

THIS TEST REPORT IS VALID UP TO 31.05.2032



**SOUTHERN AGRO ENGINE PVT. LTD., VV 105D
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


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/>

E-mail: fmti-sr@nic.in

ICE/SRFMTTI, ANANTAPUR/2025-26/ 16/16/1883	SOUTHERN AGRO ENGINE PVT. LTD., VV 105D POWER WEEDER THIS TEST REPORT IS VALID UP TO 31.05.2032	
--	--	--

Manufacturer, (apa)

: M/s. Southern Agro Engine Private
Ltd., #119, Bangalore High Road,
Pappanchatran,
Thiruvallur, Chennai 600 123
Tamilnadu

Applicant

: M/s. Southern Agro Engine Private
Ltd., #119, Bangalore High Road,
Pappanchatran, Thiruvallur, Chennai
600 123 Tamilnadu

SOUTHERN AGRO ENGINE PVT. LTD., VV 105D POWER WEEDER

Report no.: ICE/SRFMTTI, ANANTAPUR/2025-26/16/16/1883

Month: June

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.)
[An ISO 9001:2015 CERTIFIED INSTITUTE]

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

E-mail: fmti-sr@nic.in



ICE/SRFMTTI, ANANTAPUR/2025-26/ 16/16/1883	SOUTHERN AGRO ENGINE PVT. LTD., VV 105D POWER WEEDER	COMMERCIAL (ICT)
	THIS TEST REPORT IS VALID UP TO 31.05.2032	

Type of test : COMMERCIAL (ICT)

Period of test : May, 2025 to June, 2025


Test Report No. : ICE/SRFMTTI, ANANTAPUR/2025-26/16/16/1883

Month / Year of release : June, 2025

- The results reported in this report are observed values and no corrections have been applied for atmospheric and site conditions.
- The data given in this report pertain to the particular machine randomly selected by testing authority.
- The results presented in this report do not, in any way, attribute to the durability of the machine.
- 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.).
- This is a report on Commercial Test of Power Weeder named “SOUTHERN AGRO ENGINE PVT. LTD., VV 105D POWER WEEDER”. This report is valid up to 31.05.2032, 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

ICE/SRFMTTI, ANANTAPUR/2025-26/ 16/16/1883	SOUTHERN AGRO ENGINE PVT. LTD., VV 105D POWER WEEDER THIS TEST REPORT IS VALID UP TO 31.05.2032	

1	2	3	4	5
28	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 and rated power was observed as 4.47 kW under natural ambient condition against the declared value of 4.5 kW.
- 18.1.2 Specific fuel consumption of engine corresponding to maximum power was recorded as 383 g/kWh against the declared value of 360 g/kWh.
- 18.1.3 Back up torque of engine was observed as 11.91% against declared value of 10%.
- 18.1.4 Max. torque was observed as 12.84 Nm against the declared value of 11.7 Nm.

18.2 Mechanical vibration:

The amplitude of mechanical vibration on various assemblies of the Power weeder was observed to the extent of 410 micron, 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 & Chemical composition of rotor blades does not conform to the requirement of IS 6690:1981 (Reaffirmed 2022). This should be looked into for corrective action.

18.4 Marking /labeling:

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:

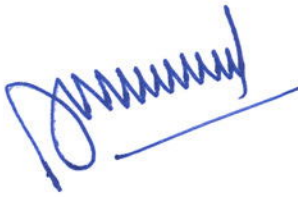
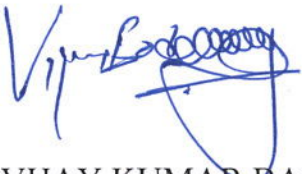

- Country of Origin,
- Make
- Specific fuel consumption (g/kWh)

18.5 Technical literature:

User's manual, Service Manual and parts catalogue provided in booklet form for reference during the test. It is recommended that same must be revised brought out in Hindi & other regional languages as per IS 8132:1999 (Reaffirmed 2004) for the sake of user & technical personnels.

ICE/SRFMTTI, ANANTAPUR/2025-26/ 16/16/1883	SOUTHERN AGRO ENGINE PVT. LTD., VV 105D POWER WEEDER THIS TEST REPORT IS VALID UP TO 31.05.2032	COMMERCIAL (ICT)
--	--	---------------------

ESTING AUTHORITY

 Er. PRAMOD YADAV AGRICULTURAL ENGINEER	 Er. VIJAY KUMAR BADAYA SENIOR AGRICULTURAL ENGINEER
 Dr. P.P. RAO DIRECTOR	



19. APPLICANT'S COMMENTS

Sl. No.	Para No.	Comments
1	18.1.2	We will improve the pump efficiency in future product.
2	18.1.3	The above action plan will applicable for this point also.
3	18.2	We will provide vibration damper to arrest the vibration.
5	18.3	We will improve in future product as per requirement of IS 6690:1981.
6	18.4	We will provide the all parameter in future product.
7	18.5	We will improve and provide in future product as per IS 8132:1999.