

THIS TEST REPORT IS VALID UP TO 30.11.2031



RAAJ, RAAJ-178BR 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]

Machine- 688/1775	RAAJ, RAAJ-178BR POWER WEEDER	COMMERCIAL (ICT)
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Manufacturer : M/s. Rajesh Engineering Works
Shop Khata No.158, Hanagal, Molkaluru
(Tq), Chitradurga (Dt), Karnataka, India.

Applicant, : The Manufacturer

RAAJ, RAAJ-178BR POWER WEEDER

Report no.: Machine-688/1775

Month: December

Year: 2024

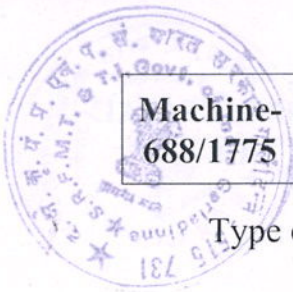


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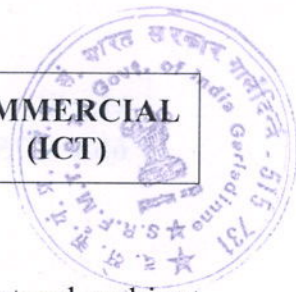
Type of test : COMMERCIAL (ICT)
Period of test : October, 2024 to December, 2024
Test Report No. : **Machine-688/1775**
Month / Year of release : December, 2024

- 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.
- 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 “**RAAJ, RAAJ-178BR POWER WEEDER**”. This report is valid up to **30.11.2031, 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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18. COMMENTS & RECOMMENDATIONS

18.1 Engine Performance:

- 18.1.1 The maximum and rated power was observed as 4.53 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 418 g/kWh against the declared value of 330 g/kWh.
- 18.1.3 Back up torque of engine was observed as 7.51 % against declared value of 10%.
- 18.1.4 Max. torque was observed as 12.83Nm against the declared value of 15 Nm.

18.2 Mechanical vibration:

The amplitude of mechanical vibration on various assemblies of the Power weeder was observed to the extent of 234 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 analysis of rotary 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:

- i) Country of origin
- ii) Year of manufacturing
- iii) Engine,(hp)
- iv) Specific fuel consumption, (g/kWh)

18.5 Technical literature:

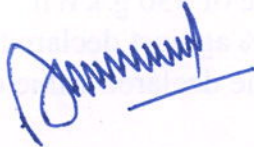
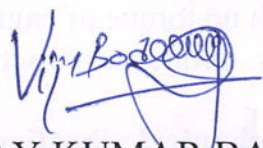

User's manual is not provided during the test. However, the same must be brought out in Hindi & other regional languages as per IS 8132:1999 (Reaffirmed 2004) for the guidance of users.

The following literature should be provided.

- i) Service manual
- ii) Parts catalogue

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TESTING AUTHORITY

 Er. PRAMOD YADAV AGRICULTURAL ENGINEER	 Er. VIJAY KUMAR BADAYA SENIOR AGRICULTURAL ENGINEER
 Dr. B.M. NANDEDE DIRECTOR	



19. APPLICANT COMMENTS

Sl. No.	Para No.	Comments
1	18.1.2 & 18.1.4	We will inform it to our manufacturer for making necessary possible changes in the future machine.
2	18.2	We will insist strongly to the manufacturer to put some vibration dampeners.
3	18.3	We will make some changes in blade material to meet the requirements of IS 6690:1981 (Reaffirmed 2022).
4	18.4	Your suggestion is noted, we will modify the labeling plate of machine as per your recommendations.
5	18.5	We will brought out the literature as per IS 8132:1999 (Reaffirmed 2004).