

The Fundamentals: How to Begin Maintenance Scheduling

Written by Raymond L. Atkins, CPMM, CMRP Contributing Editor
Monday, 01 September 2008 00:00

Many maintenance efforts have come up short due to ineffective scheduling.

Imagine that you are planning a trip. You select a destination and decide upon the route to take. You tune up the car, rotate the tires and send the dog over to stay at your sister's. You figure your expenses, develop a travel budget and withdraw money from the bank. You ask your neighbor to keep an eye on your house and notify the post office to hold your mail. In other words, you plan your trip to the last detail. Because of this attention and preparation, you are expecting a trouble-free vacation. Not so fast!

If you don't take the next logical step—and properly schedule the trip—you probably won't arrive at your destination in a timely and efficient manner. In fact, you might not even get there at all! Most of us know that if we want to have a pleasant and successful journey, we must first decide who else is going with us, who will be driving, when the trip will start and how long it should take. Alas, even the best-planned trip in the world can go awry if it is poorly scheduled.



Many maintenance organizations find themselves in the same situation as many disappointed vacationers. They are planning their work to some extent, but they are not reaping the full benefit of planned maintenance because they are neglecting scheduling, which is one of the most important functions of control available to maintenance managers. It doesn't matter how well a job is planned if it is assigned to people who do NOT have the necessary skills to complete the work...or if the maintenance team is sent out to perform maintenance or repairs on a machine that is slated to run product that day...or if a crane is required to complete the task and one has not been scheduled.

The Fundamentals: How to Begin Maintenance Scheduling

Written by Raymond L. Atkins, CPMM, CMRP Contributing Editor
Monday, 01 September 2008 00:00

Uncontested facts

If you are going to succeed as a maintenance manager, you must plan your work—that is an uncontested fact. Furthermore, if you are going to succeed at planning, you must properly schedule that which you have planned. Planning and scheduling are actually two sides of the same coin. It is not possible to do either properly without taking the other into account.

In a sluggish economy, upper management may be hesitant to approve the additional expense associated with adding positions. The answer to that argument is elementary, but it seems that it must be restated again and again—usually every time the economy takes a downward turn. Positions such as planner, scheduler, maintenance clerk and reliability engineer pay for themselves in very short order. As such, they are an investment, not an expense. It isn't a case of stating that a maintenance department really ought to have these positions staffed. Rather, it is an often documented fact that no maintenance organization can be successful without people filling these roles.

When you schedule work, you ensure that the right people are performing the correct tasks at the proper time in the most expeditious manner. That sounds simple, but it is often the obvious truths that tend to evade us. Once you have received the green light, there are some factors that must be kept in mind as you go about the business of scheduling, particularly if you are new to the task.

A good candidate for the scheduler position will be a person with excellent organizational skills who can envision the big picture. He or she should be familiar with the manufacturing process, but the candidate does not necessarily have to come from the maintenance organization.

Each millwright, multicraft, electrician or other maintenance professional should be scheduled an amount of work equal to 110% of his/her paid time. Thus, if your maintenance personnel work a 40-hour week, they should be scheduled 44 hours of work. It is human nature to tend to slack off once it appears an assigned task will be completed in the allotted time. If, however, there's always one more job in the queue, you may avoid this loss of efficiency late in the day. Moreover, if the jobs go exceptionally well on a given day, or if the planning times were pessimistic, the maintenance professional will not be faced with having to kill time because there are no more jobs ready to assign.

The Fundamentals: How to Begin Maintenance Scheduling

Written by Raymond L. Atkins, CPMM, CMRP Contributing Editor
Monday, 01 September 2008 00:00

Work should be scheduled at least a week in advance from a planned backlog no smaller than the number of man-hours available in your full crew during a -to-six week period. In addition, daily adjustments to the schedule will be required as unfinished work is turned back in and newly-discovered issues are written up.

Work should be scheduled from most important (highest priority) to least important. This means that PMs and safety-related work orders take precedence work and must be done first. Then, if time runs out later in the day, the jobs that are left for rescheduling are of a lower criticality.

The cardinal rule of scheduling is that PMs always must be performed before corrective work is commenced. This sounds like an easy rule to follow, but you will be often you are tempted to break it when a previously-undiscovered maintenance issue crops up. Just remember that more than one good maintenance effort has been brought to its knees by not adhering to the PM schedule. A conscientious and well-meaning millwright will encounter a situation that seems to require immediate attention, so the PM he has been assigned will be postponed to allow time for the corrective work to be performed. Then, because the PM was not performed when it was scheduled, another situation is encountered at the next PM interval that again seems to require immediate attention, thus forcing the postponement or cancellation of another PM. Before long, no PMs are being performed because the machine seems to be in a constant failure mode. And, as long as no PMs are performed, the machine will continue to fail. It is a classic case of cause-and-effect.

All work must be scheduled. This means that the correction of any potential mechanical failures that are discovered must be worked into the schedule. It is the scheduler's responsibility to see that the time for this unexpected work is secured by postponing other, less-important corrective work.

All planned and ready job packets should be filed according to estimated completion time. Thus, the scheduler will have a backlog of one-hour jobs, two-hour jobs, jobs by estimated time allows the scheduler to see at a glance if a particular packet will fit into a millwright's schedule.

When the schedule isn't met, there is a reason—and it is the scheduler's responsibility to determine the cause. As an example, suppose a job was expected to take two hours apiece to complete, but by the time the work was finished, those two millwrights each had four hours on the project, and a third helper had been brought in for the last hour. Consequently, a job that had been estimated at six man-hours came in at nine—adversely affecting the work schedules

The Fundamentals: How to Begin Maintenance Scheduling

Written by Raymond L. Atkins, CPMM, CMRP Contributing Editor
Monday, 01 September 2008 00:00

of three separate individuals. A variety of factors that could explain the time overage are bad time estimates, an incomplete job plan, employee attitude and motivation, wrong parts, undiscovered maintenance issues, inadequate training or improper scheduling of personnel or machinery. Thus, if the scheduler does not determine the cause of the time overage and address or at least make note of it, the job could be 50% over budget the next time it is performed as well.

There are many methodologies that may be employed when it comes down to the actual task of scheduling an individual's workday. Most of the better CMMS programs have scheduling functions. If you are lucky enough to have access to one of these, for you the job is already half done. Another favorite and time-honored method is the load board, which is a large dry-erase or bulletin board on the wall that allows the scheduler to schedule for and keep track of the entire maintenance crew for a given period of time (an example of a load board can be found at <http://www.magnatag.com/page/MF/board/maintenance-schedule-board.asp>)

) Other methods to physically segregate jobs include hanging files, bins, or just piles of work packets arranged by day and employee name. The important thing is not how you separate and schedule the work. The importance and the payoff derive from the fact that you are scheduling your assets for maximum efficiency. Work should be scheduled by the day. Thus, if an individual works a five-day, 40-hour week, he or she will have five separate daily assignments of work packets, each totaling hours (remember the 110% rule).

Work must be prioritized daily. Accordingly, the first work order that the millwright executes on any given day will be the most critical or important job of the day. Generally, or a safety work order. The next work order that the millwright tackles will be the second-most critical of that day's work. This criticality ranking will continue until the millwright runs out of time or runs out of work.

Work that is not completed on a given day must be rescheduled for the following day, ideally with a higher priority so that the project is not likely to be continuously rescheduling is a permanent and unavoidable requirement of a successful maintenance organization, it is recommended that the scheduler work slightly different hours than the millwrights. The scheduler should either stay later than the maintenance workers or start earlier—so that there is time to reschedule the workloads on a daily basis according to unfinished jobs or newly-discovered maintenance issues. One advantage to staying a little later is that the scheduler can preview the following day's work with the millwrights so that those individuals can begin to think about the jobs they will be performing during their next work shifts.

Scheduling success

The Fundamentals: How to Begin Maintenance Scheduling

Written by Raymond L. Atkins, CPMM, CMRP Contributing Editor
Monday, 01 September 2008 00:00

For scheduling to be successful in your organization, it must become part of your maintenance culture. Your maintenance professionals must come to understand its function, its purpose and its importance. They must realize it is the company's expectation that the daily workload they have been given is to be done in the assigned order of priority—in a timely manner and correctly. This enculturation cannot occur if it appears that scheduling is only occurring when it is convenient for management. So, the scheduler cannot be pulled away from his or her duties for days or weeks at a time and assigned other tasks. Scheduling will fail under these conditions.

Remember, scheduling is actually asset control. It is the company deciding what work will be done by whom, when. What company can afford to neglect this important function? Ray Atkins, CPMM, CMRP, is a veteran maintenance professional with 14 years experience in the lumber industry. He is based in Rome, GA, where he spent the last five years as maintenance superintendent at Temple-Inland's Rome Lumber facility. He can be reached at raymondlatkins@aol.com or throughout his Web site, www.raymondlatkins.com

For more info, enter 185 at www.MT-freeinfo.com