



The Geaslin Group

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Computing the True Risk/Reward Ratio for Deferring Maintenance

Creating an Understandable Ratio

By David Tod Geaslin
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The single biggest challenge in the management of maintenance is to convince senior leadership of the disastrous consequences of deferring maintenance and allowing a machine to operate to failure (OTF). This is difficult because not every deferred maintenance event becomes a breakdown event that reaches the attention of the Executive Office.

The challenge is made even more difficult when the mechanical and technical experience of the leadership is not adequate to evaluate the maintenance situations that demand their attention.

I have developed a tool that moves the criteria for making a decision from technical data to a financial ratio that is more easily understood. I call this tool **“Computing the True**

Risk/Reward Ratio for Deferring Maintenance”

It is simple and easy to use and offers a method to compare the total cost to a company for a breakdown event to the cost of early intervention to avoid the breakdown.

At the simplest level of use, the leadership must consider the total cost to the organization and not just the cost of maintenance repairs. The indirect and intangible costs must be considered also.

It is not possible to know what a future cost might be, so you must take several historical breakdown events and compute a ratio you can use in the future to make better decisions.

Type of Cost	Cost
Direct Maintenance Cost Labor (15:1) Parts Freight Maintenance Department Overhead	
Indirect Breakdown Event Cost Any known cost that can be directly attributed to the breakdown event such as rented buildings, chillers, electric generators, transportation costs, legal fees, etc.	
Intangible Breakdown Event Cost Any costs that are not easily measured such as tax payer dissatisfaction, unwanted attention of regulatory agencies, reduced student production, etc.	
Total Breakdown Event Cost to the Organization	
Early Intervention Cost This is the cost that would have prevented the breakdown event and avoided all of the costs and disruptions associated with the event.	
True Risk/Reward Ratio for Deferring Maintenance Divide the Total Breakdown Event Cost by the Early Intervention Cost	: 1

When my clients take the effort to gather all the costs associated with a breakdown event in their organization they are surprised to find that

the ratio is seldom less than 40:1 and usually much more.

They are surprised that the Direct Maintenance Cost Ratio is usually about 15:1 in direct maintenance dollars compared to early intervention.

They are even more surprised to learn that the maintenance man/hours is also 15:1.

This means it takes 15 times longer to recover from a breakdown event than an early intervention event.

Early intervention also directly influences the mechanical experience needed to effect the needed repairs because the skill set needed to change a radiator hose before it fails is significantly different than those needed to rebuild an emergency generator after it overheats just when you need it the most. Early intervention allows more maintenance to be accomplished with less skilled workers.

Examining the Indirect Costs, you will recognize the obvious saving of Early Intervention over OTF because these items would have never been needed and the money could be used elsewhere.

However, the Intangible Costs, the real undocumented cost to the organization for a breakdown event comes in the form of dissatisfaction and loss of confidence with the stockholders and regulatory agencies. Bond and stock values suffer when there are disruptions and disasters within corporate operating systems. To be supported by the investment system, the public must feel that their investment is going to be well managed before they approve investing more money.

Leadership in the business arena must make the correct decisions when managing deferred maintenance. If your True Risk/Reward Ratio for Deferring Maintenance is not sustainable there is a simple solution.

Early Detection and Early Intervention will produce the lowest maintenance cost per unit of production possible. All other options will produce a higher cost.

If you see ratios that are unacceptable, then all you have to do is support your maintenance effort by instructing them to fix everything they find wrong as soon as possible. When I say this, most financial people recoil and say, *“You are asking me to give the maintenance department a golden checkbook!”*

My response is, “Yes!” If you are operating in a breakdown maintenance mode, you cannot spend any more money than you are already spending so give them the money when they need it.

If you use a technique such a **Vertically Integrated Maintenance Program** (VM) to attack the deferred maintenance in a systematic method and plow back the 40:1 in avoided maintenance spending and the 15:1 in recovered maintenance man/hours you can create a self-financing solution to better asset reliability, more uptime, and improved safety.

Compute and examine your **True Risk/Reward Ratios for Deferred Maintenance** and if you do not want to pay those penalties, then you must create and fund better methods of Early Detection and Early Intervention. The return on the investment will be wonderful.

The author:

David Geaslin is the owner of The Geaslin Group (www.geaslin.com) and a graduate of The University of Texas at Austin with degrees in Industrial Management & Marketing; a former Marine Corps Aviator and Aircraft Maintenance Officer; the CEO of his maintenance service company for 15 years; and has consulted offering coaching and seminars in the management of maintenance since 1990. He lives in Gonzales, TX and travels offering his services wherever needed.