

Mobile Plant Risk Assessment

Equipment item name: Excavator		Location: Direk
Asset Number: EX 20		Work Area: Yard
Serial Number: WTD173		Assessors: AARON WALTER
Make / Model Number: Caterpillar 349D L ME		Date of assessment: 29 JUNE 2022
Applicable legislation: South Australian Work Health & Safety Regulations 2012, Chapter 5 – Plant & Structures		Reviewed by: Mardie Peal
Certification of operator required: CoC		Date of review: 16/08/2023

Description of Use:	Digging holes and trenches and moving materials
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RISK RATING TABLES

Consequence Levels

Consequences	Safety	Quality / Productivity / Performance	Financial	Environment
Catastrophic	Fatality & Prosecution	Audit non-conformance, multiple complaints, Job to be returned / repeated	\$500,000	Outside, off site - EPA improvement note (Significant Aspect)
Worrying	LTI (serious or permanent injury) & Regulator PIN	Audit observation, job rework or Customer non-conformance / Complaint	\$100,000	Outside, off site - no regulator action (Significant Aspect)
Concern	MTI (casualty treatment)	Found in-house and quarantined (sort)	\$10,000	Contained on premises, outside
Not Significant	First Aid Treatment (or Not Relevant)	Found In-house and immediately addressed (or Not Relevant)	\$1,000	Contained inside business/buildings (or Not Relevant)

RISK CALCULATOR

	How likely is it to occur?			
How severe could the Consequences be?	Very likely Could happen any time	Likely Could happen sometime	Unlikely Could happen but very rarely	Very unlikely Could happen, but probably never will
Catastrophic	1 (H)	1 (H)	1 (H)	2 (M)
Worrying	1 (H)	1 (H)	2 (M)	2 (M)
Concern	1 (H)	2 (M)	2 (M)	3 (L)
Not Significant	2 (M)	2 (M)	3 (L)	3 (L)

RISK CONTROL (Removing the hazard or reducing the risk)

The WHS Regulations (Regulation 36) require us to follow the Hierarchy of Control measures. Elimination is the first choice in controlling hazards. Where elimination is not practicable, substitution, isolation and engineering controls should be considered next. Administrative controls and personal protective equipment should only be used when other control measures have been considered but are not practicable.

Hazard Type	Yes / No	Hazard Description	C	L	R	Control Methods in Place	Yes / No	NA	Comments / Recommended Improvements
ENTANGLEMENT Can anyone's, hair, clothing, gloves, necktie, jewellery, cleaning brushes, rags or other materials become entangled with moving parts of the plant, or materials in motion?	Y	Body parts caught in moving parts during operation, cleaning and inspections	W	U	2(M)	Manufacturers Warning Decals	Y		JSA & Safe Work Procedures to be in place Training of operators Regular Audits/Inspections
						Readable	Y		
						Guards installed	Y		
						Warning Decals for Personal (i.e .loose clothing etc)	Y		
						Engine covers fitted	Y		
CRUSHING Can a person be crushed due to: ♦ material falling from the plant?	N					Attachments	Y		Small grader blade attachment
						Moving Blade/Bucket	Y		
♦ uncontrolled or unexpected movement of the plant or its load?	Y	Pedestrians or bystanders may be crushed	C a t	V U	2(M)	Neutral start switch fitted	Y		Traffic Management controls in place Decals to be in place Warning devices to be fitted Operating procedures to be in place Operator training to be in place Regular audits/inspections to be implemented
						Reversing/travel alarm	Y		
						Crush zone warning decal	Y		
						Amber Flashing Beacon	Y		
						Pedals-Non slip surface	Y		
						Controls have appropriate knobs	Y		
						Reversing Light		N/A	
						Rear view mirror	Y		
						Rear Swing Warning Decal or Swing Lights fitted	Y		
						Brake Lights (if fitted)		N/A	
						Machine may suddenly reverse warning decal fitted		N/A	
♦ lack of capacity for the plant to be slowed, stopped or immobilised?	Y	Refer above	Cat	VU	2(M)	Service brake operational	Y		
						Parking brake operational	Y		

Hazard Type	Yes / No	Hazard Description	C	L	R	Control Methods in Place	Yes / No	NA	Comments / Recommended Improvements
◆ the plant tipping or rolling over?	Y	Operator crushed during machine rollover	Cat	VU	2(M)	Battery Isolator fitted	Y		
						Rops decal fitted to rops	Y		
						Rops approved structure	Y		
						Fops approved structure		N/A	
						Tops/Cops approved structure	Y		
						Manufacturers designed cab	Y		
						Safe-T-Cab approved structure		N/A	
◆ parts of the plant collapsing?	Y	Operator crushed while conducting inspections and while cleaning	W	U	2(M)	Safety bar props fitted	Y		
						Use safety bar when working under 'raised attachment' decal		N/A	JHA & SOP in place Operator training
◆ coming into contact with moving parts of the plant during testing, inspection, operation, maintenance, cleaning or repair?	Y	Refer above	W	U	2(M)	Guards	Y		
							Y		
						Warning decals			
◆ being thrown off or under the plant?	Y	Refer above (roll-over)	Cat	VU	2(M)	Seat belt fitted	Y		
						Door fitted	Y		
						Seat belt must be worn, warning decal fitted	Y		
						Operator Cabin fully enclosed	Y		
						Operator Cabin open		N/A	

Hazard Type	Yes / No	Hazard Description	C	L	R	Control Methods in Place	Yes / No	NA	Comments / Recommended Improvements
CUT/STAB/PUNCTURE Can anyone be cut, stabbed or punctured due to: ♦ coming into contact with sharp or flying objects? ♦ coming into contact with moving parts of the plant during testing, inspection, operation, maintenance, cleaning or repair of the plant? ♦ the plant, parts of the plant or work pieces disintegrating? ♦ work pieces being ejected? ♦ the mobility of the plant? ♦ uncontrolled or unexpected movement of the plant?	Y		C o n	U	2 (M)	Guarding No visible signs of sharp objects	Y		
SHEARING Can anyone's body parts be sheared between any two parts of the plant, or between a part of the plant and a work piece or structure?	Y	Pedestrians or Bystanders caught between machine and fixed objects	W	V U	2(M)				Traffic Mgmt. plan in place JHA & SOP to be in place Operator training
FRICTION Can anyone be burnt due to contact with moving parts or surfaces of the plant, or material handled by the plant?	N								
STRIKING Can anyone be struck by moving objects due to: ♦ uncontrolled or unexpected movement of the plant? ♦ the plant, parts of the plant or work pieces disintegrating? ♦ work pieces being ejected?	Y	Pedestrians or bystanders may be struck by machine	C	U	2(M)		Y		Traffic management controls in place.
						Guarding	Y		
						Keep clear warning decals	Y		

Hazard Type	Yes / No	Hazard Description	C	L	R	Control Methods in Place	Yes / No	NA	Comments / Recommended Improvements
♦ mobility of the plant?						Quick hitch independent latching device	Y		
						Keeper pins correct type	Y		
						Glass safe operational condition	Y		
						Reversing / travel alarm	Y		
						Amber flashing beacon	Y		
						Reversing decal fitted	N		
						Brake lights	Y		
						Warning horn	Y		
HIGH PRESSURE FLUID Can anyone come into contact with fluids or gas under high pressure, due to plant failure or misuse of the plant?	Y	Hydraulic failure	C	U	2(M)	Indicators		NA	Regular maintenance and inspection program in place Consider installation of hydraulic pressure warning
						No return valves fitted	Y		
						Leakage	N		
						All pipe clamps fitted	Y		
ELECTRICAL Can anyone be injured by electrical shock or burn due to: ♦ the plant contacting live electrical conductors? ♦ the plant working in close proximity to electrical conductors? ♦ overload of electrical circuits? ♦ damaged or poorly maintained electrical leads and cables? ♦ damaged electrical switches? ♦ water near electrical equipment? ♦ lack of isolation procedures?	N	Contacting overhead power lines or other structures overhead				High pressure warning decals	N		JHA & SOP to be in place Consider installation of maximum height decal in cabin
						Electrical wire / overhead wires / obstructions decals fitted	Y		
EXPLOSION Can anyone be injured by explosion of gasses, vapours, liquids, dusts or other substances, triggered by the operation	N								

Hazard Type	Yes / No	Hazard Description	C	L	R	Control Methods in Place	Yes / No	NA	Comments / Recommended Improvements
of the plant or by material handled by the plant?									
SLIP/TRIP/FALL Can anyone using the plant, or in the vicinity of the plant, slip, trip or fall due to: ♦uneven or slippery work surfaces? ♦poor housekeeping, eg. swarf in the vicinity of the plant, spillage not cleaned up? ♦obstacles being placed in the vicinity of the plant? ♦lack of a proper work platform? ♦lack of proper stairs or ladders? ♦lack of guardrails or suitable edge protection? ♦unprotected holes, penetrations or gaps? ♦poor floor or walking surfaces, such as the lack of a slip resistant surface? ♦steep walking surfaces? ♦collapse of the supporting structure?	Y	Operator slips or falls while entering or exiting equipment	C	L	2(M)	Non slip surface	Y		
						Proper work platform	Y		
						Proper stairs or ladders	Y		
						Guardrails or suitable edge protection		N/A	
						Handrails / hand-holds provided	Y		
						Non slip surface	Y		
ERGONOMIC Can anyone be injured due to: ♦poorly designed seating? ♦Constrained body effort	Y	Prolonged use of equipment with operator in static seating position	C	U	2 (M)	Seat in safe usable condition	Y		
						Operational control levers & pedals in operator reach	Y		
						Seat adjustment controls operational	Y		
						Operators controls identified	Y		
SUFFOCATION	N					All labels are readable			

Hazard Type	Yes / No	Hazard Description	C	L	R	Control Methods in Place	Yes / No	NA	Comments / Recommended Improvements
Can anyone be suffocated due to lack of oxygen or atmospheric contamination, refer to the Confined Spaces Regulations?						Engine fumes not excessive at high idle			
TEMPERATURE / FIRE Can anyone come into contact with objects at high temperature?	Y	Contact with hot engine parts or exhaust	C	U	2 (M)	Door/window seals maintained	Y		
						High mounted exhaust not easily accessible	Y		
						Exhaust guard fitted	Y		
						Fire protection supplied	Y		
						Hot surface warning decal	Y		
THERMAL COMFORT Can anyone suffer ill health due to extreme temperature or change of weather?	Y	Working in hot/cold weather	C	U	2 (M)	Air conditioning	Y		
						Ventilation	Y		
NOISE Can anyone suffer ill health or hearing loss due to exposure to high noise levels ?	Y	Prolonged exposure to engine noise	C	U	2 (M)	Enclosed cabin	Y		
						Hearing protection supplied		NA	
DOCUMENTATION	Y					SWL / WLL marked on boom	Y		410kg Operating instructions and Pre-start checklist to be provided
						Load capacity chart fitted	Y		
						Lifting points approved	Y		
						Operator's Manual	N		
						JSA/SWMS/SOP available	N		
						Plant daily checklist in place	N		
						Maintenance records up to date	Y		



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Photos and Additional Comments