

# Service Manual

**PANTUM**

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## Service Manual for Pantum CM1100 Series Multi-Function Color Laser Printer



It is recommended to read this manual carefully before repairing

Version: V1.0

# **Service Manual for Pantum Multi-Function Color Laser Printer**

Suitable printer: CM11\*\* (“\*”stands for any number and letter)



### Version change history

Version	Time	Modified contents
V1.0	July 29, 2021	New Service Manual

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Version: V1.0

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When this product is used for copying, printing, scanning certain documents or images or used in other forms, such operations may violate the laws of your location. In the event that you are not sure whether the use complies with the local law, please consult a legal professional before using.

This product is only suitable for using in areas at an altitude of 2,000 meters or below.

**Safety precautions**

**Disconnect the product power supply**

This product must be placed close to and easily accessible to the power outlet, so as to disconnect the product power plug from the power outlet in time to cut off the power!

**Laser safety**

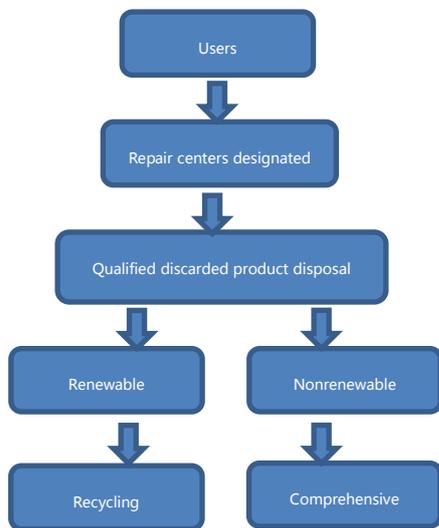
The laser radiation is harmful to the human body. Because the laser assembly is completely sealed in the printer, there is no laser radiation leak. In order to avoid laser radiation, please do not dismantle the machine at will!

This machine is a Class 1 laser product conforming to CFR and IEC 60825-1 standards. This machine is provided with Class III b laser diodes, and there is no leakage of laser radiation in the laser assembly.

**Recycling system of Pantum’s electronic products**

In order to protect the environment, Zhuhai Pantum Electronics Co., Ltd. has established a recycling system for discarded products. You can choose to hand over the discarded printers and consumables to the local Pantum maintenance center for unified recycling, and then the discarded products will be correctly recycled by the state-recognized disposal institutions with discarded product disposal qualifications, so as to ensure resource conservation, reduce environmental pollution and alleviate users’ concerns about environmental pollution caused by discarded products.

- 1. Costs borne by users: users - repair centers.
- 2. Costs borne by Pantum: Pantum repair centers - qualified discarded product disposal institutions.

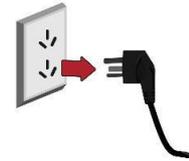


**Safety Warnings**

Prior to the use of this printer, please pay attention to the following safety warnings:

**Warnings**

 There are high voltage electrodes inside the printer. Prior to the cleaning of the printer, make sure that the power is cut off!



 Do not insert or uproot the power plugs with wet hands to avoid electric shock.



 When the printer is printing and just after it finishes printing, the fuser assembly will be in a high temperature state, please do not touch the fuser unit (the red shaded part in the picture), so as to avoid burns!



 There is a high temperature warning label on the fuser unit, please do not move or damage it.



**Safety Information****Appointment**

Note: information that may help you or things that may cause damage to the printer hardware or software.

Caution: potential hazards that may cause physical injury.

Different types of warning banners include:

 Caution - potential injuries: risk of physical injury.

 Caution - shock hazards: risk of electric shock.

 Caution - heating surface: risk of burning if touched.

 Caution - rollover hazards: risk of crushing.

 Caution - pinching hazards: risk of getting stuck between moving parts.

 Caution - rotating fan blades: risk of being cut by rotating fan blades.

**Product Declarations**

 Caution - potential injuries: for the purpose of avoiding fire or shock hazards, please connect the power cord to a properly grounded power outlet with proper rated voltage, which should be kept near the product and easy-to-use.

 Caution - potential injuries: for the purpose of avoiding fire or shock hazards, please only use the power cord supplied with this product or the substitutes approved by the manufacturer.

 Caution - potential injuries: never use extension cords, multi-lead power boards, multi-lead expanders or UPS equipment for this product. The power capacity of such accessories may easily make the laser printer overloaded, further leading to fire hazards, property loss or poor printer performance.

 Caution - potential injuries: never use this product with inline surge protector. The use of surge protectors may lead to fire hazard, property loss or poor printer performance.

 Caution - shock hazards: for the purpose of avoiding shock hazards, please do not place or use this product near water sources or in damp places.

 Caution - shock hazards: for the purpose of avoiding shock hazards, please do not set up this product in a thunderstorm day, nor use the power cord for hot-line work or cable connection.

 Caution - potential injuries: please do not cut, twist, bind or squeeze the power cord, or place heavy objects on the power cord. Please do not

wear or press the power cord. Please do not place the power cord between objects, such as furniture and walls. There may be fire or shock hazard once these things happen. Please check the power cord regularly to identify signs of this problem in time. Disconnect the power cord from the power outlet before checking.

 Caution - shock hazards: for the purpose of avoiding shock hazards, please make sure that all external connections (such as Ethernet) are correctly installed in their marked sockets.

 Caution - shock hazards: in the event that you access the controller motherboard or install optional hardware or memory devices after setting up the printer, please cut off the printer power and unplug the power cord from the power outlet before proceeding for the purpose of avoiding shock hazards. In case that your other devices are connected to the printer, turn off their power and unplug all cables connected to the printer.

 Caution - shock hazards: for the purpose of avoiding shock hazards when cleaning the outside of the printer, please unplug the power cord from the power outlet and disconnect all cables connected to the printer before cleaning.

 Caution - potential injuries: the printer with a weight of more than 18 kg can only be safely lifted by two or more trained persons.

 Caution - potential injuries: please follow the guidelines below to avoid personal injury or damage to the printer when moving it:

- Make sure that all closing covers and paper trays are closed.
- Turn off the printer power, and then unplug the power cord from the power outlet.
- Disconnect all power cords and cables from the printer.
- Please carefully roll the printer with a caster base to a new position. Be careful when passing thresholds and cracks in the floor.
- Always lift the printer with its handles.
- Any cart for moving the printer must have a surface that can support the entire base of the printer.
- Keep the printer upright.
- Avoid severe vibrations when moving the printer.
- Make sure that your fingers are not under the printer when you put it down.
- Make sure there is enough space around the printer.

 Caution - hot surface: the inside of the printer may be very hot. To avoid the risk of being burned by hot components, please wait for the surface to cool down before touching the components.

 Caution-hot surface: Some parts of the printer are still at high temperature for a short time after using. When opening the front cover or rear cover to touch the internal parts,

do not touch the location with the high temperature warning label immediately to avoid burns.

 Caution-pinching hazards: for the purpose of avoiding pinching hazards, please proceed with caution in the area marked with this label. Pinching may occur near moving parts such as gears, closing covers, trays, and covering plate.

 Caution - rotating fan blades: for the purpose of avoiding being cut by the rotating fan blades, please turn off the printer power and unplug the power cord from the power outlet before visiting the area marked with this symbol.

 Caution - potential injuries: this product uses laser. Control or adjustment or execution steps taken other than those specified in the user guide may result in hazardous radiation.

The components used in this product are from specific manufacturers and are designed, tested and verified in strict accordance with world safety standards. The safety function features of some parts may not be obvious. The manufacturer is not responsible for the adverse consequences caused by using parts of other manufacturers.

Except as described in the user documents, please consult the customer service center for service or repair matters.

This product will cause a temperature increase of the print media during the printing process, and the print media may release materials due to temperature increase. Please read and understand the chapters on the correct selection of print media in the operating manual to avoid hazardous substances.

During normal operation, this product may produce a small amount of ozone, so it may be provided with a filter designed to limit the ozone concentration far below the recommended exposure limit. In order to avoid high ozone concentration level in the process of frequent use, please install the product in a well-ventilated place and replace the ozone and discharge filters, if indicated in the product maintenance instructions. In case that there is no filter reference information in the product maintenance instructions, there is no need to replace the filter for this product.

**Please keep these safety instructions.**

**Important notes**

Precautions before use:

1. Read and understand all instructions;
2. Understand the common sense on how to use electrical appliances;
3. Follow the signs on the machine or the warnings and instructions in the manual supplied with the printer;
4. In case that there is any conflict between the operating instructions and the safety information, the latter shall prevail; you may have misunderstood the operating instructions; if you cannot solve the conflict, please call the after-sales service hotline or contact the service representative for help;
5. Before cleaning, please unplug the power cord from the AC outlet. Do not use liquid or aerosol cleaner;
6. Do not place the machine on an unstable platform to avoid falling, which may cause serious damage;
7. Do not place any object on the top of the machine to avoid the temperature of the machine parts from increasing, which may cause damage or fire;
8. Never place this machine near any radiator, air conditioner or ventilating pipe;
9. Do not place anything on the power cord; do not place this machine in any place where people may step on its power cord.
10. Do not overload the outlet and extension cord, which may degrade performance and cause fire or electric shock;
11. Beware of small animals biting AC power cords and computer interface cables;
12. Beware of sharp objects piercing the machine slot, which may come into contact with the internal high-voltage device and cause fire or electric shock; beware of any liquid splashing on the machine;
13. Do not disassemble this machine to avoid electric shock; ask professional maintenance personnel for repairs if required; there may be electric shock or other hazards when opening or removing the protecting cover; and incorrect disassembly/assembly may cause electric shock in the future use;
14. Unplug the machine from the computer and the wall-mounted AC electrical outlet, and contact professional maintenance personnel for repairs, in the event that:
  - there is liquid splashing into the machine.
  - the machine is caught in the rain or there is water getting into the machine.
  - the machine falls off, or its casing is broken.
  - there is a significant change in machine performance.
15. Adjust the control mentioned in the operating instructions only; improper adjustment of other controls may cause damage, which needs to be repaired by professional maintenance personnel for a longer period of time;
16. Never use this machine in a thunderstorm day to avoid electric shock; unplug the AC power cord in a thunderstorm day possible;
17. When multiple pages are printed continuously, the surface temperature of the exit tray will be very high. Do not touch this surface and keep children away from this surface;
18. The signal line of the equipment connecting to the printer cannot be connected to the outdoors;
19. When using or printing a huge number of documents for a long time in a room with poor

ventilation, please keep venting in time;

20. The product in standby status will automatically enter the power saver (sleep) mode after a period of time (such as 1 minute) without receiving any work order; and zero energy consumption is possible only when the product is connected without any external input power;

21. This product is a Class I device, which must be connected to the power outlet with protective earth wire in use.

22. Place this product according to the carriage label on the packaging box during carriage;

23. This product is a low-voltage device. In case of any failures such as toner fall-off or sluggish start-up during the process of use at the voltage lower than the assigned voltage, please refer to the product precautions or call Pantum after-sales service center;

24. This product is sold as a whole, and consumers can purchase the required accessories at Pantum after-sales service center. If the sales product is inconsistent with the packaging list, please go to the designated after-sales service center for processing;

25. Please install this product in the locations with a temperature between 5°C and 35°C and a relative humidity between 20% and 80%;

26. Please keep this manual properly.

Regulatory Information

	<p>This symbol indicates that this product cannot be discarded with other wastes. A better practice is to send the abandoned equipment to the designated pick-up point, so that the abandoned electrical and electronic equipment can be recycled.</p>
	<p>This product is suitable for indoor use, not for outdoor use.</p>
	<p>European Community (EC) directives conformity</p> <p>This product complies with the protection requirements of EC directives 2014/30/EU and 2014/35/EU on the approximation and harmonization of the laws of the Member States relating to electromagnetic compatibility and safety of electrical equipment designed for use within certain voltage limits. Radio Equipment directive 2014/53/EU only for models ending with suffix "W".</p> <p>The manufacturer of this product is: Zhuhai Pantum Electronics Co.,Ltd., No.3883, Zhuhai Avenue, Zhuhai, Guangdong, China 519060.</p> <p>A declaration of conformity to the requirements of the Directives is available upon request from the Authorized Representative.</p> <p>This product satisfies the Class B limits of EN 55032 / EN 55035 and safety requirements of EN 62368-1.</p>
	<p>This printer is fully compliant with the RoHS Directive 2011/65/EU for managing toxic and hazardous substances.</p>

**Some products in this series are featured with Wi-Fi function. For model approval information, please see the nameplate on the product body.**

**Names and contents of toxic and harmful substances or elements in products**

Part names	Toxic and harmful substances or elements					
	Pb	Hg	Cd	Cr (VI)	PBB	PBDE
Circuit board	×	○	○	○	○	○
Power supply	×	○	○	○	○	○
Power cord	×	○	○	○	○	○
Connector	×	○	○	○	○	○
Machine parts-rods, roller	×	○	○	○	○	○
Machine parts-motor	×	○	○	○	○	○
Machine parts-others	×	○	○	○	○	○
Scanner accessories, only suitable for multi-function equipment	×	○	○	○	○	○
LCD/LED display screen	×	○	○	○	○	○

This form is on the basis of SJ/T 11364 rules.

○ indicates that the content of toxic and hazardous substances in all homogeneous materials of the part is below the concentration limit requirements described in GB/T 26572.

× indicates that the content of toxic and hazardous substances in at least one homogeneous material of the component is higher than the concentration limit requirements described in GB/T 26572.

This product complies with the restrictions on the use of certain hazardous substances in the China RoHS Directives.



EFUP of all included products and their components are marked with the symbols shown here, unless otherwise indicated.

Some components may have a different EFUP, so mark it for reflecting this case. EFUP is only valid when the product is operated under the conditions defined in the product manual.

Contents

- 1. Product series introduction ..... 17**
- 2. Whole machine structure and principle ..... 18**
  - 2.1 Component structure chart ..... 18
  - 2.2 Mechanical device ..... 18
  - 2.3 Paper Walk Path..... 20
    - 2.3.1 ADF Paper Walk Path ..... 20
    - 2.3.2 Printer Paper Walk Path ..... 20
  - 2.4 Image-forming principle..... 21
    - 2.4.1 Charging..... 21
    - 2.4.2 Exposure..... 22
    - 2.4.3 Develop ..... 23
    - 2.4.4 First transfer ..... 24
    - 2.4.5 Second transfer..... 25
    - 2.4.6 Fuser..... 26
    - 2.4.7 Cleaning/Wiping ..... 28
- 3. Maintenance ..... 29**
  - 3.1 Cleaning of printer..... 29
  - 3.2 Replacing parts and consumables ..... 31
    - 3.2.1 Replacing the toner cartridge ..... 31
    - 3.2.2 Replacing the waste toner bottle ..... 34
    - 3.2.3 Replacing the paper tray..... 35
    - 3.2.4 Moving the printer ..... 36
      - 3.2.4.1 Moving the printer to another location..... 36
      - 3.2.4.2 Carriage of the printer ..... 36
- 4. Printer panel structure and function descriptions ..... 37**
  - 4.1 FB control panel structure and function descriptions ..... 37
    - 4.1.1 Control panel structure..... 37
    - 4.1.2 The button functions are defined as follows: ..... 37
  - 4.2 Touch screen panel structure and function descriptions ..... 39
    - 4.2.1 Control panel structure..... 39
    - 4.2.2 The button functions are defined as follows: ..... 39
- 5. Error display and troubleshooting ..... 40**
  - 5.1 Inspection prior to repair ..... 40
    - 5.1.1 Precautions for inspection prior to repair ..... 40
    - 5.1.2 Work environment..... 40
    - 5.1.3 Preliminary printer troubleshooting ..... 41
  - 5.2 Error messages ..... 50
  - 5.3 Common malfunctions ..... 53
  - 5.4 Fault codes..... 55
  - 5.5 Removing the paper jammed..... 58
    - 5.5.1 Identifying the location of the paper jammed ..... 58

5.5.2 Removing the paper jammed .....	59
5.6 Paper jam troubleshooting .....	65
5.7 Image quality problems .....	67
<b>6. Disassembly and Assembly .....</b>	<b>72</b>
6.1 Disassembly Steps .....	72
6.2 Disassembly tools .....	73
6.3 Disassembly steps .....	74
6.3.1 Disassembly of left cover .....	74
6.3.2 Disassembly of right cover .....	75
6.3.3 ADF/scanner assembly .....	77
6.3.4 ADF motor .....	78
6.3.5 Scanner cover assembly .....	79
6.3.6 CIS .....	80
6.3.7 Scanner motor .....	80
6.3.8 Disassembly of toner cartridge assembly .....	82
6.3.9 Disassembly of rear cover .....	82
6.3.10 Disassembly of front cover .....	83
6.3.11 Disassembly of transfer belt assembly .....	84
6.3.12 Disassembly of toner spot sensor .....	85
6.3.13 Disassembly of controller board cover .....	86
6.3.14 Disassembly of controller board .....	86
6.3.15 Disassembly of controller board holder .....	87
6.3.16 Disassembly of motor (CMY) .....	87
6.3.17 Disassembly of motor (K/transport belt) .....	87
6.3.18 Disassembly of motor (fuser) .....	88
6.3.19 Disassembly of graded clutch .....	88
6.3.20 Disassembly of Control panel .....	89
6.3.21 Disassembly of top cover assembly .....	89
6.3.22 Disassembly of laser .....	91
6.3.23 Disassembly of exit sensing arm and exit sensor board .....	92
6.3.24 Disassembly of main drive assembly .....	92
6.3.25 Disassembly of pickup clutch .....	93
6.3.26 Disassembly of graded belt and gear .....	93
6.3.27 Disassembly of cooling fan .....	94
6.3.28 Disassembly of high voltage board (HVPS) assembly .....	94
6.3.29 Disassembly of power supply board (LVPS) assembly .....	95
6.3.30 Disassembly of rubber roller .....	96
6.3.31 Disassembly of tray sensor switch .....	97
6.3.32 Disassembly of fuser .....	98
6.3.33 Disassembly of fuser ejection sensor .....	98
6.3.34 Disassembly of automatic feed sensor .....	99
6.3.35 Disassembly of waste toner cartridge sensor .....	99
6.3.36 Disassembly of fuser probe sensor .....	100

---

6.3.37 Disassembly of manual feed sensor .....	100
6.3.38 Disassembly of front cover sensor switch.....	100
<b>7. Precautions for replacement of spare parts: .....</b>	<b>101</b>
7.1 Manually performing the calibration function after replacing any accessories .....	101
7.1.1 Calibration method (FB model) .....	101
7.1.2 Calibration method (ADF model) .....	101
7.1.3 Maintenance instructions for replacement of controller board, laser, IDC spare parts	103
<b>Appendix 1 Circumference of Each Roller of this Equipment .....</b>	<b>107</b>
<b>Appendix 2 Descriptions of Product Serial Number.....</b>	<b>108</b>
<b>Appendix 3 Descriptions of Terminologies in this Manual .....</b>	<b>109</b>

## 1. Product series introduction

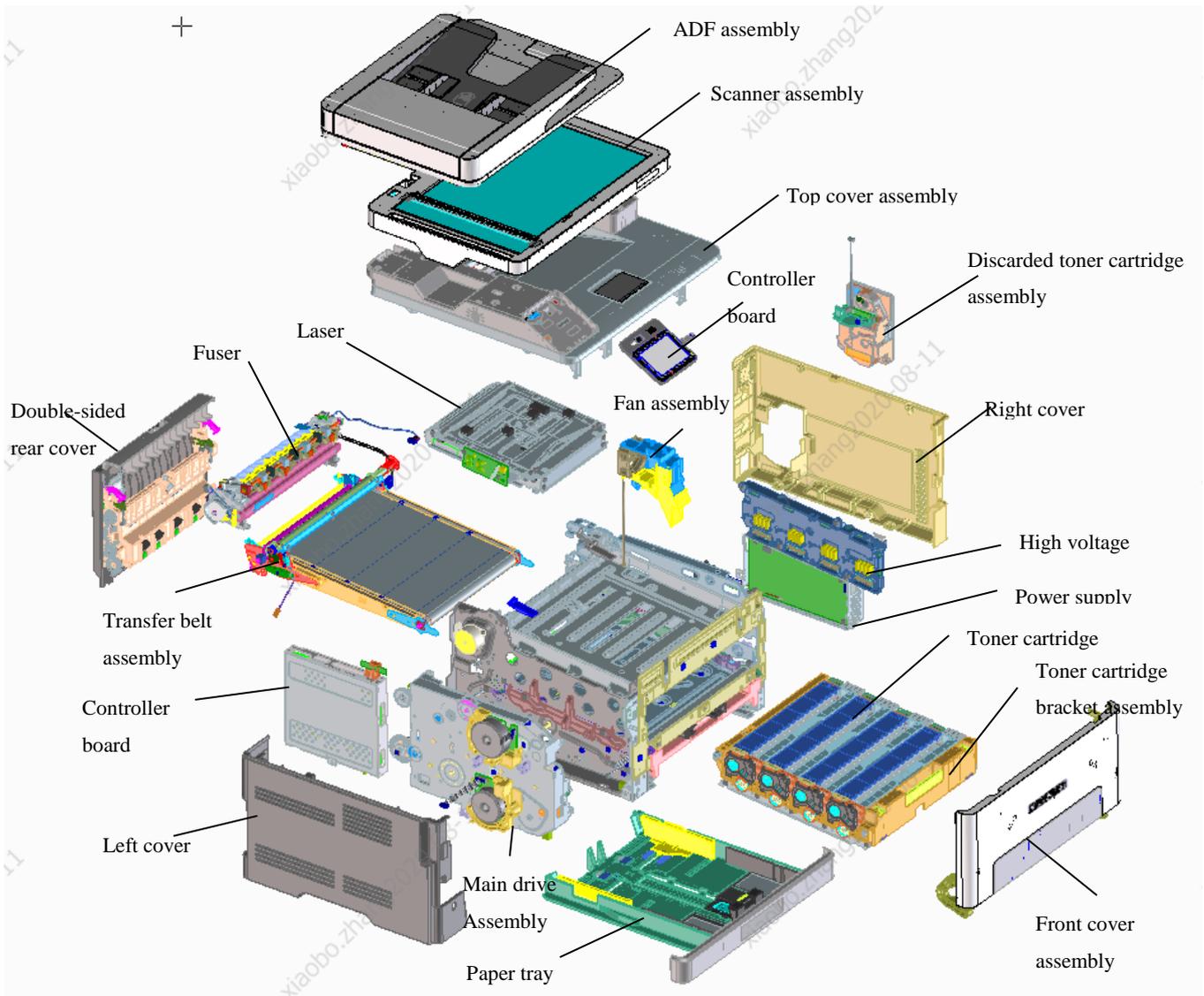
Product series parameters		CM1100DN Series	CM1100DW Series	CM1100ADN Series	CM1100ADW Series
Interface type	USB	●	●	●	●
	NET			●	●
	Wi-Fi		●		●
Printer Language	PDL	●	●	●	●
Control panel	LED	●			
	LCD		●	●	●
Printing speed (single-sided)	A4 18ppm	●	●	●	●
	Letter 19ppm	●	●	●	●
Printing function	Automatic Two-Sided Printing	●	●	●	●
	Color Printing	●	●	●	●
Copy	Manual duplex copy	●	●	●	●
	Color Copy	●	●	●	●
Scan	Manual duplex scan			●	●
	Chromoscan	●	●	●	●
Automatic document feeder (ADF)				●	●

(●: support, blank: not support)

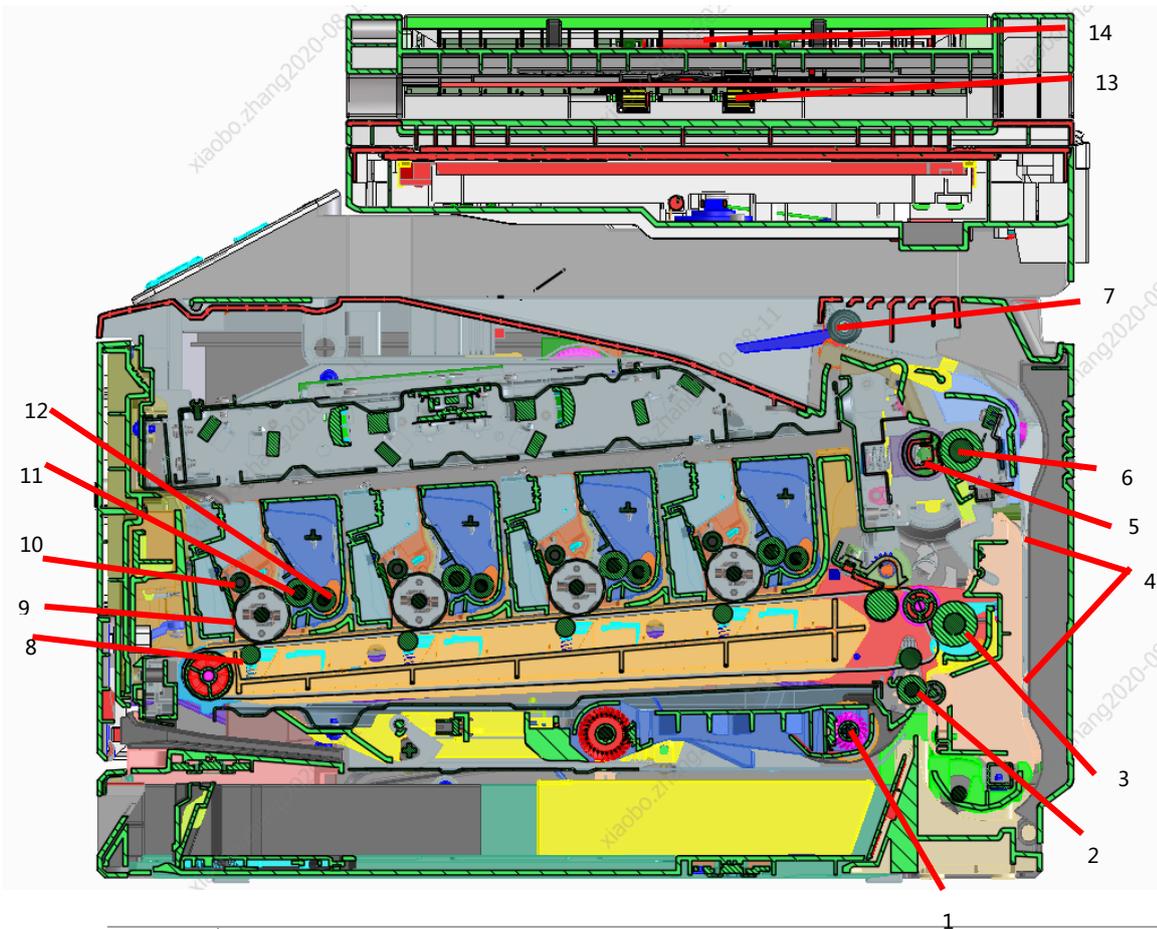
Note: Without prior notice on product series additions or changes.

## 2. Whole machine structure and principle

### 2.1 Component structure chart



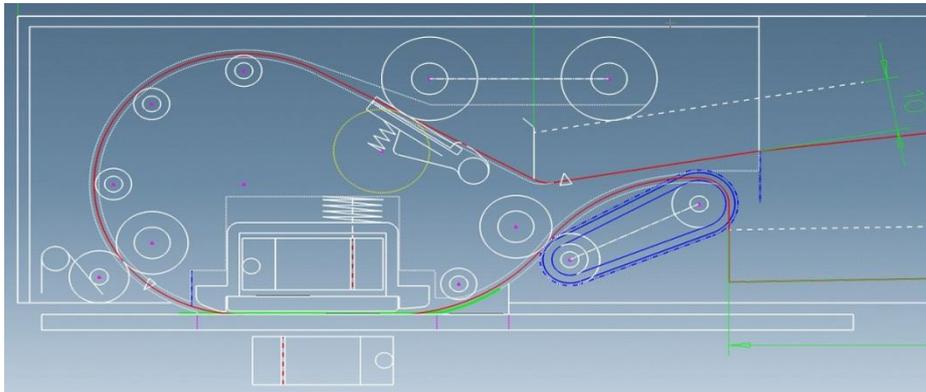
## 2.2 Mechanical device



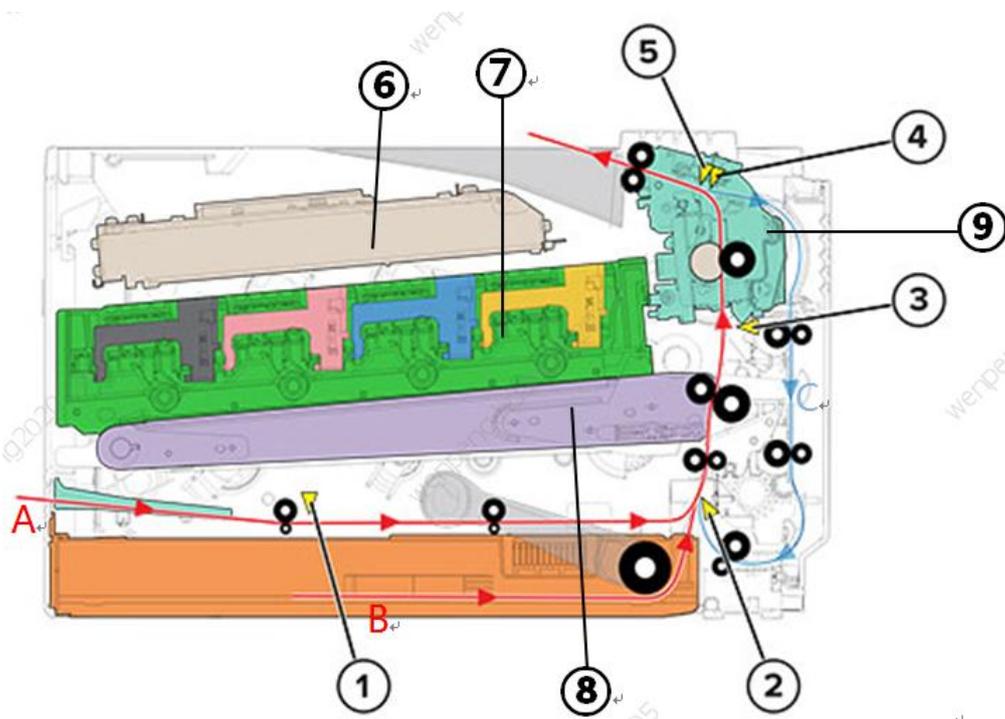
No.	Names
1	Pickup roller
2	Tip correction roller
3	Second transfer roller
4	Double-sided correction roller
5	Fuser heat roller
6	Fuser pressure roller
7	Delivery roller
8	First transfer roller
9	Photoconductor drum
10	Charging roller
11	Developer roller
12	Toner adder roller
13	ADF paper discharge roller
14	ADF paper feed roller

## 2.3 Paper Walk Path

### 2.3.1 ADF Paper Walk Path



### 2.3.2 Printer Paper Walk Path



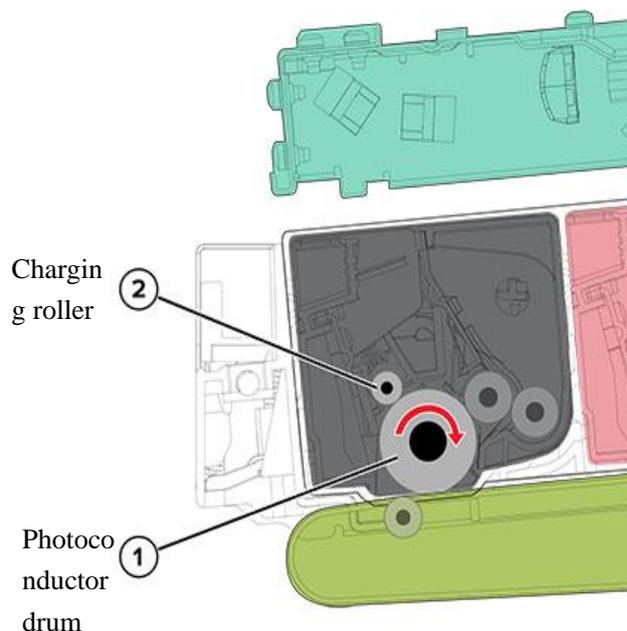
As shown in the above figure, the red line is the machine's single-sided paper feed route (Line A is the manual paper tray feed route, and Line B is the automatic paper tray feed route), and the blue line C is the machine double-sided paper feed route.

No.	Part names	Main functions
1	Manual feed sensor	<ol style="list-style-type: none"> <li>1. Detect whether there is paper in the manual feed tray</li> <li>2. Detect paper jam location</li> </ol>
2	Automatic feed sensor	<ol style="list-style-type: none"> <li>1. Detect the position of the paper relative to the image on the transfer belt to ensure the normal transfer of the papers when they pass through the transfer belt</li> </ol>

		2. Detect paper jam location
3	Fuser (probe) sensor	1. Check whether the rear cover is closed, an error will be reported if it is not closed 2. Detect the bending of the paper as it enters the fuser. If it bends excessive, the motor (fuser) will improve the speed to avoid paper jams; if not, the motor will reduce the speed to avoid blurred images
4	Ejection sensor	Detect the paper ejection, the machine will report a paper jam if the paper cannot be ejected for a long time
5	All - paper sensor	Check whether the paper slot is full of printing papers and remind to clean up the paper
6	Laser	Irradiate the laser with printed information on the OPC to form an invisible image
7	Toner cartridge assembly	The invisible image of the laser irradiated on the OPC is changed to a visible image the transfer of toner
8	Transfer belt	The visible image on the OPC is first transferred to the transfer belt, and then transferred to the paper through the transfer belt
9	Fuser	The fuser heats and pressurizes the paper passing by, melts the toner on the paper and makes it permanently adhere to the paper

## 2.4 Image-forming principle

### 2.4.1 Charging



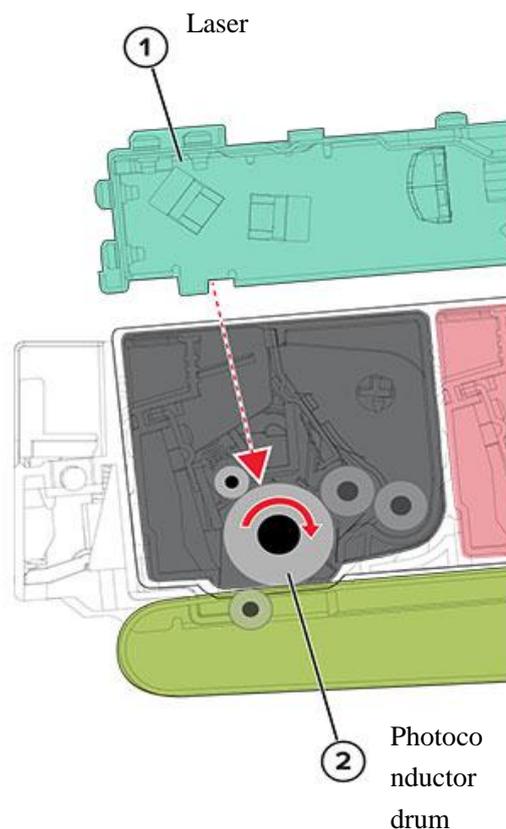
In the charging step, the voltage is sent from the HVPS to the charging rollers on the four photoconductor drums, and the charging roller is a part of the print cartridge in this printer. The

charging roller applies a uniform negative charge on the entire surface of the photoconductor drum to prepare to be irradiated by the laser beam.

### Service Tips

In case that the surface of the charging roller is damaged (for example, there are notches or pits), it will cause uneven charge on the photoconductor drum, and periodic image defects may appear on the printed page. In the event that the charging roller is severely damaged, the surface of the photoconductor drum will not be charged properly, and excessive toner particles will cover the photoconductor drum.

#### 2.4.2 Exposure



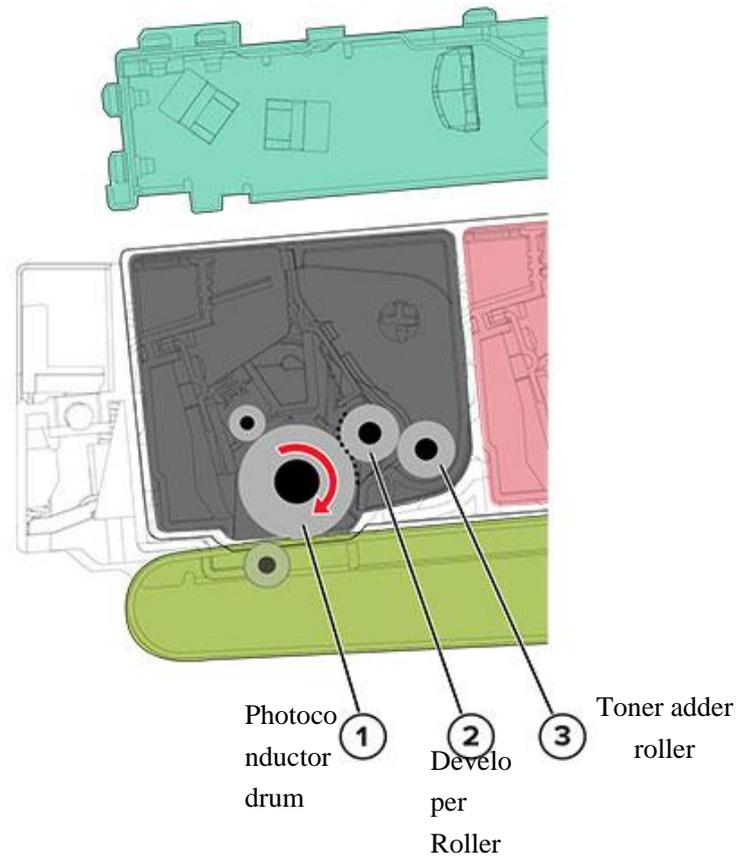
In the exposure step, the laser printing head will emit a focused light beam to the surface of each photoconductor drum to write invisible images. The images formed for each color are called

latent images or electrostatic images. The laser beam discharges only to the surface, causing the beam to hit the photoconductor drum. This discharge creates a potential difference between the exposed area and the rest of the photoconductor drum surface.

### Service Tips

Do not touch the surface of the photoconductor drum directly by hand. Sebum on the skin may cause charge difference on the surface, to which the toner cannot adhere correctly, which may lead to repeated blank spots on the page or light printing. The print cartridge causing affected color may need to be replaced. The surface of the photoconductor drum is coated with organic substances that are sensitive to light. When using the printer, make sure to cover the print cartridge. In case that the photoconductor drum is exposed for a long time, light or dark print quality problems may occur, and the print cartridge may need to be replaced.

#### 2.4.3 Develop

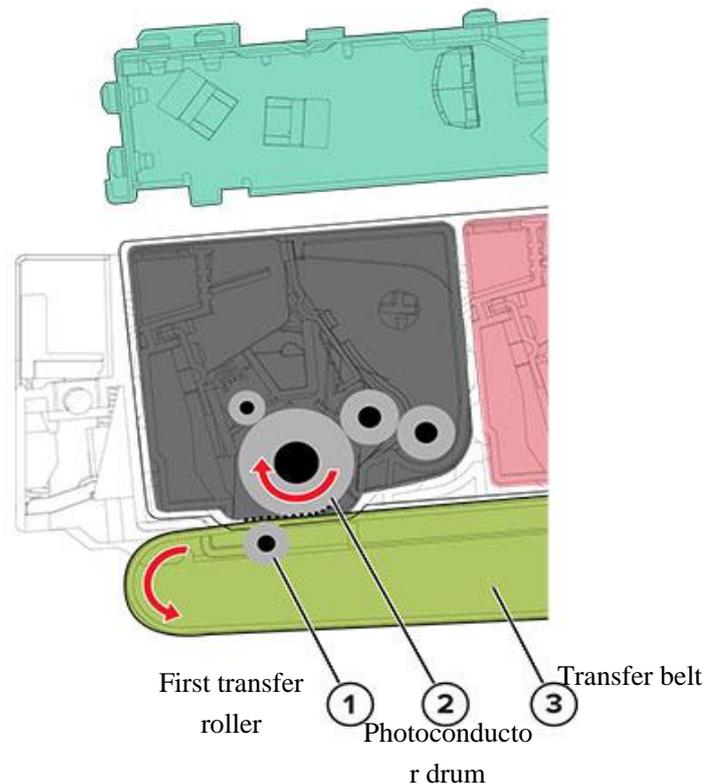


When the laser exposes the photoconductor drum, the HVPS will transfer the electric charge to the developer roller, which is evenly adhered with toner. Due to the electrical charge difference between the developer roller and the photoconductor drum, the toner is attracted to the laser-exposed area on the photoconductor drum surface. The process is similar to applying glue on a can and then rolling it on flashlight powder. The flashlight powder sticks to the glue, not to the rest of the can.

### Service Tips

Do not touch the surface of the developer roller directly by hand. Sebum on the skin may cause charge difference on the surface, to which the toner cannot adhere correctly, which may lead to repeated blank spots on the page or light printing. The developer roller damaged may not contact the surface of the photoconductor drum correctly, which may lead to periodic spots, vertical white lines or vertical colored lines on the printed page.

#### 2.4.4 First transfer

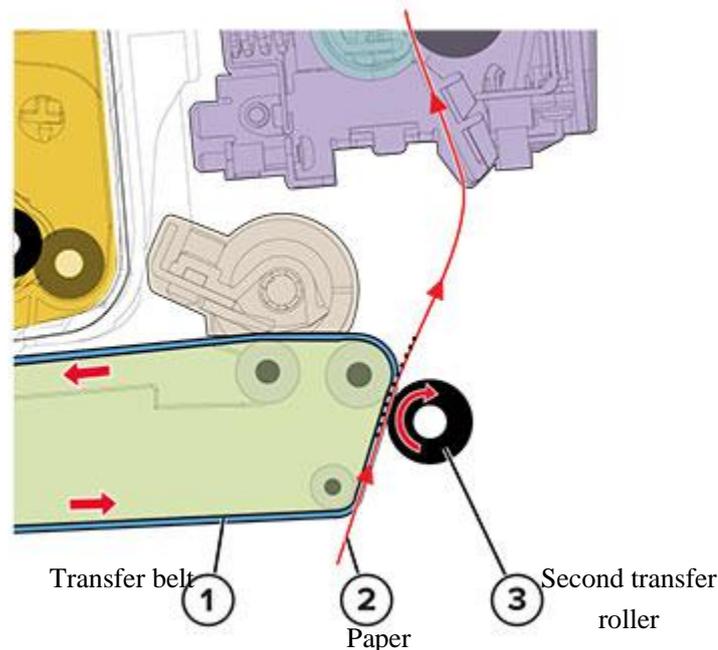


When each photoconductor is developed, HVPS transmits voltage to the first transfer roller inside the transfer belt. For each color, the image on the surface of the photoconductor drum is transferred to the surface of the transfer belt through the charge difference between the surface of the photoconductor drum and the first transfer roller, which occurs during the direct surface contact between the photoconductor drum and the transfer belt.

### Service Tips

Do not touch the surface of the transfer belt directly by hand. Sebum on the skin may cause charge difference on the surface, to which the toner cannot adhere correctly, which may lead to periodic blank spots on the page or light printing. Do not use solvent or other cleaners to clean the surface of the transfer belt. If surface scratch or charge difference is caused by solvent or other cleaners, there may be blank or light spots on the printed page.

#### 2.4.5 Second transfer



Four-color image on the transfer belt will be transmitted to the second transfer roller. When the image on the transfer belt reaches the predetermined point, the system will rub the paper by

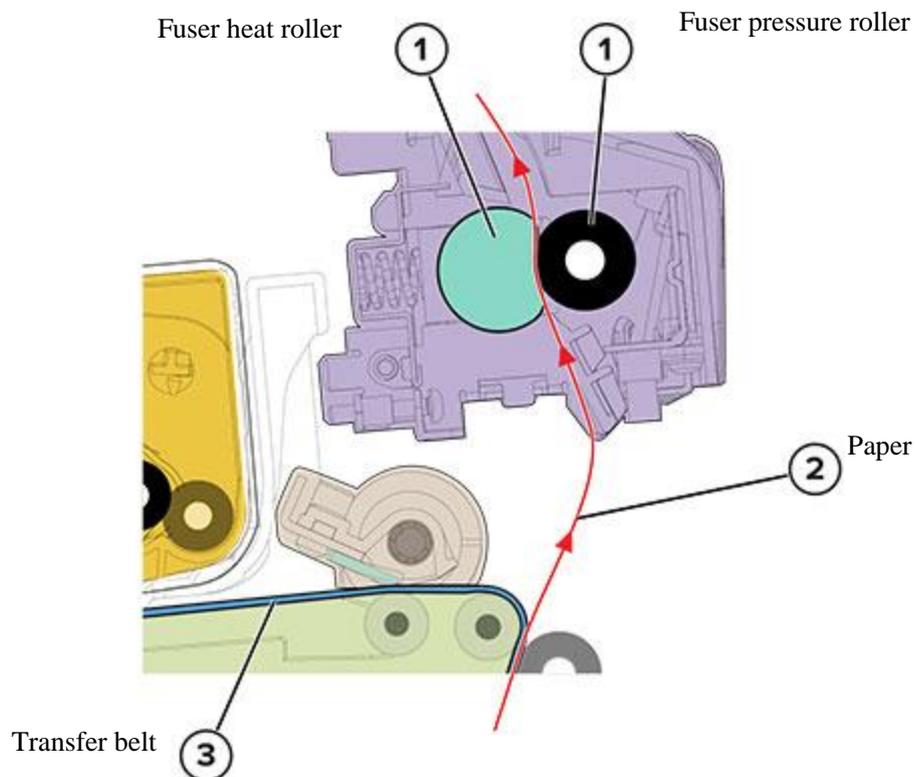
timing until the paper just moves to the position between the transfer belt and the second transfer roller. HVPS transmits the voltage to the second transfer roller to generate positive charge. When the image on the transfer belt reaches the second transfer roller, the negatively charged toner will stick to the paper and then the whole image is transferred from the transfer belt to the paper.

### Service Tips

In the event that there are notches, pits or flat spots on the second transfer roller, its surface will not get to the paper and transfer belt. As a result, there may be blank or light spots (or periodic blank or light areas) on the page. If the toner is not completely transferred, the color of the whole page may be light or partly blank due to the following reasons:

- a. The second transfer roller fails to get to the transfer belt correctly.
- b. HVPS has no voltage. The toner is transferred only by contact (no charge effect), and the contact between HVPS and the second transfer roller can be checked.

#### 2.4.6 Fuser



With the help of transfer roller, the paper with image enters the fuser area. The fuser applies heat and pressure to the paper to melt the toner particles and stick them to the paper permanently. The fuser drives the paper to the exit roller, which then drives the paper to the paper channel.

**Service Tips**

In case that the fuser roller is damaged, toner may fall off the paper and the paper may be jammed.

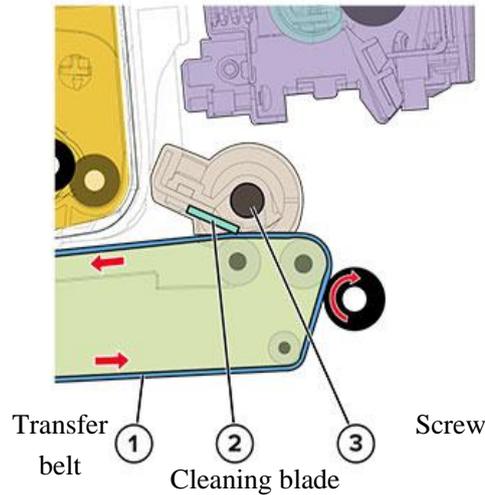
The toner falling off the paper indicates that there are fuser faults or the paper type is not set correctly. Be sure to check the paper type settings before replacing the fuser. Printing on heavy media (such as card paper) and setting the paper type as plain paper are common errors.

When removing the jammed paper from the fuser, use the fuser release buckle to reduce the pressure on the paper. Do not transmit the unfused toner through the fuser, if possible. Try to remove the jammed paper from the fuser in the opposite moving direction.

### 2.4.7 Cleaning/Wiping

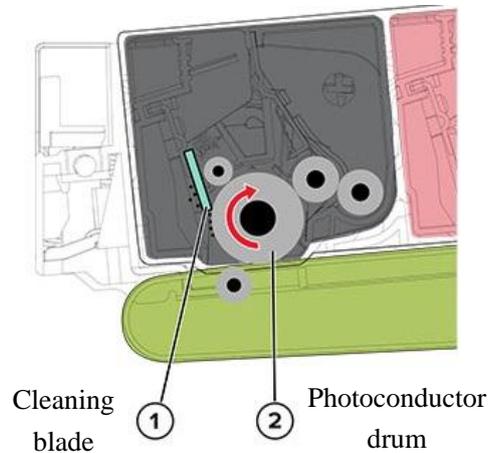
The printer will perform these two cleaning processes during the imaging process. During these two processes, the residual toner will be removed from the corresponding modules.

#### a. Cleaning of transfer belt



After the image is transferred to the paper by transfer belt, the cleaning blade transfers the residual toner to the waste toner bottle by the rotating screw.

#### b. Cleaning of photoconductor drum



After the photoconductor drum transfers each color image to the transfer belt, the cleaning blade will clean the residual toner on the photoconductor drum surface.

Prepare the surface of the photosensitive drum to restart the imaging process.

### 3. Maintenance

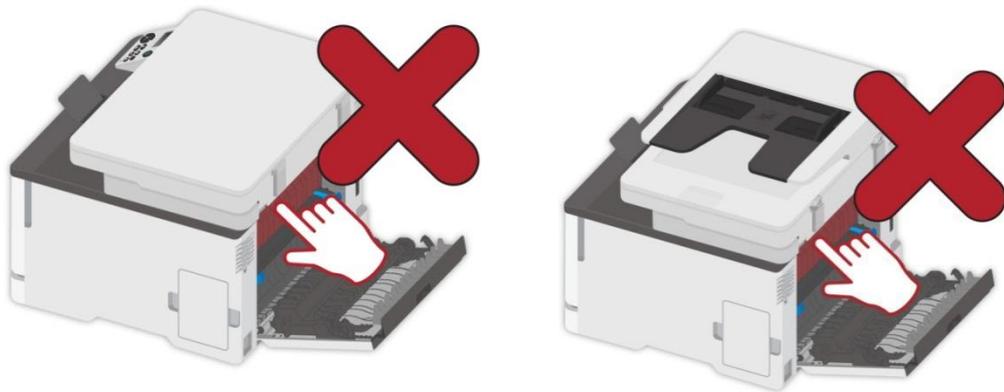
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**Note:** • The appearances of the printers with different models and functions are different, and the schematic diagram is for reference only.

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#### 3.1 Cleaning of printer

: Some parts of the printer are still in high temperature within a short time after use. To prevent burns, please don't directly touch places labeled with high temperature warning in contact with internal components after opening the printer's front or rear.



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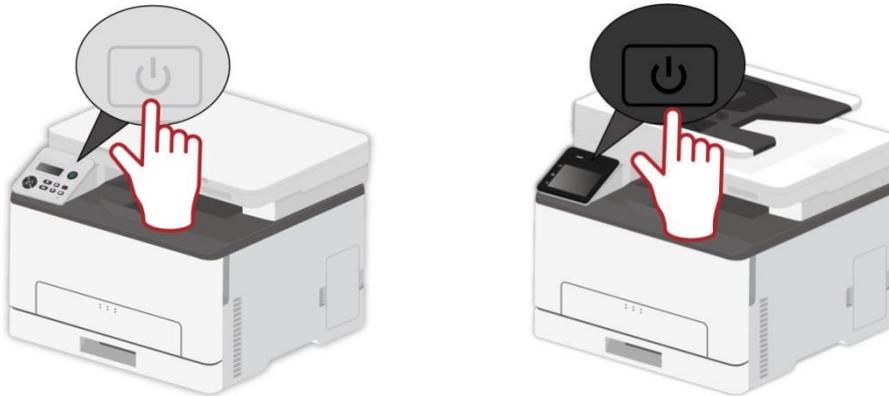
**Note:** • Disconnect the printer before cleaning.

- Please use mild detergents.
  - Use caution when using the printer display to prevent pressing or damaging the touch display. Please use a soft dry cloth or dip in a neutral detergent or ethanol to clean the display surface. Do not use any organic solvents, acidic or alkaline solutions.
- 

: To avoid the risk of electrical shock when cleaning the exterior of the printer, unplug the power cord from the electrical outlet and disconnect all cables from the printer before proceeding.

 **Note:** • Please perform this job every few months.  
• Damage to the printer caused by improper handling is not covered by the printer warranty.

1. Turn off the printer, and then unplug the power cord from the electrical outlet.



2. Remove the paper from the standard exit and feed tray.

3. Remove any dust, lint, and pieces of paper around the printer using a soft brush or vacuum.

4. Wipe the casing and the inside of the front cover of the printer with a soft and lint-free cleaning cloth



Note: • Do not use household cleaners or detergents, as they may damage the surface of the printer.  
• Make sure that all areas of the printer are dry after cleaning.

5. Connect the power cord to the electrical outlet, and then turn on the printer.



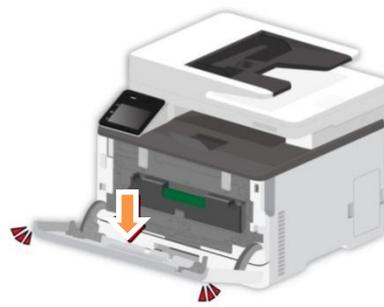
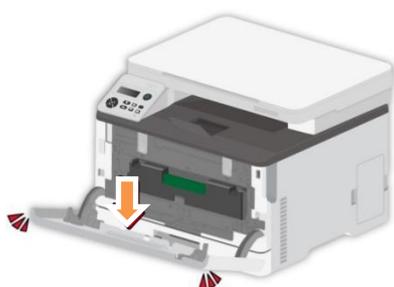
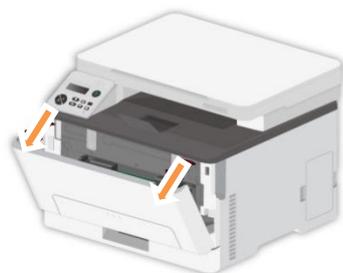
: To avoid the risk of fire or electrical shock, connect the power cord to an appropriately rated and properly grounded electrical outlet that is near the product and easily accessible.

## 3.2 Replacing parts and consumables

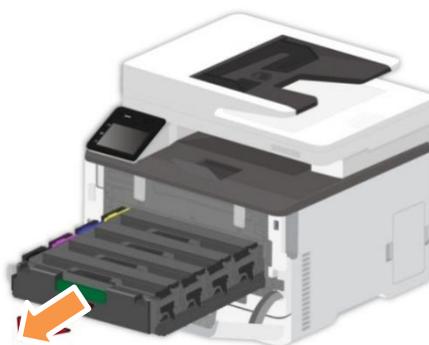
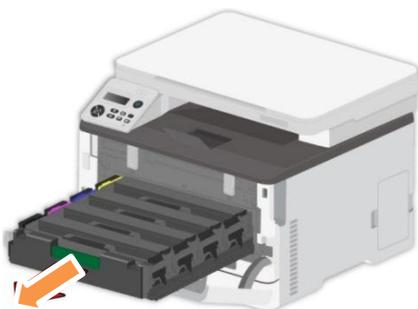
### 3.2.1 Replacing the toner cartridge

Note: • If the paper tray is opened, remove it before replacing the toner cartridge.

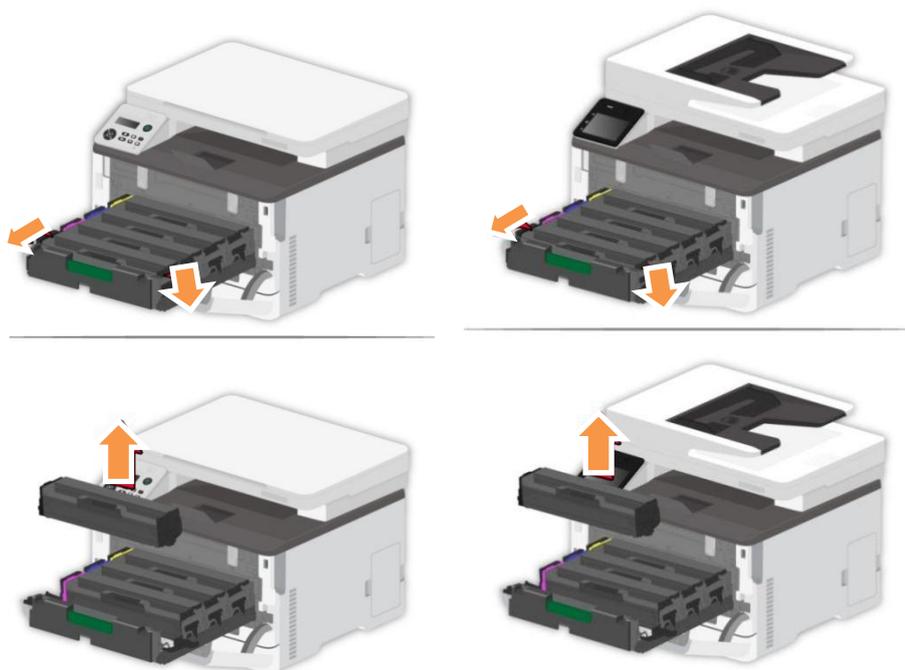
1. Open the front door and push it down firmly.



2. Pull out the printer toner cartridge tray.



3. Remove the used toner cartridge.



4. Unpack the new printer toner cartridge.

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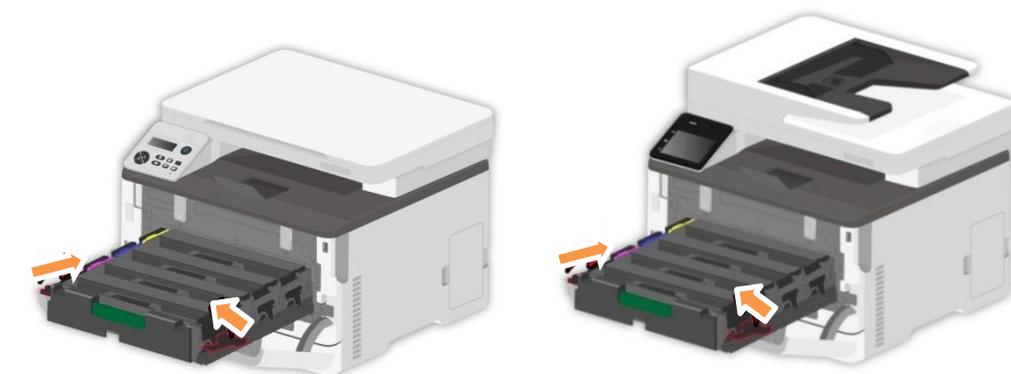
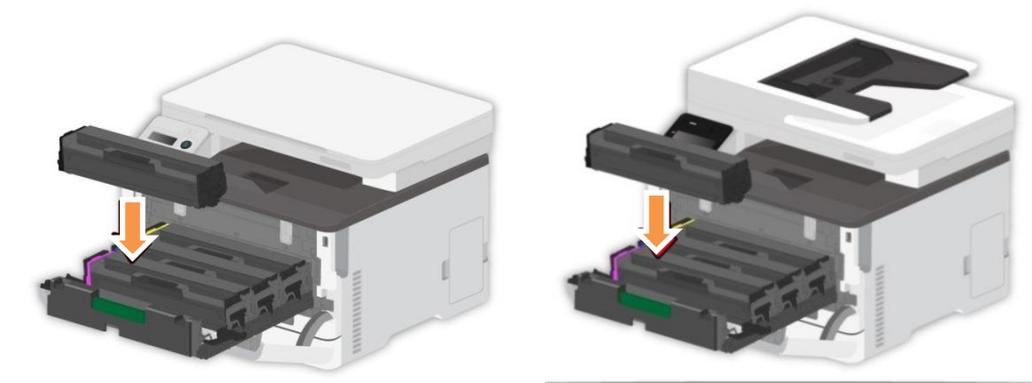
Note: • Do not expose the bottom of the printer toner cartridge to direct light. Prolonged exposure to light may cause print quality problems.

• Do not touch the bottom of the printer toner cartridge. Otherwise, the quality of future printing jobs will be affected.

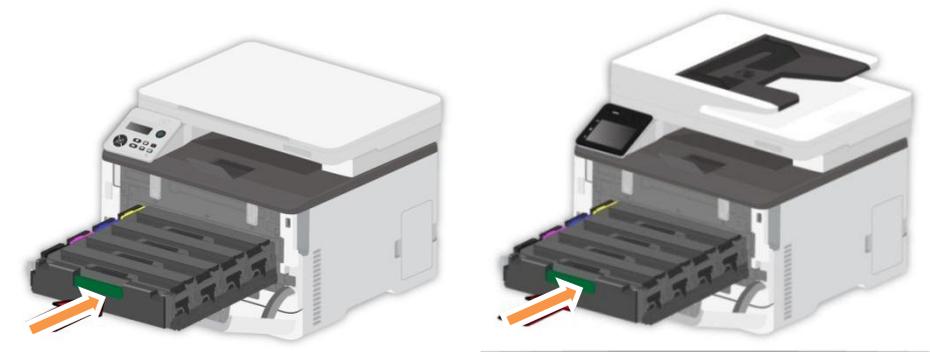
---



5. Push the new printer toner cartridge.

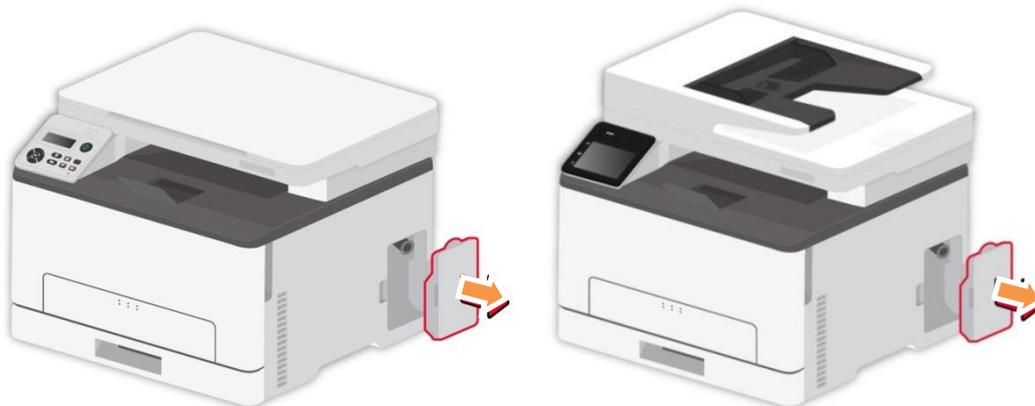


6. Push the printer toner cartridge, and then close the closing cover.



## 3.2.2 Replacing the waste toner bottle

1. Remove the old waste toner bottle.



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Note: • Place the waste toner bottle upright to avoid toner leakage.

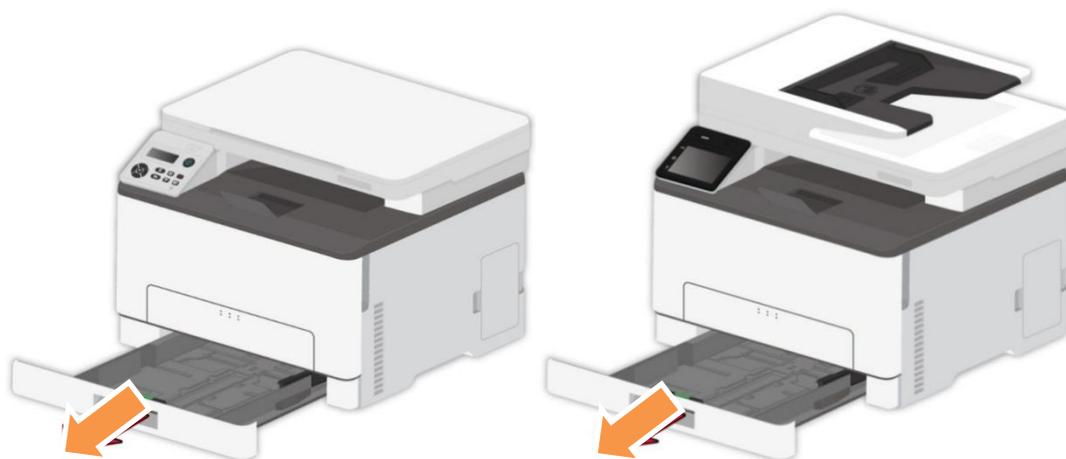
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2. Unpack the new waste toner bottle.
3. Push the new waste toner bottle.



### 3.2.3 Replacing the paper tray

1. Remove the old paper tray.



2. Unpack the new paper tray.

3. Push the new paper tray.



### 3.2.4 Moving the printer

#### 3.2.4.1 Moving the printer to another location



: for the purpose of avoiding shock hazards, please do not place or use this product near water sources or in damp places.



: the printer with a weight of more than 18 kg can only be safely lifted by two or more trained persons.



: for the purpose of avoiding fire or shock hazards, please only use the power cord supplied with this product or the substitutes approved by the manufacturer.



: Please follow the guidelines below to avoid personal injury or damage to the printer when moving it:

- Make sure that all closing covers and paper trays are closed.
- Turn off the printer power, and then unplug the power cord from the power outlet.
- Disconnect all power cords and cables from the printer.
- Please carefully roll the printer with a caster base to a new position. Be careful when passing thresholds and cracks in the floor.
- Always lift the printer with its handles.
- Any cart for moving the printer must have a surface that can support the entire base of the printer.
- Keep the printer upright.
- Avoid severe vibrations when moving the printer.
- Make sure that your fingers are not under the printer when you put it down.
- Make sure there is enough space around the printer.

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Note: • Damages to the printer caused by improper movement is not covered by the warranty.

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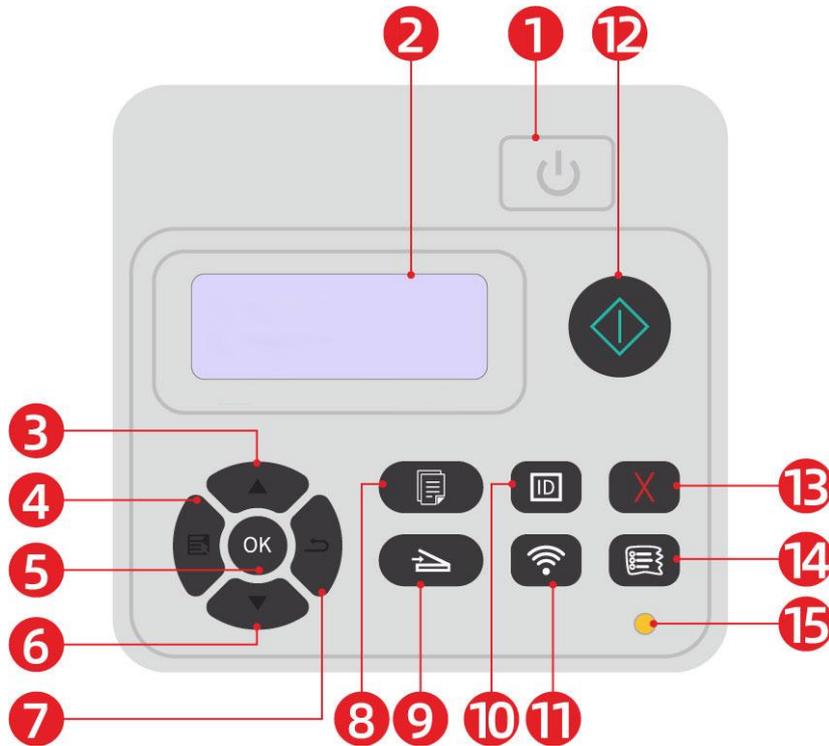
#### 3.2.4.2 Carriage of the printer

Please use the original packaging materials for packing and carriage.

## 4. Printer panel structure and function descriptions

### 4.1 FB control panel structure and function descriptions

#### 4.1.1 Control panel structure



#### 4.1.2 The button functions are defined as follows:

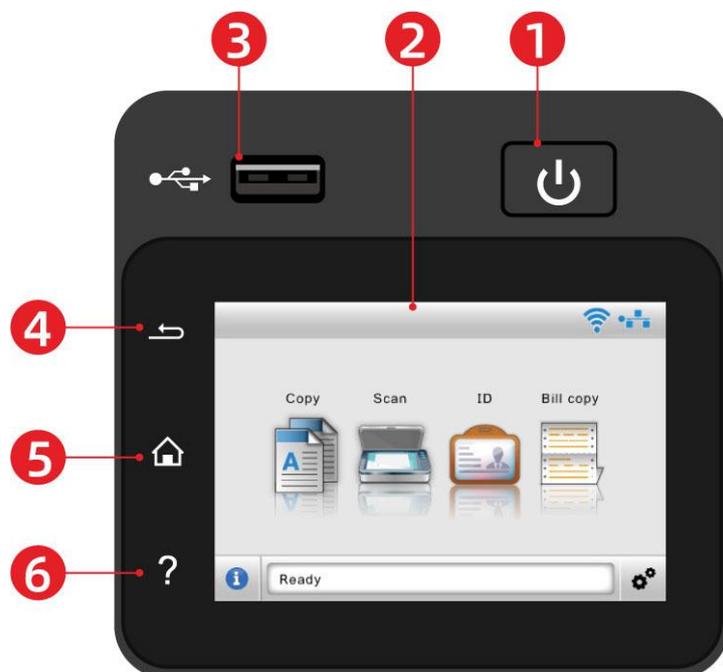
NO.	Name	Functions
1	Power switch	Turn the power on or off and press this button under Ready state to enter energy-saving mode.
		Press and hold this button for more than 2s to turn the printer power off.
2	LCD Display	Display operation interface and product information.
3	UP	Scroll through the menus and options.
		Increase 1 copy on the ready interface of Copy mode.
4	Menu	Open the main menu of control panel
5	OK	Confirm the selection on screen.
6	Down	Decrease 1 copy on the ready interface of Copy mode.

7	Back	Return to the previous menu.
8	Copy Button	Press this button to enter into copy mode.
9	Scan Button	Press this button to enter into scan mode.
10	ID copy	Press it to enter the ID copy mode.
11	Wi-Fi button	Short press Wi-Fi button to turn on direct Wi-Fi connection of the printer and automatically print out "Mobile Device Wi-Fi Connection Wizard" page (for models with Wi-Fi function only).
		Long press Wi-Fi button for over 2s to start WPS when Wi-Fi is not connected or to disconnect Wi-Fi when it has already been connected (for models with Wi-Fi function only).
		Open save toner function(applicable to non-Wi-Fi model only).
12	Start Button	This is used to start relevant operations after finishing operation settings.
		In case of a feed failure, please press this key for pick-up and printing again.
13	Cancel	Execute cancel operation.
		Idle state interface under copy mode, to reset the "Number of Copies" to 01.
14	Bill Copy Button	Press this button to enter into Bill Copy mode.
15	Status Light	Indicate the status of printer.

## 4.2 Touch screen panel structure and function descriptions

### 4.2.1 Control panel structure

Layout of touch screen buttons of printer control panel is shown as below:



### 4.2.2 The button functions are defined as follows:

NO.	Name	Functions
1	Power switch	Turn the power on or off and press this button under Ready state to enter energy-saving mode. Press and hold this button for more than 2s to turn the printer power off.
2	Color touch screen	<ul style="list-style-type: none"> <li>• Check printer status and message.</li> <li>• Set and operate printer.</li> </ul>
3	Front USB interface	Scan into the USB flash disk.
4	Return button	Return to the previous menu.
5	Home button	Go to the home screen.
6	Help button	<ul style="list-style-type: none"> <li>• Access to Help system of control panel.</li> <li>• It describes how to use each screen and eliminate faults.</li> </ul>

## 5. Error display and troubleshooting

### 5.1 Inspection prior to repair

#### 5.1.1 Precautions for inspection prior to repair

 Caution - shock hazards: this symbol on the product means that there is dangerous voltage in the working area. Unplug the power plug of the product before working. Be careful if the product must be powered on to perform the task.

 Caution - shock hazards: this product uses an electronic power switch, which cannot physically disconnect the input AC voltage. To avoid the shock hazards, be sure to unplug the power cord on the printer to cut off the AC voltage.

 Caution - shock hazards: to avoid the shock hazards when removing the covering plate or opening the door for troubleshooting, do not touch the exposed wires or circuits, if the printer is connected to the power outlet.

 Caution - shock hazards: to avoid the shock hazards and prevent the printer from being damaged, unplug the power cord from the power outlet and disconnect it from any external equipment before connecting or disconnecting any cables, circuit boards or components.

 Caution - high temperature surface: the inside of the printer may be very hot. To reduce the injury risks caused by high temperature components, please wait for them to cool before touching their surfaces.

#### 5.1.2 Work environment

- 1) After the power cord is unplugged from the power outlet, check whether it is broken, short-circuited, open-circuited or incorrectly connected.
- 2) Ensure that the printer is properly grounded.
- 3) Ensure that the power cord voltage is within 10% of the rated voltage.
- 4) Place the printer on a stable and horizontal surface.
- 5) Keep the room temperature between 10 °C and 35 °C. Keep the relative humidity between 20% and 80%.
- 6) Avoid placing the printer in a dusty place.
- 7) Avoid exposing the printer to ammonia or other harmful gases.
- 8) Avoid placing the printer in a hot or humid area (near water or humidifier).
- 9) Avoid exposing the printer to direct sunlight.
- 10) Keep the room where the printer is placed well ventilated.

11) Avoid placing the printer in a place where its vents will not be blocked.

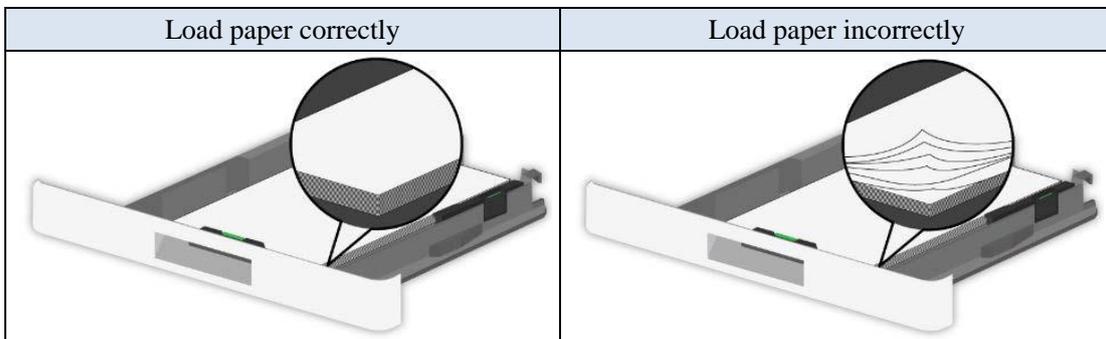
### 5.1.3 Preliminary printer troubleshooting

1. Check whether its appearance is damaged (printer defects may be related to its appearance damage)
2. Confirm the startup and shutdown (check whether the printer can warm up normally or what faults are reported)
3. Check whether there is a large amount of toner or dust in the printer, and please clean. (chip contact point, paper roller - portrait problem, toner cartridge recognition failure, no paper fed, paper jam, etc.)
4. Replace the toner cartridge and make confirmation (general portrait problems and errors reported in the toner cartridge will be related to the toner cartridge)
5. Please replace the paper products for testing (paper passing failure)
6. Restore factory settings (setting failure)
7. Print the information page to confirm the printer usage
8. Set the color calibration first in case of misregistration in printing

#### 5.1.3.1 Paper requirements

##### 1. Loading paper correctly

- 1) Make sure the paper is loaded flat in the tray



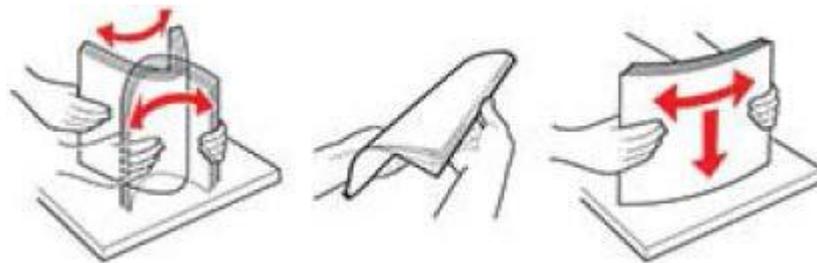
- 2) Do not install or remove the tray in the process of printing
- 3) Do not load too much paper, and ensure that the paper stack height is lower than the paper loading limit indicator.
- 4) Do not slide the paper into the tray, and load the paper as shown in the figure



- 5) Ensure that the paper guide is placed correctly and the paper or envelope shall not be pressed tightly
- 6) After loading the paper, push the tray into the printer

## 2. Using paper recommended

- 1) Use new, undamaged paper and paper recommended or special media
- 2) Do not load wrinkled, shrunk, damp, bent or curled paper
- 3) Before loading paper, it shall be tightened, unfolded and the edges of the paper shall be aligned



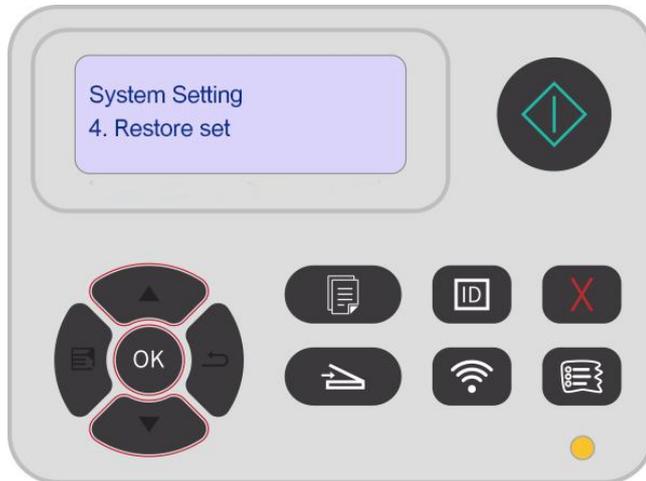
- 4) Do not use paper that has been hand-cut or trimmed
- 5) Do not mix papers in different sizes, weights or types in the same tray
- 6) Ensure that the paper size and type are set correctly on the computer or printer control panel
- 7) Please understand the recommended printable side of the paper before loading them. which is usually indicated on the paper packaging.
- 8) Do not use coated paper unless they are specifically designed for electronic phototypesetter printing.
- 9) Store paper as required by the manufacturers

## 5.1.3.2 How to restore the factory settings

### 1) FB model

"Restore factory settings" is used to recover the default settings of printer. The printer will restart itself automatically after recovering factory settings.

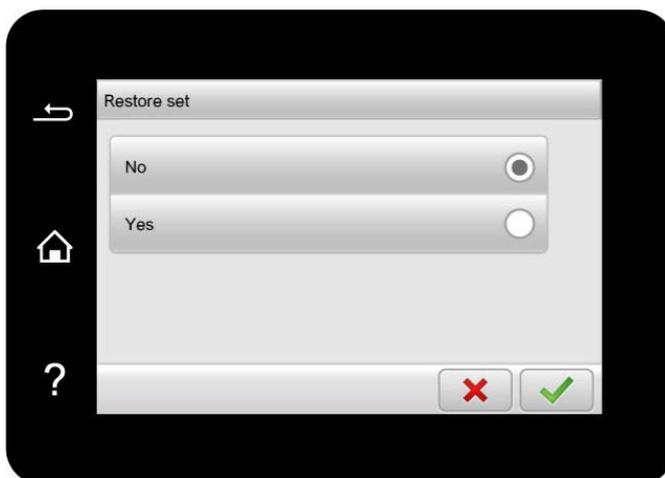
1. Press "Menu" to enter the menu setting interface.
2. Press "▲" or "▼" to select "System Setting" and then press "OK".
3. Select "Restore set" by pressing "▲" or "▼", and then press "OK" to restore factory settings.



### 2) ADF model

"Restore factory settings" is used to recover the default settings of printer. The printer will restart itself automatically after recovering factory settings.

1. Click "⚙️" button in control panel to enter "Menu Setting" interface.
2. Click and select "System Setting"- "Restore set" to reset to defaults.

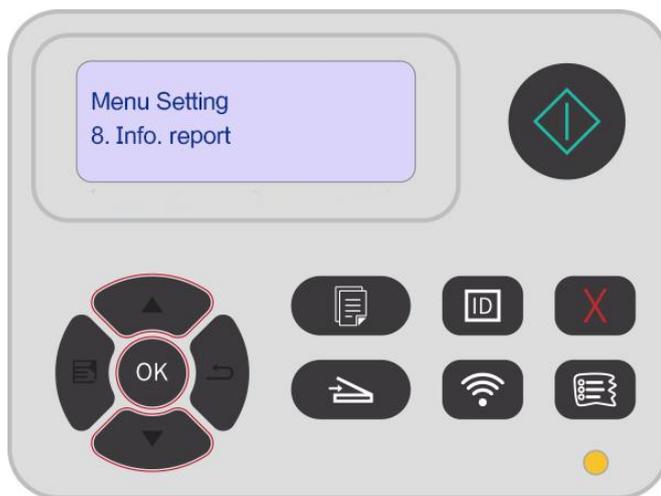


### 5.1.3.3 Printing information report

#### 5.1.3.3.1 FB panel model

You can print information report by operating control panel. These pages can help you to learn about product information, and diagnose and solve product failures.

1. Press "Menu" to enter the menu setting interface.
2. Press "▲" or "▼" to select "Info.report".
3. Press "OK" key to enter information report print. You can print product report according to needs.



Printable product reports include Demo pages, information pages, log information pages, menu structure pages, quality test pages, network configuration, email address, group mails, FTP address, Wi-Fi hotspot, etc.

 Note:• The product report above is the most complete version, and may be different from the product report of model that you actually use.

### 5.1.3.3.2 ADF panel model

You can print information report by operating control panel. These pages can help you to learn about product information, and diagnose and solve product failures.

1. Click "⚙️" button in control panel to enter "Menu Setting" interface.
2. Click and select "Info. report" to enter Info. report print, thus you can print product report as required.



Printable product reports include Demo pages, information pages, log information pages, menu structure pages, quality test pages, network configuration, email address, group mails, FTP address, Wi-Fi hotspot, etc.

 Note: • The product report above is the most complete version, and may be different from the product report of model that you actually use.

5.1.3.3.3 Information page descriptions

[ Printer Information Page ]
[ Page 1 ]

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2">Product Information</th> </tr> <tr> <td>Product Name</td> <td>: CM1100 Series</td> </tr> <tr> <td>USB Vender ID</td> <td>: 0x232B</td> </tr> <tr> <td>Firmware Version</td> <td>: T. 5. 0. 1</td> </tr> <tr> <td>Engine Version</td> <td>: 1. 2. 0. 1</td> </tr> <tr> <td>Memory Size</td> <td>: 1024MB</td> </tr> <tr> <td>Print Language</td> <td>: PCL5e/6, PS3</td> </tr> <tr> <td>Serial Number</td> <td>: AA2A000000</td> </tr> </table>	Product Information		Product Name	: CM1100 Series	USB Vender ID	: 0x232B	Firmware Version	: T. 5. 0. 1	Engine Version	: 1. 2. 0. 1	Memory Size	: 1024MB	Print Language	: PCL5e/6, PS3	Serial Number	: AA2A000000	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2">System Settings</th> </tr> <tr> <td>Sleep Time</td> <td>: 1 minute</td> </tr> <tr> <td>Toner Saving Mode</td> <td>: Close</td> </tr> <tr> <td>Mute printing</td> <td>: Close</td> </tr> </table>	System Settings		Sleep Time	: 1 minute	Toner Saving Mode	: Close	Mute printing	: Close
Product Information																									
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<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2">Print Settings</th> </tr> <tr> <td>Paper Type</td> <td>: Plain</td> </tr> <tr> <td>Paper Size</td> <td>: A4</td> </tr> <tr> <td>Paper Source</td> <td>: Auto Select</td> </tr> <tr> <td>Duplex</td> <td>: Close</td> </tr> <tr> <td>Resolution</td> <td>: 600DPI</td> </tr> <tr> <td>Density</td> <td>: Normal</td> </tr> <tr> <td>Print mode</td> <td>: Copy Color</td> </tr> </table>	Print Settings		Paper Type	: Plain	Paper Size	: A4	Paper Source	: Auto Select	Duplex	: Close	Resolution	: 600DPI	Density	: Normal	Print mode	: Copy Color	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2">Consumables information</th> </tr> <tr> <td colspan="2">Black Ink</td> </tr> <tr> <td>type</td> <td>:</td> </tr> <tr> <td>capacity</td> <td>: 0</td> </tr> <tr> <td>status</td> <td>: normal</td> </tr> <tr> <td>Remaining Amount</td> <td>: <input type="text"/> 0%</td> </tr> <tr> <td colspan="2">Yellow Ink</td> </tr> <tr> <td>type</td> <td>:</td> </tr> <tr> <td>capacity</td> <td>: 0</td> </tr> <tr> <td>status</td> <td>: normal</td> </tr> <tr> <td>Remaining Amount</td> <td>: <input type="text"/> 0%</td> </tr> <tr> <td colspan="2">Cyan Ink</td> </tr> <tr> <td>type</td> <td>:</td> </tr> <tr> <td>capacity</td> <td>: 0</td> </tr> <tr> <td>status</td> <td>: normal</td> </tr> <tr> <td>Remaining Amount</td> <td>: <input type="text"/> 0%</td> </tr> <tr> <td colspan="2">Magenta Ink</td> </tr> <tr> <td>type</td> <td>:</td> </tr> <tr> <td>capacity</td> <td>: 0</td> </tr> <tr> <td>status</td> <td>: normal</td> </tr> <tr> <td>Remaining Amount</td> <td>: <input type="text"/> 0%</td> </tr> <tr> <td colspan="2">Wast Ink</td> </tr> <tr> <td>status</td> <td>: life short</td> </tr> </table>	Consumables information		Black Ink		type	:	capacity	: 0	status	: normal	Remaining Amount	: <input type="text"/> 0%	Yellow Ink		type	:	capacity	: 0	status	: normal	Remaining Amount	: <input type="text"/> 0%	Cyan Ink		type	:	capacity	: 0	status	: normal	Remaining Amount	: <input type="text"/> 0%	Magenta Ink		type	:	capacity	: 0	status	: normal	Remaining Amount	: <input type="text"/> 0%	Wast Ink		status	: life short
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capacity	: 0																																																														
status	: normal																																																														
Remaining Amount	: <input type="text"/> 0%																																																														
Wast Ink																																																															
status	: life short																																																														

Print Information	
Total pages printed	: 7
Pages printed with monochrome	: 0
Pages printed with multicolor	: 7
A4/Letter	: 7
Legal/Folio	: 0
B5/Executive	: 0
B6/B6Env	: 0
Others	: 0

Tray Setup	
Paper Size for Man. FeedTray	: A4
Paper Type for Man. FeedTray	: Plain
Paper Size for AutoInp. Tray	: A4
Paper Type for AutoInp. Tray	: Plain

Firmware version

Machine serial number

Number of pages printed by the machine

Consumables information

5.1.3.3.4 Network configuration information page descriptions

[ Network Configuration Information Page ] [ Page 1 ]

Wired Network Configuration

Connection Status : Not Connected  
 Wired Hardware Address : AC:C5:1B:18:F6:64  
 Host Name : Pantum-935ADA  
 Device Location :

Wireless Network Configuration

Connection Status : Not Connected  
 Wireless Hardware Address : 44:EF:BF:DD:78:47  
 Communication Mode :  
 Network Name (SSID) :  
 BSSID :  
 Authentication Method :

Wired Network IPv4 Information

Status : Open  
 Configuration Method : Auto  
 IP Address :  
 Subnet Mask :  
 Default Gateway :

Wireless Network IPv4 Information

Status : Open  
 Configuration Method : Auto  
 IP Address :  
 Subnet Mask :  
 Default Gateway :  
 Bonjour Name :

IP information

Wired Network IPv6 Information

Status : Open  
 Link-Local Address :  
 Stateless Address :  
 Stateful Address :

Wireless Network IPv6 Information

Status : Open  
 Link-Local Address :  
 Stateless Address :  
 Stateful Address :

E-mail Notification

Out of paper : Close  
 Low toner : Close  
 Paper Jam : Close  
 Cartridge end : Close  
 WasteToner Warning : Close

Wireless Direct Information

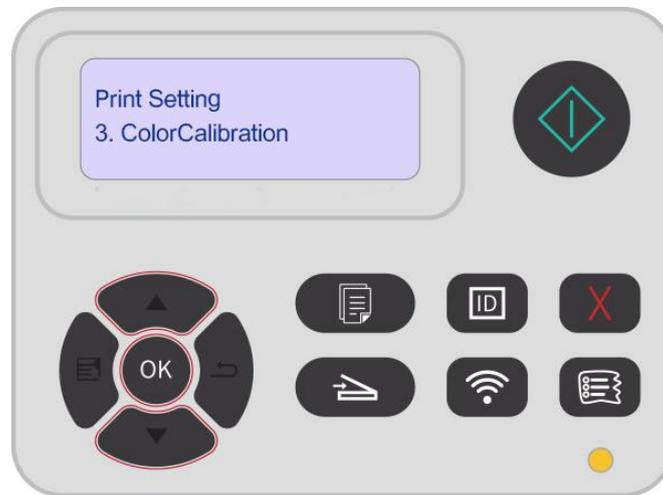
Status : Open  
 Device Name : DIRECT-IA-Pantum CP1100  
 Series :  
 IP Address : 192.168.223.1  
 Password : 12345678  
 Role : GO  
 Connected Device(s) : 0

### 5.1.3.4 Color calibration setting method (FB model)

When the environment where your printer is used changes greatly, the printer may automatically perform color calibration for better printing results. In case of ghosting or large color difference, you can manually calibrate colors as follows:

1. Press "Menu" to enter the menu setting interface.
2. Select "Print Settings" by pressing "▲" or "▼", and then press "OK".
3. Select "Color Calibration" by pressing "▲" or "▼", and then press "OK" to set "Full Calibration" and "Position Calibration".

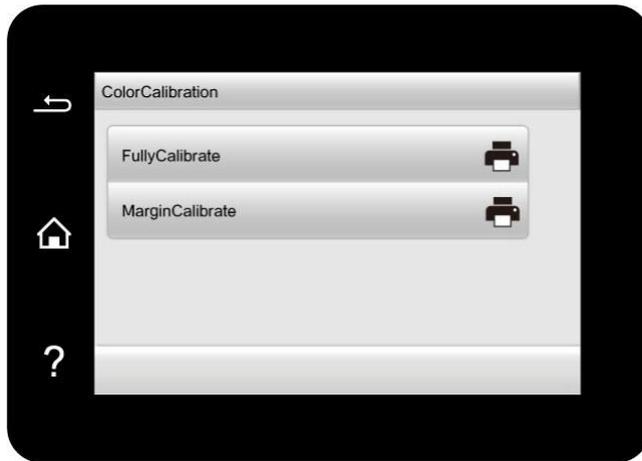
-  Note:
- When your printer performs a certain amount of print jobs, it will automatically perform color calibration.
  - When you replace the laser toner cartridge with a new one, the printer will automatically perform color calibration.



### 5.1.3.5 Color calibration setting method (ADF model)

When the environment where your printer is used changes greatly, the printer may automatically perform color calibration for better printing results. In case of ghosting or large color difference, you can manually calibrate colors as follows:

1. Click "⚙️" button in control panel to enter "Menu Setting" interface.
2. Press "Print Setting" - "ColorCalibration" to carry out "FullyCalibrate" and "MarginCalibrate".



-  Note:
- When your printer performs a certain amount of print jobs, it will automatically perform color calibration.
  - When you replace the laser toner cartridge with a new one, the printer will automatically perform color calibration.

## 5.2 Error messages

Error prompts	Error reasons	Solutions
The printer is not connected	<ol style="list-style-type: none"> <li>1. The USB cable or power cord is not connected</li> <li>2. The driver is installed incorrectly</li> <li>3. Controller board failure</li> </ol>	<ol style="list-style-type: none"> <li>1. Please connect the USB cable and power cord correctly;</li> <li>2. Install the correct driver;</li> <li>3. Replace the controller board;</li> </ol>
The front cover is open	<ol style="list-style-type: none"> <li>1. The left side of the front cover is not properly closed</li> <li>2. The right side of the front cover is not properly closed</li> <li>3. Front cover sensor switch cable defects</li> <li>4. Front cover sensor switch defects</li> <li>5. Laser defects</li> <li>6. High voltage board defects</li> </ol>	<ol style="list-style-type: none"> <li>1. Please open the front cover and close it again;</li> <li>2. Please open the front cover and close it again;</li> <li>3. Re-connect/replace the front cover sensor switch cable</li> <li>4. Replace the front cover sensor switch</li> <li>5. Replace the laser</li> <li>6. Replace the high voltage board</li> </ol>
Open the rear cover	<ol style="list-style-type: none"> <li>1. The rear cover is not properly closed</li> <li>2. Fuser (probe) sensor defects</li> <li>3. Broken fuser (probe) sensing handle</li> </ol>	<ol style="list-style-type: none"> <li>1. Please open the rear cover and close it again.</li> <li>2. Replace the fuser (probe) sensor</li> <li>3. Replace the fuser (probe) sensing handle</li> </ol>
C/M/Y/K toner cartridge is not installed	<ol style="list-style-type: none"> <li>1. The toner cartridge is not installed or not correctly installed</li> <li>2. The contact point of the toner cartridge chip is dirty</li> <li>3. The toner cartridge chip is</li> </ol>	<ol style="list-style-type: none"> <li>1. Please install the toner cartridge correctly</li> <li>2. Clean the contact point of the toner cartridge chip</li> <li>3. Replace the toner cartridge assembly</li> </ol>

	<p>damaged</p> <p>4. The toner cartridge chip cable is pulled out or broken</p> <p>5. The spring of the contact point of the high voltage board chip has deformation</p>	<p>4. Re-connect/replace the toner cartridge chip cable</p> <p>5. Replace the spring of the contact point of the high voltage board chip</p>
C/M/Y/K toner cartridge does not match	<p>1. The toner cartridge model does not match</p> <p>2. The toner cartridge chip is damaged</p>	Please replace the corresponding toner cartridge
C/M/Y/K toner cartridge is at the end of its life	<p>1. The toner in the cartridge has run out</p> <p>2. The toner cartridge chip is damaged</p>	Please replace the corresponding toner cartridge
The waste toner cartridge is not installed	<p>1. The waste toner cartridge is not installed or not correctly installed</p> <p>2. Waste toner cartridge sensor board cable defects</p> <p>3. Waste toner cartridge sensor board defects</p> <p>4. High voltage board defects</p> <p>5. Controller board defects</p>	<p>1. Please install the waste toner cartridge correctly</p> <p>2. Re-connect/replace waste toner cartridge sensor board cable</p> <p>3. Replace waste toner cartridge sensor board</p> <p>4. Replace the high voltage board</p> <p>5. Replace the controller board</p>
The waste toner cartridge is full	The waste tone bottle is full	Please replace waste toner cartridge;
The waste toner cartridge will be full	The waste tone bottle will be full	Please replace waste toner cartridge in time;
There is a little bit of toner in the C/M/Y/K toner	<p>1. The toner in the cartridge will run out</p> <p>2. The toner cartridge chip is</p>	Please replace the corresponding toner cartridge in time

cartridge;	damaged	
The paper source does not match	<ol style="list-style-type: none"> <li>The paper used is inconsistent with the paper set by the panel or the driver</li> <li>Controller board defects</li> </ol>	<ol style="list-style-type: none"> <li>Set the paper by the panel or the driver to be consistent with the paper used</li> <li>Replace the controller board</li> </ol>
Automatic input tray paper settings do not match		
No matching tray found		
Automatic input tray is not pushed in	<ol style="list-style-type: none"> <li>Paper tray sensor switch defects</li> <li>Controller board defects</li> </ol>	<ol style="list-style-type: none"> <li>Replace the paper tray sensor switch</li> <li>Replace the controller board</li> </ol>
The output tray is full	<ol style="list-style-type: none"> <li>The output bin is too full</li> <li>All - paper sensor cable defects</li> <li>All - paper sensing handle defects</li> <li>All - paper sensing handle spring defects</li> <li>All - paper sensor defects</li> <li>Controller board defects</li> </ol>	<ol style="list-style-type: none"> <li>Remove the paper from the output bin</li> <li>Re-connect/replace the all - paper sensor cable</li> <li>Replace the all - paper sensing handle</li> <li>Reinstall/replace the all - paper sensing handle spring</li> <li>Replace the all - paper sensor</li> <li>Replace the controller board</li> </ol>

### 5.3 Common malfunctions

Defects	Causes of defects	Solutions
Power off when booting	<ol style="list-style-type: none"> <li>1. The power supply board cable is pulled out/damaged</li> <li>2. Power supply board defects</li> <li>3. Controller board defects</li> </ol>	<ol style="list-style-type: none"> <li>1. Re-connect/replace the power supply board cable</li> <li>2. Replace the power supply board</li> <li>3. Replace the controller board</li> </ol>
Black screen	<ol style="list-style-type: none"> <li>1. Panel FFC is pulled out/damaged</li> </ol>	<ol style="list-style-type: none"> <li>1. Re-connect/replace the panel FFC</li> </ol>
White screen	<ol style="list-style-type: none"> <li>2. LCD screen defects</li> <li>3. Panel defects</li> <li>4. Controller board defects</li> </ol>	<ol style="list-style-type: none"> <li>2. Replace the LCD screen</li> <li>3. Replace the panel</li> <li>4. Replace the controller board</li> </ol>
Abnormal noise	<ol style="list-style-type: none"> <li>1. Toner cartridge assembly defects</li> <li>2. CMY or K/ transfer belt or fuser driving motor is dirty with foreign matters</li> <li>3. Main drive assembly defects</li> <li>4. Fuser drive assembly defects</li> <li>5. ADF motor has foreign material defects.</li> <li>6. Scanner motor has foreign material defects.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace the toner cartridge assembly</li> <li>2. Clean the foreign matters of the driving motor</li> <li>3. Replace the main drive assembly</li> <li>4. Replace the fuser drive assembly</li> <li>5. Clean the ADF motor.</li> <li>6. Clean the scanner motor.</li> </ol>
Repeated paper feed (multiple pieces of paper for printing)	<ol style="list-style-type: none"> <li>1. Too much static electricity in the printing paper</li> <li>2. The print paper is damp or glues together</li> <li>3. Rubber roller assembly defects</li> </ol>	<ol style="list-style-type: none"> <li>1. Move the paper head by hand for separating</li> <li>2. Replace the printing paper</li> <li>3. Replace the rubber roller assembly</li> </ol>
Wrinkled printing paper	<ol style="list-style-type: none"> <li>1. The double-sided printing rear cover is not correctly closed</li> </ol>	<ol style="list-style-type: none"> <li>1. Re-close the double-sided printing rear cover</li> <li>2. Replace the fuser</li> </ol>

	2. Fuser defects	
Please close the ADF cover	<ol style="list-style-type: none"> <li>1. The ADF switch cable is pulled out.</li> <li>2. ADF switch damaged.</li> <li>3. ADF sensor FFC is pulled out.</li> <li>4. ADF sensor FFC is damaged.</li> <li>5. Controller board defects.</li> </ol>	<ol style="list-style-type: none"> <li>1.Re-connect ADF switch cable.</li> <li>2.Replace ADF switch.</li> <li>3.Re-connect ADF sensor FFC.</li> <li>4.Replace ADF sensor FFC.</li> <li>5.Replace controller board.</li> </ol>
Failure of sending the scanned file	The address of the Email or FTP scanned in network connection is correct but does not exist; or the SMTP server is configured incorrectly	<ol style="list-style-type: none"> <li>1.Check the Email,FTP,SMTP configuration.</li> <li>2.Check the connection of network, cable and WIFI.</li> <li>3. Restart the printer.</li> </ol>
No response is made by PC	USB is connected abnormal.	<ol style="list-style-type: none"> <li>1. Install correct driver program.</li> <li>2.Check the connection of USB.</li> <li>3. Restart the printer.</li> </ol>
Storage in the USB flash disk failed	Storage in the USB flash disk failed	Check the connection of USB flash disk.

## 5.4 Fault codes

### Warnings!

This product has a self-diagnostic function. In the event that a fault is detected, an error code warning message will be displayed on the screen or computer.

Error code	Cause	Inspection and measures
Internal error of printer 01.001	The heat roller works at full power for a too long time	<ol style="list-style-type: none"> <li>1. Check the fuser cable;</li> <li>2. Replace the fuser;</li> <li>3. Replace the power supply board;</li> <li>4. Replace the controller board.</li> </ol>
Internal error of printer 01.002	The temperature of the heating roller rises at a low speed	
Internal error of printer 01.003	Heat roller thermistor anomalies	
Internal error of printer 01.004	The temperature of the heating roller exceeds the temperature limit (hardware error)	
Internal error of printer 01.005	The temperature of the heating roller exceeds the temperature limit	
Internal error of printer 01.006	Power detection anomalies	
Internal error of printer 01.007	Thermistor signal acquisition anomalies	
Internal error of printer 02.001	DC motor is not started (transfer belt control motor)	<ol style="list-style-type: none"> <li>1. Check the motor cable;</li> <li>2. Replace the motor;</li> <li>3. Restart the printer;</li> <li>4. Replace the controller board;</li> </ol>
Internal error of printer 02.002	DC motor is not turned off (transfer belt control motor)	
Internal error of printer 02.003	DC motor is at a slow rotating speed (transfer belt control motor)	
Internal error of printer 02.004	DC motor is at a fast rotating speed (transfer belt control motor)	
Internal error of printer 02.005	DC motor is jammed (transfer belt control motor)	
Internal error of printer 02.006	DC motor is not started (color toner cartridge control motor)	
Internal error of printer	DC motor is not turned off (color	

02.007	toner cartridge control motor)	
Internal error of printer 02.008	DC motor is at a slow rotating speed (color toner cartridge control motor)	
Internal error of printer 02.008	DC motor is at a fast rotating speed (color toner cartridge control motor)	
Internal error of printer 02.008	DC motor is jammed (color toner cartridge control motor)	
Internal error of printer 03.001	Laser motor stabilization timeout	<ol style="list-style-type: none"> <li>1. Restart the printer;</li> <li>2. Check the laser cable;</li> <li>3. Replace the laser;</li> <li>4. Replace the controller board;</li> </ol>
Internal error of printer 03.002	Laser line synchronization stabilization timeout	
Internal error of printer 03.003	Laser line synchronization loss	
Internal error of printer 04.001	System file 1 verification failure	<ol style="list-style-type: none"> <li>1. Restart the printer;</li> <li>2. Replace the controller board;</li> </ol>
Internal error of printer 04.002	System file 2 verification failure	
Internal error of printer 04.003	System file 3 verification failure	
Internal error of printer 04.004	I2C communication error	
Internal error of printer 05.001	Image output unit anomalies	<ol style="list-style-type: none"> <li>1. Restart the printer;</li> <li>2. Replace the controller board;</li> </ol>
Internal error 11 of scanner	Origin check error	<ol style="list-style-type: none"> <li>1. Check the scanner sensor cable.</li> <li>2. Replace the sensor.</li> <li>3. Restart the printer.</li> </ol>
Internal error 12 of scanner	The black mark is not found	<ol style="list-style-type: none"> <li>1. Check CIS cable.</li> <li>2. Check the white bar.</li> <li>3. Replace CIS assembly or white bar.</li> <li>4. Restart the printer.</li> </ol>
Internal error 13 of scanner	Light calibration failed	
Internal error 14 of scanner	AFE calibration failed (OFFSET)	

Internal error 15 of scanner	AFE calibration failed (GAIN)	
Internal error 16 of scanner	Shading failed	

### 5.5 Removing the paper jammed

#### 5.5.1 Identifying the location of the paper jammed



No.	Paper jam location
1	Standard exit
2	Manual feed tray
3	Automatic Feeder Tray
4	Automatic document feeder
5	Rear cover

## 5.5.2 Removing the paper jammed

1. Paper jammed in automatic input tray

1) Pull out the tray



3) Remove the paper jammed.

 **Note:** • Make sure that all paper fragments are removed.



3) Insert the tray

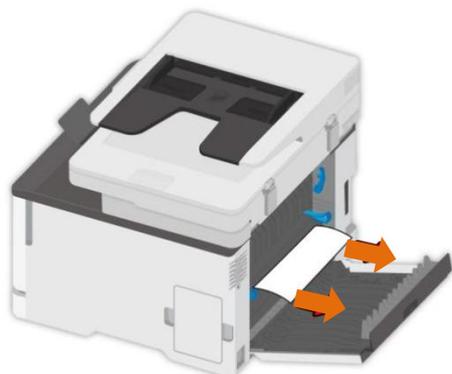
4) Open the rear cover

 :The inside of the printer might be hot. To reduce the risk of injury by a hot component, allow the surface to cool before touching it.



5) Remove the paper jammed

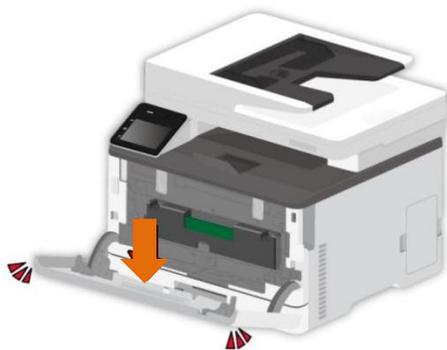
 Note: • Make sure that all paper fragments are removed.



6) Close the rear cover

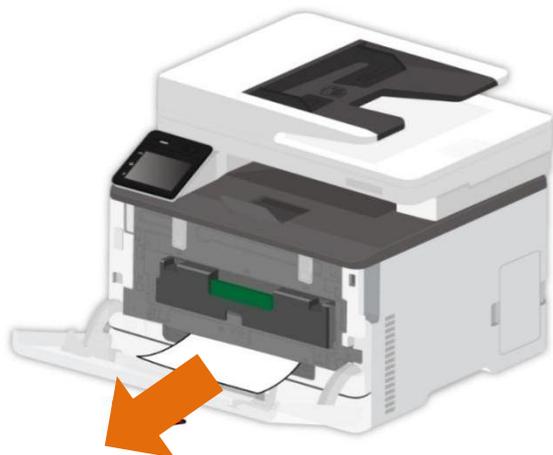
## 2. Paper jammed in manual input tray

1) Open the front cover, and then push it down hard.



2) Remove the jammed paper.

 Note: • Make sure that all paper fragments are removed.



3. Close the front cover.



Note: • If the problem still cannot be solved, please contact the customer services center.

### 3. Paper jammed in rear cover

1) Open the rear door



: the inside of the printer may be very hot. To avoid the risk of being burned by hot components, please wait for the surface to cool down before touching the components.

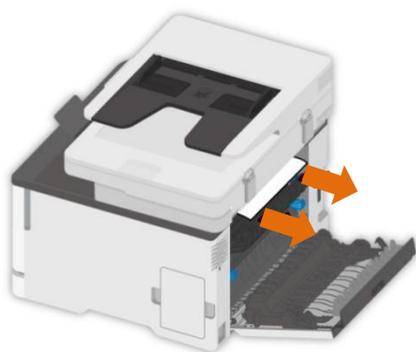
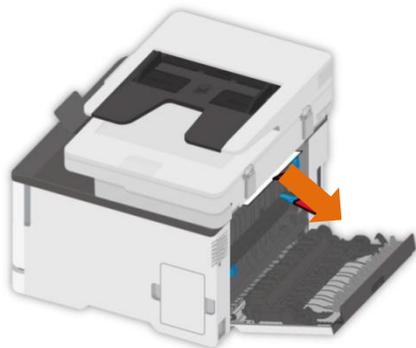


2) Remove the paper jammed

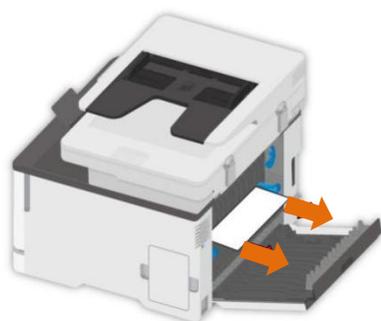
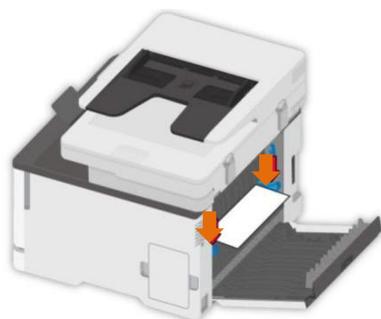


Note: • Make sure that all paper fragments are removed.

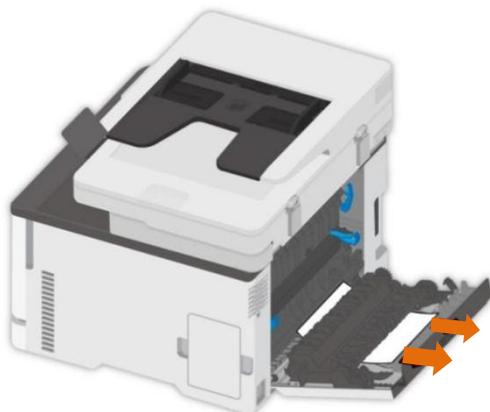
a) Paper jammed in fuser zone



b) Paper jammed below the fuser



c) Duplex unit



3) Close the cover.

4. Paper jam in the automatic document feeder (ADF)

1) Open the ADF's top cover.



2) Remove the paper jammed from the ADF.



- 3) After removing the paper jammed, close the top cover and then the printer will be back to the ready state.



- 4) If it is difficult to remove the paper jammed, please try to open the scanner cover and remove it from the pressing block.



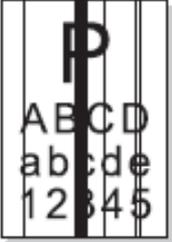
## 5.6 Paper jam troubleshooting

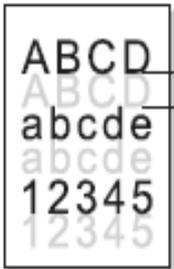
Error reasons	Solutions
Paper jammed in automatic input tray	1. Re-load the paper
Automatic input tray fails to feed the paper	2. Replace the automatic input tray
No paper in automatic input tray	3. Clean/replace the rubber roller
	4. Replace the controller board
Paper jammed in manual input tray	1. Re-connect/replace the manual feed sensor cable
Manual feed fails	2. Replace the manual feed sensing handle
No paper in manual input tray	3. Reinstall/Replace the spring of manual feed sensing handle
	4. Replace the manual feed sensor
	5. Replace the controller board
Paper jammed in exit	1. Re-connect/replace the ejection sensor cable
	2. Exchange the ejection sensing handle
	3. Reinstall/exchange the ejection sensing spring
	4. Replace the ejection sensor
	5. Replace the high voltage board
Paper jammed in the middle	1. Re-connect/exchange the feed sensor cable
	2. Reset/exchange the feed sensor spring
	3. Exchange the feed sensor handle
	4. Exchange the feed sensor
	5. Replace the controller board
Paper jammed in duplex unit	1. Exchange double-sided back cover assembly
	2. Replace the fuser

No paper in ADF	<ol style="list-style-type: none"><li>1. Place the ADF paper properly</li><li>2. Replace ADF the adf paper sensor.</li><li>3. Replace the ADF paper sensor handle.</li></ol>
Paper jammed in ADF	<ol style="list-style-type: none"><li>1. Check ADF paper path, and remove jammed paper by hand.</li><li>2. Replace the ADF paper sensor.</li></ol>

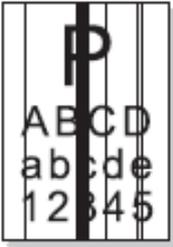
5.7 Image quality problems

Symptom	Possible cause	Suggested remedy
<p>The printout is blank</p> 	<ul style="list-style-type: none"> <li>● Laser FFC defects</li> <li>● Laser defects</li> <li>● High voltage board defects</li> <li>● Controller board defects</li> </ul>	<ul style="list-style-type: none"> <li>● Re-connect or replace the laser FFC</li> <li>● Replace the laser</li> <li>● Replace the high voltage board</li> <li>● Replace the controller board</li> </ul>
<p>The printout is monochrome (all black, blue or yellow)</p> 	<ul style="list-style-type: none"> <li>● Toner cartridge assembly defects</li> <li>● Laser FFC defects</li> <li>● Laser defects</li> <li>● Transfer belt assembly defects</li> <li>● High voltage board defects</li> <li>● Controller board defects</li> </ul>	<ul style="list-style-type: none"> <li>● Replace the toner cartridge assembly</li> <li>● Re-connect or replace the laser FFC</li> <li>● Replace the laser</li> <li>● Replace the transfer belt assembly</li> <li>● Replace the high voltage board</li> <li>● Replace the controller board</li> </ul>
<p>Colored lines appear horizontally</p> 	<p>※When periodic horizontal lines appear in the printout, you can confirm which roller has defects by measuring the distance between the lines. See Appendix 1 for the circumference of each roller.</p> <ul style="list-style-type: none"> <li>● Toner cartridge assembly defects</li> <li>● Defects of conductive spring of high voltage board</li> <li>● Transfer belt defects</li> </ul>	<ul style="list-style-type: none"> <li>● Replace the toner cartridge assembly</li> <li>● Reinstall or exchange the conductive spring of high voltage board</li> <li>● Replace the transfer belt assembly</li> </ul>
<p>Spots/regularized spots appear in the printout</p> 	<p>※When periodic spots appear in the printout, you can confirm which roller has defects by measuring the distance between the spots. See Appendix 1 for the circumference of each roller.</p> <ul style="list-style-type: none"> <li>● Toner cartridge assembly defects</li> <li>● There are contaminants or spilled toner on the transfer belt assembly</li> <li>● The transfer belt cleaner and its waste</li> </ul>	<ul style="list-style-type: none"> <li>● Replace the toner cartridge assembly</li> <li>● Clean the transfer belt assembly (transfer belt, transfer roller, and coupling gear)</li> <li>● Replace the transfer belt assembly</li> </ul>

	<p>toner nozzle are leaking or damaged</p>	
<p>Colored lines appear vertically</p> 	<ul style="list-style-type: none"> <li>● Toner cartridge assembly defects</li> <li>● There are contaminants or spilled toner on the transfer belt assembly</li> <li>● The transfer belt cleaner and its waste toner nozzle are leaking or damaged</li> </ul>	<ul style="list-style-type: none"> <li>● Replace the toner cartridge assembly</li> <li>● Clean the transfer belt assembly (transfer belt, transfer roller, and coupling gear)</li> <li>● Replace the transfer belt assembly</li> </ul>
<p>White lines appear vertically</p> 	<ul style="list-style-type: none"> <li>● Toner cartridge assembly defects</li> <li>● Laser defects</li> </ul>	<ul style="list-style-type: none"> <li>● Replace the toner cartridge assembly</li> <li>● Replace the laser</li> </ul>
<p>The printout is light (faded)</p> 	<ul style="list-style-type: none"> <li>● Toner cartridge assembly defects</li> <li>● Laser FFC defects</li> <li>● Laser defects</li> <li>● High voltage board defects</li> <li>● Controller board defects</li> </ul>	<ul style="list-style-type: none"> <li>● Replace the toner cartridge assembly</li> <li>● Re-connect or replace the laser FFC</li> <li>● Replace the laser</li> <li>● Replace the high voltage board</li> <li>● Replace the controller board</li> </ul>

<p>Gray or colored background appears in the printout</p> 	<ul style="list-style-type: none"> <li>● Toner cartridge assembly defects</li> <li>● Laser defects</li> <li>● There are contaminants or spilled toner on the transfer belt assembly</li> <li>● The transfer belt cleaner and its waste toner nozzle are leaking or damaged</li> </ul>	<ul style="list-style-type: none"> <li>● Replace the toner cartridge assembly</li> <li>● Replace the laser</li> <li>● Clean the transfer belt assembly (transfer belt, transfer roller, and coupling gear)</li> <li>● Replace the transfer belt assembly</li> </ul>
<p>Multiple images appear periodically</p> 	<ul style="list-style-type: none"> <li>● Toner cartridge assembly defects</li> <li>● Fuser defects</li> <li>● Power supply board defects</li> </ul>	<ul style="list-style-type: none"> <li>● Replace the toner cartridge</li> <li>● Replace the fuser</li> <li>● Replace the power supply board</li> </ul>
<p>The toner is fused insecurely (the toner is easy to be wiped off)</p> 	<ul style="list-style-type: none"> <li>● Fuser defects</li> <li>● Power supply board defects</li> </ul>	<ul style="list-style-type: none"> <li>● Replace the fuser</li> <li>● Replace the power supply board</li> </ul>
<p>The printout is slanted</p> 	<ul style="list-style-type: none"> <li>● The automatic paper tray's paper guides are not aligned to the correct position.</li> <li>● The manual paper tray's paper guides are not aligned to the correct position.</li> <li>● The rubber roller is worn or contaminated</li> <li>● Laser defects</li> </ul>	<ul style="list-style-type: none"> <li>● Re-load the paper</li> <li>● Replace the rubber roller</li> <li>● Replace the laser</li> </ul>

<p>The printout is not uniform</p> 	<ul style="list-style-type: none"> <li>● Toner cartridge assembly defects</li> <li>● Laser defects</li> <li>● There are contaminants or spilled toner on the transfer module</li> <li>● The transfer belt cleaner and its waste toner nozzle are leaking or damaged</li> </ul>	<ul style="list-style-type: none"> <li>● Replace the toner cartridge assembly</li> <li>● Replace the laser</li> <li>● Clean the transfer assembly (transfer belt, transfer roller, coupling gear)</li> <li>● Replace the transfer belt assembly</li> </ul>
<p>Copies have missing parts in them</p> 	<ul style="list-style-type: none"> <li>● Toner cartridge assembly defects</li> <li>● Laser defects</li> <li>● There are contaminants or spilled toner on the transfer assembly</li> <li>● The transfer belt cleaner and its waste toner nozzle are leaking or damaged</li> <li>● The main drive assembly gear and coupling are worn or damaged</li> </ul>	<ul style="list-style-type: none"> <li>● Replace the toner cartridge assembly</li> <li>● Replace the laser</li> <li>● Clean the transfer assembly (transfer belt, transfer roller, coupling gear)</li> <li>● Replace the transfer belt assembly</li> <li>● Replace the main drive assembly</li> </ul>
<p>Copies have missing color in them</p> 	<ul style="list-style-type: none"> <li>● Toner cartridge assembly defects</li> <li>● Defects of conductive spring of high voltage board OPC</li> <li>● Transfer belt defects</li> <li>● High voltage board defects</li> <li>● Controller board defects</li> </ul>	<ul style="list-style-type: none"> <li>● Replace the toner cartridge assembly</li> <li>● Exchange the conductive spring of high voltage board OPC</li> <li>● Replace the transfer belt assembly</li> <li>● Replace the high voltage board</li> <li>● Replace the controller board</li> </ul>
<p>Copies have incorrect margin</p> 	<ul style="list-style-type: none"> <li>● The automatic paper tray's paper guides are not aligned to the correct position.</li> <li>● The manual paper tray's paper guides are not aligned to the correct position.</li> <li>● The rubber roller is worn or contaminated</li> <li>● Laser defects</li> </ul>	<ul style="list-style-type: none"> <li>● Re-load the paper</li> <li>● Replace the rubber roller</li> <li>● Replace the laser</li> </ul>

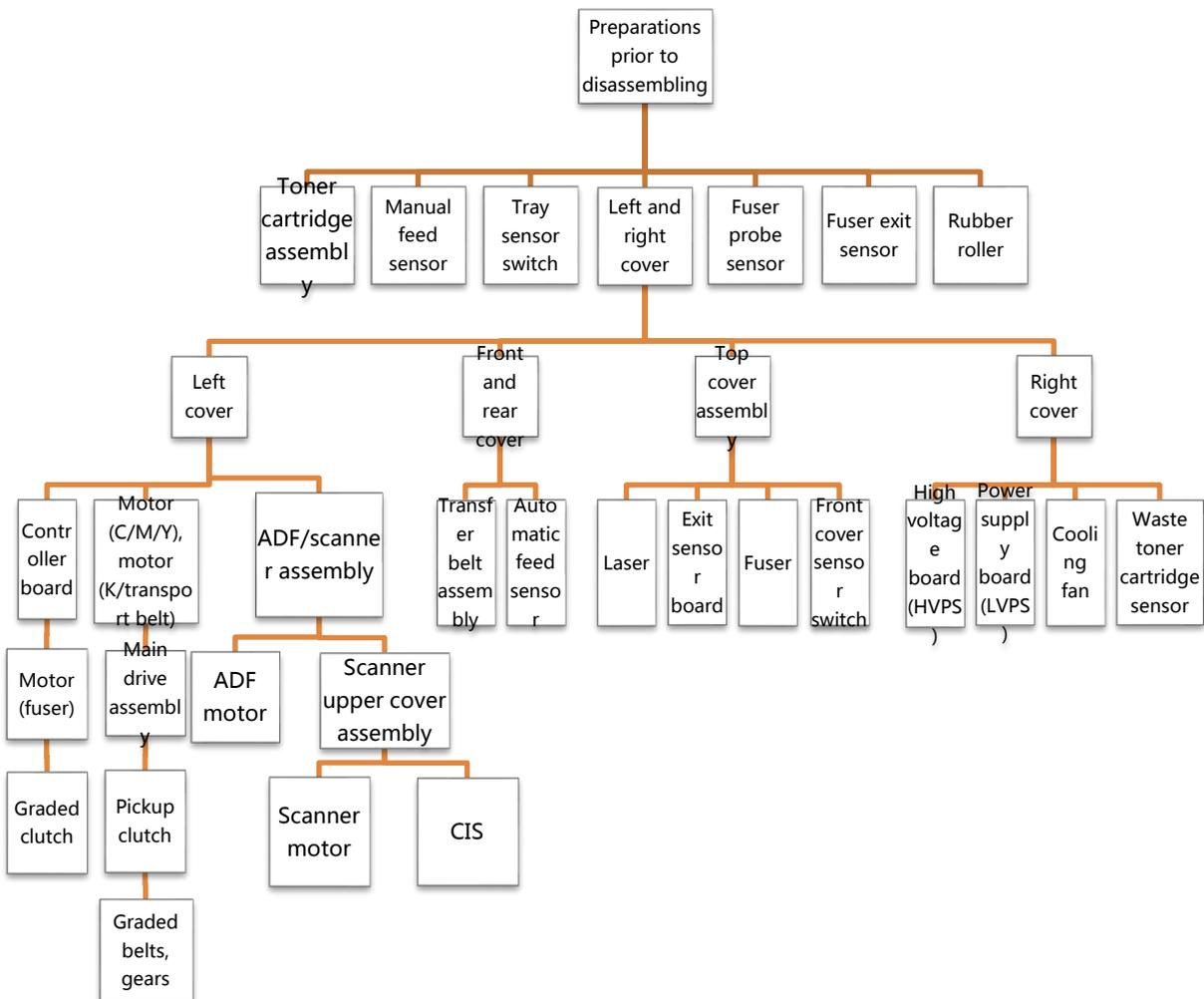
<p>Polychrome is inaccurate</p> 	<ul style="list-style-type: none"> <li>● Laser defects</li> </ul>	<ul style="list-style-type: none"> <li>● Adjust the color calibration settings (see Section 8.1.7 for concrete operation methods)</li> <li>● Replace the laser</li> </ul>
<p>There are vertical white lines or stripes</p> 	<ul style="list-style-type: none"> <li>● The glass platen is dirty.</li> <li>● The scanning head is dirty</li> </ul>	<ul style="list-style-type: none"> <li>● Clean the glass platen</li> <li>● Clean the scanning head</li> </ul>
<p>There are vertical black lines or stripes</p> 	<ul style="list-style-type: none"> <li>● The scanning head is faulty</li> <li>● The controller board is faulty</li> </ul>	<ul style="list-style-type: none"> <li>● Replace the scanning head</li> <li>● Replace the controller board</li> </ul>

## 6. Disassembly and Assembly

### Preparations before disassembling:

1. The printer needs to be disconnected from all external power supplies prior to disassembly.
2. The cable tie needs to be removed prior to disassembly. The cable tie must be exchanged during reassembly to avoid wire pinching, paper path blocking, or restricted mechanical movement.
3. The removed toner cartridge assembly must be protected from light in case of affecting the print quality.
4. Unless otherwise specified, the components shall be reassembled in the reverse order of disassembly.
5. Please wear gloves prior to the first disassembly to avoid being bruised.

### 6.1 Disassembly Steps



## 6.2 Disassembly tools

**Cross screwdriver**



**Six-angle screwdriver (6 angles T10 blades)**



**Tweezers**



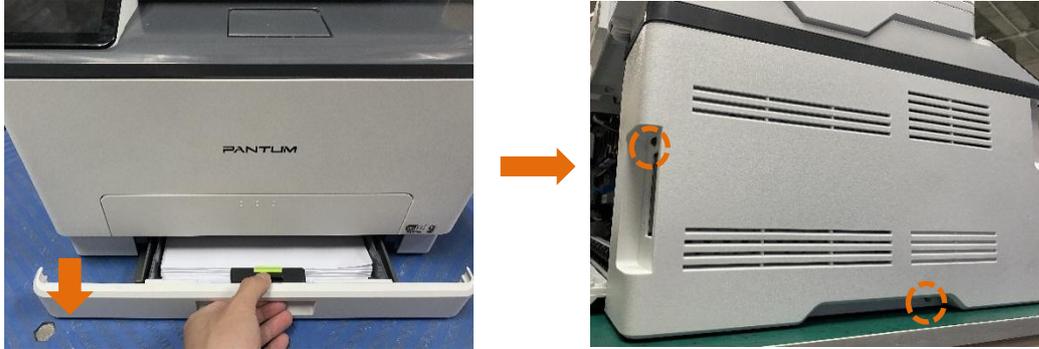
**Spring hook**



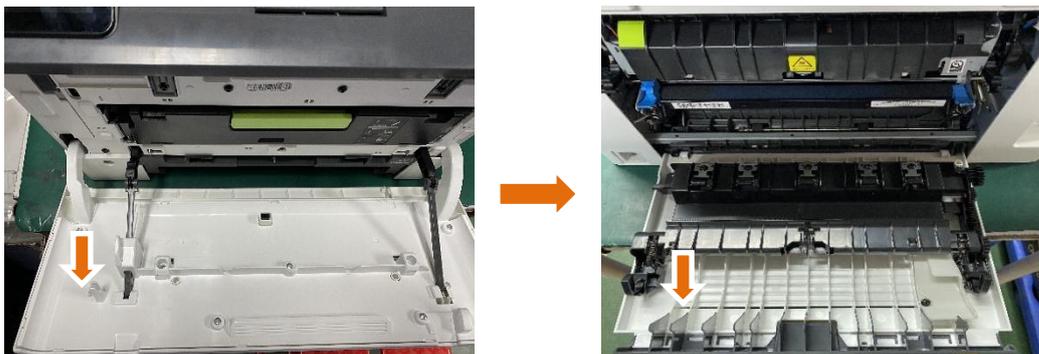
## 6.3 Disassembly steps

### 6.3.1 Disassembly of left cover

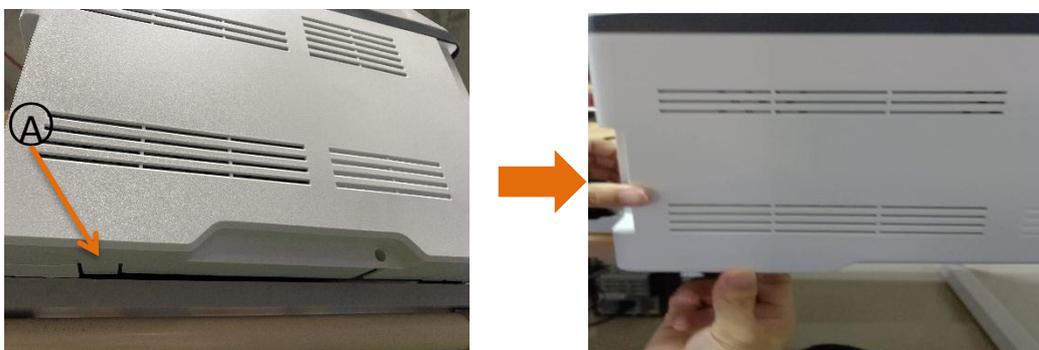
1. Pull out the automatic input tray, and use a six-angle screwdriver (T10) to remove the two fixing screws on the left cover (as shown below)



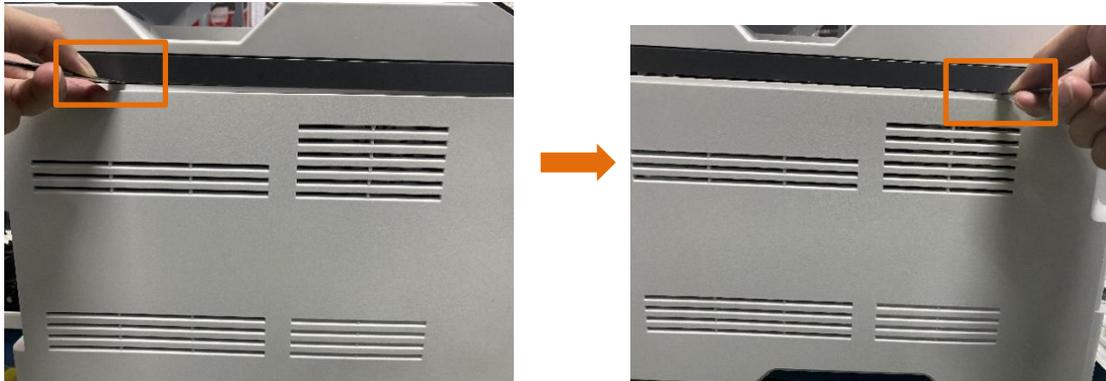
2. Open the front and rear covers of the printer



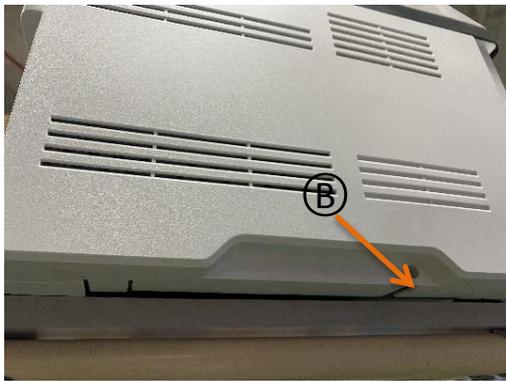
3. Move the side of the printer out of the desktop, and open the back-end buckle of the left cover of the printer with your left hand while opening the buckle A at the bottom of the printer with your right hand



4. Unclench the two buckles connecting the left cover and the upper cover (from left to right) with tweezers

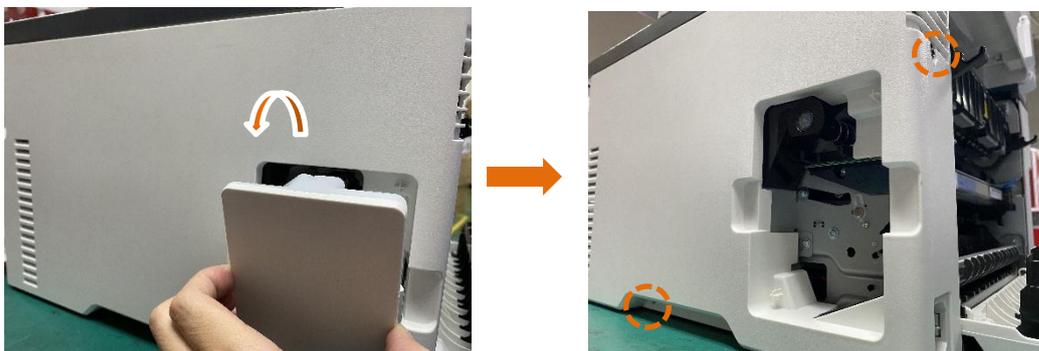


5. Loosen the buckle B at the bottom of the left cover and remove the left cover

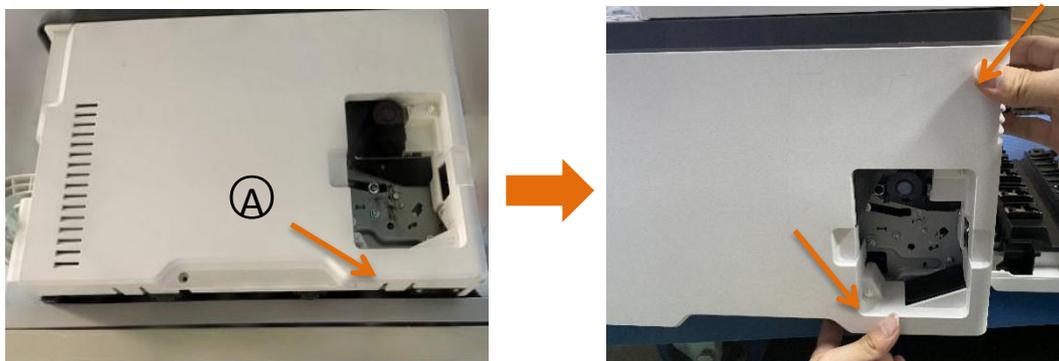


### 6.3.2 Disassembly of right cover

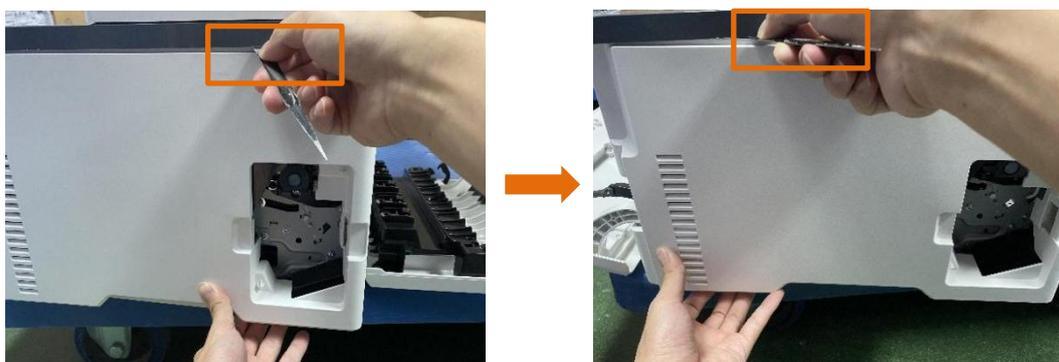
1. Open the front and rear covers of the printer, remove the waste toner cartridge, and use a six-angle screwdriver (T10) to remove the two fixing screws on the right cover



2. Move the side of the printer out of the desktop, and open the back-end buckle of the right cover of the printer with your left hand while opening the buckle A at the bottom of the printer with your right hand



3. Unclench the two buckles connecting the left cover and the upper cover (from right to left) with tweezers



4. Loosen the buckle B at the bottom of the left cover and remove the left cover

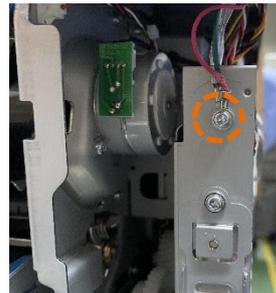


### 6.3.3 ADF/scanner assembly

1.Remove the left cover and right cover, use a six-angle screwdriver (T10) to remove one fixing screw, and then take out the protecting cover.



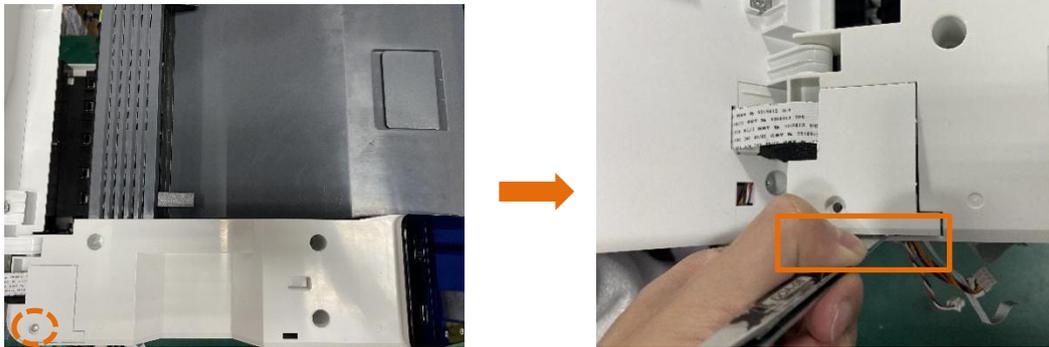
2.Disconnect the five cables of the left data board connected to the scanner assembly,, use a six-angle screwdriver (T10) to remove one grounding screw outside the controller board.



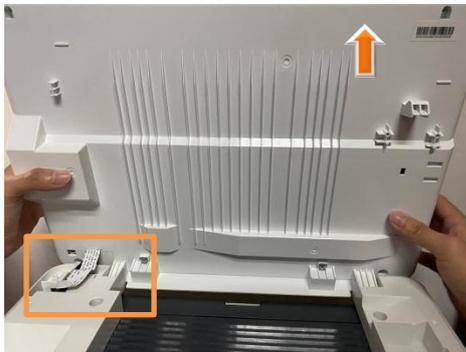
3. Use a cross screwdriver to remove two screws of the hinge support rod and then the remove the support rod (hold the scanner assembly by hand).



4. Use a cross screwdriver to remove one screw of the cover, use tweezers to pry out the edge of cover, and then remove the cover. (hold the scanner assembly by hand to avoid damage).



5. Hold the scanner/ADF assembly by hand, remove the scanner harness, and vertically pull out the scanning assembly.



### 6.3.4 ADF motor

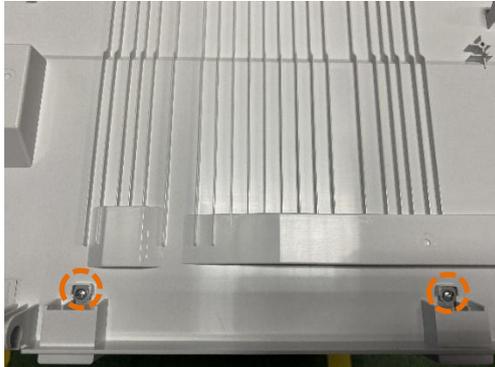
1. Remove the ADF/scanner assembly and four screws at the bottom of ADF. Then remove the ADF tray assembly by means of pulling it up.



2. Remove five fixed screws, sheet metal assembly and then remove ADF motor

### 6.3.5 Scanner cover assembly

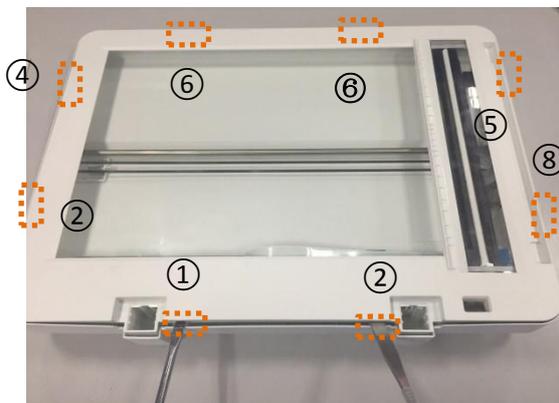
1. Remove the ADF/scanner assembly, two bottom screws of the scanner assembly, and then take out the iron baffles.



2. Remove ADF by pulling it up.

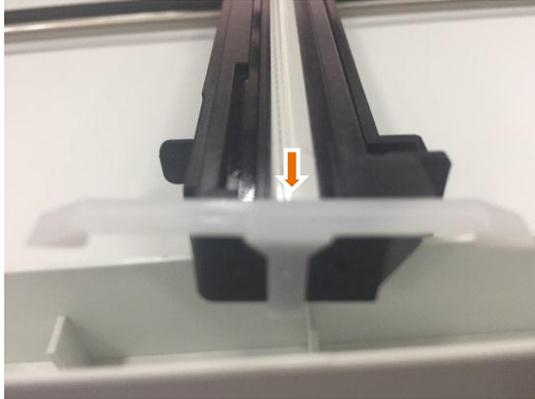


3. Pry out the bucklers (just into the corresponding holes of the jaws, and keep the tweezers in the first position while conduct prying in other positions) with two slotted screwdrivers or tweezers, and remove the scanner cover assembly

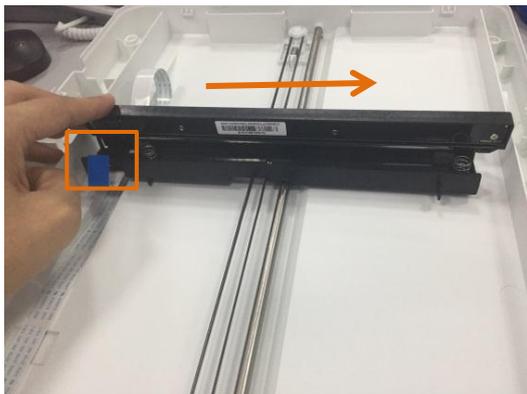


### 6.3.6 CIS

1. Remove the scanner cover assembly. Then pull out the CIS friction pads (one respectively on the left and right)

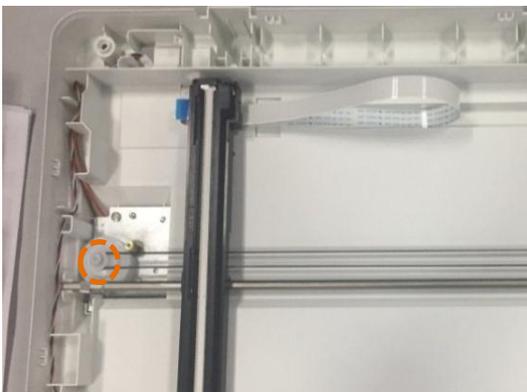


2. Pull out the CIS harness. Make CIS upright and take it out through the right side (do not directly touch the CIS luminous tube while replacing CIS, in order to avoid abnormality of the scanned image).

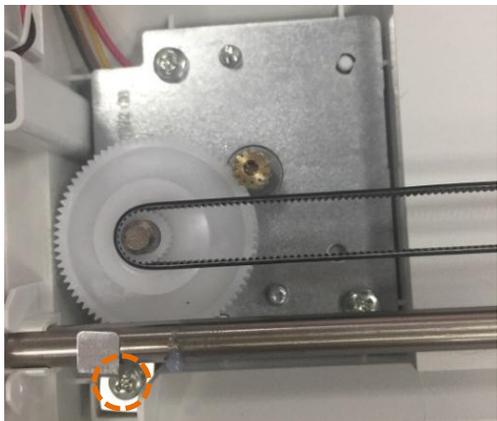


### 6.3.7 Scanner motor

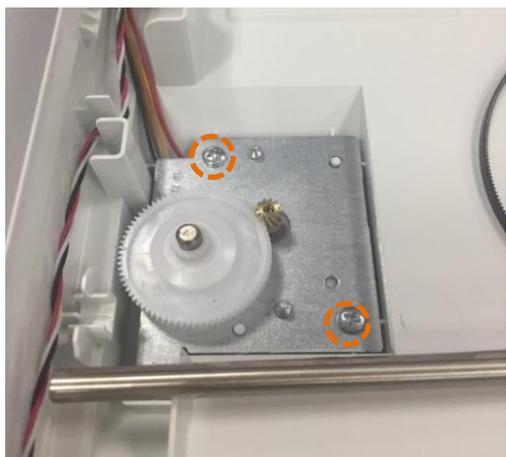
1. Remove the scanner cover assembly, pry out the gear cap, and then remove the scanner belt.



2. Remove the screws and the conductive sheet of the steel shaft. Then pry out the left end of the steel shaft.



3. Remove the two screws and take out the motor assembly. Then remove two motor screws and scanner motor.

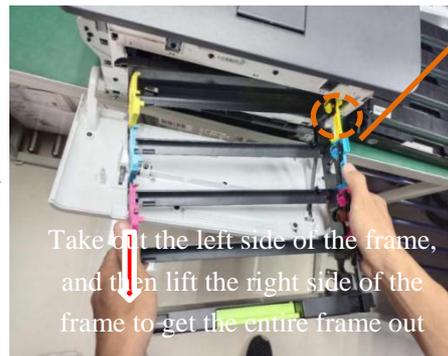


### 6.3.8 Disassembly of toner cartridge assembly

1. Open the front cover, push aside 4 pairs of toner assembly buckles, and then take out the toner cartridge (tips: do not touch the OPC surface of the toner cartridge with your hands, OPC shall be protected from light for a long term to avoid affecting the print quality)



2. Disassemble the toner cartridge frame



Lift up here while taking

Take out the left side of the frame, and then lift the right side of the frame to get the entire frame out

### 6.3.9 Disassembly of rear cover

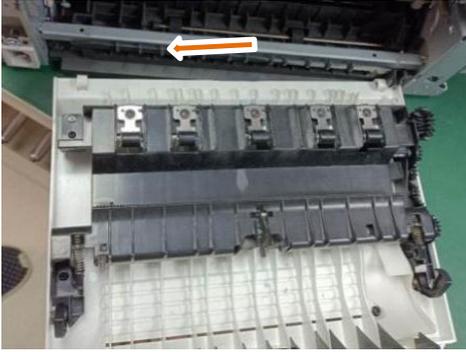
1. Use a cross screwdriver to remove the left buckle screw, and take out the buckle



Buckle

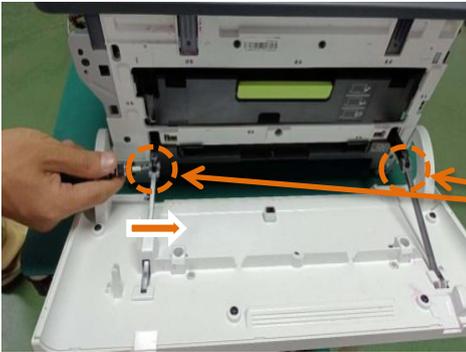


2. Move to the left to remove the rear cover (along the direction of arrow)



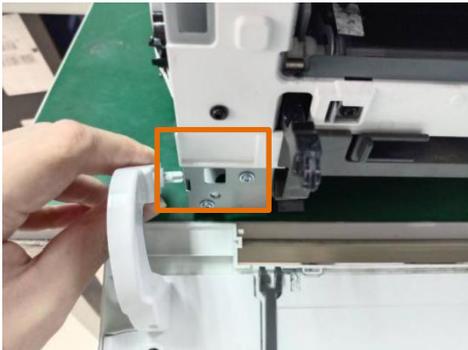
**6.3.10 Disassembly of front cover**

1. Use the tip of a straight screwdriver to push out the hinge pins on the left and right sides of the front cover to the right (place the tweezers in the position shown below to prevent the hinge pins pushed out from falling and losing)

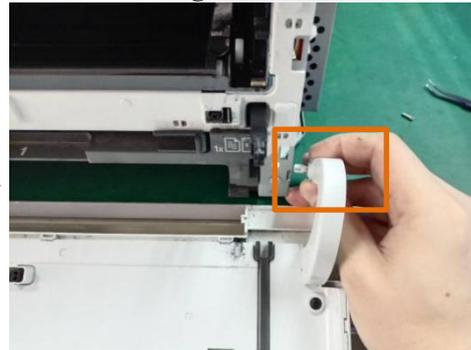


2. Remove the front cover after loosening the links of the left and right door

**Left latch**

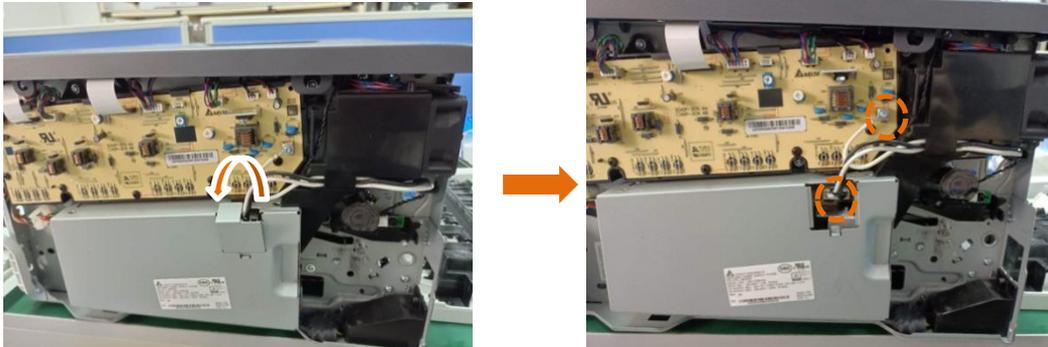


**Right latch**

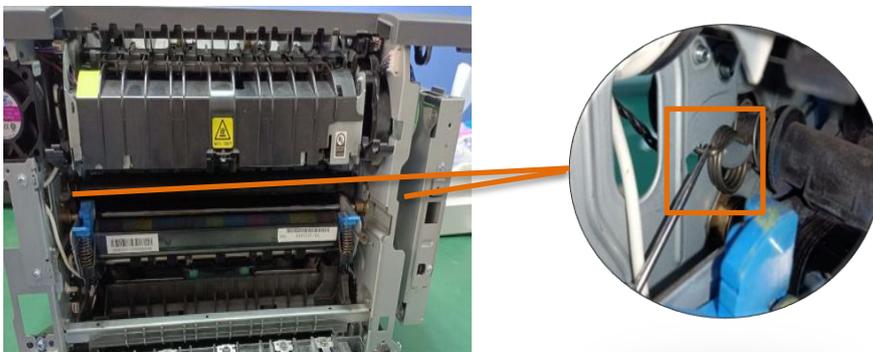


## 6.3.11 Disassembly of transfer belt assembly

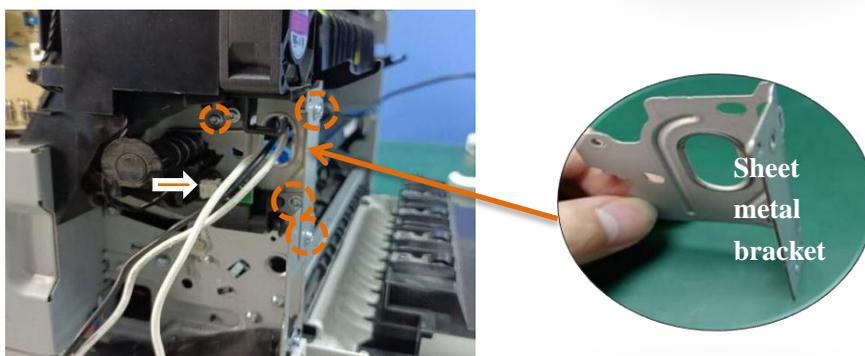
1. Push aside the connecting wire protecting cover on the right side of the power supply board by hand, use a six-angle screwdriver (T10) to loosen the screws on high voltage board and take out the wiring harness, and disconnect the wiring harness connecting the power controller board



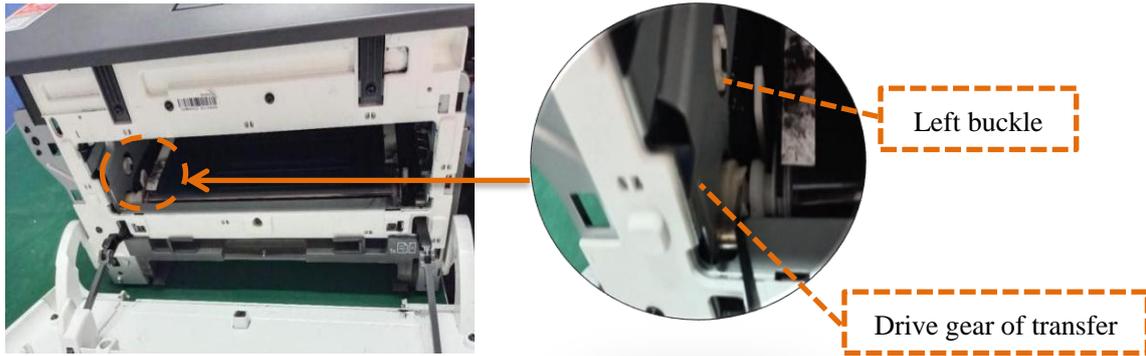
2. Use the spring hook to loosen the two retaining springs and take them out



3. Unplug the connecting line that the arrow indicates, use a six-angle screwdriver (T10) to remove the fixing screw on transfer belt bracket, and then take out the sheet metal bracket



4. Loosen the drive gear of transfer belt, press the left buckle, and take out the transfer belt (this operation is recommended to be done by two persons A and B)
  - A. Use tweezers to push out the drive gear of transfer belt to the left, and press the left buckle



B. Pull out the transfer belt from the back of the printer and take it out (do not touch or scratch the surface of the transfer belt and the transfer roller while removing them to avoid print quality problems)

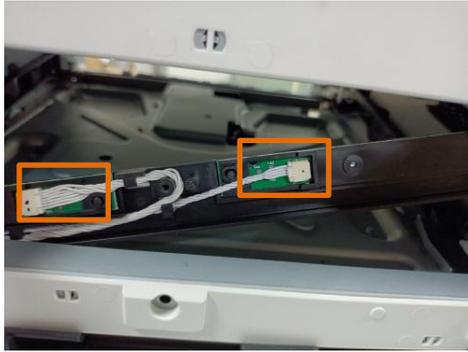


### 6.3.12 Disassembly of toner spot sensor

1. Remove the transfer belt assembly, use a cross screwdriver to remove 3 fixing screws, and then take out the back sensor.



2. Disconnect the two connecting harnesses and take out the sensor.



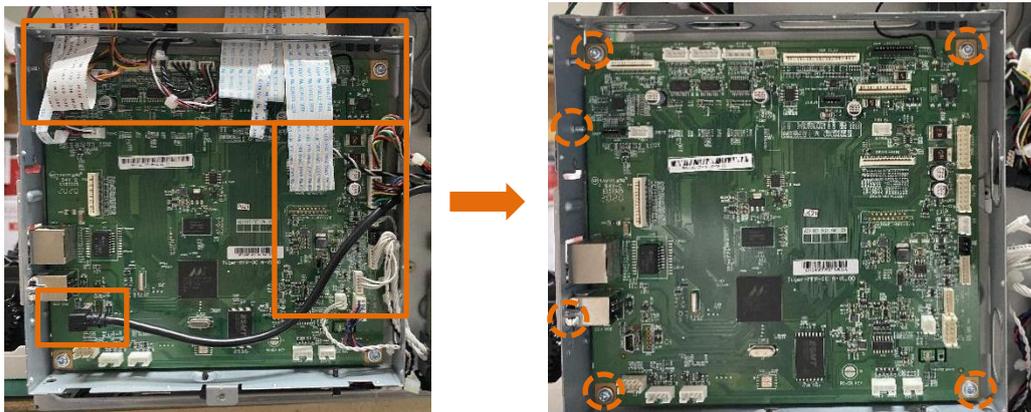
### 6.3.13 Disassembly of controller board cover

Remove the left cover, use a six-angle screwdriver (T10) to remove one fixing screw, and then take out the protecting cover



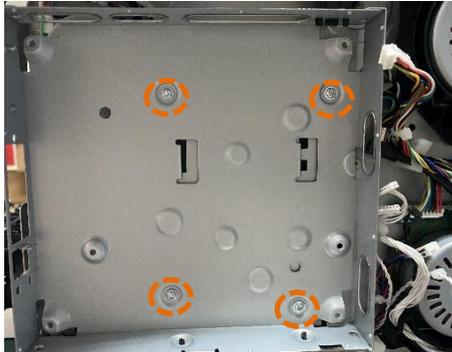
### 6.3.14 Disassembly of controller board

Remove the left cover and the controller board protection cover. Disconnect all connecting lines of the controller board, use a six-angle screwdriver (T10) to remove 5 fixing screws, and then take out the controller board.



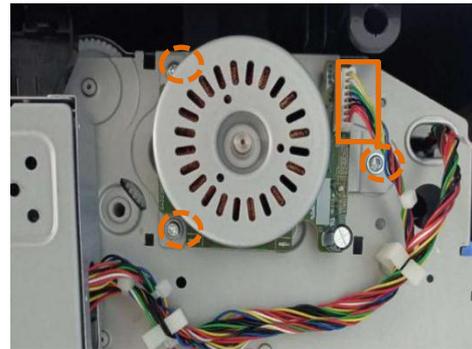
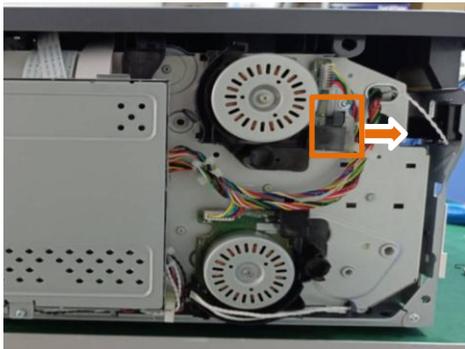
### 6.3.15 Disassembly of controller board holder

Remove the left cover, take out the controller board, use a six-angle screwdriver (T10) to remove 4 fixing screws on the controller board holder and take it out



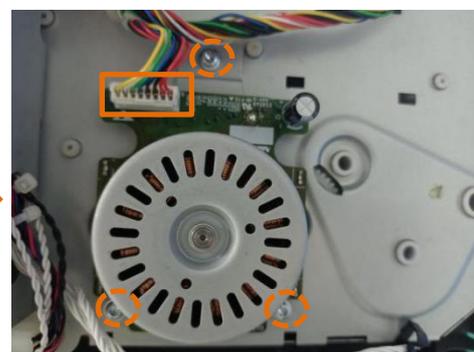
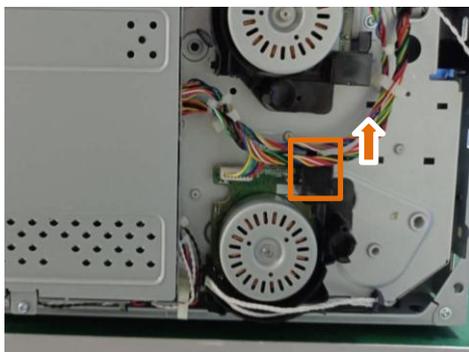
### 6.3.16 Disassembly of motor (CMY)

1. Remove the left cover, force apart the buckles on the motor cover in the frame to the direction that the arrow indicates and take out the black protecting cover, disconnect the motor connecting lines, and use a six-angle screwdriver (T10) to remove 3 fixing screws and take out the motor.



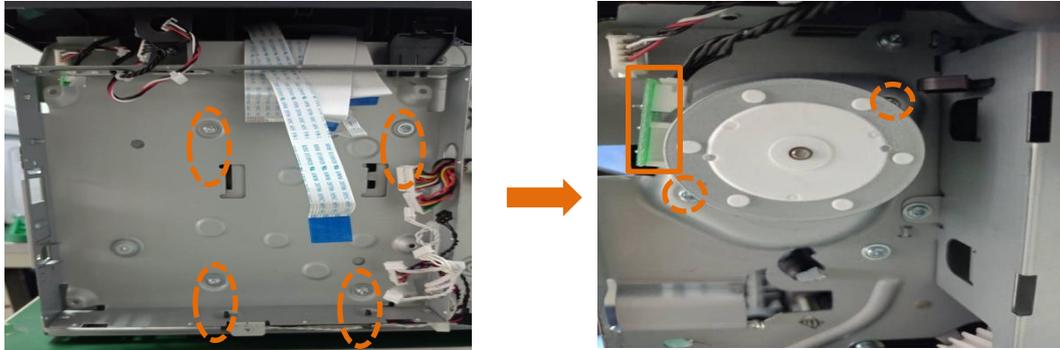
### 6.3.17 Disassembly of motor (K/transport belt)

Remove the left cover, force apart the buckles on the motor cover in the frame to the direction that the arrow indicates and take out the black protecting cover, disconnect the connecting lines, and use a six-angle screwdriver (T10) to remove 3 fixing screws and take out the motor.



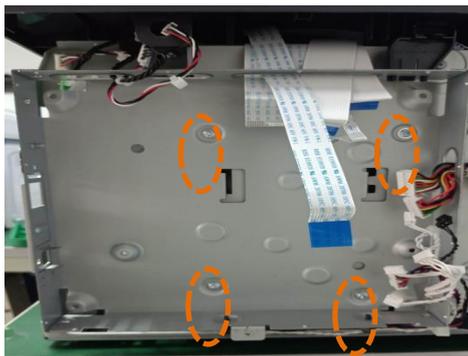
### 6.3.18 Disassembly of motor (fuser)

Remove the controller board, use a six-angle screwdriver (T10) to remove 4 fixing screws on the controller board holder and take it out. Disconnect the motor connecting lines, and use a six-angle screwdriver (T10) to remove 2 fixing screws and take out the motor.

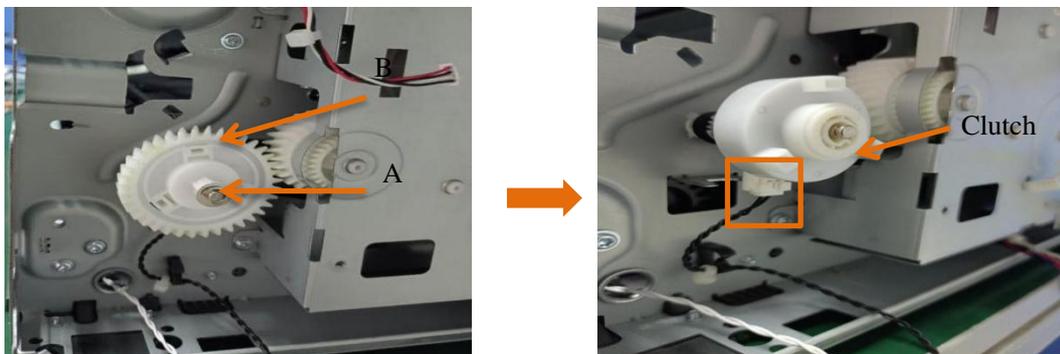


### 6.3.19 Disassembly of graded clutch

1. Remove the controller board, use a six-angle screwdriver (T10) to remove 4 fixing screws on the controller board holder and take it out.

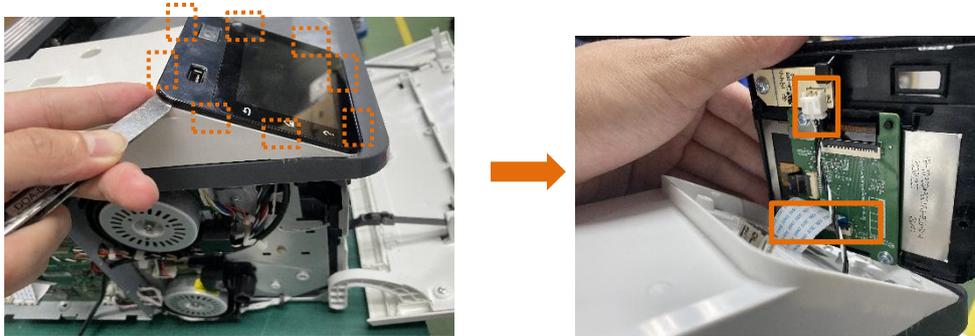


2. Use the tip of tweezers to remove the E-clip (A), and then remove the gear of the graded clutch (B). Disconnect the clutch connecting line and take out the clutch



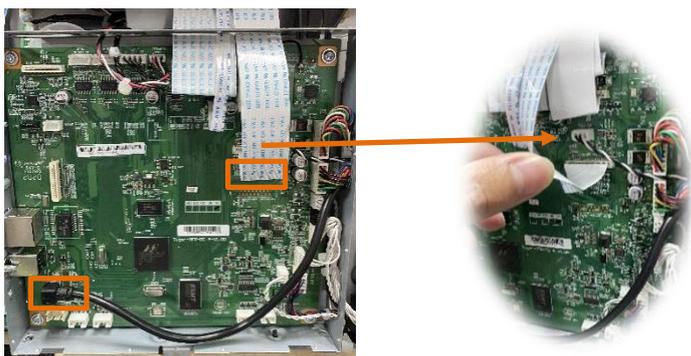
### 6.3.20 Disassembly of Control panel

1. Use tweezers to pry up eight buckles at the edge of control panel, unplug the FFC and power switch cable, then remove the control panel.

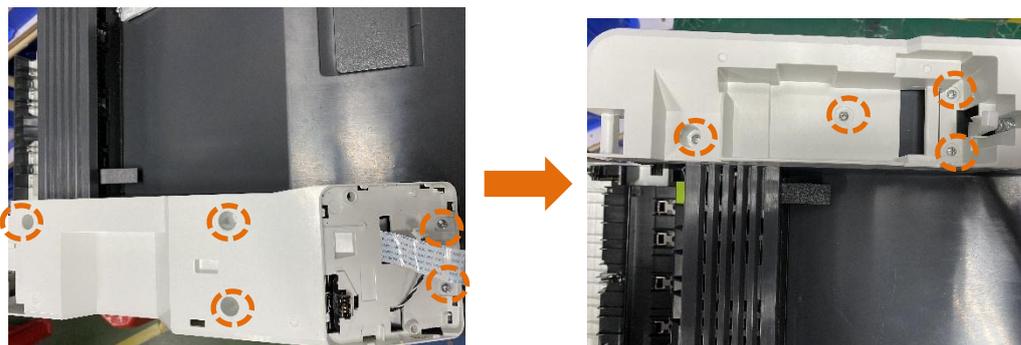


### 6.3.21 Disassembly of top cover assembly

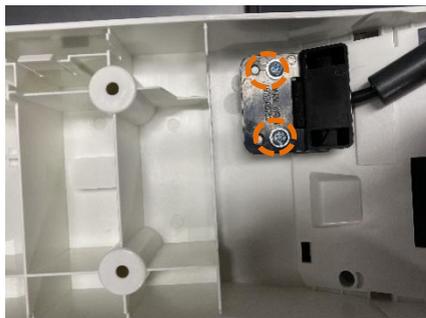
1. Remove the left and right covers of the printer, remove the controller board protecting cover, and disconnect the lines connecting the panel and the controller board.



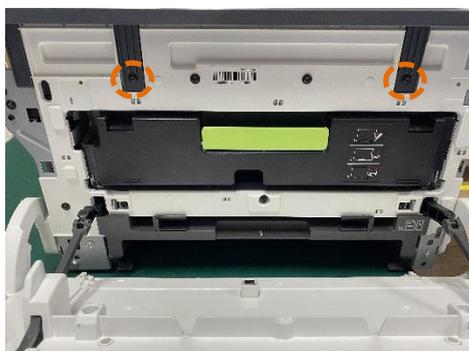
2. Use a cross screwdriver to remove nine fixed screws on lug boss, and remove the lug boss.



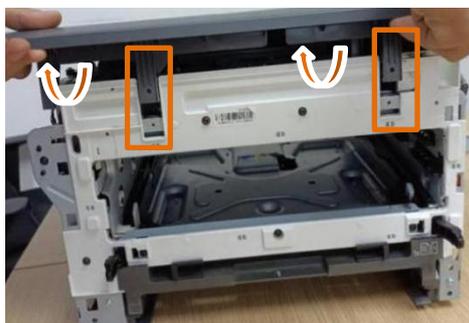
3.Remove two fixed screws on the left lug boss, then remove the USB flash disk port.



4.Use a six-angle screwdriver (T10) to remove two screws, and use tweezers to pry up three buckles.

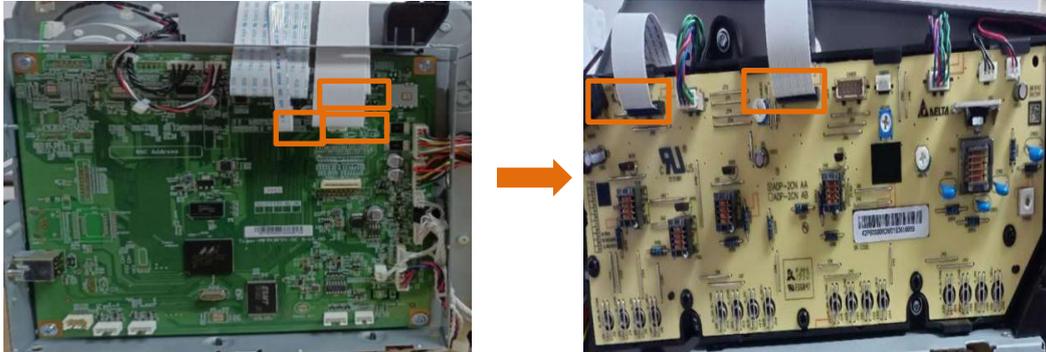


5. Lift the top cover, hold the two side edges by hand and take out the top cover.

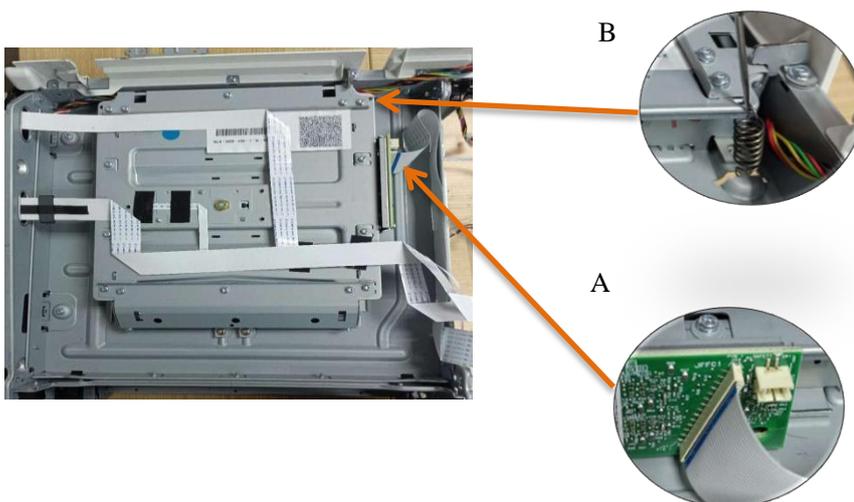


## 6.3.22 Disassembly of laser

1. Remove the left and right covers of the printer, remove the controller board protecting cover, and disconnect 3 flat connecting lines on controller board and 2 flat connecting lines on high voltage board



2. Disconnect the flat connecting harness (A) and release the locking spring (B) by the spring hook



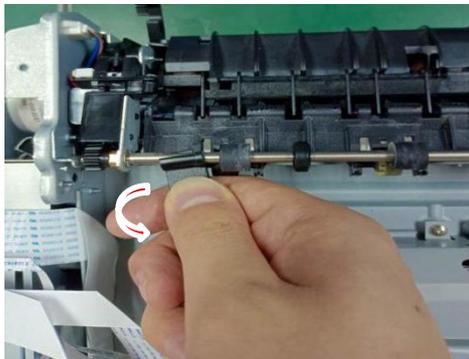
3. Use a six-angle screwdriver (T10) to remove 5 fixing screws, and then remove the stop block



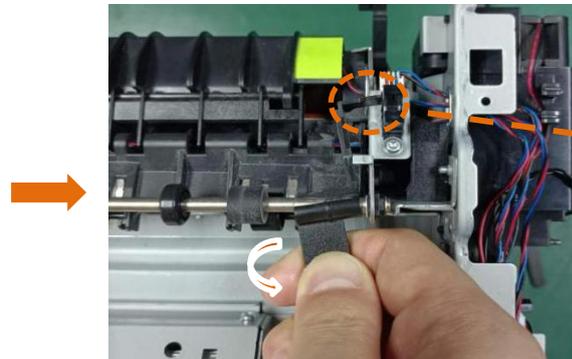
## 6.3.23 Disassembly of exit sensing arm and exit sensor board

1. Remove the top cover of the printer, and back out the sensing arm towards the right as indicated by the arrow.

Left sensing arm



Right sensing arm



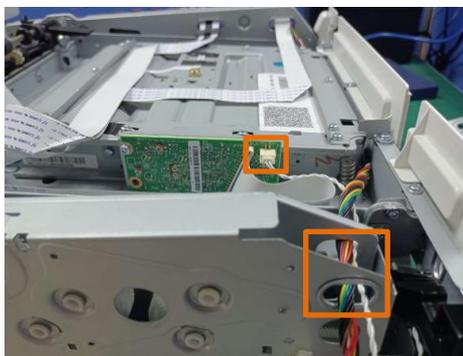
Be careful not to damage the sensing handle when backing it out

2. Disconnect the connecting cable of the exit sensor board, use a six-angle screwdriver (T10) to loosen one fixing screw, and then take out the board

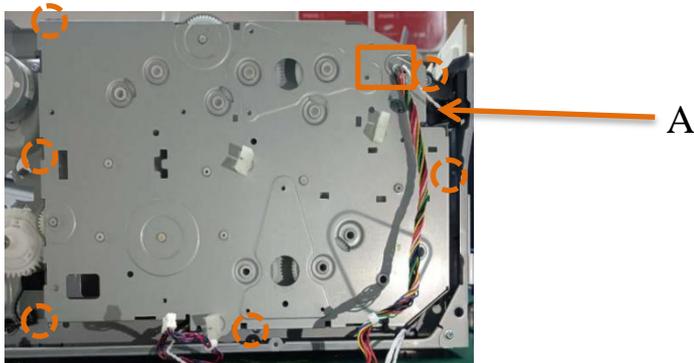


## 6.3.24 Disassembly of main drive assembly

1. Remove the left cover, right cover, top cover and controller board protecting cover. Disconnect the connecting harness on the laser connecting plate, and take out the connecting harness in the via hole

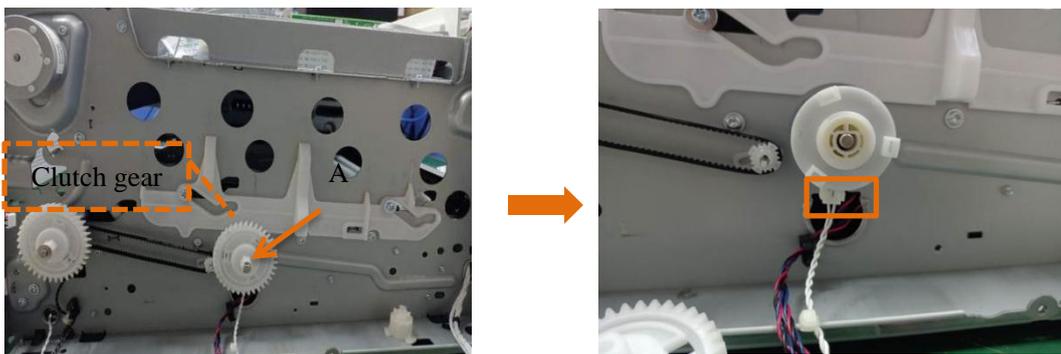


2. Take the cable A out of the inner via hole, and use a six-angle screwdriver (T10) to loosen 6 fixing screws, and then remove the main drive assembly.



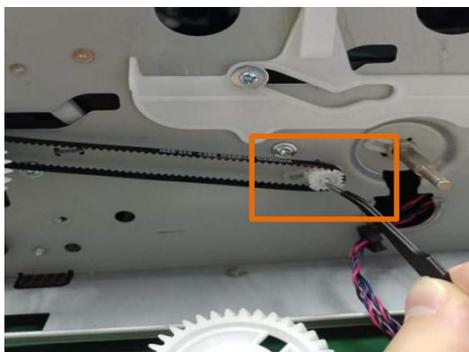
### 6.3.25 Disassembly of pickup clutch

Remove the main drive assembly. Use tweezers to remove the E-clip (A), and then remove the gear of the pickup clutch (B). Disconnect the connecting line and take out the clutch (be careful not to lose the E-clip during disassembly as it is small)



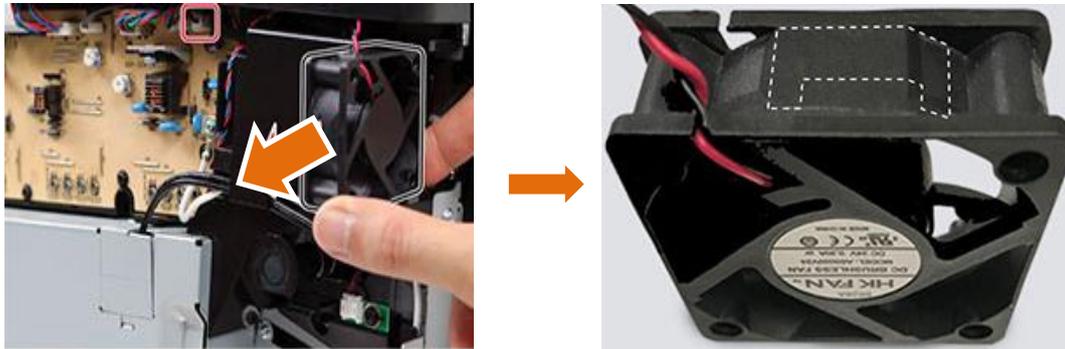
### 6.3.26 Disassembly of graded belt and gear

1. Remove the main drive assembly and the pickup clutch, press tweezers against the buckle, remove the gear and take out the belt



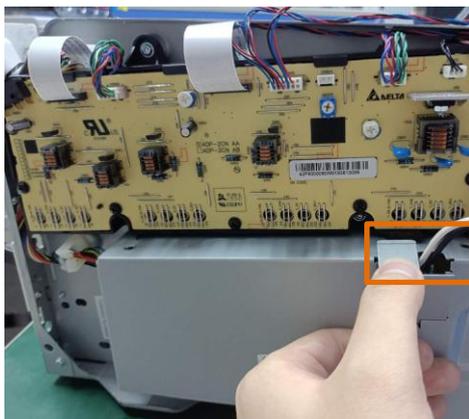
## 6.3.27 Disassembly of cooling fan

Remove the right cover, disconnect the connecting line of the high-voltage board, and then remove the fan (pay attention to the direction of the fan when installing, and the gasket needs to be stuck on the indicated area of the fan)

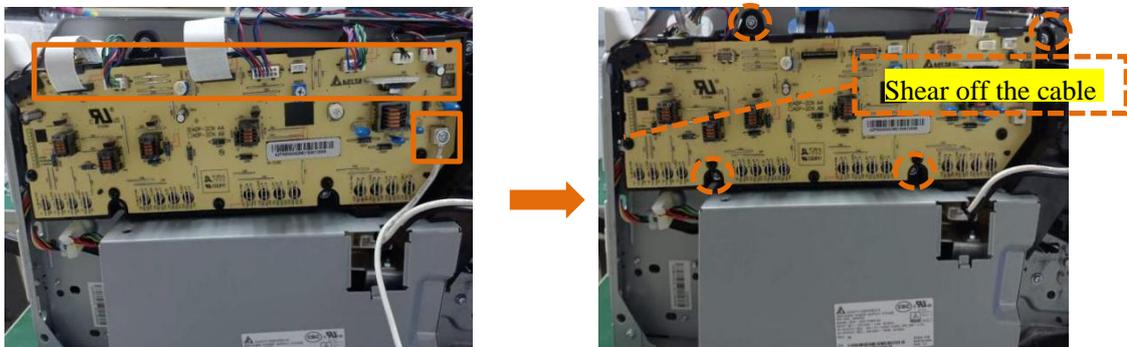


## 6.3.28 Disassembly of high voltage board (HVPS) assembly

1. Remove the right cover, push aside it by hand, remove the protective cover of the power supply board connecting cable, and disconnect all connecting harnesses of the high voltage board.

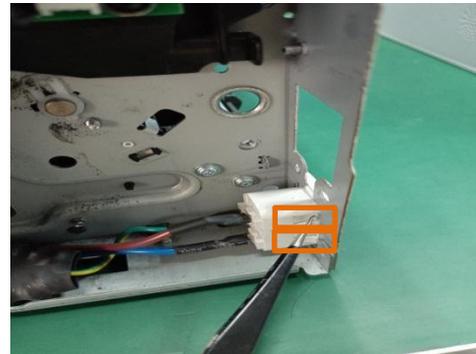
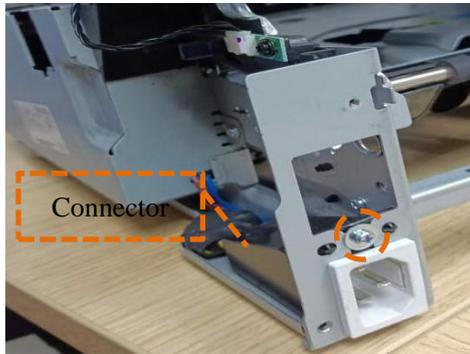


2. Disconnect all connecting lines of the high voltage board in the red frame, shear off the cable tie here, use a six-angle screwdriver (T10) to remove 4 fixing screws, and then take out the high voltage board (HVPS)

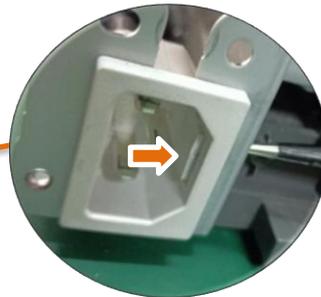
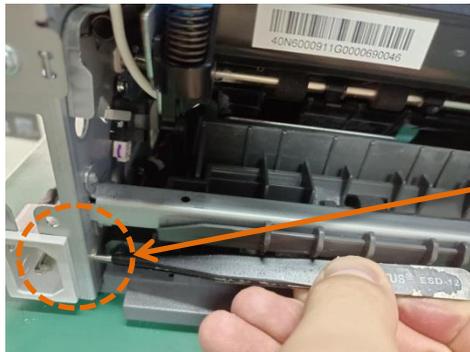


## 6.3.29 Disassembly of power supply board (LVPS) assembly

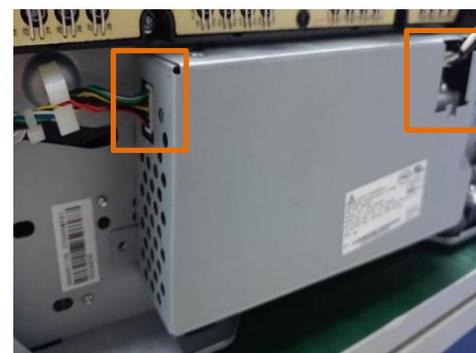
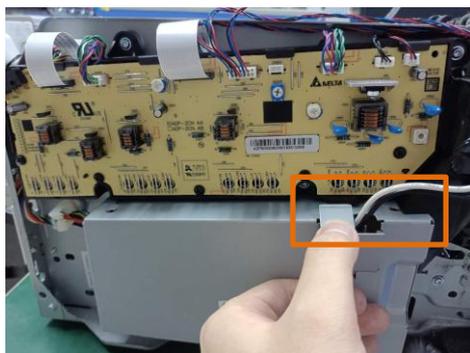
1. Remove the right cover of the printer. Remove the connector protecting cover after removing the screws with a cross screwdriver, and then press tweezers against two buckles inwards



2. Use tweezers to push out the buckle inside from the round hole of the rear cover and take out the connector



3. Push aside it by hand, remove the protecting cover of the power supply board connecting cable, and then disconnect the connecting lines at the both ends of the power supply board.



3. Use a six-angle screwdriver to remove the two fixing screws, and then take out the power supply board (LVPS)

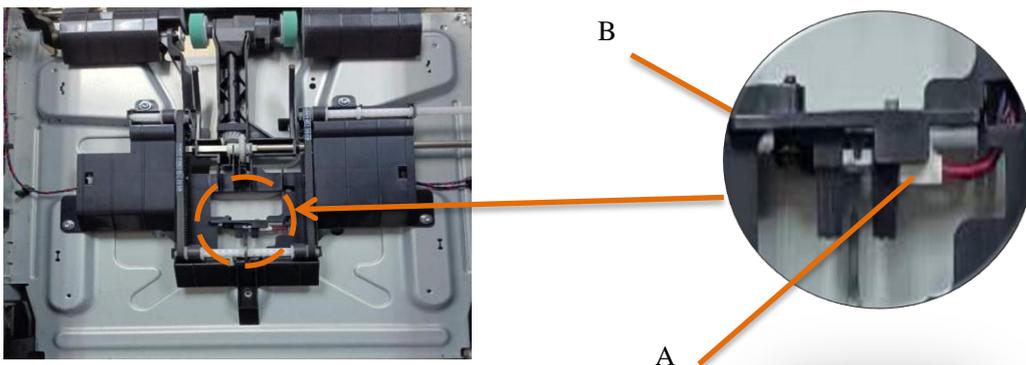


### 6.3.30 Disassembly of rubber roller

1. Place the printer as shown below, and then remove the leather sheath of the rubber roller by hands.



1. Disconnect the connecting line (A), and then use a six-angle screwdriver (T10) to remove the fixing screw (B).

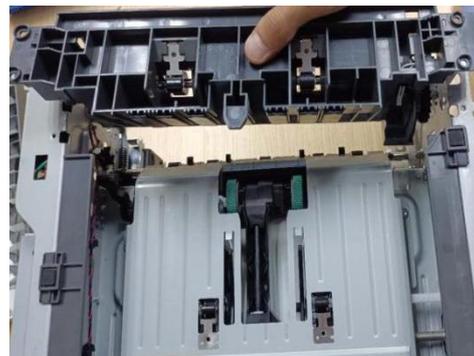


## 6.3.31 Disassembly of tray sensor switch

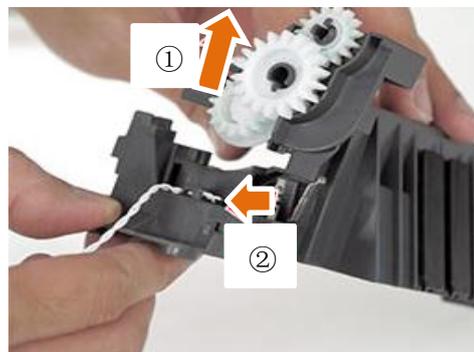
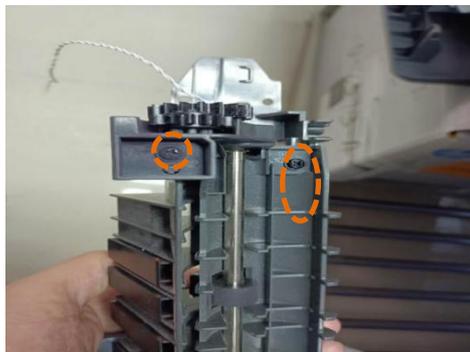
1. Remove the controller board protecting cover, and disconnect the connecting lines of the controller board.



2. Use a six-angle screwdriver to remove the 4 fixing screws on the bottom holder of the printer, and then remove the holder (**Tips:** toner contamination may occur, in case that the printer is placed sidelong. Please cover the print cartridge tray in order to minimize the contamination)

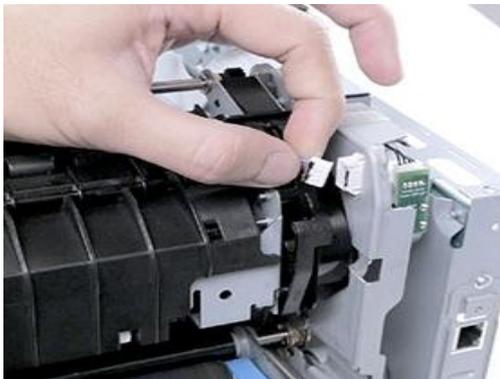


3. Use a cross screwdriver to remove 2 fixing screws, lift the gear end, and take out the tray sensor switch along the track laterally.

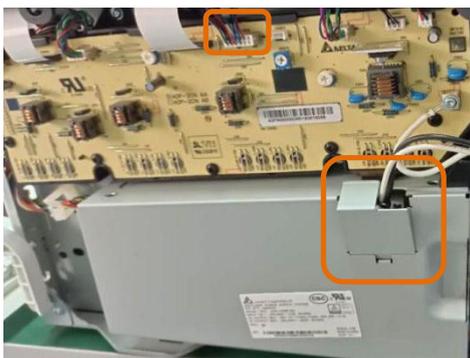


## 6.3.32 Disassembly of fuser

1. Open the front and rear covers, remove the top cover and the controller board protecting cover, and disconnect the connecting line

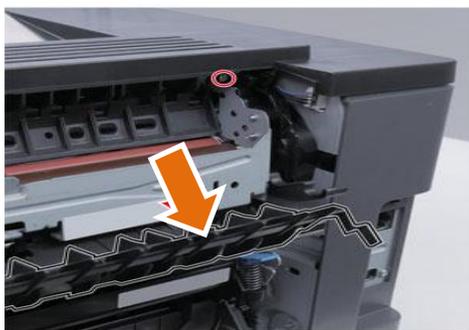


2. Disconnect the fuser connecting line at the high voltage board, push aside the power supply board protecting cover and then disconnect the connecting line. Use a six-angle screwdriver (T10) to remove 2 fixing screws on the fuser, and then take out the fuser



## 6.3.33 Disassembly of fuser ejection sensor

- Open the rear cover of the printer and the rear cover of the fuser, use a six-angle screwdriver (T10) to remove one fixing screw, and then take out the sensor

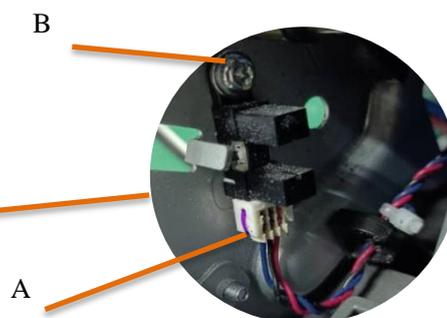


## 6.3.34 Disassembly of automatic feed sensor

1. Remove the rear cover of the printer, use a six-angle screwdriver (T10) to remove 4 fixing screws on the bottom holder of the printer, and then remove the holder



2. Disconnect the sensor cable (A), use a six-angle screwdriver (T10) to remove one fixing screw (B), and then take out the sensor



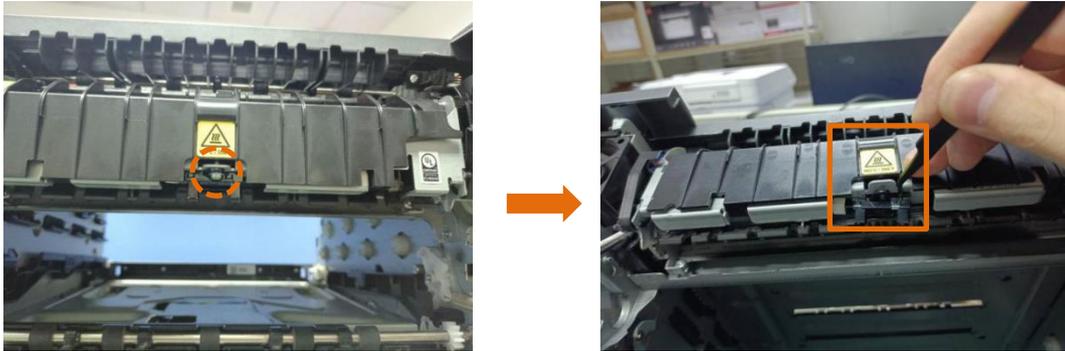
## 6.3.35 Disassembly of waste toner cartridge sensor

1. Remove the right cover. Please see the section “disassembly of right cover”.
2. Disconnect the cable, use a six-angle screwdriver to remove the fixing screw, and then take out the sensor.



### 6.3.36 Disassembly of fuser probe sensor

Open the rear cover, use a six-angle screwdriver (T10) to remove one screw on the fuser sensor, and then use tweezers to pry up the right buckle, disconnect the cable and take out the sensor



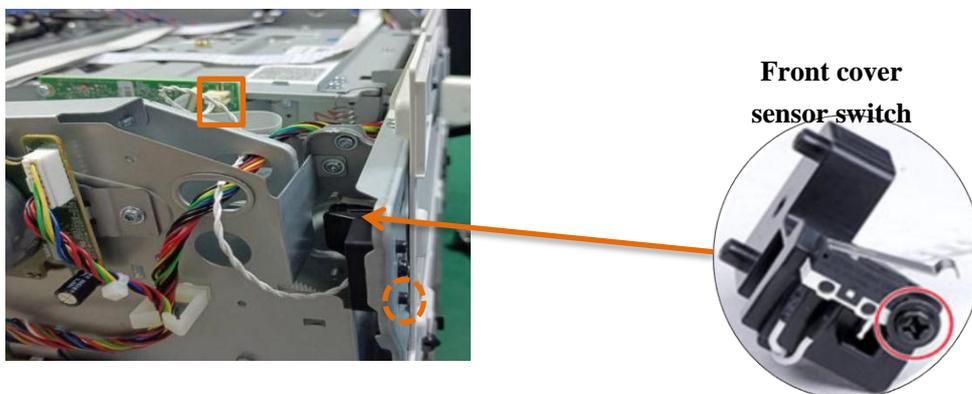
### 6.3.37 Disassembly of manual feed sensor

Use a six-angle screwdriver (T10) to remove the 4 fixing screws at the bottom of the printer, and then remove the protecting cover (**Tips:** toner contamination may occur, in case that the printer is placed sidelong. Please take out the toner cartridge assembly in order to minimize the contamination)



### 6.3.38 Disassembly of front cover sensor switch

Remove the top cover of the printer, disconnect the connecting cable, use a cross screwdriver to remove one fixing screw, and then remove the front cover sensor switch



## 7. Precautions for replacement of spare parts:

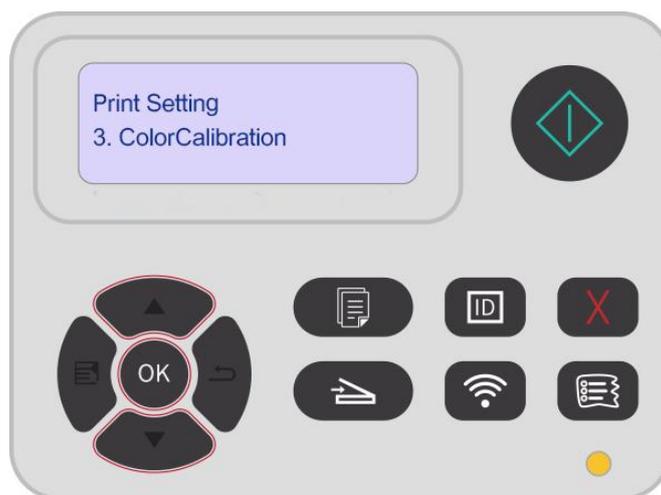
### 7.1 Manually performing the calibration function after replacing any accessories

#### 7.1.1 Calibration method (FB model)

When the environment where your printer is used changes greatly, the printer may automatically perform color calibration for better printing results. In case of ghosting or large color difference, you can manually calibrate colors as follows:

1. Press "Menu" to enter the menu setting interface.
2. Select "Print Settings" by pressing "▲" or "▼", and then press "OK".
3. Select "Color Calibration" by pressing "▲" or "▼", and then press "OK" to set "Full Calibration" and "Position Calibration".

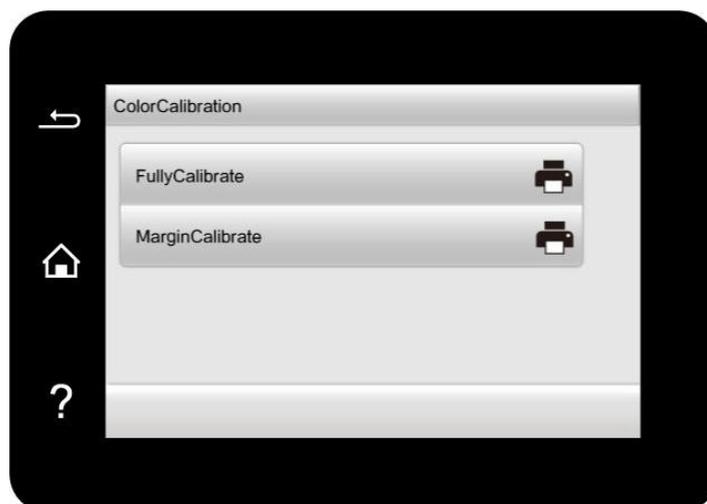
-  Note:
- When your printer performs a certain amount of print jobs, it will automatically perform color calibration.
  - When you replace the laser toner cartridge with a new one, the printer will automatically perform color calibration.



#### 7.1.2 Calibration method (ADF model)

When the environment where your printer is used changes greatly, the printer may automatically perform color calibration for better printing results. In case of ghosting or large color difference, you can manually calibrate colors as follows:

1. Click "" button in control panel to enter "Menu Setting" interface.
2. Press "Print Setting" - "ColorCalibration" to carry out "FullyCalibrate" and "MarginCalibrate".



- Note:
- When your printer performs a certain amount of print jobs, it will automatically perform color calibration.
  - When you replace the laser toner cartridge with a new one, the printer will automatically perform color calibration.

**7.1.3 Maintenance instructions for replacement of controller board, laser, IDC spare parts**

When replacing the controller board, laser (LSU) and IDC (toner spot sensor) spare parts of this series of machines, the corresponding calibration data of the spare part must be imported into the printer prior to use, otherwise the printing quality effect may be affected, and the operation is as follows:

**7.1.3.1 Instructions for controller board replacement**

**1. Obtaining maintenance information**

Maintenance history	Information to be obtained
There is no LSU or IDC history maintenance records of the machine	It is necessary to obtain <b>machine serial number (SN)</b> of the current printer
LSU has been replaced, but IDC has not been replaced	It is necessary to obtain the <b>serial number SN of the spare part of the LSU</b> that the printer finally uses, and <b>the serial number SN</b> of the printer.
IDC has been replaced, but LSU has not been replaced	It is necessary to obtain the <b>serial number SN of the spare part of the LDC</b> that the printer finally uses, and <b>the serial number SN</b> of the printer.
Both IDC and LSU have been replaced	It is necessary to obtain the <b>serial numbers SNs of the spare parts of LSU and LDC</b> that the printer finally uses

**2. Operation method:**

Remarks: Please refer to the attached page for how to operate the following “1820 Calibration Data Upload Tool, which is provided by after-sales personnel or can be obtained from the CSS after-sales system.

Maintenance history	Operation method
There is no LSU or IDC history maintenance records of the machine	<ol style="list-style-type: none"> <li>1. Enter the <b>printer SN</b> in the after-sales system interface, click “<b>Download Calibration Data File</b>” and “<b>Download IDC Parameter File</b>” and save them</li> <li>2. Send the downloaded “<b>Download Calibration Data File</b>” to the printer first with the <b>setup 1820 tool</b>, and then send the downloaded “<b>Download IDC Parameter File</b>” to the printer, and the printer will be ready after the automatic calibration is completed.</li> </ol>
LSU has been replaced, but IDC has not been replaced	<ol style="list-style-type: none"> <li>1. Enter the SN of the LSU that the printer uses finally in the after-sales system interface, and click “Download Calibration Data File” and save it;</li> <li>2. Enter the printer SN in the after-sales system interface, click “Download IDC Parameter File” and save it;</li> <li>3. Send the downloaded “<b>Download Calibration Data File</b>” to the printer first with the setup 1820 tool, and then send the downloaded “<b>Download IDC Parameter File</b>” to the printer, and the printer will be ready after the automatic calibration is completed.</li> </ol>

IDC has been replaced, but ISU has not been replaced	<ol style="list-style-type: none"><li>1. Enter the SN of the IDC that the printer uses finally in the after-sales system interface, and click “Download IDC Parameter File” and save it;</li><li>2. Enter the printer SN in the after-sales system interface, click “Download Calibration Data File” and save it;</li><li>3. Send the downloaded “<b>Download Calibration Data File</b>” to the printer first with the setup 1820 tool, and then send the downloaded “<b>Download IDC Parameter File</b>” to the printer, and the printer will be ready after the automatic calibration is completed.</li></ol>
Both IDC and LSU have been replaced	<ol style="list-style-type: none"><li>1. Enter the SN of the LSU that the printer uses finally in the after-sales system interface, and click “Download Calibration Data File” and save it;</li><li>2. Enter the SN of the IDC that the printer uses finally, click “Download IDC Parameter File” and save it;</li><li>3. Send the downloaded “<b>Download Calibration Data File</b>” to the printer first with the setup 1820 tool, and then send the downloaded “<b>Download IDC Parameter File</b>” to the printer, and the printer will be ready after the automatic calibration is completed.</li></ol>

### 7.1.3.2 Instructions for laser LSU replacement

#### 1. Obtaining maintenance information

Maintenance history	Information to be obtained
There is no LSU or IDC history maintenance records of the machine	It is necessary to obtain the <b>serial number SN of the LSU</b> to be replaced for the printer, and <b>the serial number SN</b> of the current printer.
LSU has been replaced, but IDC has not been replaced	It is necessary to obtain the <b>serial number SN of the LSU</b> to be replaced for the printer, and <b>the serial number SN</b> of the printer.
IDC has been replaced	It is necessary to obtain the <b>serial number SN of the LSU</b> to be replaced for the printer, and <b>the serial number SN of the IDC</b> that the printer uses finally.

#### 2. Operation method:

Remarks: Please refer to the attached page for how to operate the following “1820 Calibration Data Upload Tool”, which is provided by after-sales personnel or can be obtained from the CSS after-sales system.

Maintenance history	Operation method
There is no LSU or IDC history maintenance records of the machine	<ol style="list-style-type: none"> <li>1. Enter the <b>SN of the LSU</b> to be replaced for the printer in the after-sales system interface, click <b>“Download Calibration Data File”</b> and save it</li> <li>2. Enter the current <b>printer SN</b> in the after-sales system interface, click <b>“Download IDC Parameter File”</b> and save it</li> <li>3. Send the downloaded <b>“Download Calibration Data File”</b> to the printer first with the setup 1820 tool, and then send the downloaded <b>“Download IDC Parameter File”</b> to the printer, and the printer will be ready after the automatic calibration is completed.</li> </ol>
LSU has been replaced, but IDC has not been replaced	<ol style="list-style-type: none"> <li>1. Enter the <b>SN of the LSU</b> to be replaced for the printer in the after-sales system interface, click <b>“Download Calibration Data File”</b> and save it</li> <li>2. Enter the current <b>printer SN</b> in the after-sales system interface, click <b>“Download IDC Parameter File”</b> and save it</li> <li>3. Send the downloaded <b>“Download Calibration Data File”</b> to the printer first with the setup 1820 tool, and then send the downloaded <b>“Download IDC Parameter File”</b> to the printer, and the printer will be ready after the automatic calibration is completed.</li> </ol>
IDC has been replaced	<ol style="list-style-type: none"> <li>1. Enter the <b>SN of the LSU</b> to be replaced for the printer in the after-sales system interface, click <b>“Download Calibration Data File”</b> and save it</li> <li>2. Enter the <b>SN of the IDC</b> that the printer uses finally in the after-sales system interface, click <b>“Download IDC Parameter File”</b> and save it</li> <li>3. Send the downloaded <b>“Download Calibration Data File”</b> to the printer first with the setup tool, and then send the downloaded <b>“Download IDC Parameter File”</b> to the printer, and the printer will be ready after the automatic calibration is completed.</li> </ol>

### 7.1.3.3 Instructions for IDC replacement

#### 1. Obtaining maintenance information

Maintenance history	Information to be obtained
There is no IDC history maintenance records of the machine	It is necessary to obtain the <b>serial number SN of the LDC</b> to be replaced for the printer.
IDC has been replaced	It is necessary to obtain the <b>serial number SN of the LDC</b> to be replaced for the printer.

#### 2. Operation method:

Remarks: Please refer to the attached page for how to operate the following “1820 Calibration Data Upload Tool, which is provided by after-sales personnel or can be obtained from the CSS after-sales system.

Maintenance history	Operation method
There is no IDC history maintenance records of the machine	<ol style="list-style-type: none"> <li>1. Enter the <b>SN of the IDC</b> to be replaced for printer in the after-sales system interface, click “<b>Download IDC Parameter File</b>” and save it</li> <li>2. Send the downloaded “<b>Download IDC Parameter File</b>” to the printer with the setup 1820 tool, and the printer will be ready after the automatic calibration is completed.</li> </ol>
IDC has been replaced	<ol style="list-style-type: none"> <li>1. Enter the <b>SN of the IDC</b> to be replaced for printer in the after-sales system interface, click “<b>Download IDC Parameter File</b>” and save it</li> <li>2. Send the downloaded “<b>Download IDC Parameter File</b>” to the printer with the setup 1820 tool, and the printer will be ready after the automatic calibration is completed.</li> </ol>

**Appendix 1 Circumference of Each Roller of this Equipment**

<b>Names</b>	<b>Portrait cycle mm</b>
First transfer roller	25.12
Second transfer roller	59.66
Stretch roller	28.26
ITU backup roller	43.96
ITU cleaning backup roller	43.96
ITU driving roller	64.7782
Transfer belt	655.004
Photoconductor drum	75.4
Developer roller	26.6
Charging roller	25.7

## Appendix 2 Descriptions of Product Serial Number

All machines are affixed with their own product serial number labels. The meaning of the product serial number code and the location of the label are described below.

Code meaning:



Label position:



### Appendix 3 Descriptions of Terminologies in this Manual

The following table includes the explanations of all the terminologies involved in this manual.

<b>Terminologies</b>	<b>Explanations</b>
CFR	Safety standard for a kind of laser products
LCD	Liquid crystal display
CIS	Scanner
PPM	Number of pages printed per minute
HVPS	High voltage power supply board
LVPS	Low voltage power supply board
OPC	Photoconductor drum
PCR	Charging roller
DR	Developer roller
TR	Transfer roller
PR	Fuser pressure roller
LSU	Laser
FFC	Controller board connecting line
ITU	Transfer belt