



## BUILDING EQUIPMENT OWNERSHIP PAYS BIG FOR PIPELINE CONTRACTOR

By Preston Ingalls

When Tim James, equipment manager for Murrieta Development, invited Todd Close, the company's president, to attend the 2007 Construction Excellence Institute Conference, both hoped to learn ways to improve upon their existing equipment maintenance practices. Now, just over a year later, Murrieta has cut its fleet maintenance costs and its maintenance overtime in half.

Murrieta Development, a private, \$42-million business based in Temecula, California, is an underground wet utility pipeline contractor specializing in sewer, water, and storm-drain systems. Started as a two-man operation in 1981, the company has grown to 135 employees.

"For the first 15 years, our focus was on private residential construction," says Close. "In the last 18 months, we've expanded in the areas of commercial and public bids."

With 47 off-road and 52 on-road vehicles—including skip loaders, backhoes, dozers, loaders, excavators, crew trucks, and trucking transfers—fleet maintenance costs were increasing annually. "Over the last 6 years the company has quadrupled, but the equipment side wasn't keeping up with the times," says James.

Close and James invited TBR Strategies to conduct a maintenance effectiveness assessment (MEA) of their fleet asset management practices. The findings included a 46-percent emergency breakdown rate, and they showed 50 to 100 hours mean time between failures (MTBF) for backhoes.

In April 2007, at TBR Strategies' recommendation, Murrieta began to implement Total Process Reliability (TPR). Initially, it was challenging. "We tried to do everything 100 percent, 100 miles

per hour," says James. "We had to slow down and take more time to do it right."

### GETTING IT RIGHT

TPR introduced something the company needed. As part of the process, Murrieta established breakthrough teams to work on improvement projects. To provide guidance and direction, the leadership team was formed. This team generated improvement ideas. The team's ideas were passed to an implementation team to determine how to put the ideas into practice. Once processes were defined, the ideas were executed and refined in the field.

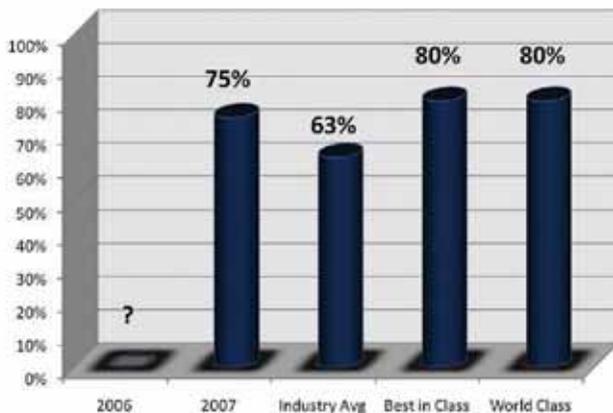
Equipment improvement teams were also developed to work on improving equipment. James, two mechanics, a planner and scheduler, two welder fabricators, and a field lube technician, as well as project managers, superintendents, operators, and laborers, all played major roles on the teams.

Since TPR, Close has seen a significant shift in attitude toward the company's equipment. "We started seeing results in the numbers after 6 months, but we saw results in attitude and company feel right away," James says.

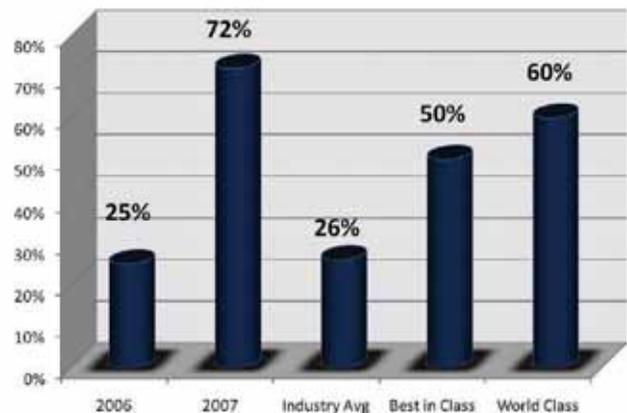
The company offers TPR education through slide shows, operator training, and weekend classes for those interested in learning more about the direction of the maintenance operation. Equipment ownership is reinforced by a reward and recognition system.

Now, operators are encouraged to work with equipment improvement teams to tear down and rebuild certain machines to learn how they function. Once rebuilt, the equipment is painted with the operator's name, and the keys to the machine are

Fleet Planned Maintenance



Fleet PM & PdM Man Hours



ABOUT the AUTHOR



Preston Ingalls is the president and chief executive officer (CEO) of TBR Strategies, LLC, a Raleigh, North Carolina-based maintenance consulting firm. He has more than 35 years of experience in maintenance and engineering. For more information, please e-mail [pingalls@tbr-strategies.com](mailto:pingalls@tbr-strategies.com) or visit [www.tbr-strategies.com](http://www.tbr-strategies.com).

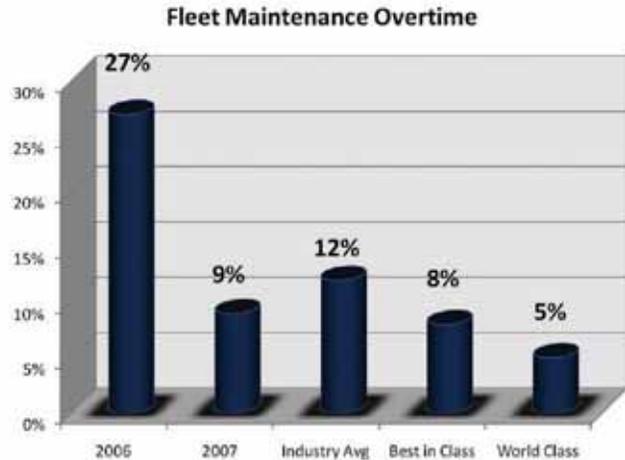
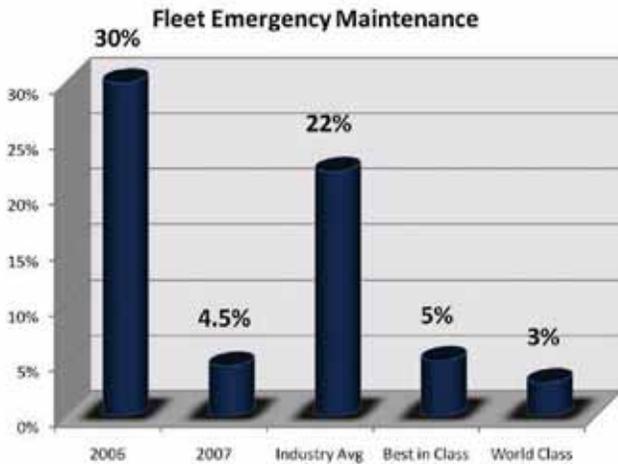
ceremoniously presented to him. To date, 11 machines have been through this process. The equipment team also conducts 3-, 6-, and 9-month inspections. Preventive maintenance excellence is rewarded with bronze, silver, and gold stickers that are applied to the equipment, and operators are given \$50 gift certificates to the place of their choice.

Murrieta's TPR implementation has met with surprisingly little resistance. "The ones we thought we'd have a problem with are the top people now," says James. "But you can't expect it to happen right away. You need to do it right the first time, be consistent, and don't let up. I've learned through this process that you eat an elephant one bite at a time."

### MEASURES OF SUCCESS

Murrieta's persistence is paying off. Emergency breakdown rates decreased to 3 to 4 percent within 8 months, and the backhoes that once had an MTBF of 50 to 100 hours now operate 300 to 400 hours before failure. Though they are spending more money with TPR, fleet maintenance cost as a percentage of revenue has dropped.

In light of the challenges faced by the construction and development industry in today's economy, cost containment is critical to company success. With its focus on preventive maintenance, team approach, leadership support, and dogged persistence, Murrieta Development is truly a TPR success story. ♦



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