



# PL1801 AREATOR

## HAZARD EVALUATION



 YouTube - HIRE A AREATOR

Online Demonstration Available at: [www.redroob.com/products/areator](http://www.redroob.com/products/areator)

QUESTION? CAN A PERSON BE INJURED?	HAZARD Y OR N?	What is the Hazard?	HAZARD RATING No.	If Rating No. is 15 or less What is the CONTROL?
<b>A. ENTANGLEMENT</b> 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	Machine's Function	21	Guarding, Operator's Control Zone. Shut off engine when out of zone
<b>B. CRUSHING</b> 1. Can anyone be crushed due to				
a. Material falling off the plant?	N			Selection by Operator
b. Uncontrolled or unexpected moving of the plant or its load?	N			Selection by Operator
c. Lack of capacity for the plant to be slowed, stopped or immobilised?	N			Selection by Operator
d. The plant tipping or rolling over?	Y	Violation of having Unit on Level Surface to Operate	23	Training Common Sense
e. Part of the plant collapsing?	N			Selection by Operator
f. Coming in contact with moving parts of the plant during testing, inspection, operation, maintenance, cleaning or repair?	Y	When cycling machine's functions	23	Training, Wear safety gear when engine is running Common Sense
g. Being thrown off or under the plant?	N			Selection by Operator
h. Being trapped between the plant and material or fixed structures?	N			Selection by Operator
i. Other factors not mentioned? ( <i>Spectators must be kept away</i> )	N			Only as Knowledge Increases
<b>C. CUTTING, STABBING &amp; PUNCTURING?</b> 1. Can anyone be cut, stabbed or punctured due to				
a. Coming in contact with sharp or flying objects?	Y	Areatoring Turf	23	Wear safety gear, Stay in operator zone, Common Sense
b. Coming in contact with moving parts of the plant during testing, inspection, operations, maintenance, cleaning or repair of the plant?	Y	When cycling machine's functions	21	Wear safety gear when engine is running Stay in operator zone
c. The plant, parts of the plant or work pieces disintegrating?	N			Selection by Operator
d. Work pieces being ejected?	Y	Areatoring Turf	25	Stay in Operator Zone, Safety Gear Required, No Bystanders
e. The mobility of the plant?	N			Selection by Operator
f. Uncontrolled or unexpected movement of the plant?	N			Selection by Operator
g. Other factors not mentioned? ( <i>Spectators must be kept away</i> )	N			Only as Knowledge Increases
<b>D. SHEARING</b> 1. Can anyone's body parts be sheared between two parts of the plant, or material handled by the plant?	N			Stay in Operator Zone, Selection by Operator
<b>E. FRICTION</b> 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	Engine Exhaust	23	Knowledge of Hot Surface, Wear safety gear,
<b>F. STRIKING</b> 1. Can anyone be struck by moving objects due to :				
a. Uncontrolled or unexpected movement of the plant?	N			Selection by Operator
b. The plant, parts of the plant or work pieces disintegrating?	N			Selection by Operator
c. Work pieces being ejected?	Y	Areatoring Turf	23	Safety Gear worn, Stay in Operator Zone
d. The mobility of the plant?	N			Selection by Operator
e. Other factors not mentioned ( <i>Spectators must be kept away</i> )				Only as Knowledge Increases

QUESTION? CAN A PERSON BE INJURED?	HAZARD Y OR N?	What is the Hazard?	HAZARD RATING No.	If Rating No. is 15 or less What is the CONTROL?
<b>G. HIGH PRESSURE SUBSTANCES</b> 1. Can anyone come into contact with substances under high pressure, due to plant failure or misuse of the plant?	Y	Fuel Tank explosion	24	Hot weather vent plugged manually, Vent by taking off cap and retightening
<b>H. ELECTRICAL</b> 1. Can anyone be injured by electrical shock or burnt due to:				
a. The plant contacting live electrical conductors?	Y	Incorrect Electrical Cabling buried or not marked	21	Inspection of Area, Training, Check Grounding, Wear Safety gear
b. the plant working in close proximity to electrical conductors?	Y	Incorrect Electrical Cabling buried or not marked	21	Inspection of Area, Training, Check Grounding, Wear Safety gear
c. Overload of electrical circuits?	N			Selection by Operator
d. Damaged or poorly maintained electrical leads and cables?	Y	Incorrect Electrical Cabling buried or not marked	21	Inspection of Area, Training, Check Grounding, Wear Safety gear
e. Damaged electrical switches?	N			Selection by Operator
f. Water near electrical equipment?	N			Selection by Operator
g. Lack of isolation procedures?	N			Selection by Operator
h. Other factors not mentioned?				Only as Knowledge Increases
<b>I. EXPLOSION</b> 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	Fuel Tank Explosion		Insure proper venting of tank No Smoking Do not overfill tank
<b>J. SLIPPING, TRIPPING &amp; FALLINGS</b> 1. Can anyone using the plant, or in the vicinity of the plant, slip, trip or fall due to:	Y	Turf Conditions	21	Inspection of Area, Training, Wear Safety gear (No Slip Shoes)
a. Uneven or slippery work surfaces?	Y	Machine should always be on Level/Dry Surfaces	21	Training, Common Sense, Adhere to Safe Operating Instructions
b. Poor housekeeping, eg swarf in the vicinity or the plant spillage not cleaned up?	Y	Poor Housekeeping	23	Training, Common Sense, Supervision
c. Obstacles being placed in the vicinity of the plant, other factors not mentioned?	Y	Poor Site Selection	23	Training, Common Sense, Supervision
2. Can anyone fall from height due to:				
a. Lack of proper work platform?	N			Selection by Operator
b. Lack of proper stairs or ladders?	N			Selection by Operator
c. Lack of guard rails or other suitable edge protection?	N			Selection by Operator
d. Unprotected holes, penetrations or gaps?	N			Selection by Operator
e. Poor floor or walking surfaces, such as the lack on a slip resistant surface?	N			Selection by Operator
f. Steep walking surfaces?	N			Selection by Operator
g. Collapse of the supporting structure?	N			Selection by Operator
h. Other factors not mentioned?	N			Only as Knowledge Increases
<b>K. ERGONOMIC</b> 1. Can anyone be injured due to:				
a. Poorly designated seating?	N			
b. Repetitive body movement?	N			Training, Common Sense
c. Constrained body posture or the need for excessive effort?	N			Training, Common Sense
d. Inadequate or poorly placed lighting?	N			Selection by Operator
e. Lack of consideration given to human error or human behaviour?	Y	Lazy, Rush, Tired, Cocky, Age	24	Training, Safety Gear, Common Sense, Supervision,
f. Mismatch of the plan with human traits and natural limitations?	Y	Under Influence, Lazy, Rush, Tired, Cocky, Age	24	Training, Common Sense, Supervision, Safety Gear

QUESTION? CAN A PERSON BE INJURED?	HAZARD Y OR N?	What is the Hazard?	HAZARD RATING No.	If Rating No. is 15 or less What is the CONTROL?
<b>L. SUFFOCATION</b> 1. Can anyone be suffocated due to lack of oxygen, or atmospheric contamination?	N			Selection by Operator
<b>M. HIGH TEMPERATURE OR FIRE</b> 1. Can anyone come into contact with objects at high temperature?	Y	Engine Exhaust	23	Knowledge of Hot Surface Selection by Operator
<b>N. TEMPERATURE (THERMAL COMFORT)</b> 1. Can anyone suffer ill health due to exposure to high or low temperature?	N			Weather Selection Selection by Operator
<b>O. OTHER HAZARDS</b> 1. Can anyone be injured or suffer ill health from exposure to:				
a. Chemicals?	N			Selection by Operator
b. Toxic fumes or vapours?	Y	Engine Exhaust	24	Do Not Operate Machine Indoors
c. Fumes?	Y	Inside Engine Exhaust	24	Do Not Operate Machine Indoors
d. Dust?	N			Assume Risk, Mask, Wet Material, Selection by Operator
e. Noise?	Y	Maintenance	23	Safety Gear, Maintenance
g. Vibration?	Y	Maintenance	23	Common Sense, Proper Maintenance, Training
g. Radiation?	N			Selection by Operator
h. Other factors not mentioned?	N			Only as Knowledge increases

## CALCULATION FOR RISK ASSESSMENT

For each identified hazard consider the maximum credible, not absolute worst case risk that may result and select from each of the following Lists

	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

Plot the categories selected from 'Likelihood of Occurrence' and 'Severity of Result' onto the Hazard Rating Grid to determine the Hazard Rating Number.

eg. If we plot 4 and B on the Hazard Rating Grid, the Hazard Rating number will be 14.

### HAZARD RATING GRID

	A	B	C	D	E
1	1	2	4	7	11
2	3	5	8	12	16
3	6	9	13	17	23
4	10	14	18	21	23
5	15	19	22	24	25

The Hazard Rating Number calculated for the risk assessment of an identified hazard is classified as follows:

- a) Relatively High Risk 1 to 6
- b) Medium Risk 7 to 15
- c) Relatively Low Risk 16 to 25 (acceptable risk)

1301-0080 05/19

**safety**  
IS EVERYBODY'S BUSINESS  
**...now**

*You alone know the operational demands and special conditions affecting the equipment in your situation and therefore assume the responsibility for developing, carrying out, and enforcing the safety concepts which apply to your own operation to effect the greatest safety for yourself and the people around you.*

 **RED ROO**<sup>TM</sup>  
Commercial Environmental Equipment

Online Demonstration Available at: [www.redroo.com/products/areator](http://www.redroo.com/products/areator)