



**SUN-MAX SMRT 6000P 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://srfmmtti.dacnet.nic.in/>

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

Tele./FAX: 08551-286441

<b>Machine-357/1177</b>	<b>SUN-MAX SMRT 6000P POWER WEEDER</b>	<b>COMMERCIAL (ICT)</b>
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Manufacturer : M/s. Chongqing Weima Agricultural Machinery Co. Ltd., 3#, Yuxang Road, Area B, Lhohuang Industry Zone, Jianjin Dist., Chongqing, **China - 40228.**

Applicant : M/s. Suntec Agri Equipments India Pvt. Ltd., # 50/A, Main Road, New Timber Yard Layout, Mysore Road, Bangalore – 560 026, Karnataka, **India.**

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Report No. : Machine-357/1177      Month: July      Year: 2020



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Clearance between valve  
guide and valve stem  
(mm)

- Intake valve : 0.06
- Exhaust valve : 0.07

**16.2 Clutch** : Not applicable

**16.3 Transmission gears:**

All the Gears and sprockets 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 working condition.

## 17. COMMENTS & RECOMMENDATIONS

**17.1 Engine performance:**

17.1.1 The maximum power and rated power were observed as 3.1 & 2.6 kW under natural ambient condition against the declared value of 3.8 kW respectively.

17.1.2 Specific fuel consumption of engine corresponding to maximum power was recorded as 487 g/kWh against the declared value of 395 g/kWh. This should be looked into for corrective action.

17.1.3 Max. Torque was observed as 8.64 Nm against the declared value of 12.0 Nm.

17.1.4 Back up torque of engine was observed as 5.75 % 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 8.64 Nm & 8.17 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 330 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.

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- 17.4 The hardness of rotary blades does not conform to the requirement of IS 6690:1981 (Reaffirmed 2012). This should be looked into for corrective action.
- 17.5 Chemical composition of rotary blades does not conform to the requirement of IS 6690:1981. This should be looked in to for corrective action.
- 17.6 The provided labeling plate should be as per the requirement IS.
- 17.7 **Technical literature:**  
User's manual cum parts catalogue of power weeder and engine in separate booklet was supplied with the test sample for reference during the test. It is however, recommended that same may 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	17.1.2 & 17.1.5	We will inform it to our manufacturer for making necessary possible changes in the machine
18.2	17.3	We will insist strongly to the manufacturer to put some vibration dampeners
18.3	17.4 & 17.5	We will make some changes in blade material to meet the requirements
18.4	17.6	We will try to implement the same
18.5	17.7	We will search for the possibilities