# **Effective Heavy Equipment Preventive Maintenance**

As we all know, the better we take care of *anything* mechanical, the longer it will last and function as designed. According to industry statistics and standards, deferred maintenance costs are *up to 10 times more* than regular maintenance. Preventive maintenance is a solution to avoiding high costs rather than a deferred maintenance approach.

The myth that deferred maintenance saves money, in the long run, is misguided. When equipment breaks down, repairing it costs 3 to 10 times more than routine/regular maintenance costs. Costs are actual parts and time of personnel to perform the maintenance.



Preventive maintenance takes a team approach to properly looking after equipment. It involves following the original equipment manufacturer’s recommendations as well as applying your organizations experiences tell you about a particular piece of machinery. Effective preventive maintenance also includes input from operators and front-line mechanics. No one knows equipment better than the people who run it and repair it.

Image courtesy of skilledgroup.com

Every operator and mechanic knows that catastrophic failure can set off a chain of events that damages other equipment parts. What could have been an inexpensive part replacement at an early intervention stage would have prevented a complete system failure like a blown engine or ruptured hydraulics. Expensive downtime always accompanies extensive downtime and lack of production.

Adapted primarily from the website [Construction Equipment Routine & Preventive Maintenance | NMC (nmccat.com)](https://nmccat.com/construction-equipment-routine-and-preventive-maintenance) and other heavy equipment manufacturers websites, let’s look at six benefits to having a consistent equipment preventive maintenance program:

### ***Availability of the Equipment:***

* When equipment suddenly fails, there’s no choice but to pull it from service.
* That leaves the machine unable to perform its task and support other machinery on the job.
* It costs in terms of lost production and constituent credibility until it’s fixed and back to work.
* Good preventive maintenance makes sure equipment is always available except for scheduled servicing.

### ***Contained Expenses:***

* Unexpected breakdowns aren’t planned events. Nor are they planned expenses.
* Scheduled routine and preventive work fits into a budget and is anticipated.
* Sudden breakdowns often go beyond budget allowances.
* Repair costs added to additional expenses such as renting equipment during the downtime of the equipment in the shop compound into costly expenses that may have been avoided with routine maintenance.

### ***Increased Safety Measures:***

* Reliable machines are safe machines. Making sure all construction equipment is routinely repaired and maintained in excellent condition significantly adds to its safety.
* Sudden component failure can cause dangerous conditions to your employees and the public, as well as presenting unsafe environmental hazards.
* Keeping your equipment safe is part of a solid preventive maintenance program.

### ***The Life and Value of the Asset Will Be Extended:***

* Without question, properly maintained construction equipment outlasts poorly maintained equipment.
* Good maintenance extends service longevity. It also pays returns in resale and trade-in value.
* Equipment works longer, and your organization is more productive during the asset’s service life. Then, if well maintained, that equipment is worth more money at its end.

### ***Confidence in the Equipment:***

* Like construction equipment, machine operators are valuable assets. However, operators are humans and have emotional needs.
* One of those is having confidence that the equipment they’re handling is safe and dependable.
* Poorly maintained equipment has a demoralizing effect on operators, and soon they’ll develop a lack of confidence that leads to disrespecting their supervisor and/or organization. That spirals to a lack of safe operation or failure to report potential problems. You can prevent low confidence with routine maintenance.

### ***Avoiding or Minimizing Litigation:***

* No matter how well-maintained your equipment may be, sometimes accidents happen.
* When accidents occur, it invariably involves the authorities and investigations into the cause.
* If the mishap occurred because of negligence due to poor maintenance, that could lead to your organization’s liability as the equipment owner. Such liability could lead to litigation. However, if there is a clear trail of regular and preventive maintenance, established procedures, and processes for completing maintenance, the chance of expensive litigation significantly lowers.

## ***Establishing an Equipment Preventive Maintenance Program***

Now that you are possibly looking at establishing a preventive maintenance program, consider the following as a part of your implementation:

### ***Choose what works best for your equipment.***

* When determining what your preventive maintenance program will look like, you will need to research your equipment requirements.
* Your preventive maintenance plan will need to include all your equipment's maintenance intervals, which will vary from machine to machine. The best place to find this information is straight from your manufacturer or warranty requirements.

### ***When you create your preventive maintenance program, stick to it!***

* The key to success with a preventive maintenance plan is sticking to your plan. Once you have established the timeline for part replacement and servicing, you need consistency to make a difference.
* When you create your preventative maintenance plan, you may include service tasks such as inspections (daily or weekly checks), analysis of fluid levels, technical monitoring such as ODB diagnostics, sudden component failure analysis, inspecting equipment for rust or corrosion.

### ***Create a thorough maintenance schedule***

* The best way to avoid failure for your preventive maintenance programs is to keep a good schedule. An effective preventive maintenance program will have scheduled appointments according to the warranty and manufacturer specifications.