

QUANTIFYING THE BENEFITS OF PREVENTIVE MAINTENANCE AGAINST STANDARD MAINTENANCE

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One of the major obstacles in presenting a Preventative Maintenance System to potential customers is the process of proving the economic benefits of the system. For various reasons, this is quite a difficult thing to do. This article will attempt to provide a degree of understanding of these benefits, and why they are often so difficult to quantify.

Many transport operators have no records of their vehicle maintenance costs. They file job cards and repair invoices in a file, but there is often no attempt to use this data to track trends in expenditure on specific vehicles, or groups of vehicles. This results in a complete absence of comparative data against which future expenditures can be measured, once a new system has been implemented. The lack of data relates to the lack of a management system that can accurately keep track of these expenditures. This opens up many loopholes where money gets dropped in and is lost forever. The unfortunate fact is that many operators do not see the value in good management systems that will assist them in understanding what their vehicles are costing them, and they therefore do not have the tools to manage those costs effectively.



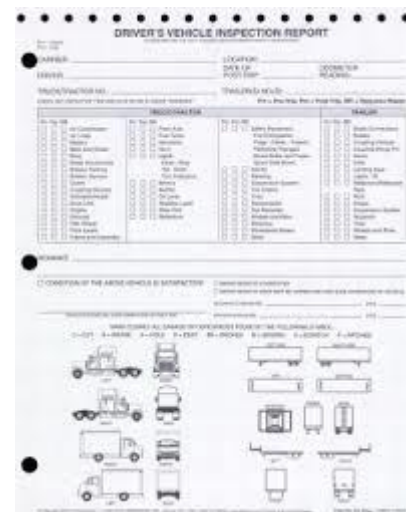
In such cases, proving the value of a Preventative Maintenance System requires a degree of research in order to identify past costs and to place them into a format where future expenditures can then be measured against. This creates a database which is then used to establish a baseline for future reference. In many cases, information provided by transporters can be so sketchy and inaccurate that the data being compiled does not provide an accurate representation of expenditure per item, and can only serve as a “best guess” source of information. The question then is how to overcome this shortcoming

and still have data available in order to prove the financial benefits of a properly implemented and managed Preventative Maintenance System.

We should not be critical of transporters who fail to maintain these records. In most cases we have investigated, the instructions have been issued to ensure control, but the systems were never set up to produce an output that can be used as a measurement to be used in a financial decision. Quite often the information is compiled into a file that is then used as a resource for future reference, but is not in a format where it can serve as a financial document.

Once this data has been compiled and formatted, the performance of every vehicle is then monitored over a period of time. It is also an unfortunate fact that the decline in maintenance costs due to the implementation of a PMS system will only become apparent over a period of time, and often transport company owners fear that money paid for the implementation of the system goes to waste as benefits are not immediately obvious. There is a sense of immediate gratification that prevails, and it is often difficult to convey the long term benefits of the system to clients.

The only manner in which to overcome the doubts is to give the system a chance to prove itself. Manage it effectively in order to ensure that the outputs are accurate, and then to measure against the historical data we discussed above. Over time the system will reduce breakdowns, defects, and will impact positively on the relationship with service providers.



However, the question remains. What would be the R value benefit of Preventative Maintenance? How do you calculate what that benefit would be? Despite this being a nebulous and complicated exercise, we can reduce it to a basic calculation which will indicate how much money can be saved.

There are two subdivisions within the maintenance expenditure model for each truck. The first is the regular scheduled maintenance costs incurred as part of the standard manufacturer's recommended servicing cycle. Often these do not complete within a single month, based on the utilisation of the vehicle, but it will average out over a year. Let's refer to this cost as X.

Secondly, there is the repair costs incurred when something gets detected, or when a defect occurs that needs to be repaired before the vehicle can be used. The mechanism by which this detection occurs could be a pre-trip inspection, or something similar. Let's refer to this cost as Y.

Logically then, the total repair costs for the vehicle for the month would be X+Y.

However, there are further sub-divisions within Y, as explained above, and this is where the essence of Preventative Maintenance comes into effect. These two factors are closely related to each other, and they serve to produce a cost which can be managed effectively by the implementation of a PMS system. Let me explain.

Let us refer to defects that are detected as a result of a well-managed and conducted inspection routine, as Y1. Defects that are detected due to breakdowns we will refer to as Y2.

Thus, $Y1+Y2 = \text{total cost of defects excluding servicing}$.

Therefore, the inter-relationship between Y1 and Y2 is as follows:

If an inspection routine that is designed to detect defects before breakdowns occur is implemented and is having an effect, then all defects detected as Y1 and repaired, will impact positively on the reduction of the occurrence of Y2 defects and breakdowns. In general, Y2 defects are many times more expensive to repair, since they come associated with a range of other costs as well, such as tow-in fees and delayed load penalties. Y2 defects may also cause other defects due to associated component failures, all of which could have been avoided. It is therefore self-explanatory as to why the adherence to the proper detection and management of Y1 defects will reduce the costs associated with a reactive process of dealing with Y2 defects.

In other words, maintaining a proper inspection routine that produces measurable outcomes will save you money. The smaller Y2 becomes as a result of Y1, the more money you will save.

But this is not all. A properly designed Preventative Maintenance System also supports you, as a fleet owner, in managing costs associated with X, your standard servicing costs which forms part of the total maintenance



expenditure. By ensuring that instructions to service providers are clear and concise, the room for misunderstandings are reduced.

Service providers are in the industry to make money. Period. And the money they make comes out of the pockets of the transport industry role players who send their trucks to them for scheduled maintenance. As explained above, many transport owners do not have systems in place to properly manage expenditure on their vehicles, and this is often exploited by service providers who fill out invoices that include work that was either never done, or never required or requested. In our experience, the transporter is then often placed in a very difficult situation where his truck may not be released before payment is made, and the transporter then pays whatever he is being charged, simply so that he can get his vehicle on the road earning revenue again.



Preventative Maintenance takes care of this process for you as well, in that instructions to service providers are provided in a clear and unambiguous manner, controls are installed which ensures that final invoicing and job cards are matched and deviances queried, before payment is authorised. Obviously, this is a difficult saving to be estimated, but a major part of the savings generated through proper management systems can be found here.

Whichever way you look at it, Preventative Maintenance is the key to saving money, and to ensure that your vehicles are on the road in a safe and reliable condition, exposing the public to less risk, and you to less financial losses. The money spent on implementing the systems work towards reducing your overall maintenance costs, and it provides you with access to other cost-saving program that are on offer, such as a comprehensive tire management system that ensures the optimum utilisation of every tire throughout its complete lifespan.

