

Product: 1999 HP LaserJet 2100 Printer Service Repair Workshop Manual
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Service Manual

HP LaserJet 2100

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Conventions

This manual uses the following conventions:

The names of major printer parts and assemblies are Capitalized.

Color is used to emphasize items which are important to the material under discussion.

Bold is used for emphasis, particularly in situations where *italic* type would be confusing.

Italic type is used to indicate related documents or emphasis.

NOTE:

Notes contain important information set off from the text.

CAUTION:

Caution messages alert you to the possibility of damage to equipment or loss of data.

WARNING!

Warning messages alert you to the possibility of personal injury.

Chapter Descriptions

Chapter 1: Product Information

This chapter describes features of the printer, including locations of external and internal assemblies, and gives safety and regulatory information. Use this chapter to form a basic service approach, and to get technical assistance.

Chapter 2: Operating Requirements

Chapter 2 details site requirements, including space and environmental specifics. The chapter also defines specifications for paper and other media with this printer.

Chapter 3: Printer Configuration

Learn to use the control panel, perform an engine test, and reset the printer. Chapter 3 contains options for configuring the printer through service mode, and also details about installing and using the Remote Control Panel. Network and IR printing is also explained.

Chapter 4: Printer Maintenance

This chapter discusses service check points, procedures for cleaning the printer, and how to use toner cartridges effectively.

Chapter 5: Functional Overview

The functional overview discusses each of the printer's stages to form and develop an image. This chapter details the engine control system, the formatter system, the paper feed system, and the sequence of printer operation.

Chapter 6: Troubleshooting

Use the systematic troubleshooting process to solve printing problems. This process contains a preliminary troubleshooting flowchart, with explanations of each step throughout the chapter. Explanations include a table with descriptions and recommended actions for all control panel messages, image defect samples, troubleshooting problems with media, and diagrams showing the locations of components that may be causing problems.

Chapter 7: Removal and Replacement

Step-by-step procedures show how to replace field replaceable units (FRUs) in the printer.

Chapter 8: Parts and Diagrams

Exploded view drawings and part number listings are included for all replaceable parts in the printer. The composite table of replaceable parts is sorted alphabetically by part name, and also sorted numerically by part number. Both tables are cross-referenced to the diagrams in the chapter.

Index

The index is an alphabetical, cross-referenced listing of information found in the main body of the manual.

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Product Information

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Printer Description and Features

Table 1-1. Printer Description and Features

Print Speed	<ul style="list-style-type: none"> ● 10 pages-per-minute printing (with Intel 80960JD 66 MHz RISC-based formatter and 33 MHz BUS).
Print Quality	<ul style="list-style-type: none"> ● True 1200 x 1200 dots per inch (dpi) text and graphics. ● Resolution Enhancement technology (REt) (600 dpi only). ● Adjustable settings to optimize print quality and performance: Best Quality: 1200 x 1200 dpi Faster Performance: 600 x 600 dpi Custom: User Defined Settings ● HP UltraPrecise toner cartridge. Cartridge capacity equals approximately 5000 pages at 5% toner cover.
Paper Handling	<ul style="list-style-type: none"> ● Adjustable Tray 1 for letterhead, envelopes, labels, transparencies, custom-sized media, postcards, and heavy paper. Tray capacity equals approximately 100 sheets of standard paper or 10 standard envelopes. ● Adjustable 250-Sheet Tray 2 for standard sizes of paper. ● Top output bin (for printing face down). ● Rear output bin (for printing face up). ● Straight-through paper path capability from Tray 1 to the rear output bin.
Accessories	<ul style="list-style-type: none"> ● Optional Tray 3 with a 250-sheet capacity. ● Enhanced Input Output (EIO) cards. ● Three dual in-line memory module (DIMM) slots. ● PostScript™ Level 2 Emulation (PS) DIMM. Factory installed on the 2100 M and 2100 TN.
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. This also includes 45 scalable TrueType fonts and one bitmapped Line Printer font.
PS Language and Fonts	<ul style="list-style-type: none"> ● The HP LaserJet 2100 M and 2100 TN printers include the HP PostScript Level 2 printer language emulation with 35 built-in PS language fonts.
Automatic Language and I/O Switching	<ul style="list-style-type: none"> ● When optional printer languages (such as PostScript emulation) are installed, the printer automatically determines and switches to the appropriate language for the print job. ● With I/O Switching the printer switches back and forth between active I/Os.

Table 1-1. Printer Description and Features (continued)

Wireless Infrared Printing	<ul style="list-style-type: none"> ● Fast infrared (IR) printing when printing from an IrDA-compliant device, such as a laptop, notebook computer, or a Personal Digital Assistant (PDA). ● JetSend IR enabled devices can also use the IR port.
Interface Connections	<ul style="list-style-type: none"> ● IEEE-1284 compliant Type B parallel port Data Transfer Rate: approximately 4 MB/second ● LocalTalk port ● Enhanced Input/Output (EIO) Slot ● Wireless Infrared port (IrDA compliant) Date Transfer Rate: approximately 4 MB/second
Networking	<ul style="list-style-type: none"> ● The printer provides an EIO Slot for HP JetDirect print servers.
Enhanced Memory and Memory Expansion	<ul style="list-style-type: none"> ● The HP LaserJet 2100 printer comes with 4 MB of memory and can be expanded to 52 MB using the three available memory (DIMM) slots. ● The HP LaserJet 2100 M and 2100 TN printers come with 8 MB of memory and can be expanded to 40 MB with the two available memory (DIMM) slots. The third slot is used for the HP PostScript language DIMM.
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"> ● EconoMode (600 dpi only), manual duplexing, and N-up printing lets the user save paper, toner, and time.
Duty Cycle	<ul style="list-style-type: none"> ● Approximately 15,000 pages per month.

Table 1-2. Comparison of HP LaserJet 2100, 2100 M, and 2100 TN

	HP LaserJet 2100	HP LaserJet 2100 M	HP LaserJet 2100 TN
PS DIMM	Optional	Standard	Standard
Standard Memory Maximum Memory	4 MB 52 MB	8 MB 40 MB	8 MB 40 MB
JetDirect 600 N print server	Optional	Optional	Standard

Identification

The serial number and the model number are listed on the identification label located on the rear output bin.

The serial number contains information about the Country of Origin, the Revision Level, the Production Code, and the production number of the printer.

As shown in figure 1-1, the label also contains power rating and regulatory information.

NOTE:

These values vary by region.

Figure 1-1 Sample Identification Label



Specifications

Table 1-3. Physical Specifications

	HP LaserJet 2100	HP LaserJet 2100 with Optional Tray 3
Height	230 mm (9 in.)	309 mm (12.2 in.)
Width	406 mm (15.9 in.)	406 mm (15.9 in.)
Depth (body)	420 mm (16.5 in.)	420 mm (16.5 in.)
Weight (with toner cartridge)	11.5 kg (25.4 lbs)	14.4 kg (31.7 lbs)

Table 1-4. Electrical Specifications

	100-127V (+/- 10%) 50/60Hz (+/- 2Hz)	220-240V (+/- 10%) 50/60 Hz (+/- 2Hz)
Typical Power Consumption	Printing 225 W (average) Standby 12 W (instant power save) Power save mode 12 W Off mode 0 W	Printing 225 W (average) Standby 14 W (instant power save) Power save mode 14 W Off mode 0 W
Minimum recommended circuit capacity	5 Amps	2.5 Amps

WARNING!

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

Table 1-5. Environmental Specifications

	Operating Printing	Storage/Standby
Temperature (printer and toner cartridge)	15 degrees to 32.5 degrees C (59 degrees to 89 degrees F)	-20 degrees to 40 degrees C (-4 degrees to 104 degrees F)
Relative humidity	10% to 80%	10% to 90%

Table 1-6. Acoustic Emissions (Per ISO 9296)

	Operator Position	Bystander (1m)	Sound Power
Printing (HP LaserJet 2100 at 10 ppm)	L _{pAm} 55dB(A)	L _{pAm} 48dB(A)	L _{WAd} 6.2 bels(A)
Power Save In this mode, the printer is essentially quiet.			

Product Overview

External Assembly Locations

Figure 1-2 External Assembly Locations (1 of 4)

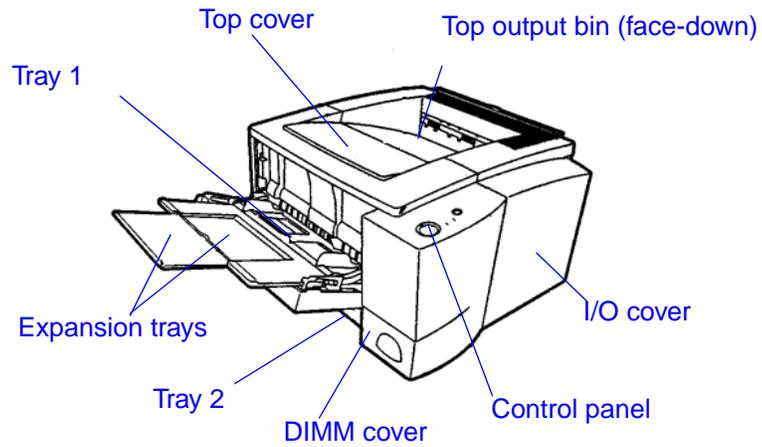


Figure 1-3 External Assembly Locations (2 of 4)

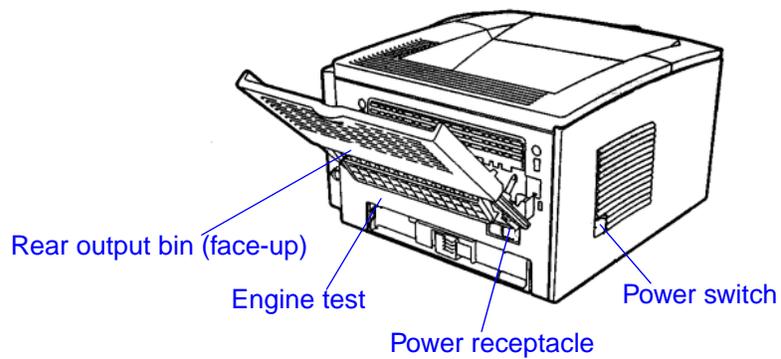


Figure 1-4 External Assembly Locations (3 of 4)

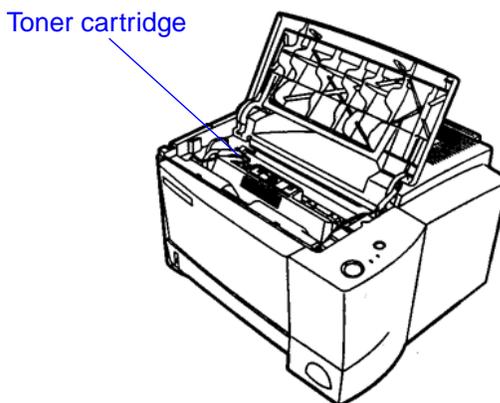
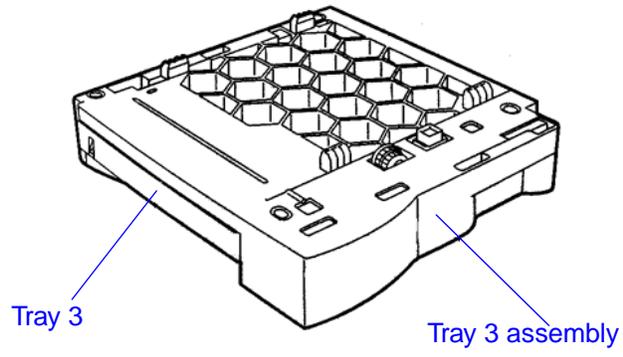


Figure 1-5 External Assembly Locations (4 of 4)



Internal Assembly Locations

Figure 1-6 Internal Assembly Locations (1 of 2)

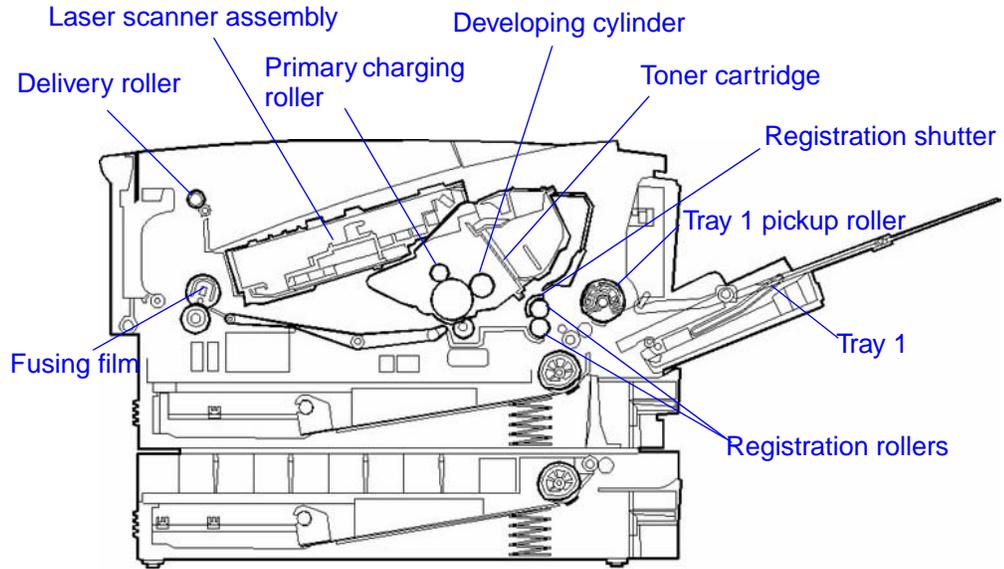
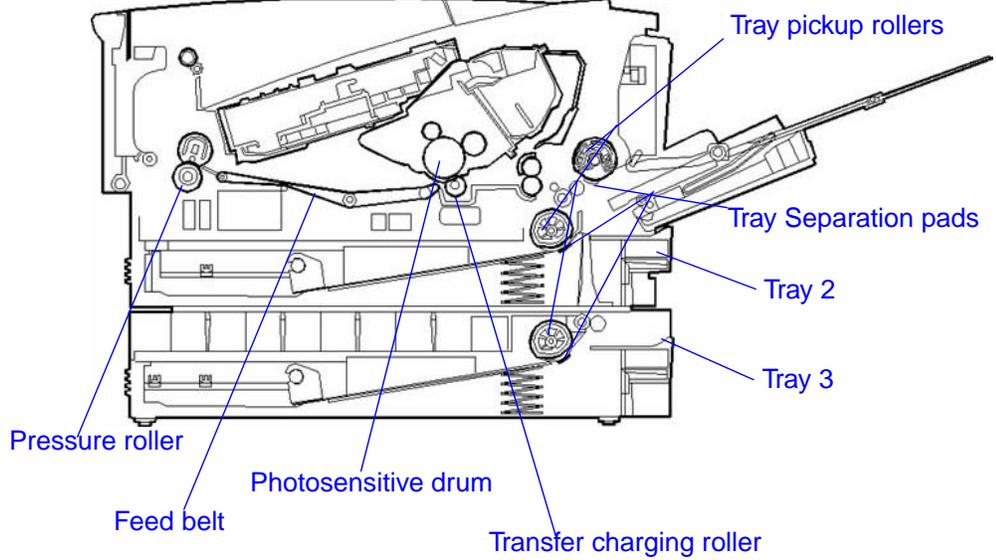


Figure 1-7 Internal Assembly Locations (2 of 2)



Safety Information

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.

Since 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, or performing procedures other than those specified in this service manual may result in exposure to hazardous laser radiation.

Laser Statement for Finland

LASERTURVALLISUUS

LUOKAN 1 LASERLAITE

KLASS 1 LASER APPARAT

HP LaserJet 2100 -laserkirjoitin on käyttäjän kannalta turvallinen luokan 1 laserlaite. Normaalisissa käytössä kirjoittimen suojakotelointi estää lasersäteen pääsyn laitteen ulkopuolelle.

Laitteen turvallisuusluokka on määritetty standardin EN 60825-1 (1993) mukaisesti.

VAROITUS!

Laitteen käyttäminen muulla kuin käyttöohjeessa mainitulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

WARNING!

Om apparaten används på annat sätt än i bruksanvisning specificerats, kan användaren utsättas för osynlig laserstrålning, som överskrider gränsen för laserklass 1.

HUOLTO

HP LaserJet 2100 -kirjoittimen sisällä ei ole käyttäjän huollettavissa olevia kohteita. Laitteen saa avata ja huoltaa ainoastaan sen huoltamiseen koulutettu henkilö. Tällaiseksi huoltotoimenpiteeksi ei katsota väriainekasetin vaihtamista, paperiradan puhdistusta tai muita käyttäjän käsikirjassa lueteltuja, käyttäjän tehtäväksi tarkoitettuja ylläpitotoimia, jotka voidaan suorittaa ilman erikoistyökaluja.

VARO!

Mikäli kirjoittimen suojakotelo avataan, olet alttiina näkymättömälle lasersäteilylle laitteen ollessa toiminnassa. Älä katso säteeseen.

VARNING!

Om laserprinterns skyddshölje öppnas då apparaten är i funktion, utsätts användaren för osynlig laserstrålning. Betrakta ej strålen.

Tiedot laitteessa käytettävän laserdiodin säteilyominaisuuksista:

Aallonpituus 770-795 nm

Teho 5 mW

Luokan 3B laser

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 825-1 (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.

Declaration of Conformity

according to ISO/IEC Guide 22 and EN45014

Manufacturer's Name: Hewlett-Packard Company
Manufacturer's Address: 11311 Chinden Boulevard
Boise, Idaho 83714-1021, USA

declares that the product

Product Name: HP LaserJet 2100, 2100 M, 2100 TN
Model Number: C4170A, C4171A, C4172A, C4793A
Product Options: ALL

conforms to the following Product Specifications:

Safety: IEC 950:1991+A1+A2+A3 / EN 60950:1992+A1+A2+A3
IEC 825-1:1993 / EN 60825-1:1994 Class 1 (Laser/LED)

EMC: CISPR 22:1993+A1 / EN 55022:1994 Class B¹
EN 50082-1:1992
IEC 801-2:1991 / prEN 55024-2:1992 - 4 kV CD, 8 kV AD
IEC 801-3:1984 / prEN 55024-3:1991 - 3 V/m
IEC 801-4:1988 / prEN 55024-4:1992 - 0.5 kV Signal Lines
1.0 kV Power Lines

IEC 1000-3-2:1995 / EN61000-3-2:1995
IEC 1000-3-3:1994 / EN61000-3.3:1995
FCC Title 47 CFR, Part 15 Class B²⁾ / ICES-003, Issue 2 / VCCI-2¹⁾
AS / NZS 3548:1992 / CISPR 22:1993 Class B¹⁾

Supplementary Information:

The product herewith complies with the requirements of the following Directives and carries the CE-marking accordingly:

the EMC directive 89/336/EEC

the Low-Voltage Directive 73/23/EEC

The product was tested in a typical configuration with Hewlett-Packard Personal Computer Systems.

This Device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

For Compliance Information ONLY, contact:

Australia Contact: Product Regulations Manager, Hewlett-Packard Australia Ltd.,
31-41 Joseph Street, Blackburn, Victoria 3130, Australia

European Contact: Your Local Hewlett-Packard Sales and Service Office or
Hewlett-Packard GmbH, Department HQ-TRE / Standards
Europe, Herrenberger Straße 130, D-71034 Böblingen
(FAX: +49-7031-14-3143)

USA Contact: Product Regulations Manager, Hewlett-Packard Company,
PO Box 15 Mail Stop 160, Boise, ID 83707-0015
(Phone: 208-396-6000)

Toner Safety

Composed of plastic and minute colored components, toner is a non-poisonous substance. If toner adheres to skin or clothes, remove as much of it as possible with dry tissue paper, and then wash with cold water. Hot water causes toner to gel and become difficult to remove.

NOTE:

Avoid letting toner come into contact with vinyl because it easily breaks down the vinyl material.

Material Safety Data Sheet

The Toner Cartridge/Drum MSDS can be obtained by contacting the HP LaserJet Supplies web site at:

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

If access to the Internet is not available, call the U.S. HP FIRST (Fax Information Retrieval Service Technology) at (1) (800) 231-9300. Use Index number 7 for a listing of the Toner Cartridge/Drum Material/Chemical Safety Data Sheets. Non-US customers should refer to "Technical Assistance" (page 18) for phone numbers and information.

Ozone Emission

The printer uses charging rollers in the electrophotographic process and therefore generates no appreciable ozone gas (O₃).

Environmental Product Stewardship Program

Protecting the Environment

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

This HP LaserJet printer design reduces:

Energy consumption

Energy usage drops to as little as 12 W (110V) and 14 W (220V) while in low-power (PowerSave) mode. Not only does this save natural resources, but it also saves money without affecting the high performance of this printer. This product qualifies for ENERGY STAR. ENERGY STAR 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 U.S. EPA. As an ENERGY STAR partner, Hewlett-Packard Company has determined that this product meets ENERGY STAR Guidelines for energy efficiency.

Toner Consumption

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

Paper Use

Depending on the type of software program in use, users can request for a number of pages of their documents to be printed on one sheet of paper. This N-up printing practice and the printer's automatic/manual duplexing feature, which provides two-sided printing, can reduce paper usage and the resulting demands on natural resources.

The design of this HP LaserJet printer facilitates the recycling of:

Plastics

Plastic housing parts have markings according to international standards that enhance the ability to identify plastics for recycling purposes at the end of the printer's life.

HP LaserJet Printing Supplies

In many countries, this product's printing supplies (e.g., toner cartridge, drum, fuser) can be returned to HP through the HP Planet Partners Printing Supplies Environmental Program. An easy-to-use takeback component of the program is available in over 20 countries. Multi-lingual program information and instruction are included in every new HP LaserJet Toner Cartridge and Consumables box.

HP Planet Partners

Since 1990, the HP LaserJet Toner Cartridge Recycling Program has collected more than 12 million used LaserJet toner cartridges that otherwise might have been discarded in the world's landfills. The HP LaserJet toner cartridges go to a collection center and are bulk-shipped to our recycling partners who disassemble the cartridge parts for recycling. After a thorough quality inspection, minor parts, such as nuts, screws, and clips 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.

Paper

This printer is suited for the use of recycled papers when the paper meets the guidelines outlined in the *HP LaserJet Printer Family Paper Specifications Guide*. Also, this printer is suitable for the use of recycled paper according to DIN 19 309.

The design of this HP LaserJet printer facilitates the recycling of:

Printer and Parts

HP provides a product return system for customers in Germany. Many of the functional parts are recovered, tested, and reused as fully warranted service parts. Used parts are not placed into new product manufacturing. Remaining product parts are recycled, if possible. For product return information, contact the local HP Sales and Service office.

To ensure longevity of the HP LaserJet printer, HP provides the following:

Extended warranty

HP SupportPack provides coverage for the HP hardware product and all HP-supplied internal components. The hardware maintenance covers a three-year period from date of the HP product purchase. The customer must purchase HP SupportPack within 90 days of the HP product purchase. Information on HP SupportPack is available in fax format by calling HP FIRST (fax-on-demand service). The document number is 9036. Customers should refer to the front of this manual for appropriate HP FIRST phone numbers and information.

Spare Parts and Consumables Availability

Spare parts and consumable supplies for this product will be made available for at least 5 years after production has stopped.

FCC Regulations

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy. If this equipment is not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation; the presence of interference can be determined by turning the equipment off and on. If this equipment does cause harmful interference to radio or television communications, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase distance between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is located.
- Consult the dealer or an experienced radio/television technician.

NOTE:

Any changes or modifications to the printer that are not expressly approved by HP could void the user's authority to operate this equipment.

Use of a shielded interface cable is required to comply with the Class B limits of Part 15 of FCC rules.

Service Approach

Bench Repair Warranty

The warranty for this product is “return to bench” for a period of one year from the date of purchase. This means that customers needing warranty repair must return their printer to an HP repair center or an Authorized Service Provider (ASP).

HP Express Exchange

Through Customer Care Centers In the United States and Canada, customers have an option to initiate Express Exchange. Under this option, customers may have a factory refurbished printer sent to them within 24 hours.

- 1 The customer contacts the local HP Customer Care Center listed in the product documentation. A technician troubleshoots the situation and determines whether the printer has actually failed. If so, the technician refers the customer to the HP Service Center.
- 2 A representative from the service center requests product and customer information. In some regions, collateral may also be requested.
- 3 HP ships a refurbished replacement unit to arrive the next day. (Geographic distance might prevent next-day shipping.)
- 4 The customer sends the defective printer to Hewlett-Packard at HP's expense.

Customers with on-site support service provided by HP should work directly with the local Customer Care Center instead of following the steps outlined here.

Exchanged units carry the remainder of the original unit's warranty or 90 days, whichever is greater. The faster turnaround from HP Express Exchange minimizes downtime over traditional service programs that require the user to ship the failed unit to the manufacturer, and then wait for it to be repaired and returned. Because HP pays the shipping charges, the user incurs no hidden costs for the service.

Ordering Parts

Field replaceable part numbers are listed in Chapter 8: Parts and Diagrams. Replacement parts can be ordered from HP's Parts Direct Ordering or HP's Parts Center Europe. Addresses and telephone numbers for both organizations are as follows:

Parts Direct Ordering	Parts Center Europe
Hewlett-Packard Company Support Materials Organization 8050 Foothills Blvd. Roseville, CA 95678	Hewlett-Packard Company Parts Center Europe Wolf-Hirth Strasse 33 D-7030 Boeblingen, Germany
1-800-227-8164 (U.S. only)	(49 7031) 14-2253

Ordering Consumables

Consumables and accessories can be ordered directly from Hewlett-Packard. Telephone numbers for ordering consumables are as follows:

U.S.	1-800-538-8787
Canada	1-800-387-3154
Toronto	416-671-8383
United Kingdom	0734-441212
Germany	0130-3322

Ordering Related Documentation

The following table shows where to order related documentation. Telephone numbers for the various sources are as follows:

PDO (Parts Direct Ordering)	1-800-227-8164 (U.S. only)
PCE (Parts Center Europe)	49 7031 14-2253
HPD (HP's Distribution Center)	303-353-7650 (U.S. only)

Related Documentation

Description	Part Number
HP LaserJet Printer Family Paper Specification Guide	5040-9092
HP LaserJet 2100, 2100 M, and 2100 TN Printers User Guide	C4170-90901

Technical Assistance

HP ASAP

HP ASAP (Automated Support Access Program) provides free technical support information 24 hours a day, 7 days a week. HP ASAP includes HP FIRST and HP AUDIO-TIPS, which are both explained below. HP ASAP requires a touch-tone telephone.

HP FIRST

HP FIRST (Fax Information Retrieval Support Technology) is a telephone-in fax service providing technical information for HP LaserJet users as well as service personnel. Receiving a fax requires a group 3 facsimile machine or fax card. Service-related information includes:

- Service notes (HP Authorized dealers)
- Application notes
- Product data sheets
- Material Safety Data Sheets (MSDS)
- Typeface and accessory information
- Printer support software information
- Toner information
- Driver request form and Software Matrix

HP FIRST, U.S.

To use HP FIRST in the U.S. call HP ASAP and follow the instructions. The telephone number for HP ASAP in the U.S. is 1-800-333-1917. For all other areas, contact the local service provider.

HP FIRST, Europe

To use HP FIRST in Europe, call HP ASAP and follow the instructions. The telephone numbers for HP ASAP in Europe are as follows:

U.K.	0800-96-02-71
Belgium (Dutch)	078-111906
Switzerland (German)	155-1527
Netherlands	06-0222420
Germany	0130-810061
Austria	0660-8128
For English service outside the above countries, (31) 20-681-5792	

HP AUDIO-TIPS

HP AUDIO-TIPS, available within HP ASAP, is an interactive voice response system providing pre-recorded answers to the questions most frequently asked by HP LaserJet printer users. Helpful "System Maps" to the HP AUDIO-TIPS recordings are available by fax through HP FIRST.

HP Support

Online Services:	World Wide Web URL - Printer drivers, updated HP printer software, plus product and support information may be obtained from the following URLs: in the U.S.: http://www.hp.com in Europe: http://www2.hp.com	
	America Online - America Online/Bertelsmann is available in the U.S., France, Germany, and UK - Printer drivers, updated HP printer software, and support documentation to help answer questions about HP products are available. Use Keyword HP to start the tour or call 1-800-827-6364 preferred customer # 1118 to subscribe. In Europe, call the appropriate number below: Austria: 0222 58 58 485 France: ++353 1 704 90 00 Germany: 0180 531 31 64 Switzerland: 0848 80 10 11 United Kingdom: 0800 279 1234	
	CompuServe - Printer drivers, updated HP printer software, and interactive sharing of technical information with other members is available on CompuServe's "HP User's forums" (GO HP), or call 1-800-524-3388 and ask for representative #51 to subscribe. (CompuServe is also available in the U.K., France, Belgium, Switzerland, Germany, and Austria.)	
Obtaining software utilities, drivers, and electronic Information for U.S. and Canada:	Phone: (805) 257-5565	Mail: Hewlett-Packard Co. P.O. Box 1754 Greeley, CO 80632 U.S.A.
	Fax: (805) 257-6866	
For European English:	For U.K., call (44) (142) 986-5511. For Ireland and outside U.K., call (44) (142) 986-5511.	
HP Service Information:	To locate HP-Authorized Dealers, call 1-800-243-9816 (U.S.) or 1-800-387-3867 (Canada).	
HP Service Agreements:	Call 1-800-835-4747 (U.S.) or 1-800-268-1221 (Canada). Extended Service 1-800-446-0522.	

Customer Support Worldwide

Customer Support and Product Repair Assistance for the U.S. and Canada:		Call (1) (208) 323-2551 Monday through Friday from 6 am to 10 pm, Saturday 9 am to 4 pm (Mountain Time).	
		Call 1-800-243-9816 to locate the nearest HP-Authorized service provider, or call 208-223-2551 for HP centralized service dispatch.	
European Customer Support Center Language and In-Country Options Available Open Monday through Friday 8:30–18:00 CET			
English 662-5525 512-5202 (171) 512-5202	Ireland: (353) (1) UK: (44) (171) International: (44)	Norwegian Danish Finnish Swedish	Norway: (47) 2211-6299 Denmark: (45) 3929-4099 Finland: (358) (9) 0203-47288 Sweden: (46) (8) 619-2170
Dutch 626-8806 (20) 606-8751	Belgium: (32) (2) Netherlands: (31)	Italian Spanish	Italy: (39) (2) 264-10350 Spain: (34) (90) 232-1123
French 62-3434 626-8807 (84) 880-1111	France: (33) (01) 43- Belgium: (32) (2) Switzerland: (41)	Polish Portuguese	Poland: (48-22) 608-77-00 Portugal: (351) (1) 441-7199
German 525-8143 0660-6386	Germany: (49) (180) Austria: (43) (1)		
In-country support numbers: If the desired country is not listed below, see “Worldwide Sales and Service Offices” (page 21) for more information.			
Argentina	787-8080	Mexico (Mexico City)	01 800-22147
Brazil	022-829-6612	Mexico (outside Mexico City)	01 800-90529
Canada	(1) (208) 323-2551	Poland	(48-22) 608-77-00
Chile	800-360999	Portugal	(351) (1) 301-7330
Czech Republic	(42) (2) 613-07111	Russia	(7) (95) 923-5001
Greece	(30) (1) 689-6411	Turkey	(90) (1) 224-5925
Hungary	(36) (1) 343-0310		