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THE HP LASERJET 4200/4300 SERIES SWING PLATE ASSEMBLY:

There's not much to an HP LaserJet 4200/43 00 series swing plate assembly (part number RM1-0043) – just a couple pieces of metal, a few gears and a spring (Figure 1) – but like most parts inside a laser printer, if it fails to function correctly the printer will let you know about it. This article will outline those ways, as well as give detailed instructions on how to replace the swing plate assembly, should you need to.

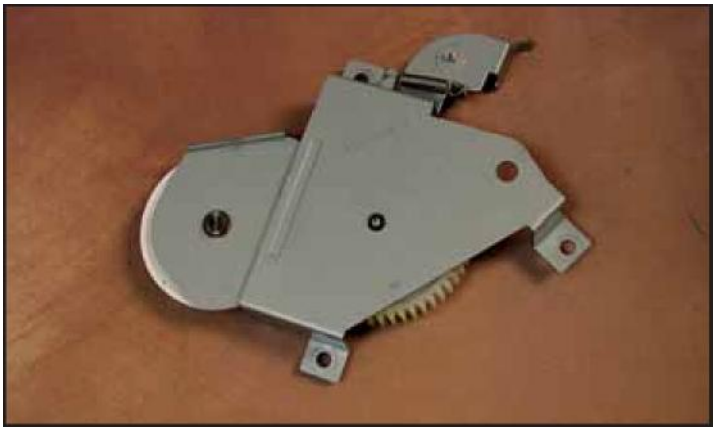

Figure 1 - The swing plate assembly for the HP LaserJet 4200/4300 series (part # RM1-0043).

A Simple Purpose

The purpose of the swing plate assembly is to engage the main drive with the fuser, causing the fuser to turn. One of the gears on the swing plate assembly engages with a 40-tooth gear on the fuser (Figure 2) when the top panel is closed. If the fuser is not fully clipped into place – or if the fuser has a broken fuser clip – these gears may not engage properly. If that is the case, two things can happen:

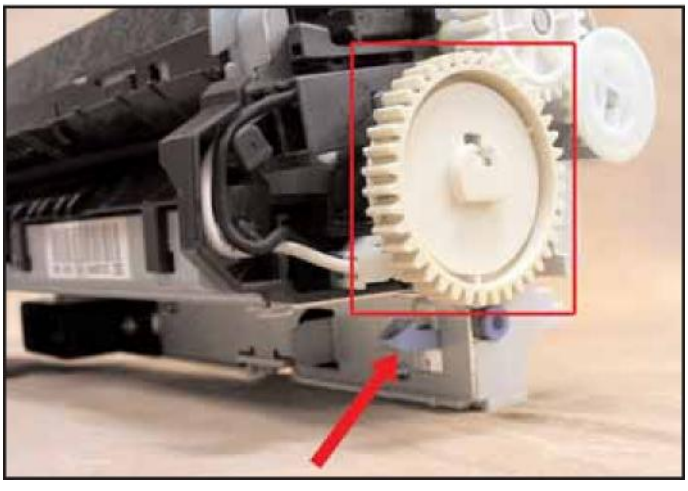

Figure 2 - The 4200/4300 series fuser has a 40-tooth gear (red box) that engages with the swing plate assembly. Blue clips on either side of the fuser (red arrow shows right clip) secure the fuser in the printer.

1. **Paper jam** - If the gears don't engage at all, the fuser roller will not turn. When paper reaches the fuser, a paper jam will occur.
2. **Grinding noise** - If the two gears engage improperly, a grinding noise can result, which can also cause damage to the fuser gear, the swing plate gear, or both.

If you experience either of these scenarios, the first thing you should do is remove the fuser and check the fuser gear, the two fuser clips (Figure 2), and the gear on the swing plate assembly for damage. You should

also lift up the gear on the swing plate assembly to verify tension (Figure 3). If there is no tension, the spring on the swing plate assembly is detached, missing or broken. If that is the case, it is time to install a new swing plate assembly, since the spring by itself is not available. If there is tension and the gears and fuser clips are not damaged, reinstall the fuser. If the paper jam or grinding noise subsides, then the fuser was not seated properly in the printer. If the problem still persists, continue trouble-shooting as recommended by the manual – the swing plate assembly is not the culprit.

If you do find damage on the fuser gear, don't assume that you can just replace the fuser and solve the problem. It's costly and embarrassing to install a new fuser in a customer's printer, only to experience the same problems with that fuser due to one bad gear chewing up the other. If you see damage on the swing plate assembly gear, you'll have to replace that also.

Playing Hard to Get

The good thing about installing a new swing plate assembly is removing it from the printer's frame is easy – simply remove the three screws holding it in place. The hard part is all the parts you need to remove to get to it. As you'll see in the following instructions, a good portion of the printer needs to be disassembled until you can finally get a screwdriver to the swing plate assembly. It's for this reason that we strongly encourage you to try reseating or exchanging the fuser first, as these options take much less effort. However, you may not have an extra known good fuser on hand, and since the fuser is considerably more expensive than the swing plate assembly, taking the extra time to install a new swing plate assembly may be worth it.

Getting To The Swing Plate

1. The swing plate assembly is nestled deep inside the printer (Figure 3, red box) and requires a lot

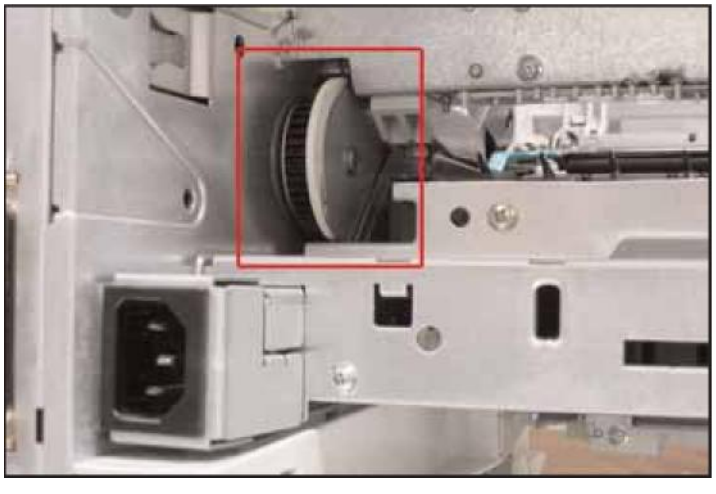

Figure 3 - The red box shows the swing plate assembly as it is positioned within the printer.

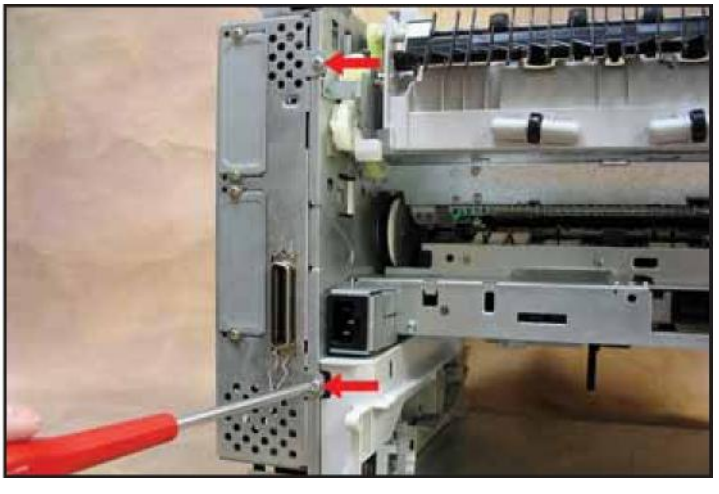

Figure 4 - The red arrows indicate the two screws that attach the formatter and its cage to the printer.

of disassembly. Follow these steps to get to it.

2. The first step in removing the swing plate assembly is to remove the rear face-up tray, toner cartridge, fusing assembly, and the left, right and top covers.

3. Remove the formatter and its cage by removing Remove the formatter and its cage by removing two screw (figure 4, red arrows). After you remove two more screws labeled "M4" (Figure 5, red arrows), you should be able to slide the right tray guide (Figure 6) out by pushing in the plastic circle (Figure 5, yellow arrow).

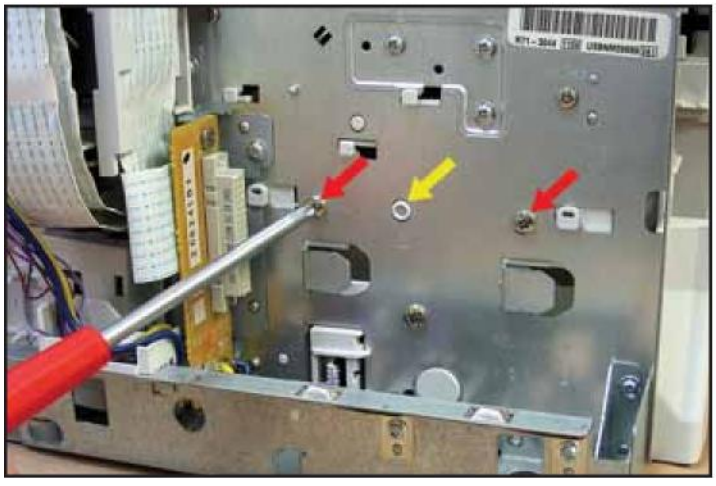

Figure 5 - Remove the two screws labeled "M4" (red arrows) and push the plastic circle (yellow arrow) to remove the right tray guide (Figure 6).

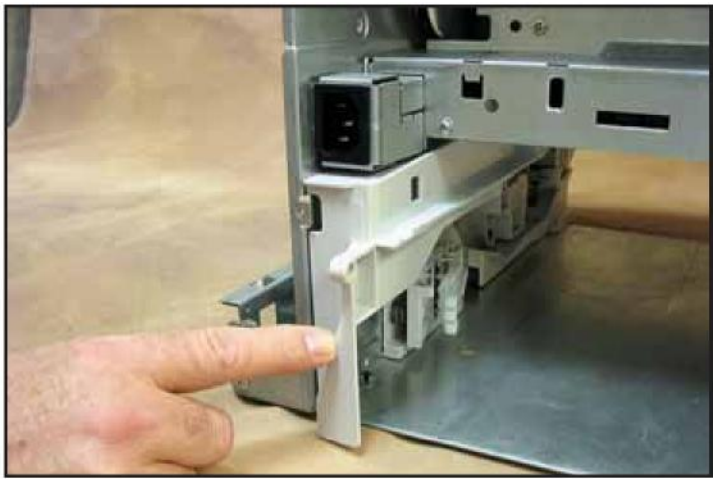

Figure 6 - The right tray guide.

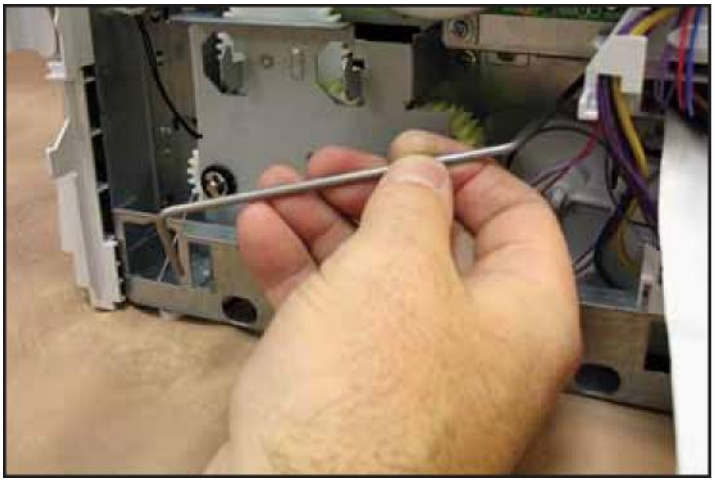

Figure 7 - Remove the switch rod.

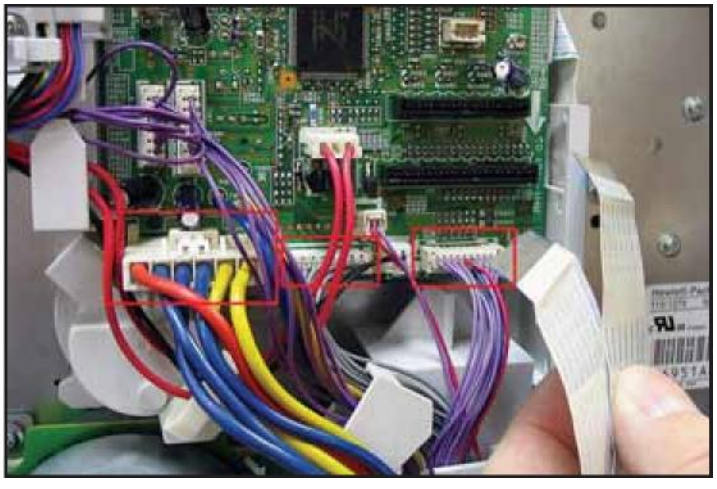

Figure 8 - The two white ribbon cables (being held) and three multi-colored cables (red boxes) must be removed from the DC controller.

5. Remove the switch rod (Figure 7).
6. The DC controller has several cables attached to it, but you will only be removing the two ribbon cables and the three plugs with multi-colored cables (Figure 8, red boxes). Slide these cables through the hole in the side of the printer (Figure 9) and pull them from the other side so they hang loose in the inside of the printer (Figure 10).
7. Staying on the right side of the printer, find the four screws labeled "M3" (Figure 11, arrows) and remove them.

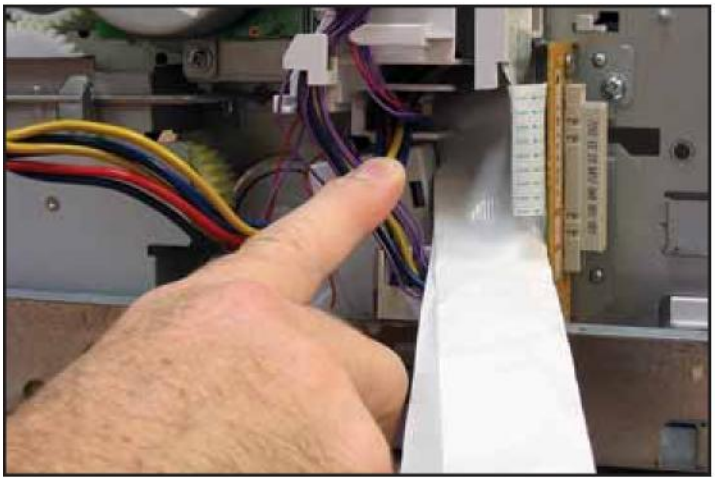

Figure 9 - Slide the cables through the hole in the side of the printer.

Figure 10 - Pull the cables so they hang loose in the inside of the printer (right, three of the five cables shown).

Figure 11 - Remove the four screws labeled "M4" (red arrows).

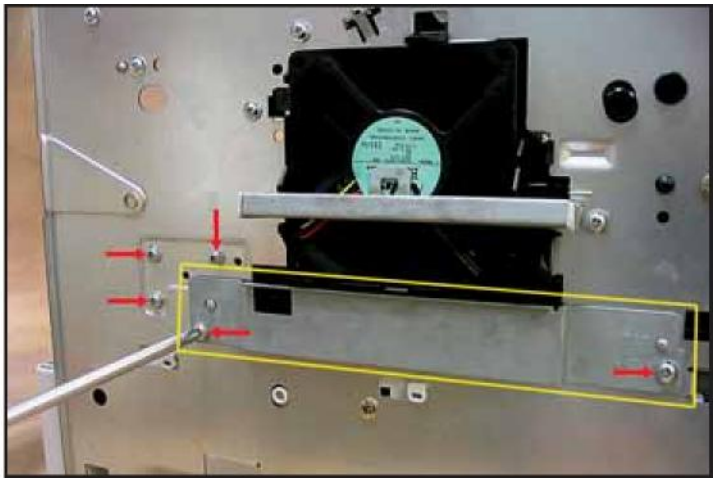

Figure 12- Once the five screws labeled "M3" (red arrows) are removed, the connector access cover can be removed (yellow box).

8. Now switch to the left side of the printer and locate the five screws labeled “M3” (Figure 12, arrows) and remove them. Two of these screws hold on the connecter access cover, which you should remove at this time (Figure 12, yellow box).

9. Locate and unplug the two cables underneath the connector access cover that are connected to the power supply, just below the main fan (Figure 13, arrows).

10. You are now ready to pull out the power supply as shown in Figure 14. The power supply will not slide out unless you lift it up slightly and pull back.

Figure 13 - Red arrows indicate the two cables underneath the connector access cover.

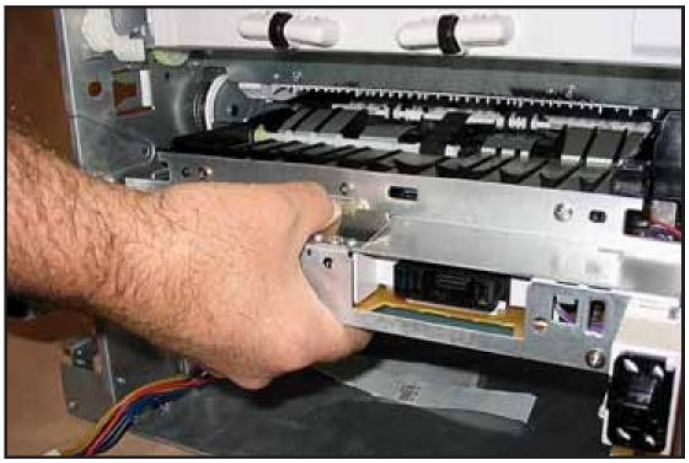

Figure 14 - Pull up and out on the power supply to remove.

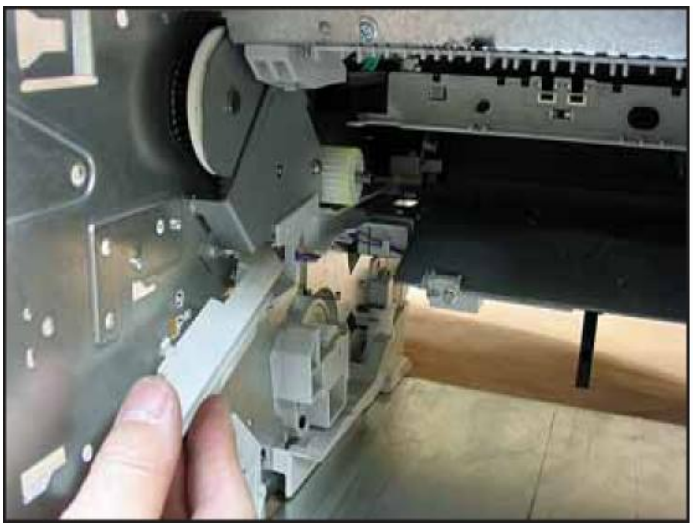

Figure 15 - The plastic power supply guide.

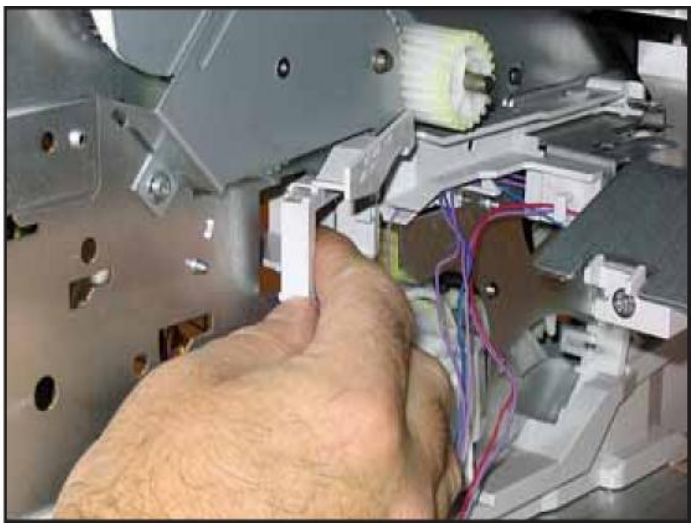

Figure 16 - The plastic wire guide.

11. Remove the plastic power supply guide (Figure 15) and the plastic wire guide (Figure 16).

12. The toner cartridge guide is attached to the printer's frame by a spring. Use a spring hook to detach the spring and remove the toner cartridge guide (Figure 17).

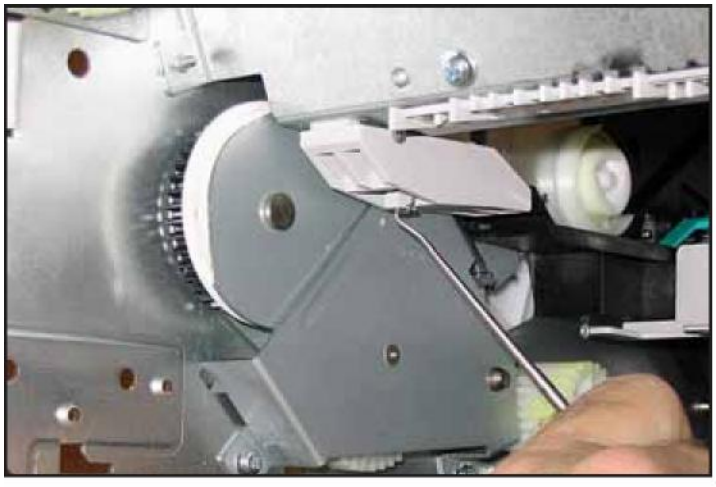

Figure 17 – Remove toner cartridge guide.

Figure 18- Remove the 23 tooth white gear.

13. Finally, remove the white 23-tooth gear (Figure18) and the three screws that hold the swing plate assembly in place (Figure 19, arrows).

You can now remove the swing plate assembly.

If you've followed these instructions, you'll have a lot of parts strewn about your work area. To put everything back in, install a new spring guide assembly, then work through the steps in reverse.

Even though this is a small and relatively cheap part, it can cause a big headache for you or your customers. Knowing how to replace it – which should be a last resort – should come in handy for you if you're working on the LaserJet 4200/4300 series. ■

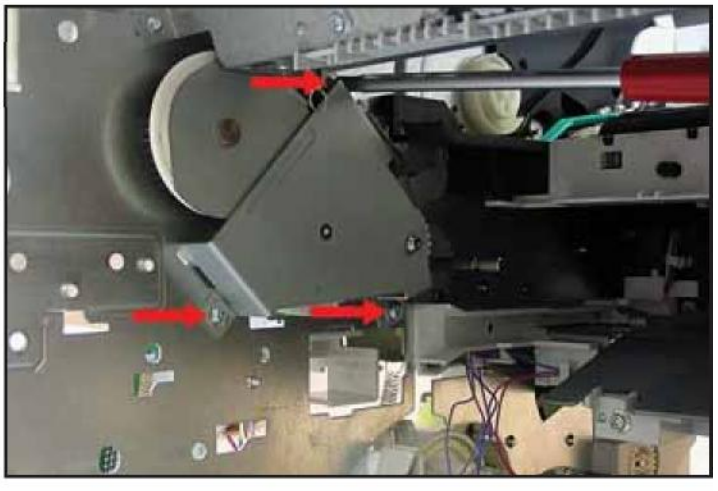

Figure 19 – The red arrows indicate the three screws that hold on the swing plate assembly.