



CUSTOM TEST  
Test Report Number  
T2587-001 Rev. 0

1100 LASER PRINTER CARTRIDGES  
Recycling System  
August 5, 2002

SCOPE: Evaluate Recycling System 1100 laser printer toner cartridge and compare to the OEM control cartridge (P/N C4092A).

TEST RESULTS AND OBSERVATIONS:

Packaging and carton contents:

Printed material on carton: None.

Carton condition/leakage: At the request from a representative of Recycling System the package performance test was not performed.

Carton vibration test: At the request from a representative of Recycling System the package performance test was not performed.

Carton drop test: At the request from a representative of Recycling System the package performance test was not performed.

Carton packaging contents/condition: None. Cartridge sealed in a foil bag.

Fuser wipers/wands and/or waste toner receptacles: Not applicable.

Loose debris or toner inside of the carton: No loose debris or toner was observed inside of the cartons.

Documentation: None.

Printed material on the outside of the cartridge: None.

Toner loading and/or waste toner-removal port: No loading or removal ports were observed on the cartridges.

Toner leakage test (upon removal from carton after the drop test): No significant toner leakage was observed.

Photoreceptor type: Both cartridges tested contained aftermarket photoreceptors.

Seal evaluation:

Seal type: Flexible plastic seal.

Ease of seal removal: Moderately difficult. There was no significant leakage when the seal was removed.

Page yield: (Based on test original containing 2,186 characters in Courier 12 pitch.)

OEM control cartridge:

Manufacturer's recommended contrast setting:	"3"
Full cartridge weight:	686.7 grams
Exhausted cartridge weight:	574.2 grams
Empty weight:	558.4 grams
Page yield:	2,750 pages
Total toner loaded:	124.3 grams (calculated)
Waste toner:	15.8 grams (calculated)
Toner usage:	22.1 pages per gram (calculated)

Page yield: (Based on test original containing 2,186 characters in Courier 12 pitch.)

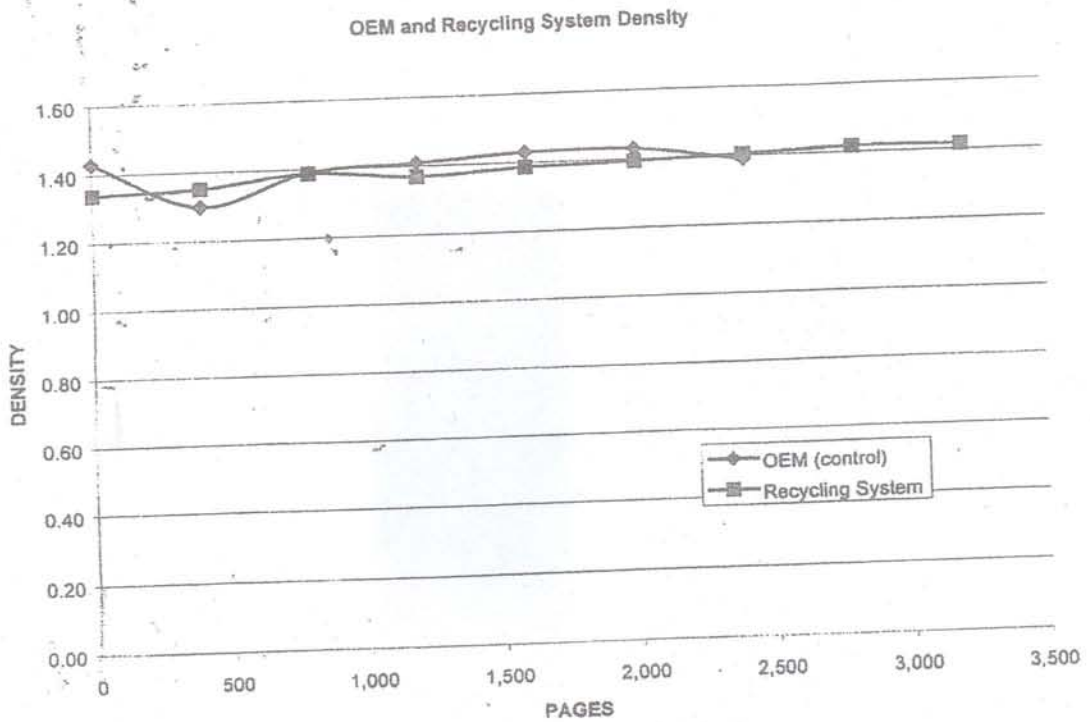
Recycling System cartridge:

Recommended contrast setting:	"3"
Average full cartridge weight:	714.2 grams
Average exhausted cartridge weight:	600.7 grams
Average empty weight:	574.6 grams
Average page yield:	3,238 pages
Average toner loaded:	139.6 grams (calculated)
Average waste toner:	26.1 grams (calculated)
Average toner usage:	23.2 pages per gram (calculated)

Reflection Density

	Recycling System	OEM
Average Density	1.39	1.40
Average High Density	1.42	1.43
Average Low Density	1.34	1.30

*NOTE: The density test data in the above table is based on a scale of 0 to 2.5, with 2.5 being as dark as would be possible under most circumstances.*



*NOTE: The plots in the graph each represent the average of four density readings (taken from four different locations on the page) at each specified interval.*

Image quality/print defects:

OEM control cartridge: Horizontal bands were observed in the halftone portion of the image quality target. Light areas were evident in the black-box portion of the graphics.

Recycling System cartridge: Horizontal bands were observed in the halftone portion of the image quality target. Light areas were evident in the black-box portion of the graphics.

Degradation of 40% halftone:

OEM control cartridge: Horizontal bands were present at the start of the test and became more pronounced as testing progressed. All of the halftones produced contained vertical light streaks running along the full length and width of the page; these light streaks became more pronounced as testing progressed.

Recycling System cartridge: Horizontal bands were present at the start of the test and became more pronounced as testing progressed. All of the halftones produced contained vertical light streaks running along the full length and width of the page; these light streaks became more pronounced as testing progressed.

Image permanence: Slight image separation occurred in the hard creasing test for image permanence with both cartridges.

Toner cartridge-related debris: There was no toner debris inside of the printer after the tests for either the OEM or Recycling System cartridges.

Condition of fuser wand: Not applicable.

Condition of fuser unit: No deleterious effects to the fuser unit were observed as a result of this test for either cartridge.

CONCLUSION: The page yield of the Recycling System cartridges exceeded the page yield of the OEM cartridge by an average of 488 pages in the tests. In addition, a comparison of the output of the OEM cartridge with that of the Recycling System cartridges indicated that there was no noticeable difference in the occurrence of print quality problems and/or print defects. Furthermore, the print density of the output produced by the Recycling System cartridges (1.39) was almost equal to that of the OEM cartridge (1.40). Consequently, based on the performance of the Recycling System cartridges in the tests, BLI feels that the Recycling System HP 1100 toner cartridge meets or exceeds the performance of the OEM cartridge. It should be noted that at the request of a representative from Recycling System the package performance evaluation was not performed.

Note: The Buyers Laboratory name and logo on this report certify that the cartridge has been tested by an independent office products testing laboratory, but does not certify the remanufacturing process. The samples tested by BLI were supplied by the remanufacturer/refiller. Therefore, BLI cannot guarantee that the components or procedures used in the remanufacturing of these cartridges are representative of production units. Use of this test report is limited to reproducing the report in its entirety. Excerpting material from this report, or altering the information in the report in any way, is strictly prohibited. Any use of BLI's name, initials or logo in any print or broadcast advertising, is strictly prohibited, unless all of the following three conditions are met: 1) the remanufactured cartridge is found to meet or exceed the performance of the OEM cartridge, 2) BLI reviews the content and form of such materials and provides approval in writing and 3) when accompanied by a statement indicating that the complete test report is available by contacting the cartridge remanufacturer and including the cartridge remanufacturer's address or telephone number. Violators of any of these restrictions will be prosecuted to the fullest extent of the law.