



NZ CRANE HIRE

Staff, Subcontractor and Customer handbook



▶ Contents

• Important Emergency Numbers	2
• Health and Safety Policy Statement.....	3
• Introduction	5
• Customer Information and Responsibilities	6
• Management Responsibilities.....	8
• Employee’s Responsibilities	9
• Responsibilities of Crane Operators and Dogmen	10
• Responsibilities of Truck Drivers	13
• Responsibilities of Workshop Staff	15
• Fire and Other Emergency Procedures	16
• Accident and Incident Reporting	17
• What to do if there is an accident or incident	22
• What will happen after an accident or incident	23
• First Aid in Crane Accidents	24
• Priority Action Plan	25
• Common Crane Hazards	32
• Hand Signals for Cranes	34
• Dogging with Radios.....	39
• Notes	41

► Important Emergency Numbers

Police, Ambulance, Fire Service
(ask for service required) 111
Road Emergencies (cellular phones) *555

New Zealand Crane Hire

Auckland Depot	0800 692 726
Deane Manley – Managing Director and Health & Safety	(021) 630 280
Will Dobson – Commercial Manager	(027) 225 5128
Chris Barwell – Lift Co-ordinator	(021) 398 254
Kevin Ritter – Lift Co-ordinator	(021) 929 248
Matt Boyce – Lift Co-ordinator	(027) 492 8954

Other Important Numbers

Gas Emergencies	
Contact Energy	0800 809 000
Vector	0800 802 332

Animal Emergencies	(09) 256 7300
--------------------	---------------

Power Emergencies	
Counties	(09) 238 9139
Contact	0800 226 682
Vector	0508 832 867

Poisons & Hazardous Chemicals	111 (Fire Service)
National Poisons Centre	(03) 474 7000
Cable Location	124

▶ Health and Safety Policy Statement

New Zealand Crane Hire is committed to providing a safe environment for all employees, customers, contractors and visitors through the identification and elimination, isolation and or minimisation of risk in the work place.

This policy outlines the responsibilities of all employees and the company.

Each person is individually responsible and accountable for:

- Working safely and keeping their work area safe, not endangering themselves or others around them.
- Appropriately using and maintaining tools and equipment, personal protective equipment including clothing and footwear.
- Compliance with systems of work, understand and follow instructions issued to protect their own safety and the safety of other.
- Reporting all hazards, near misses, injury and damage to their Supervisor or Managing Director and Health & Safety
- Ensuring they are fit for work.

Each Supervisor/Manager is responsible and accountable for:

- Implementing safety management plans and conduct monitoring to verify compliance.
- Utilising suitably competent personnel to achieve performance requirements and commitments.
- Communicating and consulting with employees on this policy and in the development, implementation and promotion of NZ Crane Hire's safe systems of work.
- Regularly reviewing contingency and emergency preparedness
- Ensuring customers, visitors and other interested parties comply with our safety requirements at all times.
- Training employees to meet safety responsibilities, gain relevant competency, achieve compliance with legislative requirements and meet safety standards for tasks performed.

- Identify and eliminate, or otherwise control, risks to our employees, customers, subcontractors, the public and the environment in which we operate.
- Met and, where possible, exceed applicable legal requirements as a minimum standard.
- Deliver on measurable objectives and targets that will drive continuous improvement necessary to pursue an injury free work place.
- Consult with our employees, customers, subcontractors and third parties impacted by our business.
- Develop health and safety programs that enhance the effectiveness of our leadership, work methods and the health and safety culture within NZ Crane Hire.
- Integrate health and safety management into every aspect of our operations as a priority business function.
- Support the safe and early return to work of injured employees.
- Encourage our employees to adopt a safe, healthy and environmentally conscious lifestyle, both at work and at home.



Deane Manley

Managing Director and Health & Safety

July 2017

▶ Introduction

The purpose of this safety booklet is to provide the process by which New Zealand Crane Hire, its employees and customers can achieve safety in the work place. It is not the aim of the handbook to reproduce the comprehensive standards established in the New Zealand Power Crane Association Safety Manual, but to outline the process of achieving those standards.

PLEASE TAKE THE TIME TO READ ALL RELEVANT SECTIONS AND FOLLOW THE INSTRUCTIONS PROVIDED.

▶ Customer Information and Responsibilities

The purpose of this section is to provide our customers with information that will assist with safe crane operations on their work sites. We consider that our customers are partners in achieving a safe working environment.

- A crane is a large piece of sophisticated equipment that requires a considerable amount of space to set up and operate. A lifting site is required to be established which is clear of all debris and building materials, and large enough to enable craneage operations to proceed without being obstructed. If you are unsure of the amount of space required please consult with someone from the New Zealand Crane Hire team.
- Many of the dangers associated with crane operations are directly influenced or created by the nature of the site and the objects to be lifted. Please advise of known hazards on the site. These include, but are not limited to, such things as ground stability, open excavations, filled excavations, drainage and other underground services that may have limited bearing capacity, overhead power and telephone services and mobile plant that may be operated in an adjacent area.
- Please do not be tempted to cut corners by providing Dogmen to direct the crane who are not experienced or competent enough to do so. An absolute minimum requirement is the ability to use the internationally accepted hand signals, which are outlined in the back of this booklet and the Approved Code of Practice for Cranes.
- Please ensure that all objects to be lifted are suitable to be lifted in their current state. Please advise New Zealand Crane Hire if special arrangements for load security are required before the lift commences.
- Loads cannot be lifted over people and normally the load will not be lifted over sheds or buildings without specific precautions being taken. Please advise if this is likely to occur while planning the operation so that appropriate controls can be put in place.

- New Zealand Crane Hire will normally be responsible for any traffic control measures required when lifting on or near public roads. Please discuss any such control requirements with us when planning operations.
- The Crane Operator and Dogman are responsible for the lift. Please ensure that your staff follow their instructions. Our staff have been specifically trained in safe crane operating procedures.
- New Zealand Crane Hire requests that a representative of the customer be on site during all crane operations. This person needs to be able to ensure site safety and authorise changes to lifting operations. At the completion of work your representative will need to sign our job sheet.
- Please ensure that any non-essential staff and site visitors are kept clear of the lifting area.
- If your organisation has specific entry and safety procedures please let us know of your requirements so that specific training or induction can take place. Our staff have been trained in safety procedures and are all holders of "Site Safe" passports.
- If no specific emergency procedures are in place on site our staff are trained in the actions required for emergencies involving work sites.
- Our policy requires the reporting of all accidents and incidents. This safety booklet sets out the procedure to be followed to ensure that all incidents can be properly investigated and improvements to safety procedures made.
- Procedures to help our staff render assistance to injured persons are set out in this booklet.
- A number of Generic Crane Hazards are set out in this booklet. Please take the time to familiarise yourself with these and contribute to the process of eliminating, isolating or minimising the potential effect of the hazards.

► Management Responsibilities

It is management's responsibility to ensure that sufficient resources are made available to all staff to ensure that work can be carried out safely and that our customers' needs are met without compromising safety.

Management's duties include:

- Provide operations and safety training for staff and to monitor activities to ensure safe work practices are followed at all times.
- Provide personal protective equipment and training in its use to all staff as required.
- Provide sufficient resources to maintain all equipment to the required safety standard and to immediately attend to repairs where safety could be compromised.
- Allocating the correct equipment and operator for the task required.
- Where necessary making pre-assessment site checks for work to be undertaken.
- For special lift projects ensuring that lift studies are carried out.
- Ensuring that adequate resources and equipment are made available so that staff can carry out their duties safely.
- Having active management systems in place to provide the information that our customers and Government agencies require.
- Maintain records and systems so that safety information is available to employees.
- Provide feedback from accident and incident investigations so that learning from mistakes is available to all staff.

▶ Employee's Responsibilities

Each individual member of the New Zealand Crane Hire team plays an important role in planning and ensuring that work is carried out safely. As much of our work is carried out without direct supervision, day-to-day work site safety is the crane operator's responsibility. At no time are they to put themselves or others at risk of injury by compromising the safety standards set out in the New Zealand Power Crane Association safety manual. Where safety standards are in question the PCA safety manual should be consulted or direction sought from New Zealand Crane Hire management. If in doubt about any safety issue stop and get advice.

General responsibilities for all staff

- Alcohol and Drugs are forbidden on all company premises. The operation of any item of plant or the driving of any company vehicle while under the influence of either Alcohol or Drugs is forbidden.
- Report all accidents and incidents including minor ones. The investigation and learning that is available from these incidents is central to the ongoing improvement in our safety procedures.
- Safety footwear must be worn at all times.
- In every appropriate circumstance, Personal Protective Equipment such as safety footwear, high visibility vests and safety hats must be worn. Other additional safety equipment is to be used wherever there is a perceived need or request by individual sites.
- No safety equipment must be interfered or tampered with.
- Fooling around on job sites or company premises is forbidden.
- Stay familiar with safety systems and participate in programs like Site Safe.
- Be professional no matter what your occupation. Always set and exceed high personal safety standards.
- Always attend Site Safe "Tool Box" meetings as required by customers or the company. Don't be shy to call a meeting if you see the need.

► Responsibilities of Crane Operators and Dogmen

When carrying out lifting operations the following procedures should be followed:

Pre-Site Planning

- Ensure that all information about the job has been obtained and that all equipment required has been issued.
- Ensure that safety certificates are current on the required equipment and daily maintenance checks have been performed and recorded (PCA Manual Pages 67-68).
- Know how to get to the site and travel to the site complying with all transport regulations (PCA Manual Pages 69-74).
- Know and understand the Laws and Regulations applying to crane operations (PCA Manual Pages 45-151).

On site arrival

- Remember 5 + 5 (take 5 minutes and 5 steps back to assess the situation).
- Operators are to make themselves known to the customer or their representative on site and hand out the New Zealand Crane Hire safety card.
- The experience and competence of the proposed dogman should be discussed to the satisfaction of the operator.
- A check of site safety should be carried out before any lifting operation commences even if the site has been previously assessed.
- All site hazards associated with crane operations need to be identified and sufficient controls established (PCA Manual Pages 12-13 & 60-66).
- Be sure to check for power lines, earth works, soft ground, drainage and other structures with limited carrying capacities.
- Establish and understand customer site safety requirements and procedures and comply with them at all times.
- Only when an operator is satisfied that any hazards are controlled and a lift can proceed safely, can operations commence.

Crane set up

- Ensure the crane can be set up on firm ground. Set sufficient blocks in a solid foundation to allow outriggers to provide a level and stable crane platform (PCA Manual pages 21-26).
- Only cranes with approved free on wheel ratings can be used without outriggers set and only if absolutely necessary.
- Do not set up too close to trenches etc. as the machine vibration can cause the walls to collapse.

Operation

- Establish an area on site that ensures the safety of all site personnel. Seek the assistance of the customer's representative if you need to have the site altered or personnel controlled.
- Ensure the area used is clear to lift.
- Avoid slewing over people – keep everyone away.
- If necessary put in place barriers and signage restricting access into hazardous areas.
- Make sure everyone is clear of the machine.
- Keep the loads as close to the ground or carrier as possible.
- Operators are to be fully aware of the safe working loads (SWL) charts in particular the stability and structural limitations of machines.
- Consider the effect the weather will have on operations.
- Exit the crane via the steps - don't jump. Take care when standing on outriggers.
- Keep the deck clear of obstacles and tidy at all times.

Rigging Loads

- It is the operator's responsibility to ensure that a load is correctly rigged (PCA Manual Pages 81-84 & 117-135). The operator may place reliance on the dogman to ensure safe rigging but only if they are 100% confident of their competence to do so. In the event that the dogman is not a NZ Crane Hire team member then the operator is to retain sole responsibility.

- Check lifting points are sufficient to take the weight, the hook is centred and sling suitably adjusted to balance the load.
- As required attach tag lines to control loads.
- When lowering loads ensure they are firmly positioned before releasing slings.

Dogman

- If the Dogman is not an experienced employee of New Zealand Crane Hire the operator is to take the time to ensure the Dogman has been sufficiently instructed and given supervision to perform the tasks required.
- If in doubt as to the skill of the Dogman, supervision should be provided. If in doubt seek assistance and direction from New Zealand Crane Hire Management.
- Lifts which are out of sight of the operator should be controlled by a two-way radio (PCA Manual Page 116).
- Be competent with the hand signals for safe crane operation (PCA Manual Pages 111-115).

Crane Maintenance

- Ensure that safety certificates, COF and RUC for your allocated equipment are current and daily maintenance checks have been performed and recorded. Any equipment which has expired safety certificates or has defects that affect safety must not be used.
- All identified defects are to be logged and reported to the operations supervisor and maintenance staff for attention.
- All work carried out must be fully documented in the individual logbook for each plant item.
- Each crane is to have its full allocation of safety and lifting equipment and any missing items notified to the Storeman as soon as possible.
- Keep cab tidy and clean at all times. Clean glass weekly.

► Responsibilities of Truck Drivers

Do not forget the requirement for hard hats and high visibility vests when working with cranes, in danger of falling objects or needing to be easily seen.

Loading

- Ensure load is correctly positioned on deck and securely lashed down.
- Ensure that overdimensional loads have proper signage and are carried with appropriate permits.
- Ensure that no small items are insecure. If needed, arrange for loose items to be carried in toolboxes or similar.

Driving

- Know, understand and comply with all traffic regulations.
- Do not exceed permitted driving hours and have all rest breaks as required.
- Consider the effect the weather and traffic conditions will have on your trip.
- Drive in a safe considerate manner.
- Take particular care when reversing or manoeuvring in difficult situations. If you can't see the back of the load, get someone to guide you.

Unloading

- Be careful with heavy weights. Use safe lifting techniques, keeping your back straight and your knees bent. We don't give medals for weight lifting. If it's too heavy get help.
- Take care working around cranes and forklifts. Follow the instructions of the driver or Dogman. Look up for hooks, slings and chains.
- Advise others of any hazards you see.
- If using truck mounted cranes ensure that you apply the same standards of operation that apply to crane operators (PCA Manual pages 86-92).

Truck Maintenance

- Ensure that safety certificates, COF and RUC for your allocated truck and trailer are current and daily maintenance checks have been performed and recorded. Any vehicles that have expired certificates or defects that affect safety must not be used.
- All identified defects are to be logged and reported to the Operations Supervisor and maintenance staff for attention.
- All work carried out must be fully documented in the individual logbook for each vehicle.
- Each vehicle is to have its full allocation of safety equipment, chains, twitches and tie downs. Any missing items are to be notified to the Storeman as soon as possible.
- Keep cab tidy and clean at all times. Clean glass weekly.

► Responsibilities of Workshop Staff

- Be familiar with the safe operation of all workshop equipment.
- Use goggles and ear protection when using power tools or welding and cutting equipment.
- Wear gloves when handling acids, solvents or corrosive liquids.
- Use transformers or RCDs when using power tools. Our power leads and appliances are checked six monthly and are marked with a tag. Don't use them if the tag is expired or they are frayed or broken. Get them repaired.
- Look for hazards around vehicles and machinery. Ensure the vehicle you are working on is prevented from moving.
- Clean up all spills that create a slipping hazard immediately.

► Fire and Other Emergency Procedures

- If you discover a fire or other emergency situation such as a chemical spill, sound the fire alarm. Know where the nearest alarm activation point is, closest to your usual work place.
- Call the fire service by dialling 111.
- Do not attempt to extinguish the fire unless it is absolutely safe to do so, and ensure that the correct extinguisher for the nature of the fire is used.
- Once an alarm is sounded all staff are to evacuate the building immediately and assemble at the designated assembly point.
- Each depot has a clearly defined evacuation plan and assembly point, which is posted in each depot.
- There will be regular evacuation drills and wardens will be appointed for each depot.
- The wardens will ensure that all personnel are evacuated and advise the Fire Service of any missing persons.
- No one is to return to a building that has been evacuated until instructed to do so by a fire warden.

► Accident and Incident Reporting

Summary of procedure

The purpose of this document is to explain the Company Policy on how accidents or incidents are to be reported, and to whom they are to be reported. The system will also set out what the accident-reporting officer has to do, and how they are to do it.

The system will be fully explained to all employees, and they will be given notes on what they need to know and do in the event of an incident or accident, so that they understand the process.

The Health & Safety in Employment Act (1992 and as amended in 2002) requires that we must keep a register of all incidents and accidents. New Zealand Crane Hire is committed to the accuracy of reporting and recording of all accidents in the workplace. Those accidents that fall within the description of serious harm must also be reported to the Occupational Safety & Health Service of the Labour Department, and in addition to this, where there are electrical accidents, these must also be reported to the Energy Safety Services. Any accidents involving a claim on ACC need to be reported to the ACC.

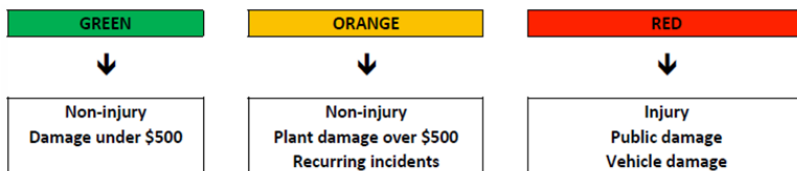
We will use the Accident or Incident Report to help us identify why the accident occurred, and the relevant hazards involved. This information will be passed on to employees, together with the plan for controlling those hazards, as outlined in the system of Hazard Identification Assessment and Control.

With the co-operation of all employees this will help us create a safer working environment, and prevent accidents or incidents from happening.

New Zealand Crane Hire requires ALL accidents and incidents to be reported as soon as possible using the forms that are available in every vehicle. Accidents are to be classified as Serious or Minor:

Accident and Incident definitions

Accidents and Incidents are to be initially classified as follows:



When entering reports into the Vault system the following applies

Level One is **Green**

Level Two is **Orange**

Level Three is **Red**

An Accident is an event that causes any form of damage or harm.

An Incident shall be a near miss that under slightly different circumstances has the potential to result in an accident.

Incidents are considered the most valuable learning opportunities in the goal towards zero accidents.

Any accident causing damage or incident that in other circumstances could have caused harm may be escalated in colour by any NZ Cranes staff member at any stage.

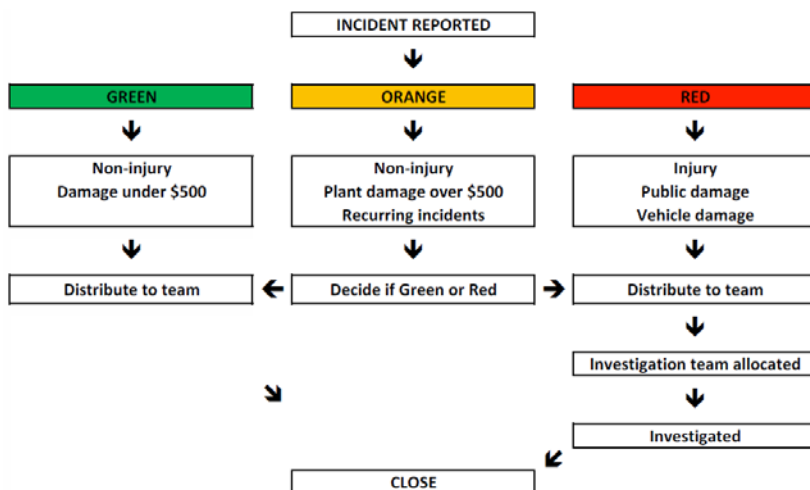
Only the Managing Director and Health & Safety may downgrade a reported incident or accident.

All incidents are reported using the Operators Accident / Incident or Complaint Form and placed in the reporting box outside Dispatch office. An example of a form is at the end of this section.

Any RED incidents are to be reported to Management (Lift Co-ordinators or Managing Director and Health & Safety) IMMEDIATELY by any means necessary at the time. This can be by way of phone, email, text message or the after-hours message service.

All incidents reported will be entered into Vault as ORANGE and circulated to ALL USERS, to ensure consistent communication and opportunity for improvement.

The following flowchart explains the communication and investigation process.



Depending on severity of injury, damage or potential the investigation will be documented informally and communicated by email and notice, or formally.

Formal investigation template can be found on Sharepoint under Templates

<http://companyweb/Shared%20Documents/Forms/AllItems.aspx?RootFolder=%2FShared%20Documents%2FTemplates&FolderCTID=0x01200068A5EF4B6C23AA48A519C43FA02F52D8&View={57CF48C2-B631-4123-8DFD-F6FC93B920DD}>

External reporting HSE Act - Serious Harm

The Health & Safety in Employment Act 1992 defines Serious Harm as following:

Schedule 1 s 2(4) Serious harm

- 1 Any of the following conditions that amounts to or results in permanent loss of bodily function, or temporary severe loss of bodily function: respiratory disease, noise-induced hearing loss, neurological disease, cancer, dermatological disease, communicable disease, musculoskeletal disease, illness caused by exposure to infected material, decompression sickness, poisoning, vision impairment, chemical or hot-metal burn of eye, penetrating wound of eye, bone fracture, laceration, crushing.
- 2 Amputation of body part.
- 3 Burns requiring referral to a specialist medical practitioner or specialist outpatient clinic.
- 4 Loss of consciousness from lack of oxygen.
- 5 Loss of consciousness, or acute illness requiring treatment by a medical practitioner, from absorption, inhalation, or ingestion, of any substance.
- 6 Any harm that causes the person harmed to be hospitalised for a period of 48 hours or more commencing within 7 days of the harm's occurrence.

Serious Harm injuries must be reported to Worksafe as soon as possible and within 7 days in writing.

The Vault system generates the prescribed notice form for written notification or notification can be made online at

<http://www.business.govt.nz/worksafe/notifications-forms/accident-serious-harm>



External reporting - PECPR Regulations

Pressure Equipment, Cranes and Passenger Ropeway Regulations 1999 require separate notification of Accidents or Incidents involving Cranes. The trigger for this notification is as following:

- (2) The event is one that—
 - (a) occurs in a place of work; and
 - (b) causes—
 - (i) damage that affects the operational safety of equipment; or
 - (ii) damage to other property that may affect the safety of equipment; and
 - (c) might, in different circumstances, have caused a person to be seriously harmed.

There is currently no structured process for reporting this to Worksafe and this is to be done on a case by case basis in the meantime.

External reporting - Electrical Accidents

Electrical Accidents that require medical attention or cause a fire are also to be reported to The Inspector of Electrical Accidents, of the Energy Inspection Group, Ministry of Economic Development, PO Box 1473, Wellington (Ph: 04 472 0030). The report is to be completed and submitted within 48 hours.

Report Form

For copy of the NZ Crane Hire 'Incident Report' form please skip to page 40.

► What to do if there is an accident or incident

- In the event of a serious injury call for an ambulance by dialling 111.
- If possible administer first aid to the casualty until professional help arrives. Be familiar with the basic first aid instructions in this booklet.
- Do not put yourself at personal risk.
- Make the site safe.
- Call for help and warn others of any possible dangers.
- Never move a casualty unless there is immediate danger.
- Render all assistance to emergency personnel but do not hinder their work.
- Call New Zealand Crane Hire management as soon as practical for further instructions.
- Do not interfere with the scene of a serious harm accident unless to save life, prevent harm or relieve suffering.
- Complete the completed accident report form that is carried in all vehicles and cranes. Give it to the Accident Reporting Officer at New Zealand Crane Hire.
- Have the customer representative acknowledge and sign the accident report form as a fair description of the events.

► What will happen after an accident or incident

- If a serious accident occurs the circumstances will most likely be investigated by OSH and/or the Police to ascertain the cause. The outcome will depend on the circumstances.
- New Zealand Crane Hire will also conduct its own internal investigation using either its own staff or a combination of this and outside experts.
- All aspects of the incident will be considered and explanations and statements obtained from those staff directly involved and any witnesses.
- A report will be prepared and made available to all parties involved.
- A copy of the report along with all other documents and records will be filed in the Accident Register kept at New Zealand Crane Hire.
- The findings of the report will be made known to all staff so that the safety and/or operational enhancements identified can be incorporated into our operating procedures.
- The main purpose of any investigation is to learn from mistakes and not to apportion blame, although this may be an outcome.
- A system is in place to record accidents and incidents for statistical purposes and our progress in accident prevention will be regularly advised to our staff and customers.
- Any employee who is injured will receive assistance with rehabilitation in line with our Staff Rehabilitation Policy.

► First Aid in Crane Accidents

The First Aid procedures in this section are intended as a guide only. It is recommended that individuals attend a First Aid Course run by a professional organisation such as the Order of St John. First Aid skills such as CPR should be practised regularly as they are easily forgotten. OSH recommends a First Aid Refresher Course every two years for Workplace First Aiders.

New Zealand Crane Hire would like to thank the Power Crane Association and The Order of St John for their assistance in producing this section of the booklet.

► Priority Action Plan

The **Priority Action Plan** is a step-by-step strategy for use when managing a first aid incident. Following this plan will allow you to identify and deal with the initial life-threatening conditions before commencing treatment for non-life-threatening injuries.

S Check for **SAFETY** – to you, the casualty or others. Only move the casualty if in danger. Take care not to be the next casualty. If possible, ask someone else to call for help. Dial the emergency number **111**. Give clear details of location, number of casualties, type of incident and type of injuries or illness.

R - Does the casualty **RESPOND**? Gently shake and shout. If no response call an ambulance.

A - If unconscious, clear the **AIRWAY**. Remove any obstructions: blood, vomit, broken dentures or teeth. Open the airway – head tilt/chin lift.

B - Check for **BREATHING**: Look, listen and feel. If not breathing, position casualty onto back. Maintain open airway. Give the patient two effective breaths. Feel for pulse. If present, continue breathing at a rate of 12 to 15 breaths per minute.

C - Check for signs of **CIRCULATION**. Look for movement including swallowing and check the neck pulse. If no **PULSE** perform **CARDIOPULMONARY** resuscitation.

S - Check for **SEVERE BLEEDING**. Control bleeding as soon as possible.

S	SAFETY
R	RESPONSE
A	AIRWAY
B	BREATHING
C	CIRCULATION
S	SEVERE BLEEDING

Emergency FIRST AID is simply common sense.

Before you do anything at the scene of a crane accident – THINK.

These pages are designed only as a basic guide to help you to adopt the proper procedure in crane accidents and the correct approach to RESCUE BREATHING, CPR, BLEEDING, SHOCK IDENTIFICATION OF BROKEN BONES and BASIC LIFE SUPPORT TECHNIQUES.

ALWAYS GUARD AGAINST FURTHER ACCIDENTS

- Avoid placing yourself at risk.
- Weigh the risk against the success of your rescue.
- Decide whether the crane is in danger of rolling over or falling.
- Beware of petrol, diesel or gas leakages – these can ignite.
- If power lines are down, consider them to be LIVE.
- Power lines in water could also render the water LIVE.

MOVE AN ACCIDENT PATIENT ONLY IF IT IS VITAL TO SURVIVAL

If pinned under a heavy object DO NOT attempt to lift it off without sufficient help in order to ensure it does not fall back.

CALL IN THE PROFESSIONALS - Phone EMERGENCY SERVICES on 111 for an AMBULANCE.

Detail clearly the nature of the accident and its location.

NOTE – The time taken between the accident and the arrival of the ambulance or doctor could mean the difference between LIFE and DEATH. It is up to you to attempt to keep the time to a minimum.

It is good practice for all involved with crane operations to have basic first aid training.

CPR Adult

- Ensure own safety.
- Assess consciousness (“Are you okay?”).
- Call/yell for help. Send someone to phone an ambulance.

AIRWAY

- Clear airway, remove objects/fluids from mouth.
- Open airway: head tilt/chin lift.
- If the patient’s airway and breathing cannot be effectively assessed in the position you found the patient, move them onto their back.

BREATHING

- Keep airway open.
- LOOK, LISTEN & FEEL for breathing (more than an occasional gasp) for up to 10 seconds.
- Rescue breathing: 2 effective breaths.

CIRCULATION

- Assess for signs of circulation.
- Interlock fingers of both hands and place the heel of the lowest hand on the lower half of the patient’s breastbone.
- Vertical compressions: 4 – 5cm, Rate 100,
- After 15 compressions give 2 slow breaths.

CHECKS

- After 4 cycles (or about a minute) reassess for signs of circulation.

CONTINUE CPR UNTIL

- The victim's own pulse and breathing have been restored.
- An ambulance officer or other health professional takes over.
- You are exhausted.

EVEN WHEN THINGS LOOK HOPELESS DO NOT GIVE UP UNTIL TRAINED HELP ARRIVES

UNCONSCIOUS CASUALTY

- Follow the **Priority Action Plan**.
- If casualty is not breathing, commence CPR.
- If casualty is breathing and there are no major injuries present place in recovery position.
- If casualty is breathing and major injuries are present **DO NOT move casualty unless absolutely necessary**. Ensure open airway is maintained (head tilt/chin lift).
- Wait the casualty and monitor breathing while someone calls an ambulance.

SHOCK

Shock is a serious condition resulting from an inadequate blood supply to the tissues of the body. It may be medical and/or injury related.

Signs and Symptoms

- Pale, cold, moist skin.
- Rapid shallow breathing.
- Rapid, weak pulse.
- Thirst.
- Nausea.
- Dizziness.

WARMTH
AIR
REST
REASSURANCE

Management

- Follow the **Priority Action Plan**, then
- WARR on shock.

BLEEDING

SERIOUS BLEEDING

- Serious bleeding may be life threatening. Act promptly.
- Apply direct pressure to the wound and surrounding skin using a sterile dressing and bulky pad if available.
- DO NOT allow the casualty to bleed to death while waiting for sterile dressings or pads. Improvise with a clean folded cloth (e.g. a handkerchief or tea towel).
- Retain the dressing and pad in position with a firm bandage.
- Wear gloves if they are available.
- Elevate the affected part where possible.
- Watch for and manage shock.
- Remember the Priority Action Plan.
- **DO NOT** remove objects which are impaled in the wound.
Pad around the wound and the object.
- Call for an ambulance.

GLOVES
DIRECT PRESSURE
ELEVATE
AMBULANCE

MINOR WOUNDS

- Minor wounds should be cleaned using soap and water or an antiseptic solution.
- Apply a clean dressing (preferably sterile and non-adherent) to the wound.
- Seek medical aid, particularly if the wound is deep and dirty.

INTERNAL BLEEDING

Internal bleeding is often the result of serious injury. There may be no external sign to the first aider until shock occurs.

- Follow the **Priority Action Plan**.
- Lay casualty down and advise complete rest.
- Treat as for shock.
- Monitor ABC.
- Call for an ambulance.

FRACTURES and DISLOCATIONS

SIGNS AND SYMPTOMS

- Pain.
- Swelling.
- Deformity.
- Bruising.
- Loss of movement.
- Shock.

Management

Try not to move the casualty unless in danger.

- If movement is necessary, steady and support the injured part.
- Remember the Priority Action Plan.
- Control severe bleeding and cover wounds.
- Call for an ambulance.

HEAD INJURIES

Any person who has had a head injury (e.g. concussion) should be assessed by a doctor, particularly if they have been unconscious even if only for a short time.

SPINAL INJURIES

- **DO NOT** remove the casualty unless in danger.
- If movement is necessary, the head and neck **MUST** be adequately supported.
- Follow the Priority Action Plan and call an ambulance.

CRUSH INJURIES

Priority Action Plan

- If the patient can be released easily this should be undertaken urgently, protecting the spine and taking care not to cause further injury.
- If in doubt, before releasing the patient phone the ambulance service for advice.
- Stop any bleeding with direct pressure and manage fractures.
- Seek urgent assistance from the ambulance service and inform them that a severe crush injury has occurred.
- Monitor ABC and reassure the patient.

▶ Common Crane Hazards

New Zealand Crane Hire has some Best Practice Policies that help to eliminate the bulk of the generic hazards that we face from day-to-day. These include:

- All machinery and lifting equipment to be operated within manufacturer specification-rated capacity and safe working radius.
- All relevant Codes of Practice to be adhered to at all times.
- The Power Crane Association (PCA) Safety Manual to be the minimum standard for the operation of any crane.
- All daily safety checks as outlined in the PCA Crane Safety Manual to be carried out.
- All NZ Cranes Hire team members to be working towards appropriate NZQA qualifications (Occupational Safety Unit Standard mandatory).
- All NZ Cranes Hire team members to be adequately trained in individual equipment usage and supervised until high level of competence is demonstrated.
- SiteSafe induction training is compulsory for all staff.

The following is a summary of the most common hazards involved in the operation of a mobile crane. The hazards are often interlinked and therefore similar action can be taken to eliminate, isolate or minimise the potential effects of it. The list is not exhaustive and should be seen as a guide to promote greater thought and awareness to the dangers involved with crane operations, for both NZ Crane Hire staff and customers.

Crane tipping over

Cranes can tip over for a number of reasons (unstable ground, loads out of radius, mechanical failure, windage etc). Consider the following issues and if in doubt, ask for advice:

- Is there adequate ground stability to ensure a solid footing for a crane's outriggers? Pay careful attention to recent excavations near the working area.
- Is the weight of the load to be lifted easily determined?
- Has the correct crane been provided or ordered for the job?

Load Falling from hook

Load contacting personnel

Load hitting other objects

All people not involved with lifting operation to be kept well clear of the slewing area of the crane. Pay particular attention to keeping members of the public informed and away from the area.

Remember the slewing area is a multi-dimensional one involving the length and height of the boom, size of crane, load radius, load size and length of rope.

Hard hats to be worn at all times. Look up regularly for potential hazards.

Never stand under a suspended load.

Load falling or shifting after being placed

- Ensure load is on firm footing before attempting to unhook from crane.
- Ensure precast panels are adequately propped.

Electrocution

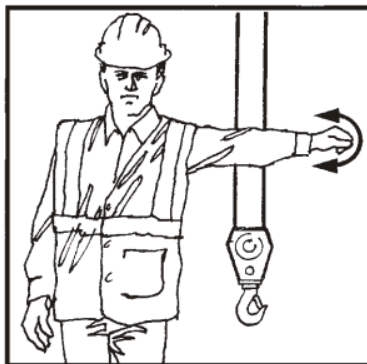
- Always check for overhead power lines.
- Never allow any part of the crane or load to come within four metres of power lines. Electricity can arc across a great distance and if wet the likelihood of current jumping to the crane is increased.
- If work closer to power lines is absolutely necessary then steps should be made when planning the job to have the electricity disconnected.

► Hand Signals for Cranes



STOP

Extend one arm and hold palm vertical.
NOTE: EMERGENCY STOP is indicated by holding both arms up.



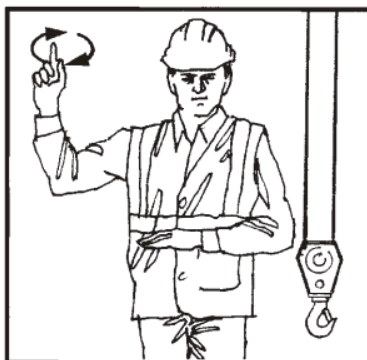
STOP (B)

Arm extended, palm down, move hand right and left. Usually for different level operations.



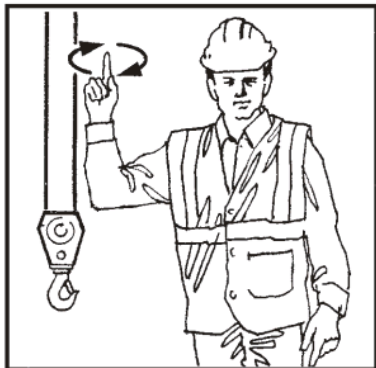
HOLD EVERYTHING

Clasp hands in front of body.



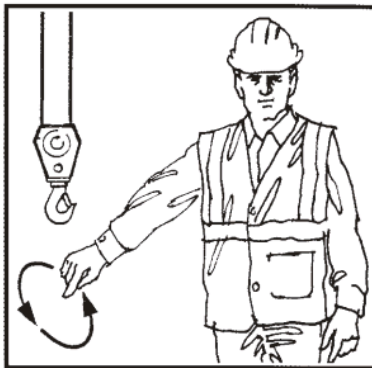
MOVE SLOWLY

Place one arm motionless across chest in conjunction with or before giving any other directional signal. ('Hoist slowly') shown as example.



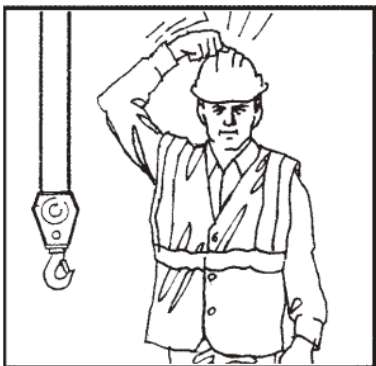
HOIST

With forearm vertical, forefinger pointing up, move hand in horizontal circles.



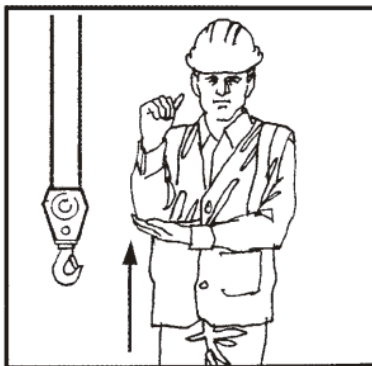
LOWER

With arm extended downward, forefinger pointing down, move arm in horizontal circles.



USE MAIN HOIST

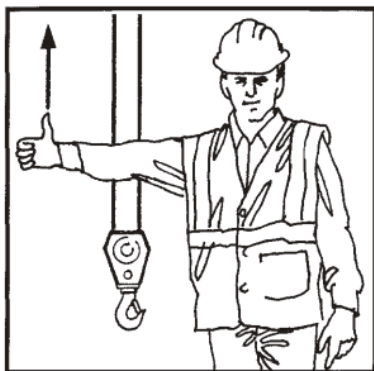
Tap fist on head, then use regular signals.



USE FLYLINE (AUXILIARY Hoist)

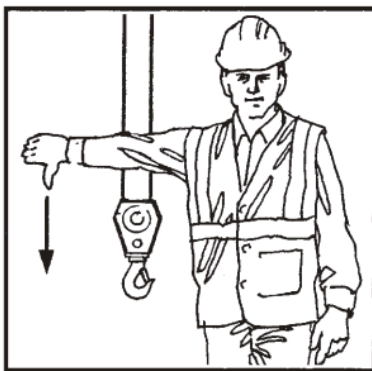
Tap elbow with one hand, then use regular signals.

KNOW YOUR SIGNALS



RAISE BOOM (Luff Up)

Arm extended, finger closed, thumb pointing upward.



LOWER BOOM (Luff Down)

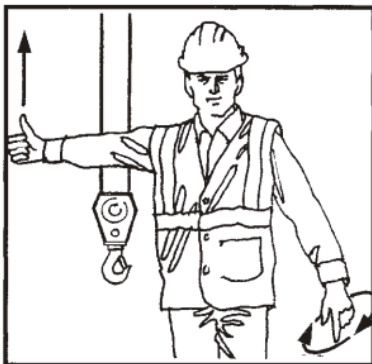
Arm extended, finger closed, thumb pointing downward.



SLEW

Arm extended, point with finger in direction of swing of boom.

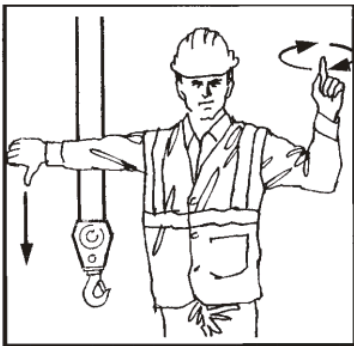
OVERHEAD GANTRY CRANE – Arm extended point with finger in the long travel or cross travel direction.



**RAISE THE BOOM &
LOWER THE LOAD**

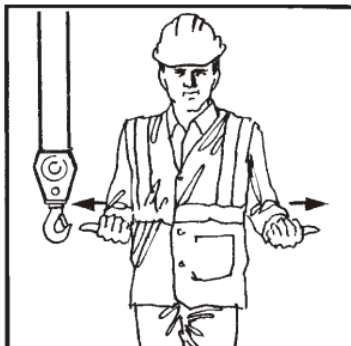
One arm extended, fingers closed, thumb pointing upward. Other arm extended downward with forefinger pointing down, move arm in horizontal circles.

TAKE SIGNALS FROM ONE PERSON ONLY



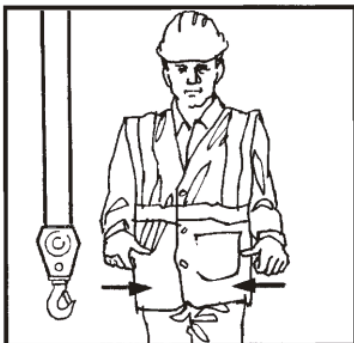
LOWER THE BOOM & RAISE LOAD

One arm extended, finger closed, thumb pointing downward. Other arm vertical with forefinger pointing up, move arm in horizontal circles.



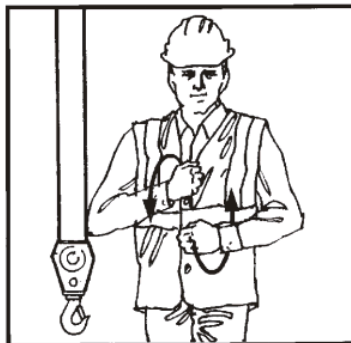
EXTENDED HYDRAULIC BOOM OR TROLLEY OUT (Tower Crane)

Both fists in front of body with thumbs pointing outward.



RETRACT HYDRAULIC BOOM OR TROLLEY IN (Tower crane)

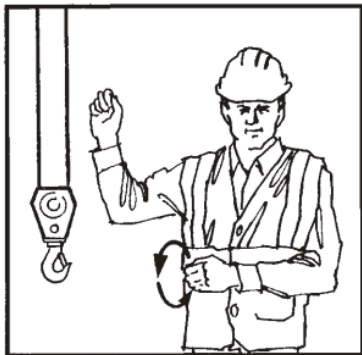
Both fists in front of body with thumbs pointing towards each other.



TRAVEL

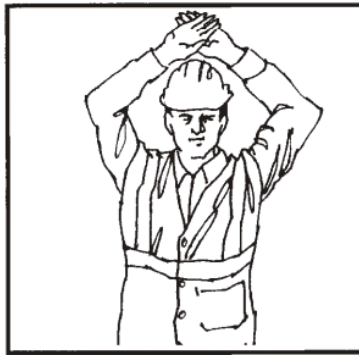
Arms bent at the elbows, fists clenched, rotate both forearms around each other, then point in the direction of travel.

KNOW YOUR SIGNALS



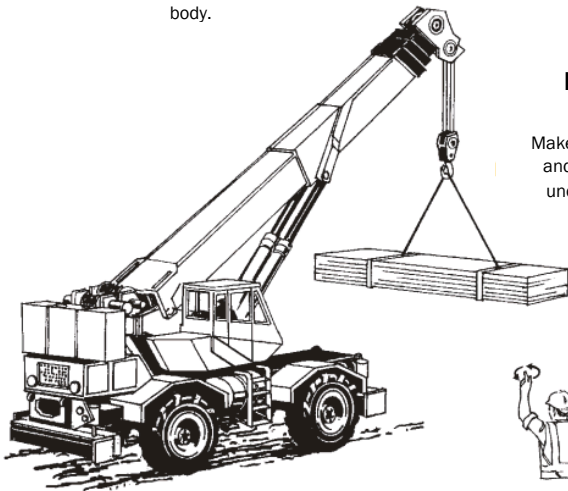
TRAVEL (One Track – Crawler Cranes Only)

Lock the track on the side indicated by the closed fist. Travel opposite track in the direction indicated by circular motion of other fist rotated vertically in front of the body.



FINISHED WITH CRANE

Place arms above the head and cross hands.



IMPORTANT- KNOW THE CORRECT SIGNALS

Make sure you, the OPERATOR and the person giving signals understand THESE SIGNALS.

TAKE SIGNALS FROM ONE PERSON ONLY

► Dogging with Radios

The use of two-way radios for communication in the crane industry has become an essential part of day-to-day lifting operations. Radios would normally be used in one or more of the following situations:

- Where the load being lifted is not visible to the crane operator and/or dogger.
- Where hand signals may not be clearly seen because of:
 - Height of load
 - Height of lift
 - Distance
 - Obstructions and site conditions
 - Weather conditions
 - Multiple lift operators

Persons using two-way radios for communication should be familiar with the manufacturer's operating instructions.

In the interests of safety the following recognised standard procedures **MUST** be followed when radios are in use:

- Prior to commencement of any task on site the radios to be used **MUST** have an operating safety check to ensure they are performing satisfactorily and the battery is charged. A spare battery should be available.
- A dedicated channel should be used for each lifting operation. Check for other radios in use on the site.
- Operators should familiarise themselves with any particular worksite procedures regarding the use of radio communication on that particular site.
- A constant talk method should be adopted requiring the radio users to talk in such a manner that the progress of the task is continuously made known to people involved at all times.
- To eliminate any misunderstanding crane operators should normally take radio instructions from one competent person only. Special circumstances may require specific arrangements to be put in place when using more than two radios.
- To ensure reliable and prolonged service all radios **MUST** be kept fully charged, dry and handled with care.

All crane operators MUST cease immediately if any loss or deterioration of radio communication occurs. BE AWARE OF INTERFERENCE AND SIGNALS FROM OTHER RADIO USERS.

NEW ZEALAND CRANE HIRE



OPERATORS ACCIDENT/INCIDENT OR COMPLAINT FORM

- ☐ Major Accident
☐ Minor Accident

Use this form to record details of any incident, accident or complaint as soon as possible after the event while it is fresh in yours and other involved parties minds. Use this form in the spirit of incident prevention and education, this is not a buck passing form, safety is everyone's responsibility

HSE 8082

- ☐ Incident
☐ Complaint

Name of NZCH Staff Member		Location	
Date			
Time			

Description of events

Operators Opinion of Causes

Describe Injuries

Name of injured person
Contact details
Employers name

Describe Property Damage

Name of Owner
Contact details

Space for diagrams, notes etc

Signed by NZCH
Employee involved

Signed by Customer
Site Representative

Name

Received by NZCH
Safety Officer

Date

Reviewed by NZCH
Director

Date

