

THIS TEST REPORT IS VALID UP TO 30.04.2032



VST, RANGER 50C POWER WEEDER



भारत सरकार

Government of India

कृषि एवं किसान कल्याण मंत्रालय

Ministry of Agriculture and Farmers Welfare

कृषि एवं किसान कल्याण विभाग

Department of Agriculture and Farmers Welfare

दक्षिणी क्षेत्र कृषि मशीनरी प्रशिक्षण एवं परीक्षण संस्थान

Southern Region Farm Machinery Training and Testing Institute

ट्रेक्टर नगर, गार्लदिन्ने-515 731, जिला: अनंतपुर (आं. प्र.)

Tractor Nagar, Garladinne-515 731, District: Anantapur (A.P.)

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ICE/SRFMTTI, ANANTAPUR/2025-26/ 10/10/1870	VST, RANGER 50C POWER WEEDER THIS TEST REPORT IS VALID UP TO 30.04.2032	COMMERCIAL (ICT)
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Manufacturer, (apa)

: M/s. V.S.T Tillers Tractors LTD Plot No. 222-224 & 229-232, 3rd Phase, KIADB Industrial Area, Malur, Koar District-563130, Karnataka.

Applicant

: M/s V.S.T. Tillers Tractors LTD Plot No-1, Dyavasandra Indl. Layout, Whitefield Road, Mahadevapura Post, Bengaluru-560048, Karnataka.

VST, RANGER 50C POWER WEEDER

Report no.: ICE/SRFMTTI, ANANTAPUR/2025-26/10/10/1870

Month: May

Year: 2025



सत्यमेव जयते

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ICE/SRFMTTI,
ANANTAPUR/2025-26/
10/10/1870

VST, RANGER 50C
POWER WEEDER
THIS TEST REPORT IS VALID UP
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COMMERCIAL
(ICT)

Type of test : COMMERCIAL(ICT)
Period of test : APRIL, 2025
Test Report No. : ICE/SRFMTTI, Anantapur/2025-26/10/10/1870
Month / Year of release : May, 2025

- i) The results reported in this report are observed values and no corrections have been applied for atmospheric and site conditions.
- ii) The data given in this report pertain to the particular machine randomly selected by testing authority through virtual mode
- iii) The results presented in this report do noting any way, attribute to the durability of the machine.
- iv) This Test Report should not be reproduced in part or full without prior permission of the Director, Southern Region Farm Machinery Training & Testing Institute, Garladinne, Anantapur (A.P.).
- v) This is a report on Commercial Test of Power Weeder named “VST, RANGER 50C POWER WEEDER”. This report is valid up to 30.04.2032, Vide Ministry's O.M. No. 13-22/2020-M&T (I&P) dated 12.12.2023.

SELECTED CONVERSIONS

S. No.	Units	Conversion Factor
1	Force	
	1 kgf	9.80665 N
		2.20462 lbf
2	Power	
	1 hp	1.01387 metric hp (Ps)
		745.7 W
	1 Ps	735.5 W
	1 kW	1.35962 Ps
3	Pressure	
	1 psi	6.895 kPa
	1 kgf/cm ²	98.067 kPa = 735.56 mm of Hg
	1 bar	100 kPa = 10 N/cm ²
	1 mm of Hg	1.3332 m-bar

18. COMMENTS & RECOMMENDATIONS

18.1 Engine Performance:

- 18.1.1 The maximum and rated power was observed as 3.80 kW under natural ambient condition against the declared value of 3.7 kW.
- 18.1.2 Specific fuel consumption of engine corresponding to maximum power was recorded as 396 g/kWh against the declared value of 400 g/kWh.
- 18.1.3 Back up torque of engine was observed as 6.94 % against declared value of 10 %.
- 18.1.4 Max. Torque was observed as 10.78 Nm against the declared value of 11 Nm.

18.2 Mechanical vibration:

The amplitude of mechanical vibration on various assemblies of the Power weeder was observed to the extent of 282 micron, which is on higher side. In view of the above, this should be given top priority for corrective action.

18.3 Hardness:

The Hardness of rotary blades does not conform to the requirement of IS 6690:1981 (Reaffirmed 2022). This should be looked into for corrective action.

18.4 Chemical analysis:

The chemical analysis of rotary blades does not conform to the requirement of IS 6690:1981 (Reaffirmed 2022). This should be looked into for corrective action.

18.5 Marking and labelling :

The labeling plate does not reveal all the required information. It is therefore recommended that a suitable labeling plate covering all essential components, interlaid, the following must be provided:

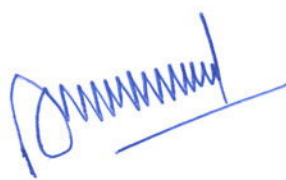



- i) Country of origin

18.5 Technical literature:

User's manual, service catalogue, warranty certificate and parts catalogue of power weeder was provided for reference during the test. It is however, the same must be brought out in Hindi & other regional languages as per IS 8132:1999 (Reaffirmed 2004) for the guidance of users.

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TESTING AUTHORITY

 Er. PRAMOD YADAV AGRICULTURAL ENGINEER	 Er. VIJAY KUMAR BADAYA SENIOR AGRICULTURAL ENGINEER
 Dr. B.M. NANDEDE DIRECTOR 	

19. APPLICANT'S COMMENTS

S. No.	Reference Page No.	Applicant Comments
1.	18.1.3	Back up torque enhancing in the engine will be taken up.
2.	18.2	Suppression of the amplitude of mechanical vibration will be taken up to reduce vibration.
3.	18.3	Correction action will be taken to increase the hardness of blades.
4.	18.4	Material of rotary blades will be selected as per standard.
5.	18.5	Country of origin will be included in the name plate.
6.	18.6	Technical Literature will be brought in Hindi & other regional language.