Report Number: ACRA 248

# PLANT RISK ASSESSMENT

### **REPORT**

Created by: Jesse Dewhurst jesse@austces.com.au

Assessed by: Jesse Dewhurst jesse@austces.com.au

Assessed for: Chris Feldbauer Northern Hire Group +61418990365 chris@northernhiregroup.com.au

Machine Details: Make: Wacker Neuson Model: SM100 Serial Number: WNMU0101CM0001129

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1300 422 783 austces.com.au



## **Risk Analysis / Evaluation**

Likelihood / Consequence	1 (Insignificant)	2 (Minor)	3 (Moderate)	4 (Major)	5 (Catastrophic)
A (Almost Certain)	Medium - 8	High -16	High - 18	Extreme - 23	Extreme - 25
B (Likely)	Medium - 7	Medium - 10	High - 17	High - 20	Extreme - 24
C (Possible)	Low - 3	Medium - 9	Medium - 12	High - 19	High - 22
D (Unlikely)	Low - 2	Low - 5	Medium - 11	Medium - 14	High - 21
E (Rare)	Low - 1	Low - 4	Low - 6	Medium - 13	Medium - 15

Consequence	Definition
Catastrophic	Fatality or permanent disabling injury
Major	Serious injury requiring admission to hospital
Moderate	Medical treatment may be required
Minor	First Aid treatment required for minor injury
Insignificant	Near Hit/Miss - no injury

Likelihood	Definition
Almost Certain	Will occur in most circumstances when the activity is undertaken - greater than 90% chance of occurring
Likely	Will probably occur in most circumstances when the activity is undertaken - 51 to 90% chance of occurring
Possible	Might occur when the activity is undertaken - 21 to 50% chance of occurring
Unlikely	Could happen at sometime when the activity is undertaken - 1 to 20% chance of occuring
Rare	May happen only in exceptional circumstances when the activity is undertaken - less than 1% chance of occurring

Evaluation	Definition
Extreme	Act immediately to mitigate risk, risk treatments must be in place before operation of plant.
High	Act immediately to mitigate risk, if permanent appropriate risk treatments are not available, interim risk treatment strategies must be developed immediately. Permanent risk treatments should be established within one week.
Medium	Take appropriate steps to monitor and mitigate risk. Implement permanent risk treatments within one month.
Low	Take appropriate steps to monitor and mitigate risk. Implement permanent risk treatments within three months.

### **Risk Identification & Treatments**

### A. Entanglement

Risk	Risk Treatment	Yes	No	N/A	P.R	R.R
The engine belts, pulleys, gears and external moving parts pose an entanglement risk.	Belts are guarded.	٢	0	0	22	15
	Warning labels are present to inform operator, maintenance staff and bystanders of risk of moving parts.	۲	0	0		
	Moving parts are covered by engine hood / bonnet.	۲	0	0		
	Battery isolation switch present and functioning.	۲	0	0		
	Emergency Stop Switch present and functioning	0	۲	0		
The Boom / Arm with cylinders pose an entanglement risk to bystanders and maintenance staff.	Keep clear labels are present on moving parts of Boom / Arm.	۲	0	0	22	15
	Battery isolation switch present and functioning.	$\bigcirc$	0	0		
	Emergency Stop Switch present and functioning	0	۲	0		
The Wheels / Tracks pose and entanglement risk to bystanders and maintenance staff	Keep clear labels are present on moving parts adjactent to tracks / wheels	۲	0	0	22	15
	Battery isolation switch present and functioning.	۲	0	0		
	Emergency Stop Switch present and functioning	0	۲	0		

B. F	Punctures
<b>-</b>	anotaroo

Risk	Risk Treatment	Yes	No	N/A	P.R	R.R
The plant, parts of the plant or work pieces disintegrating pose a puncturing risk to the operator and bystanders	The plant is regularly serviced and maintained with service records available.	۲	0	0	22	15
	All mechanical joints are in good working order without excessive wear.	۲	0	0		
	There are no visible cracks to welds structural components present.	۲	0	0		
	Maintenance records are available, either digital access or hard copy.	۲	0	0		
	Daily pre-inspection log book available and up to date.	۲	0	0		

C. Shearing						
Risk	Risk Treatment	Yes	No	N/A	P.R	R.R
Moving Joints of the boom pose a shearing risk to the operator, bystanders and maintenance staff.	Operator station / controls located in a safe location isolated from all moving parts.	۲	0	0	22	15
	Loader arm prop fitted and functioning with instruction label.	۲	0	0		
	Keep clear and warning labels present at all possible shearing locations.	۲	0	0		
	Battery isolation switch present and functioning.	۲	0	0		
	Neutral start switch present and functioning.	0	۲	0		

D. High Pressure Fluid						
Risk	Risk Treatment	Yes	No	N/A	P.R	R.R
High pressure hydraulic fluids pose a penetration risk to the operator, maintenance staff and bystanders.	All exposed / visible hydraulic hoses inspected and free from visible damage.	۲	0	0	22	15
	Hoses fitted and restrained to the plant with a low risk of damage when in use.	۲	0	0		
	No high pressure hydraulic hoses / gauges fitted in operator station.	۲	0	0		
	No visible signs of hydraulic fluid leaks	۲	0	0		

E. Crushing						
Risk	Risk Treatment	Yes	No	N/A	P.R	R.R
Attachments or loads disengaging from plant pose a crush risk to the operator, maintenance staff and bystanders.	Automatic secondary retention device fitted to quick hitch (latch or spring on quick hitch or two independent levers).	۲	0	0	22	15
	Instructional decal fitted for hitch operation.	0	0	۲		
	Audible alarm fitted to quick hitch when disengagement activated.	0	0	۲		
	Approved / rated lifting point fitted.	0	0	۲		
Unexpected or uncontrolled movements of the plant pose a crush risk to the operator, maintenance staff and bystanders.	Machine controls are fitted with appropriate handles.	۲	0	0	22	15
	Hold to run controls fitted, controls inoperable without operator present.	۲	0	0		
	Loader arm prop fitted and functioning with instruction label.	۲	0	0		
	Neutral start switch present and functioning.	0	۲	0		

E. Crushing Cont.						
Risk	Risk Treatment	Yes	No	N/A	P.R	R.R
	Crush decals fitted to all crush points on machine.	۲	0	0		
	Emergency Stop Switch present and functioning.	0	۲	0		
	Keep clear / frequently reversing decals fitted to rear of machine.	۲	0	0		
Capacity for the plant to be slowed, stopped or immobilised poses a crush risk to the operator, maintenance staff and bystanders.	Park brake present and functioning.	0	٢	0	22	15
	Battery isolation switch present and functioning.	۲	0	0		
	Emergency Stop Switch present and functioning	0		0		
	Service brake present and functioning.	۲	0	0		
Tipping and rolling over poses a crush risk to the operator.	Operation manual located in operators station and in legible condition, either digital access or hard copy.	۲	0	0	22	15
	"Danger read machine manual" label fitted and legible	۲	0	0		
Parts of the plant collapsing pose a crush risk to the operator, maintenance staff and bystanders.	All mechanical joints are in good working order without excessive wear.	۲	0	0	21	15
	There are no visible cracks to welds structural components present.	۲	0	0		
	Maintenance records are available, either digital access or hard copy.	۲	0	0		
	Daily pre-inspection log book available and up to date.	۲	0	0		
Being thrown off or under the machine poses a crush risk to the operator.	Hold to run controls fitted, controls inoperable without operator present.	۲	0	0	22	15
	"Danger read machine manual" label fitted and legible	۲	0	0		

F. Striking						
Risk	Risk Treatment	Yes	No	N/A	P.R	R.R
Unexpected or uncontrolled movements of the plant pose a striking risk to maintenance staff and bystanders.	Hold to run controls fitted, controls inoperable without operator present.	٢	0	0	22	15
	Machine controls are fitted with appropriate handles.	۲	0	0		
	Non-Slip Foot Pedals.	0	0	۲		
	Neutral start switch present and functioning.	0	۲	0		
	"Danger read machine manual" label fitted and legible		0	0		
	Isolating lever / switch on hydraulic controls present and functioning.	0	۲	0		

F. Striking Cont.						
Risk	Risk Treatment	Yes	No	N/A	P.R	R.R
	Keep clear / frequently reversing decals fitted to rear of machine.	۲	0	0		
	Controls identified.	۲	0	0		
	Emergency Stop Switch present and functioning.	0	۲	0		
	Exterior lighting fitted and in working condition.	0	۲	0		
The plant, parts of the plant or work pieces disintegrating pose a striking risk to the operator and bystanders	All mechanical joints are in good working order without excessive wear.	۲	0	0	21	15
	There are no visible cracks to welds structural components present.	۲	0	0		
	Maintenance records are available, either digital access or hard copy.	۲	0	0		
	Daily pre-inspection log book available and up to date.		0	0		

G. Explosion						
Risk	Risk Treatment	Yes	No	N/A	P.R	R.R
The battery and fuel systems of the plant pose an explosion risk to the operator, maintenance staff and bystanders.	Fuel tank fitted with appropriate lid.	۲	0	0	21	15
	Emergency Stop Switch present and functioning.	0	۲	0		
	No visible signs of fuel leaks.	۲	0	0		
	Battery(s) inspected and no signs of damage (cracks, corrosion, swelling).	۲	0	0		
	No smoking decal fitted.	۲	0	0		
	Battery isolation switch present and functioning.	۲	0	0		

H. Temperature (Thermal Comfort)							
Risk	Risk Treatment	Yes	No	N/A	P.R	R.R	
The environment the plant operates in can pose a high / low temperature risk to the operator.	"Sun-Protective Equipment must be worn" label fitted and legible	۲	0	0	9	5	

I. Electrical						
Risk	Risk Treatment	Yes	No	N/A	P.R	R.R
The environment the plant operates in can pose an electrocution risk to the operator due to contact with live wires.	"Dial Before You Dig" decal fitted.	۲	0	0	22	15
	"Look up and Live" decal fitted.	۲	0	0		
	"Clearance for operating near power lines" decal fitted.	۲	0	0		
The plant can pose an electrocution risk to the operator and maintenance staff.	Battery terminals and leads in good condition	۲	0	0	5	4
	All exposed / visible electrical cables inspected and free from visible damage.	۲	0	0		
	All electrical switches inspected and free from visible damage.	۲	0	0		
	Battery isolation switch present and functioning.	۲	0	0		

J. Slipping, Tripping & Falling	I					
Risk	Risk Treatment	Yes	No	N/A	P.R	R.R
The plant poses a slipping and falling risk for the operator and maintenance staff.	Operation station flooring fitted with non-slip surfaces.	۲	0	0	19	13
	Hold to run controls fitted, controls inoperable without operator present.	۲	0	0		
	"3 Points of contact" entry decal located at entry point.	۲	0	0		
	Any maintenance points not accessible from ground level fitted with appropriate steps / footings and guardrails.	۲	0	0		
	"Operator Only" label fitted and legible.	igodoldoldoldoldoldoldoldoldoldoldoldoldol	0	0		
The plant can pose a slipping, tripping and falling risk from poor housekeeping.	Steps / footings, entry points and and flooring clean and free of loose objects.	۲	0	0	14	13
	No visible signs of excess oil or lubricants at entry points.		0	0		

K. Ergonomics / Strains						
Risk	Risk Treatment	Yes	No	N/A	P.R	R.R
The plant can pose a risk to the operator for strains / RSI.	Controls, levers and pedals in comfortable position from operator station.	٢	0	0	19	13
	Controls, pedals and switches in serviceable condition.		0	0		

L. Fire						
Risk	Risk Treatment	Yes	No	N/A	P.R	R.R
The fuel system of the plant poses a fire risk to the operator, maintenance staff and bystanders.	Fuel tank fitted with appropriate lid.	۲	0	0	21	15
	Emergency Stop Switch present and functioning.	0	۲	0		
	No visible signs of fuel leaks.	۲	0	0		
	No smoking decal fitted.	۲	0	0		
	Fire extinguisher fitted and in serviceable condition.	0	۲	0		
The exhaust system of the plant poses a fire risk to the operator, maintenance staff and bystanders.	Exhaust system in serviceable condition without modification.	۲	0	0	21	15
	Appropriate guarding fitted to exhaust system where necessary.	۲	0	0		

M. Noise						
Risk	Risk Treatment	Yes	No	N/A	P.R	R.R
High noise levels from the plant can pose a risk to the operator, bystanders and maintenance staff	Noise levels tested to a safe level.	۲	0	0	19	13
	Hearing protection must be worn decal fitted	۲	0	0		

N. Burns						
Risk	Risk Treatment	Yes	No	N/A	P.R	R.R
The exhaust system of the machine creates a burn risk to the operator and maintenance staff	Exhaust located in an area isolated from the operator.	٢	0	0	19	13
	High Temperature warning labels in place.		0	0		
Engine cooling system poses a burn risk to operator and maintenance staff.	Cooling system located in an area isolated from the operator.	٢	0	0	14	13
	High temp / under pressure warning labels present on radiator.		0	0		
Hydraulic fluid reservoir poses a burn risk to operator and maintenance staff	Reservoir located in an area isolated from the operator.	۲	0	0	14	13
	High temp / under pressure warning labels present on reservoir.	۲	0	0		
Hydraulic hoses pose a burn risk to the operator, maintenance staff and bystanders.	All exposed / visible hydraulic hoses inspected and free from visible damage.	۲	0	0	19	13

#### N. Burns Cont.

Risk	Risk Treatment	Yes	No	N/A	P.R	R.R
	Hoses are fitted and restrained to the machine with a low risk of damage when in use.	۲	0	0		
	No high pressure hydraulic hoses / gauges fitted in operator station.	٢	0	0		

#### O. Operation

Risk	Risk Treatment	Yes	No	N/A	P.R	R.R
The plant poses risks as categorised above to the operator, maintenance staff and bystanders due to incorrect operation.	Operation manual located in operators station and in legible condition, either digital access or hard copy.	۲	0	0	22	15
	"Danger read machine manual" label fitted and legible.	۲	0	0		
	Lifting chart decal fitted or available in operator manual.	۲	0	0		
	Safe Working Load or Working Load Limit decal fitted to arm and in legible condition.	۲	0	0		
	Controls identified.	۲	0	0		

#### P. Entrapment P.R R.R Risk **Risk Treatment** Yes No N/A The operator station on the plant has a minimum of 2 exits The plant poses risks an entrapment $\bigcirc$ Ο 22 15 ۲ functional and accessible at all times, including emergency exit. risk to the operator and maintenance staff. Emergency exit functional and accessible, clearly labelled, igodol $\bigcirc$ $\bigcirc$ instructional decal fitted and any tools required for use are available.

Yes = Treatment in place

No = Treatment not in place

N/A = Treatment not available for this piece of place

P.R = Pre-existing Risk

R.R = Residual Risk

### **Assessment Acceptance**

Assessment Completed By:

Name: Jesse Dewhurst

Date: 05/04/2023

AN -

Signature:

It is recommended that the plant assessed in this report is re-assessed annually. "ACES" Australian Construction Equipment Sales accepts no liability for any Consequential Loss arising in connection with this report.

I acknowledge and confirm I have read and understand the risk assessment report written above. I acknowledge I am authorised to sign and accept this assessment as the owner or on behalf of the owner of the machine assessed above.

Assessment Accepted By:

Name:

Date:

Signature: