

व्यावसायिक परीक्षण रिपोर्ट(प्रारंभिक)

COMMERCIAL TEST REPORT (INITIAL)

संख्या/No: ICE/SRFMTTI,  
ANANTAPUR/2025-26/37/37/1955  
माह/Month:December, 2025

THIS TESTREPORT IS VALID UPTO 30.11.2032



**VST, RANGER 80 RR DLX 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.)

**[An ISO 9001:2015 CERTIFIED INSTITUTE]**

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ICE/SRFMTTI, ANANTAPUR/2025- 26/37/37/1955	VST, RANGER 80 RR DLX POWER WEEDER THIS TEST REPORT IS VALID UP TO 30.11.2032	
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Manufacturer, (apa)

: **Manufacturing Plant:**

M/s. V.S.T. TILLERS TRACTORS LTD.

Plot No 222-224 & 229-232, 3rd Phase, KIADB Industrial Area, Malur, Kolar District-563130, Karnataka.

**Registered Office:**

M/s. V.S.T. TILLERS TRACTORS LTD

Plot No- 1, Dyavasandra Indl. Layout, Whitefield Road, Mahadevapura Post, Bengaluru-560048, Karnataka.

Applicant

: The Manufacturer.

### **VST, RANGER 80 RR DLX POWER WEEDER**

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ICE/SRFMTTI,  
ANANTAPUR/2025  
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VST, RANGER 80 RR DLX POWER WEEDE

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30.11.2032

COMMERCIAL  
(ICT)

Type of test : COMMERCIAL (ICT)

Period of test : September, 2025 to October, 2025

Test Report No. : ICE/SRFMTTI, ANANTAPUR/2025-26/37/37/1955

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 RR DLX POWER WEEDE". 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	<b>Force</b>	
	1 kgf	9.80665 N
		2.20462 lbf
2	<b>Power</b>	
	1 hp	1.01387 metric hp (Ps) 745.7 W
	1 Ps	735.5 W
	1 kW	1.35962 Ps
3	<b>Pressure</b>	
	1 psi	6.895 kPa
	1 kgf/cm <sup>2</sup>	98.067 kPa = 735.56 mm of Hg
	1 bar	100 kPa = 10 N/cm <sup>2</sup>
	1 mm of Hg	1.3332 m-bar

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1	2	3	4	5
14	Thickness of rotor blade, (mm)	5 (min.)	6.55	Conforms
15	Material of blade	Boron (28MnCrB5)/High Carbon Steel EN 42)	Boron steel	Conforms
16	Hardness of blade, HRC	38 (Min.)	29 to 33	Does not conform
17	Shape of rotor blade	C/J Shape Must be provided	J shape	Conforms
18	Provision for handle height adjustment	Must be provided	Provided	Conforms
19	Provision for handle rotation	Must be provided	Provided	Conforms
20	Provision for emergency stop of engine	Must be provided	Not Provided	Does not conform
21	Provision for easy start of engine	Must be provided	Provided	Conforms
22	Depth control mechanism	Must be provided	Provided	Conforms
23	Provision for transport wheels	Must be provided	Provided	Conforms
24	Provision for cover on exhaust	Must be provided	Provided	Conforms
25	Direction of exhaust emission away from operator	Must be provided	Provided	Conforms
26	Marking/labeling of machine	The labeling plate should be riveted on the body of the machine having name and address of manufacturer & applicant, country of origin, make, model, year of manufacturer, serial number, engine number, engine HP, rated rpm & SFC	Provided	Conforms
27	Literature	Operator manual, service manual and parts catalogue should be provided	Provided	Conforms

## 18. COMMENTS & RECOMMENDATIONS

### 18.1 Engine Performance:

- 18.1.1 The maximum power was observed as 5.90 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 300g/kWh against the declared value of 310g/kWh.
- 18.1.3 Back up torque of engine was observed as 13.63% against declared value of 10.0%.
- 18.1.4 Max. torque was observed as 17.58 Nm against the declared value of 18.0 ± 2Nm.

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#### 18.2 Mechanical vibration:

The amplitude of mechanical vibration on various assemblies of the Power weeder was observed to the extent of 751micron, which is on higher side. In view of the above, this should be given top priority for corrective action.

#### 18.3 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 conforms. This should be looked into corrective action.

#### 18.4 Technical literature:

User's manual is provided 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. The following literature should be provided

- i)Service manual
- ii)Parts catalogue

#### 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 18.4	Observation will be studied, and necessary corrective action will be taken for quality improvement in products.