व्यावसायिक परीक्षण रिपोर्ट (प्रारंभिक) COMMERCIAL TEST REPORT (INITIAL)

संख्या/No: H&HT/SRFMTTI, ANANTAPUR/2025-26/06/06/1867

माह/Month: May, 2025

THIS TEST REPORT IS VALID UP TO 30.04.2032



VST, 55 DLX-CW MULTI CROP POWER REAPER



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, गार्लिक्नि-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/ E-mail: fmti-sr@nic.in

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COMMERCIAL (ICT)

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

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, 55 DLX-CW MULTI CROP POWER REAPER

Report No.: H&HT/SRFMTTI,ANANTAPUR/2025-26/06/06/1867

Month: May Year: 2025



Government of India
Ministry of Agriculture and Farmers Welfare
Department of Agriculture and Farmers Welfare
Southern Region Farm Machinery Training and Testing Institute
Tractor Nagar, Garladinne-515 731, District: Anantapur (A.P.)
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SOUTHERN REGION FARM MACHINERY TRAINING & TESTING INSTITUTE, ANANTAPUR, (A.P.)

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COMMERCIAL (ICT)

Type of test

: COMMERCIAL(ICT)

Period of test

: November, 2024 to February, 2025

Test Report No.

H&HT/SRFMTTI,ANANTAPUR/

2025-26/06/06/1867

Month / Year

: 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 the test report pertain to the particular machine randomly selected for test by the testing authority at applicant's site.

iii) The results presented in this report do not in any way attribute to the durability of the machine.

iv) This report should not be reproduced in part or full without prior permission of the Director, Southern Region Farm Machinery Training and Testing Institute, Garladinne, Anantapur (A.P.).

v) This is a report on Commercial Test of power reaper named "VST, 55 DLX-CW MULTI CROP POWER REAPER". 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		
	(8)	2.20462 lbf		
2	Power			
	1 hp	1.01387 metric hp (Ps)		
		745.7 W		
	1 Ps	735.5 W		
3	Pressure			
	1 psi	6.895 kPa		
	1 kgf/cm ²	98.067 kPa = 735.56 mm of Hg		
	1 bar	$100 \text{ kPa} = 10 \text{ N/cm}^2$		
	1 mm of Hg	1.3332 m-bar		

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COMMERCIAL (ICT)

101	2	3	4	5
20.	Slip clutch / safety pins at conveyor drive	Must be provided	Provided	Conforms
21.	Provision of row marker / crop guide	Must be provided	Provided	Conforms
22	Marking /labeling of machine	The labeling plate should be riveted on the body of machine having Name And Address Of Manufactures & Applicant, Country Of Origin, Make, Model, Year Of Manufacturer, Serial Number, Engine Number, Engine HP, Rated Rpm & SFC	Provided	Conforms
23	Literature	Operator manual, service manual and parts catalogue should be provided	Provided	Conforms

18. SUMMARY OF OBSERVATIONS, COMMENTS & RECOMMENDATIONS

18.1 Engine performance:

- 18.1.1 Engine maximum and rated power were observed as 3.17 kW against the declared values of 3.1 kW and 3.0 kW.
- 18.1.2 Max. Torque was observed as 18.90 Nm against declaration value of 19 Nm.
- 18.1.3 Specific fuel consumption of engine corresponding to maximum power was recorded as 415 g/kWh. Against the declaration value of 400 g/kWh
- 18.1.4 Back up torque of engine was observed as 12.70 %.

18.2 Mechanical vibration:

The amplitude of mechanical vibration on various assemblies of the Power Reaper was observed to the extent of 270 microns, which is on higher side. Therefore, necessary action to reduce the vibration should be taken in future.

18.3 The dimension of knife does not conform, in full, to IS: 6025-1982. This should be looked into for necessary corrective action.

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During the engine performance test at natural ambient condition varying speed test chain case cover and chain was broken. Therefore, the gear box rear cover (Part no. CHRG 001 0001, One Number) & Gasket gear box rear cover (Part no. CHRG 001 0002, One Number) and Sprocket chain (Part no. CHRG 001 0002, One Number). This should be looked into for necessary corrective action on priority basis.

18.5 Technical literature:

The operator manual cum parts catalogue of reaper and engine in single booklet was supplied with the reaper for reference during the test. The manuals are no adequate. The most of initial setting and discard limit of critical components may be added in manuals and leaflets etc. It is however, recommended that same may be revised and brought out in Hindi & other regional languages as per IS 8132: 1999 (Reaffirmed: 2019) for the sake of user & technical personnel

TESTING AUTHORITY

Er. PRAMOD YADAV AGRICULTURAL ENGINEER Er. VIJAY KUMAR BADAYA SENIOR AGRICULTURAL ENGINEER

Dr. B.M. NANDEDE DIRECTOR

19. APPLICANT'S COMMENTS

Sl. No.	Our Reference	Applicants Comments		
19.1 18.2, 18.3 & 18.4		Observations will be studied and necessary corrective action will be taken for quality improvement in product.		