



RISK CONTROL MANAGEMENT PROCEDURE

Product Description	Excavator	Series	KX Series
Model	KX91-3S	Serial No.	
Attachment/s		Revision	A
Date of inspection		Date	02/06/2006
Inspected by	Benjamin Binns Paul Watt	Location	R+D Manager 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	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	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	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				
Other hazards	Dust/debris	PPE	L	M

Probability Scale
 L = likely
 UL = unlikely

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



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	2/7/2006	On Going
Machine Roll Over		Certified ROPS/FOPS, SOP	2/7/2006	On Going
Crushing by Boom or tracks		SOP, Safety decals, Operating Clearance Zone, Travel Alarm and horn	2/7/2006	On Going
Shearing from Blade		SOP, Safety decals, Operating Clearance Zone,	2/7/2006	On Going
Striking by Boom or Machine		Boom Swivel Pedal lockout, Operator control locks, horn	2/7/2006	On Going



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"	2/7/2006	On Going
Slipping/tipping from Mounting/Dismounting	Hand Rail, Non Slip Mat	2/7/2006	On Going
Engine noise	Complies to current regulations	2/7/2006	On Going
Eye damages from dust/debris	PPE, SOP	2/7/2006	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.



RISK CONTROL MANAGEMENT PROCEDURE

Product Description	Excavator	Series	KX Series
Model	KX91-3S	Serial No.	
Attachment/s		Revision	A
Date of inspection		Date	02/07/2006
Inspected by	Benjamin Binns Paul Watt	Location	R+D Manager 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	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)	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				
Noise				
Manual Handling				
Other hazards	Machine Movement	Park on hard level surface, lower boom and blade to ground, stop engine and remove keys before beginning any maintenance.	UL	S

Probability Scale
L = likely
UL= unlikely

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



2. Risk Control

Risk Severity Table

Risk Severity Table	
Consequence	Probability
S	High
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:

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- Level 2 Minimize the risk from the hazard
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- Level 3 Provide back up controls
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Risk Control Table

Risk	Control Measure (how / who / time frame)	Implementation date	Review Date
Fan/ Fan Belt	SOP in manual, Safety Decals, Fan guard	2/07/2006	On Going
Hydraulic Pressure Loss	SOP in manual	2/07/2006	On Going
Hot liquids	SOP in manual, Safety Decals, Exhaust heat shield	2/07/2006	On Going
Battery Maintenance	Battery Manufactures maintenance procedure	2/07/2006	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.	2/07/2006	On Going



Risk Control Table	Risk	Control Measure (how / who / time frame)	Implementation date	Review Date
	Engine Hood	Hood Support Strut	2/07/2006	On Going

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