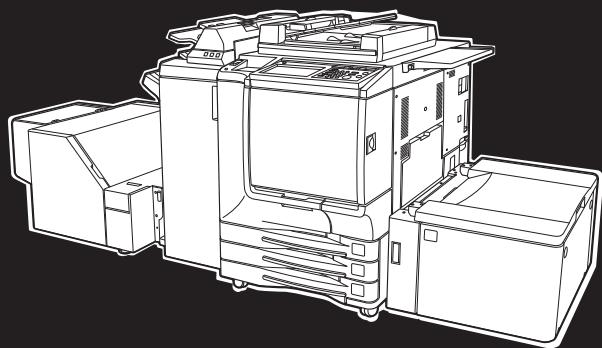


For the complete PDF manual
please visit www.LaserPros.com.



hp Color 9850mfp



Service
Manual

Copyright and License

© 2004 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: Q3225-90935

Edition 1: 03/ 2004

FCC Regulations

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 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. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, 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 separation between equipment and receiver.

Connect equipment to an outlet on a circuit different from that to which the receiver is located.

Consult your dealer or an experienced radio/TV technician.

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 A limits of Part 15 of FCC rules. For more regulatory information, see the hp 9085mfp user's guide. Hewlett-Packard shall not be liable for any direct, indirect, incidental, consequential, or other damage alleged in connection with the furnishing or use of this information.

Trademark Credits

PostScript® is a trademark of Adobe Systems Incorporated.

Windows® is a U.S. registered trademark of Microsoft Corporation.

CONTENTS

SAFETY AND IMPORTANT WARNING ITEMS	S-1
IMPORTANT NOTICE	S-1
DESCRIPTION ITEMS FOR DANGER, WARNING AND CAUTION	S-1
SAFETY WARNINGS	S-2
SAFETY INFORMATION	S-10
IMPORTANT INFORMATION	S-10
SAFETY CIRCUITS	S-11
INDICATION OF WARNING ON THE ENGINE	S-13

I OUTLINE

1. PRODUCT INFORMATION	1-1
1.1 Product features	1-1
1.2 Product specifications	1-2
1.3 Product overview	1-4
1.4 Space requirements	1-6
1.5 Setup	1-8
1.6 Media specifications	1-9
1.7 Media assessment tools and suppliers	1-19
1.8 Functions	1-20
1.9 Maintenance and life	1-21
2. CENTER CROSS SECTION	1-22
3. PAPER PATH	1-23
4. DRIVE SYSTEM DIAGRAM	1-25
4.1 Drum drive	1-25
4.2 Transfer belt conveyance/pressure drive	1-26
4.3 Developing drive	1-27
4.4 Toner supply drive	1-28
4.5 Toner collection drive	1-29
4.6 Fixing drive	1-30
4.7 Paper feed drive	1-31
4.7.1 Paper feed tray 1 to 3 drive	1-31
4.7.2 Vertical conveyance drive	1-33
4.8 ADU drive	1-34
4.8.1 By-pass tray drive	1-34
4.8.2 Registration drive/loop drive	1-35
4.8.3 ADU conveyance drive	1-36
4.8.4 Reverse paper exit drive	1-37
4.9 Engine paper exit drive	1-38
4.10 Scanner drive	1-39
5. IMAGE CREATION PROCESS	1-40
5.1 Image creation flow and function	1-40
5.2 Charging process (Step 1)	1-41
5.3 Laser exposure process (Step 2)	1-41

I OUTLINE

II UNIT EXPLANATION

III DIS./ASSEMBLY

5.4	Developing process (Step 3)	1-42
5.5	1st transfer process (Step 4)	1-43
5.6	2nd transfer process (Step 5)	1-44
5.7	Separation process (Step 6)	1-44
5.8	Drum cleaning (Sub step 1)	1-45
5.9	Pre-charging exposure (Sub step 2)	1-45
5.10	Transfer belt cleaning (Sub step 3)	1-46
5.11	2nd transfer roller L cleaning (Sub step 4)	1-46
5.12	Toner collection (Sub step 5)	1-47
5.13	Process speed	1-47
II UNIT EXPLANATION		
1.	SCANNER.	2-1
1.1	Composition	2-1
1.2	Operation	2-2
1.2.1	Home position search in the exposure unit	2-2
1.2.2	Shading correction reading	2-3
1.2.3	Original reading mode	2-4
1.2.4	Original reading control	2-5
1.2.5	APS control	2-8
1.2.6	AE control	2-10
1.2.7	Image processing	2-10
2.	WRITE.	2-12
2.1	Composition	2-12
2.2	Operation	2-14
2.2.1	Image writing	2-14
2.2.2	Color registration correction control	2-14
3.	DRUM UNIT	2-21
3.1	Composition	2-21
3.2	Operation	2-25
3.2.1	Image formation timing	2-25
4.	DEVELOPING UNIT	2-26
4.1	Composition	2-26
4.2	Operation	2-28
4.2.1	Flow of developer	2-28
4.2.2	Developing control	2-28
4.2.3	Toner supply control to the developing unit	2-28
4.2.4	Developing bias control	2-29
4.2.5	Durability of the developer	2-29
5.	TRANSFER BELT UNIT	2-30
5.1	Composition	2-30
5.2	Operation	2-32
5.2.1	Transfer belt pressure/release mechanism	2-32
5.2.2	Image correction unit	2-33
5.2.3	1st transfer control	2-34
5.2.4	2nd transfer control	2-34

6. TONER SUPPLY.....	2-35
6.1 Composition.....	2-35
6.2 Operation	2-36
6.2.1 Toner supply control to the toner hopper section	2-36
6.2.2 Toner supply control to the developing unit	2-36
6.2.3 Copy/print operation stop control due to no toner	2-37
7. TONER COLLECTION.....	2-38
7.1 Composition.....	2-38
7.2 Operation	2-39
7.2.1 Toner collection control	2-39
7.2.2 Waste toner full detection control.....	2-39
8. PAPER FEED TRAY 1 TO 3.....	2-40
8.1 Composition.....	2-40
8.2 Operation	2-42
8.2.1 Paper feed control	2-42
8.2.2 Up/down plate control	2-43
8.2.3 Remaining paper detection control.....	2-44
8.2.4 Paper size detection control.....	2-45
9. BY-PASS FEED	2-46
9.1 Composition.....	2-46
9.2 Operation	2-47
9.2.1 Tray up drive control	2-47
9.2.2 Paper feed control	2-47
9.2.3 Paper size detection control.....	2-47
10. VERTICAL CONVEYANCE	2-48
10.1 Composition.....	2-48
10.2 Operation	2-48
10.2.1 Vertical conveyance control	2-48
11. REGISTRATION/ADU/REVERSE/PAPER EXIT	2-49
11.1 Composition.....	2-49
11.2 Operation	2-53
11.2.1 Switching control of the paper exit/ADU conveyance path.....	2-53
11.2.2 Reverse/exit control	2-57
11.2.3 ADU conveyance control	2-58
11.2.4 Paper reverse control	2-59
11.2.5 ADU pre-registration control.....	2-60
11.2.6 Registration control	2-62
11.2.7 2nd transfer control	2-63
11.2.8 Paper exit full detection control	2-63
12. FIXING UNIT	2-64
12.1 Composition.....	2-64
12.2 Operation	2-66
12.2.1 Fixing drive control.....	2-66
12.2.2 Pressure/release control	2-67
12.2.3 Web control	2-68
12.2.4 Temperature control.....	2-68

I OUTLINE

II UNIT EXPLANATION

III DIS./ASSEMBLY

13. INTERFACE	2-69
13.1 Composition	2-69
14. IMAGE STABILIZATION CONTROL	2-70
14.1 Toner density control	2-70
14.2 Dmax control	2-70
14.3 Charging potential control	2-71
14.3.1 Correction of the reference value	2-71
14.3.2 Low humidity environment correction	2-71
14.4 Dot diameter adjustment control	2-72
14.5 Gamma correction control	2-73
15. OTHER CONTROLS	2-74
15.1 Parts to which power is supplied even when the reset switch is turned off	2-74
15.2 Parts that operate only when the power switch is turned on	2-75
15.2.1 Parts that operate when the reset switch is turned on	2-75
15.2.2 Parts that operate when the main switch is turned on	2-75
15.3 Fan control	2-76
15.3.1 Fan composition	2-76
15.4 Operation board control	2-77
15.4.1 Operation board composition	2-77
15.5 Counter control	2-78
15.5.1 Counter composition	2-78
15.5.2 Counter operation	2-78
15.6 ACS control	2-80
15.6.1 Switching between the color mode and the black and white mode	2-80
15.6.2 Copy count when using ACS	2-80

III DISASSEMBLY/ASSEMBLY

1. EXTERIOR	3-1
1.1 Replacing the dust filter 2	3-1
1.2 Replacing the dust filter 1 and the ozone filter 1	3-3
1.3 Replacing the toner collection box	3-5
1.4 Angle adjustment of the operation board	3-7
1.5 Removing and reinstalling the main board unit	3-8
2. SCANNER	3-12
2.1 Screws that must not be removed	3-12
2.2 Removing and reinstalling the scanner glass	3-13
2.3 Removing and reinstalling the CCD unit	3-14
2.4 Removing and reinstalling the exposure unit	3-16
2.5 Removing and reinstalling the exposure lamp	3-19
2.6 Removing the scanner wire	3-20
2.7 Reinstalling the scanner wire	3-22
3. WRITING	3-25
3.1 Screw that must not be removed	3-25
3.2 Removing and reinstalling the write unit	3-26
4. PROCESS UNIT	3-29
4.1 Flow of the disassembly of the process unit section	3-29
4.2 Cleaning the charging corona unit	3-30

4.3	Cleaning/replacing, removing and reinstalling the charging wire assy /the charging grid plate	3-32
4.4	Pulling out the process unit	3-33
4.5	Removing and reinstalling the transfer belt unit	3-34
4.6	Replacing the belt cleaning brush unit	3-37
4.7	Replacing the belt cleaning blade	3-38
4.8	Replacing the toner collection sheet 1	3-39
4.9	Replacing the belt separation claw	3-40
4.10	Replacing the transfer belt	3-41
4.11	Replacing the 1st transfer roller	3-43
4.12	Replacing the 2nd transfer roller U	3-44
4.13	Replacing the drum cartridge	3-45
4.14	Removing and reinstalling the drum	3-46
4.15	Replacing the developing unit	3-48
4.16	Replacing the developer	3-50
4.17	Replacing the belt separation claw solenoid	3-52
4.18	Removing and reinstalling the process unit	3-53
4.19	Removing and reinstalling the image correction unit	3-54
5.	TONER SUPPLY	3-55
5.1	Opening and closing the toner supply section	3-55
5.2	Replacing the charging dust filter	3-56
6.	PAPER FEED TRAYS 1 to 3	3-57
6.1	Removing and reinstalling the paper feed unit	3-57
6.2	Removing and reinstalling the paper feed trays 1 to 3	3-59
6.3	Replacing the paper feed roller and the feed rubber	3-60
6.4	Replacing the double feed prevention rubber	3-62
6.5	Replacing the paper feed clutch and the pre-registration clutch	3-63
6.6	Removing and reinstalling the tray up/down wire	3-64
7.	BY-PASS TRAY	3-68
7.1	Replacing the paper feed roller and the feed roller	3-68
7.2	Replacing the double feed prevention roller	3-70
7.3	Replacing the paper feed clutch BP	3-71
8.	VERTICAL CONVEYANCE	3-73
8.1	Removing and reinstalling the vertical conveyance	3-73
8.2	Replacing the intermediate conveyance clutch 1	3-76
9.	FIXING	3-77
9.1	Screws that must not be removed	3-77
9.2	Removing and reinstalling the fixing unit	3-78
9.3	Replacing the fixing upper heater lamps 1 and 2	3-79
9.4	Replacing the fixing lower heater lamp	3-81
9.5	Replacing the fixing roller U, ball bearing U and the heat insulating sleeve U	3-84
9.6	Replacing the fixing roller L, ball bearing L and the heat insulating sleeve L	3-86
9.7	Replacing the fixing temperature sensor 3, and removing and reinstalling the fixing temperature sensor 1 and the thermostat 1	3-88
9.8	Replacing the fixing temperature sensor 4, and removing and reinstalling the fixing temperature sensor 2 and the thermostat L	3-93
9.9	Replacing the fixing drive gear	3-98
9.10	Replacing the fixing cleaning unit	3-100

I OUTLINE

II UNIT EXPLANATION

III DIS./ASSEMBLY

9.11 Replacing the fixing torque limiter	3-102
10. REGISTRATION/ADU/REVERSE/PAPER EXIT	3-104
10.1 Removing and reinstalling the ADU.....	3-104
10.2 Replacing the registration cleaning sheet	3-106
10.3 Replacing the separation corona unit	3-107
10.4 Replacing the transfer ground plate unit and the 2nd transfer roller L	3-108
10.5 Replacing the registration roller.....	3-109
10.6 Replacing the intermediate conveyance clutches 2 and 3.....	3-111
10.7 Replacing the ADU conveyance clutches 1 and 2.....	3-112
10.8 Replacing the ADU pre-registration clutch.....	3-113
10.9 Replacing the decurler roller	3-114

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