



**KIRLOSKAR KMW-MinT5P 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 (आ. प्र.)

Tractor Nagar, Garladinne-515 731, District: Anantapur (A.P.)

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<b>Machine- 366/1187</b>	<b>KIRLOSKAR KMW-MinT5P POWER WEEDER</b>	<b>COMMERCIAL (ICT)</b>
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Manufacturer : Address 1<sup>st</sup> Unit: KMW Kirloskar Oil Engines Ltd., Plot No. E-18, Opp. M/s. Suktas India Ltd., 5 Star MIDC, Kagal-Hatkanangale Industrial Area, Kolhapur - 416 202, Maharashtra, India.

Address 2: Kirloskar Oil Engines Ltd., Plot No. 10/A, Gate No. -458, A/P-Bhare, Tal. Mulashi, Dist. Pune - 412 115, Maharashtra, India.

Applicant : M/s. Kirloskar Oil Engines Ltd. (KOEL), Laxmanrao Kirloskar Road, Khadki, Pune - 411 003, Maharashtra, **India**.

Kirloskar KMW-MinT5P Power Weeder

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Report No. : Machine-366/1187      Month: August      Year: 2020



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## 17. COMMENTS & RECOMMENDATIONS

### 17.1 Engine performance:

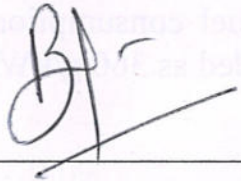

- 17.1.1 The maximum power and rated power were observed as 3.6 & 1.3 kW respectively under natural ambient condition against the declared value of 3.45 kW respectively.
- 17.1.2 Specific fuel consumption of engine corresponding to maximum power was recorded as 360 g/kWh against the declared value of 395 g/kWh.
- 17.1.3 Max. Torque was observed as 10.30 Nm against the declared value of 9.5 Nm.
- 17.1.4 Back up torque of engine was observed as 5.10 % .
- 17.1.5 **During varying speed test of engine at both natural & high ambient conditions after attaining max. torque at 10.30 Nm & 9.80 Nm respectively, while further loading, sudden drop of engine rpm was observed.**
- 17.2 Max. Noise at operator's ear level was observed as 92 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 292 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 Except the carbon, all the contents of the chemical composition of rotary blade conforms to 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:

Operator's manual cum parts catalogue of power weeder and engine in a single 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	17.1.1	We will take corrective action on observed rated power improvement
18.2	17.1.4	We will take corrective action on observed backup torque improvement
18.3	17.1.5	We are declaring max. torque 9.5 Nm as per application and will work on observed sudden drop of engine rpm
18.4	17.2	We will take corrective action on noise reduction at operator's ear level as per the observation
18.5	17.3	We will take corrective actions on amplitude of mechanical vibration reduction as per the observation
18.6	17.5	We will take corrective action to improvement the chemical composition as per IS requirement