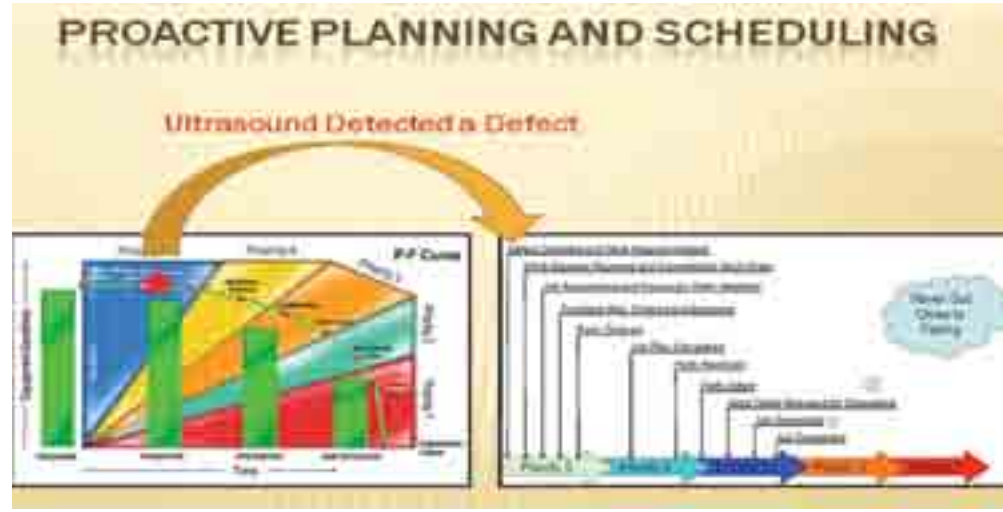


A Day in the Life of a Proactive Maintenance Planner



Notice that the planner has not had any involvement in work that is underway, and almost all of the planner's activities have been directed toward work that will leverage his/her time.



"Without Proactivity in this Process, Chaos Will Dominate"

Ricky Smith and Jerry Wilson

Where does proactive work come from?

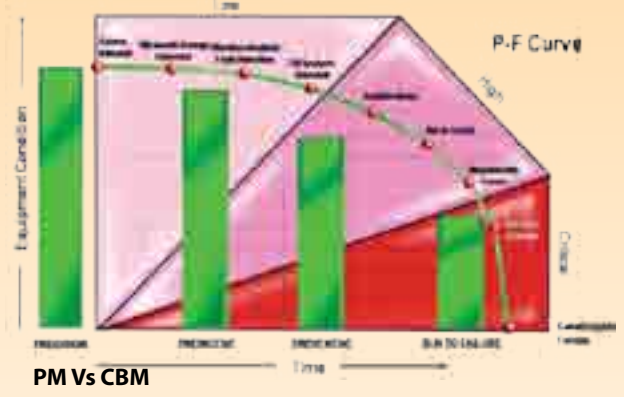
Proactive work orders or requests come from an effective preventive maintenance and condition monitoring program. Here is how it breaks out:

PM Execution: 15% of Work
Results from PM Execution: 15% of Work
(Typically identify Functional Failures)

A Functional Failure (High or Critical Defect Severity – very little, if any, time to plan and schedule proactive work) is the inability of an item (or the equipment containing it) to meet a specified performance standard, and is usually identified by an operator.

Condition Monitoring Execution: 15% of Work
Results from Condition Monitoring: 35% of Work
(Typically identify Potential Failures)

A Potential Failure (Low Defect Severity - time to plan and schedule proactive work) is an identifiable physical condition that indicates a functional failure is imminent and is usually identified by a maintenance technician using condition monitoring or quantitative prevention maintenance.



Prior to the Beginning of the Maintenance Day Shift:

The maintenance planner's day starts before the regular maintenance day shift in order to review the work orders that came in overnight. The planner will make an estimate of the man-hours, number of personnel, and craft types needed for any emergency work orders that must be started that day, then move those work orders directly to the maintenance crew, followed by a quick phone call to notify the maintenance supervisor responsible for that area of the plant. The planner will also code these jobs as emergency work orders so the level of this type work can be tracked over time. Well-disciplined proactive maintenance strategies (PM/CBM) coupled with effective planning and scheduling will make these emergency jobs fewer and fewer over time.

The planner should also use good planning and scheduling techniques on his/her own responsibilities. Once any emergency work has been estimated and sent to the maintenance crew, the maintenance planner will plug new work requests into his/her field inspection schedule. Some jobs may need to be worked into the current day's field inspection schedule in order to be put on the next day's maintenance schedule. Other new requests can be scheduled for field inspection and planning later in the week. It is important for a proactive planner to schedule all of his/her jobs (other than emergency work) for field inspections on a particular day to be most effective. The planner will also set the planning status for these new requests to "Planning," to show planning is underway.

Early Morning:

Field inspections: Armed with an inspection schedule, job inspection forms, and a camera, the planner will begin making his/her inspection of all of the job sites. The planner has established a logical route to minimize travel time and will make notes of the specific needs of the requests, any ancillary work that should be completed by the mechanics while at the job site, and all of the other applicable information required for a well-planned job. The planner will make note of the complexity and predictability of the various issues relative to a particular job in order to create an effective job plan suited to

the particular job. Also, the planner will pay particular attention to job issues where significant delays were identified in the wrench time study. Understanding and watching for complexity, predictability, and likely wrench time losses will enhance the likelihood of creating a job plan that will minimize delays during execution and result in a high-performing work force. More on these topics can be found in the 3rd edition of *Planning and Scheduling Made Simple*, by Smith and Wilson.

Immediately after completing field inspections is a good time to start ordering parts, or at least creating a list of parts to order, depending on the time available before meeting with the supervisor, scheduler, and maintenance coordinator. At this point in the process, it is not known when the job will actually be scheduled, so any parts not on site should be ordered on the same day they are identified as a need. In particular, identifying the parts that will require more than 24 hours to obtain will be important. These parts should also be ordered that day, and the status should be changed to "Waiting for Parts." Parts that are available from the storeroom should be put on reserve so they will be available for ordering the day before the job is scheduled for execution. The planner will also need to review the status of parts previously ordered and update the status to "Ready to Schedule" on the work requests where all parts

have arrived and storeroom parts are all on reserve. Some organizations go ahead and have storeroom parts delivered and placed in parts kit boxes for each job. This process can work fine, but when jobs get pushed to the future for execution, you can end up with a lot of parts kits to keep track of, or you can end up sending some parts back to the storeroom if jobs get canceled. If you have a firm parts reservation system, it will be best if the parts are put on reserve so they can't be brought out for a different job, yet if a job gets cancelled, they don't have to be returned. Less handling and better inventory accuracy provided by the reservation approach will reduce costs.

Working from the job inspection form, the planner will identify the various needs required by the jobs and will start documenting the job plan. First and foremost is the job summary page, which will contain the basic information that a fully qualified mechanic who is very familiar with this type of job would need. The job summary would provide reference numbers to the detailed information for the job that would follow in the job plan. This type of job plan format will allow those familiar with the task to quickly review the job using only the summary sheet. Anyone less familiar or skilled would have references on each item on the job summary sheet to the specific section of the job plan to access the specific information

All of the planner's free time should be spent refining and permanently documenting job plans.

they need. This provides maintenance personnel with quick access to the information they need without having to read through information they don't need. See more on this in *Planning and Scheduling Made Simple*, 3rd edition, by Smith and Wilson.

All of the planner's free time should be spent refining and permanently documenting job plans. As the planner's job plan database grows, he/she will have more plans that can be used on future jobs with only minor refinements. This will allow the planner to plan for a greater number of field maintenance personnel. As job plans are completed, the planner should update his/her backlog status to "Planning Complete." When all parts not available through stores have been received and the storeroom parts are on reserve, the status should be changed to "Ready to Schedule," assuming the job plan has been completed. The scheduler will initiate the delivery of storeroom parts on reserve the day before

the job is scheduled for execution.

Late Morning:

Now armed with the information gathered during the field inspection route, processing parts needs, and updated status reports on jobs that have received some or all of the parts ordered, the planner should meet with the maintenance supervisor, scheduler and coordinator. The planner should bring a copy of the updated planning backlog. This meeting should be short, 30 minutes or less, and its purpose is two-fold: 1) provide preliminary info to those who will be building/amending the maintenance schedule, and 2) ensure that the planner has scheduled the various jobs in his/her queue in a manner consistent with the needs of maintenance and production. The planner should share parts issue updates and the schedule for his/her planning activities. Any other major restraints, such as boom truck, crane needs, or other special

needs for particular jobs, will need to be communicated. This will provide maintenance and operations with important information that will allow them to start planning for when particular jobs will be ready for placement in the maintenance schedule. This meeting will also allow maintenance and operations to provide feedback to the planner on any changes that need to be made to the planning schedule. For example, the planner may have a particular job on schedule for planning to be complete and have "Ready to Schedule" status by next Tuesday, when, in fact, production needs it earlier or later.

Early Afternoon:

Immediately after lunch, the planner will continue writing job plans, researching technical issues for particular jobs, obtaining approval for jobs meeting specific criteria, referring other jobs to engineering for redesigns as applicable, and updating the status of the requests as appropriate.

Each day, the planner should designate a small amount of time for reviewing the feedback from mechanics on jobs recently completed. This is an important step for the planner to be able to improve the effectiveness of the plans he/she creates.

Late Afternoon:

An hour or so before the daily scheduling meeting, the planner should review his/her email account and phone messages to see if there have been any late changes to the general plan that has been forming for the next day's schedule. This information may have impact on the job summary sheets the planner takes to the scheduling meeting.

The daily scheduling meeting is not a meeting where the planning backlog will be reviewed and jobs will be selected for scheduling. Because the planner meticulously keeps the status of all jobs updated, and because of the late morning meeting between the planner, scheduler, maintenance coordinator, and the maintenance supervisor, the schedule has inherently been forming on its own. The daily scheduling meeting is where the weekly schedule will be either confirmed for the next day or slightly amended to respond to higher priority needs that presented themselves after the weekly schedule was made. Also, changes may be made to other days, depending on needs and planning status of the jobs. This meeting should take 30 minutes or less if each role has prepared in advance and communicated effectively with the other players as needed. The meeting's purpose is only to finalize what they have already been discussing and working toward since the previous day's daily planning meeting.

After the daily scheduling meeting, the scheduler will change status of any work orders that are to be added to the maintenance schedule and will order all parts that are on reserve in the storeroom. Following the daily planning meeting, the planner will amend the field inspection schedule and make any adjustments necessary to the overall planning schedule.

The planner will need to update any measures the organization tracks relative to planning, such as man-hours planned and emergency man-hours per day.

End of the Day:

The planner will make a quick review of the entire Planning Backlog:

- Is the job status up to date on all jobs?
- Is the field inspection schedule for the next day ready?
- Have all parts coming from off-site been ordered, and have parts available from the storeroom been placed on reserve for jobs that have been inspected?

Conclusions

Notice that the planner has not had any involvement in work that is underway, and almost all of the planner's activities have been directed toward work that will leverage his/her time. The only exception to this should be the small amount of time it took the planner to make a quick labor estimate on emergency work. A

planner that follows this type of rigor can be assured that he/she is leveraging the entire maintenance crew by his/her efforts and helping to propel the organization to a more proactive state where emergency work and unexpected failures are the exception. This job requires discipline and patience as the transition from reactive maintenance to proactive maintenance occurs.



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