Plant Identification : ELECTRIC ARTICULATING BOOMS
HA 12 CJ, HA 12 CJ+, HA 12 IP, HA 15 IP

	RISK	RISK CONTROL METHOD	ADDITIONAL CONTROL METHOD REQUIRED
	Entanglement – Can anything become entangled in moving parts?	Operator position at lower and upper controls at distance from moving parts Engine guard fitted Warning decals Precaution in operator manual	Address during company induction
	Crushing/Striking – Can anyone be crushed or struck by moving objects due to:		
	Material falling off or onto the plant?	Kick guards fitted as part of platform Precautions provided in operator manual	Tool and equipment may be attached by lanyard
	Uncontrolled or unexpected movement of the plant or its load?	Deadman button on joystick Movement alarm Amber flashing beacon (where applicable) Emergency stop switches fitted to platform and ground controls	None

	Lack of capacity for the plant to be slowed, stopped or immobilised?	Braking system designed and tested to comply with AS1418.10 Brakes auto-engage E-stops immobilise plant	None
	The plant tipping or rolling over?	Stability tested in accordance with AS1418.10 Warnings provided in manual	Operate machine in accordance with load, slope and wind limits

	Parts of the plant collapsing?	Load holding valve fitted to lift cylinder Conforms to AS1418.10	None
	Coming into contact with moving parts of the plant during testing, inspection, operation, maintenance, cleaning or repair?	Movement requires dual input (deadman buttons) Control positions situated at distance from moving parts Cylinders fitted with loadholding valves to prevent uncontrolled lowering / provide access for maintenance Decals fitted for hand crush and body crush hazards	None

	Being thrown off or under the plant?	Tested to AS1418.10 including depression and braking tests. Guard rails fitted to platform Warning provided in operator manual	Platform occupants to wear full body harness at all times
	Being trapped between the plant & materials or fixed structures?	Joystick fitted with deadman to protect against inadvertent movement Emergency stop fitted if movement causes trapping	Address during company induction – operator to be aware during movement Provide ground support as required for during movement. Note vision may be obscured due to chassis or when reversing
	Other factors not mentioned?		
	Cutting, Stabbing or Puncturing – Can anyone be cut, stabbed or punctured due to:		
	Coming in contact with sharp or flying objects?	No visible sharp objects	

	Uncontrolled or unexpected movement of the plant?	Deadman switch fitted to joystick Emergency stop fitted. Movement alarm and flashing beacon fitted Direction arrows (green/red) fitted to chassis and control position	Training and Supervision to be provided by site mgt
	Parts of the plant or work pieces disintegrating?	Inspection schedule provided in manual to identify disintegrating components	
	Work pieces being ejected?	Guards and covers fitted	
	Coming in contact with moving parts of the plant during testing, inspection, operation maintenance, cleaning or repair?	Guarding fitted Warning Decals fitted	
	Other factors not mentioned?		
	Shearing – Can anyone's body parts be sheared between two parts of the plant, or between a part of the plant and a work piece structure?	Decals fitted to boom arms and linkages	JSA, Training and Supervision to be provided by site mgt
	Slipping or Tripping – Can anyone using or near the plant, slip or trip due to:		
	Uneven or slippery work surfaces?	Platform has holes to prevent water from building up on surface	

	Poor housekeeping, e.g. spillage not cleaned up?	Platform provided in clean condition	Supervision by site mgt to ensure machine remains in clean, safe condition

	Obstacles being placed in the vicinity of the plant?	Storage location for operator manuals	Supervision to be provided by site mgt to ensure platform and work area remains free from obstacles
	Other factors not mentioned?		
	Falling – Can anyone fall from a height due to:		
	Lack of proper working platform?	Work platform fitted. Complies to AS1418.10:2011	
	Lack of proper stairs or ladders?	Basket is accessed at ground level	
	Lack of guard rails or other suitable edge protection?	Guard rails fitted. Complies to AS1418.10:2011	
	Unprotected holes, penetrations or gaps?	Guardrails fitted	
	Poor floor or walking surfaces, such as the lack of a slipresistant surface?	Platform has holes to prevent water from building up on surface	

	Steep walking surfaces?	Tilt sensor prevents machine exceeding acceptable slope for operator movement Platform tilt restricted to max angle as per AS1418.10	
	Collapse of the supporting structure?	Inspection requirements detailed in operator manual to inspect structure	
	Other factors not mentioned?		

	Suffocation – Can anyone be suffocated due to lack of oxygen or atmospheric contamination?	Open air platform to allow for adequate atmospheric ventilation	
	Electrical – Can anyone be injured by electrical shock or burnt due to:		

	• The plant contacting live electric conductors?	Electrical Decal specifying minimum clearance is fitted by control panel	JSA, Training and Supervision to be provided by site mgt to ensure safe working clearance from electrical fields
	• The plant working in close proximity to electrical conductors?	Electrical Decal specifying minimum clearance is fitted by control panel Precaution in operator manual	JSA, Training and Supervision to be provided by site mgt to ensure safe working clearance from electrical fields
	• Overload of electrical circuits?	Regular service intervals indicated in manual inc. inspection and testing of electrical circuits	
	• Damaged or poorly maintained electrical leads & cables?	No signs of damage at delivery	Daily inspection to include checks for damage
	• Damaged electrical switches?	No signs of damage at delivery	Daily inspection to include checks for damage
	High/Low Temperature or Fire -		
	Can anyone come into contact with moving parts or other objects at high temperatures?		
	Can anyone be injured by fire?	Emergency lowering devices provided in case of fire	JSA, Training and Supervision to be provided by site mgt

	Can anyone suffer ill-health due to exposure to high or low temperatures?		

	High Pressure Fluid – Can anyone come into contact with fluids under high pressure, due to plant failure or misuse of the plant?	Pipe clamps fitted Relief valve fitted Warning decal fitted Precautions for repair on high pressure fluids is provided in manual	
	Explosion – Can anyone be injured by explosion of gases, vapours, liquids, dusts, etc., triggered by the operation of the plant or by material handled by the plant?	Danger decal on battery	
	Other Hazards – Can anyone be injured or suffer ill-health from exposure to		
	• Chemicals?		
	• Toxic gases or vapours?		
	• Fumes?	Warning provided in manual regarding charging of battery	
	• Dust?		
	• Noise?	Unit meets EU noise standards	
	• Vibration?	Unit meets EU vibration standards	
	• Radiation?		
	• Other factors not mentioned?		
	Ergonomics – Can anyone be injured due to:		
	Poorly designed seating?	No seat required or provided	

	Repetitive body movement?	Control Box is easy-reach Control Box is moveable to appropriate ergonomic position	
	Constrained body posture or the need for excessive effort?	Electronic controls Caution in manual regarding replacement or removal of batteries	Ensure maintenance staff observe ergonomic requirements
	Other Plant Specific Hazards not covered above:		
	Indoor vs Outdoor Specifications and capacity differ for indoor or outdoor operations	Instruction provided in manual Indoor and outdoor specifications provided	JSA, Training and Supervision to be provided by site mgt Machine to be operated within maximum ratings for indoor and outdoor use
	Incorrect function or stability due to excessive deflection as a result of wear	Wear limits provided in workshop manual	Periodic and Annual inspections to be conducted.