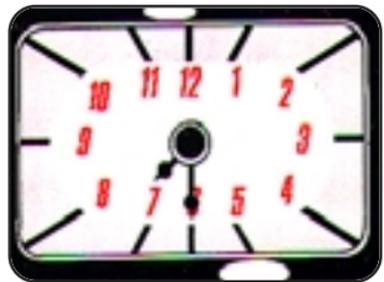


ARCHIVE

SAFETY ***at*** ***work***

*what EVERY
employee
should know*



Department of Labour

Introduction

This booklet has been produced by the Department of Labour as part of its continuing drive to reduce the incidence and severity of industrial accidents in New Zealand.

Most of what it contains can be described as “common sense”, yet every year many of the accidents in industry happen because, in one way or another, the basic guidelines set out in this booklet are not followed.

Further, or more specific, information is always available from your local office of the Department of Labour. There is also a range of other publications available.

This booklet was originally published by the Department of Labour in 1988. The sections relating to legislative requirements and the Department of Labour in the original booklet have not been reproduced here.
Pdf created February 2003.

ISBN 0-477-03428-4

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ARCHIVE Machinery

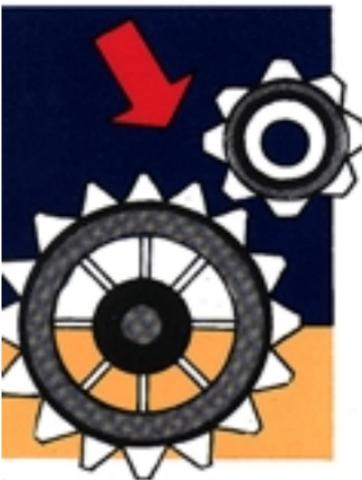


On practically every machine an emergency can arise, usually when the operator least expects it. Even experienced machinists can be injured through impulsive actions to retrieve materials from within a machine or to adjust a machine while it is in motion.

Employers in different industries are required by the Machinery Act and regulations to ensure that all machinery is guarded and operators are trained, supervised and instructed on the dangers associated with a machine. Department of Labour factory inspectors are responsible for ensuring that employers meet these and other legal requirements for the safety, health and welfare of their employees.

However, if you operate machinery, then for the safety of yourself and others you should follow these rules:

- 1** Know the dangers involved in each operation. There may be trapping points, exposed; moving parts or other hazards which can cause injury, e.g., the closing nip between the tool and die of a press, or the in-running nip between a belt and pulley.



2 Know the safe method for each operation.

3 Check that the guards provided for the machine are all in place and, where necessary, adjusted for the operation.

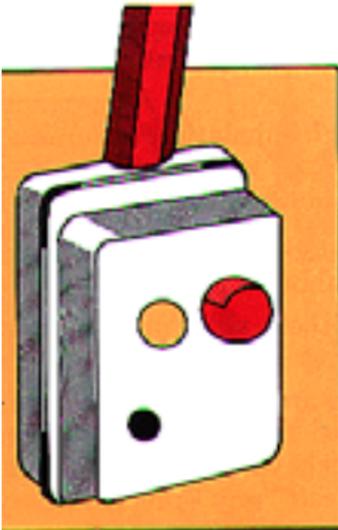
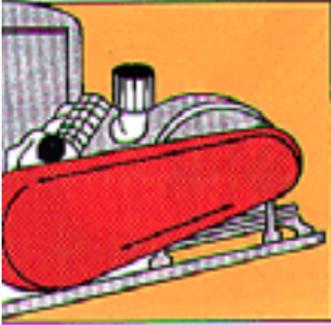
4 STOP the machine before cleaning or adjusting it.

5 Avoid placing any part of your body in any area where there is danger from exposed moving parts of machinery.

6 Avoid wearing loose clothing, particularly loose sleeves, and keep long hair close to your head. Jewellery, such as rings, bracelets and necklaces, should never be worn when operating or working around moving machinery.

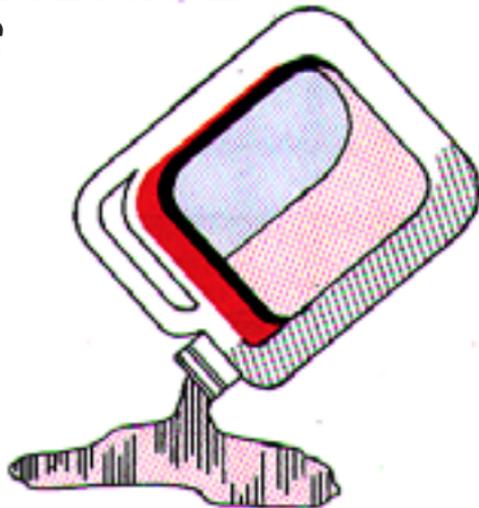
7 Never attempt to override any interlock that is fitted to a machine.

8 If a guard, interlock or any other safety device is missing or not working properly, then tell your employer immediately.



IF YOU OPERATE A MACHINE THEN DISCIPLINE YOURSELF TO AVOID IMPULSIVE ACTIONS AND TO ACT SAFELY IN AN EMERGENCY.

Chemicals



NOTE:

These are three of the more common chemical signs. There are others for particular chemical hazards that may be found in your industry— you should know them and what they mean.

Many processes in industry and elsewhere involve the use of dangerous chemicals and goods. Some are obviously dangerous as either highly flammable, corrosive or toxic, but all chemicals are dangerous under certain conditions.

If you handle chemicals, in whatever quantity, you will be at risk through one or more of these ways:

- Through inhalation of fumes,
- By contact with the skin,
- By swallowing.

If you work with or near chemicals you should:

- Know these signs and the hazards they indicate.
- Be aware of the dangers involved with the particular chemicals you are dealing with, and read any precautionary labels on containers, etc.

- Know what to do in case of a spillage.
- Know the first aid measures to be taken following any accidental contact with such materials.
- Know the location of emergency equipment—fire fighting equipment, showers, eye washes, etc.
- Always wear the protective clothing and equipment provided for the job.
- Treat all unlabelled containers with caution.
- Follow the hygiene requirements set down for the job — failure to do so may not have an immediate effect but can nevertheless be disastrous. Most cases of dermatitis, poisoning, ulcers and other industrial diseases could have been eliminated by simple hygiene.



REMEMBER: THE HARMFUL EFFECTS OF CHEMICALS ON YOUR HEALTH CAN BE IMMEDIATE AND/OR LONG-TERM.

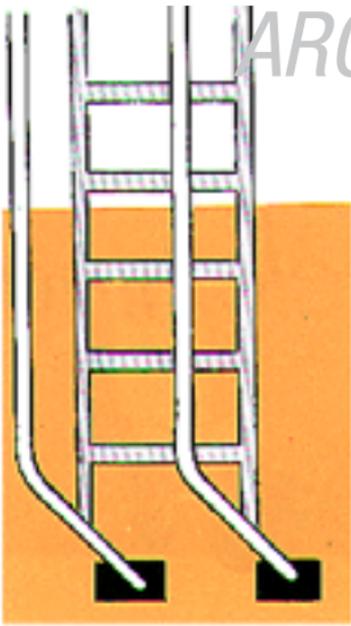
Fire and evacuation



Most of the destructive fires in industry have been attributed to unsafe acts by people working there, or to unsafe conditions that have been allowed to develop. Some of the more common causes of fires are:

- Makeshift or temporary wiring;
- Overloading of electrical wiring or equipment;
- Lack of maintenance of electrical equipment and appliances;
- Welding near flammable materials;
- Spillage of flammable materials near sources of ignition;
- Improper storage or use of flammable materials;
- Carelessly dropped cigarettes and matches;
- Heaters left switched on;





- Overheated bearings, transmissions, etc. where dust has accumulated;
- Accumulation of combustible dusts.

Whatever the cause, the effect of a fire is often decided by the way people react to it in the early stages. It is for your own safety to know as much as you can about fire precautions, fire equipment and evacuation procedures in your workplace.

Every worker should know:

- What to do in the case of fire.
- The location of fire extinguishers and how to operate them.
- The location of fire alarms and how to operate them.
- Where the fire escapes are located.
- The fire evacuation and assembly drill.



YOUR LIFE AND THE LIVES OF OTHERS COULD DEPEND ON THIS KNOWLEDGE.

Protective equipment and clothing



Many jobs involve risk of injury in some form or another, and not all risks can be eliminated at source by guarding, enclosure or other means. You may need to wear personal protective clothing or equipment to overcome particular hazards at different times in your job.

Employers are obliged to provide the protective equipment necessary for each job. You are, in turn, obliged to wear the equipment provided when necessary.

Some of the more common hazards in industry and the equipment used to overcome them are:

NOISE —High noise levels for even the shortest periods can damage your hearing, as can long exposure to moderate noise levels.

There are different grades of hearing protection available—each suitable for different noise levels— and you should find out the grade suitable for where you work and wear it whenever



and wherever noise levels require it.

EYE INJURY—Welding flash, flying sparks and particles, chemical splashes, dust and machinery are some of the more common causes of eye injury.

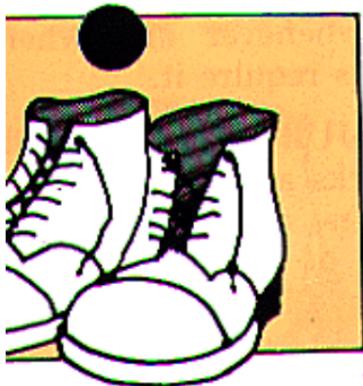
The need to wear eye protection may not always be as obvious for you as that of someone who is, say, welding, but remember an eye injury needs to happen only once to blind a person for life.

FUMES, VAPOURS AND DUSTS—These need to be guarded against by an appropriate respirator or dust mask. Types vary from the simple dust mask for short exposure to dusts, to air-supplied breathing apparatus for highly toxic gases and vapours.

Again, remember that damage may be done to your lungs and respiratory system through either long exposure to seemingly harmless dusts or by only one breath of a chemical. You should know the risk to be overcome and wear the breathing protection it requires— at all times.

INJURY TO FEET—Sturdy footwear is necessary in any job, not only to provide a good footing and save other possible injuries, but also to protect your feet from falling objects. Thongs, sandals or similar footwear should not be worn at work. If your





work requires the wearing of safety footwear, meeting the appropriate NZ standard, your employer is required to provide it.

FALLING OBJECTS—Many industries require the wearing of head protection and, in heavy industry, work areas may be declared “hard hat areas”, where the wearing of approved head protection is compulsory. If you wear a helmet in your job, ensure that it is close fitting and will not come off when it is most needed.

You may also need eye and/or hearing protection, and this is often best fitted to the helmet for comfort and convenience.



BODY AND HAND INJURY—and exposure to dangerous materials can be protected against by the wearing of suitable gloves, overalls and other protective clothing, e.g. heat-proof gloves or suits, and waterproof suits.

If you wear gloves or overalls, make sure they are close fitting, comfortable and appropriate for the setting they are being worn in. Loose-fitting overalls and aprons can be extremely dangerous, particularly around machinery. If your job requires regular changing of overalls, then make sure you do — it can affect your own health and the health of others.



Personal protective equipment varies greatly from job to job and from one industry to another, and the list above is not comprehensive. If your job means exposure to heat, water, heights or other hazards then you are likely to wear additional types of protective equipment.

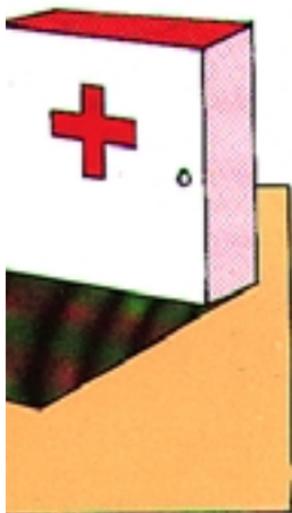
Whatever the personal protective clothing and equipment you use:

- **Keep it readily available where and when it may be required.**
- **Wear it whenever necessary.**
- **Keep it in good order and condition.**

Today's standards for protective equipment and clothing are high. Responsible manufacturers usually meet specifications issued by the Standards Association of New Zealand. Where standards are met the product will show a Standards certification mark.

The booklet *Industrial Overalls— a Safety Guide* covers the requirements for the most common type of personal protective clothing in more detail. *Respirators and Breathing Apparatus* covers the suitability, use and care of respirators.

First aid



Minor untreated injuries—cuts, abrasions, etc.—often cause absences from work with a resulting loss of wages.

In many cases it is not the initial injury that causes the absence, but the infection or complication that follows because proper first aid treatment was not given.

- Always seek immediate first aid treatment following any type of accident.
- Know where the first aid facilities are and who to contact.
- Help keep these facilities clean and properly equipped.
- If a fellow worker is seriously injured, arrange for the first aid attendant or doctor to be notified immediately.

However, there may be occasions when immediate first aid treatment is needed to save a person's life. These occasions could include cases of:

- severe bleeding,
- severe burns,
- electric shock,
- poisoning.

LEARN HOW TO DEAL WITH THESE EMERGENCIES.

If in doubt, seek advice on whether further medical treatment is required.

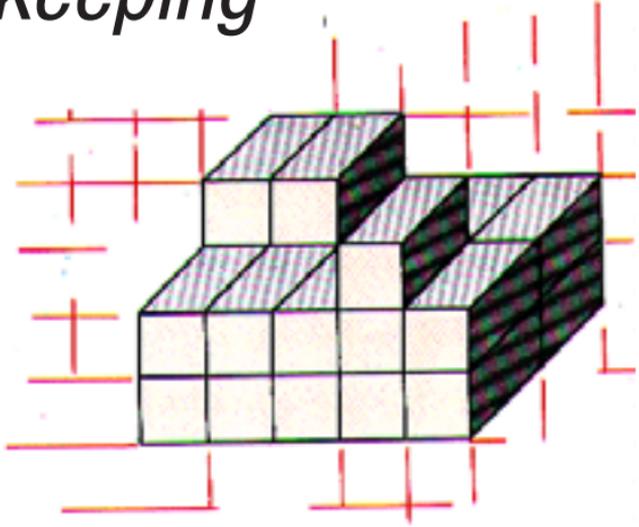
Keep wounds clean. Cleanliness is a safeguard against infection.

The booklet *First Aid for the Workplace* is available from the Department of Labour, the Department of Health and the St. John Ambulance Society.



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Housekeeping



A high standard of housekeeping is as essential at work as at home.

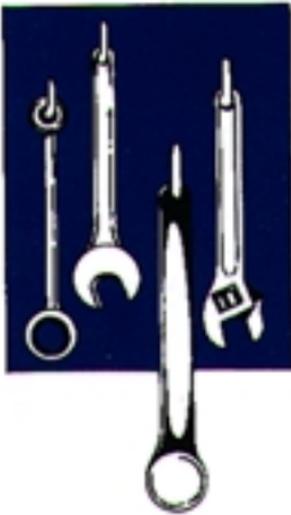
Good housekeeping means:

- 1 Cleaning up at intervals through the day;
- 2 Not letting waste and rubbish accumulate in the workplace;
- 3 Promptly removing any grease, oil, water or other spillages;
- 4 Keeping the floor, aisles and passageways clear of obstructions;
- 5 Keeping fire exits and equipment clear of stock, etc.;
- 6 Storing tools and equipment in their correct place.

Seemingly harmless dusts are often highly flammable in certain concentrations and, given a source of ignition, can explode. Such dusts should not be allowed to accumulate in the work area. Other dusts can be a health hazard if inhaled over a period.

MANY ACCIDENTS CAN BE DIRECTLY ATTRIBUTED TO POOR HOUSEKEEPING.

Booklets are available on good housekeeping in industry, safe access and the prevention of dust explosions.



Hand tools



About 15 percent of all accidents occur while hand tools are being used. Most of these arise from:

- Misuse of hand tools;
- Using the wrong tool for the job; or
- Defective hand tools.

Make sure you use the **RIGHT** tool for the job and adopt the **RIGHT** work method.

Defective or faulty hand tools should be repaired or replaced. Look out for:

- Spanners with splayed jaws;
- Files with split handles or without handles;
- Mushroom-headed chisels;
- Hammers with loose heads or split handles;
- Wrenches with worn threads.

If you use cutting tools make sure they are kept sharp—it is much easier to injure yourself with a blunt tool than a sharp one.

Portable power tools can be dangerous in the hands of inexperienced

or careless operators. Make sure you, or others you work with, are fully trained before using such tools as drills, pneumatic tools and portable circular saws.

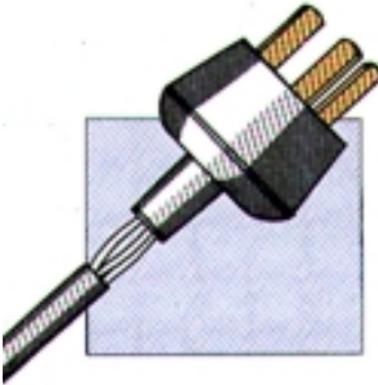
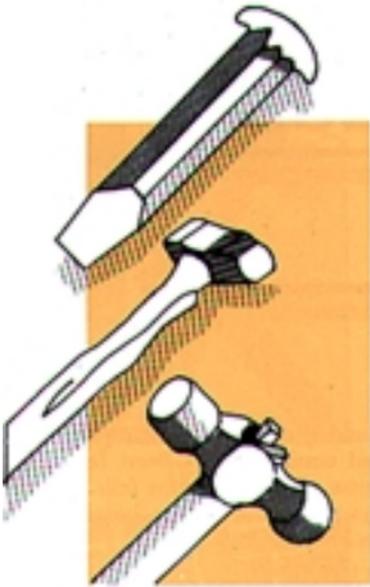
Before using power tools check for:

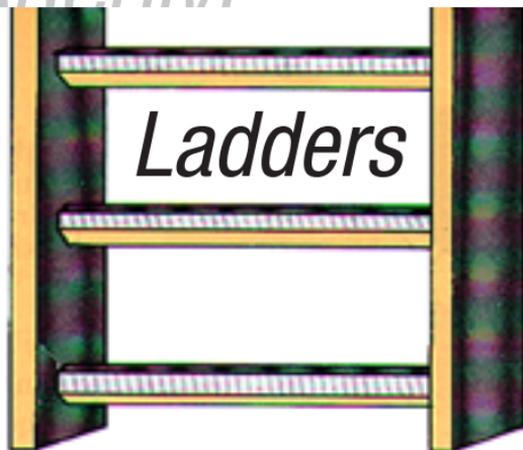
- Faulty leads and plugs;
- Trailing leads; and
- Inadequate earthing or insulation.

If an isolating transformer is required then use it.

Remember to have all hand tools, especially power hand tools, examined by a competent person at regular intervals.

NEVER LEAVE DEFECTIVE OR FAULTY HAND TOOLS ABOUT FOR OTHERS TO USE.





A ladder used wrongly or in bad condition has been the cause of many serious falls.

Always inspect a ladder before use, checking for:

- defective rungs;
- warping, cracking or splintering of stiles; or
- faulty feet.

You can test for defective rungs by tapping them with the handle of a hammer—a dull sound indicates a defective rung.

When using a ladder you should remember to:

- Stand the ladder on a firm level base.
- Set the ladder at the correct angle.
- Secure the ladder by lashing it at the top and the bottom or having someone hold the bottom steady.





- Make sure the ladder is long enough for the job.
- Always face the ladder and use both hands while climbing or descending.
- Don't use metal ladders near electricity.
- Always wear shoes with heels when climbing a ladder.
- Never over reach sideways from the ladder—move it instead.



The correct angle of a ladder is 1 unit of measure out at the base for every 4 units of height

A ladder should project at least 1 metre above any landing place.

The Standards Association of New Zealand has issued standard specifications for the design and construction of ladders and step ladders. Where appropriate only ladders meeting the appropriate standards should be used.



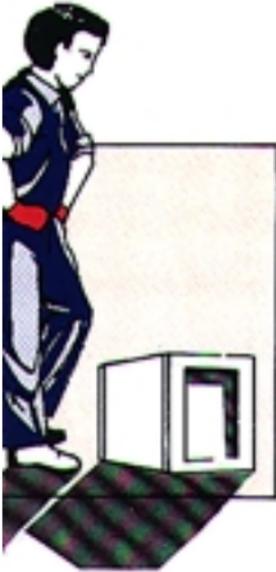
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Handling materials

More accidents occur in industry while handling materials than from any other single cause.

The most common types of injuries are strains, sprains, hernias, hand and foot injuries, spinal injuries and torn ligaments and muscles.

When lifting and handling materials, it is important to know the correct method of lifting and carrying.



SAFE LIFTING

- 1** Check that the load is within your lifting capacity and, if necessary, ask for help.
- 2** Watch out for sharp edges, and wear gloves to protect your hands when necessary.
- 3** Place your feet firmly, well apart, and squat down. Maintain good balance and get a good grip.
- 4** Keep your back as straight as you can. Lift slowly (do not jerk) by pushing up with your leg muscles. Keeping your chin tucked in helps keep your back straight.



5 Do not twist your body when lifting.

Remember: A strain can be caused more easily in lifting a bulky or awkward load than a compact one.

SAFE CARRYING

1 Carry the load close to your body.

2 Keep the back straight.

3 Ensure your vision is not obscured.

4 Never allow the load to interfere with normal walking. If it does, it is too heavy.

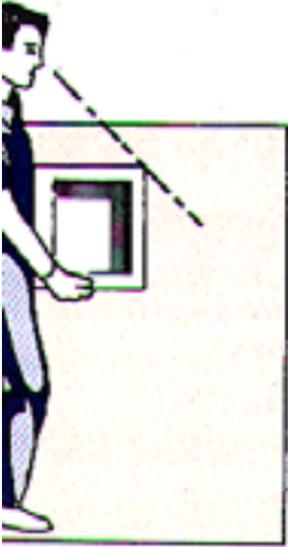
LIFTING AIDS

Wherever possible, mechanical lifting and moving appliances should be used, but make sure this equipment is used only by those who are:

- Trained in the use of the appliance.
- Authorised to use such equipment.

STACKING MATERIALS

Stack materials so that they cannot slip or fall, by interlocking or some other method.



Arrange stacks in clearly defined lines with working aisles or passageways between them. The height of a stack is restricted by the capability of the lower layers to withstand the weight on them.

Chock all rounded objects such as drums, paper rolls and logs if they are stacked on their side.

Check that every stack is stable

The Department of Labour publishes booklets on materials stacking and handling, lifting with safety, handling loose materials and forklift operating.

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Safe conduct



DANGER



Safe conduct means working with due consideration for your own safety and the safety of others —at all times.

A responsible and safe attitude to your work can be summarised as:

- Carrying out instructions properly.
- Asking when you are in doubt.
- Rectifying and reporting all unsafe conditions.
- Using correct tools and equipment.
- Keeping the workplace clean and tidy.
- Having all injuries, however small, properly attended to.
- Not distracting others or indulging in horseplay.
- Wearing or using the protective clothing and equipment provided.
- Not starting machinery unless authorised and until guards provided are in place.
- Obeying all safety rules and signs.
- Using only tools, machinery and equipment you are authorised and trained to use.
- Not leaving tools on the floor or where they can fall on people below.

**YOU MAY BE ALL RIGHT,
BUT THINK OF YOUR
WORKMATES.**