



Duty of Care:

It is a legal requirement for manufacturers and suppliers of plant and equipment to inform purchasers of hazards which could not be designed out of the plant and equipment. This risk assessment has been provided to ensure purchasers are aware of these design issues and the controls that need to be applied to protect personnel in the working environment.

The purpose for which the plant has been designed:

The LineTrike has been designed to be used for the application of line marking materials for pavement marking.

PLANT TYPE: LINETRIKE
MODEL NUMBERS: 13 B/TK
ASSESSED BY - Carl Watson
DATE OF ASSESSMENT: 9th November 2016

Potential hazards	Yes/ No	If Yes, when could this occur?
ENTANGLEMENT: Can anyone's hair, jewellery, clothing, gloves, cleaning brush etc. become entangled with moving parts of the plant?	Yes	Loose clothing, hair or jewellery can become entangled in the moving parts of the machine.
CRUSHING: Can anyone be crushed due to:		
<ul style="list-style-type: none"> Material falling off the plant? 	No	
<ul style="list-style-type: none"> Uncontrolled or unexpected movement of the plant or its load? 	Yes	Personnel may be crushed when changing wheel.
<ul style="list-style-type: none"> Lack of capacity for the plant to be slowed, stopped or immobilised? 	No	
<ul style="list-style-type: none"> The plant tipping or rolling over? 	Yes	The LineTrike may roll over on gradients >10°.
<ul style="list-style-type: none"> Parts of the plant collapsing? 	No	
<ul style="list-style-type: none"> Coming into contact with moving parts of the plant? 	Yes	The steering chain and paint pump during maintenance.
<ul style="list-style-type: none"> Being thrown off or under the plant? 	No	
<ul style="list-style-type: none"> Being trapped between the plant and materials or fixed structures? 	No	
CUTTING, STABBING & PUNCTURING Can anyone be cut, stabbed or punctured due to:		
<ul style="list-style-type: none"> Coming in contact with sharp or flying objects? 	No	
<ul style="list-style-type: none"> Coming in contact with moving parts of the plant? 	Yes	During maintenance activities.
<ul style="list-style-type: none"> The plant, parts of the plant or work pieces disintegrating? 	No	
<ul style="list-style-type: none"> Work pieces being ejected? 	No	
<ul style="list-style-type: none"> The mobility of the plant? 	No	
<ul style="list-style-type: none"> Uncontrolled or unexpected movement of the plant? 	No	
SHEARING: Can anyone's body parts be sheared between two parts of the plant or between the plant and a work piece or structure?	Yes	During maintenance activities.
STRIKING: Can anyone be struck by moving objects due to:		
<ul style="list-style-type: none"> Uncontrolled or unexpected movement of the plant or material handled by the plant? 	No	
<ul style="list-style-type: none"> The plant, parts of the plant or work pieces disintegrating? 	Yes	The Paint and hydraulic hoses may disintegrate.
<ul style="list-style-type: none"> Work pieces being ejected? 	No	
<ul style="list-style-type: none"> Mobility of the plant? 	Yes	Persons in the vicinity of the LineTrike during operation.

Potential hazards	Yes/ No	If Yes, when could this occur?
HIGH PRESSURE FLUID Can anyone come into contact with fluids under high pressure due to plant failure/misuse of plant?	Yes	Hydraulics and paint lines. Injection of paint during operation and maintenance.
ELECTRICAL Can anyone be injured by electrical shock or burnt due to:		
• The plant contacting live electrical conductors?	No	
• The plant working in close proximity to electrical conductors?	No	
• Overload of electrical circuits?	No	
• Damaged or poorly maintained electrical leads and cables?	No	
• Damaged electrical switches?	No	
• Water near electrical equipment?	No	
• Lack of isolation procedures?	No	
EXPLOSION Can anyone be injured by explosion of gases, vapours, liquids, dusts or other substances triggered by plant operation/material handled by plant?	Yes	Battery, during refuelling with unleaded petrol and static electricity.
SLIPPING, TRIPPING & FALLING Can anyone using the plant or in the vicinity of the plant slip, trip or fall due to:		
• Uneven or slippery work surfaces?	No	
• Poor housekeeping, e.g. Spillage not cleaned up?	Yes	Spillage of beads or paint during refilling and operation.
• Obstacles being placed in the vicinity of the plant?	Yes	May trip over paint hose when using the paint gun manually.
Can anyone fall from a height due to :		
• Lack of a proper work platform?	No	
• Lack of proper stairs or ladders?	No	
• Lack of guardrails or other suitable edge protection?	No	
• Unprotected holes, penetrations or gaps?	No	
• Poor floor or walking surfaces?	No	
• Steep walking surfaces?	No	
• Collapse of the supporting structure (e.g. scaffolding)?	No	
ERGONOMIC Can anyone be injured due to:		
• Poorly designed seating?	No	
• Repetitive movements?	No	
• High Forces?	No	
• Poorly designed operator controls?	No	

Potential hazards	Yes/No	If Yes, when could this occur?
• Awkward body posture/need for excessive effort?	No	
• Vibration?	No	
SUFFOCATION Can anyone be suffocated due to lack of oxygen, or atmospheric contamination?	No	
COMBINATION OF HAZARDS Can anyone be injured due to unexpected start-up, unexpected over-run/over-speed (or similar malfunction) from:		
• Failure/disorder of the control system, e.g. hydraulic system?	No	
• Restoration of energy supply after an interruption?	No	
• External influences on electrical equipment?	No	
• Other environmental factors, e.g. gravity, wind etc.?	No	
• Errors in software?	No	
• Errors made by the Operator?	No	
OTHER HAZARDS Can anyone be injured due to:		
• Exposure to hazardous chemicals, radiation or other emissions released by the plant?	Yes	Unleaded petrol, paints, beads and oil
• Inadequate or poorly placed lighting?	Yes	When operating in dull light.
• Entry into any confined spaces of the plant?	No	
• Noise?	Yes	Exposure to noise levels exceeding 85 dB(A)
• Failure to select plant that is suitable for its intended use?	No	
• Contact with hot or cold parts of the plant?	Yes	Exhaust and paint pump
• Lack of operator competency?	Yes	Misuse of equipment may cause injury to operator and other people in vicinity.

Any hazards identified are carried through to the Plant Risk Assessment to complete the risk assessment process.



PLANT RISK ASSESSMENT

To determine the risk rating, select one category from the probability and consequence table and cross-reference them in the risk-rating table. Risks should be prioritised according to their level of risk.

POSSIBLE SEVERITY	HOW LIKELY IS IT TO HAPPEN				
	5) Almost Certain	4) likely	3) Possible	2) Unlikely	1) Rare
A) Kill or cause permanent injury or ill health	EXTREME	EXTREME	EXTREME	HIGH	HIGH
B) Long term illness or serious injury.	EXTREME	EXTREME	HIGH	HIGH	MEDIUM
C) Medical attention and several days off work	EXTREME	EXTREME	HIGH	MEDIUM	LOW
D) An injury requiring first aid	EXTREME	HIGH	MEDIUM	LOW	LOW
E) Incident occurs – no injury or damage	HIGH	HIGH	MEDIUM	LOW	LOW

Hierarchy of Control

- Eliminate
- Substitution/Isolation
- Engineering
- Administration
- Personal Protective Equipment

RISK ANALYSIS

EXTREME	HIGH
MEDIUM	LOW

HAZARD	POTENTIAL RISK	RISK RATING	EXISTING CONTROL MEASURES	FURTHER FEATURES AVAILABLE
ENTANGLEMENT	Loose clothing, hair or jewellery can become entangled in the moving parts of the machine.	Medium (2C)	Guarding is provided around moving parts. Owners Manual: <ul style="list-style-type: none"> • Appropriate Personal Protective Equipment & Clothing to be worn, • Never operate the LineTrike with any of the safety guards removed. 	Nil
CRUSHING	Personnel may be crushed when changing wheel. The LineTrike may roll over on gradients >10°. The steering chain and paint pump during maintenance.	High (3C)	Owners Manual: <ul style="list-style-type: none"> • Park machine on firm level ground. Decal – roll over > 10°. Owners Manual: <ul style="list-style-type: none"> • Maintenance to be carried out by qualified and properly trained personnel. 	Nil
CUTTING, STABBING	During maintenance activities	Medium (2C)	Owners Manual: <ul style="list-style-type: none"> • Maintenance to be carried out by qualified and properly trained personnel. • Appropriate Personal Protective Equipment & Clothing to be worn 	Nil



PLANT RISK ASSESSMENT

HAZARD	POTENTIAL RISK	RISK RATING	EXISTING CONTROL MEASURES	FURTHER FEATURES AVAILABLE
SHEARING	During maintenance	Medium (2C)	Owners Manual: <ul style="list-style-type: none"> Maintenance to be carried out by qualified and properly trained personnel. Appropriate Personal Protective Equipment & Clothing to be worn 	Nil
STRIKING	The Paint and hydraulic hoses may disintegrate. Persons in the vicinity of the LineTrike during operation.	High (3C)	Owners Manual: <ul style="list-style-type: none"> Daily Checklist includes hoses. Clear area of all personnel before operating LineTrike. 	Nil
HIGH PRESSURE FLUID	Hydraulics and paint lines. Injection of paint during operation and maintenance.	High (3B)	Owners Manual: <ul style="list-style-type: none"> Daily Checklist includes hoses. Warning of injection of paint hazard. Appropriate Personal Protective Equipment & Clothing to be worn Decal – High Pressure Paint and Injection of Paint hazard to Operator and Bystanders. Instructions for de-pressurising the paint line system.	Nil
EXPLOSION	Battery, during refuelling with unleaded petrol and static electricity.	High (3B)	Owners Manual <ul style="list-style-type: none"> Battery safety Refuelling instructions. Decal – explosion hazard	Nil
TRIPPING	Spillage of beads or paint. May trip over paint hose when using the paint gun manually.	Medium (2C)	Owners Manual: <ul style="list-style-type: none"> Safe operation of LineTrike. 	Nil
CHEMICALS	Unleaded petrol, paints, beads and oil	Medium (2C)	Owners Manual: <ul style="list-style-type: none"> Safe operation of LineTrike. Appropriate Personal Protective Equipment & Clothing to be worn 	Nil
NOISE	Exposure to noise levels exceeding 85 dB(A).	Medium (2C)	Owners Manual: <ul style="list-style-type: none"> Safe operation of LineTrike. Appropriate Personal Protective Equipment to be worn 	Nil



PLANT RISK ASSESSMENT

HAZARD	POTENTIAL RISK	RISK RATING	EXISTING CONTROL MEASURES	FURTHER FEATURES AVAILABLE
CONTACT WITH HOT PARTS	Exhaust and paint pump	Medium (2C)	Owners Manual: <ul style="list-style-type: none"> Safe operation of LineTrike. Appropriate Personal Protective Equipment & Clothing to be worn during maintenance activities. 	Nil
LACK OF OPERATOR COMPETENCY	Misuse of equipment may cause injury to operator and other people in vicinity.	High (3B)	Owners Manual: <ul style="list-style-type: none"> Safe operation of LineTrike. 	Nil

MANUFACTURER/SUPPLIER'S OBLIGATIONS	CONTROL MEASURES
Testing or inspections to be carried out:	<ul style="list-style-type: none"> Nil – ready for use on delivery.
Safe Installation, Commissioning, use, transport, storage information:	<ul style="list-style-type: none"> Nil – ready for use on delivery.
Systems of Work and Competency of Operators necessary for the safe use of plant:	<ul style="list-style-type: none"> LineTrike Owner's Manual.
Emergency Procedures if there is a malfunction of the plant:	<ul style="list-style-type: none"> LineTrike Owner's Manual.