

本使用说明书内容,为了改良不经预告随时会更改,请谅解为盼。  
The description in this operation manual is subject to change for improvement of the commodity without notice.

※ 本手册为2005年10月的版本

## 使用 说 明

为使您正确使用本机,须对本机的各种功能充分了解,以便安全操作。

使用前请仔细阅读使用说明书。希望您能长期愉快地使用本机,请保存好说明书,以备查阅。

- 1、无论您何时使用本机,须了解基本的安全事项,包括但不限于下列事项。
- 2、通读所有说明,并保存好使用说明书。如果需要,请随时翻阅。
- 3、使用本机前,必须弄清与本机有关安全规定、标准在您的国家是否适用。
- 4、使用本机前或使用本机时,所有安全装置必须配备齐全。机器运转时,无安全装置属违章操用,决不允许。
  - 5、操用人员必须经过适当的培训。
  - 6、为了您的人身安全,我们建议您戴上防护眼镜。
  - 7、下列情况下,请关闭电源开关或拔下电源插头,
    - 7-1机针穿线和换梭心。
    - 7-2更换针机、压脚、针板、送料牙、布料导板等。
    - 7-3进行维修时。
    - 7-4操用区无人时。
  - 8、在机器加油润滑时,若不小心让油进入眼睛、皮肤或咽下机油或润滑油,请立即冲洗被沾染部位去医院检查。
  - 9、无论机器运转与否,严禁乱动机器零部件和配套装置。
  - 10、机器的维修,改造和调整等工作必须由专业技术人员进行。
  - 11、应由专业受训人员进行一般的维修和检查工作。
  - 12、必须在专业电器人员或专业技术人员的指导下进行有关电器部件的维修,任何电器部件一经发现受损,立即停止机器运转。
  - 13、使用期间要定期全面彻底清洗机器。
  - 14、正常操用本机时,必须进行试运转,工作环境远离强噪音源,如高频电焊机等。
  - 15、由电气人员选择合适的插头和有地线的插座。

16、若需要改造或改进本机，请采用有效可行的安全措施。本公司对由此而产生的伤害不承担责任。

17、本机只适用于专业缝纫。

18、两种警告提示符、



操作人员或维修人员请注意



特别注意事项

## 安全操作事项

	1、为避免触电，请不要打开电机的电箱盖，也不要触摸电箱内部组件。
	<p>1、为避免人身伤害，移动皮带罩，护手挡或安全装置时，请不要开动机器。</p> <p>2、为尽可能避免机器运转造成的人身伤害，手指、头部和衣服应远离上轮、后盖和电机。除此之外，上轮、后盖和电机周围不要放置任何物品。</p> <p>3、为避免人身伤害，当您打开电源开关或操作机器时，切勿将手放在机针下方。</p> <p>4、为避免人身伤害，机器运转时，切勿将手放入挑线罩内。</p> <p>5、旋梭高速运转时，勿将手指放在旋梭附近。另外，换梭心时，请关掉机器电源开关。</p> <p>6、为尽可能避免人身伤害，当翘起或抬升机头时，勿将手指放入机器内部。</p> <p>7、为尽可能避免机器的突然启动所造成的事故，抬起机头时，请关掉机器的电源。</p> <p>8、如果你的机器配用伺服电机，机器未运转时，电机无噪音。为避免机器的突然启动所造成的事故，请关掉机器的电源开关。</p> <p>9、为避免触电，移动电源地线时，请勿让机器运转。</p> <p>10、为尽可能避免触电或电器组件受损，在插上或拔下插头之前，请关掉电源开关。</p>

## 1、开车前的注意事项

1、机头装箱前为了防止机件生锈，各部分均涂有较厚的防锈油脂，同时机头装箱后，还可能在较长的贮藏和长途运输阶段造成油脂硬化和积聚在机器表面的灰尘，所以必须将表面的油脂和灰尘用汽油和洁净的软布拭擦干净。

2、机器出厂时，虽经过周密的检查和试验，但在长途运输中也可能受到强烈的震动使机件松动或歪曲，所以应该作一次周密的检查，并用手转动主动轮，看机件之间有无转动困难，碰撞现象或其它不均匀的阻力，不正常的声响，如有应作适当的调整，机器状态正常后才可正式试车。

3、油盘内机油液面高度没在正常范围内绝不能开车。

4、机器运转时，上轮转向应该是逆时针方向（从上轮外侧面看）。

5、确认电机标牌上所标电压及相位是否正确。

6、生产日期见合格证。

## 2、使用注意事项

1、当接通电源或机器运转时，请勿将手与机针接触。

2、机器运转时，请勿将手指伸入挑线杆护罩内。

3、操作者用手送料时，请勿将手指伸入护针架。

4、机头翻动及拆后盖时，一定要切断电源。

5、操作者离开机器时，必须切断电源。

6、机器动转时，注意不允许任何人的头或手以及任何东西靠近上轮、后盖、绕线器。

7、只有在停机时，才能装卸防护罩、或其他保护装置。

8、不能用香蕉水等油漆稀释剂擦洗机头表面。

## 3、主要技术规格

型 号	薄料(L)	中厚料(M)	厚 料(H)
缝 料	薄料	中厚料	中厚料～厚料
缝 速 (最高)	4000针/分	5000针/分	3500针/分
最 大 针 距	4毫米	5毫米	8毫米
压脚提升高度	6毫米（标准） 13毫米（最大）		
机 针	DA×1#9	DB×1#9～#18	DP×5#16～#18
润 滑 油	10号白油		
电 机 功 率	220伏/500瓦		

## 4、机器的安装(图1、图2、图3、图4)

### 1、油盘安装

- 1) 油盘应放置在台板册槽四角。
- 2) 将两只机头座垫①安装在油盘③的A边(朝操用者一边),将两只油盘支座②安装在油盘③的B边(用机头连接钩接合一边),然后放上油盘③(图1、图2)
- 3) 将机头连接钩①插入底板销孔内,与台板的机头连接钩座②相嵌合再把机头放到油盘四只角的座垫上。(图3、图4)

注意: 包装箱内安装在油盘四角上的橡胶垫不作其它用途,只用于包装。

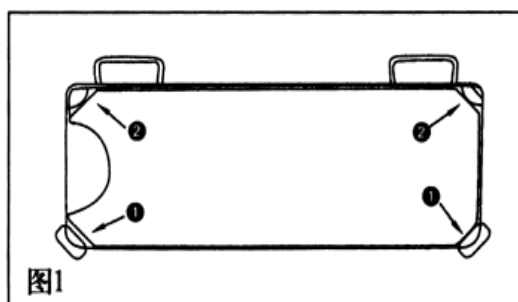


图1

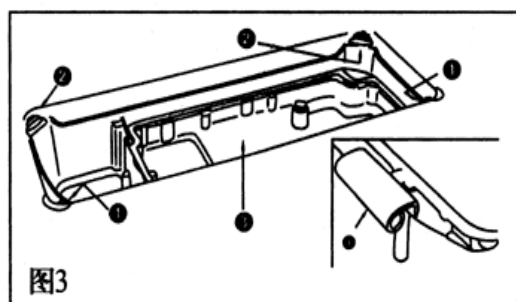


图3

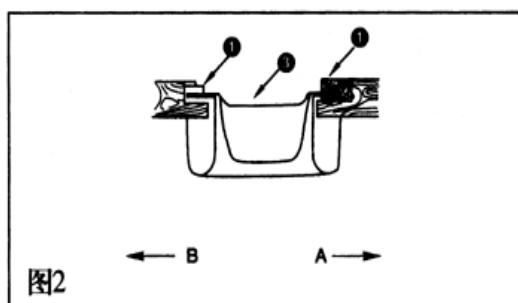


图2

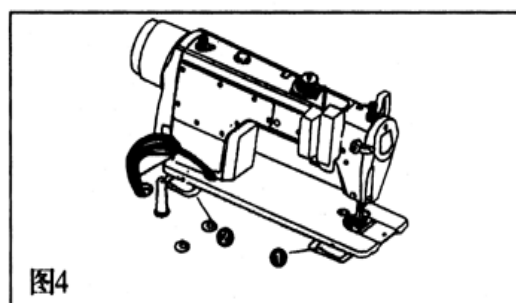


图4

## 5、机器的润滑 (图5、图6)

### 1、润滑须知:

- 1). 向油盘①注入缝纫机油 (10号白油) 至 HIGH 记号部 A。
- 2). 当油面低于 LOW 记号 B, 应再加油。
- 3). 加油后, 开动机器, 应看到油液飞溅到窗油②上, 说明润滑正常。
- 4). 至于飞溅的油量多少与总润滑油量多少无关。



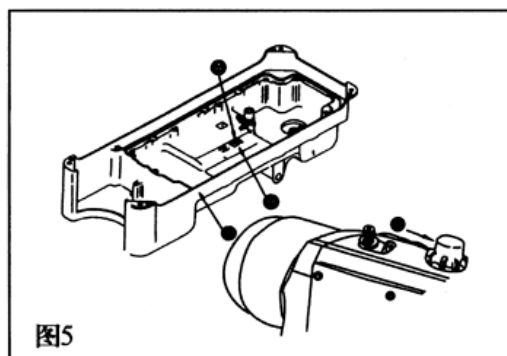


图5

## 6、旋梭油量调节（图6、图7、图8）

### 1、调节前的注意事项

- 1). 未使用的机器应进行约3分钟的空转（适当的断续运转）。
- 2). 油量纸必须在机器运转状态下插入。
- 3). 确认油盘内的油面高度处在HIGH和LOW范围内。
- 4). 油量确认时间需5秒钟（请用秒表计时）。

### 2、适量的油量标样：

- 1). 下图标样根据不同的缝制工序需进行增或减的微调整，但应注意不要增加或减少过多。

油量过少会引起旋梭发热，油量过多会油污缝料

- 2). 用三张油量纸试用三次，调节旋梭油量，直至纸上油迹不发生变化为止。

### 3、调节旋梭油量：

- 1). 将下轴前轴套上的油量调节螺钉朝+方向A转动时，油量将增大。当油量调节螺钉朝-方向B转动时，油量将减小。
- 2). 调整后应进行约30秒钟的空转，以确认油量状态。

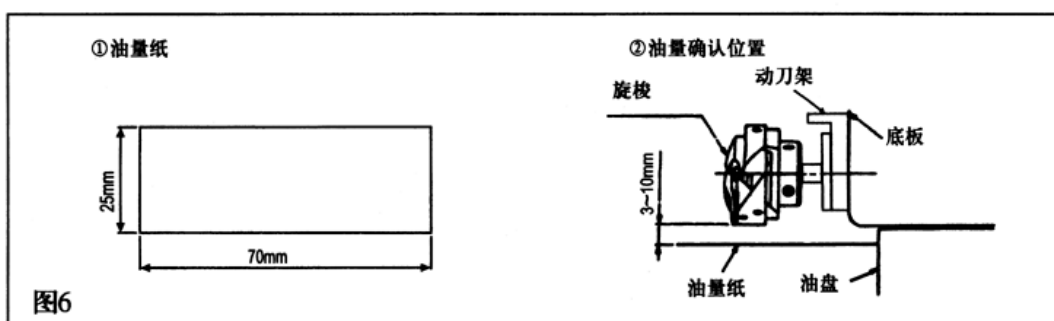
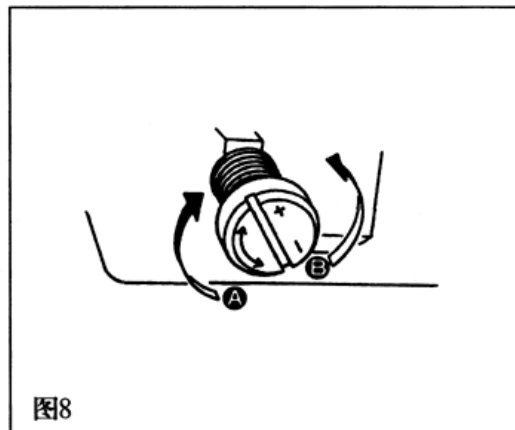
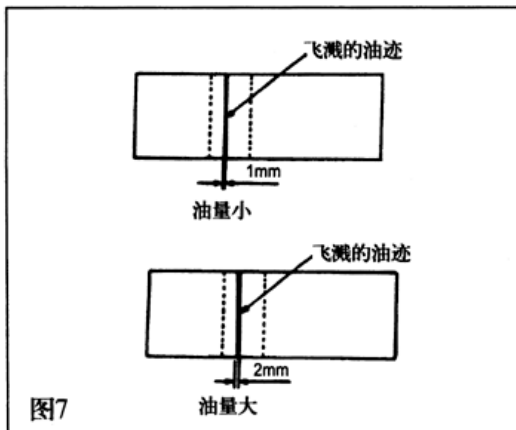


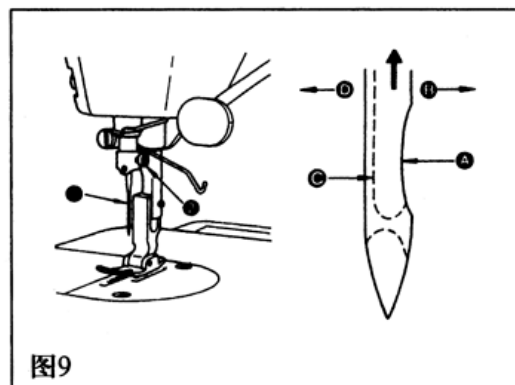
图6



## 7、机针的装法 (图9)

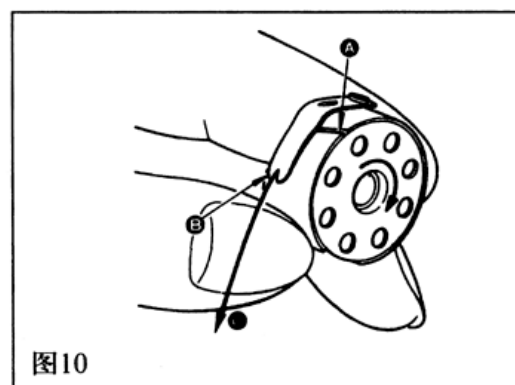
注意：在装机针前，必须切断电动机的电源。  
机针有各种编号，根据所用线的粗细和缝料来选择适当的机针。

- 1). 转动上轮使针机杆上升到最高位置。
- 2). 旋松支针螺钉②，使机针①的凹弧部分A正对右方向B。
- 3). 将机针朝箭头方向插入针孔的底部，直至插不进为止。
- 4). 旋紧支针螺钉②。
- 5). 务必使机针的长槽C正对左方向D。



## 8、梭心的装法 (图10)

- 1). 拿住梭子，将梭心装入梭子内。
- 2). 将线从梭子上的线槽A中穿过，朝B方向拉出。这样，线通过夹线簧下从线孔B处引出。
- 3). 拉底线C时，梭心应按箭头方向转动。



## 9、面线的穿法 (图11)

穿面线时针杆应在最高位置，然后由线架上引出线头按如图示顺序穿线。

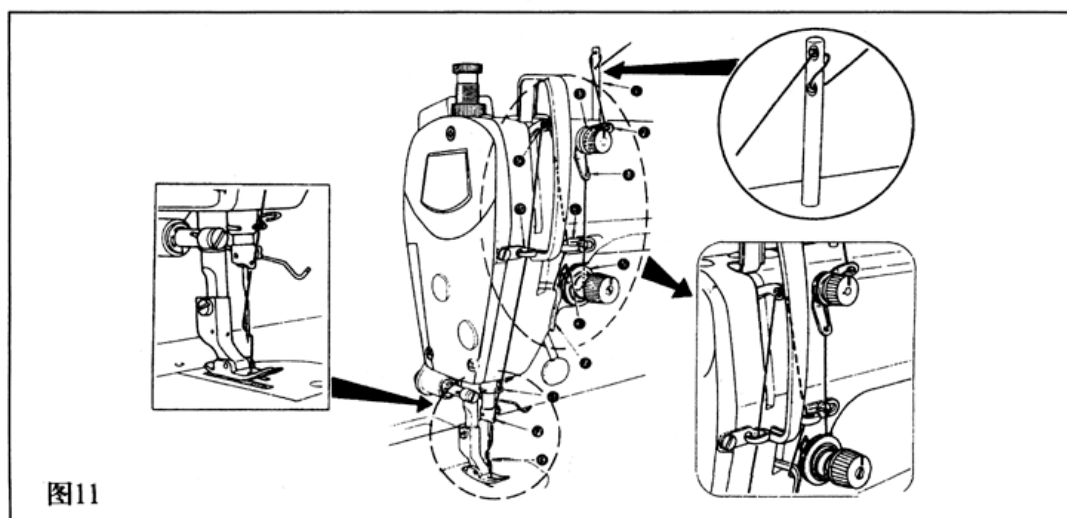


图11

## 10、底线的绕法 (图12)

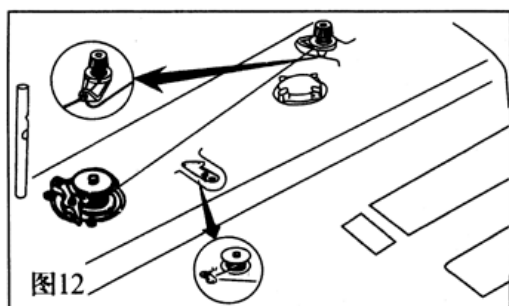


图12

底线卷绕时，线的穿法及切线如图13所示。

## 11、针距的调节 (图13)

- 1). 将送料距旋钮①朝箭头方向转动，旋至所需数字对准机壳上的刻点A
- 2). 旋钮上的刻度数字用毫米表示。
- 3). 当你想缩短线迹长度时，把倒送料板手②朝箭头方向压的同时，转动送料距旋钮。

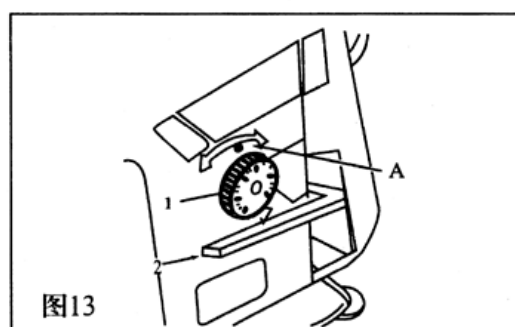


图13

## 12、线架的装法 (图14)

1). 安装线架部件, 并将它插入缝纫机台板孔里。

2). 旋紧线架杆下节螺母

①固定线架装置。

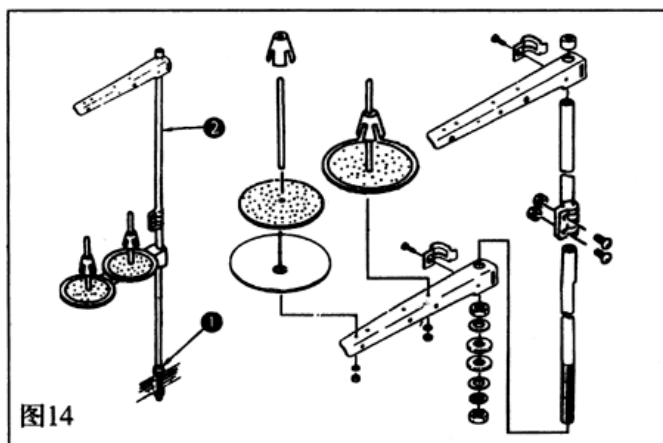


图14

### 13.1 定刀和动刀的更换 (图15、图16、图17.1 (旋刀))

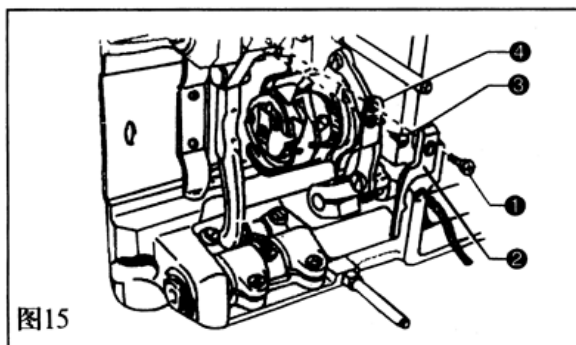


图15

#### 1. 定刀的拆卸方法

1. 将缝纫机放倒
  2. 取下紧固螺钉①和旋梭定位钩②
  3. 拆下沉头螺钉③和定刀④
- ※切线不良时请磨定刀④(如图16)

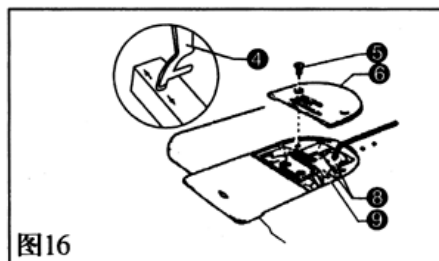


图16

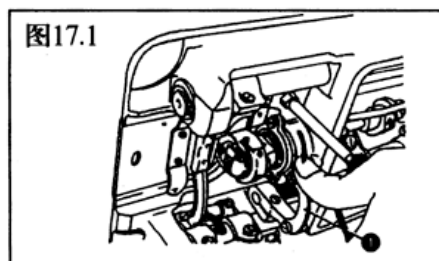


图17.1

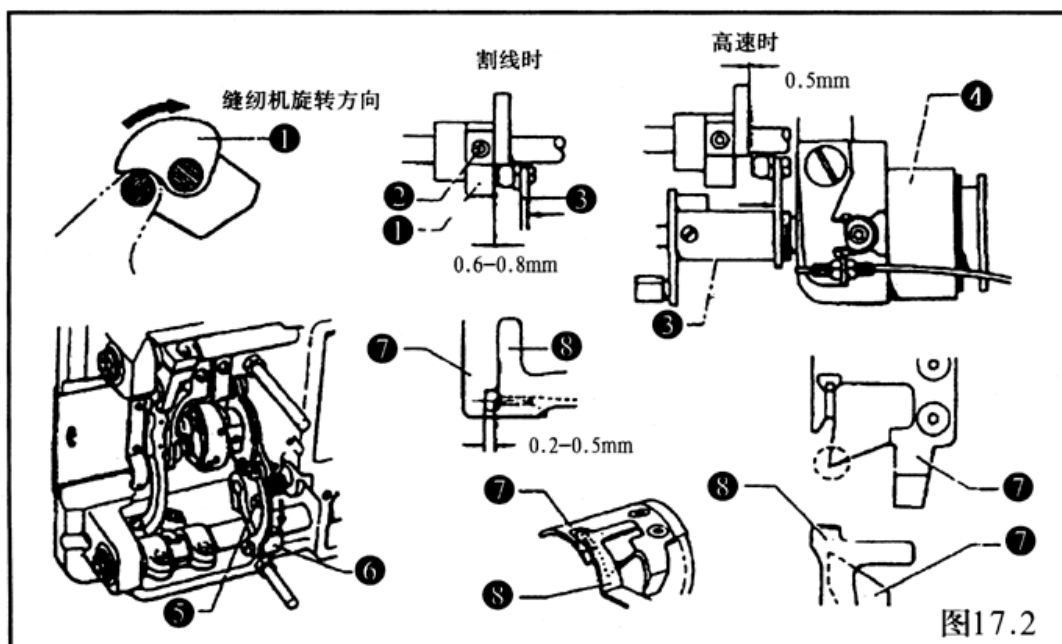
#### 2. 移动刀的拆卸方法

1. 用压脚扳手将压脚抬起
2. 拆下沉头螺钉⑤, 取下针板⑥
3. 转动缝纫机主动轮, 将针杆停止在最高位置
4. 将刀轴连杆⑦按箭头方向用手推动, 停在沉头螺钉⑧显露的位置
5. 拆下沉头螺钉⑧, 取下移动刀⑨

注1) 拆针板⑥及动刀⑨时请先取下机针。

注2) 组装按相反的顺序进行。

### 13.2 剪线装置的调整(图17.2)(旋刀)



#### (一) 剪线凸轮位置的调节

转动缝纫机的上轮，当针杆从最低位置上升5mm时，用手压剪线电磁铁④使滚珠接触剪线凸轮①的凹部，然后用定位螺钉②临时固紧。然后把剪线电磁铁④返回原来的位置（离开位置），同时旋松定位螺钉②调整剪线凸轮①，使凸轮端面和切线驱动轴端面之间的间隙为0.5mm。（以40kg/cm的扭矩拧紧定位螺钉②）

#### (二) 移动刀、定刀位置的调整

当切线驱动轴③的头部超过剪线凸轮时，定刀⑧的前端和动刀⑦的刀刃部应当啮合0.2-0.5mm。当不啮合时，在切线驱动轴超过剪线凸轮①的情况下移动刀轴连杆⑥，使定刀⑧的前端和动刀⑦的刀刃部相啮合，然后拧紧螺钉⑤。

### 13.3 定刀装置 (图17.3) (平刀)

定刀刃口磨损时, 要尽快拆下定刀  
①研磨修整, 按图示C的标准正确  
安装。

1) 如果将定刀从标准位置朝A  
方向移动, 剪线后线的长度就比标  
准的长。

2) 如果朝B方向移动, 剪线后  
线的长度就比标准的短。

a. 动力 b. 机针中心

c. 标准距离: 3~3.5mm

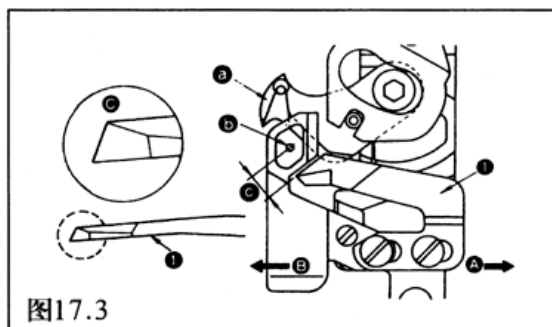


图17.3

### 14、膝提高度的调节 (图18、图19)

1). 用膝提时的标准压脚高度是  
10毫米。

2). 用膝提调整螺钉①可以调节  
压脚提升量至13毫米。

3). 当压脚提升超过10毫米时,  
不能使处于最低位置的针杆②底端  
与压脚③相碰。

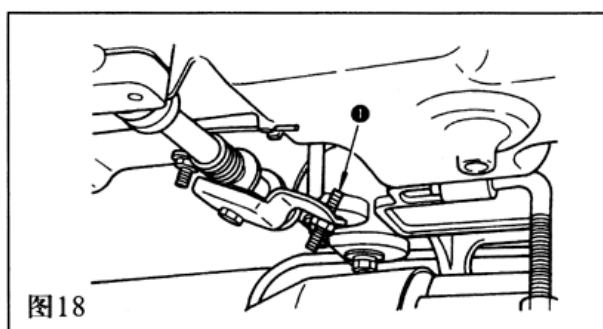


图18

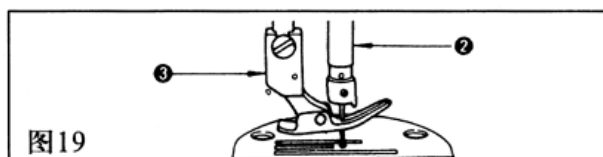


图19

### 15、踏板操作 (图20)

踏板分四个阶段操作:

1). 将踏板朝前轻踏, 则低速缝  
纫。(图示B)

2). 进一步朝前踏, 就是高速缝  
纫。(图示A)

3). 当踏板恢复到原始状态时,  
机器停止运转(上停针或下停针)。  
(图示C)

4). 将踏板朝后踏, 执行剪线动作。  
(图示D)

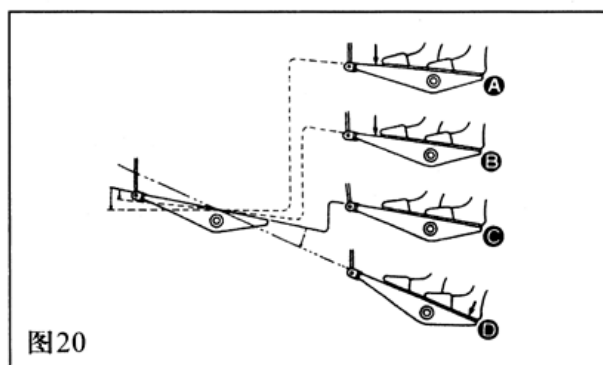


图20

- \*在执行高速缝纫或低速缝纫时，将踏板朝后踏，剪线动作能正常执行。
- \*机器开始剪线后，即使将踏板回复到中间位置，剪裁动作也能完成。
- \*当机器停止，针处于下针位状态时，如果要使处于上针位，请将踏板朝后踏一次。
- \*若机器安装自动抬压脚机构，当机器停止后，延时2-3秒，再将踏板朝后踏一次，则压脚自动抬起。踏板复位，则压脚自动放下。

## 16、缝线张力（图21）

### 1. 面线张力的调节：

- 1). 若将上夹线螺母①朝顺时针方向（即A方向）转动时，剪线后，留在针孔处线的长度就会短些。
- 2). 若朝逆时针方向（即B方向）转动时，则线会长些。
- 3). 若将夹线螺母②朝顺时针方向（即C方向）转动时，面线张力将增大。
- 4). 若朝逆时针方向（即D方向）转动时，面线张力将减小。

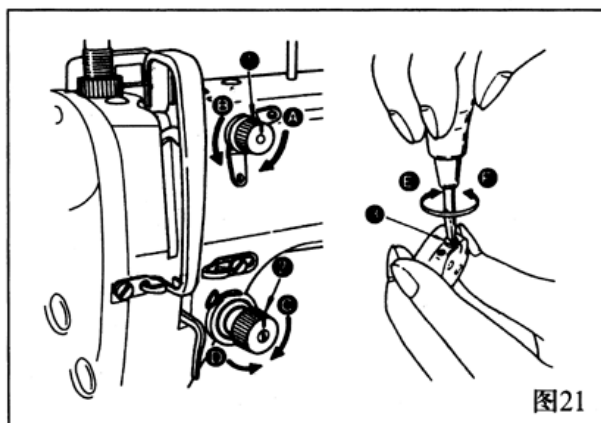


图21

### 2. 底线张力的调节：

- 1). 若将梭子上底线张力调节钉③朝顺时针方向（即E方向）动时，底线张力将增大。
- 2). 若朝逆时针方向（即F方向）动时，底线张力减小。

## 17、挑线簧调节（图22）

### 1. 改变挑线簧①的摆动量：

- 1). 旋松定位螺钉②。
- 2). 把夹线螺钉③朝顺时针方向（即A方向）转动时，挑线簧的摆动量将增大。
- 3). 把夹线螺钉朝逆时针方向（即B方向）转动时，挑线簧的摆动量将减小。

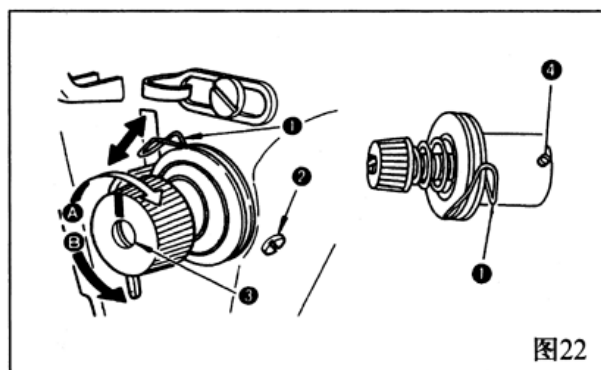


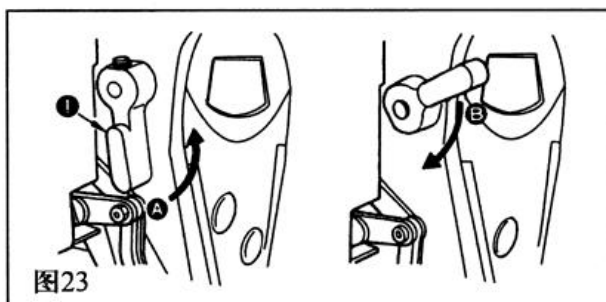
图22

### 2. 改变挑线簧①的张力：

- 1). 旋松定位螺钉②，并转动夹线螺钉③。
- 2). 旋松定位螺钉④。
- 3). 把夹线螺钉③朝顺时针方向（即A方向）转动时，挑线簧的张力将增大。
- 4). 把夹线螺钉③朝逆时针方向（即B方向）转动时，挑线簧的张力将减小。

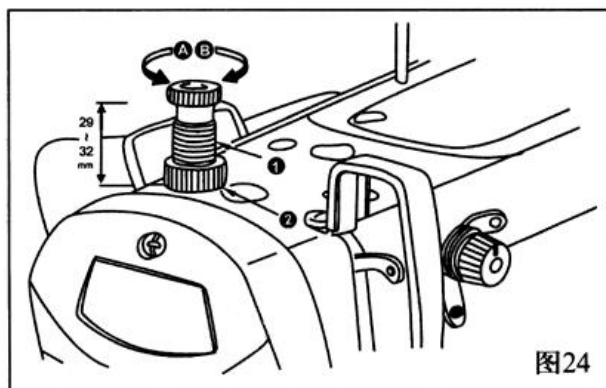
## 18、压脚扳手（图23）

- 1) 停车后，将压脚扳手①朝A方向转动，使压脚抬起。
- 2) 压脚的抬起量约为5.5毫米。
- 3) 当压脚扳手①朝B方向转动时，压脚将放回原来位置。
- 4) 对膝提压脚而言，压脚的抬起量约为10毫米，最大抬起量约为13毫米。



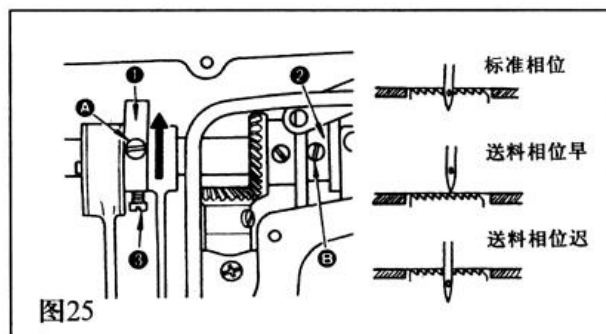
## 19、压脚压力的调节（图24）

- 1) 旋松调压螺母②。顺向（即A方向）转动压脚调节螺钉，压力将增强。
- 2) 逆向（即B方向）转动压脚调节螺钉，压力将减弱。
- 3) 调节后，旋紧调压螺母②。
- 4) 对一般布料而言，压脚调节螺钉的标准高度为29~32毫米（5公斤）左右。



## 20、送料相位的调节（图25）

- 1) 在标准相位情况下，将送料偏心轮①的定位螺钉A与上轴挡圈②的定位螺钉B对齐。
- 2) 调整时，旋松送料偏心轮上两个定位螺钉③，将送料偏心轮调到适当的位置上，然后拧紧定位螺钉。
- 3) 为了防止缝料的潜移，要加快送料相位，可将送料偏心轮朝箭头方向调整。



- 4) 为了增大线迹的紧密度，要减慢送料相位，可将送料偏心轮朝箭头相反方向移动。
- 5) 千万小心不要将送料偏心轮移动得太多，不然的话，会造成断针现象。



## 21.1 送料牙的倾斜(图26.1)(旋刀)

1) 为了防止浮线, 要送料方向高, 则旋松固定螺钉, 用螺丝刀从A孔处把牙架销朝箭头方向移动90°。

2) 为了防止缝料的潜移, 要送料方向低, 则牙架销朝箭头相反方向转动90°。

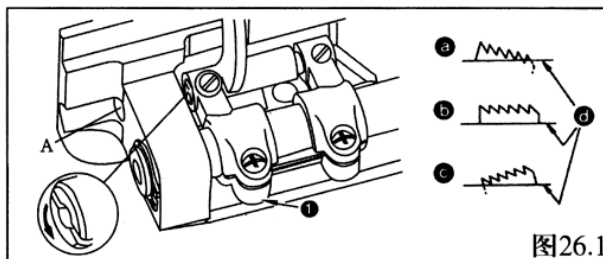


图26.1

a 前面高 b 标准 c 前面底 d 针板

\* 注意

无论什么时候, 调节送料牙的倾斜, 送料牙的高度将会变化。所以, 在调整之后, 请再次确认送料牙的高度。

## 21.2 送料牙的倾斜(图26.2)(平刀)

1) 标准的倾斜, 是牙架销上的刻点A与牙架座①上的刻点B对齐。

2) 为了防止浮线, 要送料方向高, 则旋松固定螺钉, 用螺丝刀把牙架销朝箭头方向移动90°。

3) 为了防止缝料的潜移, 要送料方向低, 则牙架销朝箭头相反方向转动90°。

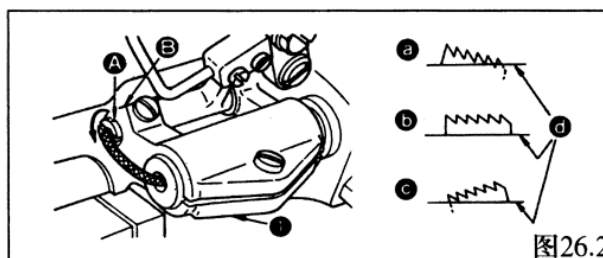


图26.2

a 前面高 b 标准 c 前面底 d 针板

\* 注意

无论什么时候, 调节送料牙的倾斜, 送料牙的高度将会变化。所以, 在调整之后, 请再次确认送料牙的高度。

## 22.1 送料牙的高度(图27.1)(旋刀)

1) 送料牙一般应比针板高出0.75—0.85毫米。厚料应高出1.15—1.25毫米。

2) 送料牙高度的调节: (1) 旋松抬牙叉形曲柄①的紧固螺钉②; (2) 上下移动牙架进行调节; (3) 旋紧曲柄螺钉②。

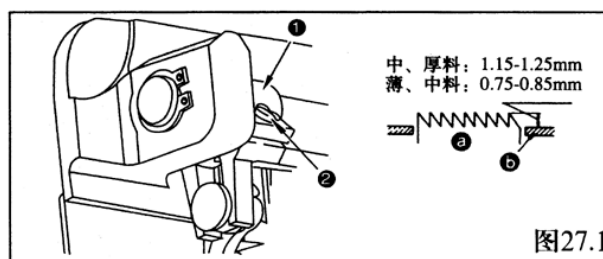


图27.1

a 送料牙 b 针板

中、厚料: 1.15-1.25mm  
薄、中料: 0.75-0.85mm

## 22.2 送料牙的高度(图27.2)(平刀)

1) 送料牙一般应比针板高出0.75—0.85毫米。厚料应高出1.15—1.25毫米。

- 2) 送料牙高度的调节: (1) 旋松抬牙叉形曲柄①的紧固螺钉②;  
(2) 上下移动牙架进行调节;  
(3) 旋紧曲柄螺钉②。

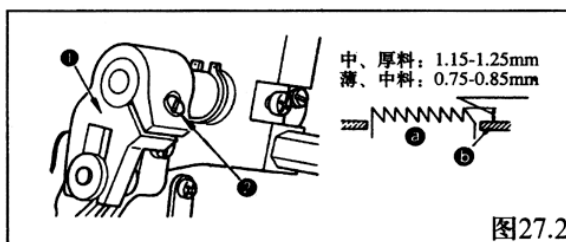


图27.2

a 送料牙 b 针板

## 23、针与旋梭的关系 (图28)

针与旋梭的关系应配合如下:

1) 转动上轮, 使针杆位于最低点, 再旋松针连接柱定位螺钉①;

\* 针杆高度的确定。

2) 使针杆②上的刻线A对准针杆下衬套③的下端, 然后旋紧针杆连接柱定位螺钉①

\* 旋梭位置的确定。

3) 旋松两只旋梭定位螺钉, 并转动上轮, 使针杆②的下刻线B对准针杆下衬套③的下端。

4) 在上述状态下, 使旋梭的勾线尖⑤

对准机针④的中心, 针与旋梭的间隙为0.04—0.1mm, 然后拧紧旋梭紧固螺钉。

\* 旋梭原来用什么型号, 调换后, 也请使用原来的型号。

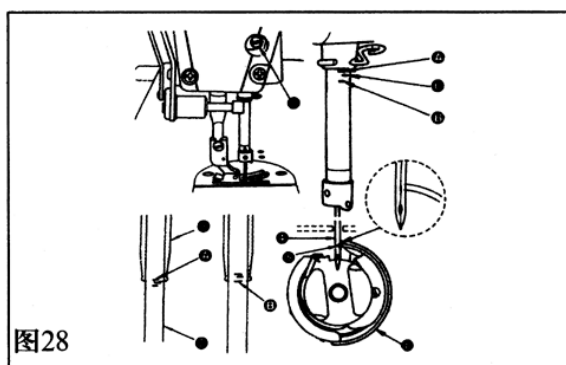


图28

## 24、压杆高度的调节 (图29)

1) 旋松压杆导架紧固螺钉①调节压杆高度 (在压脚上升最高时, 针板面与压脚底面距离为5.5毫米)。

2) 调节后, 拧紧紧固螺钉。

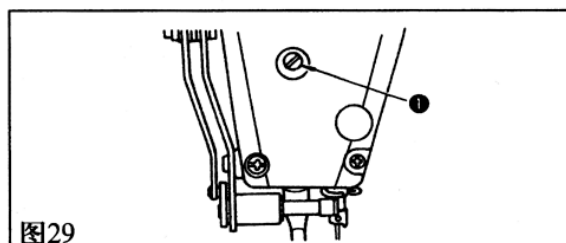


图29

## 25、挑线杆挑线量的调节 (图30)

1) 缝制厚料时, 应将右线钩①朝左方向A移动, 以增大挑线量。

2) 缝制薄料时, 应将右线钩①朝右方向B移动, 以减小挑线量。

3) 右线钩①上的刻线C与螺钉中心一致时为标准位置。

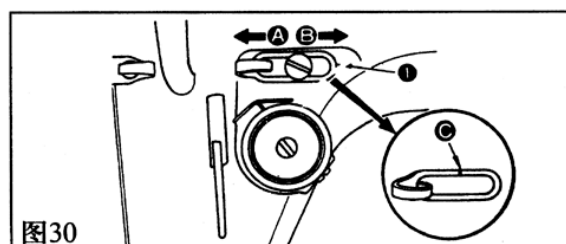


图30

## 26、停针位置的调整（图31）

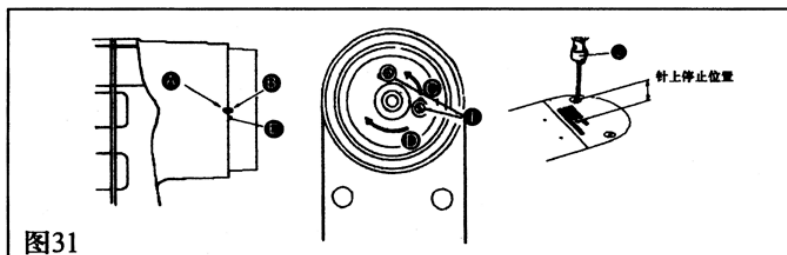


图31

### 1.剪线后的上停针位置

接通电源开关，在针上停止位置停下缝纫机时，针板上平面到针尖的距离：中厚料为10-20ml（即后盖上的刻点A与上轮上的红刻点B对齐）；厚料为10-14ml（即后盖上的刻点A与上轮上的白刻点E对齐）。

2) 要使上停针位置有所变化,旋松两个紧固螺钉①,就可在长槽范围内调整。

①若螺钉朝C方向移动,针杆②在高位置停止;

②若螺钉朝D方向移动,停止位置则变低相应。

\* 注意:

在旋松螺钉①的时候,请不要启动机器。此外,螺钉①只要旋松即可,不要拆下。

### 2.下停针位置

\* 注意: 针下停止位置不要调整

## 27、踏板压力与行程（图32）

### 1.踏板踩踏压力的调整

- 1) 摘下踏板压力调节弹簧①进行调节;
- 2) 把弹簧挂到左侧压力变小;
- 3) 挂到右侧压力变大。

### 2.踏板返回力的调整

- 1) 用返踩调节螺钉②进行调节;
- 2) 拧紧调节螺钉压力变大;
- 3) 拧紧螺钉压力变小。

### 3.踏板踩踏行程的调整

- 1) 把连接杆③安装到左侧的孔内,行程变小。

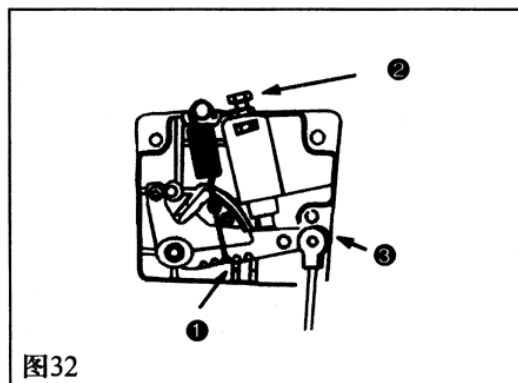


图32

## 28、踏板的调整 (图33)

### 1. 拉杆位置的调整:

1) 左右移动踏板调节板, 将踏板曲柄①和拉杆部件②垂直连接。

### 2. 踏板角度的调整:

1) 踏板的倾斜, 可以根据拉杆长度的调节自由改变。

2) 旋松螺钉④, 就可以调节拉杆的②长度。

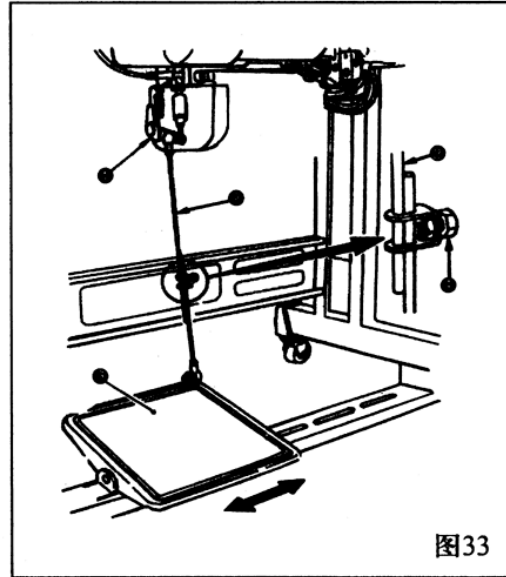


图33

## 29、手触倒缝装置 (图34)

### 1. 使用方法:

1) 手按手触倒缝开关①, 机器执行倒缝动作。

2) 机器执行自动倒缝与手按着开关按钮的时间同步。

3) 手一离开开关按钮, 机器又重新恢复到顺缝状态。

### 2. 手触倒缝开关的高度

1) 调节手触倒缝开关①的高度, 使之便于操作。

2) 旋松螺钉②, 上下移动开关杆就可调整它的高度。

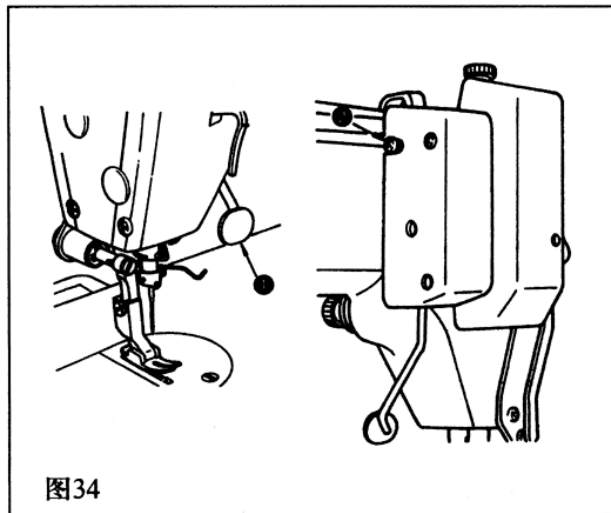


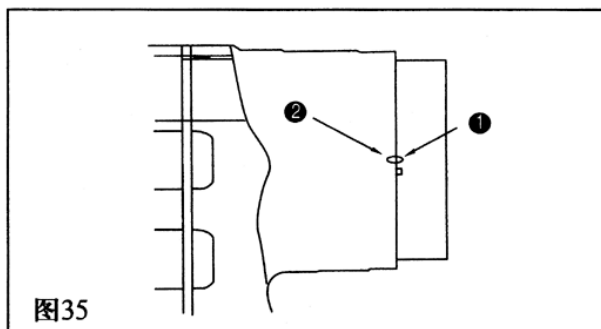
图34

### 30、拔线器（图35、图36、图37）

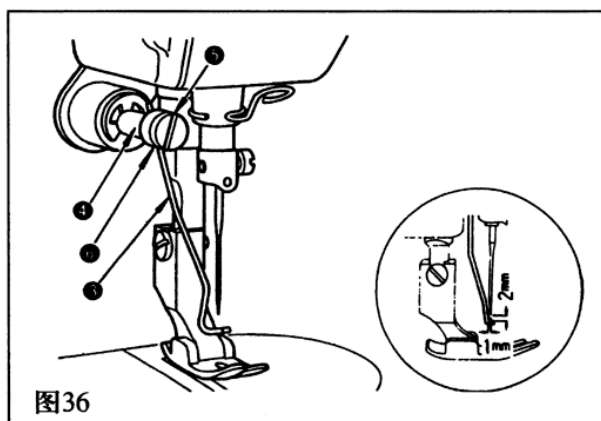
#### 1. 拔线器位置：

根据缝料厚薄来调整拔线器的位置。调整顺序如下：

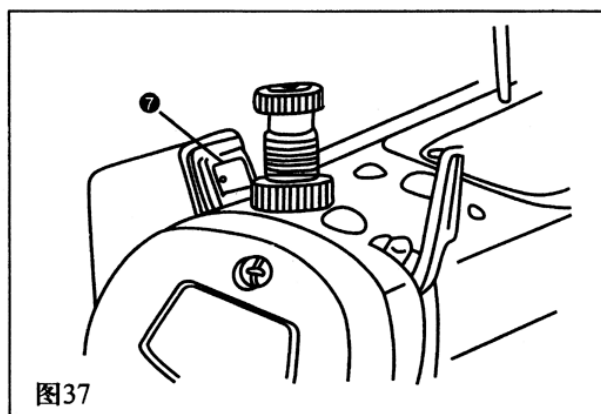
1) 朝顺缝方向转动上轮，使上轮上的白刻点①对准车壳上的红刻点②。



2) 拔线器杆垂直部位与机针中心的距离为1毫米。调整完以后拧紧螺钉⑤通过螺钉套圈⑥以固定拔线器杆。



3) 不需要使用拔线器时，请切断拔线器开关。



※ This book was prepared based on information available in October 2005.

## INSTRUCTION MANUAL

To get the most out of the many functions of this machine and operate it in safely, it is necessary to use this machine correctly.

Please read this Instruction Manual carefully before use. We hope you will enjoy the use of your machine for a long time.

Please remember to keep this manual in a safe place

1. observe the basic safety measures, including, but not limited to the following ones, whenever you use the machine.
  2. Read all the instructions, including, but not limited to this Instruction Manual before you use the machine. In addition, keep this Instruction Manual so that you may read it at anytime when necessary.
  3. Use the machine after it has been ascertained that it conforms with safety rules/standards valid in your country.
  4. All safety devices must be in position when the machine is ready for work or in operation. The operation without the specified safety devices is not allowed.
  5. This machine shall be operated by appropriately-trained operators.
  6. For your personal protection, we recommend that you wear safety glasses.
  7. For the following, turn off the power switch or disconnect the power plug of the machine from the receptacle.
    - 7-1 For threading needle (s) and replacing bobbin.
    - 7-2 For replacing part (s) of needle, presser foot, throat plate, feed dog, cloth guide etc.
    - 7-3 For repair work,
    - 7-4 For when leaving the working place or when the working place is unattended.
  8. If you should allow oil, grease, etc. used with the machine and devices to come in contact with your eyes or skin or swallow any of such liquid by mistake, immediately wash the contacted areas and consult a medical doctor.
- 
9. Tampering with the live parts and devices, regardless of whether the machine is powered, is prohibited.
  10. Repairing, remodeling and adjustment works must only be done by appropriately trained technicians or specially skilled personnel.
  11. General maintenance and inspection works have to be done by appropriately trained personnel.
  12. Repair and maintenance works of electrical components shall be conducted by qualified electric technicians or under the audit and guidance of specially skilled personnel.

Whenever you find a failure of any of electrical components, immediately stop the machine,
  13. Periodically clean the machine throughout the period of use.

14. Grounding the machine is always necessary for the normal operation of the machine. The machine has to be operated in an environment that is free from strong noise sources such as high-frequency welder.

15. An appropriate power plug has to be attached to the machine by electric technicians. Power plug has to be connected to grounded receptacle.

16. The machine is only allowed to be used for the purpose intended. Other uses are not allowed.

17. Remodel or modify the machine in accordance with the safety rules/standards while taking all the effective safety measures. We assume no responsibility for damage caused by remodeling or modification of the machine.

18. Warning hints are marked with the two shown symbols.





Danger of injury to operator or service staff



Items requiring special attention

# FOR SAFE OPERATION

	<p>1.To avoid electrical shock hazards,neither open the cover of the electrical box for the motor nor touch the components mounted inside the electrical box.</p>
	<ol style="list-style-type: none"> <li>1. To avoid personal injury ,never operate the machine with any of the belt cover, finger guard of safety devices removed.</li> <li>2. To prevent possible personal injuries caused by being caught in the machine. keep your fingers ,head and clothes away from the handwheel, cover and the motor while the machine is in operation. In addition,place nothing around them.</li> <li>3. To avoid personal injury,never put your hand under the needle when you turn "ON" the power switch or operate the machine.</li> <li>4. To avoid personal injury,never put your fingers into the thread take-up cover while the machine is in operation.</li> <li>5. The hook rotates at a high speed while the machine is in operation.To prevent possible injury to hands ,be sure to keep your hands away from the vicinity of the hook during operation.In addition,be sure to turn OFF the power to the machine when replacing the bobbin.</li> <li>6. To avoid possible personal injuries ,be careful not to allow your fingers in the machine when tilting/raising the machine head.</li> <li>7. To avoid possible accidents because of abrupt start of the machine,turn OFF the power to the machine when tilting the machine head .</li> <li>8. If your machine is equipped with a serve-motor,the motor does not produce noise while the machine is at rest.To avoid possible accidents due to abrupt start of the machine ,be sure to turn OFF the power to the machine .</li> <li>9. To avoid electrical shock hazards,never operate the sewing machine with the ground wire for the power supply removed.</li> <li>10. To prevent possible accidents because of electric shock or damaged electrical component(s),turn OFF the power switch in prior to the connection/disconnection of the power plug.</li> </ol>



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## 1.BEFORE OPERATION

- 1.In order to resist rust before machine head packing,all parts are smeared with thick rust-resist ant oil.After packing,perhaps in a relativey long storage and transportation period,the oil will harden and absorb dusts.Therefore,it's necessary to clean the oil and dusts with neat soft cloth and gasoline.
- 2.The machine are examined and checked thoroughly before leaving the factory.But in a long jouney, the machine may be shaken intensely and some parts become loose. it's advisable to test again and turn the driving gears with hands so as to make sure if turning is difficult,run foul of each other or if there is non-uniform block or irregular voice.If so,the machine should be adjusted until every part is normal before driving.
- 3.Operation are forbidden before pouring oil in the plate.
- 4.When the machine is in operation,the direction of the upper wheel are anti-clockwise(viewing from the outer part of the upper wheel).
- 5.Confirom the given electric voltage and phase on motor nameplate.
- 6.The date of manufacture is shown on the inspection certification.

## 2.OPERATION PRECAUTIONS

- 1.When the power supply is open or the machine is operating ,don't touch the machine needle with your hands.
- 2.When the machine is running ,don't stretch your hands in the mat of the thread stitch bar.
- 3.When the machine head is turning and the "V" belt is being disassembled,the electric supply should be cut off.
- 4.When the operator is leaving the machine,cut out the power supply.
- 5.When the machine is running,no heads,hands or any other things are allowed to get close to the uper wheels,"V"belts bobbin winder and motor.
- 6.Not until the machine stops running can you disassemble the belt cover,protection cover or other protecting devices?
- 7.The machine head's surface can't be cleaned with dilutes such as banana oil.
- 8.Don't put your finger into the finger guard when you feed material by hand.

## 3.CHIEF TECHNICAL SPECIFICATIONS

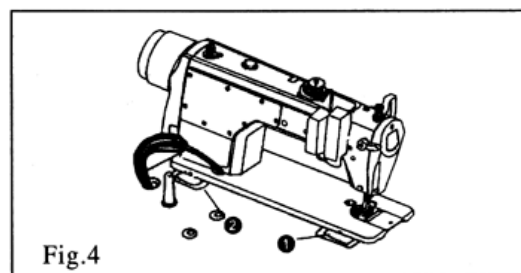
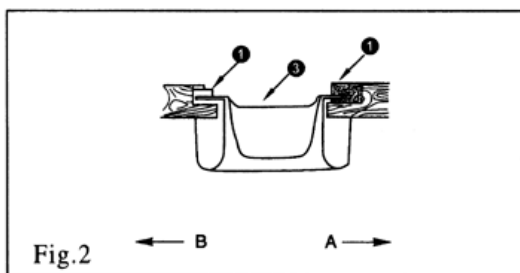
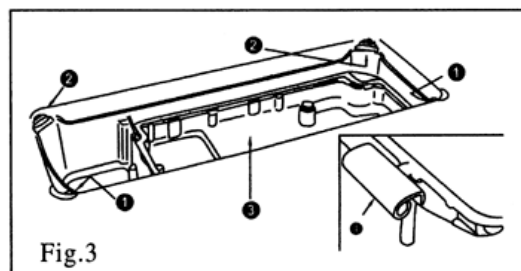
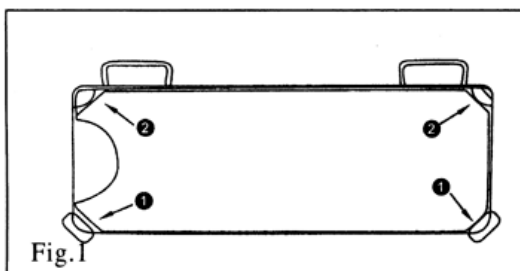
	Thin materials	Standard typical	thick materials
Sewing material	Thin materials	Light-middle thick materials	middle thick-thick materials
Sewing speed(Max)	4000S.P.M.	5000S.P.M.	3500S.P.M.
Maximum stitch length	4mm	5mm	8mm
Pressure foot lifting high	6mm(standard) 13mm(max)		
Needle	DA x 1#9	DB x 1#9~#18	DP x 5#16~#18
Lukr Cant oil	10#White oil		
Motor Power	220V/500W		

#### 4.INSTALLATION (FIG.1,FIG.2,FIG.3,FIG.4)

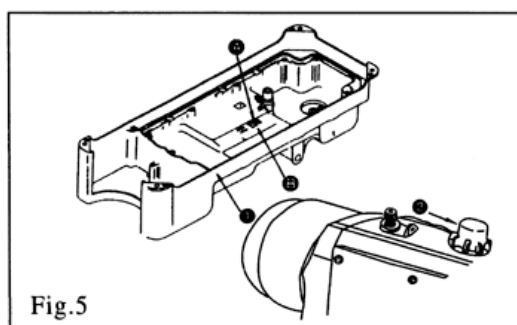
##### 1.fixing oil tray

- 1) oil tray should be put at the four corners of the slot in table plate.
- 2) Fix two arm cushion"1"to the"A"side of oil tray"3"(facing the operator).  
Fix the two stand bases"2"to the"B"side of oil tray"3"(hinge side),then  
fix the oil tray"3"(picture1.picture2)
- 3) Plug the hinge"1"into hole of bed plate,put the machine head on the table  
plate,hinge at the sink place and then fix the machine head on cushions  
of the four oil tray corners(picture3,picture4).

**attention:in the packing box ,the rubber cushions fixed at the four corner  
of oil tray is not for any other usage,just for packaging.**



#### 5.LUBRICATION (FIG.5)



### 1.Information on lubrication(Fig.5)

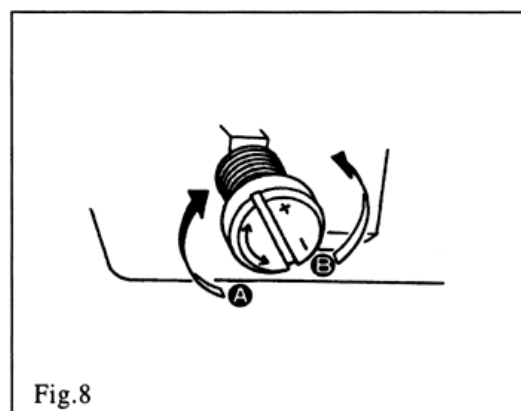
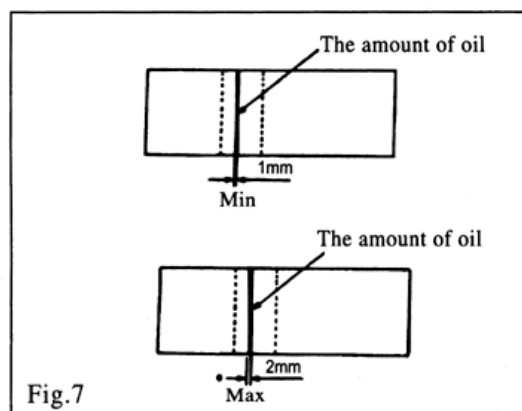
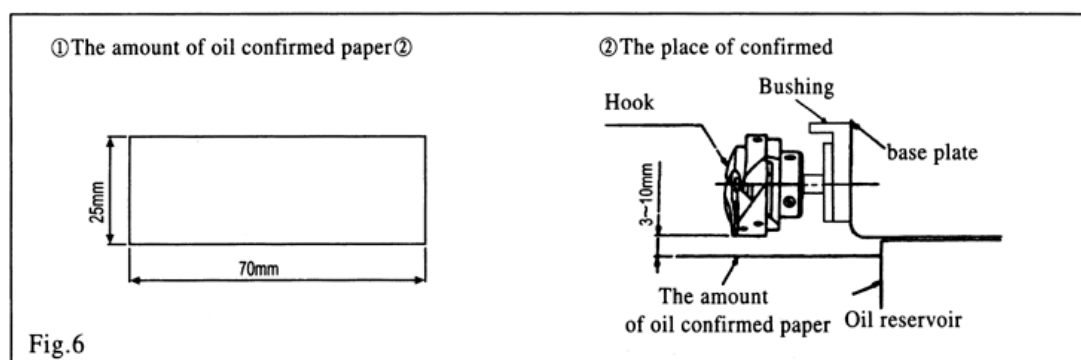
- 1) Fill oil pan①with sewing machine oil (10 white oil)up to HIGH mark A.
- 2) when the oil level lowers below LOW mark B,refill the oil pan with the specified oil.
- 3) when you operate the machine after lubrivcation,you will see splashing oil through oil sight window②if the lubrication is adequate.

4)Note that the amount of the splashing oil is unrelated to the amount of the lubricating oil.

#### \*Precaution

when you first operate your machine after set up or after an extended period of disuse,run your machine at 2,000 sp.m to 2,500s.p.m for about 10 minutes for the purpose of break-in.

## 6.ADJUSTING THE AMOUNT OF OIL (OIL.SPLASHES) IN THE HOOK(FIG.6.7.8)



1. Notice before adjustment:

1) The unexpended machine should run without material for around 3 minutes.(or suitable running now and then ).

2) Plug in the oil amount paper only when the machine is running.

3) Make sure the oil height in the oil plate ranges between HIGH and LOW.

4) The confirming time of the oil amount is 5 seconds (by manual time -keeping).

2. Appropriate oil amount sample:

1) In the following sample figures, tiny adjustments may be considered according to different sewing process but not too much oil may cause the warming of spinning shuttle and contaminate the material.

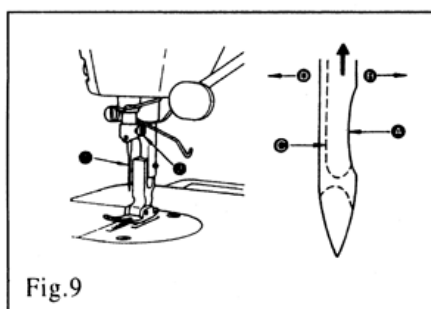
2) Try the oil amount paper three times and adjust the oil amount of the spinning shuttle until the oil trail on the paper is stable.

3. Adjust the oil amount of the spinning shuttle:

1) Turning the oil adjusting screw of the front shaft sleeve on bottom shaft towards + direction A, the oil amount will increase ,and towards -direction B, the oil amount will decrease.

2) After adjustment without material for 30 seconds to confirm the condition of the oil amount.

## 7. ATTACHING THE NEEDLE(FIG. 9)



\* Turn the motor power OFF before starting to attach the needle.

Select a proper needle size according to the count of thread and the type of material used.

1) Turn the handwheel until the needle bar reaches the highest point of its stroke.

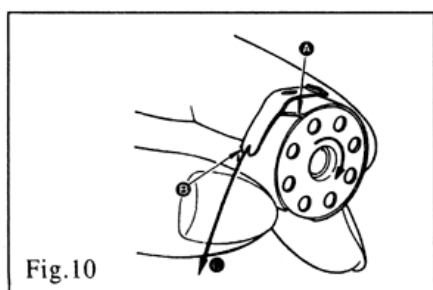
2) Loosen screw ②, and hold needle ① with its indented part A facing exactly to the right in direction B.

3) Insert the needle in the direction of the arrow until it will go no further.

4) Securely tighten screw ②.

5) Check that long groove C of the needle is facing exactly to the left in direction D.

## 8. SETTING THE BOBBIN INTO THE BOBBIN CASE(FIG .10)



1) Hold the bobbin in a way that the thread open end is directed to the right as observed from you ,and set the bobbin into the bobbin case.

2) Pass the thread through thread slit ,and pull the thread in direction .By so doing ,the thread will pass under the tension spring and come out from notch.

3) Check that the bobbin rotates in the direction of the arrow when thread is pulled.

### 9.THREADING THE MACHINE HEAD(FIG.11)

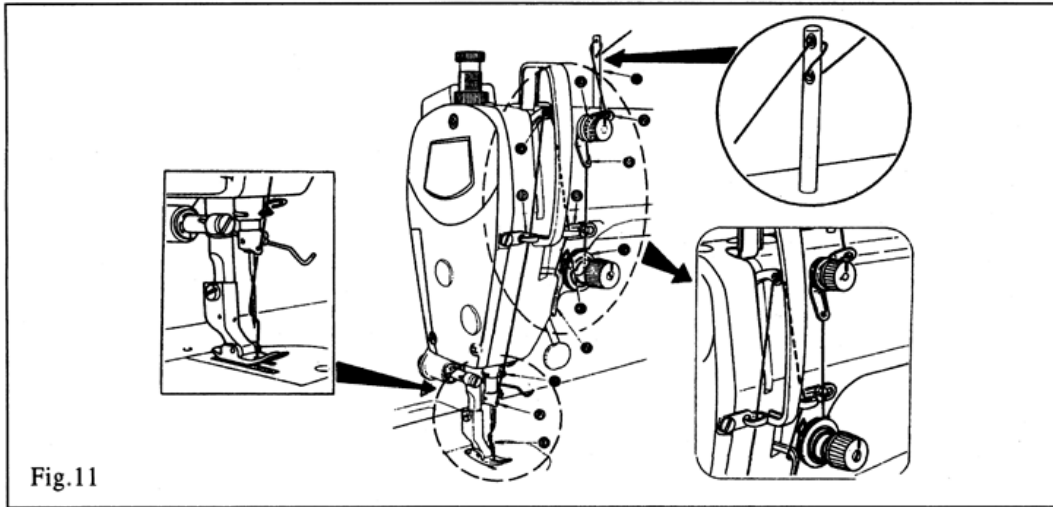


Fig.11

### 10.WINDING THE BOBBIN(FIG.12)

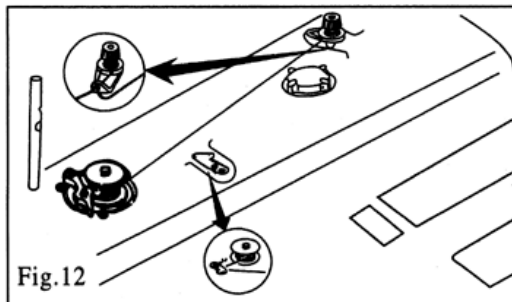


Fig.12

Thread the bobbin winder and wind the bobbin thread onto the bobbin illustrated in the figure 13.

### 11.ADJUSTING THE STITCH LENGTH(FIG.13)

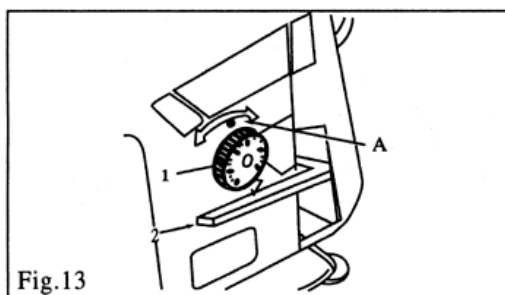


Fig.13

- 1)Turn stitch length dial①in the direction of the arrow,and align the desired number to marker dot ④ on the machine arm.
- 2)The dial calibration is in millimeters.
- 3)when you want to decrease the stitch length, turn stitch length dial①while pressing feed lever②in the direction of the arrow.

## 12.INSTALLING THE THREAD STAND(FIG.14)

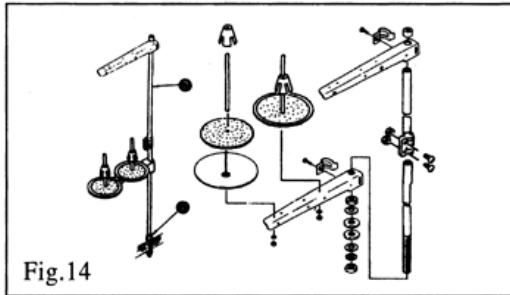


Fig.14

- 1) Assemble the thread stand unit ,and insert it in the hole in the machine table.
- 2) Tighten locknut① to fix the thread stand.
- 3) For ceiling wiring, pass the power cord through spool rest rod②

## 13.1 REPLACE THE COUNTER KNIFE AND MOVING KNIFE(FIG15,FIG16,FIG17.1)

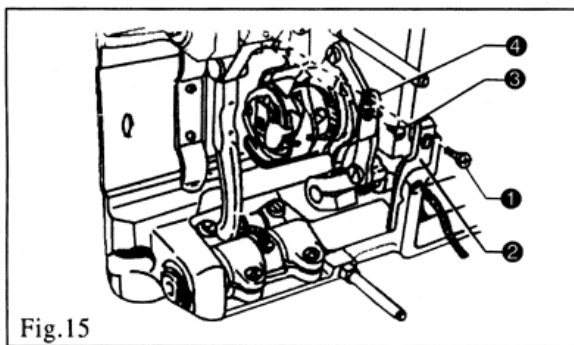


Fig.15

- 1.The method of tearing down the counter knife
  - 1).Put down the sewing machine
  - 2).Take down the screw ① and positioning finger ②
  - 3).take down the screw ③ and counter knife ④ (Fig.16)

※Please the grinding the counter knife when it is not good for cutting thread

- 2.The method of tearing down the moving knife
  - 1).Lifting the preser foot for using hand lifter
  - 2).Take down the screw ⑤,put down the needle plate ⑥
  - 3).Turn the wheel and stop the needle bar ni its highest posttion
  - 4).Drive the knife link ⑦ as illustrated by the arrows , and stop to the position when screw ⑧ is unfolded
  - 5).Take down the screw ⑨ and noving knife

Attention:

- 1.Please take down the needle before removing the needle plate and moving knife
- 2).Assemble by reversing sequence

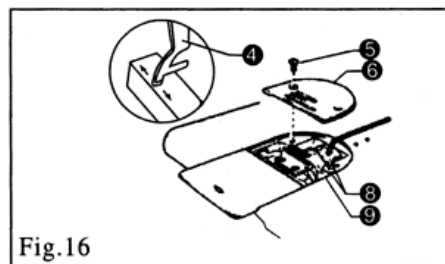


Fig.16

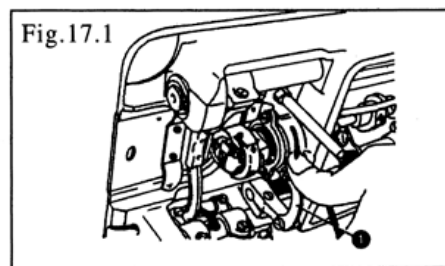
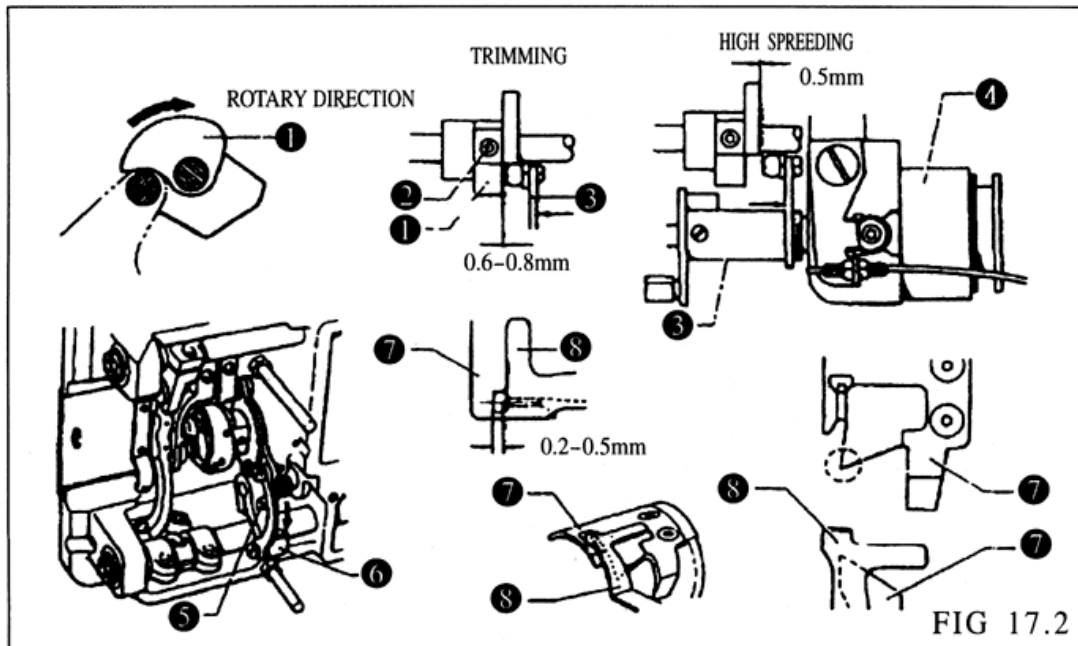


Fig.17.1

### 13.2 ADJUSTING THE THREAD TRIMMING EQUIPMENT(FIG17.2)(ROUND KNIFE)



#### (一) Adjusting the position of the thread trimmng cam.

If you run the handwheel of the machine, the needle bar goes from the bottom up to 5mm, then the thread trimming solenoid④ is pressed to impel the roller ball touches to the concave of the thread trimming cam①, Then use the position screw②to tighten it in casual.And then replace the thread trimming solenoid ④, while loose the screw② to adjust the cam①, the clearance of the end plane between the cam and thread trimming driving shaft is 0.5mm.(Use the torion with 40kg/cm to tighten the position screw②)

#### (二) Adjusting the position of the counter knife and moving knife.

When the head of the thead trimming driving shaft③ exceeds the cam, the mesh between the front plane of the counter knife⑧and the edge of the moving knife⑦ is 0.2-0.5mm. If they are not meshed,moves the knife shaft crack rod ⑥ before the thread trimming driving shaft exceeded the cam①, the front plane of the counter knife⑧and the edge of the moving knife is meshed, then tighten the screw⑤.



### 13.3 COUNTER KNIFE(FIG.17.3)(STRAIGHT EDGE)

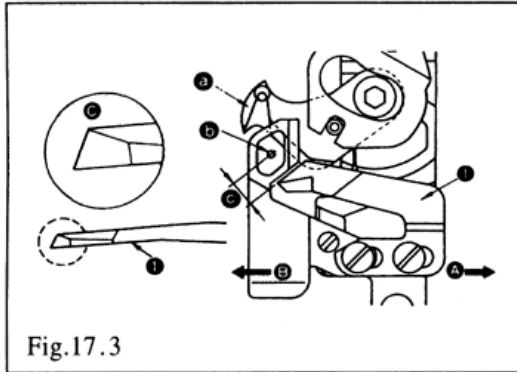


Fig.17.3

1. When the knife sharpness has deteriorated, resharpen counter knife ① as illustrated in ③, and properly reinstall it.

1) If the mounting position of the counter knife is moved in direction ④ from the standard mounting position, the thread length after thread trimming will be increased accordingly.

2) If the mounting position is moved in direction ⑤, the thread length will be decreased accordingly

③ Moving knife

② Center of needle

③ Standard: 3 to 3.5mm

### 14. ADJUSTING THE HEIGHT OF THE KNEE LIFTER(FIG.18,19)

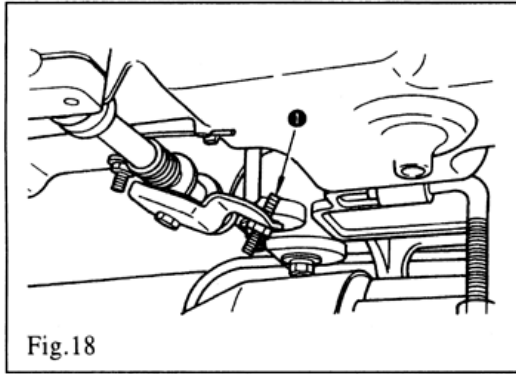


Fig.18

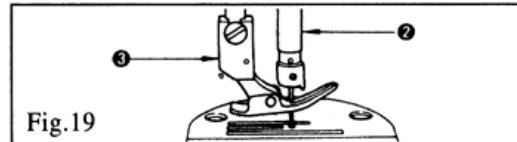


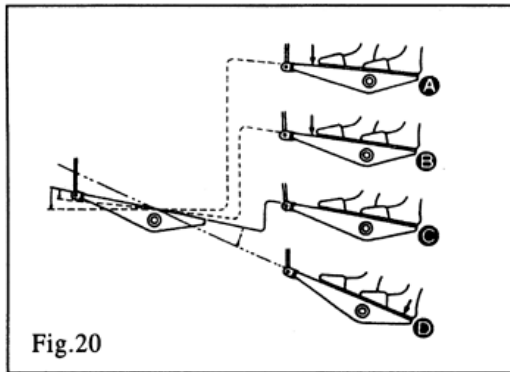
Fig.19

1) The standard height of the presser foot lifted using the knee lifter is 10mm.

2) You can adjust the presser foot lift up to 13mm using knee lifter adjust screw ①. (The max. lift should be 9 mm for the A type.)

3) When you have adjusted the presser foot lift to over 10 mm, be sure that the bottom end of needle bar ② in its lowest position does not hit presser foot ③

## 15. PEDAL OPERATION (FIG.20)



1. The pedal is operated in the following four steps:

- 1) The machine runs at low sewing speed when you lightly depress the front part of the pedal B .
- 2) The machine runs at high sewing speed when you further depress the front part of the pedal A .
- 3) The machine stops (with its needle up or down) when you reset the pedal to its original position C .
- 4) The machine trims threads when you fully depress the back part of the pedal D .

\* The machine will perform normal thread trimming even if you depress the back part of the pedal immediately following high or low speed sewing.

\* The machine will completely perform thread trimming even if you reset the pedal to its neutral position immediately after the machine started thread trimming action.

\* When the machine stops with its needle down, and if you want to bring the needle up, depress the back part of the pedal once.

\* If the machine is fixed with the automatic lifting pressure foot structure, after stopped the machine and delayed two or three seconds, then thrample the threadle backward once, so the pressure foot will lift automatically when the threadle reback, the pressure foot will be down automaticaly.

## 16.THREAD TENSION(FIG.21)

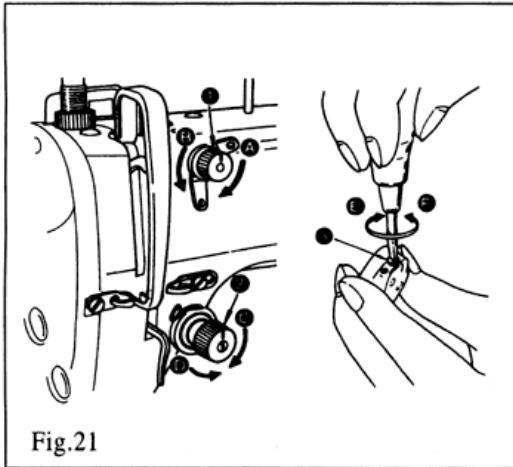


Fig.21

### 1.Adjusting the needle thread tension

- 1)As you turn thread tension No.1 nut①clockwise (in directionⒶ),the thread remaining on the needle after thread trimming will be shorter.
- 2)As you turn nut①counterclockwise(in direction Ⓑ),the thread length will be longer.
- 3)As you turn thread tension No.2 nut②clockwise (in directionⒸ),the needle thread tension will be increased.
- 4)As you turn nut②counterclockwise(in direction Ⓓ),the needle thread tension will be decreased.

### 2.Adjusting the bobbin thread tension

- 1)As you turn tension adjust screw③clockwise(in directionⒺ),the bobbin thread tension will be increased.
- 2)As you turn screw③counterclockwise(in directionⒻ),the bobbin thread tension will be decreased.

## 17.THREAD TAKE-UP SPRING(FIG.22)

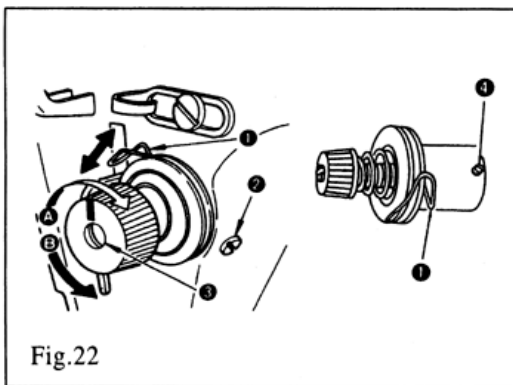


Fig.22

### 1.Changing the stroke of thread take-up spring①

- 1)Loosen setscrew②.
- 2)As you turn tension post ③ clockwise(in directionⒶ), the'stroke of the thread take-up spring will be increased.
- 3)As you turn the knob counterclockwise(in direction Ⓑ)the stroke will be decreased.

### 2.Changing the pressure of thread take-up spring①

- 1)Loosen setscrew②, and remove tension post③
- 2)Loosen setscrew④
- 3)As you turn tension post③clockwise(in directionⒶ), the pressure will be increased.
- 4)As you turn the post counterclockwise(in directionⒷ), the pressure will be decreased.

## 18.HAND LIFTER(FIG.23)

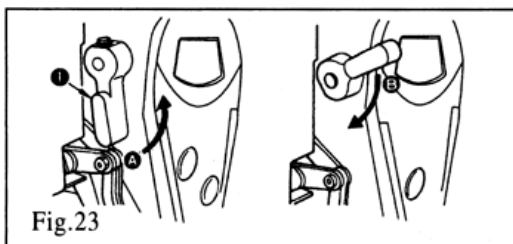
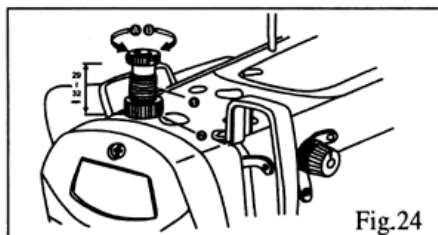


Fig.23

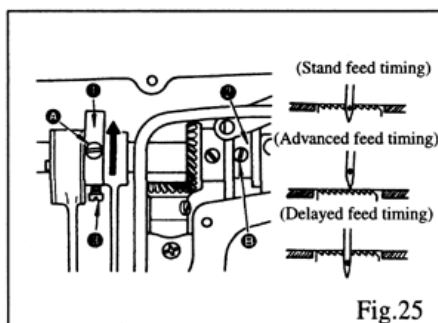
- 1)To stop the machine with its presser foot up,turn hand lifter①in directionⒶ.
- 2)The presser foot will go up about 5.5mm and stop.
- 3)The presser foot will go back to its original position when hand lifter is turned down in directionⒷ.
- 4)Using the knee lifter ,you can get the standard presser foot lift of about 10mm and the maximum lift of about13 mm.

## 19.PRESSER FOOT PRESSURE(FIG.24)



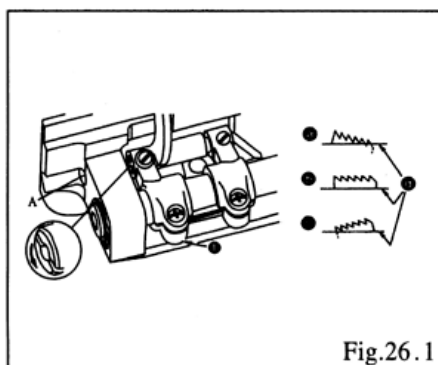
- 1) Loosen nut ②. As you turn presser spring regulator ① clockwise (in direction ㉔), the presser foot pressure will be increased.
- 2) As you turn the presser spring regulator counterclockwise (in direction ㉕), the pressure will be decreased.
- 3) After adjustment, tighten nut ②.
- 4) For general fabrics, the standard height of the presser spring regulator is 29 to 30mm (5kg).

## 20.ADJUSTING THE FEED TIMING(FIG.25)



- 1) To obtain the standard feed timing, align setscrew ㉔ on feed eccentric cam ① with setscrew ㉕ on main shaft thrust collar ②.
- 2) To make adjustment, loosen two setscrews ③ to release the feed eccentric cam, properly position the eccentric cam. Then retighten the setscrews.
- 3) To advance the feed timing in order to prevent uneven material feed, move the feed eccentric cam in the direction of the arrow.
- 4) To delay the feed timing in order to increase stitch tightness, move the feed eccentric cam in the opposite direction for the arrow.
- 5) Be careful not to move the feed eccentric cam too far, or else needle breakage may result.

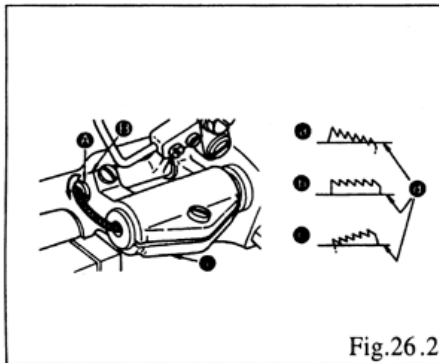
## 21.1.TILT THE FEED DOG(FIG.26.1)(ROUND KNIFE)



㉔ Front up ㉕ Standard ㉖ Front down ㉗ Throat plate

- 1) The standard tilt (horizontal) of the feed dog is obtained when marker dot ㉔ on the feed bar shaft is aligned with marker dot ㉕ on feed rocker ①.
  - 2) To tilt the feed dog with its front up in order to prevent puckering, loosen the setscrew, and turn the feed bar shaft 90 degrees in the direction of the arrow using a screw driver.
  - 3) To tilt the feed dog with its front down in order to prevent uneven material feed, turn the feed bar shaft 90 degrees in the opposite direction from the arrow.
- (Precaution)** Whenever the feed dog tilt is adjusted, the feed dog height will be changed. So, it is necessary to check the feed dog height after tilt adjustment.

## 21.2.TILT THE FEED DOG(FIG.26.2)(STRAIGHT EDGE)



㉑ Front up ㉒ Standard ㉓ Front down ㉔ Throat plate

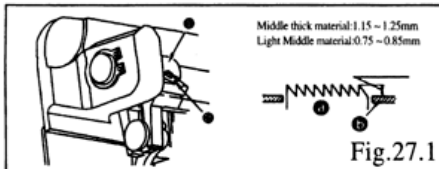
1)The standard tilt (horizontal)of the feed dog is obtained when marker dot ㉑ on the feed bar shaft is aligned with marker dot ㉑ on feed rocker ㉑

2)To tilt the feed dog with its front up in order to prevent puckering,loosen the serscrew,and turn the feed bar shaft 90 degrees in the direction of the arrow.wsing a screw driver.

3)To tilt the feed dog with its front down in order to prevent uneven material feed,turn the feed bar shaft 90 degrees in the opposite direction from the arrow

**(Precaution)**Whenever the feed dog tilt is adjusted,the feed dog height will be changed, So,it is necessary to check the feed dog height after tilt adjustment.

## 22.1.HEIGHT OF THE FEED DOG (FIG.27.1)(ROUND KNIFE)



㉑ Feed ㉒ Throat plate

Middle thick material:1.15 ~ 1.25mm  
Light Middle material:0.75 ~ 0.85mm

Fig.27.1

1)The feed dog is factory-adjusted so that it just out from the throat plate surface 0.75 to 0.85 mm.For the heavy weight material,it just out 1.15 to 1.25 mm

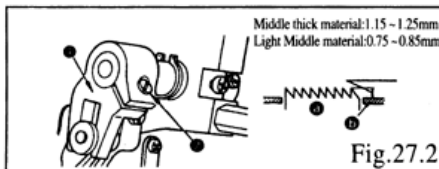
2)To adjust the height of the feed dog:

① Loosen screw ㉑ of crank ㉑

② Move the feed bar up or down to make adjustment.

③ Securely tighten screw ㉑.

## 22.2.HEIGHT OF THE FEED DOG (FIG.27.2)(STRAIGHT EDGE)



㉑ Feed ㉒ Throat plate

Middle thick material:1.15 ~ 1.25mm  
Light Middle material:0.75 ~ 0.85mm

Fig.27.2

1)The feed dog is factory-adjusted so that it just out from the throat plate surface 0.75 to 0.85 mm.For the heavy weight material,it just out 1.15 to 1.25 mm

2)To adjust the height of the feed dog:

① Loosen screw ㉑ of crank ㉑

② Move the feed bar up or down to make adjustment.

③ Securely tighten screw ㉑.

## 23.NEEDLE-TO-HOOK RELATIONSHIP(FIG.28)

1.Adjust the timing between the needle and the hook as follows:  
1)Turn the handwheel to bring the needle bar down to the lowest point of its stroke, and loosen setscrew ①.

\*Adjusting the needle bar height

2)Align marker line A on needle bar ② with the bottom end of needle bar lower bushing ③, then tighten setscrew ①.

\*Adjusting position ④ of the hook

3)Loosen the two hook setscrews, turn the handwheel, and align marker line B on ascending needle bar ② with the bottom end of needle bar lower bushing ③.

4)After making the adjustments mentioned in the above steps align hook blade point ⑤ with the center of needle ④. Provide a clearance of 0.04mm to 0.1mm between the needle and the hook, then securely tighten the hook setscrews.

\*Note that the type of hook to be substituted for, when replacing the hook, shall be in conformity with the very type of the hook installed in the sewing machine of original assemblage.

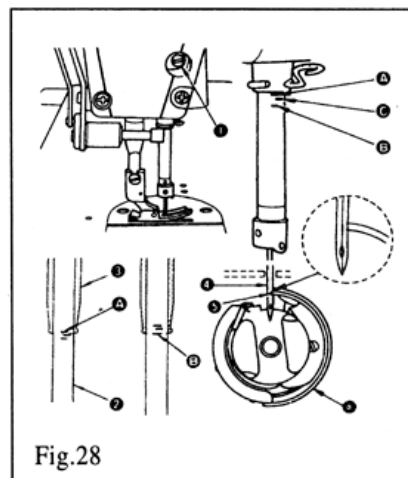


Fig.28

## 24.ADJUSTING THE HEIGHT OF THE PRESSER BAR(FIG.29)

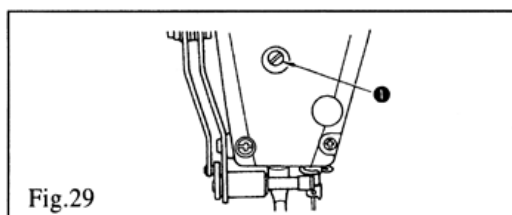


Fig.29

1)Loosen setscrew ①, and adjust the presser bar height or the angle of the presser foot.

2)After adjustment, securely tighten the setscrew.

## 25.ADJUSTING THE THREAD TAKE-UP STROKE(FIG.30)

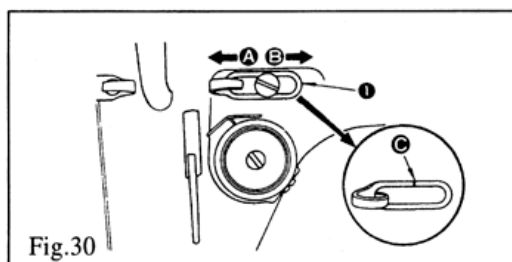


Fig.30

1)When sewing heavy -weight materials, move thread guide ① to the left (in direction ②) to increase the length of thread pulled out by the thread take-up.  
2)When sewing light-weight materials, move thread guide ① to the right (in direction ③) to decrease the length of thread pulled out by the thread take-up.  
3)Normally, thread guide ① is positioned in a way that marker line ④ is aligned with the center of the screw.

## 26.ADJUSTING THE NEEDLE STOP POSITION(FIG.31)

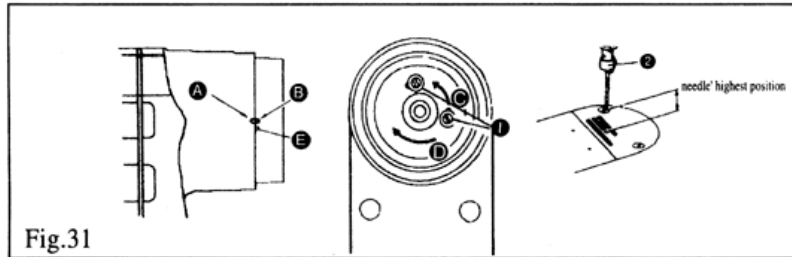


Fig.31

### 1.Needle position after thread trimming.

After switch on the machine,stop the machine as the needle goes to its highest position and then the distance between the needle plate upper plane and the needlepoint is: middle heavy cloth:10-20mm(the red point A on the back cover aligns with the red point B on the upper wheel);the heavy cloth:10-14mm(the red point A aligns with the point E on the upper wheel).

If you want to change the needle position, loose the two fixed screws 1 and then you can adjust it in the long slot.

- ① If the screw moves to C, the needle bar ② stops at its highest position;
- ② If the screw moves to D, the needle bar stops at a lower position.

### Remarks:

When loose the screw ①, please do not set up the machine; besides, just loose the screw ① not take it off.

### 2.The needle's lower position

Precaution: Don't adjusting the needle's stop position.

## 27.PEDAL.PRESSURE AND PEDAL STROKE(FIG.32)

### 1.Adjusting the pressure required to depress the front part of the pedal

1)This pressure can be changed by altering the mounting position of pedaling pressure adjust spring ①.

2)The pressure decreases when you hook the spring on the left side.

3)The pressure increases when you hook the spring on the right side.

### 2.Adjusting the pressure required to depress the back part of the pedal

1)This pressure can be adjusted using regulator screw ②.

2)The pressure increases as you turn the regulator screw in.

3)The pressure decreases as you turn the screw cut.

### 3.Adjusting the pedal stroke

1)The pedal stroke decreases when you insert connecting rod ③ into the left hole.

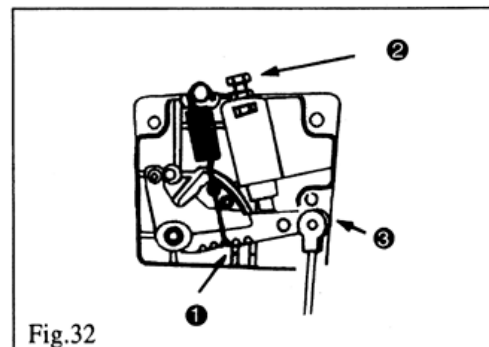
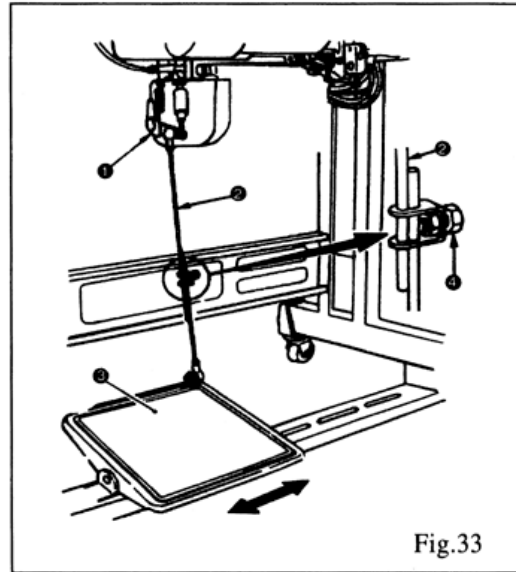


Fig.32

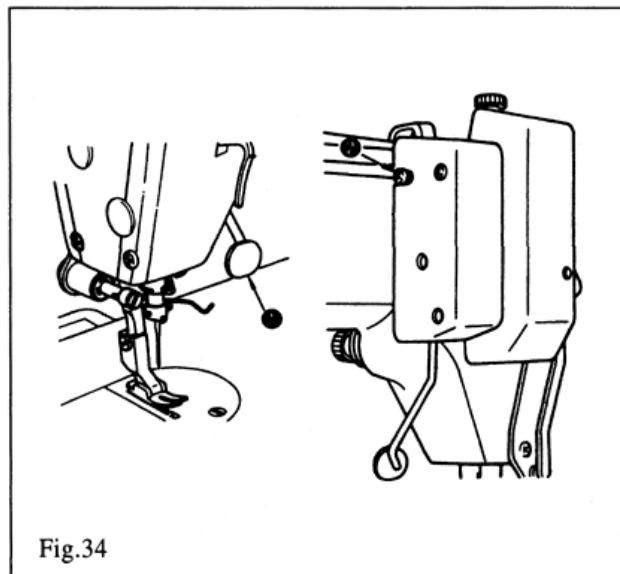
## 28. ADJUSTMENT OF THE PEDAL (FIG.33)

1. Installing the connecting rod
  - 1) Move pedal to the right or left as illustrated by the arrows so that motor control lever and connecting rod are straightened.
2. Adjusting the pedal angle
  - 1) The pedal tilt can be freely adjusted by changing the length of the connecting rod.
  - 2) Loosen adjust screw, and adjust the length of connecting rod.



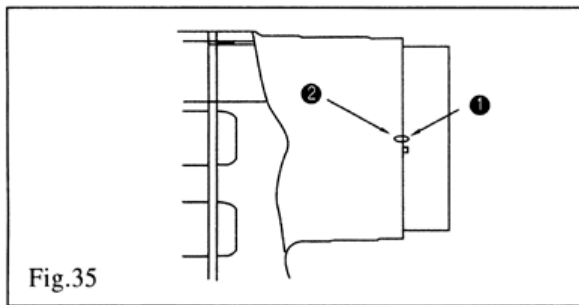
## 29. ONE-TOUCH TYPE REVERSE FEED STITCHING MECHANISM (FIG.34)

1. How to operate
  - 1) The moment switch lever ① is pressed, the machine performs reverse feed stitching.
  - 2) The machine performs reverse feed stitching as long as the switch lever is held depressed.
  - 3) The machine resumes normal feed stitching the moment the switch lever is released.
2. Height of the switch lever
  - 1) Adjust the height of switch lever ① so that it can be easily operated.
  - 2) Loosen screw ②, and move the switch lever up or down to adjust its height.





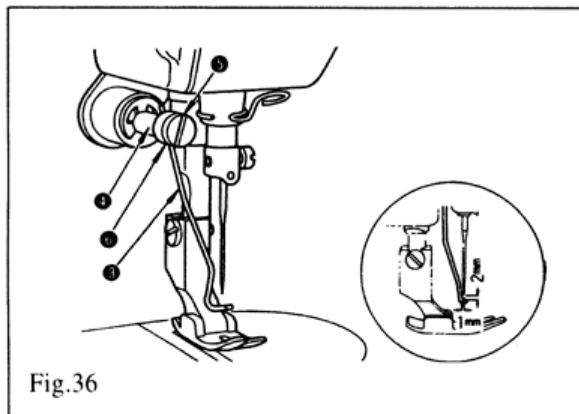
### 30.WIPER(FIG.35, FIG.36, FIG.37)



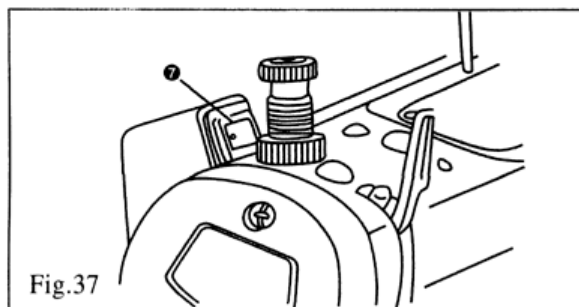
#### 1.Positioning the wiper

Adjust the position of the wiper according to the thickness of the material sewn, The adjustment procedure is as follows:

1)Turn the handwheel in the normal direction of rotation to align white marker dot①on the handwheel with red marker dot②on the machine arm.



2)Adjust the distance between the flat part of the wiper and the center of the needle to 1mm.Tighten wiper adjust screw⑤so that the wiper is pressed and fixed by wiper collar⑥.



3)When the wiper is unnecessary,turn waiper switch⑦OFF.