



RISK CONTROL MANAGEMENT PROCEDURE

Product Description Excavator Series KX Series
 Model KX080-3 Serial No. _____
 Attachment/s _____ Revision A
 Date 5/11/2007
 Date of inspection _____ Location _____
 Inspected by Benjamin Binns R+D Manager
Paul Watt Senior Divisional Manager
 Signature

Select unit type with

SAMPLE UNIT

PRODUCTION UNIT

Select Risk type with

Operational

Maintenance

1..Hazard Analysis and Risk Assessment

HAZARD	RISK SOURCE	SAFETY MEASURE	OCCURANCE	
			Probability	Consequence
Entanglement	Tracks	SOP, Decals, Travel Alarm, Operating Clearance Zone	UL	S
Crushing	Roll Over, Boom & Tracks	Certified ROPS/FOPS and seatbelt, SOP, Decals, Operating Clearance Zone, Travel Alarm and horn, Anti Drop valve fitted to Boom Cylinder	UL	S
Cutting, Stabbing, Puncturing				
Shearing	Blade (bystanders)	SOP, Decals, Operating Clearance Zone,	UL	S
Friction				
Striking	Boom, Machine, Twin Pattern Selection System	Boom Swivel Pedal lockout, Operator control locks, horn, decals	UL	S
Electrical	Overhead/Underground power	SOP, Decals, Dial before you dig, "Look up and live"	UL	S
Slipping, Tripping, Falling	Mount/Dismount	Hand Rail, Non Slip Mat	L	M
Noise	Engine	Within regulation sound level	L	M
Manual Handling				

Probability Scale
 L = likely
 UL = unlikely

Consequence Scale
 S = major injury/fatality
 M = minor injury

Other hazards	Dust/debris	PPE	L	M
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2. Risk Control

Risk Severity Table

		Probability	
Consequence	L	UL	
	S	High	Medium
M	Medium	Low	

Implementation of Risk Control:

Where a risk to health and safety has been identified utilizing the Risk Severity Table, controls to eliminate or minimize the risk are required.

The control is to be selected from the following hierarchy of controls:

- Level 1 Eliminate the hazard
- Level 2 Minimize the risk from the hazard
If the hazard cannot be eliminated, the machine should be constructed to minimize the risk *as far as practicable*.
- Level 3 Provide back up controls
Provided levels 1 and 2 have been exhausted, back up controls include administrative controls governing work practices (eg operator's manual safe working instructions) and personal protective equipment.

Risk Control Table

Risk	Control Measure (how / who / time frame)	Implementation date	Review Date
Entanglement in Tracks	SOP in manual, Safety Decals, Travel Alarm, Operating Clearance Zone	5/11/2007	On Going
Machine Roll Over	Certified ROPS/FOPS, SOP	5/11/2007	On Going
Crushing by Boom or tracks	SOP, Safety decals, Operating Clearance Zone, Travel Alarm and horn, Anti Drop Valve fitted to Boom cylinder	5/11/2007	On Going
Shearing from Blade	SOP, Safety decals, Operating Clearance Zone,	5/11/2007	On Going

Striking by Boom or Machine	Boom Swivel Pedal lockout, Operator control locks, horn	5/11/2007	On Going
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Risk Control Table

Risk	Control Measure (how / who / time frame)	Implementation date	Review Date
Electrocution	SOP, Decals, "Dial before you dig", "Look up and live"	5/11/2007	On Going
Slipping/tipping from Mounting/Dismounting	Hand Rail, Non Slip Mat	5/11/2007	On Going
Engine noise	Complies to current regulations	5/11/2007	On Going
Eye damages from dust/debris	PPE, SOP	5/11/2007	On Going

3. Review

The above Risk Assessment to be reviewed during the life of the product if an upgraded model is introduced or information is obtained about a previously unknown hazard.



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Select unit type with

SAMPLE UNIT

PRODUCTION UNIT

Select Risk type with

Operational

Maintenance

1..Hazard Analysis and Risk Assessment

HAZARD	RISK SOURCE	SAFETY MEASURE	Probability	Consequence
Entanglement	Fan/ Fan Belt	Guards, Decals, SOP (Do not open hood with engine running)	UL	S
Crushing	Loss of hydraulic pressure	SOP (lower boom and blade to ground before conducting any maintenance), Anti Drop Valve fitted to the Boom cylinder	UL	S
Cutting, Stabbing, Puncturing				
Shearing				
Friction	Hot liquids, Exhaust	SOP, Decals, Exhaust heat shield	UL	M
Striking	Engine & Hydraulic Hood	Hood support strut, Lock	UL	M
Electrical	Battery maintenance	SOP, Battery manufactures maintenance procedures	UL	M
Slipping, Tripping, Falling	Greasing Boom, Cleaning precleaner	Single sided servicing, Lower boom to ground as per operators manual. Move upper swivel frame across tracks to allow track to be used as a step to access precleaner.	L	M
Noise				
Manual Handling				
Other hazards	Machine Movement	Park on hard level surface, lower boom and blade to	UL	S

Probability Scale
 L = likely
 UL = unlikely

Consequence Scale
 S = major injury/fatality
 M = minor injury

ground, stop engine and remove keys before beginning any maintenance.



2. Risk Control

Risk Severity Table

		Probability	
Consequence	L	UL	
	S	High	Medium
M	Medium		Low

Implementation of Risk Control:

Where a risk to health and safety has been identified utilizing the Risk Severity Table, controls to eliminate or minimize the risk are required.

The control is to be selected from the following hierarchy of controls:

- Level 1 Eliminate the hazard
- Level 2 Minimize the risk from the hazard
If the hazard cannot be eliminated, the machine should be constructed to minimize the risk **as far as practicable**.
- Level 3 Provide back up controls
Provided levels 1 and 2 have been exhausted, back up controls include administrative controls governing work practices (eg operator's manual safe working instructions) and personal protective equipment.

Risk Control Table

Risk	Control Measure (how / who / time frame)	Implementation date	Review Date
Fan/ Fan Belt	SOP in manual, Safety Decals, Fan guard	5/11/2007	On Going
Hydraulic Pressure Loss	SOP in manual, Anti Drop Valve fitted to Boom cylinder	5/11/2007	On Going
Hot liquids	SOP in manual, Safety Decals, Exhaust heat shield	5/11/2007	On Going
Battery Maintenance	Battery Manufactures maintenance procedure	5/11/2007	On Going

Machine movement	SOP, Park on hard level surface, lower boom and blade to ground, stop engine and remove keys before beginning any maintenance.	5/11/2007	On Going
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Risk Control Table

Risk	Control Measure (how / who / time frame)	Implementation date	Review Date
Engine Hood	Hood support strut	5/11/2007	On Going
Greasing Boom	Single sided servicing, lower boom to ground as per OPS manual	5/11/2007	On Going
Precleaner	Move upper swivel frame across tracks to allow track to be used as a step to access precleaner.	5/11/2007	On Going

3. Review

The above Risk Assessment to be reviewed during the life of the product if an upgraded model is introduced or information is obtained about a previously unknown hazard.