

# **GLOBAL**

## **BT 500 X 200 H - TB**

### **PARTS MANUAL**



# Contents

|   |    |
|---|----|
| <b>I. Brief instruction.....</b>  | 3  |
| <b>II. Features .....</b>   | 3  |
| <b>III. Main specifications .....</b>   | 3  |
| <b>IV. Operation instruction .....</b>  | 3  |
| <b>V. Machine adjustment .....</b>  | 4  |
| <b>VI. Winding the bobbin thread .....</b>  | 6  |
| <b>VII. Threading the needle thread .....</b>   | 7  |
| <b>VIII. Plan view of the complete machine .....</b>  | 8  |
| <b>IX. Outside connection of the control box .....</b>  | 9  |
| <b>X. Parts catalogue .....</b>   | 10 |
| 1、Machine hell parts .....  | 10 |
| 2、Arm shaftand thread take-up .....   | 12 |
| 3、Needle bar and presser bar .....  | 14 |
| 4、Lower shaftand pendulum shaft .....   | 16 |
| 5、Presser foot lipt timing .....  | 18 |
| 6、Horixontal transmission .....   | 20 |
| 7、Uppwr and below sew case .....  | 22 |
| 8、vertical transmission .....   | 24 |
| 9、Thread tension .....  | 26 |
| 10、Built-in bobbinwinde .....   | 28 |
| 11、Table topand stand .....   | 30 |
| <b>XI. Control Box Operation Instruction .....</b>  | 32 |
| 1 Control box hardware specifications.....  | 32 |
| 1.1 Power specification .....   | 32 |
| 1.2 Replace the fuse .....  | 32 |
| 1.3 X/Y origin detector .....   | 32 |
| 1.4 Motors installation .....   | 32 |
| 1.5 Inner structure of the Control Box .....  | 33 |
| 2 Operation of the Sewing Machine .....   | 34 |
| 2.1 Keys Description.....   | 34 |
| 2.2 Adjusting zero position .....   | 36 |
| 2.2.1 Adjusting the position of the induction rion for the sensor of the needle upper position..... | 36 |
| 2.3 Basic operation.....  | 37 |
| 2.4 Transferring patterns by a USB disk .....   | 40 |
| 2.5 Adjusting system parameters .....   | 41 |
| 3 Pattern Inputing.....   | 42 |
| 3.1 Create a new pattern.....   | 42 |
| 3.2 Modify an existing pattern .....  | 49 |
| 3.3 Input select key .....  | 50 |
| 3.4 Pattern input key .....   | 51 |
| 3.5 Section moving, rotation and copy .....   | 52 |
| 3.6 Pattern for non-stitch feeding.....   | 53 |
| 3.7 Inserting stitch quickly.....   | 54 |
| 3.8 Translation of the pattern/Change pattern center (F1) .....                                     | 55 |

|      |  |    |
|------|--|----|
| 3.9  | Re-Curve (F2) .....                        | 55 |
| 3.10 | Inputting symmetrical pattern .....        | 56 |
| 3.11 | Modification of the feed pitch.....        | 56 |
| 3.12 | Drawing repeat design .....                | 57 |
| 3.13 | Deleting pattern.....                      | 58 |
| 4    | Download patterns from PC.....             | 58 |
| 5    | Maintainance of IO Devices .....           | 61 |
| 5.1  | Input devices check.....                   | 61 |
| 5.2  | Output devices check .....                 | 61 |
| 6    | Appendix.....                              | 63 |
|      | Appendix 1. System parameter list .....    | 63 |
|      | Appendix 2. Trouble Indication Table ..... | 67 |

#### **Accessories:**

1、Accessories of the machine head

|   |                    |       |    |                    |      |    |                 |      |
|---|--------------------|-------|----|--------------------|------|----|-----------------|------|
| 1 | Thead stand        | 1Set  | 7  | Hexagon apanner    | 1Set | 13 | ScrewM5X12      | 9Pcs |
| 2 | Hinge              | 2Sets | 8  | Oil can            | 1Pc  | 14 | Nut M5          | 9Pcs |
| 3 | Rubber wasger      | 4Pcs  | 9  | Needle             | 5Pcs | 15 | Screw St3X10    | 6Pcs |
| 4 | Oil pan            | 1Pc   | 10 | Bobbin             | 5Pcs | 16 | Silicon oil box | 1Pc  |
| 5 | Big screw driver   | 1Pc   | 11 | Rubber ring        | 3Pcs | 17 |                 |      |
| 6 | Smsll screw dvtrer | 2Pcs  | 12 | Foot pedal support | 1Pc  | 18 |                 |      |

2、Accessories of control box

|   |               |     |   |                 |      |    |                |      |
|---|---------------|-----|---|-----------------|------|----|----------------|------|
| 1 | Operation box | 1PC | 7 | Hexagon apanner | 1Set | 13 | Screw St6.3X30 | 4Pcs |
| 2 | Download line | 1Pc | 8 | Oil can         | 1Pc  | 14 | Screw St4.2X30 | 4Pcs |

## I 、 Brief Instruction

GA204-5020 is a new designed and high efficiency computerized pattern sewing machine for sewing heavy duty materials. It use Servo motor to drive, cam thread take-up, single needle, shuttle hook. It controlled by computer programs, so it can sew the special patterns. The lock stitch is beautiful, flat and well combined. It especially used for sewing signs, leather, power maintenance, rock climbing, overhead work, etc all kinds of safety belts.

## II 、 Features

It adopt advanced electromechanical and pneumatic integration technology, its presser foot lifting device and clamp device are finished by computer to control the cylinder, the feeding mechanism is also controlled by computer program, so it can sew different patterns. The large bobbin decreased changing bobbin frequency.

It is easy for operation, even inexpert can make the perfect stitch. Besides, it can store 1000 patterns, these patterns are created by StyleEdit, the user who can download the self-edited patterns from PC for use at any time.

## III 、 Main Specifications

Max. sewing speed: 800S. P. M

Clearance under prsser

foor: 18mm

Needle: DYX3 180-250#

Sewing area: 500X200mm ;300X200mm

Thread: polyester 0.3-1mm

Max. stitch thickness: 12mm

Bed size: 580X320X550

Mainn motor power: 750W

Air compressor working pressure: 0.6Mpa

## IV 、 Operation Instruction

Before using, please carefully read Maintemance Manual.

1. The machine has been adjusted before leaving the factory.

According to the ichnography, the user can assemble the machine. (Referring to IX)

2. Insert the interfaces. (Referring to X)

3. Checking machine: Turn the handwheel clockwise, the movement of handwheel and needle should be balanced.

4. Checking clamp: Turn the handwheel, make the needle and presser foot at the top position, push the clamp move to front, back, left and right, the movement should be no resistance. Then move the clamp the center and turn on the power.

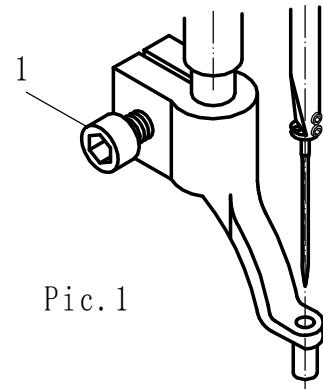
5. Before working we must process emply sewing.(Referring to XII)

Note:When process empty sewing, it is better to move off the needle to avoid it broken when to reset the needle, it mrst straightly set to the bottom and fasten the screw.

## V、Machine adjustment

### 1. Adjust presser foot and needle

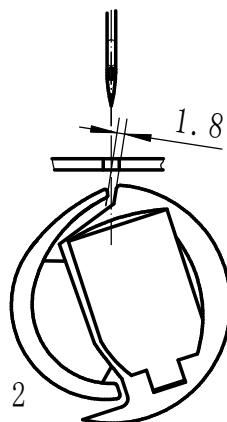
The presser foot and needle should move synchronously. When the needle puncture the workpiece and to its bottom, the presser foot should press the workpiece tightly, as the shuttle draw the loop, the presser foot lifted. (Pic.1)



Pic.1

### 2. Adjust presser foot lift

The height of presser foot should catch the thickness of material. Adjust it upward when to sew the thick material; opposite, adjust it downward. Loosen the screw(1) to move the presser foot upward or downward. (Pic.2)



Pic.2

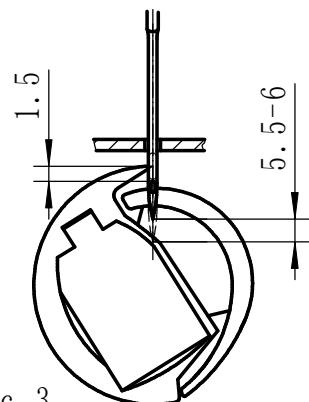
### 3. Adjust needle and shuttle hook

#### (1) Thread-off position:

When the needle move to its top position is happen to the needle center the clearance is about 1.8mm. (Pic.2)

#### (2) Lift needle amount:

When the needle move to its bottom position, the shuttle hook at its max anticlockwise position, at this time the needle moves upward 5.5-6mm, the shuttle tip is at the needle center. The distance between shuttle tip and needle threading hole is 1.5-2mm. (Pic.3)

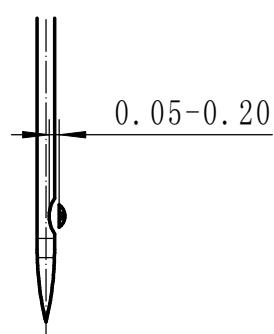


Pic.3

#### (3) Adjust the clearance of shuttle tip and needle gap:

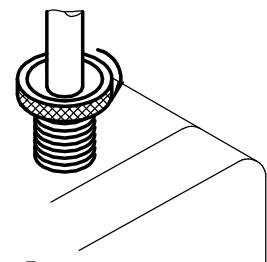
When the shuttle tip moves to the center of the needle, the clearance between shuttle tip and needle gap is 0.05-0.20mm. (Pic.4)

The large clearance, the shuttle tip is hard to draw the thread loop and cause skip thread. The small clearance, the shuttle tip may knock the needle and make the needle broken.



Pic.4

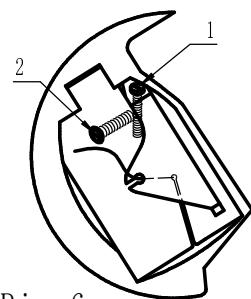
4. Adjust the pressure of presser foot  
It is according to the material, light or thick. Turn the screw clockwise to increase the pressure; Opposite to decrease the pressure. (Pic.5)



Pic.5

5. Adjust the tension of upper thread and bobbin thread

When normally sewing, the upper thread and bobbin thread should be twisted in the middle of the workpiece. Upper thread loose, it is easy crimped under the workpiece; Bobbin thread loose, it is easy to loose stitch on the workpiece. Upper thread tension can be adjusted by the thread tension nut. (Pic. 7) And for bobbin thread adjusting, take off the bobbin, loose the screw 2, and adjust the screw 1. (Pic. 6)



Pic.6

6. Emergency stop operation

When under the condition of thread breaking or run off the bobbin thread, press the emergency stop switch, the machine stops and automatically in the state of empty sewing. After take measure of that, the user can turn the handwheel and make the main shaft to the upper needle position, on the operation panel press "+", "-" to back to the stitch position for continuing sewing. If the user want to stop sewing, press the "Cancel" and quit to empty sewing state.

7. Setup sewing speed

Safety belts require high sewing quality, there are many stitch works and its thickness and pattern are different. The thick place, the stitch is large, and the pattern is complex, so it is need low speed.

Suggestion: New machine should use the low speed.

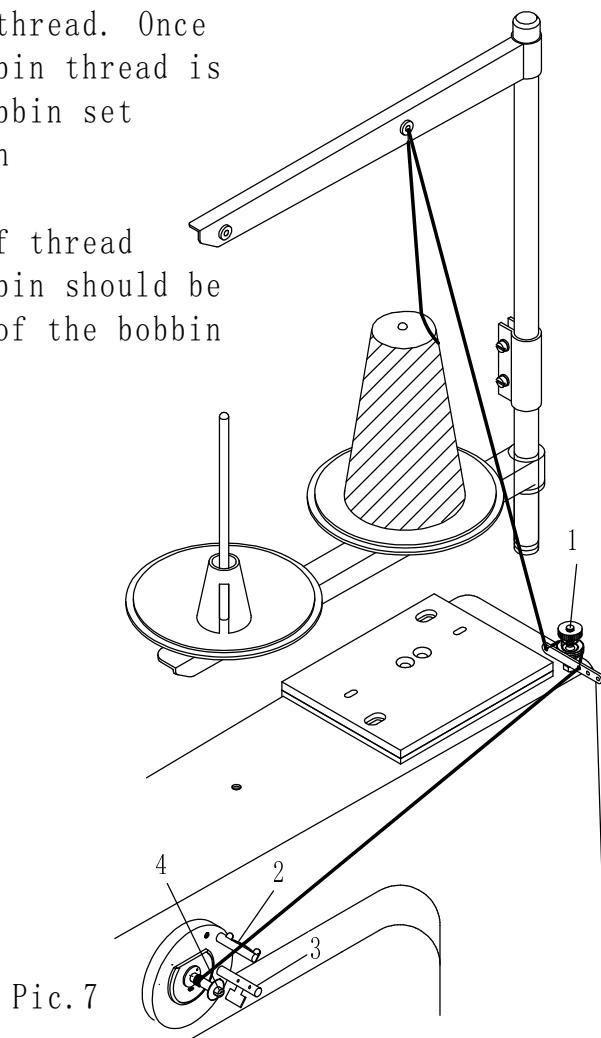
8. Adjusting the work-piece clamping force

The clamping force must be adjusted when the rope in different floppy range. To realize it by adjusting the button of pressure-reducing valve. Turning clockwise to increase the pressure, counterclockwise to reduce the pressure. The clamping force is directly related to the diameter of the rope. Different ropes should match the different clamp.

## VI、Winding the bobbin thread

The machine is equipped with built-in bobbin winder. Place the bobbin onto the bobbin winder shaft 4. Take reference of picture 7, pass the thread through thread tension set 1 and 2. wind the thread several times around the bobbin in direction indicated by arrow, then start the machine to winding the lower thread. Once winding of the bobbin thread is completed, the bobbin set lever 3 will return automatically.

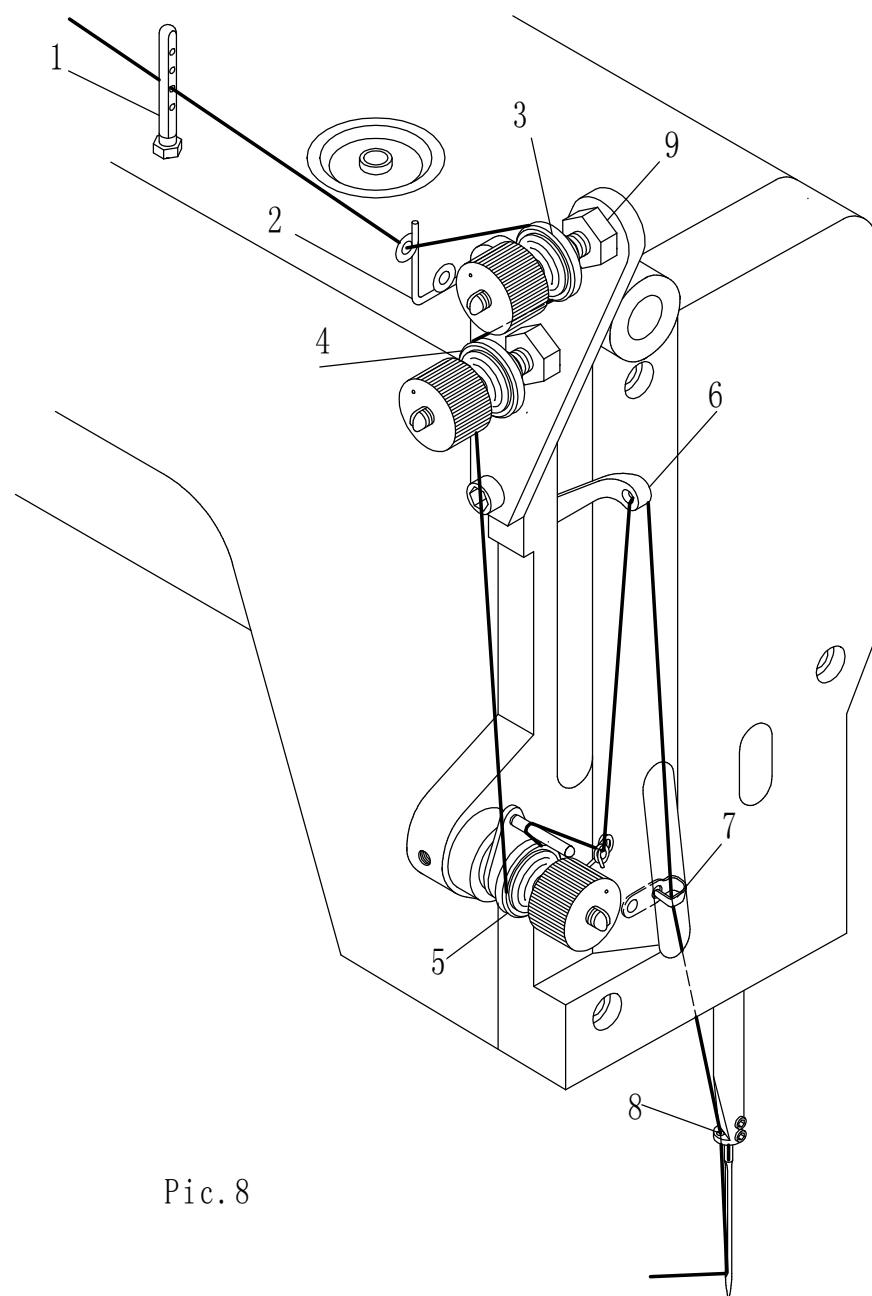
Note: the amount of thread wound onto the bobbin should be a maximum of 80% of the bobbin capacity.



## VII、Threading the upper thread

When threading the upper thread, the needle bar should in top position.

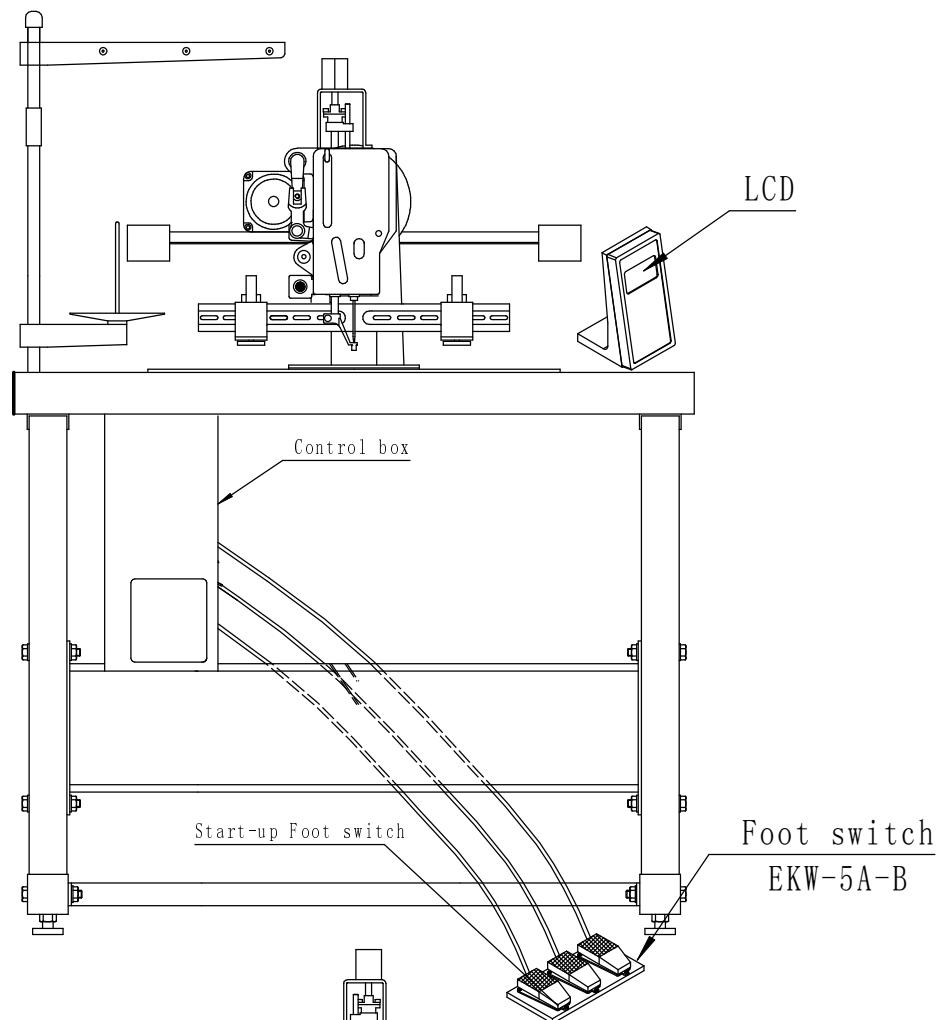
Following the order of 1 to 8 as shown in the illustration given below. ( Pic 8)



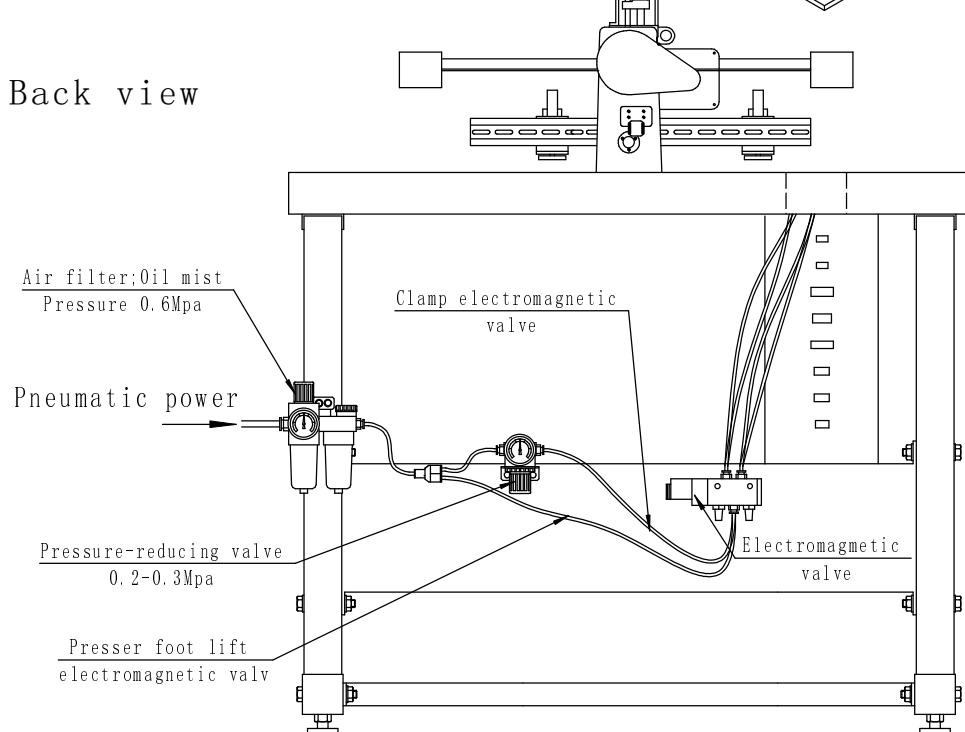
Pic.8

## VIII、Plan view of complete machine

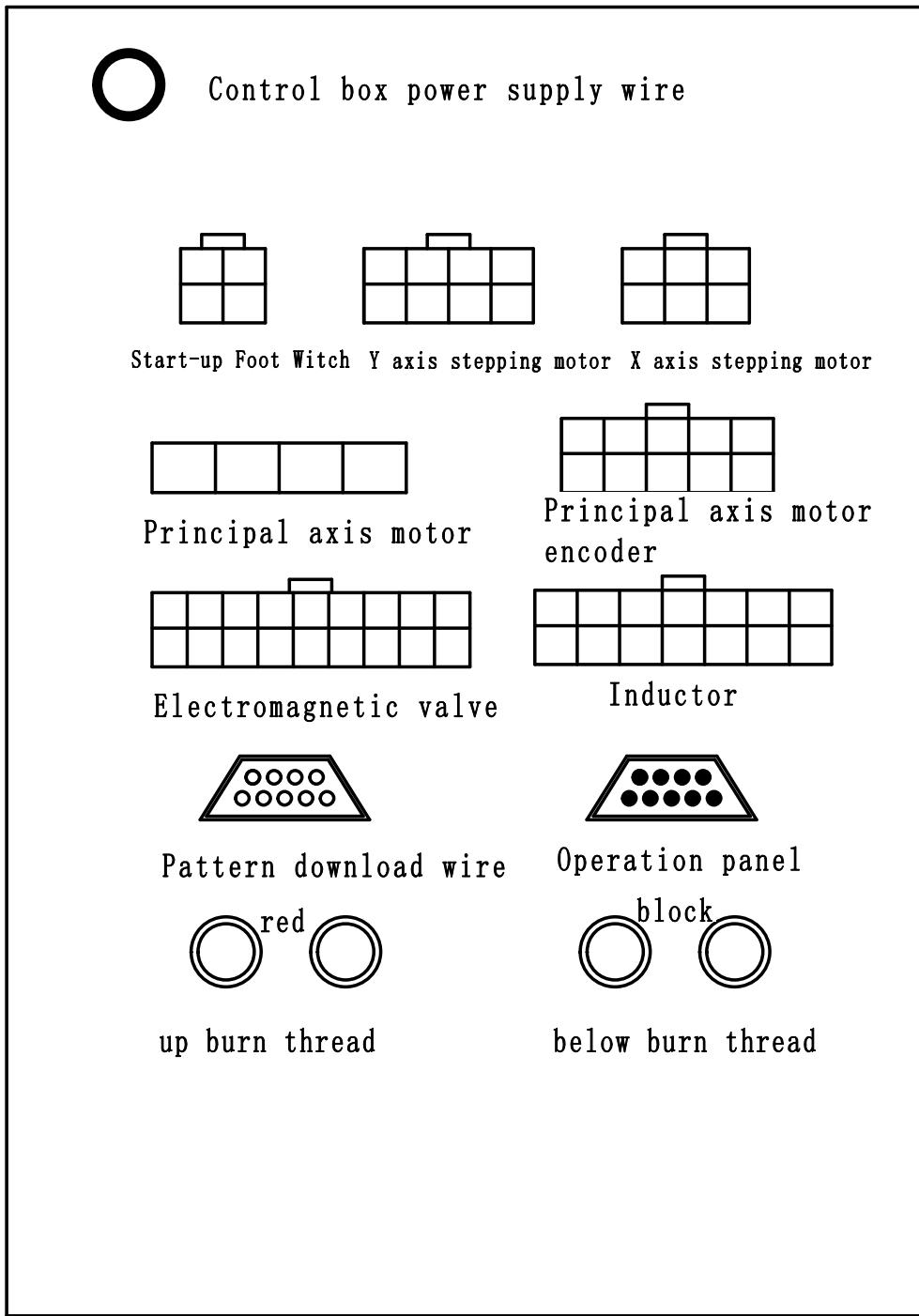
Front view



Back view

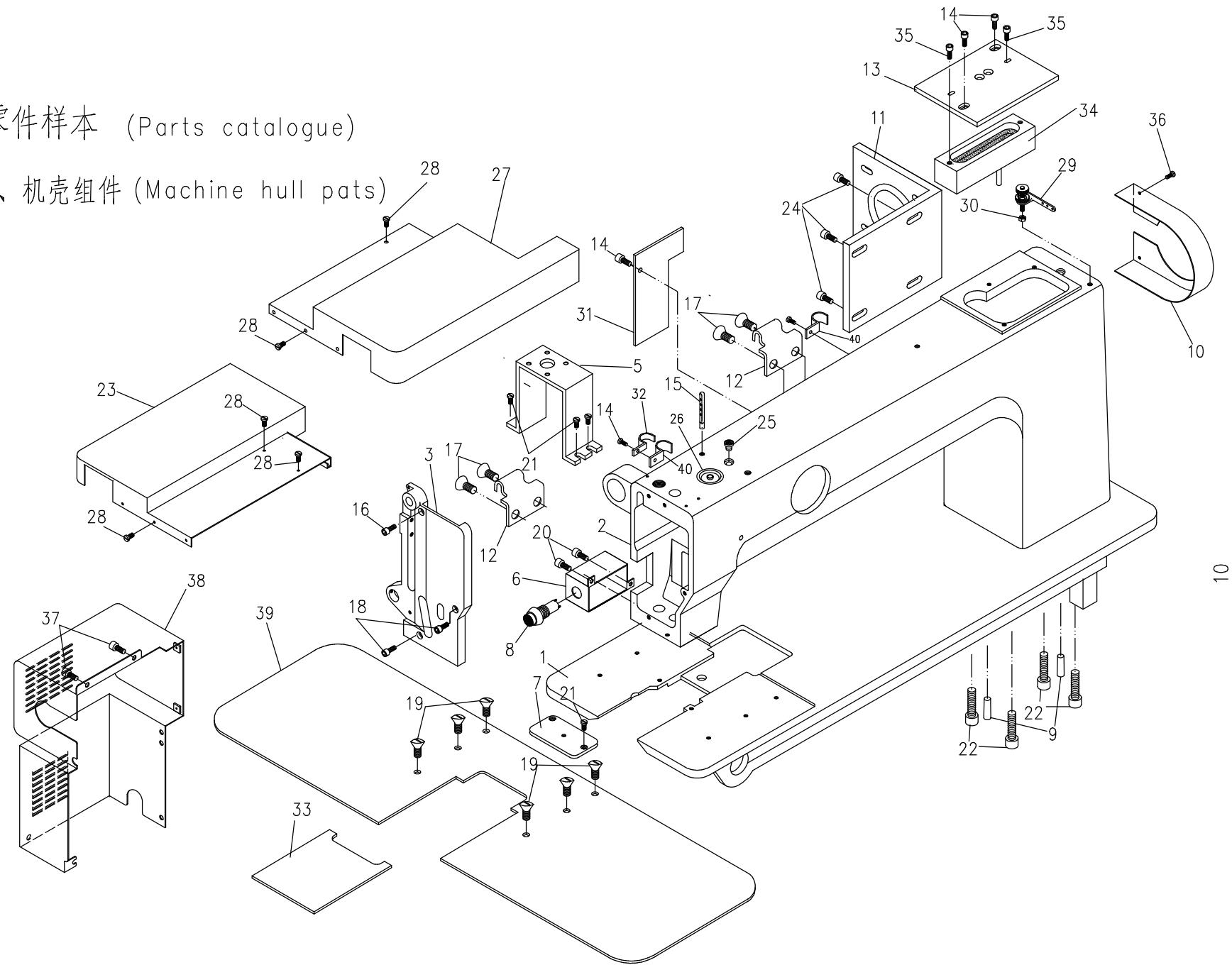


## IX、Outside connection



## 十、零件样本 (Parts catalogue)

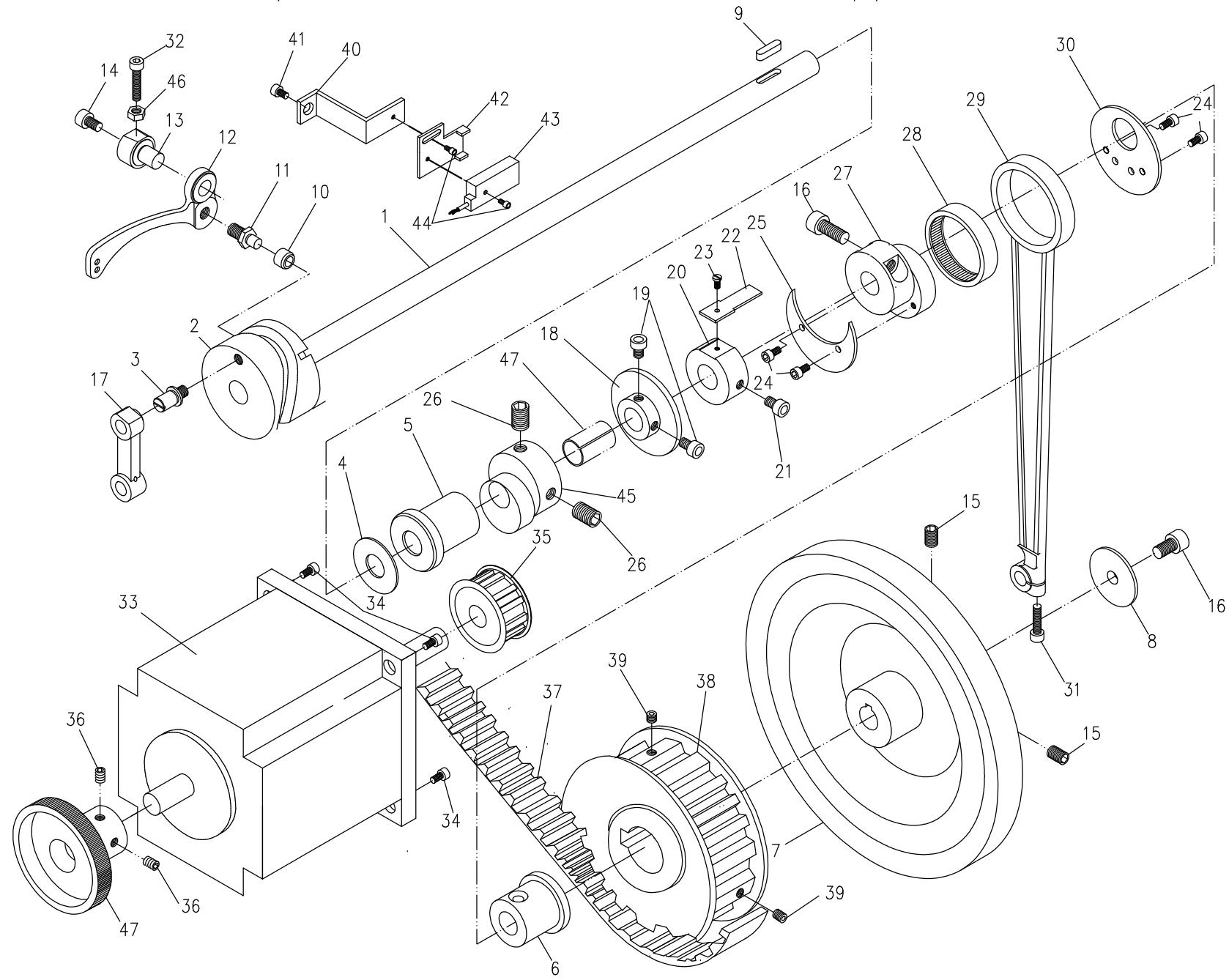
### (一)、机壳组件 (Machine hull parts)



# (一)、机壳组件(Machine hull parts)

| 序号 | 零件件号     | 零件名称    | Description             | 件数 | 备注    |
|----|----------|---------|-------------------------|----|-------|
| 1  | 50200101 | 底板      | bottom plate            | 1  |       |
| 2  | 50200102 | 机壳      | head case               | 1  |       |
| 3  | SF0104   | 前盖      | face plate              | 1  |       |
| 4  | 108A0104 | 缝合板     | sewing board            | 1  |       |
| 5  | 1070105  | 抬压脚汽缸支座 | cylinder support        | 1  |       |
| 6  | 1070106  | 急停开关防护罩 | shield cap              | 1  |       |
| 7  | 50200107 | 针板      | needle plate            | 1  |       |
| 8  | 1070134  | 急停开关    | switch                  | 1  |       |
| 9  | GS105    | 机壳销     | pin                     | 2  |       |
| 10 | 1070110  | 皮带罩     | belt hood               | 1  |       |
| 11 | 1070111  | 主轴电机支承板 | electromotor support    | 1  |       |
| 12 | GXR222   | 合页2     | hinge 2                 | 2  |       |
| 13 | GK201    | 上盖板     | upper cover plate       | 1  |       |
| 14 | GS13310  | 上盖板螺钉   | screw                   | 4  |       |
| 15 | GS101    | 穿线钉     | threading screw         | 1  |       |
| 16 | GS13318  | 前盖板螺钉   | screw                   | 1  |       |
| 17 | GS17520  | 合页2螺钉   | screw                   | 4  |       |
| 18 | GS13325  | 前盖板螺钉   | screw                   | 2  |       |
| 19 | GS16212  | 缝合板螺钉   | screw                   | 6  |       |
| 20 | GS13212  | 开关防护罩螺钉 | screw                   | 2  |       |
| 21 | GS172    | 针板螺钉    | screw                   | 8  |       |
| 22 | GS13635  | 机壳螺钉    | screw                   | 4  |       |
| 23 | 50200123 | 左防护罩    | left shield cap         | 1  |       |
|    | 30200123 | 左防护罩    | left shield cap         | 1  |       |
| 24 | GS13416  | 电机支承板螺钉 | screw                   | 4  |       |
| 25 | GK209A   | 小油堵     | small oil seal          | 4  |       |
| 26 | GK208    | 大油堵     | big oil seal            | 1  |       |
| 27 | 50200127 | 右防护罩    | right shield cap        | 1  |       |
|    | 30200127 | 右防护罩    | right shield cap        | 1  |       |
| 28 | GS12208  | 防护罩螺钉   | screw                   | 10 |       |
| 29 | 1070131  | 绕线器夹线组件 | tensin threed stand     | 1  |       |
| 30 | GL203    | 夹线螺母    | nut                     | 1  |       |
| 31 | 108A0131 | 小窗口盖板   | cover plate             | 1  |       |
| 32 | 1070136  | 电线压板II  | press plate             | 1  |       |
| 33 | 50200133 | 推板      | sliding plate           | 1  |       |
| 34 | GK203    | 油盒      | oil box                 | 1  |       |
| 35 | GS12212  | 油盒螺钉    | screw                   | 2  |       |
| 36 | GS12104  | 护针板螺钉   | screw                   | 2  | 借用204 |
| 37 | GS12310  | 电机罩螺钉   | screw                   | 4  |       |
| 38 | 1070139  | 电机罩     | electromotor shield cap | 1  |       |
| 39 | 50200139 | 缝合板     | sewing board            | 1  |       |
| 40 | 1070134  | 电线压板I   | press plate             | 2  |       |
| 41 |          |         |                         |    |       |
| 42 |          |         |                         |    |       |

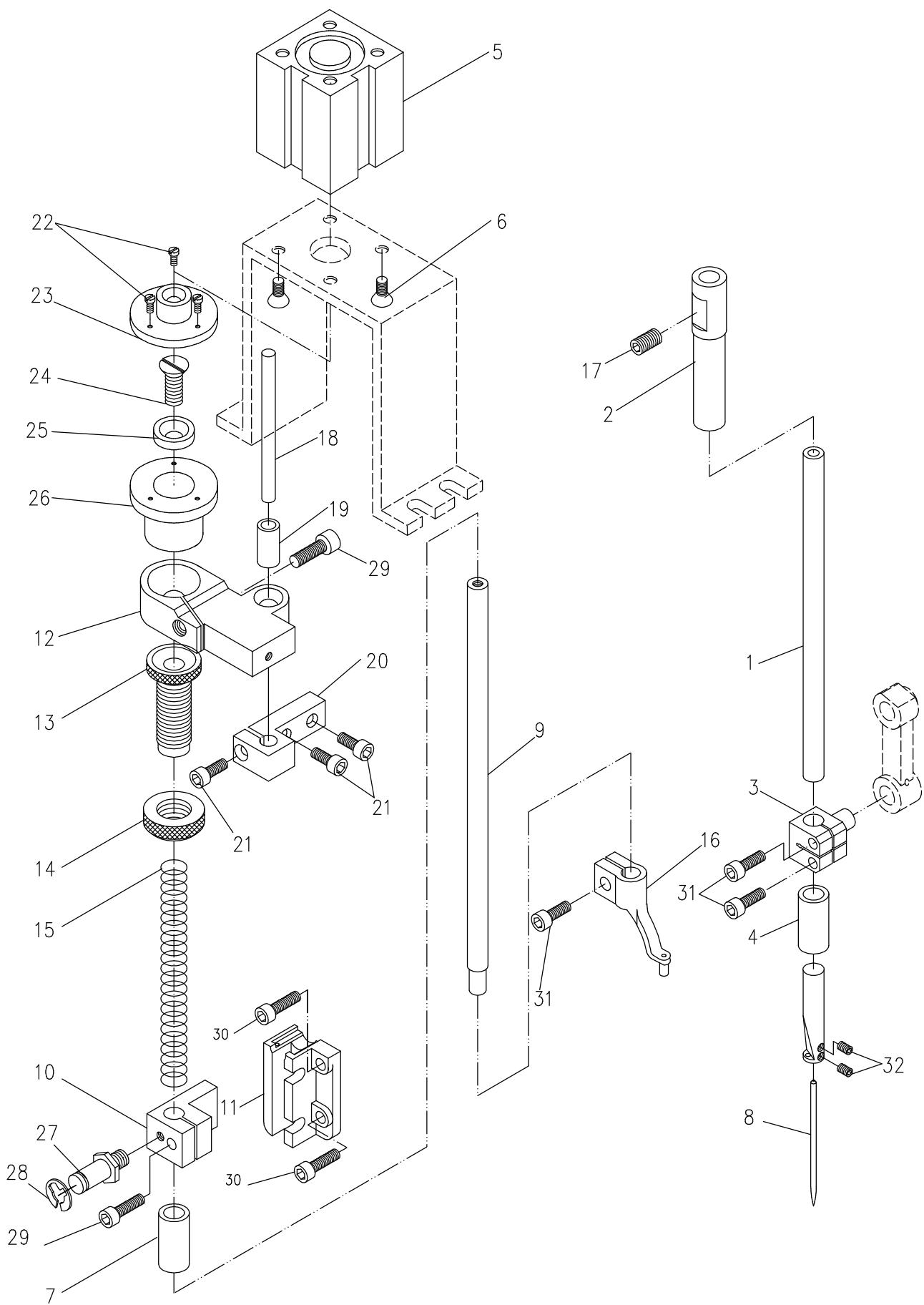
(二)、上轴、挑线组件(Arm shaft and thread take-up)



(二)、上轴、挑线组件(Arm shaft and thread take-up)

| 序号 | 零件件号    | 零件名称     | Description             | 件数 | 备注                |
|----|---------|----------|-------------------------|----|-------------------|
| 1  | GZ107   | 上轴       | upper shaft             | 1  | 108A借用GA204-420上轴 |
| 2  | GP104   | 挑线凸轮     | raising thread cam      | 1  |                   |
| 3  | GX100   | 挑线凸轮连杆销钉 | screw                   | 1  |                   |
| 4  | GS215   | 前轴套垫片    | washer                  | 1  |                   |
| 5  | GO109   | 上轴前轴套    | shaft bushing front     | 1  |                   |
| 6  | GO107   | 上轴后轴套    | shaft bushing back      | 1  |                   |
| 7  | 1070207 | 大皮带轮     | on turns                | 1  |                   |
| 8  | GK217   | 皮带轮垫片    | washr                   | 1  |                   |
| 9  | GK216   | 上轴键      | upper shaft key         | 1  |                   |
| 10 | GU100   | 挑线滚轮     | roller shaft            | 1  |                   |
| 11 | GZ105   | 挑线滚轮轴    | roller shaft screw      | 1  |                   |
| 12 | M0212   | 挑线杆      | thread take-up lever    | 1  |                   |
| 13 | M0213   | 挑线杆轴     | raising thread shaft    | 1  |                   |
| 14 | GS13412 | 挑线杆轴螺钉   | screw                   | 1  |                   |
| 15 | GS11516 | 皮带轮紧固螺钉  | screw                   | 2  |                   |
| 16 | GS13525 | 皮带轮安全螺钉  | screw                   | 2  |                   |
| 17 | 1070217 | 针杆连杆     | small connecting rod    | 1  |                   |
| 18 | GP112   | 主动摩擦轮    | driving frictiong wbeel | 1  |                   |
| 19 | GS13410 | 主动摩擦轮螺钉  | screw                   | 2  |                   |
| 20 | 1070220 | 上轴感应铁固定环 | fixer loop              | 1  |                   |
| 21 | GS13412 | 固定环螺钉    | screw                   | 2  |                   |
| 22 | 1070222 | 上轴感应铁    | iron-inductor           | 1  |                   |
| 23 | GS12206 | 感应铁螺钉    | screw                   | 1  |                   |
| 24 | GS13206 | 偏心套挡片螺钉  | screw                   | 4  |                   |
| 25 | GK237   | 偏心挡片B    | side plate(B)           | 1  |                   |
| 26 | GS13520 | 偏心套夹紧螺钉  | screw                   | 1  |                   |
| 27 | GO129   | 偏心套      | eccentric sleeve        | 1  |                   |
| 28 | HK4512  | 轴承       | needle roller bearing   | 1  |                   |
| 29 | GH129   | 大连杆体     | connecting rod          | 1  |                   |
| 30 | GK236   | 偏心挡片A    | side plate(A)           | 1  |                   |
| 31 | GS13316 | 大连杆体紧固螺钉 | screw                   | 1  |                   |
| 32 | GS13440 | 挑线杆轴紧固螺钉 | screw                   | 1  |                   |
| 33 | 1070233 | 主轴电动机    | electromotor            | 1  |                   |
| 34 | GS13316 | 主轴电机安装螺钉 | screw                   | 4  |                   |
| 35 | 1070235 | 主轴电动机带轮  | electromotor wheel      | 1  |                   |
| 36 | GS11405 | 电机带轮紧固螺钉 | screw                   | 4  |                   |
| 37 | 1070237 | 同步带      | in-phase belt           | 1  |                   |
| 38 | 1070238 | 主轴带轮     | principal axis wheel    | 1  |                   |
| 39 | GS11416 | 主轴带轮紧固螺钉 | screw                   | 2  |                   |
| 40 | 1070240 | 上轴传感器支座  | sensor support          | 1  |                   |
| 41 | GS13310 | 支座螺钉     | screw                   | 1  |                   |
| 42 | 1070242 | 上轴传感器固定架 | sensor rivet support    | 1  |                   |
| 43 | 1070243 | 传感器      | sensor                  | 1  |                   |
| 44 | GS13108 | 传感器螺钉    | screw                   | 2  |                   |
| 45 | 1070245 | 压脚升降偏心轮  | presser foot lift cam   | 1  |                   |
| 46 | GL106   | 锁紧螺母     | nut                     | 1  |                   |
| 47 | 1070247 | 主电机手轮    | electromotor wheel      | 1  |                   |
| 48 |         |          |                         |    |                   |
| 49 |         |          |                         |    |                   |
| 50 |         |          |                         |    |                   |

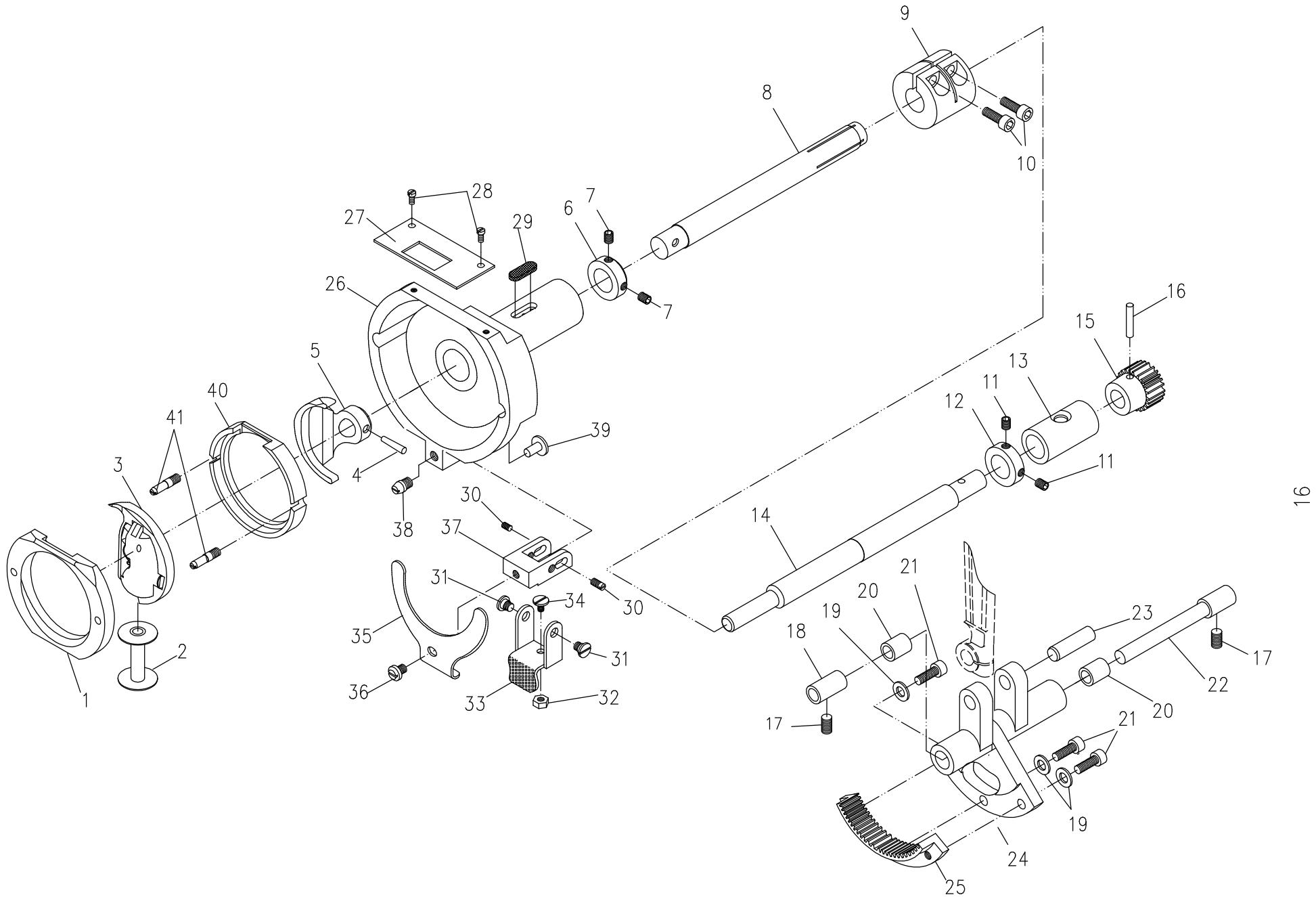
### (三)、针杆、压杆组件(Needle bar and presser bar)



(三)、针杆、压杆组件(Needle bar and presser bar)

| 序号 | 零件件号    | 零件名称       | Description                       | 件数 | 备注       |
|----|---------|------------|-----------------------------------|----|----------|
| 1  | 1070301 | 针杆         | needle bar                        | 1  |          |
| 2  | M0302   | 针杆上衬套      | bushing                           | 1  |          |
| 3  | GH118   | 针杆连接轴      | needle bar connecting shaft       | 1  |          |
| 4  | M0304   | 针杆下衬套      | bushing                           | 1  |          |
| 5  | 1070305 | 压脚提升汽缸     | cylinder                          | 1  |          |
| 6  | GS16312 | 汽缸固定螺钉     | screw                             | 4  |          |
| 7  | M0307   | 压杆下衬套      | pressing rod lower bushing        | 1  |          |
| 8  | DY×3    | 机针         | needle                            | 1  |          |
| 9  | 1070309 | 压杆         | pressing rod                      | 1  |          |
| 10 | 1070310 | 压杆导架       | oriented bracket of pressing rod  | 1  |          |
| 11 | GK226   | 压脚升降定位滑道   | presser lifting locating slideway | 1  |          |
| 12 | 1070312 | 压脚提升导向块    | block                             | 1  |          |
| 13 | GZ125   | 调压螺钉       | presser regulated screw           | 1  |          |
| 14 | M0314   | 调压锁紧螺母     | nut                               | 1  |          |
| 15 | GW201   | 压杆大簧       | presser bar big spring            | 1  |          |
| 16 | 1070316 | 压脚         | presser foot                      | 1  |          |
| 17 | GS11306 | 针杆上衬套螺钉    | screw                             | 1  |          |
| 18 | 1070318 | 压脚提升导向杆    | presser oriented shaft            | 1  |          |
| 19 | GU105   | 针杆连接轴滚柱    | roller                            | 1  | 同GB180-2 |
| 20 | 1070320 | 压脚提升导向座    | presser oriented support          | 1  |          |
| 21 | GS13216 | 导向座螺钉      | screw                             | 2  |          |
| 22 | GS13212 | 压脚提升套筒端盖螺钉 | screw                             | 3  |          |
| 23 | 1070323 | 压脚提升套筒端盖   | sleeve lid                        | 1  |          |
| 24 | GS16316 | 压杆端盖螺钉     | screw                             | 1  |          |
| 25 | 1070325 | 压杆端盖       | screw                             | 1  |          |
| 26 | 1070326 | 压脚提升套筒     | sleeve                            | 1  |          |
| 27 | 1070327 | 抬压脚连杆螺钉    | screw                             | 2  |          |
| 28 | E-05    | 开口挡圈       | block ring                        | 2  |          |
| 29 | GS13320 | 压杆导架紧固螺钉   | screw                             | 2  |          |
| 30 | GS13325 | 滑道螺钉       | screw                             | 2  |          |
| 31 | GS13316 | 针杆连接轴螺钉    | screw                             | 3  |          |
| 32 | GS11205 | 针夹螺钉       | screw                             | 2  |          |
| 33 |         |            |                                   |    |          |
| 34 |         |            |                                   |    |          |
| 35 |         |            |                                   |    |          |
| 36 |         |            |                                   |    |          |
| 37 |         |            |                                   |    |          |
| 38 |         |            |                                   |    |          |
| 39 |         |            |                                   |    |          |
| 40 |         |            |                                   |    |          |
| 41 |         |            |                                   |    |          |
| 42 |         |            |                                   |    |          |
| 43 |         |            |                                   |    |          |
| 44 |         |            |                                   |    |          |

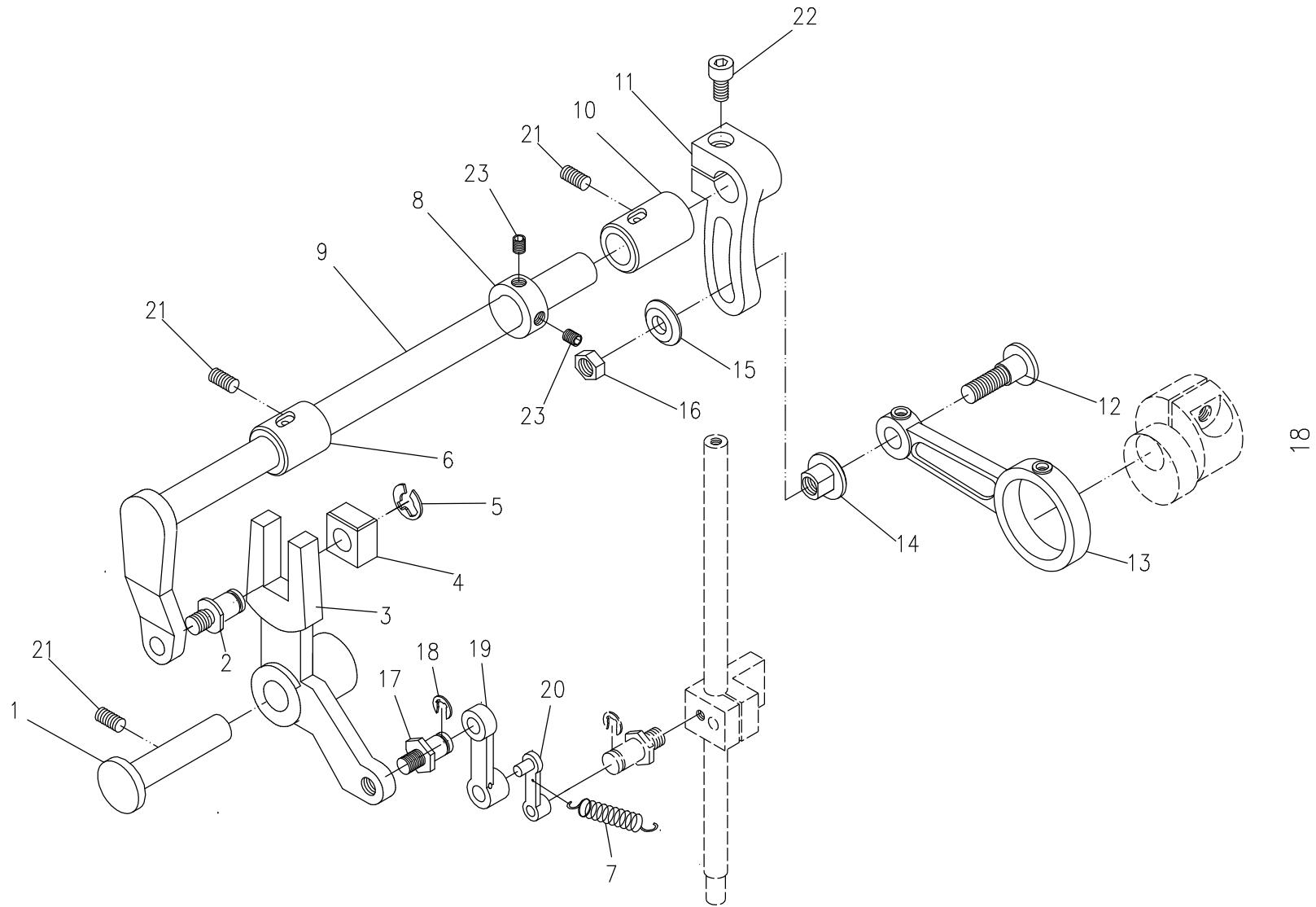
(四) 下轴、摆轴组件(Lower shaft and pendulum shaft)



(四) 下轴、摆轴组件(Lower shaft and pendulum shaft)

| 序号 | 零件件号    | 零件名称     | Description                   | 件数 | 备注    |
|----|---------|----------|-------------------------------|----|-------|
| 1  | GN118   | 梭床盖      | bobbin bed cover              | 1  |       |
| 2  | GN116   | 梭心       | bobbin                        | 1  |       |
| 3  | GN111/9 | 摆梭       | shuttle hook                  | 1  |       |
| 4  | GX121   | 摆梭托锥肖    | pin                           | 1  |       |
| 5  | GR258   | 摆梭托      | swinging shuttle support      | 1  | Ø3X21 |
| 6  | GK242   | 下轴II挡圈   | block ring                    | 1  |       |
| 7  | GS11305 | 下轴挡圈紧定螺钉 | screw                         | 2  |       |
| 8  | GZ113   | 下轴II     | below axis II                 | 1  |       |
| 9  | GZ239   | 下轴紧圈     | tight ring of lower shaft     | 1  |       |
| 10 | GS13416 | 下轴紧圈螺钉   | screw                         | 2  |       |
| 11 | GS11305 | 下轴I挡圈螺钉  | screw                         | 2  |       |
| 12 | GK240   | 下轴I挡圈    | blocking ring of lower shaft  | 1  |       |
| 13 | C0131   | 下轴I后轴套   | back shaft bushing            | 1  |       |
| 14 | GZ112   | 下轴I      | lower shaft(1)                | 1  |       |
| 15 | GP107   | 下轴小齿轮    | small gear of lower shaft     | 1  |       |
| 16 | M0415   | 小齿轮锥销    | pin                           | 1  |       |
| 17 | GS10414 | 下摆轴轴套螺钉  | screw                         | 2  |       |
| 18 | G0130   | 下摆轴轴套    | bushing                       | 1  |       |
| 19 | M0519   | 扇形齿轮螺钉垫圈 | washer                        | 3  |       |
| 20 | G0132   | 下摆轴架小套   | bushing                       | 2  |       |
| 21 | GS13318 | 扇形齿轮紧固螺钉 | screw                         | 3  |       |
| 22 | GZ111   | 下摆轴      | swinging shaft                | 1  |       |
| 23 | GZ128   | 大连杆销轴    | shaft                         | 1  |       |
| 24 | GK238   | 摆轴架      | pendulum axle stand           | 1  |       |
| 25 | GP106   | 扇形齿轮     | pendulum axle fan-shaped gear | 1  |       |
| 26 | GN117   | 梭床座      | body of shuttle bed           | 1  |       |
| 27 | GR262   | 护针板      | needle protectting board      | 1  |       |
| 28 | GS12104 | 护针板螺钉    | screw                         | 2  |       |
| 29 | GK249   | 梭床油毡垫    | oil felt                      | 1  |       |
| 30 | GS10208 | 压紧架转轴螺钉  | screw                         | 2  |       |
| 31 | GX112   | 扳手转轴螺钉   | screw                         | 2  |       |
| 32 | GL203   | 扳手轴位螺母   | nut                           | 1  |       |
| 33 | GK243   | 压紧架扳手    | press stang spanner           | 1  |       |
| 34 | GX113   | 扳手轴位螺钉   | screw                         | 1  |       |
| 35 | GW111   | 压盖簧      | ring-pressing spring          | 1  |       |
| 36 | GX117   | 压盖簧螺钉    | screw                         | 1  |       |
| 37 | GK241   | 梭床压紧架    | bobbin bed press stand        | 1  |       |
| 38 | GX109   | 压紧架轴位螺钉  | screw                         | 1  |       |
| 39 | GX108   | 压紧架轴位销钉  | screw                         | 1  |       |
| 40 | GN110   | 梭床       | bobbin bed                    | 1  |       |
| 41 | GS163   | 梭床螺钉     | bobbin bed screw              | 2  |       |
| 42 |         |          |                               |    |       |
| 43 |         |          |                               |    |       |
| 44 |         |          |                               |    |       |

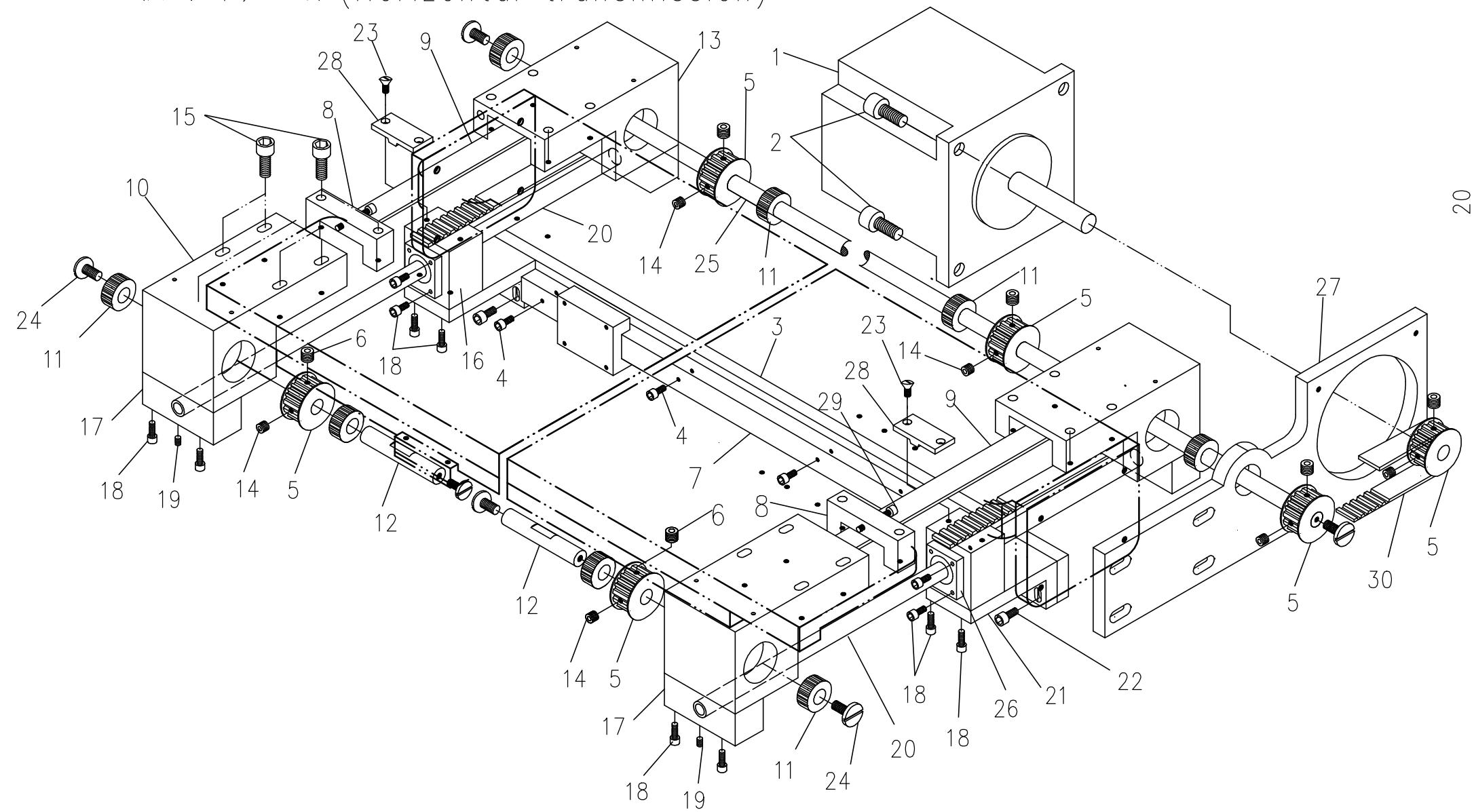
(五)、同步压脚升降组件(Presser foot lift timing)



## (五)、同步压脚升降组件(Presser foot lift timing)

| 序号 | 零件件号     | 零件名称        | Description                  | 件数 | 备注 |
|----|----------|-------------|------------------------------|----|----|
| 1  | 810-1216 | 挑线曲柄连杆销     | pin                          | 1  |    |
| 2  | GZ136    | 抬牙滑块销钉      | pin                          | 1  |    |
| 3  | 1070503  | 压脚升降叉杆      | presser foot lift feeth fork | 1  |    |
| 4  | GU111    | 铜滑块         | glide block                  | 1  |    |
| 5  | GW203    | 抬牙轴卡簧       | shaped snap spring           | 1  |    |
| 6  | GO127    | 压脚升降轴前轴套    | lifting shaft front sleeve   | 1  |    |
| 7  | GW122    | 绕线器拉簧       | spring                       | 1  |    |
| 8  | SF1303   | 压脚升降轴挡圈     | lifting shaft blocking ring  | 1  |    |
| 9  | 1070509  | 压脚升降轴       | pressing foot lift shaft     | 1  |    |
| 10 | GO126    | 压脚升降轴后轴套    | lifting shaft back sleeve    | 1  |    |
| 11 | GH146    | 压脚升降调整后曲柄   | lifting adjusting back crank | 1  |    |
| 12 | GS150    | 轴位螺钉        | screw                        | 1  |    |
| 13 | GD0606   | 压脚升降偏心轮连杆   | lifting connecting rod       | 1  |    |
| 14 | GL108    | 调整螺母        | nut                          | 1  |    |
| 15 | GR245    | 轴位螺钉垫圈      | washer                       | 1  |    |
| 16 | GL106    | 锁紧螺母        | nut                          | 1  |    |
| 17 | 1070327  | 抬压脚连杆螺钉     | screw                        | 1  |    |
| 18 | E-05     | 开口挡圈        | E-type                       | 2  |    |
| 19 | 1070519  | 抬压脚连杆(下)    | below connecting rod         | 1  |    |
| 20 | 1070520  | 抬压脚连杆(上)    | top connecting rod           | 1  |    |
| 21 | GS11308  | 压脚升降轴前后轴套螺钉 | screw                        | 3  |    |
| 22 | GS13416  | 压脚升降曲柄螺钉    | screw                        | 1  |    |
| 23 | GS11306  | 升降轴挡圈螺钉     | screw                        | 2  |    |
| 24 |          |             |                              |    |    |
| 25 |          |             |                              |    |    |
| 26 |          |             |                              |    |    |
| 27 |          |             |                              |    |    |
| 28 |          |             |                              |    |    |
| 29 |          |             |                              |    |    |
| 30 |          |             |                              |    |    |
| 31 |          |             |                              |    |    |
| 32 |          |             |                              |    |    |
| 33 |          |             |                              |    |    |
| 34 |          |             |                              |    |    |
| 35 |          |             |                              |    |    |
| 36 |          |             |                              |    |    |
| 37 |          |             |                              |    |    |
| 38 |          |             |                              |    |    |
| 39 |          |             |                              |    |    |
| 40 |          |             |                              |    |    |
| 41 |          |             |                              |    |    |
| 42 |          |             |                              |    |    |
| 43 |          |             |                              |    |    |
| 44 |          |             |                              |    |    |

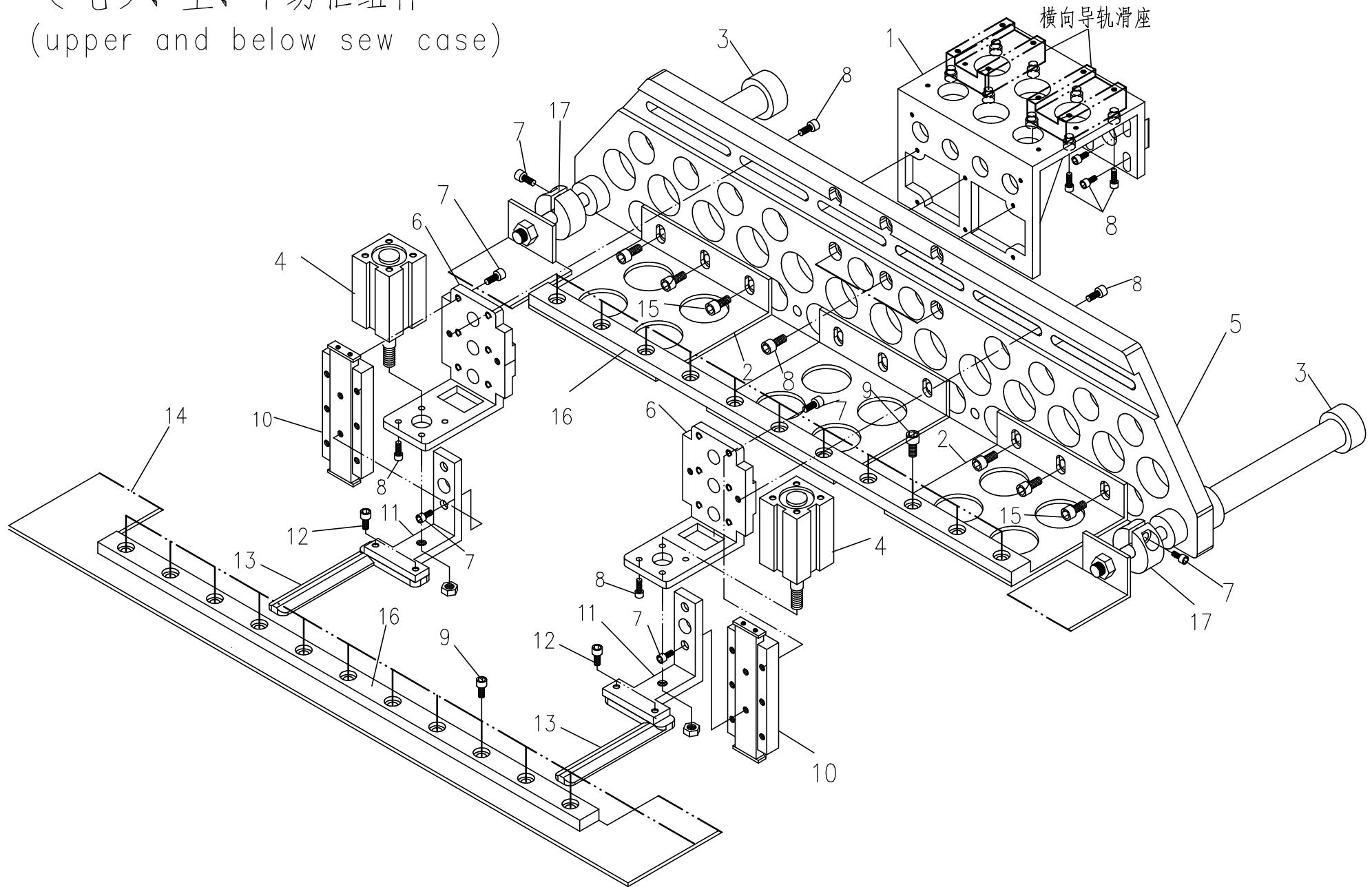
(六)、横向传动组件 (Horizontal transmission)



## (六)、横向传动组件(Horizontal transmission)

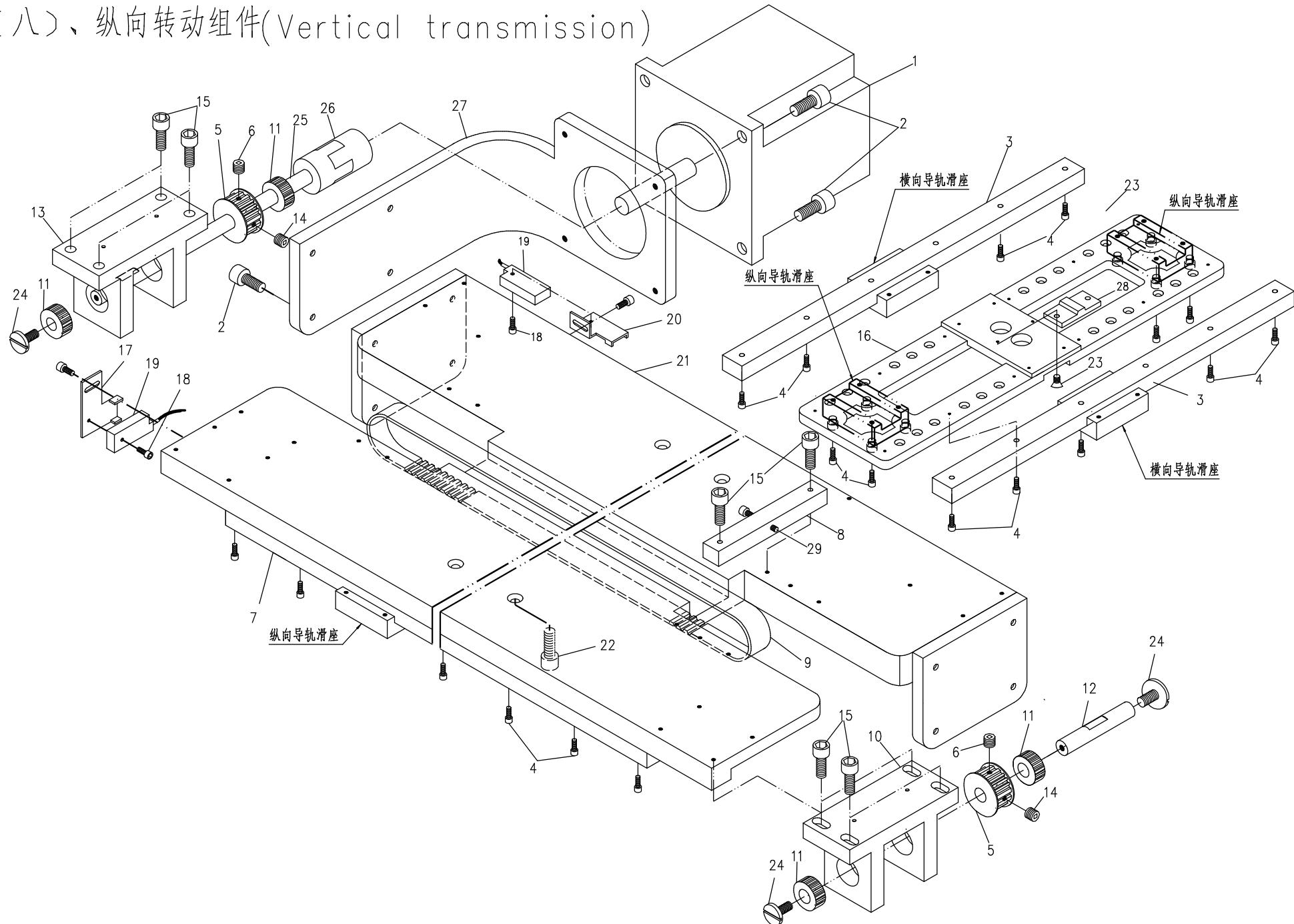
| 序号 | 零件件号     | 零件名称        | Description                | 件数 | 备注 |
|----|----------|-------------|----------------------------|----|----|
| 1  | 50200601 | 横向电动机       | electromotor               | 1  |    |
| 2  | GS13420  | 电机安装螺钉      | screw                      | 8  |    |
| 3  | 50200603 | 引导板         | oriented board             | 1  |    |
|    | 30200603 | 引导板         | oriented board             | 1  |    |
| 4  | GS13212  | 导轨安装螺钉      | screw                      | 12 |    |
| 5  | 50200605 | 齿形带轮        | belt pulley                | 6  |    |
| 6  | GS11508  | 带轮紧定螺钉M8X1  | screw                      | 6  |    |
| 7  | 50200607 | 纵向直线导轨 L580 | linear guideway            | 1  |    |
|    | 108A0707 | 纵向直线导轨 L380 | linear guideway            | 1  |    |
| 8  | 50200608 | 横向张紧座       | tensioner support          | 2  |    |
| 9  | 50200609 | 横向同步带       | synchronization belt       | 2  |    |
| 10 | 50200610 | 横向被动带轮座     | belt pulley support        | 2  |    |
| 11 | 50200611 | 滚针轴承        | bearing                    | 8  |    |
| 12 | 50200612 | 横向被动带轮轴     | belt pulley axis           | 2  |    |
| 13 | 50200613 | 横向主动带轮座     | belt pulley support        | 2  |    |
| 14 | GS11406  | 带轮紧定螺钉M6    | screw                      | 6  |    |
| 15 | GS13320  | 被动带轮支座螺钉    | screw                      | 20 |    |
| 16 | 50200631 | 引导座         | oriented support           | 2  |    |
| 17 | 50200617 | 导向轴固定架      | support of oriented axis   | 4  |    |
| 18 | GS13216  | 导向架螺钉       | screw                      | 24 |    |
| 19 | GS11306  | 导向轴紧定螺钉     | screw                      | 4  |    |
| 20 | 50200620 | 导向轴         | oriented axis              | 2  |    |
| 21 | 50200621 | 引导座连接板      | oriented board             | 2  |    |
| 22 | GS13312  | 连接螺钉        | screw                      | 4  |    |
| 23 | GS16212  | 缝台板螺钉       | screw                      | 4  |    |
| 24 | GS153    | 差动压脚托架螺钉    | screw                      | 6  |    |
| 25 | 50200625 | 横向主动带轮轴     | belt pulley axis           | 1  |    |
|    | 30200625 | 横向主动带轮轴     | belt pulley axis           | 1  |    |
| 26 | 50200626 | 直线轴承        | bearing                    | 2套 |    |
| 27 | 50200627 | 横向电机连接板     | link board of electromotor | 1  |    |
| 28 | 50200628 | 皮带压板        | belt press board           | 2  |    |
| 29 | GS13230  | 调节螺钉        | screw                      | 2  |    |
| 30 | 50200630 | 电机同步带       | synchronization belt       | 1  |    |
| 31 |          |             |                            |    |    |
| 32 |          |             |                            |    |    |
| 33 |          |             |                            |    |    |
| 34 |          |             |                            |    |    |
| 35 |          |             |                            |    |    |
| 36 |          |             |                            |    |    |
| 37 |          |             |                            |    |    |
| 38 |          |             |                            |    |    |
|    |          |             |                            |    |    |
|    |          |             |                            |    |    |
|    |          |             |                            |    |    |

(七)、上、下绣框组件  
(upper and below sew case)



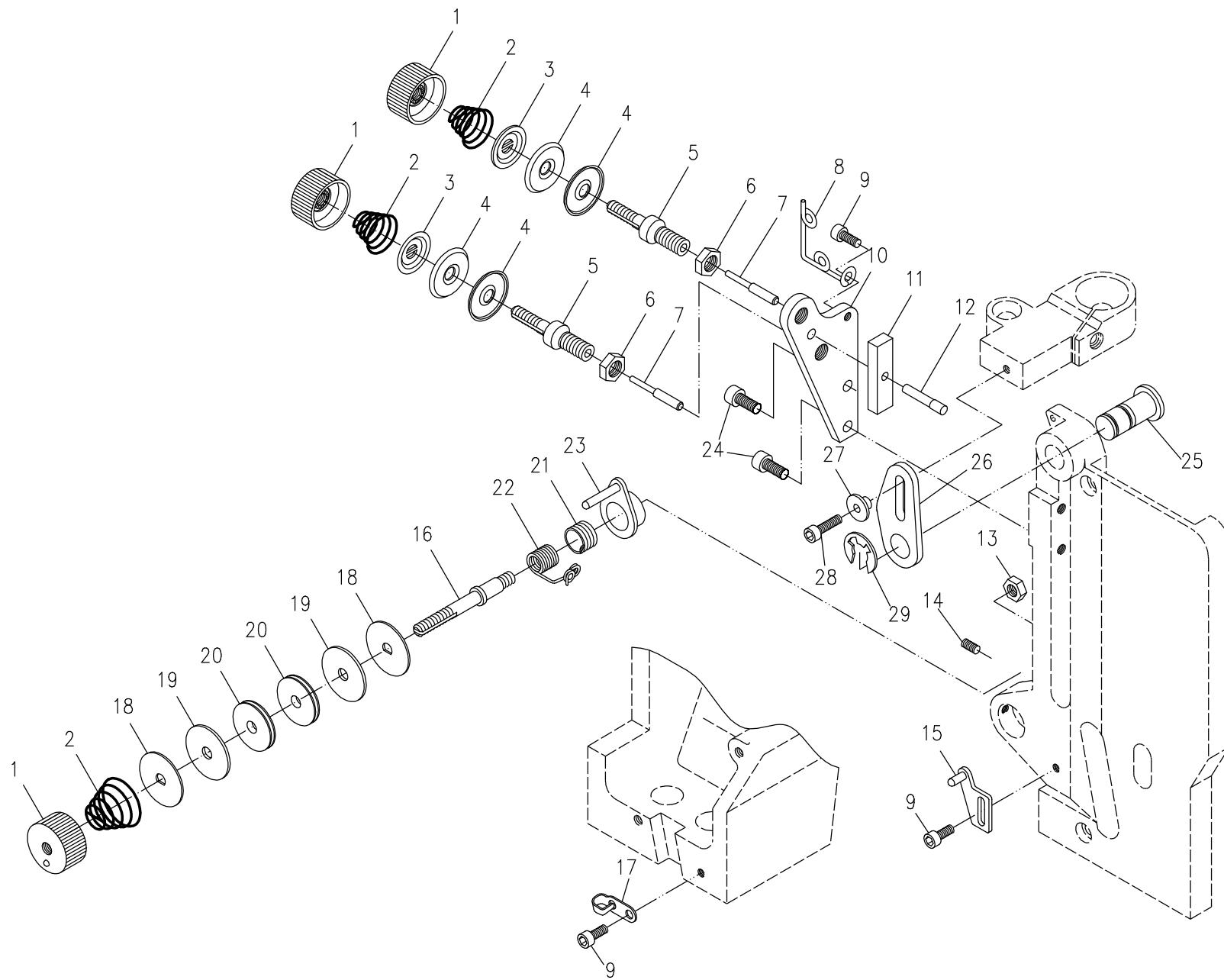
(七)、上、下绣框组件 (upper and below sew case)

## (八)、纵向转动组件(Vertical transmission)



## (八)、纵向转动组件(Vertical transmission)

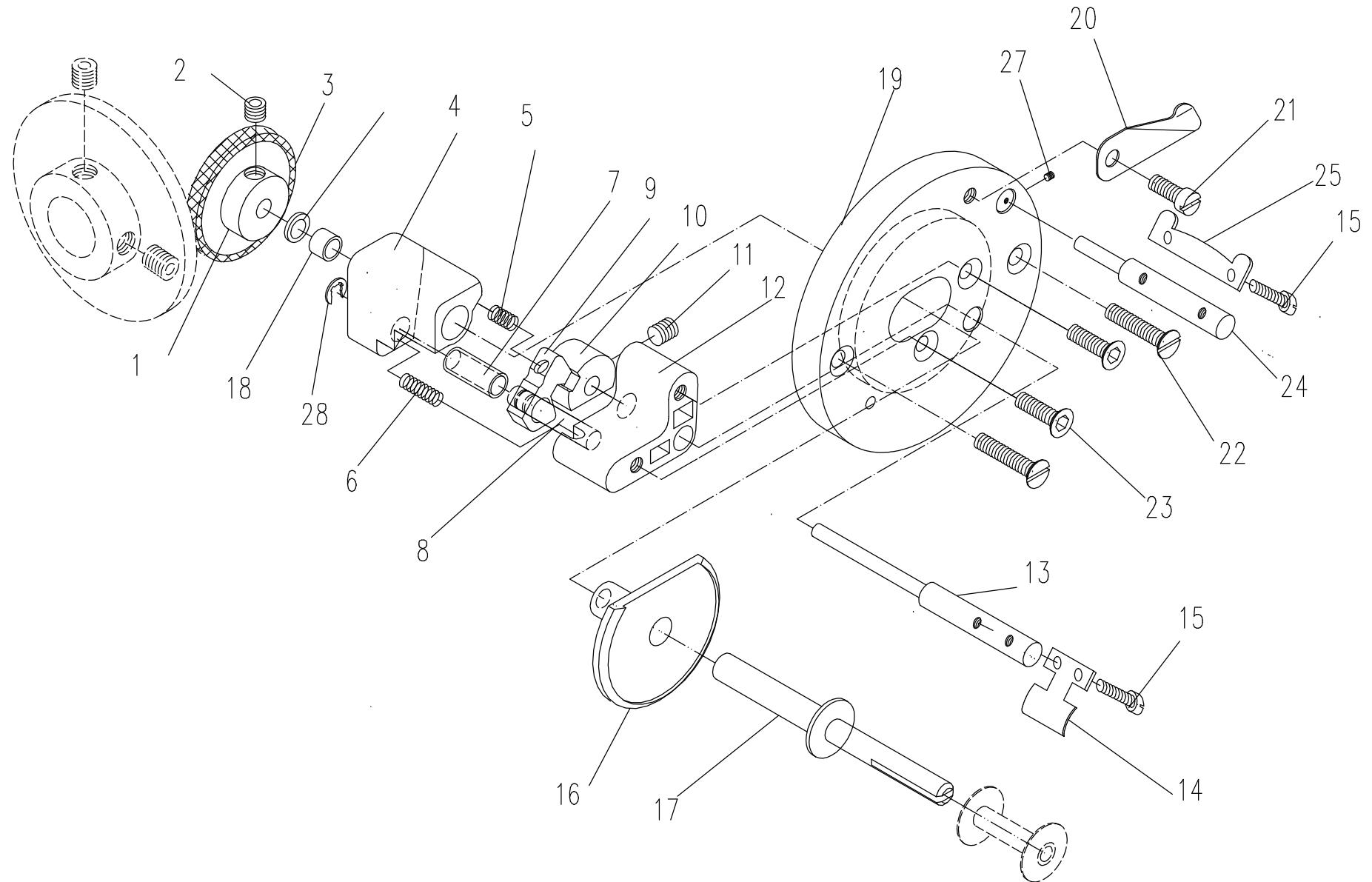
(九)、夹线、过线组件(Thread tension)



## (九)、夹线、过线组件(Thread tension)

| 序号 | 零件件号    | 零件名称     | Description            | 件数 | 备注 |
|----|---------|----------|------------------------|----|----|
| 1  | GLS204  | 夹线螺母     | tension nut            | 3  |    |
| 2  | GW115   | 夹线簧      | spring                 | 3  |    |
| 3  | GK232   | 松线板      | thread releasing plate | 2  |    |
| 4  | GK123   | 夹线板      | tension plate          | 4  |    |
| 5  | GZ126   | 夹线螺钉     | screw tension          | 2  |    |
| 6  | GL205   | 锁紧螺母     | nut                    | 2  |    |
| 7  | GX106   | 松线钉      | loosen bolt            | 2  |    |
| 8  | M0908   | 过线圈      | thread passing ring    | 1  |    |
| 9  | GS13208 | 过线圈螺钉    | screw                  | 3  |    |
| 10 | M0910   | 夹线架      | thread tension rack    | 1  |    |
| 11 | M0911   | 松线板1     | thread releasing plate | 1  |    |
| 12 | M0912   | 松线板销     | pin                    | 1  |    |
| 13 | GL204   | 过线螺钉锁母   | nut                    | 1  |    |
| 14 | GS11206 | 过线器座固定螺钉 | screw                  | 1  |    |
| 15 | GKS108  | 拨簧支架     | drawing soring stand   | 1  |    |
| 16 | M0916   | 过线螺钉     | screw tension          | 1  |    |
| 17 | GC0819  | 拦线钩      | finger                 | 1  |    |
| 18 | GK233   | 过线板      | thread passing plate   | 2  |    |
| 19 | GK234   | 过线轮毡圈    | washer                 | 2  |    |
| 20 | GP102   | 过线轮      | thread passing wheel   | 2  |    |
| 21 | GW109   | 挑线簧2     | thread take-up soring2 | 1  |    |
| 22 | GW108   | 挑线簧1     | thread take-up spring1 | 1  |    |
| 23 | GKS107  | 过线器座     | thread passing sead    | 1  |    |
| 24 | GS13316 | 松线架螺钉    | screw                  | 1  |    |
| 25 | 1070825 | 松线板定位轴   | shaft                  | 2  |    |
| 26 | 1070826 | 松线压板     | thread releasing plate | 1  |    |
| 27 | M0804   | 松线板连接套   | thread loosing sleeve  | 1  |    |
| 28 | GS13216 | 连接套螺钉    | screw                  | 1  |    |
| 29 | GW211   | 松线板定位轴卡簧 | jump ring              | 1  |    |
| 30 |         |          |                        |    |    |
| 31 |         |          |                        |    |    |
| 32 |         |          |                        |    |    |
| 33 |         |          |                        |    |    |
| 34 |         |          |                        |    |    |
| 35 |         |          |                        |    |    |
| 36 |         |          |                        |    |    |
| 37 |         |          |                        |    |    |
| 38 |         |          |                        |    |    |
| 39 |         |          |                        |    |    |
| 40 |         |          |                        |    |    |
| 41 |         |          |                        |    |    |
| 42 |         |          |                        |    |    |
| 43 |         |          |                        |    |    |
| 44 |         |          |                        |    |    |

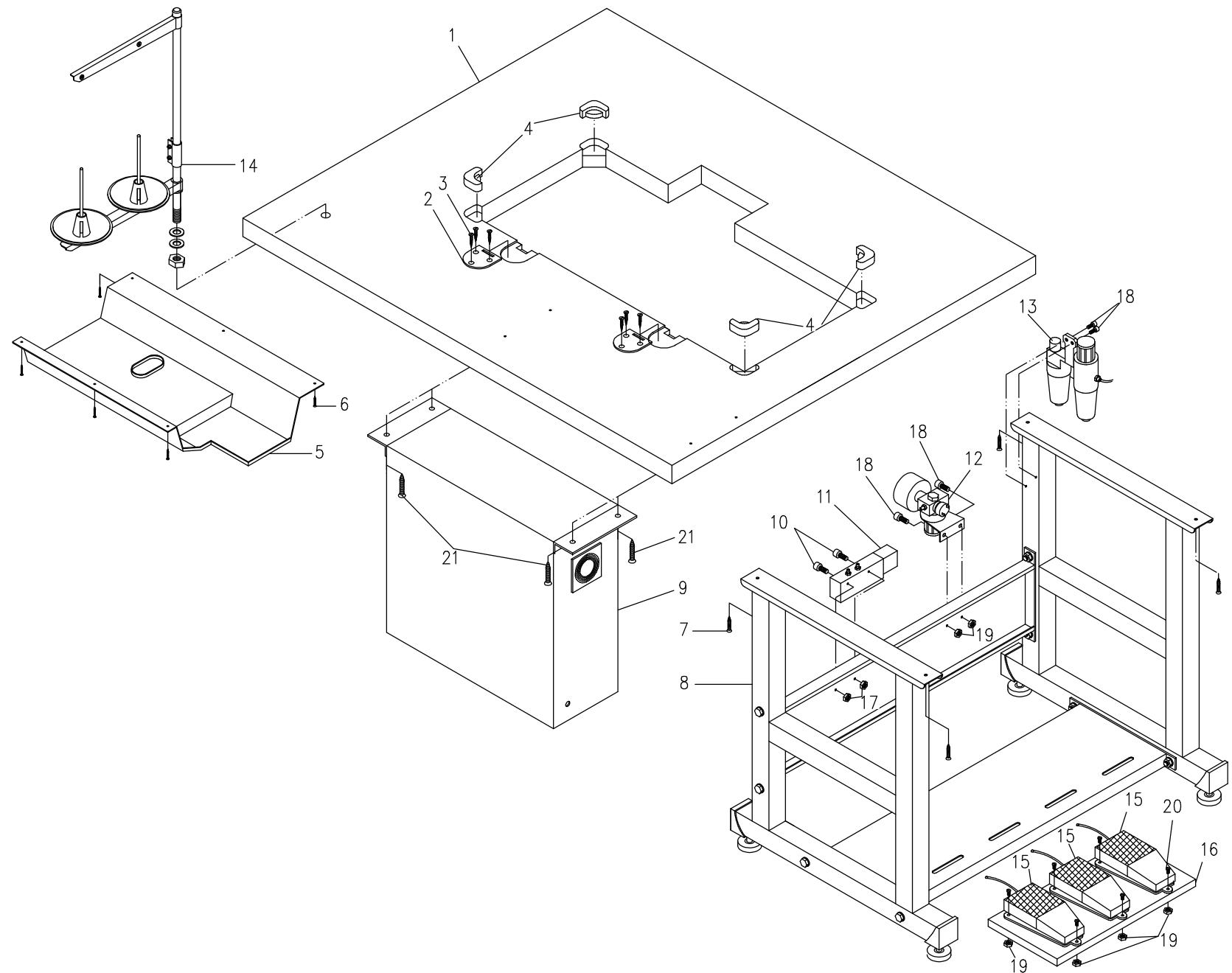
(十)、内置绕线器组件(Built-in bobbin winder)



(十)、内置绕线器组件(Built-in bobbin winder)

| 序号 | 零件件号    | 零件名称      | Description                          | 件数 | 备注 |
|----|---------|-----------|--------------------------------------|----|----|
| 1  | EL0918  | 被动摩擦轮胶圈   | rubber ring                          | 1  |    |
| 2  | GS11306 | 被动摩擦轮紧定螺钉 | screw                                | 1  |    |
| 3  | EL0920  | 被动摩擦轮     | driven friction wheel                | 1  |    |
| 4  | EL0921  | 绕线压力板座    | thread coiling presser plate seat    | 1  |    |
| 5  | EL0922  | 压力弹簧2     | presser spring 2                     | 1  |    |
| 6  | EL0923  | 压力弹簧1     | presser spring 1                     | 1  |    |
| 7  | EL0925  | 压力板小套     | presser plate small bushing          | 1  |    |
| 8  | EL0924  | 压力板芯轴     | presser plate shaft                  | 1  |    |
| 9  | EL0926  | 绕线压板      | thread coiling presser plate         | 1  |    |
| 10 | EL0927  | 绕线控制板     | thread coiling controller plate      | 1  |    |
| 11 | GS11305 | 绕线控制板顶丝   | screw                                | 1  |    |
| 12 | EL0929  | 绕线控制板座    | thread coiling controller plate seat | 1  |    |
| 13 | 1070913 | 满线跳板轴     | full reel springboard shaft          | 1  |    |
| 14 | 1070914 | 满线跳板      | full reel springboard                | 1  |    |
| 15 | GS13112 | 满线跳板调整螺钉  | regulate screw                       | 1  |    |
| 16 | EL0933  | 压力板座底盘    | presser plate base dial              | 1  |    |
| 17 | 1070917 | 梭心轴       | bobbin shaft                         | 1  |    |
| 18 | EL0941  | 绕线压板座套    | thread coiling presser plate washer  | 1  |    |
| 19 | EL0936  | 绕线器接盘     | bobbin winder connecting dial        | 1  |    |
| 20 | EL0937  | 小剪刀       | small scissors                       | 1  |    |
| 21 | GS13208 | 小剪刀紧固螺钉   | screw                                | 2  |    |
| 22 | GS17212 | 绕线器接盘螺钉   | screw                                | 2  |    |
| 23 | GS16210 | 绕线器接盘螺钉   | screw                                | 2  |    |
| 24 | 1070924 | 排线板轴      | shaft                                | 1  |    |
| 25 | 1070925 | 排线板       | plate                                | 2  |    |
| 26 | D-05    | 摩擦轮平垫     | washing                              | 2  |    |
| 27 | GS11105 | 排线轴紧定螺钉   | screw                                | 2  |    |
| 28 | E-04    | 开口挡圈      | E-type                               | 1  |    |
| 29 |         |           |                                      |    |    |
| 30 |         |           |                                      |    |    |
| 31 |         |           |                                      |    |    |
| 32 |         |           |                                      |    |    |
| 33 |         |           |                                      |    |    |
| 34 |         |           |                                      |    |    |
| 35 |         |           |                                      |    |    |
| 36 |         |           |                                      |    |    |
| 37 |         |           |                                      |    |    |
| 38 |         |           |                                      |    |    |
| 39 |         |           |                                      |    |    |
| 40 |         |           |                                      |    |    |
| 41 |         |           |                                      |    |    |
| 42 |         |           |                                      |    |    |
| 43 |         |           |                                      |    |    |
| 44 |         |           |                                      |    |    |

(十一)、台板、机架组件(Table top and stand)



(十一)、台板、机架组件(Table top and stand)

| 序号 | 零件件号     | 零件名称          | Description                 | 件数 | 备注 |
|----|----------|---------------|-----------------------------|----|----|
| 1  | 1071001  | 台板            | table                       | 1  |    |
| 2  | GKR200   | 合页1           | hinge                       | 2  |    |
| 3  | GC1005   | 合页螺钉          | screw                       | 6  |    |
| 4  | GC1004   | 机头胶垫          | upper cushion               | 4  |    |
| 5  | GKR216   | 接油盘           | oil pan                     | 1  |    |
| 6  | GBS112   | 木螺钉           | screw                       | 6  |    |
| 7  | GC1021   | 机架台板紧固螺钉      | screw                       | 4  |    |
| 8  | 1071008  | 机架            | stand                       | 1套 |    |
| 9  | 1071009  | 电控箱           | electron control            | 1  |    |
| 10 | GS13280  | 电磁阀螺钉         | screw                       | 2  |    |
| 11 | 1071011  | 电磁阀           | electromagnetisin valve     | 3  |    |
| 12 | 1071012  | 减压阀及空气压力开关两连件 | decompress valve and switch | 1  |    |
| 13 | 1011013  | 空气油雾滤清器       | air-oil filter              | 1  |    |
| 14 | M1014    | 线架            | thread stand                | 1套 |    |
| 15 | 1071015  | 脚踏开关          | jury-mast switch            | 3  |    |
| 16 | 1071016  | 脚踏开关底板        | pedal                       | 1  |    |
| 17 | GL204    | 电磁阀安装螺母       | nut                         | 2  |    |
| 18 | GS13312  | 螺钉            | screw                       | 4  |    |
| 19 | GL205    | 螺母            | nut                         | 11 |    |
| 20 | GS12312  | 脚踏开关固定螺钉      | screw                       | 9  |    |
| 21 | ST6.3X30 | 电控箱自攻螺钉       | screw                       | 4  |    |
| 22 |          |               |                             |    |    |
| 23 |          |               |                             |    |    |
| 24 |          |               |                             |    |    |
| 25 |          |               |                             |    |    |
| 26 |          |               |                             |    |    |
| 27 |          |               |                             |    |    |
| 28 |          |               |                             |    |    |
| 29 |          |               |                             |    |    |
| 30 |          |               |                             |    |    |
| 31 |          |               |                             |    |    |
| 32 |          |               |                             |    |    |
| 33 |          |               |                             |    |    |
| 34 |          |               |                             |    |    |
| 35 |          |               |                             |    |    |
| 36 |          |               |                             |    |    |
| 37 |          |               |                             |    |    |
| 38 |          |               |                             |    |    |
| 39 |          |               |                             |    |    |
| 40 |          |               |                             |    |    |
| 41 |          |               |                             |    |    |
| 42 |          |               |                             |    |    |
| 43 |          |               |                             |    |    |
| 44 |          |               |                             |    |    |