

For immediate release For further information, contact: Jennifer Piano <press@spencer.com> 1-631-367-6655; Fax: 1-631-367-2878

Reliability Assessment – Industrial Print Cartridges A Spencerlab White Paper

Melville, NY – 2 October 2012 — The SpencerLAB DIGITAL COLOR LABORATORY has just released a white paper summarizing the assessment of the Reliability of HP TIJ 1.0 (Thermal InkJet) print cartridges. The white paper is available for free download at the spencerLAB web site http://www. spencerlab.com/ under the Reports tab.

TIJ 1.0 cartridges are used throughout the world in critical banking, financial transaction (ATM), and other applications where reliability is critical. Through extreme temperatures and heavy duty cycles, cartridges are expected to print legibly and consistently. SpencerLAB performed a detailed reliability assessment of such cartridges, commissioned by HP. To truly understand and determine the elements that contribute to the cartridge reliability, spencerLAB conducted comprehensive research on the cartridge attributes, from engineering design through to the ultimate physical packaging of the consumer product, as well as performing cartridge testing in its lab. To carry out

this extensive investigation, spencerLAB visited HP Singapore and Malaysian manufacturing facilities, *"Our comprehensive assessment* observing production firsthand, with unrestricted access to HP processes, design and manufacturing engineers, as well as management.

Catherine Fiasconaro, Vice President of Operations and Director of SpencerLAB, said "Our comprehensive assessment examined the myriad of elements contributing to ink cartridge reliability. The resultant white paper provides a summary of key aspects which we felt most relevant to the user community - those who require cartridge reliability day in and day out. Lower initial cost does not always equate to overall higher value, as our testing verified."

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- Catherine Fiasconaro, VP Operations & Director of SpencerLAB

Along with expert design and manufacturing procedures, packaging plays a key role in cartridge print quality and reliability. Proper packaging aids in preventing ink leakage and evaporation, air bubble infiltration, contact corrosion, and damage while in transit or storage - which can span extreme temperatures and duration. SpencerLAB's accelerated storage testing, of both HP and non-HP TIJ 1.0 cartridges simulated a 2¹/₂-year shelf life; and while the non-HP cartridges appear to have similar physical packaging, they experienced 40% failure rates (comprised of ink leakage, excessive ink evaporation, early failure, and even printheads falling off), whereas the HP cartridges had zero problems.

Read the full white paper, available for free download: http://www.spencerlab.com/.

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ABOUT *spencerLAB* DIGITAL COLOR LABORATORY

Through more than two decades of industry service, SPENCER & ASSOCIATES PUBLISHING, LTD. has earned a premier reputation for its expertise in evaluating digital color imaging and printing. Its independent test division, the *SpencerLAB* DIGITAL COLOR LABORATORY, is internationally recognized as a leader in unbiased, third-party research and comparative analysis of digital imaging and printing system performance; the laboratory strictly adheres to the integrity of its methodology, even in commissioned studies. *SpencerLAB* provides leadership in quantitative and qualitative comparisons, benchmarking key performance metrics of digital printing systems in all technology classes, from desktop printers to digital color presses – providing research and evaluation services, compliance certifications, benchmark test software/hardware, and focus group management.

Leading vendors and firms for whom printing is mission-critical rely upon *spencerLAB* to provide strategic support and benchmarking of Print Quality, Ink/Toner Yield and Cost-per-Print, Throughput, Availability, Reliability and Usability for ink- and toner-based as well as other printing technologies. Corporate users rely upon *spencerLAB* for guidance in print system acquisition and usage optimization.

For more information, please visit www.spencerlab.com.

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