PRINTER TECH

New P4010/4510 Firmware Glitch Discovered

We at LPT discovered a new firmware-related problem with the P4010/4510 series. We reported in 2009 that weak fusers created hanging displays, and that the maintenance reset menu described in the manual was missing. Now we have learned that motor failures fail to trigger 59 errors.

The new HP firmware upgrade fixes both the missing maintenance menu and the motor error detection glitch. If the your current version is lower than 04.060.7, you should upgrade at hp.com. You may notice differences after the upgrade: the display looks slightly different, and the whirring noise made during warm up changes.

We will discuss the new issue and readdress the other two as well.

Defective Motor, but no Error code

Symptom: The printer hangs with "Processing Job" on its display. The motors do not run, although they may briefly attempt to start up. (In the fuser problem described below, the motors run more or less continuously.)

Solution: Upgrade the firmware at hp.com.

Explanation: Failure of any of the four motors in this printer should generate an error code, but the previous firmware neglected this, resulting in a hanging display. The new firmware corrects this and includes the following error codes, which are not in the manual.

59.00   Feed Motor

59.20   Fuser Motor

59.40   Drum Motor

60.02   Tray 2 Lifter Motor

If you suspect a motor failure, but have not yet upgraded the firmware, there are tests for each motor under the Components section of the Diag-

nostics menu. The tests run a motor for at least 10 seconds. A bad or impeded motor will not turn at all, and the printer will immediately return to the main diagnostic screen.

Maintenance Count Menu Missing

Problem: Armed only with the HP service manual, you will be puzzled if you try to reset the maintenance count. The recommended power-on sequence gets you into a hidden menu where you are supposed to select "New Maintenance Kit" to reset the maintenance count and clear the maintenance message. This menu item appears in none of the printers we have seen.

Solution: Upgrade the firmware at hp.com. Then you will be able to reset the maintenance count as indicated in the manual:

1. Turn the product power off and then on.

2. When XXX MB appears on the control-panel display, press and hold down the OK button until all three control-panel lights flash once, and then stay on. This might take up to 10 seconds.

3. Release the OK button and press the up arrow to scroll to NEW MAINTENANCE KIT.

4. Press OK to reset the maintenance-kit counter.

Alternate solution: Enter service mode by selecting Service Menu and keying in the correct PIN code. The codes are: 05401408 for the P4014, 05401508 for the P4015 and 05451508 for the P4515. In this menu you will find "Maintenance Count = X." Change the X to zero by pressing zero on the key pad.

Marginal Fuser, but no 50 Error

Problem: When a print job is received by the printer, the motors run continuously or occasion-

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Specifications of the P4014/P4015/P4515 series

The print resolution of this series is 1200x1200. The P4515, the high-end model of the series, prints at 62 pages per minute and has a maximum monthly duty cycle of 275,000 pages. The P4014 and P4015 print at 45 and 52 ppm, and have duty cycles of 175,000 and 225,000.

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ally pause. This may continue for several minutes. Then, one of three things will happen.

1. It will print the job, possibly with poor print quality or toner that is not completely fused.
2. 50 Error will show on the display
3. Hanging Display.
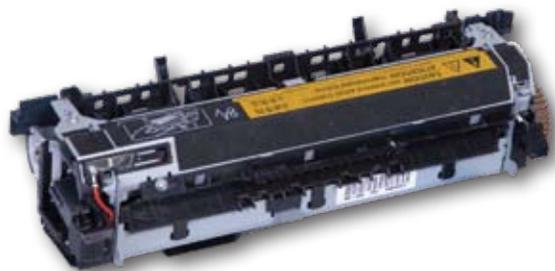
Cause: The fuser heating element is defective.

Solution: Replace the fuser.

A. Main Drive Motor (RL1-1657)
B. Drum Drive Motor (RL1-1659)
C. Fuser Motor (RM1-5051)
D. Lifter/Driver Asm, containing lifter motor (RM1-4585)

THE MOTORS

There are four motors in the printer. To get the printer to properly indicate their failure, download the firmware update.

THE FUSER

The heating element tends to fail, but may operate marginally, resulting in delays, print problems, and an eventual hanging display or 50 error.

THE FIRMWARE

The new firmware adds a missing menu and additional error code display capability.