



Implementing Effective Preventative Maintenance Programs

By Michael McLin

It's no mystery that a properly maintained piece of equipment will be more reliable and will last longer than those that are run to failure. It is a mystery however why so many equipment-intensive contractors struggle to implement an effective preventative maintenance program. Is it the lack of a well-defined program? Is there complacency in the field to execute the required inspections? Is it a training issue? Does the organization lack the proper metrics to track the efficacy of the program? In this article we will unpack many of these issues to discuss best practices and how to eliminate excuses. Your equipment fleet is likely your most important asset and it needs to be treated as such.

First and foremost, an effective preventative maintenance program needs to be well-designed. Some elements of a well-defined program are as follows:

- *Proper Maintenance Intervals* – Servicing equipment should take place per the manufacturer's recommendations or as often as a fluid analysis program will reveal. Not all companies can afford to have a fluid analysis program so they must rely on the manufacturer's recommendations. Skipping or deferring required preventative maintenance should not be allowed.
- *Automation* – Most mainstream enterprise resource planning (ERP) or equipment management programs allow you to build out a preventative maintenance schedule by equipment category and then update the meter reading or odometers to each specific piece of equipment. These maintenance schedules can then be initialized and the system will generate work orders for each piece of equipment that requires preventative maintenance. The automation simplifies the process so the shop and mechanics teams can focus on the exceptions and emergency repairs instead of trying to manually track the preventative maintenance needs.
- *Work Orders* – The work orders produced by the system should be used. Any purchases made for the machine should be tracked to the work order, and it should be tied to the machine so an accurate profit and loss statement can be produced. The mechanic's time should also be tied to the work order.
- *Accountability/Responsibility* – The roles and responsibilities in the preventative maintenance program should be clearly defined. For example, the shop foreman initiates the work orders and assigns mechanics. Mechanics perform the repair and record time and parts to the machine. Field operators are required to do daily inspections to ensure proper operation, lack of leaks, and perform basic greasing and cleaning.

One of the most prevalent issues is if the operators are “pencil whipping” the inspections which points to a lack of engagement. The inspections should be spot-checked with a mechanic or knowledgeable operator and they should perform a peer review to ensure that the inspections are being done on a timely, accurate, and complete basis. Using spot rewards and reinforcing the importance of the equipment in the organizational culture can be very helpful. Fundamentally, people behave how they get paid. Have you aligned your incentives to ensure preventative maintenance is a priority?

Training can also be a common issue if the organization's fleet consists of many different manufacturers and varying models. It is important to understand the differences among the various brands and models, and to train operators to these nuances. One recommendation is to build out an operator preventative maintenance inspection book that has the proper inspection points noted for each type and model. This allows the operator to ensure that a complete inspection has been done and is properly reported on all inspection forms.

Lastly, the proper metrics need to be established and tracked to evaluate the performance of the shop and the preventative maintenance program. The recommended metrics to evaluate this are:

- Availability
- Down Time
- Reliability

The field should be evaluated on:

- Deployment
- Utilization
- Abuse

Using these metrics levels the playing field and stops the finger-pointing. Conflicts can be dispelled and employees can have real conversations based on actual data.

In conclusion, an effective preventative maintenance program is a must-have for any equipment intensive contractor. Follow the guidelines in this article and expect to see improved results.

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