HP LaserJet 9000,9050, 9000mfp, 9040mfp and 9050mfp Series Printers-TWI: Troubleshooting and Resolving 13.20 Paper Jam Error Messages

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Minimum skill level 2

Introduction

This document will assist in troubleshooting 13.20.00 paper jams. Any of the following can cause 13.20 errors.

NOTE:**AGENTS:** It is critical to identify if the printer displays CHECKING PAPER PATH during power up then goes to a 13.20 error message or immediately boots straight to a 13.20 error. This determines what is causing the issue and how to resolve it.

Prior to beginning troubleshooting, it is useful to show the event log on the control panel and see what the error is that precedes the 13.20 error. To do this, look at the page count for the 13.20 error, then locate all other errors that share the same page count. In this list of errors sharing the same page count, the first error is the most important as it is the sensor/assembly that detected a jam that led to a 13.20 error

To show the event log, press Menu, Configure Device, Diagnostics, then Show Event Log. The event log, as viewed on the control panel, is scrollable and is capable of containing up to 50 errors.

1. A 13.20.00 paper jam message indicates that the printer could not eject paper. There may be paper blocking a sensor or a sensor may be defective or damaged. Paper path sensors are located in the following parts of the printer:

   o PS2 is located in the registration assembly.

   o Sensors PS501 and PS502 are located in the fuser assembly.

   o PS2002, PS2004, and PS2005 are located in the Duplexer (if equipped.)

   o PS1451 is located in the face down delivery assembly (top output).

- PS2502 paper path sensor located in Tray 1

2. During restart the printer polls the paper path sensors in the printer, starting with the sensors in the fuser. An issue with any of the previously listed sensors can cause the 13.20 error message. Resolving 13.20 errors involves a process of elimination. See the following section entitled "Troubleshooting the cause of the 13.20 errors" for instructions. Most 13.20 errors are the result of a paper jam; media is stuck in one of the sensors and needs to be cleared out.

3. There can also be a false 13.20 error message issue that is covered by a Modification Recommended Service Note. In this scenario, the printer *never displays* CHECKING PAPER PATH during power up and starts straight to a 13.20 error message. The troubleshooting steps include how to determine if this Service Note is applicable.

4. If the printer has just been serviced and the High Voltage Power Supply (HVPS) was replaced. During printer repair, if the Fuser High Voltage Cable contacts get knocked out of place from the fixing connector holder assembly, the printer will immediately boot up to a 13.20 error.

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Call Center Agents (Troubleshooting to be performed with customer)
NOTE: The following troubleshooting steps can and should be performed with the customer before a CSO is dispatched.

First, check the entire paper path. This includes:

1. The printer engine.

2. All input trays, including Trays 1 and 4 if equipped. Verify that the custom/standard switch is securely locked into the specified position.

3. Have the customer open Tray 1 feed cover and inspect the tray 1 input area for paper that may be stuck here. If needed have the customer remove tray 1 and power up the machine, if it boots up to a READY status then the issue has been isolated to tray 1.If tray 1 is damaged, because it is a customer installable part it can be POPPED or CREWED to the customer without dispatching a technician.

4. Have the customer open the right door and lift up the registration flap. A folded piece of paper can get stuck where the PS2 sensor is; use a flashlight to look carefully in this area.

5. Have the customer remove and inspect the duplexer (if equipped). Leave out for troubleshooting purposes.

6. Inspect all High Capacity Output (HCO) device paper paths.

7. Remove and inspect the fuser (caution the customer that it will be hot); if not damaged, reinstall it.

8. After doing this, try power cycling the printer again. If the message clears and the printer goes to a READY status, then have the customer reinstall the Duplexer (if equipped) and power cycle the printer. If the 13.20 error returns then the issue is with the Duplexer, give it a thorough inspection and remove any stuck paper and check the sensors in the Duplexer. Test again, if the 13.20 error keeps returning only with the Duplexer installed then CREW or POP the customer a new Duplexer. However the Duplexer is normally the least likely cause of this issue.

9. Ask the customer if the printer is displaying the CHECKING PAPER PATH message during restart, but then still goes to a 13.20 error message, then see the following section titled "13.20 errors caused by either Tray 1, Registration or Face Down Delivery Assemblies" for parts predication to go out with the CSO.

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Tools required

- Industry standard

- Flashlight (for checking the sensors)

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Parts required (part numbers are subject to change)

| Part description	Part number
Parts are listed in the appropriate sections	In appropriate section

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Troubleshooting the cause of the 13.20 errors

NOTE:**Technicians:** After completing printer repair it is recommended that the printer's firmware be upgraded to the latest version. Click here for instructions on the Web on how to perform this .

First, check the entire paper path. This includes:

- The printer engine.

- All input trays, including Trays 1 and 4 if equipped.

1. Open the right door and lift up the registration flap. A folded piece of paper can get stuck where the PS2 sensor is; use a flashlight to look carefully in this area. See Figure 1.

   Figure 1: Close up of registration sensor
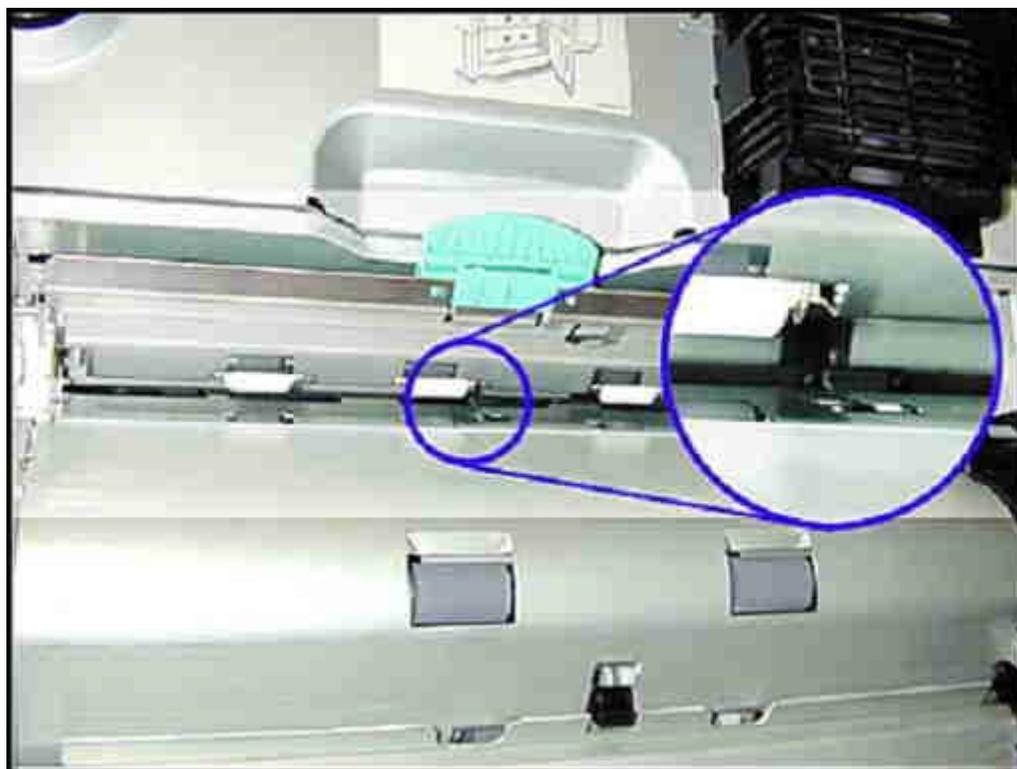
2. Remove and inspect the duplexer (if equipped). Leave out for troubleshooting purposes.

3. Inspect all high capacity output (HCO) device paper paths.

4. Remove and inspect the fuser; if not damaged, reinstall it.

5. After doing this, power cycle the printer again. If the message clears and the printer goes to a READY status, then reinstall the Duplexer (if equipped) and power cycle the printer. If the 13.20 error returns then the issue is with the Duplexer, give it a thorough inspection and remove any stuck paper and check the sensors in the Duplexer. Test again, if the 13.20 error keeps returning only with the Duplexer installed, then replace it.

6. If the printer has just been serviced and the HVPS was replaced: During printer repair if the Fuser High Voltage Cable contacts get knocked out of place from the fixing connector holder assembly, the printer will immediately start up to a 13.20 error. See the following section titled "13.20 Errors Immediately after Service Repair For Replacement Of HVPS." This issue is not likely to be very common.

7. If the printer is displaying the CHECKING PAPER PATH message during restart, but still goes to a 13.20 error message, then see

the following section titled "13.20 errors caused by Tray 1, Registration or Face Down Delivery Assemblies."

8. If after performing all of the previous troubleshooting, the information in Step 3 does not apply and the printer still boots up to a 13.20 but does not display CHECKING PAPER PATH during start up, then see the following section titled "During Power up Printer Never Displays CHECKING PAPER PATH on Control Panel."

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13.20 errors caused by Tray 1, Registration or Face Down delivery assemblies

If the printer still starts up to a 13.20 error message but does display CHECKING PAPER PATH on the control panel, then there is an issue with either Tray 1, the registration assembly or the face down delivery assembly (top output). This may be as simple as removing stuck media from the sensors or may involve replacing one of these assemblies, if damaged. An issue with any of these assemblies can cause a 13.20 error message.

Check the Tray 1 assembly for any stuck paper or damage before replacing any parts. A damaged Tray 1 can cause the printer to boot up to a 13.20 error and display CHECKING PAPER PATH on the control panel. Remove Tray 1 from the printer and power up the machine, if the printer boots to a READY status then the issue has been isolated to Tray 1.

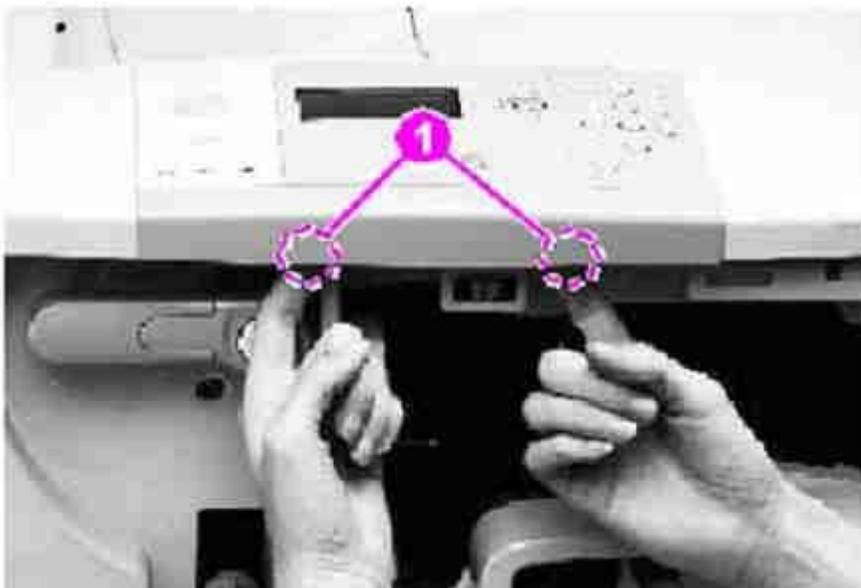## Parts required (part numbers are subject to change)

| Part description	Part number (part numbers are subject to change)
Registration assembly	RG5-5663-060CN
Face down delivery assembly	RG5-5643-080CN
Tray 1* optional if damaged	C8568-67902* optional if damaged

* denotes optional parts

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Instructions on replacing the face down delivery assembly

NOTE: After removing the left top cover look at the delivery assembly. Examine the two sensors and their respective flags for any damage or stuck media. If there is stuck media in the sensors, remove it and verify the flags move freely through the sensors. If this is the case then the issue is probably resolved at this point. Reassemble the printer and test to verify the error message has been cleared. If the assembly is damaged then proceed with replacing it.

Figure 2: Control panel removal	1. Open the front cover. 2. Release the two tabs on the underside of the control panel by pulling them toward the front of the printer. (Figure 2, call-out 1.) 3. Lift the control panel straight up. 4. Unplug the cable connector on the underside of the control panel and remove the control panel.
1 - Retaining tabs on underside of control panel	
Figure 3: Right-top cover removal	1. Remove the control panel.
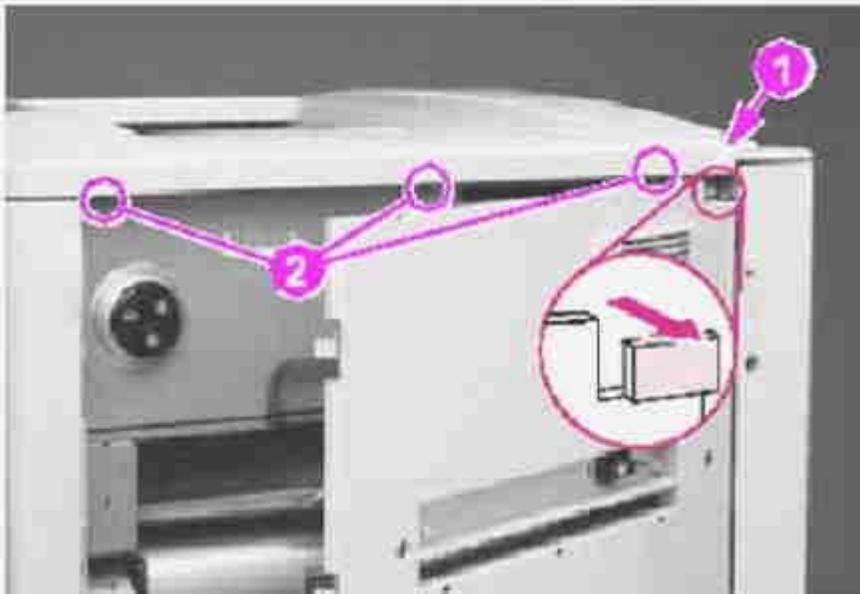
1 - Small plastic cover inside right door

2 - Three silver screws

(Figure 2).
2. If the multipurpose Tray 1 is installed, remove it.
3. Open the right door.
4. Remove the small plastic cover from the upper-right side of the right door by releasing the tab on the inside of the door. (Figure 3, call-out 1.)
5. Remove three silver screws. (Figure 3, call-out 2.)
6. Lift the right-top cover up and away from the printer.
To reinstall:
NOTE: **If the left cover was removed it must be replaced first, then replace the right cover.**
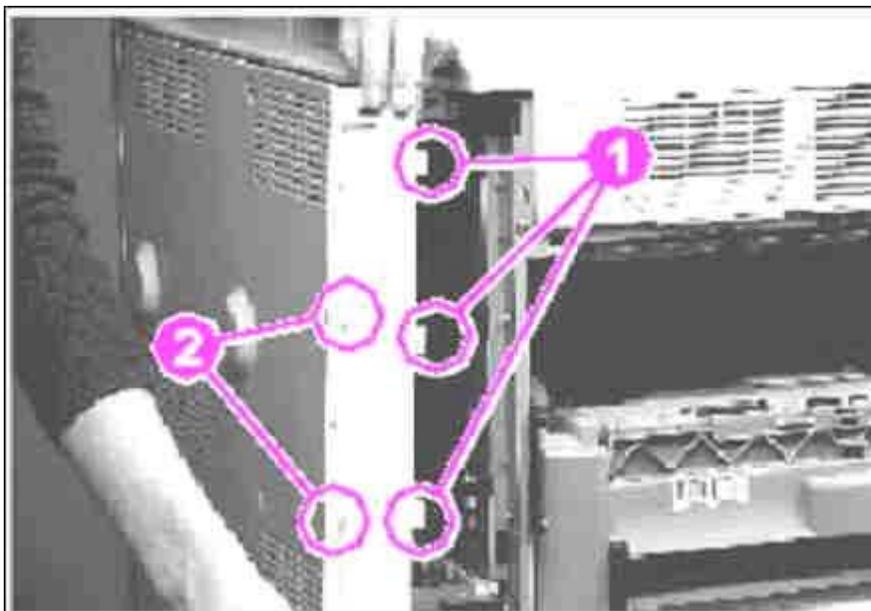
Figure 4: Left top cover removal
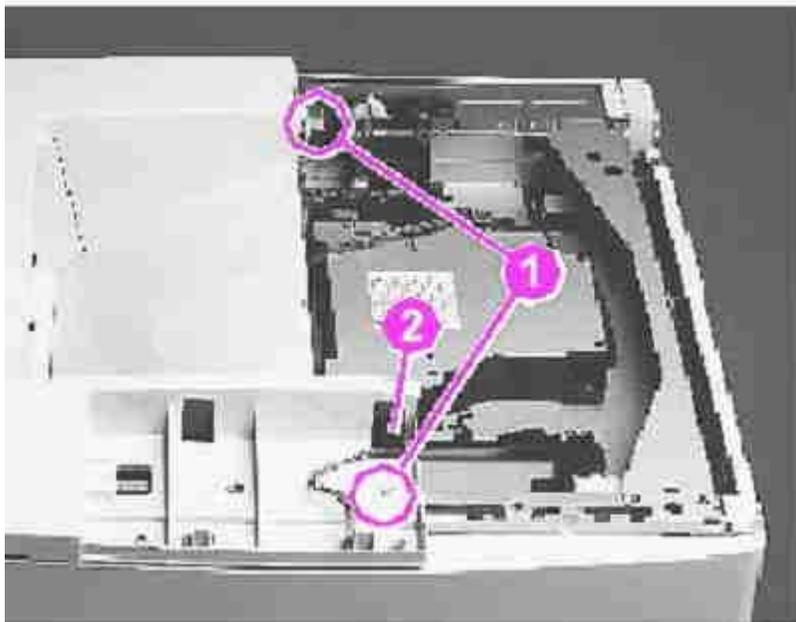
1 - Two silver screws

2 - Opening for control panel cabling to feed through

1. Remove the control panel. (Figure 2.)
2. Remove the right top cover. (Figure 3.)
3. Remove two silver screws. (Figure 4, call-out 1.)
4. Lift the left-top cover up and then pull it toward the right side of the printer to release two locating tabs (found on the underside of the cover, on the left edge).
To reinstall:
Be sure to feed the control

|	panel cable back up through the hole in the left-top cover. (Figure 4, call-out 2.) Insert the two locating tabs (found on the underside of the left cover, on the left edge) into the locating holes on the top of the printer.
Figure 5: Left back cover removal 1 - Three retaining tabs on the left side of cover 2 - Two tabs on right side of cover	1. Remove the formatter assembly. 2. Remove three silver screws from left back cover (not shown). 3. Rotate the left back cover toward the back of the printer to release the three retaining tabs on the left of the cover (Figure 5, call-out 1), and the two retaining tabs on the right side of the cover (Figure 5, call-out 2).
Figure 6: Delivery assembly removal	1. Remove the control panel. (Figure 2.) 2. Remove the right-top cover (Figure 3), the left-top cover (Figure 4), and the left-back cover (Figure 5). 3. Open the left door. 4. Face the top of the printer. 5. Unplug one cable connector (Figure 6, call-out 1).
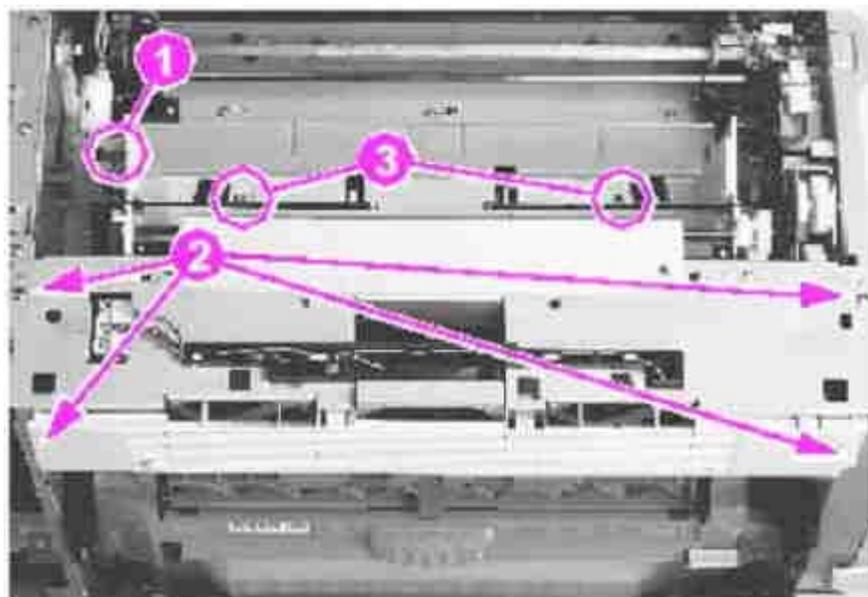
1 - Cable connector

2 - Four gold screws

3 - Two silver screws

6. Remove four gold screws (Figure 6, call-out 2) and two silver screws (Figure 6, call-out 3).
7. Lift the delivery assembly out of the printer.

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## Instructions on replacing the registration assembly

Figure 7: Right door removal
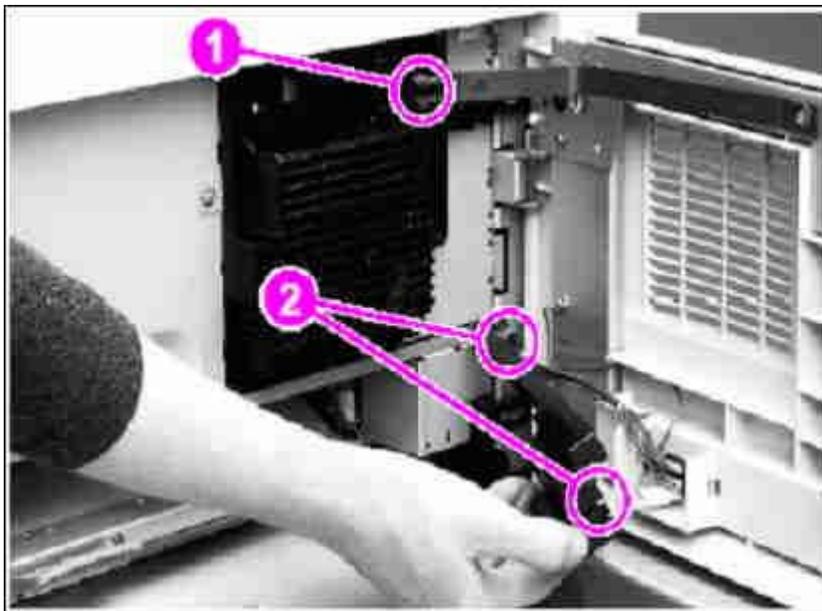
1 - Black strap

2 - Locator tabs

1. Remove Tray 1 if there is one installed on the printer.
2. Open the right door.
3. Pinch and then push the two tabs on the end of the black strap to release the strap ends (see Figure 7.1, call-out 1). Needle nose pliers may be used if there is difficulty with this step.
4. Disconnect four locator tabs on the cable cover and remove the cover (see Figure 7.1, call-out 2).
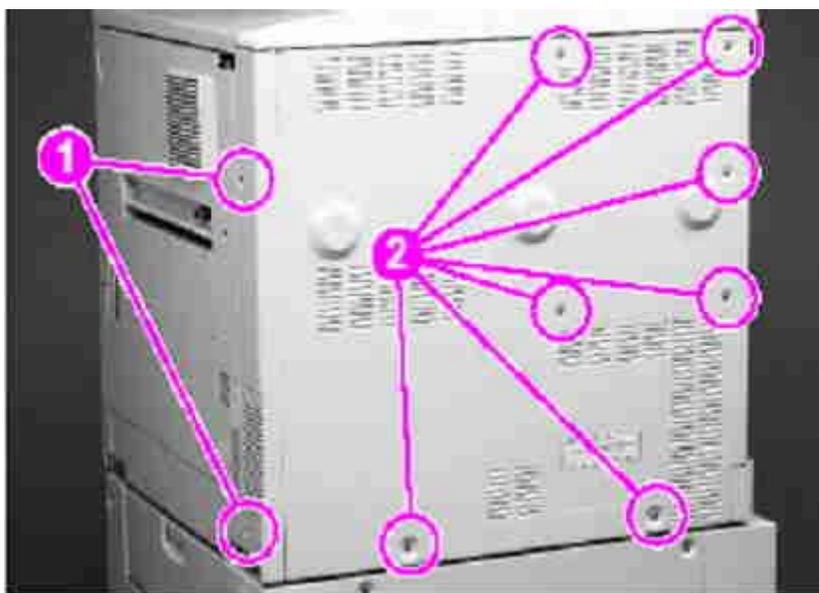
Figure 8:

5. Unplug two multiple-wire cable connectors (see Figure 7.2, call-out 3).
6. Lift the right door up and off the two

Cable connectors
Grounding cable
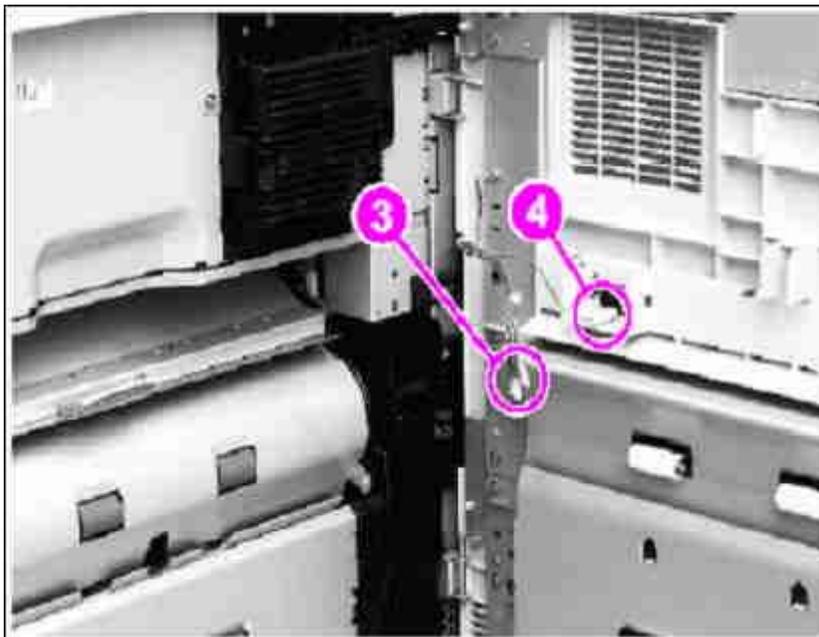
hinges and remove it from the printer. NOTE: NOTE: Do not remove the single grounding cable shown in Figure 7.2, call-out 4.

Figure 9: Back cover removal

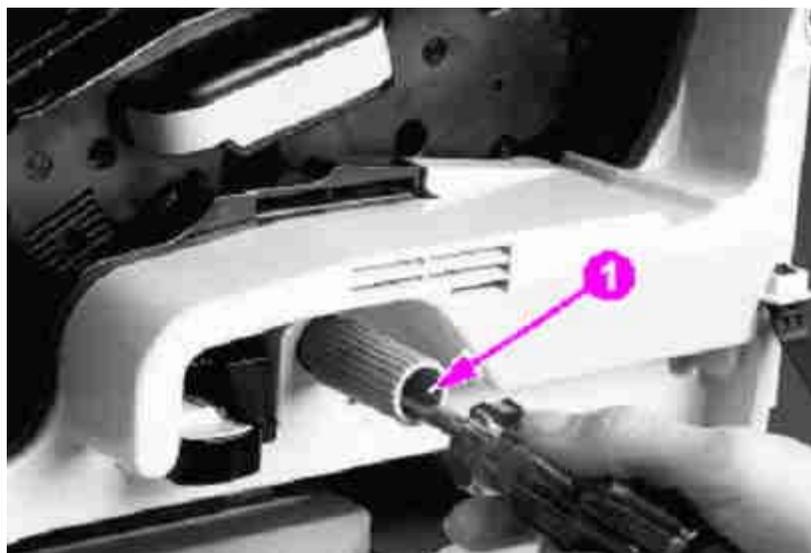1 - Two silver screws

2 - Seven gold screws

1. Remove two silver screws from the right-back cover (see Figure 8, call-out 1).
2. Remove seven gold screws from the back cover (see Figure 8, call-out 2).
3. Remove the back cover and the right-back cover together as one part.
4. Remove Trays 2 and 3.
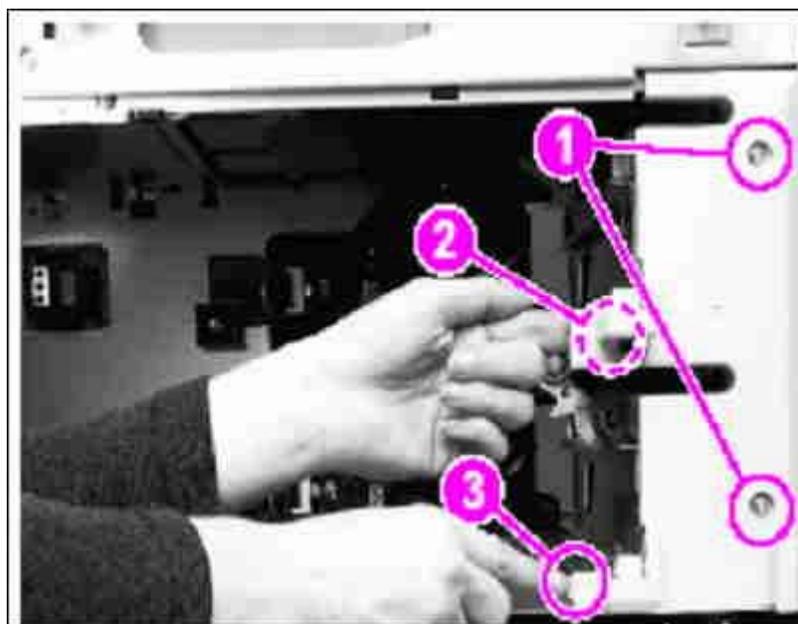5. Remove the print cartridge.

Figure 10: Registration jam removal knob removal

1. Open the front door.
2. Hold the registration jam removal knob firmly, and remove the silver screw inside the knob, (Figure 9, call-out 1).
3. Pull the knob off the printer.

1 - Silver screw

Figure 11: Right rail cover removal


1 - Right rail cover screws

2 - Upper tab

3 - Lower tab

1. Remove Tray 2 and 3 (if not already done).
2. Remove two silver screws from the right rail cover (see Figure 10, call-out 1).
3. Lift the upper tab to release it (see Figure 10, call-out 2) and push the lower tab to the right to release it (see Figure 5, call-out 3).
4. Remove the right rail cover.
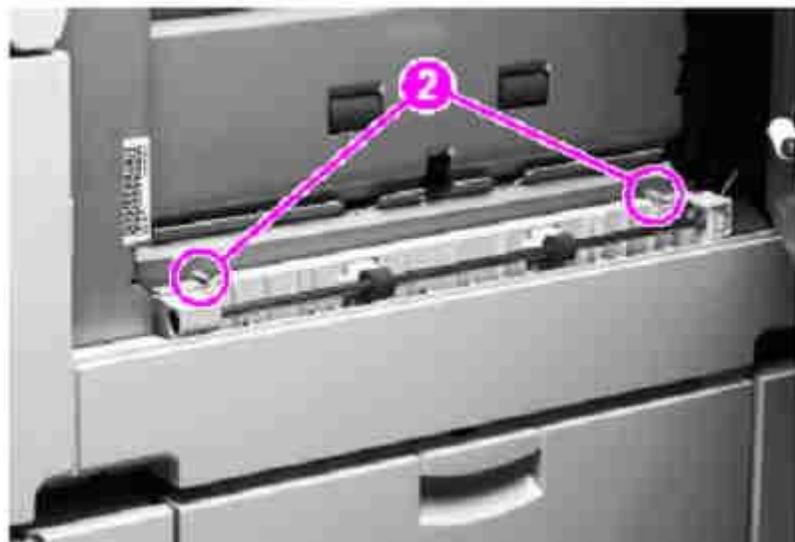5. Repeat these steps to remove the left rail cover.

Figure 12: Paper Input Unit (PIU) removal

1. Remove the right door (see Figure 7).
2. Remove the back cover (see Figure 8).
3. Remove Trays 2 and 3.
4. Remove four gold screws, two from each rail (see Figure 11.1, call-out 1).
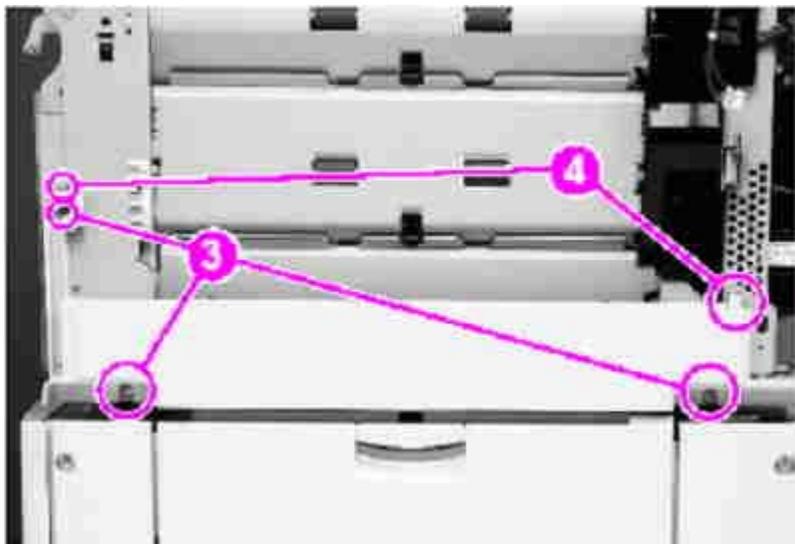5. Pull the rails out from the front of the printer.
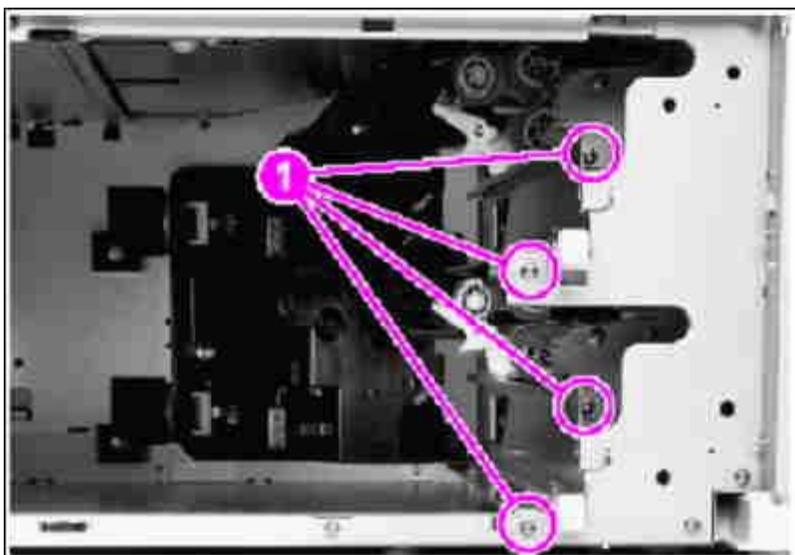
1 - Four gold screws
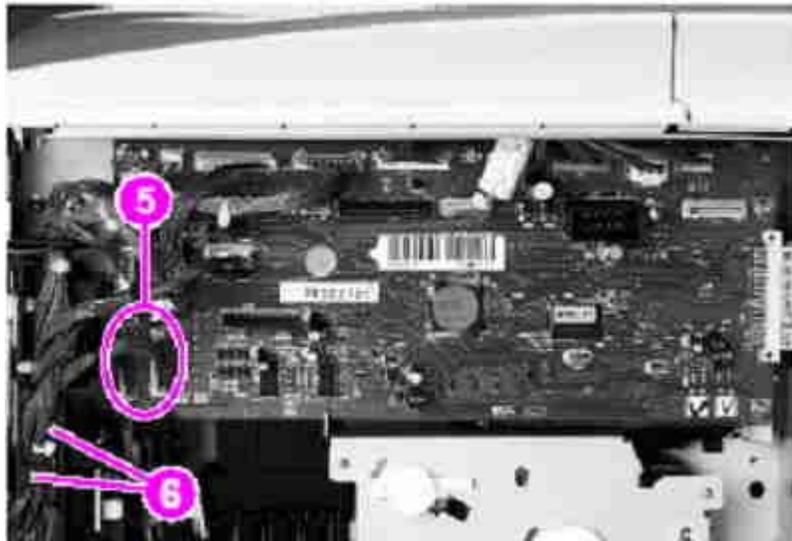
Figure 13:

Paper Path Connecting Unit (PPCU)

6. Face the right side of the printer.
7. If the 2000-sheet feeder (Tray 4) is installed, remove the Paper Path Connecting Unit (PPCU) by sliding two levers toward the center of the unit (see Figure 11.2, call-out 2).

Figure 14:

Three screws
Release two tabs

8. Remove three screws from the right-lower cover (see Figure 11.3, call-out 3).
9. Rotate the lower edge up to release two tabs (see Figure 11.3, call-out 4).
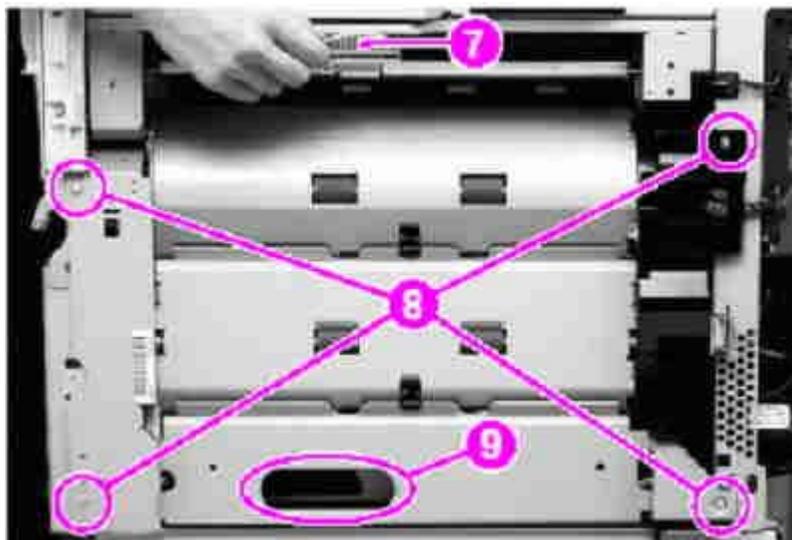10. Remove the right-lower cover.

Figure 15:

**J-220 and J-221 connectors
Cable guides**

11. Face the back of the printer.
12. Remove the J-220 and J-221 cable connectors from the DC Controller (see Figure 11.4, call-out 5).
13. Carefully unwind the cables from the cable guides (see Figure 11.4, call-out 6).
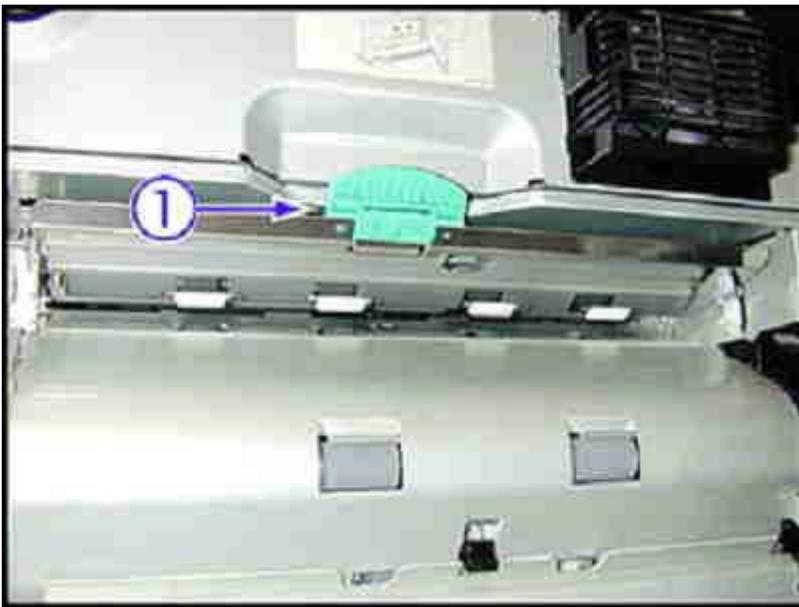
Figure 16:

**- Registration handle
Four silver screws
PIU handle**

14. Face the right side of the printer.
15. Push the green registration handle down slightly and pull it out to get access to the PIU (see Figure 11.5, call-out 7).
16. Remove four silver screws (see Figure 11.5, call-out 8).
17. Grasp the PIU handle and lift the PIU out of the printer (see Figure 11.5, call-out 9).
CAUTION: The PIU is heavy.

Figure 17:

To reinstall:
1. Verify that the green handle on the registration assembly is in an up position before reinstalling the PIU (see Figure 11.6, call-out 1).
NOTE: The new PIU does not include the feed/separation rollers or torque limiters. These must be transferred from the old PIU to the new one.
2. Reinstall the right-lower cover before the right rail cover.

1 - Registration handle in UP position

Figure 18: Registration assembly removal
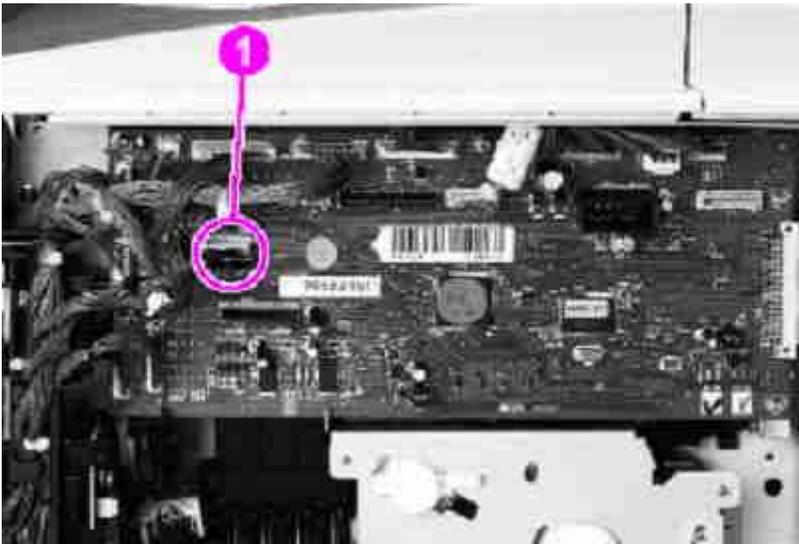
1. Unplug the J-215 cable connector; see Figure 12.1, call-out 1 from the DC Controller.

1 - J-215 connector

Figure 19:

2. Remove the two gold screws; see Figure 12.2, call-out 2 from the registration assembly.
3. Lift the registration assembly up slightly, and then rotate it downward until it can be pulled out of the printer chassis.
CAUTION: Be very careful not to scrape the top of the registration assembly against the printer chassis. Small black plastic pieces on top of the registration assembly can easily be damaged.

Two gold screws
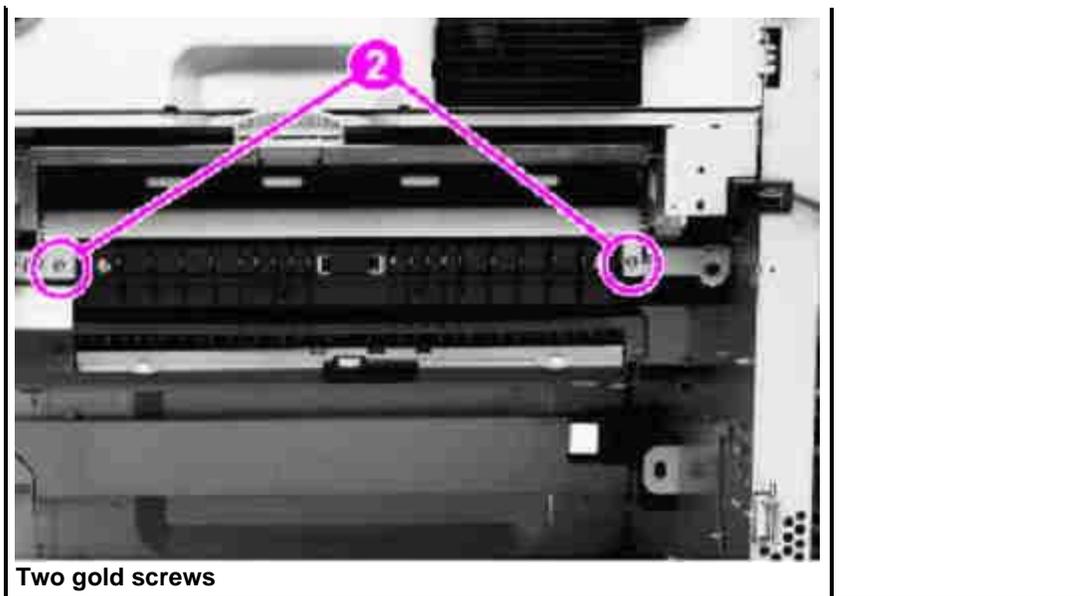
How to resolve a False 13.20 error message - During power up printer never displays CHECKING PAPER PATH on the control panel and the HVPS has notjust been replaced

If the printer still starts up to a 13.20 error and never displays the CHECKING PAPER PATH message see the following note.

NOTE: During boot up, at some point, the printer should display CHECKING PAPER PATH on the control panel. This indicates that the printer is polling the paper path sensors. It polls the sensors in the fuser first, then the rest of the sensors in the paper path. If the printer never displays this CHECKING PAPER PATH message during power up and goes straight to a 13.20 error message *and* the previous troubleshooting has been performed, then the printer probably has the "false" paper jam scenario and qualifies for the service note repair. A change has been made in the DC Controller firmware to eliminate the false (the fuser is incorrectly reporting a jam condition when there is not one) 13.20 paper jams. The fuser should also be replaced at the same time to ensure no extra toner or calcium carbonate that may have built up in the fuser causes any future issues.

Parts required (part numbers are subject to change)

Part description	Part number (part numbers are subject to change)
Fuser assembly	C8519-69033 110V, C8519-69034 220V
DC Controller	C8519-69028

NOTE:**Technicians:** Print a Configuration page and check the printer number. This number should be either an 18 or 19. This number indicated the DC Controller revision. Numbers 18 and higher have the fix described in the Service Note to eliminate the false 13.20 jams.

Service Note Information
Service note information (if applicable)

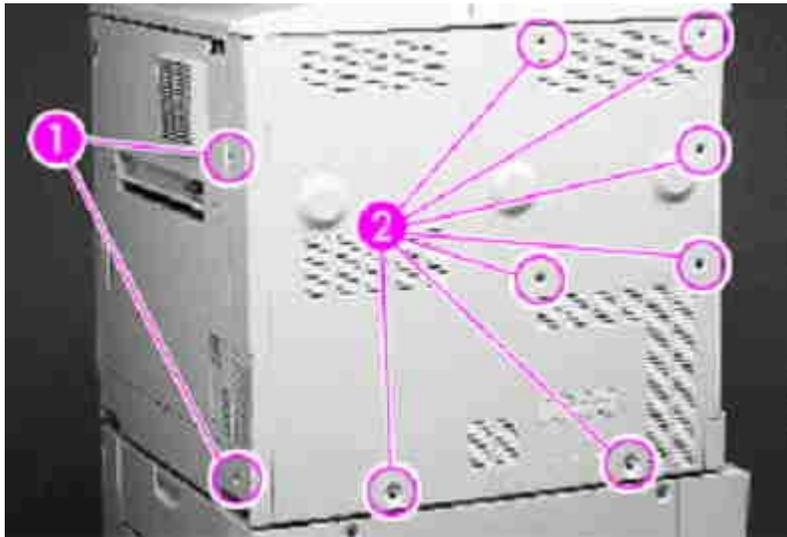| Service note numbers	Printer model
C8519A-04	HP LaserJet 9000
C8520A-04	HP LaserJet 9000n
C8521A-04	HP LaserJet 9000dn
C8522A-04	HP LaserJet 9000hns

Affected serial numbers

Starting serial number	Ending serial number
XXXX000000	XXXH000001

Instructions on replacing the DC Controller

The Formatter needs to be removed first, followed by the back cover then the High Voltage Power Supply (HVPS) to access the DC Controller.
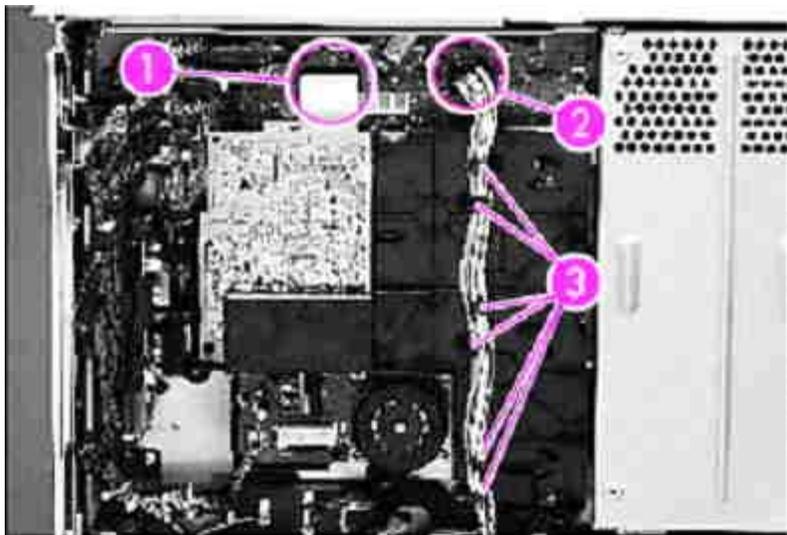
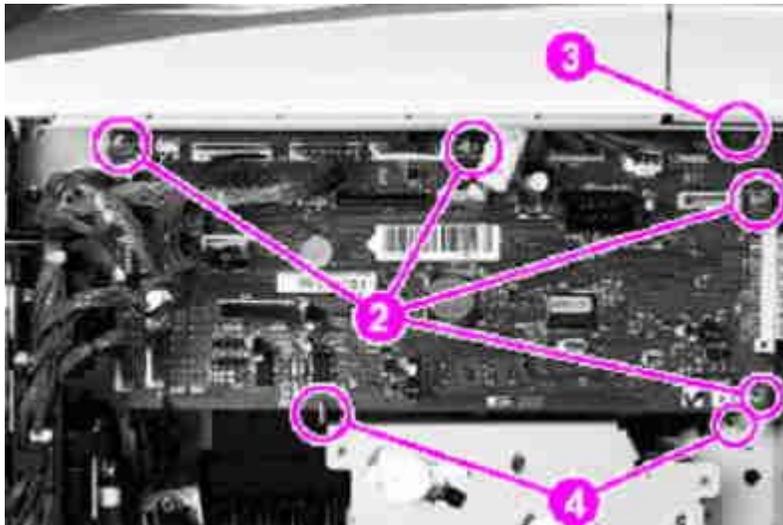|	
Figure 20: Back cover removal 1 - Two silver screws 2 - Seven gold screws	1. Turn the printer off and disconnect the power cable. 2. Remove two silver screws (Figure 13, call-out 1) from the right-back cover. 3. Remove seven gold screws (Figure 13, call-out 2) from the back cover. 4. Remove the back cover and right-back cover as one part.
Figure 21: Remove connectors 1 - Flat ribbon cable connector 2 - Low-voltage power supply cable 3 - Cable guides	1. Remove the back cover. CAUTION: The flat ribbon cable is fragile. *Do not* bend or fold it :. 2. Remove the flat ribbon cable connector (Figure 14, call-out 1) from the DC controller. 3. Unplug the low-voltage power supply cable connector (Figure 14, call-out 2) from the DC controller, and unroute the cable from the cable guides (Figure 14, call-out 3).
Figure 22: Remove screws	4. Remove three silver screws (Figure 14.2, call-out 4). 5. Push the black locking tab (Figure 14.2, call-out 5) away from the HVPS, and remove the HVPS.

Three silver screws
The black locking tab that holds in the HVPS

Figure 23: Remove connectors	CAUTION: Be very careful when removing cable connectors J-215, J-219 and J-213. Do not bend or break the component that is adjacent to these cable connectors.

1 - 1- 17 Cable connectors

2 - 3- Small tab

3 - 4- Two metal holders

CAUTION: Be very careful when removing cable connectors J-215, J-219 and J-213. Do not bend or break the component that is adjacent to these cable connectors.
1. Remove the 17 cable connectors (Figure 15.1, call-out 1).
3. Release the small tab (Figure 15.2, call-out 3), and rotate the top edge of the DC Controller away from the printer.
4. Remove the DC Controller from the two metal holders (Figure 15.2, call-out 4).
5. Reinstall in the reverse order, be careful when reconnecting the cable connectors to the DC Controller.
CAUTION: Be very careful when removing cable connectors J-215, J-219 and J-213. *Do not* bend or break the component that is adjacent to these cable connectors.
1. Remove the 17 cable connectors (Figure 15.1, call-out 1).

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13.20 Errors immediately after service repair for replacement of High Voltage Power Supply (HVPS)
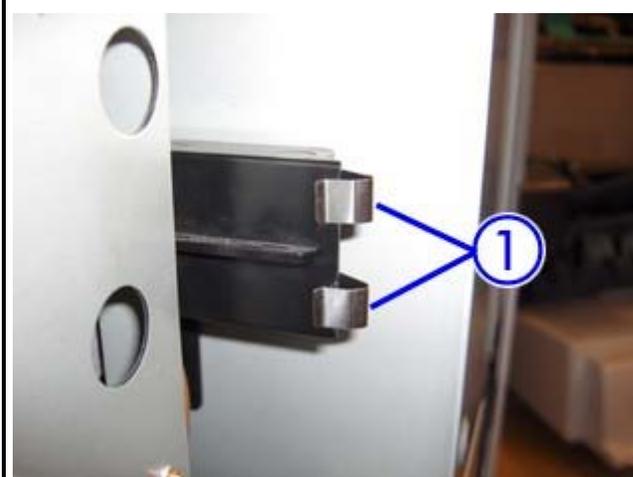
Figure 24: Contacts in wrong position	During removal/replacement, the Fuser High Voltage Cable contacts can be knocked out of place from the fixing connector holder assembly. As a result, the contacts cannot align with
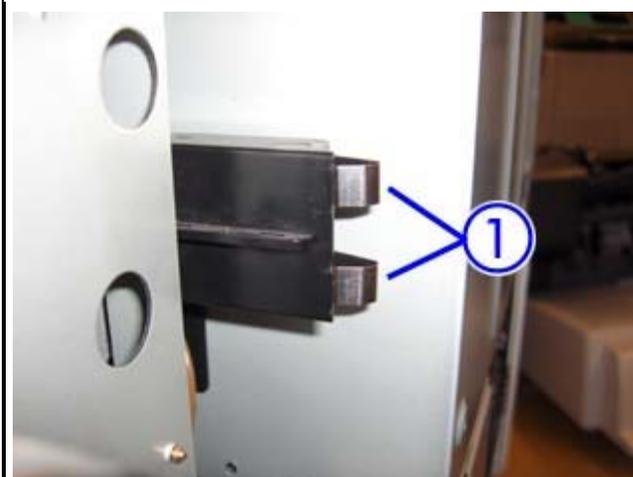
1 - Fuser cable contacts are to the right of the housing

Figure 25: Contacts in correct position

1 - Contacts are over the left edge of the housing

Instructions:
1. Remove the back cover.
2. Remove the High Voltage Power Supply (HVPS).
3. Push the contacts to the left so they cover the left edge of the housing (Figure 17, call-out 1).
4. As shown above (Figure 17, call-out 1) when the leaf spring contacts are pushed on top of the connector holder housing, the contacts cannot make contact with the pressure roller bias and the paper wrap detection connections on the HVPS. Once repositioned, the contacts will now make contact with the HVPS.
5. If readjusting the leaf spring contacts does not fix the problem, send an HVPS and a fuser high voltage cable.

the contacts on the HVPS. This error will occur when one or both of the contacts are out of place (Figure 16, call-out 1).

Possible parts required (part numbers are subject to change)

Part description	Part numbers
High Voltage Power Supply (HVPS)	RG5-5728-100CN
Fuser High Voltage cable*	RG5-8034-000CN *

*Denotes optional parts

NOTE: In most cases, simply repositioning the leaf spring contacts will resolve the issue. *Do not* replace the HVPS and the fuser high voltage cable *until* the leaf spring contacts have been positioned correctly to the left of the housing.

Verify printer functionality

When the leaf spring contacts have been repositioned properly and the printer has been reassembled, print several paper path tests from the printer control panel.

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Removal and replacement instructions for 13.20 after service repair for replacement of HVPS

| Figure 26: Back cover removal	1. Turn the printer off and disconnect the power cable. 2.Remove two silver screws (Figure 18, call-out 1) from the right-
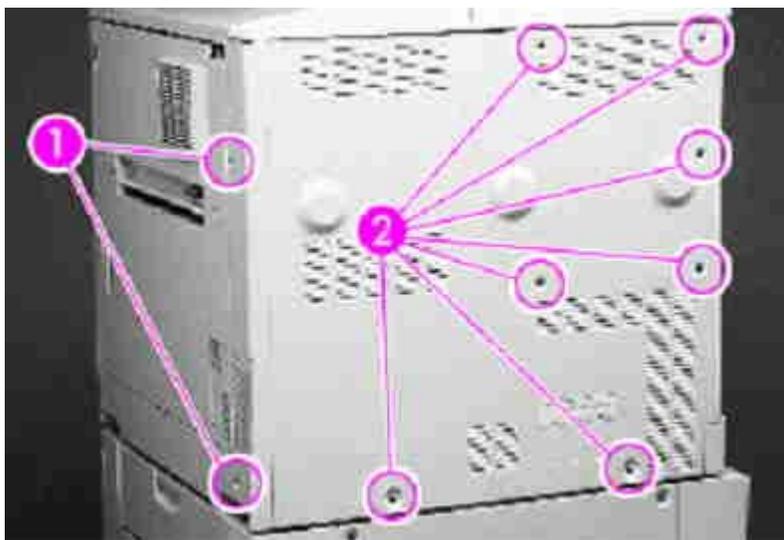
1 - Two silver screws

2 - Seven gold screws

back cover.
3.Remove seven gold screws (Figure 18, call-out 2) from the back cover.
4. Remove the back cover and right-back cover as one part.

Figure 19: High Voltage Power Supply (HVPS) removal

Figure 27: Remove connectors
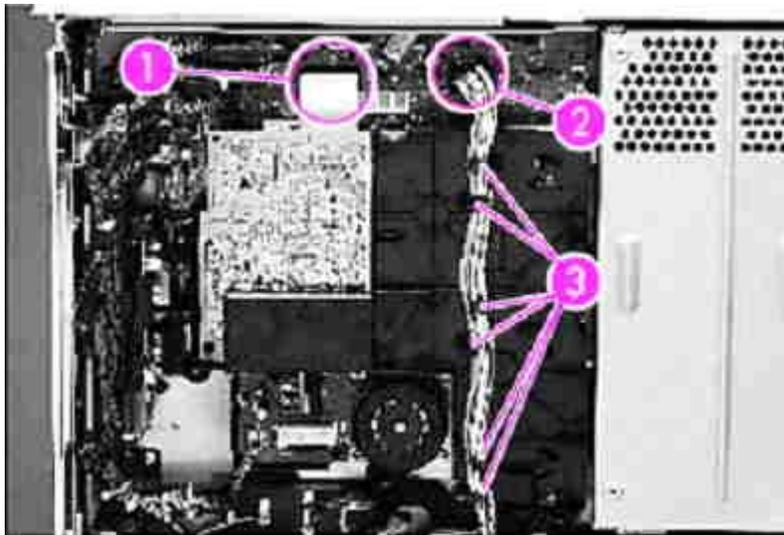
1 - Flat ribbon cable connector

2 - Low-voltage power supply cable

3 - Cable guides

1.Remove the back cover (page 122).
WARNING: he flat ribbon cable is fragile. *Do not* bend or fold it. T
2.Remove the flat ribbon cable connector (Figure 19.1, call-out 1) from the DC Controller.
3. Unplug the low-voltage power supply cable connector (Figure 19.1, call-out 2) from the DC Controller, and unroute the cable from the cable guides (Figure 19.1, call-out 3).

Figure 28: Remove screws

4.Remove three silver screws (Figure 19.2, call-out 4).
5. Push the black locking tab (Figure 19.2, call-out 5) away from the HVPS, and remove the HVPS.
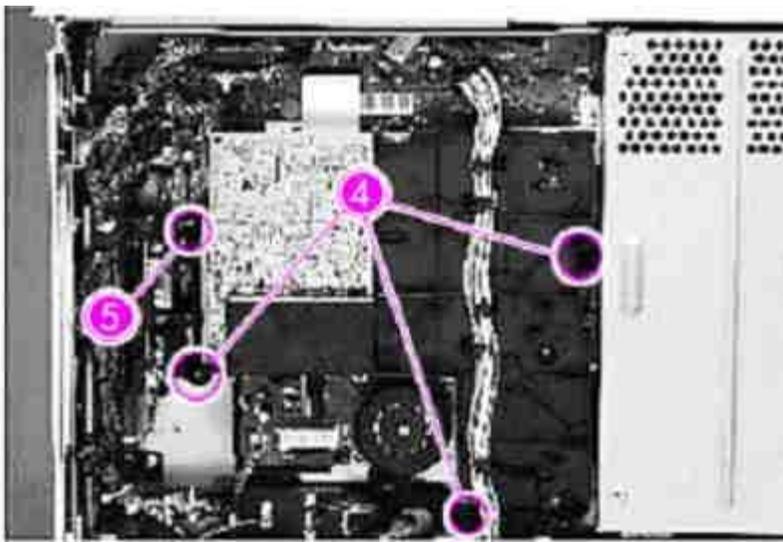
4- Three silver screws
5- The black locking tab that holds in the HVPS

top

June 2002 Featured Technical Article

Helpful Hints on New HP LaserJets

This article originally appeared in the March 2002 issue of Image Source (Vol. 5, Issue 3).

Working on a new printer, I often find myself saying "I wish I already knew the quirky areas of the machine rather than stumbling across them Ð but I guess that's just part of the learning curve on new printers." If you've ever found yourself thinking the same thing, today I have a treat for you. We have recently gone through a couple of new products and found some "quirks" that will likely save you several hours of head scratching and under-your-breath mumblings.

HP LJ 9000 HV Contacts can cause 13.20 Paper Jam

What does the high voltage power supply (HVPS) have to do with paper jams?

Nothing, many would say, but recently after reinstalling an HVPS into an HP LJ 9000 printer, we started getting instant 13.20 paper jams. What could be going on? After checking for paper that may have been left in the machine and verifying the flags were ok, I opened the Service Manual (OK, I was really stumped). One of the steps in the Service Manual is to verify the proper seating of the leaf springs under the HVPS. After removing the HVPS, I found that one of these leaf springs was bent to the right (Figure 1) and out of the case. These leaf springs should be to the left over the case, so when you reinstall the HVPS, the contacts on the board touch the leaf springs. These contacts are labeled TB1009 & TB1010 on the HVPS (Figure 2).
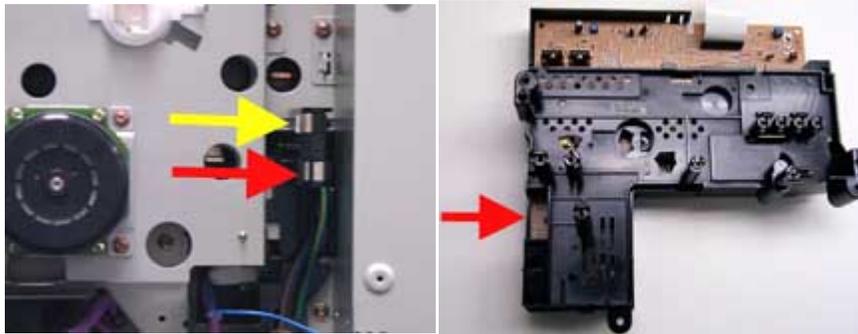

Figure 1   **Figure 2**

What do these contacts have to do with a paper jam problem? They monitor pressure roller bias connections between the fuser and HVPS. These connections are routed through the fuser connectors and complete the fuser wrapping jam detection circuit. The wrapping jam detection circuit is an arm on a solenoid that physically contacts the pressure roller when this check is done. It compares the checked value to the applied value for differences. If they differ, the circuit determines that a wrapping jam has occurred and stops the printer (a wrapping jam is when paper wraps itself around the pressure roller). If you get the 13.20 error and really are having trouble figuring it out, check for paper wrapped around the pressure roller. Then, check these contacts and leaf springs under the HVPS.

Follow these steps to get to this area of the printer:

1. Remove the rear cover, by removing seven gold screws and two silver screws in wrap around panel on right side.

2. Remove the HVPS by:
   o Disconnecting two cables (green arrows, Figure 3).
   o Removing three screws (red arrows, Figure 3).
   o Unlatch one tab (yellow arrow, Figure 3).

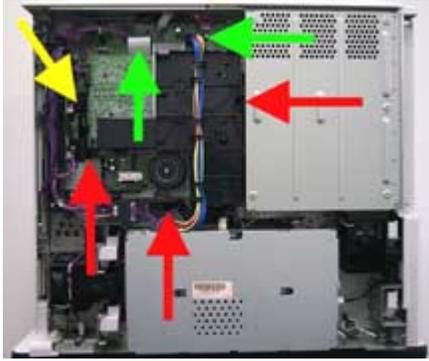This will expose the springs (Figure 1) and contacts on the HVPS (Figure 2).

Figure 3

Now that we understand a quirk with the new HP LJ 9000 that can cause a headache without even knowing it happened (until power is applied), let's move on to the quirk that can happen with the HP 1200/1220.

Reversing the HP LJ 1200 HV Connectors

Most technicians out there will laugh when they hear the story I am about to tell--though I didn't until days later. I spent a lot of time troubleshooting this problem, which hopefully you can avoid simply by reading this article. It all started when an HP LJ 1200 printer came in for repair with a flashing amber error light. This light, when flashing, indicates a general error such as paper out, paper jam, door open or incorrectly installed toner cartridge.

I began troubleshooting by checking all the sensor flags, which were all intact and moving freely. Then, I checked the door open switch and the toner cartridge, finding no problems. I contacted HP technical support and they suggested that either the motor was the cause of this problem or the formatter, which could be giving a false error. Both were changed with no effect. I even tried changing out the engine control board, with no success. However, upon reinstallation, it was noticed that the HVPS contacts, J301 & J304 could be cross-connected. I referred to the manual once again and guess what--the contacts were in fact hooked up in reverse, causing the printer to not recognize the toner cartridge (see Figures 4 and 5 for the correct and incorrect connections).

Figure 4   **Figure 5**

Upon further investigation, the customer had admitted to trying to fix the printer himself for a separate problem, and not knowing which wire went to where, he assumed it didn't matter. When connecting these wires, note that both are red and both connect the exact same way. It's important not to cross them as they go straight up to their appropriate connectors (again, see Figures 4 and 5 for the proper and improper connections).

To access this area of the printer:

1. Open the toner cartridge door.
2. Remove the left side panel (as looking from the front).
3. Remove the two screws as indicated by arrows in figure 6 and remove the rear panel.

Figure 6