RISK MANAGEMENT REPORT

TYPE	*Crane - Mobile*
MAKE	Kato
MODEL	CR-130Ri
SERIAL NUMBER	7811286
ENGINE NUMBER	4M50-D48139

Report Number	BTE 20170718-1012
Date	18-Jul-2017
Created By	Jessica Kaczorowski
Assessor	Ian Eyres
Assist. Assessor(s)	
Completed By	Jessica Kaczorowski
Owner	Tutt Bryant Equipment
Customer	ZIGGY'S CRANES PTY LTD
Assessment Purpose	Sale
State	NSW

TABLE OF CONTENTS

SECTION 1 IMPORTANT INFORMATION

This report generated by Plant Assessor™ © Online Safety Systems on Tuesday, 18 Jul 2017 10:43 AM

This Risk Management Report has been prepared for -

_____

(insert recipient name/company name)

This document has been prepared to cover the sale or transfer of this item of plant between the Company identified on the front cover and their named recipient. This report must not be used for any subsequent sale or transfer.

This document is provided to meet duty of care obligations as set out in relevant state and territory health and safety regulations for the supply of plant and the sale and transfer of plant.

The safety hazards associated with the operating and maintaining of this item of plant have been identified as far as practical by visual inspection. This item of plant is being sold in an "as-is" condition with known and unknown safety hazards. No physical testing has been conducted (eg. Wire rope tests, stress tests, structural/non-destructive tests, noise tests, vibration tests, brake tests, insulation tests etc.) unless stated otherwise in the notes.

This document is not intended to provide information on, nor warrant the mechanical, electrical or structural condition of this item of plant. Any information on standard features have been supplied through the manufacturer and should be used as a guide only until otherwise verified.

This item of plant should be further assessed, tested and inspected or dismantled as necessary to gauge any further hazards and /or risks relating to SPECIFIC WORKPLACE USE, which are currently unknown, in accordance with relevant standards, regulations and acts.

Under common law and relevant state and territory health and safety acts, regulations and codes of practice, there is a requirement for the plant owner, employer and operator to exercise a duty of care in the safe operation and maintenance of plant. Accordingly before this item of plant is supplied to, or used at any workplace it must be inspected to ensure it is in a fully operational , safe and serviceable condition and that operators and maintenance personnel are appropriately trained in the use & maintenance of this item of plant.

For further information regarding this report contact Online Safety Systems on 1300 72 88 52

SECTION 2 MACHINE DETAILS

MACHINE DETAILS

- DESIGN	Design Registration Number	
BOOM	# of Boom sections	
	Boom length min - max (m)	5300-24000
	Boom Width (mm)	
CAPACITIES	Fuel Tank Capacity	
	Hydraulic Oil Tank Capacity (Litres)	
DIMENSIONS/WEIGHTS	Height (mm)	2845
	Length (mm)	7440
	SWL (kg)	13000kg
	Tailswing radius (mm)	
	Travel length (mm)	7440
	Weight (kgs)	13765
	Weight distribution, empty, front\rear (%)	6790 6975
	Wheelbase (mm)	2750

	Width (mm)	1995
DRIVES	Drive Configuration	
ENGINE	Engine Cylinders/Litres	4
	Engine Displacement (Ltr)	4.899
	Engine Hours	
	Engine Make & Model	Mitsubishi 4M50-TLE3A
	Engine Number	4M50-D48139
	Engine Power kW/(Hp)	129Kw
	Fuel: Petrol/Diesel/Gas	Diesel
TYRES	Number of Tyres	4
	Tyre Size	305/70R22.5
WORK CAPABILITIES	Gradeability (%)	
	Maximum lift height (mm)	
	Maximum Lifting Capacity (kg)	130000 KG
EXTRAS	Air Conditioning	
	Storage/Tool boxes	

SECTION 3 RISK ANALYSIS / RISK EVALUATION

RISK ANALYSIS

LIKELIHOOD \ CONSEQUENCE	1. INSIGNIFICANT Dealt with by in house first aid	2. MINOR Treated by medical professionals, hospital out patients	3. MODERATE Significant non permanent injury overnight hospital stay	4. MAJOR Extensive permanent injury eg. Loss of fingers, extended hospital stay	5. CATASTROPHIC Death, permanent disabling injury eg. Loss of hand, quadriplegia
A. Almost certain to occur in most circumstances	MEDIUM 8	HIGH 16	HIGH 18	CRITICAL 23	CRITICAL 25
B. Likely to occur frequently	MEDIUM 7	MEDIUM 10	HIGH 17	HIGH 20	CRITICAL 24
C. Possibly and likely to occur at sometime	LOW 3	MEDIUM 9	MEDIUM 12	HIGH 19	HIGH 22
D. Unlikely to occur but could happen	LOW 2	LOW 5	MEDIUM 11	MEDIUM 14	HIGH 21
E. May occur but only in rare circumstances	LOW 1	LOW 4	LOW 6	MEDIUM 13	MEDIUM 15

RISK EVALUATION

CRITICAL	Act immediately to mitigate risk. Implement risk treatment(s) in accordance with the risk treatment table below.
HIGH	Act immediately to mitigate risk. Implement risk treatment(s) in accordance with the risk treatment table below. If the appropriate risk treatments are not immediately accessible establish interim risk treatment strategies. Permanent risk treatments must be implemented within one week.
MEDIUM	Take reasonable steps to mitigate and monitor the risk. Implement risk treatment(s) in accordance with the risk treatment table below. Permanent risk treatments must be implemented within one month.
LOW	Take reasonable steps to mitigate and monitor the risk. Implement risk treatment(s) in accordance with the risk treatment table below. Permanent risk treatments must be implemented within three months.

RISK TREATMENT

Selecting the most appropriate risk treatment option involves balancing the costs and efforts of implementation against the benefits derived, with regard to legal, regulatory and other requirements. (source AS/NZS ISO 31000:2009)	
Eliminate	Eliminate the risk source.
Substitute	Provide an alternative that is capable of performing the same task which is safer.
Engineering	Provide or construct a physical barrier or guard.
Administration	Develop policies, procedures, practices and guidelines in consultation with employees to mitigate the risk. Provide training, instruction and supervision about the risk source.
Personal protective	Provide personal protective equipment to protect the individual from the risk source.

SECTION 4 RISK TREATMENTS REQUIRED

This section of the report pertains to hazards created by use of this item of plant which currently do not have risk treatments in place. The risk treatments recommended in this section have been developed based on relevant Australian Standards, health & safety legislation, the hierarchy of risk treatment in accordance with the guidelines set forth in AS/NZS ISO 31000 – Risk Management and various other sources. The recommended risk treatment measures must be developed, implemented and validated as effective prior to the operation, maintenance or testing of this item of plant. Treatments applied must be dated and initialled adjacent the recommendations. All operators must read and understand the entire contents of this section prior to operating this item of plant.

	HAZARD(S)	Prelim. Risk Rating	Residual Risk Rating	Time Frame	Due Date	Date Rectified	Initial
OPERATION	TIP OVER	HIGH 22	HIGH 21	1 Week	25-Jul-17		
	Risk Treatment Required: Crane Level Indicator Ensure that this item of plant is fitted with a level indicator at the following positions - a) In the crane operating cabin within the view of the crane operator b) At each outrigger control station where the levelling motion(s) can be controlled (if fitted). Once fitted this device must be present and fully functional at all times whilst this item of plant is in operation. **References:** AS1418.5						
	CRUSHING, STRIKING, COLLISION	MEDIUM 12	LOW 6	1 Month	17-Aug-17		
	Risk Treatment Required: Tail Swing Label Ensure the rear of this item of plant has a hazard warning label re: general plant movement, tail swing, keep clear, etc. It must be present and fully functional and serviceable at all times. Legislation: State Health & Safety Legislation & Regulation **References:** AS1319- , AS/NZS4024.1201						
DESIGN COMPLIANCE	ENTRAPMENT	HIGH 21	MEDIUM 15	1 Week	25-Jul-17		
	Risk Treatment Required: Two Operator Exits Ensure that the operator cabin/work area on this item of plant has two (2) exits prior to operation. Once fitted these must be accessible at all times whilst this item of plant is manned, whether during operation or maintenance activities. Legislation: State Health & Safety Legislation & Regulation **References:** AS1418.1						
	CRUSHING	HIGH 21	LOW 5	1 Week	25-Jul-17		
	Risk Treatment Required: FOPS - Mobile Crane Ensure that a compliant FOPS (falling object protective structure) is fitted tio the operator cabin prior to operation. Once fitted this safety structure must be present and fully functional at all times whilst this item of plant is in operation. **References:** AS1418.5						

SECTION 5 RISK TREATMENTS IN PLACE

This section of the report pertains to risk treatments currently in place on this item of plant. This section must be read in conjunction with the safety section of the manufacturers handbook. All operators must read and understand the entire contents of this section prior to operating this item of plant. These treatments or equivalent must remain in place at all times whilst this item of plant is in operation.

	HAZARD(S)	Prelim. Risk Rating	Residual Risk Rating
COMMISSIONING	NON COMPLIANCE	HIGH 22	MEDIUM 15

Risk Treatments in Place: Mobile Crane - Major Inspection
This item of plant's major inspection regime is current. This inspection must be re-conducted at a further 2/3 of design life or 7 years [if design life unknown]. It is recommended that before any sale of this item of plant occurs, a major inspection and re marking take place by an authorised, qualified and competent person.
References: AS2550.5-

OPERATION	INCORRECT OPERATION	CRITICAL 24	MEDIUM 15

Risk Treatments in Place: Operator Competency
Only persons who are qualified, trained and experienced and/or hold the relevant certification/license can operate this item of plant. If there is not a competent/licensed person available for operation of this item of plant then only persons who are supervised by a competent/licensed person can operate this item of plant.
References: Work Health & Safety Act & Regulations-

	INCORRECT OPERATION	HIGH 22	MEDIUM 15

Risk Treatments in Place: Operation Handbook
The manufacturer's operation handbook has been supplied for this item of plant.

This handbook must be available at all times to all potential operators and supervisory staff. All potential operators must read and be familiar with this handbook prior to operating.

A complete risk assessment/Job Safety Analysis must be undertaken covering all operating processes and environments associated with this item of plant. SWMS should be produced for specific tasks associated with use of this item of plant.
References: Work Health & Safety Act & Regulations-

	INCORRECT OPERATION	HIGH 22	MEDIUM 15

Risk Treatments in Place: Pre-op Checklist Crane - Mobile
A pre-operational checklist is available for this Crane - Mobile. All operators must complete this checklist prior to operating this Crane - Mobile.
References: Work Health & Safety Act & Regulations-

	INCORRECT OPERATION	HIGH 22	MEDIUM 15

Risk Treatments in Place: SOP Crane - Mobile
Safe Operation Procedures are available for this Crane - Mobile. The information in the Safe Operation Procedures must be followed at all times whilst operating this Crane - Mobile.
References: Work Health & Safety Act & Regulations-

	INCORRECT OPERATION	HIGH 22	MEDIUM 15

Risk Treatments in Place: Control Labels
All controls including all levers, buttons, pedals, switches etc. are clearly labelled as to their purpose and method of operation. These labels must be maintained in a clean and serviceable condition at all times.
References: AS/NZS4024.1905

HAZARD(S)	Prelim. Risk Rating	Residual Risk Rating
CRUSHING, FALLING	HIGH 22	MEDIUM 15

Risk Treatments in Place: Passenger Seat Label

This item of plant is fitted with a clear hazard warning label re: Operator only, No passengers. Passengers must not be carried at anytime. This label must be clear and legible at all times whilst this item of plant is in operation.

Legislation: State Health & Safety Legislation & Regulation

References: AS1319-

INSTABILITY, INCORRECT OPERATION	HIGH 22	MEDIUM 15

Risk Treatments in Place: Load Indicator - Crane

This item of plant fitted with a load indicator that displays the mass being hoisted.

This indicator must be present and serviceable at all times whilst this item of plant is in operation.

References: AS1418.5

ELECTROCUTION	HIGH 22	MEDIUM 15

Risk Treatments in Place: Electrical Approach Distances

This item of plant has a hazard warning label re: overhead electrical hazards and minimum approach distances fitted. These distances must be adhered to strictly. These labels and tables must be present, clear and legible at all times.

Spotters are required when working within 5 metres of the minimum approach distance of any live electrical apparatus.

Any encroach within the minimum approach distances must only occur if the following provisions have been met -
1. The machine is designed to work within the minimum approach distances
2. Permission has been granted by the electricity company and
3. Safe systems of work have been documented and approved.

References: ISO31000

COLLISION	HIGH 22	MEDIUM 15

Risk Treatments in Place: Phone Use label

This item of plant is fitted with an instruction label advising that mobile phones must not be used whilst operating this machine. Accordingly all operators must not use a mobile phone at any time whilst operating machine. If phone use is necessary then operator must place machine in park configuration in a safe position prior to phone use. Operators MUST adhere to this advice at all times.

This label must be clear and legible at all times whilst this item of plant is in operation.

References: AS1319- , ISO31000

ENTANGLEMENT, SHEARING, PINCHING	HIGH 22	MEDIUM 15

Risk Treatments in Place: Guarding Label

All the belts, pulleys and gears are guarded. These guards must be present, fully functional and serviceable at all times whilst this item of plant is in operation and the labels re: do not open or remove while engine is runninig must be in place and easily seen at all times.

References: AS/NZS4024.1201

POISONING, EXPLOSION, BURNS	HIGH 22	MEDIUM 15

Risk Treatments in Place: Tank ID Label

The tank(s) on this item of plant have clear, legible label(s) identifying their contents, and if appropriate any necessary controls re: the contents. These must be present, clear and legible at all times. (this includes radiator, hydraulic and petrol/diesel tanks)

References: Work Health & Safety Act & Regulations-

HAZARD(S)	Prelim. Risk Rating	Residual Risk Rating
INCORRECT OPERATION, OPERATIONAL MALFUNCTION	HIGH 22	MEDIUM 15

Risk Treatments in Place: Drawbar Capacity Label
The item of plant has a drawbar and a hazard warning label attached adjacent the drawbar/tow hitch re: maximum towing capacity, crushing, keep clear. It must be present and fully functional and serviceable at all times.
References: ISO31000

POOR SIGNAGE	HIGH 22	HIGH 21

Risk Treatments in Place: Rated Capacity (SWL) Label
This item of plant has a rated capacity (SWL) label. This capacity must not be exceeded at any time during operation. This label must be clear and legible at all times whilst this item of plant is in operation.
References: AS1418.1

NON COMPLIANCE	HIGH 21	MEDIUM 15

Risk Treatments in Place: Rated Capacity Chart
This item of plant fitted with a Rated Capacity Chart.
This chart must be present, clear and legible at all times whilst this item of plant is in operation.
References: AS1418.1

NON COMPLIANCE, OPERATIONAL MALFUNCTION	HIGH 21	MEDIUM 15

Risk Treatments in Place: Log Book
The plant log book is available for this item of plant, ensure that all service, maintenance, inspections and use are recorded in the log.
References: AS2550.5-

HEARING LOSS	HIGH 19	MEDIUM 14

Risk Treatments in Place: Hearing Protection Label - Bystanders
The hazard warning labels re: wearing of hearing protection for bystanders attached to this item of plant refer to the level of noise produced. Permanent hearing damage will result if hearing protection is not worn. These labels must be present, clear and legible at all times whilst this item of plant is in operation.
References: AS/NZS1269, AS3781-

HEARING LOSS	HIGH 19	MEDIUM 14

Risk Treatments in Place: Hearing Protection Label - Operator
The hazard warning label(s) re: wearing of hearing protection attached to this item of plant refer to the level of noise produced. Permanent hearing damage will result if hearing protection is not worn. These labels must be present, clear and legible at all times whilst this item of plant is in operation.
References: AS/NZS1269, AS3781-

ENTANGLEMENT, SHEARING, BURNS	HIGH 19	MEDIUM 13

Risk Treatments in Place: Engine Guard Label
The engine fan and alternator belts, pulleys and gears are guarded. These guards have clear legible hazard warning labels re do not open or remove guards while engine is running. These labels must be present, legible and easily seen at all times whilst this item of plant is in operation.
References: AS1319- , AS/NZS4024.1201

FIRE	MEDIUM 13	LOW 4

Risk Treatments in Place: Fire Extinguisher
This item of plant is fitted with an approved and maintained fire extinguisher. Fire extinguisher(s) must be present and fully functional at all times. They must be readily accessible to the operator. Regular inspections must also be carried out in accordance with the manufacturer's requirements and AS 1851 – 1995
References: AS/NZS1841, AS1851

HAZARD(S)	Prelim. Risk Rating	Residual Risk Rating
CRUSHING, COLLISION	MEDIUM 12	LOW 6

Risk Treatments in Place: Warning Device (horn)
This item of plant is fitted with a fully functional audible warning device such as a horn. This must be easily accessed by the operator, and easily identifiable by nearby pedestrians.

All operators should ensure the warning devices are functional at the start of each shift, by completing pre-start checklists. Warning devices should operate automatically where appropriate (eg reversing)
References: ISO7731

CRUSHING	MEDIUM 9	LOW 5

Risk Treatments in Place: Stabiliser Legs
This item of plant has a hazard warning label re: crushing, adjacent the stabiliser legs. These labels must be present, clear and legible at all times.
References: AS1319- , AS/NZS4024.1201

COLLISION	MEDIUM 9	LOW 5

Risk Treatments in Place: Recovery Point Label
This item of plant is fitted with a hazard warning label adjacent the recovery tow point which states "Danger – Read manufacturer's towing instructions before towing. Failure to do so could result in DEATH or SERIOUS INJURY."

This label must be clear and legible at all times whilst this item of plant is in operation.
References: ISO31000

DESIGN COMPLIANCE

CRUSHING, COLLISION	CRITICAL 24	MEDIUM 15

Risk Treatments in Place: Hold To Run Crane Controls
The crane controls are the "hold to run" type. Operators and maintenance staff MUST NEVER attempt to bypass this important safety feature. Failure to comply with this instruction may lead to serious injury or death.
References: AS1418.1

CRUSHING, COLLISION	CRITICAL 24	MEDIUM 15

Risk Treatments in Place: Park Brake
The park brake fitted to this item of plant is fully functional at all times. The park brake must be regularly inspected and tested. These inspections and tests must be documented as part of your plant safety programme.
References: ISO31000

TIP OVER	HIGH 22	HIGH 21

Risk Treatments in Place: Crane Load/Possition Indicators
The following items are continuously displayed in view of the operator during crane operation -
a) Utilisation of rated capacity, given as an analogue display with marking of the loading status of the crane (e.g. green: yellow – approach to rated capacity; red – overload condition)
b) The permitted load in accordance with the rated capacity at the actual radius/outreach or jib angle;
c) An indication of load on the hook plus mass (weight) of hook and block.

These displays must be present and the information available to the operator at all times whilst this crane is in operation.
References: AS1418.5

CRUSHING	HIGH 22	MEDIUM 15

Risk Treatments in Place: Unintended Operation
This item of plant is fitted with a device that ensures that no unintended movement of the crane is possible until the crane operator is in the prescribed operating position (e.g. armrest switch, dead man switch, seat switch).

This safety device must be present and fully functional at all times whilst this item of plant is in operation.
References: AS1418.5

HAZARD(S)	Prelim. Risk Rating	Residual Risk Rating
CRUSHING	HIGH 22	MEDIUM 15

Risk Treatments in Place: Hydraulic Locking Devices for Stabilisers
This item of plant is fitted with hydraulic cylinder locking devices to the stabiliser legs to prevent movement in the event of hydraulic failure. These devices must be fully functional at all times whilst this item of plant is in operation.
References: AS/NZS4024.1201, AS1418.1

CRUSHING, ENTANGLEMENT, STRIKING, COLLISION	HIGH 22	MEDIUM 15

Risk Treatments in Place: Neutral Start
This item of plant has neutral start control in place. It must be fully functional and serviceable at all times whilst this item of plant is in operation.
References: AS4024.1603

CRUSHING	HIGH 22	MEDIUM 15

Risk Treatments in Place: Seat Belt
This item of plant is fitted with an operator seat belt. This seat belt must be free from damage, and permanently and sturdily attached at all times whilst this item of plant is in operation. Operators must use this seat belt at all times during operation.
References: AS/NZS4024.1201

CRUSHING, INCORRECT OPERATION, OPERATIONAL MALFUNCTION	HIGH 22	MEDIUM 15

Risk Treatments in Place: Hoisting Limit Indicator
This item of plant is fitted with a hoisting limit indicator to warn the operator of impending contact between the lower load block or hook assembly and upper load block, boom or jib point sheave assembly(ies). The warning is both audible and visible to the operator.
This safety device must be present and fully functional at all times whilst this item of plant is in operation.
References: AS1418.5

INSTABILITY, TIP OVER	HIGH 22	HIGH 21

Risk Treatments in Place: Motion Limiting Device
This item of plant is fitted with motion limiting devices which restrict movement beyond the design limits for each action where applicable.

Such devices include -
a) Hoisting limiter e.g. anti two block system
b) Lowering limiter, ensure the minimum amount of rope remains on the drum
c) Slewing limiter, no slewing beyond design/operational limits
d) Luffing limiter, boom or jib is not luffed up or down beyond design/operational limits
e) Boom telescope limiter, prevent boom telescoping out beyond design/operational limits
f) Jib angle limiter, prevent jib angle from excedding design/operational limits
g) Fly Jib angle limiter, prevent fly jib angle from excedding design/operational limits.

Each of these must be present and fully functional at all times whilst this item of plant is in operation.
References: AS1418.5

CRUSHING, TIP OVER	HIGH 22	LOW 2

Risk Treatments in Place: Rated Capacity Limiter
This item of plant is fitted with a rated capacity limiting device. This device prevents movements which increase load on the crane when the rated capacity has been reached in any particular configuration. This device must be fully functional at all times whilst this item of plant is in operation.
References: AS1418.1, AS1418.5

CRUSHING	HIGH 22	LOW 2

Risk Treatments in Place: Crane Hydraulic Load Holding Devices
The crane load carrying cylinders on this item of plant are fitted with automatic means (e.g. load-holding valves) to prevent uncontrolled movement of the unit in the case of loss of power or hydraulic failure. These devices must be present and fully functional at all times whilst this item of plant is in operation.
References: AS1418.1

HAZARD(S)	Prelim. Risk Rating	Residual Risk Rating
CRUSHING, TIP OVER	HIGH 22	MEDIUM 15

Risk Treatments in Place: Rated Capacity Indicator

This item of plant is fitted with a rated capacity indicator that provides a warning to the operator and persons in the vicinity of the crane when -

1. The load is approaching rated capacity (i.e. is between 90% & 97.5% of the rated capacity).
2. The rated capacity is being exceeded

The warning for approach to rated capacity and the warning for exceeding the rated capacity must be clearly differentiated and both warnings must be continuous and shall be distinguishable as a warning to the persons concerned whilst the crane is being operated.

The rated capacity indicator must be fully functional at all times whilst this item of plant is in operation.

References: AS1418.1, AS1418.5

CRUSHING, COLLISION	HIGH 22	MEDIUM 15

Risk Treatments in Place: Reverse Movement Alarm

A reverse movement sensor alarm is fitted to this item of plant. It must be fully functional and serviceable at all times whilst this item of plant is in operation.

References: ISO7731

ENTANGLEMENT, CUTTING, SHEARING	HIGH 22	MEDIUM 15

Risk Treatments in Place: Emergency Stop Device

This item of plant is fitted with an emergency stop device.

The emergency stop must meet all of the following criteria whilst this item of plant is in operation:

1. Is operational
2. Is coloured red with yellow background
3. Is clearly labeled as to purpose and method of operation
4. Is easily accessible to the operator(s) at all times whilst operating this item of plant
5. Resetting of emergency stop does not automatically restart machine
6. Is located at each operator control station.

References: AS/NZS4024.1604

STRIKING, BURNS	HIGH 22	MEDIUM 15

Risk Treatments in Place: Hydraulic Hoses

This item of plant has hydraulic hoses. These hoses must be inspected each day or before each use for wear and tear. If there are visible signs of wear immediate action must be taken to control the risk arising from this wear. These inspections must be documented.

Hydraulic fluid at high pressure can penetrate the skin, never use any part of your body to check for leaks. If oil penetrates the skin seek medical advice immediately. Always use a piece of cardboard or similar to check for suspected leaks.

Hydraulic pressure can be stored and is a hazard. Before disconnection or connection of hydraulic hoses complete the following steps -

1. Stop engine
2. Keep all bystanders clear of the work area
3. Refer to operators manual as to methods to release pressure
4. Wait 5 minutes

References: AS2671, AS4024

POOR VISIBILITY, COLLISION	HIGH 22	MEDIUM 15

Risk Treatments in Place: Machine Lights

This item of plant is fitted with self contained lighting. All of these lights must be fully functional and serviceable whilst this item of plant is in operation in areas of reduced light. If any of these lights stop working the operation must cease immediately and the faulty light be repaired before operation can continue in the areas of reduced light.

References: AS/NZS4024.1201

HAZARD(S)	Prelim. Risk Rating	Residual Risk Rating
INSTABILITY, CRUSHING	HIGH 22	MEDIUM 15

Risk Treatments in Place: Stabiliser Leg Requirements

This item of plant fitted with stabiliser legs which meet the following criteria -

1. Means provided to securely locate each stabiliser in the retracted position
2. Means is provided to indicate that the stabiliser is in the correct position horizontally to provide adequate support.

All of these criteria must be met at all times whilst this item of plant is in operation.

References: AS/NZS4024.1201

ENTANGLEMENT	HIGH 22	MEDIUM 15

Risk Treatments in Place: Engine Guards

The engine fan and alternator belts, pulleys and gears are guarded. These guards must be present and fully functional and serviceable at all times whilst this item of plant is in operation.

References: AS/NZS4024.1601

CRUSHING, COLLISION	HIGH 22	MEDIUM 15

Risk Treatments in Place: Slew Restraint

This item of plant has a fully functional transit locking device with a clear and legible instruction label adjacent fitted to prevent slewing during transport. E.g. Either a slew lock pin or a boom restraint. The locking device must be double action e.g. Pin and speed clip.

This safety device and its labelling must be present and serviceable at all times and engaged at all times during transport.

References: AS1418.1

COLLISION	HIGH 22	MEDIUM 11

Risk Treatments in Place: Turning, Braking & Presence Lights

This item of plant is fitted with lighting to indicate presence, turning and braking. All of these lights must be fully functional whilst this item of plant is in operation in areas of reduced light.

If any of these lights stop working the operation must cease immediately and the faulty light be repaired before operation can continue in the areas of reduced light.

References: AS/NZS4024.1201

COLLISION	HIGH 22	MEDIUM 15

Risk Treatments in Place: Beacon

This item of plant is fitted with a safety beacon. This beacon must meet the following criteria at all times whilst this item of plant fitted is in operation -

- Is visible up to 200m in all directions (allowing for intermittent obstruction from the plant structure whilst the plant is in operation)
- Is fitted in the most appropriate location on machine to maximise visibility without risking continual damage

NOTE: more than one beacon may be fitted to meet these criteria.

References: AS/NZS4024.1201

CRUSHING, INCORRECT OPERATION	HIGH 22	MEDIUM 15

Risk Treatments in Place: Boom Length Indicator

This item of plant is fitted with a telescopic boom length indicator. The information provided by this device must be used in conjunction with the boom angle indicator and the load chart in the operators work area. The combination of information provided by these safety features must not be exceeded at any time during operation. This item of plant must not be operated if this device is not present and fully functional.

References: AS1418.1

HAZARD(S)	Prelim. Risk Rating	Residual Risk Rating
CRUSHING, INCORRECT OPERATION	HIGH 22	MEDIUM 15

Risk Treatments in Place: Electronic Boom Angle Indicator
This item of plant is fitted with an electronic and gravity pendulum boom angle indicator. The information provided by these devices must be used in conjunction with the boom length indicator and the load chart in the operators work area. The combination of information provided by these safety features must not be exceeded at any time during operation. This item of plant must not be operated if these devices are not present and fully functional.
References: AS1418.1

CRUSHING, INCORRECT OPERATION	HIGH 22	MEDIUM 15

Risk Treatments in Place: Manual Boom Angle Indicator
This item of plant is fitted with a boom angle indicator. The information provided by this device must be used in conjunction with the boom length indicator and the load chart in the operators work area. The combination of information provided by these safety features must not be exceeded at any time during operation. This item of plant must not be operated if this device is not present and fully functional.
References: AS1418.1

TIP OVER	HIGH 22	MEDIUM 15

Risk Treatments in Place: Chassis Inclination Display
This item of plant is fitted with a device to indicate whether the inclination of the chassis is within the limits permitted by the manufacturer. This device must be fully functional at all times whilst this item of plant is in operation. The limits set by this device must NEVER be exceeded or serious injury or death may occur.
References: AS1418.5

OPERATIONAL MALFUNCTION	HIGH 22	LOW 2

Risk Treatments in Place: Plant Modification
The plant is in original condition.
References: ISO31000

NON COMPLIANCE	HIGH 21	MEDIUM 15

Risk Treatments in Place: Crane Event Recorder
This item of plant is fitted with an event recorder that meets the following requirements -
1. Is automatically checked each time the crane is put into operation
2. An event recorder malfunction shall be indicated to the crane operator.

This device must be fully functional at all tiumes whilst this item of plant is in operation.
References: AS1418.5, ISO10245

POOR VISIBILITY	HIGH 21	MEDIUM 15

Risk Treatments in Place: Windscreen Wipers
The windscreen wipers and washers fitted to this item of plant must be fully functional at all times.
References: AS/NZS4024.1201

CRUSHING	HIGH 21	MEDIUM 15

Risk Treatments in Place: Crane Hook Compliance Information
Lifting hook permanently marked with the following -
a) The manufacturer's id
b) Working load limit
c) A serial number linking it to a test certificate.
This information must be clear and legible at all times whilst this item of plant is in operation.
References: AS3777

HAZARD(S)	Prelim. Risk Rating	Residual Risk Rating
 INCORRECT OPERATION	HIGH 20	MEDIUM 14
Risk Treatments in Place: Intuitive Controls The controls fitted to this item of plant are orientated so that the movement of the control is consistent with the action of the machine e.g. moving a control lever to the left results in the machine turning to the left. This design feature must be maintained at all times whilst this item of plant is in operation. **References:** AS/NZS4024.1906		
 STRAINS	HIGH 19	LOW 5
Risk Treatments in Place: Controls Ergonomics All controls including all levers, buttons, pedals, switches etc. are placed near the operator work position and are easy to reach and operate during the execution of the operator's normal duties. This applies for all persons within the 95th percentile of the normal population distribution. **References:** AS/NZS4024.1901		
 STRIKING, BURNS	HIGH 19	LOW 5
Risk Treatments in Place: Hydraulic Hose Failure Shield This item of plant is fitted with a sturdy, permanent shield(s) between the hydraulic hoses and any body parts of the operator to provide protection during a hose or component failure. This shield(s) must be present and fully functional at all times whilst this item of plant is in operation. **References:** AS2671, AS4024, ISO4413		
 INCORRECT OPERATION, SLIPPING	HIGH 17	LOW 6
Risk Treatments in Place: Control Levers/Pedals/Buttons All controls including all levers, buttons, pedals, switches etc. must be kept non-slip and free from damage at all times. **References:** AS/NZS4024.1901		
 SLIPPING	MEDIUM 12	LOW 6
Risk Treatments in Place: Operator Work Area Access/Egress Safe access and egress to the cabin/work area(s) must be maintained at all times whilst this item of plant is in operation. It must be non slip, free from damage, located at a height so as to not cause undue body stresses and strains with three points of contact available to personnel at all times. All personnel must - 1. Always face the item of plant during access and egress. 2. Always maintain three points of contact during access and egress. 3. Never carry an object(s) in his/her hand(s) during access and egress. 4. Never jump off machine. **References:** AS1657		
 FALLING, SLIPPING	MEDIUM 12	LOW 6
Risk Treatments in Place: Access/Egress Instruction Label An instruction label is fitted adjacent access/egress areas to advise all personnel of the following - 1. Always face the item of plant during access and egress. 2. Always maintain three points of contact during access and egress. 3. Ensure the steps are clean. 4. Never jump off machine. This label must be clear and legible at all times whilst this item of plant is in operation. **References:** ISO31000		

HAZARD(S)	Prelim. Risk Rating	Residual Risk Rating
POOR VISIBILITY, COLLISION	MEDIUM 12	MEDIUM 11

Risk Treatments in Place: Operator Mirrors

The operator rear view mirrors fitted to this item of plant must be fully functional and kept clean at all times. There must always be at least one mirror on each side to provide rear vision to the operator to avoid striking bystanders and objects.

References: AS1418.1, AS/NZS4024.1201

FALLING, SLIPPING, TRIPPING	MEDIUM 12	LOW 6

Risk Treatments in Place: Engine Bay Access

Safe access and egress to the engine bay/work area(s) must be maintained at all times whilst this item of plant is in operation. It must be non slip, free from damage, located at a height so as to not cause undue body stresses and strains with three points of contact available to personnel at all times.

All personnel must -

1. Always face the item of plant during access and egress.
2. Always maintain three points of contact during access and egress.
3. Never carry an object(s) in his/her hand(s) during access and egress.
4. Never jump off machine.

References: AS1657

ELECTRIC SHOCK, BURNS	MEDIUM 12	LOW 6

Risk Treatments in Place: Battery Cover

All batteries fitted to this item of plant are constrained to prevent displacement & fitted with a permanent sturdy cover which allows for ventilation. The constraint and cover must be present and fully functional and serviceable at all times whilst this item of plant is in operation.

References: AS/NZS4024.1201

INCORRECT OPERATION, SLIPPING	MEDIUM 9	LOW 4

Risk Treatments in Place: Operator Floor

All work area floors are non-slip and free from damage & debris.

Floor area must remain non-slip and free from damage & debris, including rubbish, tools and other items, at all times whilst this item of plant is in use.

References: AS/NZS4024.1201

STRAINS	MEDIUM 9	LOW 1

Risk Treatments in Place: Operator Seat

The operator seat fitted to this item of plant must remain free from damage and tears, and be permanently and securely fitted at all times.

References: AS/NZS4024.1401 , AS1418.1

HEAT STROKE, DEHYDRATION	MEDIUM 9	LOW 4

Risk Treatments in Place: Air Conditioning

This item of plant is fitted with an air conditioned cabin. This air conditioned cabin helps control the air quality and temperature for the operator and also provides shade from the sun. The air conditioner must be fully functional and serviceable at all times whilst this item of plant is in operation.

References: ISO31000

BURNS	MEDIUM 9	LOW 5

Risk Treatments in Place: Exhaust

The engine exhaust on this item of plant is fitted with a guard to prevent injury to any person and control the risk of initiating a fire. It must be present and fully functional and serviceable at all times whilst this item of plant is in operation.

References: AS/NZS4024.1201

MAINTENANCE

HAZARD(S)	Prelim. Risk Rating	Residual Risk Rating
CRUSHING, COLLISION	CRITICAL 25	MEDIUM 15

Risk Treatments in Place: Brakes

The brakes fitted to this item of plant must be fully functional at all times whilst this item of plant is in operation. The brakes must be regularly inspected and tested. These inspections and tests must be documented as part of your plant safety programme.

References: AS1418.1, Australian Design Rules-

CURRENT OR PREVIOUS STRUCTURAL DAMAGE	CRITICAL 25	MEDIUM 15

Risk Treatments in Place: Structural Integrity

Regular checks for structural damage must be undertaken. Look for cracks in frames/chassis (current or repaired), bends or damage to structural components, etc.

References: ISO31000

INCORRECT OPERATION	HIGH 22	MEDIUM 15

Risk Treatments in Place: Maintenance Manual

The manufacturer's maintenance manual(s) has been supplied for this item of plant

These manual(s) must be available at all times to all users and maintenance staff of this item of plant. All users and maintenance staff must read and be familiar with these handbook(s) prior to maintaining or repairing this item of plant.

A complete risk assessment/JSEA must be undertaken covering all inspection, maintenance, servicing and transportation requirements of this piece of plant prior to use.

A full assessment of the competence of people using the book(s) must also be undertaken

References: Work Health & Safety Act & Regulations-

NON COMPLIANCE	HIGH 22	MEDIUM 15

Risk Treatments in Place: Plant (annual) Periodic Inspection

Current (less than 12 months) documentation is available stating that this item of plant has had an annual periodic inspection which has been carried out by a competent person and that this item of plant is in a safe condition for use.
This item of plant must be re-inspected within 12 months by a competent and new documentation be provided.

References: AS2550.5-

STRIKING, BURNS	HIGH 22	MEDIUM 15

Risk Treatments in Place: Hydraulic Damage

The hydraulic hoses to this item of plant are free from damage and protected against damage arising from contact with the plant structure. Ensure that hoses are free from damage and that protection is in place at all times whilst this item of plant is in operation. Inspection of the hydraulic hoses and protection system should be conducted regularly and documented as part of your plant safety programme.

References: AS2671, AS4024, ISO4413

OPERATIONAL MALFUNCTION	HIGH 22	LOW 2

Risk Treatments in Place: Major Fluid Leaks

This item of plant must remain free from leaks at all times whilst in operation (this includes engine, transmission, cooling system, air, fuel, drive line, wheel hubs, steering and hydraulics). Development of a major leak will require this item of plant to be stood-down until repaired. Minor leaks detected must be repaired within 1-14 days.

References: ISO31000

INSTABILITY, COLLISION	HIGH 22	MEDIUM 15

Risk Treatments in Place: Tyres

The tyres and wheel components must be inspected as part of a "pre start" checklist. These inspections must be documented as part of your plant safety programme.

References: ISO31000

HAZARD(S)	Prelim. Risk Rating	Residual Risk Rating
OPERATIONAL MALFUNCTION	HIGH 21	MEDIUM 15

Risk Treatments in Place: Service Records

Service and maintenance records are available for this item of plant.

These records must continue to be maintained and stored in a secure area as part of your plant safety management programme. This programme includes the undertaking of regular inspections concerning the general condition of the item of plant including (but not limited to) tyre condition, oil levels and wear and tear on critical items such as brakes and steering, etc. All OEM prescribed, scheduled and non scheduled maintenance must also be documented as part of these records and attended to within a risk management framework.

References: Work Health & Safety Act & Regulations-

POOR VISIBILITY	MEDIUM 9	LOW 4

Risk Treatments in Place: Windows & Screens

Ensure the cabin/work area safety glass windows and screens are kept clean and free from cracks and other damage at all times whilst this item of plant is in use.

References: AS1418.1, AS/NZS4024.1201

SECTION 6 IMAGES AND NOTES

IMAGES

- No Images Available -

NOTES

- No Notes Available -