

THIS TEST REPORT IS VALID UPTO 30.04.2031



VST, FT 20 POWER WEEDER



सत्यमेव जयते

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

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

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

[An ISO 9001:2015 CERTIFIED INSTITUTE]

Website: <http://srfmtti.dacnet.nic.in/>

Machine- 573/1628	VST, FT 20 POWER WEEDER	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, Kolar District-563130, Karnataka.,
India.

Applicant : The Manufacturer

VST, FT 20 POWER WEEDER

Report no.: **Machine-573/1628**

Month: **May**

Year: **2024**



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Ministry of Agriculture and Farmers Welfare
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[An ISO 9001:2015 CERTIFIED INSTITUTE]

Telephone: 08551-286441

Website: <http://srfmmtti.dacnet.nic.in/>

E-mail: fmti-sr@nic.in

**SOUTHERN REGION FARM MACHINERY TRAINING &
TESTING INSTITUTE, ANANTAPUR, (A.P.)**

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Machine-573/1628	VST, FT 20 POWER WEEDER	COMMERCIAL (ICT)
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Type of test : COMMERCIAL (ICT)

Period of test : October, 2023 to April, 2024

Test Report No. : **Machine-573/1628**

Month / Year of release : May, 2024

- 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 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 FT 20 POWER WEEDER**". This report is valid up to 30.04.2031, 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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1	2	3	4	5
21	Provision for easy start of engine	Must be provided	Provided	Conforms
22	Provision for shield/cover to prevent flying of mud and stone from rotor	Must be provided	Provided	Conforms
23	Depth control mechanism	Must be provided	Provided	Conforms
24	Provision for transport wheels	Must be provided	Not provided	Conforms
25	Provision for cover on exhaust	Must be provided	Provided	Conforms
26	Direction of exhaust emission away from operator	Must be provided	Provided	Conforms
27	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	Specific fuel consumption (g/kW) not provided	Does not conform
28	Literature	Operator manual, service manual and parts catalogue should be provided	Provided	Conforms

16. COMMENTS & RECOMMENDATIONS

16.1 Engine Performance:

- 16.1.1 The maximum power was observed as 1.08 kW under natural ambient condition against the declared value of 1.3 kW.
- 16.1.2 Specific fuel consumption of engine corresponding to maximum power was recorded as 688 g/kWh against the declared value of 450 g/kWh.
- 16.1.3 Back up torque of engine was observed as 7.02 % against declared value of 10%.
- 16.1.4 Max. torque was observed as 3.05 Nm against the declared value of 3.45 Nm.

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16.2 Mechanical vibration:

The amplitude of mechanical vibration on various assemblies of the Power weeder was observed to the extent of 539 micron, which is on higher side. In view of the above, this should be given top priority for corrective action.



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

- i) Specific fuel consumption (g/kWh)

16.5 Technical literature:

User's manual cum parts catalogue not provided for reference during the test. It is recommended that must be revised in booklet form and brought out in Hindi & other regional languages as per IS 8132:1999 (Reaffirmed 2004) for the sake of user & technical personnel in booklet form.

TESTING AUTHORITY

Er. PRAMOD YADAV AGRICULTURAL ENGINEER	
Dr. B.M. NANDEDE DIRECTOR	

17. APPLICANT'S COMMENTS

Sl. No.	Reference Page No.	Comments
1	Para no.16.2 and 16.3	Observation will be studied and necessary corrective action will be taken for quality improvement in products.