

Technical Disclosure Commons

Defensive Publications Series

September 2020

SAFE,USER-FRIENDLY PRINTHEAD CLEANER REPLACEMENT & DISPOSAL SYSTEM

HP INC

Follow this and additional works at: https://www.tdcommons.org/dpubs_series

Recommended Citation

INC, HP, "SAFE,USER-FRIENDLY PRINTHEAD CLEANER REPLACEMENT & DISPOSAL SYSTEM", Technical Disclosure Commons, (September 11, 2020)
https://www.tdcommons.org/dpubs_series/3595



This work is licensed under a [Creative Commons Attribution 4.0 License](https://creativecommons.org/licenses/by/4.0/).

This Article is brought to you for free and open access by Technical Disclosure Commons. It has been accepted for inclusion in Defensive Publications Series by an authorized administrator of Technical Disclosure Commons.

Safe, User-Friendly Printhead Cleaner Replacement & Disposal System

Abstract: A Printhead Cleaner module is removable from a printer in a safe and user-friendly way without the user directly interacting with any regulated substance such as ink.

This disclosure relates to the field of printers.

A technique is disclosed that removes and stores a depleted Printhead Cleaner module in a safe and user-friendly way, with the idea that the user does not interact directly with any regulated substance, thus making the operation safer and simpler for the user.

The Printhead Cleaner (PHC) is a maintenance module used in large format printers to keep the printheads in a healthy condition for optimum Image Quality (IQ). However, after a certain time - which depends on the usage model of the product - it gets full of waste ink and therefore it must be disposed of and replaced with a fresh one. The PHC contains a lot of ink inside at the end of its life. This makes its total weight noticeable, in the range of several kilograms, so its handling becomes also difficult. Local regulations often require the user to take special precautions, such as the use of gloves, when handling and disposing of parts which are in contact with ink. This complicates the storage and disposal of the PHC at the end of its life, apart from the risk of potential ink stains.

According to the present disclosure, and as understood with reference to the Figure, consider a PHC 20 in the context of a latex printer 10. In some such printers, the PHC 20 may be installed by introducing it through a door area 30 and pushing forward by hand. Removal works the same way, but in the opposite direction.

Hooks 50 are added to the external perimeter of the door area 30. They may protrude from the frame of the printer, or may be attached to another surrounding area as long as it is nearby. In one example, there are 4 hooks, one on each corner.

When the PHC 20 needs to be removed, if it is still in good condition, the hooks 50 are not used and will not interfere in the removal. However, when the PHC 20 reaches the end of its life and needs to be removed together with all the ink it has inside, then the hooks 50 come into use. The user 70 takes a bag 60, usually plastic, as required by the local regulations. In some cases, the bag 60 may have a zip-lock top to facilitate closure and sealing. Instead of removing the PHC 20 while wearing the gloves the risk of spilling out ink, the user first attaches the perimeter of the opening of the bag 60 to the hooks 50 surrounding the door area 30.

Once the bag 60 is secured onto the hooks 50, the user 70 then pushes the bag 60 inside the cavity of the printer where the PHC 20 is located by pressing the bag 60 by hand so that it bends inwards until it reaches the PHC 20. At no time does the user 70 contact the PHC 20 directly, but rather does so through the bag 60 between them. The user 70 then pulls the PHC 20 out, making it end up fully inside the bag 60, which is still attached to the hooks 50. Once the PHC 20 is out of the printer 10, the user 70 removes the bag 60 from the hooks 50 and closes the door. The bag 60 with the PHC 20 inside can then be stored and disposed of as appropriate per local regulations.

To insert a fresh PHC 20 no bag 60 is required, so the hooks 50 are not used during this installation operation.

The disclosed technique advantageously makes the entire process of removing a PHC full of ink completely safe for the user, with no risk of coming into contact with the ink. By removing the PHC through the bag, the risk of ink spills or stains for the user or the surrounding environment is minimized or eliminated. If the local regulations allow gloves to be dispensed with because of the use of the bag, their cost could be avoided.

Disclosed by Jose Angel Villasante Bembibre, Lluís Sole, Ricardo Oltra, and Alex Rius, HP Inc.

