

SERVICE EDGE

The Laser Printer

Tech Quarterly

Spring 2008

- LPT's 1st Quarter & the Economy
- Nupro Announcement
- NEW TECH ARTICLE: LJ 5000 Gear Wear
- LPT Unleashes Quick Reference Guide



RECESSION



NOTE FROM THE CEO

Best Time Ever for Service Companies

LPT's first quarter sales volume was a whopping **33.2% higher than the first quarter of 2007. Isn't there a recession going on?**

I have great news for your service company. The recession will be a boom!

Amid a struggling economy, we all thrive. Your own customers will be opting to repair rather than replace office equipment. They will even forego their OEM buyback programs. You will find greater receptiveness to refurbished printers and remanufactured toner cartridges. Our industry is recession-proof and then-some.

Considering that the world today has the largest installed base of printers during a recession in history, we could see service companies tripling sales overnight.

Look at the recent numbers for Liberty

Parts Team, which had a stellar start to its fourth year of business.

- + LPT did nearly \$2.7 million in sales in January.
- + First quarter sales were 33.2% higher than last year.
- + We added about 150 new clients and sold to more customers than ever.

LPT will continue arming you with reliable parts, tech help, savings, and innovations. Together, we can reap the most out of these great times.

Get ready. The next three years could be the best ever!

—David K. Reinke

The Service

Our knowledge, your profit



RELIABLE PARTS FOR LASER PRINTERS

From its 57,000 sq. ft. headquarters in Madison, Wis., Liberty Parts Team provides service organizations worldwide with new and remanufactured laser printer parts.

- We remanufacture HP and Lexmark fusing assemblies and other printer components for the wholesale service market.
 - We also offer new parts for HP, Lexmark, Okidata, Xerox and Samsung printers.
 - JetDirect cards and maintenance kits are among our best-selling products.
 - We offer used and new laser printers. Our printer refurbishing staff members have on average nine years of experience with laser printers.
- Call (608) 268-7600.



LPT is Master Distributor for Nupro After Three Years of Testing, LPT endorses Nupro as 'Best Green Alternative'



Dennis Kosterman
(1991)
Tech Support Manager



Eddie Karlstlyst (1995)
Printer Refurbishing /
Tech Support



Craig Kaltenberg (1991)
Quality Control Mgr/
Tech Support

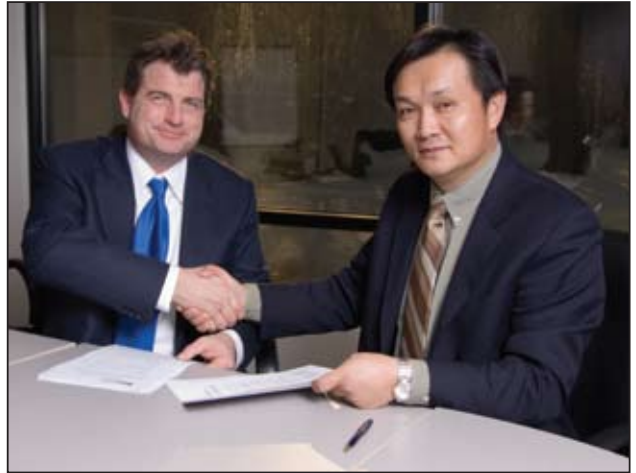
Liberty Parts Team, a reseller of new OEM and refurbished printer parts, is now U.S. Master Distributor for Nupro, LLC. Nupro manufactures parts and maintenance products compatible with Lexmark laser printers.

The companies concluded the deal March 6.

“LPT can now offer its clients the best prices on the industry’s best alternative to OEM Lexmark parts,” says Richard Jordan, purchasing director at Liberty Parts Team. “After three years of testing, Liberty Parts Team is ready to endorse the Nupro product as ‘the best green alternative on the market.’”

Ron Harris, director of marketing at Nupro, says that the team-up with LPT will reverberate throughout the industry. “I admire David Reinke and the Liberty Parts Team for coming into an already established market and executing a straightforward plan of becoming one of the country’s top distributors of laser printer maintenance components. The effect of this partnership will be felt at all levels of our industry.”

Nupro President Henry Hu says the two companies are a unique fit. “Liberty’s message of quality at competitive prices and Nupro’s quality-first manufacturing aligns the two companies perfectly. Liberty’s resourceful growth over the



David K. Reinke and Henry Hu

past three years makes them a strong force in the industry.”

As U.S. Master Distributor of the wholesale maintenance parts channel, LPT will supply Nupro products to large and small resellers, service providers, as well as distributors throughout the globe.

“Alternative or compatible fusers are the most innovative idea our industry has seen in the last 10 years,” Jordan says. “With the consistent quality that Nupro produces, we now feel confident to offer this product to all of our customers.”



From Left, Nupro Sales Director John Torres, Director of Marketing Ron Harris, President Henry Hu, Liberty Parts Team CEO David K. Reinke, Director of Purchasing Richard Jordan and Creative Director Robert Reinke

Thrifty Fix: Replacing 5000/5100 Fuser Drive Gears

Like many other HP printers, the LaserJet 5000 and 5100 can have problems with the gears on the fuser and in the printer wearing each other out. It had been necessary to replace the entire main drive assembly (RG5-3543 for the 5000, RG5-7079 for the 5100), but now you can save money by replacing just the affected gears.

The gear that directly drives the fuser is part number RF5-2409 (swing arm/gear), and the gear that drives that one is part number RS6-0348 (29-tooth/14-tooth gear). It is usually best to replace both. The replacement procedure requires some care, but this article will help you replace the gears without causing any additional problems.

1. Remove the toner cartridge.

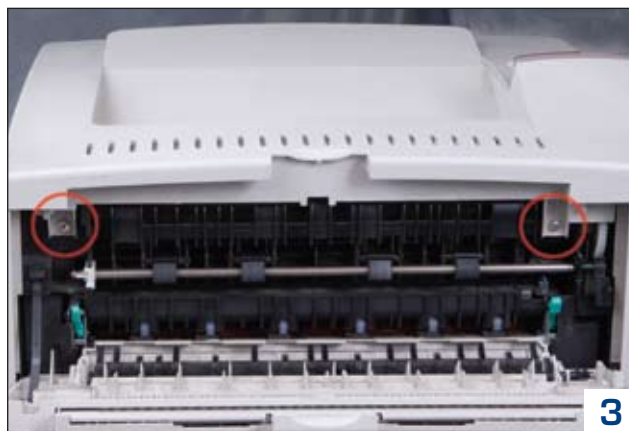
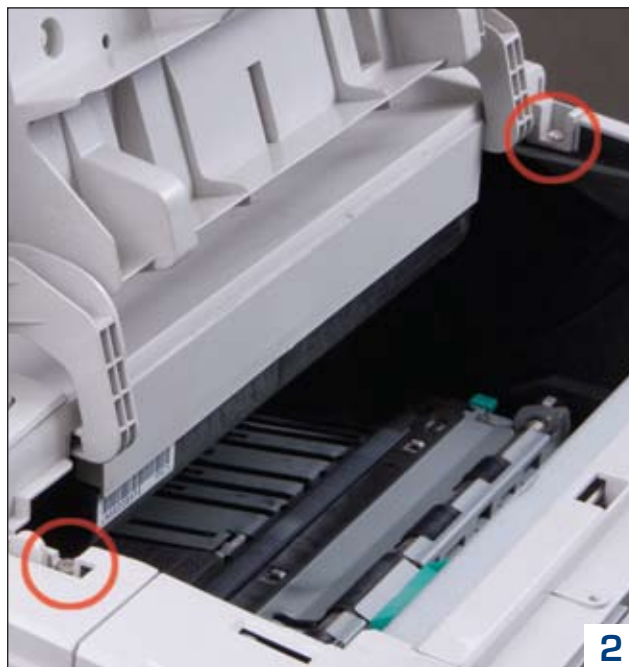
- Cover it or put it in a dark place, as ambient light can damage the drum.

2. Remove the top cover.

- With the toner access door open, release the toner cartridge engagement arm from the inside of the top cover by squeezing the locking tabs together (Fig. 1).
- Remove two screws on top (Fig. 2) and two screws in the back (Fig. 3). Open doors to access screws.
- Tilt the cover to the left and disconnect the control panel cable (Fig. 4).
- Lift the cover off of the printer.

3. Remove the left side cover.

- Release the tab in the top middle



The Service
Our knowledge, your profit



Richard Jordan (1997)
Director of Purchasing
608-268-7609

Richard's experience dealing with the world's largest resellers and service companies combined with his personal background, give him a rare understanding of both the domestic and international laser part industry.

ADVANTAGES

Liberty Parts Team is a leading reseller of laser printer parts because

- The focus is on client success, made possible by outstanding service, tech support and prices.
- The CEO, industry pioneer David K. Reinke, leads a very experienced staff.
- With nearly 70 employees, LPT is the perfect size to give clients the boutique experience they deserve.

As our clients thrive, so do we. In 2007 we grew 43%, with a total revenue of \$21 million.





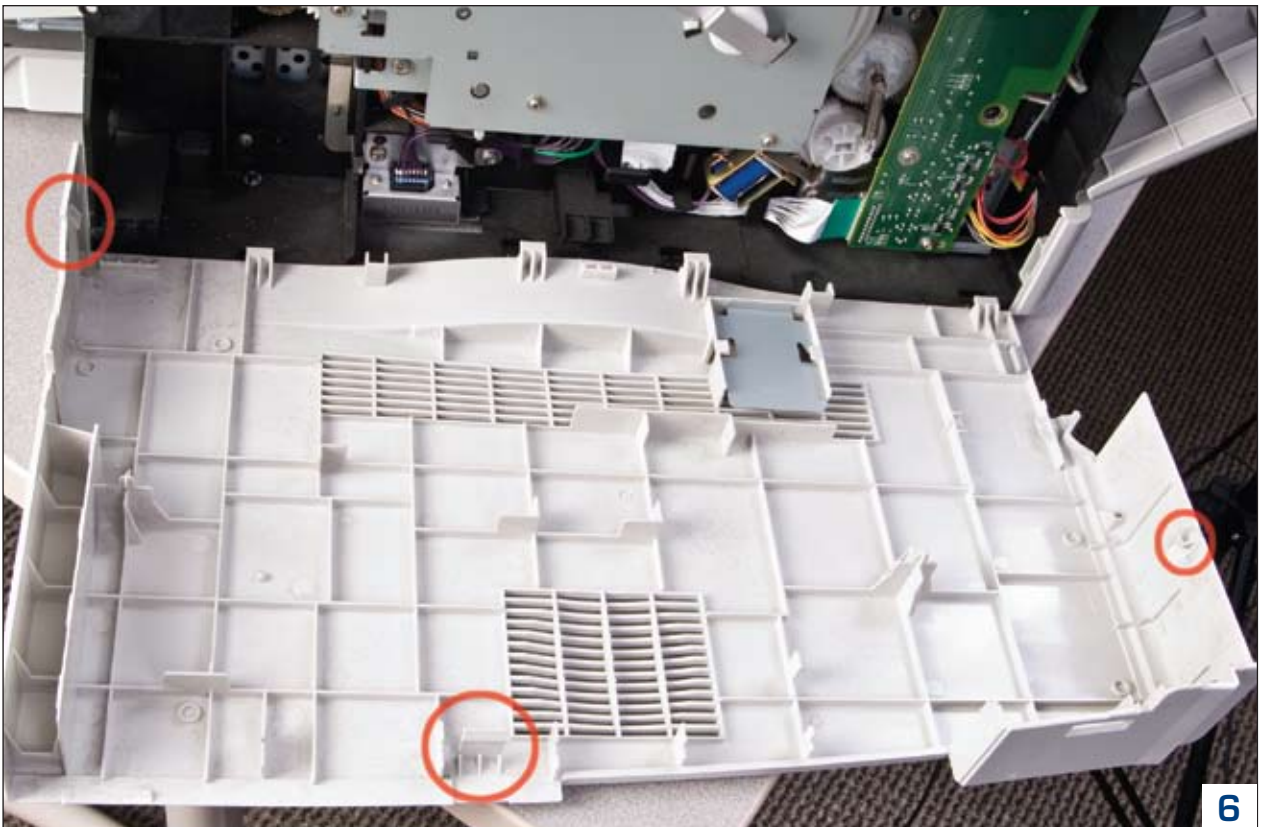
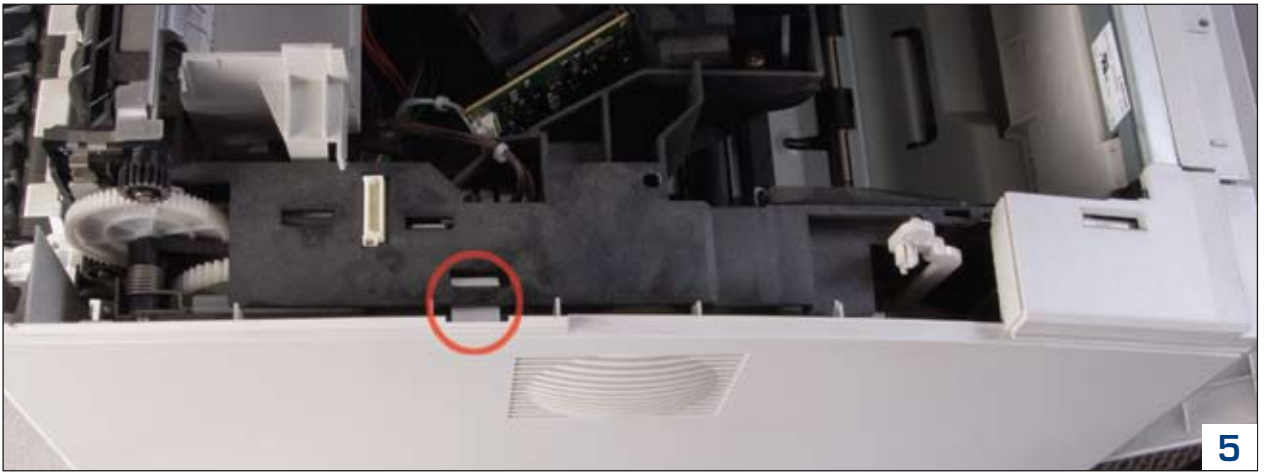
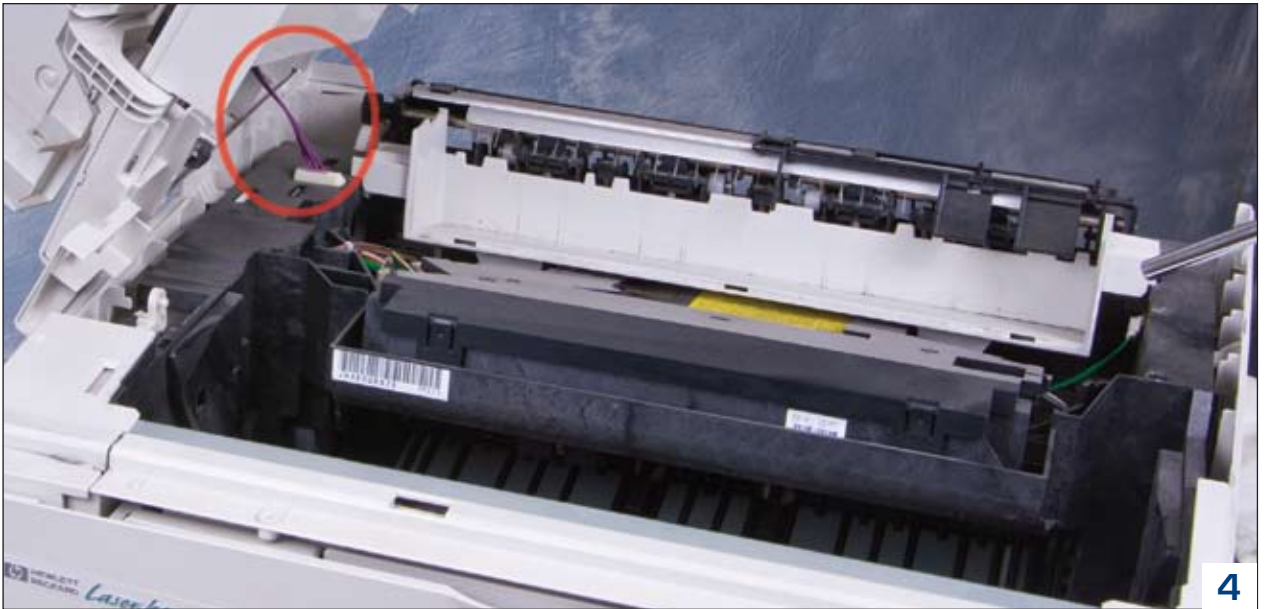
Brenda Barbian (1998)
Purchasing



Kim Schaefer (2005)
Purchasing



Bill Fitzgibbon (1995)
Expeditor



5000 Gears, Continued

(Fig. 5) by pushing down on it; then grasp the upper front and lower rear corners of the cover and rock gently to free two remaining tabs (Fig. 6 shows an inner view of the cover and points out the three tabs).

4. Disconnect the main motor cable (Fig. 7).

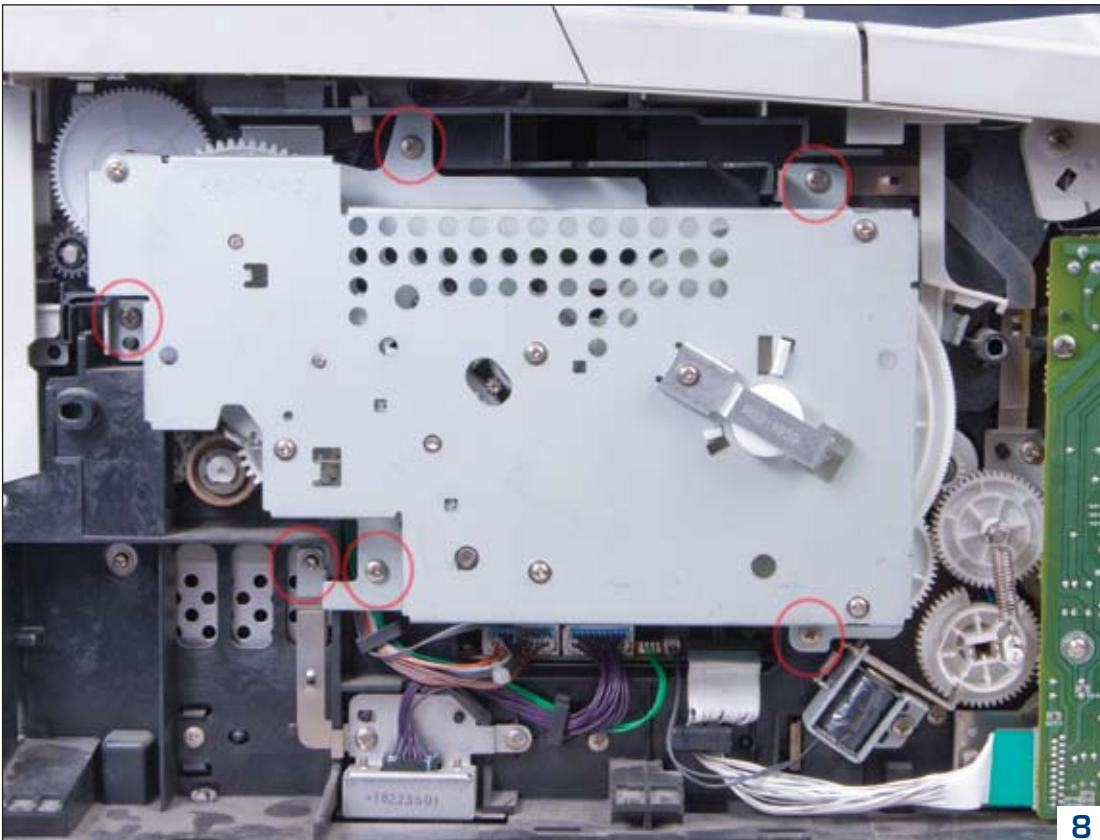
5. Remove the main drive assembly.

a. Remove five self-tapping screws and one grounding screw (Fig. 8); then rotate the bottom of the assembly out, away from the printer, and lower it to release the locating tab. Use

caution to avoid breaking the toner cartridge engagement arm. At this point, you can replace the entire main drive assembly by simply reversing steps 1-5. If you wish to replace just the fuser drive gears, continue on to step 6.

6. Note Spring Orientation.

a. Before disassembling the drive assembly to replace the gear(s), observe the orientation of the three torsion springs near the rear of the assembly (Fig. 9). The tension on these springs will be released when the outer plate is removed, so you will need to remember their correct orientation.



The Service

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Janine Masten,
General Manager.

Our GM is an experienced leader. Most recently, she managed a staff of 80 as VP of Sales & Marketing at Full Compass Systems Ltd., and helped that company achieve a growth of 52 percent (\$50 million to \$76 million) between 2002 and 2006. She also was Worldwide Director of Sales and Service at Lucasfilms THX Division.

"I love being part of such an optimistic and positive company," Masten says. "LPT is not only about one company growing fast. It is about helping clients do the same."

WARRANTY WEARY?

Every LPT remanufactured fuser is

- tested to ensure clean printing and quiet operation
- inspected for flat spots on rollers & other defects
- warranted for six months.

When you are sick of warranties, switch to Liberty Parts Team.

Call (608) 268-7600.





Rich Russell (1996)
Account Executive
608-268-7601



Bruce Davis (1997)
Account Executive
608-268-7613



Kas Schafer (1997)
Account Executive
608-268-7607



Lisa Lytle (2007)
Customer Service

7. Carefully remove the outer plate and toner drive mechanism together.

a. Remove six screws (Fig. 10), while maintaining pressure on the outer plate. The large toner drive gear seats into this plate, but is not secured by anything, so you will need to support this gear and hold it against the plate while disassembling (Fig. 11). This is very important – the toner drive mechanism also contains the toner ground, and if it comes apart and is not properly re-assembled, the toner cartridge will not have a good ground connection, resulting in unsatisfactory print quality (see Fig. 16). The best policy is to make sure it does not come apart in the first place, by removing the outer plate and the toner drive mechanism together.

8. Remove 42-/24-tooth double gear and torsion spring.

a. Remove the 42/24-tooth double gear, then the torsion spring (Figs. 12 & 13). Note the position and orientation of these items before removing them.

9. Remove swing arm/gear and 29-/14-tooth double gear

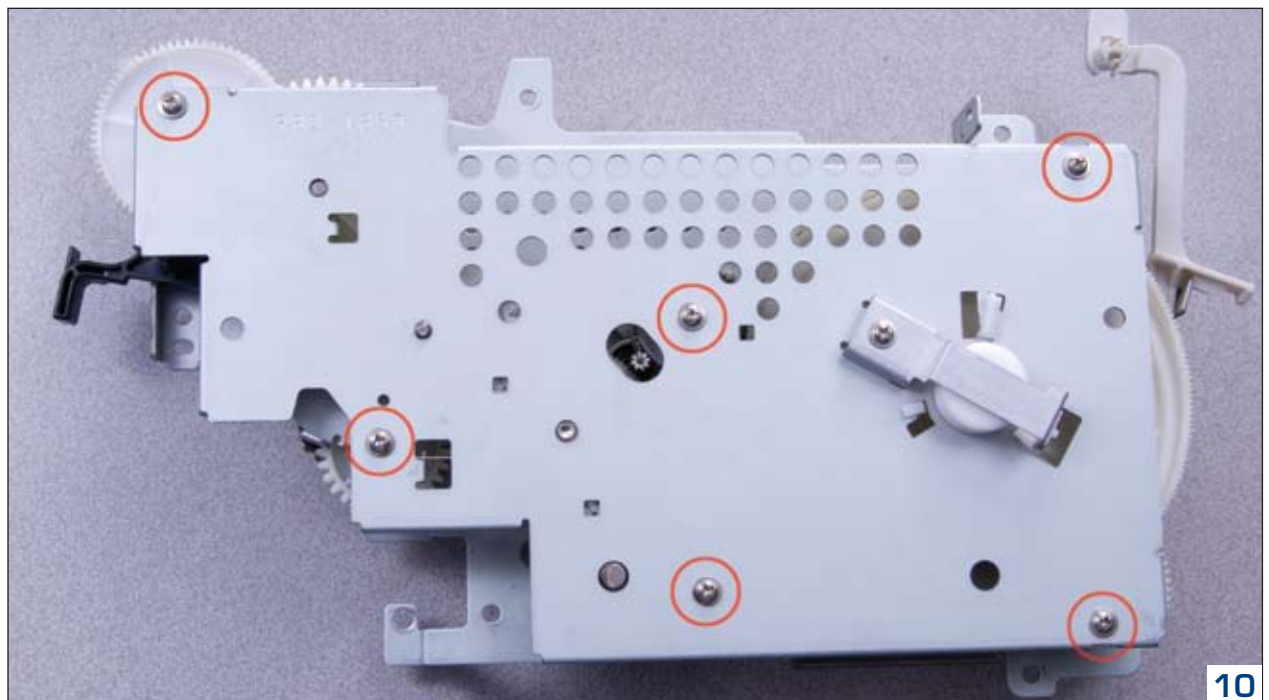
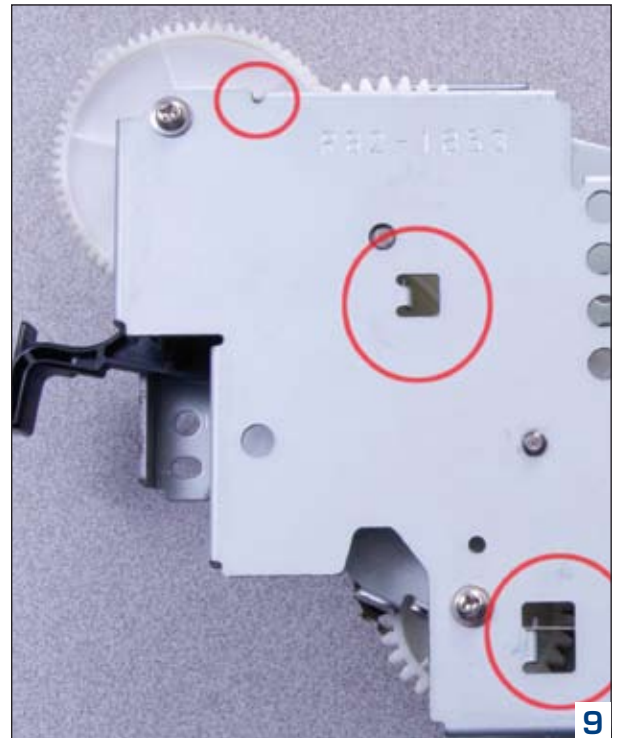
a. Now you can remove the swing arm/gear (this is the brown gear in the metal bracket) and the 29/14-tooth double gear that drives it. These gears will come off together. Note their relative position and orientation before pulling them apart (see Figs. 14 & 15). When installing the new gears, make sure that the metal swing arm bracket is positioned on the correct side of the metal tab on the backing plate (the correct position can be seen in Figs. 12 & 13).

10. Reassemble drive assembly.

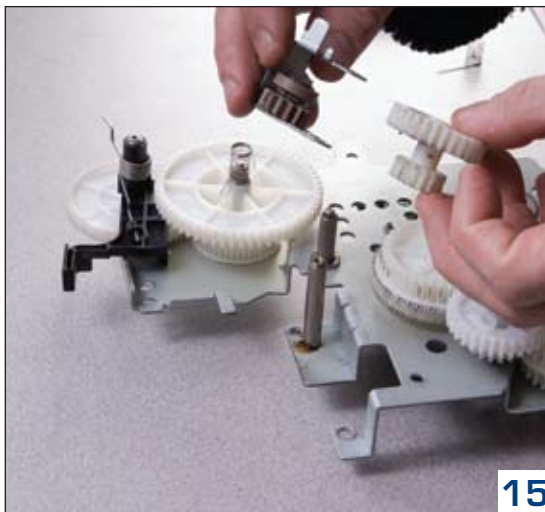
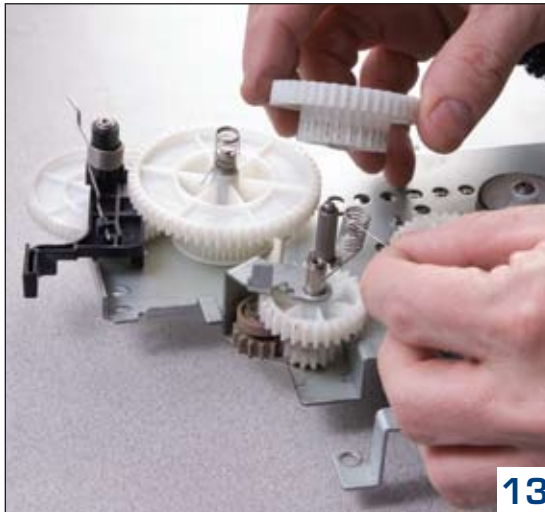
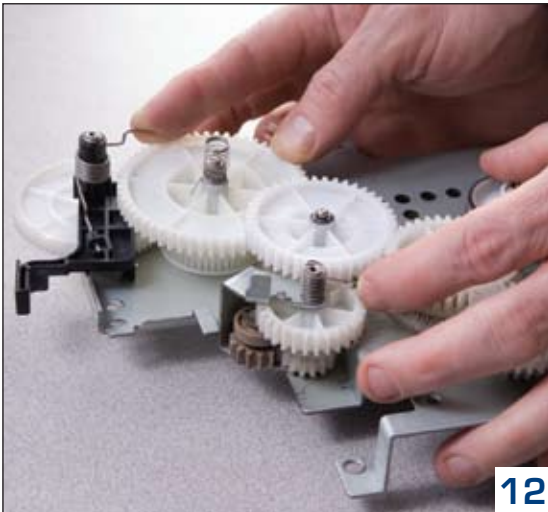
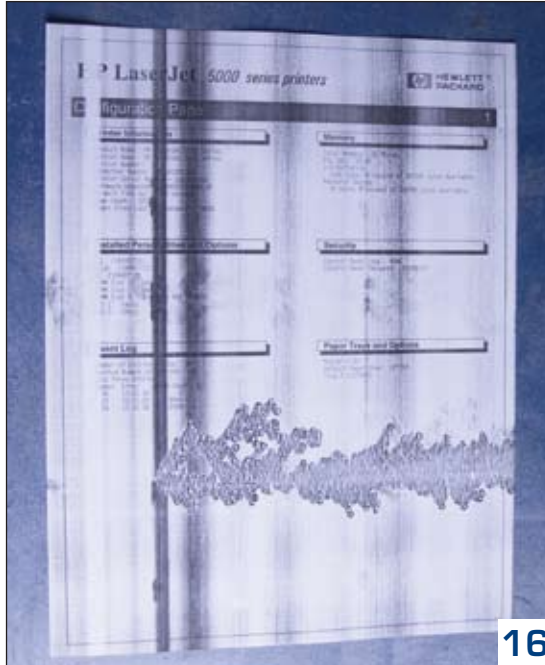
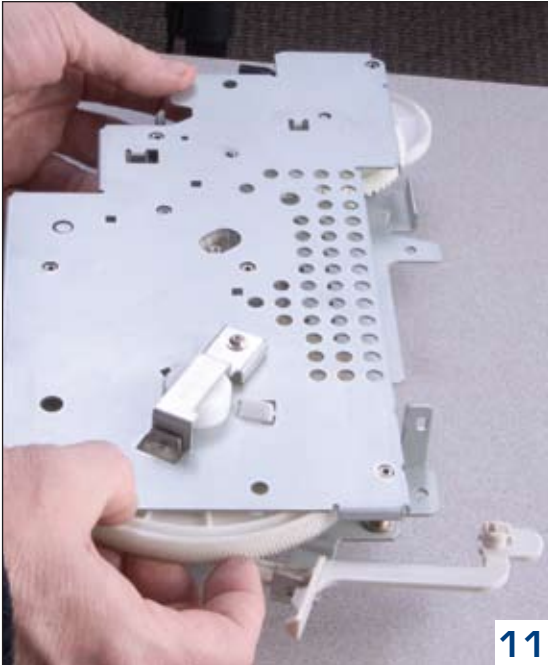
a. Carefully reassemble the drive assembly, making

sure to properly orient the three torsion springs (Fig. 12 shows these springs in the correct position, but without the outer plate). Then reverse steps 1-5 above to reassemble the printer.

Do not forget to reconnect the toner cartridge engagement arm to the lid of the printer. Run a few test prints to make sure that everything has been re-installed correctly. In particular, make sure you do not get the kind of image shown in Fig. 16 (if you do, the toner cartridge is not getting a good ground connection). If you have followed all the steps correctly, the printer should operate quietly and correctly, with no paper jams or image problems.
—Dennis Kosterman



5000 Gears, Conclusion



The Service

Our knowledge, your profit



David Reinke

LPT President and CEO.

With high-tech company PDS from 1987-1988. In printer parts from 1989-1999 (PN owner and CEO), 2005-present (LPT owner and CEO). His goal is for service company owners to make \$20 more on every service call. "We make clients more profitable and help them grow," Reinke says. "Pricing is a big part of that. We routinely come in \$100 less than our major competitors on frequently used parts, and this allows our customers to realize a 33% increase in their profit of parts acquired through us." Another important way we have of helping our clients, Reinke says, is through the tech and business tips shared in LPT publications.

VALUE

LPT routinely beats the competitions' prices without scrimping on component quality or quality control.

Why not request a price quote today?

Call (608) 268-7600.

Technician's Service Edge: Essential Tool for Repetitive Defects

Repetitive defects are repeating equidistant marks appearing on a printed page. The marks can be blotches, lines, repeats of a previous image, or voids. This common problem is easy to troubleshoot thanks to Liberty Parts Team's *Technician's Service Edge*.

A repetitive defect ruler is simply a page with the circumferences of various printer rollers marked off from a main line. By aligning the main line with the first defect on the page, the second defect will align by one of the circumference marks, indicating which roller caused the problem.

Liberty Parts Team combined numerous rulers into a plastic booklet called the *Technician's Service Edge*. In addition to rulers for the popular HP LaserJet printers, it contains error code summaries and other helpful information for the service tech.

How to use the Technician's Service Edge

1. Locate the ruler for the printer in question; printer models are identified at top — see the photo, below right. Below the model name is a line marked "Initial occurrence of defect," and below that are lines labeled with the names of rollers and drums.

2. Line up the line marked "Initial occurrence of defect" with the first defect on the page.

3. Note where the next defect aligns on the ruler. Replace the part indicated and the defects will vanish. In the photo below, the second mark on the page aligns with "Charge Roller," which is the cause of this instance.

The usefulness of the *Technician's Service Edge* has been affirmed by techs around the country. At LPT, our aim is to make your organization more profitable, not only through great prices on reliable printer parts, but with time-saving ingenuity.

We are offering the *Technician's Service Edge* for \$20. To purchase, call Liberty Parts Team at (608) 268-7600.



Dave Gress (1991)
Account Executive
608-268-7605



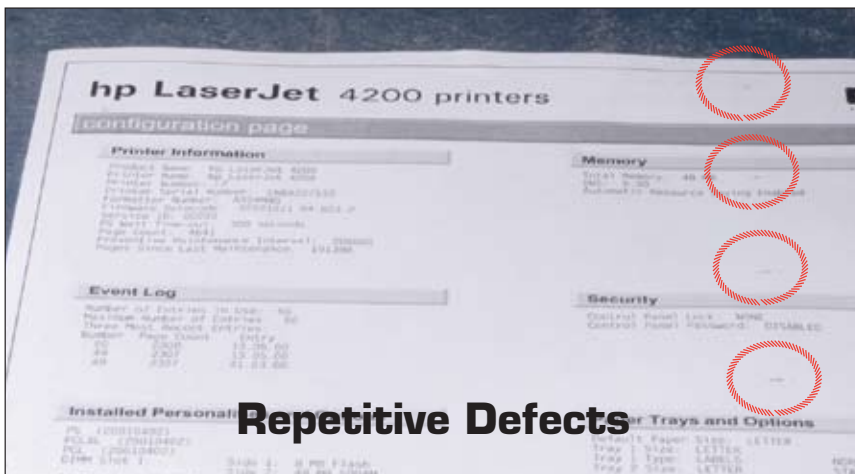
Wayne Tougas (1994)
Account Executive
608-268-7603



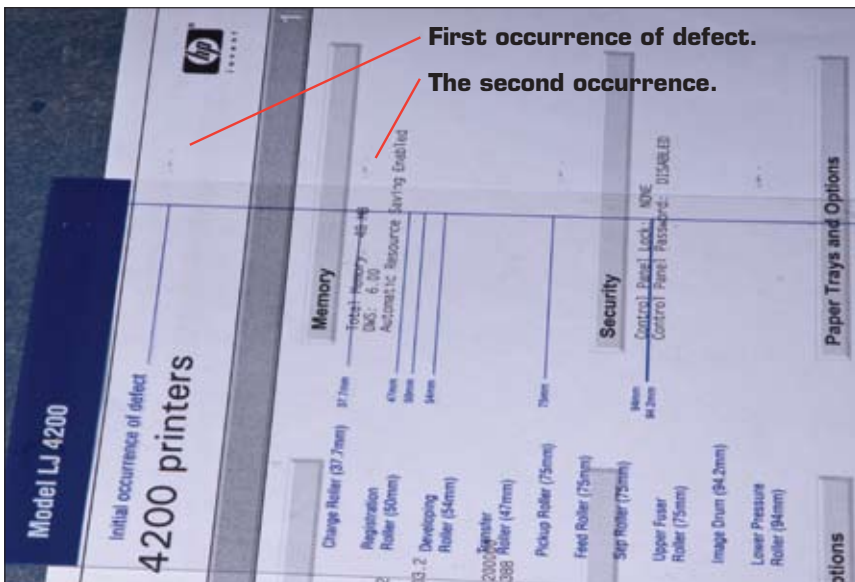
Gonzo Casas (1995)
Account Executive
608-268-7606



Colleen Longseth (2003)
Account Executive
608-268-4623



Repetitive Defects



The Service Edge is the quarterly laser printer tech bulletin of Liberty Parts Team, Inc. In addition to new material, it reprints news and tech articles from the company's monthly postcard-newsletter, which is free to LPT clients.

Editor-in-Chief: David K. Reinke; Editor: Robert Reinke;
Writers: Dennis Kosterman, Robert Reinke
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LPT Unleashes Best Laser Printer Quick Reference Guide

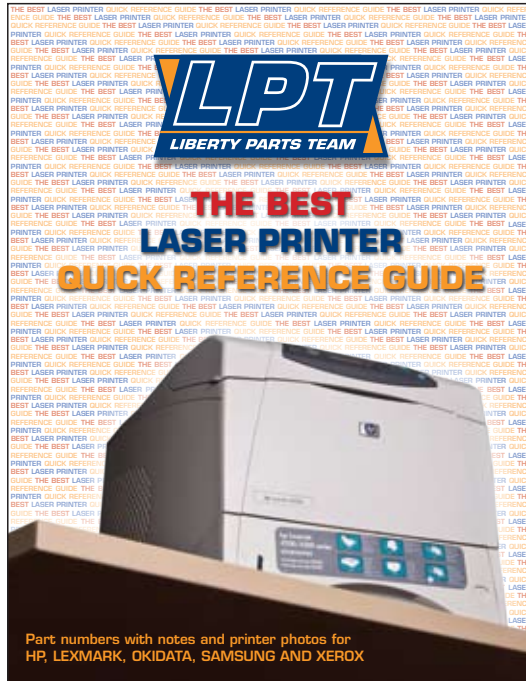
The Best Laser Printer Quick Reference Guide will prove indispensable for purchasing agents, service managers and techs due to its original content and organization.

Tabbed pages, clear headings, a printer index, and a table of contents all help the user locate quickly the printer in question. Below a photo of the printer and its specifications are part numbers separated into three sections: maintenance kit contents, key service parts, and rebuild parts.

Very useful product notes accompany the part numbers, such as compatible printers and alternate part numbers. Extremely popular parts that we recommend clients keep stocked are marked with a star. We have also provided space for notes.

In the back is an assortment of useful laser printer information: memory, JetDirect cards, error code summaries, maintenance reset instructions and service mode PIN codes.

Being spiral bound instead of stapled, *The*



Part numbers with notes and printer photos for HP, LEXMARK, OKIDATA, SAMSUNG AND XEROX

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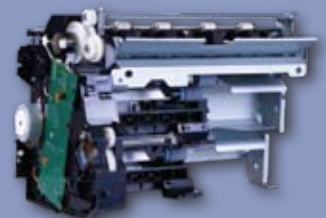
LPT OFFERS THE BETTER EXPERIENCE

LPT offers:

- great prices on fusers and other printer assemblies, JetDirect cards and refurbished printers.
- high-tech packaging.
- a serious approach to quality control.
- an experienced staff, with tech support providers having on average of 15 years in this industry.
- tech articles and industry news and ideas via our newsletters and web site.

Think of how reduced prices and callbacks will help your service organization.

Call LPT today at (608) 268-7600.



HP LaserJet 4000, 4050

PRINTER SPECS.	LaserJet 4000	LaserJet 4050
Model No.	C4118A	C4251A
Release Date	October 1998	May 2001
Pages Per Minute	17	17
Dots per inch	1200	1200
Pages Per Month	65,000	65,000
Maintenance Interval	200,000	200,000
Service Manual	C4251-91003	C4251-91003



Maintenance Kits and Contents

- Maintenance Kit
- ★ Feed/Separation Roller (6)
 - ★ Fuser
 - ★ Pickup Roller, Tray 1
 - ★ Transfer Roller
- Other Service Parts**
- Delivery Asm
 - Engine Controller, 110v
 - Lower Pickup Drive Asm, Tray 3
 - Paper Stop, Tray 2
 - Pickup Drive Asm, Opt 500 Sheet Tray
 - Pickup Asm, Tray 1
 - Pickup Coupler (dog bone)
 - Pickup Drive Asm, Tray 2
 - Pickup Roller Shaft with rollers, Trays 2, 3, 4
 - ★ Pickup Roller, Tray 2 & 3, LJ 4000
 - ★ Pickup Roller, Tray 2 & 3, LJ 4050
 - ★ Separation Pad
 - Toner Cartridge
 - Torque Limiter (Separation Clutch)

Part

- C4118A
- RF5-1885
- RG5-2661
- RG5-3718
- RG5-4283
- RG5-2648
- RG5-3693
- RG5-2684
- RF5-2760
- RG5-2690
- RG5-2655
- RB1-8877
- RG5-2672
- RF5-2484
- RB1-8865
- RB1-8957
- RG5-5281
- C4127A
- RB1-8974

Product Notes

- Contains Fuser, Transfer Roller, Tray 1 Pickup Roller and six Feed/Separation Rollers
Alt: RF5-3114. Also LJ 4100, CLJ 4500, 4550
- Alt: RG9-1529. Also LJ 4100; CLJ 4600, 4610, 4650, 5500, 5550
- Product Notes**
Also: LJ 4000, 4050
- For 250-sheet "T" version
- Also: LJ 4100
- Also: LJ 4000, 4050
- Interchangeable with RB1-8957.
Also LJ 4100. Interchangeable with RB1-8865.
- C4127X is higher capacity
Also: LJ4100; CLJ 4500, 4550



Edge



Confidence.



Stephen Mikkelson
Account Executive
(608) 275-3761



Jason Meyering
Account Executive
(608) 268-7608



John Schuchart
Account Executive
(608) 275-3762

Satisfaction.



Profit.



Be Free.
(608) 268-7600.

Liberty Parts Team
3517 W. Beltline Hwy.
Madison, WI 53713
www.lbrty.com
888-444-8778



LIBERTY PARTS TEAM

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at competitive prices,
backed by outstanding tech support.
Tired of warranties? Give LPT a try.
Call (888) 444-8778.



4100 SLEEVE



P3005 REMANUFACTURED FUSER



JETDIRECT J7934G

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