

HAZARD EVALUATION AND CONTROL

Description of Plant: Surface Preparation Machine - Petrol

Model No: Bartell SP8G

Assessed By: Evan Miller

Company : Flextool (Aust) Pty Ltd

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Issue: A

Hazard Description	Hazard Y/N	Plant & / or Situation	Likelihood	Severity	Risk Control
A - ENTANGLEMENT 1 Can anyone's hair, clothing, gloves necktie, jewellery, cleaning brushes, rags, or other materials become entangled with moving parts of the plant, or materials in motion?	Y	Entanglement with cage/drum or edger shaft while rotating	5	C	* Rotating and moving parts will cause injury if contacted. Ensure guards and safety devices are in place before this machine is operated. Make sure engine is shut down and spark plug and air or electric supply is disconnected before servicing your Surface Preparation Unit. Never leave a machine unattended when it is running. * Wear snug fitting clothing and ensure no clothing, hair or jewellery can become entangled in the machine.
B - CRUSHING					
1. Can anyone be crushed due to:-					
a. Material falling off the plant?	N				
b. Uncontrolled or unexpected movement of the plant or its load?	N				
c. Lack of capacity for the plant to be slowed, stopped or immobilised?	N				
d. The plant tipping or rolling over?	Y	In use on an incline	4	D	* Always be sure the equipment will not tip over, roll, slide or fall when operated.
e. Parts of the plant collapsing?	N				
f. Coming in contact with moving parts of the plant during testing, inspection, operation, maintenance, cleaning or repair?	Y	Drawing in between rotating pulley and moving V-belt	5	C	* Ensure guards and safety devices are in place before this machine is operated.
g. Being thrown off or under the plant?	N				
h. Being trapped between the plant and material or fixed structures?	N				

* Refer to Bartell instruction manual and/or Flextool supplementary operating instructions.

Likelihood of Occurrence

1. Expected to Happen
2. Common
3. Sometimes
4. Rarely
5. Highly Unlikely

Severity of Result

- A. Fatality
- B. Permanent Disability
- C. Lost Time Injury
- D. Medical Treatment
- E. First Aid Injury

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i. Other factors not mentioned?	N				
C. CUTTING, STABBING & PUNCTURING?					
1. Can anyone be cut, stabbed or punctured due to:					
a. Coming in contact with sharp or flying objects?	Y	Ejection of parts or material	4	D	* Always wear approved hearing protection. Protective dust mask, goggles, footwear and clothing may also be necessary.
b. Coming in contact with moving parts of the plant during testing, inspection, operation, maintenance, cleaning or repair of the plant?	Y	Cage/cutter contact while rotating	5	C	* Rotating and moving parts will cause injury if contacted. Ensure guards and safety devices are in place before this machine is operated. Make sure engine is shut down and spark plug or air or electric supply is disconnected before servicing your Surface Preparation Unit. Never leave a machine unattended when it is running.
c. The plant, parts of the plant or work pieces disintegrating?	Y	Disintegration of cage/cutters	4	D	* Ensure guards and safety devices are in place before this machine is operated. * Always wear approved hearing protection. Protective dust mask, goggles, footwear and clothing may also be necessary.
d. Work pieces being ejected?	Y	Ejection of material	4	D	* Ensure guards and safety devices are in place before this machine is operated. * Always wear approved hearing protection. Protective dust mask, goggles, footwear and clothing may also be necessary.
e. The mobility of the plant?	N				
f. Uncontrolled or unexpected movement of the plant?	N				
g. Other factors not mentioned?	N				
D. SHEARING					
1. Can anyone's body parts be sheared between two parts of the plant, or material handled by the plant?					
	Y	Rotating cage/cutters, drum against stationary guard or work piece	5	B	* Rotating and moving parts will cause injury if contacted. Ensure guards and safety devices are in place before this machine is operated. Make sure engine is shut down and spark plug and air or electric supply is disconnected before servicing your Surface Preparation Unit. Never leave a machine unattended when it is running.

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E. FRICTION 1. Can anyone be burnt due to contact with moving parts or surfaces of the plant, or between a part of the plant and a work piece or structure?	Y	Contact between rotating cage/cutters, drum, plant and work piece Contact between stationary object and moving V-belt	5	C	* Rotating and moving parts will cause injury if contacted. Ensure guards and safety devices are in place before this machine is operated. Make sure engine is shut down and spark plug and air or electric supply is disconnected before servicing your Surface Preparation Unit. Never leave a machine unattended when it is running.
F. STRIKING 1. Can anyone be struck by moving objects due to :					
a. Uncontrolled or unexpected movement of the plant?	Y	Plant moving while unattended	3	E	* Never leave a machine unattended while it is running.
b. The plant, parts of the plant or work pieces disintegrating?	Y	Ejection of parts, material	4	D	* Ensure guards and safety devices are in place before this machine is operated. * Always wear approved hearing protection. Protective dust mask, goggles, footwear and clothing may also be necessary.
c. Work pieces being ejected?	Y	Ejection of material	4	D	* Ensure guards and safety devices are in place before this machine is operated. * Always wear approved hearing protection. Protective dust mask, goggles, footwear and clothing may also be necessary.
d. Mobility of the plant?	N				
e. Other factors not mentioned?	N				
G. HIGH PRESSURE SUBSTANCES 1. Can anyone come into contact with substances under high pressure, due to plant failure or misuse of the plant?	N				
H. ELECTRICAL 1. Can anyone be injured by electrical shock or burnt due to:					

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a. The plant contacting live electrical conductors?	Y	Cutter, drum contact with electrical conductors	5	A	* Ensure that the material to be milled does not contain any "live" electrical cables.
b. The plant working in close proximity to electrical conductors?	N				
c. Overload of electrical circuits?	N				
d. Damaged or poorly maintained electrical leads and cables?	N				
e. Damaged electrical switches?	N				
f. Water near electrical equipment?	N				
g. Lack of isolation procedures?	N				
h. Other factors not mentioned?	N				
I. EXPLOSION 1. Can anyone be injured by explosion of gases, vapours, liquids, dusts or other substances, triggered by the operation of the plant or by material handled by the plant?	Y	Petrol vapour	5	B	* Petrol is extremely flammable and explosive under certain conditions. * Ensure that petrol is only stored in an approved storage container. * Do not refuel the motor while in is in operation or hot. * Do not refuel the motor in the vicinity of sparks, a naked flame or a person smoking. * Do not over fill the fuel tank and avoid spilling petrol when refuelling. Spilled petrol or petrol vapour may ignite. If a spillage occurs, ensure that the area is dry before starting the motor. * Ensure that the fuel tank cap is securely fitted after refuelling.
J. SLIPPING, TRIPPING & FALLING					
1. Can anyone using the plant, or in the vicinity of the plant, slip, trip or fall due to:					
a. Uneven or slippery work surfaces?	Y	Slip, Trip	3	E	* Always maintain good footing so that you do not slip, trip and loose control when starting or operating the machine.

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b. Poor housekeeping, eg, swarf in the vicinity of the plant, spillage not Cleaned up?	N				
c. Obstacles being placed in the vicinity of the plant, other factors not mentioned?	N				
2. Can anyone fall from a height due to:					
a. Lack of proper work platform?	N				
b. Lack of proper stairs or ladders?	N				
c. Lack of guard rails or other suitable edge protection?	N				
d. Unprotected holes, penetrations or gaps?	N				
e. Poor floor or walking surfaces, such as the lack of a slip-resistant surface?	N				
f. Steep walking surfaces?	N				
g. Collapse of the supporting structure?	N				
h. Other factors not mentioned?	N				
K. ERGONOMIC					
1. Can anyone be injured due to:					
a. Poorly designated seating?	N				
b. Repetitive body movement?	N				

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c. Constrained body posture or the need for excessive effort?	Y	Incorrect lifting of unit	3	C	Surface prep machines are heavy and should be positioned by two people of appropriate strength using the lifting handles provided on the machine, along with correct lifting techniques.
d. Inadequate or poorly placed lighting?	N				
e. Lack of consideration given to human error or human behaviour?	N				
f. Mismatch of the plant with human traits and natural limitations?	N				
g. Other factors not mentioned?	N				
L. SUFFOCATION 1. Can anyone be suffocated due to lack of oxygen, or atmospheric contamination?	Y	Motor exhaust fumes	4	A	Warning label on motor * Do not operate or refuel a petrol motor in a confined area without adequate ventilation. * Carbon monoxide exhaust gases from internal combustion motor driven units can cause poisoning in confined spaces and an exposed person may be further injured due to the confused mental state following exposure to poisonous gas.
M. HIGH TEMPERATURE OR FIRE 1. Can anyone come into contact with objects at high temperature?	Y	Motor muffler	3	E	Warning label on motor Muffler guard marked "Hot" - Honda motor * Be careful to avoid contact with the muffler when engine is hot as it may cause severe burns.
N. TEMPERATURE (THERMAL COMFORT) 1. Can anyone suffer ill health due to exposure to high or low temperatures?	N				
O. OTHER HAZARDS					
1. Can anyone be injured or suffer ill health from exposure to:					
a. Chemicals?	N				

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b. Toxic gases or vapours?	Y	Motor exhaust, petrol vapour	4	A	Warning label on motor * Do not operate or refuel a petrol motor in a confined area without adequate ventilation. * Carbon monoxide exhaust gases from internal combustion motor driven units can cause poisoning in confined spaces and an exposed person may be further injured due to the confused mental state following exposure to poisonous gas.
c. Fumes?	Y	Motor exhaust, work surface	4	A	Warning label on motor * Carbon monoxide exhaust gases from internal combustion motor driven units can cause poisoning in confined spaces and an exposed person may be further injured due to the confused mental state following exposure to poisonous gas.
d. Dust?	Y	Work surface	2	D	Dust mask warning label on plant * Always wear approved hearing protection. Protective dust mask, goggles, footwear and clothing may also be necessary.
e. Noise?	Y	Cutter and motor operation	2	B	Hearing protection warning label on plant * Wear an approved hearing protection device to limit noise exposure. As required by Occupational Health and Safety regulations.
f. Vibration?	Y	Cutter and motor operation	4	D	Anti vibration mounts fitted to plant. Resilient hand grips fitted to plant.
g. Radiation	N				
h. Other factors not mentioned?	Y	Fire, petrol vapour	4	C	* Petrol is extremely flammable and explosive under certain conditions. * Ensure that petrol is only stored in an approved storage container. * Do not refuel the motor while in is in operation or hot. * Do not refuel the motor in the vicinity of sparks, a naked flame or a person smoking. * Do not over fill the fuel tank and avoid spilling petrol when refuelling. Spilled petrol or petrol vapour may ignite. If a spillage occurs, ensure that the area is dry before starting the motor. * Ensure that the fuel tank cap is securely fitted after refuelling.

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