

Plant Identification : HAULOTTE LIGHT BOOMS 3522A (HTA 13P); 4527A (HTA 16P); 5533A (HTA 19P) and 3632T (HTT 13)					
Potential Hazard	Risk		Control Methods currently in Place	Additional Control Method Required	Confirmation and Acceptance
	Yes	No			
Entanglement – Can anything become entangled in moving parts?	Y		IC Engine - Optional has compartment cover fitted Fan cover fitted Precaution in operator manual	Address during company induction – operators to be aware of clothes and materials hanging near moving parts	
Crushing/Striking – Can anyone be crushed or struck by moving objects due to:					
Material falling off or onto the plant ?	Y		Kick guards fitted as part of platform Precautions provided in operator manual	Tool and equipment may be attached by lanyard if required per the site assessment	
Uncontrolled or unexpected movement of the plant or its load?	Y		Deadman(enable) push button plus movement selection buttons require dual input for movement Movement alarm Amber flashing beacon Emergency stop switches fitted to platform and ground controls	None	
Lack of capacity for the plant to be slowed, stopped or immobilised?	<input type="checkbox"/>	N	Braking system designed and tested to comply with AS1418.10 Parking Brakes provided E-stops immobilise plant	None	

	The plant tipping or rolling over?	Y		<p>Stability tested in accordance with AS1418.10</p> <p>Max slope limits provided on data plate</p> <p>Warnings provided in manual</p> <p>Warnings provided to not carry material in platform that will increase wind surface area in wind-affected environments</p> <p>Load Management System fitted which prevents movement when overloaded</p> <p>Tilt sensor fitted which alarms and restricts booms and jib raise movements when on excessive slope</p>	<p>Operate machine in accordance with load, slope and wind limits</p> <p>Do not overload platform or carry material which increases wind surface area</p>	
	Parts of the plant collapsing?	Y		<p>Dual Load holding valves fitted to lift cylinders</p> <p>Design conforms to AS1418.10</p> <p>Inspection schedule provided in operator manual</p>	<p>Inspection, cleaning, maintenance and repair to be conducted when machine is stationary</p>	

	Coming into contact with moving parts of the plant during testing, inspection, operation, maintenance, cleaning or repair?	Y		IC Engine (Optional) is fully enclosed Ground controls fitted with hold-on switches Control stations located at suitable distance from moving parts No drive movements are provided on this machine hence no drive movement available at ground controls Precaution in operator manual	Site management to ensure body harness to be correctly worn and connected at all times when in basket	
	Being thrown off or under the plant ?	Y		Tested to AS1418.10 Guard rails fitted to platform Harness anchor points fitted to platform Warning provided in operator manual	All platform occupants to wear full body harness	
	Being trapped between the plant & materials or fixed structures?	Y		Deadman (enable) push button provided to protect against inadvertent movement Emergency stop fitted if movement causes trapping Warning decals attached	Collision with overhead objects and operator entrapment can occur depending on site structures. Address during company induction	
	Other factors not mentioned?	<input type="checkbox"/>	N			
	Cutting, Stabbing or Puncturing – Can anyone be cut, stabbed or punctured due to:					
	Coming in contact with sharp or flying objects?	<input type="checkbox"/>	N	No visible sharp objects Instrument panel, controls and handrails are rounded Engine fan enclosed		

	Uncontrolled or unexpected movement of the plant?	Y		Deadman (enable) push button fitted and dual input by operator is required Emergency stop fitted. Movement alarm and flashing beacon fitted	Training and Supervision to be provided by site mgt	
	Parts of the plant or work pieces disintegrating?	<input type="checkbox"/>	N	Inspection schedule provided in manual to identify disintegrating components	Conduct pre-operational inspection and periodic inspections as scheduled	
	Work pieces being ejected?	<input type="checkbox"/>	N	Guards, covers, keeper pins and lock pins fitted		
	Coming in contact with moving parts of the plant during testing, inspection, operation maintenance, cleaning or repair?	<input type="checkbox"/>	N	Guarding fitted Warning Decals fitted Serviceable components (hydraulic, engine, batteries) all in enclosures and in accessible locations		
	Other factors not mentioned?	<input type="checkbox"/>	N			
	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?	Y		Operator position not adjacent to moving parts Warning Decals fitted Precaution in operator manual	JSA, Training and Supervision to be provided by site mgt Bystanders to keep clear when machine is operational	
	Slipping or Tripping – Can anyone using or near the plant, slip or trip due to:					
	Uneven or slippery work surfaces?	Y		Non slip surface provided on platform		
	Poor housekeeping, e.g. spillage not cleaned up?	Y		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 or platform?	Y		Designated 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?	<input type="checkbox"/>	N			
	Falling – Can anyone fall from a height due to:					
	Lack of proper working platform?	<input type="checkbox"/>	N	Work platform fitted. Complies to AS1418.10 Warning provided not to climb on rails	Operator to remain within and standing on platform at all times	
	Lack of proper stairs or ladders?	<input type="checkbox"/>	N	Platform lowers to ground for entry and exit purposes		
	Lack of guard rails or other suitable edge protection?	<input type="checkbox"/>	N	Guard rails fitted. Complies to AS1418.10		
	Unprotected holes, penetrations or gaps?	<input type="checkbox"/>	N	Guardrails fitted as per requirements of AS1418.10 Spacing between rails conforms to AS1418.10		
	Poor floor or walking surfaces, such as the lack of a slip-resistant surface?	<input type="checkbox"/>	N	Platform has slip resistant surface		
	Steep walking surfaces?	<input type="checkbox"/>	N	Basket levelling allows operator to adjust platform to level surface Tilt sensor prevents machine exceeding acceptable slope for operator movement		
	Collapse of the supporting structure?	<input type="checkbox"/>	N	Inspection requirements detailed in operator manual and AS2550.10 to inspect structure		

	Other factors not mentioned? Ejection from plant due to sudden movement of chassis (ground collapse, driven over drop-off etc)	Y		Harness anchor points provided for all operators. Anchor points comply to AS1891 & AS1418.10	Site management to ensure correct body harness is worn by all platform occupants	
	Suffocation – Can anyone be suffocated due to lack of oxygen or atmospheric contamination?	Y		Open air platform		
	Electrical – Can anyone be injured by electrical shock or burnt due to:					
	• The plant contacting live electric conductors?	Y		Electrical Decal specifying minimum clearance is fitted to work platform	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?	Y		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?	<input type="checkbox"/>	N	Regular service intervals indicated in manual including inspection and testing of electrical circuits		
	• Damaged or poorly maintained electrical leads & cables?	<input type="checkbox"/>	N	No signs of damage		
	• Damaged electrical switches?	<input type="checkbox"/>	N	No signs of damage		
	• Water near electrical equipment?	Y		Electrical compartments comply with AS1418.10 requiring level IP54 in accordance with AS60529		
	• Lack of isolation procedures?	<input type="checkbox"/>	N			
	• Other factors not mentioned?	<input type="checkbox"/>	N			

	High/Low Temperature or Fire –					
	Can anyone come into contact with moving parts or other objects at high temperatures?	Y		Engine & Exhaust cover provided		
	Can anyone be injured by fire?	Y		Emergency lowering devices provided in case of fire	Fire extinguishers to be provided as deemed necessary following job assessment JSA, Training and Supervision to be provided by site mgt	
	Can anyone suffer ill-health due to exposure to high or low temperatures?	<input type="checkbox"/>	N			
	High Pressure Fluid – Can anyone come into contact with fluids under high pressure, due to plant failure or misuse of the plant?	Y		Pipe clamps fitted Relief valve fitted Precautions for repair on high pressure fluids is provided in manual Hydraulic system complies to AS1418.10 burst pressure requirements		
	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?	Y		Warning decal on battery	Charge batteries in a well ventilated area.	
	Other Hazards – Can anyone be injured or suffer ill-health from exposure to					
	• Chemicals?	<input type="checkbox"/>	N			
	• Toxic gases or vapours?	<input type="checkbox"/>	N			
	• Fumes?	Y		Warning provided in manual regarding charging of battery	Charge batteries in a well ventilated area.	
	• Dust?	<input type="checkbox"/>	N			

	• Noise?		N			
	• Vibration?	<input type="checkbox"/>	N			
	• Radiation?	<input type="checkbox"/>	N			
	• Other factors not mentioned?	<input type="checkbox"/>	N			
	Ergonomics – Can anyone be injured due to:					
	Poorly designed seating?		N	No seat required or provided		
	Workstation Layout?		N	Clear information is provided on control panel and in operator manual Warning lights (fault codes) provide important and instantaneous information only	Replace control panel decal if illegible or damaged.	
	Inadequate provision of devices/tools/controls?		N	Switches provided for every movement controls marked and actuate in direction of movement		
	Repetitive body movement?	<input type="checkbox"/>	N	Controls Box is easy-reach Controls are hold-on and do not require repeat actions		
	Constrained body posture or the need for excessive effort?	<input type="checkbox"/>	N	Electronic controls require minimal effort Upper and lower Controls located at recommended height for percentile male		
	Design deficiency causing mental or psychological stress?	<input type="checkbox"/>	N			
	Inadequate or poorly placed lighting?	<input type="checkbox"/>	N			
	Lack of consideration given to human error or human behaviour?	<input type="checkbox"/>	N			

	Excessive number of simultaneous tasks required ?			Single movement of controls provide simple actions.		
	Mismatch of the plant with human traits and natural limitations?	<input type="checkbox"/>	N			
	Other Plant Specific Hazards not covered above:					
	Injury, instability or damage due to overload above platform limits	Y		Plant limits detailed on sign in platform Load management system restricts overload as per AS1418.10 requirements LMS calibrated at Pre-Delivery by Haulotte		
	Instability due to operation at greater than allowable slope	Y		Tilt system fitted to prevent booms and jib functions, if slope is exceeded. Tilt switch tested at manufacturer's Pre-Delivery	Site management to ensure operators are trained in EWP operation and machines are operated within limits	
	Injury due to inadvertent movement	Y		Controls and direction of controls clearly marked. Instructions of use provided in operator manual Dual input (commonly referred to as 'deadman' switch) required for all functions at platform and base/ground controls Interlocks prevent movement at startup/engine ignition		
	Machine malfunction due to insufficient inspection and maintenance	Y		Inspection schedule and maintenance requirements provided in operator manual and maintenance manual		

	Incorrect function or stability due to excessive deflection as a result of wear	Y		Wear limits and inspection schedule provided in workshop manual		
	Access to operator if assistance required	Y		Emergency lowering system provided from ground controls, including an auxiliary power source if main power is disconnected		
	Injury, instability or damage during Emergency Operations	Y		Secondary electric power provided for emergency retrieval. Operation listed in manual. Deadman input required	Site management to ensure a ground crew member is trained in emergency retrieval on machine	
	Inadvertent activation / interference when plant not in use	Y		Removable key provided		

Risk Assessment carried-out by:	
Name:	Shahid Qureshi
Role:	HAULOTTE Director of Product Safety
Date:	18 August 2015
Project/Plant Managers Review:	
Name:	
Role:	
Signed:	
Date:	

