SINGLE POINT LESSON- ACCURATE WORK ORDER CLOSE OUT

BY: **RICKY SMITH, CMRP, CMRT, CRL**

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Single Point Lesson

ACCURATE WORK ORDER CLOSE OUT

by Ricky Smith, CMRP

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"Accurate Work Order Close Out is important for the continuous improvement of any Maintenance Organization / Asset Reliability."

Maintenance Scorecard
January 2020

PM Compliance	Planned Work	Scheduled Compliance	Work Order Close Accurately	Rework	Maintenance Cost
100%	40%	100%	47%	14	12%

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1

The objective of accurate data collection is to assist management in making the right decisions at the right time and to empower workers to make decisions at the floor level.

Work Orders are NOT:
A•method to track whether a Maintenance Technician is working or not (Maintenance Supervisor's responsibility)
• A waste of time (it takes less than 2 minutes to write a work order for any maintenance action required)

Work Orders are used as a...
• A method to identify repeat failures in equipment (typically "Bad Actors")
• A method to track maintenance repair and parts cost on specific assets to determine when action is required to restore equipment to a "Maintainable Condition."
A•method to track specific parts (ie. Bearings) are being consumed at an increased rate with the possible root cause could be identified to one of two causes.

General Rules of Work Orders

Work Orders should have at the minimum the correct code (breakdown (1), urgent (2), etc., the correct equipment number, at the right level, the maintenance person's accurate total work hours charged to this work order, the start time and complete time on the job, comments from the maintenance person as to what work was performed or any recommendation to changes to maintenance strategy or plan, any parts used whether from the storeroom or not.

Without the above information one cannot determine:
A•ctual maintenance cost for specific assets
M•ean Time Between Failure (MTBF)
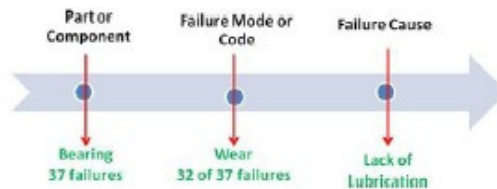M•ean Time To Repair (MTTR)

- Mean Time Between Repairs (MTBR)
- Rework
- If a PM Procedure is effective
- If a specific type of repair is effective

#1

Repair or Corrective Work orders should have the information as stated above everything as stated above plus, component code, failure code, and cause code if an organization wants to mitigate unexpected failures.

Without the right information on work orders when closed one cannot determine:
Dominant Failure Thread – which component has the most specific failure modes with a specific cause across multiple assets.

Part or Component — Failure Mode or Code — Failure Cause

Bearing 37 failures — Wear 32 of 37 failures — Lack of Lubrication

- Dominant Failure Pattern – which failure pattern is the most dominant and what are the major causes of failures for this pattern. This allows one to develop strategies to eliminate unacceptable failures which impact the organization.

#2

Establish the Criteria for WO Order Priority (all work orders are not equal).

See chart below to illustrate work order priority levels, time to respond, consequence of delaying the work, and likelihood of failure.

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Priority	Description	Time to Respond	Consequence of Delaying Work	Likelihood of Failure
1	Emergency	Within 24 Hours	• Injury or Death • Major (Total) Production Loss • Regulatory/Environmental Violation	• Immediate Failure Certain
2	Urgent	This Business Week	• Significant Production Loss • Product Quality Issues • Significant (Avoidable) Repair Costs • Secondary Equipment Damage	• Immediate Failure Probable
3	Standard	Within Next 2 Weeks	• Loss of Production Rate – Slowed Production • Spurious Interruptions to Production Capability • Minor Product Quality Losses • All Proactive Work (PM and PdM)	• Immediate Failure Unlikely
4	Non-Critical	> 2 Weeks	• Strategic Improvement Work • Construction and Capital Projects • No Immediate Impact on Safety, Compliance, Production, or Costs	• Failure Not Likely

#3

Preventive Maintenance/Predictive Maintenance Work Orders should...
• Become a method to track, prevent or predict known failure modes (failure mode – how something fails, example: Lack of Lubrication)
  • Attach the equipment history for the past 30-60 days to the PM and provide time on the schedule for techs (10 minutes max) to review before they execute the PM.
  • On a PM Procedure it should have specific steps and specifications on what is to be done to known best practices.

Example: Lubricate Bearing –
Step 1: Clean the grease fitting.
Step 2: Clean the end of the grease gun to ensure no contamination will be introduced into the bearing.
Step 3: Insert 4 grams of lithium grease (two shots)

#4

When closing all Work Orders the following items should be included:

Condition as Found.

Condition as Left

Recommendation to changes to procedure.

#5

Define Roles and Responsibilities for the effective use of Work Orders using the RACI Model.

• Assemble a team of people involved in Maintenance Work Order Success (ex: planner, supervisor, technician, reliability engineer, production).

Define the WO process/ tasks required for success.

Educate the team in what an effective Work Orders looks like .

Prepare key people before you assemble the team.

Facilitate the team through the RACI Process.

Post the RACI Chart along Maintenance KPI Dashboard for all to see .

Perform RCA when WOs that do not meet expectations.

See example chart on the next page for a RACI chart.

Maintenance Work Order Roles and Responsibilities

"RACI"

Tasks Decisions/Functions➡	Maintenance Supervisor	Maintenance Planner	Production Supervisor	Maintenance Manager	Production Manager	Technician
Create a Corrective Maintenance Work Order	R	C	R	I	A	R
Create an Emergency / Urgent Work Order	R		R	A		
Approve Work Order	R	R	C	A		
Parts charged to Asset via Work Order	R	A				R
Ensure WO Info Correct Before Closure	R	A				C
Close Out WO	C	R	C	A		C
Leading/Lagging KPIs Reported	I	R	I	A	I	I

Responsibility	"the Doer"
Accountable	"the Buck stops here
Consulted	"in the Loop"
Informed	"kept in the picture"

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With nearly 340 different machines in our work environment, it's an impossible task to manually assign and track PM's. **With UpKeep we can schedule regular maintenance without overlapping tasks with other critical jobs.**"

★★★★★ **Paul D, Health and Safety Coordinator**
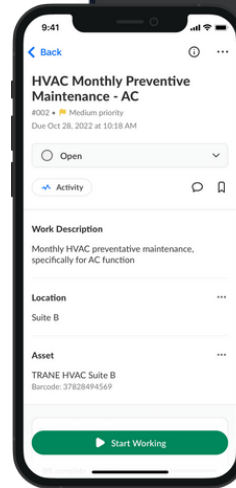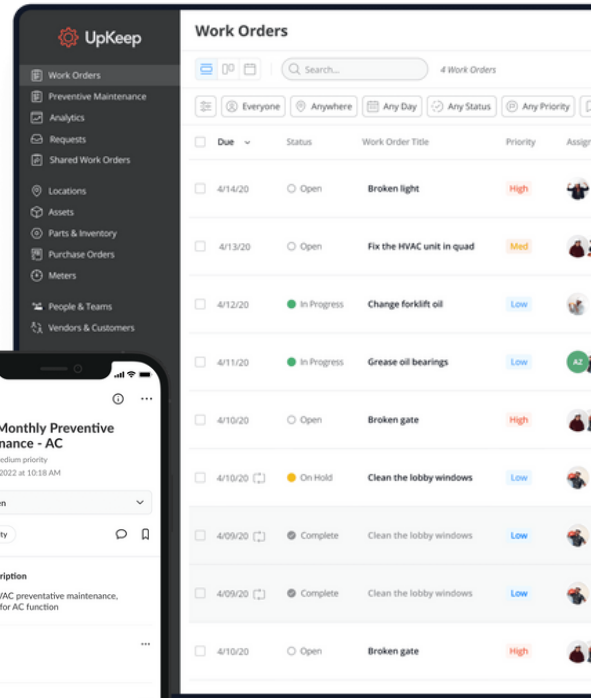
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The Maintenance Community Coalition was founded on the belief that working together will benefit everyone within our community

Committed to helping each other thrive in our individual professional journeys by sharing resources and expertise, granting scholarships, hosting events, and unlocking knowledge – always at no cost.

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