safety
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HVLS HYDRAULIC LOG SPLITTER

HAZARD EVALUATION

RED ROO™
Commercial Environmental Equipment

Online Demonstration Available at: *www.redroo.com/products/logsplitter*

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	Movement Splitter Head	21	Training Operator Presence Control Proper Safety Gear Common Sense
B. CRUSHING 1. Can anyone be crushed due to				
a. Material falling off the plant?	Y	Round Falling Off	17	Load Properly. Stay in Operating Zone
b. Uncontrolled or unexpected moving of the plant or its load?	Y	Round Moving	17	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	If used on steep angle of bank	23	Training Common Sense Use on Level
e. Part of the plant collapsing?	Y	Failure to use Locking Pin	21	Training, Not following checklist in Manual
f. Coming in contact with moving parts of the plant during testing, inspection, operation, maintenance, cleaning or repair?	Y	When testing cycling of machine in head	23	Training, Wear Safety Clothes, Stay in Operator Zone, 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?	Y	Round too heavy or too long	24	Do not exceed limits, Selection by Operator
i. Other factors not mentioned? *(Spectators must be kept away)*	N	Spectators must be kept away		Only as Knowledge Increases
C. CUTTING, STABBING & PUNCTURING? 1. Can anyone be cut, stabbed or punctured due to				
a. Coming in contact with sharp or flying objects?	Y	Wood Split	21	Wear Safety Gear, Split Wood correctly
b. Coming in contact with moving parts of the plant during testing, inspection, operations, maintenance, cleaning or repair of the plant?	Y	When testing cycling of machine in head	23	Training, Wear Safety Gear, Stay in Operator Zone, Common Sense
c. The plant, parts of the plant or work pieces disintegrating?	Y	Split Wood not completely disengaging	23	Training, Stay in operator safety zone, Wear safety gear
d. Work pieces being ejected?	Y	Split Wood falling	21	Selection by Operator Wear Safety Gear
e. The mobility of the plant?	N			Gloves Split Wood Correctly
f. Uncontrolled or unexpected movement of the plant?	N			
g. Other factors not mentioned? *(Spectators must be kept away)*	N	Spectators must be kept away		Only as Knowledge Increases
D. SHEARING 1. Can anyone's body parts be sheared between two parts of the plant, or material handled by the plant?	Y	Putting fingers into spokes between wood and plant	17	Stay in operator zone, Wear Safety Gear, Selection by Operator, Do Not use helpers
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 Safety Gear
F. STRIKING 1. Can anyone be struck by moving objects due to :				
a. Uncontrolled or unexpected movement of the plant?	Y	Round can move unexpectedly	17	Load round properly, Selection by Operator, Stay in operator zone
b. The plant, parts of the plant or work pieces disintegrating?	Y	Split Wood not completely disengaging	23	Wear Safety Gear, Selection by Operator, Training
c. Work pieces being ejected?	Y	Wood Split	21	Wear Safety Gear Stay in Operator Zone
d. The mobility of the plant?	Y	Machine improperly set-up, not anchored	21	Set-up Machine Correctly on level surface, Only as Knowledge Increases
e. Other factors not mentioned *(Spectators must be kept away)*	N	Spectators must be kept away		

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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, Hydraulic System Failure	24	Insure proper tank venting
H. ELECTRICAL 1. Can anyone be injured by electrical shock or burnt due to:				
a. The plant contacting live electrical conductors?	Y	Improper Grounding	21	Training, Wear Safety Gear, Common Sense, Check Grounding
b. The plant working in close proximity to electrical conductors?	N			Selection by Operator
c. Overload of electrical circuits?	N			Selection by Operator
d. Damaged or poorly maintained electrical leads and cables?	N			Selection by Operator
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?	N			Only as Knowledge Increases
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, Hydraulic System Failure	24	Hot Weather Vent Plugged, Manually Vent by taking off Cap
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 Choice	23	Training, Wear Safety Gear Common Sense
b. Poor housekeeping, eg swarf in the vicinity or the plant spillage not cleaned up?	Y	Human Choice	23	Supervision, Proper Work Area Selection, Training
c. Obstacles being placed in the vicinity of the plant, other factors not mentioned?	Y	Human Choice	23	Conduct Proper Work Area, Review, Supervision, Training
2. Can anyone fall from a 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 guardrails 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 of slip-resistant surface?	N			Selection by Operator
f. Steep walking surfaces?	N			Selection by Operator
g. Collapse of supporting structure?	N			Selection by Operator
h. Other factors not mentioned?	N			Only as Knowledge Increases
K. ERGONOMIC 1. Can anyone be injured due to:				
a. Poorly designated seating?	N			
b. Repetitive body movement?	Y	Each round is different	17	Training, Common Sense, Proper Lifting Techniques
c. Constrained body posture or the need for excessive effort?	Y	Each round is different	24	Training, Common Sense, Proper Lifting Techniques
d. Inadequate or poorly placed lighting?	Y	Human Choice	24	Selection by Operator, Training
e. Lack of consideration given to human error or human behaviour?	Y	Tired, Cocky, Rush, Lazy, Age, Under the Influence	24	Training, Common Sense, Supervision, Safety Gear

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f. Mismatch of the plan with human traits and natural limitations?	Y	Tired, Under the Influence, Age, Lazy, Rush, Cocky	24	Training, Common Sense, Supervision, Safety Gear
g. Other factors not mentioned:	N	Spectators must be kept away		Only as Knowledge Increases
L. SUFFOCATION 1. Can anyone be suffocated due to lack of oxygen, or atmospheric contamination?	N			Selection by Operator
M. HIGH TEMPERATURE OR FIRE 1. Can anyone come into contact with objects at high temperature?	Y	Engine Exhaust	21	Knowledge of Hot Surface, Wear Safety Gear, Weather, Selection by Operator
N. OTHER HAZARDS 1. Can anyone be injured or suffer ill health from exposure to:				
a. Chemicals?	N			Selection by Operator
b. Toxic gases or vapours?	N			Selection by Operator
c. Fumes?	N	Fuel fumes emit Carbon Monoxide		No operation in an enclosed area, Selection by Operator
d. Dust?	Y	Human Choice	21	Selection by Operator. Assume risk, mask, wet material
e. Noise?	Y	Lack of Maintenance	20	Maintenance, Wear Safety Gear
f. Vibration?	Y	Lack of Maintenance	20	Training, Maintenence, Common Sense

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)

P/N 1301-0044-B

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