

# SIRUBA

ORIGINAL


使用説明書

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 , 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

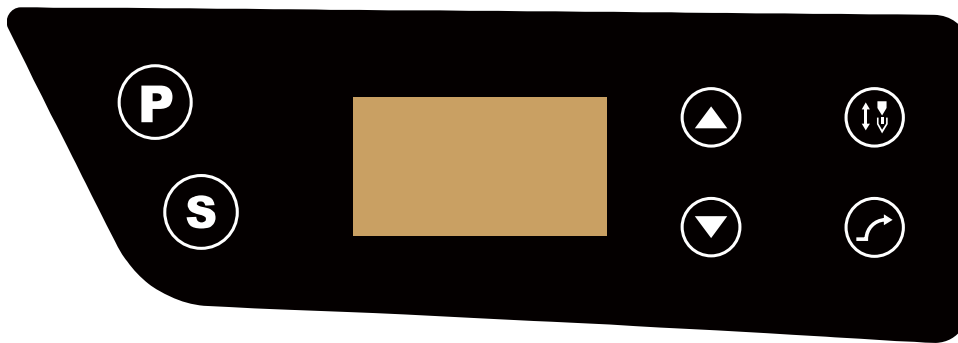
Any trouble found within warranty period under normal operation, it will be repaired free of charge.

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 Parameter Edit	<b>P</b>	Press this key to enter or exit function parameter edit mode.
Setting Parameter Check and Save	<b>S</b>	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 Adjustment Key	▲	1. Choose the region parameter items of incrementing key 2. Parameter setting value incrementing key
Under the Adjustment Key	▼	1. Choose the region parameter items of diminishing key 2. Parameter setting value decrementing key
Slow Launch Setting	↷	If click, set used or cancelled slow launch function.
Needle Stop Position 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 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 automatically as power turned on	0-1	1	0: No Function 1: Power turned on, needle goes up position automatically
P10	Machine protection switch selection	0-2	0	0: Disable 1: Testing zero signal 2: Testing positive signal
P11	Speed curve adjustment	1-100	32	The larger the value, the faster to increase speed
P15	Stitch Correction Mode	0-3	3	0: Half stitch 1: One stitch 2: Continuous correct half stitch 3: Continuous correct stitch and quickly stop machine
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	Type		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 supply voltage is correct. (Or exceed the rated voltage specified in use.) 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 bad connection or is too loose. To get it right and turn on. If there are still errors, please replace the control box and call for customer service.
E05	Speed control unit connection is abnormal	Turn off the system power supply, please check the speed control unit connector if loose or fall off, Will resume normal after the restart system If you still cannot work normally, please replace the speed control unit and notify the manufacturer.
E07	Motor locked-rotor error	Turn the machine handwheel, check if it is stuck. If it is stuck, you have to rule out the mechanical failure. If turn normal, check if the encoder and motor in bad connection or is too loose. If yes, please correct. If connection well, check if the power supply voltage is 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.
E09 E11	Positioning signal error	Turn off the machine, please check if the encoder in bad connection or is too loose. To get it right and turn on. If there are still errors, please replace the control box and call for customer service.
E14	Encoder signal error.	Turn off the system power supply, please check motor encoder connector if loose or fall off, renew to normal then restart system. If still not work, please replace the motor and notify the manufacture.
E15	Power module abnormal over current protection	Turn off the system power supply, and then restart the machine. If still not work, please replace the control box and notify the manufacture.
E17	The sewing table safety switch is not in the correct position	Turn off the system power supply, please check machine head is open or not, the machine head switch is damage or not.

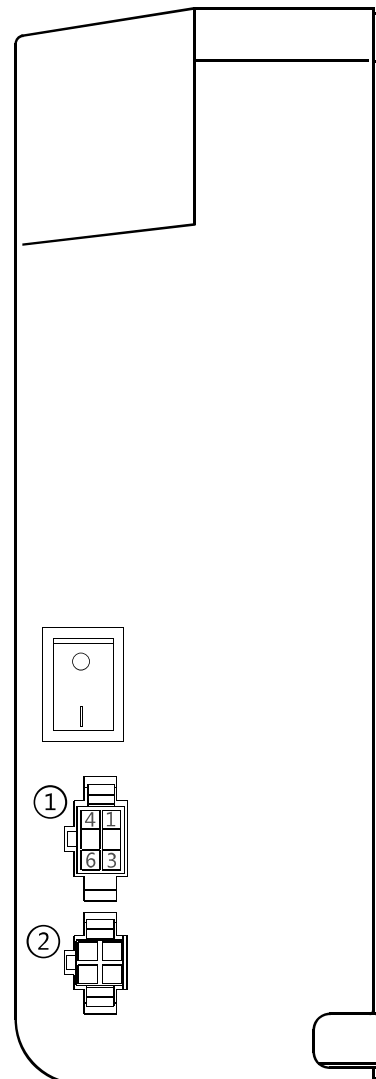
## 5 Port Outline Diagram:

### 5.1 Port Description

#### ① Function Interface

Function Interface
Clothing lights: 1(GND)、 4 (+5V)
Jog fill needle: 3(GND)、 6 (signal)

#### ② Pedals Interface





高林股份有限公司  
KAULIN MFG. CO., LTD.

由於對產品的改良及更新，本產品零件圖及外觀的修改恕不事先通知！

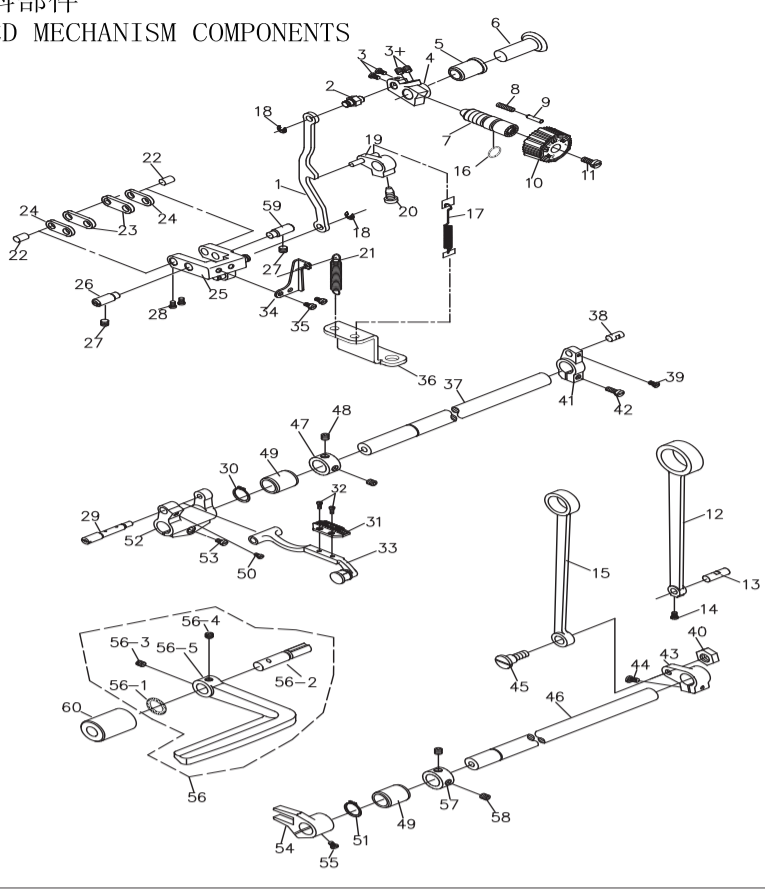
The specification and/or appearances of the equipment described in this parts list are subject to change because of modification which will without previous notice.

DL720..JUN.2019





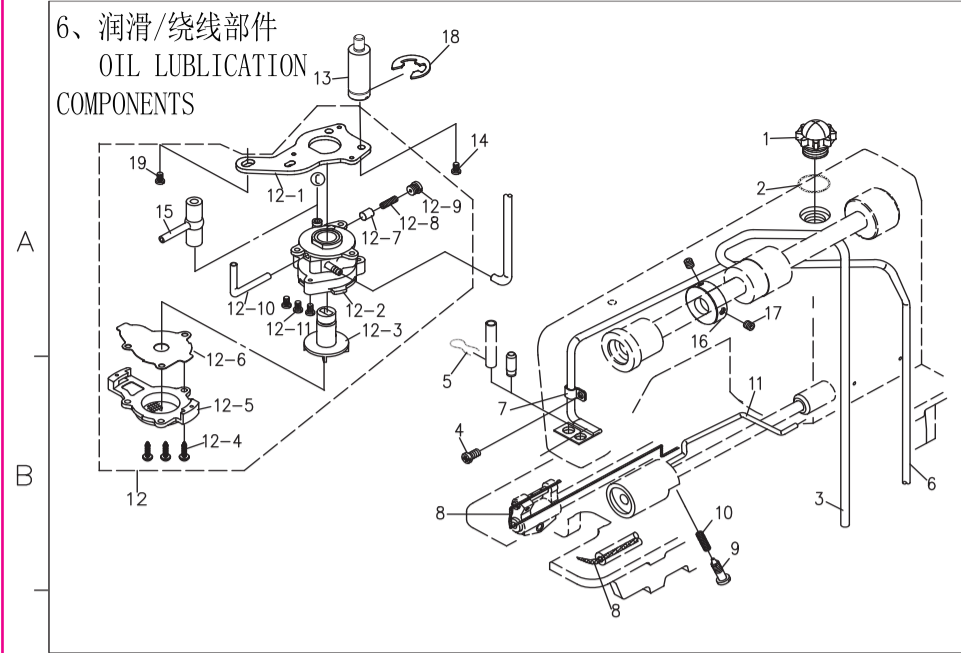
5. 送料部件  
FEED MECHANISM COMPONENTS



5.送料部件/FEED MECHANISM COMPONENTS

序号 Ref.No.	新图号 new part No.	名称 Part name	名称 Name of parts	数量 Qty	备注 Note
1	991005001	倒送料连杆	Feed adjust rod	1	
2	991005001D	倒送料连杆(大旋梭)	Feed adjust rod(big hook)	1	
3	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	
4	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	
4	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	针距调节螺钉	Feed regulator screw	1	
8	991005008	止动销弹簧	Spring	1	
9	991005009	止动销	Feed adjust pin	1	
11	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	
11	991005010-7	针距旋钮(0-7)	Needle distance knob(0-7)	1	
11	S07462818	针距旋钮螺钉	Screw 3/16 x 28 L=18	1	
12	991005012	送料连杆	Rocker shaft connecting rod	1	
13	991005013	送料连杆销	Walking foot long pin	1	
14	S083574004	送料连杆销螺钉	Screw 9/64 x 40 L=4	1	
15	991005015	拾牙连杆	Connecting rod	1	
16	991005016	针距调节螺钉O型圈	Rubber ring	1	
17	991005017	摆动板复位弹簧	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	
20	991005019D	倒送料曲柄组件(大针距)	Feed reverse arm asm(Big needle)	1	
21	S07462815	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	
24	991005024	长摆动板	Connecting link long pin	1	
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	
27	991002001	左右销螺钉	Screw 15/64 x 28	2	
28	S123574005	连杆销螺钉	Screw 9/64 x 40 L=5	2	
29	991005029	牙架偏心销	Feed bar shaft	1	
30	991005030	送布轴轴用挡圈	Retaining ring	1	
31	991005031	送布牙	Feed dog	1	
31	991005031H	送布牙(厚料/3排牙)	Feed dog	1	
31	991005031D	送布牙(大针距/3排牙)	Feed dog	1	
31	0303D	送布牙(大旋梭/3排牙)	Feed dog	1	
32	S073184406	送布牙螺钉	Screw 1/8 x 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 x 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 x 40 L=8	1	
40	N217142805	拾牙连杆轴位螺母	Nut 9/32 x 28	1	
41	991005041	送布曲柄	Feed rocker shaft crank	1	
41	991005041D	送布曲柄(大针距15mm)	Feed rocker shaft crank	1	
42	S07462815	送布曲柄螺钉	Screw 3/16 x 28 L=15	1	
43	991005043	拾牙后曲柄	Lifting rocker asm.	1	
44	S07462815	拾牙后曲柄螺钉	Screw 3/16 x 28 L=15	1	
45	991005045	拾牙连杆轴位螺钉	Hinge screw	1	
46	991005046	拾牙轴	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 x 40 L=4	2	
49	991005049	送布轴前轴套	Feed rocker shaft bushing	2	
50	991005049D	拾压轴前轴套(大旋梭)	Axle sleeve	1	
51	S084374007	牙架销螺钉	Screw 11/64 x 40 L=7	2	
51	991005051	拾压轴轴用挡圈	Retaining ring	1	
52	991005052	牙架座(牙架曲柄)	Feed bar crank asm.	1	
53	S07462812	牙架座螺钉	Screw 3/16 x 28 L=12	1	
54	991005054	拾牙叉	Driving shaft crank asm.	1	
54	991005054D	拾牙叉(大旋梭)	Driving shaft crank asm.	1	
55	S084374012	拾牙叉螺钉	Screw 11/64 x 40 L=12	1	
56	991005056	倒送料扳手组件	Reverse feed control lever asm.	1	
56-1	991005056-1	倒送料轴O型圈	Rubber ring	1	
56-2	991005056-2	倒送料轴	Feed reverse shaft	1	
56-3	S145952808	倒送料扳手螺钉	Screw	1	
56-4	S145952810	倒送料扳手定位螺钉	Screw	1	
56-5	S20005056-5S	倒送料扳手	Reverse fird control lever	1	
57	991005057	拾牙轴挡圈	Thrust collar	1	
58	S126354004	拾牙轴挡圈螺钉	Screw 1/4x40 L=4	2	
59	991005059	摆动轴板座右销	Adjusting link fulcrum shaft	1	
60	991005060	倒送料轴轴套	Feed lever metal	1	

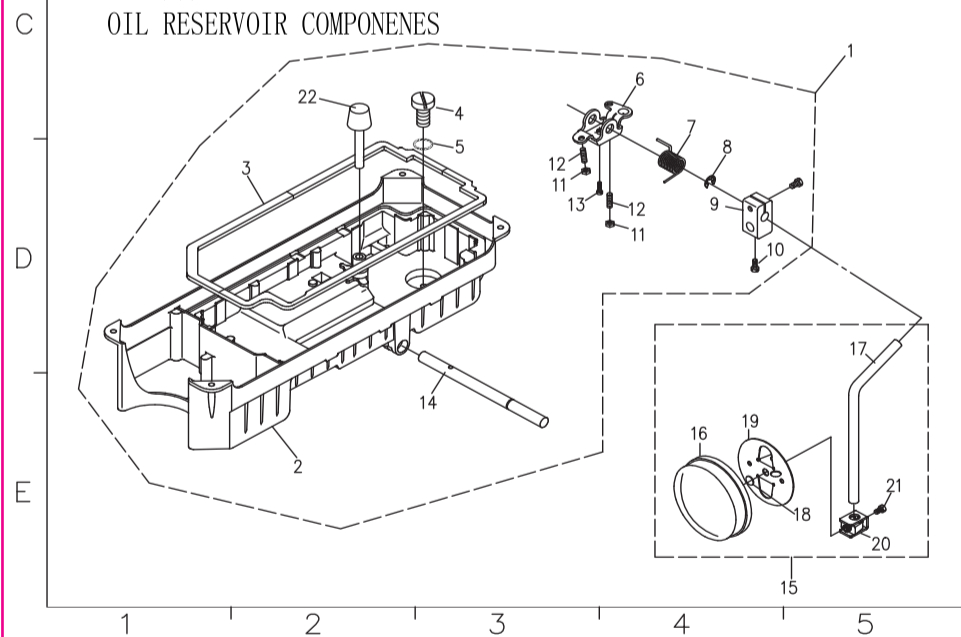
6. 润滑/绕线部件  
OIL LUBRICATION  
COMPONENTS



6.润滑/绕线部件/OIL LUBRICATION COMPONENTS

序号 Ref.No.	新图号 new part No.	名称 Part name	名称 Name of parts	数量 Qty	备注 Note
1	991009001	油窗	Oil sight window	1	
2	991009002	油窗O型圈	Rubber ring	1	
3	991009003	上轴供油管	Main shaft oil tube	1	
3+	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 L=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	
12-11	991009012-10A	下轴供油管(四自动)	Hook driving shaft oil tube	1	
12-11	M070300508	油泵安装螺母	Screw M3 L=8	3	
13	991009013	油泵连接螺母	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	Cleclip	1	
19	S075952510	油泵螺钉	Screw 15/64x28 L=10	1	

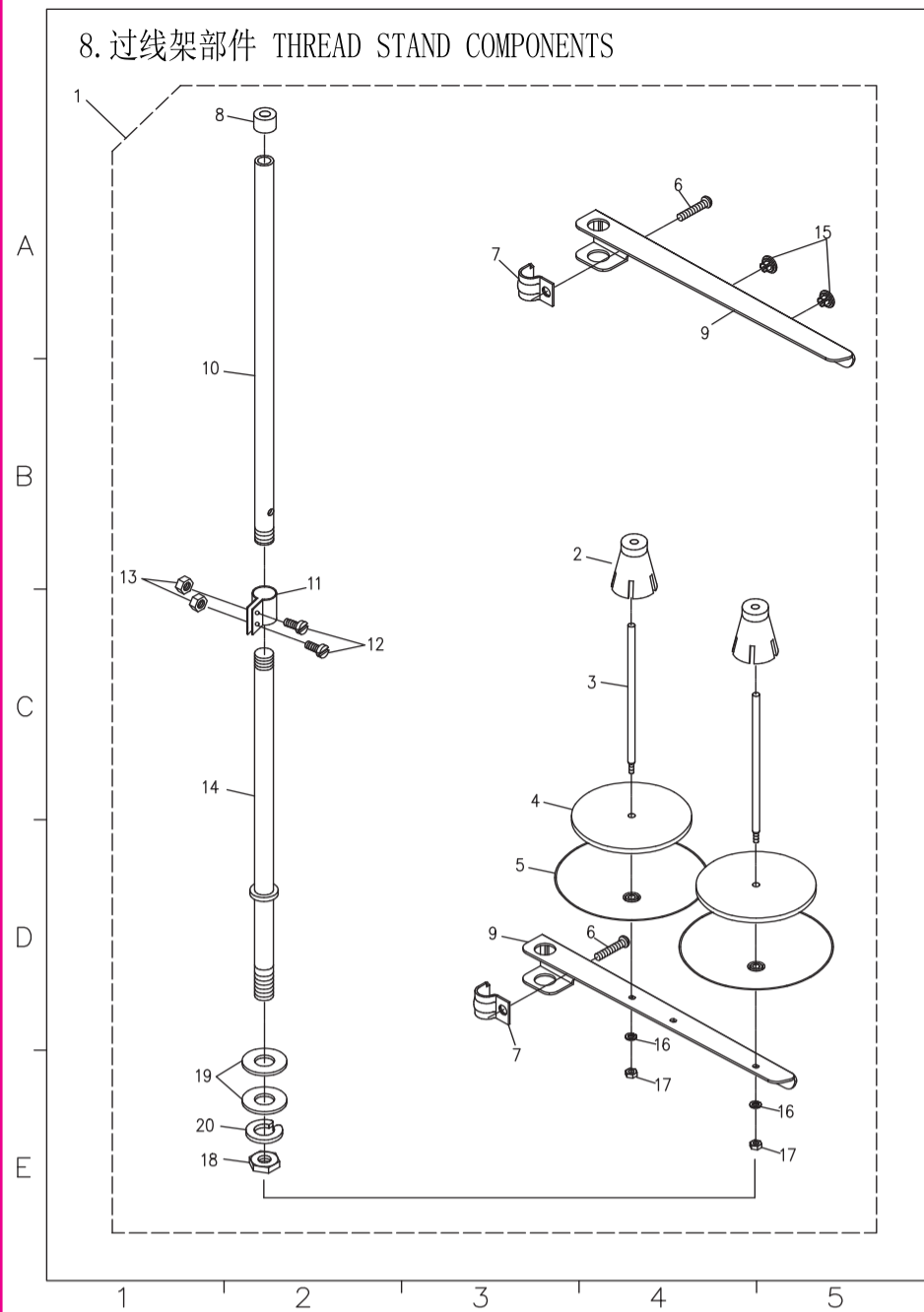
7. 油盘部件



7.油盘部件/OIL RESERVOIR COMPONENTS

序号 Ref.No.	新图号 new part No.	名称 Part name	名称 Name of parts	数量 Qty	备注 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O型圈	Rubber ring	1	
6	991010006	拾压脚双向曲柄	Knee lifting rotating arm	1	
7	991010007	双向曲柄弹簧	Spring	1	
8	991010008	拾压脚轴开口挡圈	E-ring 10	1	
9	991010009	拾压脚轴接头	Vertical shaft fitting arm	1	
10	991010010	接轴杆接头螺钉	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	双向曲柄限位螺钉	Screw M6 L=17.5	1	
14	991010014	拾压脚轴	Knee press cross shaft	1	
15	991010015	接轴杆部件	Knee pan plate asm	1	
16	991010016	接轴杆轴套	Knee pan plate cover	1	
17	991010017	接轴杆	Knee pan upright shaft	1	
18	991010018	接轴杆轴套	Knee pan plate rubber	1	
19	991010019	接轴杆	Knee pan plate	1	
20	991010020	接轴杆接头	Knee pan plate support	1	
21	M190601012	接头螺钉	Screw M6 L=12	1	
22	991010022	拾压脚顶杆	Knee lifter push rod	1	

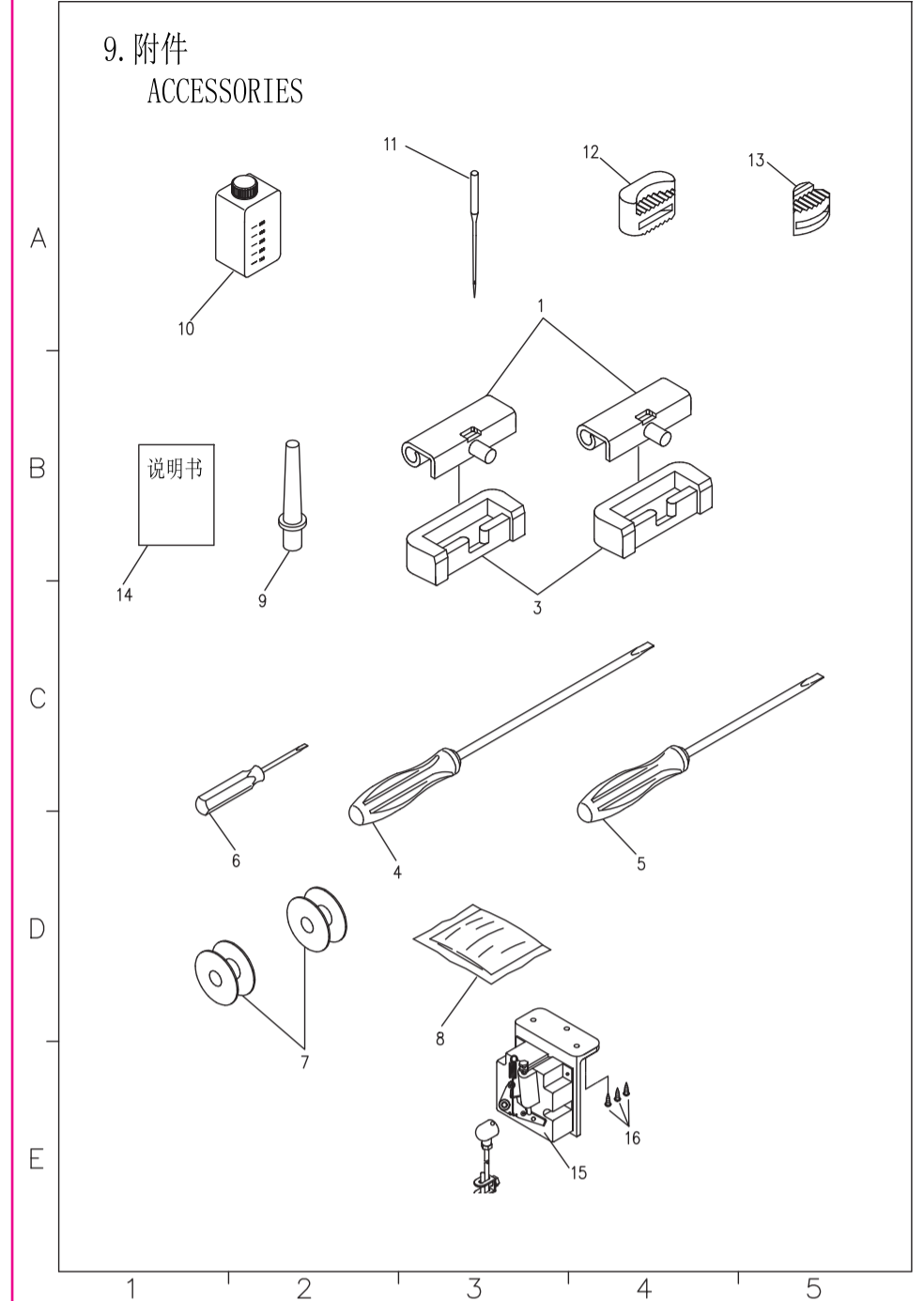
8. 过线架部件  
THREAD STAND COMPONENTS



8.过线架部件/THREAD STAND COMPONENTS

序号 Ref.No.	新图号 new part No.	名称 Part name	名称 Name of parts	数量 Qty	备注 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 x 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	线架杆上节	Spool rest arm upper	2	
10	991013010	线架杆下节	Spool rest rod lower	1	
11	991013011	接架杆接头	Spool rest rod joint	1	
12	M090500814	接架杆接头螺钉	Screw M5 x 14	4	
13	N210500805	接架杆接头螺母	Nut M5	2	
14	991013014	接架杆下节	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 x 1.5	1	
19	991013019	线架杆紧固螺母垫圈	Washer 16 x 30 x 2.6	2	
20	991013020	紧固螺母弹簧垫圈	Spring washer	1	

9. 附件  
ACCESSORIES



9.附件/ACCESSORIES

序号 Ref.No.	新图号 new part No.	名称 Part name	名称 Name of parts	数量 Qty	备注 Note
1	991014001	机头连接钩座	Machine hinge plate asm.	2	
2	991014002	机头连接钩座钉	Nail	4	
3	991014003	机头连接钩座	Machine hinge plate	2	
4	991014004	螺丝刀(大)	Screw driver,large	1	
5	991014005	螺丝刀(中)	Screw driver,medium	1	
6	991014006	螺丝刀(小)	Screw driver,small	1	
7	991014007	梭心	Bobbin	2	
8	991014008	机头罩	Magube head cover	1	
9	991014009	机头支柱	Magube rest cover	1	
10	991014010	油箱部件	Oil reservoir asm.	1	
11	991014011	机针 DBxl #14	Needle DBxl #14	4	
11	991014011H	机针 DPx5 #21	Needle DPx5 #21	4	
12	991014012	防震垫(A)	quakeproof washer A	2	
13	991014013	防震垫(B)	quakeproof washer B	2	
14	991014014	说明书	Instruction book	1	
15	991014017	调速器	speed controller	1	
16	991014018	调速器安装螺钉	speed controller screw	3	
17	991014019	调速器拉杆	speed controller pull rod	1	