



CONSTRUCTION
EQUIPMENT AUSTRALIA

plant
assessor



RISK MANAGEMENT REPORT

Report Number	CEA 20181024-1029
Date	24-October-2018
Date Completed	24-October-2018
Created By	Jessica Kohutek
Assessor	Jessica Kohutek
Assist. Assessor(s)	David Worboys
Company	CFC Holdings T/A JCB Construction Equipment /
Owner	CEA Sydney
Make	JCB
Model	86C-1
Type	Excavator - Small
Serial Number	2576539
Engine Number	4725101970
Lot Number	Total Drain Cleaning
Assessment Purpose	Sale
State	NSW

TABLE OF CONTENTS

Section 1 - Important Information

Contains information outlining the scope and any limitations applicable to this Risk Management Report

Section 2 - Unit Details

Contains standard machine specifications and details of any extras fitted

Section 3 - Risk Analysis, Risk Evaluation & Risk Treatment

Contains details of the technique used to calculate risk ratings, time frame and risk treatments. Please refer to this information when reviewing and interpreting the information in section 4

Section 4 part 1 - Risk Treatments Required

Contains detailed information regarding the risk treatments to be implemented including hazard, risk rating, time frame, relevant standards & legislative references

Section 4 part 2 - Risk Treatments in Place

Contains detailed information regarding the risk treatments in place including hazard, risk rating, relevant standards & legislative references

Section 5 - Images & Documents

Contains images & any relevant information entered by the assessor

SECTION 1 IMPORTANT INFORMATION

This Risk Management Report has been prepared for -

Total Drain Cleaning
(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

STANDARD SPECS

- Noise Test Results

1. Manufacturers specified noise level dBA	
2. Ambient noise level dBA	96
3. Noise level - Operator position (high idle) dBA	74
4. Noise level - Operator position (low idle) dBA	
5. Noise level LHS dBA @ m (high idle)	
6. Noise level Front dBA @ m (high idle)	
7. Noise level RHS dBA @ m (high idle)	
8. Noise level Rear dBA @ m (high idle)	

Bucket

Standard bucket capacity, SAE rated (m3)	
Standard bucket width (mm)	

Capacities

Fuel Tank Capacity (Litres)	
Hydraulic Oil Tank Capacity (Litres)	

Dimensions/Weights

Dig depth (mm)	4531
Dig depth to cut 2.44 m level bottom (mm)	
Dump height (mm)	5506

**MACHINE
DETAILS****Make
Model
Type**JCB
86C-1
Excavator - Small**Serial Number
Assessed By
Date**2576539
Jessica Kohutek
24-October-2018

Ground clearance (mm)	345
Max depth of vertical wall (mm)	3289
Operating weight (kg)	8600
Reach @ ground level (mm)	7225
Tailswing radius (mm)	1490
Transport height (mm)	2706
Transport length (mm)	6435
Width (mm)	2187
Engine	
Engine Displacement (Litres)	2500cc
Engine Hours	
Engine Make & Model	Stage IIIB Tier 4 Final KDI 2504 TCR
Engine Number	
Engine Power (kW@rpm)	48kw @ 2200 rpm
Number of Cylinders	
Extras	
Spare spool for attachments? Yes/No	
Hitch	
Quick Hitch Make	
Quick Hitch Model	
Quick Hitch Serial No.	
Hydraulics	
Flow of main pumps (L/Min)	158.4
Pump Types	
Relief valve pressure, main pumps (Bar)	
Plant Classifications	
Class	
Year	
Safety Structures	
FOPS Compliance No.	
FOPS Serial No.	
ROPS Compliance No.	
ROPS Serial No.	
Tracks	
Track length on ground (mm)	2325
Track pad width (mm)	450
Transmission	
Speed (km/h)	5km/h
Work Capabilities	
Arm breakout (kgf)	
Bucket breakout (kgf)	
Gradeability (%)	

EXTRAS**DETAILS**Air Conditioning
Bucket - 600mm
Bucket - Mud - 1500mm
FOPS
Front grader blade
Hammer Piping
Hitch - Quick
ROPS - Cabin

SECTION 3

Risk Analysis						
		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, e.g. Loss of fingers, extended hospital stay	5 Catastrophic Death, permanent disabling injury e.g. Loss of hand, quadriplegia
Likelihood	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 Possible 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 permanent 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.
Administrative	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 PART 1 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.

Operation**Hazard(s):** Incorrect Operation**Relevant References:** Work Health & Safety Act & Regulations-**Preliminary Risk Rating:** CRITICAL 24**Time Frame:** Immediate**Due Date:** 24-Oct-18**Residual Risk Rating:** MEDIUM 15**Date Rectified:****Initial:****Risk Treatment Required:** 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.

Legislation: State Health & Safety Legislation & Regulation

SECTION 4 PART 2 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.

Delivery**Hazard(s):** Crushing**Relevant References:** Work Health & Safety Act & Regulations-**Preliminary Risk Rating:** HIGH 22**Residual Risk Rating:** MEDIUM 15**Risk Treatment:** SWMS Loading/Unloading

Ensure that all operators follow approved SWMS/SOP when loading and unloading this machine to and from a flat top truck or trailer, low loader or tilt tray.

**Hazard(s):** Crushing**Relevant References:** Work Health & Safety Act & Regulations-**Preliminary Risk Rating:** HIGH 22**Residual Risk Rating:** MEDIUM 15**Risk Treatment:** SWMS Load Restraint

Ensure that all operators follow the approved SWMS/SOP when restraining this machine for transport.

Operation**Hazard(s):** Crushing, Incorrect Operation**Relevant References:** AS1418.8**Preliminary Risk Rating:** HIGH 22**Residual Risk Rating:** HIGH 21**Risk Treatment:** Boom Rated Capacity Label

This item of plant has a rated capacity label fitted to each side of the boom. Ensure that these labels are clear and legible at all times whilst this item of plant is in operation. Operators must not exceed this rated capacity at any time during operation.

**Hazard(s):** Incorrect Operation**Relevant References:****Preliminary Risk Rating:** HIGH 22**Residual Risk Rating:** MEDIUM 15**Risk Treatment:** 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.

**Hazard(s):** Incorrect Operation**Relevant References:** Work Health & Safety Act & Regulations-**Preliminary Risk Rating:** HIGH 22**Residual Risk Rating:** MEDIUM 15**Risk Treatment:** Pre-op Checklist Excavator

A pre-operation checklist is available for this Excavator. This checklist must be completed by all operators prior to operating this Excavator.



Hazard(s): Incorrect Operation

Preliminary Risk Rating: HIGH 22

Risk Treatment: SOP Excavator

Safe Operation Procedures are available for this Excavator. The information in the Safe Operation Procedures must be followed at all times whilst operating this Excavator.

Relevant References: Work Health & Safety Act & Regulations-

Residual Risk Rating: MEDIUM 15



Hazard(s): Incorrect Operation

Preliminary Risk Rating: HIGH 22

Risk Treatment: 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.

Relevant References: AS/NZS4024.1905

Residual Risk Rating: MEDIUM 15



Hazard(s): Crushing, Falling

Preliminary Risk Rating: MEDIUM 15

Risk Treatment: 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.

Relevant References: AS1319-

Residual Risk Rating: MEDIUM 15

Legislation: State Health & Safety Legislation & Regulation



Hazard(s): Crushing, Incorrect Operation

Preliminary Risk Rating: HIGH 21

Risk Treatment: Quick Hitch Information

This hydraulic quick hitch has the following information marked upon it -

1. A unique identification mark (serial number)
2. The manufacturer's name and model clearly and durably marked upon it
3. The maximum rated capacity clearly and durably marked upon it
4. The mass of the hitch clearly and durably marked upon it
5. The lift point capacity (kg) clearly and durably marked upon it

This information must be considered by all operators when assessing the suitability of the hitch for any task. Failure to consider and or comply with this information could lead to serious injury or death.

Relevant References: AS4772

Residual Risk Rating: MEDIUM 15



Hazard(s): Crushing

Preliminary Risk Rating: MEDIUM 15

Risk Treatment: ROPS Label

The warning label stating that the ROPS must not be damaged at any time (including cuts, drill holes and welds) must be present, clean and legible at all times.

Relevant References: ISO3471

Residual Risk Rating: MEDIUM 15



Hazard(s): Crushing

Preliminary Risk Rating: HIGH 22

Risk Treatment: ROPS seat belt label

The advisory label stating that a "ROPS is fitted seatbelts must be worn" must be followed at all times whilst operating this item of plant. This label must be present, clean and legible at all times.

Relevant References: AS2294, ISO3471

Residual Risk Rating: MEDIUM 15



Hazard(s): Electrocution

Preliminary Risk Rating: HIGH 22

Risk Treatment: 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.

Relevant References: ISO31000

Residual Risk Rating: MEDIUM 15



Hazard(s): Electrocution, Explosion

Preliminary Risk Rating: HIGH 22

Risk Treatment: Dial Before You Dig (AUS)

This item of plant is fitted with a clear hazard warning label re: underground services and advice to "Dial 1100 Before You Dig" to the operator work area. This advice must be adhered to strictly. Digging into an electricity cable or gas pipe can cause serious injury or death. Damaging a pipe or cable may also lead to isolating a community from emergency services such as fire, police or ambulance. This label must be present, clear and legible at all times.

Relevant References: ISO31000

Residual Risk Rating: MEDIUM 15

Hazard(s): Collision

Relevant References: AS1319- , ISO31000



Preliminary Risk Rating: HIGH 22

Residual Risk Rating: MEDIUM 15

Risk Treatment: 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.



Hazard(s): Burns, Explosion, Poisoning

Relevant References: Work Health & Safety Act & Regulations-

Preliminary Risk Rating: HIGH 22

Residual Risk Rating: MEDIUM 15

Risk Treatment: 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)



Hazard(s): Collision

Relevant References: ISO20474-

Preliminary Risk Rating: HIGH 22

Residual Risk Rating: MEDIUM 15

Risk Treatment: Left Hand Drive Label

This item of plant has a hazard warning label re: left hand drive, at the rear. It must be present, clear and legible at all times.



Hazard(s): Collision, Crushing, Striking

Relevant References: ISO20474-

Preliminary Risk Rating: HIGH 19

Residual Risk Rating: MEDIUM 14

Risk Treatment: Tail Swing Label

The rear of this item of plant has a hazard warning label re: general plant movement, tail swing, keep clear. It must be present and fully functional and serviceable at all times.



Hazard(s): Crushing

Relevant References: AS1319-, ISO20474-

Preliminary Risk Rating: MEDIUM 14

Residual Risk Rating: MEDIUM 13

Risk Treatment: Front Grader Blade Label

The front blade on this item of plant is fitted with a hazard warning label re: crush zone, keep clear. This label must be present and fully functional and serviceable at all times.



Hazard(s): Crushing, Pinching

Relevant References: AS/NZS4024.1201, AS1319-

Preliminary Risk Rating: MEDIUM 14

Residual Risk Rating: MEDIUM 13

Risk Treatment: Swing Boom Crush Label

This item of plant has clear hazard warning labels re: pinch point/crush zone, keep clear, that are attached to each side of the boom swing/pivot point. These must be present, clear and legible at all times whilst this item of plant is in operation.



Hazard(s): Burns, Entanglement, Shearing

Relevant References: AS/NZS4024.1201, AS1319-

Preliminary Risk Rating: MEDIUM 14

Residual Risk Rating: MEDIUM 13

Risk Treatment: 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.



Hazard(s): Crushing, Poor Signage

Relevant References: AS1418.8

Preliminary Risk Rating: HIGH 19

Residual Risk Rating: MEDIUM 13

Risk Treatment: Boom Lifting Point Table

This item of plant has a lifting point fitted to the boom, accordingly a load/distance table is present at the operator work area. This must be clear and legible at all times. This item of plant must comply with the relevant parts of AS 1418 at all times. All operators must be appropriately trained to use this item of plant and licenced where necessary.



Hazard(s): Collision, Crushing

Relevant References: ISO7731, ISO9533

Preliminary Risk Rating: MEDIUM 12

Residual Risk Rating: LOW 6

Risk Treatment: 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)



Hazard(s): Collision

Relevant References: ISO31000

Preliminary Risk Rating: MEDIUM 9

Residual Risk Rating: LOW 5

Risk Treatment: 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.

Hazard(s): Fire

Relevant References:

MACHINE DETAILS

**Make
Model
Type**
JCB
86C-1
Excavator - Small

**Serial Number
Assessed By
Date**

2576539
Jessica Kohutek
24-October-2018



Preliminary Risk Rating: MEDIUM 13

Residual Risk Rating: LOW 4

Risk Treatment: 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

Design Compliance



Hazard(s): Entrapment

Relevant References: AS3868

Preliminary Risk Rating: HIGH 21

Residual Risk Rating: MEDIUM 15

Risk Treatment: Two Operator Exits

The operator cabin/work area on this item of plant has a minimum of two (2) possible exits. These must be functional and accessible at all times whenever the item of plant is manned, whether during operation or maintenance activities.



Hazard(s): Crushing

Relevant References: AS/NZS4024.1906, AS4772

Preliminary Risk Rating: HIGH 22

Residual Risk Rating: MEDIUM 15

Risk Treatment: Quick Hitch Controls

The quick hitch operation control fitted with a device/method to prevent accidental operation. This device must be fully functional at all times whilst this item of plant is in operation.



Hazard(s): Collision, Crushing, Entanglement, Striking

Relevant References: AS4024.1603

Preliminary Risk Rating: HIGH 22

Residual Risk Rating: MEDIUM 15

Risk Treatment: 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.



Hazard(s): Crushing

Relevant References: ISO6683

Preliminary Risk Rating: HIGH 22

Residual Risk Rating: MEDIUM 15

Risk Treatment: 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.



Hazard(s): Poor Visibility

Relevant References: AS/NZS4024.1201

Preliminary Risk Rating: HIGH 21

Residual Risk Rating: MEDIUM 15

Risk Treatment: Windscreen Wipers

The windscreen wipers and washers fitted to this item of plant must be fully functional at all times.



Hazard(s): Crushing

Relevant References: AS4772, ISO7731

Preliminary Risk Rating: HIGH 22

Residual Risk Rating: MEDIUM 15

Risk Treatment: Quick Hitch Operation Alarm

This item of plant is fitted with a quick hitch with a fully functional audible alarm fitted to the operator work area to alert the operator that the host machine is in the mode that allows for the controls to be operated to engage or disengage attachments.

This alarm must be fully functional at all times whilst this item of plant is in operation.



Hazard(s): Crushing

Relevant References: ISO7731, ISO9533

Preliminary Risk Rating: HIGH 22

Residual Risk Rating: MEDIUM 15

Risk Treatment: Movement Awareness Alarm

An automatic movement awareness alarm is fitted to this item of plant. This alarm is automatically activated when travel in any direction occurs. It must be fully functional and serviceable at all times whilst this item of plant is in operation.



Hazard(s): Crushing

Relevant References: AS4772

Preliminary Risk Rating: HIGH 22

Residual Risk Rating: MEDIUM 15

Risk Treatment: Quick Hitch - Fully Automatic

This item of plant is fitted with a fully automatic hydraulic (quick) hitch (i.e. has hydraulically operated latch as primary retention device and remotely controlled safety device as back up) between the excavator arm and attachments.

This safety device must meet all of the following criteria at all times prior and during operation -

1. Is a mechanical device i.e. not just an indicating system/device
2. Must be intentionally disengaged to remove attachments
3. Is not the primary source of retention of attachments
4. Has means of verifying engagement of the primary retention device from the operator position and
5. Has means of verifying engagement of safety system from operator position

If any of these criteria are not met at any time then operation must cease.

Hazard(s): Crushing

Relevant References: AS2294, AS4987, ISO3471



Preliminary Risk Rating: HIGH 21

Residual Risk Rating: MEDIUM 15

Risk Treatment: ROPS

A Roll Over Protective Structure (ROPS) to ISO 3471, ISO 12117.1 or 2, AS 2294 or AS 4987 is fitted to this item of plant. A permanent label stating this standard must be attached to the structure at all times. This structure provides a safety envelope during a rollover. A warning label re: wearing of seat belts at all times whilst this item of plant is in operation and accordingly seat belts must be worn at all times during operation.



Hazard(s): Burns, Crushing, Entanglement, Pinching,

Relevant References: AS/NZS4024.1201

Preliminary Risk Rating: HIGH 22

Residual Risk Rating: MEDIUM 15

Risk Treatment: Safe Operator Location

This machine is designed so that the operator is isolated from all danger zones whilst at the operator position. This condition must exist at all times whilst this item of plant is in operation.



Hazard(s): Burns, Striking

Relevant References: AS2671, AS4024

Preliminary Risk Rating: HIGH 22

Residual Risk Rating: MEDIUM 15

Risk Treatment: 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



Hazard(s): Collision, Poor Visibility

Relevant References: ISO20474-

Preliminary Risk Rating: HIGH 22

Residual Risk Rating: MEDIUM 15

Risk Treatment: 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.



Hazard(s): Entanglement

Relevant References: AS/NZS4024.1601

Preliminary Risk Rating: HIGH 22

Residual Risk Rating: MEDIUM 15

Risk Treatment: 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.



Hazard(s): Crushing, Instability, Tip Over

Relevant References: AS1418.8

Preliminary Risk Rating: HIGH 22

Residual Risk Rating: MEDIUM 15

Risk Treatment: Levelness Device

This item of plant is fitted with a level indicator. This device indicates the "levelness" of the machine chassis. During operation operators must ensure the machine is within the manufacturers guidelines for levelness. The rated capacity chart fitted for lifting operations has a maximum level angle which must never be exceeded during lifting operations.

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



Hazard(s): Collision

Relevant References: ISO20474-

Preliminary Risk Rating: HIGH 22

Residual Risk Rating: MEDIUM 15

Risk Treatment: 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.



Hazard(s): Incorrect Operation

Relevant References: AS/NZS4024.1906

Preliminary Risk Rating: HIGH 20

Residual Risk Rating: MEDIUM 14

Risk Treatment: 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.



Hazard(s): Collision, Poor Visibility

Relevant References: ISO5006

Preliminary Risk Rating: MEDIUM 12

Residual Risk Rating: MEDIUM 11

Risk Treatment: Operator Mirror

This item of plant is fitted with at least one rear vision mirror. This mirror must be fully functional and clean at all times whilst this item of plant is in operation.



Hazard(s): Slipping

Relevant References: AS3868

Preliminary Risk Rating: MEDIUM 12

Residual Risk Rating: LOW 6

Risk Treatment: 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.



Hazard(s): Falling, Slipping

Relevant References: ISO31000

Preliminary Risk Rating: MEDIUM 12

Residual Risk Rating: LOW 6

Risk Treatment: 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.



Hazard(s): Incorrect Operation, Slipping

Relevant References: AS/NZS4024.1901

Preliminary Risk Rating: HIGH 17

Residual Risk Rating: LOW 6

Risk Treatment: 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.



Hazard(s): Burns, Electric Shock

Relevant References: AS/NZS4024.1201

Preliminary Risk Rating: MEDIUM 12

Residual Risk Rating: LOW 6

Risk Treatment: 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.



Hazard(s): Strains

Relevant References: AS/NZS4024.1901

Preliminary Risk Rating: HIGH 19

Residual Risk Rating: LOW 5

Risk Treatment: 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.



Hazard(s): Crushing

Relevant References: ISO10262

Preliminary Risk Rating: HIGH 21

Residual Risk Rating: LOW 5

Risk Treatment: FOPS General

This item of plant is fitted with a Level I Falling Objects Protective Structure (FOPS). This structure is designed to protect the operator from small falling objects (e.g. bricks, small concrete blocks, hand tools)

Before operating this item of plant a task based risk assessment must be conducted to determine the level of FOPS required.

Level I - withstands 1,365 joules (e.g. 20kgs @ 7m drop, 70kgs @ 2m drop)

- operations such as highway maintenance, landscaping and other construction site services

Level II - withstands 11,600 joules (e.g. 200kgs @ 6m drop, 394kgs @ 3m drop)

- operations such as site clearing, overhead demolition or forestry

This task risk assessment must be undertaken before each operation, in particular when the item of plant is moved to a new location, even if it is within the same site.

Hazard(s): Burns, Striking

Relevant References: AS2671, AS4024, ISO4413

MACHINE DETAILS

**Make
Model
Type** JCB
86C-1
Excavator - Small

**Serial Number
Assessed By
Date**

2576539
Jessica Kohutek
24-October-2018



Preliminary Risk Rating: HIGH 19

Residual Risk Rating: LOW 5

Risk Treatment: 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.



Hazard(s): Burns

Relevant References: AS/NZS4024.1201

Preliminary Risk Rating: MEDIUM 9

Residual Risk Rating: LOW 5

Risk Treatment: 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.



Hazard(s): Incorrect Operation, Slipping

Relevant References: AS/NZS4024.1201, ISO20474-

Preliminary Risk Rating: MEDIUM 9

Residual Risk Rating: LOW 4

Risk Treatment: 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.



Hazard(s): Dehydration, Heat Stroke

Relevant References: ISO31000

Preliminary Risk Rating: MEDIUM 9

Residual Risk Rating: LOW 4

Risk Treatment: 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.



Hazard(s): Operational Malfunction

Relevant References: ISO31000

Preliminary Risk Rating: HIGH 22

Residual Risk Rating: LOW 2

Risk Treatment: Plant Modification

The plant is in original condition.



Hazard(s): Strains

Relevant References: AS/NZS4024.1401, ISO20474-

Preliminary Risk Rating: MEDIUM 9

Residual Risk Rating: LOW 1

Risk Treatment: 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.



Hazard(s): Crushing

Relevant References: AS1418.8

Preliminary Risk Rating: CRITICAL 24

Residual Risk Rating: LOW 1

Risk Treatment: Closed Eye Lifting Point

The lifting point fitted to this item of plant is the closed eye type. Hooks with or without latching devices must not be used as a lifting point at any time.

Maintenance



Hazard(s): Incorrect Operation

Relevant References: Work Health & Safety Act & Regulations-

Preliminary Risk Rating: HIGH 22

Residual Risk Rating: MEDIUM 15

Risk Treatment: 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



Hazard(s): Operational Malfunction

Relevant References: Work Health & Safety Act & Regulations-

Preliminary Risk Rating: HIGH 21

Residual Risk Rating: MEDIUM 15

Risk Treatment: 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

MACHINE DETAILS

**Make
Model
Type** JCB
86C-1
Excavator - Small

**Serial Number
Assessed By
Date**

2576539
Jessica Kohutek
24-October-2018

a risk management framework.



Hazard(s): Crushing

Preliminary Risk Rating: HIGH 22

Risk Treatment: ROPS Damage

The Roll Over Protective Structure (ROPS) fitted to this item of plant must remain free from damage at all times whilst this item of plant is in operation.

Relevant References: AS2294, ISO3471

Residual Risk Rating: MEDIUM 15



Hazard(s): Burns, Striking

Preliminary Risk Rating: HIGH 22

Risk Treatment: 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.

Relevant References: AS2671, AS4024, ISO4413

Residual Risk Rating: MEDIUM 15



Hazard(s): Current or previous structural damage

Preliminary Risk Rating: CRITICAL 25

Risk Treatment: 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.

Relevant References: ISO31000

Residual Risk Rating: MEDIUM 15



Hazard(s): Poor Visibility

Preliminary Risk Rating: MEDIUM 9

Risk Treatment: 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.

Relevant References: AS/NZS4024.1201, ISO20474-

Residual Risk Rating: LOW 4



Hazard(s): Collision, Instability

Preliminary Risk Rating: MEDIUM 9

Risk Treatment: Tracks

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

Relevant References: ISO20474-

Residual Risk Rating: LOW 4



Hazard(s): Operational Malfunction

Preliminary Risk Rating: HIGH 22

Risk Treatment: 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.

Relevant References: ISO31000

Residual Risk Rating: LOW 2

SECTION 5

IMAGES AND DOCUMENTS

NOTES

IMAGES

There are no images

<END OF RISK ASSESSMENT REPORT>

RISK MANAGEMENT REPORT

Report Number CEA 20181024-1029
Date 24-October-2018
Date Completed 24-October-2018
Created By Jessica Kohutek
Assessed By Jessica Kohutek
Assist. Assessor(s) David Worboys
Company CFC Holdings T/A JCB Construction Equipment /
Owner CEA Sydney
Make JCB
Model 86C-1
Type Excavator - Small
Serial Number 2576539
Engine Number 4725101970

Lot Number Total Drain Cleaning
Assessment Purpose Sale
State NSW

PURCHASER ACKNOWLEDGEMENT

I the undersigned acknowledge that I have read and understand the risk management report described above.

I also acknowledge that I have received a copy of this risk management report.

I also acknowledge that I am authorised to sign on behalf of the purchaser.

Company Name Total Drain Cleaning
 First Name Nick Surname Messing
 Address 6 Sleigh Place
 Suburb/Town Wetherill Park State NSW Postcode 2164
 Phone 96201981 Fax 96201987 Mobile 0401 741684
 Email Address Nick@totaldraincleaning.com.au
 Signature _____ Date _____

Can Online Safety Systems contact the purchaser with important OH&S information ? (please tick one)
 Yes ☐
 No ☐

The manufacturers' operational & maintenance handbooks have been supplied, _____ (initial) (please tick one)
 Yes ☐
 No ☐

Please transfer this assessment to my Plant Assessor membership as a Hire / Plant in Use assessment (circle either)

My Plant Assessor email address is _____

Safe Operating Procedures

Make: JCB
Model: 86C-1
Type: Excavator - Small
Serial Number: 2576539
Engine Number: 4725101970



Recommended PPE - Subject to Company & Site Policy



SOP Excavator

GENERAL & START UP

- Read and understand manufacturers operational manual
- Complete pre-operational checklist (never use faulty or defective machinery)
- All operators must be free from the direct and after effects of drugs and alcohol
- Never operate in a poorly ventilated area, carbon monoxide is colourless, odourless and poisonous
- Ensure work area is clear of bystanders and hazards prior to starting engine and operating machine
- Once engine is started confirm control pattern, travel direction and machine function
- Ensure that you are familiar with all attachments and the clearance distances between attachments and any other part of machine

! NEVER HIT CABIN OR ANY PART OF MACHINE WITH ANY ATTACHMENTS

TRAVEL & OPERATION

! ALWAYS WEAR YOUR SEAT BELT

! NEVER CARRY PASSENGERS

- Ensure work area is clear of all bystanders
- When travelling always keep dipper arm perpendicular to ground and attachments low to ground ensuring maximum stability and operator visibility
- Always consider ground type prior to travelling machine, use extreme caution on slippery surfaces such as metal, ice etc
- Never travel across slopes, travel up and down slopes only
- Ensure front and rear swing area is clear of bystanders and objects
- Refer to power line approach distance label re safety around power lines
- Confirm location of any underground services prior to digging in any area, use extreme caution if services are present, always hand excavate in close proximity to services taking material to be excavated into consideration
- Position machine on solid ground, (lower blade if fitted)

! ALWAYS POSITION MACHINE AS LEVEL AS POSSIBLE - this may require building a level surface prior to operation

! NEVER POSITION MACHINE OVER "SHELF" ADJACENT EXCAVATION

! NEVER POSITION MACHINE UNDER PRECIPICE OR OVERHEAD OBSTRUCTIONS

! NEVER WORK ACROSS SLOPES, WORK UP AND DOWN BUILDING LEVEL WORK AREA AS NECESSARY

! NEVER EXCAVATE UNDER MACHINE

LIFTING

This machine is an excavator, any lifting must be in accordance with the crane requirements, as a minimum observe the following:

- Never exceed machines capacity as per load chart
- Never lift anything using bucket teeth
- Always use approved closed eye lifting point (must not be attached to bucket)
- Use only approved chains, slings and fittings appropriately rated for task
- Remove buckets and other attachments prior to lifting

Safe Operating Procedures

- Never lift anything over people
- Never lift people

REFUELLING

- NEVER** refuel unless the engine is stopped and ignition turned off
- NEVER** smoke during refueling

Operator Signature:

Name: _____ Date: _____ Signature: _____

PRE-OP INSPECTION

Make - Model: JCB - 86C-1
Type: Excavator - Small
Serial Number: 2576539

Created By: Jessica Kohutek
Created On: 24 Oct 18 - 1:02 PM
Engine Number: 4725101970

METERS AND SERVICING

Hour Meter (h)

PRE-OP - FLUIDS

Engine oil level OK	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COMMENTS:			
Hydraulic oil level OK	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COMMENTS:			
Coolant level OK	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COMMENTS:			
Fuel level OK	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COMMENTS:			
Machine free from major leaks to engine, cooling system, hydraulics, drive line etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COMMENTS:			

PRE-OP - EXTERNAL INSPECTION

Fire extinguisher is present & within inspection period	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COMMENTS:			
All lights and reflectors are present and serviceable (if fitted, machines without lights must only be used during daylight hours)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COMMENTS:			
Amber safety beacon is fully functional	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COMMENTS:			
All hydraulic hoses are connected properly and free from leaks and damage (never use your hand to check for leaks, use wood or card board)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COMMENTS:			
All batteries are constrained & fitted with a sturdily attached cover	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COMMENTS:			
All engine & exhaust guards are present, sturdily attached and free from damage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COMMENTS:			
All tracks and track components are in safe working condition	<input type="checkbox"/>	<input type="checkbox"/>	
COMMENTS:			
Quick hitch (if fitted & semi-auto) fitted with mechanical locking pin & retention device	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COMMENTS:			
All lifting components (wire ropes, chains, hooks, slings etc.) are free from damage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COMMENTS:			
All grease points present, functional and greased as per manufacturer's recommendations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COMMENTS:			
All structural components are in safe working condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COMMENTS:			

PRE-OP - OPERATOR WORK AREA

All operator access is non slip, sturdily attached and free from damage with three points of contact available	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COMMENTS:			
Operator floor is non slip, free from damage & rubbish	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COMMENTS:			
Seat(s) sturdily attached and free from damage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COMMENTS:			
Seat belt(s) present, sturdily attached and free from damage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COMMENTS:			
Two mirrors fitted & fully functional (one on each side of machine)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COMMENTS:			
All windows and screens are present, clean and free from damage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COMMENTS:			

PRE-OP INSPECTION

Make - Model: JCB - 86C-1
Type: Excavator - Small
Serial Number: 2576539

Created By: Jessica Kohutek
Created On: 24 Oct 18 - 1:02 PM
Engine Number: 4725101970

Windscreen wipers are present, free from damage & fully functional

COMMENTS:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------

Air conditioning/heating fully functional

COMMENTS:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------

Two exits available (vandal proof guarding removed)

COMMENTS:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------

Operator warning device (horn) is fully functional

COMMENTS:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------

All controls are fully functional, free from damage and clearly and legibly labelled as to purpose and method of operation

COMMENTS:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------

Movement awareness alarm present & fully functional

COMMENTS:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------

Overhead power line minimum approach distance table present & legible

COMMENTS:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------

"Dial Before You Dig" warning label present and legible

COMMENTS:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------

Load chart present & legible (for machines with a lifting point)

COMMENTS:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------

PRE-OP - MACHINE FUNCTION

Machine functions as per manufacturers operating instructions

COMMENTS:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------

PRE-OP - INFORMATION

Manufacturer's operational and safety information is available

COMMENTS:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------

PRE-OP - OTHER

Is this item of plant free from any other safety fault which requires attention, if No then document issue in comments section.

COMMENTS:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------

Inspected By: _____

Inspected On: _____

Signature: _____