



S RAJA R-101 POWER WEEDER



भारत सरकार

Government of India

कृषि एवं किसान कल्याण मंत्रालय

Ministry of Agriculture and Farmers Welfare

कृषि, सहकारिता एवं किसान कल्याण विभाग

Department of Agriculture, Cooperation 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]

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Machine- 367/1188	S RAJA R-101 POWER WEEDER	COMMERCIAL (ICT)
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Manufacturer : M/s. Chongqing Hongmei
Technology Co. Ltd., 9, Huzhu
Village, Baqiao Town, Chongqing,
China.

Applicant : M/s. Raja Enterprises,
Dr. Saron Wali Gali, Mandi
Ahmedgarh, Dist., Sangrur - 148 021,
Punjab, **India.**

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Report No. : Machine-367/1188 Month: August

Year: 2020



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17. COMMENTS & RECOMMENDATIONS

17.1 Engine performance:

- 17.1.1 The maximum power and rated power were observed as 4.1 kW under natural ambient condition against the declared value of 4.0 kW.
- 17.1.2 Specific fuel consumption of engine corresponding to maximum power was recorded as 246 g/kWh against the declared value of 290 g/kWh.
- 17.1.3 Max. Torque was observed as 14.0 Nm against the declared value of 12.72 Nm.
- 17.1.4 Back up torque of engine was observed as 7.12 % against the declared value of 10 %.
- 17.1.5 **During varying speed test of engine at both natural & high ambient conditions after attaining max. torque at 14.0 Nm & 13.5 Nm respectively, while further loading, sudden drop of engine rpm was observed.**
- 17.2 Max. Noise at operator's ear level was observed as 89 dB (A).
- 17.3 The amplitude of mechanical vibration on most of the assemblies of the Power Weeder was observed up to the maximum extent of 420 microns, Which is directly concerned with Operator's Health, Safety and Comfort. Besides, it also adversely affect the useful life of the components. In view of the above, this should be taken care for corrective action.
- 17.4 The hardness of rotary blades conforms to the requirement of IS 6690:1981 (Reaffirmed 2012).
- 17.5 Only silicon content of the chemical composition of rotary blade is not conforming the requirement of IS 6690:1981. This should be looked into for corrective action.
- 17.6 The provided labeling plate should be as per the requirement IS.



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17.7 Technical literature:

Owner's manual/service manual and parts catalogue of power weeder and engine in separate booklets were supplied with the test sample for reference during the test. It is however, recommended that same June be revised and bought out in Hindi & other regional languages as per IS 8132:1999 (Reaffirmed 2004) for the sake of user & technical personnel.

TESTING AUTHORITY:

B.N. DIXIT AGRICULTURAL ENGINEER	
Dr. P.P. RAO DIRECTOR	

18. APPLICANT'S COMMENTS

Para No.	Our reference	Applicant's comments
18.1	17.1.5	We will inform to our principle supplier to make modifications as per your suggestions
18.2	17.3	We will search for the possibilities to reduce the mechanical vibration of the machine
18.3	17.5	As per your suggestion, we will make changes in blade material
18.4	17.6	We will search for the possibilities
18.5	17.7	We will follow your suggestions, as per the possibility we will brought out the literature

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