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## GDX Automotive Plant Earns Reputation as a Lean Machine



By creating a work environment focused on lean manufacturing, GDX earns prestigious Shingo Prize, plus a slew of new business.

David Padgett slipped the thermal imaging camera off his shoulder and opened the electrical control panel for the extrusion lines at the GDX Automotive plant in New Haven. He was looking for temperature differences from previous images taken a month before of the same panel.

"A difference could indicate a load imbalance," said Padgett, "or maybe a loose connection . . . If something blows it could mean thousands of dollars in parts and lost

labor."

Padgett uses the thermal imaging camera to check everything from breaker boxes to motors, even the roof, where he once found a water leak. "With this, we can catch something before it fails," he said. The thermal imaging camera is part of the preventative maintenance that GDX practices and one way the company has implemented a lean manufacturing approach to business.

"It's all about eliminating waste in our work process," said Human Resources Manager Kevin Carpenter, noting that the New Haven plant makes the rubber seals for car doors and windows. GDX makes over 10 million parts a year for eight different customers and ships them to 18 different plants around the world, including Brazil, China, Canada and Mexico.

Over the last several years, GDX has made lean manufacturing a top priority. They've incorporated a number of initiatives toward that philosophy and have been rewarded with improved profitability and efficiency. Recently the company received an even bigger prize -- the Shingo Prize for Excellence in Manufacturing.

Named for Shigeo Shingo, a Japanese industrial engineer who distinguished himself as one of the world's leading experts in improving the manufacturing process, the prize is considered an assurance of world-class manufacturing standards. "In the auto industry, it's the benchmark of quality," said Carpenter. The Shingo Prize was established in 1988 by Utah State University to promote awareness of lean manufacturing concepts and recognize North American companies that achieve it, said Carpenter. To be considered for the Shingo Prize, companies have to apply. For GDX, this meant preparing a 100-page document outlining the many things they do on the floor to achieve lean manufacturing. A team of auditors then visit the plant to evaluate the real process. They also take into consideration the company's place in the community -- volunteer service, donations and safety record.

GDX applied for the Shingo Prize last year and was named a finalist -- still a tremendous honor. This year the company was pleased to learn it was a recipient. "We have a lot of new business this year as a result of the Shingo Prize," said Carpenter, noting clients see the award as an assurance of quality. "Previously we had just GM and Ford as customers. We've added Honda, Toyota and DaimlerChrysler as clients. And next year we'll be adding Nissan and BMW. "That diversity base helps guarantee plant security," said Carpenter.

### **Lean Initiatives**

About four years ago, GDX created a position it calls the Continuous Improvement Manager, a person whose focus is to do exactly what the title suggests -- continuously strive for eliminating the waste in the company's work process. That was just one step toward a new philosophy at GDX that centered around getting the plant's some 600 employees more involved in the overall process, giving them a voice in how the plant operates, creating a "shared leadership model."

GDX employees are grouped into teams according to the car part they work on. In addition to his or her job, each member of each team has a specialty to focus on, said Carpenter -- communications, safety, maintenance, quality . . . "It's not a supervisory position, but they are helping us run the business," said Carpenter. The concept of teams isn't new to GDX, but putting the teams to work toward lean manufacturing was. The reason wasn't only for the company's profitability and efficiency, but also for basic survival, said Carpenter. GDX's contracts with clients have built-in "give backs," he explained. This means that by contract GDX gets paid less each year for producing the same product.

"We can't make a part the same this year as we did last year," he said. "We have to do things better each year just to stay competitive, to stay in business, but it's also helping us to win more business." GDX received help in establishing its successful shared leadership model from **The Quality Coach!**<sup>®</sup>, a Washington company that serves as business coaches for clients.

Some of the initiatives GDX implemented to improve lean manufacturing include:

- \* Conducting team building training, where each department took off work for a week to learn how better to communicate and get along with each other.
- \* Holding "commonsense manufacturing events," where team members look at profitability and how they could improve their workflow.
- \* Establishing housekeeping standards known as the Five S's, as in sustain, shine, straighten . . . "Teams are to have everything labeled and in its place in their work area," said Carpenter. "Every week we go out and audit their areas. The team with the best score gets a banner that says they're the best."
- \* Creating an employee suggestion program that encourages and rewards employees for making suggestions on how the company could improve. Every department has its suggestion board and each team has goals for making suggestions.

"Those suggestions build a culture of continuous improvement," said Carpenter, noting last year the employees made over 8,000 suggestions in areas of safety, productivity and more. "We're not looking for the big things -- like someone suggested air-conditioning the whole plant -- but

the little things, like better signs. "Now instead of 50 people (in management) thinking of ways to improve, we have 600," said Carpenter.

### **Employees Are Happier**

It's been several years since GDX implemented its lean manufacturing initiatives and things are running smoothly, said Carpenter. But it wasn't always that way. "Getting people to understand and to get on board took time," he said. "Before we had the traditional hierarchy where a supervisor had to tell them everything and monitor them. It was a big change to have all the employees be part of the process, but surveys we've taken show people are happier with their jobs now." Not only are they happier, but they're more aggressive where work is concerned. When management recently involved the teams in planning the budget, the employees set goal levels for productivity and scrap higher than management, said Carpenter. "The key was that they came up with it themselves," he said. "The main key in this is trust. If you have that, you can do lots of things." Many of the employees said they like the team philosophy and the shared leadership model of assigning employees a specialty -- even if it does mean more work. "It gives us a piece of the responsibility," said Lisa Bates, communications specialist on the Dodge Ram team. "It involves everybody. "We actually came up with an added specialty role for our team -- morale specialist."

The added amount of work that comes from having a specialty depends on which area a person is assigned. It can range from as little as five minutes a day for a communications specialist to have a team meeting at the start of a shift, to a couple of hours for the safety specialist to complete paperwork and keep books up to date. Other employees said they liked that the new approach eliminated waste and improved proficiency. "Before our work environment was chaotic," said Sherry Counts, training and morale specialist for the GMX 001 rear door team. "Now we have one piece flow, but before we did large batch processing, where we produced parts until it was like a sea of black here. "Then our scrap was at 18 percent," said Counts. "Now it's less than 2 percent."

### **Shares Ideas**

Part of being a Shingo Prize recipient requires that GDX open its doors to other manufacturing companies working toward lean manufacturing, to serve as a benchmark for other companies. That's actually something the company has done for several years, said Carpenter. "Over the last two years, we've had lots of companies, local and from around the world, come through to benchmark and pick up ideas," he said, "Clemco, Esselte, Hodges Badge, Sporlan Valve, the hospital." In true Shingo fashion, GDX asks each person who tours the plant afterward to complete a survey on areas they could improve. "We're hungry for that feedback," said Stacy Hymer, Continuous Improvement Manager.

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