 絲(4)。(圖38)
- 2.上列移動裝飾線勾針(1),使其離針板之高度 為8.3-8.7mm,然後鎖緊螺絲(3)(4)。



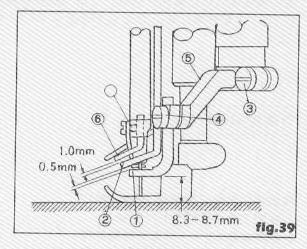
# Setting the Position of Spreader

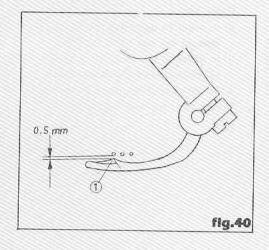
The height of the spreader must be kept at around 8.3-8.7mm from the top surface of the needle plate. There is a clearance about 0.5mm between the spreader hooking point and the left needle when the spreader passes the left needle. (fig 39)

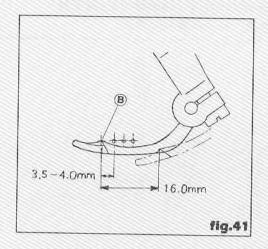
And there is a clearance about 3.5-4mm between the hooking point (3) and the left needle when the spreader is in its left dead point (fig 41)

To adjust, loosen the screws (3) (4), and move the spreader (1) back or forth, while turning the spreader lever (5), After finishing the setting, tighten the screw (4). (fig 38)

Move the spreader (1) upwards or downwards to set its height from the needle plate to 8.3-8.7mm, then fasten the screw (3).(4).







## 裝飾線導板位置之調整

當針棒移至最低點時,裝飾線導板(2)之線溝剛 好在導線片(6)孔之下方,且裝線導板(2)與裝 飾線勾針(1)之間隙為0.5mm。(圖39)

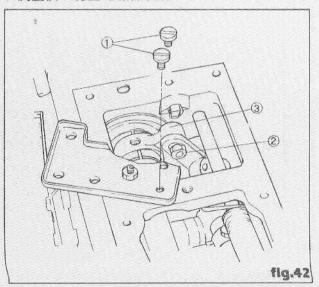
### 導線片之固定

當針棒移至最低位置時,導線片(6)與裝飾線導板(2)之距離為1.0mm且線孔與線溝必須相對。(圖39)

#### 裝飾線勾針行程之調整

裝飾線勾針的行程是16.0mm (圖41)

- 1.移開上蓋和螺絲(1);(圖42)
- 2. 鬆開螺絲(2),並上下移動連桿(3)
- \*欲減低其行程時,將連桿(3)向上移;
- \* 欲增加其行程時,將連桿(3)向下移。
- 3.調整後·將上述螺絲鎖緊。



# Setting the Position of Spreader Thread Guide

When the needle bar is in its lowest position, the part (a) of the thread guide should be set just below the eye of the guide (6). And the clearance between the thread guide (2) and the spreader (1) should be set to 0.5mm. (fig 39)

# Setting the Thread Guide

When the needle bar moves to its lowest position, the clearance should be 1.0mm between the spreader thread guide (2) and the thread guide (6). The concavity of the spreader and the thread eye should face each other. (fig 39)

# Adjusting the Spreader Stroke

The spreader stroke is 16.0mm, (fig 41)

- 1. Remove the arm cover and the screw. (fig 42)
- Loosen the nut (2) and move the connecting rod (3) upwards or downwards.

#### Remarks:

- a) In order to decrease the spreader stroke, move the connecting rod (3) upwards.
- b) In order to increase the spreader stroke, move the connecting rod (3) downwards.

After finishing the above adjustments, remember to fasten the above said screws.

# 押具提昇之調整

各機型之押具提升請參照表5。(圖43) 押具提昇是指當押具升至最高點時與針板間之距離。

#### 調整時:(圖44)

- 1.轉運皮帶輪使送料具降至最低點。
- 2. 鬆開螺帽(1),並使螺絲(2)下降。
- 3.降低連桿(3),使押具(4)提昇至您機器所需 之高度;
- 4.以上調整後即下降螺絲(2),及固定螺絲(1)。

#### PRESSER FOOT LIFT

Table 5

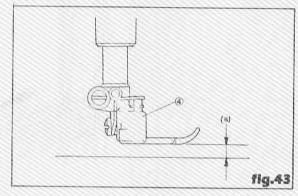
Machine type	Presser foot lift		
мастте туре	2-needle	3-needle	
* F007-W122	6.3mm	5.0mm	
F007-U122	6.3mm	6.3mm	
F007-W222	6.3mm	5.0mm	
F007-U222	6,3mm	6.3mm	
F007-W522	5.3mm	5.0mm	
F007-U522	6.3mm	6.3mm	

# Adjusting Presser Foot Lift

The presser foot lift for every model is listed in table 5. Pressor foot lift means the height between the pressor foot and the needle plate when the pressor foot is in its lowest position. (fig 43)

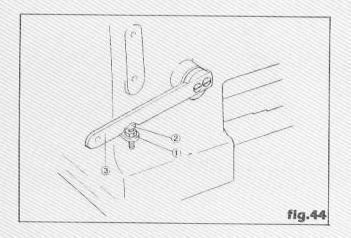
## To adjust, (fig 44)

- Rotate the handwheel to lower the feed dogs to the lowest position;
- 2. Loosen the nut (1) and tighten the screw (2);
- Descrend the lever (3) and raise the pressor foot (4) to the height you need;
- After the adjustments as above, raise the screw (2) up to touch the lever (3) and fix the nut (1) to lock the position.



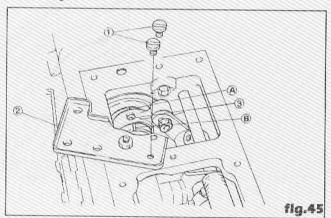
#### 裝飾線勾針時間之調整

- 1.卸下螺絲(1),並將油護片(2)移至另一邊。
- 2. 鬆開螺絲(3)(二個),並調整使A與B兩凹槽 成一直線後再鎖緊螺絲(3)。(圖 45)



# Adjusting the Spreader Timing

- Remove the screw (1) and move the oil guard (2) to one side;
- Loosen the two screws (3) and adjust the mark A and B to be a straight line, then tighten the screw (7). (fig 45)



## 針棒與勾針之時間關係

\*當針棒移至最低點時,勾針也剛好在最右點,亦 即針棒開始提昇時,勾針也跟著開始向左移,勾 針從後面通過,再由前退回原來之位置。(圖46)

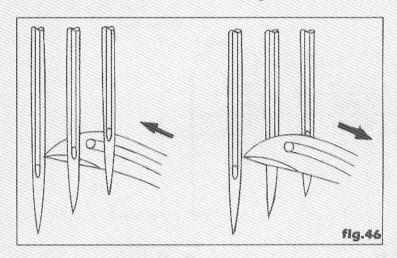
#### 調整時:(圖47)

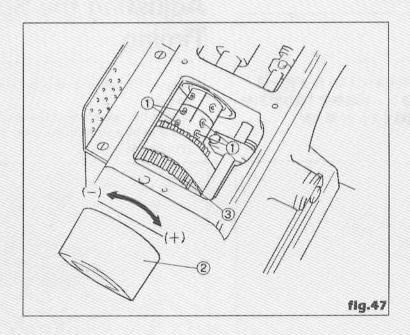
- 1.打開機器上蓋;
- 2. 鬆開四個螺絲(1),並轉動皮帶輪(2)及上皮 帶齒輪之心軸(3)位置。
- \*欲提早勾針運轉時間時,將皮帶輪(2)略向右轉,反之則向左轉。

# Synchronizing Needle Bar and the Looper

When the needle bar is in the lowest position, the looper should be at the extreme right point. Therefore, when the needle bar begins to rise, the looper should begin to move to the left, passing behind the needles, then reverting to the original position in front of the needles. (fig 46) To adjust, (fig 47)

- 1. Remove the arm cover.
- Loosen the 4 screws (1), adjust the handwheel (2) and the crankshaft (3) of the upper belt gear;
- To accelerate the timing of the looper against the needle, turn the handwheel to the right. To retard the timing, turn the handwheel to the left.

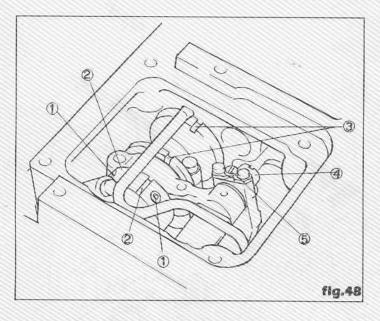




針與勾針前後移動時間關係之調整

# Adjusting the Timing Between the Needle and the Back and Forth Movement

\* 鬆開螺絲(1)使偏心輪(2)與主軸之凹槽(3) 成一線。(圖48) Loosen the screw (1), and align the groove of the eccentric (2) and the groove of the crankshaft (3). (fig 48).



勾針運動前後恍動行程之調整:

勾針從針之後面移至最左邊,然後再從針之前面回 到最右邊。

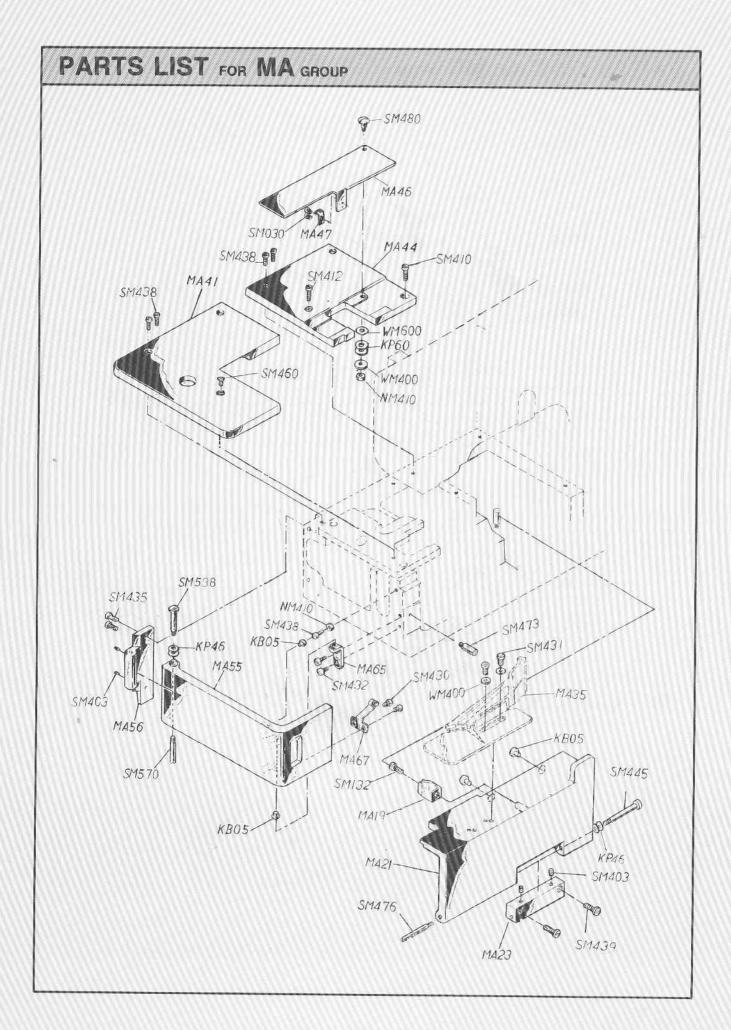
通常調整時依據針之大小尺寸放鬆螺絲(4),將 螺絲(5)順時鐘方向轉鄉力減少前後恍動行程, 反之則增加。(圖 48)

# Adjusting the Looper's Motion

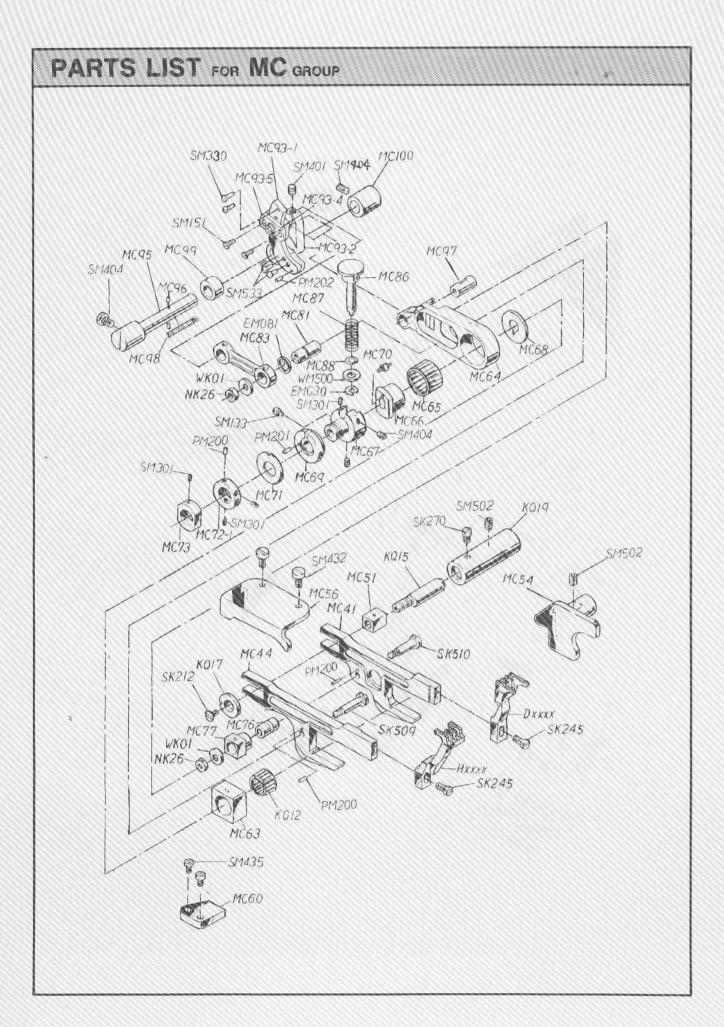
The looper passes behind the needles to the far left end, then reverts to the original position in front of the needles.

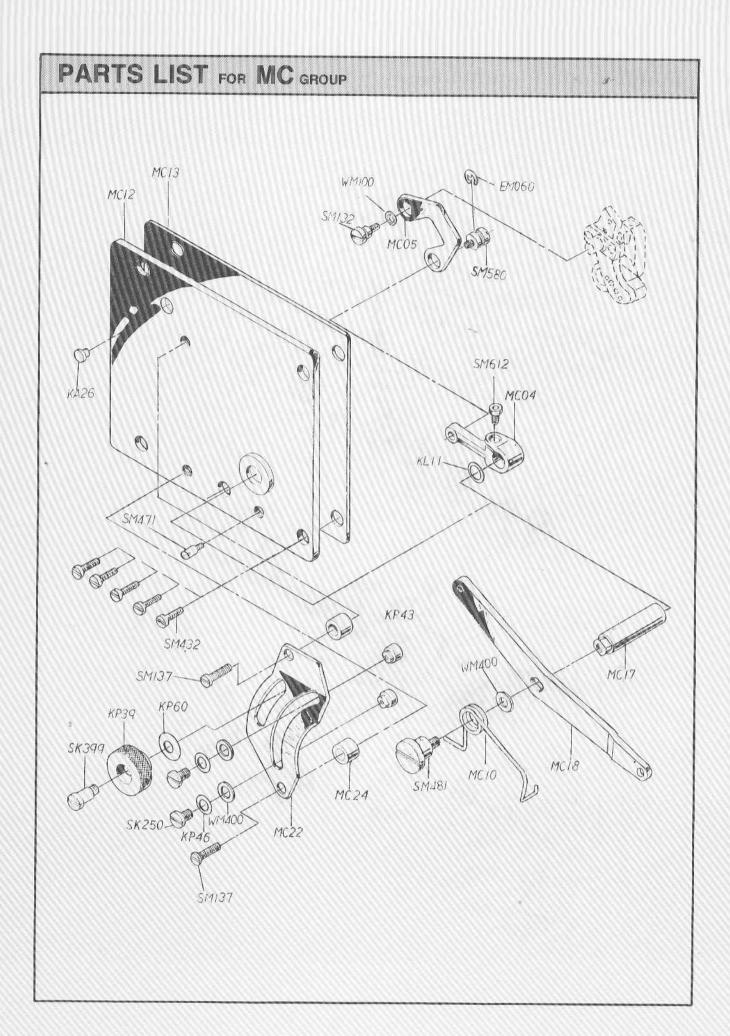
The adjustment can be done, according to the size of the needle, by loosening the screw (4), turn the screw (5) clockwise to decrease the looper's motion. On the contrary, turn the screw counter-clockwise to increase the motion. (fig.48)

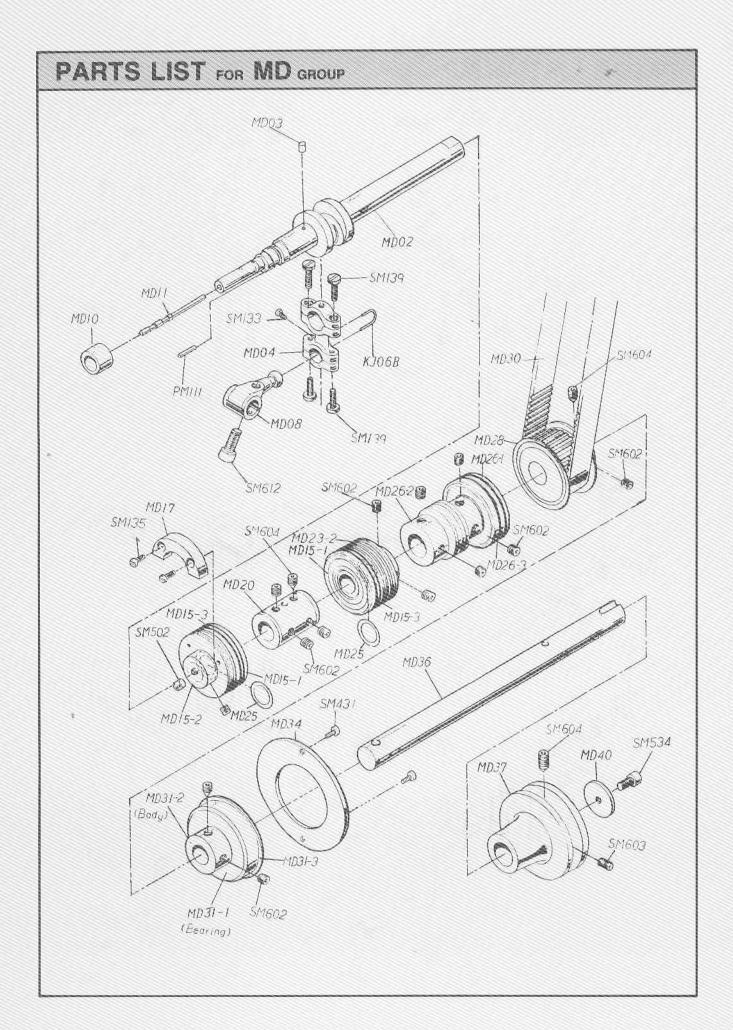
# PARTS LIST FOR MA GROUP SM439 \_SM132 M409 MA07 MA02 SM630 MAO8 0 SM 444 -MA05 MAI6 MA15 MA10 MAIT MAIZ MAQ4 AM210 SM439 NM4000 NM433 SM432 SM461 MAC6 (00) KH48 M401 MA18

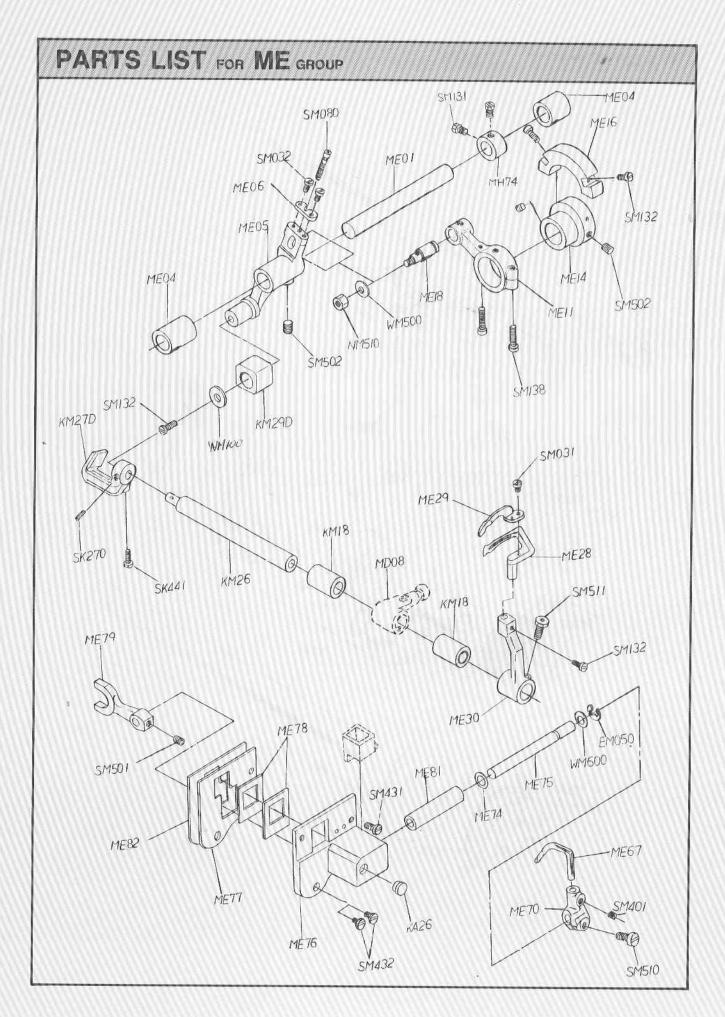


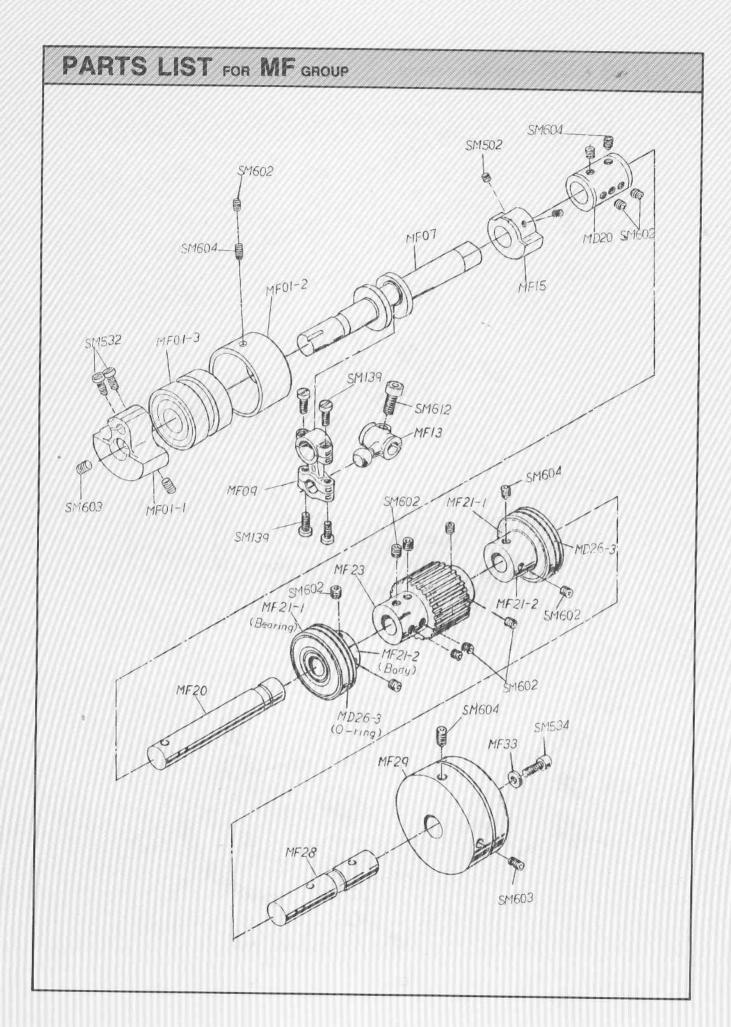
# PARTS LIST FOR MB GROUP MC86 -SM436 SM450 MB04 MB05 SM433 -MB08 MBOI D MB09 MB02 -MB14 -MC87 SM910 MB08 KN13 K426 KA26 MB10 KA26 -MB06 0-MB07 -SM831 ( For FR Only ) KL20 --SM810 KA21 WM810 WM800 SM810 SM430 MB27

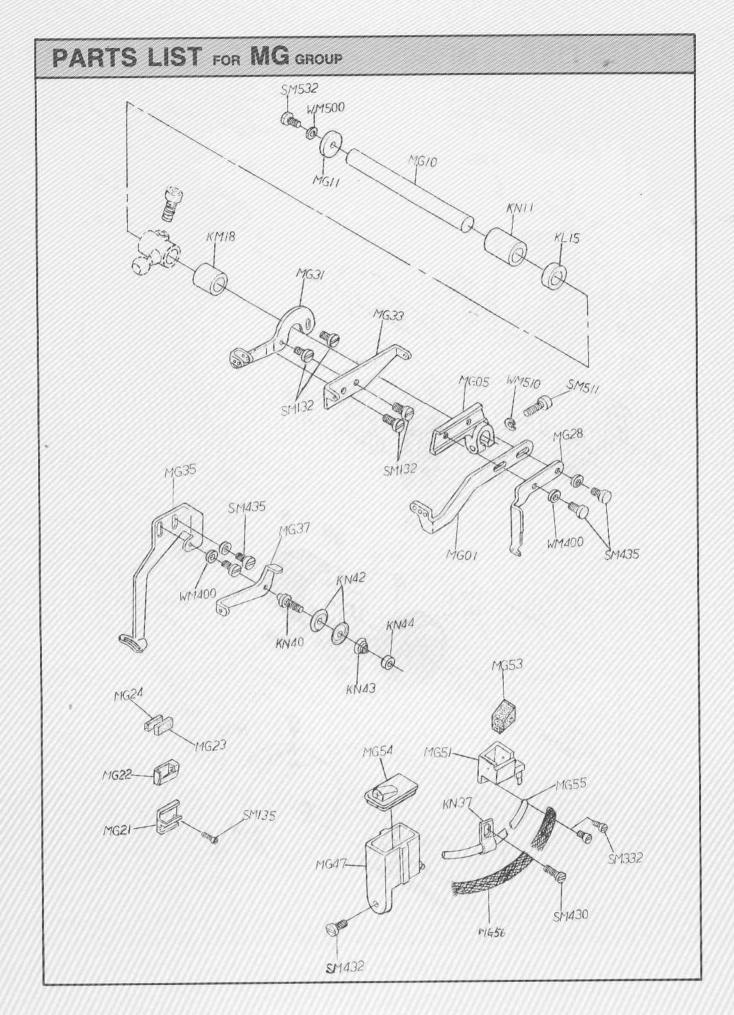


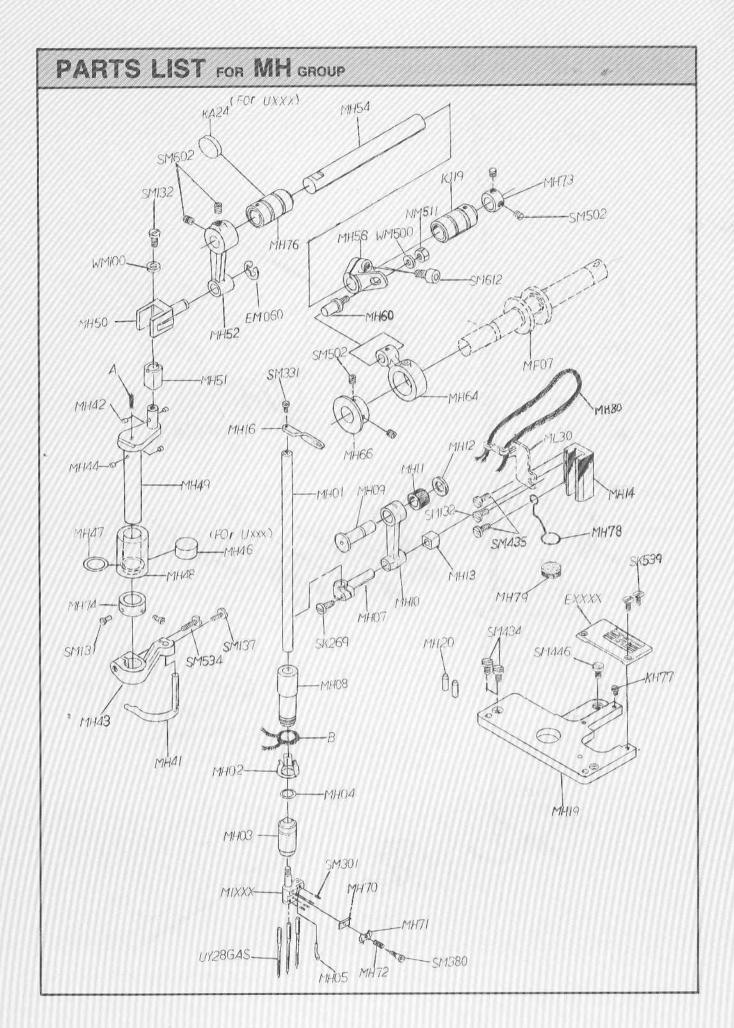


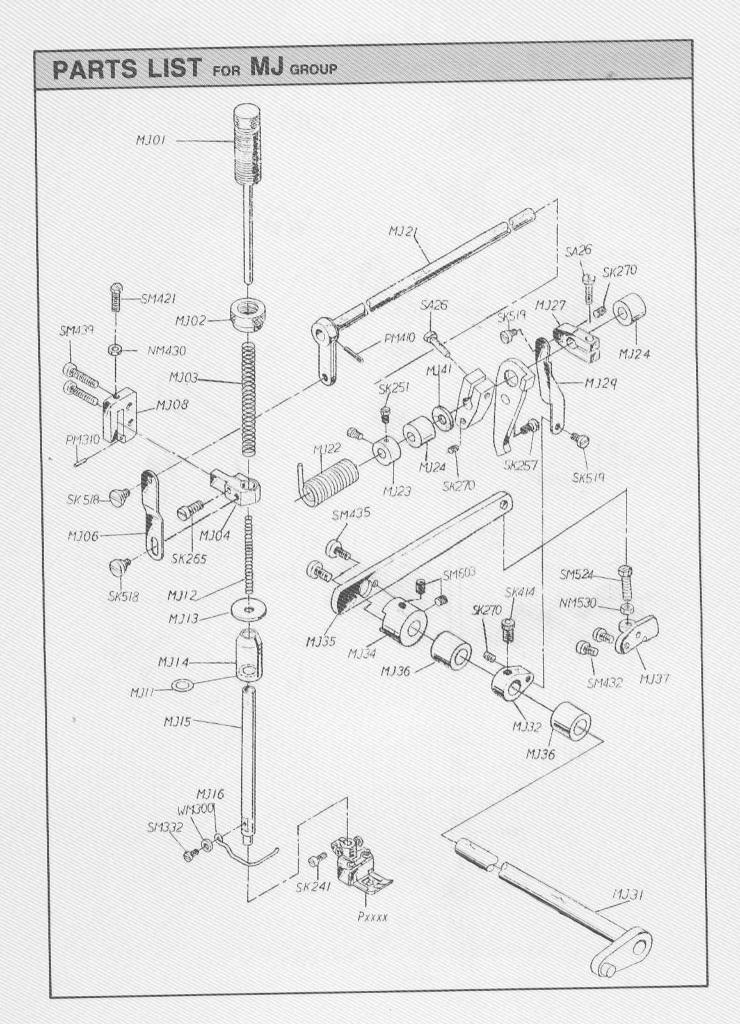


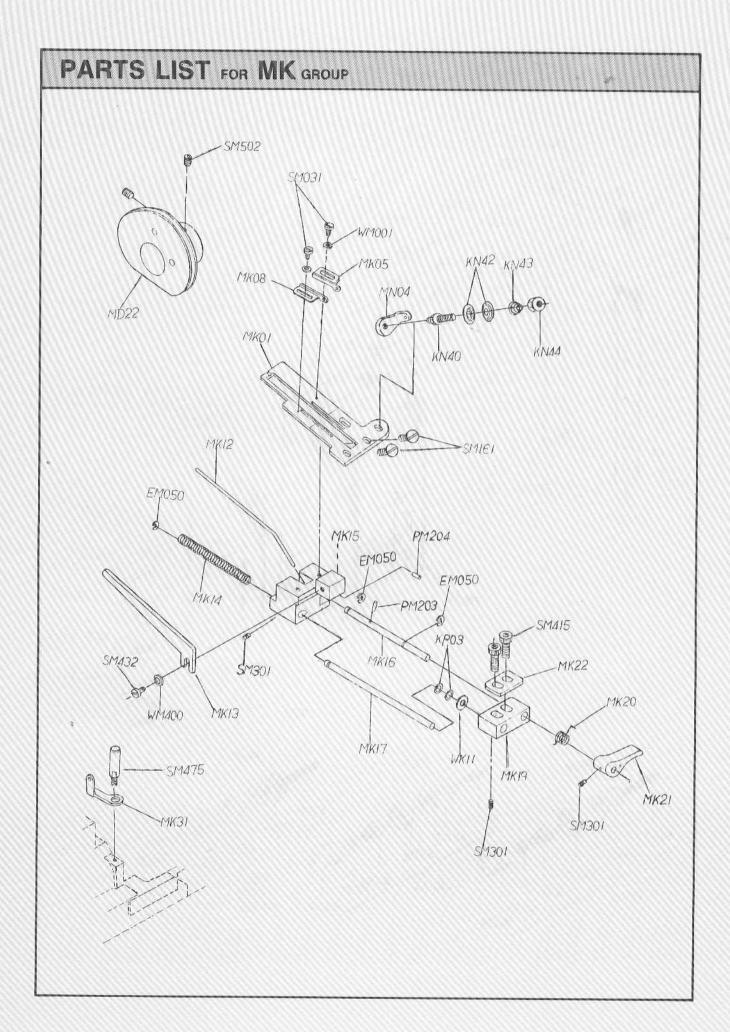


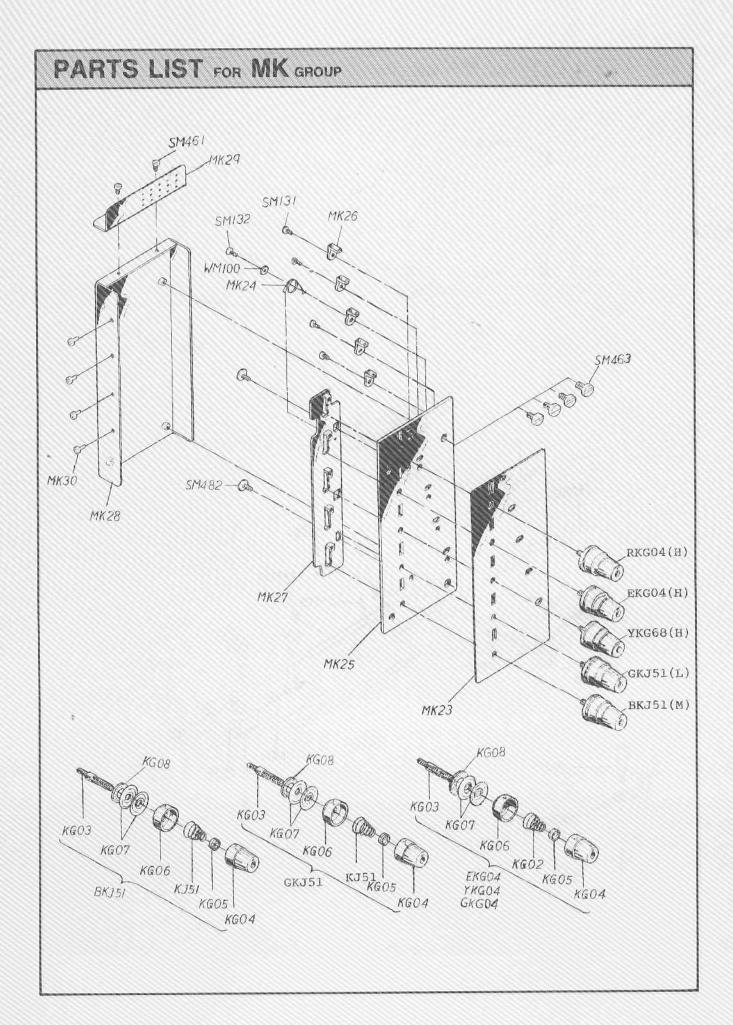


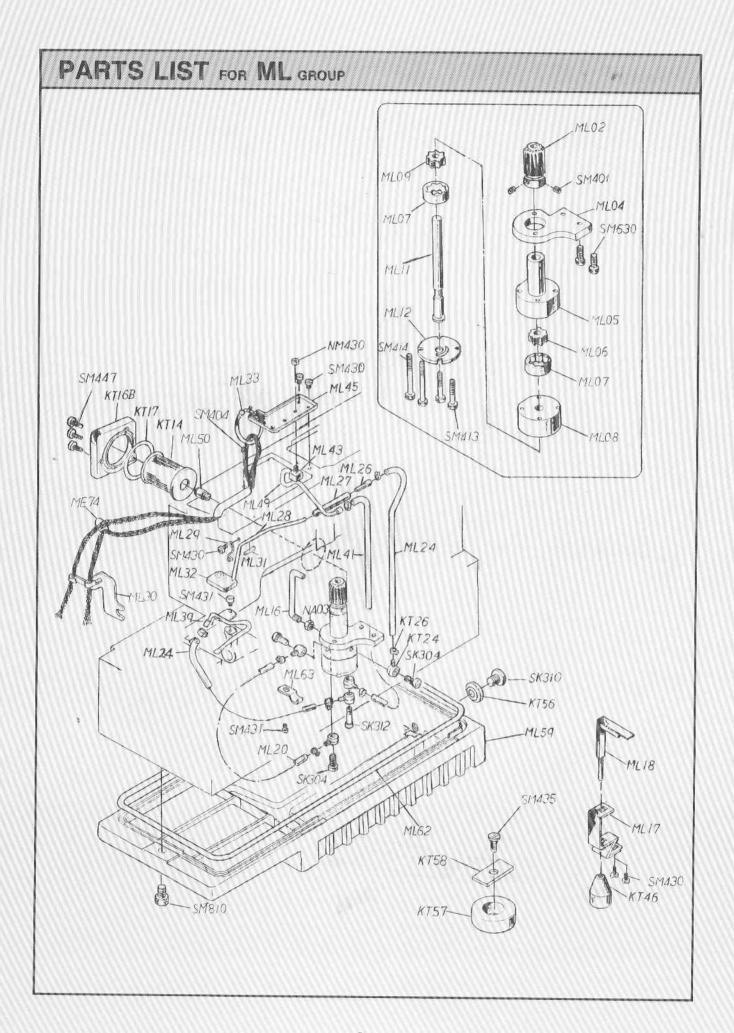


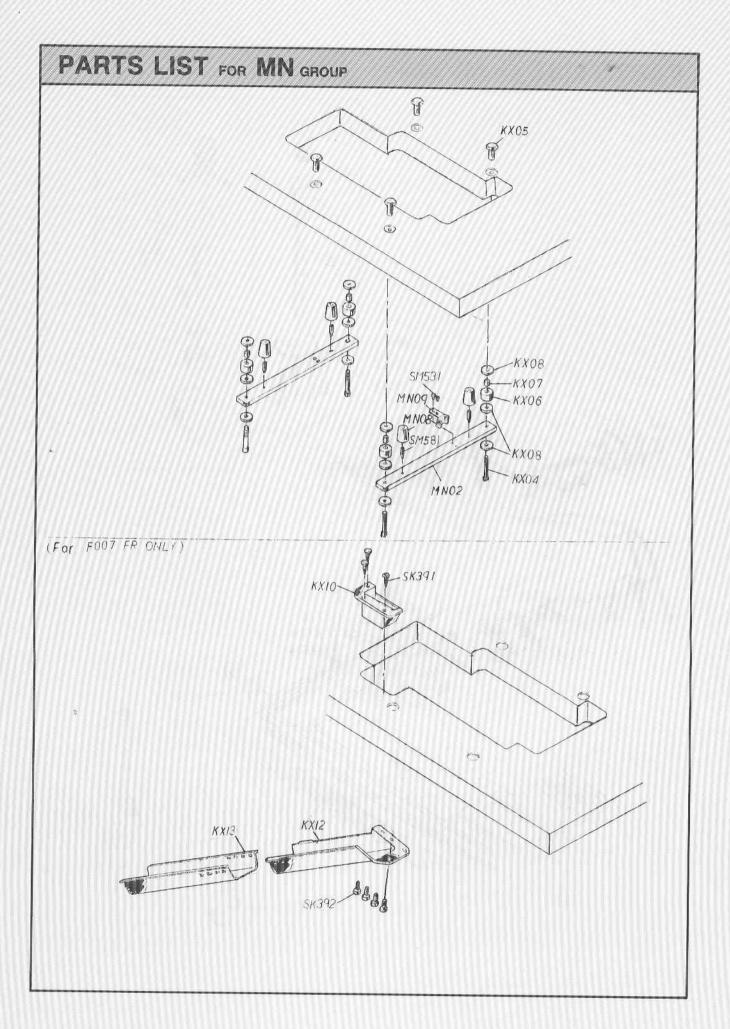


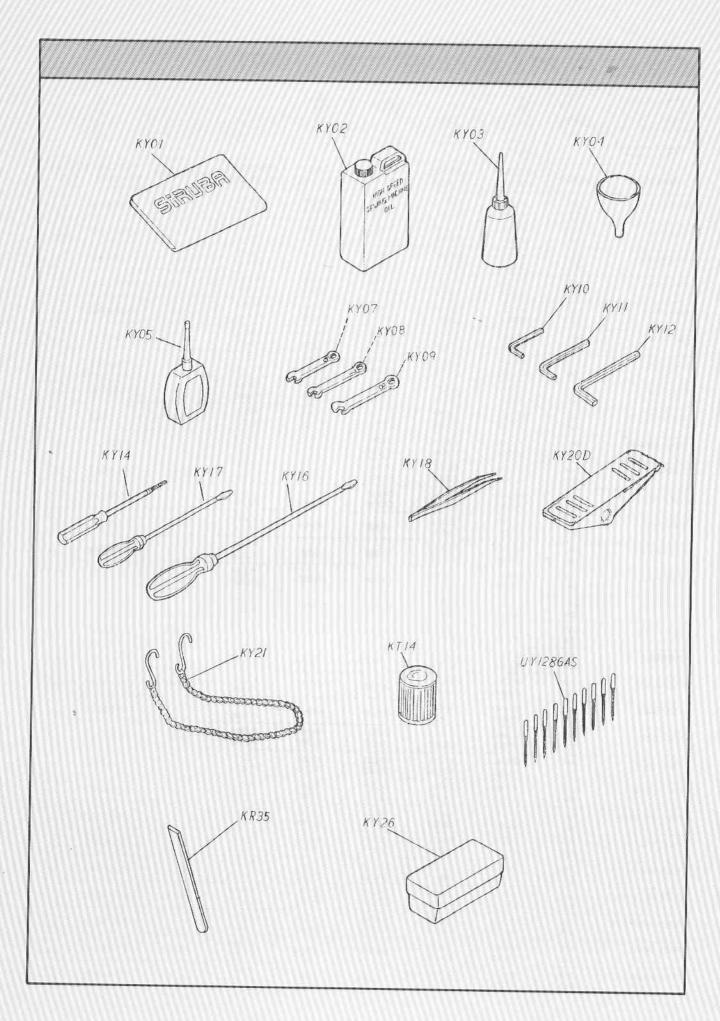




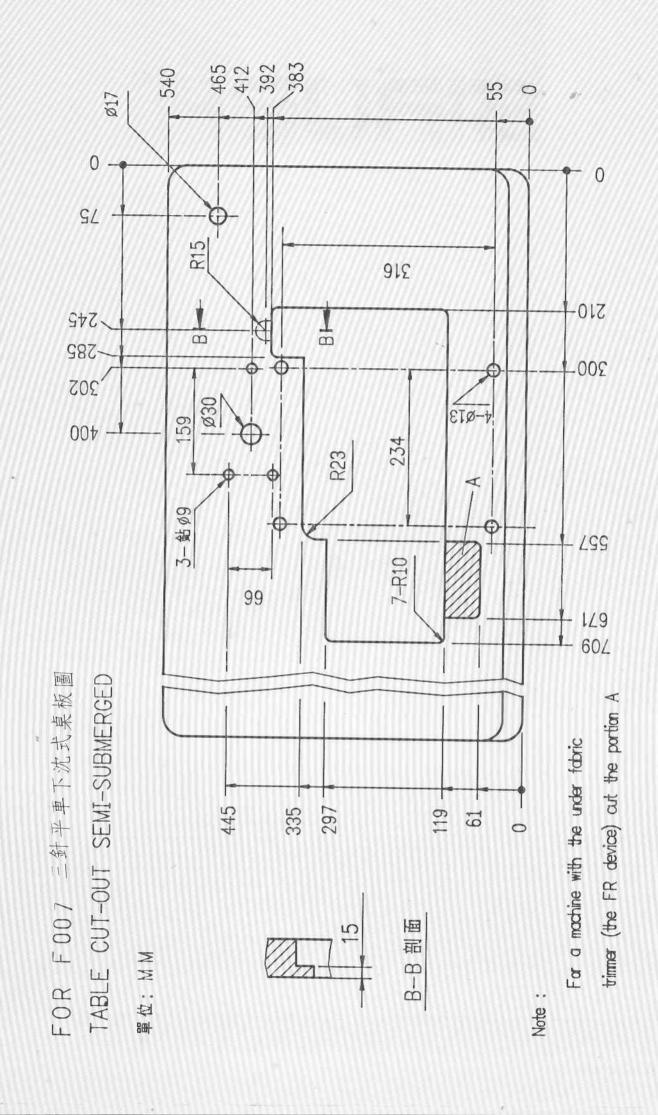








SPARE	1 1-11		W1446					n	
	Estar.								
MACHINE	GAUGE	NEEDLE HOLDER	NEEDLE PLATE	MAIN FEED DOG	DIFF FEED DOG	PRESSER FOOT ASS	SPREADER	NEEDLE I	NEEDLE SIZE
F007-W121	240 356	M1240 M1356	E1514 E1816	D1206 D1207	H1258 H1259	P0014 P0116	MH41	UY128GAS	# 9 #10
-007-U121	240 356	M1240 M1356	E1514 E1816	D1206 D1207	H1258 H1259	P0214 P0316		UY128GAS	# 9 #10
F007-W122	240 356	M1240 M1356	E1524 E1826	D1206 D1207	H1258 H1259	P0014 P0116	MH41	UY128GAS	# 9 #10
F007-U122	240 356	M1240 M1356	E1524 E1826	D1206 D1207	H1258 H1259	P0214 P0316		UY128GAS	# 9 #10
F007-W123	240 356	M1240 M1356	E1534 E1836	D1206 D1207	H1258 H1259	P0014 -P0116	MH41	UY128GAS	# 9 #10
F007-U123	240 356	M1240 M1356	E1534 E1836	D1206 D1207	H1258 H1259	P0214 P0316		UY128GAS	# 9 #10
F007-W221	240 356	M1240 M1356	E3014 E3316	D1215 D1216	H1261 H1262	P1814 P2116	MH41	UY128GAS	# 9 #10
F007-U221	240 356	M1240 M1356	E3014 E3316	D1215 D1216	H1261 H1262	P2314 P2616		UY128GAS	# 9 #10
F007-W222/FQ	240 356	M1240 M1356	E3024 E3326	D1215 D1216	H1261 H1262	P1814 P2116	MH41	UY128GAS	# 9 #10
F007-U222/FQ	240 356	M1240 M1356	E3024 E3326	D1215 D1216	H1261 H1262	P2314 P2616		UY128GAS	# 9 #10
F007-W223	240 356	M1240 M1356	E3034 E3336	D1215 D1216	H1261 H1262	P1814 P2116	MH41	UY128GAS	# 9 #10
F007-U223	240 356	M1240 M1356	E3034 E3336	D1215 D1216	H1261 H1262	P2314 P2616		UY128GAS	# 9 #10
F007-W312	240 356	M1240 M1356	E0524 E0626	D1200	H1253	P1204 P1306	MH41	UY128GAS	# 9 #10
F007-U312	240 356	M1240 M1356	E0524 E0626	D1200	H1253	P1404 P1506		UY128GAS	# 9 #10
F007-W313	240 356	M1240 M1356	E0534 E0636	D1200	H1253	P1204 P1306	MH41	UY128GAS	# 9 #10
F007-U313	240 356	M1240 M1356	E0534 E0636	D1200	H1253	P1404 P1506		UY128GAS	# 9 #10
F007-W322	240 356	M1240 M1356	E0724 E0826	D1200	H1254	P1204 P1306	MH41	UY128GAS	# 9 #10
F007-U322	240 356	M1240 M1356	E0724 E0826	D1200	H1254	P1404 P1506	MANA	UY128GAS	# 9 #10
F007-W323	240 356	M1240 M1356	E0734 E0836	D1200	H1254	P1204 P1306	MH41	UY128GAS	# 9 #10
F007-U323	240 356	M1240 M1356	E0734 E0836	D1200	H1254	P1404 P1506	Militi	UY128GAS	# 9 #10
F007-W521	240 356	M1240 M1356	E5014 E5316	D1221 D1222	H1267 H1268	P2814 P3116	MH41	UY128GAS	# 9 #10
F007-U521	240 356	M1240 M1356	E5014 E5316	D1221 D1222	H1267 H1268	P3314 P3616		UY128GAS	# 9 #10
F007-W522/FR/FE	240 356	M1240 M1356	E6024 E6326	D2221 D2222	H2267 H2268	P2814 P3116	MH41	UY128GAS	# 9 #10
F007-U522/FR/FE	- 240 356	M1240 M1356	E6024 E6326	D2221 D2222	H2267 H2268	P3314 P3616		UY128GAS	# 9 #10
F007-W621/W721	240 356	M1240 M1356	E4514 E4816	D1215 D1216	H1261 H1262	P3814 P4116	MH41	UY128GAS	# 9 #10
F006-U621/U721	240 356	M1240 M1356	E4514 E4816	D1215 D1216	H1261 H1262	P4314 P4616		UY128GAS	# 9 #10
F007-W622/W722	240 356	M1240 M1356	E4524 E4826	D1215 D1216	H1261 H1262	P3814 P4116	MH41	UY128GAS	# 9 #10
F007-U622/U722	240 356	M1240 M1356	E4524 E4826	D1215 D1216	H1261 H1262	P4314 P4616		UY128GAS	# 9
F007-W821	240 356	M1240 M1356	E2216 E2217	D1207	H1259	P1616 P1617	MH41	UY128GAS	# 5 #10
F007-W822	240 356	M1240 M1356	E2226 E2227	D1207	H1259	P1616 P1617	MH41	UY128GAS	# 9 #10



# SIRUBA