

Technical Disclosure Commons

Defensive Publications Series

August 14, 2018

WHITE PRINthead PRESENCE DETECTION WHILE INSTALLED IN A ROTATIVE DEVICE BY DETECTING THE DISPLACEMENT OF THE CAP USING A SWITCH

HP INC

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

Recommended Citation

INC, HP, "WHITE PRINthead PRESENCE DETECTION WHILE INSTALLED IN A ROTATIVE DEVICE BY DETECTING THE DISPLACEMENT OF THE CAP USING A SWITCH", Technical Disclosure Commons, (August 14, 2018)
https://www.tdcommons.org/dpubs_series/1411



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.

White Printhead presence detection while installed in a rotative device by detecting the displacement of the cap using a switch

ABSTRACT

It is known that White ink requires to be in continuous movement to avoid pigment deposition. Sometimes, customer needs to keep the White printheads out of the carriage. As they cannot be just stored in a shelf, a PH wheel has been created to keep the Printheads in constant movement and, therefore, the pigment properly dispersed.

The printer needs to know that the Printheads are in the Wheel while they are not in the carriage, so a sensor in the wheel is required to check it. As the Wheel is constantly rotating, this invention proposes to use the change on the capping position that happens once the Printhead has been installed in the Wheel (see picture attached).

PROBLEM SOLVED

The customer may forget to install the White Printheads in the Wheel when removing them from the carriage. Then, pigment deposition will happen, clogging the nozzles and reducing PH life. With this presence sensor device, printer will warn customer that Printheads are not located in the right place, avoiding Printhead malfunction and increasing customer satisfaction. Not assembling the PH in the wheel and therefore reducing PH life, can lead to warranty costs to HP. So, knowing PH presence in the wheel is very important also for HP financials.

PRIOR SOLUTION

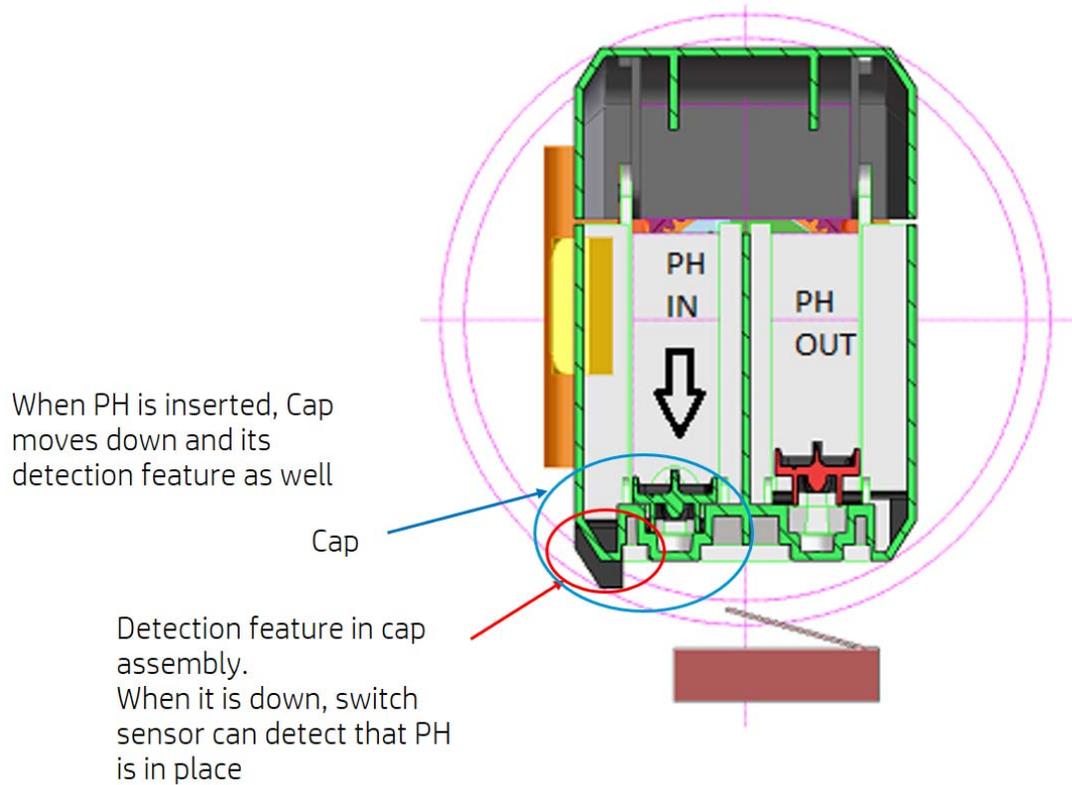
Prior solution in SKAAR does not include a Printhead presence detection sensor. Printer never knows if the Printhead has been installed in the wheel. Customer may forget to do the right process and Printhead will not work properly next time it is installed in the carriage

DESCRIPTION

This invention uses the Printhead cap mechanism with some modifications and a switch sensor located in the fixed part of the wheel space.

When a PH is inserted, cap moves down. Therefore, its detection feature as well, entering in the switch sensor detecting area.

The switch sensor can detect the cap position when the Wheel is rotating. The switch sensor can be any kind of sensor that detects cap movement: mechanical switch test, hall effect sensor, optical sensor, etc.



ADVANTAGES

The design proposed in this disclosure has the following advantages:

- Improve white PH reliability
- Improve customer satisfaction as white PH will last more cause HP printer will warn the user in case he forgets to include the PH in the wheel
- HP financials will not be impacted in case the user forgets to include the PH in the wheel

Disclosed by Marta Coma Vives, Jordi Hernandez Creus and Jose Ma Rio Doval, HP Inc.