Technical white paper

Aftermarket Chips for HP LaserJet Printers

Recommended changes to avoid brand misidentification
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Introduction

For many years HP printers have provided a message to end users when a toner cartridge is installed in the printer, stating either “Genuine HP Supply Installed” or “non-HP Supply Installed.”

One method that is used to properly identify cartridges is if the chip manufacturer has programmed the manufacturer ID field (also known as the trademark field) on their chip so that it accurately displays the chip manufacturer brand name. However, this is often not the case; instead, some manufacturers of aftermarket chips deliberately identify themselves as “Genuine HP” in order to more favorably position their products with their customers.

Customers have a right to know the brand of cartridge they have purchased. In fact, cartridges that misidentify themselves as HP when they are really alternatives are potentially deceptive in brand identification or, worse, may be counterfeit. To improve customer transparency, HP’s best-selling cartridges facilitate the proper identification of all cartridge types by enabling the same core features for non-HP as HP cartridges. Aftermarket chip manufacturers are henceforth prompted to change (or if already changed, maintain) their existing chips for certain platforms so that proper messaging is displayed to the end user. The purpose of this whitepaper is to inform manufacturers of aftermarket chips of these changes; detail which toner chips should be changed; and explain the requirements for ensuring that alternative chips are identified as such with no material impact to their core performance.

Background

HP printers provide a message to end users when the cartridge is installed in the printer. The primary purpose of this message is to reassure the customer that the cartridge was installed correctly and the printer is ready to resume printing. A secondary intent of this message is to inform the users of the type of cartridge installed. Though there is some variation from printer to printer, cartridges manufactured and distributed by HP are generally identified with the message “Genuine HP Supply Installed.” Those manufactured or remanufactured by other parties should be identified as “non-HP Supply Installed.”

For many years, HP’s toner cartridges have decoupled the manufacturer field from access to core features. Aftermarket chips that properly identify themselves as non-HP will not lose access to printer core functionality. As a result, there is no plausible benefit for aftermarket chip makers to misidentify their products as Genuine HP, and customers should be properly notified of the type of cartridge installed.

Need

Aftermarket manufacturers are henceforth prompted to program their existing chips for certain current and future printers so that proper messaging is displayed to the end user and their products are not misrepresented.

Properly identifying a cartridge as non-HP will not result in a loss of core features or degraded performance. In addition, manufacturers that produce chips with correct messaging will help ensure that their products will not be used to sell misidentified (counterfeit) product.

As long as chip manufacturers make the changes to their existing products in a timely way, and as long as future solutions follow these design protocols from the beginning, the costs of implementation should be immaterial to the manufacturer.

Solution

To ensure accurate messaging, HP printer firmware reads and reacts on messaging based on data fields on the chip. Provided that the fields on the chip are programmed properly, non-HP cartridges can be identified as such. For LaserJet printers introduced prior to 2015 to properly identify their cartridges and avoid potential facilitation of

counterfeiting, cartridge makers will need to change the manufacturer ID field on their chips. Chip makers will need to locate the manufacturer ID field within the applicable data structure and change the string of ASCII characters from "HP" followed by 6 spaces to some other value – any value is acceptable, but HP recommends that manufacturers use their own brand identifiers. Note that this field can be located in different areas in different chips. Putting any value other than "HP" in this field will only change the display message the customer sees, and it will not impact print speed or other core functionality. Please note that it is important to use the latest version of printer firmware to ensure that chips perform as intended. If vendors encounter issues with their aftermarket chips not behaving as expected, they should first ensure they are using the latest version of the firmware, which is available at http://support.hp.com/us-en/drivers/. HP supports a variety of ways by which users can update printer firmware, including using remote solutions.

With the introduction of HP LaserJet printers and MFPs with JetIntelligence in 2015, additional protection was added to further validate the authenticity of Genuine HP supplies. The inclusion of these new protections now requires two fields in concert to identify whether a supply is Genuine HP or non-HP. The first field indicates the presence of a digital signature and the second is the traditional manufacturer ID field from legacy products. Both of these fields must indicate either an HP supply or a non-HP supply. Mismatches in this data will result in a supply memory error. Again, like products introduced previously, the proper messaging of the supply brand will not impact print speed or core functionality.

There are many printers in the HP installed base that support proper brand identification, as detailed below. In addition, all HP printers launching in and after 2014 support this messaging. Chip makers are expected to make or continue to maintain the necessary changes to enable proper identification of non-HP cartridges for the indicated platforms as well as all new launches.

Benefits

Chip manufacturers that make or continue to maintain these changes will help verify their customers' products are respectful of registered trademarks and other rights as is guaranteed in many countries. In addition, those same manufacturers will be able to validate that their products are not used to pass off counterfeit product. Finally, chip manufacturers will be doing their part to help ensure that customers are able to identify and avoid counterfeit products.

Roadmap

As it pertains to printers already in the installed base of HP printers, this messaging approach is and has been effective for the devices listed at the end of this paper.

HP will continue to develop methods to protect its brand. The methods used to assure that a Genuine HP message is delivered to a customer only when an HP supply is installed could change in the future.

Covered toner and printers

Selectability	Cartridge Number	Printer / MFP
05A black	CE505A	HP LJ P2035 / HP LJ P2055
17A black	CF217A	HP LJ Pro M102 / M130 JetIntelligence
18A black	CF218A	HP LJ Pro M102 / M130 JetIntelligence
19A drum	CF219A	HP LJ Pro M102 / M130 JetIntelligence
125A black	CB540A	HP CLJ CP1215 / CLJ CM1312 / CLJ CP1515n / CLJ 1518n
125A cyan, yellow, magenta	CB541A, 542A, 543A	HP CLJ CP1215 / CLJ CM1312 / CLJ CP1515n / CLJ 1518n
128A black	CE320A	HP LJ Pro CP 1525 / HP CLJ Pro CM1415
128A cyan, yellow, magenta	CE321A, 322A, 323A	HP LJ Pro CP 1525 / HP CLJ Pro CM1415
130A black	CF350A	HP CLJ Pro MFP M176 / HP CLJ Pro MFP M177
130A cyan, yellow, magenta	CF351A, 352A, 353A	HP CLJ Pro MFP M176 / HP CLJ Pro MFP M177
201A black	CF400A	HP CLJ Pro M252 / M277 JetIntelligence
201A cyan, yellow, magenta	CF401A, 402A, 403A	HP CLJ Pro M252 / M277 JetIntelligence
201X black	CF400X	HP CLJ Pro M252 / M277 JetIntelligence
201X cyan, yellow, magenta	CF401X, 402X, 403X	HP CLJ Pro M252 / M277 JetIntelligence
25X black	CF325X	HP LJ Enterprise 806 / HP LJ Enterprise Flow MFP 830
26A black	CF226A	HP LJ Pro M402 / Pro M426 JetIntelligence
26X black	CF226X	HP LJ Pro M402 / Pro M426 JetIntelligence
28A black	CF228A	HP LJ Pro M403 / Pro M427
28X black	CF228X	HP LJ Pro M403 / Pro M427
30A black	CF230A	HP LJ Pro M203 / M227 JetIntelligence
30X black	CF230X	HP LJ Pro M203 / M227 JetIntelligence
31A black	FC231A	HP LJ Pro M203 / M206 / M227
32A drum	CF232A	HP LJ Pro M203 / M227 JetIntelligence
33A black	CF233A	HP LJ Ultra M106 / HP LJ M134 JetIntelligence
34A drum	CF234A	HP LJ Ultra M106 / HP LJ M134 JetIntelligence
37A black	CF237A	HP LJ Enterprise M607 / M608 / M609 / M631 / M632 / M633 JetIntelligence
37X black	CF237X	HP LJ Enterprise M607 / M608 / M609 / M631 / M632 / M633 JetIntelligence
37Y black	CF237Y	HP LJ Enterprise M607 / M608 / M609 / M631 / M632 / M633 JetIntelligence
304A black	CC530A	HP CLJ CP2025 / HP CLJ CM2320
304A cyan, yellow, magenta	CC531A, 532A, 533A	HP CLJ CP2025 / HP CLJ CM2320
307A black	CE740A	HP CP5225

Selectability	Cartridge Number	Printer / MFP
307A cyan, yellow, magenta	CE741A, 742A, 743A	HP CP5226
410A black	CF410A	HP CLJ Pro M377 / M452 / M477 JetIntelligence
410A cyan, yellow, magenta	CF411A, 412A, 413A	HP CLJ Pro M377 / M452 / M477 JetIntelligence
410X black	CF410X	HP CLJ Pro M377 / M452 / M477 JetIntelligence
410X cyan, yellow, magenta	CF411A, 412A, 413A	HP CLJ Pro M377 / M452 / M477 JetIntelligence
504A black	CE250A	HP CLJ CP3525 / HP CLJ CM3530
504A cyan, yellow, magenta	CE251A, 252A, 253A	HP CLJ CP3525 / HP CLJ CM3530
504X black	CE250X	HP CLJ CP3525 / HP CLJ CM3530
508A black	CF360A	HP CLJ Pro M552 / M553 / M577 JetIntelligence
508A cyan, yellow, magenta	CF361A, 362A, 363A	HP CLJ Pro M552 / M553 / M577 JetIntelligence
508X black	CF360X	HP CLJ Pro M552 / M553 / M577 JetIntelligence
508X cyan, yellow, magenta	CF361X, 362X, 362X	HP CLJ Pro M552 / M553 / M577 JetIntelligence
55A black	CE255A	HP LJ P3015
55X black	CE255X	HP LJ P3015
647A black	CE260A	HP CLJ CP4025 / CLJ CP4525
648A cyan, yellow, magenta	CE261A, 262A, 263A	HP CLJ CP4025 / CLJ CP4525
655A black	CF450A	HP CLJ Enterprise M652 / M653 / M681 JetIntelligence
655A cyan, yellow, magenta	CF451A, 452A, 453A	HP CLJ Enterprise M652 / M653 / M681 JetIntelligence
656X black	CF460A	HP CLJ Enterprise M652 / M653 / M681 JetIntelligence
656X cyan, yellow, magenta	CE461A, 462A, 463A	HP CLJ Enterprise M652 / M653 / M681 JetIntelligence
657X black	CF470X	HP CLJ Enterprise M681 JetIntelligence
657X cyan, yellow, magenta	CF471X, 472X, 473X	HP CLJ Enterprise M681 JetIntelligence
78A black	CE278A	HP LJ M1536 / LJ P1566 / LJ P1606dn
79A black	CF279A	HP LJ Pro M12 / M26
824A cyan, yellow, magenta	CB381A, 382A, 383A	HP CLJ CP6015 / CM6030mfp / CM6040mfp
825A black	CB390A	HP CLJ CM6030mfp / CM6040mfp
826A black	CF310A	HP CLJ Enterprise M855
826A cyan, yellow, magenta	CF311A, 312A, 313A	HP CLJ Enterprise M855

Selectability	Cartridge Number	Printer / MFP
827A black	CF300A	HP CLJ Enterprise Flow MFP M880
827A cyan, yellow, magenta	CF301A, 302A, 303A	HP CLJ Enterprise Flow MFP M880
83A black	CF283A	HP LJ Pro MFP M125 / HP LJ Pro MFP M127
85A black	CC388A	HP LJ P1102/LJ Pro M1132/LJ Pro M1212/LJ Pro M1214/LJ Pro M1217
87A black	CF287A	HP LJ Pro M501 / Enterprise M506 / M527 JetIntelligence
87X black	CF287X	HP LJ Pro M501 / Enterprise M506 / M527 JetIntelligence
93A black	CZ192A	HP LJ Pro M435 / M701 / M706

Disclaimer

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Contacts

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