

# Product use instructions

MARATHON-III(lab)



- Please read this instruction carefully for safety reasons before using the machine.
- To protect your eyes, please wear protective glasses

### operational approach :

1. Connect the mobile phone cable and the pin switch cable to the interface of the control box (refer to the control box icon).

After confirming that the voltage marked on the control box is consistent with your voltage, plug the power cord into the power socket.

3 Set the speed adjustment knob to the lowest speed "0".

4. Power on the control box.

5. Turn the speed control knob clockwise to increase the speed.

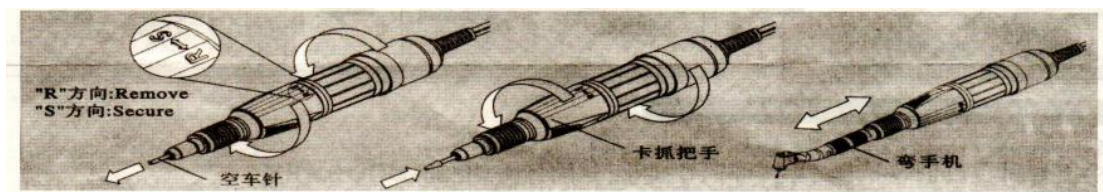
6. If you need to change the rotation direction, please turn off the motor first, and then flip the forward/reverse switch to change the rotation direction after confirming that the mobile phone stops rotating.

7 When the foot switch is required to control, turn the hand/foot switch to the POOT position.

### Loading and unloading pins:

1. Turn the grip handle on the phone in the "R" direction to open the grip, then remove the old pin.

2. Insert the core turning needle into the bottom of the three-valve spring completely, and then turn the grip handle to the direction of "S" to lock the grip.



### Corrective Maintenance:

1. Check whether the output voltage of the power socket is consistent with the voltage marked on the control box.

2. Check whether the Fuse Holder on the control box is burned out.

3. Verify that the power cable, motor cable, and foot switch are properly connected.

4. Check whether the grip (three-valve spring) is open or loose. If so, tighten it

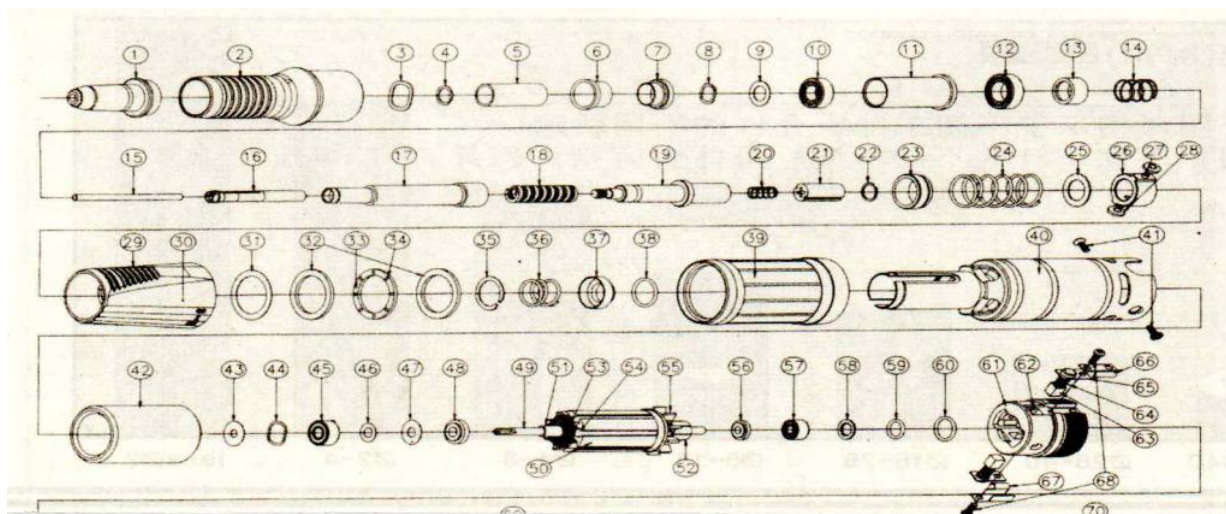
5. Check whether the carbon brush on the motor is worn and needs to be replaced.

6. If the control box is overloaded, please press the Reset Switch (some models are equipped with the Reset button).

Or turn off the control box power switch, and then turn on the power switch again.

7. If the above inspection fails to restart the operation of your machine, please send it to our authorized agent or after-sales service center for repair.

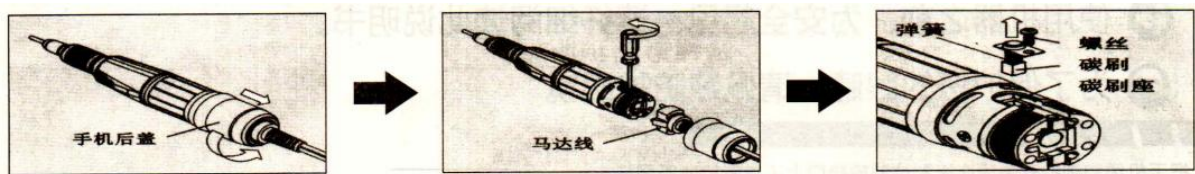
## Handpiece structure diagram:



NO	PARTS NAME	MATERIAL	QUANTITY	DRAWING NO
1	NOSE CAP	SUS303F	1	H35LSP-5-101-00
2	HAND CAP	SUS303F	1	H35LSP-5-102-00
3	1260 WAVE WASHER	Sk5	1	H35LSP-3-103-00
4	CHUCK HOUSING C-RING	SUS415	1	H35LSP-3-104-00
5	SPACER	BSBM	1	H35LSP-5-109-00
6	COLLAR	BSBM	1	H35LSP-5-105-00
7	BEARING FIX WASHER	BSBM	1	H35LSP-5-106-00
8	1260 WAVE WASHER	PBS	1	H35LSP-3107-00
9	1260 WASHER	SUS304	1	H35LSP-3-111-00
10	BALL BEARING(1260ZZ)		1	H37L-8-201-00
11	BUSH	Al6061	1	H35LSP-5-112-00
12	BALL BEARING(1480ZZ)		1	H37L-8-202-00
13	SPRING SHEET	BSBS	1	H37L-5-113-00
14	COIL SPRING	SPS	1	H37L-6-114-00
15	TEST BUR	SUS416	1	H37L-6-116-00
16	COLLET CHUCK 2.34	SUS420J2	1	H37L-5-117-00
17	CHUCK HOUSING	SUS420J2	1	H35LSP-5-115-00
18	CHUCK SPRING	SPS6	1	H37L-6-118-00
19	JOINT SHAFT	SUS303F	1	H35LSP-5-121-00
20	CONNECTOR COIL SPRING	SUS	1	H37L-6-122-00
21	CONNECTOR	POLYACETAL	1	H37L-2-123-00
22	CONNECTOR C-RING	BSBM	1	H37L-3-204-00
23	BEARING BUSH COLLAR	BSBM	1	H35LSP-5-124-00
24	BEARING BUSH COLLAR COIL SPRING	SUS	1	H37L-6-125-00
25	CONTROL WASHER	Sk5	1	H37L-3-127-00
26	ROLLER BODY	SMF4030	1	H37L-4-128-00
27	ROLLER BODY PIN		2	H37L-5-129-00
28	ROLLER GUIDE	SMF5030	2	H37L-4-130-00
29	SET RING	NYLON66	1	H37L-2-131-00
30	CAM		1	H37L-4-132-00
31	TEFLON WASHER	TEFLON	1	H37L-3-233-00
32	SLIDE WASHER	Sk5	2	H37L-3-133-00
33	SLIDE BODY	NYLON	1	H37L-2-134-00
34	BALL		8	H37L-8-207-00
35	MOTOR CASE C-RING	SUS416	1	H37L-3-136-00
36	MOTOR CASE COIL SPRING	SPS2	1	H37L-6-137-00
37	MOTOR CASE SPRING SHEET	Al6061	1	H37L-5-138-00
38	1030 FIX O-RING	NBR	1	H37L-7-175-00
39	MOTOR CASE COVER	NYLON66	1	H37L-2-142-00
40	MOTOR CASE	SUM22	1	H37L-5-141-00
41	MOTOR CASE BOLT		2	H37L-8-205-00
42	MAGNET	FERRITE	1	H37L-4-208-00
43	COPPER WASHER	BSBM	1	H37L-3-144-00
44	1030 WAVE WASHER	BSBM	1	H37L-3-145-00
45	BALL BEARING(1030ZZ)		1	H37L-8-208-00
46	1030 COPPER WASHER	BSBM	1	H37L-3-149-00
47	1030 TEFLON WASHER	TEFLON	1	H37L-3-150-00
48	1030 SPACER	PPS	1	H37L-2-152-00
49	SHAFT	Sk4	1	H37L-5-178-00
50	CORE	SOPN595	73	H37L-3-155-00
51	SHAFT BUSH	SUM22	2	H37L-5-179-00

### Replace carbon brush:

1. First turn off the power switch, unscrew the Carbon Housing Cover from the back of the phone and unplug the cable.
  2. Unscrew the Carbon Brush Bolt on the Carbon Brush Holder with a Phillips screwdriver, and then remove the worn Carbon Brush.
  3. Replace with a new carbon Brush. Note that the Brush Spring should be pressed inside the carbon Brush holder.
  4. Pack your phone.
  5. Leave the phone running at 20,000 RPM for 30 minutes without load before using it.
- ※ Under normal circumstances, the carbon brush should be replaced after one year of use. But it varies depending on how long you work and how hard you work.



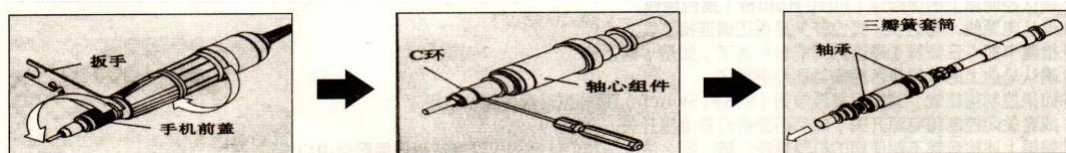
### Replace the three valve spring (clamping):

1. Use the Chuck Wrench to unscrew the Hand Cap counterclockwise and remove the Spindle Set. dry
  2. Unscrew the three-valve spring (Collet Chuck) counterclockwise with a special wrench.
  3. Install the mobile phone after replacing the three-valve spring.
  4. Operate the mobile phone without load and make sure there is no problem before normal use.
- ※ Under normal circumstances, the three valve spring needs to be replaced after 2~ 3 years of use. However, it may vary according to the working hours and intensity of the day.



### Replace the bearing:

1. Unassemble the Hand Cap and Spindle Set.
2. Remove the C Ring in front of the Chuck Housing, so that bearings and other components can be disassembled.
3. After replacing the bearing and installing other components, reinstall the C ring.
4. Reinstall the front cover and axle components.
5. Operate the mobile phone without load and make sure there is no problem before normal use.



### Permissible speed:

