

Chapter Five D I S A S S E M B L Y

Chapter Five C O N T E N T S

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General Instructions

This chapter provides procedures for removal and replacement of field replacement components. For other components not shown in this chapter, the diagrams in the *Parts Catalog* attached with this manual will help locate the component.

For replacement of a component, use the reverse of the removal procedures explained in this chapter.

Before proceeding, make sure printer power is switched off and the power cord is unplugged from the printer. See **Warning** below.



Warning - To avoid injury to human bodies, make sure that AC power is removed and the power cord is unplugged from both the power line and the printer.

Screws/hardware

Screws and hardware used in the printer are listed in the beginning section of the *Parts catalog*. Symbol numbers also given in the list for these screws are referred to in the disassembling instructions in the following pages.



Caution - To secure a self-tapping screws, align it with the thread carefully. First turn it counterclockwise, then slowly clockwise. Do not over-tighten. In case the selftapped thread is damaged, the affected part must be replaced with a new part.

Disassembly road map

The diagram on page 5-4 is intended to give an idea on what order to be followed to reach the component. For example, in order to remove the drum unit, the toner container, developer unit, and the paper feed unit must be removed beforehand.

Note. In most cases, the toner container and the developer unit must be removed in the beginning.

Use the reverse of removal procedures when replacing the component back in the printer. Observe whatever note provided to give critical handlings.

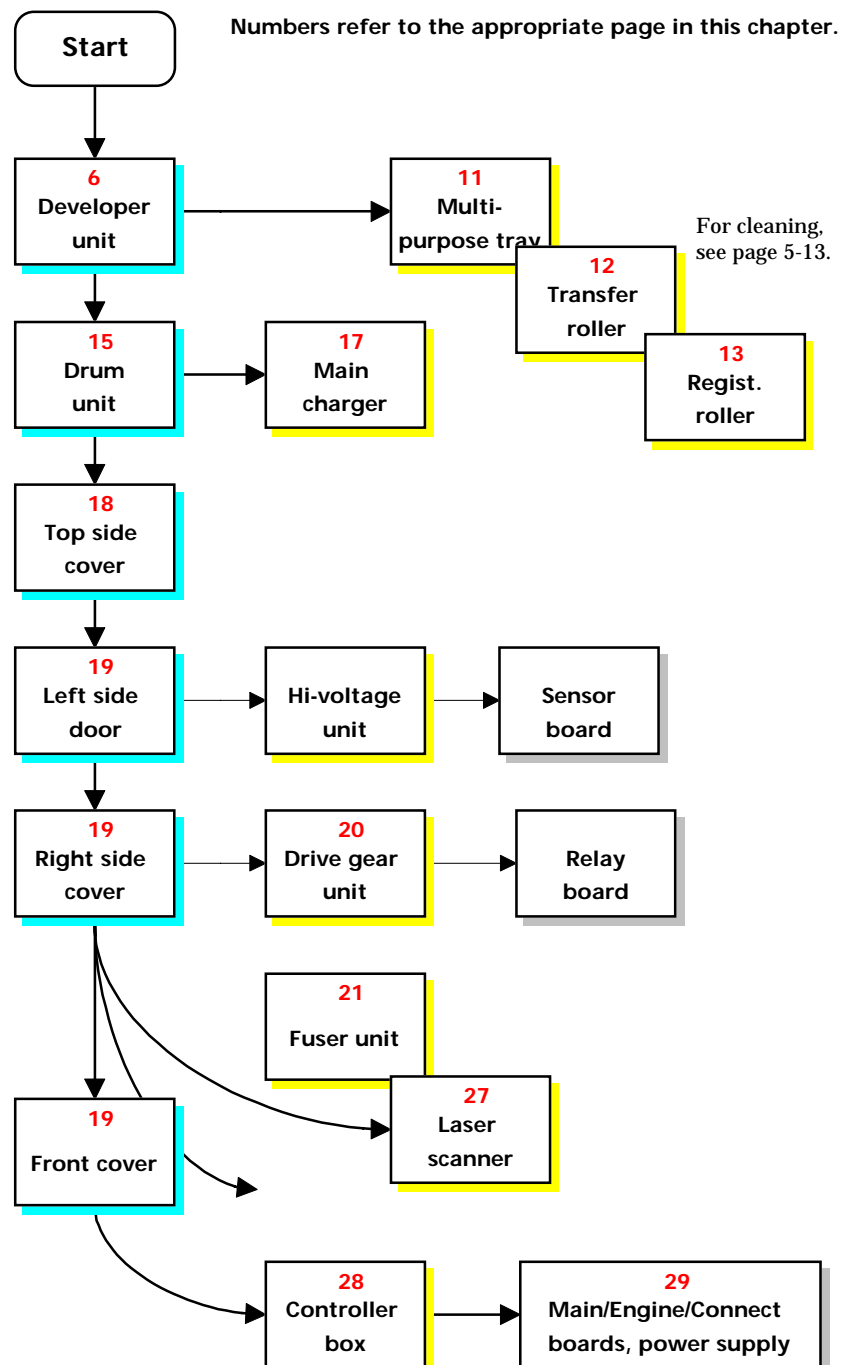


Warning - Before proceeding, unplug the power cord from the printer and the power supply.

Warning - Never attempt to operate the printer with a component removed.

Caution - The printer uses electrostatic-sensitive parts inside (on boards, laser scanner, etc.). Provide an antistatic (discharging) device, such as a wrist strap, that can effectively discharge your body before touching boards, laser scanner, etc.

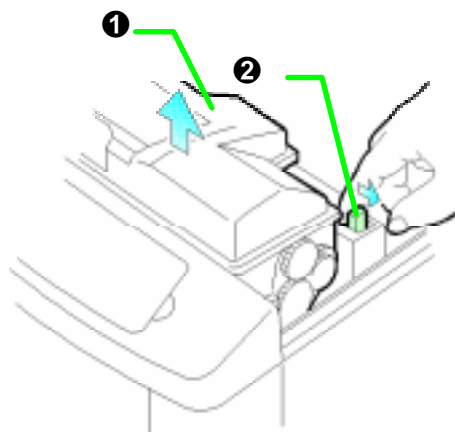
DISASSEMBLY ROAD MAP



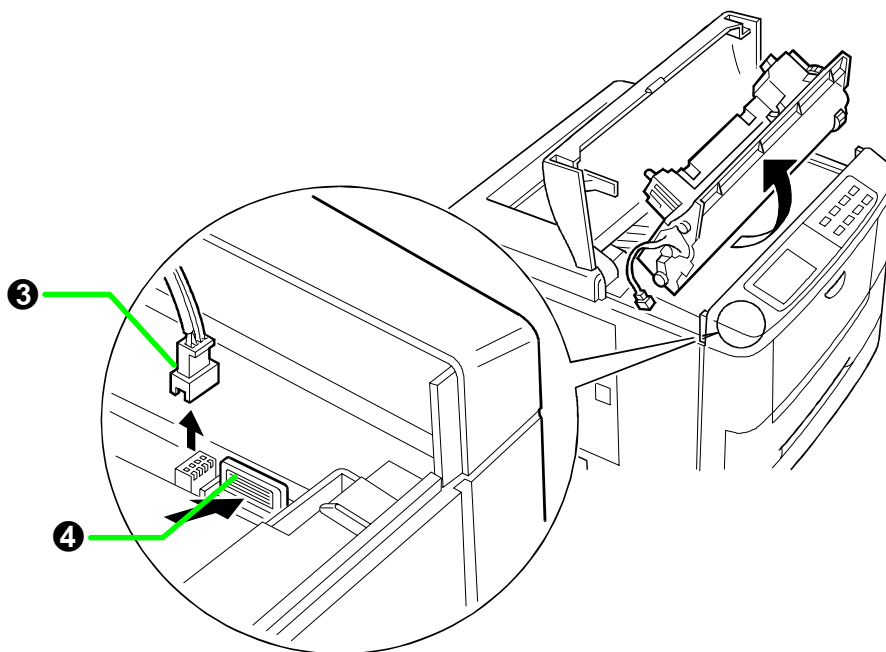
Disassembly

Removing the developer unit

Open the top cover. The toner container ❶ must be removed first: Pull the toner container release lever ❷ as below. Pull the toner container slowly up. To avoid toner adhering from spilling, keep it as level as possible.



After removing the toner container, remove the developer's connector ③ from the printer. Then, while pressing the developer release lever ④ towards the front of the printer, remove the developer unit.



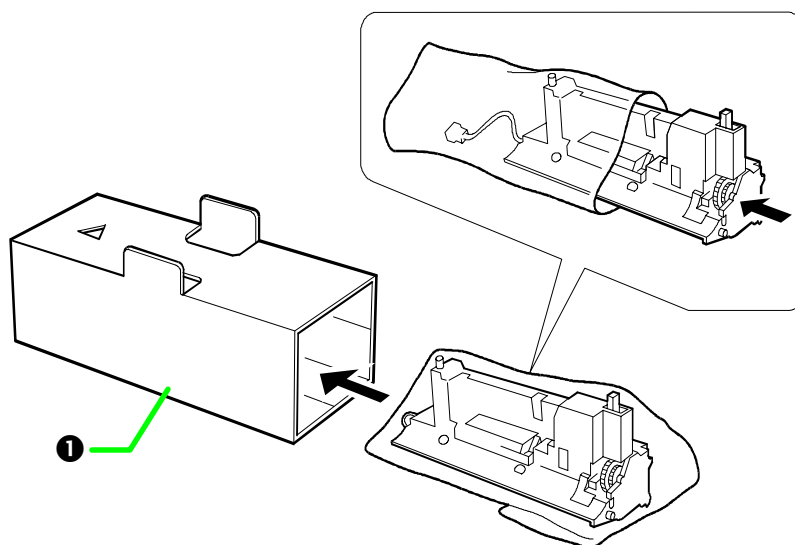
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Note. After removing the developer, seal it in the protective bag and place it on a flat surface. Do not place the developer in a dusty area. If you ship the developer, pack it in the shipping container specifically supplied with the printer. See **Shipping the developer unit** on page 5-8. Also do not touch the developing roller of the developer. Do not place floppy disks near the developer.

Shipping the developer unit

If the developer unit is shipped (the developer must be shipped separately if the printer is shipped), it must be fit in the shipping container ❶ supplied originally with the printer.

First, flap the magnet roller protective cover down. Put the developer unit in the plastic bag supplied with the shipping container. Put the developer unit into the shipping container.



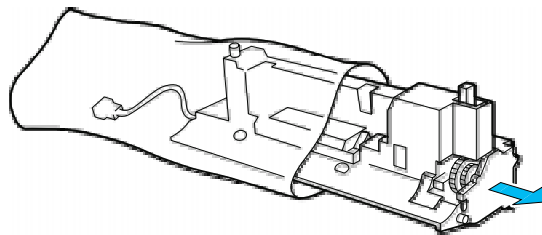
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Installing a new developer

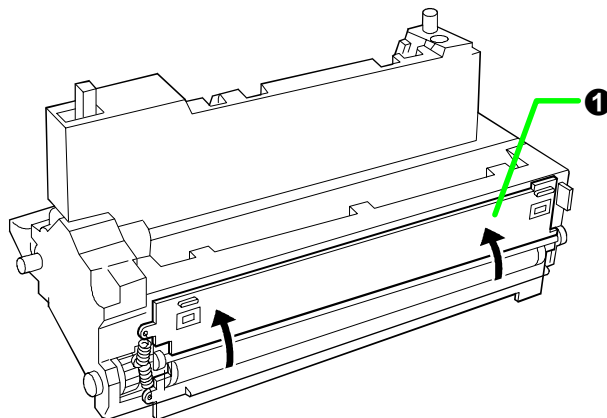
Use the following developer kit for replacement. This kit is commonly used with both FS-1700 and FS-3700 models.

Kit	FS-1700	FS-3700
Developer unit	DV-20	DV-20

Produce the developer unit from the protective bag.



Flap the magnet roller protective cover ❶ up.



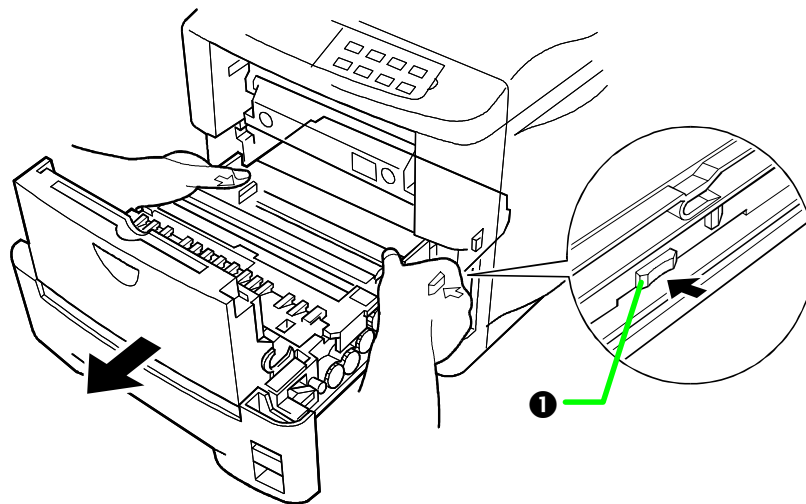
Install the developer using the reverse manner of removing the developer explained above. Connect the developer connector.

Removing the paper feed unit

The paper feed unit can be removed from the printer without using tools. First, **be sure to remove the paper cassette entirely out**. Otherwise, the paper feed unit will not come out.

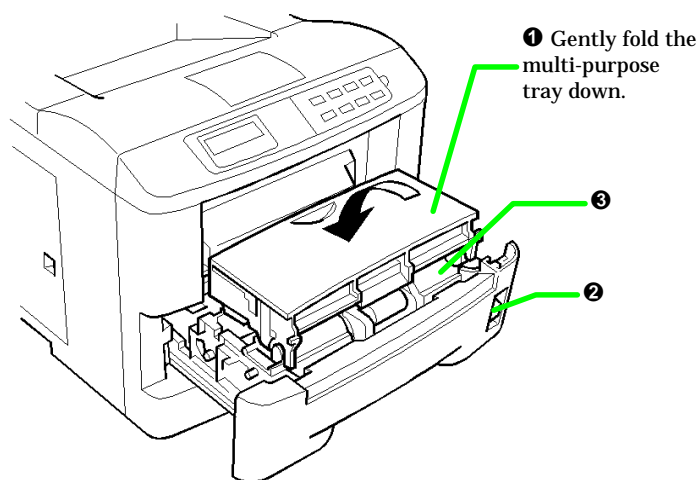
To remove the paper feed unit, first remove the paper cassette out. While holding and pushing the locking tabs ❶ at both sides of the paper feed unit, draw the paper feed unit all the way out.

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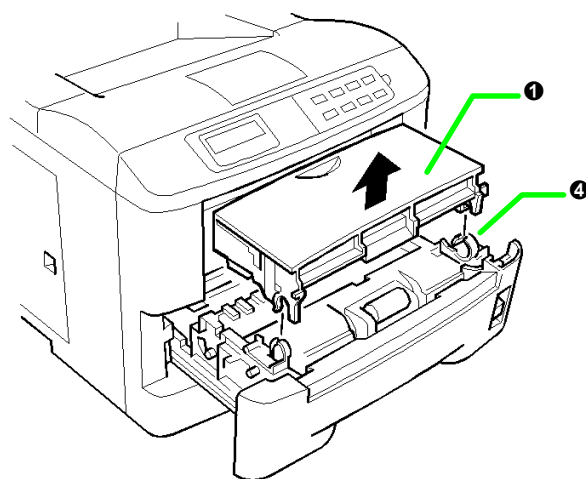


Removing the multi-purpose tray

To remove the multi-purpose tray ❶, pull the paper feed unit release lever ❷ up and draw the paper feed unit ❸ out. Then proceed as follows:



Holding the tray by both ends, pull it up until catches ④ are released.



Removing the transfer roller

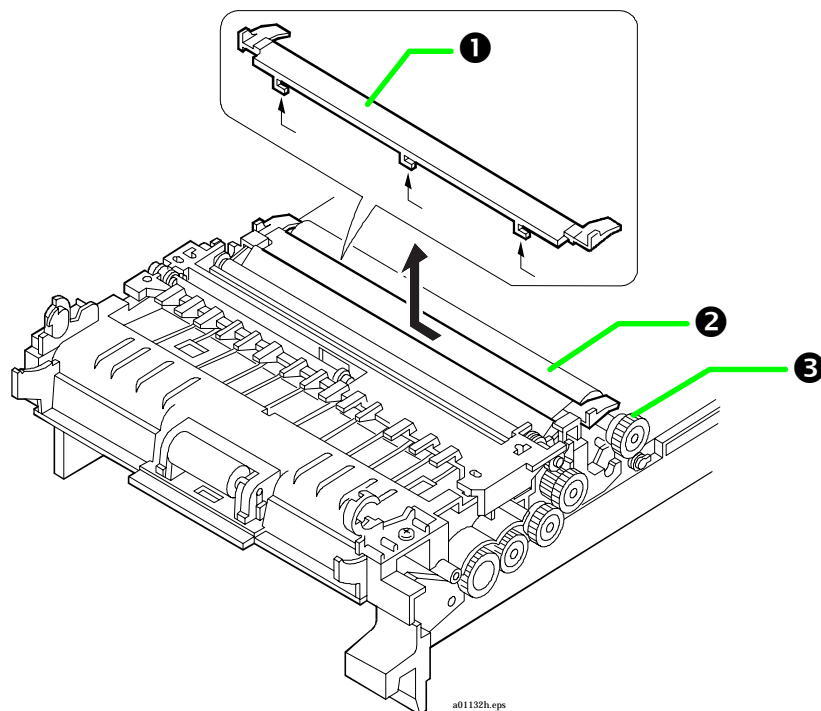
Before removing the transfer roller, remove the paper feed unit out of the printer.



Caution - Do not touch the transfer roller (sponge) surface. Oil and dust (particles of paper, etc.) on the transfer roller can significantly deteriorate the print quality (white spots, etc.).

Remove the transfer roller cover ❶. Facing front the paper feed unit, move it to left. Using a small flat blade screw, pull the left end of the cover.

The transfer roller ❷ is held in place by two axle holders that hold the roller axle at both ends. Hold and pull the gear ❸ at the right end of the roller up, then remove the left end.



CLEANING THE TRANSFER ROLLER

To clean the transfer roller, hold it by its gear so that the roller hangs down horizontally. Use a vacuum cleaner, moving nozzle along the roller, **but do not let the nozzle directly touch on the roller**. Thoroughly clean the entire surface of the roller.

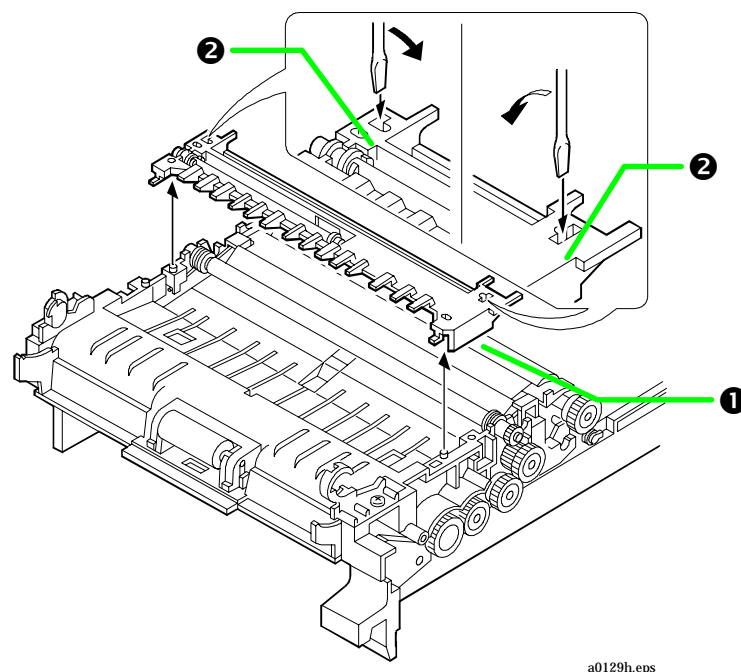
REPLACING THE TRANSFER ROLLER

Carefully clean the left side (facing the front of the paper feed unit) axle end before replacing the transfer roller. This end of the axle is directly applied with the high voltage transfer bias.

Removing the registration rollers

Before removing the registration rollers, remove the paper feed unit out of the printer. See **Removing the paper feed unit** on page 5-10.

Remove the registration rollers cover ①. The cover is locked by two catches that lock it onto the paper feed unit. These catches can be accessed through the holes ② on the cover. Insert a screw driver as shown below and release the locks.

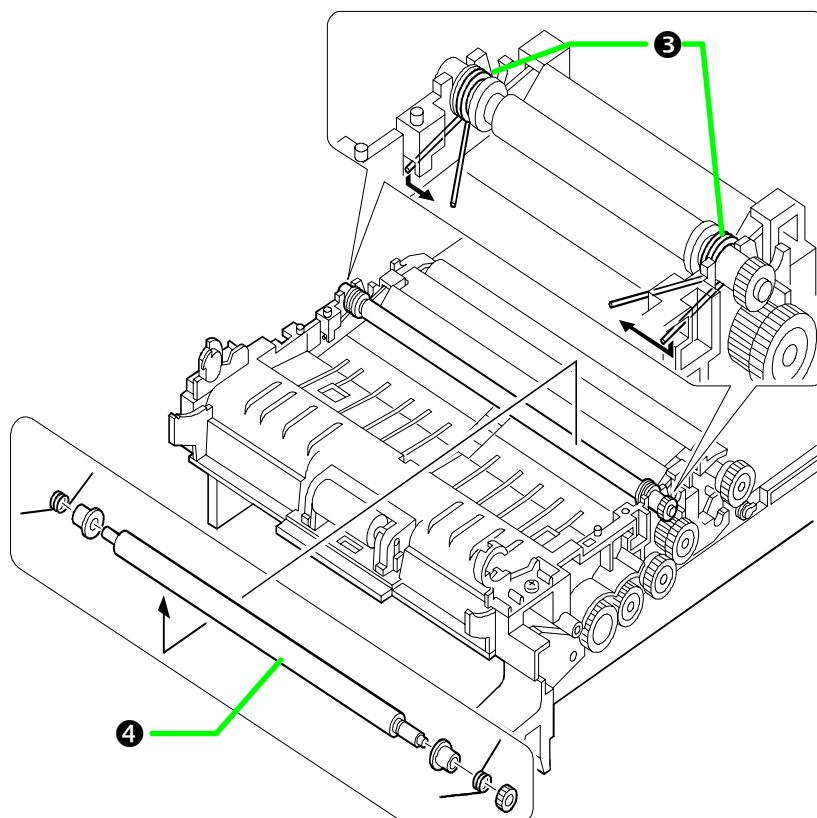


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Remove the coil springs ③ that are used to secure and press the top (metal) registration roller ④ towards the bottom (rubber) registration roller underneath.



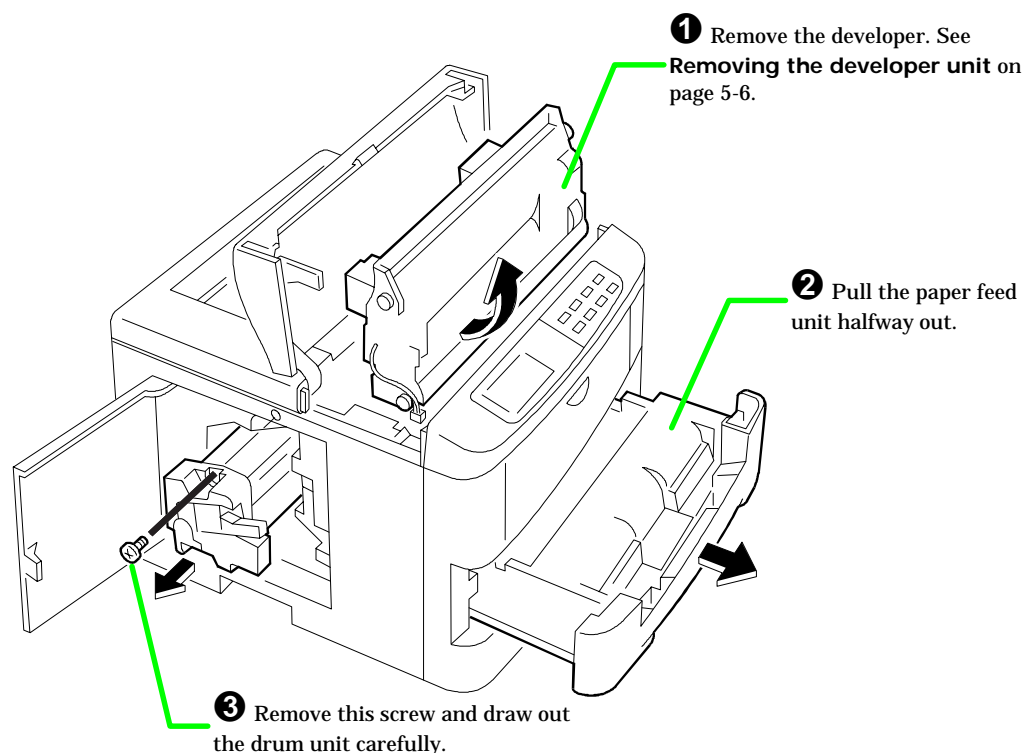
Protect your eyes with goggles.



Removing the drum unit



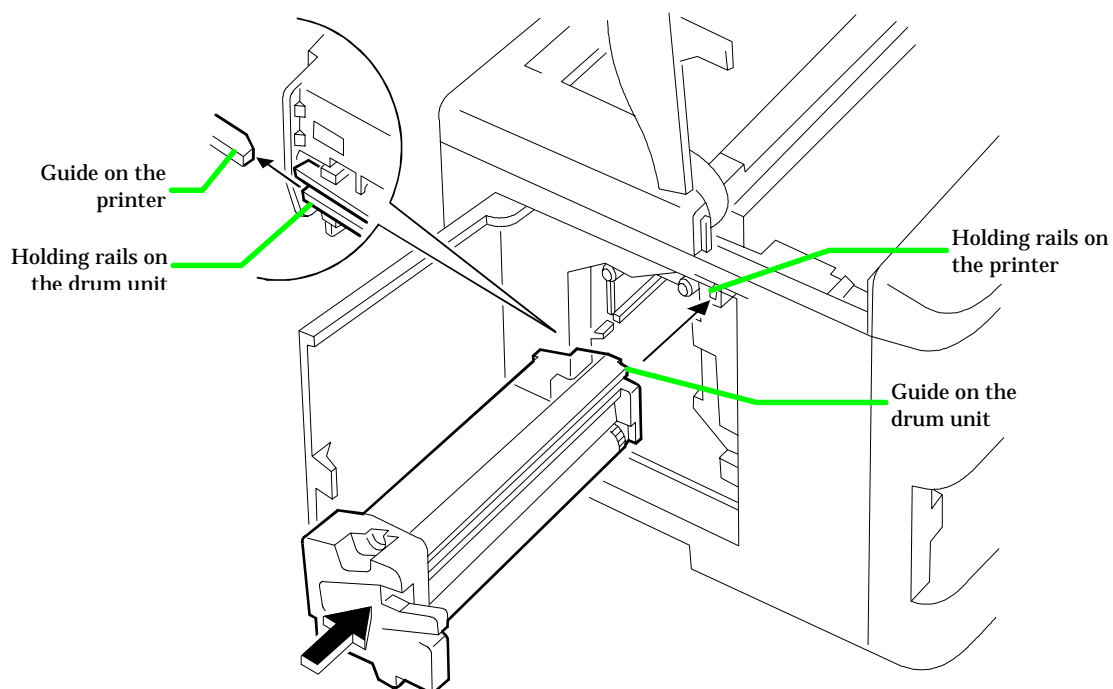
Caution - Before removing the drum unit ③, be sure to remove the developer unit ① and draw out the paper feed unit ② half way. Do not attempt to forcibly pull out the drum without first having done all of these procedures.



Caution - Store the drum unit in a clear, clean place, not exposed to a strong light source. Seal it in a protective bag. Avoid bump the drum surface onto hard objects.

Replacing the drum unit

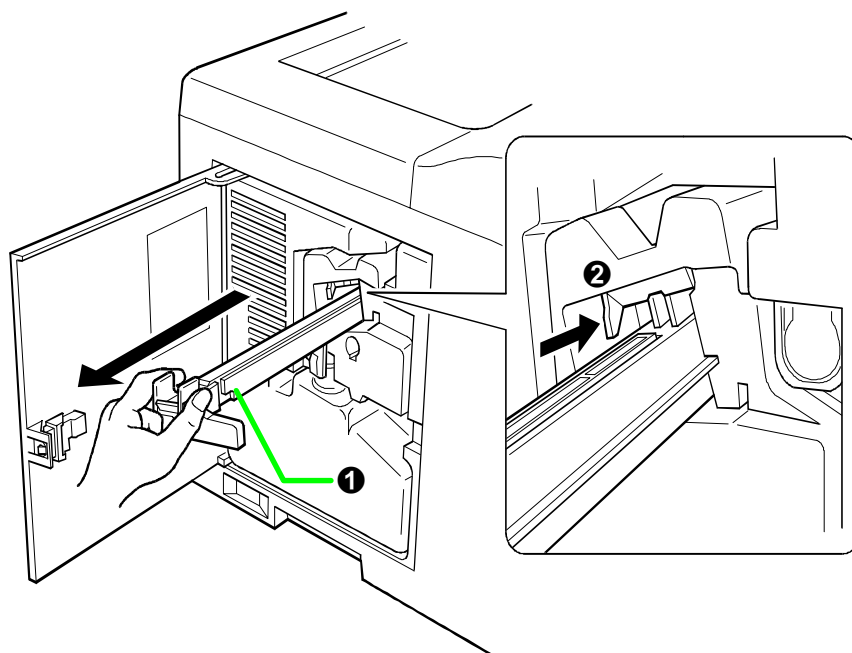
To replace the drum unit into the printer, be sure to align the guides and rails on the drum unit with each other. Do not force to slide the drum unit in unless they are properly aligned with each other.



Main charger unit

Pull the main charger ❶ until it stops. While pushing the (white) locking peg ❷ inwards the printer, pull the main charger unit all the way out.

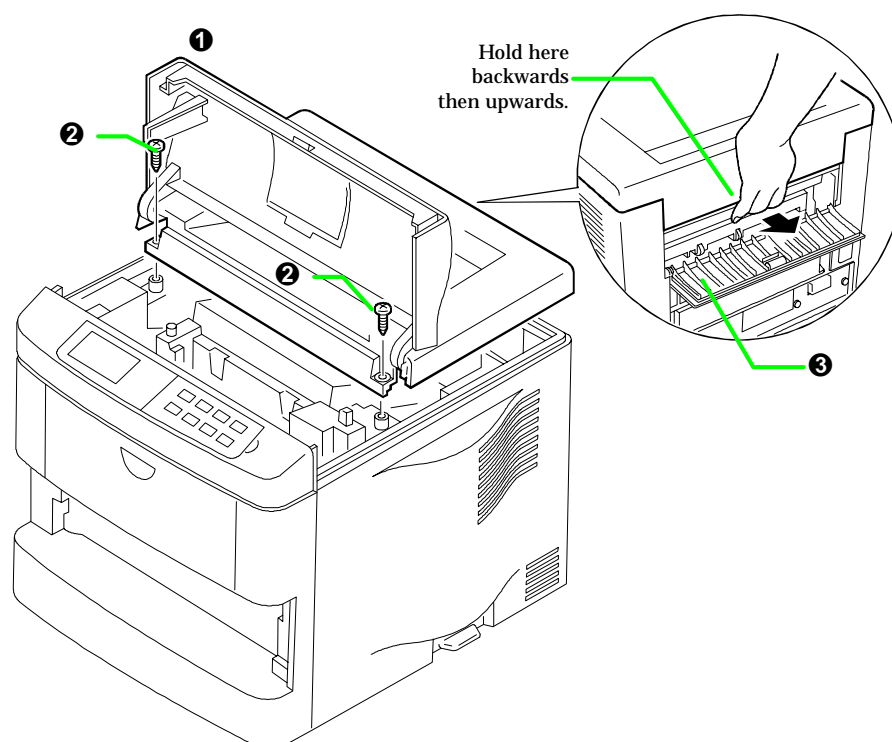
The main charger unit is technically explained in chapter 4, *Operation*.



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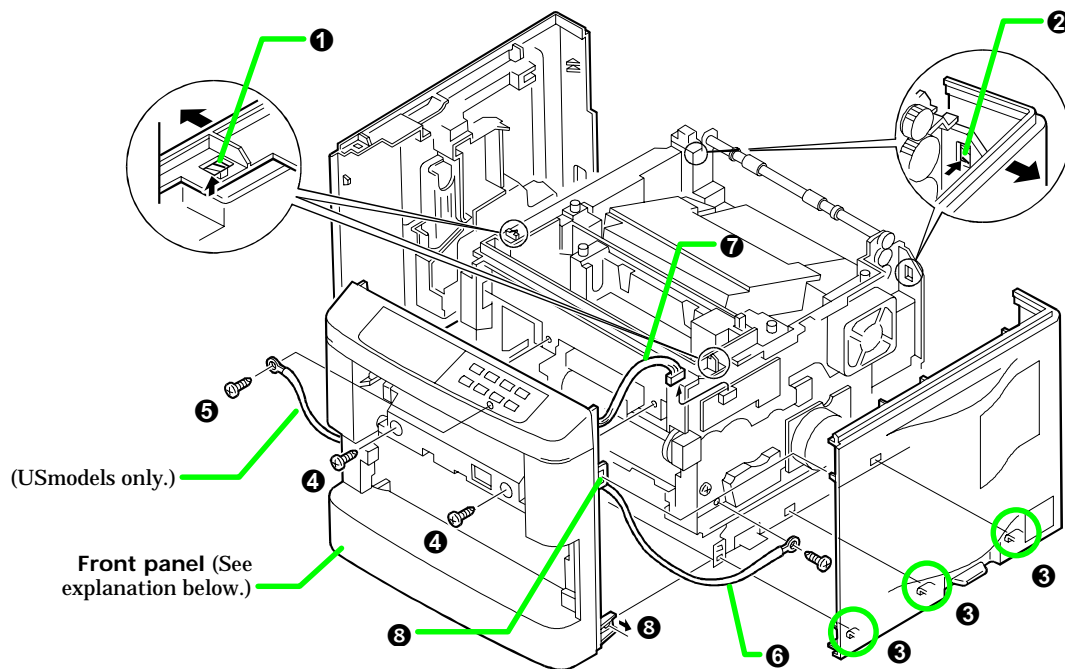
Top side cover

Open the toner container access door ❶. Remove two screws ❷. While holding the spring-loaded back side cover ❸ to open, pull the back plane of the top cover away from the printer, then pull it upwards to remove.



Removing covers

The left and right side covers are snapped onto the chassis by catches and holes. No screws are used. To remove the left and right side covers, release those catches and holes at the front ❶ and the rear ❷ from each other, by inserting a small flat blade screw driver between the cover and the chassis. Then, free the catches at the bottom ❸ by lowering the top side of the cover downwards.

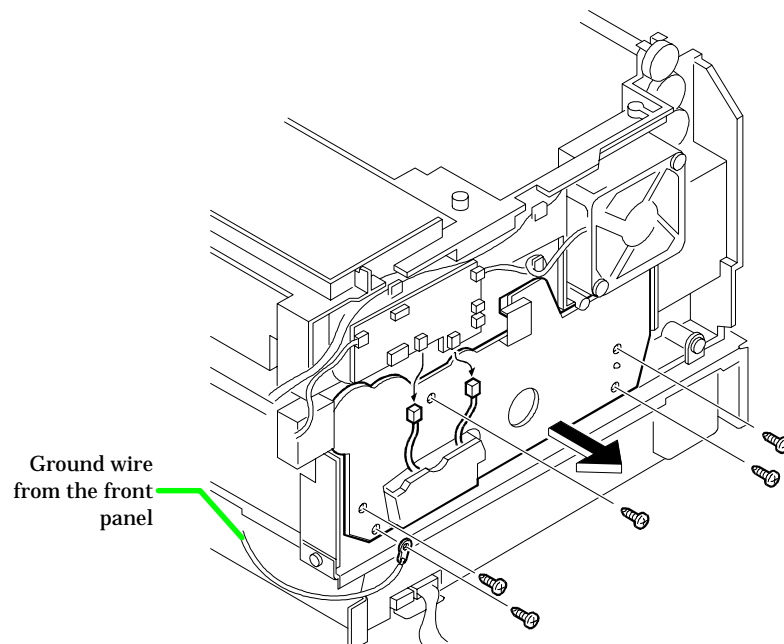


Removing the front panel

See the picture above. Remove two screws ④ that secure the front panel to the chassis. Remove the ground wire from the chassis front ⑤. Remove the other ground wire ⑥. Unplug the connector ⑦. Release catches ⑧ in four parts. Remove the front panel.

Removing the drive gears assembly

The right side cover must be removed first. Remove five screws. Detach two connectors. Then remove the drive assembly from the printer.



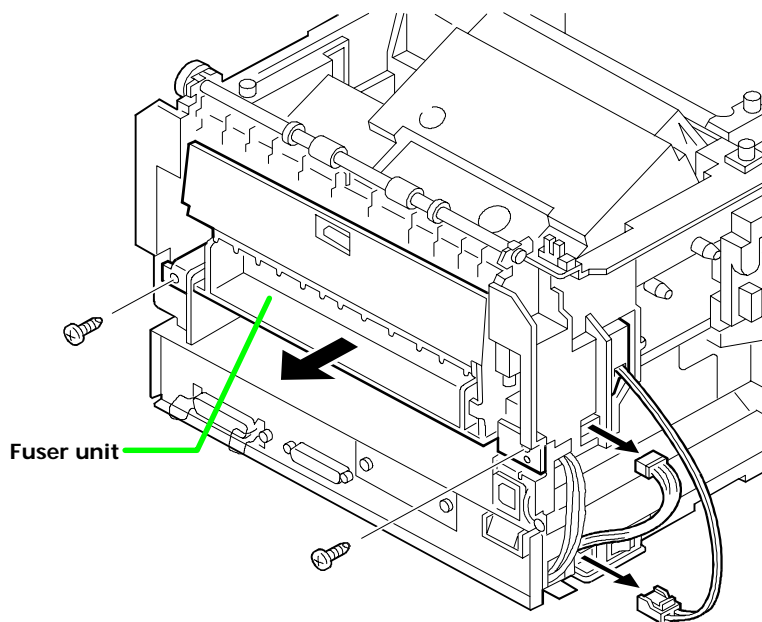
Removing the fuser unit

Before removing the fuser unit, remove the covers first (Refer to **Removing covers**, page 5-19).



Warning - The fuser is hot after the printer was running. Wait until it cools down.

Disconnect plugs first. To remove the fuser unit remove two screws at the back.



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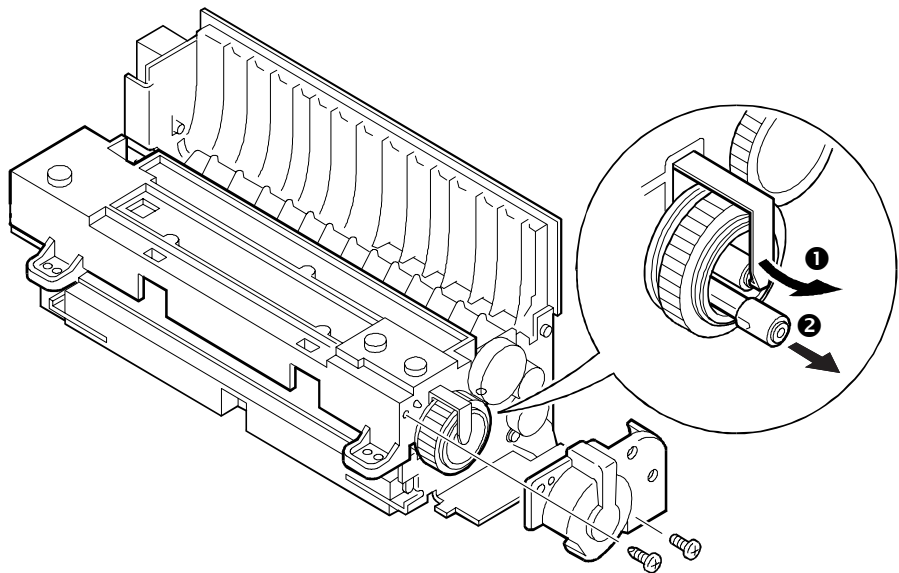
Removing the heater lamp



Warning - The heater is extremely hot immediately after the printer was running. Allow substantial period of time until it cools down. Also, the heater is fragile: Handle it with great care.

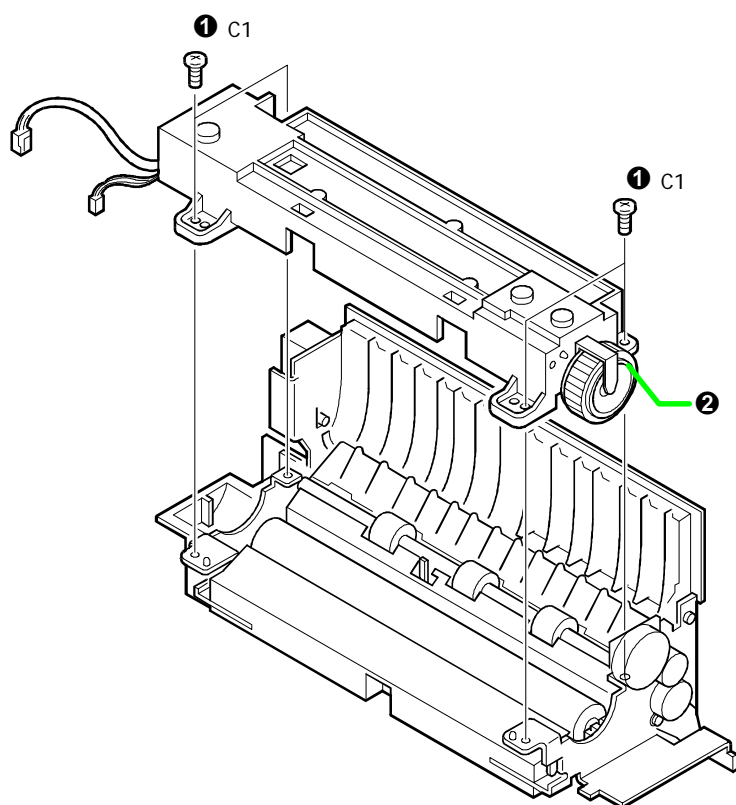
To remove the heater lamp, remove two screws on the cover at the right side of the fuser unit. Remove the cover. Slightly pulling the terminal outward ❶, so that it bends to free the heater head ❷, draw the heater lamp out.

Note. Do not directly touch on the heater lamp. Finger prints on the heater's outer surface can prevent proper fusing of toner on paper. A01126dm.eps



Replacing the fuser rollers

Remove four screws ❶ on the top case. Use care not to let the top (heat) roller ❷ fall when lifting the top case.

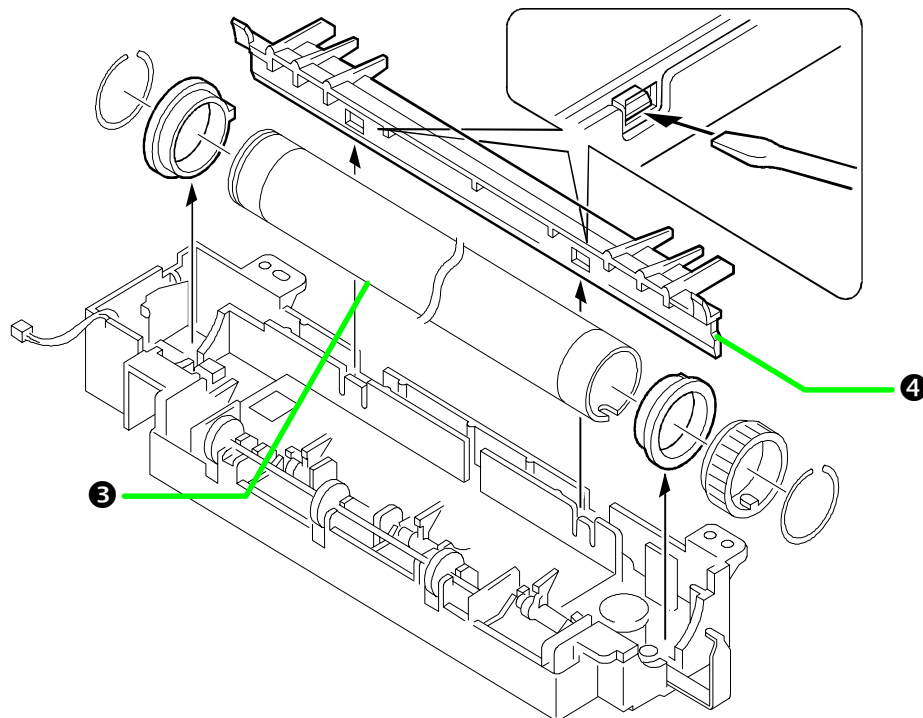


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To gain access to the heat (metal) roller ③, the roller retaining plate ④ must be removed. To remove the retaining plate, use a small flat blade screwdriver inserting it into the gaps as shown in the figure below.

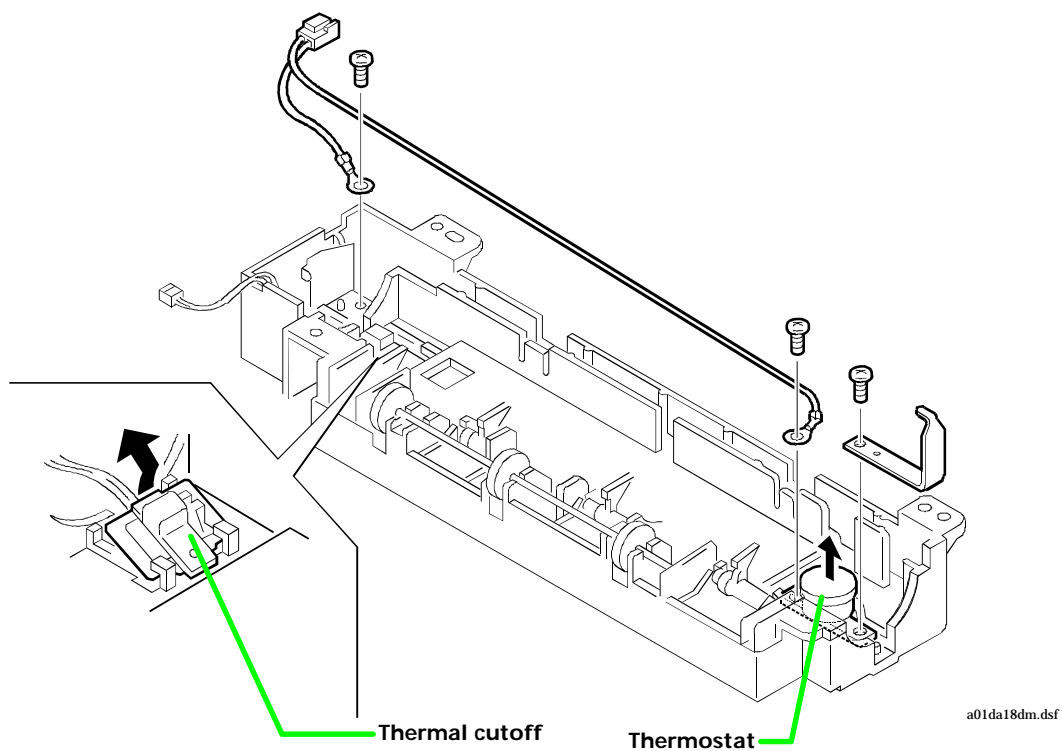


Caution - Special care should be taken not to let the screwdriver go too far into the hole. Such an action can irrevocably damage the roller surface.



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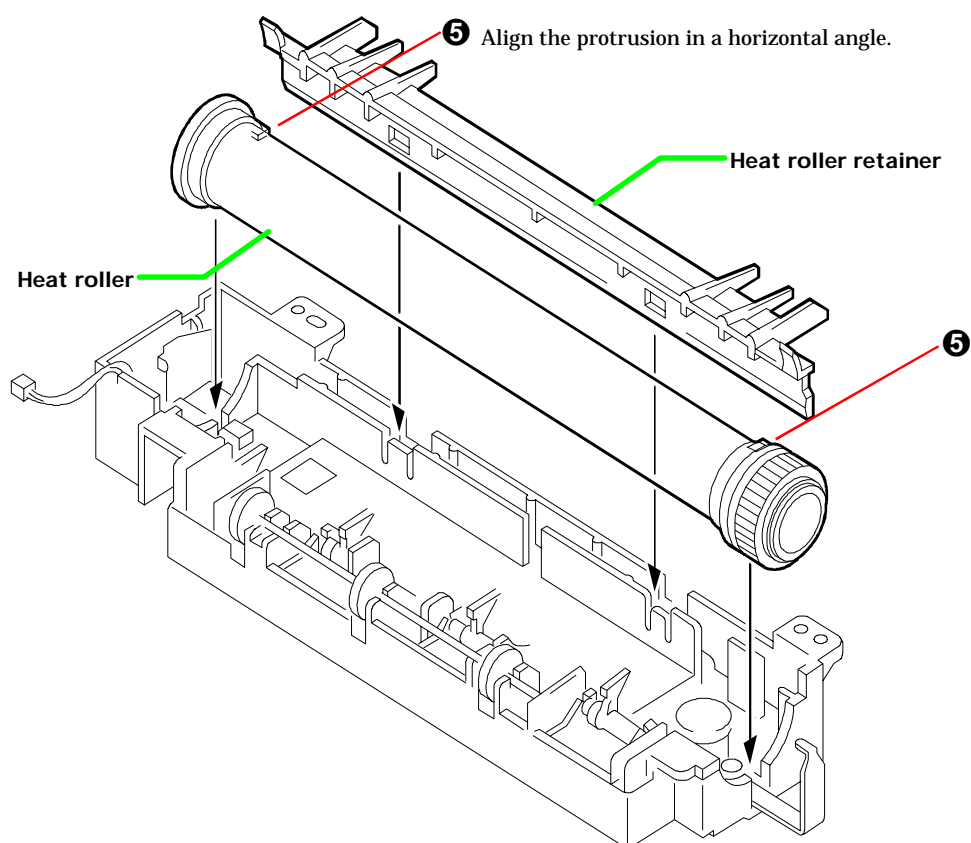
Removing the thermostat and thermal cutoff



Replacing the heat roller

To replace the heat roller, align the protrusions ⑤ on both collars so that they face the paper input side (the drum unit side) [horizontally].

Then insert the heat roller retainer ④ back in place.



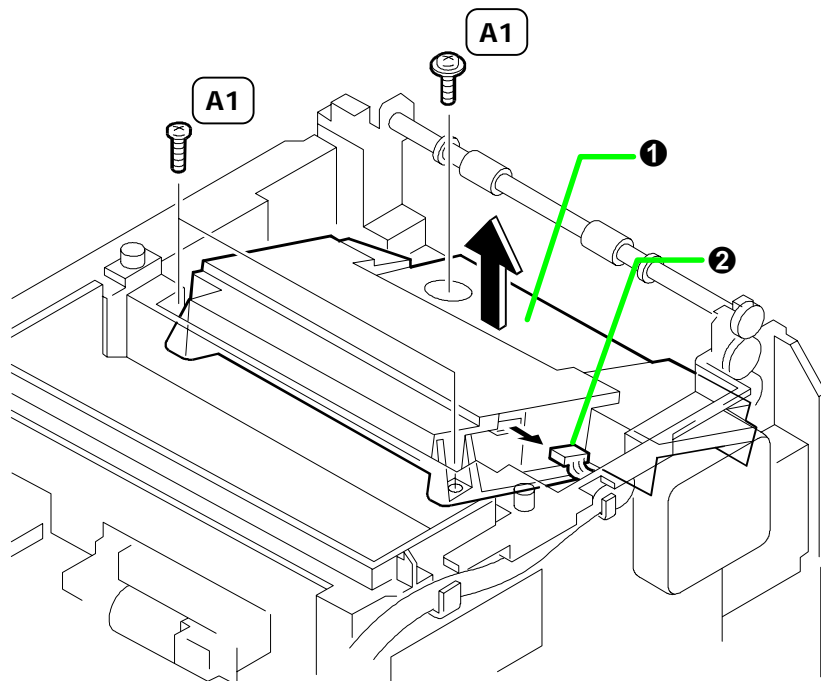
Removing the laser scanner

To remove the laser scanner, the top cover must be removed first. For details on removing the top cover, refer to **Removing covers** on page 5-19.



Warning - The laser scanner contains electrostatic-sensitive parts inside (laser diode, etc.). Before touching the laser scanner, provide an antistatic (discharging) device, such as a wrist strap, that can effectively discharge your body.

To remove the laser scanner ❶, remove a connector ❷. Remove three screws. **After removing the scanner, handle it carefully.**

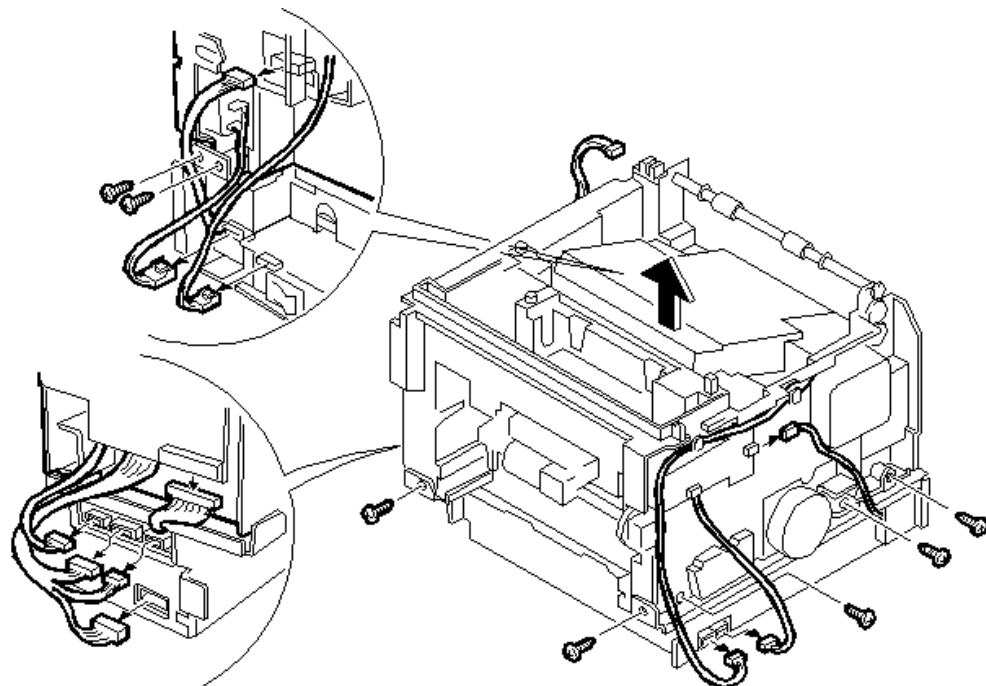


Removing the controller box

Before removing the controller box, the following parts must be removed in the order indicated. (For details on removing these parts, refer to the page enclosed by brackets.)

- Developer (Page 5-6)
- Drum unit (Page 5-16)
- Top side cover (Page 5-19)
- Left side cover (Page 5-19)
- Right side cover (Page 5-19)
- Front panel (Page 5-19)

Remove the connectors, then remove the screws as shown in the diagram below.



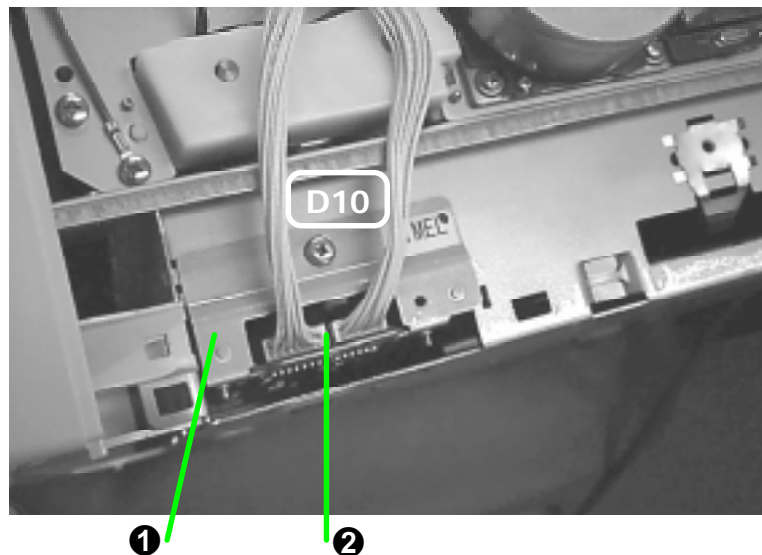
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Removing the engine board

In prior to removing the engine board, remove the following parts (For details on removing these parts, refer to the page enclosed by brackets.):

- Top cover (Page 5-5-18)
- Right side cover (Page 5-5-19)
- Memory card [if inserted in the slot]
- Main controller board [Remove three screws securing the board to the rear panel.]

To remove the engine board ❶, remove two connectors ❷; then remove a screw D10. Draw out the engine board slowly along the rails.



Use the reverse procedure to replace the engine board back in the printer.

