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DC SERVICE & MAINTENANCE

an ounce of prevention…

It's Murphy's Law—your equipment's going to break down just when you're in the midst of processing your biggest customer's order. But it doesn't have to be that way.

AS ANY HOMEOWNER OR CAR OWNER WILL TELL YOU, EQUIPMENT BREAKdowns have joined death and taxes on the list of life's certainties. Hoping to forestall the inevitable, smart car owners get regular oil changes and smart homeowners schedule tune-ups for their furnaces or washing machines.

It's no different for America's distribution centers. Smart managers who want to keep their lift trucks lifting, conveyors conveying, and AS/RS systems storing and retrieving have progressive preventative maintenance (PM) programs in place for all of their equipment. These routine checkups can extend the life of equipment and help avert the chances of a catastrophic breakdown just when your biggest customer's order is being filled.

What many don't realize, however, is that the upkeep plan itself requires upkeep. It's important not to just set up a maintenance schedule and walk away. Managers should plan to audit the program's effectiveness on a regular basis—measuring performance against key metrics (see sidebar) and setting goals for improvement. And it goes without saying, these should not be vague goals like "minimizing breakdowns," but specific objectives such as reducing the amount of maintenance-related overtime paid by X percent or cutting parts inventories by Y percent.

One manager who has a solid grip on how effective his company's PM program has proven to be is Bryan Eccard, director of facility services for Limited Brands, parent company of national retail chains like Victoria's Secret, Express and The Limited. Ask Eccard what Limited Brands' PM program has accomplished, and he'll give you specifics: The company's equipment breakdown time has shrunk by 15 percent, he reports, and equipment spare parts inventory is down by a quarter of a million dollars. What's more, the equipment is lasting much longer. "We have some equipment that's been around for 18 years and is still running today," he says.

Achieving this level of performance was neither easy nor quick. Managers at Limited Brands have been fine-tuning the enterprisewide progressive preventative maintenance program since

1997, when the company consolidated all seven of its Columbus, Ohio-based DCs under Limited Logistics Services. Although the company already had a PM program in place at each of the DCs, management decided to standardize the procedures in order to take things to the next level.

The first step was consolidating computer systems: "We had various versions of MP2 by Data Stream and we had to come up with one program that would help us develop one standardized set of procedures," says Eccard. As part of that effort, managers examined the PM practices in use at the different facilities and distilled them into a set of best practices for use across the enterprise.

Once data on all of the material handling equipment were entered into the system, Eccard and his crew wrote step-by-step instructions for maintaining each piece of equipment, including a list of parts and tools needed for each. "This process gave us a way to track the costs of materials for all of our equipment," explains Eccard. "Then we tackled the process of determining the number of FTE (full-time employee) hours required to maintain each piece of equipment. Combined, those numbers gave us the true costs of equipment and labor." Limited then established a baseline for budgeting time for maintenance as well as for labor and parts.

With this solid set of baseline information, Limited Brands is able to plan the work a month in advance. This allows the company to schedule the right number of people at the right time to keep each piece of equipment in working order. Work is carried out in order of importance—the equipment that would have the biggest impact on operations if it broke down is tended to first, and then on down the line.

Making a case

Not all preventative maintenance programs succeed as spectacularly as Limited Brands' program has, of course. Eccard believes that a big part of the success can be traced to corporate support for the program. "Our management is behind this program 110 percent," he says.

That's important, says Bruce Tompkins, principal at Tompkins Associates. "The commitment to a preventative maintenance program must come from the top because often, you're going to have to get mindsets to change," he says. "It's important to have the whole organization believe in this and understand that it's your best shot for preventing failure down the road."

For those who are forced to take their case to management in order to get funding for a PM program, the best course is to show them the numbers. "Look at your historical data to see how often equipment is down and how often you get customer complaints—figure out the cost of downtime," says Kate Vitasek, partner at the Bellevue, Wash.-based consultant Supply Chain Visions.

Yet even full management support is no guarantee of success. Far too many companies end up disappointed by the mediocre results they get. This happens for a variety of reasons. Some companies lose sight of their goals; others get overwhelmed by the size of the task. What follows are some tips for avoiding some common pitfalls:

- *Set priorities.* It's important to prioritize where a PM program can have the greatest impact. "Too often, companies make the mistake of going out and trying to do it all at once," says Tompkins. "You have to start with the equipment that has the biggest impact on your operations."
- *Develop a schedule.* Consider how often you need to conduct maintenance, who will need to conduct it, and exactly what needs to be done to each piece of equipment. You can make up the schedule manually, but software like that used by Limited Brands can make the job much easier.

As for when to schedule maintenance, look for the slowest shift or off-shift, if there is one. Some companies perform maintenance in small doses on a daily basis; others shut the whole facility down at specified intervals to do a complete overhaul. "The beauty of planning," says Vitasek, "is that you can schedule maintenance to avoid busy times. The interruption of a breakdown is much worse."

- *Keep up with the paperwork.* "You have to track what you're doing and make sure you don't let maintenance slide," says Dick Bonsall, manager at Sedlak Management Consultants in Richfield, Ohio.
- *Set goals for continuous improvement.* "Your plan needs to be subjected to an audit, either by a third party or by a good internal group," says Vitasek. "People can easily get into the habit of treating maintenance as an afterthought without goals for improvement." Says Eccard: "You need to measure your system; otherwise it's not worth the effort. We set new goals each year to ensure continuous improvement." □

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the metrics of maintenance

You can't audit a preventative maintenance program without a set of metrics to measure performance against. But what should you measure? Kate Vitasek and Mike McHale, partners at Supply Chain Visions in Bellevue, Wash., recommend the following:

- *Availability.* Is the equipment available when it's supposed to be?
- *Efficiency.* Is the equipment performing at the expected speed/throughput?
- *Quality/reliability.* Is the equipment producing/doing the right things?
- *Inventory optimization.* Are your inventory projections accurate? To find out, measure the percentage of inventory/parts on hand when needed.
- *Maintenance department productivity.* Are there enough people assigned to maintenance tasks? Too few? Too many? Measure the percentage of maintenance work planned and the percentage of overtime labor required for the maintenance department.