

THIS TEST REPORT IS VALID UP TO 31.08.2028



e-Agrocare D-531-E, 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 प्रशिक्षण एवं परीक्षण संस्थान

Southern Region Farm Machinery Training and Testing Institute

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

[An ISO 9001:2015 CERTIFIED INSTITUTE]

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Machine- 514/1537	e-AGROCARE D-531-E, POWER WEEDER	COMMERCIAL (ICT)
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Manufacturer, (apa) : M/s. e-Agro Care Machineries and equipment's
Pvt. Ltd, D-45, 5-star MIDC, Shendra
Aurangabad-431154 Maharashtra, India

Applicant : M/s. e-Agro Care Machineries and equipment's
Pvt. Ltd, D-45, 5-star MIDC, Shendra
Aurangabad-431154 Maharashtra, India

e-Agro Care D-531-E, Power Weeder

Report no.: Machine-514/1537

Month: September

Year: 2023



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Machine-514/1537	e-AGROCARE D-531-E, POWER WEEDER	COMMERCIAL (ICT)
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Type of test : COMMERCIAL TEST

Period of test : 08.05.2023 to 29.08.2023

Test Report No. : **Machine-514/1537**

Month / Year of release : September, 2023

- 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 "**e-Agro Care D-531-E, Power weeder**". **This report is valid up to 31.08.2028** Vide Ministry's O.M. No. 13-24/2018-M&T (I&P) dated 19.09.2018.

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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16.2 Clutch:

Any marked wear in clutch friction plate	None
Condition of clutch release bearing	Normal
Presence of oil and water in clutch housing	Wet type clutch
Condition of clutch pilot bearing	Normal
Condition of pressure plate	Normal

16.3 Transmission gears:

All the gears of the transmission system were found in normal working condition.

16.4 Rotary drive unit:

The rotary drive unit was dismantled and all the components were found in normal condition.

17. COMMENTS & RECOMMENDATIONS

17.1 Engine Performance:

- 17.1.1 The maximum and rated power was observed as 6.62 kW under natural ambient condition against the declared value of 7 kW.
- 17.1.2 Specific fuel consumption of engine corresponding to maximum power and at rated engine speed was recorded as 334 g/kWh against the declared value of 280 g/kWh.
- 17.1.3 Back up torque of engine was observed as 8.91 % against declared value of 11%. This should be looked into for corrective action.
- 17.1.4 Max. torque was observed as 22.97 Nm against the declared value of 23 Nm.
- 17.2 Max. Noise at operator's ear level was observed as 96 dB (A), which appears to be on higher side. As the Sound Pressure level is directly influencing the Human/Operator's Health, Safety and Comfort; and therefore suitable corrective action may be taken.
- 17.3 The amplitude of mechanical vibration on various assemblies of the Power Weeder was observed to the extent of 407 micron, which is on higher side. In view of the above, this should be given top priority for corrective action.
- 17.4 The hardness of rotor blades does not confirm against the requirement of 56 ± 3 HRC. This maybe looked into for corrective action.
- 17.5 Chemical composition of rotor blades does not meet the requirement of relevant code. Therefore this may be looked into for corrective action.

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17.6 The particulars provided on marking labeling plate not adequate. It is there for recommended to provide the following details is unequivocal terms:

- Engine no.
- Make & model of power weeder
- Max. power ,(kW)
- Specific fuel consumption ,(g/kWh)

17.7 Technical literature:

User's manual cum parts catalogue is a single booklet was provided for reference during the test. It is recommended that same must be revised 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	 Er. D.C. MOULI AGRICULTURAL ENGINEER
 Dr. B.M NANDEDE DIRECTOR	

18. APPLICANT'S COMMENTS:

Sl. No.	Reference	Comments
(1)	(2)	(3)
1	17.1.2, 17.1.3	We will bring up this issue with engine manufacturer.
2	17.3	We will work on it to reduce the mechanical vibration of machine in future production.
3	17.4, 17.5	We will take corrective action and make changes as per recommended IS Standard.
4	17.6	Labeling will be revised and brought up as per recommendation in future production.
5	17.7	Literature will be provided as per recommendation in future production.