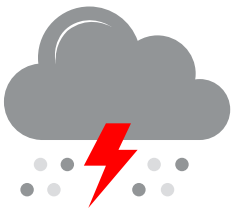# Engineering & Mechanic Workshops

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Keeping sites in proper working order

While we're here to pay to claims if the worst happens, we're all about trying to keep you and your property safe and secure in the first place.

Engineering and mechanic workshops and garages are often found in industrial and commercial zones. The premises themselves range from large, standalone buildings to shared units – and while the buildings vary, most sites share key risks to be mindful of. These industries involve the use of flammable and combustible liquids and activities like hot work, spray coating, acid baths and all types of work on motor vehicles.

Weather watch outs

While you can't control wild weather, you can reduce the risks that come with it.

Best practice

- Be aware of what weather or flood events are likely to affect your building or business. This can help you plan what needs to be done.

- Keep trees and shrubbery well-trimmed, and remove diseased or damaged limbs. Ask a professional arborist to assess and strategically remove branches to allow wind to blow through the trees.

- Protect water and other pipes from freezing using insulation, or install heat tape.

- Remove snow and hail from gutters as soon as it's safe to do so. This will reduce the possibility of subsequent rain overflowing gutters.

Must haves

- ✔ Ensure the building is well maintained, that walls and roof are watertight. Make sure doors and windows are close fitting.

- ✔ Make sure gutters and down pipes are not blocked by leaves or rubbish. Check before the winter season, or more frequently if needed.

- ✔ Inspect channel drains, yard storm water outlets and sumps and make sure they are all free-flowing and that curb side gutters are not blocked by leaves and rubbish.

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Keep your site safe

The whole building should be kept secure and in good structural condition.

Must haves

✔ **Ensure any exterior cladding, access doors, windows and their locks, latches and hinges should be in good working order.**

✔ **Check any access roller doors need to be secure with pins and padlocks once the business is closed for the day. Motorised doors should have their electric open/close switch locked – while manual doors should be chained to the building.**

✔ Organise regular maintenance to check that:

- There aren't any holes in fire walls and that fire doors can be easily opened and closed.

- Fragile or exposed cladding is protected from impact damage with bollards or barriers.

Maintaining a secure space

Good physical and electronic security can keep criminals away.

Best practices

- High fences and secured gates are important for these kinds of sites. Use a close shackle padlock, or protected padlock that's hard to tamper with — and don't leave it unlocked on the gate at any time.

- Keep valuable documents or cash in an appropriate safe that's bolted to the floor and close enough to the intruder alarm. Any valuable stock should be similarly close to the alarms – and within view of your CCTV.

- Impound yards will need a higher level of security — including monitored fencing, intruder detection and floodlighting outside.

Must haves

✔ **Keep the outside well-lit after dark to avoid theft or arson. LED-based lighting is a low-cost, high-visibility option for this.**

✔ **Set up CCTV both inside and out – think high definition, motion sensing and infrared, to for clear images.**

✔ **Install a monitored intruder alarm with a security patrol response that's professionally maintained at least once a year. Make sure your alarm sensors are left clear too. You might also want to consider random after-hours security patrols.**

✔ **Vehicle keys should be kept locked away in a key safe.**

Putting out fire risks

Having the correct equipment and protection in place can reduce the potential for loss.
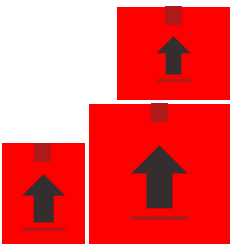
Best practice

- Practice good fire separation with processes – like making sure spray painting isn't happening near hot work or welding areas.

- Consider installing a monitored fire detection system that's compliant to NZS 4512 and fitted with smoke and heat detectors. You can also connect smoke or heat detection through your intruder alarm – but you'll need Building Consent first as it's not a certifiable fire alarm system.

- Install a manual fire alarm to alert staff and occupants with enough time to evacuate. The appropriate staff should also be trained with using hand–held equipment like fire extinguishers or blankets – which you should provide throughout you site.

Must haves

- ✓ Provide fire extinguishers throughout the site. Fire extinguishers are useful in putting these out and containing the spread, which allows more time for evacuation and also prevents a significant loss of plant or property. As a minimum a 4.5kg dry powder unit should be accessible. For fires involving metal powders, special fire extinguishers are required. Consult your fire equipment supplier.

- ✓ Carry out routine tests and maintenance checks at least once a month – and check and maintain fire appliances at least once a year.

- ✓ Keep combustibles away from ignition sources, remove trip hazards, and make sure fire exits are unblocked.

Storing valuable stock

Engineering and mechanics workshops/garages might store everything from oils and fuel to rubber tyres and motor vehicles – calling for a broad range of safe, secure storage options.
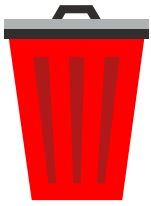
Best practice

- Certify and maintain any overhead gentry, cranes or other equipment used to move heavy stock.

Must haves

- ✓ Ensure all racks and shelving are be strong and stable.

- ✓ Any dangerous goods stores need to be properly bunded and certified.

- ✓ Keep external shipping containers padlocked and within an enclosed area, especially if you're storing valuable items.

- ✓ Check storage is kept away from heated or combustible materials – and never kept too high to be safe to reach.
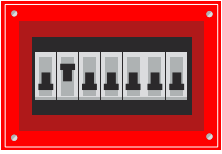
Good housekeeping counts

Good housekeeping goes a long way to keeping machinery and equipment running as they should — while also reducing the risk of production or property loss.

Think about taking the following measures:

Must haves

✔ Ensure external waste bins, pallets, skips or local cardboard disposal bins, etc. are kept clear of the building (ideally, at least 10m) with their lids locked closed.

✔ Make sure any used oil, paint or solvent-soaked rags should be disposed of in a metal bin with a lid.

✔ Clear the areas around your machinery of any swarf or oil or fuel spills every day.

✔ Secure gas cylinders in place with a chain. Hazardous substances like LPG might need compliance certification — and will need to be stored and handled safely. You should also:

- Separate any non-compatible substances

- Limit the amount of hazardous substances at work areas to the minimum required for day to day operations.

- Check if HSNO certification is needed

- Keep small quantities in dangerous goods cabinets

- Store larger amounts in a dangerous goods store or separate part of the building.

✔ Clear paths around machinery and storage areas for forkhoists and goods-handling equipment.

✔ Always keep your fire exit doors clear.

✔ Train forkhoist and goods-handling equipment operators to use this equipment safely — ensure they're licensed if need be. Battery chargers should be kept away from the main warehouse storage area (ideally in a 60-minute fire-rated room) and clear of combustibles.

✔ All spray-painting, powder coating booths and paint mixing rooms need to be certified and kept clean. Tidy up any spills straight away and keep contaminated rags in purpose-made metal bins.

✔ Fit oxy-fuel welders with flash-back arrestors.

Electrical maintenance

Faulty or damaged electrical systems can lead to fires. We recommend:

Must haves

✔ Carry out periodic verification (visual inspection and limited testing) for older buildings, where there are ongoing electrical problems, or if the electrical system shows wear and tear. An electrician will be able to advise. Periodic verification provides a comprehensive check of the entire electrical system.

✔ Keep lighting systems in good working order.

✔ Thermographic imaging of switchboards — to spot any higher temperatures or overloading.

✔ Testing and tagging all portable electrical equipment — and keeping the use of extension leads and power boards to a minimum.

✔ Maintain electrical equipment according to the manufacturer's guidelines – including any emergency generators.

Other maintenance to keep in mind

Top tips for reducing risk.

Must haves

✔ Critical mechanical plant, machinery and tools used in the production cycle should be included in a routine scheduled maintenance plan.

✔ Check and calibrate all heated machinery temperature controls.

Watching out for water damage

With routine checks and a proper plan, the risks can be seriously reduced.

Best practice

• Plumb washing machine and dishwasher outlets into the wastewater pipe, not simply with the waste pipe hooked over a sink.

Must haves

✔ Know where the water shut off valve(s) are for the water supply. Where possible, shut off the water supply during extended shutdowns or when not needed e.g. over the summer holidays or in an unoccupied building.

✔ Ensure flexi-hoses are checked regularly and replaced if showing signs of damage – or every 10 years otherwise.

✔ Check shower enclosures for signs of deterioration, especially to the wall boards/tiling

✔ Inspect plumbing, water pipes and waste lines for leaks, damage or corrosion. Check that all basins, tanks, etc have overflow facilities. Process tanks should be bunded.

✔ Check and clean the roof regularly. This is important before the winter season and after storms. Pay attention to membrane-style roof coverings as these have a limited life and can be affected by environmental exposures.

✔ Check flashings where the walls and roof meet, and also pipes and skylights where they penetrate the roof covering.

Good management controls

Top tips for reducing risk.

Must haves

✓ Check each area to see that everything is as it should be – with all equipment that's not in use is switched off and proper storage and hazardous material controls are being followed.

✓ Follow proper hot work procedures where cutting, welding or grinding is likely – including 60-minute watch and a 1-hour gap between welding stopping and the site closing. Use designated areas with welding curtains if you can.

✓ Limit smoking to a designated area that's free of any waste bins and equipped with proper receptacles for throwing away cigarette butts.

Don't get disrupted

Have robust business recovery measures in place.

Best practice

• Consult with a professional to check if your cyber security measures are good enough, especially if you maintain confidential records such as a customer database or bank account details.

• Invest in a business continuity plan, so you can readily replace key equipment if need be.

Must haves

✓ Back up critical data weekly and consider using secure Cloud services.

✓ Ensure you've got antivirus protection on your computer and regularly update it.

✓ Keep important paper records in a fireproof box/cabinet.

✓ Have spare parts for critical equipment on site to ensure that any breakdowns can be fixed quickly.

Visit **vero.co.nz/risk-profiler** to check out our other advice sheets for more tips and in-depth information about managing risk.

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