

Maintenance Strategy

You and your operators know your equipment better than almost anyone, so when it comes to keeping it operating effectively, you are best suited to deciding and executing the ideal maintenance strategy. Below we will explain some of the key variables that should be considered when determining your maintenance strategy.

One thing to keep in mind is that OEM maintenance guidelines are considered a baseline on which you can apply your specific knowledge. Taking the variables below into account with your maintenance provider should allow you to optimise your strategy and gain further control of your equipment availability and costs. The aim of developing your maintenance regime should be to create the lowest cost per hour whilst retaining equipment reliability. To achieve this requires input from experienced technicians who understand how the variables below affect your equipment.

✓ **Operator input** - The way your equipment is treated is arguably the largest contributor to your maintenance costs. Sometimes even the most experienced operators have accumulated 'bad habits' which apply undue load or stress on your equipment. The single best opportunity to identify faults is the daily pre-start check, followed closely by during operation. Knowledgeable and observant operators will highlight small issues before they impart further damage.

✓ **Operating environment** - Similarly to operator input, the environment your equipment operates in contributes significantly to your maintenance requirements. For example, working in a saline swamp poses different wear characteristics to a rocky metalliferous mine, so this needs to be considered in your maintenance plan. Further considerations are contaminants, temperature, humidity, altitude and coastal to name a few.

✓ **Timing** - One of the biggest impacts on the cost of maintenance is choosing when to perform it. Too early and you lose residual life from your components and too late you risk the deterioration impacting

other components and increasing the cost to repair. Equipment owners need to juggle these decisions with the working requirements of the equipment to select the best time for servicing and repairs. This can be difficult and finding the solution that suits your operation is imperative to long term implementation, it could be spreadsheet, whiteboard or management software based.

Duty Cycle - One of the biggest impacts on the cost of maintenance is choosing when to perform it. Too early and you lose residual life from your components and too late you risk the deterioration impacting other components and increasing the cost to repair. Equipment owners need to juggle these decisions with the working requirements of the equipment to select the best time for servicing and repairs. This can be difficult and finding the solution that suits your operation is imperative to long term implementation, it could be spreadsheet, whiteboard or management software based.

Considerations

Have your operators been adequately trained and verified as being competent to your expectations? Was a component of this verification the conducting pre-start check and the key faults to look for? Is your workforce encouraged to identify faults?

Have you considered the environment your equipment operates in? Has this thought impacted your maintenance strategy (including pre-start checks)? If your equipment moves between sites, does this vary your strategy?

Where practicable, do you forecast your requirements for machinery? Does this include the maintenance requirements? If applicable, do your maintenance and operations teams work cohesively in this endeavour?

Does the utilisation of your equipment impact your maintenance strategy development? Do you notify your maintenance provider as the duty cycle of your equipment changes? In regard to duty cycle - think about how many kilometres a taxi does over its life cycle vs a Sunday driver, the same vehicle has a vastly different life expectancy (in terms of km travelled).

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