



# TYPICAL

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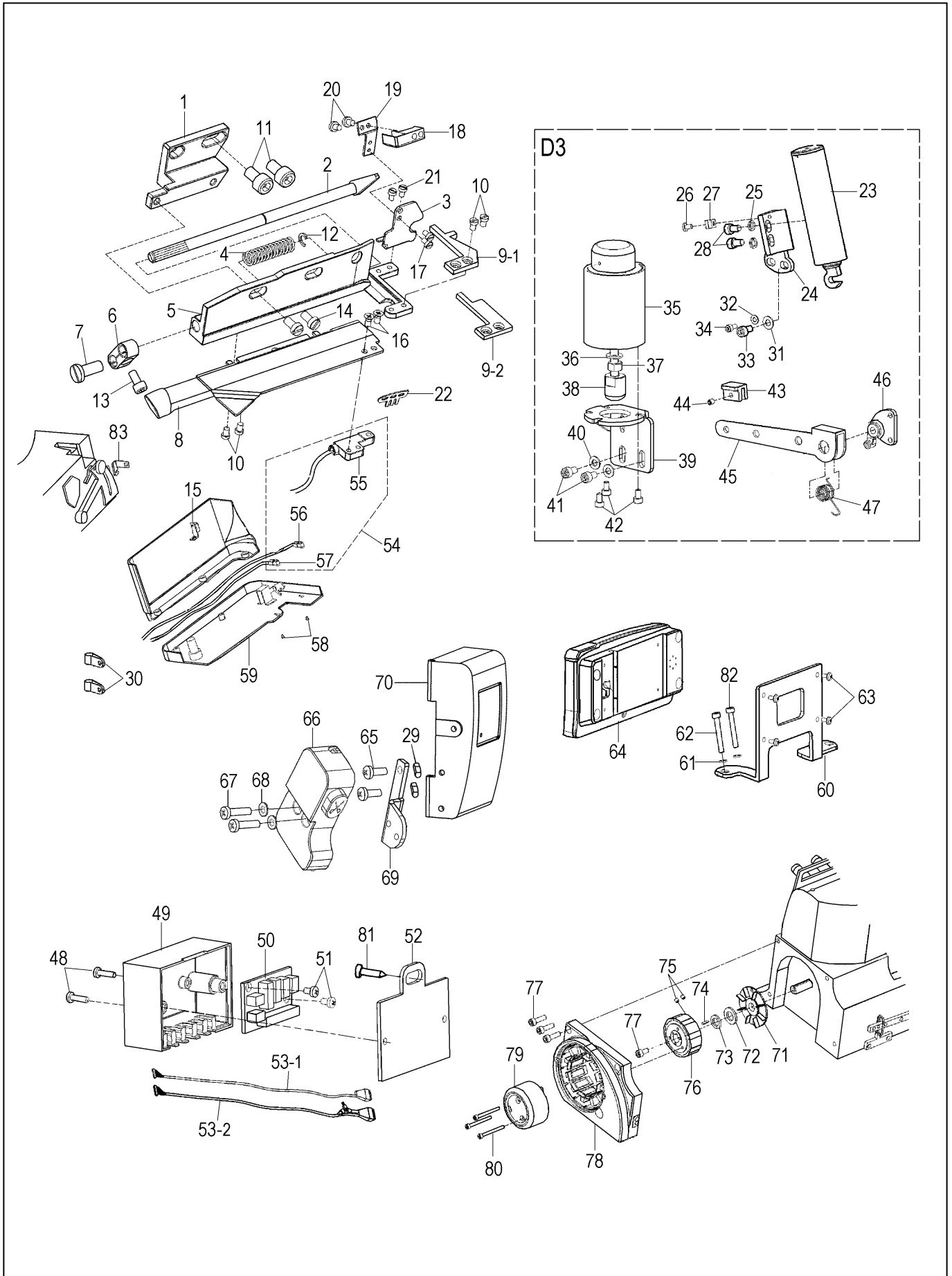
GN6000  
GN7000 SERIES

AUTOMATIC OVERLOCK MACHINE  
OPERATING INSTRUCTIONS

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XI'AN TYPICAL INDUSTRIES CO.,LTD.

# 1. SPECIAL PARTS ( 1 )

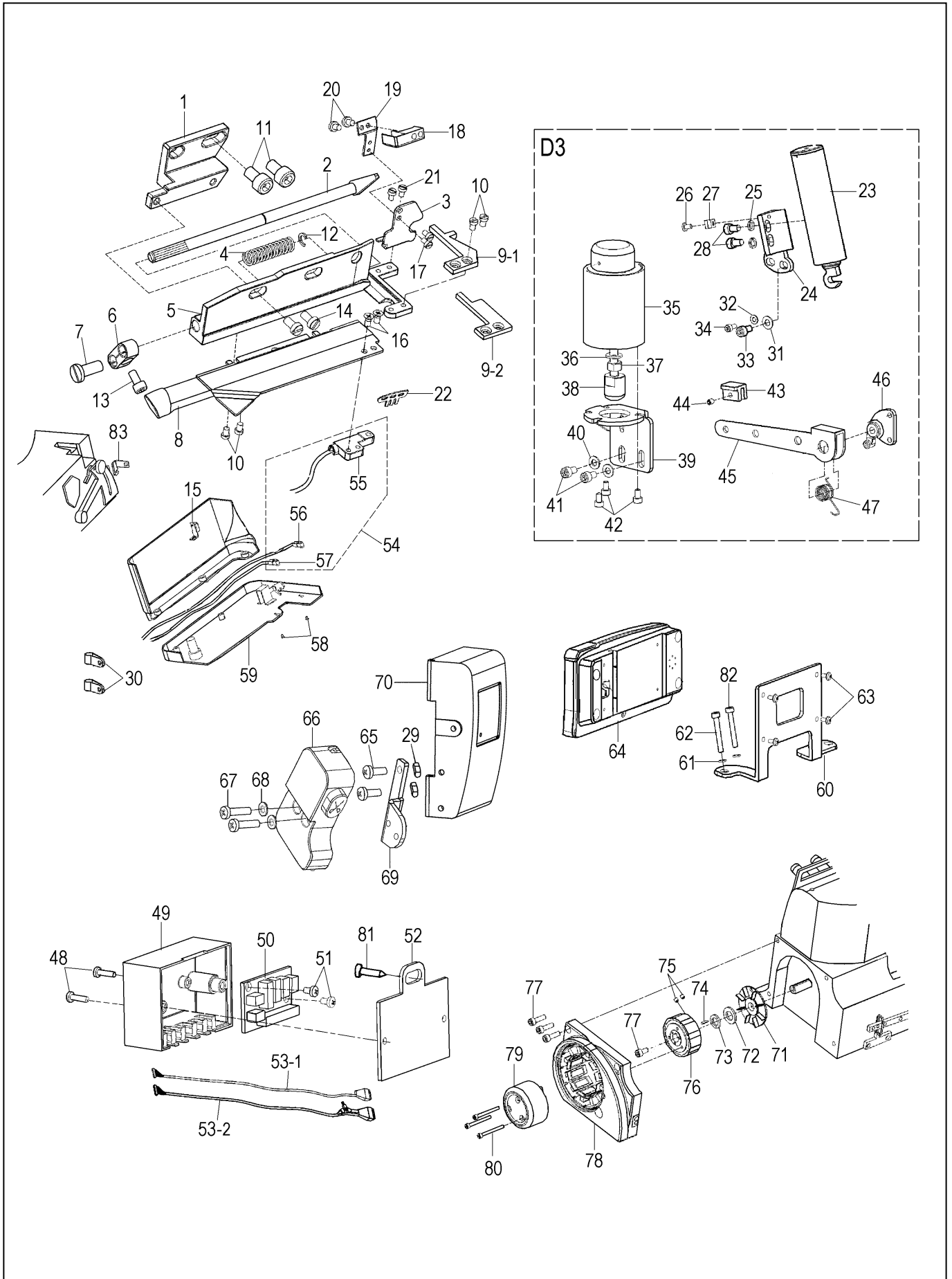


# 1. SPECIAL PARTS ( 1 )

| No  | Ref.No.    | Description                                | 3/4/4H |    | 5/5H/6 |    |
|-----|------------|--|--------|----|--------|----|
|     |            |  | Q3     | D3 | Q3     | D3 |
| 1   | 276220001  | Fixed block                                | 1      | 1  | 1      | 1  |
| 2   | 276221100  | Movable knife assy                         | 1      | 1  | 1      | 1  |
| 3   | 276221006  | Backplate                                  | 1      | 1  | 1      | 1  |
| 4   | 276221002  | Spring                                     | 1      | 1  | 1      | 1  |
| 5   | 276221003  | Tool post                                  | 1      | 1  | 1      | 1  |
| 6   | 276220002  | Locking block                              | 1      | 1  | 1      | 1  |
| 7   | 276220003  | Pin 6                                      | 1      | 1  | 1      | 1  |
| 8   | 276221004  | Floor                                      | 1      | 1  | 1      | 1  |
| 9-1 | 276221008  | Fixed knife                                | 1      | 1  |        |    |
| 9-2 | 276C11102  | Fixed knife                                |        |    | 1      | 1  |
| 10  | S150201002 | Screw M3 × 4 GB/T 65 - 2000                | 4      | 4  | 4      | 4  |
| 11  | S150211019 | Socket head screw M6 × 10 GB/T 70.1 - 2000 | 2      | 2  | 2      | 2  |
| 12  | S150624001 | Bead flange 5 GB/T 960 - 1986              | 1      | 1  | 1      | 1  |
| 13  | S150209044 | Socket head screw M4 × 8 GB/T 70.1 - 2000  | 1      | 1  | 1      | 1  |
| 14  | 276220005  | Screw SM11/64" - 40 L=8                    | 2      | 2  | 2      | 2  |
| 15  | 276280001  | Safety switch induction base               | 1      | 1  | 1      | 1  |
| 16  | S150218009 | Screw M3 × 6 GB/T 819.1 - 2000             | 2      | 2  | 2      | 2  |
| 17  | S150201035 | Screw M2.5 × 4 GB/T 65 - 2000              | 2      | 2  | 2      | 2  |
| 18  | 276221010  | Emit light                                 | 1      | 1  | 1      | 1  |
| 19  | 276221009  | Prop                                       | 1      | 1  | 1      | 1  |
| 20  | 276221011  | Screw M3 × 4                               | 2      | 2  | 2      | 2  |
| 21  | 276221007  | Screw M3 × 4                               | 2      | 2  | 2      | 2  |
| 22  | 276220004  | Safe stop plate                            | 1      | 1  | 1      | 1  |
| 23  | 276231000  | Thread trimming solenoid                   |        | 1  |        | 1  |
| 24  | 276231001  | Thread trimming solenoid rest              |        | 1  |        | 1  |
| 25  | S150601004 | Spring washer 6 GB/T 93 - 1987             |        | 2  |        | 2  |
| 26  | 276231003  | Screw M4 × 6 GB/T 818 - 2000               |        | 1  |        | 1  |
| 27  | 276231002  | R line clip                                |        | 1  |        | 1  |
| 28  | S150209016 | Socket head screw M6 × 12 GB/T 70.1 - 2000 |        | 2  |        | 2  |
| 29  | S150501005 | Hexagon nut M3 GB/T 41 - 2000              | 2      | 2  | 2      | 2  |
| 30  | 276230001  | Plastic clip 6                             | 2      | 2  | 2      | 2  |
| 31  | S150605020 | Plain washer 6 GB/T 95 - 1985              |        | 1  |        | 1  |
| 32  | S150605001 | Plain washer 4 GB/T 95 - 1985              |        | 1  |        | 1  |
| 33  | S150209056 | Socket head screw M6 × 16 GB/T 70.1 - 2000 |        | 1  |        | 1  |
| 34  | S150209049 | Socket head screw M4 × 14 GB/T 70.1 - 2000 |        | 1  |        | 1  |
| 35  | 276271000  | P - foot lifter solenoid                   |        | 1  |        | 1  |
| 36  | 276271001  | Washer 8                                   |        | 1  |        | 1  |
| 37  | S150501005 | Hexagon nut M8 GB/T 41 - 2000              |        | 1  |        | 1  |
| 38  | 276271002  | Ejector rob                                |        | 1  |        | 1  |
| 39  | 276271003  | Electromagnet bracket                      |        | 1  |        | 1  |
| 40  | S150605020 | Plain washer 6 GB/T 95 - 1985              |        | 2  |        | 2  |
| 41  | S150209056 | Socket head screw M6 × 16 GB/T 70.1 - 2000 |        | 2  |        | 2  |
| 42  | S150209034 | Socket head screw M5 × 10 GB/T 70.1 - 2000 |        | 3  |        | 3  |

Other spare parts are same as the parts of 3000 series

## 2. SPECIAL PARTS ( 1 )

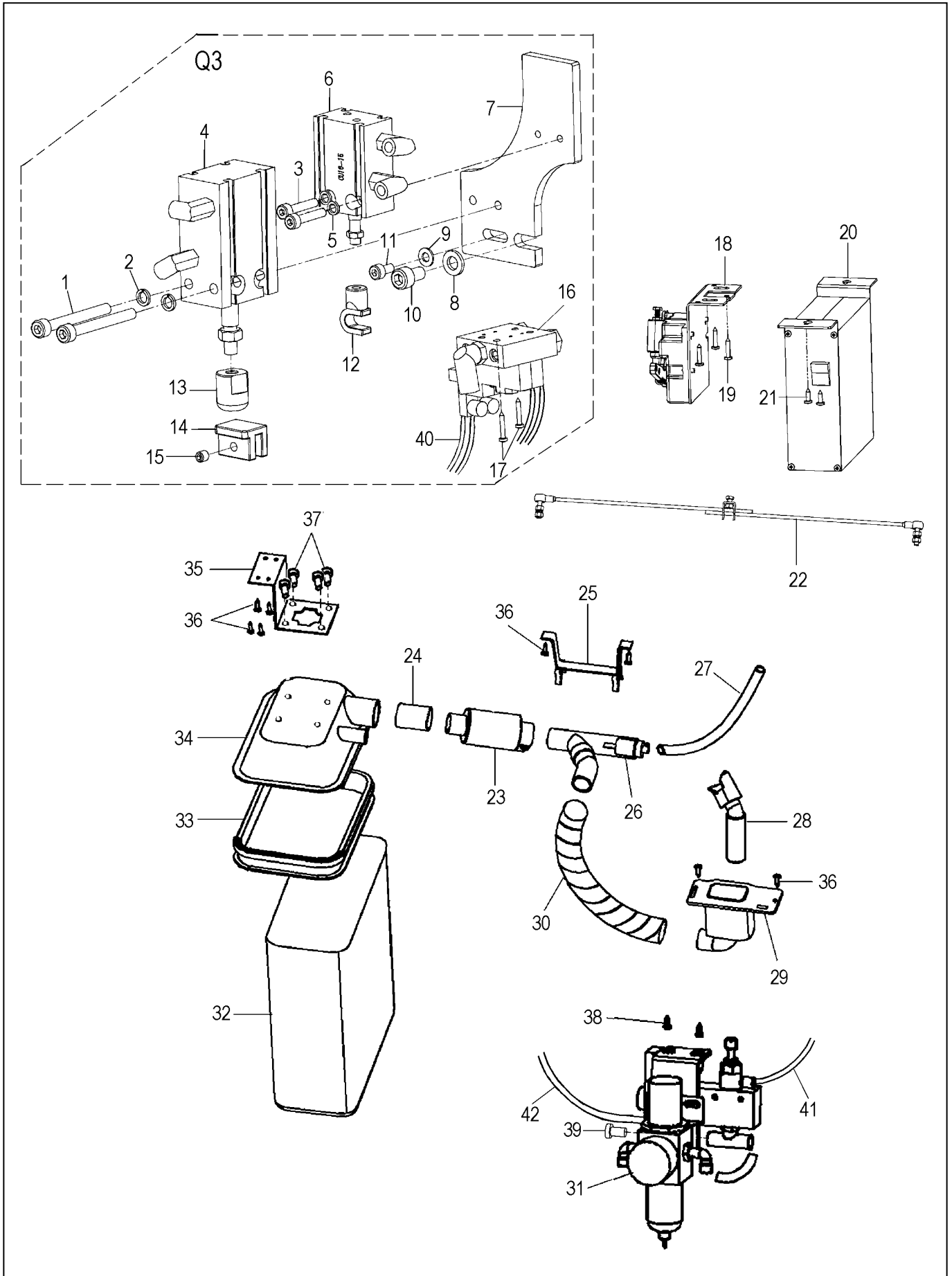


## 2. SPECIAL PARTS ( 1 )

| No     | Ref.No.    | Description                                   | 3/4/4H |    | 5/5H/6 |    |
|--------|------------|---|--------|----|--------|----|
|        |            |   | Q3     | D3 | Q3     | D3 |
| 43     | 276270001  | Padding block                                 |        | 1  |        | 1  |
| 44     | S150212006 | Socket head screw M5 × 6 GB/T 77 - 2000       |        | 1  |        | 1  |
| 45     | 276270002  | Presser foot lever                            |        | 1  |        | 1  |
| 46     | 276270004  | Presser foot lifting lever mount              |        | 1  |        | 1  |
| 47     | 276270003  | Spring  |        | 1  |        | 1  |
| 48     | 276260001  | Screw M3 × 10                                 | 2      | 2  | 2      | 2  |
| 49     | 276260002  | Cable box shell                               | 1      | 1  | 1      | 1  |
| 50     | 276260003  | Cable box circuit board                       | 1      | 1  | 1      | 1  |
| 51     | 276260004  | Screw M3 × 4                                  | 2      | 2  | 2      | 2  |
| 52     | 276260005  | Cable box cover                               | 1      | 1  | 1      | 1  |
| 53 - 1 | 276A13001  | Drawing off wire                              | 1      |    | 1      |    |
| 53 - 2 | 276260006  | Drawing off wire                              |        | 1  |        | 1  |
| 54     | 276221200  | Sensor eye assy                               | 1      | 1  | 1      | 1  |
| 55     | 276221005  | Receive light                                 | 1      | 1  | 1      | 1  |
| 56     | 276250002  | Auto start photoelectric sensor eye           | 1      | 1  | 1      | 1  |
| 57     | 276250001  | Front thread cutting photoelectric sensor eye | 1      | 1  | 1      | 1  |
| 58     | S150217014 | Screw M2.5 × 5 GB/T 819.1 - 2000              | 2      | 2  | 2      | 2  |
| 59     | 276251000  | Sewing table assy                             | 1      | 1  |        |    |
|        | 276C12100  | Sewing table assy                             |        |    | 1      | 1  |
| 60     | 276110003  | Display stand                                 | 1      | 1  | 1      | 1  |
| 61     | S150601005 | Spring washer 4 GB/T 93 - 1987                | 2      | 2  | 2      | 2  |
| 62     | S150209210 | Socket head screw M4 × 35 GB/T 70.1 - 2000    | 1      | 1  | 1      | 1  |
| 63     | 276110002  | Screw M3 × 10                                 | 4      | 4  | 4      | 4  |
| 64     | 276110001  | Display                                       | 1      | 1  | 1      | 1  |
| 65     | S150209212 | Screw M3 × 8                                  | 2      | 2  | 2      | 2  |
| 66     | 276240002  | Manual switch                                 | 1      | 1  | 1      | 1  |
| 67     | 276240001  | Screw M3 × 12                                 | 2      | 2  | 2      | 2  |
| 68     | S150613002 | Plain washer 3 GB/T 848 - 1985                | 2      | 2  | 2      | 2  |
| 69     | 276240004  | Manual switch stand                           | 1      | 1  | 1      | 1  |
| 70     | 276240005  | Cover piece                                   | 1      | 1  | 1      | 1  |
| 71     | 276210006  | Blades 12 × 10                                | 1      | 1  | 1      | 1  |
| 72     | 276210005  | Flat gasket 12                                | 1      | 1  | 1      | 1  |
| 73     | S150625001 | Washer 12 GB/T 7246 - 1987                    | 1      | 1  | 1      | 1  |
| 74     | 276210004  | Triangle pin 3 × 3                            | 1      | 1  | 1      | 1  |
| 75     | S150212006 | Socket head screw M5 × 6 GB/T 77 - 2000       | 2      | 2  | 2      | 2  |
| 76     | 276210003  | Rotor   | 1      | 1  | 1      | 1  |
| 77     | S150209058 | Socket head screw M6 × 20 GB/T 70.1 - 2000    | 4      | 4  | 4      | 4  |
| 78     | 276210002  | Electric machine                              | 1      | 1  | 1      | 1  |
| 79     | 276210001  | Pilot wheel                                   | 1      | 1  | 1      | 1  |
| 80     | S150209098 | Socket head screw M4 × 40 GB/T 70.1 - 2000    | 3      | 3  | 3      | 3  |
| 81     | S150221016 | Socket head screw ST4.8 × 16 GB/T 845 - 85    | 1      | 1  | 1      | 1  |
| 82     | S150209211 | Screw M4 × 30 GB/T 70.1 - 2000                | 1      | 1  | 1      | 1  |
| 83     | 276280002  | Magnet seat                                   | 1      | 1  | 1      | 1  |

Other spare parts are same as the parts of 3000 series

### 3. SPECIAL PARTS ( 2 )



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| No | Ref.No.    | Description                   | 3/4/4H |    | 5/5H/6 |    |
|----|------------|-------------------------------|--------|----|--------|----|
|    |            |                               | Q3     | D3 | Q3     | D3 |
| 1  | S150209025 | Screw M5 × 45 GB/T 70.1-2000  | 2      |    | 2      |    |
| 2  | S150601007 | Spring washer 5 GB/T 93-1987  | 2      |    | 2      |    |
| 3  | S150209208 | Screw M4 × 18 GB/T 70.1-2000  | 2      |    | 2      |    |
| 4  | 276A11103  | Air cylinder                  | 1      |    | 1      |    |
| 5  | S150601005 | Spring washer 4 GB/T 93-1987  | 2      |    | 2      |    |
| 6  | 276A11101  | Air cylinder CU16 × 15 0.8Mpa | 1      |    | 1      |    |
| 7  | 276A11105  | Web plate                     | 1      |    | 1      |    |
| 8  | S150605020 | Plain washer 6 GB/T 95-1985   | 1      |    | 1      |    |
| 9  | S150605001 | Plain washer 4 GB/T 95-1985   | 1      |    | 1      |    |
| 10 | S150209056 | Screw M6 × 16 GB/T 70.1-2000  | 1      |    | 1      |    |
| 11 | S150209049 | Screw M4 × 14 GB/T 70.1-2000  | 1      |    | 1      |    |
| 12 | 276A11102  | Suspender                     | 1      |    | 1      |    |
| 13 | 276A11104  | Ejector rob                   | 1      |    | 1      |    |
| 14 | 276270001  | Padding block                 | 1      |    | 1      |    |
| 15 | S150212006 | Screw M5 × 6 GB/T 77-2000     | 1      |    | 1      |    |
| 16 | 276A12000  | Electromagnetic valve assy    | 1      |    | 1      |    |
| 17 | S150221018 | Screw ST2.9 × 30 GB/T 845-85  | 2      |    | 2      |    |
| 18 | 276120003  | Governor                      | 1      | 1  | 1      | 1  |
| 19 | S150221017 | Screw ST4.8 × 25 GB/T 845-85  | 3      | 3  | 3      | 3  |
| 20 | 276120001  | Control cabinet               | 1      | 1  | 1      | 1  |
| 21 | S150221016 | Screw ST4.8 × 16 GB/T 845-85  | 2      | 2  | 2      | 2  |
| 22 | 276120002  | Pull rod                      | 1      | 1  | 1      | 1  |
| 23 | 276300009  | Noise suppressor ( B )        | 1      | 1  | 1      | 1  |
| 24 | 276300014  | connecting tube 45            | 1      | 1  | 1      | 1  |
| 25 | 276300013  | Y type tube table hanger      | 1      | 1  | 1      | 1  |
| 26 | 276300011  | Y type tube                   | 1      | 1  | 1      | 1  |
| 27 | 276300012  | Hose tube 18                  | 1      | 1  | 1      | 1  |
| 28 | 276300016  | Sewing table suction tube     | 1      | 1  | 1      | 1  |
| 29 | 276300015  | Waste bucket                  | 1      | 1  | 1      | 1  |
| 30 | 276300010  | Threaded pipe                 | 1      | 1  | 1      | 1  |
| 31 | 276300001  | Filter regulator valve assy   | 1      | 1  | 1      | 1  |
| 32 | 276300005  | Bag                           | 1      | 1  | 1      | 1  |
| 33 | 276300006  | Bag cover                     | 1      | 1  | 1      | 1  |
| 34 | 276300007  | Bag base                      | 1      | 1  | 1      | 1  |
| 35 | 276300008  | Bag hanger                    | 1      | 1  | 1      | 1  |
| 36 | S150221019 | Screw ST4.8 × 20 GB/T 846-85  | 8      | 8  | 8      | 8  |
| 37 | S150211019 | Screw M6 × 10 GB/T 70.1-2000  | 4      | 4  | 4      | 4  |
| 38 | S150221016 | Screw ST4.8 × 16 GB/T 845-85  | 2      | 2  | 2      | 2  |
| 39 | 276300017  | Spigot 8                      |        | 1  |        | 1  |
| 40 | 276300002  | Trachea 4                     | 4      |    | 4      |    |
| 41 | 276300003  | Trachea 6                     | 1      | 1  | 1      | 1  |
| 42 | 276300004  | Trachea 8                     | 1      |    | 1      |    |

Other spare parts are same as the parts of 3000 series

# Operation Panel Instruction

## 4.1 Appearance and key

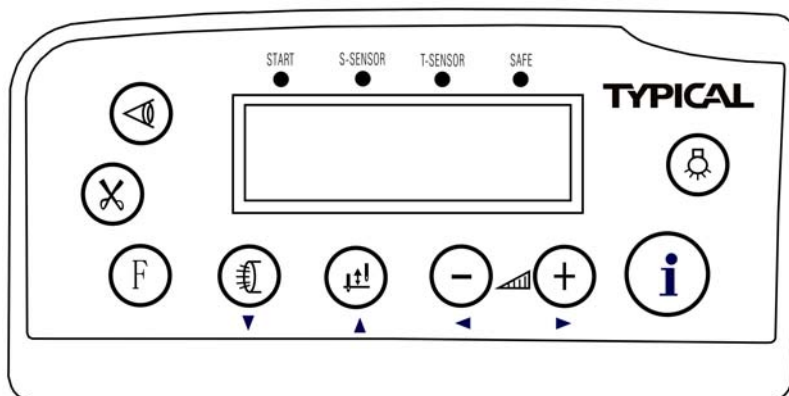





Fig 4.1 The appearance of operation panel

"SAFE" indicator light (Yellow): remind users when the safety switch is off.

Operate/ malfunction indicator light (green/red): when the green light is on, the electric motor of the sewing machine runs; when the red light is on, the system fails.

| No. | Appearance | Description   |
|-----|------------|---|
| 1   |            | Main menu key: return the top main interface, also can worked when pressed with other keys at the same time.  |
| 2   |            | Automatic mode selection key: in the case of all sensor open,continuous press can choose automatic pedal or automatic sensor control mode.  |
| 3   |            | Sensor function select key: open or close the sensor function。 Sensor shut down and turn into the manual mode; It be can choose semi-automatic or automatic mode after sensor open. Additionally, the starting sensor delay parameters can be modified.   |
| 4   |            | Trimming selection key: select the trimming mode when sewing. continuous press are optional front trimming, back trimming, front and back trimming ,and trimming the closure of four modes; additionally, the opened shear line delay pin number modified can be modified.  |
| 5   |            | Suck function selection keys: select the suction mode when sewing. Continuous press front trimming suction, back trimming suction, front and back suction and suction closure four kinds of modes; additionally, the open time parameters of front trimming suction can be modified.<br>(down key: according to the reminder on the screen, select down, used to modify index number) |
| 6   |            | Needle stop position selection key: select the needle position when stop. Continuous press up stop position, down stop position and close the needle stop position in turn.<br>(Up key: according to the reminder on the screen, select up, used to modify index number )   |



|   |   |   |
|---|---|---|
| 7 |  | Deceleration key: decrease the highest speed when sewing.<br>(Left key: according to the reminder on the screen, select left, used to modify parameter value)   |
| 8 |  | Acceleration key: increase the highest speed when sewing.<br>(Right key: according to the reminder on the screen, select right, used to modify parameter value) |
| 9 |  | Head lamp key : modify the height of head lamp. Continuous press the key and grade 0~3 can be selected, grade 0 is close.                                       |

## 4.2 Main interface

The control panel is correctly inserted into the corresponding electrical control box and make sure the power is open safely. After two second of starting up, the lcd will display the main interface (Fig 4.2).

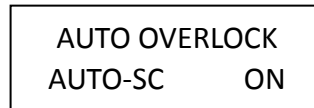


Fig 4.2 System main interface

## 4.3 Working mode setting

Automatic sewing machine system according to the requirements can work in manual mode, semi-automatic mode, automatic pedal control mode and automatic sensor control mode. Wherein, the manual mode controls the sewing machine operation entirely by foot pedals. In this case, sensor is closed, and detection and automatic trimming function is invalid. Semi-automatic mode controls sewing machine operation by the sensors combined with foot pedal. In this case, sensor function open, but starting sensor is closed, and foot pedals as well as trimming are valid. Automatic pedal control mode controls foot automatically by the starting sensor. Foot pedals starts the sewing process. Automatic sensor control mode is entirely controlled sewing machine automatically by the sensor. In this case, foot pedals is invalid.

| Sewing mode              | Sensor function | Starting sensor | Automatic mode selection |
|--------------------------|-----------------|-----------------|--------------------------|
| Semi - manual            | Off             | Off             | Invalid                  |
| Semi - automatic         | On              | Off             | Semi - automatic         |
| Automatic pedal control  | On              | On              | Automatic pedal control  |
| Automatic sensor control | On              | On              | Automatic sensor control |

For example: manual mode main interface when the sensor is closed (Fig 4.3)

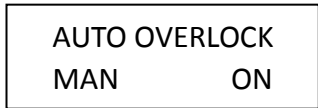



Fig 4.3 Manual mode system main interface

Press  key at main interface, in this case, the current status of sensor is displayed on the screen (Fig 4.4).

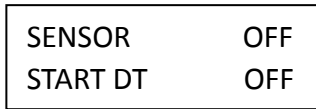


Fig 4.4 Sensor close

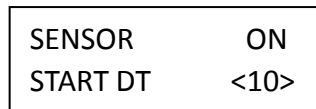






Fig 4.5 Sensor open

Press  key again , sensor switch on (Fig 4.5), in this case, Press  and  key to adjust the delay time parameter of the starting sensor. After finishing the setting, press  key to return main interface.

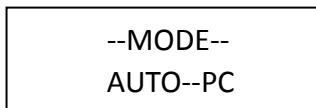


Fig 4.6 Automatic pedal control

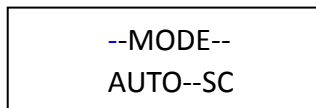






Fig 4.7 Automatic sensor control

After returning to main interface , in the case of sensor function open but starting sensor do not close, press  key can select Automatic pedal control mode (Fig 4.6) or automatic sensor control mode (Fig 4.7). After finishing the setting, press  key to return main interface.

#### 4.4 Trimming function setting

Press  key on main interface, the trimming function setting will display on the screen. Then press  key, trimming function will switch between front trimming (fig 4.8), back trimming (fig 4.9), front and back trimming (fig 4.10) and close trimming (fig 4.11).

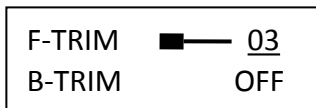


Fig 4.8 Front trimming

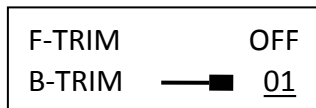


Fig 4.9 Back trimming



Fig 4.10 front and back trimming

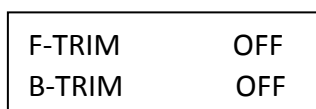







Fig 4.11 close trimming

When front trimming or back trimming mode opens, the parameters of trimming delay needle quantity display on the screen. Press 、 key trimming delay needle quantity. When front trimming and back trimming mode open at the same time, press  or  key to switch modify parameters of front or back trimming delay needle quantity. After finishing trimming function setting, press  key to return main interface.

### 4.5 Suck function setting



Press  key on the main interface, suck function setting will display on the screen (Fig 4.12). Then press  key, suck function will switch between close trimming suction (Fig 4.12), front trimming suction (Fig 4.13), back trimming suction (Fig 4.14), and front and back suction (Fig 4.15).



Fig 4.12 Close trimming suction



Fig 4.13 Front trimming suction



Fig 4.14 Back trimming suction

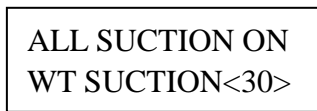







Fig 4.15 Front and back trimming suction

When the front trimming or front and back trimming suction function is open, the front trimming suction open time parameter will display on the screen. Press ,  key can modify this parameter to adjust suction open time. After finishing suck function setting, press  key to return main interface.

### 4.6 Needle stop position setting

Press  key on the main interface, needle stops position during operation setting will display on the screen. Then press  key, needle stop position during operation will switch between down stop (Fig 4.16), up stop (Fig 4.17) and closed (Fig 4.18).

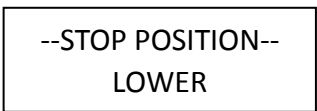


Fig. 4.16 Needle stop down

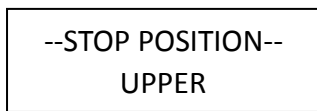


Fig 4.17 Needle stop up

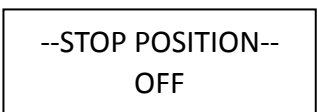






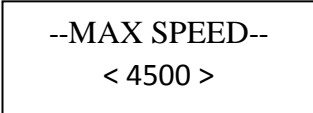


Fig 4.18 Close needle stop position

After finishing needle stop position setting, press  key to return main interface.

## 4.7 The highest speed setting

Press  or  key, the highest running speed of sewing machine will display on the screen (Fig. 4.19). Then press  or  key can modify the highest running speed. The highest running speed increases/decreases 50 rpm when press the keys every time. After finishing the highest running speed setting, press  key to return main interface.




```
--MAX SPEED--  
< 4500 >
```












Fig 4.19 The highest speed

## 4.8 Advanced function

### 4.8.1 Chinese - English switch

Press  for 3 seconds on main interface can complete Chinese-English switch of the operation panel.

### 4.8.2 The sensor parameters setting

Press  +  key simultaneously on the main interface, and then enter into the interface of the sensor parameters inquire setting. Under this interface, the signal and threshold value of three sensors can be viewed and set. Press  or  can switch page between starting sensor, s-sensor and t-sensor. The data of the first row in every page is the detection signal value of the current sensor. The data of the second row is variable threshold value. and press  or  can modify this parameter. After finishing this setting, press  key to return main interface. Close starting sensor operation: In Fig 4.20 interface, press  key to modify sensor threshold value till displaying "OFF ". After finishing this setting, press  key to return main interface. Open starting sensor operation: When the threshold of starting sensor is " OFF ", press  key to change the threshold of starting sensor to number. After finishing this setting, press  key to return main interface.



```
START    0750  
THRESHOLD<0750>
```

Fig 4.20 The signal and threshold of starting sensor





```
S-SENSOR  0750  
THRESHOLD<0750>
```

Fig 4.21 The signal and threshold of s - sensor

T-SENSOR 0550  
THRESHOLD<0550>




Fig 4.22 The signal and threshold of t - sensor

### 4.8.3 Ordinary parameter Settings

Press  +  key simultaneously on the main interface, and then enter into the password interface of ordinary parameter settings (Fig 4.23).






PASSWORD  
< 7777 >

Fig 4.23 Parameter password



The modification of the password can be achieved by using  or  . Press  key, if the password is right then enter into the page of parameter setting (Fig 4.24); if the password is wrong then return main interface.

P-01  
< 0400>



Fig 4.24 parameter setting

In the page of parameter setting, pressing  or  can change parameter index number, pressing  or  can change parameter value. After finishing the setting, press  key to return main interface.

### 4.8.4 Technical parameter setting




Press  +  key simultaneously on the main interface, and then enter into the password interface of technical parameter setting. The other step is the same as the ordinary parameter setting in 4.8.3.

### 4.8.5 Monitor mode

Press  +  key simultaneously on the main interface, and then enter into monitor mode (Fig 4.27).

MONITOR-01  
BusVoltage 0310

Fig 4.27 Monitor mode

Press  or  key to switch index of monitor mode and then view the different monitor parameters. Press  key to quit monitor mode and return the main interface.

Monitor parameter table :

| Display | Parameter specification                      | Unit   |
|---------|--|--------|
| 01      | Bus voltage                                  | V      |
| 02      | Motor speed                                  | spm    |
| 03      | Motor current                                | 0.1A   |
| 04      | Initial Angle of the motor                   | degree |
| 05      | Needle stop signal/Hall signal               |        |
| 06      | Pedal signal                                 |        |
| 07      | The controller software version number       |        |
| 08      | The controller software sub - version number |        |
| 09      | HMI software version number                  |        |

#### 4.9 Error and failure treatment

When there is a failure in the sewing machine, the main interface of system will display the failure content and code on the screen (Fig 4.28).



Fig 4.28 Failure display

Failure code table :

| Failure code | Failure content                         | Solution  |
|--------------|---|---|
| 1            | Hardware overcurrent                    | Close system power and open power again after 30 seconds. If the controller still can not work, please replace the controller and inform the manufacturer.  |
| 2            | Software overcurrent                    |   |
| 3            | System undervoltage                     | Disconnect the power of controller, and check the input voltage is low or not. If the voltage is low, and restarting the power still can not work after the voltage recovering, please replace the controller and inform the manufacturer.                                |
| 4            | Overvoltage during pausing              | Disconnect the power of controller, and check the input voltage is low or not. If the voltage is high (over 245V) and restarting the power still can not work after the voltage recovering, please replace the controller and inform the manufacturer.                    |
| 5            | Overvoltage during running              |   |
| 6            | Motor block                             | Disconnect the power of controller, check the power plugs is off, loose and broken or not, and check there is some things enwind on the head of the motor. If restarting still cannot work after the solution, please replace the controller and inform the manufacturer. |
| 7            | Head needle stop signal failure         | Check the connecting wire between the motor encoder or head synchronizer and controller is off, loose and broken or not. If restarting still cannot work after the solution, please replace the controller and inform the manufacturer.                                   |
| 8            | Mainboard read and write EEPROM failure | Disconnect the power and restarting. If still display failure, please replace the controller and inform the manufacturer.   |
| 9            | Overspeed failure                       | Disconnect the system power, and reconnect the power after 30 seconds. If the controller can not works, please replace the controller and inform the manufacturer.  |
| 10           | Reversal failure                        |   |
| 11           | Motor overload                          |   |
| 12           | Current detection circuit failure       |   |

|    |                                     |   |
|----|-------------------------------------|---|
| 13 | Motor HALL failure                  | Check the connecting wire between the motor encoder and controller is off, loose and broken or not. If restarting still cannot work after the solution, please replace the controller and inform the manufacturer.  |
| 14 | Communication failure               | Check the connecting wire between the panel and the controller is off, loose and broken or not. If restarting still cannot work after the solution, please replace the controller and inform the manufacturer.  |
| 15 | Pedal signal failure                | Check the connecting wire between the pedal and the controller is off, loose and broken or not. If restarting still cannot work after the solution, please replace the controller and inform the manufacturer.  |
| 16 | Electromagnet short circuit failure | Check the connecting wire of electromagnet is right, off, loose and broken or not. If have these phenomena, please replace the wire in time. If restarting still cannot work after the solution, please replace the controller and inform the manufacturer. |
| 18 | Sensor failure                      | Check the connecting wire between the panel and the controller is off, loose and broken or not. If restarting still cannot work after the solution, please replace the controller and inform the manufacturer.  |
| 19 | Panel read and write EEPROM failure | Please restarting after disconnect the power. If still have a failure, please replace the controller and inform the manufacturer.   |



## (Fifth) System reference instruction

### 5.1 Ordinary parameters list

| No                  | Display | Controlled value                                    | Parameter range                              | Reference value |
|---------------------|---------|---|--|-----------------|
| Ordinary parameters |         |   |  |                 |
| 1                   | P - 01  | The lowest speed limit                              | 300 - 1000                                   | 400             |
| 2                   | P - 02  | The highest speed limit                             | 300 - 7000                                   | 4500            |
| 3                   | P - 03  | Soft starting function and<br>needle number         | 0 - 9  | 0               |
| 4                   | P - 04  | The highest speed of soft<br>starting               | 300 - 1500                                   | 1200            |
| 5                   | P - 05  | Acceleration  | 10 - 90                                      | 20              |
| 6                   | P - 06  | Deceleration  | 10 - 90                                      | 30              |
| 7                   | P - 07  | Retention   | -  | -               |
| 8                   | P - 08  | Retention   | -  | -               |
| 9                   | P - 09  | Overcurrent failure<br>automatically recover switch | 0:OFF 1:ON                                   | 1               |
| 10                  | P - 10  | The maximum current setting                         | 7 - 17                                       | 10              |
| 11                  | P - 11  | Motor running direction                             | 0: Reverse direction<br>1: Forward direction | 1               |
| 12                  | P - 12  | The needle stop sensor model                        | 0:OFF 1:ON                                   | 1               |
| 13                  | P - 13  | Start find the needle position                      | 0:OFF 1:ON                                   | 0               |
| 14                  | P - 14  | Needle stopping position<br>selection               | 0: Down stop<br>1: Up stop                   | 1               |
| 15                  | P - 15  | Retention parameters                                | 1  | 1               |
| 16                  | P - 16  | Up needle stopping angle<br>adjustment              | 0 - 23                                       | 23              |
| 17                  | P - 17  | Down needle stopping angle<br>adjustment            | 0 - 23                                       | 14              |
| 18                  | P - 18  | Foot treadle curve model                            | 0 - 4  | 0               |

|    |        |   |  |      |
|----|--------|---|--|------|
| 19 | P - 19 | Foot treadle back step position                       | 1 - 4090   | 300  |
| 20 | P - 20 | Foot treadle idle position adjustment                 | 1 - 4090   | 500  |
| 21 | P - 21 | Treadle before stepping up the seam position          | 1 - 4090   | 830  |
| 22 | P - 22 | Treadle position at low running speed                 | 1 - 4090   | 1300 |
| 23 | P - 23 | Treadle position at the highest running speed         | 1 - 4090   | 2400 |
| 24 | P - 24 | Automatic test run time                               | 1 - 99   | 5    |
| 25 | P - 25 | Automatic test pause time                             | 1 - 99   | 5    |
| 26 | P - 26 | Fill needle speed                                     | 300 - 1200   | 450  |
| 27 | P - 27 | Supplement needle sensitivity                         | 100 - 500  | 200  |
| 28 | P - 28 | Rockover switch mode                                  | 0: Disconnection<br>1: connection  | 0    |
| 29 | P - 29 | Initial Angle of the motor                            | 0 - 355  | 50   |
| 30 | P - 30 | Save the user - defined parameters                    | 0:OFF 1:ON   | 0    |
| 31 | P - 31 | Restore the current starting motor factory parameters | 8: Restore the factory parameter<br>6: Restore the user - defined parameters | 0    |
| 32 | P - 32 | Motor type selection                                  | 0  | 0    |
| 33 | P - 33 | Motor running Green indicator switch                  | 0 : Green light<br>1 : Green light off                                       | 0    |
| 34 | P - 34 | Retention parameters                                  |  |      |
| 35 | P - 35 | Retention parameters                                  |  |      |
| 36 | P - 36 | Retention parameters                                  |  |      |

| Technical parameters |      |                                       |  |      |
|----------------------|------|---------------------------------------|--|------|
| 37                   | P-37 | Retention parameters                  | *  |      |
| 38                   | P-38 | Retention parameters                  | *  |      |
| 39                   | P-39 | Retention parameters                  |  |      |
| 40                   | P-40 | Retention parameters                  |  |      |
| 41                   | P-41 | Automatic seam sewing up the speed    | 800 - 4500   | 2500 |
| 42                   | P-42 | Air suction mode                      | 0 : Automatic suction close<br>1 : Front trimming suction<br>2 : Back trimming suction<br>3: Front and back trimming suction | 2    |
| 43                   | P-43 | Suction opening time                  | 0-10 0 : Off<br>10: On   | 5    |
| 44                   | P-44 | Retention parameters                  |  |      |
| 45                   | P-45 | Back suction parameter 1              | 1 - 50   | 30   |
| 46                   | P-46 | Back suction paramete2                | 1 - 50   | 10   |
| 47                   | P-47 | Retention parameters                  |  |      |
| 48                   | P-48 | Retention parameters                  |  |      |
| 49                   | P-49 | Retention parameters                  |  |      |
| 50                   | P-50 | Trimming solenoid valve keep time     | 10 - 1000  | 50   |
| 51                   | P-51 | Automatic press foot selection        | 0 - 3  | 3    |
| 52                   | P-52 | Press foot delay                      | 10 - 300   | 50   |
| 53                   | P-53 | Retention parameters                  | -  | -    |
| 54                   | P-54 | Retention parameters                  | -  | -    |
| 55                   | P-55 | Time of Press foot protection timeout | 1 - 50   | 10   |

|    |      |   |  |     |
|----|------|---|--|-----|
| 56 | P-56 | Retention parameters                                      |  |     |
| 57 | P-57 | Retention parameters                                      |  |     |
| 58 | P-58 | Retention parameters                                      |  |     |
| 59 | P-59 | Retention parameters                                      |  |     |
| 60 | P-60 | Retention parameters                                      |  |     |
| 61 | P-61 | Sensor selection  | 0 : Normal close<br>1 : Normal open    | 0   |
| 62 | P-62 | Starting sensor sewing delay                              | 1 - 99                                 | 10  |
| 63 | P-63 | Front electric eye sensitivity                            | 10 - 1010                              | 750 |
| 64 | P-64 | The delayed needle number of s-sensor trimming            | It is determined by the P-71 parameter | 3   |
| 65 | P-65 | S-sensor threshold  | 10 - 1000                              | 750 |
| 66 | P-66 | The delayed needle number of t-sensor trimming            | It is determined by the P-72 parameter | 1   |
| 67 | P-67 | T-sensor threshold  | 10 - 1000                              | 550 |
| 68 | P-68 | Retention parameters                                      | -                                      | -   |
| 69 | P-69 | Power-off protection function of motor                    | 0 : Off 1 : On                         | 1   |
| 70 | P-70 | Starting sensor automatically stop                        | 0 - 10                                 | 1   |
| 71 | P-71 | Before trimming the number of stitches threshold          | 1 - 40                                 | 10  |
| 72 | P-72 | After trimming the number of stitches threshold           | 1 - 40                                 | 20  |
| 73 | P-73 | Trimming manual mode, suck Wind function quick adjustment | 0 : Off 1 : On                         | 1   |
| -  | -    | -   | -                                      | -   |
| 84 | P84  | Retention parameters                                      |  |     |

- Besides adjusting stitch, please laypeople don't debug or maintain.
- Parts are subject to changes in design without prior notice.

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