



SUN-MAX SMRT 9000D 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

Tele./FAX: 08551-286441

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| Machine-358/1178 | SUN-MAX SMRT 9000D POWER WEEDER | COMMERCIAL (ICT) |
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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-358/1178 Month: July

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 6.9 kW under natural ambient condition against the declared value of 5.8 kW respectively.
- 17.1.2 Specific fuel consumption of engine corresponding to maximum power was recorded as 338 g/kWh against the declared value of 280 g/kWh.
- 17.1.3 Max. Torque was observed as 19.22 Nm against the declared value of 18.0 Nm.
- 17.1.4 Back up torque of engine was observed as 5.14 %, 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 19.22 Nm & 18.75 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 442 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 does not conform to the requirement of IS 6690:1981 (Reaffirmed 2012). This should be taken care for corrective action.
- 17.5 Chemical composition of rotary blade does not conform 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:

The user manual cum parts catalogue of power weeder and engine in separate booklets was 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:

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| 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 |