Inkjet Printer Long-Term Storage Test

HP Inkjet Printers with Integrated Print Head Supplies

Test Objective

Buyers Laboratory LLC (BLI), Hackensack, NJ (USA), was commissioned by the Hewlett-Packard Company to assess the resistance of HP inkjet products against ink drying up. Therefore, a test was conducted on three HP Deskjet Ink Advantage 2515 All-in-One Printers, which use the HP 678 ink cartridge, to evaluate the impact of long-term periods of non-use on the print performance of HP inkjet print cartridges when stored under conditions of high heat and low relative humidity (RH). An extreme temperature of 37°C was chosen, which is the average summer high in New Dehli, India, according to weatherspark.com; and 20%RH was selected as it is the lowest recommended storage humidity of the ink cartridges tested.

Test Methodology

Following a 24-hour acclimation period, each printer was installed on BLI’s lab test network and 10 sets of the ISO 24712 five-page test suite were printed and stored. The printers, with the cartridges installed, were allowed to completely power down before they were unplugged and were then stored in a Thermatron WP-446 Walk-in Environmental Chamber for six weeks with conditions set at 37°C/20%RH. Following the six-week period of non-use, the printers were reinstalled on BLI’s lab test network and, after a 24-hour acclimation period, one set of the ISO 24712 five-page test suite was printed on each printer for comparison with the initial print samples.

Conclusion

Absolutely no print quality degradation or reliability issues were observed by BLI after the six weeks of printer storage, clearly demonstrating that extended storage of HP Deskjet Inkjet Printer Long-Term Storage Test
Inkjet Printer Long-Term Storage Test
HP Inkjet Printers with Integrated Print Head Supplies

Advantage 2515 All-in-One Printers even under these extreme conditions of high heat and very low relative humidity does not have an ink dry-out effect on this HP print system.

Test Observations

As can be seen from the “before and after” print samples identified as Exhibits A and B below, there are no discernible differences in the print quality of the Exhibit A and Exhibit B prints produced by each device, indicating that the quality of the HP ink cartridges was unaffected by the six-week period of idle time under the extreme conditions of 37°C/20%RH.

Test Print Samples
Before Storage

Printer 1
Exhibit A 1

Stephen J. Singel
Fabanda Sinpat Abarress
Tendar, BSF
URANGLLE

30 November 2005
Johnathan Q. Maderia
Inpert Mampem Abarress
2343 Stantin Dawer Lank
Benhibe, SDF

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Test Print Samples
After 6 Weeks of Storage

Printer 1
Exhibit B 1

Stephen J. Singel
Fabanda Sinpat Abarress
Tendar, BSF
URANGLLE

30 November 2005
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Inkjet Printer Long-Term Storage Test
HP Inkjet Printers with Integrated Print Head Supplies

Test Print Samples
Before Storage

Printer 1
Exhibit A 2

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Printer 1
Exhibit A 3

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Test Print Samples
After 6 Weeks of Storage

Printer 1
Exhibit B 2

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Printer 1
Exhibit B 3

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Inkjet Printer Long-Term Storage Test
HP Inkjet Printers with Integrated Print Head Supplies

Test Print Samples Before Storage
Printer 1
Exhibit A 4

Test Print Samples After 6 Weeks of Storage
Printer 1
Exhibit B 4

Printer 1
Exhibit A 5

Printer 1
Exhibit B 5
Inkjet Printer Long-Term Storage Test
HP Inkjet Printers with Integrated Print Head Supplies

Test Print Samples
Before Storage

Printer 2
Exhibit A 1

Stephen J. Singel
Fabanda Spinat Abarress
Tendar, BSF
URANGLE

30 November 2005

Johnathan Q. Madera
Impert Mampem Abaress
2343 Stanton Dower Lank
Benihibe, SDF

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Test Print Samples
After 6 Weeks of Storage

Printer 2
Exhibit B 1

Stephen J. Singel
Fabanda Spinat Abarress
Tendar, BSF
URANGLE

30 November 2005

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Inkjet Printer Long-Term Storage Test
HP Inkjet Printers with Integrated Print Head Supplies

Test Print Samples Before Storage
Printer 2
Exhibit A 3

Test Print Samples After 6 Weeks of Storage
Printer 2
Exhibit B 3

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Test Print Samples
Before Storage

Printer 2
Exhibit A 5

Test Print Samples
After 6 Weeks of Storage

Printer 2
Exhibit B 5
Inkjet Printer Long-Term Storage Test  
HP Inkjet Printers with Integrated Print Head Supplies

Test Print Samples  
Before Storage

Printer 3  
Exhibit A 1

Stephen J. Singel  
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Tendar, BSF  
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30 November 2005  
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Exhibit A 2

Printer 3  
Exhibit B 2

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HP Inkjet Printers with Integrated Print Head Supplies

Test Print Samples
Before Storage
Printer 3
Exhibit A 3

Test Print Samples
After 6 Weeks of Storage
Printer 3
Exhibit B 3

Lorem
Praesent pellentesque ante. Sed interdum metus non arcu. Donec nec risus nec elit lao-meet sollicitudin.

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Praesent pellentesque ante. Sed interdum metus non arcu. Donec nec risus nec elit lao-meet sollicitudin.

Printer 3
Exhibit A 4

Printer 3
Exhibit B 4
Inkjet Printer Long-Term Storage Test
HP Inkjet Printers with Integrated Print Head Supplies

Test Print Samples
Before Storage
Printer 3
Exhibit A 5

Test Print Samples
After 6 Weeks of Storage
Printer 3
Exhibit B 5
Supporting Test Data

Test Environment

BLI's dedicated test network, consisting of Windows 2003 and Microsoft Exchange 2003 servers, Windows XP and 7 Professional workstations, 10BaseT/100BaseTX network switches and CAT5 cabling.

Thermotron WP-446 Walk-in Environmental Chamber

Lab Test Environment

Print testing was conducted in BLI's test facility located at 20 Railroad Avenue, Hackensack, NJ, and under ambient conditions of 20°C to 22°C and 45% RH (+/-10%), with daily conditions monitored by an Extech RH520 temperature/humidity digital recorder and Honeywell Model 61 Seven-Day Temperature/Humidity Chart Recorder. During the six-week period of non-use, all printers were stored in a Thermatron WP-446 Walk-in Environmental Chamber with conditions set at 37°C/20%RH.

Compatible Printers

The following cartridge used in testing is compatible with these printers and the results from testing will also apply to these models.

<table>
<thead>
<tr>
<th>HP 678 ink</th>
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<tbody>
<tr>
<td>HP Deskjet Ink Advantage 1515 All-in-One Printer</td>
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<td>HP Deskjet Ink Advantage 2515 All-in-One Printer</td>
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