

Pneumatic Oil Filling Machine

Operation Instruction

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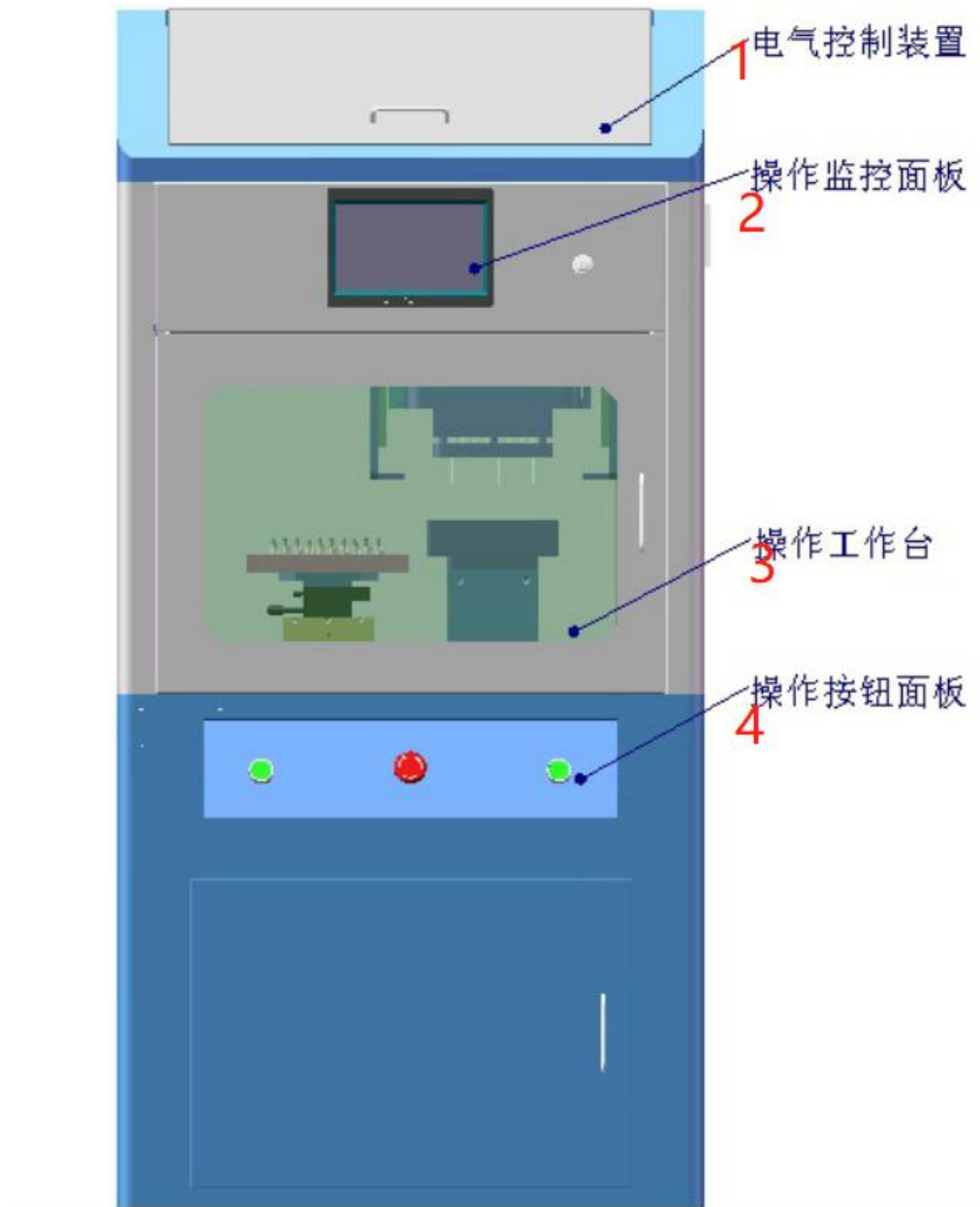
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【Foreword】

Thank you for choosing our products. We provide you with high quality products and reliable after-sales service. In order to ensure the personal safety of users and the integrity of the machine, please read this manual fully before using the machine and pay attention to the precautions in use. This operation manual describes the design principle of the equipment in detail according to the standards, construction, operation specifications and maintenance. Possible fault situation and troubleshooting method, electrical diagram, etc. References to "test specifications" in this manual are for reference only. If you find any objection, please review the relevant standards or materials by yourself.

Special instructions

- ◆ This operation manual shall not be used as a basis for making any request to the company
- ◆ The company reserves the right to interpret the operation manual



1. Electrical Control Device
2. Touch Screen
3. Operation Platform
4. Control Panel

一、 Brief Introduction

The Pneumatic e-cigarette oil filling machine is a pneumatic power source equipment that efficiently and precisely to fill a various styles of cartridges and filling multiple pieces at the same time

二、 Main Structure and Working Principle:

1. Main Structure

It is mainly composed of frame, operating platform and electrical control device and etc. The electrical part adopts touch screen display. (the equipment is assembled and shipped as a whole, no need customer self-installation)

2. Working Principle

The device is used for injecting liquid/hemp oil into the cartridges/pods/tinctures and/or other containers. It is made up of the frame, operation platform and electric control devices. The mechanical devices are: oil filling assembly, up/down assembly, slide assembly. All parts coordinate operation to make the filling process easy and convenient, filling precisely into the oil holes. By using temperature and location sensors and other sensors to transfer the data to the HMI touch screen, to make sure the device automatic control and set the oil filling parameters automatic real-time display and save.

三、 Main Specification:

Item Name	Spec
Input Voltage (V)	AC110VAC 60Hz
Power	1.5kW
Temperature Measure Range	0~100℃ 2% Accuracy
Size	710x510x1550mm
Weight	120kg
Using Condition	Temperature 10~40℃
Working Pressure (MPa)	0.5~0.8MPa
Control	Electric+Pneumatic

四、 Setting Up

4.1 Setting up circumstance

1. To get the best performance of the equipment, should choose the sites temperature of 15 ~ 20 ℃, relative humidity is no more than 85%;

2. Please no rapid temperature change for the working site;
3. Should install on horizontal ground, do not have direct sunshine, ventilated good, dust is little;

4.2 Move Around and Loading & Unloading

1. Please use lifter lift the equipment wooden box and keep it horizontal when take it into the facility;
2. Follow the mark on the wooden box to stand up the wooden box then separate the wooden box and get the equipment;
3. Check if there is any damage on the equipment surface;

五、 Safety Precaution

5.1 Mechanical Part

- (1) You should reading the operation manual when operating the equipment;
- (2) Wear appropriate work clothes. Persons operating or maintaining equipment shall not wear ties, necklaces or loose clothing and shall wear necessary protective equipment
- (3) Do not touch the heating part of the equipment by hand to avoid scald;
- (4) Please consider the operation steps Before operate the device;
- (5) Do not block secure interlocks unless you are a qualified person;
- (6) Stop all moving parts of the equipment before demonstrating any operation next to the device

5.2 Electric Part

- (1) Electrical hazards exist in the power supply and wiring terminals of the equipment. In order to avoid any electric shock and injury accidents, the main power supply must be cut off before maintenance. And only qualified or trained maintenance person were allowed to maintain and repair equipment.
- (2) Please turn off the main power supply before any maintenance in the electrical cabinet. Live operation is strictly prohibited. Live maintenance or adjustment is allowed only by trained persons.
- (3) Understand and remember the location of all safety devices and strictly follow

standard safety rules.

六、 Operation Note Points

1. Before operation, please carefully check whether the power supply conforms to the specified voltage, whether the power supply has grounding wire, whether the power supply wire is properly connected according to the specifications, and whether the electrical components have short circuit. Carefully check whether there is leakage in the pipeline system and whether there is looseness in the pipeline interface; If all is well, the operation can be carried out.

2. Demonstrate the operation steps before operating the device

3. Do not shield the safety door switch, open the safety door when operating equipment to avoid accidents.

4. The inlet terminal of the power supply of the equipment shall be connected with an air switch with leakage protection, so as to cut off the power supply immediately in case of emergency. The enclosure must be reliably grounded to avoid the risk of electric shock

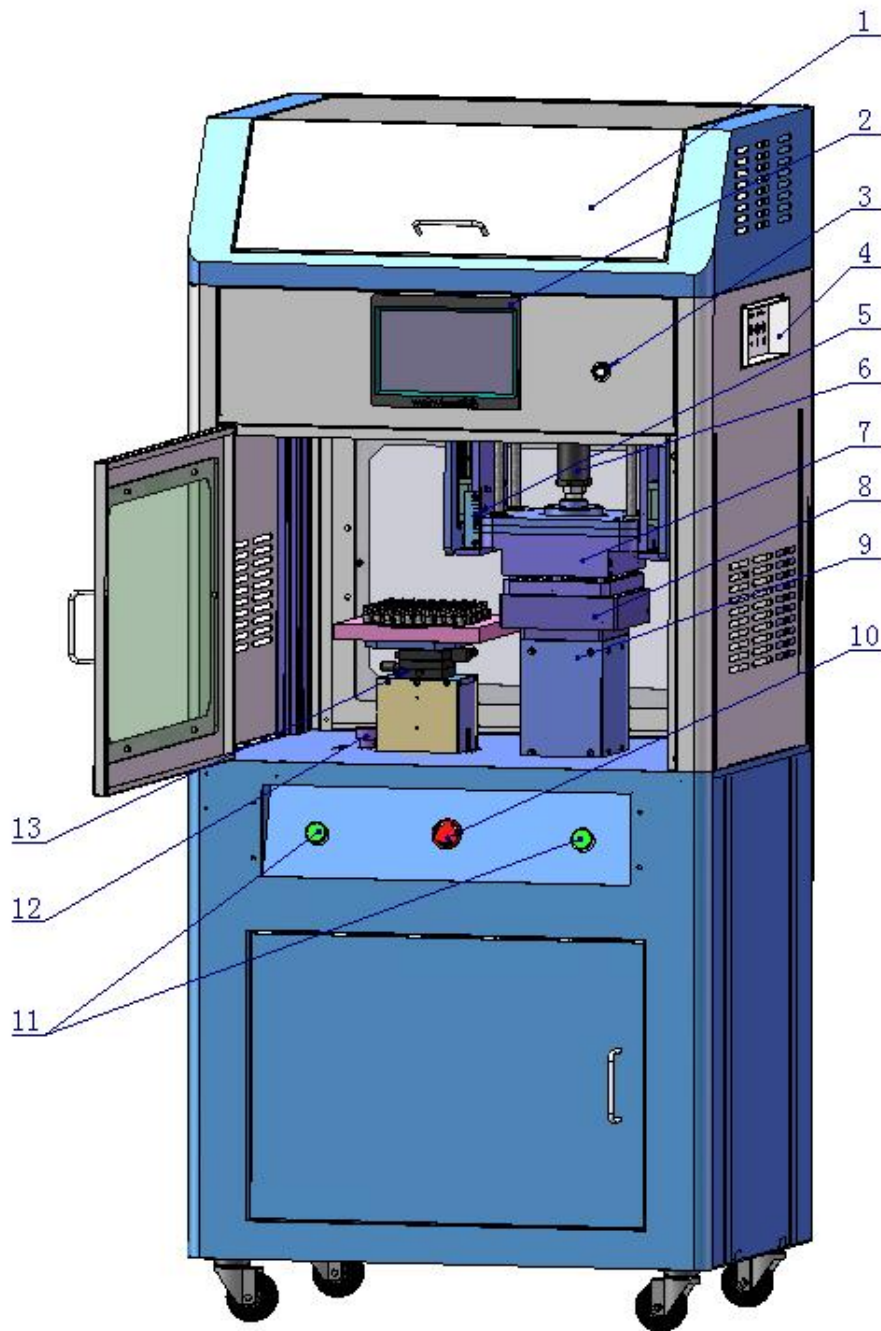
5. Please make sure cut off the power before move the equipment.

七、 Operation Theory

7.1 Contents

Understand the position and function of the major parts of the equipment

7.2 General Survey

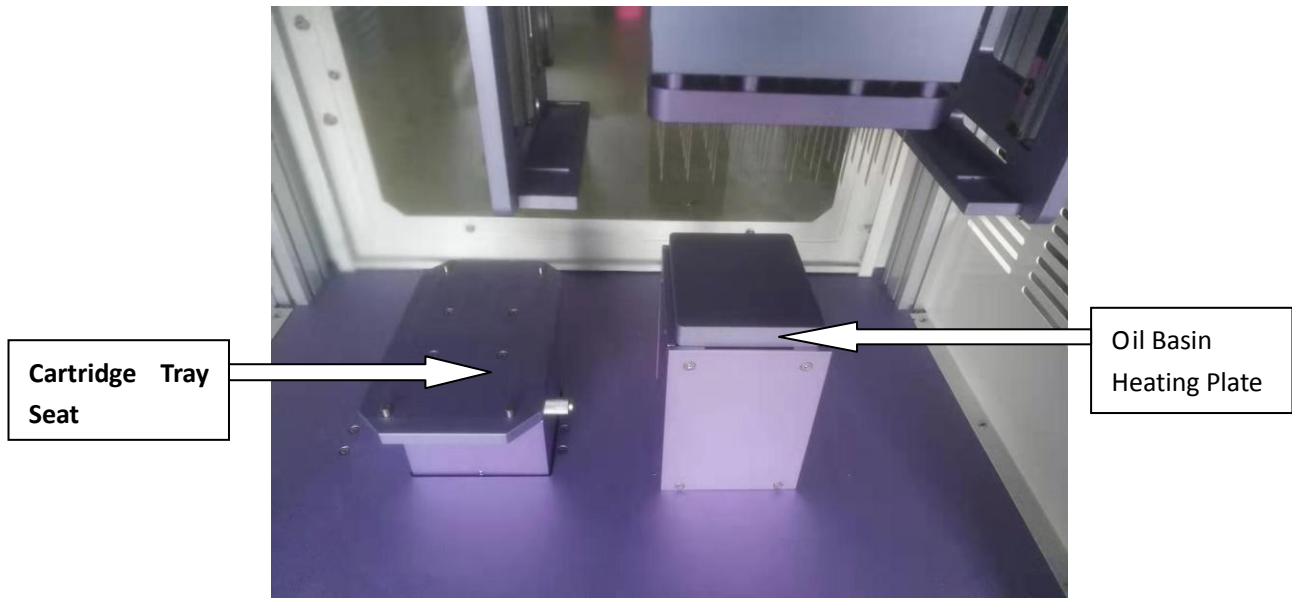


1	Electrical case cover
2	Touch Screen(HMI)
3	Main Power Switch
4	Air Pressure Adjusting Knob
5	Volume Scale

6	Volume Adjustment Nut
7	Injector Head
8	Oil Basin
9	Oil Basin Heating Plate
10	Stop/Reset Button
11	Start Button
12	Cartridge Tray Height Adjustment Knob
13	X/Y-Axis Slim Adjustment Plate

7.3 Inspection Before Operation

1. Check whether the injection head is at the top and far right position. Do not put the oil basin on the heating plate of the oil basin before the demonstration to avoid damaging the needles by mistake
2. Check whether the cartridge tray seat is adjusted to the lowest position. If not, please adjust it to the lowest position to avoid damaging the needles during the demonstration





3. Check whether the air pressure filter connection of the equipment is correct, and adjust the pressure as shown in below picture:



调压阀 Pressure Adjustment Valve

进气 Air Inlet

盖帽上拉 Pull up the cap to Adjust

视察罩 Inspect Cover

油雾器 Atomized Lubricator

第一步 Step 1. Pull Up the Black Knob;

第二步 Step 2. Twist the knob to Adjust the Pressure

第三步 Step 3. Press Down to set the Pressure

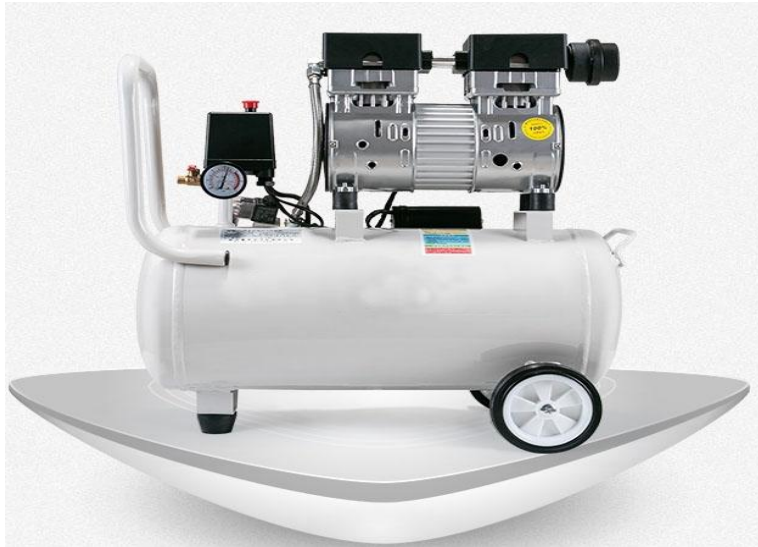
压力表 Pressure Gage

过滤器 Filter

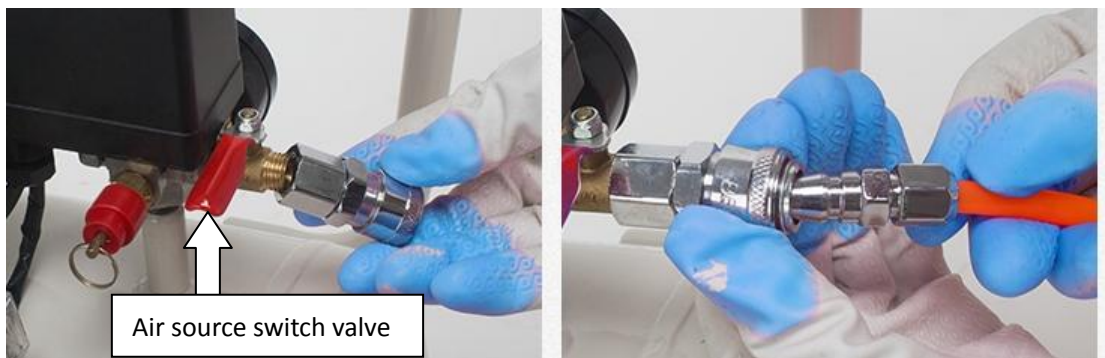
调节环 Regulating Ring

出气 Air Outlet

4. Check whether the rated pressure of air compressor meets the requirements and whether the air outlet valve is closed



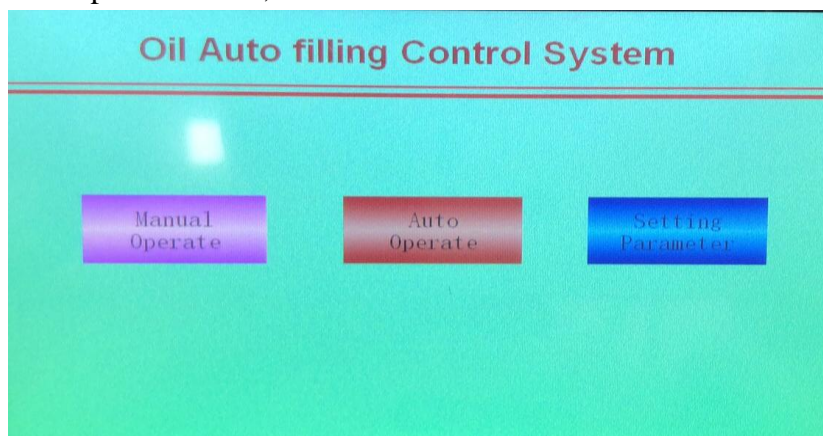
5. Check whether the air tube matches the equipment and the air compressor. When connecting the air tube, connect the air filter inlet of the equipment first then the air outlet of the air compressor;



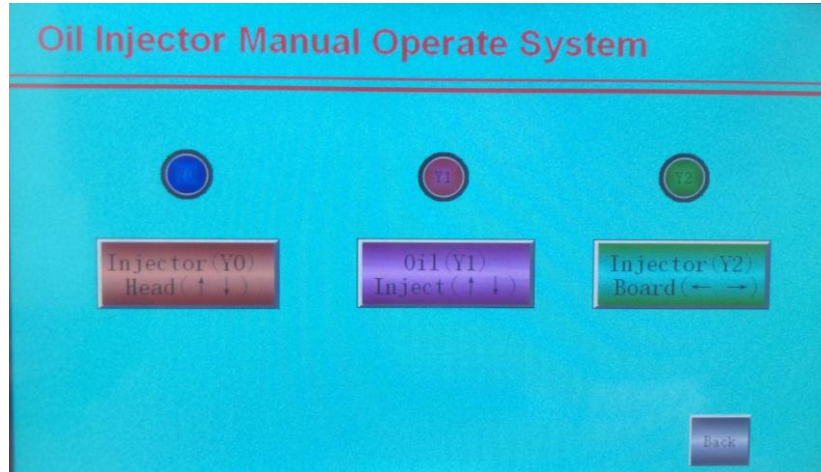
6. Open the air source switch valve of the air compressor, adjust the pressure regulating valve to make the pressure reach the standard pressure, and check whether there is air leakage in each tube line of the equipment. After check all ok, connect the power cord.

八、 Operation Instruction

1. After check the equipment and make sure all is OK, connect the power cord and press the main power switch, the touch screen shown as in below:

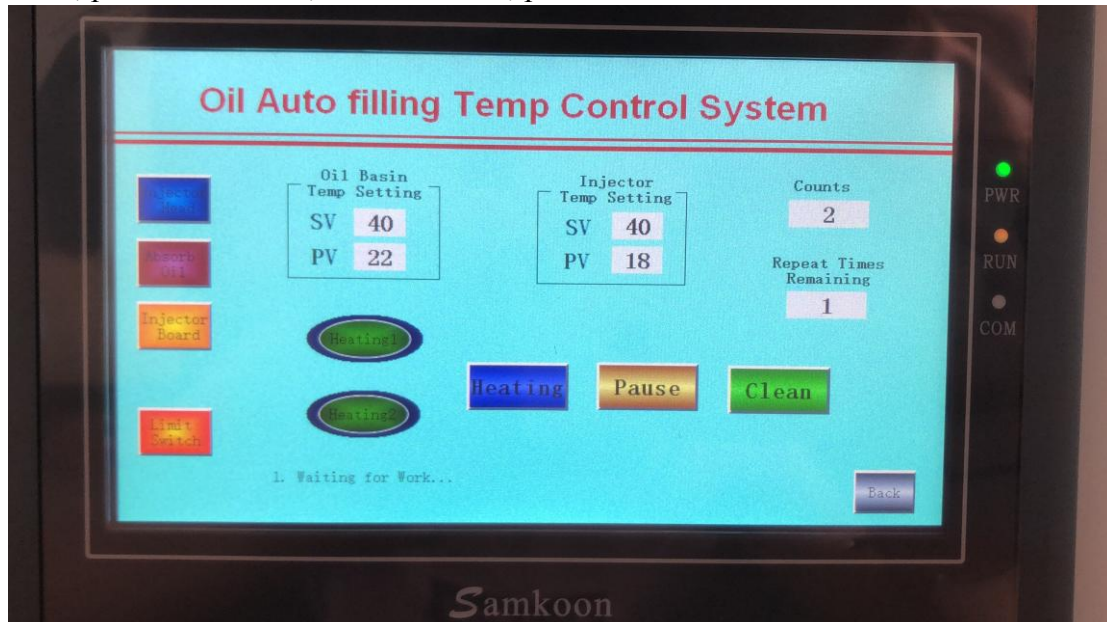


2. The touch screen show 3 buttons: Manual Operate, Auto Operate, Setting Parameter

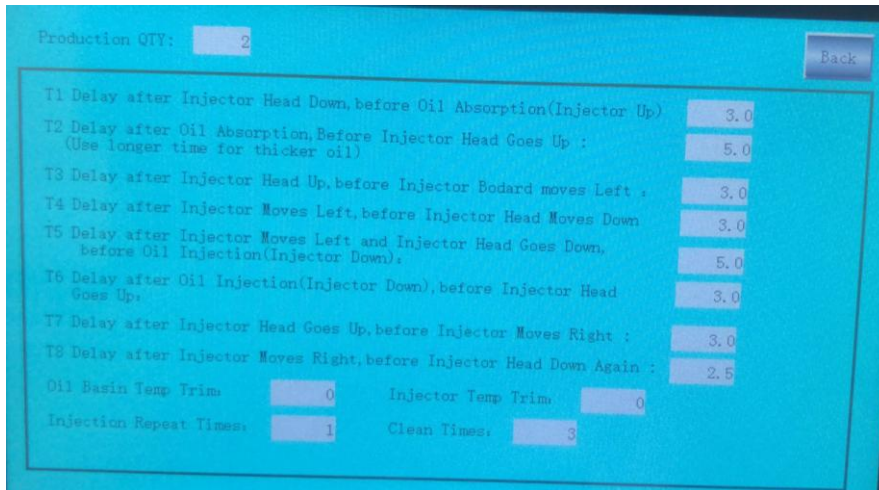


3. Manual Operate System : “Injector head”Up/Down, “Oil Inject”Up/Down, “Injector Board”Left/Right; In this screen can adjust the movement of all parts of the equipment; press “back” button to exit;

4. Auto Filling System: Oil Basin and Injector head temperature setting --SV and actual temperature -- PV, heating on/off, equipment pause, injector head filling piston clean, production count, clean left time; press “Back”button to exit.

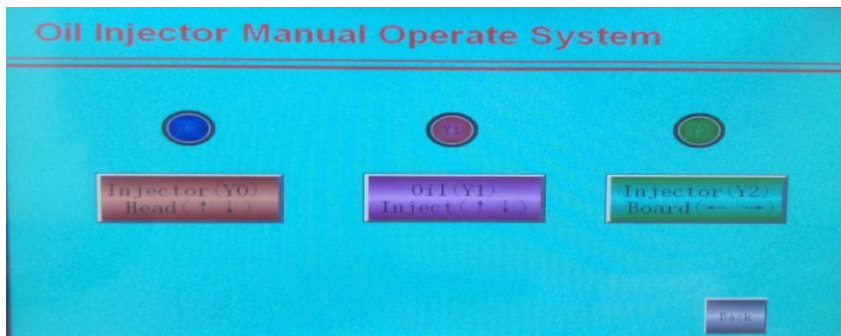


5. Setting Parameter : All products production settings, all motions time settings, Temperature error correction Settings, reset time setting, clean time setting. Set the parameters when debugging the equipment. press “back” button to exit;

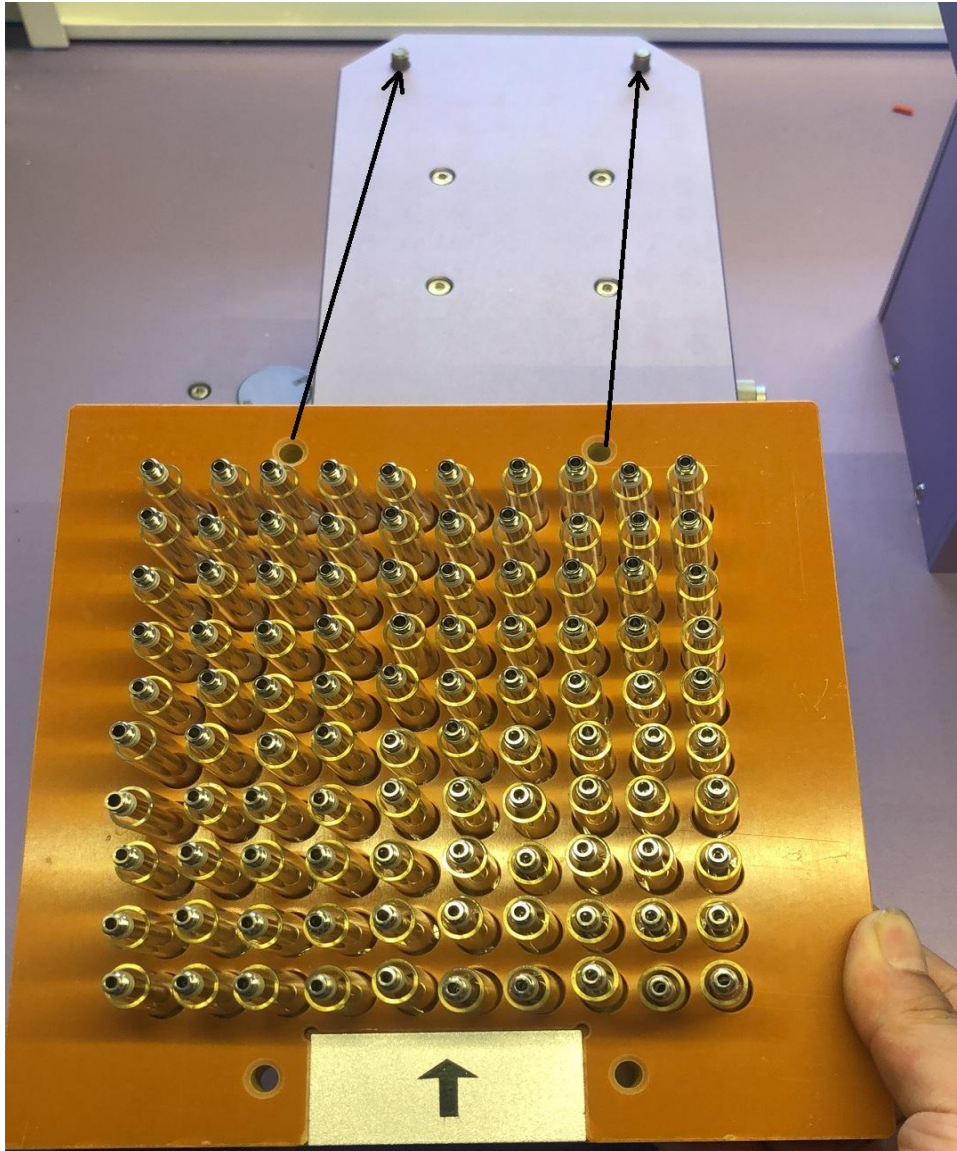


6. Pressure Adjustment: The speed pressure adjusting knob of each part are on the right side of the equipment, as shown in below

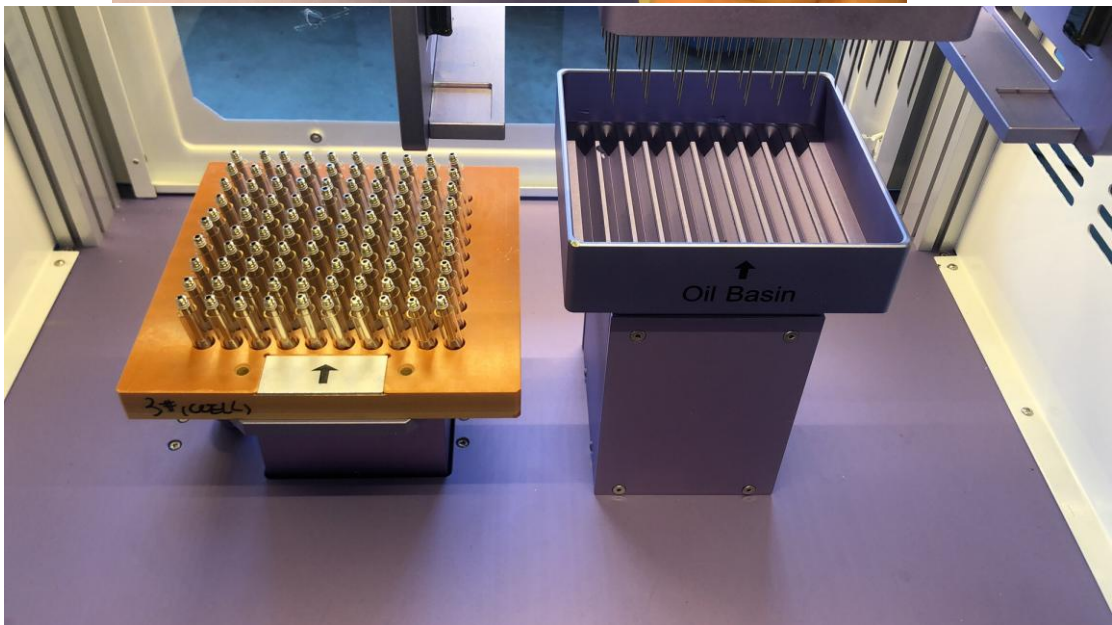
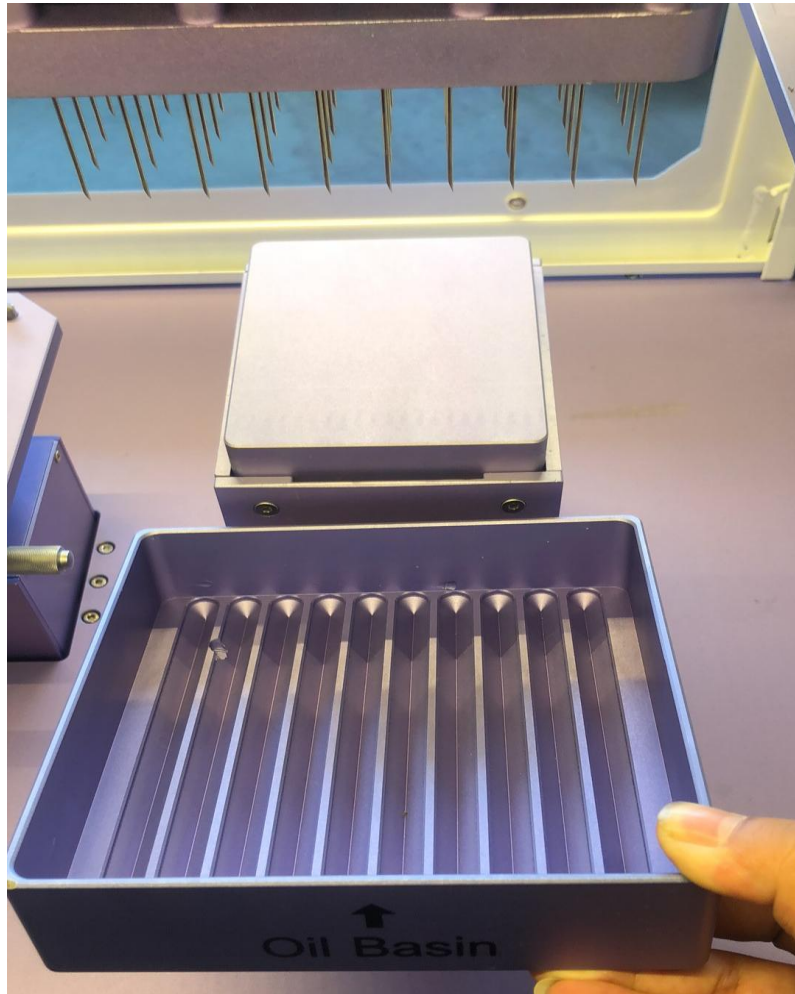
Touch Screen: Back to the Manual Operate System, move the parts to check the speed of each movement you just setted.



7. Cartridge tray position: Put the cartridge tray on the seat, 4 pin posts are aligned with 4 positioning holes of the tray



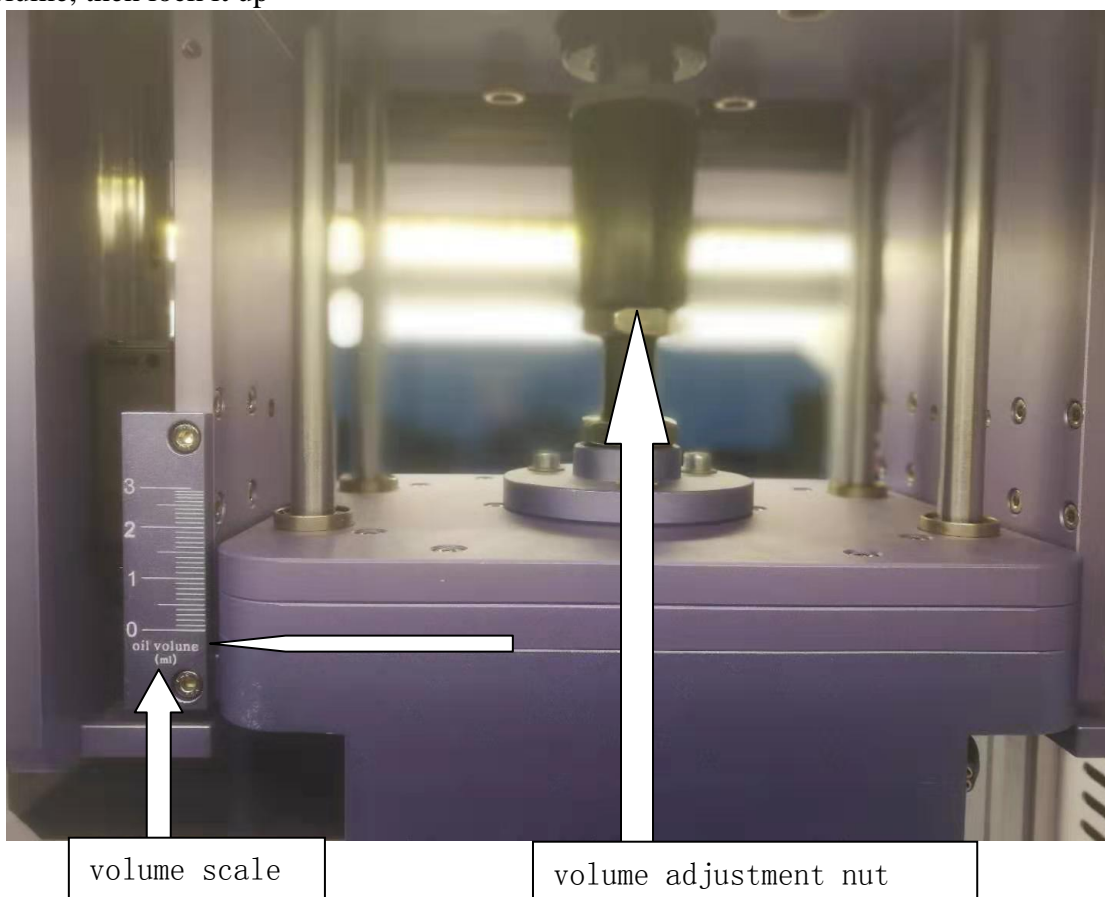
8. Oil Basin Position: Align the groove below the oil basin on the heating plate and gently put it in place. Please keep the marked sign outwards.



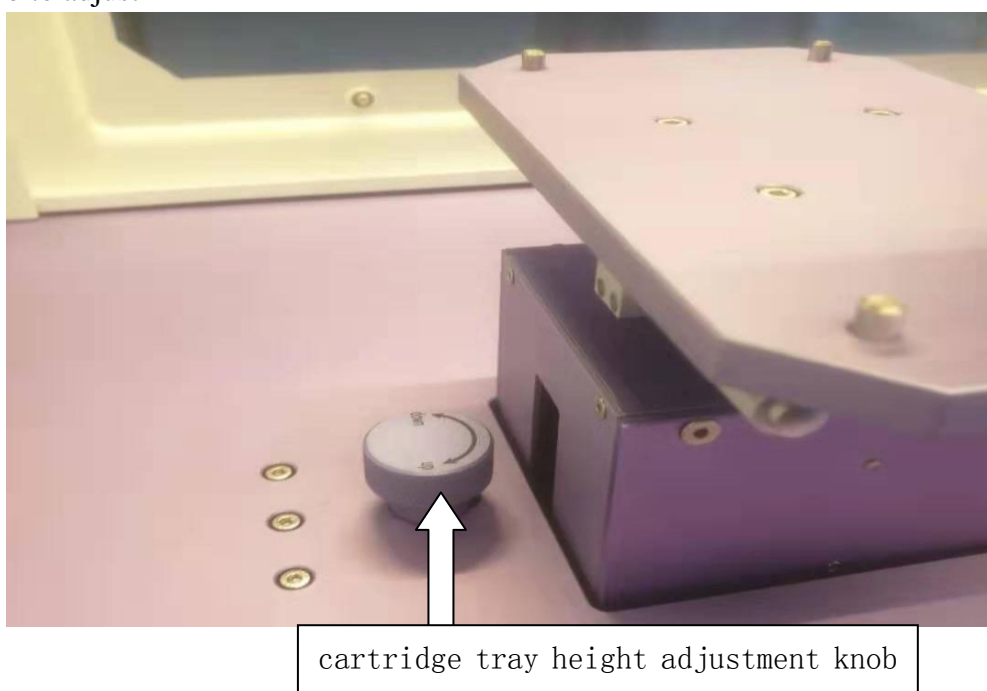
This show the cartridge tray and oil basin positioned well

9.Oil Volume Adjustment: Get in the manual operate screen, press “oil inject up”check the volume scale and adjust the “volume adjustment nut” to get the right

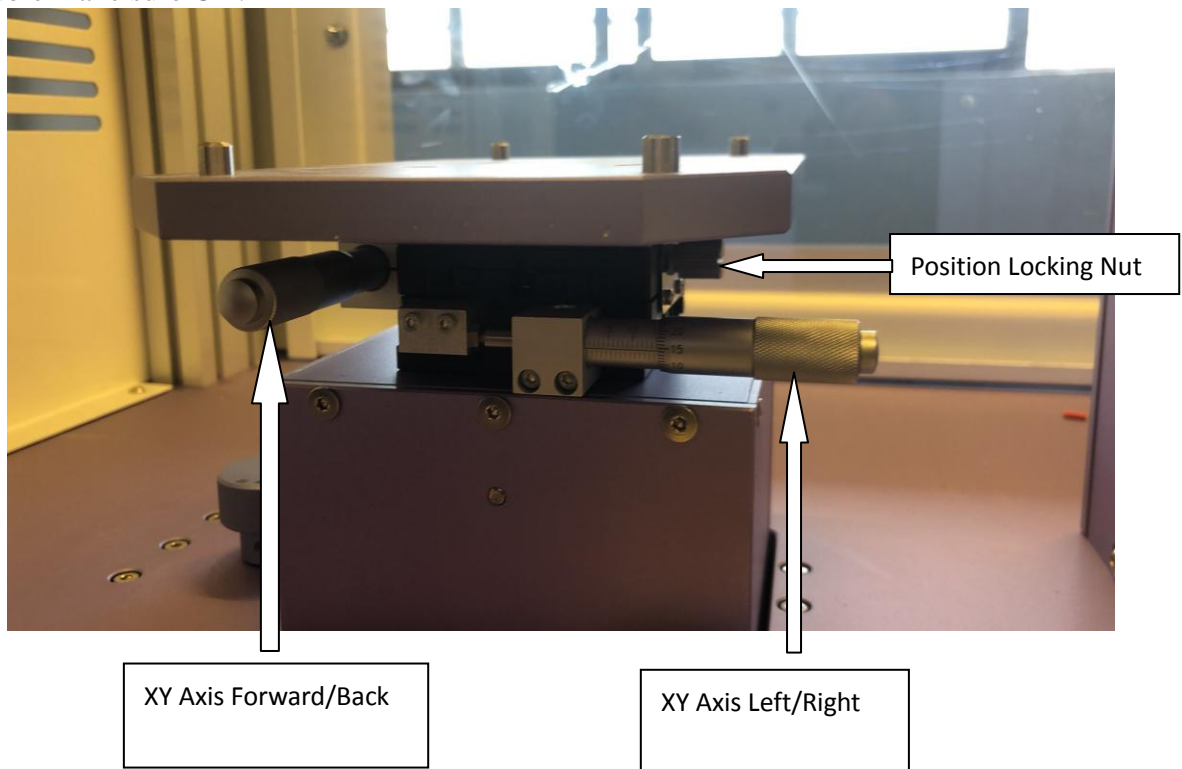
volume, then lock it up



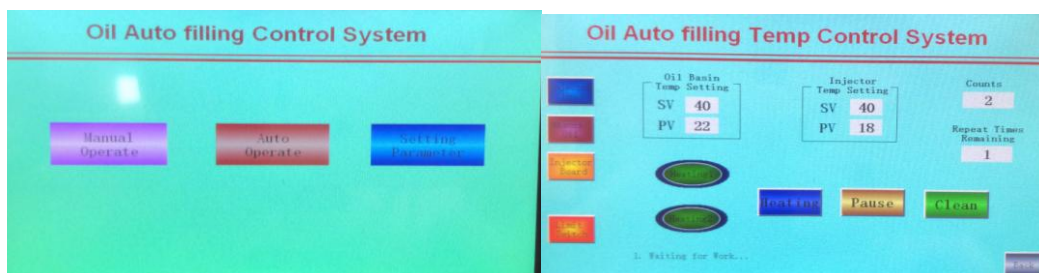
10. Cartridge tray height adjustment: Twist the cartridge tray height adjustment knob to adjust

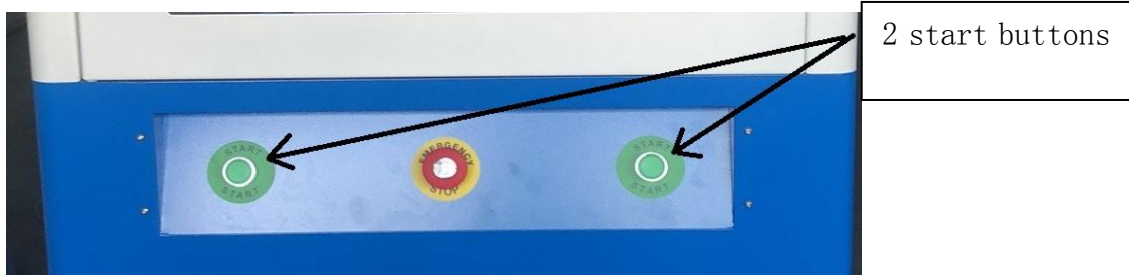


11. Cartridge Tray Horizontal Move: This is to piston the cartridge tray to make sure the needles all inject into the oil fillig holes. Get in manual operate mode and move the “Injector Board” to the left, get the “Injector Head”down, adjust the “cartridge tray height adjustment knob”to move the cartridge tray up and adjust the “XY Axis Forward/Back & Left/Right”until the needles all inject into the oil filling holes then lock the “Position Locking Nut”then adjust the filling height again to double make sure OK.



12. Simulate Filling: After all set ok, close the front and back Interlock security doors, get into the “auto filling screen”, press the 2 start buttons at the same time do auto filling process.





九、Maintenance

- 1、 After each use of the equipment, please keep the inside and outside of the machine clean, no stains;
- 2、 The equipment is very precise, according to the specified ways to move around, please no crash or other damage.
- 3、 The on-off interval of the equipment must be guaranteed to be more than 1 minute;
- 4、 The equipment should be electrified every other week if out of use for a long time;
- 5、 Do not remove electrical components and equipment parts at will, so as not to damage the equipment and affect the performance;
- 6、 Maintenance and repair of the equipment shall be carried out by professionals or trained persons

十、Common Fault Analysis

- 1、 Contents: Provide any possible failures; Operation manual, tools and other tools, troubleshooting according to the trouble list
- 2、 Trouble List Analysis

Trouble	Part	Analysis	Solution
Press Main power button, touch screen not show	Power terminal in lower cabinet	The power cord terminal is off	plug on corresponding terminal
	power interface	Insurance burn out	Replace 10A fuse
	Main Power Button	Main Power Indicator not light up	The terminal is off, connect the wire, or replace the main power button
	Touch screen	Touch screen power cord comes off	Connect the power cord
cylinders does not move in manual mode	Air Compressor	Whether the air outlet valve of air compressor is opened	Turn on the valve
	Air filter	Not enough air pressure	Adjust the pressure regulating valve to the right pressure

	motherboard	The wiring terminal is off, or the circuit board does not give instructions	Connect the terminal or replace the circuit board
	Solenoid valve	Solenoid valve core damage, solenoid valve coil damage	Replace Solenoid valve
	speed pressure adjusting knob/Throttle valve at the side of the equipment	The throttle valve is closed and the air pressure is not enough	Adjust throttle valve to achieve standard pressure
cylinders does not move in automatic mode	Touch screen	Not in auto mode or the pause button is pressed	Enter auto mode or cancel the pause button
	front and back Interlock security doors	Not closed at position	Close the Interlock security doors
	Stop/Emergency button	Stop/Emergency button is pressed	Twist it off
Needle plate sealing leakage oil	Sealing gaskets/gasket sheet	The cylinder move too fast when filling or the needle plate not tightened well	调节注油气缸速度或锁紧针板或跟换密封垫 Adjust the filling speed or tighten the needle plate or replace the sealing gasket sheet
Temperature not showed properly	Touch screen	Measurement deviation	Correct the temperature in the parameters screen
	Injector head or the oil basin heating palte	Temperature sensor damage	Replace Temperature sensor

Note: If other unknown faulty, please seek professional for maintainance

Appendix

Appendix 1: Equipment operate manual

Appendix 2: Parts list

Appendix 3: Circuit Diagram

Appendix 4: Spare parts list