

**GREENSYSTEM ROTARY TILLER, Model: RT 1035 (Gear Drive)
(Tractor Operated)**



सत्यमेव जयते

भारत सरकार

GOVT OF INDIA

कृषि एवं किसान कल्याण मन्त्रालय

MINISTRY OF AGRICULTURE & FARMERS WELFARE

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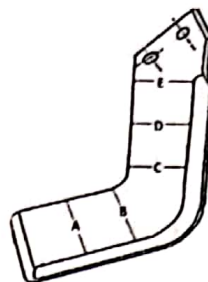


Fig 7 : DIMENSIONS FOR WEAR ANALYSIS

8. EASE OF OPERATION & ADJUSTMENTS

The operator can easily adjust and control the implement from operator's seat in the field as the adjustments are within the easy reach of operator. However the operator has to get down from the tractor in order to raise/lower the depth adjusting skids. No noticeable difficulty was observed during the operation and adjustment of Rotary tiller.

9. DEFECTS, BREAKDOWNS AND REPAIRS

No breakdown was occurred during 40.8 h of wet land and dry land operation.

10. SUMMARY OF OBSERVATIONS, COMMENTS AND RECOMMENDATIONS

- 10.1 The dimension of three point linkage (hitch pyramid) of the rotary tiller does not conform to Cat. I & Cat. II to IS: 4468-2012. This should be looked into for corrective action for standardization.
- 10.2 Dimensions of PIC and PIC yoke bore of implement do not conform to IS: 4931-1995 and therefore, it should be looked into for corrective action.
- 10.3 Chemical composition of rotor blades does not conform to IS: 6690-2002. The percentage of carbon and manganese content in composition of rotavator blade material was recorded as 0.270 and 1.220 % respectively. The carbon content was on lower side and manganese content was on higher side when compared with the relevant Indian Standard. Moreover, the hardness of rotor blades also does not conform to relevant Indian Standard. It is therefore, recommended that the material of rotavator blade should be improved and provided as per requirement of Indian Standard.
- 10.4 The rate of work was recorded 0.374 to 0.527 ha/h at forward speed of 3.07 to 3.68 kmph in dry land operation.
- 10.5 The depth of operation in dry land operation was recorded as 8 to 10 cm with soil moisture content of 13.1 to 15.6 % in sandy loam soil. The depth of puddle was recorder as 24 to 25 cm which is considered as normal for wetland operation.
- 10.6 The hourly rate of wear of blade on mass basis in Dry land & Wet land operations was recorded as 0.14 to 0.18 % and 0.03 to 0.05 % respectively. The average wear of blade is considered as on higher side.



- 10.7 The hourly rate of wear of blade on dimensional basis in Dry land & Wet land operations was recorded as 0.01 to 0.55 % and as 0.01 to 0.03 % respectively. The average wear of blade is considered as on higher side.
- 10.8 Manufacturer's name, address & trademark (if any), size of implement, power requirement and year of manufacture should also be indicated on the labeling plate.
- 10.9 No ingress of mud and/or water was found in primary and secondary reduction boxes after 40.8 hr of Dry and Wet land operations and the sealing provided on different sub-assemblies were found effective.
- 10.10 **Technical literature:**
Parts Catalogue was provided along with the machine during the course of testing. It is further recommended to bring out these manual and Operator cum Service Manual in Hindi and other vernacular languages as per IS: 8132-1999.

TESTING AUTHORITY

S. G. PAWAR AGRICULTURAL ENGINEER	
A.K. UPADHYAY SENIOR AGRICULTURAL ENGINEER	
K.K. NAGLE DIRECTOR	

Draft Test Report compiled by - Sh. Rahul Prajapati

11. APPLICANT'S COMMENTS

Para No.	Our reference	Applicant's Comments
11.1	10.1	We agree with the recommendations and will provide implement hitch for Rotary Tiller conforming Cat-II to Indian Standards IS: 4468-2012.
11.2	10.2	We agree with the recommendations on PIC Yoke bore and PIC of rotary tiller and will make necessary corrections to dimensions of implement to conform to IS: 4931-1995.
11.3	10.3	We agree with recommendations and rotor blades conforming to IS: 6690-2002 on chemical composition for Carbon and Manganese content and hardness at the edge portion.
11.4	10.6 & 10.7	We agree with recommendation provided to us and we would improve to control the wear of blades.
11.5	10.8	We agree with the recommendation and parameters on labelling plate with sufficient information.
10.6	10.10	We agree with the recommendation and we will provide the booklet in Hindi and other local languages conforming as per IS 8132-1999. Booklet will include tractor compatibility sheet.