

ORIGINAL

使用說明書 INSTRUCTIONS BOOK DL720

# **SIRUBA DL-720 Instruction**

▲ Safety Instruction

1) Users are required to read the operation manual completely and carefully before installation or operation.

2) The product should be installed and pre-operated by well-trained persons

3) All the instruction marked with sign  $\Delta$ , must be observed or executed; Otherwise, bodily injuries might occur.

4) For perfect operation and safety, it is prohibited that using extension cable with multi-outlet for power connection

5) When connecting power supply cords to power sources, it is necessary to make sure that the power voltage is lower than 250V AC 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. Continue supply 380V power over 5 minutes might damage the fuse F2, burst the electrolytic capacitors and the power module U14 of the main board and even might endanger the person safety.

6) Please don't operate in direct sun light, outdoors area and where the room temperature is over 45°C or below 0°C.

7) Please avoid operating near the heater at dew area or at the humidity below 10% or above 95%.

8) Please don't operate in area with heavy dust, corrosive substance or volatile gas.

9) Avoid power cord being applied by heavy objects or excessive force, or over bend.

10) 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.

11) All the moving portions must be prevented to be exposed by the parts provided.

12) Turing on the machine in the first time, operate the sewing machine at low speed and check the correct rotation direction.

13) Turn off the power before the following operation:

- 1. Connecting or disconnecting any connectors on the control box or motor.
- 2. Threading needle.
- 3. Raising the machine arm.
- 4. Repairing or doing any mechanical adjustment.
- 5. Machine is out of work.

14) Repairing and high level maintenance work should only be done by electronic technicians with appropriate training.

15) All the spare parts for repairing work must be provided or approved by the manufacturer.

16) Don't use any objects 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:

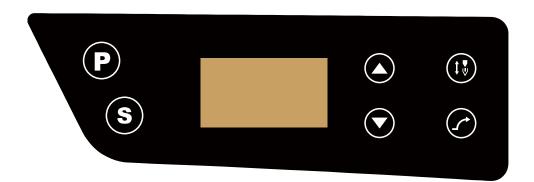
1. Inappropriate use, including: wrong connecting high voltage, wrong application, disassemble, repair, modification by incompetent personnel, or operation without the precaution, or operation out of its specification range, or inserting other objects or liquids into the product.

2. Damage by fire, Earth quake, lighting, wind, flood, salt corrosive, moisture, abnormal power voltage and any other damage cause by the natural disaster or by the inappropriate environments.

3. 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 all a failsafe device. (Such as residual current breaker).

## **1 Key Description**



| Name                                      | Key | Indicate  |
|---|-----|---|
| Function<br>Parameter Edit                | Ρ   | Press this key to enter or exit function parameter edit mode.   |
| Setting<br>Parameter<br>Check and<br>Save | S   | For the content of the selected parameters check and save: after select parameter press this key to check and modify operation, after modified parameter value press this key to exit and save the parameter. |
| On the<br>Adjustment<br>Key               |     | <ol> <li>Choose the region parameter items of incrementing key</li> <li>Parameter setting value incrementing key</li> </ol>   |
| Under the<br>Adjustment<br>Key            |     | <ol> <li>Choose the region parameter items of diminishing key</li> <li>Parameter setting value decrementing key</li> </ol>  |
| Slow Launch<br>Setting                    |     | If click, set used or cancelled slow launch function.   |
| Needle Stop<br>Position<br>Selection      | ‡ ♥ | If click, the needle stop position after shift the sewing mode ( Up position / Down position)   |

#### 2. Operating Instructions

#### 2.1 Restore Factory Setting

Under the shutdown state, hold on the "up" key and "down" key to boot, then double-click the S key to confirm it, shutdown restart.

#### **3 Parameter List**

| Parameters | Parameter Function             | Range    | Default | Description                        |
|------------|--------------------------------|----------|---------|------------------------------------|
| P01        | Maximum speed                  | 200-3700 | 3700    | Set the max sewing speed.          |
| P02        | Needle stop position selection | 0-2      | 1       | 0: Needle up 1: Needle down 2: OFF |
| P03        | Soft start switch              | 0-1      | 1       | 0: OFF<br>1: ON                    |
| P04        | Soft start sewing speed        | 200-1500 | 400     |                                    |
| P05        | Stitches number of soft start  | 1-15     | 1       |                                    |
| P06        | Minimum speed                  | 200-500  | 200     | Set the minimum speed.             |

| Parameters | Parameter Function                                    | Range    | Default | Description   |
|------------|---|----------|---------|---|
| P07        | Up position adjustment                                | 0-24     | 0       |   |
| P08        | Down position adjustment                              | 0-24     | 12      |   |
| P09        | Needle goes up<br>automatically as power<br>turned on | 0-1      | 1       | 0: No Function<br>1: Power turned on, needle goes up position<br>automatically  |
| P10        | Machine protection<br>switch selection                | 0-2      | 0       | <ul><li>0: Disable</li><li>1: Testing zero signal</li><li>2: Testing positive signal</li></ul>  |
| P11        | Speed curve adjustment                                | 1-100    | 32      | The lager the value, the faster to increase speed   |
| P15        | Stitch Correction Mode                                | 0-3      | 3       | <ul> <li>0: Half stitch</li> <li>1: One stitch</li> <li>2: Continuous correct half stitch</li> <li>3: Continuous correct stitch and quickly stop machine</li> </ul> |
| P21        | Motor rotate direction                                | 0-1      | 1       | 0: clockwise 1: counter-clockwise   |
| P22        | Auto running speed                                    | 200-6000 | 3500    | Auto running speed setting  |
| P23        | Auto running time                                     | 1-250    | 20      |   |
| P24        | Auto running stop time                                |          | 20      |   |
| P25        | Item A test   | 1-250    | 0       | Continue running with constant speed  |
| P26        | Item B test   | 0-1      | 0       | Carry out the set loop running  |
| P36        | Туре  |          | 1       |   |

Note: the initial value of parameters is for reference only, and the actual value of parameters is subject to the real object.

## 4 Error Code List

| Error Code | Problem                                   | Status / Measurement  |
|------------|---|---|
| E01        | Over-voltage                              | 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  |
| E02        | Low-voltage                               | Turn off the system power supply, and detect whether the<br>supply voltage is correct. (Or exceed the rated voltage<br>specified in use.)<br>If correct, please replace the control box and inform the factory  |
| E03        | CPU communication error                   | Turn off the machine, please check if the operation panel in<br>bad connection or is too loose. To get it right and turn on. If<br>there are still errors, please replace the control box and call<br>for customer service.   |
| E05        | Speed control unit connection is abnormal | Turn off the system power supply, please check the speed<br>control unit connector if loose or fall off, Will resume normal<br>after the restart system<br>If you still cannot work normally, please replace the speed<br>control unit and notify the manufacturer.   |
| E07        | Motor locked-rotor error                  | Turn the machine handwheel, check if it is stuck. If it is stuck,<br>you have to rule out the mechanical failure.<br>If turn normal, check if the encoder and motor in bad<br>connection or is too loose. If yes, please correct.<br>If connection well, check if the power supply voltage is<br>abnormal or sewing speed is too high. If yes, please adjust. |

|            |   | If there are still errors, please replace the control box and call |
|------------|---|--|
|            |   | for customer service.  |
|            |   |  |
|            |   | Turn off the machine, please check if the encoder in bad           |
| E09        | Positioning signal error  | connection or is too loose. To get it right and turn on. If there  |
| E11        |   | are still errors, please replace the control box and call          |
|            |   | for customer service.  |
|            |   | Turn off the system power supply, please check motor encoder       |
| <b>F14</b> | Encoder signal error.   | connector if loose or fall off, renew to normal then restart       |
| E14        |   | system. If still not work, please replace the motor and notify the |
|            |   | manufacture.   |
|            | Power module observal over ourrest  | Turn off the system power supply, and then restart the             |
| E15        |   | machine. If still not work, please replace the control box and     |
|            | protection  | notify the manufacture.  |
| E17        | The sewing table safety switch is not in  | Turn off the system power supply, please check machine head        |
| E17        | E09<br>E11Positioning signal errorTurn off the machine, please che<br>connection or is too loose. To get it<br>are still errors, please replace t<br>for customer service.E14Encoder signal error.Turn off the system power supply, pl<br>connector if loose or fall off, rene<br>system. If still not work, please repla<br>manufacture.E15Power module abnormal over current<br>protectionTurn off the system power supply<br>machine. If still not work, please repla<br>machine. If still not work, please repla<br>machine.E17The sewing table safety switch is not in<br>Turn off the system power supply, please<br>machine. | is open or not, the machine head switch is damage or not.          |

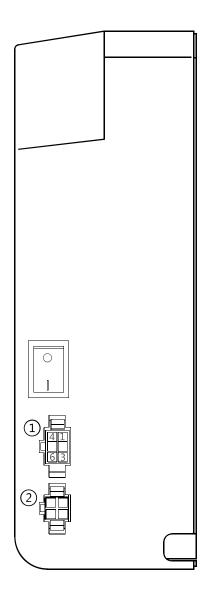
# 5 Port Outline Diagram:

5.1 Port Description

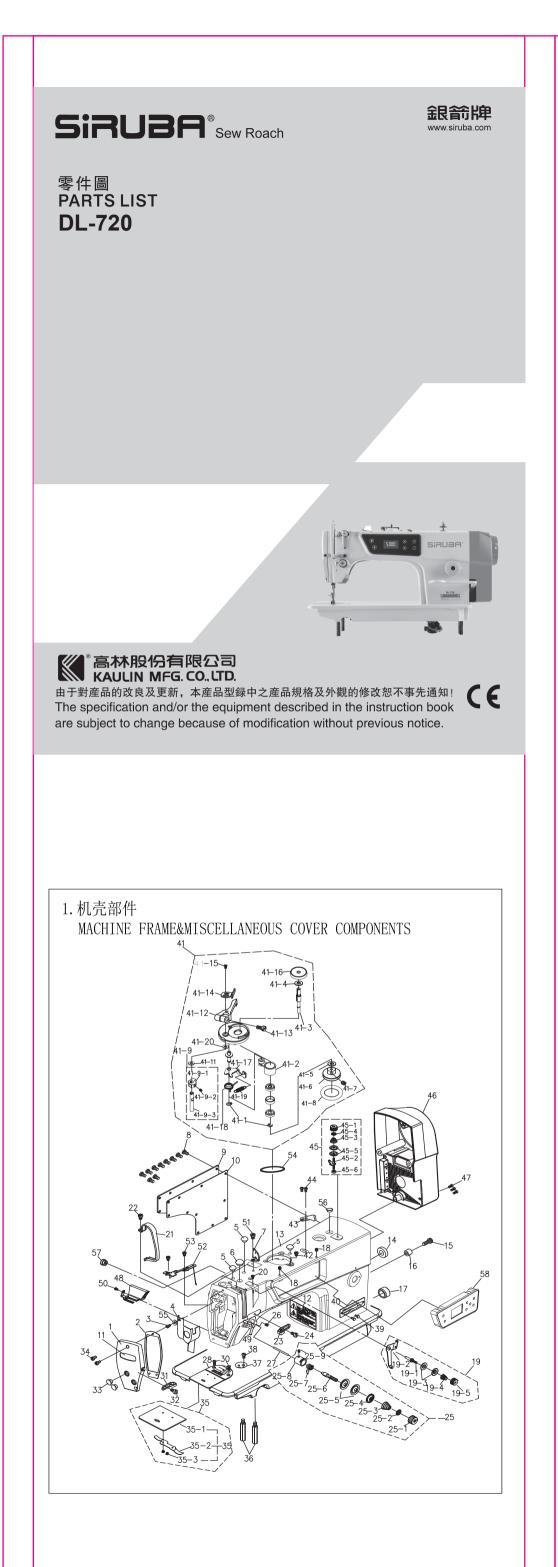
# 1 Function Interface

| Г |                            |            | ٦ |
|---|----------------------------|------------|---|
| I | Function Interface         |            | I |
| I | Clothing lights: 1(GND) 4  | 4 (+5V)    | I |
| I | Jog fill needle: 3(GND)、 6 | 6 (signal) | I |
| L |                            |            | Ц |

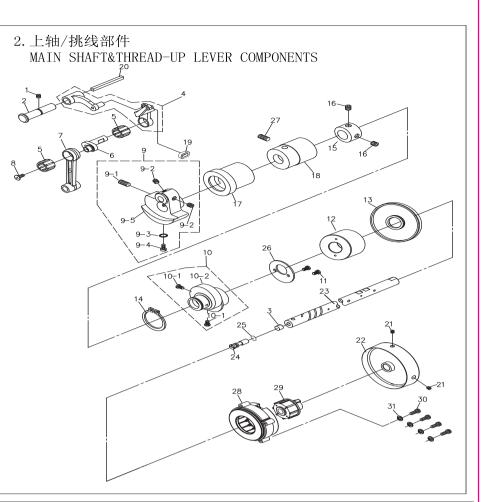
2 Pedals Interface







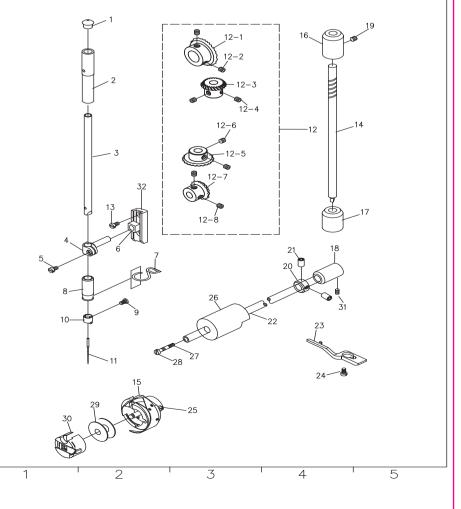
| 新图号<br>new part No.<br>180001001S<br>180001002<br>S073184404<br>991001004 | 名稱<br>Part name<br>面板   | Name of parts  | 数量<br>Oty   | 备注<br>Note   |
|---|---|--|---|--|
| 180001002<br>S073184404   |   | Face plate   | 1   | Note   |
|   | 面板垫   | Face plate agsket  | 1   |  |
| 991001004   | 防油板螺钉<br>面部防油板  | Screw 1/8 × 44 L=4<br>Arm oil shifld   | 1<br>1  |  |
| 991001005<br>991001006  | 挑线连杆销孔塞<br>针杆曲柄螺孔塞  | Rubber plug<br>Rubber plug   | 3<br>1  |  |
| 991001007   | 三眼过线板   | Thread guide rod   | 1   |  |
| S094762809<br>280001009   | 后窗板螺钉<br>后窗板  | Screw 3/16 × 28 L=9<br>Side plate  | 12<br>1   |  |
| 280001010   | 后窗板垫  | Gasker   | 1   |  |
| 180001011<br>991001012  | 面板商标牌<br>安全指示牌  | Face plate<br>Safety lable   | 1<br>1  |  |
| 180001013   | 机壳组件  | Machine cover  | 1   |  |
| S184782818  | 倒缝限位套紧固螺钉   | Screw $3/16 \times 28$ L=18  | 1   |  |
|   |   |  | 1   |  |
| S144374006  | 螺钉 SM11/64"x40 L=6  | Screw SM11/64"x40 L=7  | 2   |  |
| 991001019<br>991101019 <mark>S</mark>                                     | 小夹线器组件(9911机型)  | Thread tension asm<br>Thread tension asm   | 1   |  |
| 991001019-1<br>991001019-2  |   | Small clip line screw<br>Thread tonsion guide  | 1   |  |
| 991001019-3   | 小夹线板  | Thread tension disk  | 2   |  |
|   |   | Thread tension spring<br>Thread tension nut  | 1   |  |
| S113742806  | 小夹线组件支架螺钉   | Screw 11/64 $\times$ 40 L=6  | 1   |  |
| 991001021 <mark>S</mark><br>S094762806                                    | 挑线防护罩螺钉   | Thread take–up lever cover<br>Screw 3/16 × 28 L=6  | 1<br>1  |  |
| 991001023   | 右线钩   | Arm thread guide right   | 1   |  |
| 991001025 <mark>S</mark>  | 夹线器组件   | Thread tension asm   | î   |  |
| 991001025H <mark>S</mark><br>991101025D <mark>S</mark>                    | 夹线器组件(厚料 )<br>夹线器组件(9911机型 )  | Thread tension asm<br>Thread tension asm   | 1<br>1  |  |
| 991001025–1 <mark>S</mark>  | 夹线螺母  | Tension nut  | 1   |  |
| 991001025–2<br>991001025–3  | 夹线簧   | Rotating stopper<br>Rotating stopper   | 1<br>1  |  |
| 991001025-4   | 夹线压板  | Thread tension disk presser  | 1 2   |  |
| 991001025-6   | 夹线螺钉  | Tension post   | 1   |  |
|   |   | Take–up spring<br>Tension post socket  | 1   |  |
| S143574005  | 夹线螺丝紧固螺钉  | Screw $9/64 \times 40$ L=5.5   | 1   |  |
| 991001027   | 松线钉   | Screw 15/64 × 28 L=7<br>Tension releasing  | 1   |  |
| 991001028<br>991001028D   |   | Throat plate<br>Throat plate   | 1   |  |
| 0303D   | 针板 B2.6(大旋梭/3排牙)  | Throat plate   | 1   |  |
|   |   |  | 2<br>1  |  |
| S074374006  | 左线勾螺钉   | Screw 9/64 $\times$ 40 L=6   | 1   |  |
| 991001033<br>S094762808   | 面板螺钉  | Screw $3/16 \times 28$ L=8   | 3   |  |
| 991001035<br>991001035-1  | 推板组件  | Slide plate asm<br>Slide plate   | 1   |  |
| 991001035-2   | 推板簧   | Bed slide spring   | 1   |  |
|   |   |  |   |  |
| 991001037   | 卷边器   | Ruler stopper  | 1   |  |
| 991001039   | 查辺希緊钓<br>型号牌铆钉  | Screw 11/64 × 40 L=6<br>Pole   | 2 2   |  |
| 180001040   | 型号牌   | Modle plate<br>Winder accembly   | 1   |  |
| 991001041-1   | 挡圈E4  | Ring E4  | 2   |  |
|   |   |  | 1   |  |
| 991001041-4   | O型圈P9   | O ring   | 1   |  |
| 991001041–5<br>991001041–6  | 半垫圈S6<br>绕线轮  | Flat washer<br>Winding wheel   | 1   |  |
| 991001041 <b>-</b> 7  | 螺钉M5X5<br>檢中热圈20  | Screw M5x5<br>Rubber wester  | 2   |  |
| 991001041-9   | 梭芯夹凸轮组件   | Shuttle cam asm.   | 1   |  |
| 991001041-9-1<br>991001041-9-2  | 梭芯夹凸轮<br>螺钉M5X5   | Shuttle cam<br>Screw M5x5  | 1<br>1  |  |
| 991001041-9-3   | 梭芯夹轴  | Shuttle clamp shaft  | 1   |  |
| 991001041–11<br>991001041–12  | 梭芯压臂柄   | Flat washer<br>Shuttle arm handle  | 2<br>1  |  |
| 991001041-13  | 螺钉M4X12   | Screw  | 1   |  |
| 991001041-15  | 螺钉SM4.76  | Screw  | 2   |  |
| 991001041–16<br>991001041–17  | 梭芯座<br>绕线杠杆   | Bobbin base<br>Winding lever   | 1<br>1  |  |
| 991001041-18  | 弹簧  | Spring   | 1   |  |
| 991001041–19<br>991001041–20  | 弹簧<br>O型密封圈S5   | Spring<br>O type sealing ring  | 1<br>1  |  |
| M080500810  | 绕线器螺钉   | Bobbin screw   | 3   |  |
| 991001043<br>S093574005   | 割线刀螺钉   | Knife screw  | 2   |  |
| 991001045 <mark>5</mark><br>991001045 <b>-</b> 15                         | 绕线夹线器组件<br>夹线螺母   | Thread tension asm.<br>Tension nut   | 1   |  |
| 991001045-2   | 夹线螺钉  | Tension post   | 1   |  |
| 991001045-3<br>991001045-4  | 夹线弹簧<br>夹线板   | Tension spring<br>Thread tension disk presser  | $\frac{1}{2}$   |  |
| 991001045-5   | 过线板   | Thread tension guide   | 1   |  |
| 991001045 <b>-</b> 6<br>180101046 <mark>S</mark>                          | 电机罩壳  | Tension nut<br>Motor cover   | 1<br>1  |  |
| M180500835<br>991001048   | 电机罩壳紧固螺钉<br>倒缝灯开关组件   | Screw<br>Reverse seam lamp switch assembly   | 4   |  |
| 991001049   | 大线勾   | Presser bar thread guide   | 1   |  |
| S094762806<br>S074374007  | 倒缝灯开关固定螺钉<br>三眼线勾螺钉   | Screw<br>Screw   | 1   |  |
| 991001052   | 油线板组件   | Oil plate assembly   | 1   |  |
| S073574011<br>991001056   | 油线板固定螺钉<br>绕线器垫片  | Screw<br>Bobbin Washer   | 2<br>1  |  |
| 991001057   | 防油板垫片   | Grease plate gasket  | 1   |  |
| 991001058<br>280001063  | 操作面板出线橡胶塞   | Rubber plug<br>Rubber plug   | $\frac{3}{1}$   |  |
|   | 180001013         991001014         S184782818         991001017         S144374006         991001019–1         991001019–2         991001019–3         991001019–55         S113742806         991001025         S094762806         991001025         991001025         S074762806         991001025         991001025         991001025-1S         991001025-4         991001025-5         991001025-6         991001025-7         991001025-8         S143574005         S115952807         991001025-8         S143574005         S115952807         991001025-7         991001025-8         S143574005         S115952807         991001025-7         991001025-8         S143574006         991001025         991001035         991001035         991001035         991001035         991001035         991001035         991001035         991001035         991001041-1 | 180001013         机壳组件           991001014         逆料调节语孔寒           5184782818         倒違限位套緊固螺钉           991001016         倒違服位金           991001017         下轴盲孔寒           5144374006         螺钉 SM1164*x401=6           991001019-1         小夹线器组件(9911机型)           991001019-1         小夹线螺钉           991001019-1         小夹线螺钉           991001019-3         小夹线螺钉           991001019-4         小夹线螺钉           991001019-5         小夹线锯           991001025         先线板           991001025         夹线器组件(9911机型)           991001025-15         夹线器组件(9911机型)           991001025-25         夹线板           991001025-4         夹线其正动           991001025-5         夹线板           991001025-6         夹线板           991001025-7         夹线板           991001025-7         夹线板           991001025-8         調线簧間下           \$113552007         夹线螺钉           991001028         村板 (大軒正方           991001028         村板 (大軒正方           991001031         左线勾           \$044374006         竹板 (大軒正方           991001035         椎板 (           991001035 | 180001013         現井司 管部2.8         Machine cover           5184732618         倒建展校在家園胡紫行         Srew 3/16 × 28 L=18           901001017         下衛月2.8         Rubber plug           518473206         Str SM1164*x0 L=6         Srew 3/16 × 30 L=7           901001019         小夫奖奖選出件09114021         Small clip line serce           90100109-1         小夫奖奖選出件09114021         Small clip line serce           90100109-3         小夫奖奖         Thread tension asm           901001021         指尖沙沙子螺         Thread tension asm           901001023         台尖沙湾         Thread tension asm           901001023         大尖沙濱         Thread tension asm           901001025-2         夫炎診着         Thread tension asm           901001025-4         大尖沙濱         Thread tension asm           90100125-7         大尖沙濱         Thread tension asm           90100125         大尖沙濱         Thread tension asm           90100125-7         大尖沙濱         Thread tension asm      > | 100001013         以去將與下第九素         Babber plog         1           5184725818         印建聚位金梁閒塔行         Sernew 3/16 x 28 L= 18         1           91000107         丁福介孔素         Babber plog         1           91000107         丁福介孔素         Babber plog         1           91000107         丁福介孔素         Babber plog         1           91000109         小夫袋藻類計件901182         Turnad tension asan         1           91000109-1         小夫袋藻類         Turnad tension asan         1           91000109-1         小夫袋藻類         Turnad tension spring         2           91000109-1         小夫袋藻         Turnad tabe-up lower cover         1           91000109-1         小夫袋藻         Turnad tabe-up lower cover         1           91000102-3         北美公業         Serrew 3/16 x 28 L=6         1           91001023-1         大会選員件の9111021         Turnad tension sam         1           91001025-4         大会選員         Taber plog         1           91001025-5         大会選員         Turnad tension sam         1           91001025-6         大会選員         Turnad tension sam         1           91001025-7         大会選員         Turnad tension sam         1           91001025-7 |



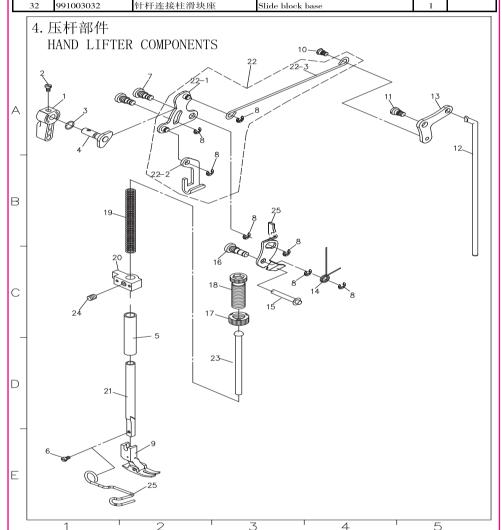
| 序号            | 新图号                        | 名稱                      | Name of parts                     | 数量       | 备注   |
|---------------|----------------------------|-------------------------|-----------------------------------|----------|------|
| Ref.No.       | new part No.<br>991002001  | Part name<br>挑线连杆销螺钉    | Screw 15/64 × 28 L=10.5           | Qty<br>1 | Note |
| $\frac{1}{2}$ | 991002001<br>991002002     | 挑线连杆销                   | thread take-up crank shaft        | 1        |      |
| 3             | 991002002<br>991002003     | 曲柄油量限制毡                 | Roller felt                       | 1        |      |
| 3             |                            |                         |                                   | -        |      |
| 4             | 991002004<br>991002004H    | 挑线连杆组件                  | thread take–up lever asm          | 1        |      |
| 4             |                            | 挑线连杆组件(厚料)              | thread take–up lever asm          | -        |      |
| ~             | 991002004D                 |                         | thread take–up lever asm          | 1        |      |
| 5             | 991002005                  | 挑线杆滚针轴承                 | Needle bearing                    | 2        |      |
| 6             | 991002006                  | 挑线曲柄                    | Needle bar crank                  | 1        |      |
| _             | 991002007H                 | 挑线曲柄(厚料)                | Needle bar crank                  | 1        |      |
| 7             | 991002007                  | 针杆连杆                    | Needle bar crank rod              | 1        |      |
| 8             | 991002008                  | 挑线曲柄左旋螺钉                | Left screw $9/64 \times 40$ L=4.8 | 1        |      |
| 9             | 991002009                  | 针杆曲柄组件                  | Counter weight                    | 1        |      |
|               | 991102009H                 | 针杆曲柄组件(9911机型)          | Counter weight                    | 1        |      |
| 9-1           | S127142816                 | 针杆曲柄紧固螺钉                | Screw $9/32 \times 28$ L=16       | 1        |      |
| 9–2           | S116354006                 | 挑线曲柄定位螺钉                | Screw $1/4 \times 40$ L=6         | 2        |      |
| 9-3           | 991002009-3                | 定位螺丝O型圈                 | Rubber ring                       | 1        |      |
| 9-4           | S077142815                 | 针杆曲柄定位螺钉                | Screw $9/32 \times 28$ L=15.5     | 1        |      |
| 9–5           | 991002009-5                | 针杆曲柄                    | Counter weight                    | 1        |      |
| 10            | 991002010                  | 送料偏心轮组件                 | Feed drive eccentric cam asm.     | 1        |      |
| 10 - 1        | S076354011                 | 送料偏心轮螺钉                 | Screw $1/4 \times 40$ L=11        | 2        |      |
| 10-2          | 991002010-2                | 送料偏心轮                   | Feed drive eccentric cam          | 1        |      |
| 11            | S093574006                 | 送料偏心轮盖板螺钉               | Screw $9/64 \times 40$ L=6        | 2        |      |
| 12            | 991002012                  | 上轴后套                    | Mainshaft back sleeve             | 1        |      |
| 13            | 991002013                  | 上轴后套油封                  | Oil seal of mainshaft back sleeve | 1        |      |
| 14            | 991002014                  | 抬牙连杆轴挡圈                 | Snap ring                         | 1        |      |
| 15            | 991002015                  | 上轴挡圈                    | Thrust collar asm                 | 1        |      |
| 16            | S116354006                 | 上轴挡圈螺钉                  | Screw 1/4x40 L=6                  | 2        |      |
| 17            | 991002017                  | 上轴前轴套                   | Main shaft front bushing asm.     | 1        |      |
| 18            | 991002018                  | 上轴中轴套                   | Bushing intermediate              | 1        |      |
| 19            | 991002019                  | 挑线杆橡皮套                  | Rubber                            | 1        |      |
| 20            | 991002020                  | 挑线连杆销供油线                | Thread take–up crank shaft felt   | 1        |      |
| 21            | M140500806                 | 手轮螺钉                    | Screw                             | 2        |      |
| 22            | 920102022–C <mark>S</mark> | 手轮(带磁钢)                 | Hand wheel(Magnetic steel)        | 1        |      |
| 23            | 920102023                  | 上 轴                     | Main shaft                        | î        |      |
| 24            | 991002024                  | 上轴油量调节销                 | Oil amount adjusting pin          | 1        |      |
| 25            | 991002025                  | 上轴油量调节销O型圈              | Rubber ring                       | 1 i      |      |
| 26            | 991002026                  | 送料偏心轮盖板                 | Thrust collar                     | î        |      |
| 20            | S145952808                 | 上轴中轴套螺钉                 | Screw                             | i        |      |
| 28            | 920102028                  | 工抽 中 抽 奏 嚇 巧<br>电 机 定 子 | Stator                            | 1        |      |
| 20<br>29      | 920102028                  | 电机转子                    | Botor                             | 1        |      |
| 30            | M180500822                 | 电机安装螺钉M5X22             | Screw                             | 4        |      |
| 31            | 991002034                  | 电机安装螺钉垫片                | Screw<br>Washer                   | 4        |      |

3. 针杆/竖轴/下轴部件 NEEDLE BAR, UPRIGHT SHAFT&HOOK DRIVING SHAFT COMPONENTS

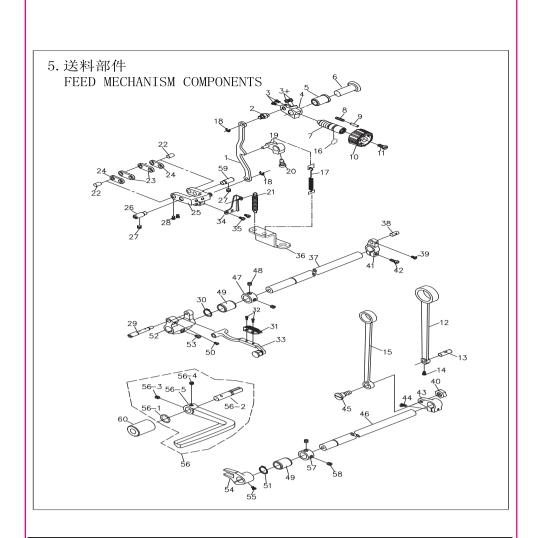
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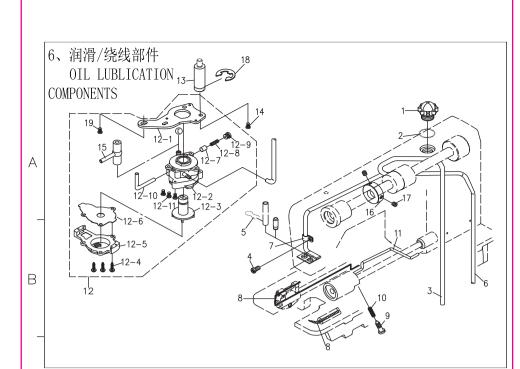
| .针杆/৬         | &轴/下轴部件/NE          | EDLE BAR, UPRIGHT SHA | FT&HOOK DRIVING SHAFT COM      | 3.针杆/竖轴/下轴部件/NEEDLE BAR, UPRIGHT SHAFT&HOOK DRIVING SHAFT COMPONENTS |            |  |  |  |  |  |  |  |
|---------------|---------------------|-----------------------|--------------------------------|--|------------|--|--|--|--|--|--|--|
| 序号<br>Ref.No. | 新图号<br>new part No. | 名 稱<br>Part name      | Name of parts                  | 数量<br>Qty  | 备注<br>Note |  |  |  |  |  |  |  |
| 1             | 991003001           | 针杆上孔塞                 | Сар                            | 1  |            |  |  |  |  |  |  |  |
| 2             | 991003002           | 针杆上套                  | Needle bar bushing upper       | 1  |            |  |  |  |  |  |  |  |
| 3             | 991003003           | 针杆                    | Needle bar                     | 1  |            |  |  |  |  |  |  |  |
| 3             | 991003003H          | 针杆(厚料)                | Needle bar                     | 1  |            |  |  |  |  |  |  |  |
| 4             | 991003004           | 针杆连接柱                 | Needle rod holder asm.         | 1  |            |  |  |  |  |  |  |  |
| 5             | S073574007          | 针杆连接柱螺钉               | Screw 9/64 $\times$ 40 L=7.5   | 1  |            |  |  |  |  |  |  |  |
| 6             | 991003006           | 针杆连接柱滑块               | Slide block                    | 1  |            |  |  |  |  |  |  |  |
| 7             | 991003007           | 针杆下套线钩                | Needle bar thread guide        | 1  |            |  |  |  |  |  |  |  |
| 8             | 991003008           | 针杆下套                  | Needle bar bushing lower       | 1  |            |  |  |  |  |  |  |  |
| 9             | S083184405          | 机针螺钉                  | Screw $1/8 \times 44$ L=4.8    | 1  |            |  |  |  |  |  |  |  |
| 10            | 991003010           | 针杆过线环                 | Needle bar thread guide        | 1  |            |  |  |  |  |  |  |  |
| 10            | 0303D               | 针杆过线环(9911机型)         | Needle bar thread guide        | 1  |            |  |  |  |  |  |  |  |
| 11            | 991003011           | 机针                    | Needle DBx1 #14                | 1  |            |  |  |  |  |  |  |  |
| 11            | 991003011H          | 机针 DPx5 #21           | Needle DPx5 #21                | 1  |            |  |  |  |  |  |  |  |
| 12            | 991003012           | 伞齿轮组件                 | Gear pinion asm.               | 1  |            |  |  |  |  |  |  |  |
| 12 - 1        | 991003014           | 上轴伞齿轮                 | Gear asm.                      | 1  |            |  |  |  |  |  |  |  |
| 12-2          | S116354008          | 伞齿轮螺钉                 | Screw $1/4 \times 40$ L=8      | 2  |            |  |  |  |  |  |  |  |
| 12-3          | 991003016           | 竖轴上伞齿轮                | Pinion asm.                    | 1  |            |  |  |  |  |  |  |  |
| 12-4          | S116354008          | 伞齿轮螺钉                 | Screw $1/4 \times 40$ L=8      | 2  |            |  |  |  |  |  |  |  |
| 12-5          | 991003019           | 竖轴下齿轮                 | Gear asm.                      | 1  |            |  |  |  |  |  |  |  |
| 12-6          | S116354008          | 伞齿轮螺钉                 | Screw $1/4 \times 40$ L=8      | 2  |            |  |  |  |  |  |  |  |
| 12-7          | 991003021           | 下轴伞齿轮                 | Pinion asm.                    | 1  |            |  |  |  |  |  |  |  |
| 12-8          | S116354008          | 伞齿轮螺钉                 | Screw $1/4 \times 40$ L=8      | 2  |            |  |  |  |  |  |  |  |
| 13            | S074374008          | 滑块座螺钉                 | Screw SM11/64 $\times$ 40 L=8  | 2  |            |  |  |  |  |  |  |  |
|               | 991003014           | 竖轴                    | Upright shaft                  | 1  |            |  |  |  |  |  |  |  |
| 14            | 991105006           | 竖轴(9911机型)            | Upright shaft                  | 1  |            |  |  |  |  |  |  |  |
| 15            | 991003015           | 旋梭                    | Hook asm.                      | 1  |            |  |  |  |  |  |  |  |
| 15            | 0303D               | 大旋梭(9911机型)           | Big Hook asm.                  | 1  |            |  |  |  |  |  |  |  |
| 16            | 991003016           | 竖轴上轴套                 | Upright shaft bushing, upper   | 1  |            |  |  |  |  |  |  |  |
| 17            | 991003017           | 竖轴下轴套                 | Upright shaft bushing, lower   | 1  |            |  |  |  |  |  |  |  |
| 18            | 991003018           | 下轴后轴套                 | Bushing rear                   | 1  |            |  |  |  |  |  |  |  |
| 19            | S145952808          | 竖轴上套紧固螺钉              | Screw                          | 1  |            |  |  |  |  |  |  |  |
| 20            | 991003020           | 下轴挡圈                  | Thrust collar asm.             | 1  |            |  |  |  |  |  |  |  |
| 21            | S074374005          | 下轴挡圈螺钉                | Screw $11/64 \times 40$ L=5    | 2  |            |  |  |  |  |  |  |  |
|               | 991003022           | 下轴                    | Lower shaft                    | 1  |            |  |  |  |  |  |  |  |
| 22            | 991107001           | 下轴(9911机型)            | Lower shaft                    | 1  |            |  |  |  |  |  |  |  |
| 22            | 991003023           | 旋梭定位勾                 | Bobbin case holder             | 1  |            |  |  |  |  |  |  |  |
| 23            | 0303D               | 旋梭定位勾(9911机型)         | Bobbin case holder             | 1  |            |  |  |  |  |  |  |  |
| 24            | S084374011          | 旋梭定位勾螺钉               | Screw SM11/64 $\times$ 40 L=11 | 3  |            |  |  |  |  |  |  |  |
| 25            | 991003032           | 旋梭螺钉                  | Screw                          | 3  |            |  |  |  |  |  |  |  |
| 26            | 991003026           | 下轴前轴套                 | Lower shaft front metal        | 1  |            |  |  |  |  |  |  |  |
| 26            | 991105012           | 下轴前轴套(9911机型)         | Lower shaft front metal        | 1  |            |  |  |  |  |  |  |  |
| 27            | 991003027           | 下轴限油芯                 | Oil wick                       | 1  |            |  |  |  |  |  |  |  |
| 28            | 991003028           | 下轴限油螺钉                | Oil seal screw                 | 1  |            |  |  |  |  |  |  |  |
|               | 991003029           | 梭芯                    | Bobbin                         | 1  |            |  |  |  |  |  |  |  |
| 29            | 0303D               | 检芯(配9911)             | Bobbin                         | 1  |            |  |  |  |  |  |  |  |
|               | 991003030           | 梭壳                    | Bobbin case                    |  |            |  |  |  |  |  |  |  |
| 30            | 0303D               | · 後売(配9911)           | Bobbin case                    |  |            |  |  |  |  |  |  |  |
| 31            | S145952808          | 下轴后轴套螺钉               | Screw                          | 1  |            |  |  |  |  |  |  |  |
| 32            | 991003032           | 针杆连接柱滑块座              | Slide block base               |  |            |  |  |  |  |  |  |  |
|               |                     |                       |                                |  |            |  |  |  |  |  |  |  |



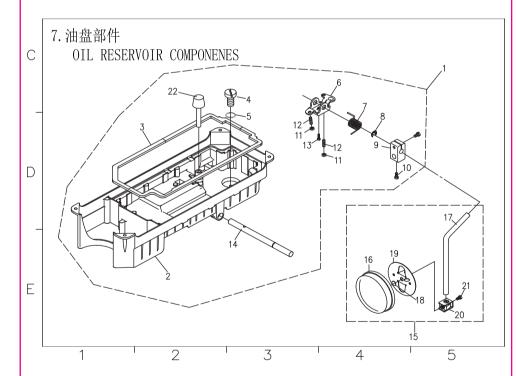
| 序号      | 5件/HAND LIFTEE<br>新图号 | 名稱         |                                    | 数量             | 备注    |
|---------|-----------------------|------------|------------------------------------|----------------|-------|
| Ref.No. | new part No.          | Part name  | Name of parts                      | <u></u><br>Qty | Note  |
| 1       | 991004001             | 压脚扳手       | Hand lifter                        | 1              | 11010 |
| 2       | 991004002             | 压脚扳手螺钉     | Screw $9/64 \times 40$ L=10        | 1              |       |
| 3       | 991004003             | 压脚扳手轴O型圈   | Rubber ring                        | 1              |       |
| 4       | 991004004             | 压脚扳手凸轮部件   | hand lifter cam asm                | 1              |       |
| 5       | 991004005             | 压杆轴套       | Presser bar bushing lower          | 1              |       |
| 6       | S073574011            | 压脚螺钉       | Screw $9/64 \times 40$ L=11        | 1              |       |
| 7       | 991004007             | 前杠杆螺纹销     | Link shaft                         | 2              |       |
| 8       | 991004008             | 挡圈         | E-ring 5                           | 7              |       |
|         | 991004009             | 压脚部件       | Presser foot asm                   | 1              |       |
| 9       | 991004009H            | 压脚部件(厚料)   | Presser foot asm                   | 1              |       |
|         | 991004009D            | 压脚部件(大旋梭)  | Presser foot asm                   | 1              |       |
| 10      | 991004010             | 抬压脚拉杆螺钉    | Hinge screw                        | 1              |       |
| 11      | 991004011             | 后杠杆轴拉螺钉    | Hinge screw                        | 1              |       |
| 12      | 991004012             | 抬压脚顶杆      | Knee lifter connecting rod         | 1              |       |
| 13      | 991004013             | 抬压脚后杠杆     | Lifting lever link                 | 1              |       |
| 15      | 991004013 <b>-</b> Н  | 抬压脚后杠杆(厚料) | Lifting lever link(Thick material) | 1              |       |
| 14      | 991004022             | 松线顶板复位簧    | Tension release return spring      | 1              |       |
| 24      | 991001027             | 松线辅钉       | Tension release supporting pin     | 1              |       |
| 15      | 991004025             | 松线顶板       | Thread tension relerse wire        | 1              |       |
| 16      | 991004026             | 松线顶板螺纹销    | Tension release shaft              | 1              |       |
| 17      | 991004027             | 调压螺母       | Presser adjurting screw nut        | 1              |       |
| 17      | 991004027H            | 调压螺母(厚料)   | Presser adjurting screw nut H      | 1              |       |
| 18      | 991004028             | 调压螺钉       | Presser spring regulator           | 1              |       |
| 10      | 991004028H            | 调压螺钉       | Presser spring regulator H         | 1              |       |
| 19      | 991004029             | 调压簧        | Presser adjurting spring           | 1              |       |
|         | 991004029H            | 调压簧(厚料)    | Presser adjurting spring H         | 1              |       |
| 20      | 991004030             | 压杆导架       | Presser bar guide bracket          | 1              |       |
| 21      | 991004031             | 压杆         | Presser bar                        | 1              |       |
| 22      | 991004032             | 前杠杆组件      | Knee lifting cross rod asm         | 1              |       |
|         | 991004032W            | 前杠杆组件(弯型)  | Knee lifting cross rod asm         | 1              |       |
| 22-1    | 991004032-1           | 抬压脚前杠杆     | Hand lifter link                   | 1              |       |
| 22-2    | 991004032-2           | 压脚升降板      | Lifting lever                      | 1              |       |
| 22-3    | 991004032-3           | 抬压脚拉杆      | Knee lifting cross rod             | 1              |       |
| 23      | 991004033             | 调压导杆       | Presser guide bar                  | 1              |       |
| 24      | S126354006            | 导架螺钉       | Screw                              | 1              |       |
| 25      | 991004036             | 压脚保护架      | Presser foot protection frame      | 1              |       |



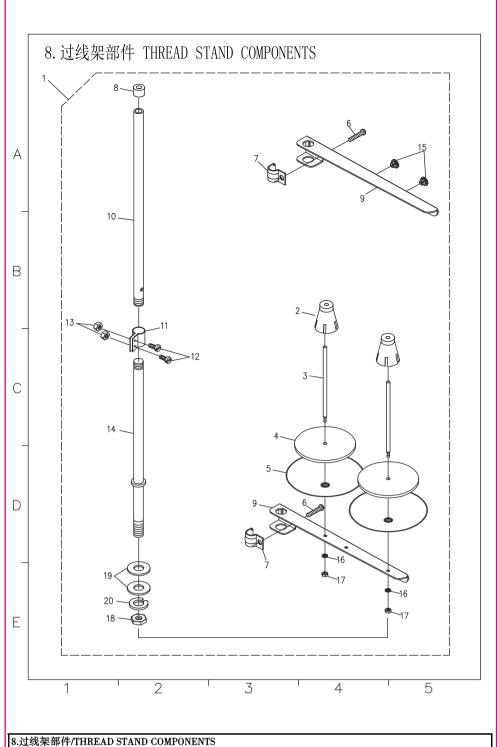
| 序号           | 新图号                     | 名称               | Name of parts                           | 数量            | 备注   |
|--------------|-------------------------|------------------|---|---------------|------|
| Ref.No.      | new part No.            | Part name        | _                                       | Qty           | Note |
| 1            | 991005001               | 倒送料连杆            | Feed adjust rod                         | 1             |      |
|              | 991005001D              | 倒送料连杆(大旋梭)       | Feed adjust rod(big hook)               | 1             |      |
| 2            | 991005002               | 倒送料连杆销           | Feed regulator pin                      | 1             |      |
| 3            | S043574006              | 倒送料连杆销螺钉         | Feed regulator pin screw                | 2             |      |
| 3+           | M090500806              | 送料调节器紧固螺钉        | Feed regulator Fastening screw          | 2             |      |
| 4            | 991005004               | 送料调节器            | Feed regulator                          | 1             |      |
| -            | 991005004D              | 送料调节器(大针距)       | Feed regulator (Big needle distance)    | 1             |      |
| 5            | 991005005               | 送料调节器轴套          | Feed regulator bushing                  | 1             |      |
| 6            | 991005006               | 送料调节器轴           | Feed regulator shaft                    | 1             |      |
| 7            | 991005007               | 针距调节螺杆           | Feed regulator screw                    | 1             |      |
| 8            | 991005008               | 止动销弹簧            | Spring                                  | 1             |      |
| 9            | 991005009               | 止动销              | Feed adjustpin                          | 1             |      |
|              | 991005010               | 针距旋钮(0-5)        | Needle distance knob(0–5)               | 1             |      |
| 10           | 991005010-4             | 针距旋钮(0-4)        | Needle distance knob(0–4)               | 1             |      |
| 10           | 991005010-7             | 针距旋钮(0-7)        | Needle distance knob(0–7)               | 1             |      |
| 11           | S074762818              | 针距旋钮螺钉           | Screw $3/16 \times 28$ L=18             | î             |      |
| 12           | 991005012               | 送料连杆             | Rocker shaft connecting rod             | 1             |      |
|              | 991005012<br>991005013  |                  | Walking foot long pin                   | 1             |      |
| 13           |                         | 送料连杆销            | 0 01                                    | · ·           |      |
| 14           | S083574004              | 送料连杆销螺钉          | Screw $9/64 \times 40$ L=4              | 1             |      |
| 15           | 991005015               | 抬牙连杆             | Connecting rod                          | 1             |      |
| 16           | 991005016               | 针距调节螺杆O型圈        | Rubber ring                             | 1             |      |
| 17           | 991005017               | 摆动板座复位簧          | Feed reverse spring                     | 1             |      |
| 18           | 991005018               | 挡圈E5             | E–ring 5                                | 2             |      |
| 19           | 991005019               | 倒送料曲柄组件          | Feed reverse arm asm.                   | 1             |      |
| 19           | 991005019D              | 倒送料曲柄组件(大针距)     | Feed reverse arm asm(Big needle         | 1             |      |
| 20           | S074762815              | 倒送料曲柄螺钉          | Feed reverse arm screw                  | 1             |      |
| 21           | 991005021               | 倒送料拉簧            | Spring                                  | 1             |      |
| 22           | 991005022               | 短摆动板连接销          | Walking foot short pin                  | 2             |      |
| 23           | 991005023               | 长摆动板             | Connecting link long pin                | 2             |      |
| 24           | 991005024               | 短摆动板             | Connecting link short pin               | 2             |      |
| 25           | 991005025               | 摆动座              | Feed adjust link asm                    | 1             |      |
| 26           | 991005026               | 摆动板座左销           | Adjusting link fulcrum shaft            | 1             |      |
| 20           | 991003020               | 左右销螺钉            | Screw $15/64 \times 28$                 | 2             |      |
| 27           | S123574005              | 连杆销螺钉            | Screw 15/64 × 28<br>Screw 9/64 × 40 L=5 | $\frac{2}{2}$ |      |
|              |                         |                  |   |               |      |
| 29<br>20     | 991005029               | 牙架偏心销            | Feed bar shaft                          | 1             |      |
| 30           | 991005030               | 送布轴轴用挡圈          | Retaining ring                          | 1             |      |
|              | 991005031               | 送布牙              | Fedd dog                                | 1             |      |
| 31           | 991005031H              | 送布牙(厚料/3排牙)      | Feed dog                                | 1             |      |
| 01           | 991005031D              | 送布牙 (大针距/3排牙)    | Feed dog                                | 1             |      |
|              | 0303D                   | 送布牙(大旋梭/3排牙)     | Feed dog                                | 1             |      |
| 32           | S073184406              | 送布牙螺钉            | Screw $1/8 \times 44$ L=6               | 2             |      |
| 33           | 991005033               | 牙架部件             | Feed bar asm                            | 1             |      |
| 33           | 991005033D              | 牙架部件(大旋梭)        | Feed bar asm                            | 1             |      |
| 34           | 991005034               | 摆动板座复位板          | Adjusting link spring guide             | 1             |      |
| 35           | S074374007              | 复位板紧固螺钉          | Screw $11/64 \times 40$ L=7             | 2             |      |
| 36           | 991005036               | 拉簧固定板            | Feed spring hood                        | 1             |      |
| 37           | 991005037               | 送布轴              | Feed rocker shaft                       | 1             |      |
| 38           | 991005038               | 送布曲柄销            | Walking foot middle pin                 | 1             |      |
| 39           | S073574008              | 曲柄销螺钉            | Screw $9/64 \times 40$ L=8              | 1             |      |
| 40           | N217142805              | 抬牙连杆轴位螺母         | Nut $9/32 \times 28$                    | 1             |      |
| -10          | 991005041               | 送布曲柄             | Feed rocker shaft crank                 | 1             |      |
| 41           | 991005041<br>991005041D | 送布曲柄(大针距15mm)    | Feed rocker shaft crank                 | 1             |      |
| 42           | S074762815              | 送布曲柄螺钉           | Screw $3/16 \times 28$ L=15             | 1             |      |
| 42<br>43     | 991005043               | 送布曲柄螺钉<br>抬牙后曲柄  | Lifting rocker asm.                     | 1             |      |
|              |                         | 指才后曲柄<br>抬牙后曲柄螺钉 | 0                                       | 1             |      |
| 44<br>45     | S074762815              |                  | Screw $3/16 \times 28$ L=15             | ^             |      |
| 45<br>46     | 991005045               | 抬牙连杆轴位螺钉         | Hinge screw                             | 1             |      |
| 46           | 991005046               | 抬牙轴              | Feed driving shaft                      | 1             |      |
| 47           | 991005047               | 送布轴挡圈            | Thrust collar asm.                      | 1             |      |
| 48           | S126354004              | 送布轴挡圈螺钉          | Screw $1/4 \times 40$ L=4               | 2             |      |
| 49           | 991005049               | 送布轴前轴套           | Feed rocker shaft bushing               | 2             |      |
|              | 991005049D              | 抬压轴前轴套(大旋梭)      | Axle sleeve                             | 1             |      |
| 50           | S084374007              | 牙架销螺钉            | Screw 11/64 $\times$ 40 L=7             | 2             |      |
| 51           | 991005051               | 抬牙轴轴用挡圈          | Retaining ring                          | 1             |      |
| 52           | 991005052               | 牙架座(牙架曲柄)        | Feed bar crank asm.                     | 1             |      |
| 53           | S074762812              | 牙架座螺钉            | Screw $3/16 \times 28$ L=12             | 1             |      |
| E A          | 991005054               | 抬牙叉              | Driving shaft crank asm.                | 1             |      |
| 54           | 991005054D              | 抬牙叉(大旋梭)         | Driving shaft crank asm.                | 1             |      |
| 55           | S084374012              | 抬牙叉螺钉            | Screw $11/64 \times 40$ L=12            | 1             |      |
| 56           | 991005056               | 倒送料扳手组件          | Reverse feed control lever asm.         | î             |      |
| 56-1         | 991005056-1             | 倒送料轴O型圈          | Rubber ring                             | 1             |      |
| 56-2         | 991005056-2             | 倒送料轴<br>倒送料轴     | Feed reverse shaft                      | 1             |      |
| 56-2<br>56-3 | S145952808              | 国运科抽<br>倒送料扳手螺钉  | Screw                                   | 1             |      |
|              |                         |                  | Screw<br>Screw                          | 1             |      |
| 56-4         | S145952810              | 倒送料扳手定位螺钉        |   |               |      |
| 56-5         | 280005056-5S            | 倒送料扳手            | Reverse frrd control lever              | 1             |      |
| 57           | 991005057               | 抬牙轴挡圈            | Thrust collar                           | 1             |      |
| 58           | S126354004              | 抬牙轴挡圈螺钉          | Screw 1/4x40 L=4                        | 2             |      |
| 59           | 991005059               | 摆动轴板座右销          | Adjusting link fulcrum shaft            | 1             |      |
| 57           |                         | 倒送料轴轴套           | Feed lever metal                        | 1             |      |



| 6.润滑/约  | 6. 润滑/绕线部件/OIL LUBLICATION COMPONENTS |            |                             |     |      |  |  |  |  |
|---------|---------------------------------------|------------|-----------------------------|-----|------|--|--|--|--|
| 序号      | 新图号                                   | 名 称        | Name of parts               | 数量  | 备注   |  |  |  |  |
| Ref.No. | new part No.                          | Part name  | *                           | Qty | Note |  |  |  |  |
| 1       | 991009001                             | 油窗         | Oil sight window            | 1   |      |  |  |  |  |
| 2       | 991009002                             | 油窗0型圈      | Rubber ring                 | 1   |      |  |  |  |  |
| 3       | 991009003                             | 上轴供油管      | Main shaft oil tube         | 1   |      |  |  |  |  |
| 5       | 991009003B                            | 上轴供油管B     | Main shaft oil tube         | 1   |      |  |  |  |  |
| 4       | S094762806                            | 回油管夹螺钉     | Screw 3/16x28 L=6           | 1   |      |  |  |  |  |
| 5       | 991009005                             | 回油毡夹       | Oil felt presser            | 1   |      |  |  |  |  |
| 6       | 991009006                             | 回油管        | Oil return tube asm         | 1   |      |  |  |  |  |
| 7       | 991009007                             | 回油管夹       | Holder                      | 1   |      |  |  |  |  |
| 8       | 991009008                             | 送料轴油线      | Oil wick                    | 1   |      |  |  |  |  |
| 9       | 991009009                             | 旋梭油量调节螺钉   | Oil adjusting screw         | 1   |      |  |  |  |  |
| 10      | 991009010                             | 旋梭油量调节簧    | Spring                      | 1   |      |  |  |  |  |
| 11      | 991009011                             | 旋梭供油管      | Oil tube                    | 1   |      |  |  |  |  |
| 12      | 991009012                             | 油泵部件       | Lubricating oil pump asm    | 1   |      |  |  |  |  |
| 12-1    | 991009012-1                           | 油泵安装板      | Oil pump installing base    | 1   |      |  |  |  |  |
| 12-2    | 991009012-2                           | 油泵体        | Oil pump                    | 1   |      |  |  |  |  |
| 12-3    | 991009012-3                           | 油泵叶轮       | Oil pump impeller           | 1   |      |  |  |  |  |
| 12-4    | 991009012-4                           | 油泵盖螺钉      | Screw D=3 1=10              | 3   |      |  |  |  |  |
| 12-5    | 991009012-5                           | 油泵盖        | Lubricating oil pump cover  | 1   |      |  |  |  |  |
| 12-6    | 991009012-6                           | 油泵叶轮托板     | Oil pump impeller cover     | 1   |      |  |  |  |  |
| 12-7    | 991009012-7                           | 回油柱塞       | Plunger                     | 1   |      |  |  |  |  |
| 12-8    | 991009012-8                           | 柱塞簧        | Plunger spring              | 1   |      |  |  |  |  |
| 12-9    | 991009012-9                           | 柱塞螺钉       | Plunger screw               | 1   |      |  |  |  |  |
| 12-10   | 991009012-10                          | 下轴供油管      | Hook driving shaft oil tube | 1   |      |  |  |  |  |
| 12-10   | 991009012-10+                         | 下轴供油管(四自动) | Hook driving shaft oil tube | 1   |      |  |  |  |  |
| 12-11   | M070300508                            | 油泵安装螺钉     | Screw M3 L=8                | 3   |      |  |  |  |  |
| 13      | 991009013                             | 油泵连接螺柱     | Oil pump support,large      | 1   |      |  |  |  |  |
| 14      | S074374010                            | 油泵螺钉       | Screw                       | 1   |      |  |  |  |  |
| 15      | 991009015                             | 供油管接头      | Rubber joint                | 1   |      |  |  |  |  |
| 16      | 991009016                             | 绕线器驱动轮     | Bobbin pulley               | 1   |      |  |  |  |  |
| 17      | S144374006                            | 绕线器驱动轮螺钉   | Screw                       | 2   |      |  |  |  |  |
| 18      | 991009017                             | 卡簧         | Circlip                     | 1   |      |  |  |  |  |
| 19      | S075952510                            | 油泵螺钉       | Screw 15/64x28 L=10         | 1   |      |  |  |  |  |



| 序号      | 新图号          | 名 称        | Name of parts              | 数量  | 备注   |
|---------|--------------|------------|----------------------------|-----|------|
| Ref.No. | new part No. | Part name  | Name of parts              | Qty | Note |
| 1       | 991010001    | 油盘部件       | Oil reservoir asm          | 1   |      |
| 2       | 991010002    | 油盘         | Oil reservoir              | 1   |      |
| 3       | 991010003    | 油盘垫        | Oil reservoir gasket       | 1   |      |
| 4       | S077942407   | 排油孔螺钉      | Screw 5/16x24 L=7          | 1   |      |
| 5       | 991010005    | 排油孔螺钉0型圈   | Rubber ring                | 1   |      |
| 6       | 991010006    | 抬压脚双向曲柄    | Knee lifting rotating arm  | 1   |      |
| 7       | 991010007    | 双向曲柄扭簧     | Spring                     | 1   |      |
| 8       | 991010008    | 抬压脚轴开口挡圈   | E-ring 10                  | 1   |      |
| 9       | 991010009    | 抬压脚操纵杆接头   | Vertical shaft fitting arm | 1   |      |
| 10      | 991010010    | 操纵杆接头螺钉    | Screw                      | 2   |      |
| 11      | N210601006   | 双向曲柄限位调节螺母 | Nut M6                     | 2   |      |
| 12      | M120601030   | 双向曲柄限位调节螺钉 | Screw M6 L=30              | 2   |      |
| 13      | M190601018   | 双向曲柄螺钉     | Screw M6 L=17.5            | 1   |      |
| 14      | 991010014    | 抬压脚轴       | Knee press cross shaft     | 1   |      |
| 15      | 991010015    | 操纵杆部件      | Knee pan plate asm         | 1   |      |
| 16      | 991010016    | 操纵杆软垫      | Knee pan plate cover       | 1   |      |
| 17      | 991010017    | 操纵杆        | Knee pan upright shaft     | 1   |      |
| 18      | 991010018    | 操纵杆垫       | Knee pan plate rubber      | 1   |      |
| 19      | 991010019    | 操纵板        | Knee pan plate             | 1   |      |
| 20      | 991010020    | 操纵杆接头      | Knee pan plate support     | 1   |      |
| 21      | M190601012   | 接头螺钉       | Screw M6 L=12              | 1   |      |
| 22      | 991010022    | 抬压脚顶杆      | Knee lifter push rod       | 1   |      |



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| 序号      | 新图号          | 名称        | Name of parts                    | 数量  | 备注   |
|---------|--------------|-----------|----------------------------------|-----|------|
| Ref.No. | new part No. | Part name | 1                                | Qty | Note |
| 1       | 991013001    | 过线架部件     | Thread stand asm                 | 1   |      |
| 2       | 991013002    | 线团防松垫     | Spool retainer                   | 2   |      |
| 3       | 991013003    | 线盘钉       | Spool pin                        | 2   |      |
| 4       | 991013004    | 线盘轮垫      | Spool rest cushion               | 2   |      |
| 5       | 991013005    | 线盘        | Spool rest                       | 2   |      |
| 6       | M090601016   | 线架过线夹螺钉   | Screw $M6 \times 16$             | 2   |      |
| 7       | 991013007    | 线架过线夹     | Thread guide arm joint           | 2   |      |
| 8       | 991013008    | 线架杆顶防护橡皮  | Spool rest rod rubber cap        | 1   |      |
| 9       | 991013009    | 线架过线杆     | Spool rest arm                   | 2   |      |
| 10      | 991013010    | 线架杆上节     | Spool rest rod upper             | 1   |      |
| 11      | 991013011    | 接架杆接头     | Spool rest rod joint             | 1   |      |
| 12      | M090500814   | 接架杆接头螺钉   | Screw $M5 \times 14$             | 2   |      |
| 13      | N210500805   | 接架杆接头螺母   | Nut M5                           | 2   |      |
| 14      | 991013014    | 线架杆下节     | Spool rest rod lower             | 1   |      |
| 15      | 991013015    | 过线圈       | Thread guide                     | 2   |      |
| 16      | 991013016    | 线盘钉弹簧垫    | Spring washer                    | 2   |      |
| 17      | 991013017    | 线盘钉螺母     | Nut M5                           | 2   |      |
| 18      | 991013018    | 线架杆紧固螺母   | Nut M6 $\times$ 1.5              | 1   |      |
| 19      | 991013019    | 线架杆紧固螺母垫圈 | Washer $16 \times 30 \times 2.6$ | 2   |      |
| 20      | 991013020    | 紧固螺母弹簧垫圈  | Spring washer                    | 1   |      |

