MACHINERY & EQUIPMENT RISK

Maintenance Basics

CLAIR

The success of your business relies on your equipment being available for use when you need it, in a condition that enables you to complete the work in a timely fashion without breakdowns. The key to achieving this is understanding the basics of maintenance and applying them alongside your knowledge of your mobile plant & equipment.

Whether you are maintaining chainsaws or face shovels, the basic components of any great maintenance strategy are; Clean, Lubricate, Adjust, Inspect and Repair. All tasks undertaken stem from one of these concepts.

Clean – Having clean equipment makes it easier to identify any faults whilst also reducing the critical risk of fire occurring. Clean equipment can also reduce breakdowns – dirty ABS chopper wheels and blocked breathers are common examples of this. Surprisingly, psychology is also at play here because operators using a clean and tidy machine will treat it with much more care than a dirty and banged up unit. Additionally, clean and well maintained equipment projects the image of your business to world. Keeping your equipment clean is an extremely low cost option that has many added benefits beyond what is mentioned here.

Is my equipment cleaned regularly? Is this cleaning done within enclosures (engine and pump bays) as well as externally? If not, what would you have to implement to achieve this? Does my usage create further risk i.e. forestry or coal handling?

Lubricate – Modern equipment has advanced so that it no longer requires continuous lubrication (early equipment required oiling regularly during operations, which was costly and interrupted the job). With this in mind, lubrication remains a critical aspect of keeping your equipment in great condition, so it pays to understand what it means for your equipment and operating environment. If lubrication is inadequate, contact between metal surfaces occurs and damage is almost instantaneous, which can dramatically reduce the operating life of your equipment.

Am I using the lubricants recommended by the manufacturer for the climate/ environment I am operating in? Does my equipment get lubricated sufficiently? It is important to remember the OEM frequency is a baseline and your application may require more frequent attention.

Adjust – Loose bolts, tracks or hoses alongside incorrect hydraulic pressures are a few costly examples which highlight the importance of adjustment. To prolong the service life of your equipment, as well as reduce running costs, it is vital to maintain adjustment of components within manufacturer specifications. A good example is correctly adjusted tyres reduce driveline load (wear and tear as well as fuel) whilst also maximising the life of the tyres.

Is the schedule of adjusting my equipment frequent enough to identify issues prior to them inflicting damage? Are the staff conducting these tasks trained and competent of what to look for and how to adjust? Are the specifications used aligned with manufacturers guidelines?

Inspect – Preventing unplanned breakdowns relies on a range of inspections undertaken by educated and observant personnel. Arguably the most important of these is the daily pre-start inspection, which is undertaken by the equipment operator. It is important that the operators know what they are looking at and the wear/ failure characteristics they should be aware of. Further inspections are best carried out by skilled maintenance personnel at scheduled services to identify any pending issues.

Do I have a schedule of different inspections performed by trained and competent people? Is my daily pre-start inspection based off the exact piece of equipment and specific enough? Are my people empowered enough to identify and raise issues during inspections?

Repair – Repairs on your equipment are best undertaken by experienced maintenance personnel who have a thorough knowledge of the equipment who can therefore advise on the most cost effective solution. Having a structured repair process ensures that all maintenance issues raised are planned and completed prior to the machine breaking down and prior to further damage being done.

Are my repairs undertaken by suitably experienced and qualified persons? Have I discussed my equipment requirements and maintenance strategy with my maintenance provider? Do I have a process to identify and repair all faults prior to them becoming a breakdown?

Visit nti.com.au to book a free session with a Risk Expert.

NTI.MSUS11.1.18052021