UP 300 Service Manual

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Failure 01: Initialization failed: abnormal sound /can't touch the limit

Failure	Cause	Solution		Remark
• An axis has abnormal sound during initialization • Manual three-axis motion can't touch the limit switch • The only method is to turn off the power	➢ Confirm the fault axis	☐ The axis that causes the initialization failed is the fault axis (initialization sequence: Z-X-Y)		Normal initialization: ➢Z axis collides downwards with limit once; ➢X axis collides backwards with limit twice; ➢Y axis collides rightwards with limit twice; ➢LED light is on
	➢ Limit switch of fault axis is deformed/damaged	☐ Turn off the power, and move the XY axis manually; if the fault axis can't touch the limit contact or no sound is made after touching the limit contact, the limit is damaged and should be repaired or replaced; if the failure still exists, process as follows;	✓ Remove and replace X limit ✓ Remove and replace Y limit ✓ Remove and replace Z limit	➢Do not break off the limit with hands if it can't touch
	➢ Limit wire, motor wire broken, plug loose, needle retreated	☐ Turn off the power, remove the rear panel and check if the limit (on mainboard side) and motor wire of the fault axis is broken; if not, re-plug the limit/motor plug of the fault axis ☐ Turn off the power and replace the motor of the fault axis	✓ Remove and replace X motor ✓ Remove and replace Y motor ✓ Remove and replace Z motor	➢Check which axis isn't moving normally during initialization, touch the limit by hand, and check whether it can resume normal initialization
	➢ Mainboard damaged	☐ Turn off the power and replace the mainboard	✓ Remove and replace mainboard	
	➢ Mainboard adapter board damaged	☐ Turn off the power and replace the mainboard	✓ Remove and replace mainboard adapter board	
	➢ CPU damaged	☐ Turn off the power and replace the CPU	✓ Remove and replace CPU	
	➢ Display damaged	☐ Turn off the power and replace the display	✓ Remove and replace display	

Failure 02: Initialization failed: no action on an axis

Failure	Cause	Solution		Remark
	➢ Confirm the fault axis	☐ The axis that causes the initialization failed is the fault axis (initialization sequence: Z-X-Y)		Normal initialization: ➢Z axis collides downwards with limit once; ➢X axis collides backwards with limit twice; ➢Y axis collides rightwards with limit twice;
• A certain axis has no action during initialization and the motor has no motion sound • Initialization is always in the state that can't be finished • The only method is to turn off the power	➢ Motor wire of fault axis broken, needle retreated, plug loose ➢ Check if the motor of the fault axis is damaged	☐ Turn off the power, check if the motor wiring of the fault axis is damaged, and if the plug is broken; if not, remove the mainboard and check if the motor wire is broken or if the plug is loose ☐ Turn off the power, open the rear panel, plug an intact motor into the motor terminal of the mainboard, and then initialize and test the motor for damage. Replace the motor of the fault axis	✓ Remove and replace X limit ✓ Remove and replace Y limit ✓ Remove and replace Z limit	➢ After abnormal initialization by touching the limit with hand, push each axis by hand to see if there is any power failure
	➢ Mainboard damaged	☐ Turn off the power and replace the mainboard	✓ Remove and replace mainboard	
	➢ CPU damaged	☐ Turn off the power and replace the CPU	✓ Remove and replace CPU	

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Failure	Cause	Solution	Remark
• The machine directly powers off and restarts when the initialization function is triggered in any method • The cause of this fault is a short circuit	➢ 26P colour cable ➢ Platform FFC short circuit ➢ Platform adapter board damaged ➢ LED light short circuit ➢ Height aligning cable short circuit	☐ Turn off the power and replace the 26P color cable ☐ Turn off the power, replace the platform adapter board ☐ Replace the LED light cable ☐ Replace the height aligning cable	✓ Replace the platform adapter board ✓ Replace the LED light cable ✓ Replace the height aligning cable	Short circuit is easy to damage the mainboard and platform adapter board ➢Platform adapter board is damaged ➢Mainboard is damaged, there is obvious burning during initialization, and the light appears
	➢ Short circuit of aluminum substrate	☐ Turn off the power, and replace the aluminum substrate assembly	✓ Replace the aluminum substrate assembly	
	➢ nozzle adapter board short circuit ➢ nozzle CFC cable adapter board ➢ nozzle FFC cable is damaged or contact is poor	☐ Turn off the power and replace the nozzle adapter board ☐ Turn off the power and replace the mainboard adapter board ☐ Turn off the power and check if the FFC cable of the nozzle has defects such as false connection, crushing, and plug loose. If yes, replace it	✓ Replace the PCB nozzle adapter board ✓ Replace the mainboard cable adapter board ✓ Replace the FFC-Y axis adapter cable	
	➢ Short circuit of internal components of the nozzle	Turn off the power and replace the nozzle assembly	✓ Remove and replace the nozzle assembly	
	➢ Power cable or signal cable of screen short circuit	☐ Turn off the power, check if the power cable and signal cable are damaged, and if the connector is broken or the plug is loose. If yes, replace the power cable, signal cable / re-plug	✓ Replace the power cable and signal cable	
	➢ Mainboard damaged	☐ Turn off the power and replace the mainboard	✓ Remove and replace mainboard	
	➢ CPU damaged	☐ Turn off the power and replace the CPU	✓ Remove and replace CPU	
	➢ Display damaged/ power/signal cable damaged	☐ Turn off the power and replace the display ☐ Check if the power/signal cable is disconnected or broken	✓ Remove and replace display ✓ Remove and replace power/signal cable	

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Failure 04: A certain shaft has slight abnormal sound during initialization, but initialization can be done

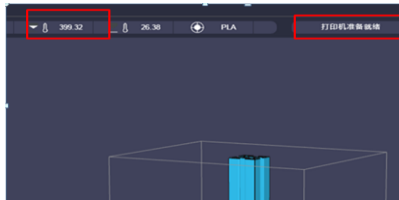| Failure	Cause	Solution		Remark
• Initialization can be done normally, but abnormal sound is caused by slight friction of the faulty axis during initialization and printing	➤ Fault axis lacks lubrication	☐ If it is Y/X/Z axis, check if there is any jam or dry noise; if yes, lubricate the fault axis bar with industrial grade lubricating oil directly ☐ If it is Z-axis, remove the rear panel first, and then apply the industrial grade lubricating oil evenly to the screw motor	✓ Disassemble the rear panel	
	➤ Y axis abnormal sound	☐ Turn off the power, manually pull the Y-axis nozzle holder, and check if the Y-axis motor pulley is loose ☐ Y-axis light bars not parallel, too tight	✓ Remove and replace Y motor ✓ Replace Y-axis light bar	
	➤ X axis light bar abnormal sound	☐ Turn off the power, manually pull the Y-axis, and check if the X-axis has obvious blackening or axial scratches	✓ Remove and replace X-axis light bar	It is difficult to replace Y-axis linear bearing; it is recommended to replace the Y-axis assembly
	➤ X-axis pulley abnormal sound	☐ Turn off the power supply and manually pull the Y-axis to check if the X-axis motor pulley is loose ☐ Place the belts on both sides of the pulley, and pull the Y-axis back and forth five times to check if the belt has obvious displacement and wear	✓ Replace X-axis belt ✓ Replace X motor	
	➤ Z axis abnormal sound	☐ Check if the 26P color cable with black net under the platform falls off		

Failure	Cause	Solution		Remark
• No sound under any operation • Low volume under any operation	➢ Buzzer / display damaged	☐ Turn off the power, remove the display, and replace the buzzer components on the display	Remove and replace display	
	➢ Mainboard damaged	☐ Turn off the power and replace the mainboard	✓ Remove and replace mainboard	

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Failure 06: Software shows that the nozzle temperature or platform temperature is too high

Software reports nozzle high temperature error

Software reports platform high

Printing stops and reports nozzle high temperature error

Failure	Cause	Solution		Remark
● Reports nozzle high temperature when the nozzle powers on ● Printing stops and reports nozzle high temperature error ● Platform automatically heats up after initialization ● Software reports platform high temperature error when loading model	➢ nozzle (nozzle plate, temperature control components, etc.)	☐ Turn off the power, remove and replace the nozzle PCB board ☐ Turn off the power, remove the nozzle, and replace the integrated liquefied gas ☐ Turn off the power and replace the nozzle assembly	✓ Remove and replace the nozzle assembly ✓ Remove and replace the nozzle plate ✓ Remove and replace the integrated liquefied gas	It is recommended to replace the nozzle assembly
	➢ nozzle is not heated, fan doesn't run when the motor is turned on	☐ Turn off the power and replace the nozzle PCB adapter board ☐ Turn off the power and replace the nozzle PCB board	Remove and replace nozzle PCB adapter board	
	➢ FFC-platform heating wire false connection	☐ Re-plug or replace the FFC-platform heating cable	✓ Replace FFC-platform heating cable	
	➢ 26P adapter cable short circuit	☐ Re-plug or replace the 26P color cable	✓ Replace the 26P color cable	
	➢ Mainboard damaged	☐ Turn off the power and replace the mainboard	✓ Remove and replace mainboard	

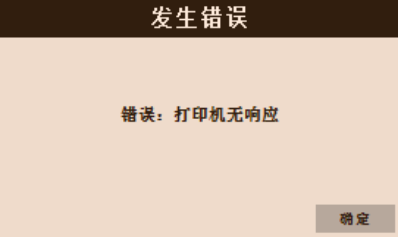| Failure	Cause	Solution		Remark
• When the UP 300 is connected with a USB cable, there is no prompt on the connection, and the software control operation can't be performed • Unstable connection state causes transmission model data to fail/crash after connection	➢ USB cable is not fixed/loose; USB cable is damaged	☐ Check if the USB cable is damaged (damaged, connector deformed), and re-plug the USB cable on the mainboard and PC ☐ If the fault persists, replace the USB cable		
	➢ USB port on PC	☐ The USB interface of the connected PC may be damaged. Change the USB interface or check it with another PC		
	➢ Software driver installation failed	☐ Connect the device to the PC with USB and update the UP300 driver in the PC device manager (drive location: software installation directory)		
	➢ Software version problem	☐ Download the latest control software from the designated official website ☐ http://www.tiertime.com ☐ https://www.up3d.com		
	➢ PC mainboard is underpowered	☐ Change another PC (some MACs have experienced insufficient power supply to the mainboard and the symbol of "USB connection" always flashes when connecting, and eventually the connection is abnormal)		
	➢ Peripheral interface board damaged / display damaged / external interface board damaged	☐ Turn off the power and replace the peripheral interface board ☐ Turn off the power and replace the display ☐ Turn off the power and replace the peripheral interface board	✓ Remove and replace display ✓ Replace the peripheral interface board	
	➢ Screen signal/ power cable	☐ Turn off the power, and replace the screen signal/ power cable	✓ Remove and replace screen power / signal cable	

Failure 08: Failed to connect UP 300 (Wi-Fi), Wi-Fi transmission failed

Failure	Cause	Solution		Remark
• When UP300 is connected wirelessly, there is no prompt on the connection, and the software control operation can't be performed • Unstable Wi-Fi connection state causes transmission model data to fail/crash after connection • Error when connecting Wi-Fi: the printer is not responding	➢ The wireless status of the connection between the PC and the UP300 is different	☐ Restart the UP 300 and UP Studio software, and confirm that the display and PC are connected to the same Wi-Fi ☐ If the workspace has multiple Wi-Fis for different purposes, its Wi-Fi name needs to be distinguished from other Wi-Fis		
	➢ Insufficient wireless signal strength / wireless signal instable	☐ Restart UP 300 and the software and reconnect; ☐ Reconfigure wireless settings; ☐ Replace a more stable and stronger wireless signal		
	➢ Software version problem	☐ Download the latest control software from the designated official website ☐ http://www.tiertime.com ☐ https://www.up3d.com		
	➢ Wireless router is not compatible	☐ Check the router type. Currently, the UP Studio software only supports wireless router in the 2.4GHz band. It is not compatible with other routers and needs to be replaced with a router supporting the 2.4GHz band		
	➢ CPU damaged	☐ Connect Wi-Fi with the PC in the standard procedure. If it can't be connected normally, turn off the power and replace the CPU	✓ Remove and replace CPU	
	➢ Wi-Fi cable assembly or display damaged	☐ Turn off the power and replace the Wi-Fi cable assembly or display	✓ Remove and replace the Wi-Fi cable assembly or display	

Failure	Cause		Solution		Remark
• When UP300 is connected wirelessly, there is no prompt on the connection, and the software control operation can't be performed • Unstable Wi-Fi connection state causes transmission model data to fail/crash after connection • Error when connecting Wi-Fi: the printer is not responding 发生错误 错误：打印机无响应 确定 • Software error					
	➢	The wireless status of the connection between the display and the PC is different	☐ Restart the UP 300 and UP Studio software, and confirm that the display and PC are connected to the same Wi-Fi ☐ If the workspace has multiple Wi-Fis for different purposes, its Wi-Fi name needs to be distinguished from other Wi-Fis		
	➢	Insufficient wireless signal strength / wireless signal instable	☐ Restart the router ☐ Restart UP BOX and the software and reconnect; ☐ Reconfigure wireless settings; ☐ Replace a more stable and stronger wireless signal		
	➢	Software version problem	☐ Download the latest control software from the designated official website ☐ http://www.tiertime.com ☐ https://www.up3d.com		
	➢	CPU damaged	☐ Connect Wi-Fi with the display in the standard procedure. If it can't be connected normally, turn off the power and replace the CPU	✓ Remove and replace CPU	
	➢	Wi-Fi cable assembly or display damaged	☐ Turn off the power and replace the Wi-Fi cable assembly or display	✓ Remove and replace the Wi-Fi cable assembly or display	

Failure	Cause	Solution		Remark
• No error. When register an account with the UP Studio software, the message has been sent to the specified email address, but the activation email has not been received	➤ Intercepted as spam	☐ Check the spam and restore the email		
	➤ Software version problem	☐ Download the latest control software from the designated official website ☐ http://www.tiertime.com ☐ https://www.up3d.com		
	➤ PC firewall settings	☐ Check your firewall settings		
	➤ Some email suffixes have limitation (e.g. .org)	☐ Replace with commonly used email for registration (QQ, NetEase, 263, etc.)		

Failure 11: nozzle calibration/alignment failed

Failure	Cause	Solution		Remark
• Error: nozzle temperature too high • Error: Calibration failed • There is abnormal sound several times when the platform rises to the nozzle and no error reported	➤ nozzle temperature is high during calibration or height aligning after the nozzle extruded	☐ Wait for the nozzle temperature to drop below 80°C		Clean residual wire on the nozzle before aligning
	➤ Height aligning cable damaged	☐ Unplug the height aligning cable connecting the height aligning assembly	✓ Replace the height aligning cable	
	➤ Short circuit or damage to height aligning PCB board	☐ Remove the height aligning assembly and replace the height aligning PCB board	✓ Replace height aligning PCB board	
	➤ Steering gear is not powered	☐ Remove and replace the steering gear assembly	✓ Replace the steering gear assembly	
	➤ Mainboard damaged	☐ Turn off the power and replace the mainboard	✓ Remove and replace mainboard	
	➤ nozzle adapter cable is broken	☐ Remove and replace the nozzle adapter cable	✓ Remove and replace the nozzle adapter cable	

Failure	Cause	Solution		Remark
● Extrusion failure when the nozzle extrudes the wire ● The nozzle suddenly stops in printing process	➤ Material problems (wire used up, knotted, damp, broken, uneven diameter)	☐ Rearrange unrolled wires ☐ Put in a drying oven for drying ☐ Replace with new materials or reinstall materials		
	➤ nozzle plugging	☐ Clean or replace the nozzle	✓ Remove and replace the nozzle	
	➤ nozzle height and platform compensation value setting is unreasonable	☐ Reset nozzle height ☐ Calibrate the platform manually (using calibration sheet)		
	➤ nozzle CFC cable is damaged and the contact is poor ➤ nozzle FFC adapter cable	☐ Turn off the power and check if the CFC cable of the nozzle is damaged, and replace if yes ☐ Check the nozzle FFC cable for damage, if replace if yes	✓ Remove and replace the nozzle FFC cable ✓ Remove and replace the nozzle CFC cable	
	➤ nozzle (nozzle plate, nozzle motor, temperature control components, etc.)	☐ Turn off the power, remove and replace the nozzle board ☐ Turn off the power, remove the nozzle, and replace the integrated liquefied gas; ☐ Turn off the power and replace the nozzle motor ☐ Turn off the power and replace the nozzle assembly	✓ Remove and replace the nozzle assembly ✓ Remove and replace the nozzle board ✓ Remove and replace the integrated liquefied gas ✓ Remove and replace the nozzle motor	It is recommended to replace the nozzle assembly
	➤ Mainboard damaged	☐ Turn off the power and replace the mainboard	✓ Remove and replace mainboard	

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Failure 13: Failed to receive activation code from server when printer is activated

Failure	Cause	Solution	Remark	
• Error: Failed to receive activation code from server • Error: "Not factory activation status" / "Failed to acquire activation status" • Error: "Activation code error" / "Activation failed, wrong activation code"	➤ The number of prints reaches the preset value	☐ Download the latest control software from the designated official website, connect to the network and activate CPU ☐ http://www.tiertime.com ☐ https://www.up3d.com		
	➤ Error when CPU is activated, failed to return activation code from server	☐ Query whether the CPU number has been imported into the database		
	➤ Failed to get activation status	☐ The customer shall return the CPU to the factory		
	➤ The activation code returned by the server does not match the printer's check code	☐ Need to confirm with the IT department of the factory whether the serial number has been uploaded to the cloud		
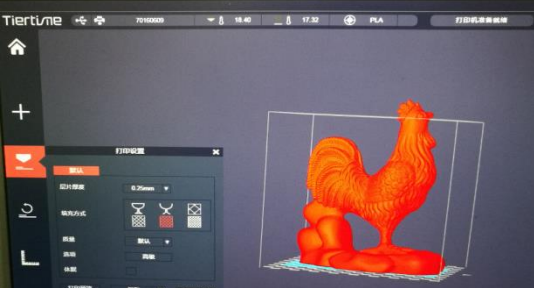
Failure	Cause	Solution	Remark
发生错误 错误：打印材料不足，是否继续打印？ 是　　否 Software prompt ● Error when transferring data model: material not enough, continue?	➢ The remaining material in the filament spool is not enough to print the model being transferred	☐ Remove the cover of the wire box and check if the remaining filament in the box is about to run out	
	➢ Software material weight setting is improper	☐ Set the actual weight of the material being used in the wire box in the "Material" interface of the UP Studio software	

Failure 15: The model displays red when clicking Print, and reports error "Model out of print range" when transmitting

Failure	Cause	Solution	Remark
Model shows red (not primary color) ☐ The model displays red when sending a print task and the error "Model out of	➢ The model is not automatically placed after being scaled and moved, and some areas are outside the molding space	☐ Set to automatically place and retransfer the model in the software	
	➢ Model size out of molding range	☐ In the software, if you select the model with the left mouse button, you can know the maximum size of the XYZ-axis. It can't be transferred and printed if it exceeds the molding space of UP 300 ☐ The forming space of UP 300 model is X*Y*Z=205mm*255mm*225mm	
Software error	➢ nozzle height value not reasonable	☐ Restart the machine and re-run the height aligning	

Failure	Cause	Solution	Remark
• Model transferred to the machine successfully but can't be printed	➤ The nozzle does not heat up	☐ The nozzle does not heat up when printing, "OK" in other states	✓ Replace nozzle assembly
	➤ Select parameter "Warm up" when printing	☐ After the file transfer is completed, you can see that the platform starts to heat up slowly. Wait for 15 minutes to let the nozzle warm up and start printing ☐ If you do not need to warm up the platform before printing, uncheck the "Warm up" function in the print parameters	
	➤ nozzle CFC cable is damaged and the contact is poor	☐ Check if the FFC cable of the nozzle is damaged and if the connection is false; replace it if yes ☐ Check if the CFC cable of the nozzle is damaged, and replace it if yes	✓ Remove and replace nozzle FFC cable ✓ Remove and replace nozzle CFC cable

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Failure	Cause	Solution		Remark
● Z axis suddenly drops automatically in the printing process, or X-Y axes suddenly stop. After reinitialization, the faulty axis is not powered	➢ Initialize the device ➢ Wire inspection limit problem	☐ Check if the initialization of each axis is normal ☐ Check if the wire inspection switch turns on/off normally		Normal initialization: ➢Z axis collides downwards with limit once; ➢X axis collides backwards with limit twice; ➢Y axis collides rightwards with limit twice; ➢LED light is on
	➢ Motor cable of fault axis is broken, plug is loose	☐ Turn off the power, remove the rear panel and check if the motor wire of the fault axis is broken; if not, re-plug the motor plug of the fault axis	Method of removing the outer casing	
	➢ Fault axis structure damage (motor pulley loose, belt loose, etc.)	☐ Turn off the power, manually move the fault axis, check if the motor pulley is loose, and if the conveyor belt is loose. If yes, replace it accordingly	✓ Remove the X-axis motor	
	➢ Motor drive of fault axis /mainboard damaged	☐ Turn off the power and replace the mainboard	✓ Remove and replace mainboard	
	➢ Motor of fault axis damaged	☐ Turn off the power and replace the motor of the fault axis	✓ Remove and replace X motor ✓ Remove and replace Y motor ✓ Remove and replace Z motor	

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Failure	Cause	Solution		Remark
请关闭前门 确定 取消 • Pause during data transmission and report error: "Please close the front door of the printer" • The connection is disconnected while the calculation is in progress during the transfer of the data file to the UP300, and the prompt pops up continually after the calculation is completed • Pause while printing the model, the platform drops and reports an error: "Please close the front door of the printer"	➢ The front door is not closed properly	☐ Check if the front door is closed normally		
	➢ Disconnect during transferring data file to UP 300	☐ Ensure that the connection between the PC and UP 300 is stable and the front door remains closed when the file is transferred		
	➢ Front door round magnet damaged/magnetism is weak	☐ Check if the round magnet of the front door near the bottom of the right board is broken or damaged, and replace if yes	✓ Replace the front door magnet	
	➢ Door inspection cable is damaged	☐ Open the front door and remove the door inspection cable block	✓ Remove the door inspection cable	

Failure 19: Platform temperature is too high
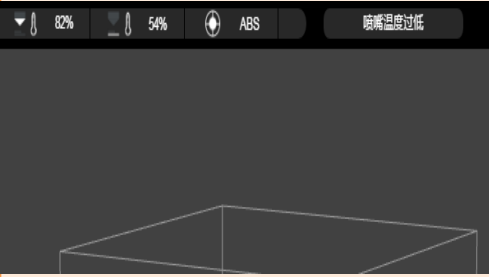
Failure	Cause	Solution		Remark
• Error: platform temperature is too high • Software and display terminal display platform temperature: About 397°C • This fault may occur while the print task is in progress	➢ Platform FFC cable is broken, plug is loose	☐ Turn off the power supply, remove the heating base plate, check if the platform FFC cable is damaged, if the platform FFC cable of the heating base plate is broken, 26P cable	✓ Remove and replace the platform FFC heating cable ✓ Remove and replace 26P cable	
	➢ Heating aluminium substrate damaged	☐ Turn off the power, remove the heating aluminum substrate, check if the heating plate has soldering short circuit, and repair or replace	✓ Remove and replace the aluminum substrate	
	➢ Mainboard damaged	☐ Turn off the power and replace the mainboard	✓ Remove and replace mainboard	
	➢ Platform adapter board is damaged	☐ Turn off the power, replace the platform adapter board	✓ Remove and replace the platform adapter board	
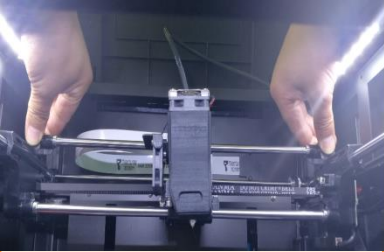
Failure	Cause	Solution		Remark
   • Error: nozzle temperature is too high • Extrusion/printing nozzle does not heat up • Abnormal noise of the nozzle during printing (no feeding) • The print model has surface defects such as breakpoints	➢ nozzle CFC cable is damaged and the contact is poor	☐ Check if the CFC cable is damaged, if the plugging is loose, and replace it if yes		
	➢ nozzle (nozzle plate, nozzle motor, temperature control components, etc.) ➢ Large stratification, fast printing speed, insufficient nozzle motor power	☐ Turn off the power, remove and replace the nozzle board ☐ Turn off the power, remove the nozzle, and replace the integrated liquefied gas ☐ Turn off the power and replace the nozzle assembly ☐ Turn off the power and replace the nozzle motor	✓ Remove and replace the nozzle assembly ✓ Replace nozzle board ✓ Replace integrated liquefied gas	It is recommended to replace the nozzle assembly
	➢ Mainboard damaged	☐ Turn off the power and replace the mainboard	✓ Remove and replace mainboard	
	➢ Material problem	☐ Replace with new materials		

Failure	Cause	Solution	Remark
X-axis test method No error, print model has staggering in a direction of different degrees **Y-axis test method**	➢ Confirm the fault axis	☐ Observe the model and confirm the direction of the staggered layer to determine the axis ☐ Confirm fault axis: Front-rear direction: X axis; Left-right direction: Y axis; Up-down direction: Z axis	
	➢ Fault axis structure damaged (motor pulley loose, belt loose, etc.)	☐ Turn off the power and re-initialize, check if the Z-axis motion is smooth, if there is a stuck or abnormal sound ☐ Turn off the power and re-initialize, push the Y-axis back and forth to check if the X-axis motor pulley and the connecting rod pulley have glue failure ☐ Turn off the power and re-initialize, hold the nozzle and nozzle holder by hand, push Y-axis nozzle holder to the left and right to check if the Y-axis motor pulley has glue failure	Do not apply too much force on the Y-axis to avoid damage to the mainboard
	➢ Fault axis motor is damaged	☐ Turn off the power and replace the motor of the fault axis	✓ Remove and replace X motor ✓ Remove and replace Y motor ✓ Remove and replace Z motor
	➢ Mainboard damaged	☐ Turn off the power and replace the mainboard	✓ Remove and replace mainboard
	➢ CPU damaged	☐ Turn off the power and replace the CPU	✓ Remove and replace CPU

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Failure 22: Print model warped or deformed

Failure	Cause	Solution		Remark
• Model surface has obvious warping deformation ☐ The base area or overall size of the model is large, resulting in a larger tensile force and substrate warpage when the model is cold	➢ nozzle height and platform compensation value setting is unreasonable	☐ Reset nozzle height ☐ Calibrate the platform manually		
	➢ Chosen print speed is fast	☐ Choose "Normal" or "Better" print speed		
	➢ Platform temperature is not enough when the print task starts	☐ Warm up the platform for a while before transferring the print task ☐ When transferring the model, select the "Warm up" option. After transferring, the platform will warm up first, and then start nozzle heating and printing		
	➢ The model cools too fast when printing	☐ Adjust the air volume of the nozzle fan to the model by adjusting the air switch of the nozzle assembly		
	➢ The size of the model base is large, and the filling method isn't changed accordingly	☐ Set the filling to a looser option within the software		

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Failure	Cause	Solution		Remark
● Pause automatically during printing	➤ The front door automatically opens and the access control opens normally	☐ Front door outer wide component magnet off ☐ Front door outer wide assembly deformed	✓ Replace the front door or the magnet	
	➤ The wire is used up, the wire inspection function is normally turned on	☐ Replace wire		
	➤ Wire inspection limit damaged, falsely connected	☐ Remove the rear panel and the right side panel to replace the wire inspection limit	✓ Replace the wire inspection component	

Failure	Cause	Solution	Remark
• Only print supports or theme model • When the wire feeding is normal, there is no model or support printing at a certain height	➤ Defects in the model (loss when data is converted, etc.)	☐ Repair the model with UP Studio software before printing	
	➤ Files lost when model files are transferred to SD card	☐ Retransfer the model data file while the connection is stable	
	➤ Improper print parameter settings	☐ Set a small support area and support angle (recommended to guide the user), re-transfer the print model	
	➤ Software problem	☐ Completely delete the UP Studio software, download the latest software from the official website, and re-transfer the print ☐ http://www.tiertime.com ☐ https://www.up3d.com	When the version is updated, clear the Up studio folder in the old version of the installation directory

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Failure	Cause	Solution		Remark
● After printing, the model surface has obvious defects such as twill and horizontal stripes	➢ Material problem (uneven diameter or impurities)	☐ Replace with coiled wire		
	➢ Incorrect material settings	☐ Set materials according to the material type indicated on the label of the rolled wire		
	➢ Severe nozzle wear or nozzle damage	☐ Turn off the power and replace the nozzle	✓ Remove and replace the nozzle	
	➢ Inconsistent nozzle feeding (intermittent feeding)	☐ Turn off the power and replace the integrated liquefied gas ☐ Turn off the power and replace the nozzle assembly	✓ Remove and replace the integrated liquefied gas ✓ Remove and replace the nozzle assembly	
	➢ Irregular texture, inconsistent position; caused by mainboard	☐ Turn off the power and replace the mainboard	✓ Remove and replace mainboard	
	➢Irregular texture position of the same model is always consistent; caused by SD card	☐ Turn off the power and replace the SD card	✓ Replace the SD card	

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Failure	Cause	Solution		Remark
• The platform automatically heats up after initialization or printing	➤ Platform FFC cable short circuit	☐ Turn off the power, remove the heating base plate, check if the platform FFC cable is damaged, and if the platform FFC cable of the heating base plate is broken or loose. If yes, replace the FFC cable / re-plug	✓ Remove and replace the platform FFC cable	
	➤ Heating plate damaged	☐ Turn off the power, remove the heating plate, check if the heating chip on the plate is damaged, repair or replace it ☐ Turn off the power and replace the heating base plate	✓ Remove and replace the heating base plate	
	➤ Mainboard damaged	☐ Turn off the power and replace the mainboard	✓ Remove and replace mainboard	

Failure	Cause	Solution		Remark
• Including two states: Whether the display can be powered on or not (whether the touch screen has content) • The display can't be powered on, i.e. it can't work at all • If the display works abnormally, i.e. it can be powered on, but the function is abnormal	➢ Display has failure	☐ Turn off the power, remove the display, and check if it has obvious surface crush, scratches, etc.	✓ Remove and replace display	
	➢ Screen signal cable, power cable plug loose / damaged	☐ Turn off the power, check whether the signal cable and power cable are damaged, whether the connector is broken or the plug is loose. If yes, replace the signal cable, power cable / re-plug	✓ Remove and replace screen signal cable, power cable	
	➢ Mainboard display socket /mainboard damaged	☐ Turn off the power and replace the mainboard display socket ☐ Turn off the power and replace the mainboard	✓ Remove and replace mainboard	
	➢ Peripheral interface board damaged	☐ Turn off the power and replace the peripheral interface board	✓ Remove and replace the peripheral interface board	

Failure 28: Data transmission error 6/SD card error/repeated printing failure/unable to save and update high value

Failure	Cause	Solution		Remark
• Error: Data Transfer Failure 6 • Error: SD Card Error SD Write Error SD Read Error • Repeated printing with display, button or software failed • Values can't be saved after height aligning	➢ USB cable damaged /offline when transfer data	☐ Ensure stable connection and re-transfer data ☐ Check if the plugs on both ends of the USB cable are deformed and if the connection is broken ☐ Replace with a good USB cable		
	➢ Peripheral interface board damaged	☐ Turn off the power and replace the peripheral interface board	✓ Remove and replace the peripheral interface board	
	➢ SD card (damaged/loose)	☐ Remove the aluminum column, format the SD card, and then re-plug the SD card; if the fault persists, replace the SD card	✓ Remove and replace the SD card	
	➢ Display SD card slot/ interface board USB interface damaged	☐ Turn off the power and replace the display SD card slot ☐ Turn off the power and replace the peripheral interface board	✓ Remove and replace display ✓ Remove and replace the peripheral interface board	
	➢ CPU damaged	☐ Turn off the power and replace the CPU	✓ Remove and replace CPU	

Failure	Cause	Solution		Remark
• Motion system error 5 • This error occurs when the display is aligning height automatically during printing	➢ Motor pulley of fault axis is loose, belt is loose, certain injection molded part broken	☐ Turn off the power and reinitialize; if it fails to initialize properly, determine and solve the problem according to "Failure 01" - "Failure 04"; ☐ Manually move the fault axis to check if the motor pulley and the conveyor belt are loose. If yes, replace accordingly	✓ Failure 1 ✓ Failure 2 ✓ Failure 3 ✓ Failure 4	
	➢ Limit cable of fault axis is broken, plug is loose	☐ Check if the fault axis limit (limit switch side) is damaged / broken, and repair or replace; ☐ Turn off the power, remove and check if the fault axis limit (mainboard end) and the motor cable are disconnected, re-plug the fault axis limit/motor plug	✓ Remove and replace X limit ✓ Remove and replace Y limit ✓ Remove and replace Z limit	
	➢ Mainboard damaged	☐ Turn off the power and replace the mainboard	✓ Remove and replace mainboard	
	➢ Mainboard adapter board damaged	☐ Turn off the power and replace the mainboard adapter board	✓ Remove and replace mainboard adapter board	

Operation Guide 01- Method of replacing the shell

Tool: M4 hex wrench
1. Loosen the 4 screws marked in Fig. 1 and remove the rear panel;
2. Loosen the 4 screws marked in Fig. 2, remove the screen cable from the main board and cut off the cable tie, and then remove the aluminum column assembly;
3. Loosen the 6 screws marked by the red circles in Fig. 3, and then remove the right panel assembly;
4. Loosen the 2 screws marked in Fig. 4, and then pull the upper panel assembly back to the right;
5. Loosen the 6 screws marked in Fig. 5 and remove the front panel assembly;
6. Loosen the 6 screws marked in Fig. 6, and remove the left panel assembly.
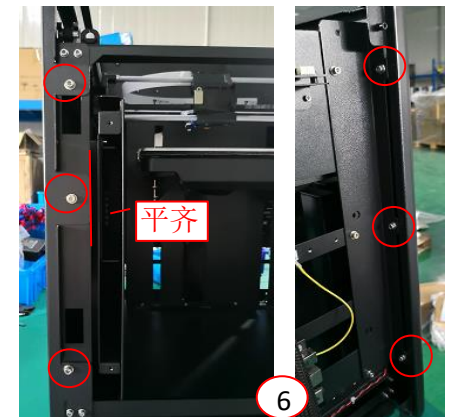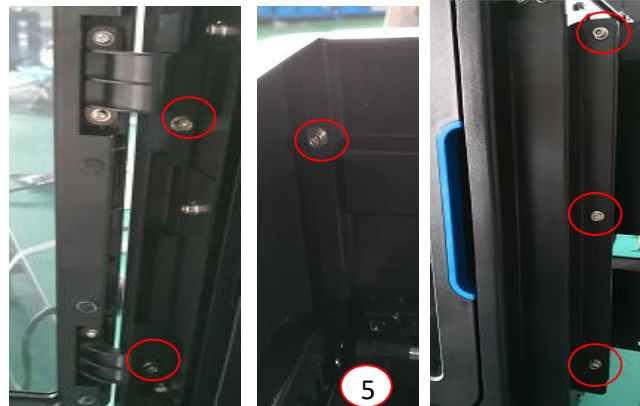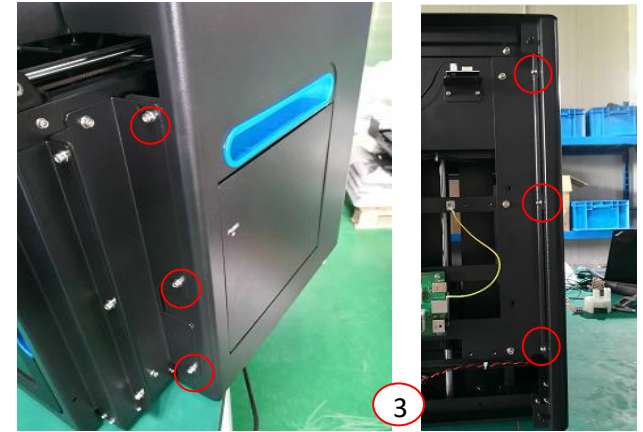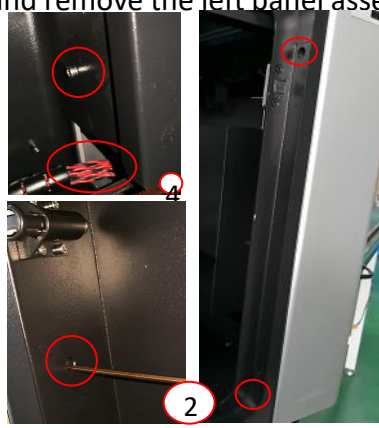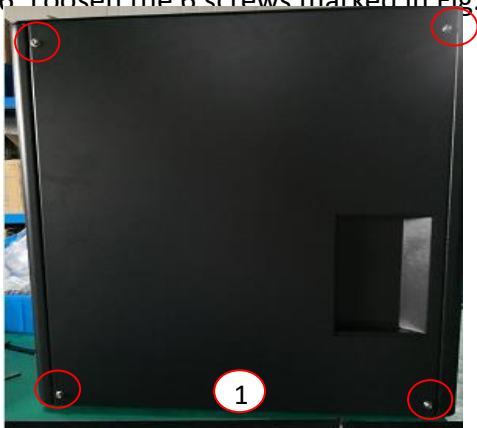
Note: Please disassemble from step 1 to 6 and install in the reverse steps and pay attention to the fit between the panels

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Operation Guide 02- Method of replacing mainboard adapter board

Tools:
Cross screwdriver, 2.5mm hex wrench

1. Remove the rear panel;
2. Pull out the cable plug on the mainboard adapter board;
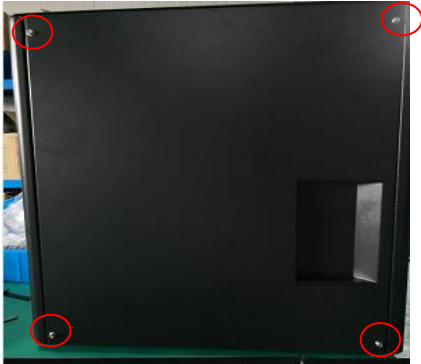
3. Use a cross screwdriver to remove the four screws on the mainboard adapter board.
4. Remove and replace the mainboard adapter board;
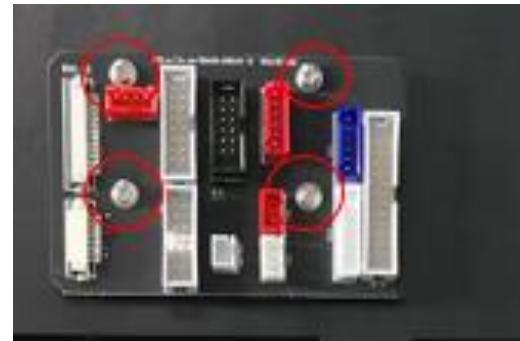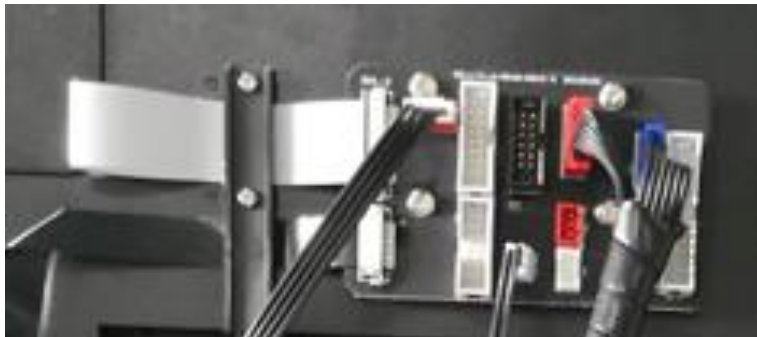
Note: For the installation direction of FFC cable, the side with metal contact should be on the same side as the internal metal contacts on the interface.

Tools
Cross screwdriver, 2.5mm hex wrench

1. Use a cross screwdriver to remove the 4 screws of the adapter board cover and then remove the rear nozzle cover.
2. Pull out the 2 lines as shown in the figure.
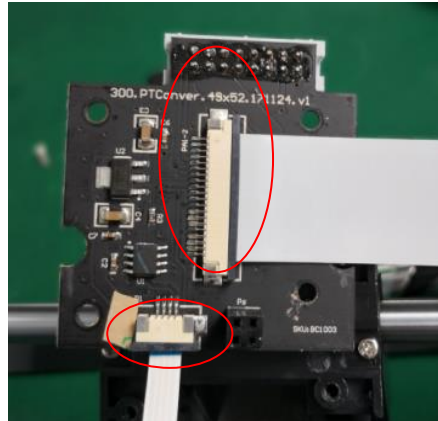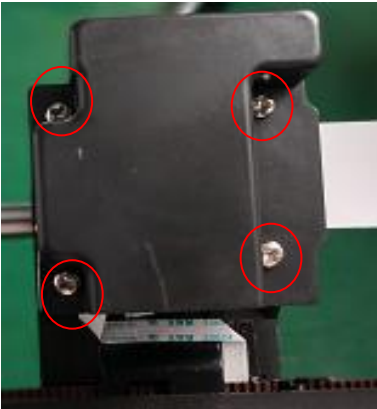
3. Pull out the CFC-nozzle cable interface to remove and replace the PCB-nozzle adapter board.

Operation Guide 04-Method of replacing PCB-height aligning board

Tool
Cross screwdriver

1. Remove the two screws fixed on the aluminum substrate;
2. Pull out the interface shown in the figure from the bottom to remove the height aligning board component;
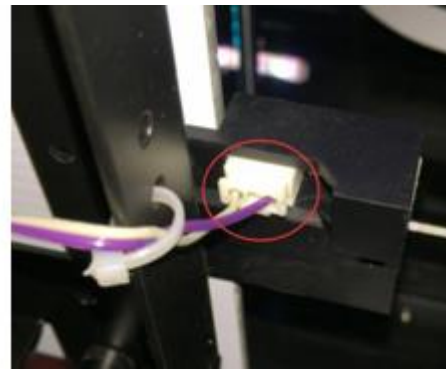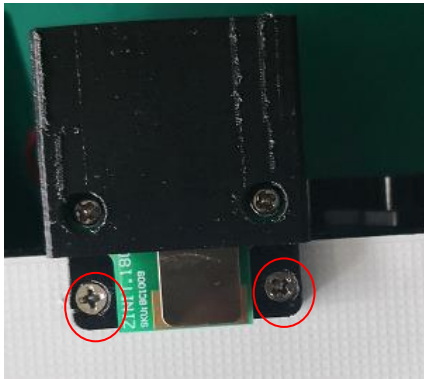
3. Remove the screws fixing the height aligning board, push out the height aligning board in the direction shown, and then replace the PCB-height aligning board.

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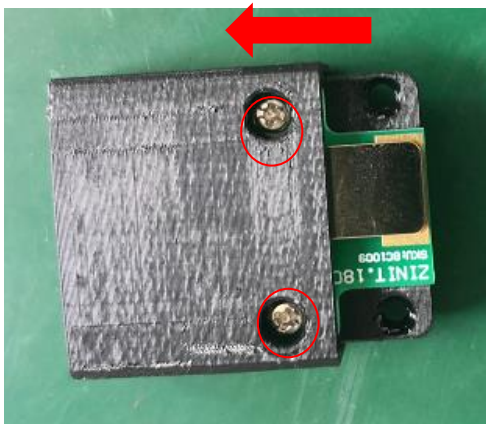
Tool

Cross screwdriver

1. Remove the steering gear assembly by unscrewing the fixing screws from the bottom;

2. Remove the steering gear component by removing the CFC cable on the steering gear board.
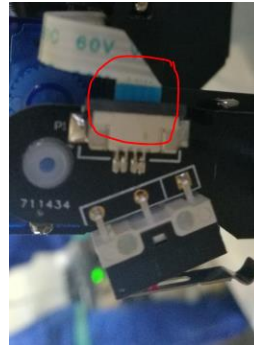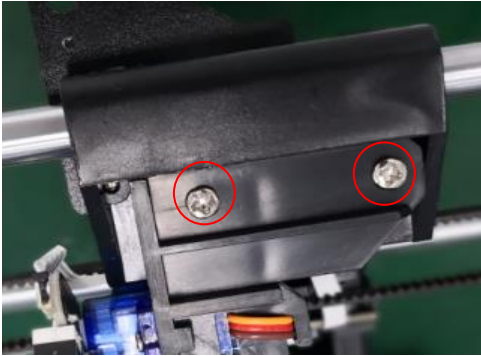
3. Replace the steering gear CFC cable: loosen the 4 screws of the adapter board cover, and then remove the steering gear CFC cable.
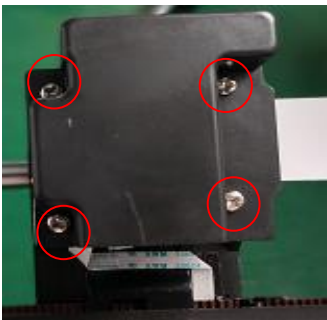
Note: Pay attention to the reserved length of the steering gear cable during installation, that is, the CFC cable touches neither the belt nor the steering gear board in the steering process of the steering gear.

Tool

Cross screwdriver

1. Pull out the interface of wire-height aligning cable at the end of the height aligning board and cut off the cable tie;

2. Pull out the CFC-platform 26p cable;

3. Open the FFC-platform cable interface on the bottom of the platform and pull out the FFC-platform cable;

4. Use a cross screwdriver to remove the two screws that connect the platform adapter board to the platform.

5. Replace the corresponding wire or platform adapter board.
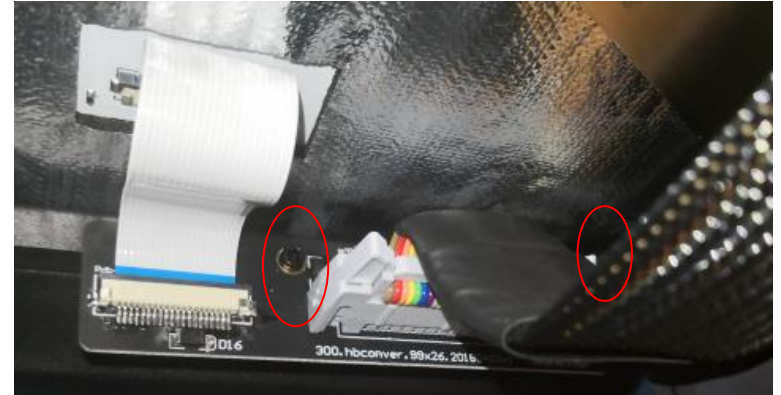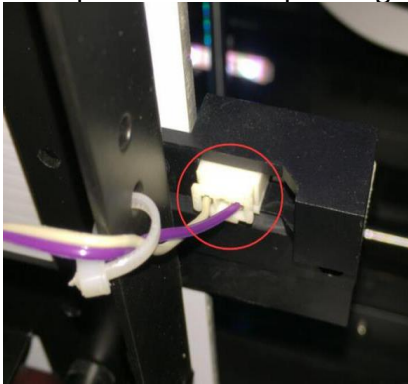
Note: 1. Pay attention to the installation direction of the FFC plug. The metal side of the FFC cable should correspond to the metal contact side of the interface.
**2. If the operation is inconvenient during the disassembly process, remove the left shell first. For the disassembly method, see the disassembly and assembly of the shell;** **Method of removing the shell**

Tool

Cross screwdriver
1. Loosen the 4 screws and remove the rear panel.
2. Cut off the cable tie of the interior light wire, and then pull out the plug of the interior light in the mainboard.
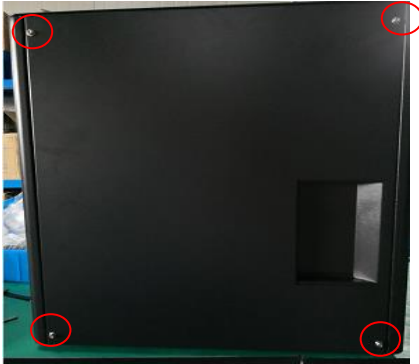
1. Loosen the 6 screws of the interior light clip and loosen the cable tie.
2. Remove the interior light and replace it.。

cable buckle
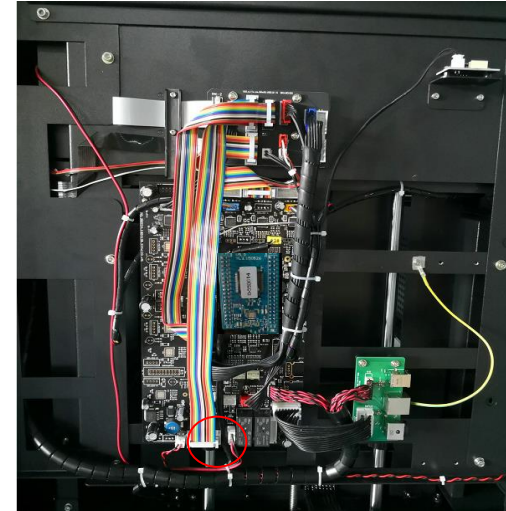
Operation Guide 8- Method of replacing Wire-door inspection cable

Tool

Cross screwdriver

1. Disassemble the rear panel, then cut the cable tie and unplug the door inspection cable on the mainboard adapter board socket;
2. Open the front door, loosen the 2 screws of the door inspection fixing block, and then remove the fixing block;

Door inspection cable
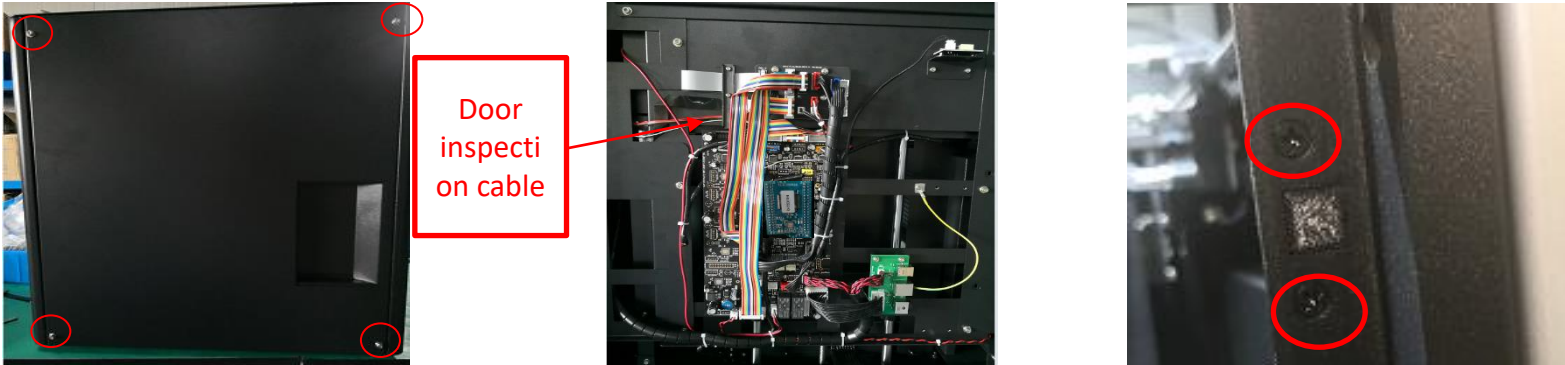
3. Cut off the 2 cable ties of the machine's internal door inspection cable, and then remove the door inspection cable;
4. Open the Hall switch clamp and replace it; paying attention to the direction of the Hall switch.

Font face up
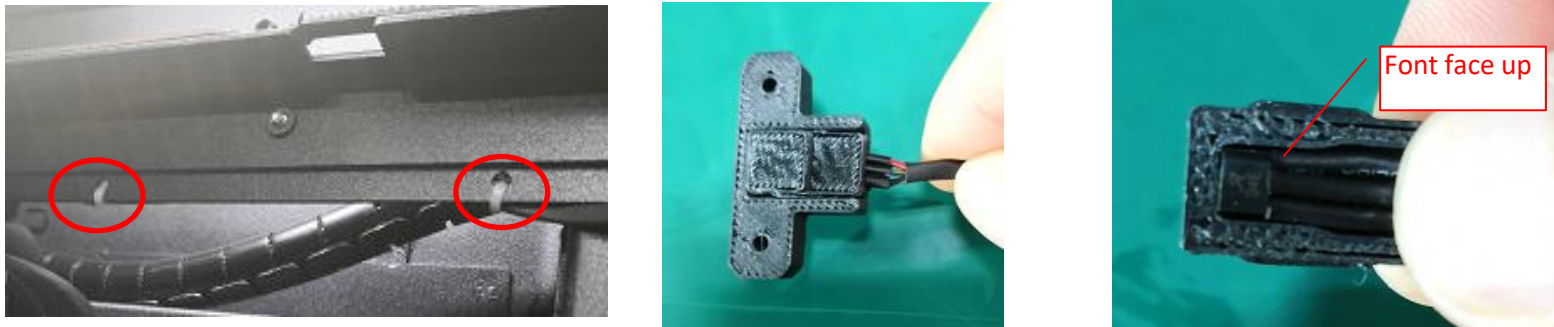
Operation Guide 9- Replacing front door magnet

Tool
Cross screwdriver

1. Open the front door, loosen the 4 screws that attach the front door on the door hinge, and then remove the front door assembly;
2. Remove 12 round rubber pads, then remove 12 screws and remove the front door frame;
3. Loosen the 2 screws that lock the magnet and then lift the magnet out to replace it. (Replace the magnet and apply some 496 glue)
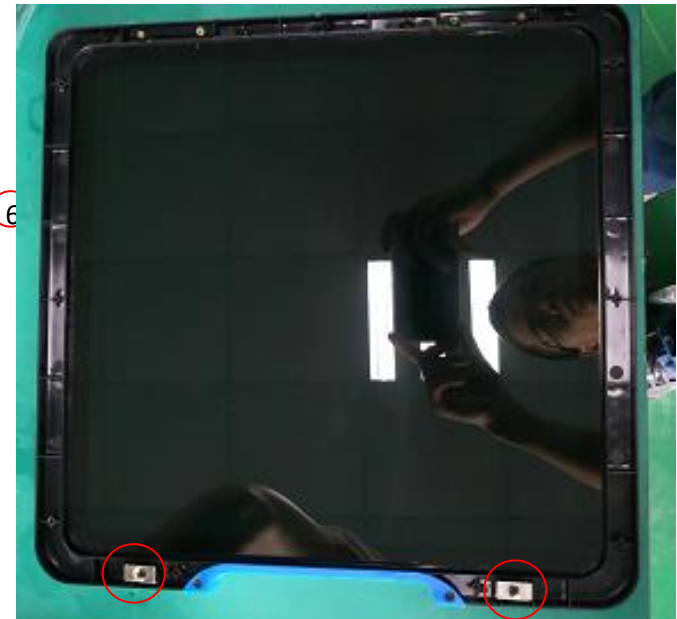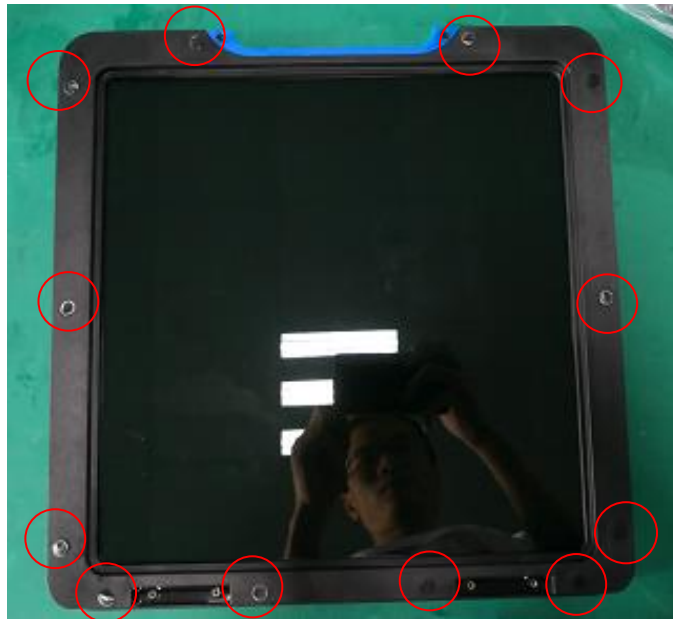
Tools
Cross screwdriver, 2.5mm hex wrench

1. Remove the 4 screws on the rear panel and remove the rear panel.
2. Remove the FFC cable pressure plate of the nozzle shown in the figure, then ~~pull the position of the FFC cable interface and unplug the nozzle FFC cable.~~
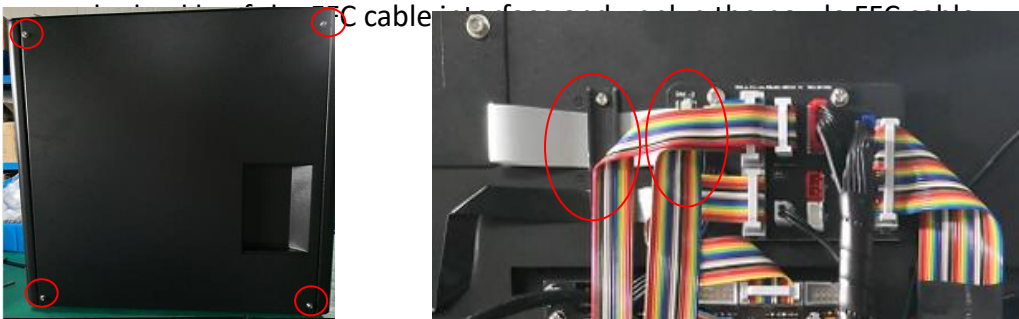
3. Unscrew the four screws of the nozzle cover behind the nozzle holder;
4. Pull out the interface of the FFC nozzle cable on the PCB nozzle adapter board to remove the nozzle FFC.
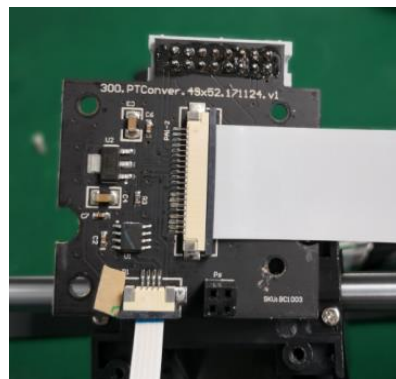
Use tooling to apply a layer of double-sided tape on the FFC cable on the same side as the metal contacts on the interface (note the direction)

Pay attention to the installation direction of the FFC plug. The metal side of the FFC cable should correspond to the metal contact side of the interface.

FFC cable folding length 83mm

Tool
3mm hex wrench

1. Withdraw the wire and remove the nozzle wire cover;
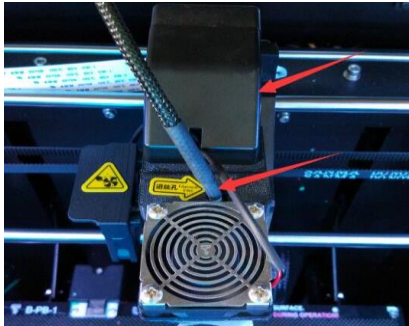
2. After removing the nozzle cable cover, pull out the CFC nozzle cable as shown in the figure;
3. After removing the fixing screw at the lower left, remove the nozzle. (The removal method of TPU/PLA/ABS nozzle is the same)
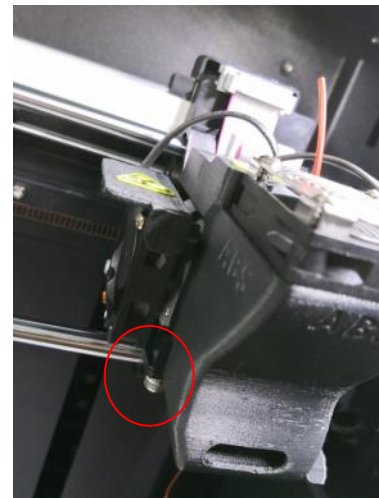
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Tool
2mm hex wrench

1. Withdraw the wire, then turn off the device, remove the nozzle wire cover, and pull out the nozzle fan plug;
2. Push the nozzle cover out from the direction shown;
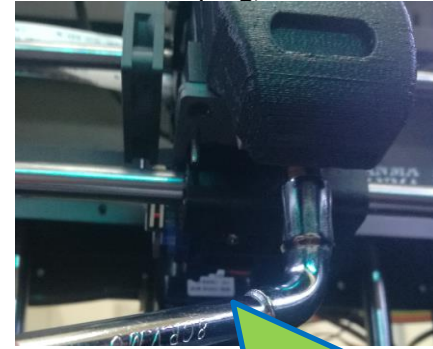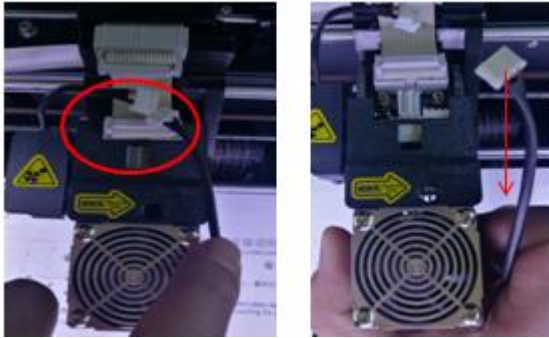
• Use a hex wrench to remove the illustrated screw and remove the wire block.
Use a brush to clean the wire feed roller and the wire feed channel.

Note: 1. Remove the nozzle cover by hand; do not use excessive force to avoid affecting the nozzle height;
2. When installing the nozzle cover, pay attention to the fact that the heating wire can't be caught in the lower right corner.

First remove the wire, then remove the nozzle with a wrench
Note: Be careful of burns

Use alcohol lamp to carbonize the residual wire in the nozzle at high temperature, and then remove the residual carbide in the nozzle.
Note: Be careful of burns, pay attention to fire prevention.

Tools
2mm hex wrench, 2.5 hex wrench

1. First remove the two terminals of the two nozzle fans;
2. Then remove the nozzle cover in the direction of the arrow

3. Use a hex wrench to remove the screws fastening the nozzle board;
4. Then remove the motor wire terminal and heating element terminal on the nozzle board, and then replace the nozzle PCB board.

Always remove the wire before removing the nozzle, and then use a special wrench to remove the nozzle clockwise.
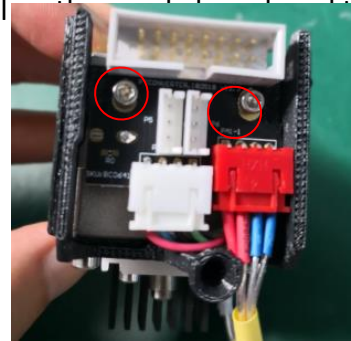
5. Use a hex wrench to remove the two screws fastening the heat sink. This also removes the heating element.

Pay attention to the direction of the heating parts when replacing

PLA heating element is installed without grooved clamp
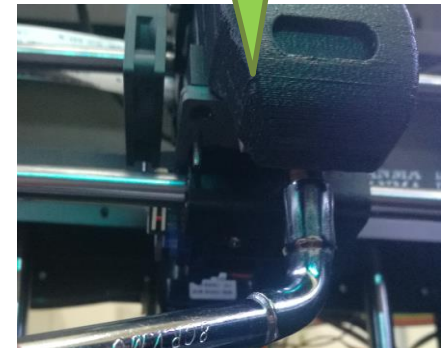
Note: The PLA nozzle is removed in the same way as the ABS nozzle, except that the heating element has one end cap and no grooved clamp is installed.

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Operation Guide 13- Method of replacing nozzle PCB board, heating parts, nozzle parts

Replacement method of TPU nozzle PCB board, heating element and nozzle:

Tools

2mm hex wrench, 2.5 hex wrench

1. First remove the two terminals of the two nozzle fans;

2. Then remove the nozzle cover in the direction of the arrow
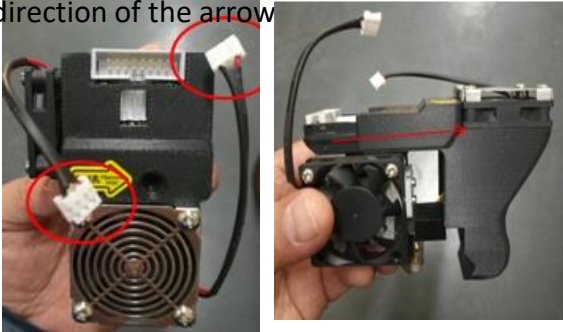
3. Use a hex wrench to remove the screw fastening the nozzle board;

4. Then remove the motor wire terminal and heating element terminal on the nozzle board, and then replace the nozzle PCB board
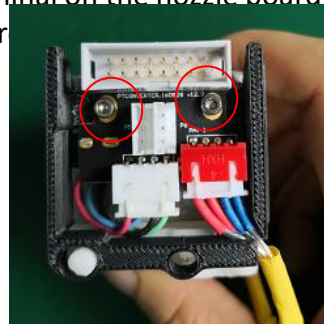
5. Use a hex wrench to remove the two screws fastening the heat sink. This also removes the heating element.
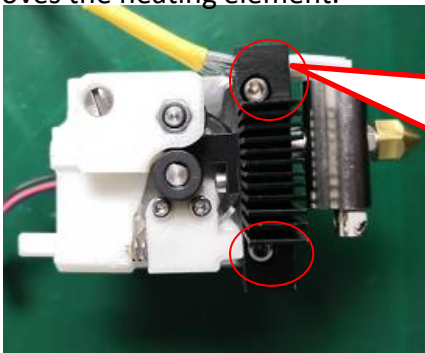
Pay attention to the direction of the heating element when replacing, and the heating plate wire should be clamped in the groove of the heat sink.
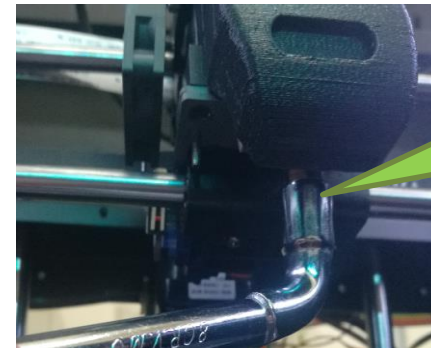
Always remove the wire before removing the nozzle, and then use a special wrench to remove the nozzle clockwise.

Operation Guide 14- Method of replacing CPU, mainboard, interface board, mainboard adapter board and USB power board

Tools

3mm hex wrench, cross screwdriver, anti-static gloves

1. Loosen the 4 screws on the rear panel with a 3mm hex wrench and remove the rear panel;
2. Find the PCB board that needs to be replaced, pull out the wire in the board, and then loosen the screw for replacement.

Mainboard adapter board

USB power board

CPU; pay attention to the PIN angle number when installing

Peripheral interface board
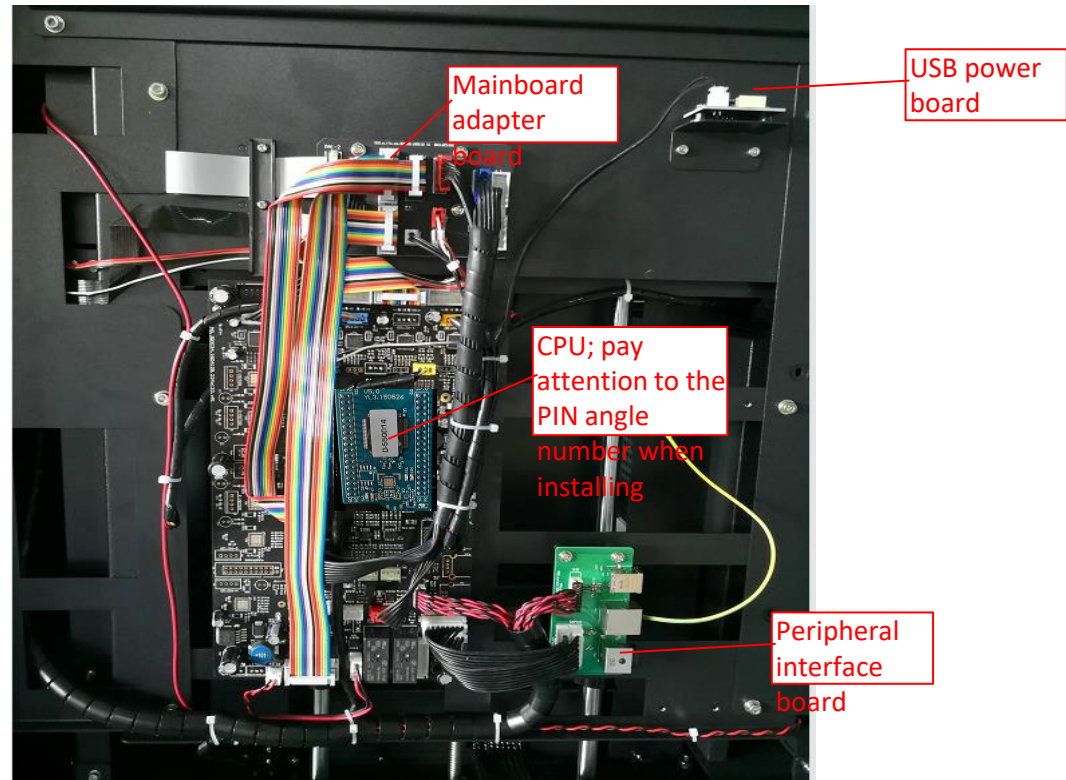
Note: Operators should wear static gloves before removing electrical components such as mainboard.

Operation Guide 15- Method of replacing FFC-Y axis cable and Y-axis limit

Tools

Cross screwdriver, 2.5mm hex wrench

1. First remove the aluminum column, the rear plate and the right side plate with a hex wrench;

[Method of removing the shell](#)

2. Use a cross screwdriver to remove the two screws fastening the Y-axis adapter board;
3. Gently remove the adapter board and unplug the Y-axis limit cable on the adapter board;
4. Use the pliers to gently pull the Y-axis limit in the direction shown, and the Y-axis limit can be removed.

5. Remove the internal injection molded part shown in the figure with a cross screwdriver;
6. Slowly remove the adapter board, open the connector, and take out the FFC cable; pay attention to the folding of the cable.
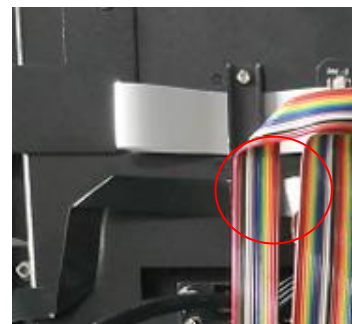
Note: 1. Reciprocating folding will damage FFC cable easily, so it is best to mark and complete folding in one time.

2. Pay attention to the installation direction of the FFC cable during installation. The metal side corresponds to the metal side of the interface.

Y-axis folding method

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Operation Guide 16- Method of replacing PCB-Y axis adapter board

Tools
Cross screwdriver, 2.5mm hex wrench

1. First remove the aluminum column, the rear plate and the right side plate with a hex wrench; Method of removing the shell
2. Use a cross screwdriver to remove the two screws fastening the Y-axis adapter board;
3. Unscrew the screw at the mark with a 2.5mm hex wrench (the screw has the grounding wire on the adapter board)
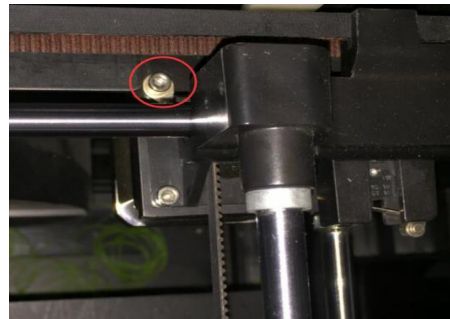
4. Gently remove the adapter board, unplug all the plugs on the adapter board and remove the PCB-Y axis adapter board;
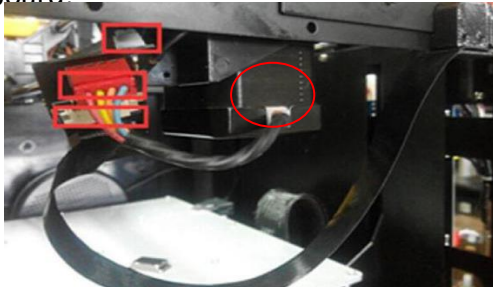
Note: 1. When installing, first insert the plug on the adapter board, and then fasten the grounding wire of the adapter board;
2. Pay attention to the installation direction of the FFC cable during installation. The metal side corresponds to the metal side of the interface.

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Tool
Cross screwdriver

1. Open the front door of the machine, use a screwdriver to loosen the 2 screws on the filter cover, and then remove the cover.
2. Pull out the filter element and replace it. Pay attention to the direction of the filter element when replacing.

1. The silk wadding face the inside of the machine

1. Bead faces the inside of the machine
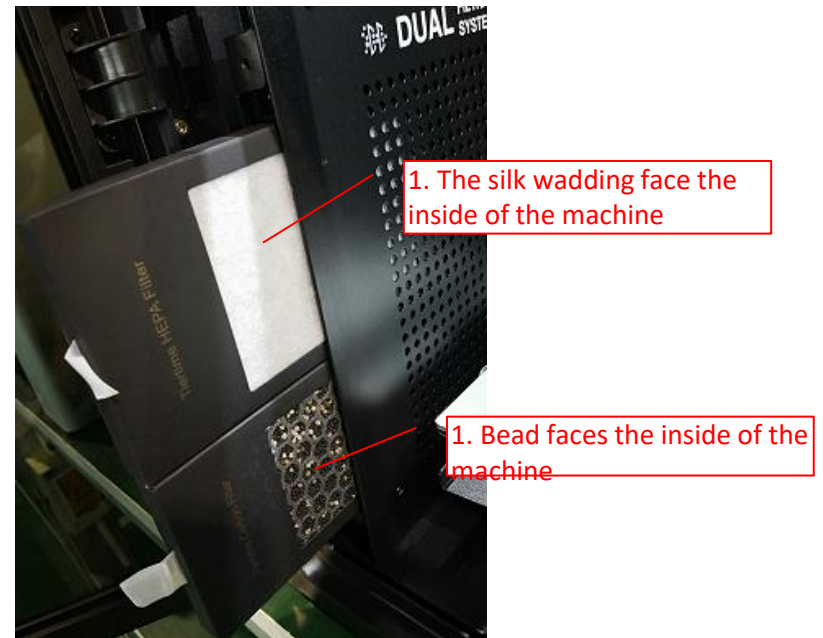
Operation Guide 18- Method of replacing centrifugal fan

Tools

Hex wrench, pliers, cable tie, cross screwdriver

1. Remove the machine shell, including the front, rear, left, right and upper panels. Method of removing the shell
2. Cut off the 3 cable ties of the fan and remove the fan cable from the mainboard.
3. Loosen the 8 screws of the back shield and remove the back shield.
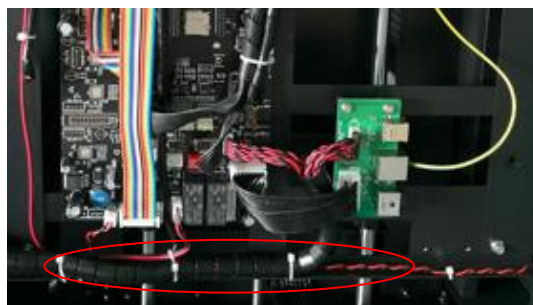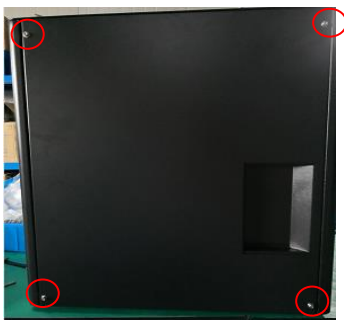
4. Loosen the 4 screws that attach the filter assembly to the frame, then place the platform to the bottom, and remove the filter assembly obliquely.
5. Loosen the 5 screws of the filter panel and remove the filter panel.
6. Loosen the 3 screws of the shield and remove the filter shield and air duct isolation plate.
7. Loosen the 3 screws of the fan and remove the fan for replacement.
8. Then, install in the reverse order.
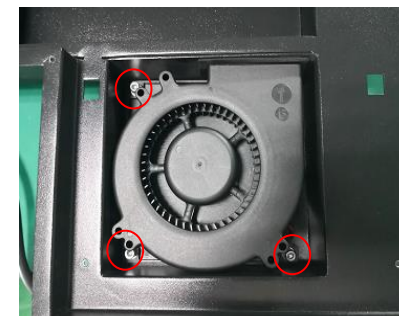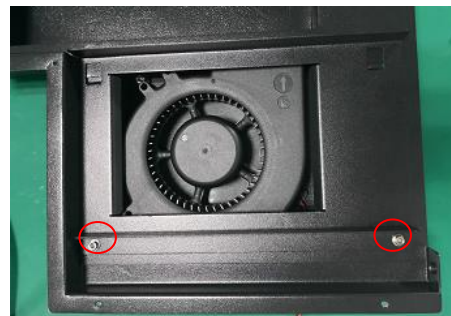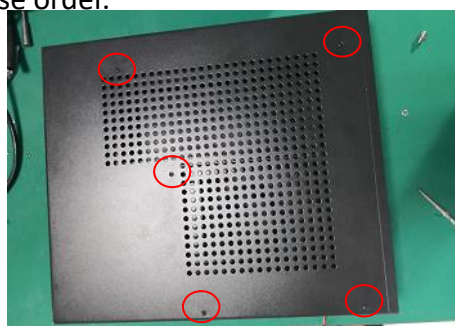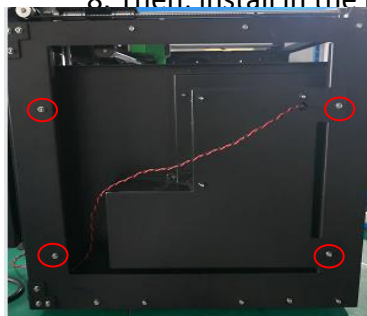
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Tool
Cross screwdriver

1. Remove the breadboard.
2. Use a cross screwdriver to remove the screws that fasten the height aligning block.
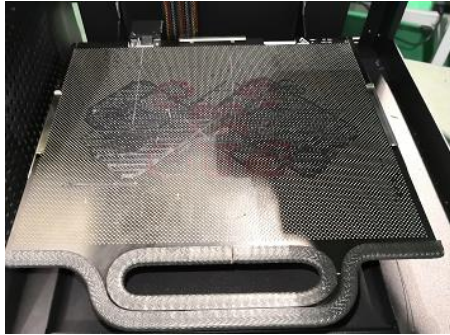
3. Remove the FFC platform cable from the aluminum substrate interface (here you can also replace the FFC platform cable), and then loosen the four leveling nuts to remove the aluminum substrate assembly.
4. Loosen the 6 screws that lock the aluminum substrate to the presser, and then replace the aluminum substrate.

Note: After the installation is complete, you need to adjust the level of the worktable by adjusting the 4 leveling knobs.

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Tool
Cross screwdriver

1. Loosen the 4 screws on the rear panel and remove the rear panel.
2. Cut off the cable tie of the wire inspection cable, loosen the crimping plate slightly, and then unplug the wire inspection cable.

Loose the screw slightly

Wire inspection cable
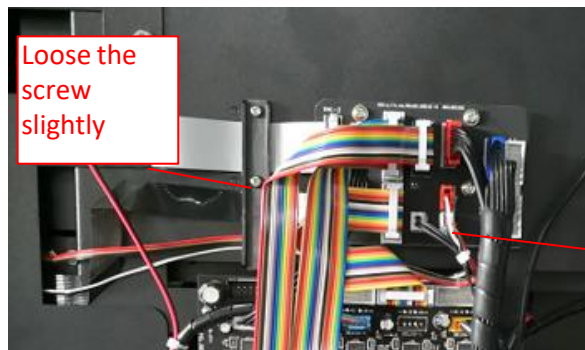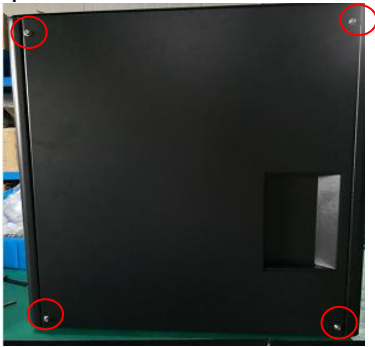
3. Open the wire box cover and then loosen the 2 screws to pull out the wire inspection assembly.
4. Loosen the 2 screws of the wire inspection limit and replace the wire inspection limit.
5. Loosen the three screws of the wire feeding clamp and replace the wire feeding tube.
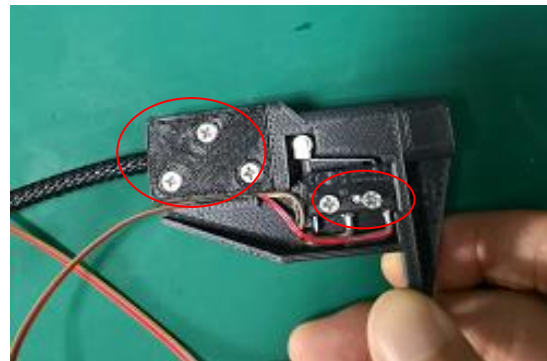
Operation Guide 21- Method of replacing X-axis motor

Tools

Pliers, hex wrench , cable tie

1. Loosen the 4 screws on the rear panel and remove the rear panel.
2. Use the pliers to cut off the cable tie that bundles X-axis motor cable and disconnect the X-axis motor cable plug from the mainboard (blue);
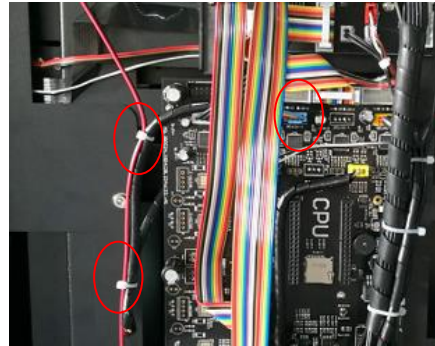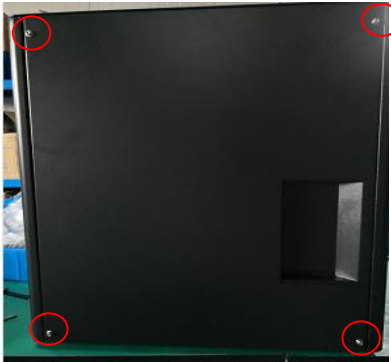
3. Remove the four screws that fasten the X-axis motor assembly. At this time, remove the X-axis motor unit. (When installing this step, first put the short belt on the X-axis motor)
4. Remove the four screws on the X-axis motor assembly, and then remove and replace the X-axis motor; (The replaced motor cable may be wrapped with a winding tube)
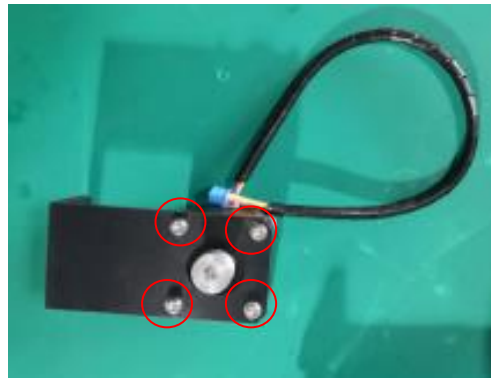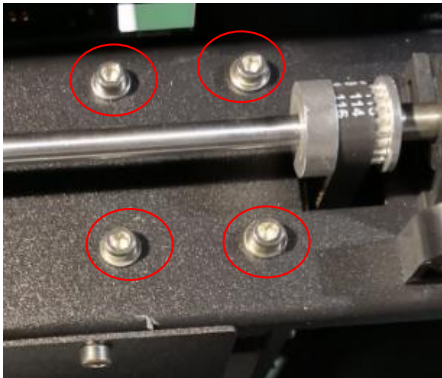
Operation Guide 22- Method of replacing X-axis connecting rod assembly

Tools:
Cross screwdriver, 2.5mm hex wrench

1. Remove the screws shown in the circles with hex wrench and remove the short belt from the X-axis motor gear;
2. Remove the part A and B, unscrew the screws that fasten the part AB, rotate the part AB according to the following method to take it out, and then remove the X-axis connecting rod assembly.
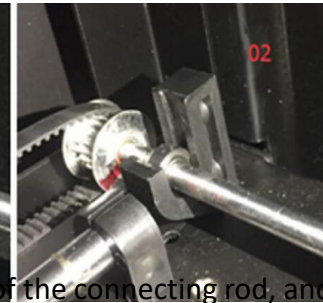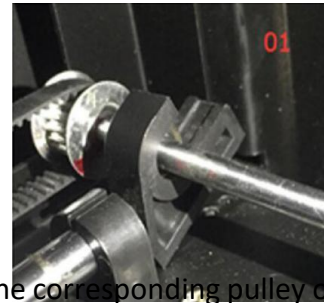
3. When installing the connecting rod, first put the short belt on the corresponding pulley of the connecting rod, and then put the left and right X-axis belts on the pulley on the left and right ends of the connecting rod.
(Note that the belt synchronization at the left and right ends can avoid the inconsistency of the C and D gaps in the fourth step), then install the part A and B in the reverse order, and tighten the screws below;
4. Install the short belt on the X-axis motor, tighten the screws loosened in the first step, and pull the X-axis to the front end of the device after the installation is completed.
Ensure that the gaps of part C and D at both ends are basic position

将Y轴拉倒最前，使Y轴左右两侧直线轴承定位套和X轴防撞套之间的间隙基本一致，间隙不得大于0.5mm
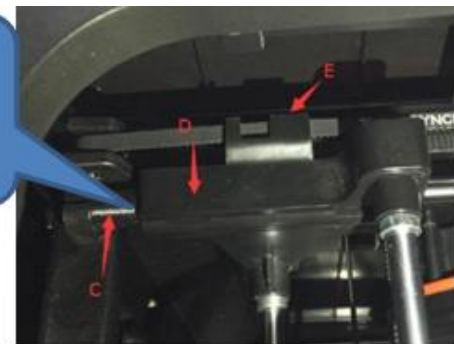
自检：用手推动Y轴，X轴限位开闭正常，喷头FFC满足喷头在整个打印区域内运动；

Tools

Cross screwdriver, hex wrench

1. Remove the aluminum column of the display and loosen the screws in the four holes marked in the right to release the aluminum column, which is convenient for replacing the pulley bracket.

2. Use a cross screwdriver to remove the screws under the right fastening pulley bracket assembly and remove the pulley bracket assembly. The pulley on the right requires special tooling.

3. When installing, put the belt into the corresponding gear on the X-axis connecting rod assembly, then put the other end of the belt on the pulley bracket assembly, and then tighten the screws under the pulley bracket assembly;

4. Finally, keep the gaps between parts C and D on both sides basically the same by adjusting the amount of E.
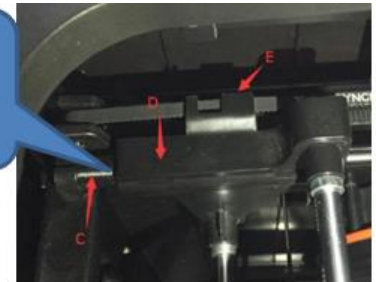
将Y轴拉倒最前，使Y轴左右两侧直线轴承定位套和X轴防撞套之间的间隙基本一致，间隙不得大于0.5mm

自检：用手推动Y轴，X轴限位开闭正常，喷头FFC满足喷头在整个打印区域内运动；

Tools

Cross screwdriver, 2.5mm hex wrench

1. Use a cross screwdriver to remove the screws of the two X-axis bars that are close to the front door. (The left side requires a screwdriver with ultra-short handle, which is the same as the tool for replacing the pulley bracket.)

2. Take out the X-axis belts on both sides from the X bearing sleeve in the direction as shown.

3. Tilt the Y-axis connecting rod assembly as shown in the figure so that the X-axis light bar at one end is outside the machine body. At this time, the X-axis light bar can be taken out from the front door.
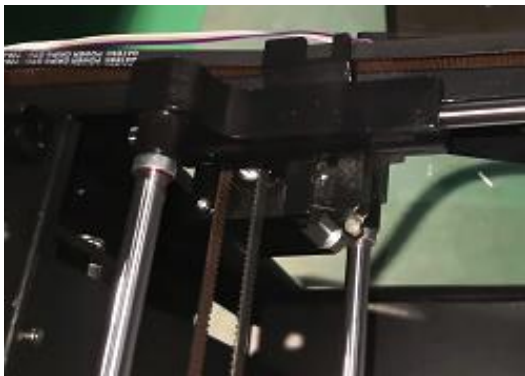
将Y轴拉倒最前，使Y轴左右
两侧直线轴承定位套和X轴防
撞套之间的间隙基本一致，
间隙不得大于0.5mm

自检：用手推动Y轴，X轴限位开闭正常，喷头FFC满足喷头在整
个打印区域内运动；

Note: When removing the X-axis light bar, do not the damage FFC cable and the Y-axis FFC cable. When replacing the light bar, pay attention to the force to avoid pushing out the beads of the bearing.

Tools
Cross screwdriver, hex wrench, pliers, cable tie

1. Remove the 4 screws securing the rear panel and remove the rear panel;
2. Cut off the cable tie that bundles the motor and the limit cable with pliers, and unplug the corresponding plugs of Z-axis motor cable and X-axis limit cable on the mainboard;
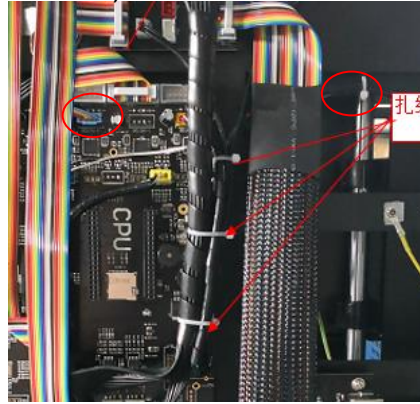
3. Use a cross screwdriver to remove the X-axis limit screw and peel off the black sleeve, and then remove the X-axis limit.

1. Install the X-axis limit cable and the Z-axis motor cable with a black sleeve before installation, and then tie the corresponding position with a cable tie.
2. Push the Y-axis by hand to test whether the X-axis limit can be opened and closed normally.

Tools

Cross screwdriver, 2.5mm hex wrench

1. Remove the screw securing the steering gear assembly with a cross screwdriver, take out the steering gear, and then take out the Y-axis belt stuck in the nozzle base in the direction shown.

2. Remove the four screws that fasten the Y-axis motor with a hex wrench (loosening the screw near the frame from the rack hole by moving the X-axis), and then take out the Y-axis belt on the Y-axis motor gear;
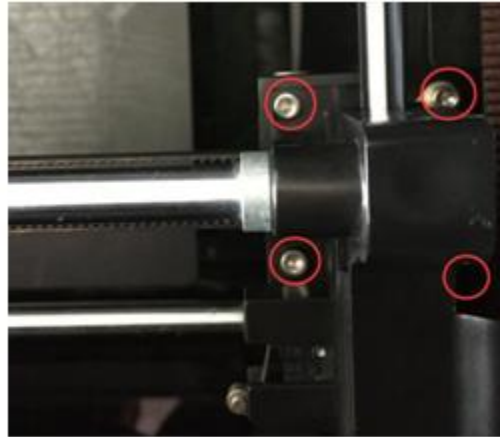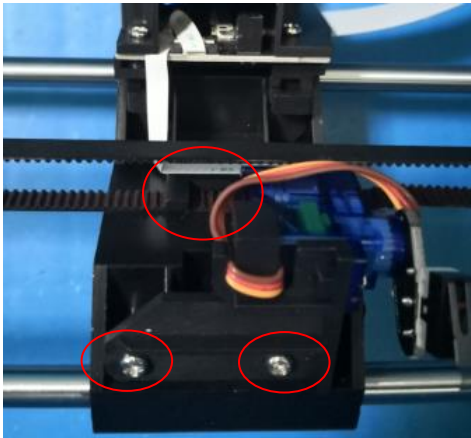
3. Take out the pulley in the direction shown in the figure, and then remove the Y-axis belt.

Tools
Cross screwdriver, 2.5mm hex wrench

1. First remove the rear panel and the right panel, and then remove the self-made parts shown in the figure with a cross screwdriver;
2. Gently remove the adapter board and unplug the Y-axis motor cable;
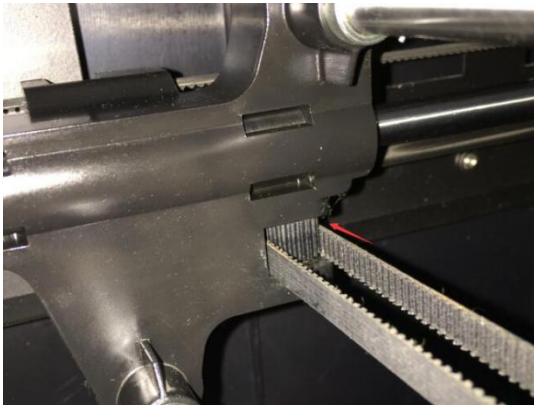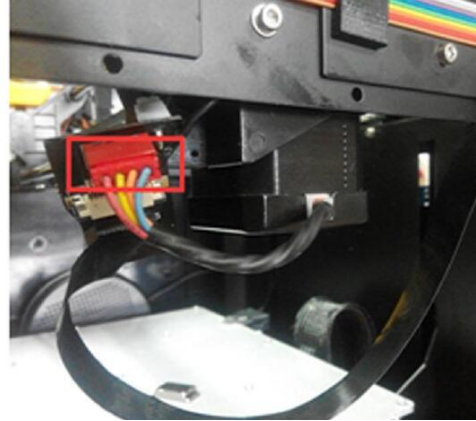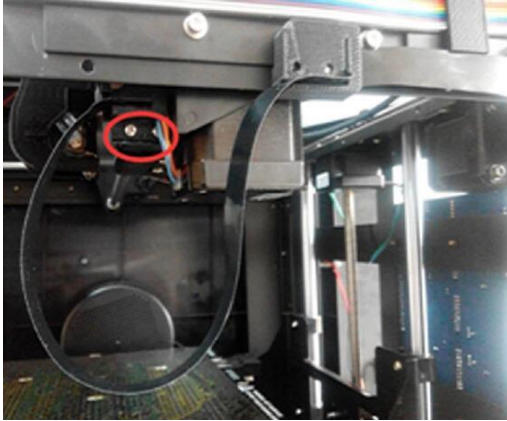
3. Remove the 4 screws that fasten the Y-axis motor.
(When you unscrew the two screws in the direction of the rack, you need to move the X-axis so that the screws are aligned with the holes in the rack);
4. Then remove the Y-axis motor.
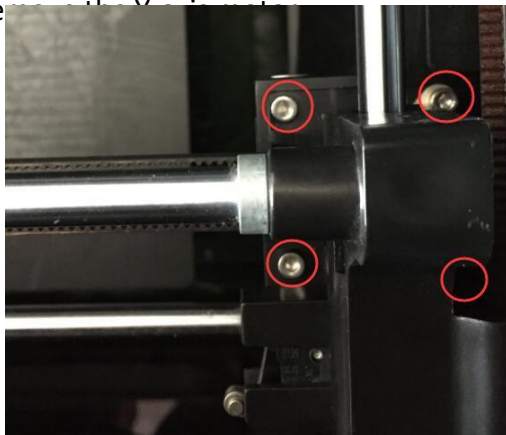
Tools

Cross screwdriver, hex wrench

1. Remove the aluminum column, rear panel and right panel of the machine;   <u>Method of removing the shell</u>

2. Remove the four screws of the Y-axis nozzle cover with a cross screwdriver, pull out the interface of the FFC-nozzle cable at the
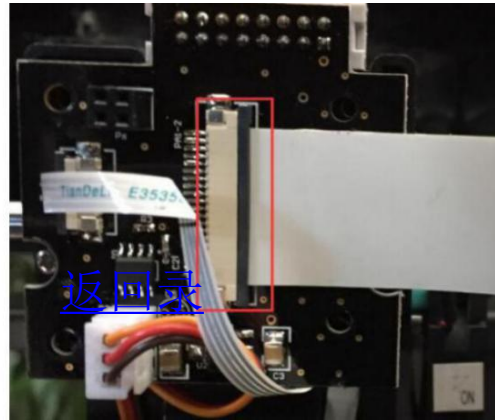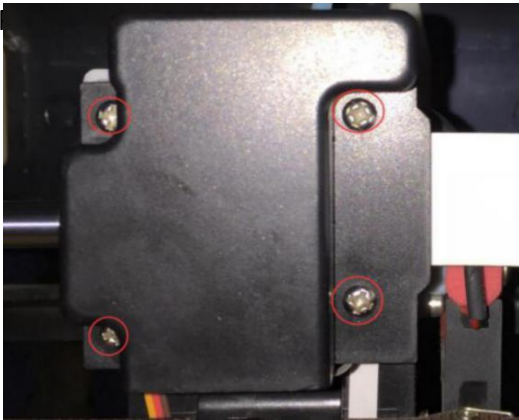
3. Remove the two screws of the Y-axis adapter board with a cross screwdriver, and then remove the FFC cable clip;

4. Then remove the FFC cable and pay attention to the folding method of the FFC cable.
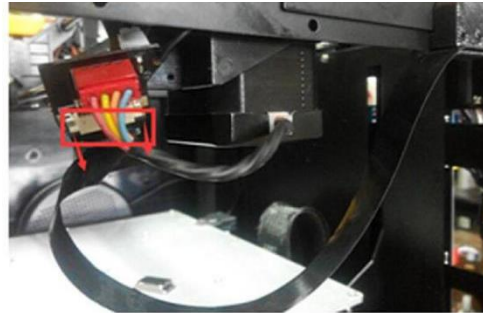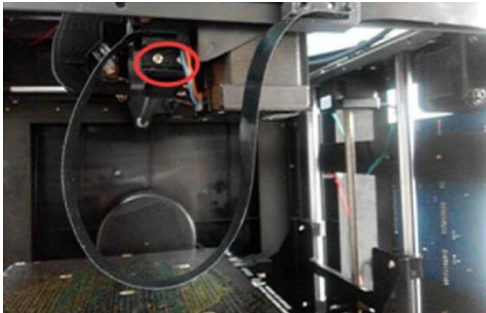
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5. Remove the screws of the two X-axis light bars from the side of the front door with a cross screwdriver and remove all the X-axis light bars.

6. Take out the X-axis belts on both sides of the X-bearing sleeve in the direction shown in the figure;
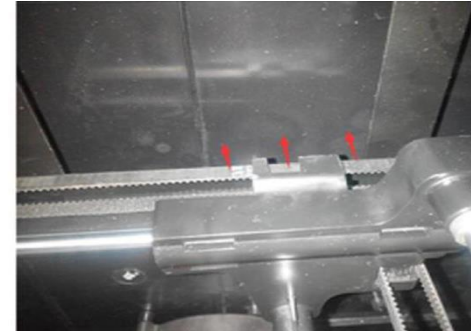
7. Tilt the Y-axis connecting rod assembly as shown in the figure so that the X-axis light bar at one end is outside the machine body. At this time, the X-axis light bar can be taken out from the front door;

8. Remove the four screws in the figure and then remove and replace the Y-axis motor.

Add spring washer

Add spring washer and lock Y-axis ground wire

Add spring washer and flat washer
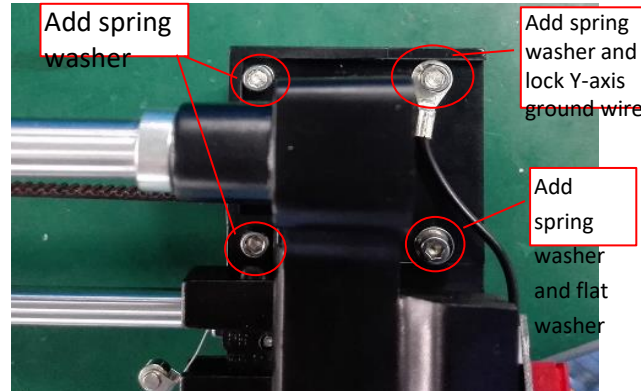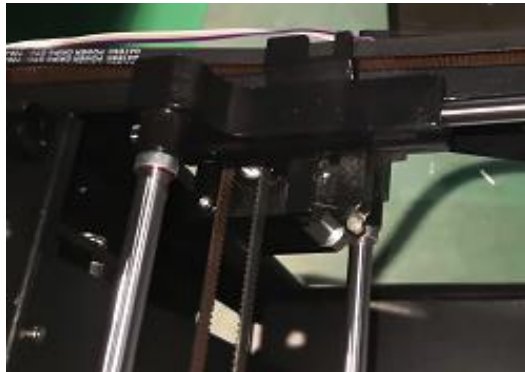
9. Remove the 2 screws in the figure with a cross screwdriver and then pull out the Y-axis belt.
10. Gently tap the X bearing sleeve with a leather hammer or screwdriver and remove the X bearing sleeve. At this time, the Y-axis connecting rod assembly can be removed;
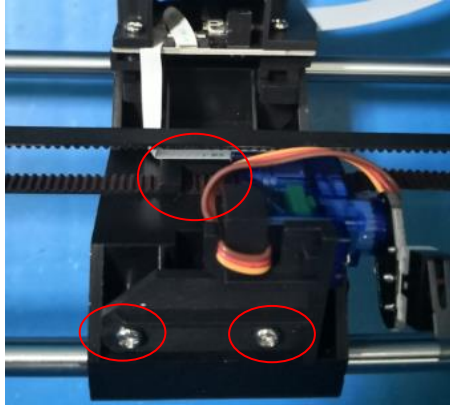
Note: When installing, pay attention to pressing the wire between the belt and the inje
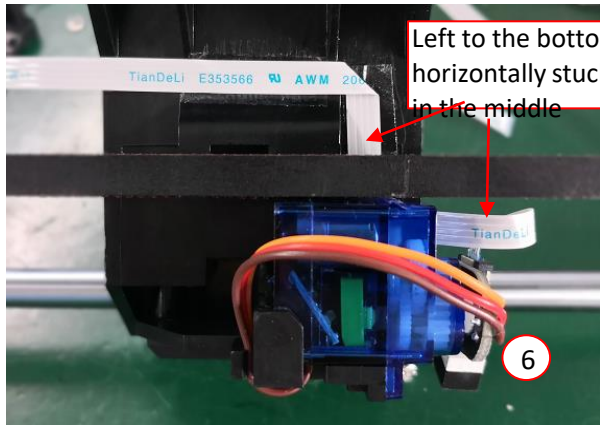
Left to the bottom, horizontally stuck in the middle

⑥

将Y轴拉倒最前，使Y轴左右两侧直线轴承定位套和X轴防撞套之间的间隙基本一致，间隙不得大于0.5mm
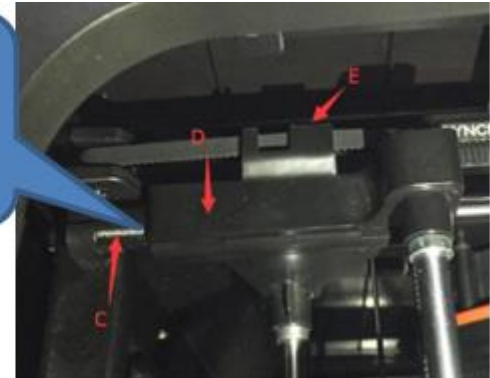
Self-test: push the Y-axis by hand, the X-axis limit opens and closes normally, and the nozzle FFC satisfies the movement of the nozzle in the entire printing area;

Operation Guide 29- Method of replacing Z-axis screw motor

Tools

Hex wrench, pliers, cable tie

1. Remove the 4 screws securing the rear panel and remove the rear panel;

2. Then cut off the cable tie that bundles the Z-axis motor cable with pliers, unplug the Z-axis motor cable from the mainboard; unwind the winding tube that wraps the Z-axis motor cable;
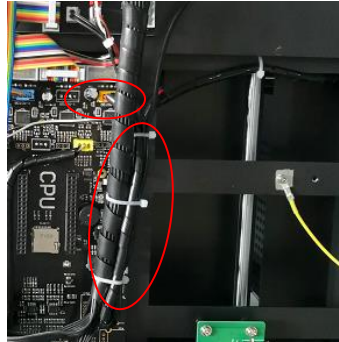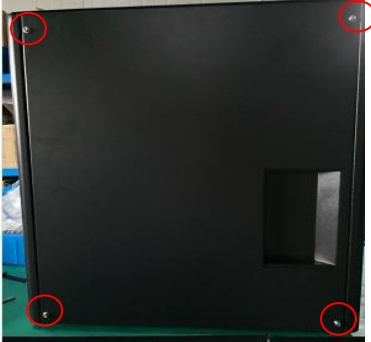
3. Remove the 8 screws that lock the rear shield and remove the front shield from above;

4. Remove the 4 screws that lock the Z-axis motor;

5. Remove the 2 screws that lock the platform connection plate. At this time, the Z-axis motor can be removed.
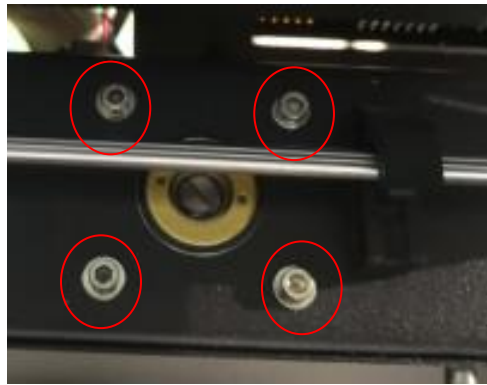
Note: Do not damage the FFC cable when removing the front shield.

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Method of replacing and installing Z-axis motor:

1. Pre-tighten the screws of Z-axis motor, copper nut, platform bracket and Z-axis light bar, reserve half to one turn, and move the Z-axis up and down to ensure smoothness;

2. Pull the Z axis to the highest point. At this time, first tighten the two screws on the opposite corner of the Z-axis motor, and then tighten the two screws on the opposite corners of the copper nut, and then move up and down to ensure smoothness;

3. Pull the Z-axis to the highest point, and then tighten the two screws of the platform bracket in turn (note that the two screws should be tightened by half a turn alternately to avoid uneven force), and then move up and down to ensure smoothness;

4. Pull the Z-axis to the highest point, first tighten the remaining diagonal screws of the Z-axis motor, and then tighten the remaining diagonal screws of the copper nut, and then move up and down to ensure smoothness;

5. Finally, pull the Z-axis to the highest point and tighten the two screws of the Z-axis light bar in turn, and then move up and down to ensure smoothness.

6. Place two 42-motors on the center of the platform (the weight must be greater than 450g and must be confirmed and labeled by the quality department), the driving tool must make it smooth and move in full stroke;

7. Turn the multimeter to buzzer to check if the platform bracket connection plate and the Z axis are conducted.
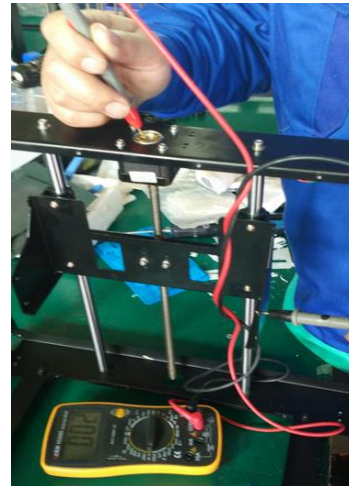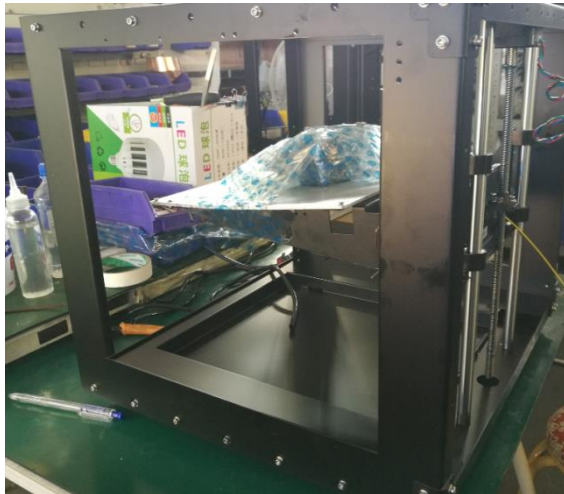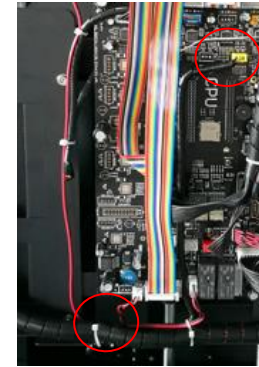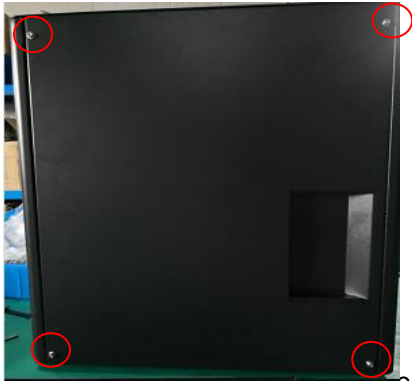
Tools

Short handle cross screwdriver, 2.5mm hex wrench, pliers, cable tie

1. Remove the 4 screws that fasten the rear panel and remove the rear panel;
2. Remove the 4 screws that fasten the bottom panel and then remove the bottom panel;
3. Cut off the cable tie of the Z-axis limit cable and then unplug it from the mainboard.

4. Place the machine on the side, then loosen the 2 screws that lock the limit frame from the bottom and then remove the Z-axis limit assembly;
5. Loosen the 2 screws that lock the Z-axis limit, and then remove and replace the Z-axis limit.

Note: The limit should be aligned with the edge of the limit frame during installation, and the limit cable needs to be wrapped with a winding tube.


Flush

Tool
 2.5mm hex wrench

1. Remove the 4 screws that fasten the rear panel and remove the rear panel;
2. Pull out the plug connecting the 26p cable to the mainboard adapter board.
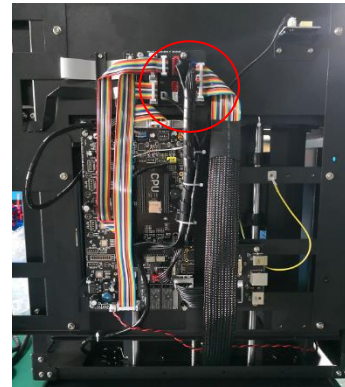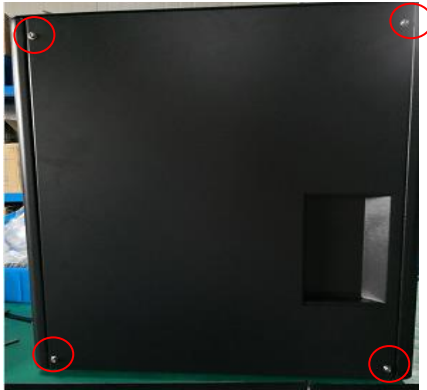
3. Inside the machine, unplug the interface of the 26P cable inserted in the platform adapter board and pull it out of the buckle.
4. Then remove the cable from the two buckles of the rear shield and pull out the cable from the lowermost hole shaft to replace it.
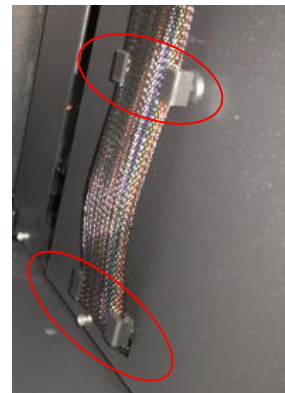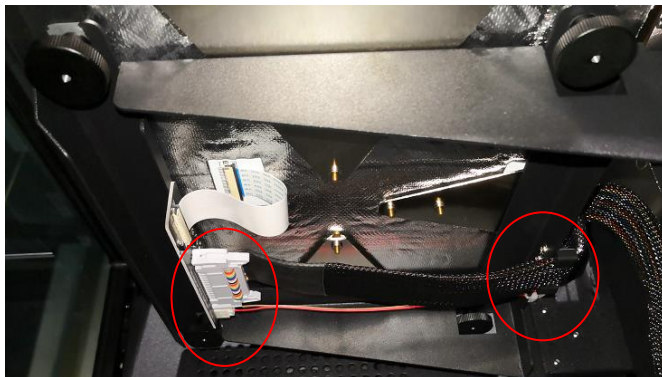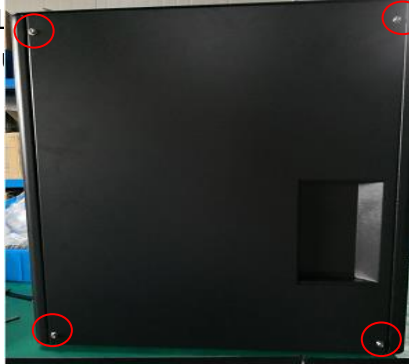
Tools

Hex wrench, pliers, cable tie

1. Remove the 4 screws that fasten the rear panel and remove the rear panel;
2. Cut off the cable tie of the screen power cable and signal cable, and remove it from the mainboard and interface board.
3. L s marke
col

4. Cut off the cable tie of the screen power cable and signal cable, and remove it from the display panel for replacement.
5. As shown below, unplug the 2 USB disk interface cables and then replace the CFC-USB disk interface
6. As shown below, press the SD card on the slot to remove the SD card for replacement

When installing, the screen power cable and signal cable should be slightly curved; the cable should be tied to the 2 holes on the inner side; prevent the cable from contacting the x-axis belt and the pulley.
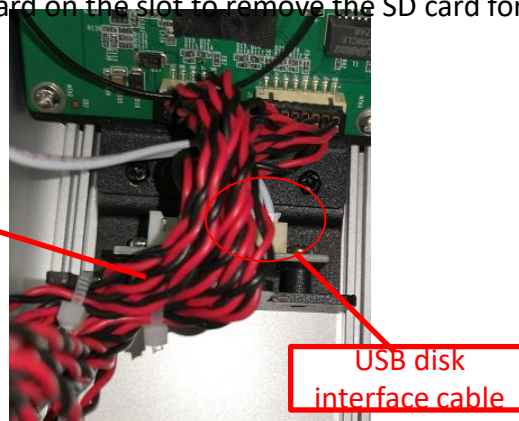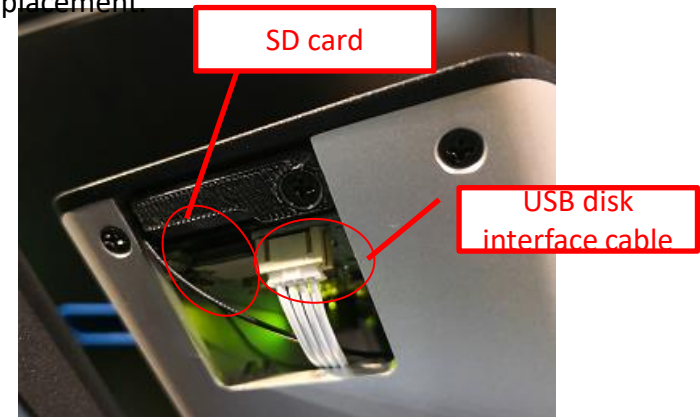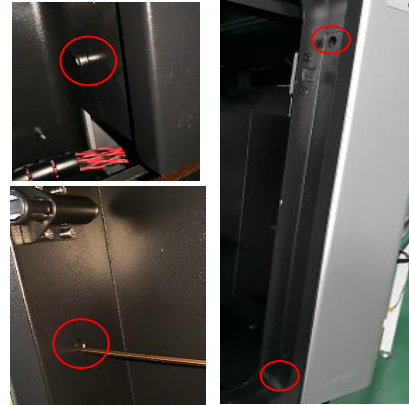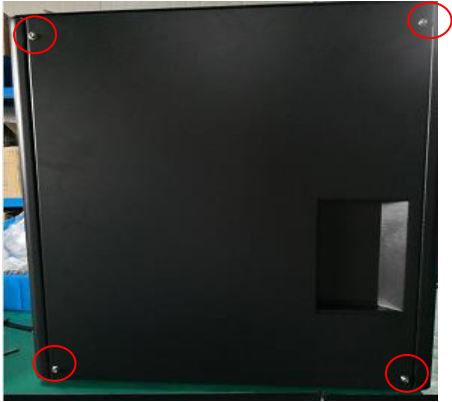
SD card

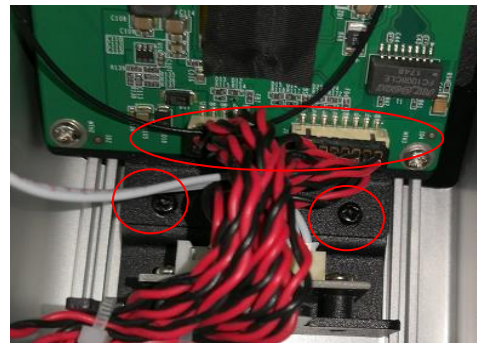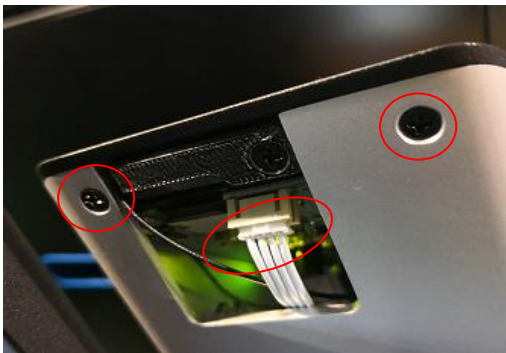USB disk interface cable

USB disk interface cable

Tools

Hex wrench, cross screwdriver

1. Remove the 4 screws that fasten the rear panel and remove the rear panel;
2. Loosen the screws in the 4 holes marked on the right to release the aluminum column.


3. On the back of the aluminum column, loosen the two screws that lock the display and unplug the USB disk interface cable.
4. Inside the aluminum column, loosen the 2 screws on the sheet metal part, and then remove the screen power cable and signal cable, and then remove the display assembly.

5. Loosen the 4 screws that lock the display and unplug the wifi antenna connector to remove the display for replacement.
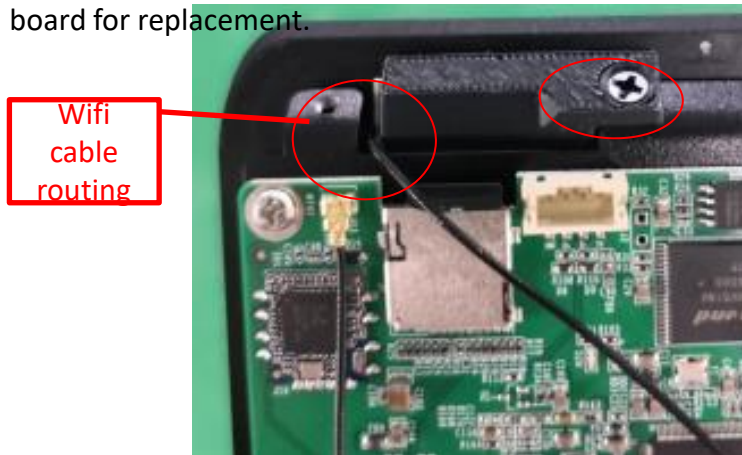(Replacement of the new display requires 0.5mm thick gaskets)
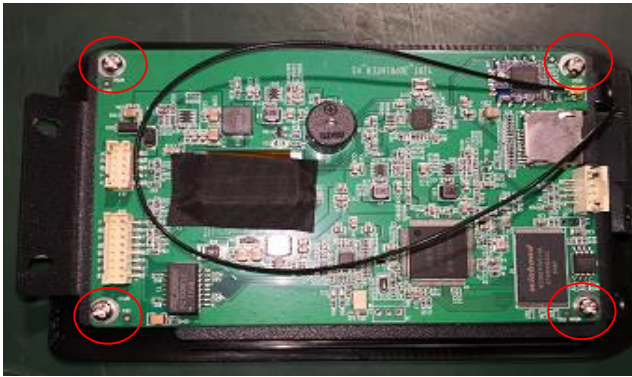
Attach gaskets

6. Loosen the fixing screws to remove the wifi component, then remove the wifi cable for replacement. (When installing, the wifi cable must be stuck in the groove)
7. Loosen the 2 screws that lock the USB disk interface board, unplug the USB disk interface cable and remove the USB disk interface board for replacement.

Wifi cable routing