

PRINTER TECH

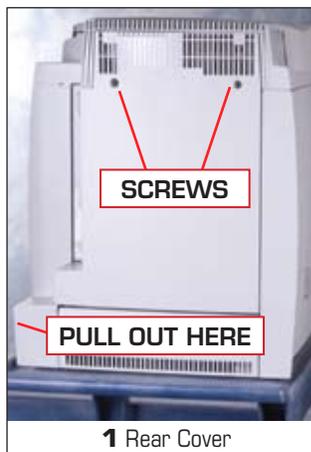
CLJ 4600/4650: Blank Pages



Although there are many possible causes, it is not hard to troubleshoot a LaserJet 4600/4650 printer with a blank page problem. It is usually caused by a specific mechanical issue that we will show you how to fix (step 5, below). Most of the other possibilities can be eliminated

from consideration quickly. Here is a summary of the possible causes.

- ✦ Single color blank pages are caused by a defective scanner or an empty or defective toner cartridge. These are dealt with in Step 1.
 - ✦ Formatter or software problems. See Step 2 and 3.
 - ✦ Mechanical Problems, addressed in Steps 4 and 5.
 - ✦ DC Controller and High Voltage PCB (and its contacts) These are the only possibilities mentioned in the manual, but are rare. Check these if all else fails.
1. To see if a single color is missing, or all four, print a Supplies Status Page. Replace the scanner or print cartridge if one color is missing. If it is a blank sheet, go to 2.
 2. Print an engine test by pressing the engine test button, accessible through a small hole on the left side of the printer. If you get a page of parallel lines, either the formatter is bad or you have a software issue: go to 3. If it is blank, go to 4.
 3. Disconnect the printer from the network and print a configuration page. If it prints normally, computer software is causing the blank page issue. If it is still blank, it is the formatter.
 4. While folding shut the transfer belt, see if the



1 Rear Cover



2 Top Cover: Damper Arm



3 Top Cover Removal: Retainer Block



4 Rear Top Cover Removal: 3 screws



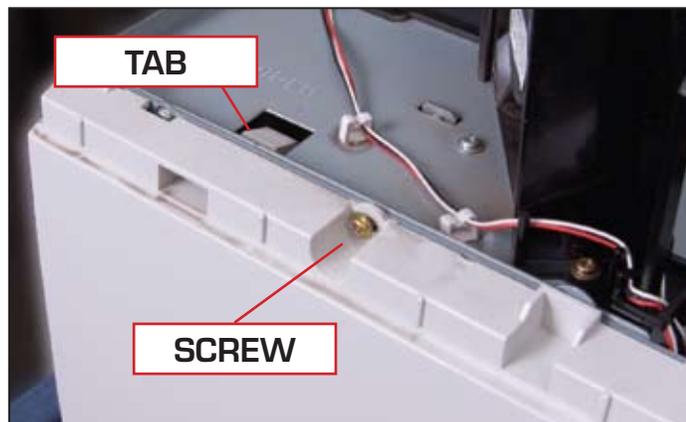
5 Rear Top Cover Removal: Pry right side



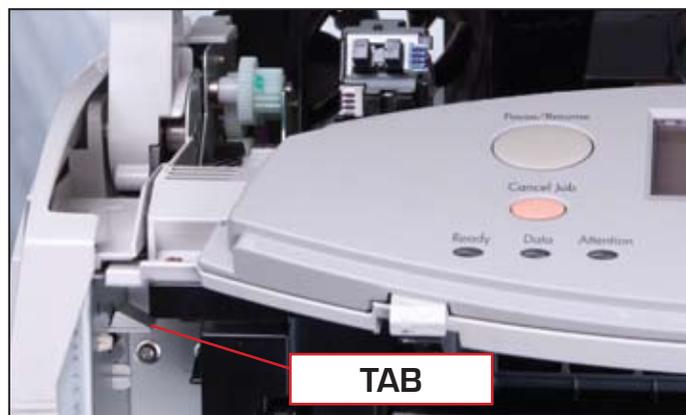
6 Rear Top Cover Removal: Pry left side

cartridge shutters are opening. All four shutters are controlled by a single mechanism. If the shutters are working, go to 5. If not, call us at LPT Tech Support and we will help.

5. In our experience, most blank page issues in these models are caused by mechanical prob-



7 Left Cover Removal: Screw, first locking tab



8 Left Cover Removal: Second locking tab



9 DC Controller Shield Removal

lems involving the toner cartridge drive and engagement systems, all located on the left side of the printer. The single most common problem involves the developer disengagement plate (Figs 11, 13), which is a plastic bar that moves up and down to tilt the toner cartridges, thereby engaging and disengaging the developer rollers inside the cartridges. The movement of the plate is controlled by gears, and what usually happens is that the gear teeth on the plate wear down or break. We will show you how to access the plate and what to look for.

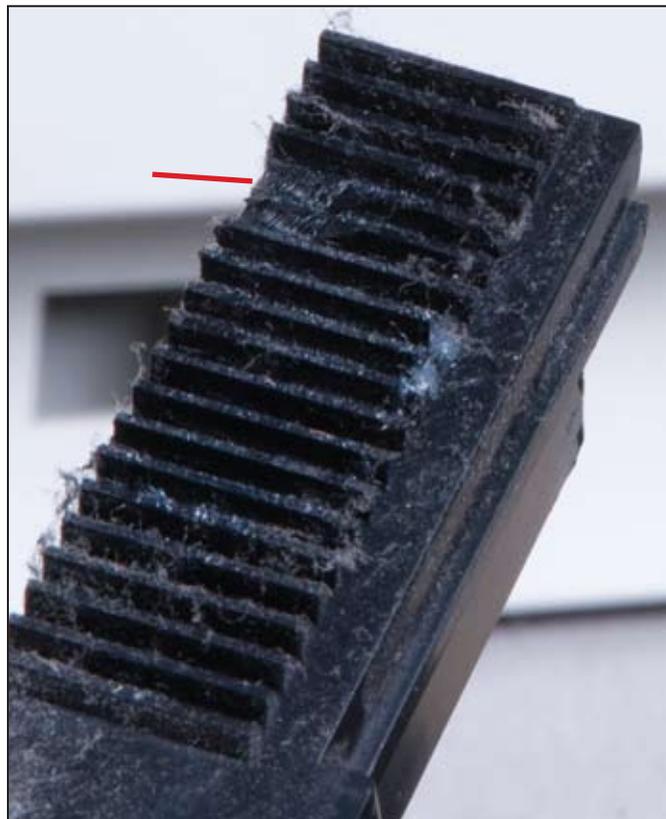
- A. Remove Rear Cover (Fig. 1). Remove two screws from the Rear Cover and pull out on the lower left of the cover to loosen and remove it.
- B. Remove Fuser.
- C. Remove Top Cover.
 1. (Fig. 2) Tip the cover forward slightly and squeeze the white plastic clips on the damper arm to release this arm from the left side of the cover.
 2. (Fig. 3) Remove the retaining block from the right side of the cover.
 3. Pull the cover to the left to release the right-side hinge pin, then pull it to the right to release the left-side hinge pin, freeing the cover.
- D. Remove Rear Top Cover.
 1. (Fig. 4) Remove three screws.
 2. (Figs. 5, 6) Pry the Rear Top Cover from the Right Cover with a screwdriver. Then pry the left side to free the rear top cover.
- E. Remove Left Cover.
 1. (Figs. 7, 8) Remove one screw and disengage the two locking tabs. Tilt cover away from printer to remove it.
- F. Remove DC Controller Shield (Fig. 9)
 1. Remove nine screws (and possibly a 10th screw at the rear of the printer, indicated by dotted circle in Fig. 9). Remove the shield.
- G. Observe Developer Disengagement Plate. Now partially re-install the top cover so that you can run the printer, and observe the behavior of the developer

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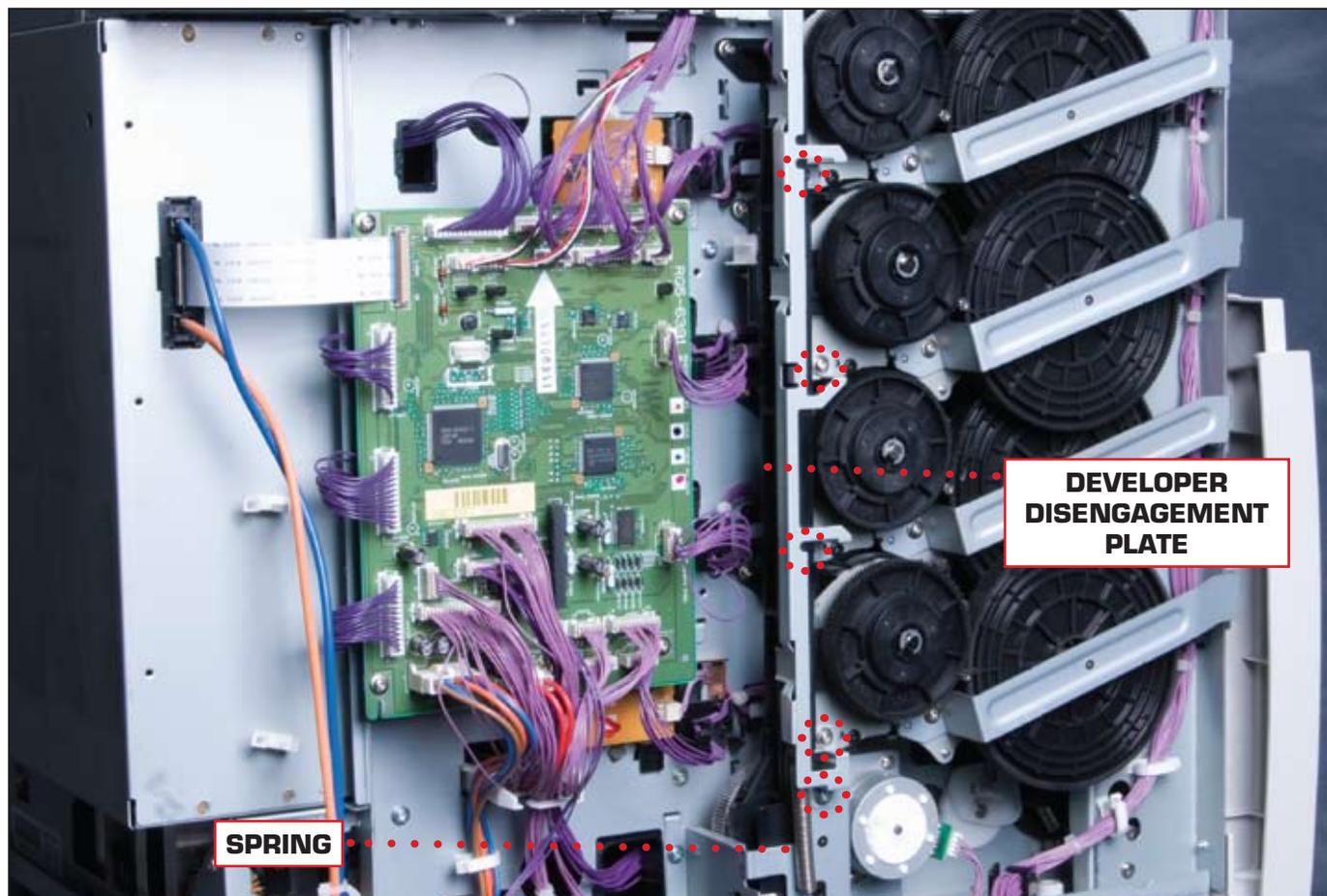
4600 Blank Page, Continued

disengagement plate (see Fig.11) during the printing cycle. In a normal working printer, the plate will move about halfway up to the top of the printer at the beginning of a print job (when the motors start running), remain in that position for a second or two, and then move all the way up to the top and remain in that position until the print job is completed. If the plate does not go all the way up, or if it bounces or jitters while it is in the top position, there is definitely something wrong. Even if it seems to be acting normally, though, it is a good idea to remove it and inspect the gear teeth – we have seen cases where this part can cause blank pages even though there is no apparent problem with the movement.

- H. Remove the Developer Disengagement Plate. Remove the four toner cartridges (put them in a dark place or cover them).



10 Broken teeth on plate

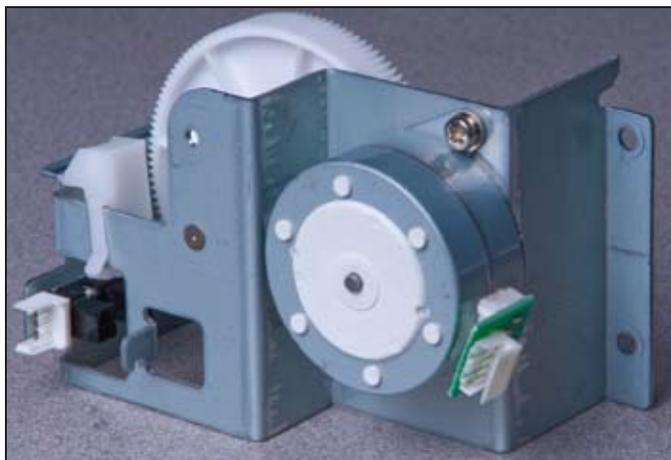


11 Replacing Developer Disengaging Drive Asm. Remove five CHROME COLORED SCREWS (NOT BLACK).

1. Remove the metal drum drive grounding plate that covers the plate (five screws – see Fig. 11). Then unhook the spring from the bottom and slide the plate up and out. There will be some resistance, since you will be turning the gears as you move the plate upward. You may have to use a screwdriver under the plate to lever it out, especially if it has broken teeth.
2. Once you have removed the developer disengagement plate, inspect the two sets of gear teeth along the side (Fig. 10 shows an example of a plate with broken gear teeth). You may also want to look at the two gears in the printer (one at the bottom, one at the top) that couple to the plate, although usually these are OK. The lower gear is part of the developing disengaging drive asm, part number RG5-6507 (Fig. 12). The upper gear is available as a separate part (RS7-0139). The developer disengaging plate itself is RB2-8239 (Fig. 13). Replace any

of these parts that appear worn (usually just the plate), reassemble the printer, and blank pages should be a thing of the past!

6. Last Resorts. If the gears appear fine, there is a problem with either the DC Controller or the High Voltage PCB (or its contacts) These are the only possibilities mentioned in the manual, but are rare. Check them if all else fails.



12 Developer Disengagement Drive Asm (RG5-6507)



13 Developer Disengagement Plate (RB2-8239)

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