

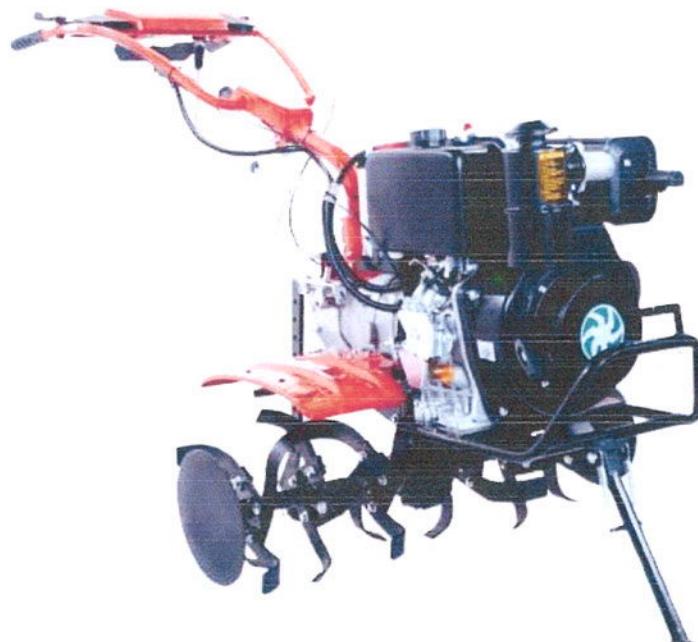
व्यावसायिक परीक्षण रिपोर्ट(प्रारंभिक)

COMMERCIAL TEST REPORT(INITIAL)

संख्या/No: ICE/SRFMTTI,
ANANTAPUR/2025-26/36/36/1954

माह/Month:December, 2025

THIS TESTREPORT IS VALID UPTO 30.11.2032



VST, RANGER 80 POWER WEEDER



भारत सरकार

Government of India

कृषिएवं किसान कल्याण मंत्रालय

Ministry of Agriculture and Farmers Welfare

कृषिएवं 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

ट्रैक्टर 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/
36/36/1954

VST, RANGER 80 POWER WEEDEER
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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, Kolar District-563130,
Karnataka.
Regd. & Head Office: Plot No – 1, Dyavasandra
Indl. Layout, Whitefield Road, Mahadevapura Post,
Bangalore-48, Karnataka, India.

Applicant : The Manufacturer.

VST, RANGER 80POWER WEEDEER

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ICE/SRFMTTI
ANANTAPUR/2025-26/
36/36/1954

VST, RANGER 80 POWER WEEDEER
THIS TEST REPORT IS VALID UPTO
30.11.2032

COMMERCIAL
(ICT)

Type of test : COMMERCIAL (ICT)

Period of test : September, 2025 to November, 2025

Test Report No. : ICE/SRFMTTI, ANANTAPUR/2025-26/36/36/1954

Month / Year of release : December, 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.
- iii) The results presented in this report do not, in 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 80 POWER WEEDEER**". This report is valid up to **30.11.2032**, 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



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ANANTAPUR/2023-26/
36/36/1954

VST, RANGER 80 POWER WEEDER
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COMMERCIAL
(ICT)

18. COMMENTS & RECOMMENDATIONS

18.1 Engine Performance:

- 18.1.1 The maximum power was observed as 5.91 kW under natural ambient condition against the declared value of 5.90 kW.
- 18.1.2 Specific fuel consumption of engine corresponding to maximum power was recorded as 303 g/kWh against the declared value of 310 g/kWh.
- 18.1.3 Back up torque of engine was observed as 15.12% against declared value of 10.0%.
- 18.1.4 Max. torque was observed as 17.81 Nm against the declared value of 18.0 Nm.

18.2 Noise measurement:

Maximum Noise at operator's ear level was observed as 91 dB (A), which is higher as per ILO. Therefore, corrective action to reduce the noise should be taken up.

18.3 Mechanical vibration:

The amplitude of mechanical vibration on various assemblies of the Power weeder was observed to the extent of 795 micron, which is on higher side. In view of the above, this should be given top priority for corrective action.

18.4 Hardness & Chemical analysis:

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

18.5 Defects, Breakdowns & Repair:

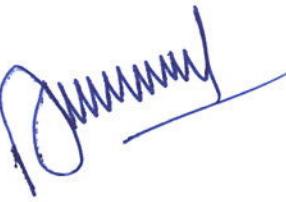
As mentioned in the para no. 15, During the power weeder field performance test, the final drive bevel pinion assembly pair teeth damaged. Subsequently, the applicant submitted another request (letter nil dated 09.10.2025) stating that the Gear Bevel (Part No. GCRIIC00620A) and Shaft Pinion FT Bottom GB (Part No. GCRIIC01620A1) required replacement with new components of the same specifications. With the approval of the competent authority, the aforementioned spare parts have been replaced with new ones of same specification. **This breakdown occurred in the final drive assembly has been considered as Major Breakdown (Mj-8) as per IS 13539:2018.** This calls for introduction of stringent quality control measures at production level and improvement in the quality of final drive bevel pinion assembly on the power weeder at manufacturing level.

ICE/SRFMTTI, ANANTAPUR/2025-26/ 36/36/1954	VST, RANGER 80 POWER WEEDEER THIS TEST REPORT IS VALID UPTO 30.11.2032	COMMERCIAL (ICT)
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18.6 Technical literature:

Operation cum Service manual and Spare parts catalogue of Power Weeder provided in English during the test. However, the same must be brought out in Hindi & other regional languages as per IS 8132:1999 (Reaffirmed 2004) for the guidance of users.

TESTING AUTHORITY

	
Er. PRAMOD YADAV AGRICULTURAL ENGINEER	Er. Y. K. RAO SENIOR AGRICULTURAL ENGINEER
	 Dr. P.P. RAO DIRECTOR

19. APPLICANT'S COMMENTS

Sr.No.	Reference Page No.	Comments
01	Page No.18.2 to 18.5	Observation will be studied, and necessary corrective action will be taken for quality improvement in products.