



व्यावसायिक परीक्षण रिपोर्ट
COMMERCIAL TEST REPORT

संख्या / No.: Imp-224/297
माह / Month: December 2017



GREENSYSTEM ROTARY TILLER, Model: RT1005 (Chain Drive)
(Tractor Operated)



भारत सरकार

GOVT OF INDIA

कृषि एवं किसान कल्याण मन्त्रालय

MINISTRY OF AGRICULTURE & FARMERS WELFARE

कृषि, सहकारिता एवं किसान कल्याण विभाग

DEPARTMENT OF AGRICULTURE, COOPERATION & FARMERS WELFARE

उत्तर पूर्वी क्षेत्र कृषि यंत्र प्रशिक्षण एवं परीक्षण संस्थान

**NORTH EASTERN REGION FARM MACHINERY TRAINING & TESTING
INSTITUTE**

विश्वनाथ चारिअली, जिला-विश्वनाथ (असम)

BISWANATH CHARIALI: BISWANATH: ASSAM, PIN - 784 176

[AN ISO 9001:2015 CERTIFIED INSTITUTION]

Website: <http://nerfntti.nic.in>

Ph. No. 03715-222094

Fax No: 03715-230358

E-Mail: fnti-ner@nic.in

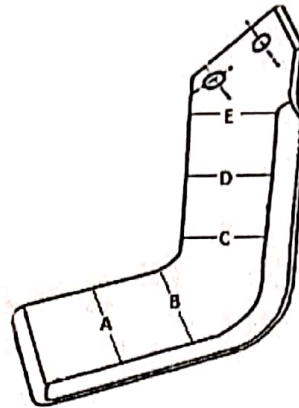


Fig 7 : DIMENSIONS FOR WEAR ANALYSIS

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 40.4 h of wet land and dry land operation.

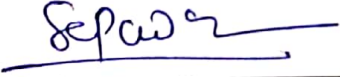

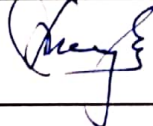
10. SUMMARY OF OBSERVATIONS, COMMENTS AND RECOMMENDATIONS

- 10.1 The dimension of three point linkage (hitch pyramid) of the rotavator 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 0.418 to 0.441 ha/h at forward speed of 3.01 to 3.28 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 17.2 % in sandy loam soil and considered on lower side. The depth of puddle was recorder as 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 0.11 to 0.12 % and 0.04 to 0.06 % 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 0.32 % and as 0.01 to 0.04 % respectively. The average wear of blade is considered as on higher side.
- 10.8 There is no any labeling plate on the implement. Therefore, it is recommended to provide a labeling plate along with necessary parameters.
- 10.9 Ingress of mud and/or water was found in secondary reduction box after 40.4 h of operation, the sealing provided in secondary reduction box were found defective. Therefore, it is recommended to rectify the same in future production.
- 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