



SH400 STUMP GRINDER

HAZARD EVALUATION



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

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	Wheel movement	23	Operator Presence Control Operator's Zone No Bystanders
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?	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>)				
C. CUTTING, STABBING & PUNCTURING? 1. Can anyone be cut, stabbed or punctured due to				
a. Coming in contact with sharp or flying objects?	Y	Cutting Teeth	21	Operator Presence Control Safety Gear, No Bystanders
b. Coming in contact with moving parts of the plant during testing, inspection, operations, maintenance, cleaning or repair of the plant?	Y	Cutting Teeth	21	Operator Presence Control Common sense
c. The plant, parts of the plant or work pieces disintegrating?	Y	Cutting Teeth	21	Operator Presence Control
d. Work pieces being ejected?	Y	Cutting Teeth	21	Operator Presence Control, General & Routine Maintenance
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>)				
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	20	Knowledge of Hot Surface Wear Gloves
F. STRIKING 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	Cutting Teeth	21	Operator Presence Control Safety Gear, No Bystanders
c. Work pieces being ejected?	Y	Cutting Teeth	21	Operator Presence Control Safety Gear, No Bystanders

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d. The mobility of the plant?	N			
e. Other factors not mentioned (<i>Spectators must be kept away</i>)				
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 Explosion	21	Hot Weather Vent plugged Manually Vent, Safety Gear, No Bystanders
H. ELECTRICAL 1. Can anyone be injured by electrical shock or burnt due to:	N			
a. The plant contacting live electrical conductors?	Y	Grounding Interrupted	21	Operator Presence Control Wear proper Boots Inspection of area.
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?				
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	Fuel Tank Explosion	21	Hot Weather Vent Plugged Manually Vent Safety Gear, No Bystanders
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	Human	21	Operator Presence Control Wear proper Boots Inspection of Area
b. Poor housekeeping, eg swarf in the vicinity or the plant spillage not cleaned up?	Y	Human	21	Supervision Common Sense
c. Obstacles being placed in the vicinity of the plant, other factors not mentioned?	Y	Human	21	Supervision Common Sense
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 guardrails or other suitable edge protection?	N			
d. Unprotected holes, penetrations or gaps?	N			
e. Poor floor or walking surfaces, such as the lack of slip-resistant surface?	N			
f. Steep walking surfaces?	N			
g. Collapse of supporting structure?	N			
h. Other factors not mentioned?				
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?	N			
d. Inadequate or poorly placed lighting?	N			
e. Lack of consideration given to human error or human behaviour?	Y	Unknown, Lazy, Cocky	24	Common Sense Supervision
f. Mismatch of the plan with human traits and natural limitations?	Y	Unknown, Under the Influence, Aged, Disabled, Tired.	24	Common Sense Supervision
g. Other factors not mentioned:				
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, Grinding Teeth immediately after grinding is finished	20	Knowledge of Hot Surfaces, eg. Grinding Teeth after grinding is finished, Gloves, No Bystanders
N. OTHER HAZARDS 1. Can anyone be injured or suffer ill health from exposure to:				
a. Chemicals?	N			
b. Toxic gases or vapours?	N			
c. Fumes?	N			
d. Dust?	Y	Human	20	Mask, Wet Area Operator Presence Control
e. Noise?	Y	Human Lack of Maintenance	20	Operator Presence Control Ear Protection, Maintenance
f. Vibration?	Y	Lack of Maintenance	20	Maintenance Operator Presence Control
g. Radiation?	N			
h. Other factors not mentioned?				

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	20
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)