

Operation Goldcrest: Top Five Contraventions

	Contravention	Total No. of Contraventions
1	Failure to Maintain Cranes in Good Working Condition	44
2	Failure to Establish and Implement a Proper Lifting Plan	39
3	Using Defective Lifting Gear or Lifting Gear without Certification	31
4	Failed to Implement a Proper Permit-To-Work System	26
5	No Indication of Safe Working Load and Lifting Machine number on the Lifting Machine	16

Failure to Maintain Cranes in Good Working Condition

1 The load bearing components and safety devices of cranes were inspected to establish the working condition of the cranes. Some key findings were:

- a) Damaged, corroded or kinked wire ropes
- b) Failure or malfunction of safety devices
- c) Defective or damaged safety latches of main hooks and auxiliary hooks
- d) General maintenance of the crane



- Wire ropes which were found to be kinked and severely corroded. Some were observed to be frayed with breakages along the length of the wire rope.

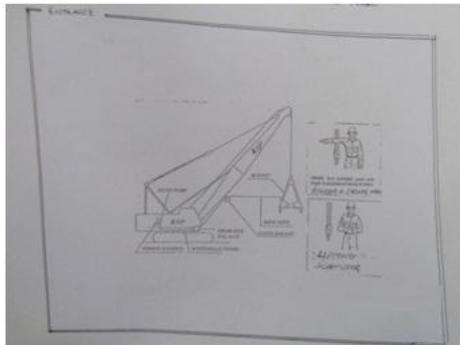
- Some of the cranes safety devices such as the derricking limiter², hoisting limiter³ and load radius indicators⁴ were observed to be faulty.

Failure to Establish and Implement Proper Lifting Plan

2 Under the WSH (Operation of Cranes) Regulations, the responsible person⁵ must implement a lifting plan for every lifting operation involving a crane.

3 Lifting plans were assessed based on the Approved Code of Practice for Safe Lifting Operations at the Workplace. The key elements of the lifting plan include:

- a) Details of the load
- b) Details of the lifting equipment / lifting gear used
- c) Means of communications
- d) Personnel involved in the lifting operation
- e) Physical and environmental considerations
- f) Sequence of movement / special precautions
- g) Sketch of the zone of operation



- A lifting plan that was found to be lacking in essential details

Using Defective Lifting Gear or Lifting Gear without Certification

²Derricking limiter is a safety device that limits the derricking motion of the cranes. The derricking motion generally refers to the raising and lowering of the cranes boom or jib, and is used to move the load nearer or further from the crane.

³ Hoisting limiter is a safety device that limits the hoisting motion of the cranes. The hoisting motion generally refers to the upward or downward motion of the cranes lifting hook using the winch system.

⁴ Load radius indicator is a device that shows the rated capacity (the maximum weight that the crane can lift) and the radius at which the load is being lifted. The radius refers to the horizontal distance between the centre of the crane's rotation and the vertical line through the centre of the lifting hook.

⁵ 'Responsible person' in relation to a worksite where a crane is being operated by a person means the employer of that person or the principal under whose direction that person operates the crane.

4 Lifting gear refers to the equipment that secures the load to the cranes. As such, it is essential that the condition of the lifting gear is checked before using them for lifting operations.

5 Under the WSH (General Provisions) Regulations, lifting gear used for lifting operations must be of good construction, sound material, adequate strength, free from patent defect and properly maintained. Lifting gear should not be used unless it has been tested, examined and certified by an Authorised Examiner. Some common findings are:

- Use of lifting gear with faulty safety latches
- Use of lifting gear that have not been tested and examined by the Authorised Examiners
- Use of wire rope slings that are kinked
- Use of severely corroded chain slings



- Lifting gear with faulty safety latches uncovered during inspections

Failure to Implement a Proper Permit-To-Work System

6 The Permit-To-Work system is a process used to manage workplace hazards by ensuring that all safety measures are in place before any work is permitted to commence. This includes lifting operations that are being carried out in worksites. Failure to implement a Permit-To-Work System is an indication of poor management of workplace hazards.

No Indication of Safe Working Load and Lifting Machine number on the Lifting Machine

7 Every lifting machine must be conspicuously marked with its safe working load and distinctive number for means of identification. Failure in compliance with

this requirement would constitute a violation under the WSH (General Provisions) Regulations.