

For the complete PDF manual  
please visit [www.LaserPros.com](http://www.LaserPros.com).



## *Service Manual*

## ***Lexmark™ T420(n) Laser*** ***4048–00x***

- ***Table of Contents***
- ***Start Diagnostics***
- ***Safety and Notices***
- ***Trademarks***
- ***Index***

**LEXMARK™**

*Lexmark and Lexmark with diamond design are trademarks of Lexmark International, Inc., registered in the United States and/or other countries.*

**4048-00x**

**Edition: February 2004**

**The following paragraph does not apply to any country where such provisions are inconsistent with local law:** LEXMARK INTERNATIONAL, INC. PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions; therefore, this statement may not apply to you.

This publication could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in later editions. Improvements or changes in the products or the programs described may be made at any time.

Comments may be addressed to Lexmark International, Inc., Department D22A/032-2, 740 West New Circle Road, Lexington, Kentucky 40550, U.S.A or e-mail at ServiceInfoAndTraining@Lexmark.com. Lexmark may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you. You can purchase additional copies of publications related to this product by calling 1-800-553-9727. In other countries, contact your point of purchase.

Lexmark, Lexmark with diamond design, MarkNet, MarkVision, Optra, and *Prebate* are trademarks of Lexmark International, Inc., registered in the United States and/or other countries.

Optra Forms and PictureGrade are trademarks of Lexmark International, Inc.

Other trademarks are the property of their respective owners.

**© 2002, 2004 Lexmark International, Inc.**

**All rights reserved.**

#### **UNITED STATES GOVERNMENT RESTRICTED RIGHTS**

This software and documentation are provided with RESTRICTED RIGHTS. Use, duplication or disclosure by the Government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.227-7013 and in applicable FAR provisions: Lexmark International, Inc., Lexington, KY 40550.

# Table of Contents

<b>Laser Notices</b> .....	<b>vii</b>
<b>Safety Information</b> .....	<b>xvii</b>
<b>Preface</b> .....	<b>xxii</b>
<b>General Information</b> .....	<b>1-1</b>
Maintenance Approach .....	1-1
Special Tools .....	1-1
Serial Number .....	1-2
Printer Identification .....	1-2
Printer Features .....	1-3
Memory and User Flash Memory .....	1-3
Resolution and Print Quality .....	1-4
Print Area .....	1-5
Print Media .....	1-6
Printer Data Streams .....	1-7
Fonts .....	1-8
Paper Handling .....	1-8
Connectivity .....	1-10
Printer Speed .....	1-11
RIP Card Specifications .....	1-11
Supplies .....	1-12
Operator Panel .....	1-12
Options .....	1-13
Acronyms .....	1-14
<b>Diagnostic Information</b> .....	<b>2-1</b>
Start .....	2-1
Operator Panel .....	2-2
Light Patterns .....	2-3
Status Information Light Patterns .....	2-3
Attendance Information Light Patterns .....	2-5
Obtaining Information about Printer Service Error Codes .....	2-11
Service Error Codes .....	2-11
Power-On Operations .....	2-25
Power-On Self Test (POST) .....	2-26
Symptom Tables .....	2-26

Service Checks .....	2-29
Cooling Fan Service Check .....	2-29
Cover Interlock Switch Service Check .....	2-30
RIP Card Service Check .....	2-31
Dead Machine Service Check .....	2-33
Low Voltage Power Supply (LVPS) Service Check .....	2-33
Fuser Service Check .....	2-34
Main Motor Service Check .....	2-37
Operator Panel Service Check .....	2-38
Transfer Roll Service Check .....	2-40
Paper Feed Service Checks .....	2-41
Parallel Port Service Check .....	2-47
Print Quality Service Checks .....	2-48
Solving Print Quality Problems .....	2-55
Restoring Factory Defaults .....	2-62
Using Print Quality Test Pages .....	2-62
<b>Diagnostic Aids .....</b>	<b>3-1</b>
Operator Panel .....	3-1
Menu Definition .....	3-1
Configuration Menu Group or Diagnostic Menu Group .....	3-2
Printer Diagnostics Mode .....	3-6
Continuity Check on HVPS/Cartridge .....	3-8
<b>Repair Information .....</b>	<b>4-1</b>
Handling ESD-Sensitive Parts .....	4-1
Adjustments .....	4-2
Printhead Assembly Adjustment .....	4-2
Adjusting Paper Feed Alignment .....	4-3
Lubrication .....	4-3
Re-assembly .....	4-5
Removal Procedures .....	4-6
Cover Removals .....	4-6
Rear Exit Door Removal .....	4-18
Duplex Tray Assembly Removal .....	4-19
Fuser Assembly, Fuser Paper Exit Guide, Fuser Exit Sensor, and Fuser Lamp Removal .....	4-20
Terminal Assembly Removal .....	4-22
Tray Damper and Spring Removal .....	4-23
Door Latches Removal .....	4-24
Bracket, Opener Shutter Removal .....	4-25
Paper Guide Roller Removal .....	4-26
Charge Roll Removal .....	4-27

Right Guide Removal . . . . .	4-28
Left Guide Removal . . . . .	4-28
Smart Button Sensor Removal . . . . .	4-31
Entrance Guide Removal . . . . .	4-32
Transfer Roll Assembly and Left Transfer Support Bearing Re- moval. . . . .	4-33
Bracket, Paper Detect (Input Sensor) Removal . . . . .	4-34
D–Roll Tray 1 Feed Removal . . . . .	4-35
D–Roll (Tray 1) Shaft Assembly Removal. . . . .	4-36
3–Pin and 2–Pin Connectors Removal . . . . .	4-38
Printhead Removal . . . . .	4-39
RIP Card Cage (with card in place) Removal . . . . .	4-40
Main Drive Motor Assembly Removal . . . . .	4-42
Motor Assembly (Stepper) Removal . . . . .	4-43
Main Drive Assembly Removal . . . . .	4-44
Reference Plate Assembly Removal. . . . .	4-46
Cartridge Coupling Assembly Removal . . . . .	4-48
Upper (MPF) Housing Assembly (with Paper Flag) Removal	4-49
Lower (MPF) Housing Assembly - Paper Sensor Removal .	4-50
Lower (MPF) Housing Assembly Removal . . . . .	4-52
MPF Roller Assembly Removal . . . . .	4-53
HVPS Card Removal . . . . .	4-56
LVPS Card Removal . . . . .	4-57
Cooling Fan Removal . . . . .	4-58
<b>Locations . . . . .</b>	<b>5-1</b>
Cables . . . . .	5-2
Cables (continued) . . . . .	5-4
Sensors . . . . .	5-6
RIP Card Assembly . . . . .	5-8
Power Supply (LVPS) . . . . .	5-11
High Voltage Power Supply (HVPS) . . . . .	5-12
<b>Preventive Maintenance . . . . .</b>	<b>6-1</b>
Safety Inspection Guide . . . . .	6-1
Lubrication Specifications . . . . .	6-1
<b>Parts Catalog . . . . .</b>	<b>7-1</b>
How to Use This Parts Catalog . . . . .	7-1
<b>Index . . . . .</b>	<b>I-1</b>

For the complete PDF manual  
please visit [www.LaserPros.com](http://www.LaserPros.com).