

**DIRECT DRIVE COMPUTER-CONTROLLED
HIGH-SPEED LOCKSTITCH SEWING MACHINE**

Operation instruction
Parts book

目 录

Contents

使用说明	
Operation Manual.....	1
零件样本	
Parts Book.....	18
中厚料用	
For Medium Heavy Materials.....	19
1. 机壳分组件	
Arm Bed Components.....	19
2. 上轴、挑线分组件	
Main Shaft & Take-up Components.....	21
3. 针杆、夹线分组件	
Needle Bar & Thread Tension Components.....	23
4. 压料分组件	
Presser Bar Components.....	25
5. 勾线分组件	
Hook Driving Shaft Components.....	27
6. 送料分组件	
Feed Mechanism Components.....	29
7. 送料调节分组件	
Feed Regulatig Components.....	31
8. 润滑分组件	
Lubrication Components.....	33
9. 油盘、膝抬压脚分组件	
Oil Reservoir & Knee Lifter Components.....	35
10. 机头附件(1)	
Machine Head Accessories (1).....	37
机头附件(2)	
Machine Head Accessories (2).....	38
11. 机架、台板、电器分组件	
Machine Stand, Table & Electric Appliance Components.....	39
厚料用	
For Heavy Weight Materials.....	41

使用 说 明

Operation Manual

开车前的注意事项： BEFORE OPERATION

1. 油盘内未加油绝不能开车。
 2. 机器运转时，从上轮外侧看转向应为逆时针方向。注意，不能倒转。
 3. 在第一月中，不要选用大尺寸的电动机皮带轮。
 4. 确认电动机标牌上标电压及相位是否正确。
1. Never operate the machine unless its oil pan has been filled with oil.
 2. After setting up the machine, check the direction of motor rotation. To check it, turn the handwheel by hand to bring the needle down, and turn the power switch ON while observing the handwheel. (The handwheel should turn counterclockwise as observed from the handwheel side.)
 3. Do not use a larger motor pulley for the first one month.
 4. Confirm that the voltage and phase (single or 3-phase) are correct by checking them against the ratings shown on the motor nameplate.

使用注意事项： OPERATION PRECAUTIONS

1. 接通电源开关或机器运转时，请勿将手放到针的下部。
 2. 机器运转时，请勿将手指伸入挑线杆护罩内。
 3. 机头翻动及拆三角皮带时，一定要切断电机开关。
 4. 操作者离开机器时，必须切断电源。
 5. 机器运转期间，注意不允许任何人的头或手以及任何东西靠近上轮“V”形皮带、绕线轮和电动机。
 6. 装拆皮带罩、防护罩、或者其它保护装置时，请勿开动机器。
 7. 不要用香蕉水等油漆稀释剂擦洗机头表面。
1. Keep your hands away from the needle when you turn the power switch ON or while the machine is operating.
 2. Do not put your fingers into the thread take-up cover while the machine is operating.
 3. Be sure to turn the power switch OFF before tilting the machine head or removing the V belt.
 4. When an operator leaves from the machine, make sure to turn off the power.
 5. During operation, be careful not to allow your or any other person's head or hands to come close to the handwheel, V belt, bobbin winder or motor. Also, do not place anything close to them. Doing so may be dangerous.
 6. If your machine is provided with a belt cover, finger guard or any other protectors, do not operate your machine with any of them removed.
 7. Don't clean the face of machine head with thinner.

1. 机器的安装(图 1、图 2、图 3、图4)

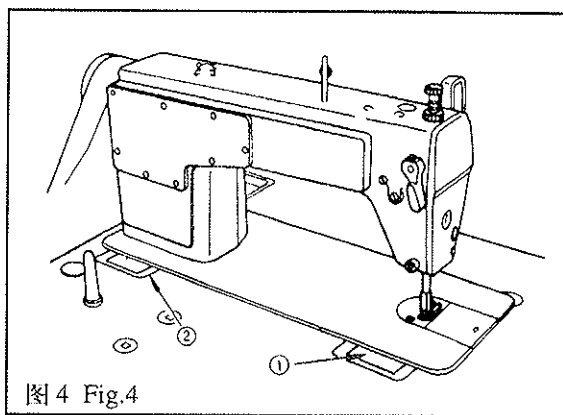
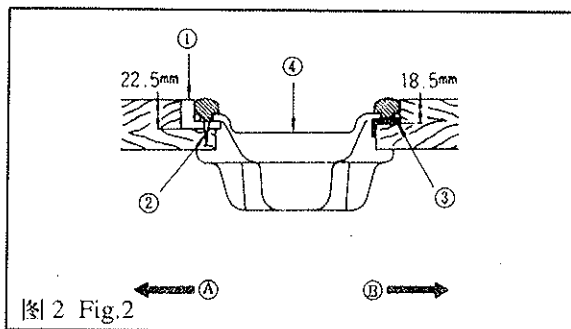
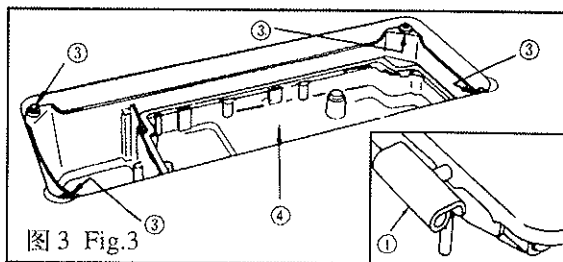
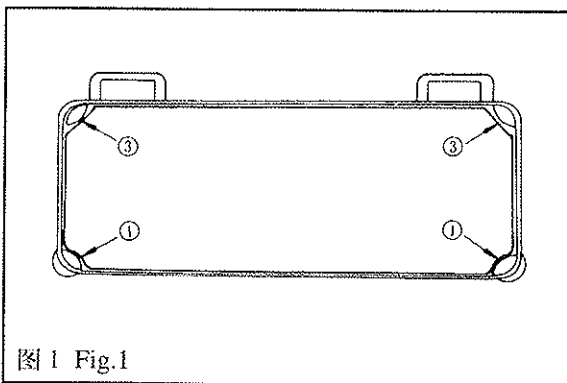
1. INSTALLATION (Fig.1, Fig.2, Fig.3, Fig.4)

* 油盘安装:

- 1) 油盘应搁在工作台凸槽四角。
- 2) 如图所示, 将两只油盘支座①用油盘座钉②固定在 A 一边 (朝操作者一边), 将两只油盘座垫③用油盘座钉②固定在 B 一边 (用机头连接钩接合一边), 最后把油盘④放在其上。(图 1、图 2)
- 3) 将机头连接钩①放入底板孔内, 与台板的机头连接钩座②相嵌合, 再将机头放到四只角的机头座垫③上。(图 3、图 4)

*Installing the oil pan

- 1) The oil pan should rest on the four corners of the machine table groove.
- 2) Fix two rubber seats ① on side A (operator's side) using nails ② as illustrated above. Fix two cushion seats ③ on side B (hinged side) using nails ②. Then place oil pan ④ on the fixed seats. (Fig.1, Fig.2)
- 3) Fit hinge ① into the opening in the machine bed, and fit the machine head to table rubber hinge ② before placing the machine head on cushions ③ on the four corners. (Fig.3, Fig.4)



2. 机器的润滑(图 5、图6)

2. LUBRICATION (Fig.5, Fig.6)

1. 润滑须知:(图 5)

* 开车前:

- 1) 向油盘①内加缝纫机油(10号白油)至HIGH记号部位A。(图5)
- 2) 当油面低于LOW记号B, 应再加油。
- 3) 加油后, 开动机器, 应看到油液飞溅到油窗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。

* 注意:

使用新机器或者长期未使用过的机器时, 应在每分钟3000~3500针的状态下使机器进行十分钟左右的适应性运转。

2. 调节面部油量:(图6)

- 1) 转动油量调节销①, 可以调节挑线曲柄②的供油量。
- 2) 油量调节销朝B方向转动, 刻点A靠近挑线曲柄时, 油量达到最小值。
- 3) 油量调节销朝C方向转动, 刻点A背离挑线曲柄时, 油量达到最大值。

1. Information on lubrication (Fig.5)

* Before starting the machine

- 1) Fill oil pan ① with 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 lubrication, you will see splashing oil through oil sight window ② if 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 3,000 s.p.m. to 3,500 s.p.m. for about 10 minutes for the purpose of break-in.

2. Adjusting the amount of oil supplied to the face plate parts (Fig.6)

- 1) Adjust the amount of oil supplied to the thread take-up and needle bar crank ② by turning adjust pin ①.
- 2) The minimum amount of oil is reached when marker dot A is brought close to needle bar crank ② by turning the adjust pin in direction B.
- 3) The maximum amount of oil is reached when marker dot A is brought to the position just opposite from the needle bar crank by turning the adjust pin in direction C.

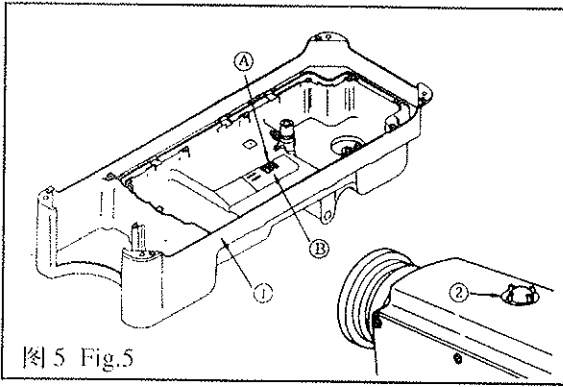


图 5 Fig.5

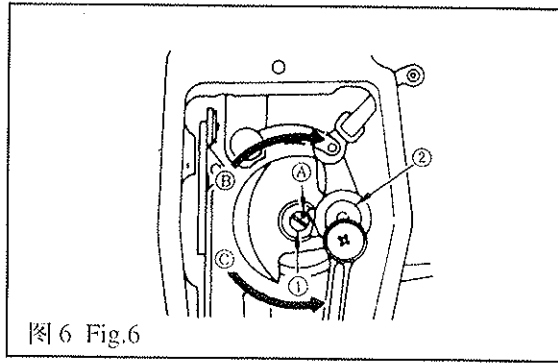


图 6 Fig.6

3. 旋梭油量的调节(图 7、图 8、图 9)

3. ADJUSTING THE AMOUNT OF OIL SUPPLIED TO THE HOOK (Fig.7, Fig.8, Fig.9)

1) 未使用的机器应进行约 3 分钟的空转 (适当的断续运转)。(图 7)

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 HI 和 LOW 范围内。

4) 油量确认时间需 5 秒钟 (请用秒表计时)。

* 适量的油量标样: (图 8)

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得过多。

* 油量过少会引起旋梭发热, 油量过多会油污缝料。

2) 用油量纸试用三次, 当纸上油迹不发生变化时, 就不需再调节了。

* 调节旋梭油量: (图 9)

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, 以确认油量的状态。

1) After cooling, the machine may be idling for three minutes (operating continued properly). (Fig 7)

2) The amount of oil confirmed paper must be inserted in the state when the machine is operating.

3) Oil in the oil pan is confirmed within HI and LOW.

4) The amount of oil confirmed is for five seconds (please use the clock with the second)

*The proper amount of oil manual (Fig 8)

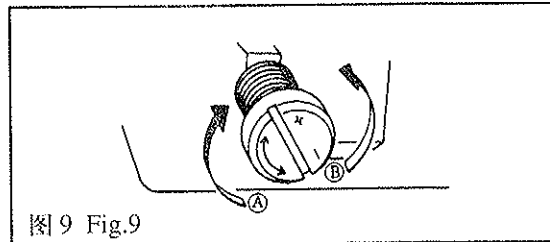
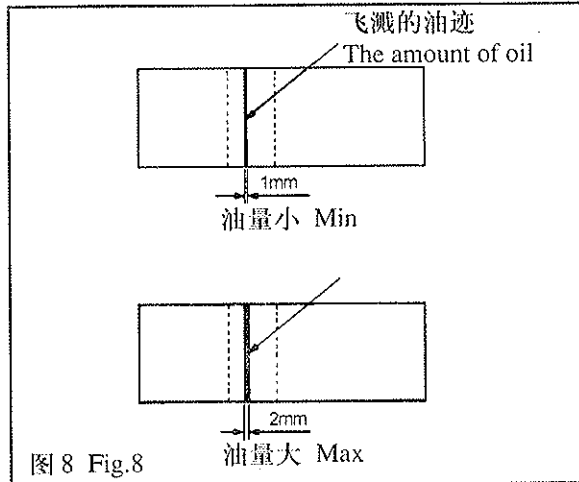
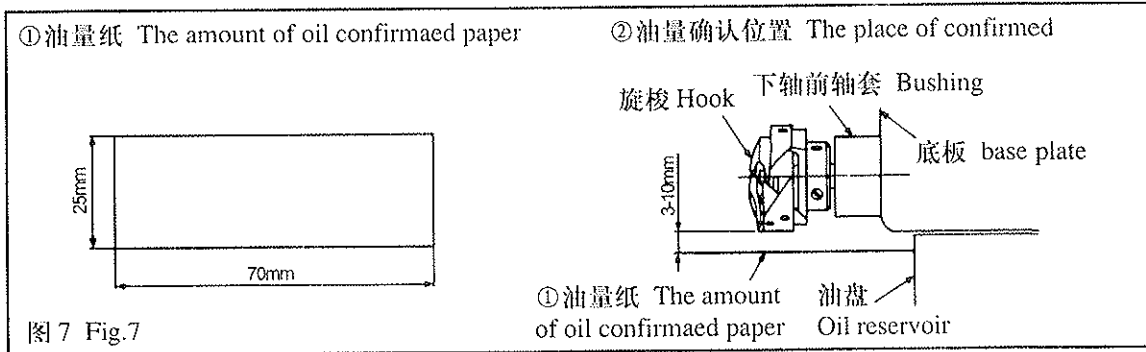
1) The amount of oil can be adjusted according to the different sewing process but it must be suitable amount.

* Otherwise the hook will generate heat or the sewing material will be contaminated.

2) Use the amount of confirmed paper for three times to observe the amount of oil. Adjust the screw until the mark on the paper hasn't changed.

***Adjusting the amount of oil supplied to the hook (Fig 9)**

- 1) More oil is supplied as oil amount adjust screw mounted on the hook driving shaft is turned toward + in direction A. As the oil amount adjust screw is turned toward - in direction B, the amount of oil supplied will be decreased.
- 2) After adjusted, the machine must be idling for thirty seconds. It can be confirmed the state of oil supplied.



4. 机针的装法 (图 10)
4. ATTACHING THE NEEDLE (Fig.10)

* 在装机针前，必须切断电动机电源。

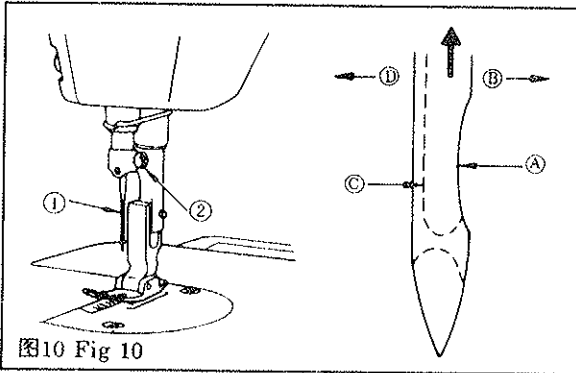
标准用针为 DB × 1#14。机针有各种编号，根据所用线的粗细和缝料来选择适当的机针。

- 1) 转动上轮使针杆上升到最高位置。
- 2) 旋松支针螺钉①，使机针的凹弧部分 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。

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

A needle of DB × 1#14 should be used. Select a proper needle size according to the count of thread and the type of material used.

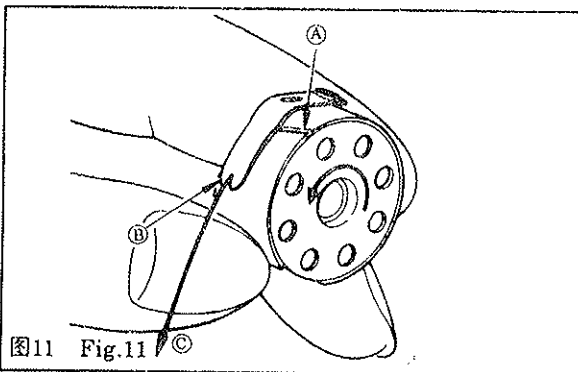
- 1) Turn the handwheel until the needle bar reaches the highest point of its stroke.
- 2) Loosen screw ②, and hold needle ① with its indented part A facing exactly to the right in direction B.
- 3) Insert the needle in the direction of the arrow until it will go no further.
- 4) Securely tighten screw ②.
- 5) Check that long groove C of the needle is facing exactly to the left in direction D.



5. 梭心的装法(图11)

5. SETTING THE BOBBIN INTO THE BOBBIN CASE(Fig.11)

- 1) 拿住梭子，将梭心装入梭子内。
 - 2) 把线从梭子上的线槽 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。
- 1) Hold the bobbin in a way that the thread open end is directed to the left as observed from you, and set the bobbin into the bobbin case.
 - 2) Pass the thread through thread slit A, and pull the thread in direction B. By so doing, the thread will pass under the tension spring and come out from notch B.
 - 3) Check that the bobbin rotates in the direction of the arrow when thread C is pulled.



6. 面线的穿法 (图 12)

6. THREADING THE MACHINE HEAD (Fig.12)

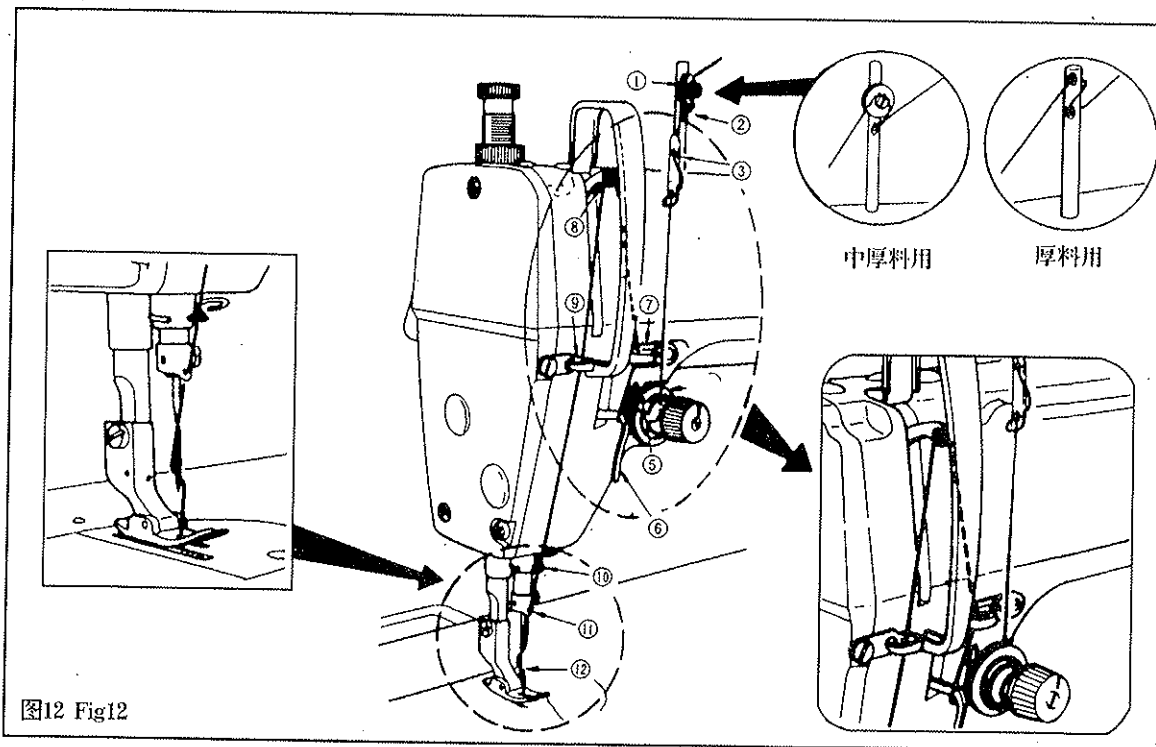


图12 Fig12

7. 针距的调节 (图 13)

7. ADJUSTING THE STITCH LENGTH (Fig.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) 旋钮上的刻度数定用毫米表示。
 - 3) 当你想缩短线迹长度时, 把倒送料扳手②朝箭头方向压的同时, 转动送料距旋钮。
- 1) Turn stitch length dial ① in the direction of the arrow, and align the desired number to marker dot A on the machine arm.
 - 2) The dial calibration is in millimeters.
 - 3) When you want to decrease the stitch length, turn stitch length dial ① while pressing feed lever ② in the direction of the arrow.

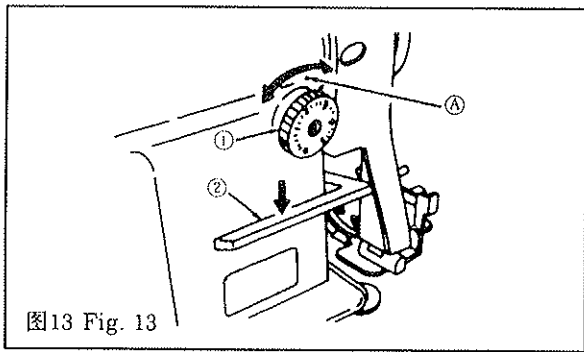


图13 Fig. 13

8. 缝线张力(图 14)

8. THREAD TENSION (Fig.14)

1. 面线张力的调节:

- 1) 根据不同的缝制条件, 用夹线螺母来调整面线张力。
- 2) 若把螺母①按顺时针方向(即 A 方向)转动时, 面线张力将增大。
- 3) 若把螺母①按逆时针方向(即 B 方向)转动时, 面线张力将减小。

2. 底线张力的调节:

- 1) 将夹线螺钉②朝顺时针方向(即 C 方向)转动时, 底线张力将增大。
- 2) 将夹线螺钉②朝逆时针方向(即 D 方向)转动时, 底线张力将减小。

1. Adjusting the needle thread tension

- 1) Adjust the needle thread tension using tension adjust nut ① according to the sewing specifications.
- 2) As you turn nut ① clockwise (in direction A), the needle thread tension will increase.
- 3) As you turn nut ① counterclockwise (in direction B), the tension will decrease.

2. Adjusting the bobbin thread tension

- 1) As you turn tension adjust screw ② clockwise (in direction C), the bobbin thread tension will increase.
- 2) As you turn screw ② counterclockwise (in direction D), the bobbin thread tension will decrease.

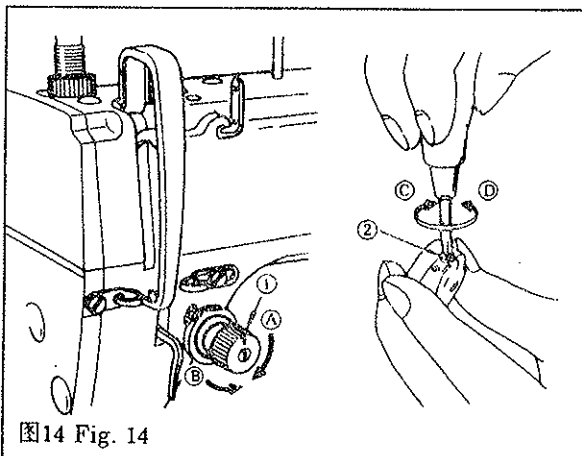


图14 Fig. 14

9. 挑线簧(图 15)

9. THREAD TAKE UP SPRING (Fig.15)

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。

2. 改变挑线簧①的张力:

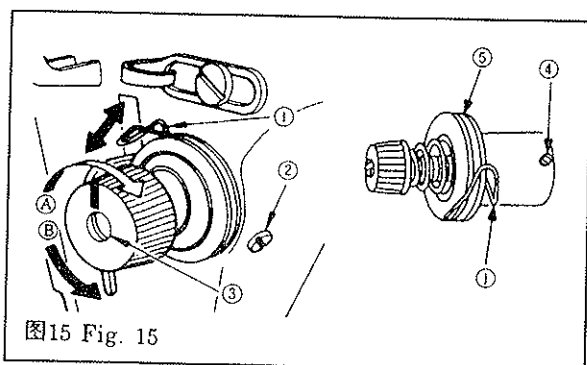
- 1) 旋松定位螺钉②, 取出夹线器(组件)⑤。
- 2) 旋送定位螺钉④, 并转动夹线螺钉③。
- 3) 把夹线螺钉③朝顺时针方向(即 A 方向)转动时, 挑线簧的张力将增大。
- 4) 把夹线螺钉③朝逆时针方向(即 B 方向)转动时, 挑线簧的张力将减小。

1. Changing the stroke of thread take-up spring ①

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

2. Changing the pressure of thread take-up spring ①

- 1) Loosen setscrew ② , and take out tension asm ⑤ .
- 2) Loosen setscrew ④ , and remove tension post ③ .
- 3) As you turn tension post ③ clockwise (in direction A), the pressure will be increased.
- 4) As you turn the post counterclockwise (in direction B), the pressure will be decreased.



10. 压脚板手(图 16)

10. HAND LIFTER (Fig.16)

- 1) 停车后, 将压脚板手①朝 A 方向转动, 使压脚抬起。
- 2) 压脚的抬起量约 5.5 毫米。
- 3) 当压脚板手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。

- 1) To stop the machine with its presserfoot up, turn hand lifter ① in direction A.
- 2) The presser foot will go up about 5.5 mm and stop.
- 3) The presser foot will go back to its original position when hand lifter ① is turned down in direction B.
- 4) Using the knee lifter, you can get the standard presser foot lift of about 10 mm and a maximum lift of about 13 mm.

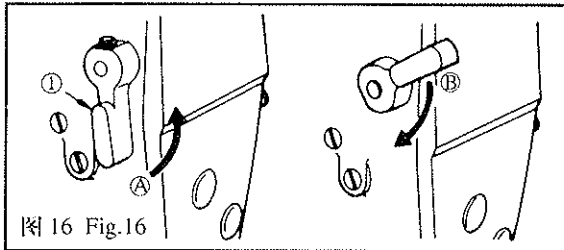


图 16 Fig.16

11. 压脚压力的调节(图 17)

11. PRESSER FOOT PRESSURE (Fig.17)

- 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。(DDL-5520 为 7kg)
- 1) Loosen nut ②. As you turn presser spring regulator ① clockwise (in direction A), the presser foot pressure will be increased.
 - 2) As you turn the presser spring regulator counterclockwise (in direction B), 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 32 mm (5kg). (For the model DDL - 5520 it is 7kg)

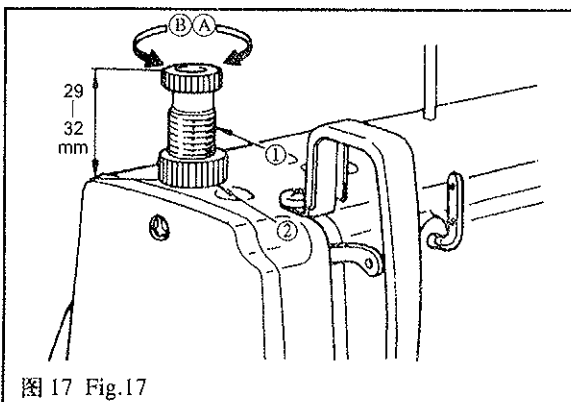


图 17 Fig.17

12. 送料相位的调节(图 18)

12. ADJUSTING THE FEED TIMING (Fig.18)

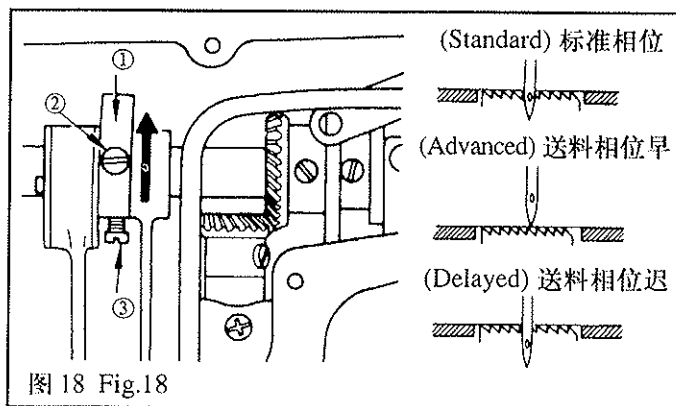
- 1) 旋松送料偏心凸轮①上的定位螺钉②和③, 将送料偏心凸轮①调到适当的位置, 然后拧紧定位螺钉。
- 2) 在标准相位情况下, 当送料牙从针板面下降时, 送料牙上端、针孔上端和针板上端面对齐。
- 3) 为了防止缝料的潜移, 要加快送料相位, 可将送料偏心轮朝箭头方向调整。
- 4) 为了增大线迹的紧密度, 要减慢送料相位, 可将送料偏心轮朝箭头反方向移动。

* 注意:

若送料偏心轮移动过多, 则会引起断针。

- 1) Loosen two setscrews ② and ③ on feed eccentric cam ①, properly position the eccentric cam. Then retighten the setscrews.
- 2) To obtain the standard feed timing, when when the feed dog is dropping from throat plate, align the top of the feed dog with the top of the hole on the needle and the top of the throat plate.
- 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 from the arrow.

***If moving the feed eccentric cam to far, the needle will be break.**



14. 针与旋梭的关系(图 20)

14. NEEDLE-TO-HODK RELATIONSHIP (Fig.20)

1. 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,再旋松针杆连接柱定位螺钉①。

* 针杆高度的确定

2)(使用 DB 针时)使针杆②上的刻线 A 对准针杆下轴套③的下端,然后旋紧针杆连接柱定位螺钉①。

(使用 DA 针时)使针杆②上的刻线 C 对准针杆下轴套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)(使用 DB 针时)旋松三只旋梭定位螺钉,并转动上轮,使针杆②上的刻线 B 对准针杆下轴套③的下端。

(使用 DA 针时)旋松三只旋梭定位螺钉,并转动上轮,使针杆②上的刻线 D 对准针杆下轴套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。

* 注意

若间隙太小,会磨损梭尖,若间隙太大,则会引起跳针。

* 旋梭原来用什么型号,调换后,也请使用原来的型号。

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) When using the needle of DBX1, align marker line A on needle bar ② with the bottom end of needle bar lower bushing ③, then tighten setscrew ①.

When using the needle of DAX1, align marker line B with it, then tighten setscrew ①.

* Adjusting position of the hook

3) When using the needle of DBX1 loosen the three hook setscrews, turn the handwheel, and align marker line B on the needle bar ② with the bottom end of needle bar lower bushing ③.

When using the needle of DAX1, align marker line D 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 0.04 mm to 0.1 mm between the needle and the hook, then securely, tighten the hook setscrews.

* Precaution

If the clearance is too small, the tip of the hook will be abraded. If it is too big, it will lead to skip over.

* 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.

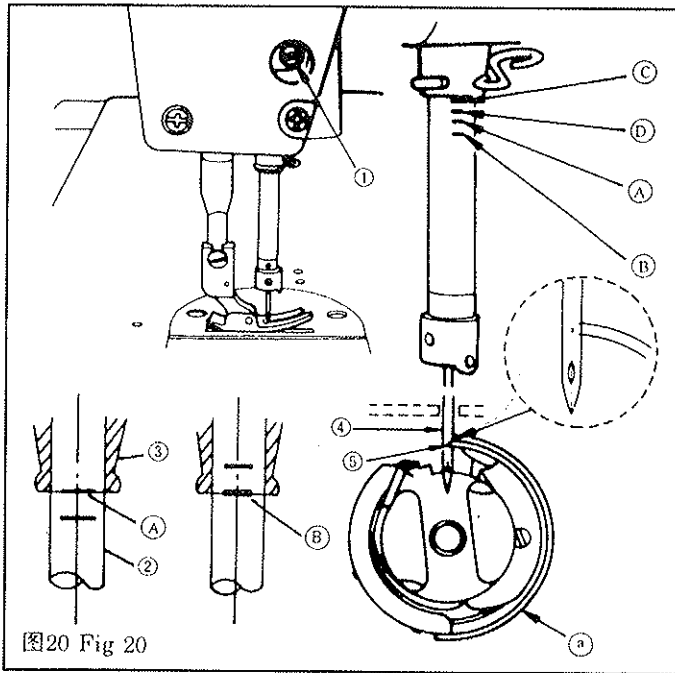


图20 Fig 20

15. 压杆高度的调节 (图 21)

15. ADJUSTING THE HEIGHT OF THE PRESSER BAR (Fig.21)

- 1) 旋松压杆导架紧固螺钉①，调节压杆高度与压脚角度。
- 2) 调整后，拧紧紧固螺钉。

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

2) After adjustment, securely tighten the setscrew.

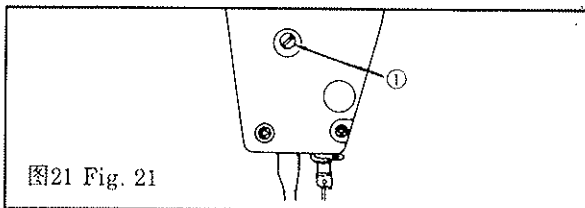


图21 Fig. 21

16. 挑线杆线量的调节(图 22)

16. ADJUSTING THE THREAD TAKE-UP STROKE (Fig.22)

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。

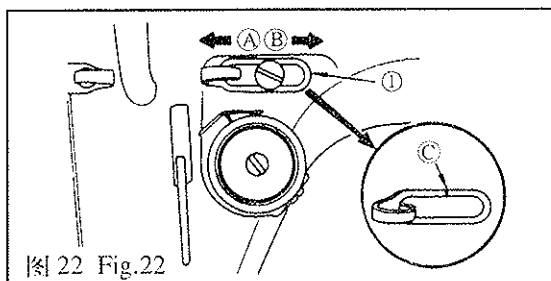
2 缝制薄料时, 应将右线钩①朝右方向 B 移动, 以减小挑线量。

3) 右线钩①上的刻线 C 与螺钉中心一致时为标准位置。

1) When sewing heavy-weight materials, move thread guide ① to the left in direction A 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 B to decrease the length of thread pulled out by the thread take-up.

3) When the marker line C on the thread guide ① is aligned with the center of the screw, it is standard.



17. 皮带罩绕线器的装法(图 23、图 24、图 25)

17. INSTALLING THE BELT COVER AND THE BOBBIN WINDER (Fig.23, Fig.24, Fig.25)

1. 安装程序:

1) 在台板上钻四只木螺钉导孔 A、B、C、D。

2) 将罩壳支柱①装入机壳的螺孔内。

3) 将上轮前罩壳③从后斜方装入, 使上轮套进上轮前罩壳③的孔内。

4) 将上轮后罩壳②放置在导孔 C D 上。

5) 用螺钉和垫圈④⑤⑥, 将上轮前罩壳固定在车壳上, 此时的螺钉紧固扭矩请控制在螺钉④为 30kgfcm、螺钉⑤为 25kgfcm, 即使紧固扭矩超过以上程度, 也无效果。

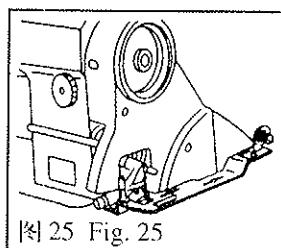
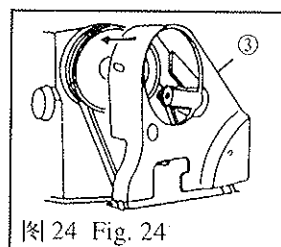
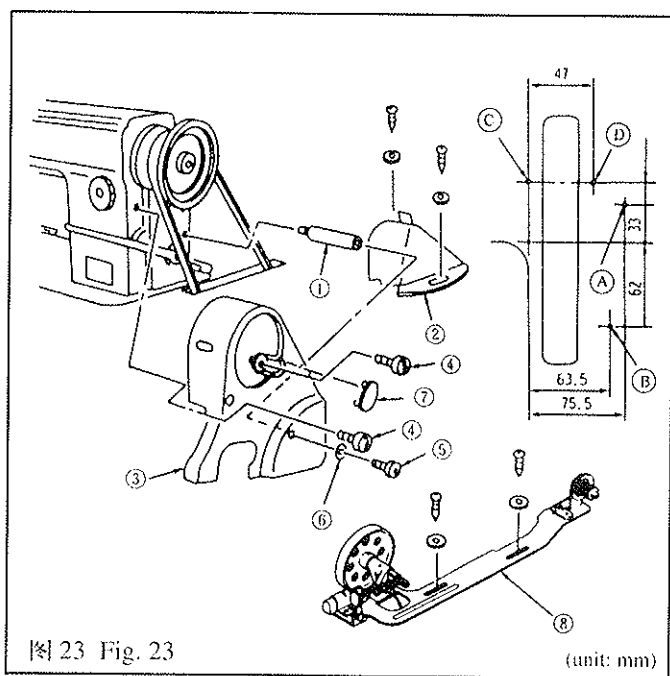
6) 盖上上轮前罩盖板⑦。

7) 将上轮后罩壳②向后方移动, 在上轮后罩壳②的橡胶部分碰到上轮前罩壳③时, 再移动 0.5-1mm, 将其用木螺钉和垫圈固定。

8) 用木螺钉将绕线器⑧固定地导孔 A 和 B 上。

1. Installing procedure

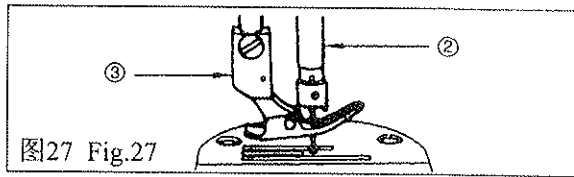
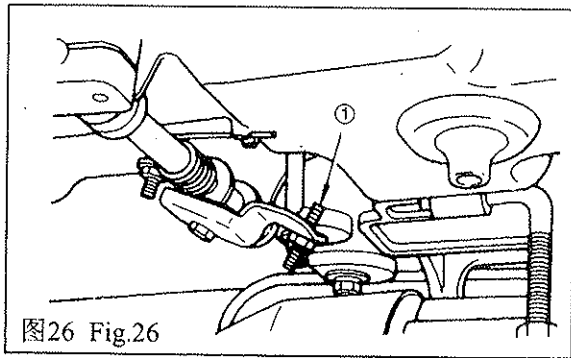
- 1) Drill four wooden screw guide holes A, B, C and D in the machine table.
- 2) Insert support ① in the tapped hole in the arm.
- 3) Install the front belt cover ③, get the hand wheel in the middle of the hole.
- 4) Install the back belt cover ② at C and D.
- 5) Using the screws ④, ⑤ and washer ⑥ fix the front belt cover ③ on the support the tightening torque for the screw ④ is about 30 kgfcm, for the screw ⑤ is about 25 kgfcm.
- 6) Fix the cover ⑦.
- 7) Move the back belt cover ② backward until its rubber touches the front belt cover ③, then move further more 0.5-1 mm, fix it using the wooden screws and washers.
- 8) Fix bobbin winder ⑧ at A and B using the wooden screws.



18. 膝提高度的调节(图 26、27 图)

18. ADJUSTING THE HEIGHT OF THE KNEE LIFTER (Fig.26, Fig.27)

- 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) 当压脚提升量超过 10 毫米时,不能使处于最低位置的针杆②的底端与压脚③相碰。
- 1) The standard height of the presser foot lifted using the knee lifter is 10 mm.
 - 2) You can adjust the presser foot lift up to 13 mm using knee lifter adjust screw ①.
 - 3) When you have adjusted the presser foot lift to over 10 mm, be sure that bottom end of needle bar ② in its lowest position does not hit presser foot ③.



19. 规格
19. SPECIFICSTIONS

	Model	Model	Model
缝料	中厚料用	厚料用	厚料大旋梭
缝速	最高每分钟5500针	最高每分钟3500针	最高每分钟3000针
线迹长度	5mm	5mm	7mm
压脚提升高度 (膝提)	10mm (标准) 13mm (最大)	10mm (标准) 13mm (最大)	10mm (标准) 13mm (最大)
机针	DB × 1#9~#18	DB × 1#18~#22	DB × 1#18~#23
润滑油	10号白油		

	Model	Model	Model
Application	For medium-weight materials	For medium-weight materials	For heavy-weight materials
Sewing speed	Max. 5,500 s.p.m.	Max. 3,500 s.p.m.	Max. 3,000 s.p.m.
Stitch length	Max. 5mm	Max. 5mm	Max. 7mm
Presser foot lift (by knee lifter)	10mm(standara) 13mm(max.)	10mm(standara) 13mm(max.)	10mm(standara) 13mm(max.)
Needle	DB × 1#9~#18	DB × 1#18~#22	DB × 1#18~#23
Lubricating oil	10 white oil		

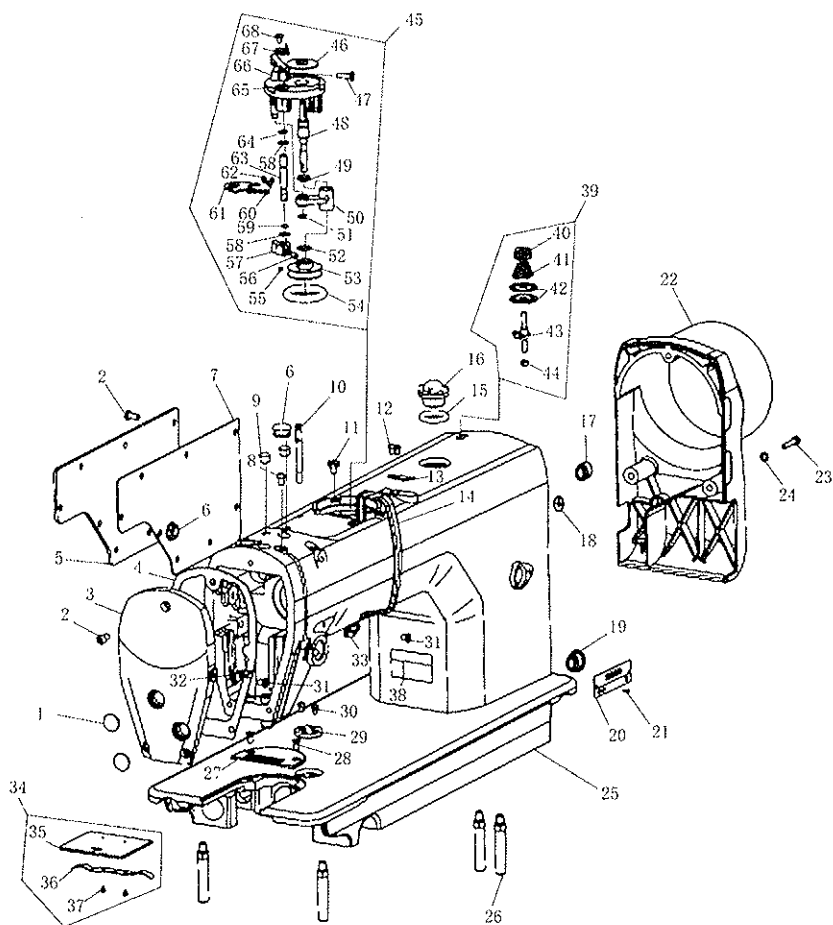
零件样本
Parts Book

1. 机壳分组件 MACHINE FRAME — MISCELLANEOUS COVER COMPONENTS

序号 Ref. No.	件号 Part NO.	名称 Description	数量 QTY	备注 Remark
1	1-1	橡胶塞 Rubber plug	2	
2	1-2	螺钉 Screw	11	
3	1-3	面板 Face plate	1	
4	1-4	面板垫 Face plate gasket	1	
5	1-5	后窗板 Side plate	1	
6	1-6	橡胶塞 Rubber plug	2	
7	1-7	后窗板垫 Side plate gasket	1	
8	1-8	螺钉 Screw	1	
9	1-9	橡胶塞 Rubber plug	2	
10	1-10	过线柱 Needle thread guide pin	1	
11	1-11	螺钉 Screw	3	
12	1-12	螺钉 Screw	2	
13	1-13	绕线切刀 Thread cutter	1	
14	1-14	挑线杆护罩 Thread take-up lever cover	1	
15	1-15	O形圈 O-ring	1	
16	1-16	油窗 Oil window	1	
17	1-17	橡胶塞 Rubber plug	1	
18	1-18	机头接地指示牌 Earthing indication plat	1	
19	1-19	橡胶塞 Rubber plug	1	
20	1-20	型号牌 Model plate	1	
20	1-20	型号牌 Model plate	1	
21	1-21	铆钉 Rivet	1	
22	1-22	后盖 Pulley cover	1	
23	1-23	螺钉 Screw	3	
24	1-24	垫圈 Washer	3	
25	1-25	机壳拼装组件 Machine frame	1	
26	1-26	底板支柱 Bed screw stud	4	
27	1-27	针板 Needle plate	1	
27	1-27	针板 Needle plate	1	
28	1-28	螺钉 Screw	2	
29	1-29	限位挡片 Ruler plate	1	
30	1-30	螺钉 Screw	2	
31	1-31	螺钉 Screw	2	
32	1-32	左线钩 Arm thread guide left	1	
33	1-33	右线钩 Arm thread guide right	1	
34	1-34	推板部件 Side plate ASM.	1	
35	1-35	推板 Side plate	1	
36	1-36	推板簧 Spring of side plate	1	
37	1-37	螺钉 Screw	2	
38	1-38	机头安全提示牌 Safty-indication plate	1	
39	1-39	绕线夹线器组件 Bobbin thread tension ASM.	1	
40	1-40	塑料夹线螺母 Thread tension nut	1	
41	1-41	弹簧 Spring	1	
42	1-42	夹线板 Thread tension disk	2	
43	1-43	中过线板组件 Bobbin thread tension ASM.	1	
44	1-44	螺母 Nut	1	
45	1-45	绕线器 Bobbin winder ASM.	1	
46	1-46	卷绕轴垫 Cushing	1	
47	1-47	螺钉 Screw	1	
48	1-48	梭芯卷绕轴 Shaft	1	

1. 机壳分组件 MACHINE FRAME — MISCELLANEOUS COVER COMPONENTS

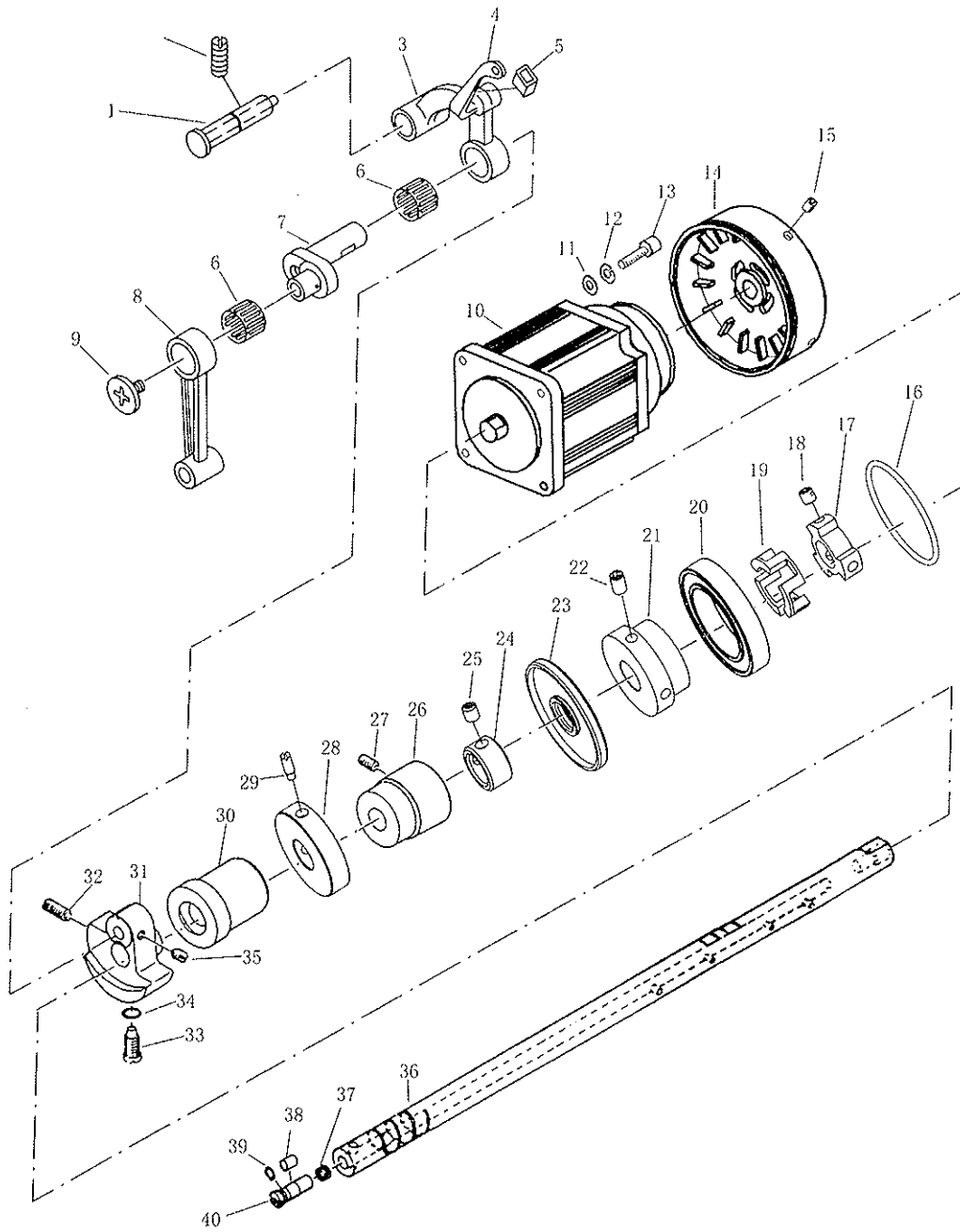
序号 Ref. No.	件号 Part NO.	名称 Description	数量 QTY	备注 Remark
49	1-49	O形圈 O-ring	1	
50	1-50	摆线板组件 Bobbin winder shaft comple	1	
51	1-51	挡圈 Thrust collar	1	
52	1-52	垫圈 Washer	1	
53	1-53	绕线轮 Bobbin ring	1	
54	1-54	橡胶轮 Rubber ring	1	
55	1-55	螺钉 Screw	1	
56	1-56	螺钉 Screw	1	
57	1-57	绕线定位块 Bobbin winder regulator	1	
58	1-58	垫圈 washer	2	
59	1-59	O形圈 O-ring	1	
60	1-60	弹簧 Spring	1	
61	1-61	控制板 Adjusting plate	1	
62	1-62	弹簧 Spring	1	
63	1-63	绕线凸轮轴 Bobbin shaft	1	
64	1-64	挡圈 Thrust collar	1	
65	1-65	梭芯卷绕体组件 Bobbin fitting basis COMPL.	1	
66	1-66	卷绕手柄 Bobbin lever	1	
67	1-67	线量调节板 Adjusting plate	1	
68	1-68	螺钉 Screw	1	



2. 上轴、挑线分组件 MAIN SHAFT & THREAD TAKE-UP COMPONENTS

序号 Ref.No.	件号 Part NO.	名称 Description	数量 QTY	备注 Remark
1	2-1	挑线连杆销组件 Thread take-up crank shaft	1	
2	2-2	螺钉 Screw	1	
3	2-3	挑线连杆 Thread take-up bar	1	
3	2-3	挑线连杆 Thread take-up bar	1	-5
4	2-4	挑线杆分部件 Thread take-up lever ASM.	1	
4	2-4	挑线杆分部件 Thread take-up lever ASM.	1	-5
5	2-5	挑线杆防油圈 Oil resietant cover	1	
6	2-6	轴承 Bearing	2	
7	2-7	挑线曲柄组件 Needle bar crank	1	
7	2-7	挑线曲柄组件 Needle bar crank	1	-5
8	2-8	针杆连杆 Needle bar crank rod	1	
9	2-9	螺钉 Screw	1	
10	2-10	电机 Motor	1	
11	2-11	垫圈 Washer	4	
12	2-12	垫圈 Washer	4	
13	2-13	螺钉 Screw	4	
14	2-14	上轮 Head wheel	1	
15	2-15	螺钉 Screw	2	
16	2-16	O形圈 O-ring	1	
17	2-17	联轴器 Coupling	1	
18	2-18	螺钉 Screw	3	
19	2-19	联轴器橡胶圈 Washer	1	
20	2-20	轴承 Bearing	1	
21	2-21	联轴器 Coupling	1	
22	2-22	螺钉 Screw	2	
23	2-23	油封 Oil seal	1	
24	2-24	挡圈 Thrust collar	1	
25	2-25	螺钉 Screw	2	
26	2-26	轴套 Bearing support	1	
27	2-27	螺钉 Screw	1	
28	2-28	绕线主动轮 Wheel	1	
29	2-29	螺钉 Screw	1	
30	2-30	轴套 Bearing support	1	
31	2-31	针杆曲柄 Counter weight	1	
31	2-31	针杆曲柄 Counter weight	1	-5
32	2-32	螺钉 Screw	1	
33	2-33	螺钉 Screw	1	
34	2-34	O形圈 O-ring	1	
35	2-35	螺钉 Screw	2	
36	2-36	上轴 Main shaft	1	
37	2-37	毛毡 Roller felt	1	
38	2-38	曲柄油量调节销套 Sleeve of adjusting pin	1	
39	2-39	O形圈 O-ring	1	
40	2-40	曲柄油量调节销 Adjusting pin	2	

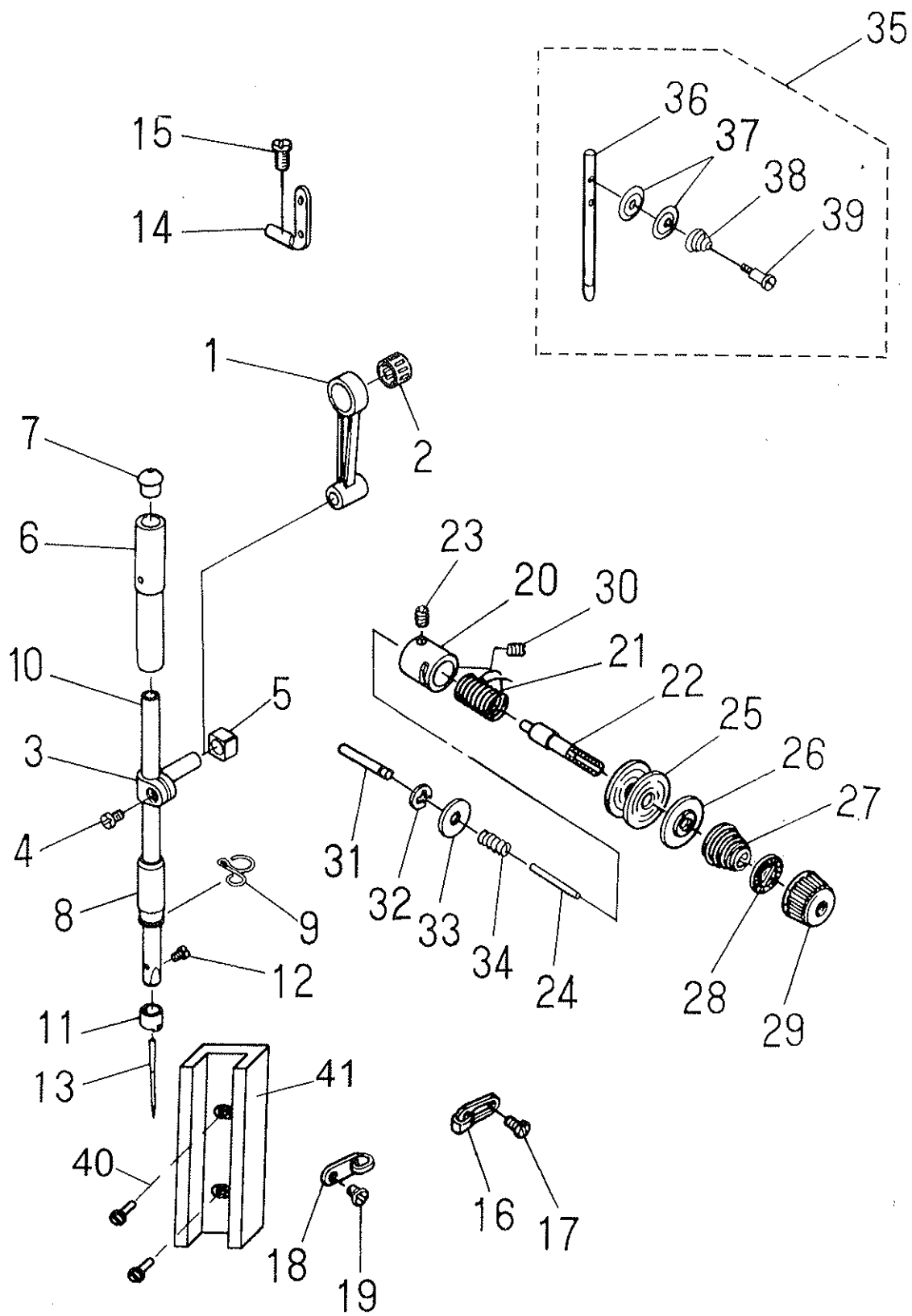
2. 上轴、挑线分组件 Main shaft & thread take-up lever components



3.针杆、夹线分组件

3.Needle bar & thread tension components

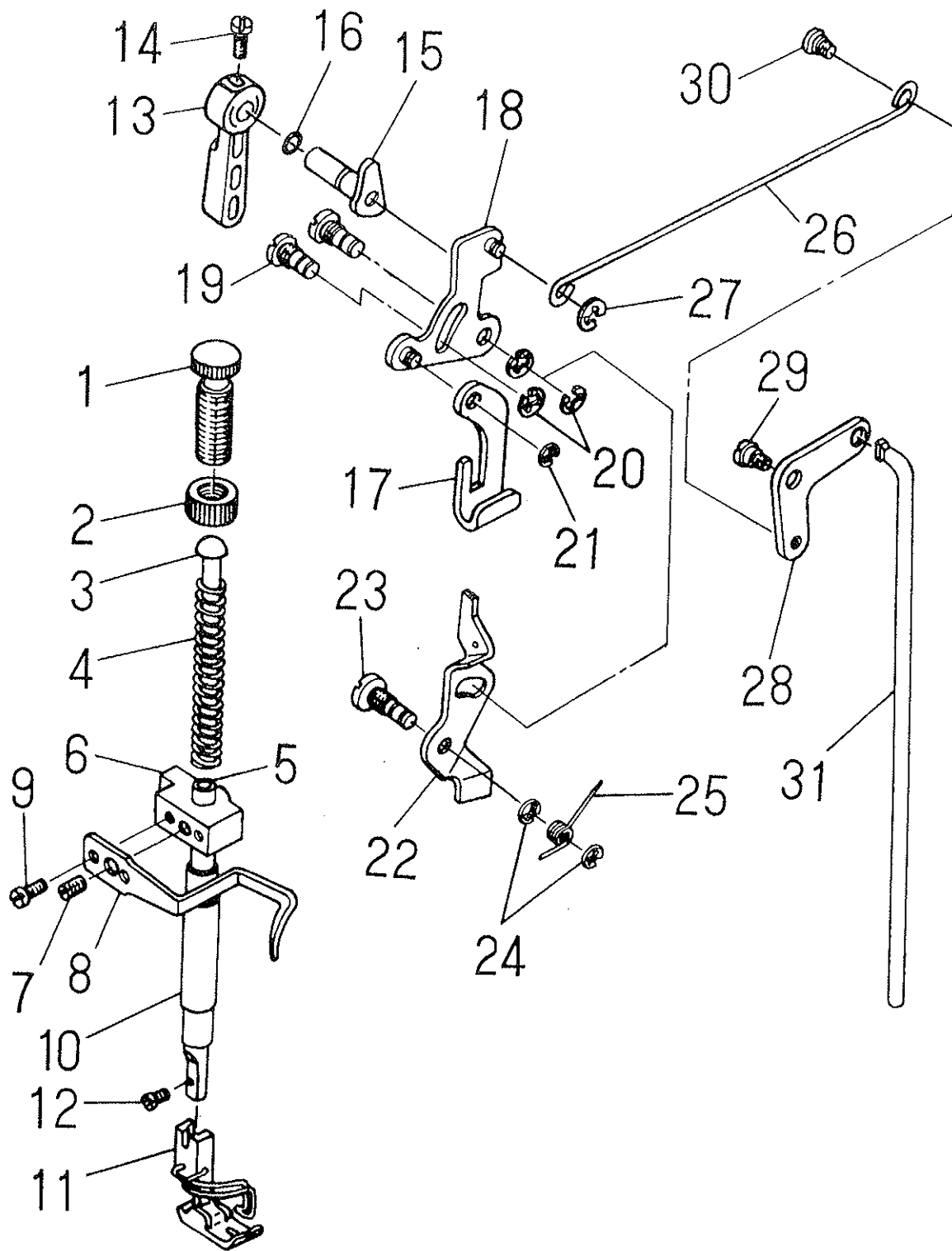
序号 Ref.No.	件号 Part No.	名 称	Description	数量 Amt.
1	GH334	针杆连杆.....	Needle bar crank rod.....	1
2	GO270	针杆连杆滚针轴承.....	Needle bearing.....	1
3	GR1478	针杆连接柱.....	Needle bar connection asm.....	1
4	GS011	针杆连接柱螺钉 9/64-40 L=6.....	Screw 9/64-40 L=6.....	1
5	GU168	针杆连接柱滑块.....	Slide block.....	1
6	GO271	针杆上轴套.....	Needle bar bushing, upper.....	1
7	GR1479	针杆上轴套孔塞.....	Cap.....	1
8	GO272	针杆下轴套.....	Needle bar bushing, lower.....	1
9	GR3351	针杆下轴套线钩.....	Needle bar thread guide.....	1
10	GZ432	针杆.....	Needle bar.....	1
11	GR3352	针杆线钩.....	Needle bar thread guide.....	1
12	GS071	支针螺钉 1/8-44 L=4.5.....	Screw 1/8-44 L=4.5.....	1
13	GV15	机针(DB × 1 [#] 14).....	Needle (DB × 1 [#] 14).....	1
14	GR3353	二眼线钩.....	Two-hole thread eyelet.....	1
15	GS0551	二眼线钩螺钉 3/16-28 L=6.....	Screw 3/16-28 L=6.....	1
16	GR3354	右线钩.....	Frame thread guide, right.....	1
17	GS0552	右线钩螺钉 11/64-40 L=6.....	Screw 11/64-40 L=6.....	1
18	GR3355	左线钩.....	Frame thread guide, left.....	1
19	GS0551	左线钩螺钉 11/64-40 L=6.....	Screw 11/64-40 L=6.....	1
20	GR1487	挑线簧调节座.....	Tension post socket.....	1
21	GW250	挑线簧.....	Take-up spring.....	1
22	GS015	夹线螺钉.....	Screw.....	1
23	GS016	夹线螺钉紧固螺钉 9/64-40 L=5.5.....	Set screw 9/64-40 L=5.5.....	1
24	GX567	松线钉.....	Thread release pin.....	1
25	GR1488	夹线板.....	Tension disc.....	2
26	GR1489	松线板.....	Tension disc holder.....	1
27	GW251	夹线簧.....	Tension spring.....	1
28	GR1490	夹线制动板.....	Tension disc stopper.....	1
29	GL0113	夹线螺母.....	Tension nut.....	1
30	GS48	夹线器螺钉 15/64-28 L=7.....	Screw 15/64-28 L=7.....	1
31	GX568	松线辅钉.....	Tension release supporting pin.....	1
32	GR1717	松线辅钉挡圈.....	Snap ring.....	1
33	GR3357	松线辅钉垫片.....	Washer plate.....	1
34	GW432	松线辅钉弹簧.....	Tension release pin spring.....	1
35	GR1491/5	过线器部件.....	Needle thread guide pin asm.....	1
36	GR1492	过线柱.....	Needle thread guide pin.....	(1)
37	GR1493	过线夹线板.....	Tension disc.....	(2)
38	GW252	过线夹线簧.....	Tension spring.....	(1)
39	GS017	过线夹线螺钉.....	Hinge screw.....	(1)
40	GS0340	滑块槽螺钉.....	Slide block.....	2
41	GR0341	针杆滑块槽.....	Needle bar trough.....	1



4. 压料分组件

4.Presser bar components

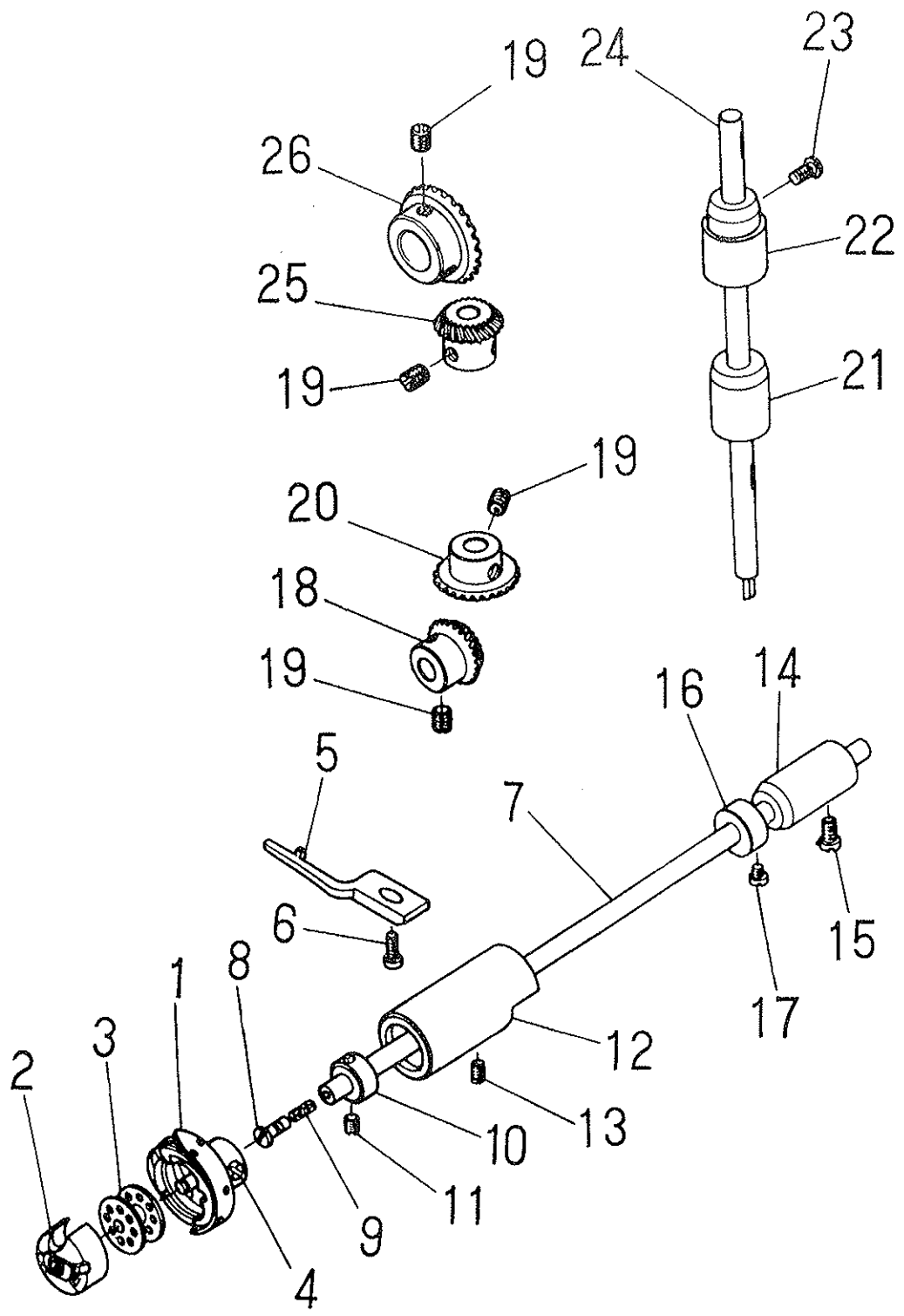
序号	件号	名 称	数量
Ref.No.	Part No.	Description	Amt.
1	GS0553	调压螺钉 Presser spring regulator.....	1
2	GL0114	调压螺母 Nut.....	1
3	GR1494	调压导杆 Presser guide bar.....	1
4	GW253	调压簧 Presser spring.....	1
5	GZ275	压杆 Presser bar.....	1
6	GR3358	压杆导架 Needle bar guide bracket.....	1
7	GS033	压杆导架螺钉 1/4-40 L=8..... Screw 1/4-40 L=8.....	1
8	GR3359	缓线调节钩 Presser bar thread guide.....	1
9	GS0100	缓线调节钩螺钉 9/64-40 L=8.5..... Screw 9/64-40 L=8.5.....	2
10	GO273	压杆轴套 Presser bar bushing lower.....	1
11	GM200/5	活压脚部件 Presser foot asm.	1
12	GS020	活压脚螺钉 9/64-40 L=10.5..... Screw 9/64-40 L=10.5.....	1
13	GR3360	压脚扳手 Hand lifter.....	1
14	GS0554	压脚扳手螺钉 Screw.....	1
15	GR3361/2	压脚扳手凸轮部件 Hand lifter cam asm.	1
16	GR1503	压脚扳手轴 O 形圈 Rubber ring.....	1
17	GR3363	压脚升降板 Lifting lever.....	1
18	GR3364/3	抬压脚前杠杆部件 Hand lifter link asm.	1
19	GS0555	前杠杆螺纹销 Link shaft.....	2
20	GR1510	螺纹销开口挡圈 Snap ring.....	3
21	GR3366	升降板连接特制开口挡圈 Lifting lever ring.....	1
22	GR3367	松线顶板 Tension release plate.....	1
23	GS0556	松线顶板螺纹销 Tension release shaft.....	1
24	GR1510	螺纹销开口挡圈 Snap ring.....	2
25	GW433	松线顶板复位簧 Tension release return spring.....	1
26	GR3368	抬压脚拉杆 Lifting lever connecting rod.....	1
27	GR1510	拉杆开口挡圈 Snap ring.....	1
28	GR3369	抬压脚后杠杆 Lifting lever link.....	1
29	GS0557	后杠杆轴位螺钉 Hinge screw.....	1
30	GS0558	抬压脚拉杆螺钉 Hinge screw.....	1
31	GR3370	抬压脚顶杆 Connecting rod vertical.....	1



5. 勾线分组件

5.Hook driving shaft compinents

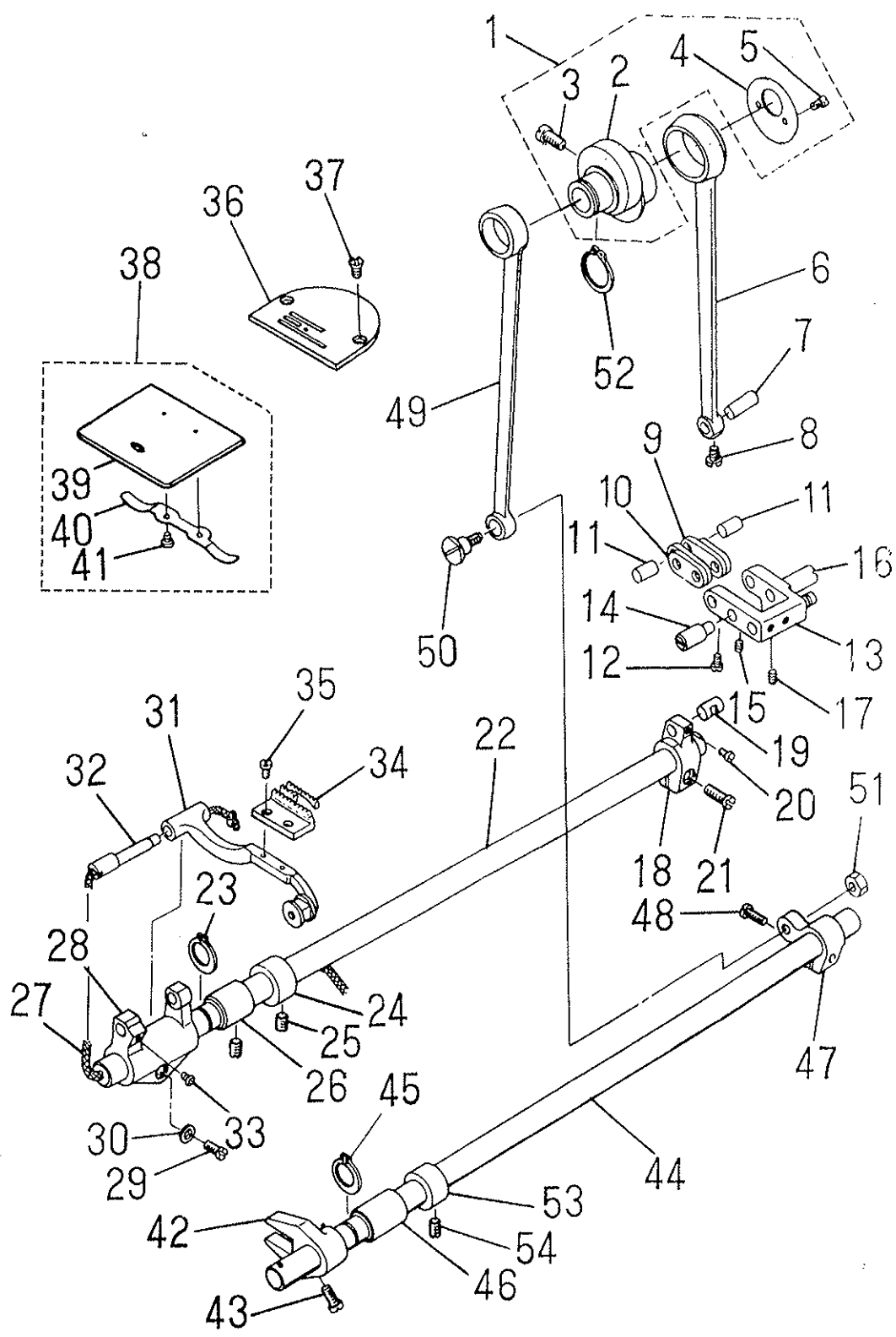
序号	件号	名 称	数量
Ref.No.	Part No.	Description	Amt.
1	GN161	旋梭 Hook asm.	1
2	GN162	梭子 Bobbin case asm.	1
3	GN163	梭心 Bobbin.....	1
4	GS029	旋梭紧固螺钉 Screw.....	2
5	GR3371	旋梭定位钩 Positioning finger.....	1
6	GS030	旋梭定位钩螺钉 11/64-40 L=9.5..... Screw 11/64-40 L=9.5.....	1
7	GZ434	下轴 Hook driving shaft.....	1
8	GS031	下轴限油螺钉 Oil seal screw.....	1
9	GR1515	下轴限油芯 Oil wick.....	1
10	GR3372	下轴挡油圈 Thtust collar.....	1
11	GS032	下轴挡油圈螺钉 11/64-40 L=3.5..... Screw 11/64-40 L=3.5.....	2
12	GO331/3	下轴前轴套部件 Bushing asm front.....	1
13	GS0559	下轴前轴套螺钉 Screw.....	1
14	GO470	下轴后轴套 Bushing, rear.....	1
15	GS053	下轴后轴套螺钉 12/64-28 L=9..... Screw 12/64-28 L=9.....	1
16	GR1519	下轴挡圈 Thrust collar asm.	1
17	GS082	下轴挡圈螺钉 11/64-40 L=4.8..... Screw 11/64-40 L=4.8.....	2
18	GC165	下轴伞齿轮 (小) Pinion asm.	1
19	GS033	伞齿轮螺钉 1/4-40 L=8..... Screw 1/4-40 L=8.....	8
20	GC166	竖轴下伞齿轮 (大) Gear asm, large.....	1
21	GO471	竖轴下轴套 Upright shaft bushing,ower.....	1
22	GO472	竖轴上轴套 Bushing, upper.....	1
23	GS053	竖轴上轴套螺钉 12/64-28 L=9..... Screw 12/64-28 L=9.....	1
24	GZ435	竖轴 Upright shaft.....	1
25	GC167	竖轴上伞齿轮 (小) Pinion asm.	1
26	GC168	上轴伞齿轮 (大) Gear asm.	1



6. 送料分组件

6.Feed mechanism components

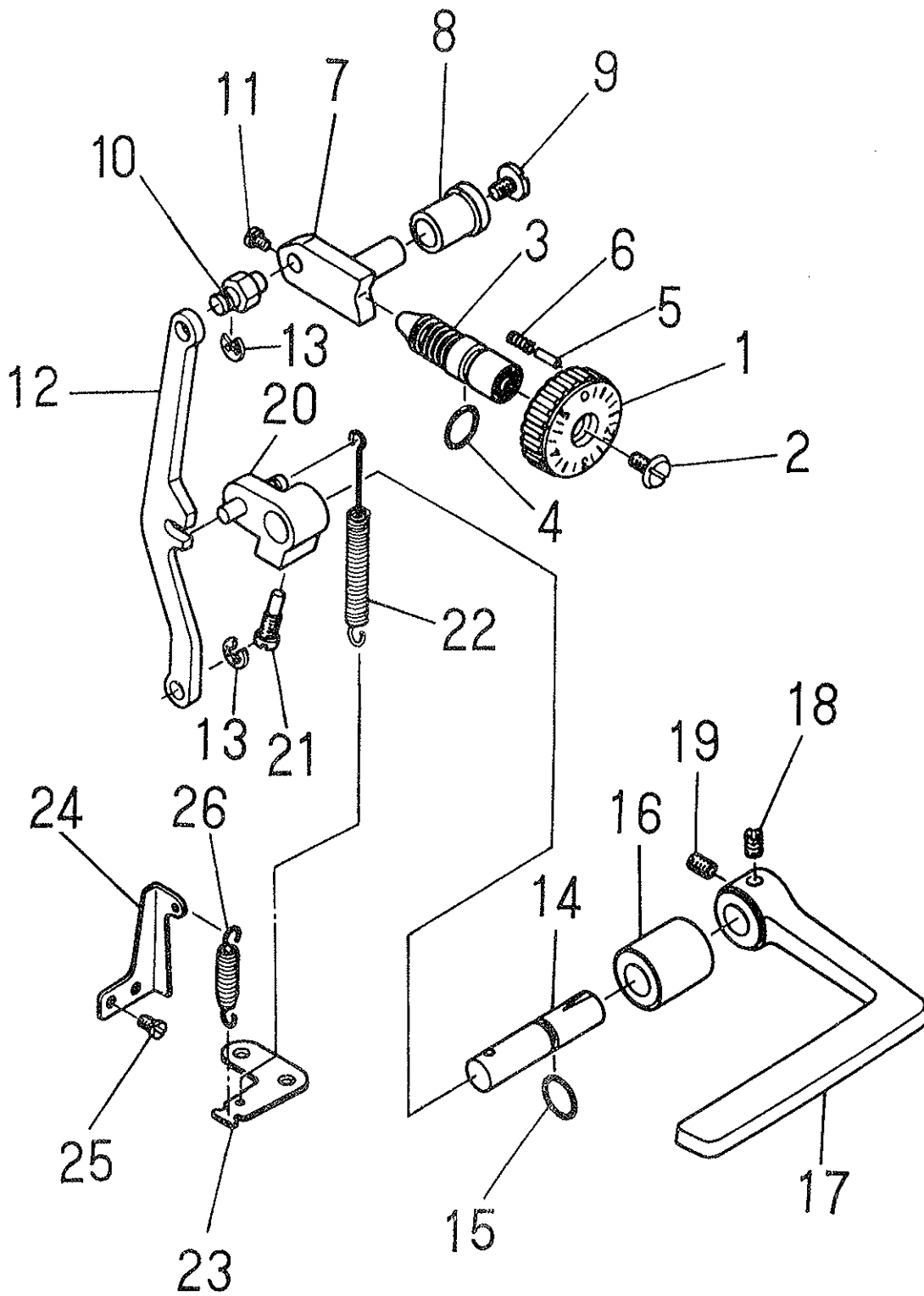
序号 Ref.No.	件号 Part No.	名 称	Description	数量 Amt.
1		送料偏心轮部件	Feed drive eccentric cam asm.	1
2	GT198	送料偏心轮	Feed drive eccentric cam.	(1)
3	GS034	送料偏心轮螺钉 1/4-40 L=11	Screw 1/4-40 L=11	(2)
4	GR3373	送料偏心轮盖板	Thrust collar	(1)
5	GS011	偏心轮盖板螺钉 9/64-40 L=6	Screw 9/64 L=6	(2)
6	GH568	送料连杆	Rocker shaft connecting rod	1
7	GX570	送料连杆销	Walking foot pin	1
8	GS0560	送料连杆销螺钉 9/64-40 L=6	Screw 9/64-40 L=6	1
9	GR3374	送料长摆动板	Walking foot link	2
10	GR3375	送料短摆动板	Connecting link	2
11	GX571	短摆动板连接销	Walking foot pin	2
12	GS0560	连接销螺钉 9/64-40 L=6	Screw 9/64-40 L=6	2
13	GR3376/2	送料摆动板座部件	Walking foot adjusting link	1
14	GX573	送料摆动板座左销	Adjusting link fulcrum shaft	1
15	GS48	左销螺钉 15/64-28 L=7	Screw 15/64-28 L=7	1
16	GX573	送料摆动板座右销	Adjusting link fulcrum shaft	1
17	GS48	右销螺钉 15/64-23 L=7	Screw 15/64-28 L=7	1
18	GH569	送料曲柄	Feed rocker shaft crank asm.	1
19	GX571	送料曲柄销	Walking foot pin	1
20	GS0560	曲柄销螺钉 9/64-40 L=6	Screw 9/64-40 L=6	1
21	GS0561	送料曲柄销螺钉 3/16-28 L=14	Screw 3/16-28 L=14	1
22	GZ436	送料轴	Feed rocker shaft	1
23	GR1524	送料轴轴用挡圈	Retaining ring	1
24	GR1469	送料轴挡圈	Thrust collar asm.	1
25	GS39	送料轴挡圈螺钉 1/4-40 L=6	Screw 1/4-40 L=6	2
26	GO473	送料轴前轴套	Feed rocker shaft bushing	1
27	GR3378	送料轴油线	Oil wick	1
28	GR3379	牙架座	Feed rocker asm.	1
29	GS69	牙架座螺钉 3/16-28 L=14	Screw 3/16-28 L=14	1
30	GR1528	牙架座螺钉垫圈	Washer	1
31	GR3380/5	牙架部件	Feed bar asm.	1
32	GX575	牙架销	Feed bar shaft	1
33	GS092	牙架销螺钉 11/64-40 L=7	Screw 11/64-40 L=7	1
34	GM201	送料牙	Feed dog	1
35	GS072	送料牙螺钉 1/8-44 L=6	Screw 1/8-44 L=6	2
36	GM202	针板	Throat plate	1
37	GS044	针板螺钉 11/64-40 L=8.5	Screw 11/64-40 L=8.5	2
38	GM340/4	推板部件	Bed slide asm.	1
39	GM204	推板	Slide plate	(1)
40	GW434	推板簧	Bed slide spring	(1)
41	GS045	推板簧螺钉 3/32-56 L=1.9	Screw 3/32-56 L=1.9	(2)
42	GH570	拾牙叉形曲柄	Driving shaft crank asm. front	1
43	GS037	拾牙叉形曲柄螺钉 11/64-40 L=10.5	Screw 11/64-40 L=10.5	1
44	GZ437	拾牙轴	Feed driving shaft	1
45	GR1524	拾牙轴轴用挡圈	Retaining ring	1
46	GO336	拾牙轴前轴套	Feed rocker shaft bushing	1
47	GH571	拾牙后曲柄	Rear crank asm.	1
48	GS0561	拾牙后曲柄螺钉 3/16-28 L=12	Screw 3/16-28 L=12	1
49	GH572	拾牙连杆	Connecting rod	1
50	GS0562	拾牙连杆轴位螺钉	Hinge screw	1
51	GL7	拾牙连杆轴位螺母 9/32-28	Nut 9/32-28	1
52	GR1535	拾牙连杆轴用挡圈	Snap ring	1
53	GR1469	拾牙轴挡圈	Thrust collar asm.	1
54	GS39	拾牙轴挡圈螺钉 1/4-40 L=6	Screw 1/4-40 L=6	2



7. 送料调节分组件

7.Feed regulating components

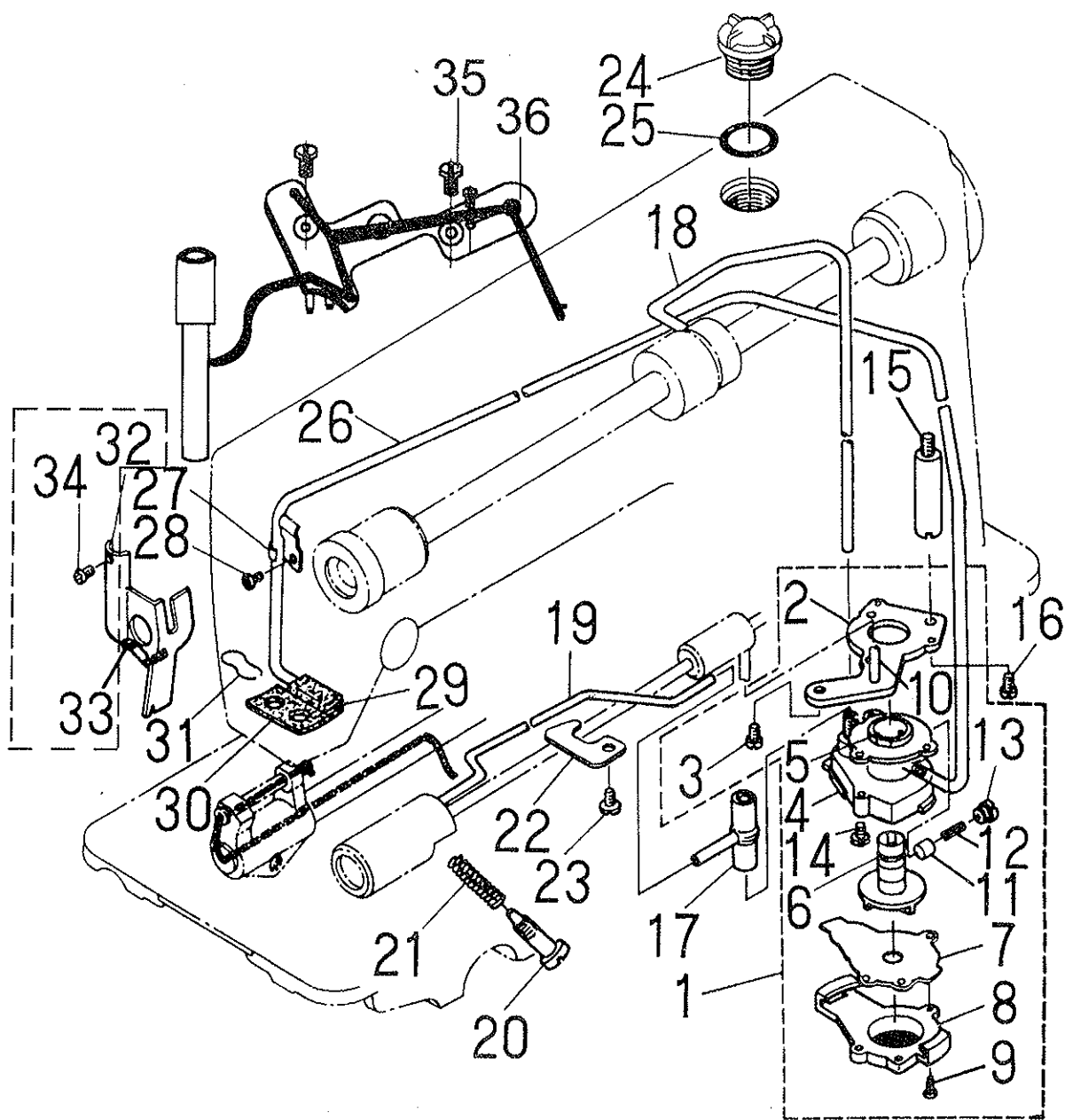
序号	件号	名称	数量
Ref.No.	Part No.	Description	Amt.
1	GR3382	送料距旋钮	1
2	GS0563	送料距旋钮螺钉	1
3	GS0564	送料调节螺柱	1
4	GR3383	送料调节螺柱 O 形圈	1
5	GX576	送料距锁合销	1
6	GW257	送料距锁合簧	1
7	GR3384	送料调节器	1
8	GO474	送料调节器轴套	1
9	GS0565	送料调节器轴端螺钉	1
10	GX577	倒送料连杆销	1
11	GS011	连杆销螺钉 9/64-40 L=6.....	2
12	GH573	倒送料连杆	1
13	GR1510	倒送料连杆挡圈	2
14	GZ438	倒送料轴	1
15	GR3385	倒送料轴 O 形圈	1
16	GO475	倒送料轴轴套	1
17	GR3386	倒送料扳手	1
18	GS050	倒送料扳手定位螺钉 1/4-40 L=10.....	1
19	GS033	倒送料扳手螺钉 1/4-40 L=8.....	1
20	GH574/2	倒送料曲柄部件	1
21	GS0566	倒送料曲柄螺钉	1
22	GW435	倒送料拉簧	1
23	GR3387	拉簧固定板	1
24	GR3388	摆动板座复位板	1
25	GS0567	复位板螺钉 11/64-40 L=5.....	2
26	GW436	摆动板座复位簧	1



8. 润滑分组件

8.Lubrication components

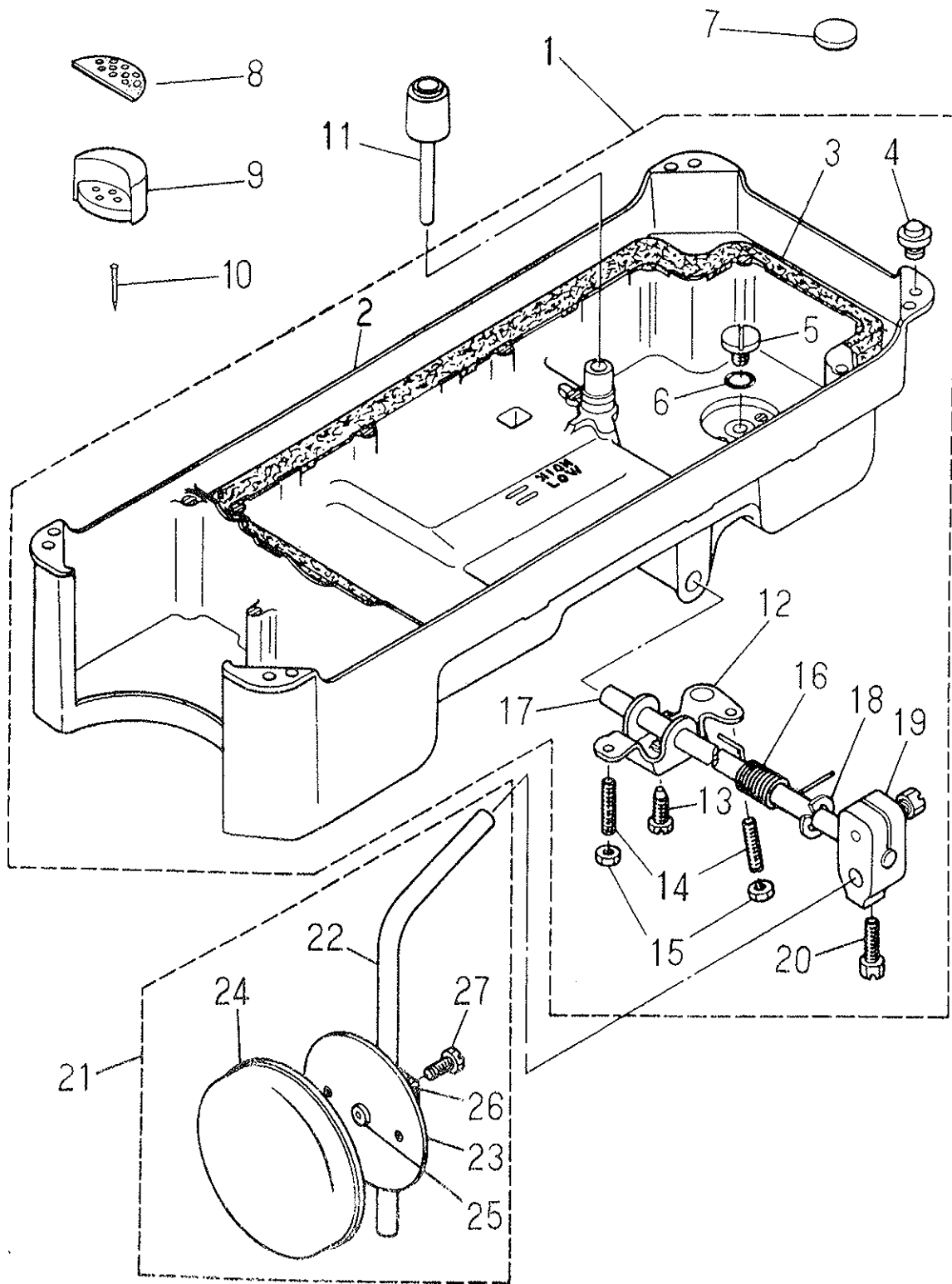
序号	件号	名 称	数 量
Ref.No.	Part No.	Description	Amt.
1	GR3389/12	油泵部件	Lubricating oil pump asm. 1
2	GR3390	油泵安装板	Oil pump installing base..... (1)
3	GS0568	油泵安装螺钉 15/64-28 L=9.....	Screw 15/64-28 L=9..... (3)
4	GR3391	油泵体	Oil pump..... (1)
5	GO476	油泵体衬套	Oil pump bushing..... (1)
6	GR3392	油泵叶轮	Oil pump impeller..... (1)
7	GR3393	油泵叶轮托板	Oil pump impeller cover..... (1)
8	GR3394	油泵盖	Lubricating oil pump cover..... (1)
9	GS554	油泵盖螺钉	Screw..... (3)
10	GR3395	下轴供油管	Hook driving shaft oil tube..... (1)
11	GR3396	回油柱塞	Plunger..... (1)
12	GW437	柱塞簧	Plunger spring..... (1)
13	GS0569	柱塞螺钉	plunger screw..... (1)
14	GS062	油泵螺钉	Screw..... (1)
15	GS0567	油泵连接螺柱	Oil pump support..... 1
16	GS030	螺柱连接螺钉 11/64-40 L=9.5	Screw 11/64-40 L=9.5..... 1
17	GR3397	供油管接头	Rubber joint..... 1
18	GR3398	上轴供油管	Main shaft oil tube..... 1
19	GR3399	旋梭供油管	Oil tube..... 1
20	GS054	旋梭油量调节螺钉	Oil adjusting screw..... 1
21	GW259	旋梭油量调节簧	Spring..... 1
22	GR3400	旋梭供油管压板	Tube holder (lower)..... 1
23	GS062	压板螺钉 15/64-28 L=9.....	Screw 15/64-28 L=9..... 1
24	GR1561	油窗	Oil sight window..... 1
25	GR1562	油窗 O 形圈	Rubber ring..... 1
26	GR3401	回油管	Oil return tube..... 1
27	GR1566	回油管夹	Oil return tube holder..... 1
28	GS0551	回油管夹螺钉 3/16-28 L=6.....	Screw 3/16-28 L=6..... 1
29	GR1567	回油除尘毡	Anti-dust oil felt..... 1
30	GR1568	回油毡	Oil felt..... 1
31	GR1569	回油毡夹	Oil felt presser..... 1
32	GR3403	面部防油板	Arm oil shield..... 1
33	GR3404	防油板油线	Oil wick..... 1
34	GS44	防油板螺钉 1/8-44 L=4.....	Screw 1/8-44 L=4..... 1
35	GS0835	油线固定板螺钉	Oil wick setplate screw..... 2
36	GR0836	油线固定板组件	Oil wick setplate asm..... 1



9. 油盘、膝抬压脚部分组件

9.Oil reservoir & knee lifter components

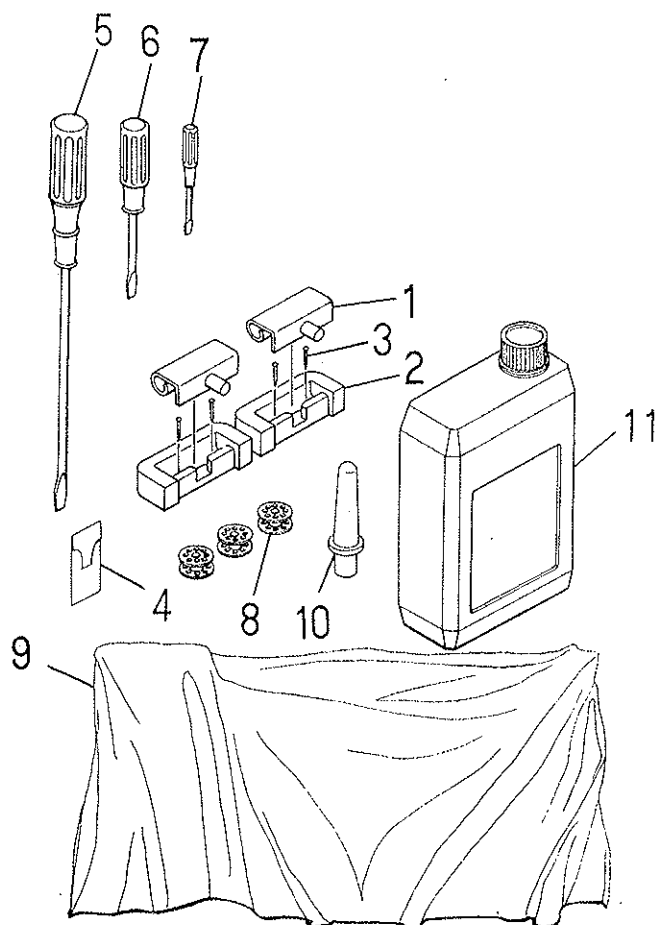
序号	件号	名	称	数量
Ref.No.	Part No.	Description		Amt.
1	GR3405/17	油盘部件	Oil reservoir asm.	1
2	GR3406	油盘	Oil reservoir	(1)
3	GR3407	油盘垫	Gasket	(1)
4	GR3408	机头座垫	Rubber cushion	(4)
5	GS0571	排油孔螺钉	Screw	(2)
6	GR3409	排油孔螺钉 O 型圈	Rubber ring	(2)
7	GR1576	油盘磁铁	Oil reservoir magnet	1
8	GR1578	油盘座垫	Oil reservoir felt cushion	2
9	GR1579	油盘支架	Oil reservoir rubber cushion	2
10	GBX108	油盘座钉	Nail	4
11	GH579	抬压脚顶销	Knee press lifter rod	1
12	GH576	抬压脚双向曲柄	Connecting rod, vertical	1
13	GS0572	双向曲柄螺钉	Screw	1
14	GS057	双向曲柄限位调节螺钉 15/64-28L=30	Screw 15/64-28 l=30	2
15	GL21	双向曲柄限位调节螺母 15/64-28	Nut 15/64-28	2
16	GW438	双向曲柄扭簧	Spring	1
17	GZ439	抬压脚轴	Knee press rod	1
18	GR1583	抬压脚轴开口挡圈	Snap ring	1
19	GR3410	抬压脚操纵杆节头	Bearing bracket	1
20	GS0573	操纵杆节头螺钉 9/32-20 L=20	Screw 9/32-20 l=20	2
21	GR3411/6	操纵杆部件	Knee press plate asm.	1
22	GR1586	操纵杆	Knee lifter plate rod	1
23	GR3412	操纵板	Knee press plate	1
24	GKR13	操纵板软垫	Knee press plate cover	1
25	GR3413	操纵杆垫	Rubber	1
26	GR3414	操纵杆节头	Knee press plate holder	1
27	GS584	节头螺钉 15/64-28 L=15	Screw 15/64-28 l=15	1



10. 机头附件(1)

10. Machine head accessories(1)

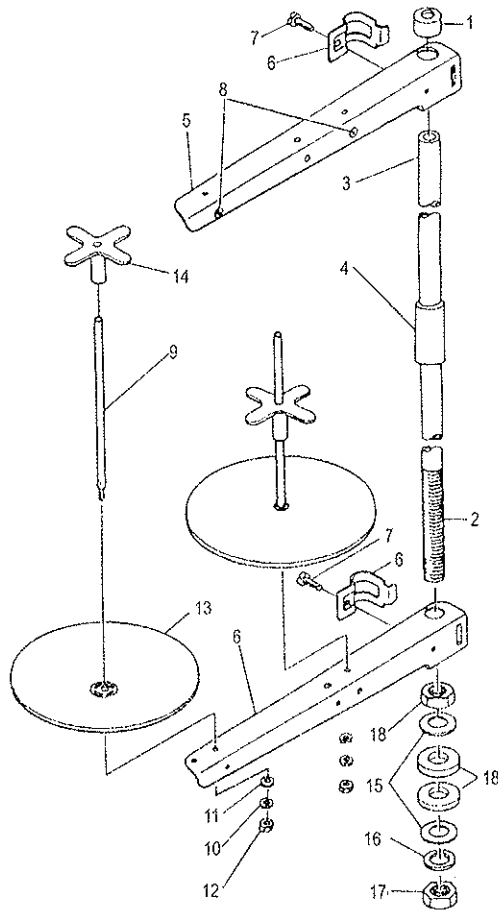
序号	件号	名称	数量
Ref.No.	Part No.	Description	Amt.
1	GR1590/2	机头连接钩部件	Machine hinge plate asm. 2
2	GBX105	机头连接钩座	Machine hinge plate..... 2
3	GK241	机头连接钩座钉	Nail..... 4
4	GV15	机针	Needle.....1包
5	GR1610	螺丝刀 (大)	Screw driver, large..... 1
6	GR1602	螺丝刀 (中)	Screw driver, mendium..... 1
7	GR1603	螺丝刀 (小)	Screw driver, small..... 1
8	GN163	梭心	Bobbin..... 3
9	GF424	机头罩	Machine head cover 1
10	GBR148	机头支柱	Machine rest pin 1
11	GR1604/3	油箱部件	Oil reservoir asm. 1

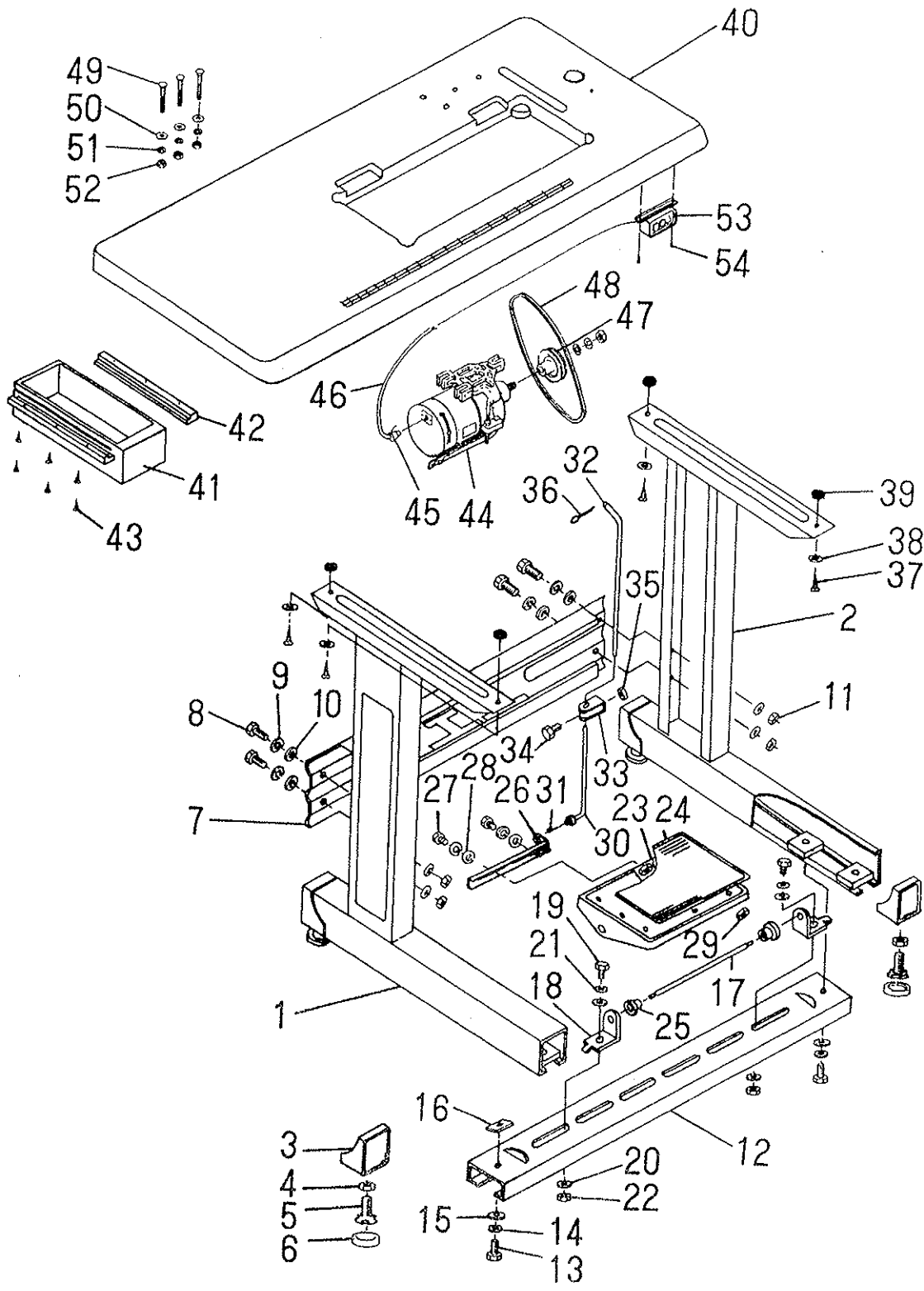


机头附件(2)

Machine head accessories(2)

序号 Ref.No.	件号 Part No.	名 称	Description	数量 Amt.
1	GR1744	线架杆顶防护橡皮	Spool rest rod rubber cap	1
2	GZ315	线架杆下节	Spool rest rod (lower)	1
3	GZ316	线架杆上节	Spool rest rod (upper)	1
4	GR1932	线架杆接头	Spool rested joint	1
5	GR1825	线架过线杆	Thread guide asm.	2
6	GR1745	线架过线夹	Thread guide asm joint	2
7	GS558	线架过线夹螺钉	Screw	2
8	GR1748	过线圈	Thread guide ring	2
9	GS067	线盘钉	Spool pin	2
10	GR1625	线盘钉弹簧垫圈	Spring washer	2
11	GR1626	线盘钉垫圈	Washer	2
12	GL23	线盘钉螺母	Nut	2
13	GR1811	线盘	Spool rest	2
14	GR1215	线团防松垫	Spool vibration stopper	2
15	GR1696	线架杆紧固螺母垫圈	Washer	2
16	GR1751	紧固螺母弹簧垫圈	Spring washer	1
17	GL158	线架杆紧固螺母	Nut	2
18	GR1753	线架杆防震橡皮圈	Rubber washer	2





厚料用

For Heavy Weight Materials

序号	件号	名称	数量
Ref.No.	Part No.	Description	Amt.
1	GH579/3	挑线杆部件..... Link thread take-up lever asm. ...	1
2	GH580	挑线杆曲柄..... Needle bar crank H.....	(1)
3	GR1644	过线钉..... Thread guide pin.....	1
4	GO288	针杆下轴套..... Needle bar bushing, lower.....	1
5	GR1632	针杆下轴套线钩..... Needle bar thread guide.....	1
6	GZ441	针杆..... Needle bar.....	1
7	GR3431	针杆线钩..... Needle bar thread guide.....	1
8	GV17	机针(DB×1#21)..... Needle (DB × 1#21).....	1
9	GW269	调压簧..... Presser spring.....	1
10	GR3433/10	夹线器部件..... Thread tension asm.	1
11	GW268	夹线簧..... Tension spring.....	1
12	GR3432	右线钩..... Arm thread guide (HA).....	1
13	GW440	摆动板座复位簧..... Adjust link spring.....	1
14	GR3434	旋梭定位钩..... Positioning finger.....	1
15	GM210	针板..... Throat plate(H).....	1
16	GM209	送料牙..... Feed dog(H).....	1
17	GM208/5	活压脚板部件..... Hinged presser foot asm.	1
18	GR1646	活压脚板..... Presser foot asm.	1
19	GN197	旋梭..... Lubricating bobbin asm.	1
20	GS069	防油板螺钉1/8-44L=2.5..... Screw 1/8-44 L=25.....	1
21	GR3435	拉簧固定板..... feed spring hook.....	1

△ Safety Instruction

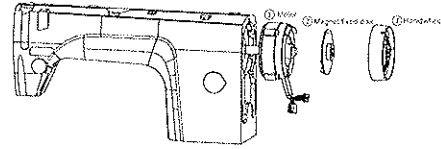
- Users are required to read the operation manual completely and carefully before installation or operation.
- All the instruction marked with sign △ must be observed or executed; otherwise, bodily injuries might occur.
- The product should be installed and pre-operated by well trained persons.
- For perfect operation and safety, it is prohibited that using extension cable with multi-outlet for power connection.
- When connecting power supply cords to power sources, it is necessary to make sure that the power voltage is lower than 250 VAC and matches the rated voltage indicated on the motor's name plate.
 △ **※Attention:** If the Control Box is AC 220V system, please don't connect the Control Box to AC 380V power outlet. Otherwise, the error will occur and motor will not work. If that happens, please turn off the power immediately and check the power voltage.
- Don't operate in direct sun light, outdoors area and where the room temperature is over 45°C or below 5°C.
- Please avoid operating near the heater at dew area or at the humidity below 30% or above 95%.
- Don't operate in area with heavy dust, corrosive substance or volatile gas.
- Avoid power cord being applied by heavy objects or excessive force, or over bend.
- The earth wire of power cord must be connected to the system ground of the production plant by proper size of conductions and terminals. This connection should be fixed permanently.
- All the moving portions must be prevented to be exposed by the parts provided.
- Turning on the machine in the first time, operate the sewing machine at low speed and check the correct rotation direction.
- Turn off the power before the following operation:
 - Connecting or disconnecting any connectors on the control box or motor.
 - Threading needle.
 - Raising the machine head.
 - Repairing or doing any mechanical adjustment.
 - Machines idling.
- Repairs and high level maintenance work should only be carried out by electronic technicians with appropriate training.
- All the spare parts for repair must be provided or approved by the manufacturer.
- Don't use any objects or force to hit or ram the product.

Guarantee Time
 Warranty period of this product is 1 year dated from purchasing, or within 2 years from ex-factory date.
Warranty Detail:
 Any trouble found within warranty period under normal operation, it will be repaired free of charge. However, maintenance cost will be charged in the following cases even if within warranty period:

- Inappropriate use, including: wrong connecting high voltage, wrong application, disassemble, repair, modification by incompetent personnel, or operation without the precaution, or operation out of its specification range, or inserting other objects or liquids into the product.
 - Damage by fire, Earth quake, lightning, wind, flood, salt corrosive, moisture, abnormal power voltage and any other damage cause by the natural disaster or by the inappropriate environments.
 - Dropping after purchasing or damage in transportation by customer himself or by customer's shipping agency
- Note:** We make our best effort to test and manufacture the product for assuring the quality. However, it is possible that this product can be damaged due to external magnetic interference and electronic static or noise or unstable power source more than expected; therefore the grounding system of operate area must guarantee the good earth and it's also commended to install a failsafe device. (Such as residual current breaker)

1 Installation

- Power Connection
 △ For countries or regions with unstable power supply, it is proposed to install a power stabilizer.
- Motor Installation:
 Installation of Internal Motor



1.3 Adjust The Force Required To Operate The Foot Pedal



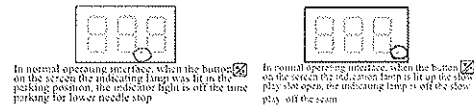
Spring A: Downward force adjustment
 Bolt B: Heeling back force adjustment
 Hole C: Pedal stroke adjustment
 △ In case of connecting with an air switch on the pedal rod to activate a Venturi Device, please shift the position for A and C as shown below.

1.4 Comparison Table of LCD Display Fonts and Actual Fonts

Actual	0	1	2	3	4	5	6	7	8	9
Display	0	1	2	3	4	5	6	7	8	9

Actual	A	B	C	D	E	F	G	H	I	J
Display	A	B	C	D	E	F	G	H	I	J
Actual	K	L	M	N	O	P	Q	R	S	T
Display	K	L	M	N	O	P	Q	R	S	T
Actual	U	V	W	X	Y	Z				
Display	U	V	W	X	Y	Z				

1.5 Upper and lower stop debugging, Slow start joint debugging

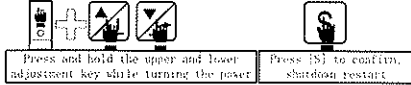


2:Keyfunction

Setting Parameter, Check And Save	S	After setting the function code, press this key to check the preset parameter and then can edit the parameter accordingly. When the parameter is fixed, press key to save the setting and quit.
Entering the parameter mode	P	1. Press key P to enter into user parameter setting mode 2. Long press key Pin the same time turn on the power switch from off to enter into system parameter setting mode.
On the adjustment key-Select the shortcut needle position	▲/▼	1. Choose the region parameter items incrementing key 2. Parameter setting value incrementing key 3. Select the shortcut needle position
Under the adjustment key- Slow play scan selection shortcuts	⏪/⏩	1. Choose the region parameter items of dimmishing key 2. Is decremented key parameter settings 3. Slow play scan selection shortcuts

3 Operating instructions

3.1: Reset the system



3.2 Enter the user argument and save changes



3.3 Enter technician mode and save changes



4: User Parameter & Technician Parameter

4.1 User Parameter

Parameters	Parameter Function	Range	Default	Description
F01	Maximum speed	010-500	100	set the max sewing speed (show the actual number *10% speed)
F02	needle stop position selection	000-001	000	Set the needle stop position(0: needle up 1: needle down)
F03	soft start switch	000-001	000	soft start switch setting(0:OFF 1: ON)
F04	soft start sewing speed	010-150	010	soft start sewing speed settings(show the actual number *10% speed)
F05	stitches number of soft start	001-009	001	set the stitches number of soft start, each unit is half stitch
F06	Minimum speed	020-003	060	set the minimum speed (show the actual number *10% speed)

4.2 Technician Parameter

Parameters	Parameter Function	Range	Default	Description
F07	Up Position Adjustment	000-024	000	
F08	Down Position Adjustment	000-024	012	
F09	Needles Goes Up Automatically as Power turned on	000-001	001	0: No Function. 1: Power turned on, needle goes up position automatically
P11	Speed Curve Adjustment (%)	001-100	032	The larger the value, the faster to increase speed
P15	Stitch Connection Mode	000-003	000	0: Half stitch 1: One stitch 2: Continuous correct half stitch Continuous correct stitch and quickly stop machine.
P21	motor rotate direction	000-001	000	motor rotate direction setting (0:clockwise 1:counter clockwise)
P22	auto running speed	020-500	350	auto running speed settings(show the actual number *10% speed)
P23	auto running time	010-250	020	set the auto running time in testing
P24	auto running stop time	010-250	020	set the auto running stop time in testing
P25	Iron I test	000-001	000	Iron I test setting(continue running with constant speed)
P26	Iron II test	000-001	000	Iron II test setting(only run the set loop running)
P27	Iron	000-010		

5 Error Code Table:

Error	Problem	Measurement
E01	1) When power on, detected main voltage too high. 2) When the supply voltage is too high	Turn off the system power supply, and detect whether the supply voltage is correct. (Or exceed the rated voltage.) If correct, please replace the control box and inform the factory.
E07	a)Bad connection at the motor connector b)Machine locked or object stuck in the motor pulley c)Sewing material is too thick d)Module output is abnormal.	Please check the machine head to see if objects stuck in the motor pulley; If stuck it is not the machine head machinery fault. If normal running, please check the encoder connector and motor power cord connector if loose. If loose please tight connection. If connection well, please check supply voltage whether abnormal or setting speed too high. If have please modify. If normal, please replace the control box and notify the manufacturer.
E09 E11	Synchronizer signal error.	Turn off the system power supply, please check motor encoder connector if loose or fall off, renew to normal then restart system. If still not work, please replace the motor and notify the manufacturer.
E12	Power is turned on without the synchronizer signal.	Motor still can run, but it automatically starts the clutch mode. All constant-stitch sewing pattern and trimmer /wiper function is invalid. Please check the synchronizer.
E14	Encoder signal error.	Turn off the system power supply, please check motor encoder connector if loose or fall off, renew to normal then restart system. If still not work, please replace the motor and notify the manufacturer.
E15	Power module abnormal over current protection	Module driver output and head output will close all. Waiting for the power to open + reset. (please carefully check power supply board each function)
E17	The sewing table safety switch is not in the correct position	Please check sewing table is open or not, the sewing table safety switch is damage or not, the socket is abnormal or not.

6: Schematic diagram of port

6.1.1: Each port name:

① Function Interface

1. Function Interface
 1. Clearing lights 1(GND), 4 (+5V)
 1 Jog 61 need: 3(GND), 6 (+5V)

② Pedals Interface

