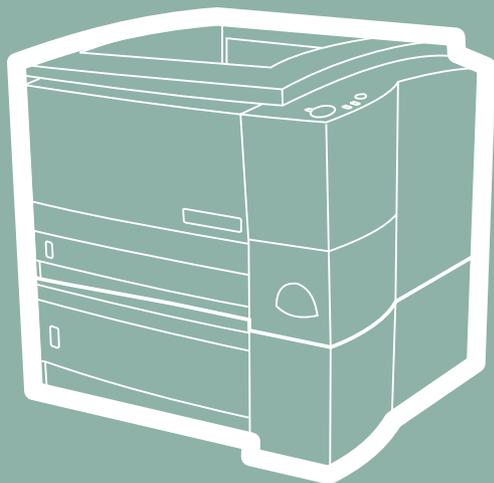


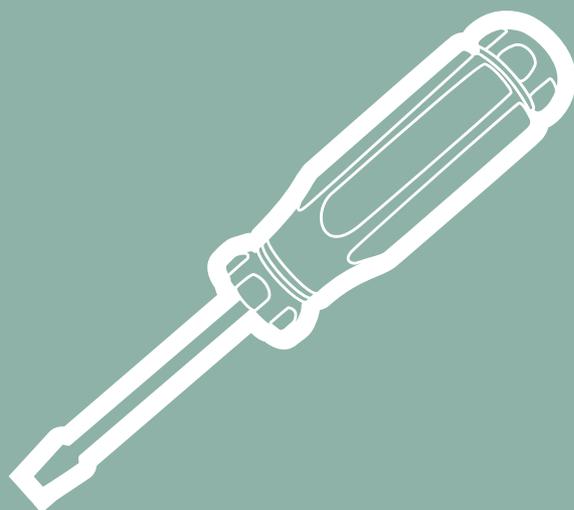
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HP LaserJet 2200 Series Printer

Service Manual _____

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Printer features

Table 1. Printer features for the HP LaserJet 2200 series printers

Speed	<ul style="list-style-type: none">● 19 pages per minute (ppm) for letter-size print media, and 18 ppm for A4-size media (with 133 MHz Motorola Coldfire V4[®] microprocessor).● Instant-on fuser provides first page out in less than 15 seconds from warm or cold start (simplex) and less than 26 seconds using duplex.
Resolution	<ul style="list-style-type: none">● HP FastRes 1200 (1200-dpi like quality at up to 19 ppm letter and 18 ppm A4).● HP ProRes 1200 (true 1200 by 1200 dpi text and graphics).● Adjustable line screen settings of 141 to 180 lines per inch to optimize print quality.
Toner	<ul style="list-style-type: none">● HP UltraPrecise toner cartridge. Capacity rated at average 5,000 pages with 5 percent coverage.● EconoMode capability (saves up to 50 percent of toner at 600 dpi).
Flexible media handling	<p>HP LaserJet 2200d and 2200dn printers:</p> <ul style="list-style-type: none">● Tray 1 is a 100-sheet or 10-envelope multipurpose tray for automatic and manual feeding of letterhead, envelopes, labels, transparencies, custom-sized media, postcards, and heavy paper (3 by 5 inch to legal size).● Tray 2 is a 250-sheet tray that supports letter, A4, executive, legal, B5 (ISO), B5 (JIS), A5, and 8.5 by 13 inch print media.● Two output bins: select either the top output bin or the rear output bin for the most convenient output location.● Standard output capacity of 150 sheets in the top output bin and 100 sheets in the rear output bin.● Straight-through paper path capability from tray 1 to the rear output bin.● Paper input level indicators.● Printing on both sides of paper, or duplex printing, is a standard feature of the printer, with the duplexer integrated into the paper path. <p>HP LaserJet 2200dt and 2200dtn printer:</p> <ul style="list-style-type: none">● Tray 1 is a 100-sheet or 10-envelope multipurpose tray for automatic and manual feeding of letterhead, envelopes, labels, transparencies, custom-sized media, postcards, and heavy paper (3 by 5 inch to legal size).● Tray 2 is a 250-sheet tray that supports letter, A4, executive, legal, B5 (ISO), B5 (JIS), A5, and 8.5 by 13 inch print media.● For the HP LaserJet 2200dt, tray 3 is a 250-sheet tray that supports letter, A4, executive, legal, B5 (ISO), B5 (JIS), A5, and 8.5 by 13 inch print media.● For the HP LaserJet 2200dtn, tray 3 is a 500-sheet tray that supports letter and A4-size paper.● Two output bins: select either the top output bin or the rear output bin for the most convenient output location.● Standard output capacity of 150 sheets in the top output bin and 100 sheets in the rear output bin.● Straight-through paper path capability from tray 1 to the rear output bin.● Paper input level indicators.● Printing on both sides of paper, or duplex printing, is a standard feature of the printer, with the duplexer integrated into the paper path.
Expandability	<ul style="list-style-type: none">● All models accept tray 3, a 250-sheet or 500-sheet feeder to hold additional print media.● Enhanced input/output (EIO) cards.● Dual inline memory module (DIMM) slots for adding memory and fonts.

Table 1. Printer features for the HP LaserJet 2200 series printers (continued)

PCL printer language and fonts	<ul style="list-style-type: none">● Fast printing performance, built-in Intellifont and TrueType™ scaling technologies, built-in HP-GL/2 vector graphics, and advanced imaging capabilities are benefits of the PCL 6 printer language. PCL 6 also includes 45 scalable TrueType fonts and one bitmapped Line Printer Font.
PS language and fonts	<ul style="list-style-type: none">● PostScript® (PS) Level 2 emulation with 35 built-in PS language fonts included.
Automatic language switching	<ul style="list-style-type: none">● The printer automatically determines and switches to the appropriate language for the print job.
Wireless printing	<ul style="list-style-type: none">● The printer supports wireless printing from an IrDA-compliant device, such as a notebook computer, camera, cell phone, or a personal digital assistant (PDA).● IrReady 2000.
Interface connection	<ul style="list-style-type: none">● Bidirectional ECP type-B parallel port (IEEE-1284 compliant).● Universal serial bus (USB) port.● EIO slot.● Wireless Fast Infrared port (IrDA compliant).
Networking	<ul style="list-style-type: none">● The printer provides an EIO slot for HP JetDirect EIO print servers for fast and easy connectivity. HP 610N JetDirect print server included with HP LaserJet 2200dn and 2200dtn.
Enhanced memory and memory expansion	<ul style="list-style-type: none">● The HP LaserJet 2200 series printers come with 8 MB of memory and can be expanded to 72 MB with the two available memory (DIMM) slots.
Energy savings	<ul style="list-style-type: none">● The printer automatically conserves electricity by substantially reducing power consumption when not printing.● As an ENERGY STAR® partner, Hewlett-Packard Company has determined that this product meets ENERGY STAR® guidelines for energy efficiency.
Economical printing	<ul style="list-style-type: none">● N-up printing and two-sided printing with the built-in duplexer conserves print media.● EconoMode conserves toner.● For tips to reduce the amount of print media used or extend the life of the toner cartridge see the user guide.
Duty cycle	<ul style="list-style-type: none">● 40,000 pages per month average.

Identification

The model number and printer serial number are listed on an identification label located on the rear output bin. The model number is alphanumeric, such as C7058A for the HP LaserJet 2200 printer.

The serial number contains information about the country of origin, the revision level, the production code, and canon serial number of the printer. An example of a serial number is USBBX12345.

The top label also contains power rating and regulatory information. See figure 1.

Note The power rating and regulatory information vary by region.

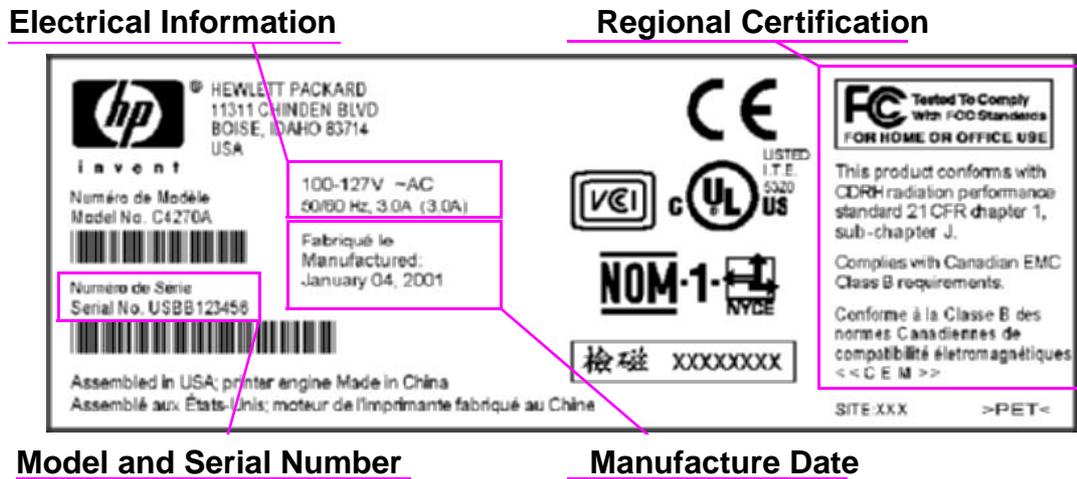


Figure 1. Sample identification label

Specifications

Table 2. Configuration comparison

	HP LaserJet 2200d	HP LaserJet 2200dn	HP LaserJet 2200dt	HP LaserJet 2200dtn
Standard memory Maximum memory	8 MB 72 MB	8 MB 72 MB	8 MB 72 MB	16 MB 72 MB
PS Level 2 emulation	Standard	Standard	Standard	Standard
JetDirect 610N print server	Optional	Standard	Optional	Standard
Duplex printing	Standard	Standard	Standard	Standard
250-sheet feeder *	Optional	Optional	Standard	Optional
500-sheet feeder *	Optional	Optional	Optional	Standard

Note

* A 250-sheet feeder and 500-sheet feeder cannot be installed at the same time.

Table 3. Physical specifications

	HP LaserJet 2200d/ 2200dn	HP LaserJet 2200dt	HP LaserJet 2200dtn
Height	259.2 mm (10.25 in)	361.7 mm (14.24 in)	396.7 mm (15.62 in)
Width	417.9 mm (16.45 in)	417.9 mm (16.45 in)	417.9 mm (16.45 in)
Depth	434.6 mm (17.11 in)	434.6 mm (17.11 in)	434.6 mm (17.11 in)
Weight (with toner cartridge)	12.8 kg (28.219 lb)	15.8 kg (34.833 lb)	17.4 kg (38.360 lb)

Table 4. Electrical specifications

Volts	Frequency	Amperes (A)	Watts (W) (typical)
100 to 127 Vac ± 10 percent	50/60 Hz ± 3 Hz	Minimum recommended current capacity = 5 amps	printing = 400 W standby = 12 W PowerSave on = 12 W off = 0 W (EPA ENERGY STAR®)
220 to 240 Vac ± 10 percent	50/60 Hz ± 3 Hz	Minimum recommended current capacity = 2.5 amps	printing = 400 W standby = 12 W PowerSave on = 12 W off = 0 W (EPA ENERGY STAR®)

WARNING!

Power requirements are based on the region where the printer is sold. Do not convert operating voltages. This can damage the printer and void the product warranty.

The following environmental specifications must be maintained to ensure the correct operation of the printer. Consider the following points before installing the printer:

- Place the printer on a sturdy, level surface.
- Allow adequate space around the printer for unimpeded operation.
- Install the printer in a well-ventilated room.
- Prevent exposure to direct sunlight or chemicals, including ammonia-based cleaning solutions.
- Ensure that an adequate power supply is used.
- Install the printer in a stable environment that experiences no abrupt temperature or humidity changes.

Table 5. Environmental specifications

	Operating/printing	Storage/standby
Temperature (printer and toner cartridge)	10 degrees to 32.5 degrees C (50 degrees to 90.5 degrees F)	-20 degrees to 40 degrees C (-4 degrees to 104 degrees F)
Relative humidity	20 percent to 80 percent	10 percent to 90 percent

Table 6. Noise-level specifications

	Operator position	Bystander (1m)	Sound power
Printing at 18 ppm	L_{pAm} 58 db(A)	L_{pAm} 51 db(A)	L_{WAd} 6.5 db(A)
Powersave	L_{pAm} inaudible	L_{pAm} inaudible	L_{WAd} inaudible

Note

Testing per International Standards Organization (ISO) 9296

Product overview

External assembly locations

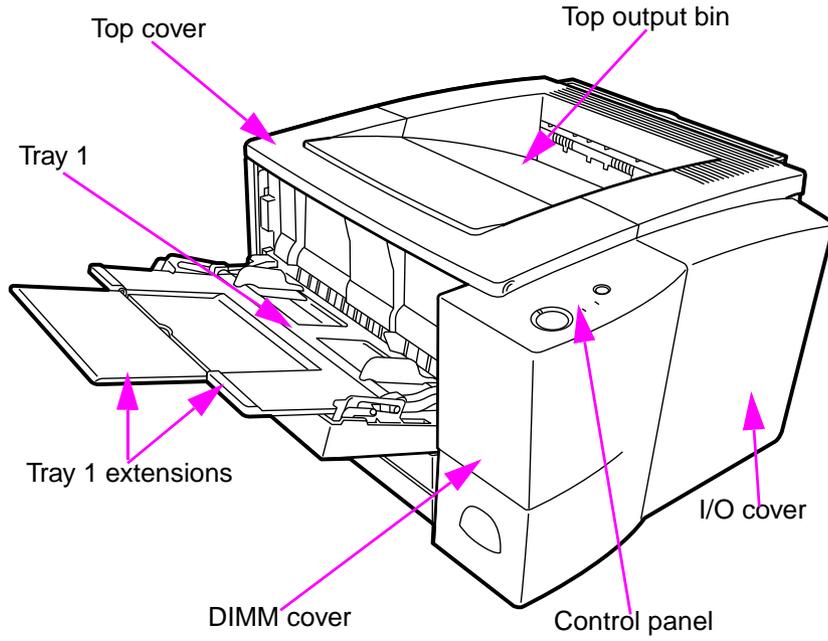


Figure 2. External assembly locations (1 of 5)

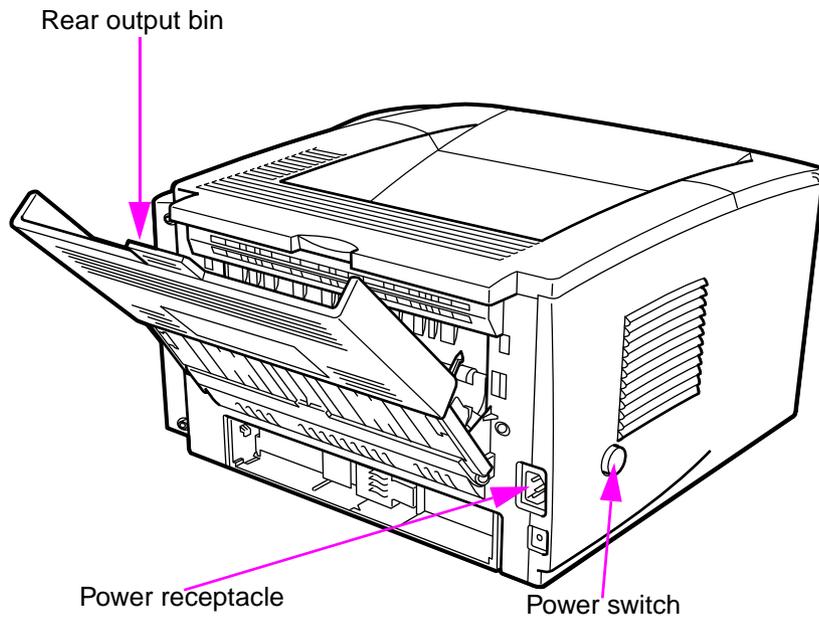


Figure 3. External assembly locations (2 of 5)

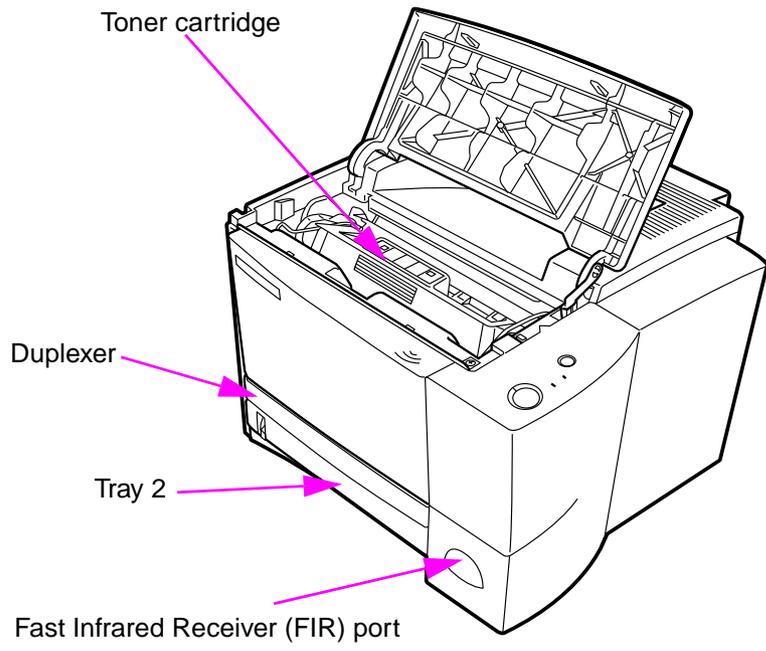


Figure 4. External assembly locations (3 of 5)

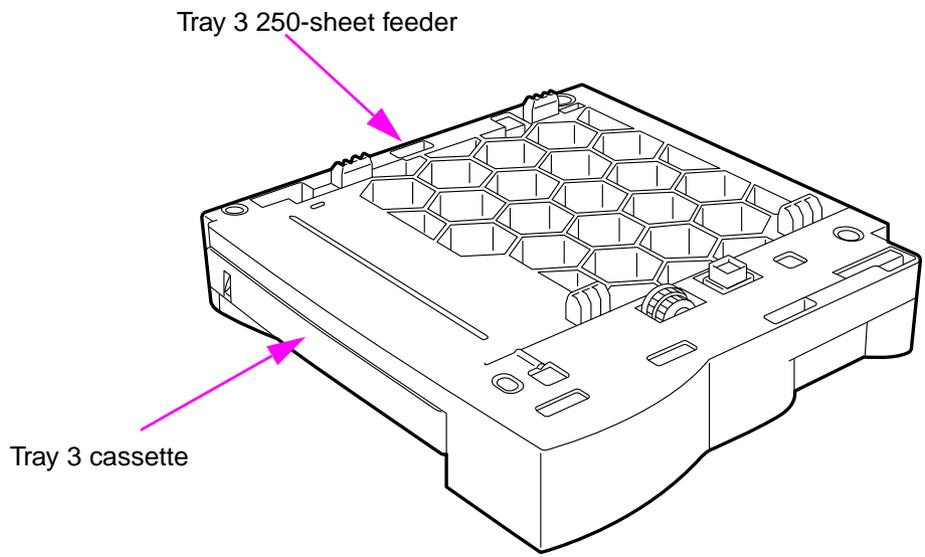


Figure 5. External assembly locations (4 of 5)

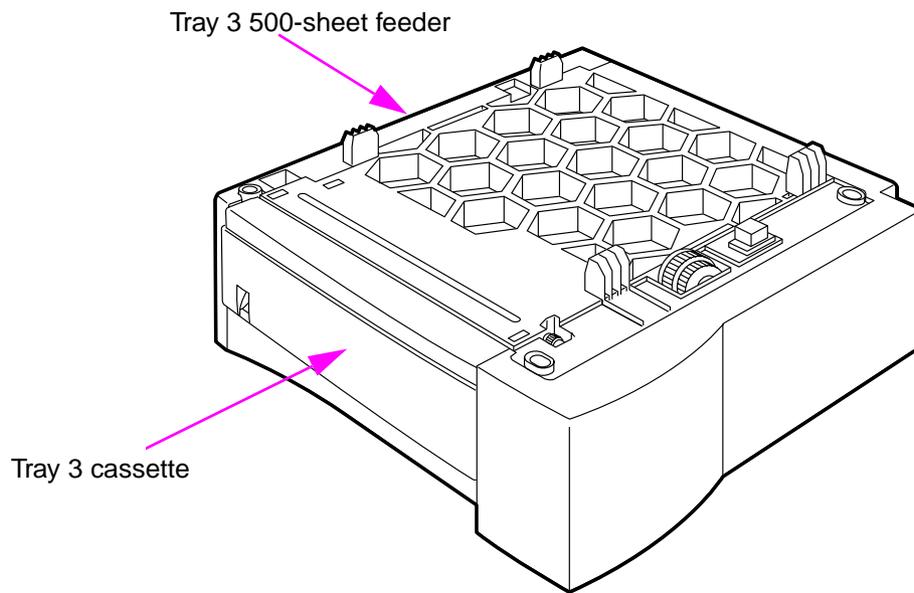


Figure 6. External assembly locations (5 of 5)

Internal assembly locations

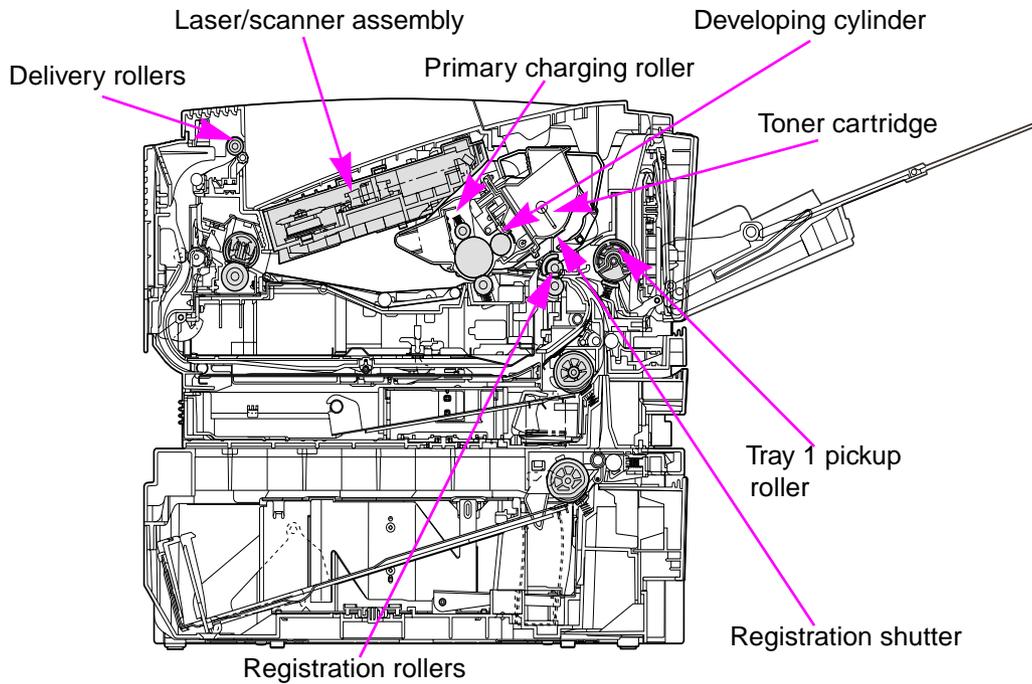


Figure 7. Internal assembly locations (1 of 2)

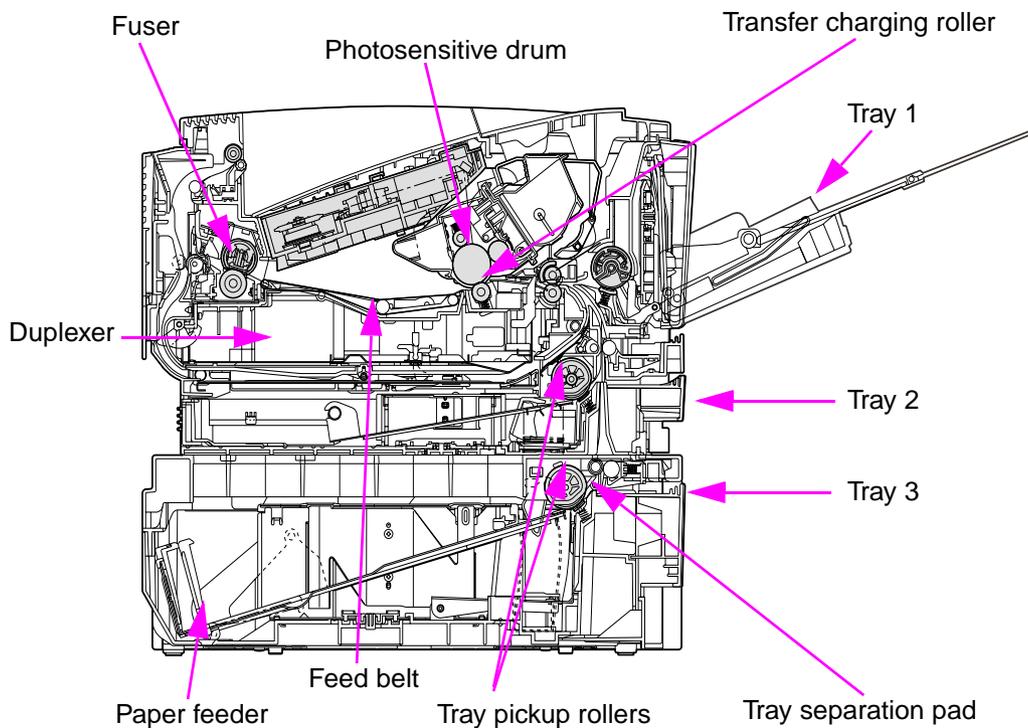


Figure 8. Internal assembly locations (2 of 2)

Safety information

Toner safety

Handling and storage

WARNING!

Keep toner cartridges and toner particles away from excessive heat, sparks, and open flames.

If toner is spilled, avoid breathing in toner particles. Inhalation of toner particles causes respiratory tract irritation. Vacuum or sweep the material into a bag or other sealed container. A vacuum specifically designed for cleaning toner can be used if it is capable of filtering fine particles (5 microns in diameter).

WARNING!

Do not vacuum toner using a conventional vacuum. Toner particles used in this product might be too fine for effective vacuuming and could result in damage to a conventional vacuum.

Dispose of waste toner in accordance with local requirements. Do not discharge toner particles in drains.

First aid measures

- **Ingestion.** If toner is ingested, rinse mouth out thoroughly with water and drink several glasses of water. Get medical attention if symptoms persist.
- **Inhalation.** If toner particles are inhaled, move to fresh air immediately. If symptoms occur, consult a physician.
- **Eye contact.** If toner comes in contact with the eyes, immediately flush with plenty of water for at least 15 minutes. If irritation persists, consult a physician.
- **Skin contact.** If toner spills on skin, remove as much toner as possible with a dry tissue, and then wash with cold water.

Clothing contact

Note

Toner can stain clothing. Hot water or heat (from a clothes dryer) can cause toner to melt and permanently fuse to clothing.

Clothing is best cleaned by removing as much toner as possible with a dry tissue, and then washing with cold water. Air-dry clothing.

Additional information

The Toner Cartridge/Drum Material Safety Data Sheet (MSDS) can be obtained by contacting HP at the following website:

<http://www.hp.com/go/msds>

Laser safety

The Center for Devices and Radiological Health (CDRH) of the U.S. Food and Drug Administration has implemented regulations for laser products manufactured since August 1, 1976. Compliance is mandatory for products marketed in the United States. The printer is certified as a Class 1 laser product under the U.S. Department of Health and Human Services (DHHS) Radiation Performance Standard according to the Radiation Control for Health and Safety Act of 1968.

Because radiation emitted inside the printer is completely confined within protective housings and external covers, the laser beam cannot escape during any phase of normal user operation.

WARNING!

Using controls, making adjustments, bypassing safety switches, or performing procedures other than those specified in this service manual can result in exposure to hazardous radiation.

LED safety

The infrared port on the control panel of this printer is classified as a Class 1 LED (light emitting diode) device according to International Standard IEC 60825-1 (EN 60825-1). This device is not considered harmful, but the following precautions are recommended.

- Avoid direct eye exposure to the infrared LED beam.
- Be aware that the beam is invisible light and cannot be seen.
- Do not attempt to view the infrared LED beam with any type of optical device.

Regulatory information

For regulatory information and requirements, please see the user guide.

FCC regulations

For FCC regulations, please see the user guide.

Declaration of conformity

For declaration of conformity information, please see the user guide.

Environmental Product Stewardship Program

Protecting the environment

Hewlett-Packard Company is committed to providing quality products in an environmentally sound manner. This product has been designed with several attributes to minimize impacts on our environment.

Ozone production

This product generates no appreciable ozone gas (O₃).

Energy consumption

Energy usage drops significantly while the printer is in PowerSave mode, which saves natural resources and saves money without affecting the performance of the printer. This product qualifies for ENERGY STAR[®] which is a voluntary program established to encourage the development of energy-efficient office products.



ENERGY STAR[®] is a U.S. registered service mark of the United States Environmental Protection Agency. As an ENERGY STAR[®] partner, Hewlett-Packard Company has determined that this product meets the ENERGY STAR[®] guidelines for energy efficiency. For more information, see

<http://www.epa.gov/energystar/>

Toner consumption

EconoMode uses significantly less toner, which might extend the working life of the toner cartridge.

Paper use

This product's duplex feature (two-sided printing) and N-up printing capability (multiple pages printed on one sheet of paper) can reduce paper usage and the resulting demands on natural resources.

Plastics

Plastic parts more than 25 grams in weight are marked according to international standards that enhance the ability to identify plastics for recycling purposes at the end of the product's life.

In many countries, this product's printing supplies (for example: toner cartridge, drum, fuser) can be returned to HP through the HP Printing Supplies Returns and Recycling Program. An easy-to-use takeback program is available in more than 25 countries. Multilingual program information and instruction are included in every new HP LaserJet toner cartridge and consumables package.

HP Printing Supplies Environmental Program information

Since 1990, the HP Printing Supplies Returns and Recycling Program has collected more than 39 million used LaserJet toner cartridges that otherwise might have been discarded in the world's landfills. The HP LaserJet toner cartridges and consumables go to a collection center and are bulk-shipped to our resource and recovery partners who disassemble the cartridge's for recycling. After a thorough quality inspection, selected parts are reclaimed for use in new cartridges. Remaining materials are separated and converted into raw materials for use by other industries to make a variety of useful products.

US returns

For a more environmentally responsible return of used cartridges and consumables, HP encourages the use of bulk returns. Simply bundle two or more cartridges together and use the single, pre-paid, pre-addressed UPS label that is supplied in the package. For more information in the United States, call (1) (800) 340-2445 or visit the HP LaserJet Supplies website at

<http://www.ljsupplies.com/planetpartners/>.

Outside the US returns

Outside the US customers should call the local HP sales and service office for further information regarding availability of the HP Supplies Returns and Recycling Program.

Paper

This printer is suited for the use of recycled papers when the paper meets the guidelines outlined in the *HP LaserJet Printer Family Print Media Guide*. Also, this printer is suitable for the use of recycled paper according to DIN 19309.

Material safety data sheet

Material Safety Data Sheets (MSDS) can be obtained by contacting the HP LaserJet Supplies website at <http://www.hp.com/go.msds>. In the United States, if you do not have access to the internet, call the U.S. HP FIRST (fax on demand service) at (1) (800) 231-9300. Use index number seven for a listing of the material safety data sheets. Outside the US, see "Worldwide offices" in table 8 for appropriate phone numbers and information.