

व्यावसायिक परीक्षण रिपोर्ट (प्रारंभिक)  
COMMERCIAL TEST REPORT  
(INITIAL)

संख्याNo: Machine-382/1210  
माहMonth: October, 2020  
Validity: 30.09.2025



**SURANJAN AGENCIES SAT- 105 D 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]**

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

E-mail: [fmti-sr@nic.in](mailto:fmti-sr@nic.in)

Tele./FAX: 08551-286441

<b>Machine- 382/1210</b>	<b>SURANJAN AGENCIES SAT- 105 D POWER WEEDER</b>	<b>COMMERCIAL (ICT)</b>
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Manufacturer : M/s. Chongqing Hongmei Technology Co. Ltd., No. 9, Huzhu Village, Bagiao Town, Dadukou District, Chongqing- 400 084, **China**

Applicant : M/s. Suranjan Agencies, H. No. 7994/40 (West), Beside Vitthal Plaza, Adityanagari, Tendulkar Estate, Bhakti Construction Road, Beed- 431 122, Maharashtra, India

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## 17. COMMENTS & RECOMMENDATIONS

### 17.1/ Engine Performance:



- 17.1.1 The maximum power and rated power were observed 4.4 & 2.4 kW under natural ambient condition against the declared value of 4.4 kW respectively.
- 17.1.2 Specific fuel consumption of engine corresponding to maximum power was recorded as 334 g/kWh against the declared value of 300 g/kWh. This should be looked into for corrective action.
- 17.1.3 Max. Torque was observed as 15.00 Nm against the declared value of 18.00 Nm. This should be looked into for corrective action.
- 17.1.4 Back up torque of engine was observed as 3.23 %, against the declared value of 10 %. This should be looked into for corrective action.
- 17.1.5 **During varying speed test of engine at both natural & high ambient conditions after attaining max. torque at 15.00 Nm & 14.53 Nm respectively, while further loading, sudden drop of engine speed and thick black smoke was noticed.**
- 17.2 Max. Noise at operator's ear level was observed as 96 dB (A), which is higher than the limit specified by the ILO. Therefore, this should be looked into for corrective action
- 17.3 The amplitude of mechanical vibration on most of the assemblies of the Power Weeder was observed up to the maximum extent of 333 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 is not conforming to the requirement of IS 6690:1981 (Reaffirmed 2012). This should be looked into for corrective action.
- 17.5 Chemical composition of rotary blade is not as per 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:**

Operational manual and parts catalogue of power weeder and engine in a separate booklets were supplied with the test sample for reference during the test. It is however, recommended that same may be revised and brought 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**

"As per your suggestions, we will make all possible necessary changes in our future products".