



## Wrench time wonder

By Joel Levitt © 2023

**Question:** what is the quickest way to improve wrench time?

**Answer:** Short repairs during PMs (defined as short but complete repairs on problems found during PMs that are done during the PM). PM person must have any tools and parts with them. They also must have the competence to do that work.

To see how this works, lets list the activities of a PM from soup to nuts.

<b>Complete PM activity</b>
Get job assignment
Lock out tag out –make it safe
Collect special tools and equipment
Locate, check and collect parts, materials
Travel to job with materials and tools (field and infrastructure)
Quick safety walk down
<b>Perform work (this is the only real wrench time)</b>
Clean up work area
Unlock, un-Tag
Return asset to operations
Return tools and excess materials
Do paperwork, work order, closing comments

There are 12 activities and only 1 is productive. One thing is clear. When we can do a second or third planned job on the same asset we would add mostly to the “perform work” time. Let’s put some times into the blocks and see if you agree or not:

Activity	Doing PM only in minutes	PM + 60 minute short repair
Get job assignment	10	10
Move equipment to work bay or go to equipment	25	25
Lock out tag out	15	15
Collect special tools and heavy equipment	30	30
Locate, check and collect parts, materials	60	60
Travel to job with materials and tools (field and infrastructure)	5	5
Quick safety walk down	10	10
<b>Perform work</b>	<b>90</b>	<b>90+60 = 150</b>
Clean up work area	10	15
Unlock, un-Tag	10	10

Move equipment, return to operations	15	15
Return tools and excess materials	10	10
Do paperwork, work order, closing comments	10	15
Totals	90/300=30%	150/370=40%

Wow 25% increase in wrench time just for rearranging the job.

### Other advantages

- PM inspectors feel trusted and take greater ownership of the health of the equipment.
- Less waste
- Shorter downtime due to PM/Corrective maintenance
- Way more interesting -less zombie like state of mind from boredom
- Skill enhancing

### There are 5 rules for short repairs

1. You have to set a maximum time depending on the size of your facility and your type of equipment. Usually, the limit is 15 minutes to as long as an hour are common.
2. The repair must be able to be done safely with the tools that the PM person has with them.
3. The last rule is that PM mechanic must be already carrying any necessary materials or parts
4. Of course, the mechanic must have the skills
5. If in your organization the scope of work on the permit has to be followed and if changed, the permit has to be reissued then short repairs are not for you

### Important to code the extra time as CM and not PM on work order if possible

#### Disadvantages to short repairs that should be known and managed:

- The skill requirement for PM people for short repairs is significantly higher than for just PM
- Short repairs require significant judgment (so the short repair doesn't turn into a long repair or isn't too disruptive)
- One thing that you need to accept is that short repairs can cause mild schedule disruptions

Good luck, be well, stay safe! Thanks for reading. Cheers, Joel

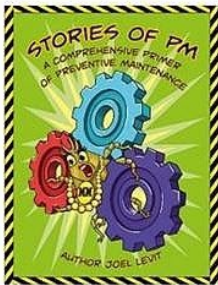
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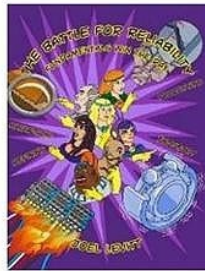
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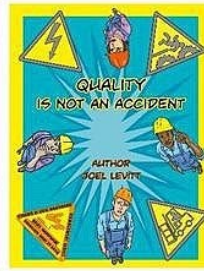
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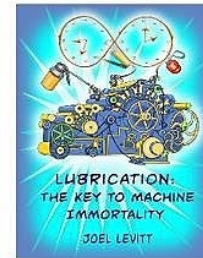
Defect Elimination



Reliability and fundamentals



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Joel Levitt, President JDL@Maintrainer.com  
Springfield Resources 267-254-0061  
WWW.MaintenanceTraining.com



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**Don Fitchett, President - Maintenance, Engineering Training Co., Nevada**

"Although we had heard many of those perspectives in Joel's book from the stakeholders before, it is nice to have them in one presentation to get a better sense of the big picture.

The 3D analysis lab was super cool! The real-world examples and learning process I watched (read?) play out was of great value to the story. Your book Joel is a real piece of art. You wrote it in such a way that it is relatable to everyone. It didn't hurt that I have a soft spot for superhero comics. :) Thanks for sharing."

**Rolly Angeles, Consultant at RSA Reliability and Maintenance Consultancy Firm (Philippines)**

Joel Levitt is one of the maintenance gurus I admire and have much respect for. I have purchased some of his books which I used for reference. There are many authors out there, which you will have a difficult time digesting the contents of the book. Joel has found a way of overcoming this by writing a book in an animated format where it is straightforward to understand.

If you are looking for a smart way to improve your plant, I highly recommend this book by Joel Levitt, which you can finish reading in one sitting. I give this book two thumbs up.

**Doc Palmer MBA, Author, trainer, Managing Partner Richard Palmer & Associates, Inc.**

Hey Joel, Thanks for letting me read this. You are one of my early career inspirations for helping people in maintenance. A long time ago, you sent me a cassette tape out of the blue that included "we remember Noah's flood because we just think about disasters, not the work of keeping them from happening." Many, many thanks

**Daniel Daily, PE, CMRP Author, consultant and trainer**

From a higher-level, I would say that I like the overall concept. I recall one of the presenters at the Las Vegas reliability convention saying that one of the biggest problems is that people are no longer readers. This approach might help solve that problem.

**Alain Le Bon National Engineering and Maintenance Manager at Cheetham Salt**

I am really finding the books quite useful. I think they are good base line educators and for shop floor. simple easy to understand messaging and like the light read, comic book approach which seems to work to audience. We definitely have a battle for reliability on our hands! I really want to engage the shop floor and these books are useful for that.