



GT622 GARDEN TILLER

HAZARD EVALUATION



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	Tiller – Exposure of digging tynes	21	Operator's Presence Control, Police Area. Wear proper Clothes, Clear Area of 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>)	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	Tiller – Exposed Tynes	25	Release tyne engagement control lever, Operator's Presence Control, Common sense
b. Coming in contact with moving parts of the plant during testing, inspection, operations, maintenance, cleaning or repair of the plant?	Y	Tiller – Exposed Tynes	23	Release tyne engagement control lever, Operator's Presence Control, Common sense
c. The plant, parts of the plant or work pieces disintegrating?	Y	Tiller Operational	25	Release tyne engagement control lever, Operator's Presence Control, Common sense
d. Work pieces being ejected?	Y	Tiller Operational	25	Release tyne engagement control lever, Operator's Presence Control, Common sense
e. The mobility of the plant?	Y	Tiller Operational	25	Release tyne engagement control lever, Operator's Presence Control, Common sense
f. Uncontrolled or unexpected movement of the plant?	Y	Tiller Operational	25	Release tyne engagement control lever, Operator's Presence Control, Common sense
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	Hot Surface Exhaust of Engine	23	Location of Hot Surfaces, Wear Gloves Engine Exhaust guards in place and functional
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?	N			
c. Work pieces being ejected?	N			
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	Engine fuel Hydraulic Tank	24	Fuel Tank is Vented Do not overfill Allow for expansion of Hydraulic fluid

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H. ELECTRICAL				
1. Can anyone be injured by electrical shock or burnt due to:				
a. The plant contacting live electrical conductors?	Y	Tiller not Grounded	21	Release tyne engagement Control lever, Operator's Presence, Weather Selection, Wear Safety Gear, Common Sense
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?	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	Tiller Operational Hit/Penetrated Container	21	Wear Safety Gear, Maintenance, 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	Tiller Operation Bucking or aggressive digging action	23	Release tyne engagement control lever Operator Presence Control, Safety Gear, Area Selection Common Sense
b. Poor housekeeping, eg swarf in the vicinity or the plant spillage not cleaned up?	Y	Tiller Operation Bucking or aggressive digging action	23	Release tyne engagement control lever Operator Presence Control, Safety Gear, Common Sense, Housekeeping
c. Obstacles being placed in the vicinity of the plant, other factors not mentioned?	N			
2. Can anyone fall from height due to:	N			
a. Lack of proper work platform?	N			
b. Lack of proper stairs or ladders?	N			
c. Lack of guard rails or other suitable edge protection?	N			
d. Unprotected holes, penetrations or gaps?	N			
e. Poor floor or walking surfaces, such as the lack on a slip resistant surface?	N			
f. Steep walking surfaces?	N			
g. Collapse of the 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?	Y	Tiller Operational Fatigue	25	Take a break, Rotation of Operator, Multiple Machines
c. Constrained body posture or the need for excessive effort?	Y	Tiller Operational Incorrect Use, Poor Maintenance	23	Upgrade to Rotary Hoe Larger Machine
d. Inadequate or poorly placed lighting?	Y	Possibilities	25	Correct Lighting, Common Sense
e. Lack of consideration given to human error or human behaviour?	Y	Possibilities	25	Supervision, Common Sense

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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	Tiller Engine Exhaust Operational	23	Use Gloves, Location of Hot Surfaces Engine Exhaust guards in place and functional
N. TEMPERATURE (THERMAL COMFORT) 1. Can anyone suffer ill health due to exposure to high or low temperature?	N			
O. OTHER HAZARDS 1. Can anyone be injured or suffer ill health from exposure to:				Selection by Operator
a. Chemicals?	N			
b. Toxic fumes or vapours?	Y	Engine Exhaust in an Enclosed Place	21	Wear Mask Do not operate in an enclosed environment
c. Fumes?	Y	Engine Exhaust in an Enclosed Place	21	Wear Mask Do not operate in an enclosed environment
d. Dust?	Y	Lack of Breathing Mask	17	Operators Assume Risk, Wet Material
e. Noise?	Y	No Muffler, Long Duration	21	Maintenance, Common Sense
g. Vibration?	Y	Poor Maintenance	23	Maintenance, Common Sense
g. Radiation?	N			
h. Other factors not mentioned?	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)

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