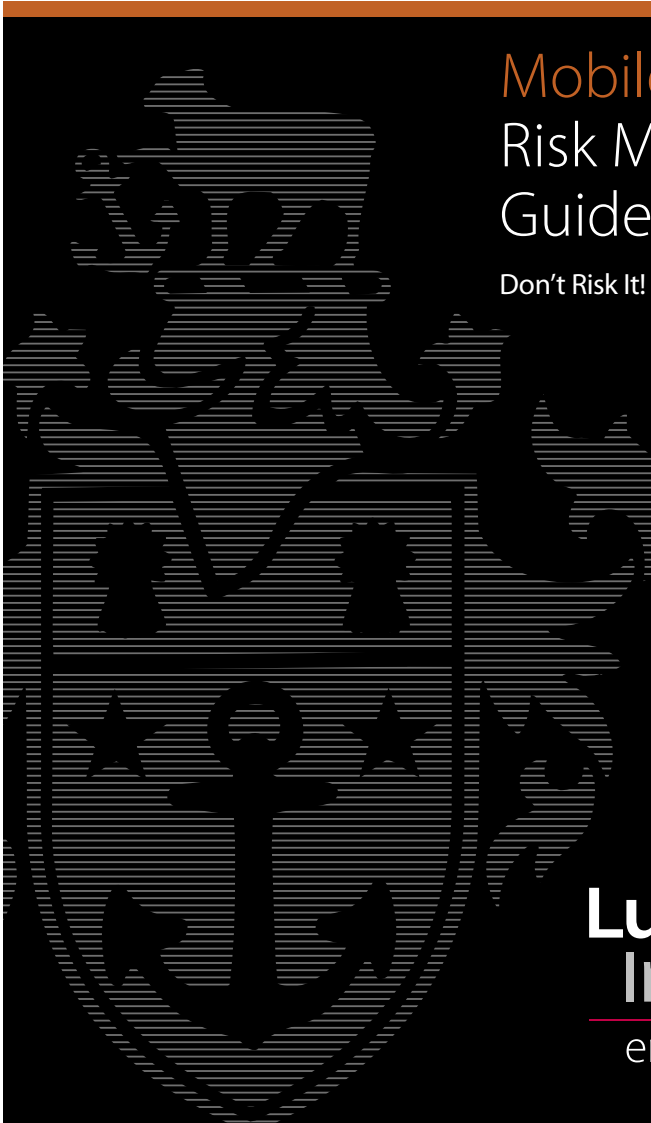


engineering



Mobile Plant Risk Management Guide

Don't Risk It!



Lumley 
Insurance
ensure the future



About Lumley Insurance

Lumley Insurance has extensive experience in mobile plant insurance and risk management.

This experience has shown us that many serious losses occurring in the mobile plant industry can be mitigated by implementing simple risk control measures.

We have used our industry knowledge in producing this easy to read guide, to assist you in controlling the risk to your business. Our dedicated Engineering team is also available to answer any question you may have and to assist you in implementing effective risk control measures.

Mobile Plant

Risk management guide overview

How to use this guide

- 1 Read through the enclosed risk fact sheets
 - 2 Use the checklists on your assets and work sites
 - 3 Implement your risk control plans
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Contents of this guide

- 1 **Risk fact sheets**
 - Machine servicing
 - Site inspections
 - Fire protection
 - Security
 - 2 **Self assessment checklists**
 - Walk around checklist
 - Pre-operational checklist
 - Security measures
 - Site and working environment checklist
 - Safe access and machine movement checklist
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Machine servicing

Mobile plant maintenance is one of the first key elements that contribute to good risk management of plant equipment. Conducting regular maintenance can prevent machine damage and interruptions to any mobile plant business.

Regular maintenance

Daily checks/walk around

Daily checks or walk around inspections are essential to prevent down time, machine and personal injury and also to identify potential problems that need immediate attention or problems that can be documented to be repaired during an allocated shut down period.

Daily checks are conducted by the operator by using a simple checklist that should be filled in prior to commencement of operations each day.

Required servicing

All Original Equipment Manufacturers (OEM's) specify the servicing standards for the machine will be found in the machines Operators Manual. This manual should be kept in the operator's cabin at all times.

Service requirements will require servicing to be carried out on a regular basis, either being a period of time or using the kilometres or hours the machine has accrued.

Why service?

Regular servicing will reduce down time, machine damage, personal injury and assist to improve productivity.

Servicing will ensure that:

- ✓ Lubricants are clean and replenished
- ✓ Filtration systems are free from debris
- ✓ Systems are checked for operation
- ✓ Preventative maintenance has occurred



Site inspections

The site where the machine is to operate plays a major role in risk management. Both the machine and the operator could be placed in harm if the site has not been correctly assessed.

Site Inspection and site works

Prior to any works commencing, the site should be inspected for potential hazards.

Power lines, trees, surrounding buildings and recently filled trenches are some of the hazards to look out for. Geotechnical reports and services such as Dial Before You Dig (or similar) can assist in preventing major loss and should be used to minimise harm to the operator and the machine.

Safe access

Safe access can be assessed on most sites using similar risk management methods. Listed below are few points to help you with your assessment.

- ✓ Can the machinery move to and from an allocated work area unrestricted?
- ✓ Is there safe access for machinery to transfer product around the site?
- ✓ Will there be movement of light vehicles on and around the site?
- ✓ Are all haul roads and vehicle access roads clear and serviceable?
- ✓ Is there a need for traffic control measures?



Fire protection

Forestry, Mining and construction activities have resulted in a large number of equipment fires due to location and application. Adopting simple precautions can prevent damage to the machinery and business interruption.

Equipment maintenance

Prior to commencement of daily activities inspect the machinery and clear all debris (combustible materials) from in and around the machines belly plates, engine and hydraulic compartments. A visual inspection of fuel and hydraulic lines should also be carried out during this inspection.

Fire protection equipment should be inspected for serviceability remembering that fire protection equipment must be serviced by a qualified technician.

Automatic fire suppression systems must be serviced as per the fire systems manufacturer's instructions and inspected daily for serviceability.

Fire protection equipment

Portable fire extinguishers should be placed in a readily accessible location for the operator to be able to access in a safe manner.

Additional fire extinguishers may be located around the machine if accessibility permits.

Automatic fire suppression systems should be fitted to high risk machinery such as mining and forestry equipment and must be serviced as per the manufacturer's instructions and inspected daily.



Security

Machine vandalism and theft are still the most common events that the mobile plant industry incurs. Security measures and theft deterrent systems have been proven to reduce these risks.

Site compounds

Many construction sites will contain a lockable compound to store machines. This eliminates the machine being out in the open and susceptible to vandalism and theft. The compounds should be patrolled by security whilst the site is vacated.

GPS tracking devices

GPS tracking unit is a device that uses the global positioning system to determine the precise location of the machinery or other assets at regular intervals. This enables the machines location to be monitored and traced if necessary.

Data Dot

This system uses microscopic dots that have unique codes that can be traced back to the owner of the equipment. They are read using magnifying equipment normally available to auction houses, second hand dealers and law authorities.

Immobilisers

An immobiliser is an electric device fitted to mobile equipment that prevents the engine from being started unless the correct PIN, card or key is present. This system prevents the equipment from being hot wired or started after entry has been achieved.



Machine checklist

Walk around checklist	Yes	No	N/A
Check underneath machine for any water or oil leaks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check track condition and tensions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check tyre condition and pressures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check fuel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check hydraulic oil level	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check oil level in slew motor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check oil level in transfer case	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check transmission oil level	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check engine oil level	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check brake fluid level	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check power steering fluid level	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check battery security, water level and cleanliness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check coolant level	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drain air tank	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clean air pre-cleaner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check air filter indicator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check fire extinguishers are serviceable and accessible	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check that the operators manual and load charts are in cabin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check attachments for condition and security	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check for any visual damaged or broken parts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check quick hitch attachment/safety locking device	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check cabin for damage (glass/structure)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check hoses, fittings and hydraulic cylinders for leaks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Remarks

Machine checklist

Pre-operational start-up checklist	Yes	No	N/A
Are the service records up to date?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are the windows clean?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the seat adjusted correctly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check the seat belt for damage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are the warning devices working? (lights and/or audible alarms)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check all gauges	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check that the rotating/tramming lights are operational	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Remarks

Security measures site/machine checklist (items for your consideration)	Yes	No
Is the site secure?	<input type="checkbox"/>	<input type="checkbox"/>
Is the machine fitted with vandal covers?	<input type="checkbox"/>	<input type="checkbox"/>
Has the machine got lockable reservoir caps (fuel/hydraulic)?	<input type="checkbox"/>	<input type="checkbox"/>
Is the machine fitted with an alarm?	<input type="checkbox"/>	<input type="checkbox"/>
Is there a secured compound on site?	<input type="checkbox"/>	<input type="checkbox"/>
Does the site have after hour security patrols?	<input type="checkbox"/>	<input type="checkbox"/>
Has the machine been fitted with Data Dot?	<input type="checkbox"/>	<input type="checkbox"/>
Has the machine been fitted with a GPS tracking systems?	<input type="checkbox"/>	<input type="checkbox"/>
Has the machine been fitted with an immobiliser?	<input type="checkbox"/>	<input type="checkbox"/>

Site checklist

Site and working environment checklist	Yes	No
Power lines	<input type="checkbox"/>	<input type="checkbox"/>
Trees and vegetation (combustibles)	<input type="checkbox"/>	<input type="checkbox"/>
Overhead service lines	<input type="checkbox"/>	<input type="checkbox"/>
Bridges	<input type="checkbox"/>	<input type="checkbox"/>
Water course ways, dams or tidal activities	<input type="checkbox"/>	<input type="checkbox"/>
Surrounding buildings	<input type="checkbox"/>	<input type="checkbox"/>
Other equipment in the area	<input type="checkbox"/>	<input type="checkbox"/>
Personnel in the area	<input type="checkbox"/>	<input type="checkbox"/>
Dangerous materials	<input type="checkbox"/>	<input type="checkbox"/>
Underground services	<input type="checkbox"/>	<input type="checkbox"/>
Recently filled trenches	<input type="checkbox"/>	<input type="checkbox"/>

Note: Answering YES to any of the above should result in an action plan

Remarks

Safe access and machine movement checklist	Yes	No
Is there safe access to the work area?	<input type="checkbox"/>	<input type="checkbox"/>
Is there room for movement of plant equipment on site?	<input type="checkbox"/>	<input type="checkbox"/>
Will traffic control need to be considered?	<input type="checkbox"/>	<input type="checkbox"/>
Are the access roads/haul roads clear and serviceable?	<input type="checkbox"/>	<input type="checkbox"/>
Are there light vehicle movements on site?	<input type="checkbox"/>	<input type="checkbox"/>

Remarks

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