

TYPE	Backhoe Loader
MAKE	John Deere
MODEL	315SL
CHASSIS / VIN	1T0315SLCNF420788
REGISTRATION	35680E

Report Number	ST 20221201-1205
Date	01-Dec-2022
Created By	Wayne Morris
Assessor	Wayne Morris
Assist. Assessor(s)	
Completed By	Wayne Morris
Owner	Austral Plant Hire
Assessment Purpose	Plant in use - Rail Corridor (NSW)
State	NSW



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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 & 5

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

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

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IMAGES AND NOTES

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SECTION 1 IMPORTANT INFORMATION

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All operators of this item of plant must read and understand this report prior to operating this item of plant. This report pertains to this item of plant as it appeared on the day of inspection.

The safety hazards associated with the operating and maintaining of this item of plant have been identified as far as practical by visual inspection. The condition of this item of plant will change with use. 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.

Controls outlined in both section 4 & 5 of this report must be maintained at all times whilst this item of plant is in operation. Any information contained in the notes section of this report shall be read in conjunction with section 3. Any information relating to the standard features have been supplied via the manufacturer and shall be used as a guide only until verified.

Additional Risk Assessment may be required, specific to the operating environment, for this item of plant. All operators and maintenance personnel must be 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	- NOISE TEST RESULTS	1. Manufacturers specified noise level dBA	
		2. Ambient noise level dBA	
		3. Noise level - Operator position (high idle) dBA	
		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)	
	BRAKES	Brake Type	Hydraulic wet disc
	BUCKET	Bucket width: min-max (mm)	2184
	CAPACITIES	Fuel Tank Capacity (Litres)	140
	DIMENSIONS/WEIGHTS	Ground clearance (mm)	351
		Loader Bucket breakout (kgf)	
		Loader bucket capacity (m3)	.77-1.0
		Loader Bucket width (mm)	2184
		Loader Dump height (mm)	2.71
		Loading Height (mm)	
		Operating weight (kg)	8389
		Travel height (mm)	3.63
		Travel length (mm)	5.96
Turn circle radius without brakes (mm)			
Width (mm)		2.26	
DRIVES	Drive		
ENGINE	Engine Displacement (Litres)	4.5	
	Engine Hours		
	Engine Make & Model	John Deere PowerTech Plus 4045HT082	
	Engine Number		
	Engine Power (kW@rpm)	74@2244	
	Number of Cylinders		
EXTRAS	Sideshift or Centre mount		
GENERAL	Relief valve pressure (bar)	3625psi	
	Slew system		
HYDRAULICS	Pump Type	Gear type	
OPTIONS	Ride control (Std/Opt/NA)		
PLANT CLASSIFICATIONS	Class		

		Year	
	PUMP	Pump Flow (L/Min)	106-136
	SAFETY STRUCTURES	FOPS Compliance No.	
		FOPS Serial No.	
		ROPS Compliance No.	
		ROPS Serial No.	
	TRANSMISSION	Maximum speed (km/h)	40
		Speeds F/R	
		Transmission Type	
	TYRES	Tyres, front/rear	
	WORK CAPABILITIES	Bucket breakout (kgf)	
		Dipper breakout (kgf)	
		Reach @ ground level (mm)	5.44
		SAE dig depth (mm)	

SECTION 3 RISK ANALYSIS / RISK EVALUATION





RISK ANALYSIS		CONSEQUENCE				
LIKELIHOOD		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	 INCORRECT OPERATION	CRITICAL 24	MEDIUM 15	Immediate	1-Dec-22		
	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 References: Work Health & Safety Act & Regulations- , Occupational Health & Safety Act & Regulations						
DESIGN COMPLIANCE	 CRUSHING, COLLISION	CRITICAL 24	MEDIUM 15	Immediate	1-Dec-22		
	Risk Treatment Required: Park Brake Ensure this item of plant is fitted with a fully functional park (hand) brake which meets the following requirements – 1. Is separate to the service brakes 2. Has a device which maintains the brake in the on position until intentionally disengaged & 3. Requires at least two separate and distinct movements to disengage the park brake. The park brake must be regularly inspected and tested. These inspections and tests must be documented as part of your plant safety programme. Legislation: State Health & Safety Legislation & Regulation References: AS2958 Assessor Comments: Not OEM fitted Revised Date/Control Not Required Comments: As per OEM Guidelines and daily report						
	 CRUSHING	HIGH 22	MEDIUM 15	1 Week	8-Dec-22		
	Risk Treatment Required: Hydraulic Locking Devices for Stabilisers Ensure that this item of plant is fitted with hydraulic cylinder locking devices to each stabiliser to prevent movement in the event of hydraulic failure. Once fitted these devices must be fully functional at all times whilst this item of plant is in operation. References: AS/NZS4024.1201, AS1418.1 Revised Date/Control Not Required Comments: Not OEM fitted						
	 STRIKING, BURNS	HIGH 22	MEDIUM 15	1 Week	8-Dec-22		
	Risk Treatment Required: Hydraulic Hose Failure Shield Ensure that a sturdy, permanent shield is installed to prevent injury due to fluid jet or movement (whiplash) of all hydraulic hoses as a result of fluid leakage or component failure. Once installed this shield(s) must be present and fully functional at all times whilst this item of plant is in operation. References: AS4024, ISO4413, AS2671 Revised Date/Control Not Required Comments: As per OEM Guidelines and daily report						







HAZARD(S)	Prelim. Risk Rating	Residual Risk Rating	Time Frame	Due Date	Date Rectified	Initial
 CRUSHING, COLLISION	CRITICAL 25	MEDIUM 15	Immediate	1-Dec-22		
Risk Treatment Required: 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 on this item of plant require remedial action before operating this machine. The brakes must be regularly inspected and tested. These inspections and tests must be documented as part of your plant safety programme. Legislation: State Health & Safety Legislation & Regulation References: AS2958 Assessor Comments: Not tested Revised Date/Control Not Required Comments: As per OEM Guidelines and daily report						
 STRIKING, BURNS	HIGH 22	MEDIUM 15	1 Week	8-Dec-22		
Risk Treatment Required: Hydraulic Damage The hydraulic hoses to this item of plant must be free from damage and have protection against damage arising from contact with the plant structure. Replacement hoses or protection must be installed as per the time frame above. Once installed, ensure that hoses and protection are in place at all times whilst this item of plant is in operation. Inspection of the hoses and protection should be conducted regularly and documented as part of your plant safety programme. Legislation: State Health & Safety Legislation & Regulation References: AS4024, ISO4413, AS2671 Revised Date/Control Not Required Comments: As per OEM Guidelines and daily report						

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
 INCORRECT OPERATION	HIGH 22	MEDIUM 15
Risk Treatments in Place: Plant Security This item of plant is fitted with the appropriate locking devices and or vandal proof guarding. These must be employed whenever this item of plant is left unattended. References: RMS G22, AS7502-		
 CRUSHING	HIGH 22	MEDIUM 15
Risk Treatments in Place: 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. References: Work Health & Safety Act & Regulations- , Occupational Health & Safety Act & Regulations		
 CRUSHING	HIGH 22	MEDIUM 15
Risk Treatments in Place: SWMS Load Restraint Ensure that all operators follow the approved SWMS/SOP when restraining this machine for transport. References: Work Health & Safety Act & Regulations- , Occupational Health & Safety Act & Regulations		








	HAZARD(S)	Prelim. Risk Rating	Residual Risk Rating
COMMISSIONING	 NON COMPLIANCE Risk Treatments in Place: Pre-hire Contractor Inspection A record is available to show that this item of plant has been inspected to ensure that it complies with the manufacturer's requirements and is safe for use for the hire period. References: ISO31000	HIGH 22	HIGH 21
	 NON COMPLIANCE Risk Treatments in Place: Road & Traffic Authority Registration This item of plant is currently registered with the road & traffic authority. Registration (conditional or full) must be current at all times whilst this item of plant is in operation in the rail corridor. References: AS7502-	LOW 6	LOW 1
OPERATION	 CRUSHING Risk Treatments in Place: Fully Automatic Quick Hitch - Swing Risk This item of plant was fitted with a fully automatic quick hitch prior to December 31st 2015. This type of hitch allows for uncontrolled movement of the attachment in the event of a failure of the primary retention system. This hitch must be replaced prior to December 31st 2022. Ensure that all operators are familiar with the safe use of this hitch. References: SafeWork NSW- Position Paper	CRITICAL 24	MEDIUM 15
	 CRUSHING Risk Treatments in Place: Hydraulic steering speed advisory label Hydraulic steering maximum speed warning label fitted to operator area. Operators must not exceed this speed at any time whilst operating this item of plant. References: RMS G22	HIGH 22	HIGH 22
	 INCORRECT OPERATION 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- , Occupational Health & Safety Act & Regulations	HIGH 22	MEDIUM 15
	 INCORRECT OPERATION Risk Treatments in Place: Pre-op Checklist Backhoe Loader Pre-operational checklist is available for this Backhoe Loader. All operators must complete this checklist prior to operation of this Backhoe Loader. References: Work Health & Safety Act & Regulations- , Occupational Health & Safety Act & Regulations	HIGH 22	MEDIUM 15
	 INCORRECT OPERATION Risk Treatments in Place: SOP Backhoe Loader Safe Operation Procedures are available for this Backhoe Loader. The information in the Safe Operation Procedures must be followed at all times whilst operating this Backhoe Loader. References: Work Health & Safety Act & Regulations- , Occupational Health & Safety Act & Regulations	HIGH 22	MEDIUM 15
	 INCORRECT OPERATION 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	HIGH 22	MEDIUM 15







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-			
	CRUSHING	HIGH 22	MEDIUM 15
Risk Treatments in Place: 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. References: ISO3471			
	CRUSHING	HIGH 22	MEDIUM 15
Risk Treatments in Place: ROPS seat belt label This item of plant is fitted with a ROPS and has an advisory label stating that "seatbelts must be worn". This label must be present, clean and legible at all times. All operators and passengers must wear seatbelts whilst on this item of plant. References: AS2294, ISO3471			
	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			
	ELECTROCUTION, EXPLOSION	HIGH 22	MEDIUM 15
Risk Treatments in Place: 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. 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			








HAZARD(S)		Prelim. Risk Rating	Residual Risk Rating
	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- , Occupational Health & Safety Act & Regulations			
	CRUSHING, INCORRECT OPERATION	HIGH 22	HIGH 21
Risk Treatments in Place: Backhoe Boom Rated Capacity Label This backhoe is fitted with a non extendable boom and a lifting point and has a rated capacity label fitted to each side of the backhoe 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.			
References: AS1418.8			
	CRUSHING, INCORRECT OPERATION	HIGH 22	HIGH 21
Risk Treatments in Place: Backhoe Boom Retracted Rated Capacity Label This backhoe is fitted with an extendable/retractable boom and a lifting point and has a rated capacity label fitted to each side of the backhoe boom which displays the rated capacity in the retracted position. 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.			
References: AS1418.8			
	CRUSHING, INCORRECT OPERATION	HIGH 22	HIGH 21
Risk Treatments in Place: Backhoe Boom Extended Rated Capacity Label This backhoe is fitted with an extendable/retractable boom and a lifting point and has a rated capacity label fitted to each side of the backhoe boom which displays the rated capacity in the extended position. 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.			
References: AS1418.8			
	COLLISION	HIGH 22	HIGH 21
Risk Treatments in Place: Reverse Camera This item of plant is fitted with a reverse camera. This camera and screen must be fully functional at all times whilst this item of plant is in operation.			
References: AS/NZS4024.1201			
	CRUSHING, STRIKING, COLLISION	HIGH 22	MEDIUM 15
Risk Treatments in Place: Vehicle Frequently Reversing The rear of this item of plant has a hazard warning label re: vehicle frequently reversing. It must be present and fully functional and serviceable at all times.			
References: ISO20474-			
	FIRE	HIGH 21	MEDIUM 15
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			








HAZARD(S)		Prelim. Risk Rating	Residual Risk Rating
	CRUSHING, INCORRECT OPERATION	HIGH 21	MEDIUM 15
Risk Treatments in Place: Quick Hitch Information This hydraulic quick hitch has the following information marked upon it - <ol style="list-style-type: none"> 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. References: AS4772			
	INSTABILITY, CRUSHING	HIGH 21	MEDIUM 15
Risk Treatments in Place: 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. References: AS1418.8			
	INSTABILITY, CRUSHING	HIGH 21	MEDIUM 15
Risk Treatments in Place: 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. References: AS1418.8			
	CRUSHING	HIGH 21	MEDIUM 15
Risk Treatments in Place: Backhoe Boom Crush Zone Label The backhoe boom 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. References: ISO20474-			
	CRUSHING, PINCHING	HIGH 21	MEDIUM 15
Risk Treatments in Place: 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. References: AS/NZS4024.1201, AS1319-			
	CRUSHING	HIGH 21	MEDIUM 15
Risk Treatments in Place: Loader Crush Zone Label The loader boom 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. References: AS1319- , ISO20474-			
	INSTABILITY, CRUSHING	HIGH 21	MEDIUM 15
Risk Treatments in Place: Backhoe Lifting Point Table This item of plant has a lifting point fitted to the backhoe boom, accordingly a load/distance table is present at the operator work area. These must be clear and legible at all times. This item of plant must comply with AS 1418.8 - 2002 part 5 at all times. All operators must be appropriately trained to use this item of plant as a mobile crane. References: AS1418.8			






HAZARD(S)		Prelim. Risk Rating	Residual Risk Rating
	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: AS3781- , AS/NZS1269			
	CRUSHING	MEDIUM 14	MEDIUM 13
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: AS/NZS4024.1201, AS1319-			
	ENTANGLEMENT, SHEARING, BURNS	MEDIUM 14	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: AS/NZS4024.1201, AS1319-			
	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, ISO9533			
	CRUSHING, COLLISION	MEDIUM 9	LOW 4
Risk Treatments in Place: UHF Radio This item of plant is fitted with a UHF radio. All operators must be familiar with the specific site protocols for use of this device. This device must meet the following criteria at all times whilst this item of plant is in operation - - Is permanently and sturdily mounted to the item of plant - Is fitted with an external aerial - Is audible to the operator during normal machine operation - Is fully functional			
References: ISO31000			
	CRUSHING, COLLISION	CRITICAL 24	MEDIUM 15
Risk Treatments in Place: Left/Right Brake Pedals This item of plant fitted with individual left and right brake pedals, which have a sturdy, permanently attached connecting device which locks the brake pedals together to ensure that both pedals are depressed uniformly during straight line operation. This device must be present at all times during operation.			
References: ISO31000			
	CRUSHING	CRITICAL 24	MEDIUM 15
Risk Treatments in Place: Level Lift Loader This item of plant is fitted with a level lift type loader. The level lift functionality must be operational at all times whilst this item of plant is in operation.			
OR This item of plant is fitted with a FOPS to control the crushing hazard created by the non level lift loader. The FOPS must be present at all times whilst this item of plant is in operation and a restraining device must be used to hold loads in place which a risk assessment indicates are unstable and may fall.			
References: ISO20474-			









HAZARD(S)		Prelim. Risk Rating	Residual Risk Rating
	COLLISION	CRITICAL 24	MEDIUM 15
Risk Treatments in Place: Road/Rail Reverse Movement Awareness Alarm This item of plant is fitted with a reverse movement awareness alarm. This alarm must meet the following criteria at all times whilst this item of plant is in operation. Failure to meet any of these criteria requires immediate stand down until rectified. <ol style="list-style-type: none"> 1. Is automatically operated when reverse gear is selected 2. Is mounted with unobstructed vision to the rear of the machine 3. and the alarm either - <ol style="list-style-type: none"> a. Responds to surrounding noise levels to be clearly audible over the units noise. (smart alarm) and b. Regardless of being a smart alarm has a base sound pressure level (SPL) not less than 87dB(A) measured at a distance of one metre References: ISO7731, ISO9533			
	CRUSHING	CRITICAL 24	LOW 1
Risk Treatments in Place: 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. References: AS1418.8			
	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. <p>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.</p> <p>Hydraulic pressure can be stored and is a hazard. Before disconnection or connection of hydraulic hoses complete the following steps -</p> <ol style="list-style-type: none"> 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: AS4024, AS2671			
	CRUSHING, COLLISION	HIGH 22	MEDIUM 15
Risk Treatments in Place: Loose Items - Operator Work Area All items that could cause harm to the operator in the event of a collision or rollover are securely restrained. References: ISO31000			
	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: 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. References: AS4772, AS/NZS4024.1906			
	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: ISO6683			








HAZARD(S)		Prelim. Risk Rating	Residual Risk Rating
	POOR VISIBILITY, COLLISION	HIGH 22	MEDIUM 15
	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: AS/NZS4024.1201, ISO14401.1		
	CRUSHING	HIGH 22	MEDIUM 15
	Risk Treatments in Place: 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.		
	References: AS4772, ISO7731		
	CRUSHING	HIGH 22	MEDIUM 15
	Risk Treatments in Place: 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 backhoe arm and attachments. This safety device must meet all of the following criteria at all times prior and during operation - <ol style="list-style-type: none"> 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.		
	References: AS4772		
	CRUSHING	HIGH 22	MEDIUM 15
	Risk Treatments in Place: Earthmoving ROPS A Roll Over Protective Structure (ROPS) to AS 2294, ISO 3471, ISO 12117.1 or 2 or SAE J1040 is fitted to this item of plant. A permanent label stating this standard must be attached to the structure at all times. It must also carry 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.		
	References: AS2294, ISO3471		
	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: ISO20474-		
	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		

HAZARD(S)		Prelim. Risk Rating	Residual Risk Rating
	CRUSHING, COLLISION	HIGH 22	MEDIUM 15
Risk Treatments in Place: Backhoe Transit Locking Device This backhoe boom is fitted with transit locking device(s) to prevent movement of the boom during transit. This transit locking device(s) must meet the following criteria at all times – <ol style="list-style-type: none"> 1. Is a mechanical device(s) 2. Must be intentionally disengaged 3. Is not the primary source of retention 4. Is fitted with a clear and legible instruction label Locking device(s) can be either manually or hydraulically engaged and must be used during transit.			
References: AS/NZS4024.1201			
	CRUSHING	HIGH 22	MEDIUM 15
Risk Treatments in Place: Loader Prop The loader boom on this item of plant is fitted with a safety support and instruction label. These must be fully functional and serviceable at all times. The support must be used when accessing the area under the boom and bucket for maintenance or any other purpose.			
References: ISO20474-			
	INSTABILITY, CRUSHING, TIP OVER	HIGH 22	MEDIUM 15
Risk Treatments in Place: 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.			
References: AS1418.8			
	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 - <ul style="list-style-type: none"> - 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: ISO20474-			
	CRUSHING, NON COMPLIANCE	HIGH 22	MEDIUM 15
Risk Treatments in Place: Forklift Tyne Movement Lock The fork tynes are fitted with a lateral movement locking device. This device must be employed and fully functional at all times whilst this item of plant is in use.			
References: AS2359			
	OPERATIONAL MALFUNCTION	HIGH 22	LOW 2
Risk Treatments in Place: Plant Modification The plant is in original condition.			

HAZARD(S)		Prelim. Risk Rating	Residual Risk Rating
	ENTRAPMENT	HIGH 21	MEDIUM 15
Risk Treatments in Place: 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.			
References: AS5327			
	ENTRAPMENT	HIGH 21	MEDIUM 15
Risk Treatments in Place: Emergency Exits The emergency exits for this item of plant meet the following requirements - <ol style="list-style-type: none"> 1. Clearly and legibly labelled 2. Instructions for use are clear and legible and located adjacent the exit 3. Any required tools required for use are available e.g. Emergency hammers These exits must be legibly labelled and fully functional at all times whenever the item of plant is manned, whether during operation or maintenance activities.			
References: ISO31000			
	POOR VISIBILITY, COLLISION	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	LOW 5
Risk Treatments in Place: FOPS Level II This item of plant is fitted with a level II Falling Objects Protective Structure (FOPS). This structure is designed to protect the operator from heavy falling objects (e.g. trees, rocks). Care should still be exercised when operating in an area with a risk of falling objects.			
References: AS2294, ISO3449			
	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			
	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			

HAZARD(S)		Prelim. Risk Rating	Residual Risk Rating
	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: AS5327			
	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			
	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			
	COLLISION	MEDIUM 12	LOW 6
Risk Treatments in Place: Rail Corridor Plant Reflectors This item of plant fitted with external reflectors which meet the following requirements - 1. Reflector placement must highlight the extremities of plant 2. Rear - minimum 2 x red reflectors 3. Sides - minimum 3 x orange reflectors. These reflectors must be present, clean and free from damage at all times whilst this item of plant is in operation. References: AS7502-			
	COLLISION	MEDIUM 12	LOW 6
Risk Treatments in Place: Rail Corridor Reflective Tape - Plant This item of plant is fitted with reflective tape to the rear which meets the following requirements - 1. Placement must highlight extremities of plant 2. Where possible must be between 400mm & 1500mm from ground level 3. Where possible must be 100mm tall & must not be less than 250mm 4. Tape is coloured contrasting red and orange. References: AS7502-			

HAZARD(S)		Prelim. Risk Rating	Residual Risk Rating
	INCORRECT OPERATION, SLIPPING	MEDIUM 9	LOW 4
Risk Treatments in Place: Work Area Floors 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, ISO20474-			
	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 , ISO20474-			
	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			
	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.			
	CRUSHING, COLLISION	CRITICAL 24	HIGH 21
Risk Treatments in Place: Mechanical Condition This item of plant is in an acceptable general and mechanical condition. Ensure that a maintenance & inspection regime is in place to ensure that this is the case at all times whilst this item of plant is in operation.			
	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- , Occupational Health & Safety Act & Regulations			
	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
	CRUSHING	HIGH 22	MEDIUM 15
Risk Treatments in Place: 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.			
References: AS2294, ISO3471			
	INCORRECT OPERATION	HIGH 22	LOW 2
Risk Treatments in Place: RMS Start Requirements The engine to this item of plant must be easy to start (frequent jump starting is not acceptable), reliable, not over heat and provide sufficient power for the unit's intended purpose at all times whilst this item of plant is in operation. Any failure to meet these criteria must be repaired within 1-7 days.			
References: RMS G22			
	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			
	CRUSHING	HIGH 22	LOW 5
Risk Treatments in Place: Lift Tynes The fork tynes fitted to this item of plant are free from structural damage including deformation. If at anytime the fork tynes do become damaged including deformation then operation must cease and a competent person carry out the necessary repairs prior to operating item of plant again.			
References: AS2359			
	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 managed and available at all times as part of your service and maintenance programme. (This programme includes the undertaking of regular inspections of the item of plant with specific reference to all OEM prescribed, scheduled and non scheduled service and maintenance requirements).			
References: Work Health & Safety Act & Regulations- , Occupational Health & Safety Act & Regulations			
	POOR VISIBILITY, COLLISION	HIGH 21	MEDIUM 15
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: AS/NZS4024.1201, ISO20474-			
	POLLUTION	LOW 1	LOW 1
Risk Treatments in Place: RMS Engine Smoke Requirements This item of plant's engine exhaust smoke shall not be visible for continuous periods of more than 10 seconds whilst this item of plant is in operation. (Clean Air Act 1981) Failure to achieve this must be repaired within 1-7 days.			
References: RMS G22			

SECTION 6 IMAGES AND NOTES

IMAGES



NOTES

- No Notes Available -

RISK MANAGEMENT REPORT

TYPE	Backhoe Loader	Report Number	ST 20221201-1205
MAKE	John Deere	Date	01-Dec-2022
MODEL	315SL	Created By	Wayne Morris
CHASSIS / VIN	1t0315SLCNF420788	Assessor	Wayne Morris
REGISTRATION	35680E	Assist. Assessor(s)	
		Owner	Austral Plant Hire
		Assessment Purpose	Plant in use - Rail Corridor (NSW)
		State	NSW

OPERATOR 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.

<u>DATE</u>	<u>NAME</u>	<u>COMPANY/POSITION</u>	<u>SIGNATURE</u>