

## BASIC CONCEPTS ABOUT PRINTER CONSUMABLES

### Usefull Information

#### Frequently asked questions

1. What is the difference between original and compatible consumables?
2. Can use of not original consumables spoil the printer?
3. Advantages and disadvantages of CISS (Continuous Ink Supply System).
4. What is cartridge refilling?
5. What is cartridge reconstruction?
6. What can cartridge refilling cause?
7. How to consider what to do refilling or reconstruction?
8. What inks to chose?
9. What does laser jet cartridges drum's speed of wear out depend on?

#### Cartridge's construction

#### Useful information about care for printer and storage of cartridges

### FAQ

#### 1. What is the difference between original and compatible consumables?

**Original consumables** are being produced directly by the producer of the technique with the same brand as the technique (for example HP, Canon, Epson, Lexmark etc.). The price of original consumables is higher because of popularity of its producer and because the producer pawns the main part of his profit to the consumables.

**Compatible consumables** - are those similar with vendors' product, which have been produced by another producer, not the company which has produced the printer. The use of compatible cartridges is profitable especially for the final consumer. Using compatible product he spares his facility to which since time he can gain one more printer.

As the original, so and the compatible cartridges can be refilled after the use. In most part of cartridges water based inks are used. However line of HP, Canon, Epson cartridges are filled with pigment inks. Different composition of inks provides differences of printing quality, and determines the type of paper carrier while printing. It is recommended to use its own type of ink for each cartridge. It provides

better color transmit and higher quality of printing. There are also universal inks, which approach for refilling of broadly line of cartridges (but not all contract!!!).

#### 2. Can use of not original consumables spoil the printer?

Of course, use of low quality consumables can cause to littering of printer because of spilling of a toner, caused by breach of hermeticity of the cartridge. This can bring with it premature wear-out of mechanism of the printer and bring to significant deterioration of printing quality. So don't hurry in acquisition of strangely low costing cartridges and properly interest about the warranty obligations of the vendor of such cartridges.

#### 3. The advantages and disadvantages of CISS (Continuous Ink Supply System)

CISS (Continuous Ink Supply System)- consists of cartridges, united with

multi-server train with capacity of ink. During seal automatic unceasing presenting of ink occurs in to the cartridge. The Capacities of CISS are miscellaneous volume, starting from 50 ml. and finishing with greater capacities as 500 ml., which exceeds the capacity of a usual cartridge for several times. It's possible to use CISS as in the office which will allow to spare vastly on seal of documents, so as at home CISS will suit for printing photography fine. All this is reached thanks to data in the system using inks of alternative producers, which costs much lower than original inks and do not yield them on quality.

### **The advantages of Continuous Ink Supply System**

- High stability of seal quality - is provided by constancy of the pressure in printing head of the printer, which does not depend on decreasing level of the ink in capacity-donor.
- Increasing the capacity of the printer - no necessities to spend time to change the cartridge, to clean printing heads.
- Reduction of the cost of the seal for 2-50 times (depending on a printer type). However you should take into account that in case of qualitative seal, the cost of the photo paper forms the main part of the imprint cost.
- Increasing the safety when printing - absence of risk of mortality of printer's printing heads because of hit of the air when changing the cartridge
- Increasing the resource of printing heads
- Seal of greater volumes without risk of interruption because of ink completion of the cartridge
- Possibility of renewing the spare of the ink of different colors in accordance with their real consumption while it's necessary to change the standard three-colored cartridge when only one of three colors is finished.

### **Disadvantages**

When moving the printer you'd better to perform maximum caution. Otherwise displacement of capacities on height can cause to suffuse of ink along whole printer of raised differences of the pressures.

### **4. What is cartridge refilling?**

The Process of cartridge refilling includes:

- primary testing of the cartridge
- full stripping of the cartridge and its clearing from remainder of the toner
- refilling of cartridge with high-quality toner
- assembly
- output checking of quality and testing of filled cartridge

Cartridge refilling is a process that vendors of the original consumables don't love. Why? They lose money on this, and the users spare, moreover greatly. Simply talking refilling the cartridge, the body stays the same, only toner is changed, and all the other spare parts pass preventive clearing – here where the economy comes from. As a rule laser jet cartridge holds 2-3 refilling, after that reconstruction should be made.

**5. What is “cartridge reconstruction”?** Cartridge Reconstruction differs from its refilling that when recovering not only toner is changed, but also subject to

wear-out components of the cartridge - a drum (OPC Drum, Photoreceptor), racker (Wiper Blade, Cleaning Blade, cleaning edge) and if required, the other components- PCR (charging gross) etc.

### 6. What can cartridge refilling cause?

Many clients, choosing between buying a new cartridge and refilling of perfected ones, ask if refilling the cartridge is bed for the printer. This is because many sellers of the organizational technology categorically do not recommend to refill cartridges, motivating that it harms the device.

Posteriorly we can say - qualitative refilling does not influence to the resource of the device. But spare on this client gets rather essential. For all the history of our work not a single refilled device has came out of formation because of faulty refilling. It's possible to fill the cartridges repeatedly, changing through 2-3 refilling the drum or other spare parts if necessary.

The Maximum amount of the refilling, made by us on 1 cartridge, has exceed 80 refilling (for HP LJ 1010) and even after such amount of refillings, the cartridge qualitative prints and doesn't pour the toner inside the device. The Advantage at a glance is 80 refillings  $80 * 5000 \text{AMD} = 400000 \text{AMD}$ , but when buying a new cartridge it's going to be  $80 * 30000 \text{AMD} = 2400000 \text{AMD}$ . The Difference forms 2000000 AMD or approximately 34 new printers.

Other deal if the cartridge is filled unqualified, from it heavily pours the toner, drum and the other grosses are not swabbed, than this can bring to output of some details of the device from formation. But even herewith, refilling the cartridge rakish dips the repair and usage of the device.

### 7. How to consider what to do, refilling or reconstruction?

As a rule, laser jet cartridges hold 2-3 refilling, after that it should be reconstructed. There are some symptoms, basing on which it's possible to define what to do, reconstruction or refilling:

**Faded imprint, in some places text almost is not seen** - it signs that toner is finished, you can get the cartridge and shake it, it'll help for some time, but it's already time to reconstruct or refill.

**Vertically black bands in different places of the sheet, but most often on edge** - sign of the wear-out of the drum - it is necessary to do reconstruction.

**Horizontal dark bands** - sign that drum is lit, possibly you have kept the cartridge without the black package - it is necessary to do reconstruction.

**Gray background on whole sheet, "toner marks (indications)"** - possibly the racker (wiper blade) is damage - it is necessary to do reconstruction.

**Vertical thin bands along whole sheet** - magnetic gross is damaged (Mag.Roller, Developer Roller) - it is necessary to do reconstruction.

**Defect of the seal reiterative in 3x-4x places on length of the sheet, herewith the rest imprint is normal** - a mechanical damage of the drum (break), occurs in consequence of mechanical damage of the cartridge (have dropped or tried to insert in to the printer wrongly) - it is necessary to do reconstruction.

**Cartridge clamors when working (squeaks)** - possible, the racker (wiper blade) is wearied out - it is necessary to do reconstruction.

### 8. What inks to chose?

After decision of installation of CISS or fuelled cartridge, this question appears. The question of choice of inks is not ambiguous, it's better to approach to it complexly and not to yield on provocations.

The main criteria of choice of the ink is:

Seal quality - includes color transmit of the ink (without grading): fluidity of the ink on a usual paper.

Stability of imprint to the external ambience (long-term). These questions are individual for different printer models and paper types (photo paper), on which you plan to print.

Accessibility and price - the ink should be available to acquisition. If a problem accure to one seller with a given ink, it will be possible to buy them in another place. The question of the price each solves for itself, but it must be at least reasonable.

If you already use the ink of some producer and it's suitable for you, you'd better use them further more as the transition of another ink concerned with certain difficulties and expenses.

### **9. What does laser jet cartridge's drum's speed of wear out depend on?**

- Paper quality – the better the paper is, the longer drum serves
- Paper density – the thicker the paper is, the more is its influence on the paper and the less drum serves
- Printing intensity – the intensive the cartridge is used, the faster drum spoils
- Use of stickers – stickers make additional load on the drum, special stickers should be used for laser jet printing
- Use of branded forms – many companies use branded forms (printed by color printer or in printing houses) – such as stickers it makes additional load on a drum, moreover that the additional load goes to the same part of the drum
- Use of "circulating" (papers that are clean from one side) the paper passes through the drum by its used side, which causes to fast spoil of the drum
- User's culture – should take care of printer, conduct cleaning and preventive maintenance in time, not to load more than declared capacity.

## **Useful information about care for printer and storage of cartridges**

Don't keep the cartridge

1. under influence of the straight sunshine
2. in temperature higher than 40°C
3. in places with sharp swings of temperature and moisture
4. in a car within long period of time
5. in places with raised of the salts in atmosphere
6. in places with raised dust.

## **Recommendations about keeping the cartridge**

1. Until you decide to use the new cartridge, keep it in the package
2. Do not touch the cartridge without emergency! Do that when you decide to take it out for refilling or cleaning the cartridge! If the cartridge is already extracted

keep it in the hermetic package without fall!

3. The cartridge won't print fault-free if keep it without the package for a long period of time.

### **Care for the printer**

- keep the staff order of the switching off the printer
- if you have nothing to print within several days, anyway don't care missing on seal at least one - two pages, this will make possible to avoid drought of sniffled
- if during seal network feeding disappears, wait for its reconstruction and immediately switch the printer off, using network stand-in
- take out the cartridge only when changing
- do not fill the cartridge yourself
- and do not wash the mechanism of printer itself, including its head, with alcohol containing liquid (only distilled!) as this brings destruction of the sniffled covering.