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Manchester Printer Cartridge Company Proves to be More than Just Reliable
NH MEP Helps Reliable Technologies Improve Facility Layout, Increase Production

Manchester, NH – Wayne Justason, the Vice President of Manufacturing at Reliable Technologies in Manchester is always looking for ways to make some cost-reducing changes at his company. For more than 14 years, Reliable has manufactured cartridges for printers and fax machines, and provided printer sales, services, and supplies. Justason recognized an opportunity to incorporate some positive modifications at Reliable to keep up with their growing production demands.

Justason was familiar with Lean Manufacturing, a technique using a simple, yet systematic approach in order to eliminate waste and reduce manufacturing costs, while increasing productivity and thought Lean could help the company streamline operations. He knew the New Hampshire Manufacturing Extension Partnership (NH MEP) is an expert in applying Lean at manufacturers and could also help a small company like his obtain a grant to help train employees, so he brought in Linda Ellis, a NH MEP project manager.

“Almost everyone on the manufacturing team participated in an initial Lean Principles training,” said Ellis. “The staff came back from the training sessions well motivated and ready to see how they could use what they learned and apply it to their own work environment.”

Ellis and her NH MEP team mainly focused on the assembly areas at Reliable, working with employees to improve the layout of the facility, in order to keep manufacturing at a comfortable and efficient pace. The first step was to implement Value Stream Mapping, a process that maps out the current manufacturing processes to determine where changes and improvements can be made and then a future state map is created which provides a roadmap for implementing the improvement ideas.

“Through these processes, the work flow was streamlined, and three work areas were combined into one work cell, reducing the time and distance of the production process. As a result, we

have been able to manufacture about 120 cartridges in 6 hours as opposed to the 80 we were making before. That's a 50 percent productivity increase," said Justason.

The next step was to rework the disassembly areas, where employees take used toner cartridges apart, run tests to determine what needs to be replaced and what can be used again, then they clean them up and make new ones. The disassembly part of production is still a work in progress, since the work done by the team is dictated by each individual cartridge. As the team at Reliable works to streamline the disassembly process, the NH MEP will give them support when needed.

"We are currently 50 percent of the way to completing our transformation to Lean, and we have experienced a 50 percent improvement in our daily production output with the same staff as we had before," said Justason. "The outcome we have experienced from the work we have done with the NH MEP has exceeded my expectations."

To help keep on track with continuous improvement and keep costs down, the NH MEP helped bring in a student from Southern New Hampshire University to help the Reliable team write work instructions for their day-to-day production. The student will train with the NH MEP and work with the Reliable staff over the next few months.

"This student will interview the Reliable team and document their production process, while gaining real world quality systems experience," said Ellis. "We wanted to help Reliable get this task done without the big cost. They are a great, hard-working company, and I think this student-worker relationship will work out very well."

The NHMEP is an affiliate of the National Institute of Standards and Technology (NIST) under the U.S. Department of Commerce. The national MEP system is a network of manufacturing extension centers that provide business and technical assistance to smaller manufacturers in all 50 states, the District of Columbia and Puerto Rico. Through MEP, manufacturers have access to more than 2,000 manufacturing and business "coaches" whose job is to help firms make

changes that lead to greater productivity, increased profits and enhanced global competitiveness.
For more information, please visit www.nhmep.org, or phone 1-800-MEP-4MFG.

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