

THIS TEST REPORT IS VALID UP TO 31.05.2032



SOUTHERN AGRO ENGINE PVT. LTD., VV 140 DR 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]

ICE/SRFMTTI, ANANTAPUR/2025-26/ 15/15/1882	SOUTHERN AGRO ENGINE Pvt. Ltd., VV 140 DR POWER WEEDER THIS TEST REPORT IS VALID UP TO 31.05.2032	
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Manufacturer, (apa) : M/s. Chongqing Aiconick Machinery co. Ltd,
No.380, Huaying Road, Longxi street, Yubei
District, Chongqing City, **China**.

Applicant : M/s. Southern Agro Engine Private Limited,
#119, Bangalore High Road, Pappanchatram,
Thiruvallur, Chennai – 600 123, Tamil Nadu.

SOUTHERN AGRO ENGINE PVT. LTD., VV 140 DR POWER WEEDER

Report no.: ICE/SRFMTTI, ANANTAPUR/2025-26/15/15/1882

Month: **June**

Year: **2025**



सत्यमेव जयते

Government of India
Ministry of Agriculture and Farmers Welfare
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**SOUTHERN REGION FARM MACHINERY TRAINING &
TESTING INSTITUTE, ANANTAPUR (A.P.)**

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Type of test : COMMERCIAL(ICT)

Period of test : May, 2025 to June, 2025

Test Report No. : ICE/SRFMTTI, ANANTAPUR/2025-26/15/15/1882

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 through virtual mode
- The results presented in this report do noting 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 140 DR 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

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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	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	Address of manufacturer & country of origin are not provided.	Does not conform
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 power was observed as 5.49 kW under natural ambient condition against the declared value of 5.50 kW.
- 18.1.2 Specific fuel consumption of engine corresponding to maximum power was recorded as 303 g/kWh against the declared value of 300 g/kWh.
- 18.1.3 Back up torque of engine was observed as 10.95% against declared value of 10%.
- 18.1.4 Max. torque was observed as 16.10 Nm against the declared value of 14.5 Nm.



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**COMMERCIAL
(ICT)**

18.2 Mechanical vibration:

The amplitude of mechanical vibration on various assemblies of the Power weeder was observed to the extent of 344 micron, which is on higher side. In view of the above, this should be given top priority for corrective action.

18.3 Noise measurement:

Max. Noise at operator's ear level was observed as 92 dB (A), which is on higher side, therefore suitable corrective action should be taken to reduce the noise level.

18.4 The Hardness and Chemical analysis:

The Hardness and Chemical composition 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.

18.5 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, inter alia, the following must be provided:

- i. Name and address of manufacturer
- ii. Country of origin

18.6 Technical literature:

Operators manual and parts catalogue of power weeder were supplied with test sample for reference during the test. It is however, recommended that same way be revised and brought out in Hindi & other regional languages as per IS: 8132-1999(reaffirmed 2019) for the sake of user & technical personnels.

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TESTING 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	18.1.3	We will improve the pump efficiency in future product.
2	18.1.4	The above action plan will applicable for this point also.
3	18.2	We will provide vibration damper to arrest the vibration.
4	18.3	We will improve in future product to reduce the Noise level.
5	18.4	We will improve in future product as per requirement of IS 6690:1981.
6	18.5	We will provide the all parameter in future product.
7	18.6	We will improve and provide in future product as per IS 8132:1999.