8.5.2 Printer Preventative Maintenance

Implementing preventative maintenance can significantly extend the life of a printer.

The following table provides a guideline for preventative maintenance for laser printers:

Element	Recommended Maintenance
Environment	Keeping printers in a clean, safe area helps prevent premature failure. An optimal printing environment includes: ▪ Keeping the printer in an area with minimal amounts of dust or other air debris will help the printer to run smoothly and will extend the life of its mechanical components. ▪ Using surge protectors will help protect a printer from the effects of power surges and spikes. ▪ Providing proper ventilation will help a printer to not overheat. Excessive heat causes electrical components to degrade rapidly. Avoid keeping printers in closets or rooms that aren't properly ventilated.
Maintenance Kits	Following the manufacturer's recommendations for the installation of maintenance kits can greatly extend a printer's life. Most maintenance kits include replacements for the most commonly used components of a printer such as: ▪ Fuser wires ▪ Rollers ▪ Toner drum If these parts are replaced on a regular basis (usually after about 20,000 pages of printing), you can avoid a great deal of common printer problems. It is important to buy the maintenance kit for your exact make and model of printer.
Toner	A printer's reported toner level isn't based on how much toner is left in the cartridge, but on how many pages have been printed since the toner cartridge was installed. For this reason, it is important to check the actual toner level periodically. If the cartridge still has sufficient toner, but you are receiving prompts that say that toner level is low, you can reset the toner page counter by following the instructions in your owner's manual. The toner cartridge might include some of the components necessary in the printing process such as the developing roller, corona wire, and OPC drum in a single cartridge referred to as an electrophotographic (EP) cartridge. If this is the case, these components are replaced every time you change the toner. Excess toner can clog up the inner components of a printer over time. Toner has a magnetic charge, so it is important that it only be cleaned by an anti-static vacuum cleaner. The dust and toner on the inside of printers should be cleaned out on a regular basis.

In addition, it is a good idea to:

- Send empty toner and inkjet printer cartridges to be recycled.
- Use only approved toner or ink cartridges. Refilling cartridges might cause ink or toner spills, result in unsatisfactory output, void the printer warranty, or cause damage to printer components.
- Verify consumables status on a regular basis, including the toner cartridges and the imaging drum.

Other types of printers need periodic maintenance as well. Observe the following:

Printer	Recommended Maintenance
Thermal	Complete the following to maintain thermal printers: ▪ Clean the heating element. ▪ Clean the print head every time the ribbon is changed. Clean the head with isopropyl alcohol and a lint-free rag. ▪ Remove accumulated debris with compressed air. ▪ Clean the drive roller using an alcohol wipe.
Impact	Complete the following to maintain impact printers: ▪ Replace the ribbon as needed. Avoid rewinding and reusing the print ribbon as it will dramatically decrease your print quality. ▪ Remove accumulated debris. Pay special attention to the tractor feeds as debris can cause them to jam. ▪ Calibrate the printer. Some dot matrix printers include a calibration utility that you can use to print out a calibration page. Follow the manufacturer's instructions for completing the calibration. ▪ Replace the print head if necessary. Heavily used printers may require replacement of the print head as it wears out. Follow the manufacturer's instructions for replacing the print head.
Inkjet	Complete the following to maintain inkjet printers:

- Replace the ink cartridge as needed. Avoid refilling and reusing the ink cartridge as it could decrease your print quality. In addition, many ink cartridge manufacturers include a small fuse or switch that is tripped when the cartridge runs out of ink. The switch has to be reset, or the fuse replaced, before the cartridge could be refilled and reused.
- Calibrate the printer after replacing the ink cartridge. Most inkjet printers include a calibration utility that you can use to align the new print head in the new cartridge.
- Remove accumulated debris. Pay special attention to the paper rollers as debris can cause them to jam.
- Check the carriage assembly and belt. The carriage is the assembly that holds the ink cartridges and slides back and forth using a belt drive to transfer ink onto the paper.

  On heavily-used printers, the carriage and the belt that drives it can wear out or sustain damage. If this happens, you may experience carriage jams. You may also hear a grinding noise as the printer attempts to move the carriage. In this situation, you can replace the carriage assembly and the belt. The steps for doing this will vary by printer manufacturer. Consult the appropriate documentation for your printer.