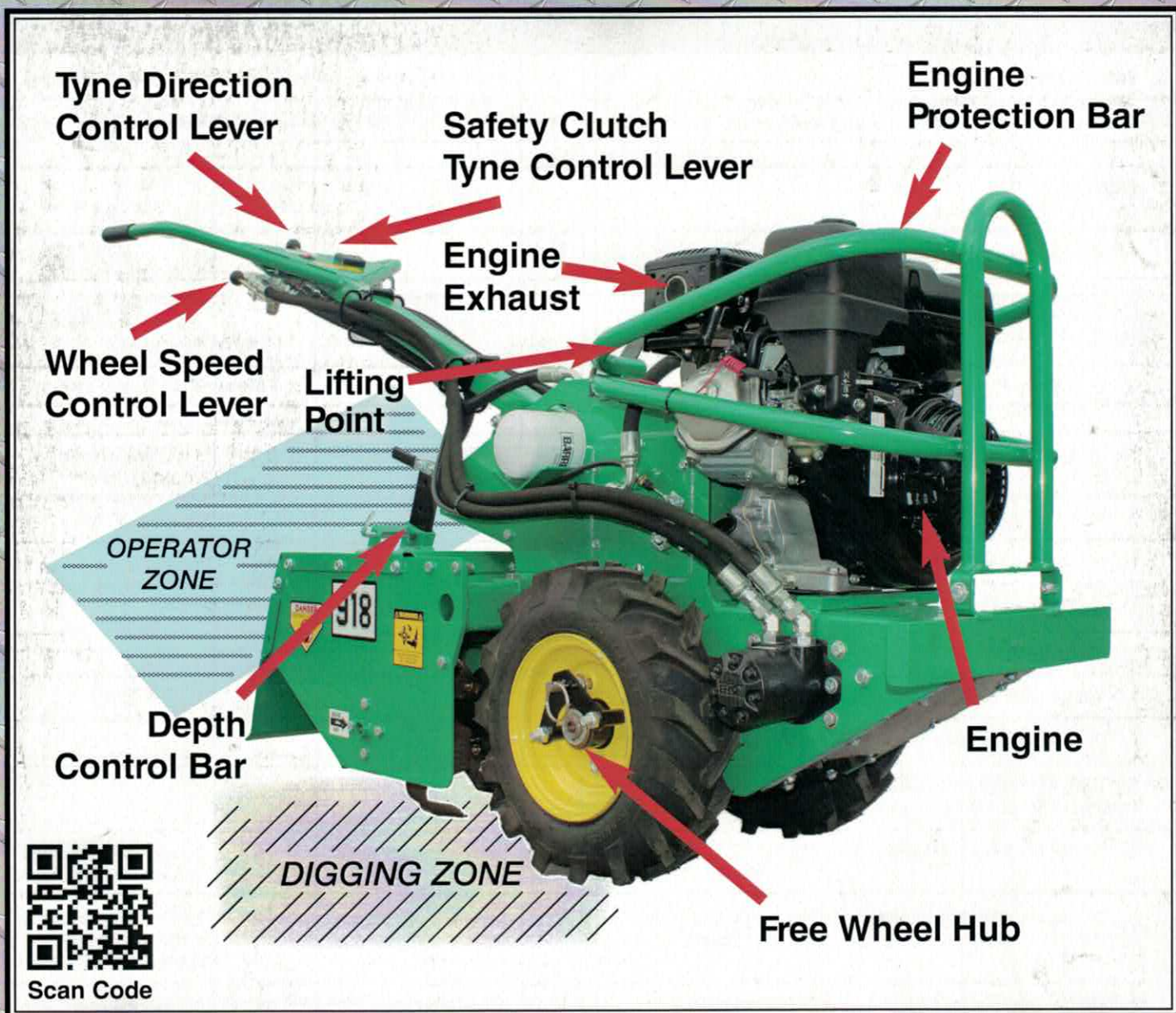




RH918 ROTARY HOE

HAZARD EVALUATION

 **RED ROO**TM
Commercial Environmental Equipment

Online Demonstration Available at: www.redroo.com/products/rotaryhoe

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?
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	Nature of Machine is Tilling i.e. Moving Tynes	23	Instruction of Operation of Machine, proper clothing and dress, guards in place
B. CRUSHING 1. Can anyone be crushed due to				
a. Material falling off the plant?	N			
b. Uncontrolled or unexpected moving of the plant or its load?	Y	If control is activated unexpectedly	25	Uninstructed person could squeeze Engage Lever in Forward only
c. Lack of capacity for the plant to be slowed, stopped or immobilised?	N			
d. The plant tipping or rolling over?	Y	Working on excess angle of bank	23	Instruction in Loading & Unloading Unit
e. Part of the plant collapsing?	N			
f. Coming in contact with moving parts of the plant during testing, inspection, operation, maintenance, cleaning or repair?	Y	If Engine Running and one engages Rotor Lever (Operator Presence)	23	Instruction of Individual as to how machine functions
g. Being thrown off or under the plant?	N			
h. Being trapped between the plant and material or fixed structures?	N			
i. Other factors not mentioned? (<i>Spectators must be kept away</i>)	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	Tyne can fracture metal	25	Survey Area to be worked, Operator Presence Control
b. Coming in contact with moving parts of the plant during testing, inspection, operations, maintenance, cleaning or repair of the plant?	Y	If Engine is running and one engages Rotor Lever (Operator Presence)	23	Instruction of individual as to how the Machine Functions. Guards in place
c. The plant, parts of the plant or work pieces disintegrating?	Y	Flying Object could happen	25	Operator Presence Control deactivated
d. Work pieces being ejected?	Y	Flying Object	25	Operator Presence Control deactivated
e. The mobility of the plant?	N			
f. Uncontrolled or unexpected movement of the plant?	N			
g. Other factors not mentioned? (<i>Spectators must be kept away</i>)	N			
D. SHEARING 1. Can anyone's body parts be sheared between two parts of the plant, or material handled by the plant?	N			
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	Engine Exhaust	23	Instruction of Operator Muffler Area
F. STRIKING 1. Can anyone be struck by moving objects due to :				
a. Uncontrolled or unexpected movement of the plant?	Y	Yes if hit a Bottle or similar type item	25	If the Operator Presence Control malfunctioned
b. The plant, parts of the plant or work pieces disintegrating?	Y	Gas Tank Exploded	25	Tank would require sufficient heat and pressure
c. Work pieces being ejected?	Y	Rotating piece defective or fractured by outside force	25	Operator Presence Control malfunctioned

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d. The mobility of the plant?	N			
e. Other factors not mentioned (<i>Spectators must be kept away</i>)	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?	Y	Fuel Tank Vapour Lock	25	Equalize Pressure by unscrewing Fuel Cap
H. ELECTRICAL 1. Can anyone be injured by electrical shock or burnt.	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	Machine by Tilling could come in contact with such	25	Operator Presence Control Inspection of work area by operator
J. SLIPPING, TRIPPING & FALLINGS 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	Operator could injure himself even if machine stops	23	Operator should wear correct Boots, be physically well & inspect area for hazards
b. Poor housekeeping, eg swarf in the vicinity or the plant spillage not cleaned up?	Y	See Above (a)	23	See Above (a)
c. Obstacles being placed in the vicinity of the plant, other factors not mentioned?	Y	Unknown Circumstance with Object ie. lightning strike near tree with operator standing in water	25	Do not accept the risk as operator
d. Steep walking surfaces?	Y	Operator could slip (Note: 15 degree limitation)	23	Operator Presence Control (OPS) will stop machine
K. ERGONOMIC 1. Can anyone be injured due to:				
a. Poorly designated seating?	N			
b. Repetitive body movement?	N			
c. Constrained body posture or the need for excessive effort?	Y	Need for Reverse Action by Free Wheeling	23	Correct use, Older person gets in a corner cannot pull in freewheel mode
d. Inadequate or poorly placed lighting?	N			
e. Lack of consideration given to human error or human behaviour?	Y	Unable to function, Unable to understand English	25	Do not rent to/allow any person that is drunk, taken drugs, disfunctional or can't understand english
f. Mismatch of the plan with human traits and natural limitations?	N			
L. SUFFOCATION 1. Can anyone be suffocated due to lack of oxygen, or atmospheric contamination?	N			
M. HIGH TEMPERATURE OR FIRE 1. Can anyone come into contact with objects at high temperature?	Y	Engine Exhaust	23	Instruction as to Hot Area and pointing out location
N. OTHER HAZARDS 1. Can anyone be injured or suffer ill health from exposure to:				
a. Fumes?	Y	Engine Exhaust in confined space	23	Engine has Exhaust Deflector Check it is on Engine
b. Dust?	Y	Tilling without wetting Soil	23	Proper Tilling condition Damping Dust Creation.
c. Noise?	Y	Exceeding 8Hr Working Day	23	Use Ear Protection
d. Vibration?	Y	Engine not tuned, Tyres imperfect.	23	Proper Maintenance

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)

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CHECK FOR ELECTRICAL AND GAS LINES BEFORE DIGGING

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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.

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