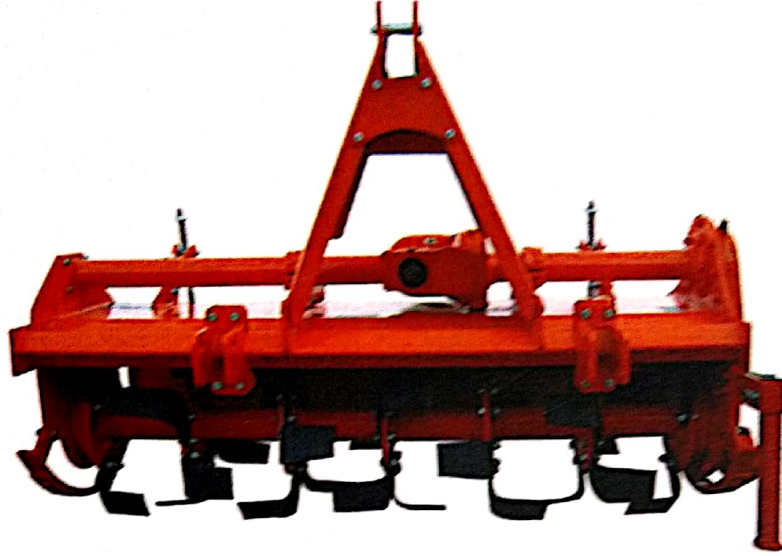




THIS TEST REPORT VALID UPTO 31/08/2026



SHAKTIMAN ROTARY TILLER, Model: SRT-5(150)/MS CD R+
CENTRALLY MOUNTED, CHAIN DRIVE, MULTI SPEED



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 चारिआलि, जिला-विश्वनाथ(असम)

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1	2	3	4	5	6	7
iv.	Size, (m) (Dia of Rotor X Width of Cut)	Evaluative	Should be provided rotary tiller (Rotavator)	--	0.48 x 1.49	Yes
v.	Country of origin	--	--	--	India	Yes
vi.	Year of manufacture	--	--	--	2018	Yes
vii.	Chassis, Serial Number	--	--	--	AGBI101112867	Yes
viii.	Recommended PTO speed of Prime mover(rpm)	--	--	--	540/1000	Yes
ix.	Maximum PTO power requirement, kW	--	--	--	30-41/40-55	Yes
8.	Category of breakdowns/ defects					
	Category of breakdowns	Category Evaluative/ Non Evaluative	Requirements	As Observed	Whether meets the requirements (Yes/ No)	
i.	Critical breakdowns	Evaluative	No critical breakdown	None	Yes	
ii.	Major breakdown	Evaluative	Not more than one and neither of them should be repetitive in nature.	None	Yes	
iii.	Minor breakdowns	Evaluative	Not more than three and frequency of it's should not be more than two.	None	Yes	
iv.	Total breakdowns	Evaluative	In no case, the total no of breakdown should exceed four, I e (1 major + 3 minor) or 4 minor breakdown	None	Yes	

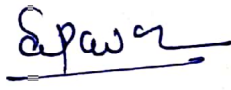
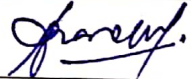

11. SUMMARY OF OBSERVATIONS, COMMENTS AND RECOMMENDATIONS

- 11.1 The dimension of three point linkage (hitch pyramid) of the rotary tiller (Rotavator) does not conform to IS: 4468-1997. This should be looked into for corrective action for standardization.
- 11.2 Dimensions of PIC and PIC yoke bore of implement does not conform to IS: 4931-1995 and therefore, it should be looked into for corrective action.
- 11.3 Chemical composition of rotor blades does not conform to IS: 6690-2002. The percentage of carbon and Manganese content in composition of rotary tiller blade material was recorded as 0.256 and 1.275 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 edge portion of rotor blades also does not conform to relevant Indian Standard. It is therefore, recommended that the material of rotary tiller blade should be improved and provided as per requirement of Indian Standard.
- 11.4 The rate of work was recorded as 0.3282 to 0.3519 ha/h and the speed of operation vary from 2.59 to 3.05 kmph..



- 11.5 In dry land operation average depth of cut was recorded 7.3 cm which does not meet the requirement of Indian Standard and field efficiency was recorded 78.9 % which is as per requirement of Indian standards in sandy loam soil, an average depth of puddle and puddling index was recorded as 25.4 cm and 80.77% respectively, which is as per requirement of Indian standards.
- 11.6 The hourly rate of wear of blade on mass basis in Dry land & Wet land operations was recorded as 0.02 % and 0.06 to 0.07 % respectively.
- 11.7 The hourly rate of wear of blade on dimensional basis in Dry land & Wet land operations was recorded as 0.02 to 0.32% and as 0.03 to 0.08 % respectively.
- 11.8 No ingress of mud and/or water was found in primary and secondary reduction boxes after 39.75 hr of field operations and the sealing provided on different subassemblies were found effective.
- 11.9 **Technical literature:**
An Operator cum Service Manual & Parts Catalogue was provided along with the machine during the course of testing.

TESTING AUTHORITY

S. G. PAWAR AGRICULTURAL ENGINEER	
J. P. MANDAL SENIOR AGRICULTURAL ENGINEER	
K.K. NAGLE DIRECTOR	

Test conducted & draft test report compiled by - Khagendra Bora, STA

12. APPLICANT'S COMMENTS

Para no	Our Reference	Applicant Comments
12.1	11.1	Dimension of three-point linkage will be modified to confirm IS 4468-1997.
12.2	11.2	The dimension of PIC & PIC Yoke of implements will be modified to confirm IS 4931-1995.
12.3	11.3	Shaktiman Rotary Tiller blade are made of "BORON" steel which is better than Carbon & Silicon Manganese steel Referred in IS 6690-2002. Chemical compositions and Hardness of Rotavator Blade are maintaining as per "BORON" steel.
12.4	11.5	We will take necessary action for increase depth of operation.