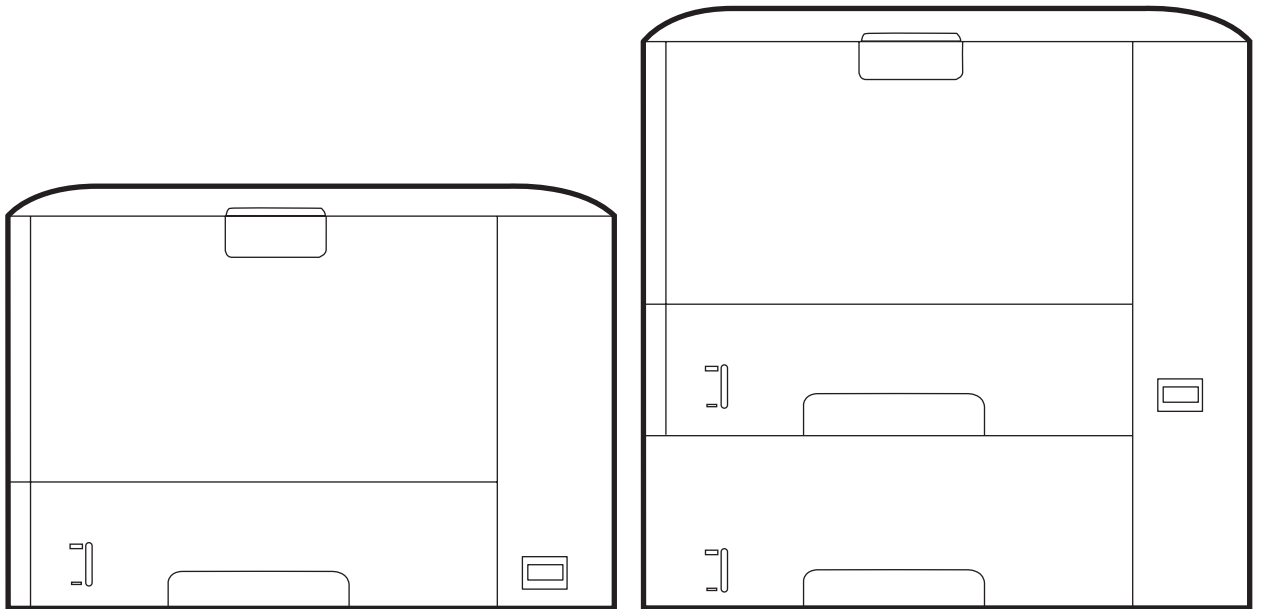


HP LaserJet P3005 Series printers

Service Manual



For the complete PDF manual
please visit www.LaserPros.com.



HP LaserJet P3005 Series printers

Service Manual



Copyright information

© 2006 Copyright Hewlett-Packard Development Company, L.P.

Reproduction, adaptation, or translation without prior written permission is prohibited, except as allowed under the copyright laws.

The information contained herein is subject to change without notice.

The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Part number: Q7812-90910

Edition 1, 10/2006

Safety information

WARNING!

Potential Shock Hazard

Always follow basic safety precautions when using this product to reduce risk of injury from fire or electric shock.

Read and understand all instructions in the user guide.

Observe all warnings and instructions marked on the product.

Use only a grounded electrical outlet when connecting the product to a power source. If you do not know whether the outlet is grounded, check with a qualified electrician.

Do not touch the contacts on the end of any of the sockets on the product. Replace damaged cords immediately.

Unplug this product from wall outlets before cleaning.

Do not install or use this product near water or when you are wet.

Install the product securely on a stable surface.

Install the product in a protected location where no one can step on or trip over the power cord and where the power cord will not be damaged.

If the product does not operate normally, see the online user guide.

Refer all servicing questions to qualified personnel.

Information regarding FCC Class B, Parts 15 and 68 requirements can be found in the user guide.

Trademark credits

Adobe®, Acrobat®, PostScript®, and the Acrobat Logo® are trademarks of Adobe Systems Incorporated.

Java™ is a U.S. trademark of Sun Microsystems, Inc.

Microsoft®, Windows®, and Windows NT® are U.S. registered trademarks of Microsoft Corporation.

UNIX® is a registered trademark of The Open Group.

ENERGY STAR® and the ENERGY STAR logo® are U.S. registered marks of the United States Environmental Protection Agency.



Table of contents

1 Device information

Chapter contents	1
Device configurations	2
Features	3
Walkaround	5
Device parts	5
Interface ports	6
Control-panel layout	7
Device software	9
Minimum system requirements	9
Supported operating systems	9
Supported printer drivers	10
Software for Windows computers	10
HP Web Jetadmin	10
HP Easy Printer Care software	10
Supported operating systems	10
Supported browsers	11
Software for Macintosh computers	11
Other software	11
Embedded Web server	11
Uninstall software	12
Remove software from Windows operating systems	12
Remove software from Macintosh operating systems	12
Media specifications	13
Select print media	13
Supported media sizes	14
Supported media types	15
Paper to avoid	16

2 Installation and configuration

Chapter contents	17
Site preparation	18
Location specifications	18
Operating environment	18
Load input trays	19
Load tray 1 (multipurpose tray)	19
Load tray 2 and optional tray 3	21
Install supplies	23
Supply replacement guidelines	23

Change the print cartridge	23
Install accessories	26
Install memory	26
Install device memory	26
Check DIMM installation	29
Enable memory for Windows	30
Use HP Jetdirect print server cards	30
Install an HP Jetdirect print server card	30
Remove an HP Jetdirect print server card	31

3 Maintenance

Chapter contents	33
Manage supplies	34
Supplies life	34
Approximate print-cartridge replacement intervals	34
Manage the print cartridge	34
Print-cartridge storage	34
Use genuine HP print cartridges	34
HP policy on non-HP print cartridges	34
Print-cartridge authentication	35
HP fraud hotline and Web site	35
Clean the device	36
Clean the exterior	36
Clean the paper path	36
Clean spilled toner	36
Clean the fuser	36
Management tools	38
Use information pages	38
Use the HP Easy Printer Care software	39
Open the HP Easy Printer Care software	39
HP Easy Printer Care software sections	40
Use the embedded Web server	41
Open the embedded Web server by using a network connection	41
Embedded Web server sections	41
Use HP Web Jetadmin software	43
Use the HP Printer Utility for Macintosh	43
Open the HP Printer Utility	44
HP Printer Utility features	44

4 Theory of operation

Chapter contents	45
Basic operation	46
Formatter	46
Engine control unit (ECU)	47
Pickup/feed/delivery system	50
Laser/scanner system	51
Image-formation system	52
Step 1: Primary charging	53
Step 2: Laser beam exposure	53
Step 3: Developing	53

Step 4: Transfer	54
Step 5: Separation	54
Step 6: Fusing	54
Step 7: Drum cleaning	55
Internal components	56
Timing	58
Print cartridge memory system	61

5 Removal and replacement

Chapter contents	63
Overview	65
Removal and replacement strategy	65
Electrostatic discharge	65
Required tools	65
Types of screws	66
Service approach	67
Before performing service	67
Pre-service procedures	67
Parts removal order	68
After performing service	68
Covers	69
Right-side cover	69
Left-side cover	70
Back cover	72
I/O cover	72
Top, right cover	73
Top cover	74
Front, right cover	75
Control panel	78
Formatter	80
Fuser	83
Laser/scanner	86
Engine control unit (ECU)	88
Access plate	96
High-voltage power supply	97
Paper feed guide assembly	104
Main motor	106
Gear assembly	108
Reinstallation notes for the gear assembly	110
Tray 1 solenoid	111
Tray 2 solenoid	112
E-label reader (memory tag)	113
Face-down-roller shaft	115
Cartridge door	117
Transfer roller	120
Registration assembly	121
Tray 1 pickup roller	124
Tray 2 pickup roller	125
Separation pad	127

6 Troubleshooting

Chapter contents	129
Troubleshooting process	130
Basic troubleshooting	130
Control-panel messages	131
Control-panel message types	131
Resolve control-panel messages	131
Clear jams	148
Avoid jams	148
Typical jam locations	149
Jam detection	150
Clear jams from the input-tray areas	151
Clear jams from the print-cartridge area	153
Clear jams from the output-bin areas	154
Clear jams from the optional duplexer	155
Interface troubleshooting	157
Communications checks	157
Computer direct connect (parallel) test	157
EIO troubleshooting	157
Jetdirect page	158
Network printing problems	158
Service mode functions	160
Cold reset	160
NVRAM initialization	160
Hard-disk initialization	161
Skip disk-load	161
Self test	161
Service menu (service PIN codes)	161
Service ID	162
Restoring the service ID	162
Convert the service ID to an actual date	163
Troubleshooting tools	164
Control-panel menus	164
Diagnostics menu	164
Test pages	165
Engine-test page	165
Formatter test page	166
Image defect ruler	167
Upgrade the firmware	168
Determine the current firmware version	168
Download the new firmware from the HP Web site	168
Transfer the new firmware to the device	168
Use FTP to upgrade the firmware on a network connection	168
Use HP Web Jetadmin to upgrade the firmware	169
Use MS-DOS commands to upgrade the firmware	170
Upgrade the HP Jetdirect firmware	171
Troubleshoot general printing problems	172
Troubleshoot media handling problems	175
Multiple pages feed	175
Pages are wrinkled or folded	175

Pages are skewed	175
Troubleshoot print-quality problems	177
Print-quality checklist	177
Image-defect examples	178
Light print (partial page)	179
Light print (entire page)	180
Specks	180
Dropouts	181
Lines	181
Gray background	182
Toner smear	182
Loose toner	183
Repeating defects	183
Repeating image	184
Misformed characters	184
Page skew	185
Curl or wave	185
Wrinkles or creases	186
Vertical white lines	186
Tire tracks	187
White spots on black	187
Scattered lines	188
Blurred print	188
Random image repetition	189
Diagrams	190
Device component locations	190
Main assemblies	190
Main parts	191
Sensors and switches	192
Motors, fans, and solenoids	193
PCAs	194
Wiring diagrams	194

7 Parts and diagrams

Chapter contents	199
Order parts, accessories, and supplies	200
Order directly from HP	200
Order through service or support providers	200
Order directly through the embedded Web server (for printers that are connected to a network)	200
Order directly through the HP Easy Printer Care software	200
Part numbers	201
Paper-handling accessories	201
Print cartridge	201
Memory	201
Cables and interfaces	202
Covers	204
Internal components	206
Tray 2 pickup assembly	222
Alphabetical parts list	224

Numerical parts list	233
----------------------------	-----

Appendix A Specifications

Physical specifications	244
Electrical specifications	245
Acoustic specifications	246
Operating environment	246

Appendix B Service and support

Hewlett-Packard limited warranty statement	247
Customer self repair warranty service	248
Print cartridge limited warranty statement	249
HP Customer Care	250
Online Services	250
Telephone support	250
Software utilities, drivers, and electronic information	250
HP direct ordering for accessories or supplies	250
HP service information	250
HP service agreements	250
HP Easy Printer Care software	251
HP support and information for Macintosh computers	251
HP maintenance agreements	252
On-site service agreements	252
Next-day on-site service	252
Weekly (volume) on-site service	252
Repacking the device	252
Extended warranty	253

Appendix C Regulatory information

FCC regulations	256
Environmental product stewardship program	257
Protecting the environment	257
Ozone production	257
Power consumption	257
Toner consumption	257
Paper use	257
Plastics	257
HP LaserJet print supplies	257
HP print supplies returns and recycling program information	258
Paper	258
Material restrictions	258
Disposal of waste equipment by users in private households in the European Union	259
Material Safety Data Sheet (MSDS)	259
For more information	259
Declaration of conformity	261
Safety statements	262
Laser safety	262
Canadian DOC regulations	262

VCCI statement (Japan)	262
Power cord statement (Japan)	262
EMI statement (Korea)	262
Laser statement for Finland	263

Index	265
--------------------	------------

For the complete PDF manual
please visit www.LaserPros.com.