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SERVICE TODAY

APRIL 2003, VOLUME TWELVE, NUMBER 3

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COMPANY

SALES SPOTLIGHT: THAD BAINBRIDGE



He may have only been with PARTS NOW! for a short time, but Thad Bainbridge is already fitting in well with the company's commitment to customer service.

"Something that is really stressed at PARTS NOW! is getting back to the customer promptly whenever they leave a voice mail or send an email or fax," Bainbridge said. "Every communication my customer has with me is important."

Communication has been a key for Bainbridge, who has been with PARTS NOW! for nearly a year.

"Many of my customers are companies just getting started in

(CONTINUED ON NEXT SIDEBAR)

NEW HP PRINTER RECAP

Recently, HP has announced a flurry of new laser printer models, for both monochrome and color. These new models have improved on previous models, and, in the case of the new inline color printers, created a whole new class based on their superior technology.

To keep them straight, we have compiled some basic information on four

new HP printers. All PARTS NOW! account representatives have been trained on these printers by our training staff, and are ready to answer your questions.

Our inventory is stocked with parts for these printers, so make sure you are prepared and have some common replacement parts on hand. ■

HP Color LaserJet 2500



Model Number
C9706A
Fuser
RG5-6903
Print Speed
4 ppm (color)
16 ppm (B&W)

Used primarily for small businesses or workgroups, the 2500 prints high-quality color at 4 ppm and carries a price tag of under \$1,000. Though duplexing must be performed manually, if you have low-output needs, its compact size can't be beat.

HP Color LaserJet 5500



Model Number
C9656A
Fuser
RG5-6648
Print Speed
21 ppm (color)
21 ppm (B&W)

The CLJ 5500, the new addition to the HP color family, prints high-quality wide-format documents at speeds up to 21 ppm letter size. The inline positioning of the toner cartridges, just as in the HP CLJ 4600, allows for color prints at monochrome speed.



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HP LaserJet 4200/4300

4200	4300
<u>Model Number</u> Q2425A	<u>Model Number</u> Q2431A
<u>Fuser</u> RM1-0013	<u>Fuser</u> RM1-0101
<u>Print Speed</u> 35 ppm (B&W)	<u>Print Speed</u> 45 ppm (B&W)

These high-speed monochrome laser printers offer a lower-cost alternative to the HP LaserJet 9000 and function as a faster, more compact version of the HP LaserJet 4100. The 4200 prints monochrome at 35 ppm, the 4300 at 45 ppm.

NEW ACCESSORIES OFFERED

In the January 2003 issue of *Service Today*, we introduced a new line of accessory products for the service technician. Demand for these products has

been so overwhelming that we are expanding our offerings.

For more information, contact your PARTS NOW! account representative. ■

3M Field Service Vacuum

Part Number - 11737730



Comes complete with:

- Stretch hose (31" to 7')
- Crevice tool brush
- Detachable power cord
- Three-year limited warranty
- Type 2 filter
- Crevice Tool
- Wand tool

Filters for 3M Field Service Vacuum

Part Numbers:
Type 1 (color) - 11737708
Type 2 (black) - 11737731

For use in the 3M Field Service Vacuum (11737730).



Vacuum Carrying Case

Part Number - 11014449

For use with UltiVac Jr. (11021363), 3M (11737730), and other service vacuums.



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(CONTINUED FROM PREVIOUS SIDEBAR)

printer repair, and I am usually in constant contact with them. It's exciting to help these customers succeed, and hear them tell me how fast their business is growing. That's satisfying."

Bainbridge also noted that he feels PARTS NOW! has effectively positioned itself for the future.

"I think PARTS NOW! is really looking at the long term and trying to determine where the market is going to be in five years—and that brings our customers stability."

In his time away from work, Bainbridge enjoys hunting and fishing.

NEW ACCESSORIES, CONTINUED

Energizer Double Barrel Aluminum Flashlight

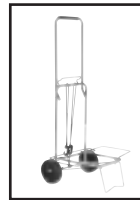
Part Numbers:
Flashlight - 11020864
Replacement Bulb -
11020866



Clipper 76 Multi- Purpose Cart

Part Number - 11011708

Strong, lightweight steel cart with all chrome-plated parts transports loads up to 115 lbs.



Clipper 90-2E Multi- Purpose Cart

Part Number - 11011709

This 13-pound cart can hold up to 250 lbs. of whatever you need to transport.



Clipper 770-2 Super Cart

Part Number - 11011710

Compact, lightweight cart handles loads up to 400 lbs.



Panamax[®] Max 2 Premier Series

Part Numbers:

- a. - 11019812 - Max 2 (15-Amp)
- b. - 11019814 - Max 2 Tel
- c. - 11019813 - Max 2 (20-Amp)

These high-quality surge protectors guard your printers, phone lines, and other electronic equipment against sudden electrical surges.



ProTemp 10 Infrared Thermometer

Part Number - 11022074

The ProTemp 10 uses a laser pointer to measure temperature from 0° to 750° F (-18° to 399° C).



Leatherman Juice Tool

Part Number -
11020867

This high tool features luminescent outer panels of yellow anodized aluminum that enclose a variety of tools.



Triplet Model 9005 Digital Multimeter

Part Number -
11022105

Measures AC voltage to 750 V, DC voltage to 1000 V, AC/DC current to 10 A, and resistance to 200MΩ.



Triplet Model 9600 "Sniff-it" AC Voltage Detector

Part Number - 11020131

The safe, easy, economical way to check for the presence of AC voltage between 50 and 600 volts.



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PRODUCT

PART SPOTLIGHT:

HP LASERJET 5L FIXING FILM ASSEMBLY AND LOWER PRESSURE ROLLER

Most printer service technicians know that almost every laser printer on the market contains a fuser, which uses heat to bond toner to the page. What every technician does not know, however, is that there are exceptions to this rule.

For example, many believe that the HP LaserJet 5L, which contains an AX Canon engine, utilizes a whole fuser. However, this is not true. Instead, because it is so small, the 5L uses a fixing film assembly (part number RG5-1964) made up of a ceramic roller with a heating element covered by a film sleeve. This part is driven by the force of the lower pressure roller (RF5-1516), which burns the toner onto the page. This technology is popular because the machines get heated instantly and there is no waiting for a bulb to get warm.

Despite the instant heating, the fixing film assembly does have drawbacks. This part can get damaged if an attempt is made to clear a paper jam with a fingernail file or a letter opener, which can put a gouge in the film on the sleeve and/or the lower pressure roller. In addition, the fixing film assembly and the lower pressure roller are sold separately—not as a whole unit.

Many customers ask if these parts work in the HP LaserJet 6L—they do



The HP LJ 5L lower pressure roller (RF5-1516).



The HP LJ 5L fixing film assembly (RG5-1964).

not. There is downward compatibility only, meaning the 6L fixing film assembly and lower pressure roller work in the 5L. There is a catch here too: both parts need to be changed at the same time.

With many 5L printers still in use, the demand for these parts has continued to be high. If you service HP printers, chances are you will have a need to have these parts on hand.

PARTS NOW! has plenty of these parts in stock, so be sure to call your account representative at (800) 886-6688 today! ■

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LEXMARK OPTRA C720 UNLISTED ERROR CODE

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The following article originally appeared in the January 2003 issue of Recharger Magazine (Volume 14, Number 5).

If you work on laser printers, purchasing a service manual for the models you work on is an invaluable resource. Filled with diagrams of assemblies and parts, along with maintenance specifications and error codes, the service manual has long been the tool of choice of many a successful printer service technician.

Sometimes, however, you come across a situation that even the service manual has no answer for. Such is the case with the “Code 32 unsupported cartridge” error on the Lexmark C720 color printer. In an effort to keep all my fellow technicians in the know, this article will outline the specifics of the error and how to remedy it.

This error, which also appears on other Lexmark printers, occurs when the smart cartridge system in the printer detects an incorrect cartridge. The reason this usually occurs in some of the newer printers is due to the smart chip the cartridges have on them. The printer reads this smart chip, which contains cartridge information such as the serial number and approximate pages printed or toner

level. If the printer doesn’t see the smart chip or sees an incorrect chip, it gives the error.

In the case of the C720, it doesn’t use the smart chip system, but instead uses a mechanical system where a colored and specifically shaped tab on the cartridge (Figure 1) trips a sensor lever or metal tab (Figure 2) that breaks a photo sensor beam in the printer (toner key sensor). When this beam is broken, it indicates to

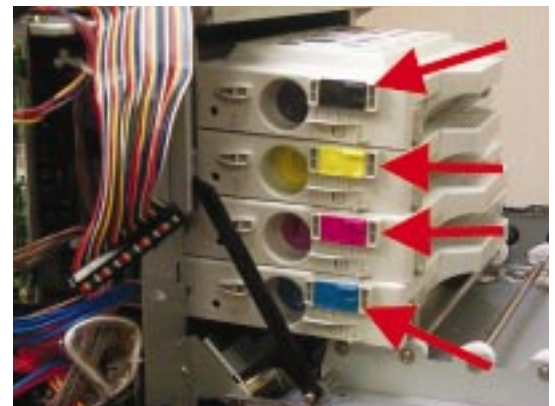


Figure 1 - Arrows denote the toner keys.

the printer that the correct cartridge is engaged at the appropriate time. This timing occurs through a system of cams, clutches, and solenoids in the front door, which we will discuss later. This error can occur for a couple of reasons:

1. A mechanical problem where the



Figure 2 - Arrows denote toner key sensor tabs.

photo sensor beam is not broken because the sensor lever does not move into the beam far enough, or at the correct time.

2. An electronic problem where a sensor is bad or the controlling boards or printed circuit boards (PCBs) are not communicating.

As mentioned previously, error code 32 is not listed in the C720 manual. However, there is a service bulletin from Lexmark that does cover this error (Bulletin # C720_104).

NOTE: Even though this error is not listed in the manual, the procedures below should not be attempted without the manual. This is due to the complexity of the printer. Remove the top, front and side panels using the manual before proceeding.

Following are the listed steps from the Lexmark service bulletin:

1. Correctly re-install the toner cartridges and be sure that they are Lexmark keyed (Figure 1).
2. Bend the tabs on the left side of the cartridge out slightly (Figure 3).
3. Check the left side of the front door for proper seating, if bent too far out, the cams will not push the cartridges into the sensor (Figure



Figure 3 - Bend out toner cartridge tabs (denoted by arrows).

- 4). The front door or cover part number is 12G7029.
 4. Check the toner key sensor (12G7062), connection to the IOD1 connector, DCN 15 (Figure 5). Reseat the connector and replace sensor if necessary.
 5. If all else checks OK, replace the toner key sensor. A common failure is the metal hinge will be bent (Figure 6). Note: This has been prevented in an EC (engineering
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OPTRA C720 UNLISTED ERROR, CONTINUED

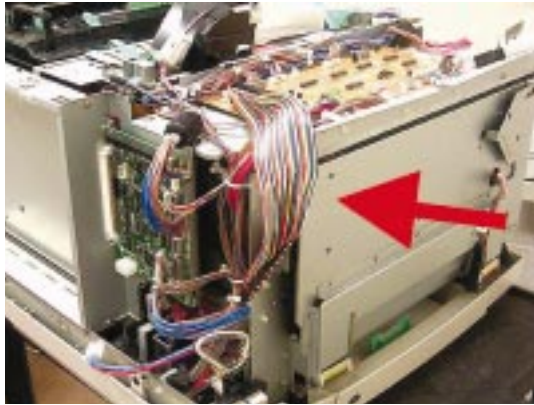


Figure 4 - Arrow denotes possible bent front door.

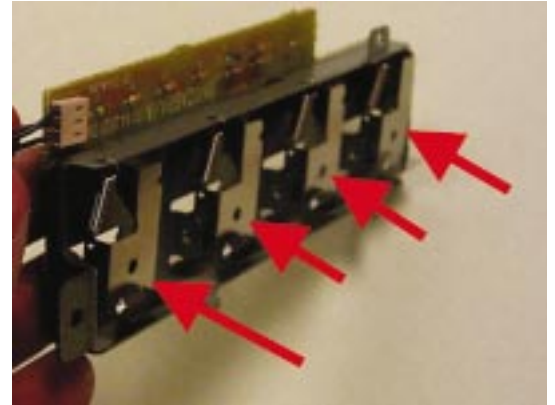


Figure 6 - Arrows denote toner key sensor tabs that bend.

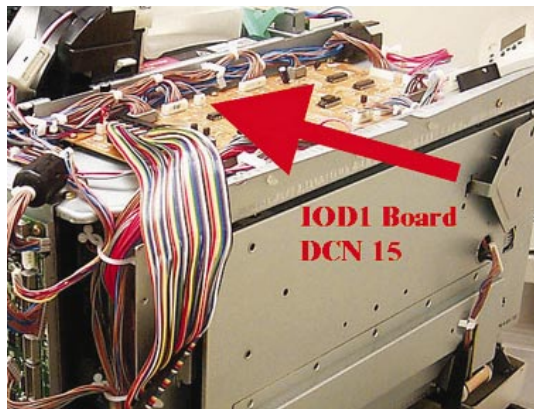


Figure 5 - Connector DCN 15

change) on current production printers. See Figure 7 for the location of the toner key sensor assembly.

6. If the previous steps did not fix the problem, only then replace the IOD1 board, (12G7064) and the MCTL card, (12G7030) as necessary (Figure 8).

While this covers the troubleshooting

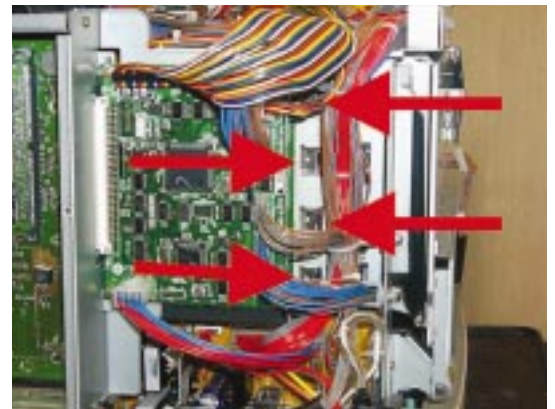


Figure 7 - Arrows denote toner key sensor assembly installed.

steps pretty well, I've also added the steps below as additional thoughts and suggestions to assist in the troubleshooting of the above problem.

1. Referring to item 5 above—Along with the possibility of the metal hinge (or tab) bending, there is also the possibility that one of the photo sensors on the toner key

(CONTINUED IN TWO PAGES)

TECH TIP OF THE MONTH

THE HP LASERJET 4000/4050/4100 TRAY 1 PICKUP ASSEMBLY & ENVELOPE FEEDER COMPATIBILITY ISSUES

The tray 1 pickup assemblies for the HP LaserJet 4000/4050 (RG5-2655) and the HP LaserJet 4100 (RG5-5084) are officially not interchangeable. At first we wondered why, since they appear to be functionally identical. In fact, we have used a 4100 pickup assembly in one of our 4000 test beds for months with no problems.

It turns out that the critical difference between them has to do with the envelope feeders. The 4100 envelope feeder (C8053A) is internally driven—i.e., it has its own motor and drive system, and needs only electrical signals from the printer. The 4000/4050 envelope feeder, on the other hand, has no internal drive—it needs to be mechanically coupled to the printer's drive system.

This difference is reflected in the tray 1 pickup assemblies. The 4000/4050 pickup assembly has a cutout in the plastic housing, just below and to the left of the envelope feeder connector. The gear that protrudes through this cutout is what drives the envelope feeder. The 4100 pickup assembly has this gear, but no cutout—because the 4100 envelope feeder doesn't need it.

So, if you never used an envelope feeder, these assemblies would be completely interchangeable. But if you do use an envelope feeder, you need to have the correct pickup assembly in your printer. In particular, the 4000/4050 envelope feeder will not work with the 4100 pickup assembly because there is no way for it to get the mechanical coupling that it requires.

—Denny Kosterman

Mr. Kosterman is a technical support representative for PARTS NOW!.



Figure 1: The HP LJ 4000/4050, with gear circled.



Figure 2 - The HP LJ 4100, with no exposed gear.

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OPTRA C720 UNLISTED ERROR, CONTINUED

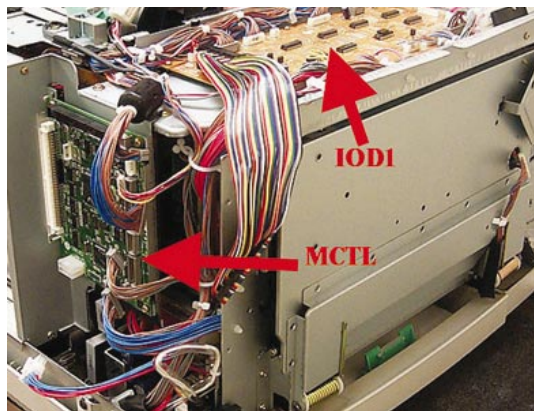


Figure 8 - Arrows denote IOD1 and MCTL boards, as labeled.

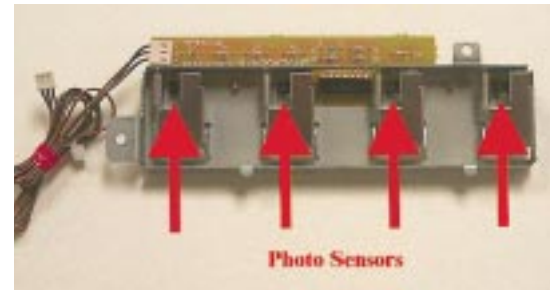


Figure 9 - Arrows denote photo sensors on toner key sensor assembly.



Figure 10 - Front door or cover assembly.

sensor assembly could be inoperative (Figure 9).

2. Referring to item 3 above. If the cam drive mechanism, clutches, solenoids or one of the home sensors is inoperative, this will cause improper sequencing of the cartridges. If the cartridges don't indicate engagement when they are supposed to, the machine assumes an improper cartridge is installed. So, replacement of the entire door assembly is another possible fix for this problem (Figure 10).

For removal and replacement of all the items listed above, please refer to the Lexmark C720 service manual (12G3667). If you should encounter this error in the field and items one, two, and three from the bulletin do not fix the problem, it is highly recommended that the printer be taken to a service facility for further troubleshooting.

Though the steps above are pretty thorough and will help if you should encounter this error, you can also contact PARTS NOW! Technical Support if you have any further questions. All in all, this should help you get to the root of the problem rather than wasting time looking for a service code that is not listed in the manual. ■

—Bill Voelker

Mr. Voelker has provided laser printer and technical training for staff members and through PARTS NOW! training courses for four years. He also writes technical articles for industry journals and magazines.

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SERVICE TODAY is a PARTS NOW! publication with a mission to serve as a technical resource for printer repair technicians.
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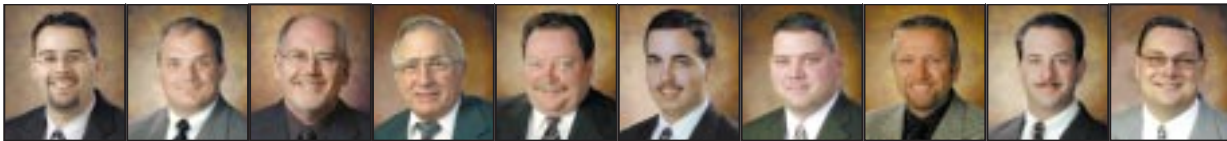
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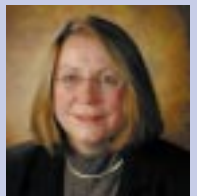


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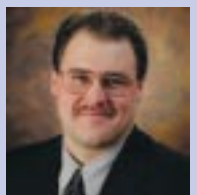
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April training will be held at the PARTS NOW! training facility in Madison, WI.

Further information on course details, area hotels, and directions to the training site can be found at www.partsnow.com in the Resources section.

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