

RISK MANAGEMENT REPORT

TYPE	Excavator - Large (20 Tonne +)
MAKE	Doosan
MODEL	DX300LC
DDICING CDOUD NUMBER	0001

PRICING	GROUP	NOWIDER	3393

Report Number	15313 20190621-1013
Date	21-Jun-2019
Created By	Nic Mclennan
Assessor	Nic Mclennan
Assist. Assessor(s)	
Completed By	Nic Mclennan
Owner	AB Equipment Limited
Assessment Purpose	Hire
State	NZ



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SECTION 1 IMPORTANT INFORMATION

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

SECTION 2 MACHINE DETAILS

Contains standard machine specifications and details of any extras fitted

RISK ANALYSIS, RISK EVALUATION & RISK TREATMENT

SECTION 3

Contains details of the technique used to calculate risk ratings

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

RISK TREATMENTS REQUIRED

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

RISK TREATMENTS IN PLACE

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

SECTION 6 IMAGES AND NOTES

Contains images & any relevant information entered by the assessor



SECTION 4

SECTION 5



Model DX300LC

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SECTION 1 IMPORTANT INFORMATION

This report generated by Plant Assessor™ © Online Safety Systems on Tuesday, 25 Jun 2019 3:41 PM

This report pertains to this item of plant as it appeared on the day of inspection.

It is the responsibility of the hirer to conform with the instructions and information contained within this report. Any change in condition of this item of plant should be reported to the hire company immediately.

Any information relating to the standard features have been supplied via the manufacturer and should be used as a guide only until verified.

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

SECTION 2 MACHINE DETAILS

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	Manufacturers specified noise level dBA	104dBA
	·	T04dBA
	2. Ambient noise level dBA	
	3. Noise level - Operator position (high idle) dBA	73dBA
- NOISE TEST RESULTS	4. Noise level - Operator position (low idle) dBA	
NOISE TEST RESSETS	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)	1.47
BUCKET	Standard bucket width (mm)	1370
CAPACITIES	Fuel Tank Capacity (Litres)	500
	Dig depth to cut 2.44 m level bottom (mm)	
	Digging depth (mm)	7360
	Dump height (mm)	7260
	Ground clearance (mm)	500
	Max depth of vertical wall (mm)	6190
DIMENSIONS/WEIGHTS	Operating weight (kg)	29,300
	Tailswing radius (mm)	3200
	Transport height (mm)	3250
	Transport length (mm)	10620
	, , ,	1111
	Width (mm)	3200
	Engine Displacement (Litres)	7640cc
	Engine Hours	
ENGINE	Engine Make & Model	Doosan DL08
	Engine Number	
	Engine Power (kW@rpm)	147kW@1900rpm
	Number of Cylinders	6
EXTRAS	Spare spool for attachments? Yes/No	
	Quick Hitch Make	Geith
HITCH	Quick Hitch Model	QC90H1G3
	Quick Hitch Serial No.	
	Flow of main pumps (L/Min)	2x247
	Hydraulic Oil Reservoir Capacity (Litres)	280
HYDRAULICS		2 Variable displacement axial
	Pump Types	piston pumps
	Relief valve pressure, main pumps (Bar)	343
DI ANT OF ACCIETO ATIONS	Class	Excavator
PLANT CLASSIFICATIONS	Year	
	FOPS Compliance No.	ISO 10262 : 1998 (Level II) and SAE J1356
SAFETY STRUCTURES	FOPS Serial No.	
5 211 01110 101120	ROPS Compliance No.	ISO 12117-2:2008
	ROPS Serial No.	
4		I





Make Doosan Model DX300LC

TRACKS	Track length on ground (mm)	4010
TRACKS	Track pad width (mm)	600
TRANSMISSION	Speed (km/h)	5.1/ 3
	Arm breakout (kgf)	13800
WORK CAPABILITIES	Bucket breakout (kgf)	20400
WORK CAPABILITIES	Gradeability - Degrees/(%)	35°/70%
	Reach @ ground level (mm)	10550
EXTRAS	Air Conditioning	
	Bucket - Tilt	





SECTION 3 RISK ANALYSIS / RISK EVALUATION

RI:	SK ANALYSIS					
	← CONSEQUENCE →					
гікегіноор ———		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
—— LIKELI	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

LUATION	CRITICAL	Act immediately to mitigate risk. Implement risk treatment(s) in accordance with the risk treatment table below.		
RISK EVA	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.			
Take reasonable steps to mitigate and monitor the risk. Implement risk treatment(s) in accordance we treatment table below. Permanent risk treatments must be implemented within one month.		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.		
		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.		

EATMENT	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)		
REAT	Eliminate	Eliminate the risk source.	
RISKT	Substitute	Provide an alternative that is capable of performing the same task which is safer.	
Ч	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.		





Make Doosan Model DX300LC

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	Residual Risk	Time	Due Date	Date	Initial
HAZAKD(3)	Rating	Rating	Frame	Due Date	Rectified	IIIIIIai

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		
ERY	CRUSHING	HIGH 22	MEDIUM 15		
DELIVERY	Risk Treatments in Place: SWMS Loading/Unloading Ensure that all operators follow approved SWMS/SOP when loading and unloading this matilit tray. Potentians Work Hoolth & Sofety Act & Regulations	chine to and from a flat top tru	ck or trailer, low loader or		
	References: Work 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 fo	r transport.			
	References: Work Health & Safety Act & Regulations-				
ION	NOMINATED OPERATION OPERATION ONLY	CRITICAL 24	MEDIUM 15		
Risk Treatments in Place: Operator Competency Only persons who are qualified, trained and experienced and/or hold the relevant certification/license can operate this item of plant. Only persons who are qualified, trained and experienced and/or hold the relevant certification/license can operate this item of plant. Only persons who are qualified, trained and experienced and/or hold the relevant certification/license can operate this item of plant.					
	References: Work Health & Safety Act & Regulations-				
	INCORRECT OPERATION	HIGH 22	MEDIUM 15		
	Risk Treatments in Place: Operation Handbook The manufacturer's operation handbook has been supplied for this item of plant.				
	This handbook must be available at all times to all potential operators and supervisory staff. All potential operators must read and be familiar with this handbook prior to operating.				
	A complete risk assessment/Job Safety Analysis must be undertaken covering all operating processes and environments associated with this item of plant. SWMS should be produced for specific tasks associated with use of this item of plant.				





Make Doosan Model DX300LC

HAZARD(S)	Prelim. Risk Rating	Residual Risk Rating
INCORRECT OPERATION	HIGH 22	MEDIUM 15
Risk Treatments in Place: Pre-op Checklist Excavator A pre-operation checklist is available for this Excavator. This checklist must be completed by	all operators prior to operation	ng this Excavator
References: Work Health & Safety Act & Regulations-	an operators prior to operating	ing this Exouvator.
INCORRECT OPERATION	HIGH 22	MEDIUM 15
Risk Treatments in Place: SOP Excavator Safe Operation Procedures are available for this Excavator. The information in the Safe Operating this Excavator.	eration Procedures must be fo	ollowed at all times whilst
References: Work Health & Safety Act & Regulations-		
INCORRECT OPERATION	HIGH 22	MEDIUM 15
Risk Treatments in Place: Control Labels All controls including all levers, buttons, pedals, switches etc. are clearly labelled as to their maintained in a clean and serviceable condition at all times.	purpose and method of opera	ation. These labels must be
References: AS/NZS4024.1905		
CRUSHING	HIGH 22	MEDIUM 15
Risk Treatments in Place: Quick Hitch - Semi Auto This item of plant is fitted with a semi automatic hydraulic (quick) hitch which is fitted with a re-	nechanical safety system.	
Hydraulic locking devices MUST not be relied upon as the only source of retention for attach backing-up the hydraulic locking device is present and engaged at all times whilst this item of		anical safety system
If at any time this pin is not present then operation must cease until it is replaced.		
References: AS4772		
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 a		ntrols re: the contents.
These must be present, clear and legible at all times. (this includes radiator, hydraulic and po	etrol/diesel tanks)	
References: Work Health & Safety Act & Regulations-		
INCORRECT OPERATION, CRUSHING	HIGH 22	HIGH 21
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 of plant is in progretion. Operators must not exceed this rated capacity at any time during one		at all times whilst this item
of plant is in operation. Operators must not exceed this rated capacity at any time during operations. AS1418.8	erauUH.	
110101010017101710.0		



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



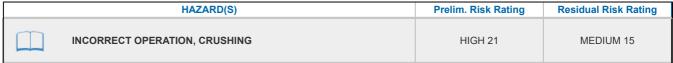


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Type Excavator - Large (20 Tonne +)

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Risk Treatments in Place: 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.

References: AS4772



COLLISION, STRIKING, CRUSHING

HIGH 19

MEDIUM 14

Risk Treatments in Place: 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.

References: ISO20474-



CRUSHING

MEDIUM 15

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



BURNS, ENTANGLEMENT, SHEARING

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: AS1319-, AS/NZS4024.1201



COLLISION, CRUSHING

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





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HAZARD(S) Prelim. Risk Rating 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 with out latching devices must not be used as a lifting point at any time.

References: AS1418.8



STRIKING, BURNS

CRUSHING

HIGH 22

MEDIUM 15

Risk Treatments in Place: Hydraulic Hoses

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

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

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

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

References: AS2671, AS4024



CRUSHING, NON COMPLIANCE

HIGH 22

MEDIUM 15

Risk Treatments in Place: Control Lock out

The primary operator controls are fitted with an isolation device which meets the following requirements -

- a) Must be engaged to allow entry & exit of the machine
- b) Is not easily bypassed.

This device deactivates the primary operator controls. This must be employed during entry, exit and while performing maintenance on this item of plant.

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

References: ISO10968



STRIKING, ENTANGLEMENT, COLLISION, CRUSHING

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: AS/NZS4024.1906, AS4772



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





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Excavator - Large (20 Tonne +)

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Risk Treatments in Place: Seat Belt

The operator seat belt fitted to this item of plant must be fully functional and serviceable at all times. (N.B. It must not be attached to the ROPS). Operator seat belts must be worn at all times whilst this item of plant is in operation.

References: ISO6683



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: 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.

References: ISO7731, ISO9533



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 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.

References: AS4772



COLLISION, POOR VISIBILITY

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





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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



FALLING

HIGH 22

MEDIUM 15

Risk Treatments in Place: Handrails

All operator work platforms above 1.8 metres from the ground or nearest platform have an approved handrail. It must be present and fully functional and serviceable at all times.

Handrails must meet the following requirements at all times whilst this item of plant is in operation -

- 1. All handrails are at least 0.95m
- 2. All handrails have a mid rail
- 3. All sides and ends have a kick plate which is at least 100mm high

References: AS1657



COLLISION

HIGH 22

MEDIUM 15

Risk Treatments in Place: Beacon

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

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

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

References: ISO20474-

OPERATIONAL MALFUNCTION

HIGH 22

LOW 2

Risk Treatments in Place: Plant Modification

The plant is in original condition.



POOR VISIBILITY

HIGH 21

MEDIUM 15

Risk Treatments in Place: Windscreen Wipers

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

References: AS/NZS4024.1201

ROPS FITTED

CRUSHING

HIGH 21

MEDIUM 15

Risk Treatments in Place: 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.

References: AS2294, ISO3471



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, ISO10262



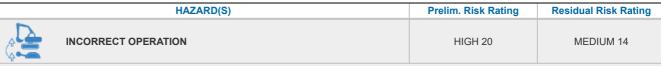


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Risk Treatments in Place: Intuitive Controls

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



SLIPPING, INCORRECT OPERATION

HIGH 17

I OW 6

Risk Treatments in Place: Control Levers/Pedals/Buttons

All controls including all levers, buttons, pedals, switches etc. must be kept non-slip and free from damage at all times.

References: AS/NZS4024.1901



SLIPPING

MEDIUM 12

LOW 6

Risk Treatments in Place: Operator Work Area Access/Egress

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

All personnel must -

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

References: AS3868



SLIPPING, FALLING

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

If you can't see my mirrors I CAN'T SEE

COLLISION, POOR VISIBILITY

MEDIUM 12

MEDIUM 11

Risk Treatments in Place: Operator Mirrors

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

References: ISO14401.1, AS/NZS4024.1201



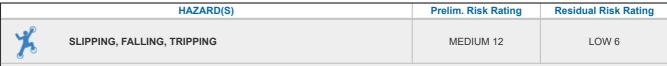


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Risk Treatments in Place: Engine Bay Access

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

All personnel must -

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

References: AS3868



ELECTRIC SHOCK, BURNS

MEDIUM 12

I OW 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



SLIPPING, INCORRECT OPERATION

MEDIUM 9

LOW 4

Risk Treatments in Place: Operator Floor

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

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

References: AS/NZS4024.1201, 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



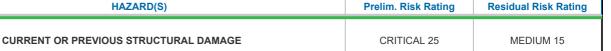


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Risk Treatments in Place: Structural Integrity

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



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-



STRIKING, BURNS

HIGH 22

MEDIUM 15

Risk Treatments in Place: Hydraulic Damage

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

References: AS2671, AS4024, ISO4413



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



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



OPERATIONAL MALFUNCTION

HIGH 21

MEDIUM 15

Risk Treatments in Place: Service Records

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

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

References: Work Health & Safety Act & Regulations-

Assessor Comments: On Request





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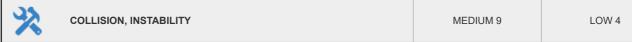
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Risk Treatments in Place: Windows & Screens

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: ISO20474-, AS/NZS4024.1201



Risk Treatments in Place: 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.

References: ISO20474-

SECTION 6 IMAGES AND NOTES

IMAGES

- No Images Available -

NOTES

- No Notes Available -





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RISK MANAGEMENT REPORT

TYPE	Excavator - Large (20 Tonne +)	Report Number	15313 20190621-1013
MAKE	Doosan	Date	21-Jun-2019
MODEL	DX300LC	Created By	Nic Mclennan
PRICING GROUP NUMBER	339J	Assessor	Nic Mclennan
		Assist. Assessor(s)	
		Owner	AB Equipment Limited
		Assessment Purpose	Hire
		State	NZ

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>	COMPANY/POSITION	<u>SIGNATURE</u>



Make Doosan
Model DX300LC

Type Excavator - Large (20 Tonne +)

Pricing Group Number Assessed By

Nic Mclennan 21-Jun-2019