

HP Color LaserJet 2605, 2605dn, 2605dtn Service Manual

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



HP Color LaserJet 2605, 2605dn, 2605dtn

Service Manual



Copyright and License

© 2005 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 in this document 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.

Q7821-90930

Edition 1, 12/2005

FCC Class A Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense. The end user of this product should be aware that any changes or modifications made to this equipment without the approval of Hewlett-Packard could result in the product not meeting the Class A limits, in which case the FCC could void the user's authority to operate the equipment.

Trademark Credits

Adobe Photoshop® and PostScript® are trademarks of Adobe Systems Incorporated.

CorelDRAW™ is a trademark or registered trademark of Corel Corporation or Corel Corporation Limited.

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

Netscape™ and Netscape Navigator™ are U.S. trademarks of Netscape Communications Corporation.

TrueType™ is a U.S. trademark of Apple Computer, Inc.

ENERGY STAR® and the ENERGY STAR logo® are U.S. registered marks of the United States Environmental Protection Agency. Details on the proper use of the marks are explained in the "Guidelines for Proper use of the ENERGY STAR® Name and International Logo."



Table of contents

1 Printer basics

Printer configurations	2
HP Color LaserJet 2605 printer	2
HP Color LaserJet 2605dn printer	2
HP Color LaserJet 2605dtn printer	3
Printer features	4
Walkaround	6
Software	8
Software and supported operating systems	8
Print-media specifications	9
General guidelines	9
Paper and print media	9
Printing and storage environment	10
Envelopes	10
Labels	12
Transparencies	13
HP LaserJet glossy paper and HP LaserJet Photo paper	13
Letterhead or preprinted forms	13
HP LaserJet Tough paper	13
Custom-sized print media or cardstock	14
Supported media weights and sizes	14

2 Installation

Site preparation	18
Operating environment	18
Minimum system requirements	19
Requirements for PC systems	19
Requirements for Macintosh systems (non-PostScript)	19
Package contents	20
Install input devices	21
Installing Tray 3 (2605dtn)	21
Loading Tray 1	21
Loading Trays 2 and 3	23

3 Managing and maintenance

Control panel menus	30
Using the control panel menus	30
Control panel menu map	30
Managing supplies	32

Supplies life	32
Checking and ordering supplies	32
To check status and order using the control panel	32
To check and order supplies using HP ToolboxFX	32
To check and order using HP Web Jetadmin	33
Storing supplies	33
Replacing and recycling supplies	33
HP policy on non-HP supplies	33
Resetting the printer for non-HP supplies	33
HP anti-counterfeit website	34
Cleaning the printer	35
To remove toner build-up	35
To clean the paper path using HP ToolboxFX	37
Cartridge out override	38
Configuration	38
On-going operation	38
Calibrating the printer	39
To calibrate the printer at the printer	39
To calibrate the printer from the HP ToolboxFX	39
Managing the printer	40
Device pages and reports	40
Demo page	40
Configuration page	40
Supplies Status page	41
Networking page	43
Fonts pages	43
Usage page	43
Menu map	43
HP ToolboxFX	44
To view HP ToolboxFX	44
Status	45
Event log	45
Alerts	46
Set up status alerts	46
Set up e-mail alerts	46
Help	46
Device settings	47
Device information	47
Paper handling	48
Printing	48
PCL5e	48
PostScript	49
Print quality	49
Print density	49
Paper types	50
Memory card (HP Color LaserJet 2605dtn)	50
System setup	51
Service	51
Network settings	51
Using the embedded Web server	51

To access the embedded Web server using a network connection	52
Information tab	52
Settings tab	53
Networking tab	53
Other links in HP ToolboxFX	53

4 Operational theory

Engine control system	56
Basic sequence of operation	56
Power-on sequence	57
Motors and fans	57
Main motor failure detection	58
Fan motor failure detection	58
Image formation system	59
Image formation process	61
Latent image formation	62
Laser/scanner system	63
Developing stage	63
Print cartridge	64
Transfer belt (ETB)	65
Transfer stage	66
Separation stage	67
Fusing stage	67
Pickup and feed system	69
Manual feed slot pickup mechanism	71
Paper feed mechanism	71
Skew correction by the registration shutter	71
Jam detection	72
Solenoid, motor, and fan locations	73
Printed circuit assembly locations	73
250-sheet tray solenoid and printed circuit locations	74
Duplexing mechanism	75
Service-only tools (SERVICE ONLY)	80
General timing chart	80
Printer calibration	81

5 Removal and replacement

Overview	84
Service approach	85
Pre-service procedures	85
Removal and replacement procedures	86
Print cartridge replacement	86
ETB removal and replacement	89
Fuser removal and replacement	97
Formatter removal and replacement	105
DC controller removal and replacement	108
Separation assembly removal and replacement	111
Paper-pickup roller removal and replacement	112
Control panel removal and replacement	114
Memory-card assembly removal and replacement	119

Duplexing drive unit removal and replacement	124
Duplexing-driver PCA removal and replacement	129

6 Troubleshooting

Troubleshooting process	134
Troubleshooting checklist	134
Control-panel messages	136
Alert and warning messages	136
Status-log messages	140
Clearing jams	142
Where to look for jams	142
To clear jams from inside the printer	143
To clear jams from the duplex area (HP Color LaserJet 2605dn and 2605dtn models only)	144
To clear jams from the top bin (HP Color LaserJet 2605)	146
To clear jams from the top output area (HP Color LaserJet 2605dn and 2605dtn models only)	147
To clear jams from Tray 2 or optional Tray 3	149
E-Label reader guide pin damage	150
Print problems	151
Printed image quality problems	151
Improving print quality	151
Paper Types menu	151
Print Modes menu	151
Print quality menu	152
Understanding print-quality settings	153
To temporarily change print-quality settings	153
To change print-quality settings for all future jobs	153
Identifying and correcting printed image defects	153
Print-quality checklist	154
General print quality issues	154
Solving issues with color documents	158
Paper handling issues	160
Wrong size/type media	160
Cannot select a tray or feature to use	161
Performance problems	161
Functional tests (SERVICE ONLY)	163
Engine-test print	163
Service mode functions (SERVICE ONLY)	164
Cold reset	164
NVRAM initializer	164
Super NVRAM initializer	164
Restoring page counts and serial number	165
Cleaning the ETB	165
Troubleshooting tools	166
Printer pages and reports	166
Demo page	166
Configuration page	167
Supplies Status page	167
Fuser cleaning page	167

Print quality troubleshooting pages	167
Status log	167
Event log	168
Service menu	169
Service menu settings	169
Restoring the factory-set defaults	169
To restore the factory-set defaults	169
Secondary service menu	169
HP ToolboxFX	171
HP ToolboxFX	171
To view HP ToolboxFX	171
Troubleshooting tab	171
Print quality troubleshooting pages	171
Printer calibration	171
Cleaning page	172
Configuration page	172
Diagnostic resources	173
Reports menu	173
Network/Web diagnostics tools	173
Repetitive-image-defect ruler	174
Firmware and software updates	175

7 Parts and diagrams

Overview	178
Assembly locations	182
Covers	188
Internal assemblies	192
Input devices	210
Diagrams	222
Alphabetical parts list	223
Numerical parts list	226

Appendix A Specifications

Printer specifications	230
------------------------------	-----

Appendix B Service and support

Hewlett-Packard limited warranty statement	234
Print Cartridge Limited Warranty Statement	235
HP Customer Care	236
Availability of support and service	238
HP Care Pack™ Services and Service Agreements	238
Repacking the printer	239
To repack the printer	239
Service information form	240

Appendix C Regulatory information

Introduction	242
FCC regulations	243
Environmental Product Stewardship program	244

Protecting the environment	244
Ozone production	244
Power consumption	244
HP LaserJet printing supplies	244
Disposal of waste equipment by users in private households in the European Union ...	245
Material safety data sheet	246
Declaration of conformity	247
Country/region-specific safety statements	248
Laser safety statement	248
Canadian DOC statement	248
Korean EMI statement	248
VCCI statement (Japan)	248
Finnish laser statement	249
Index	251