

World-Class Maintenance – Part 1

By Drive, Inc.

WHY DO COMPAINIES FAIL AT MAINTENANCE?¹

1. The maintenance team doesn't know what good planning looks like.
2. The maintenance staff doesn't understand true wrench time.
3. The true definition of maintenance planning has never been written down or followed based on best known practices.
4. The difference between planning and scheduling is not understood.
5. Maintenance planners or planner/schedulers are not trained by a true maintenance planning and scheduling professional.
6. The company's leaders think it is all about the planner, so the rest of the team can still be reactive.
7. Materials management is operated in a highly reactive, non-focused state.
8. Preventive maintenance is conducted, and yet failures continue.
9. No focus or little focus on prevention or identification of failure modes.
10. The leadership team doesn't have the right key performance indicators for maintenance planning.

To ensure we have the right understanding when it comes to maintenance, we must change how we view it. In Drive's opinion, maintenance produces capacity; Maintenance is not a service organization. It is a capacity assurance organization. This understanding of maintenance will resonate better with the executives within the organization. It will also aid the maintenance group in gaining support for the significant investments needed to implement a proper maintenance strategy. With the proper maintenance strategy the maintenance group will be able to alert the operational team of pending problems before the operational team is aware of a problem thus ensuring capacity when the business needs it most.

RUN TO FAILURE

While there are many companies with a desire to become world-class in their maintenance practices, there are fewer that are willing to invest the human and financial capital to make it happen. Instead these companies push their assets to continue to produce at standard rates or even higher rates at times. When asked what maintenance strategy they have, these companies typically cannot articulate it. One of the many things we have come to know is that there is always a maintenance strategy at work. In the case where the company can't articulate that strategy, we assume their strategy is "run-to-failure."

Run-to-failure maintenance strategies are extremely detrimental to the journey to excellence for any company. In fact, many companies will not consider going on the journey due to the instability present within their operations. Machines typically fail when those machines are under extreme pressure to produce. Therefore, these companies insist on having a large amount of inventory to cover up these problems. These same failures occur at the most inopportune times for the company. Companies rarely admit that their strategy is run-to-failure, but it is

¹ "The Top 10 Reasons Why Maintenance Planning is Not Effective" by Ricky Smith 2013



the default strategy if the company hasn't intentionally done otherwise. In this and the next two newsletters, I will describe what it takes to move your company from a run-to-failure strategy to a world-class maintenance strategy.

STRATEGY

To determine the strategy at work within the company, we can look at what percentage of time is spent in each of the quadrants below:

	Machine Down	Machine Running/ Not Impacted
Reactive	Unplanned Downtime	Temp. Repair
Proactive	Scheduled (Planned) Downtime Intrusive Preventative Maintenance (replacements, repairs)	TPM Checks Non-Intrusive Preventative Maintenance (inspections, monitoring, PdM, etc.)

If the majority of our maintenance time is spent in the reactive-machine down quadrant, then we can assume a run-to-failure maintenance strategy. There may be times when this strategy is the most feasible. For example, if you have 100 light bulbs in a room, you wouldn't want to change them out prematurely. If a bulb burns out, it may be fine if there is a process in place to quickly change it while the process still runs. However, if the bulb in question is being used during a delicate surgery, this strategy is flawed and must be eliminated.

I am reminded of a conversation I had with a client in which we discussed allowing assets to run to failure, and this client gave the example of his truck. He said he knew the truck needed repairs, but he wasn't sure he wanted to invest the money to get the repair completed. I asked him what his primary purpose was for the truck. His reply was that he used it around his farm or for quick trips to the local store. In that case, I told him, if he is willing to take a short walk, it wouldn't be that big of a deal. However, if he was going to let his young daughter drive it across the state, he would certainly want to get it fixed. There is clearly a different sense of urgency in these two examples.

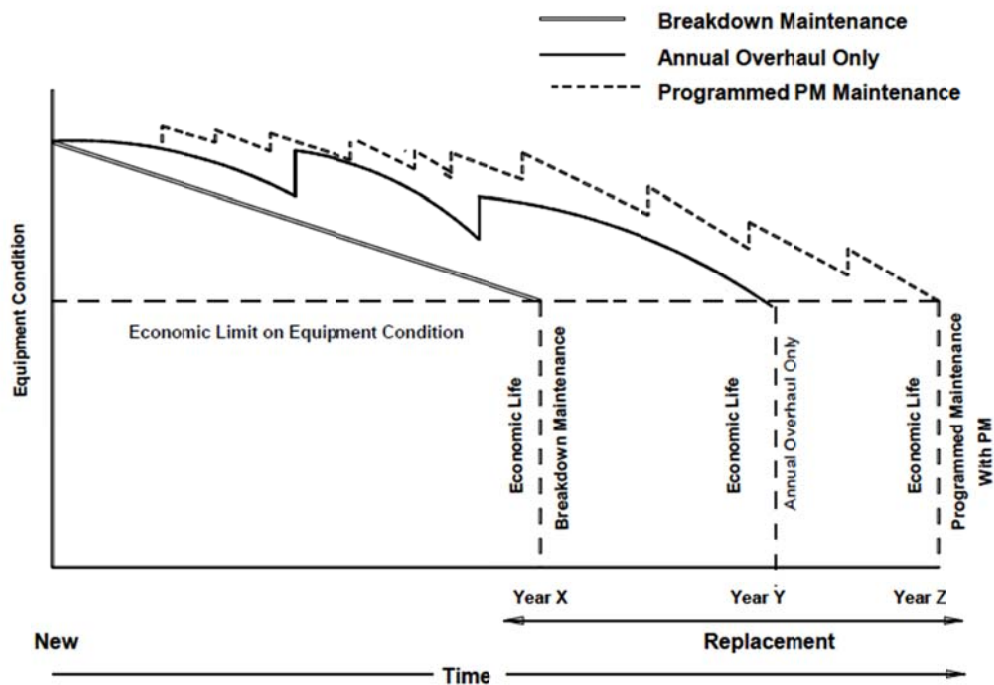
If the majority of our maintenance time is spent in the proactive-machine down quadrant, we can assume a preventative maintenance strategy. If the majority of our maintenance time is spent in the reactive-machine running / not impacted quadrant, we can assume a temporary repair strategy. Our only hope is these temporary repairs are corrected properly to prevent an increase in unplanned downtime as a result of the temporary repair failing. Finally, if the majority of our maintenance time is spent on proactive-machine running / not impacted quadrant, we can assume a predictive maintenance strategy.

We are constantly looking for ways to be more proactive with respect to our maintenance activities. There are many benefits to being proactive. The two biggest impacts to which most companies can relate are outlined below:



- Less stores inventory
 - o We don't have to store all possible spares, since we will be able to diagnose a failure and order the parts needed at the machine just in time for the planned repair.
- Higher total uptime
 - o We reduce the time needed for the repair through proper planning.
 - o We decide when the machine goes down versus the machine failing at an inopportune time.
 - o We create machines that need less maintenance.

The diagram below shows the impact on the economic limit of any asset depending on the type of maintenance strategy employed. It clearly demonstrates that having a robust total productive maintenance strategy extends the life of any asset. You can think of it this way, "You pay now, or you will certainly pay later." "Later" typically happens at the most inopportune time. If not in good working order, the asset will fail when under the most pressure to produce.



Source: Preventative and Predictive Maintenance Article - No Author Shown

What is your company's maintenance strategy? Do you run-to-failure, do you survive on temporary repairs, or do you invest in the proper maintenance staff and strategy to ensure you have the highest asset reliability possible?

This is a very high level introduction to maintenance. If you need more information, please contact Harold Chapman (harold.chapman@driveinc.com), our VP of Operations, at Drive, Inc. Stay tuned for next month's newsletter in which we will continue our discussion around maintenance strategies that work.

If your organization wants to improve your maintenance to become world-class, Drive can help. We have a team of proven experts on improving business performance, and we offer a 200% guarantee, so there is no risk. For a no-obligation introduction meeting, please contact Paul Eakle at paul.eakle@driveinc.com or 865-323-3491.

