NSW Resources
Resources Regulator

NSW GOVERNMENT

Workshop hazards

Expected standards

Small Mines Roadshow

February / March / April 2025

What are the most common workshop hazards?

The maintenance workshop and workshop areas can be one of the most hazardous places on a quarry or mine site. Many types of hazards can be found there that may include:

- Service bays
- Tyres
- Hot work hazards including welding, grinding and oxy cutting
- Chemicals and their storage
- Tooling
- The use/storage of lifting equipment
- Auxiliary equipment such as forklifts, manitious, skid steer, maintenance trucks/vehicles (often the most neglected equipment on site)

Service Bays

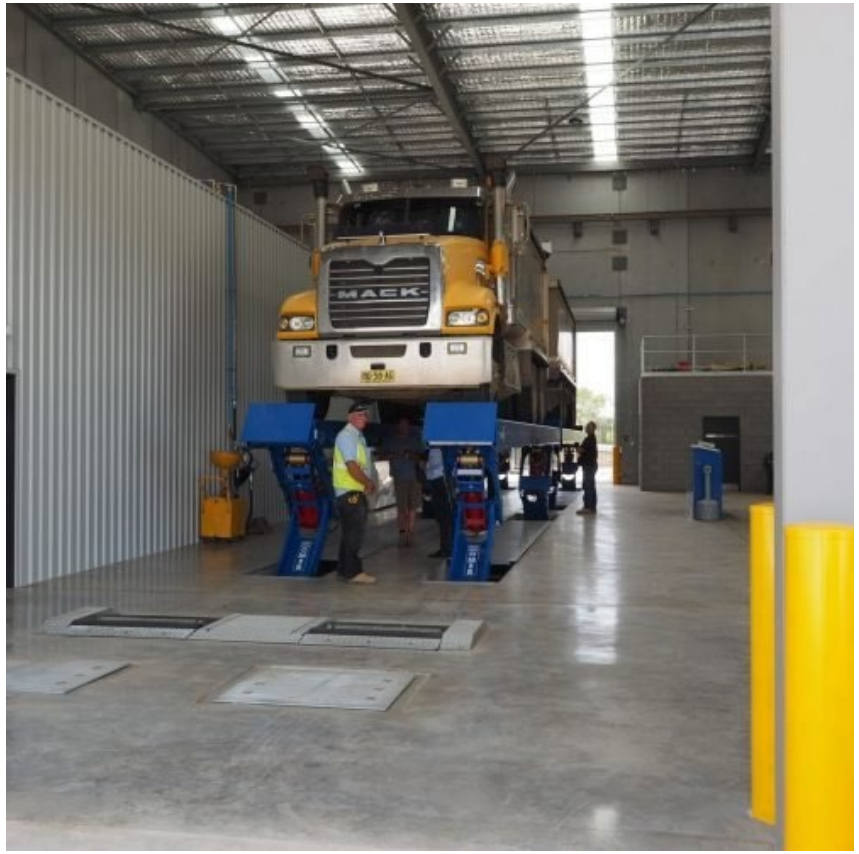
Service bays exhibit a number of hazards for workers. These include:

- Oil and oil spills.
- Machinery coming in and out of area.
- Service pits.
- The use of chemicals such as contact cleaner, Loctite or bearing retainer.
- The use of compressed air.
- Spare parts storage.
- Electrical tooling.
- Battery charging stations and storage.
- Hot works such as welding, grinding and oxy cutting.

What we see – the good

What we see – the good

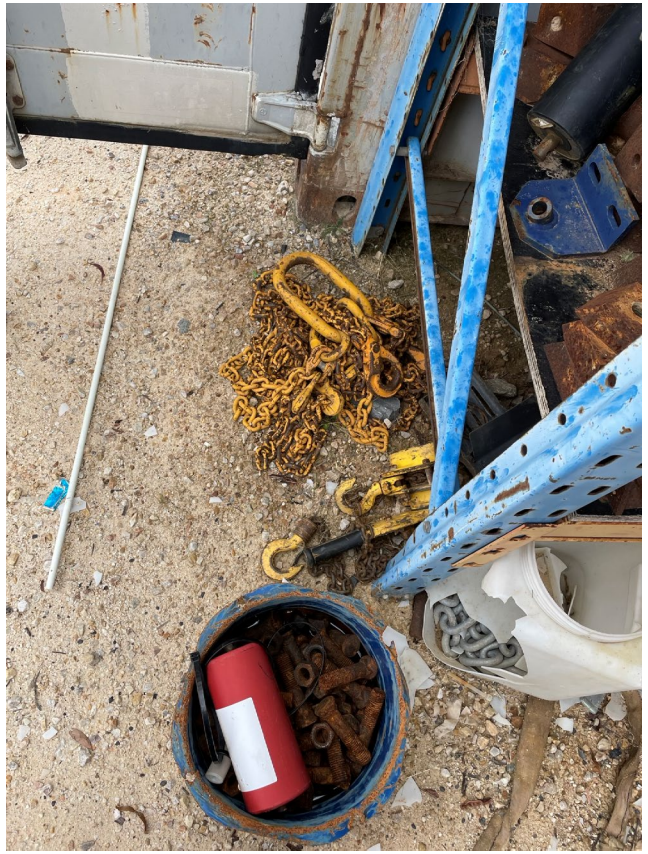
What we see – the good



What we see – the good

What we see – the bad

What we see – the bad



Tyres

Tyre and rim management is an integral part of reducing hazards associated with large earth moving tyres.

A tyre fitter's role is one of the most hazardous on a quarry or mine site, given the high risks involved and potentially sever consequences of a sudden release of air pressure.

Specialised tooling and training is essential before performing any tyre or rim changes on heavy earth moving machinery. Additionally, maintenance workshops must have properly set up bays or designated areas to ensure safety and efficiency.

Tyre explosion February 2024

What we see – the bad

Hot work area (welding, grinding, cutting)

- Hot work areas pose significant safety risks. Some of the primary safety risks include;
- Fire hazard from sparks, molten steel and hot surfaces.
- Explosions from flammable gases or vapours.
- Toxic fumes and gases as a by product of conducting hot work activities.
- Burns and heat exposure from sparks, molten steel and hot surfaces.
- Electrical hazards from welding equipment.

What we see – the good

What we see – the bad

What we see – the bad

Chemicals

Many types of chemicals are used on mine and quarry sites such as degreaser, contact cleaner, cleaning chemicals, turpentine, paint, paint thinners, fuels and lubricants and dust suppressant.

When using and storing chemicals, it requires strict adherence to safety protocols, proper handling procedures and environmental considerations to minimise the risk to workers and the environment around them.

This information can be found on the SDS sheets that come with chemicals when purchased for site.

What we see – the bad

What we see – the good

The dangers of misuse

Brake cleaner is used widely across the industry. While being an effective tool, is can pose several hazards to human health, safety and the environment.

It is as volatile as unleaded petrol.

When not used in the correct application, can cause skin and eye irritation, cause dizziness, headaches and nausea.

A build-up of vapours when used in confined spaces can create an explosive atmosphere.

Explosion May 2024

Figure 1 Inside the Crusher Lubrication Container

Figure 2 Oil reservoir and brake cleaner handpump

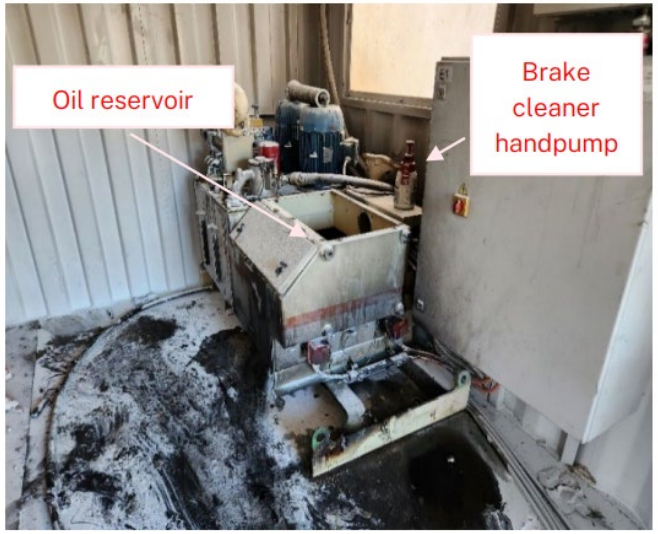


Figure 3 Brake cleaner handpump

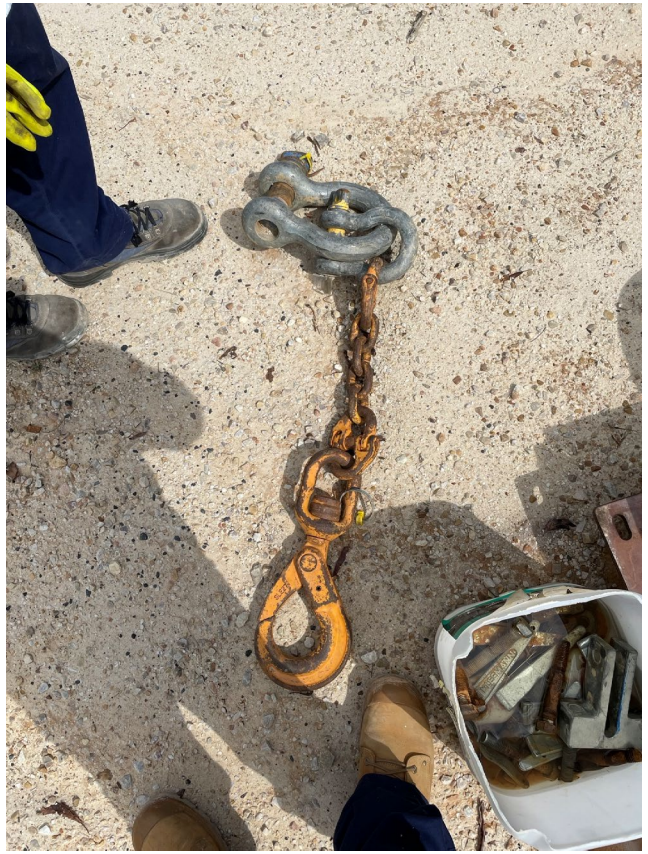
Figure 4 Milwaukee battery-operated handheld blower

Lifting Equipment

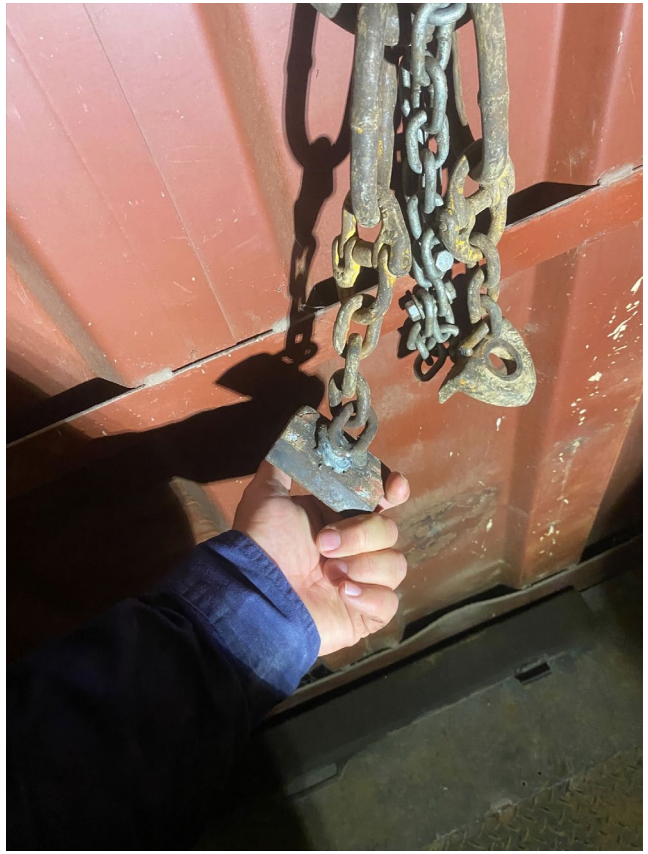
Lifting chains, slings and shackles are one of the most used tool on site from a maintenance perspective. When storing lifting equipment, it is good practice to;

- Keep them stored out of the weather.
- Keep them stored up of the ground to prevent water saturation and dampness.
- Store separately to towing gear to prevent any possible misuse.
- Any lifting equipment that is not up to standard, broken or has failed, store separately so it can not be used.

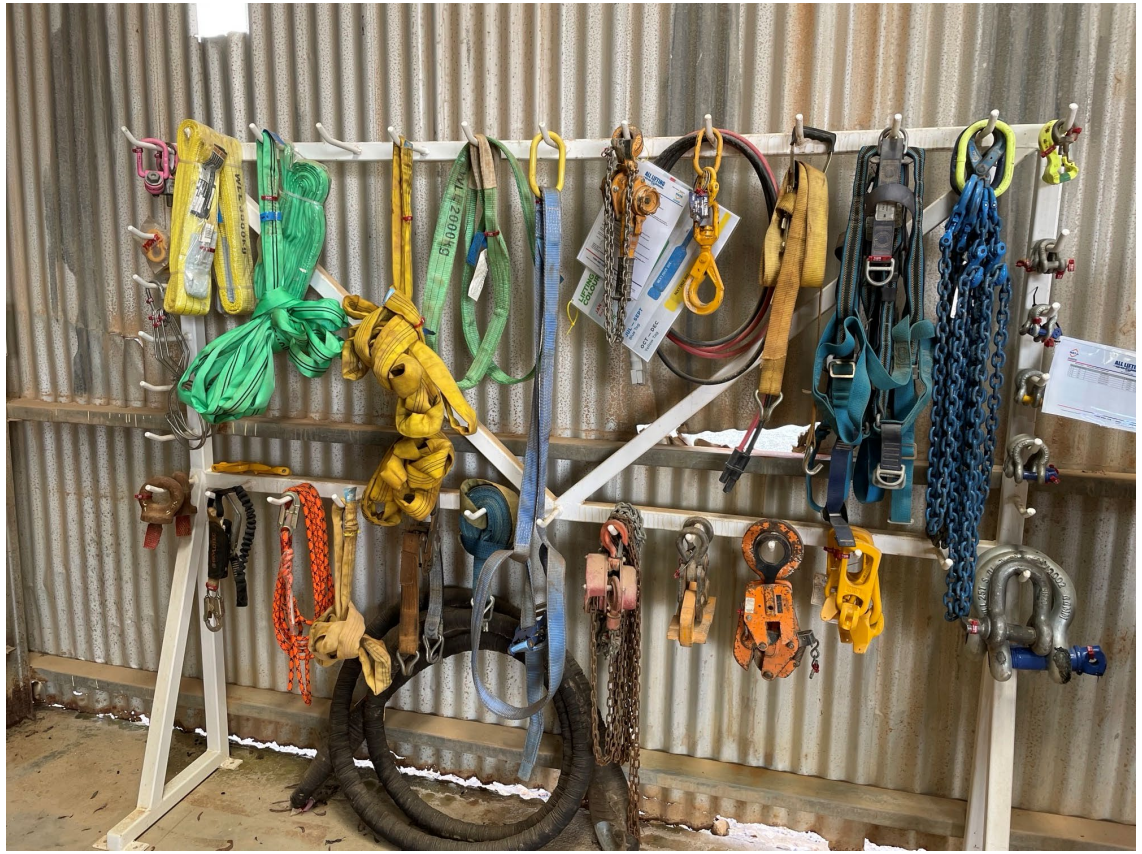
What we see – the bad



What we see – the bad



What we see – the good



What we see – the good

Auxiliary Equipment

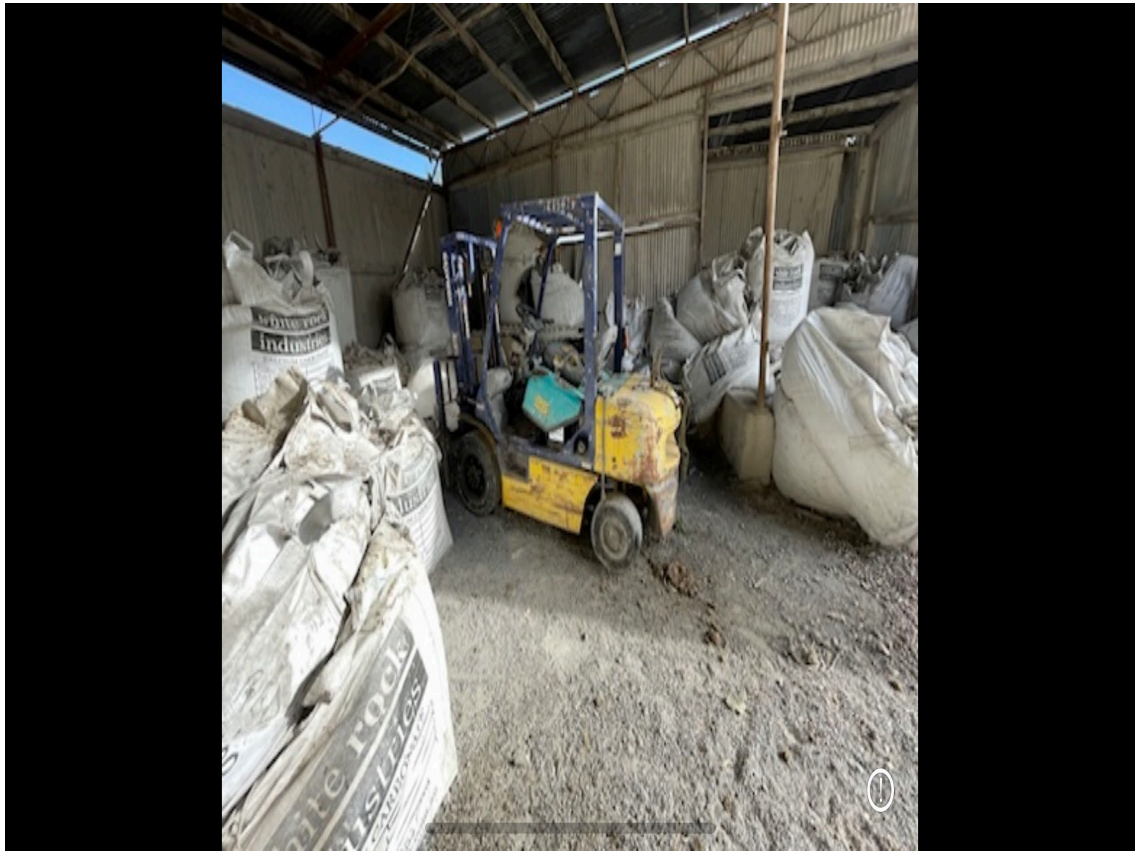
Auxiliary maintenance equipment on a quarry or mine site is often the most abused, neglected and overlooked piece of machinery. This includes:

- Forklifts
- Manitous
- Fitters vehicles and trucks
- Mini skid steers and excavators
- EWP’s

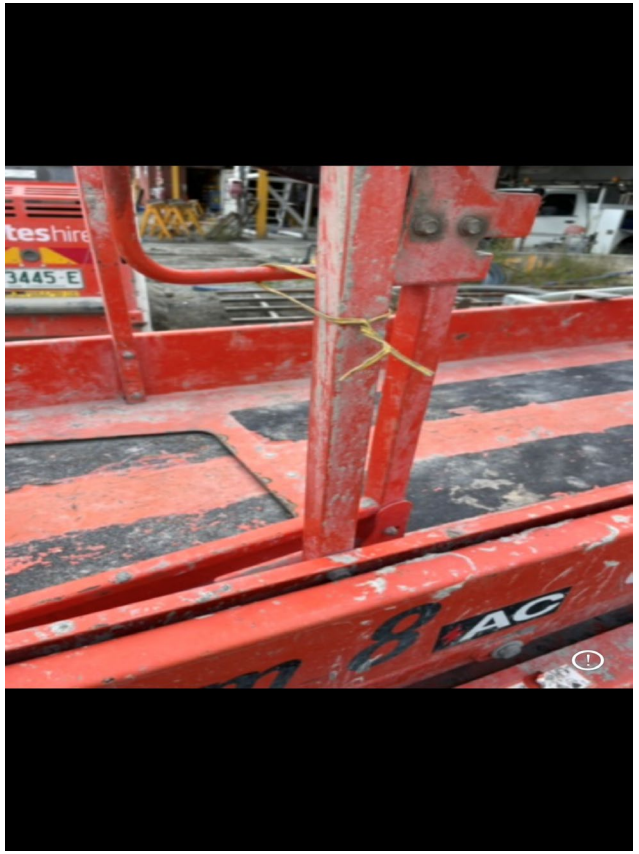
What we see – the good

What we see – the good

What we see – the bad



What we see – the bad



Fit for purpose

How do you ensure your workshop, tooling and equipment remains fit for purpose?

- Is the workshop or any maintenance area a part of the inspection process on site?
- Are pre-starts conducted prior to use on equipment and any defects reported and repaired?
- Is there a process for reporting defective tooling?

What do we take away from this?

Workshop and maintenance areas pose significant risks that are often overlooked when managing the day-to-day operations of a quarry.

Quarry managers and supervisors need to consider the following:

- Making the maintenance workshop and areas part of the inspection process for site.
- Have a process for managing defective equipment and tooling that is signed off and actioned.
- When equipment or tooling is not being utilised, it is packed away/parked up in a safe place (a place for everything and everything in its place)

Setting standards

- Set a standard on how these areas should be kept and enforce it.
- Set yourself and others up for success.
- A well organise and clean workshop is safe and efficient workshop

‘ **The standard you accept is the standard you keep** ’

Questions?

Thank you