



TonerCharge



The Best Laser Printer Maintenance Program in The Business

When it comes to caring for your laser printer, we've come up with a new concept in maintenance - **Delivering Value.**

We're the experts when it comes to your laser printer-nobody knows more about your machines than we do. **Total Laser Care (TLC)** is a program you can count on. You'll sleep easy knowing that one of our comprehensive programs is working for you.

TLC WAS DESIGNED TO:

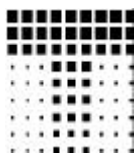
- ▲ minimize, postpone, or eliminate expensive and inconvenient breakdowns
- ▲ improve print quality
- ▲ control ozone emissions.

TLC protects your laser printer by removing the most dangerous threats to the proper functioning of your printer. In addition to replacing key printer components, the service includes a thorough cleaning of internal parts, ensuring crisp copies and greatly extending the life of your printer.

TLC facilitates the environmental safety of your printers by replacing your existing dust-clogged ozone filter with a new charcoal filter.

TLC provides peace of mind by providing a full one-year warranty on your fuser roller assembly, the cause of many major printer breakdowns.

In short, **TLC** keeps your laser in top working condition, can save you hundreds of dollars in repair bills, and protects your office workers from the hazards of ozone gas.



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Our Programs Include:

\$199.95

per machine



GOLD

TOTAL CARE GOLD includes our TLC cleaning service and fully warrants your machine, including parts and labor, for any breakdowns for a period of one year. Under this service, loaner printers are available at no charge if the repair cannot be performed on-site. The price for non-Canon based engines is an additional \$100. The Price for high speed network printers is an additional \$100 and excludes the consumable, scheduled, maintenance kit.

\$129.95

per machine



SILVER

TOTAL CARE SILVER includes the basic TLC service and fuser roller warranty. You pay only the next \$100 of any and all printer repairs (excluding the warranted fuser roller) during the 12 months. For any repairs above \$100, your machine is fully insured for all parts and labor.

The price for non-Canon based engines is an additional \$100. The price for high speed network printers is an additional \$100 and excludes the consumable, scheduled, maintenance kit. As an example:

- ▲ You purchase the Total Care Silver service in March and receive the full cleaning of your printer.
- ▲ A few months later you need a repair to your DC Power Supply, normally costing \$240. You pay only \$100 for the service.
- ▲ Any and all repairs needed thereafter during the remainder of the contract are free to you.



BRONZE

\$ 79.95

per machine

TOTAL CARE BRONZE, our basic service, is a 15-step process that results in a complete, professional cleaning of your laser printer. In addition to the maintenance service, your fuser roller assembly (the source of many laser failures) is warranted for one full year, parts and labor.

What Are the Steps of

1. Remove toner/paper dust and Other Contaminants from Fusing Assembly.

This is the most common maintenance item in the machine, generating expensive repair bills. We remove contaminants before they can do their damage!

2. Check Fusing Assembly Gears. Replace as Necessary.

With steps one and two combined, we are able to guarantee the performance of the fusing assembly unconditionally for one year after service is performed on an undamaged unit. Damaged units can be replaced at time of service at a deeply discounted price.

3. Replace Ozone Filter.

Many laser printers produce ozone. While in the machine, ozone attacks everything but stainless steel and glass. Once outside the machine it attacks your lungs, eyes and other mucous membranes. Most filters last only one year.

4. Clean Transfer Corona Assembly

Toner "transfers" to the paper because this assembly puts a positive charge on it. Over time, it attracts toner to itself and may need replacing. Generally, cleaning or replacing it results in immediate print quality improvement.

5. Replace Separation Pad.

This part prevents more than one sheet of paper from entering the printer at a time. As it begins to wear out, multiple sheets may feed into the printer causing jams. A new pad prevents this.

6. Clean Pick-up Roller Surfaces.

The pick-up rollers actually liberate small amounts of fiber from every page they pick up. Some of this bonds to the roller, making it slick or dusty. For most machines, cleaning this is a sure-fire cure for pick-up problems.

7. Clean Beam-to-Drum Mirror

Ozone doesn't attack glass, but it does help toner and paper dust to bond to the surface of the beam to drum mirror. This can become so cloudy that print quality is seriously impaired.

8. Clean Registration Rollers

Like the pick-up rollers, these become coated with a hard, shiny white film of paper debris that makes them slick. Solvent cleaning restores them to their original texture.

9. Clean Exit Rollers

This is done in somewhat the same manner as eight (#8) above.

10. Inspect Upper Cooling Fan Assembly

Toner conspires with ozone to "gum-up" this fan. If the fan fails, ozone intensifies its attack on the machine. Your fan will be inspected for proper operation.

11. Tighten or Replace Screws. Check Exposed Grounds.

Loose screws can fall out of the clamshell into the cartridge and affect output. Loose grounds can cause bizarre and unpredictable failures.

12. Lubricate Machine as Required.

Originally, the drive gears in the machine were properly lubricated, but over time the heat and motion in the machine combine with dust to "dry out" the gears.

13. Thoroughly Clean the Lower Part of Machine Using Vacuum.

It is important that this be done **AFTER** the sub-assemblies have been removed from the machine's frame, preventing debris from contaminating machine parts. Only after the machine is properly vacuumed should the sub-assemblies be re-installed.

14. Remove Lower Casing and Inspect Fan.

The lower fan draws air through the printer to cool the printed circuit boards. Over time, dust and debris collect, impeding its cooling ability. Cleaning the bottom portion of the printer and examining this fan for proper operation is critical to the long-term health of the printer.

15. Clean exterior of Printer.

A special solution is used to thoroughly clean the outside of the printer.

Why Change Your Ozone Filter?

Reprinted From *The Wall Street Journal*, January 29, 1991

THE WALL STREET JOURNAL

ENVIRONMENT

By FRANK EDWARD ALLEN

Printers Are Injecting Ozone Into Offices

THE OZONE GAS produced by laser printers and photocopy machines is raising health concerns.

In the U.K., scientists recently found that office workers who share space with copiers and laser printers are exposed to as much as 10 times the amount of ozone that's considered safe.

The Danish Technological Institute tested such equipment in 200 offices and discovered that the internal filters often clog and stop working after about a year,

emitting unhealthy amounts of the gas, which can cause respiratory ailments, nausea, headaches and premature aging of skin. The risk is considered greatest in small and poorly ventilated work spaces where the gas can't break down easily.

Concerns about ozone are spreading in the U.S. as desktop models gain popularity. BIS CAP International, a market researcher in Norwell, Mass. estimates that 4.2 million laser printers are in use nationwide, including about 1.7 million units purchased in 1990.

Until recently, Apple Computer had been comfortable leaving original ozone filters in place for the life of its LaserWriter machines. But now, the company recommends replacement af-

ter about 30,000 pages. Explains a spokeswoman: "Dust becomes the culprit. The filters lose their effectiveness."

Hewlett-Packard, which has about three million laser printers in use worldwide, says its newest machines produce much less ozone than older models. Ozone filters are designed to be changed every 20,000 to 30,000 pages, says Russell Buschert, Hewlett-Packard's toner product manager. "It's hard to get the work out." Neither the Environmental Protection Agency nor the Occupational Safety and Health Administration has any rules governing emissions from such equipment. Spokesman at both agencies say there aren't any studies under way to evaluate the issue.

Reprinted From *The Allentown Examiner*, February 17, 1991

Are Your Office Machines Poisoning You?

by Melanie Wood

Poisonous ozone gas is seeping through dusty laser printer filters in doses 15 times more concentrated than that shown to cause damage to humans in laboratory tests, scientists have discovered.

Ozone, a form of pure oxygen and a natural by-product of the electro-photographic process, is trapped and broken down by charcoal filters inside the machines.

But recent studies have shown that these filters are easily clogged by dust that renders them useless and sends dangerous levels of ozone into the office.

The way the system works is the extra atom of oxygen that makes ozone hazard-

ous bonds to the charcoal as it passes through the filter. When the filter is clogged, the ozone blows through the room in its pure form undetected.

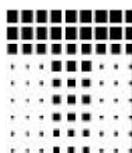
Hewlett-Packard spokesman Russel Buschert said the problem was recently discovered and can be eliminated by changing the filter on the laser printers every 25,000 to 30,000 prints.

"Originally we thought we could keep the filters for the duration of the printer," he said. "Now in our brochures we recommend they change them every year." Studies both here and abroad have shown that short-term exposure to ozone reduces lung capacity, causes respiratory problems, headaches and sometimes nausea." Longer exposure to the gas can lead to fibrosis,

scarring of the lungs and the destruction of antigens. And like the carcinogenic Radon gas discovered seeping into building through crevasses, ozone is invisible and causes irreversible damages to the lungs.

Neither the EPA or OSHA has made a recommendation on the margin of safety for the gas indoors, but Underwriters Laboratory (UL) set a standard of .10 parts per million (ppm). A Laserjet Series II printer with a new filter tested at .05 ppm, Buschert said.

Of the five million laser printers operating in this country very few have ever had their filters changed. The danger of this is compounded by the fact that the machines are often crammed into the corners of small dusty offices.



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