

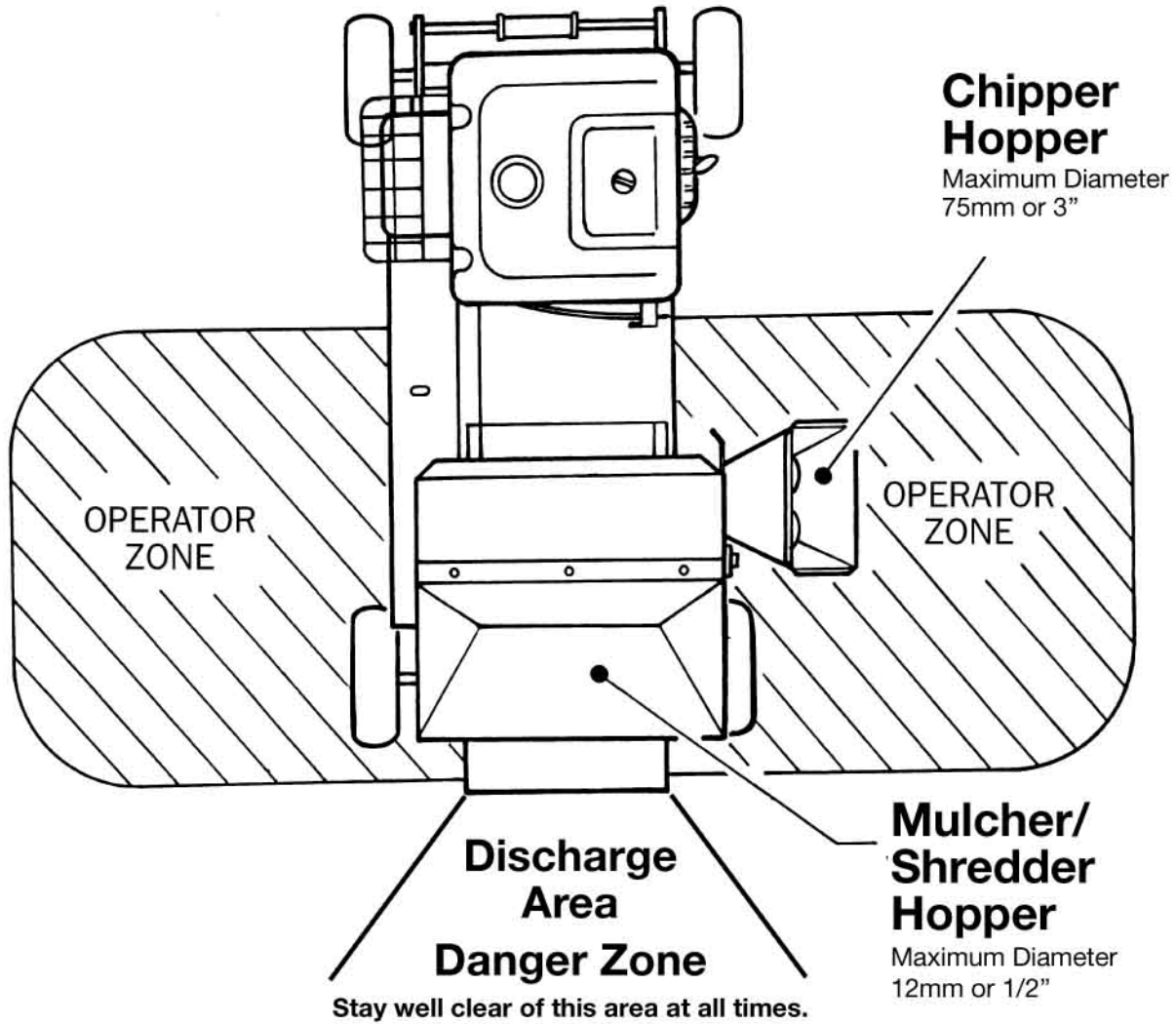
# CMS80 CHIPPER MULCHER SHREDDER

## HAZARD EVALUATION

 **RED ROO**™  
Commercial Outdoor Power Equipment

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	Rotating Parts	21	Engine Flywheel, Small Hopper, Large Hopper, Belts, Discharge Area All Guarded
<b>B. CRUSHING</b> 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?	N			
c. Lack of capacity for the plant to be slowed, stopped or immobilised?	N			
d. The plant tipping or rolling over?	N			
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?	N			
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			
<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	Material flying back in Mulching Hopper	20	Not Wearing Safety Gear, Flap Defective
b. Coming in contact with moving parts of the plant during testing, inspection, operations, maintenance, cleaning or repair of the plant?	Y	Rotating Parts	21	Guard not in Place
c. The plant, parts of the plant or work pieces disintegrating?	Y	Guards are Involved	24	Desintegration is designed to stay within case
d. Work pieces being ejected?	Y	If they get into Rotor Area	24	Designed to go down into the Non Operator Zone
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			
<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			
<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?	N			
<b>F. STRIKING</b> 1. Can anyone be struck by moving objects due to :				
a. Uncontrolled or unexpected movement of the plant?	N			
b. The plant, parts of the plant or work pieces disintegrating?	Y	Guards are involved	24	Desintegration is designed to stay within case
c. Work pieces being ejected?	Y	Material kicking back from Mulching Hopper	20	Not wearing Safety Gear Flap Defective
d. The mobility of the plant?	N			
e. Other factors not mentioned ( <i>Spectators must be kept away</i> )				

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<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?	N			
<b>H. ELECTRICAL</b> 1. Can anyone be injured by electrical shock or burnt.	N			
<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?	N			
<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				
a. Uneven or slippery work surfaces?	Y	Operator does not use common sense or is not wearing proper clothing or exercised proper house-keeping of Operators Zone	23	
b. Poor housekeeping, eg swarf in the vicinity or the plant spillage not cleaned up?	Y	See Above (a)	23	
c. Obstacles being placed in the vicinity of the plant, other factors not mentioned?	Y	See Above (a)	23	
d. Steep walking surfaces?	N			
<b>K. ERGONOMIC</b> 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?	N			
d. Inadequate or poorly placed lighting?	N			
e. Lack of consideration given to human error or human behaviour?	Y	Human Error to behave in an unsafe manner and not to use Safety Gear.	25	Take off Guards without proper Maintenance
f. Mismatch of the plan with human traits and natural limitations?	N	See Above (e)	25	Human Factor to be adequate to task
<b>L. SUFFOCATION</b> 1. Can anyone be suffocated due to lack of oxygen, or atmospheric contamination?	N			
<b>M. HIGH TEMPERATURE OR FIRE</b> 1. Can anyone come into contact with objects at high temperature?	Y	Engine Exhaust	21	Location of Hot Spots and Guarding
<b>N. OTHER HAZARDS</b> 1. Can anyone be injured or suffer ill health from exposure to:				
a. Fumes?	Y	Engine Running Rich	23	Proper Maintenance
b. Dust?	Y	Using very Dry Material Excessively	20	Run Larger Material or Wet Material
c. Noise?	Y	Not wearing Ear Protection	21	Continuous use without a Muffler.
d. Vibration?	N			



## 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)