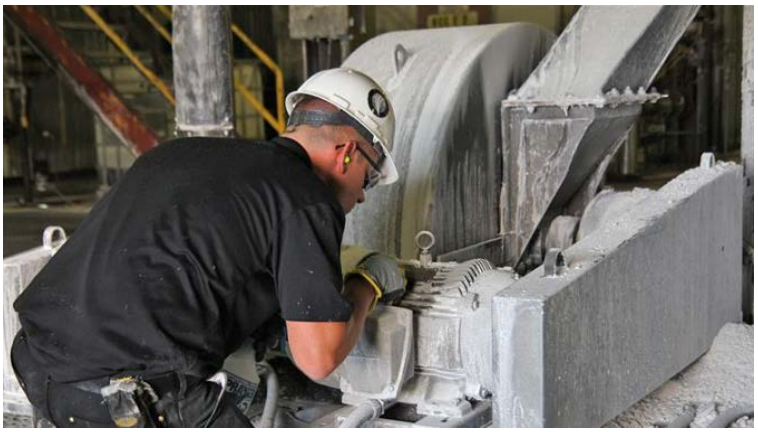
DAY IN THE LIFE OFA“PROACTIVE MAINTENANCE TECHNICIAN”

BY RICKY SMITH, CMRP

IN PARTNERSHIP WITH:
THE MAINTENANCE COMMUNITY BY UPKEEP

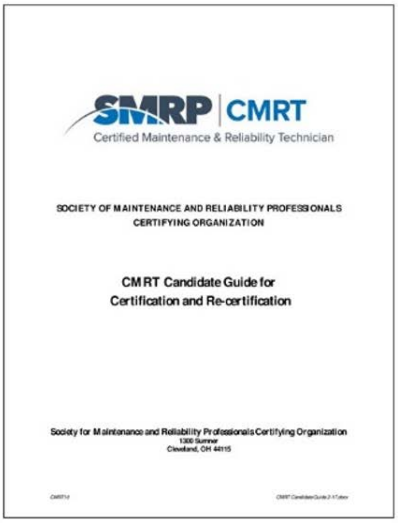
A proactive maintenance technician is a highly trained professional who is an expert in his or her skills area, has knowledge of other skills areas, including safety and production, and has a desire to learn more. This professional knows and can implement a failure-modes driven maintenance strategy for any piece of equipment. A proactive maintenance technician uses knowledge and experience to ensure the maintenance process is optimized by making constructive recommendations to management concerning improvement areas.

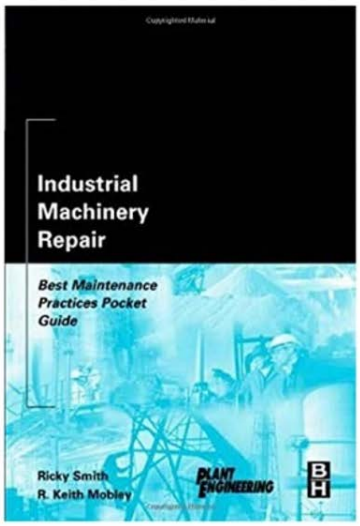
To ensure success, a proactive maintenance technician is proactive in everything he or she does. This person constantly reviews information to ensure procedures are accurate and issues are resolved quickly and does what is required to ensure the work is repeatable. Such a professional leads by example and takes responsibility for training new employees on how to be a proactive and effective maintenance technician.



LIFE AS A PROACTIVE MAINTENANCE TECH.

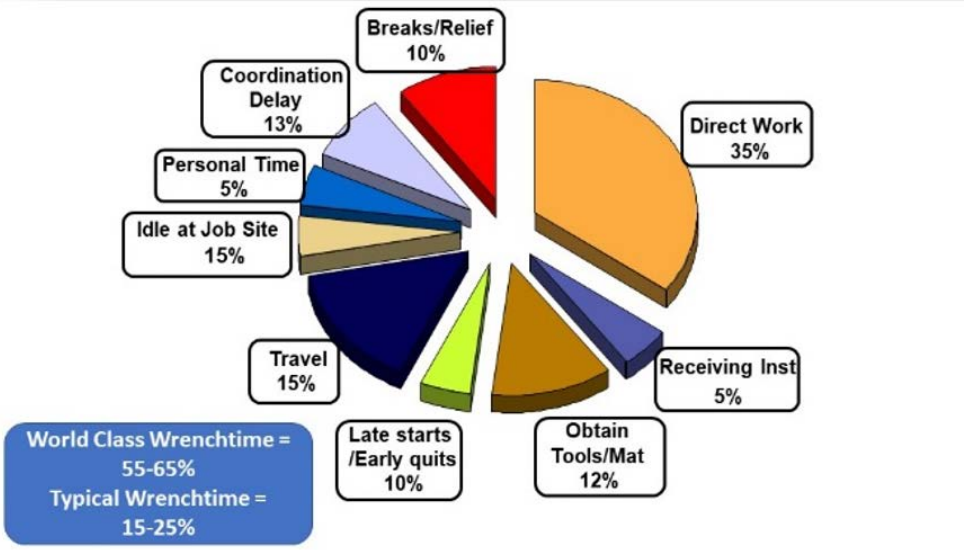
A successful proactive maintenance technician follows known best repair practices in all tasks and has a suitable reference book as part of his or her tool set, such as Industrial Machinery Repair: Best Maintenance Practices Pocket Guide from Elsevier Publishing. A proactive maintenance technician may be Certified Maintenance Reliability Technician (CMRT).



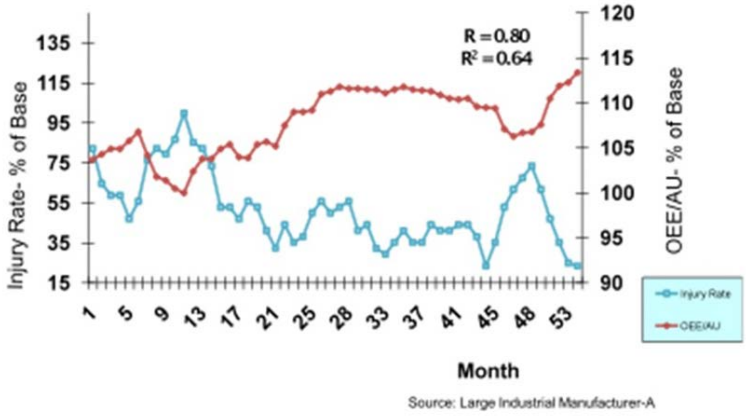


On a daily basis, a proactive maintenance technician begins work on time, ends work on time, takes the allotted break(s)without taking additional time and always makes the best use of time. He or she knows the applicable planned and scheduled work for the week and inspects the next day's tools and parts for the scheduled work.

Wrench time is high (55% and greater), as shown in the following diagram, because the maintenance technician identifies scheduling delays and makes recommendations for improvement.



Additionally, a proactive maintenance technician makes sure the work site is clean and safe when completing work. Work safety is always the #1 priority. We hear this all the time, but the facts actually show a proactive organization's safety and incident rate is extremely low. Think about the different in a proactive maintenance organization vs. a reactive one, a proactive maintenance organization incident/safety rate is low.



Think about our normal lives. If you are late for appointments or work often, what are the chances you may get in an accident or have an incident (speeding ticket)? It is much higher and so the same goes for maintenance teams.

A reactive organization in maintenance may hear these statements often:

- How much longer is it going to take to get the equipment up because of a breakdown? (I have heard this many times as a tech, supervisor, and as a maintenance manager.)
- How much longer before you finish the PM, etc.?
- Where are the parts?
- Why did this breakdown occur?

Perhaps most importantly, a proactive maintenance technician is always proud of the work he or she conducts or influences. No pat on the back is required, just the personal satisfaction in knowing that the job was completed successfully.

WHAT DOES A TYPICAL DAY LOOK LIKE FOR A PROACTIVE MAINTENANCE TECHNICIAN?

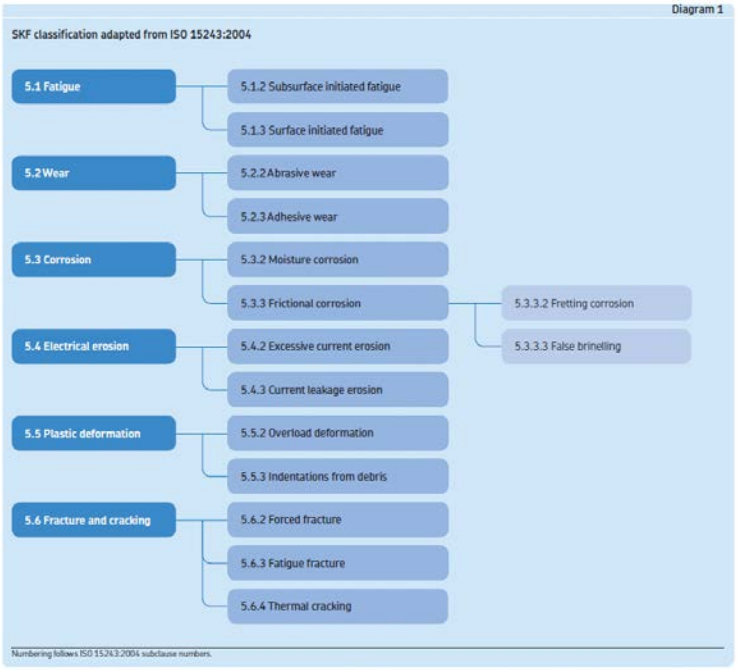
A proactive maintenance technician begins the day by pulling a job package from the scheduled work box, goes to where the parts are kitted, pulls the required parts and tools, and leaves for the job site. Because the planner has made sure that all special tools, parts, and procedures are at the job location, the maintenance technician can begin on time since all the equipment, parts, tools and procedures are ready to execute.

The maintenance technician arrives at the job site and is greeted by a production worker, who has cleaned and cooled down the equipment per the maintenance schedule so the maintenance technician has the optimum amount of time to perform preventive maintenance, corrective maintenance, etc.

With a focus on safety, the proactive maintenance technician ensures all work places are free of hazards and is skilled at using the tools required to reduce potential hazards to include premature equipment failure.

In-depth training in the identification of failure modes and their causes for all

equipment in the maintenance technician's area and vast knowledge on how to prevent or identify failures early are key components for preventing a failure.



Bearing Failure Modes

Furthermore, the proactive maintenance technician is trained and can execute specific advanced maintenance tools, such as ultrasound, infrared, and laser alignment tools, with precision when needed, thus reducing the need for additional personnel.

The proactive maintenance technician performs the particular work to specification. Following all procedures, the maintenance technician cleans the area and releases the equipment back to production in a "like new" status according to the definition of maintenance. Once production has the equipment back to operating standards, the maintenance technician returns to the shop and ensures all required closed out information is on the work order with the proper failure codes, failure causes, time taken to complete the job and any other information required in the synopsis to includes any recommendation to changes to the work order.

WO # 12033	Asset # 12332 – Line 1
Job Description:	
Lubricate Bearings	

Frequency:	Monthly

Estimated Craft Hours:	1 x 1.0
Estimated Production Downtime:	0

Originator:	Bill Hill	Origination Date:	01/12/2020
Owner:	Maintenance Dept	Version #:	1
Previous Version(s) Modifications:			
Approval:	RAS	Version #:	1.0

Cautions:	Failure to follow PM Requirements could result in equipment failure
Personal Protective Equipment Required:	Gloves, hearing protection

Part # (Stores ID)	Part Description	Quantity	Quantity Description
C-1395	Synthetic Lube	1	Each

Consumables Needed:
Lint Free Towels

Special Tools Required:
Single Pump Grease Gun - Type 237 (Synthetic Grease Gun)

Mobile/Special Equipment:
None
Required Departmental Coordination:
Production Lead will be notified before execution of Lubrication

ID	Description	Craft Type	# of Crafts	Craft Hours	Initial Steps
1	Ask Operator if any issues with asset	M	1	.3	KL
2	Inspect asset for any leaks or abnormalities	M	1	.3	KL
3	Clean grease fitting with lint free rag	M	1	.1	KL
4	Insert grease into 4 "Zerk fittings" (2 Pumps per fitting)	M	1	.1	KL
5	Notify Production work is complete	M	1	.1	KL
6	Complete Work Order	M	1	.1	KL
	Total Hours			1	KL

Condition (As Found): (Required)

Leaks coming from #1 Gearbox

Condition (As Left): (Required)

Clean up oil, notified production leader to keep area clean of oil

Comment(s): (Optional)

None

Craft's Feedback on Procedures: (Optional)

All Good

Craft's Signature(s): (Required)

Jim Jimbo

Date:

10/11/2019

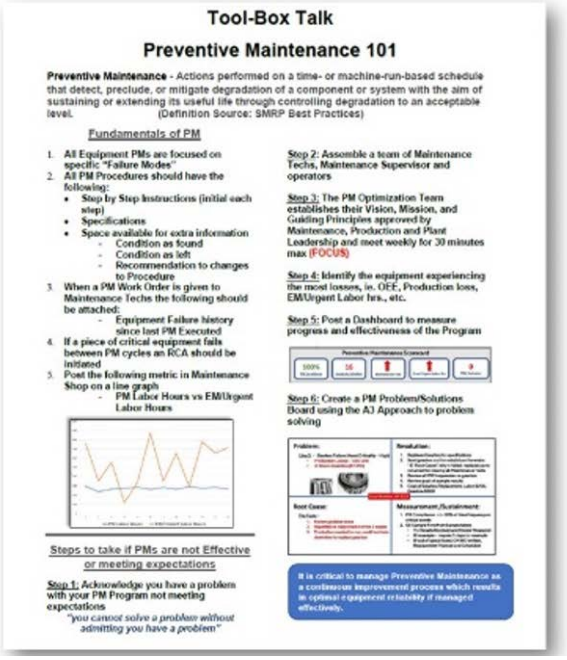
"Repeatable Procedure Example"

BEFORE SHIFT ENDS

Prior to leaving for the day, the maintenance technician reviews the work scheduled for the next day from the job plan package left by the planner/scheduler. This ensures that the proactive maintenance technician knows the job and validates that the parts are in the kitted area.

ADDITIONAL COMMENTS

The maintenance technician may also participate in a Tool-Box training session concerning safety, new work instructions, or technical training ideas to increase his or her knowledge base and help teammates by sharing this knowledge. See the example Tool-Box Talks in the following images.



Tool-Box Talk

Preventive Maintenance 101

Preventive Maintenance - Actions performed on a time- or machine-run-based schedule that detect, preclude, or mitigate degradation of a component or system with the aim of sustaining or extending its useful life through controlling degradation to an acceptable level. (Definition Source: SMRP Best Practices)

Fundamentals of PM

1. All Equipment PMs are focused on specific "Failure Modes"
2. All PM Procedures should have the following:
   - Step by Step Instructions (initial each step)
   - Specifications
   - Space available for extra information
     - Condition as found
     - Condition as left
     - Recommendation to changes to Procedure
3. When a PM Work Order is given to Maintenance Techs the following should be attached:
   - Equipment Failure history since last PM Executed
4. If a piece of critical equipment fails between PM cycles an RCA should be initiated
5. Post the following metric in Maintenance Shop on a line graph
   - PM Labor Hours vs EM/Urgent Labor Hours

Steps to take if PMs are not Effective or meeting expectations

Step 1: Acknowledge you have a problem with your PM Program not meeting expectations

"you cannot solve a problem without admitting you have a problem"

Step 2: Assemble a team of Maintenance Techs, Maintenance Supervisor and operators

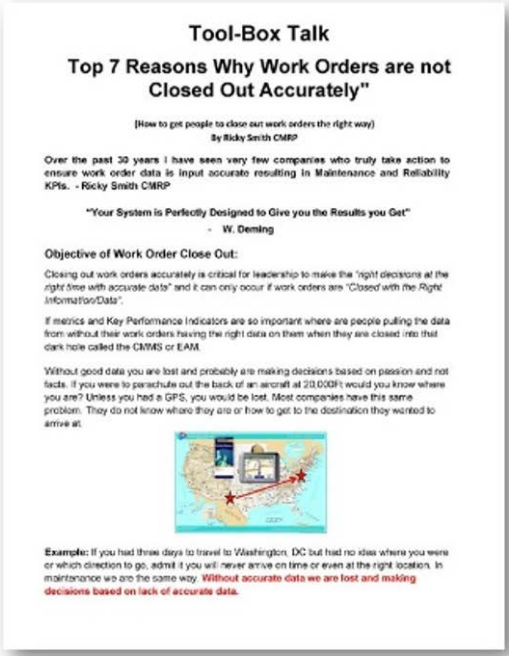
Step 3: The PM Optimization Team establishes their Vision, Mission, and Guiding Principles approved by Maintenance, Production and Plant Leadership and meet weekly for 30 minutes max (FOCUS)

Step 4: Identify the equipment experiencing the most losses, ie. OEE, Production loss, EM/Urgent Labor hrs., etc.

Step 5: Post a Dashboard to measure progress and effectiveness of the Program

Step 6: Create a PM Problem/Solutions Board using the A3 Approach to problem solving

It is critical to manage Preventive Maintenance as a continuous improvement process which results in optimal equipment reliability if managed effectively.



Tool-Box Talk

Top 7 Reasons Why Work Orders are not Closed Out Accurately"

(How to get people to close out work orders the right way)

By Ricky Smith CMRP

Over the past 30 years I have seen very few companies who truly take action to ensure work order data is input accurate resulting in Maintenance and Reliability KPIs. - Ricky Smith CMRP

"Your System is Perfectly Designed to Give you the Results you Get"

- W. Deming

Objective of Work Order Close Out:

Closing out work orders accurately is critical for leadership to make the *"right decisions at the right time with accurate data"* and it can only occur if work orders are *"Closed with the Right Information/Data"*.

If metrics and Key Performance Indicators are so important where are people pulling the data from without their work orders having the right data on them when they are closed into that dark hole called the CMMS or EAM.

Without good data you are lost and probably are making decisions based on passion and not facts. If you were to parachute out the back of an aircraft at 20,000Ft would you know where you are? Unless you had a GPS, you would be lost. Most companies have this same problem. They do not know where they are or how to get to the destination they wanted to arrive at.

Example: If you had three days to travel to Washington, DC but had no idea where you were or which direction to go, admit it you will never arrive on time or even at the right location. In maintenance we are the same way. Without accurate data we are lost and making decisions based on lack of accurate data.

WHAT VALUE DOES A PROACTIVE MAINTENANCE TECHNICIAN PROVIDE TO A PROACTIVE ORGANIZATION?

In addition to all of this, a proactive maintenance technician adds value by working with production and operations as a team to resolve equipment problems, whether maintenance or production related, to optimize asset reliability and increase capacity.

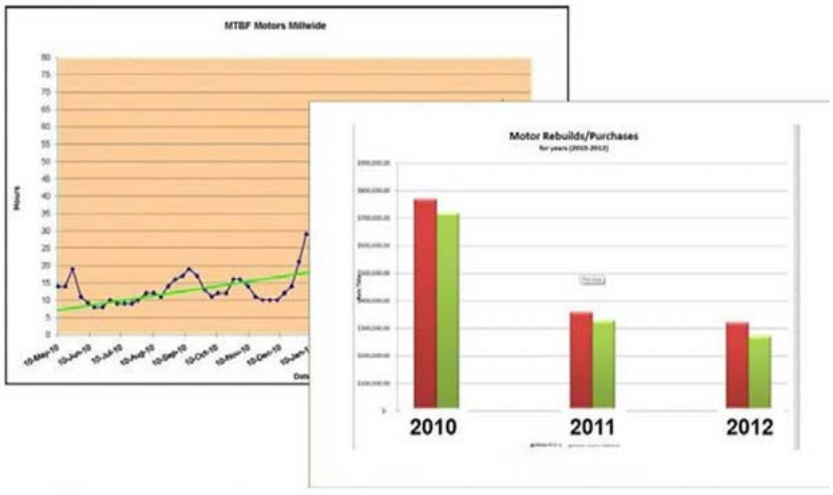
A proactive maintenance technician is always on time, performs work to standard, makes recommendations to improve work for the next time it is executed, ensures tools are operational, verifies production has started up the equipment to standard and on time, and performs all work in a safe environment.

A proactive maintenance technician's conducts preventive maintenance as a "controlled experiment." Because the proactive maintenance technician always takes the time to make repairs accurately, they are more often than not sustainable with no rework required.

A proactive maintenance technician is also capable of correcting defects and making repairs using repeatable, effective procedures that reduce rework. A maintenance technician also has the ability to write effective, repeatable procedures following company guidelines to ensure other technicians have the tools to perform quality work.

With a focus on safety, the proactive maintenance technician ensures all workplaces are free of hazards and is skilled at using the tools required to reduce potential hazards. In-depth training in the identification of failure modes and their causes for all equipment in the maintenance technician's area and vast knowledge on how to prevent or identify failures early are key components for preventing a failure. Furthermore, the proactive maintenance technician is trained and can execute specific advanced maintenance tools, such as ultrasound, infrared and laser alignment tools, with precision when needed, thus reducing the need for additional personnel.

A proactive maintenance technician is confident in providing management with metrics that show asset reliability is improving. Further, he or she has the ability to make recommendations for equipment improvement based on failure reports and metrics as shown below.



Join me for Best Maintenance Technician Practices Workshop

February 22-24, 2022

For more information send an email to rsmith@worldclassmaintenance.org