

REDUCING FINANCIAL LOSSES IN MAINTENANCE



By Bridget Bell

This is part one of a three-part article on the journey taken by one highway construction and pavement maintenance company to reduce its financial losses in its maintenance department.

Discovering an effective plan to reduce financial losses in a company is no easy task, but it was the task given to Joe Farone and Kevin Nichols of The Gorman Group, a highway construction and pavement maintenance company located in Upstate New York. In 2005, co-owners Mark Gorman and Tony Gorman approached Farone, CFO and VP; Nichols, VP of operations, along with two other managers with this assignment: reduce the \$1.3 million loss in The Gorman Group maintenance department.

Over the course of the next couple years, Farone and Nichols strived to meet their assigned goal. The company was losing money on equipment maintenance and repair and needed to discover a means to turn the situation around.

POTENTIAL SOLUTION

In 2008, Farone encountered a potential solution to The Gorman Group's problem. At an AGC/CFMA meeting in a session dedicated to *Equipment Best Practices*, Farone heard Brian Cooney, CFO of

Barriere, speak. Barriere is a construction company similar to The Gorman Group, and had originally encountered a deficit problem as well. In the session, Cooney spoke of *Total Process Reliability* or TPR, a maintenance improvement plan which enabled Barriere to reduce and eventually eliminate its maintenance deficit. Farone liked what he heard. If Barriere could go from a major loss in its shop, to breaking even, and eventually making money, he believed The Gorman Group could do the same.

Farone approached Cooney to find out more details about TPR. Cooney told Farone TPR had been introduced and implemented at Barriere by Preston Ingalls, who is now president and CEO of TBR Strategies, a Raleigh-based consulting firm specialized in maintenance and reliability. Farone returned to New York, enthusiastic about exploring TPR further.

In December 2008, Farone, Nichols, and two other managers, placed a call to Preston Ingalls. The call would become the first step in their TPR journey—a challenging journey that would eventually eliminate the \$1.3 million maintenance shop deficit. By the end of their 2-hour conversation, Ingalls delivered the good news: the Gorman Group's problems were not rare, and they were correctable. Ingalls recommended he come to New York for a maintenance assessment.

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PROPOSED RECOMMENDATIONS

Relieved and excited, The Gorman Group invited Ingalls to study its operation in January 2009. He spent a week with the firm, conducting interviews with employees, inspecting their shops, and evaluating the maintenance situation. At the end of the week, Ingalls proposed a list of recommendations.

"The nice thing about TPR is he [Ingalls] actually gave us a plan that spanned 14 months," Farone says.

During the initial maintenance assessment presentation, Farone asked Jennifer Angrisano to sit in. Angrisano, who at the time was a senior accountant focusing on equipment cost, had formed a great interest in *Total Process Reliability*. When Farone and Nichols took a trip to Barriere in order to see the TPR results firsthand, Angrisano came along. Farone, Nichols, and Angrisano met with Barriere's equipment manager, Ben Tucker, who explained where Barriere had started in 2000 and what they were doing today to improve maintenance reliability. Barriere had won the 2004 and 2009 Fleet Masters Award for best construction fleet in the country. After Ingalls's initial assessment and the benchmarking trip to Barriere, The Gorman Group decided to move forward with TBR Strategies' list of recommendations, and to begin implementing TPR.

PLAN SET IN MOTION

TPR, which was perfected by Ingalls, is a process that focuses on increasing the uptime of a firm's machines through proactive maintenance rather than reactive maintenance. The goal of TPR is to engage each member of an organization to take ownership of the equipment. This means operators all the way up to members of senior management are involved in the

Preventative Maintenance, whether it is through a leadership role or through identification of warning signs to prevent a failure of equipment.

Ingalls initial major recommendation for The Gorman Group was to consolidate the firm's three separate maintenance facilities into a centralized location, which Farone says "was a tough pill to swallow." But, the suggestion made sense. At the time, the three divisions were operating as separate entities with no standardization and limited sharing. A need existed for consistency, and so, in 2009, The Gorman Group built a new state-of-the-art facility in Amsterdam, New York.

CHALLENGES BEGIN

Ingalls also recommended The Gorman Group purchase a Computerized Maintenance Management System (CMMS) software program in order to manage costs, to pinpoint reoccurring problems, and to create a trackable maintenance history. Angrisano, who was initially a member of the TPR implementation team, was in charge of finding a CMMS that would meet The Gorman Group's needs. The first CMMS software was purchased in 2009, but a year later Angrisano decided it was not meeting the firm's needs. The software lacked a maintenance scheduling element, and still required more manual labor than Angrisano wanted. The ineffectiveness of the first CMMS system was one of several challenges The Gorman Group would face in its TPR journey. ■

This article will continue next issue with changes in personnel responsibilities and 2009 and 2010 accomplishments.

What does the 2004 and 2009 Fleet Masters Award winner have in common with the 2002 and 2004 North American Maintenance Award winners?



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NECESSARY CHANGES

Reducing the Financial Losses in Maintenance

By Bridget Bell

This is part two of a three-part article on the journey taken by one highway construction and pavement maintenance company to reduce its financial losses in its maintenance department.

With the new centralized maintenance facility, came the need for an equipment manager, as well as a preventative maintenance (PM) coordinator, and a planning and scheduling coordinator. From within the facility, “you need someone to pay attention,” says Joe Farone, CFO and VP, and so The Gorman Group promoted internal employees to these positions and then each received training on their responsibilities by TBR Strategies.

WEDDING OUT OLD IRON

The creation of a PM coordinator was particularly important, as the firm was spending too much money on unneeded equipment emergencies. The Gorman Group needed to focus on improving its fleet and changing the approach to fleet maintenance. The goal of preventive maintenance according to Ingalls, “is to minimize breakdowns and excessive depreciation,” or as Kevin Nichols, VP of operations, says to “fix it before you run to failure.” This is done through planned service and early detection of problems, which left unaddressed, could lead to equipment failure. “In its simplest form,” Ingalls explains, “preventive maintenance can be compared to the service schedule for an automobile or truck.” The process includes

activities such as lubrication, painting, testing, cleaning, adjusting, and minor component replacement aimed at extending the life of the equipment. With the creation of a PM coordinator and the other improvement efforts, the firm “went from a reactive situation to a proactive situation in terms of equipment and repair,” says Owner Tony Gorman.

Using an analysis instrument provided by Ingalls, The Gorman Group also realized that some machines in its fleet were what Farone calls “bad actors,” and the firm was spending too much money on “old iron.” The team decided to get rid of old equipment that wasn’t being utilized and to lease equipment when feasible. If a piece of equipment did not yield a return, it was sold. An Equipment Replacement Plan was developed with the goal of replacing vehicular stock within 5 years, production stock within 7 years, and specialty stock within 8 years. The fleet of equipment, Farone says, was old, with an average age of 13 years. The Gorman Group decided to strive for an average equipment age of 5 to 7 years. By replacing the “bad actors” with high-performing machines, The Gorman Group knew it would have less down time and the equipment would have a higher trade-in value. Ultimately, by the end of 2009, The Gorman Group purged 7 percent of its fleet.

Amongst all these changes in May 2009, employees in new positions traveled to California for a week-long, hands-on workshop called the TPR Coordinator Course. Ingalls recommended that Farone or Nichols participate in the training



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in order to stress the commitment of top management to the TPR process. Part of the team's training involved public speaking assignments designed to improve their ability to communicate in front of a group, which would come in handy back home when they implemented TPR training with the employees.

TRAINING IS KEY

Within the first phase of TPR, The Gorman Group educated all staff members on the maintenance process and created a TPR Steering Council and Implementation Team. Foremen and managers received over 48 hours of leadership training. All the training was a huge change for The Gorman Group. According to Farone, before working with Ingalls, the firm did not have a training budget. In reaction to that lack of training, The Gorman Group spent an impressive 2900 hours training employees in 2010—a number management hopes to increase this year. The increase in training, according to Tony Gorman, has been “a key cultural change.”

Within its first year of working with TPR, The Gorman Group was able to move from a \$1.3 million deficit to a \$200,000 profit for its equipment division, but not without substantial challenges. The deficit reversal was, as Tony Gorman says, “the low hanging fruit,” and the firm's journey to the goal of Best in Class continues.

THE PROCESS OF TPR

Before exploring the challenges and successes of The Gorman Group on its TPR journey, it is important to understand TPR. Ingalls admits that TPR can be a complex process. So, in order to reduce that complexity, implementation is approached in 5 stages.

Phase 1: Gap Analysis involves maintenance effectiveness and feedback. At this stage, a core group of TPR supporters is formed and an analysis of the firm's need for change is conducted. An examination of the costs and benefits of making said changes is also performed during Phase 1.

Phase 2: Support Network solidifies who within an organization will be the key champions and leaders for TPR through the creation of a Steering Council and Implementation Team.

Phase 3: Focus on planning and strategy development.

Phase 4: Revolves around education, training, and plan execution, and focuses on operation and equipment maintenance improvement.

Phase 5: Evaluation is ongoing throughout the TPR journey. Progress is continually assessed through a series of evaluations and audits.

While the employee resistance and “culture shock,” was a major obstacle

for The Gorman Group, there were also employees who were enthusiastic about the arrival of TPR. This enthusiasm, both Nichols and Farone stress, is important to drive the process. ■

The final installment of this article will appear in the next issue and focus on the bumps in the road and the overall impact to the company.



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OVERCOMING ROADBLOCKS

By Bridget Bell



This is the final installment of a three-part article on the journey taken by one highway construction and pavement maintenance company to reduce its financial losses in its maintenance department.

One major force behind The Gorman Group's TPR journey was, and still is today, Jennifer Angrisano. When The Gorman Group was first introduced to TPR, Angrisano worked as a senior accountant who focused on equipment cost. In reaction to the need for TPR leadership, Angrisano was promoted to TPR coordinator, and later promoted again to continuous improvement manager. Angrisano's first major TPR assignment was to purchase a computerized maintenance management system (CMMS). The Gorman Group had previously never used a CMMS, and therefore, had no means to track costs and reoccurring maintenance issues. Finding the right CMMS system to meet The Gorman Group's needs also posed another obstacle. Initially, in an attempt to cut costs, The Gorman Group chose a less expensive CMMS, but it simply did not deliver what the firm wanted. So, with Ingalls' guidance, The Gorman Group purchased a new, more effective CMMS. In response to this experience, Farone says, "spend the money up front and bite the bullet."

TRACKING MAINTENANCE COSTS

Angrisano is extremely pleased with the new CMMS system, which allows the firm to track maintenance cost within each

work order to build a parts history to begin predicting when equipment parts will need to be replaced. Another major plus of the CMMS system, according to Angrisano, is the elimination of "finger pointing." Prior to TPR, work orders were handwritten on pieces of paper with little means of accountability. With a strong CMMS, the foreman enters information directly into the system. "There can be no more he said, she said," Angrisano explains.

OPERATOR CARE PROGRAM

A vital part of TPR is proactive maintenance, which involves engaging operations managers into the process. An early disconnect between the operations managers and TPR also caused a "road bump" for The Gorman Group. To lower the occurrence of equipment failure, operations personnel are trained in ways to detect "warning signs" prior to a breakdown. However, if operators do not take ownership of the machines, this process will not be as effective. Under Ingalls' guidance, The Gorman Group created an Operator Care Program, which was rolled out in the spring. The OC program trains all crew members from the foreman to the operators and establishes the operator care expectations. It first began with a day-long training program for operations managers. According to Angrisano, The Gorman Group's Operator Care Team has developed cleaning, lubrication, and inspection standards for each type of equipment. Angrisano explains, "These standards list the tasks that are required to be performed on that piece of equipment daily and weekly. It sets the expectations."

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Another roadblock The Gorman Group encountered was its ambition to attempt too many changes simultaneously. For companies interested in the TPR process, Farone advises avoiding too many initiatives at once. "We bit off too much," he says. Gorman agrees. "Pick key issues rather than trying to solve all the problems at the same time."

CONTINUOUS IMPROVEMENT

Despite all of these challenges, The Gorman Group remains committed to TPR, and as a result, the firm has seen "enormous changes," says Angrisano. And while the firm reached its initial goal of reducing its \$1.3 million Equipment Division deficit, the new goal is to become Best in Class, and eventually World Class. In order to continue seeing effective results and in order to reach those long-term goals, Angrisano persistently champions for the process through following up and following through. Farone echoes that sentiment. "Inspect what you expect," he says.

That idea of follow through is what Angrisano's position as continuous improvement manager is all about. In order to create the much needed accountability that is crucial to TPR, each employee receives an Action Item List that he or she is responsible for. "We hold monthly meetings," Angrisano explains, "to ensure that action items are done, and if not, why?" The Gorman Group also stresses follow through by keeping TPR at the forefront of the employees' minds. There are TPR boards posted throughout the facilities, and a TPR news bulletin is published each month.

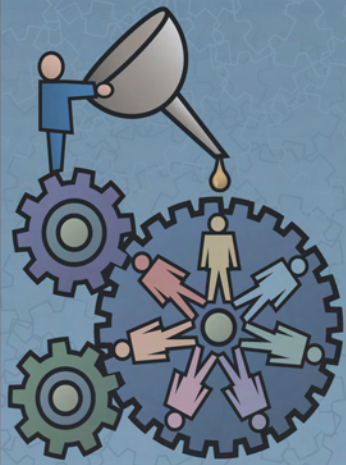
"When people come back to work in the season, we have refreshers to tell them about what is going on with TPR,"

Angrisano says. "And we tell them about what went wrong. We don't want to keep that a secret."

THE RESULTS

Brian Mead, Gorman's equipment manager, explained the numerous changes and benefits from TPR, "Since implementing TPR in our organization we have realized many benefits. We have consolidated all our shops into one central location allowing us to have all our talent in one area. It also helped greatly reduce the waste of triplication services, from outsourcing repairs to parts purchases that can occur with separate maintenance locations. We Installed a CMMS system that can track all of our assets from cradle to grave. This system assists us with our planning and scheduling needs along with all our preventive and corrective maintenance activities. It also is a great tool for developing budgets and generating reports on associated costs of our assets allowing us to focus on the bad actors. Most importantly, though, TPR helped us realize the need for training. Our equipment operators have now been taught proper ways to care or *CLAIRE* for their equipment. *CLAIRE* stands for Clean, Lubricate, Adjust, Inspect, Repair, and Eliminate. Our maintenance technicians are being trained to diagnose and perform repairs properly by attending service schools, in-house workshops through vendors and equipment manufacturers. This is going to continuously improve our talent level. The end result is that the equipment is cared for the same way whether it's on the road or in the shop."

As The Gorman Group enters into the third season of its TPR journey, Angrisano gives this final word of advice: "To whoever is going to do this process—keep fighting. It is definitely worth it. It really is." ■



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