



KIRLOSKAR KMW-MinT 8 DLX 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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Machine- 365/1186	KIRLOSKAR KMW-MinT 8 DLX POWER WEEDER	COMMERCIAL (ICT)
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Manufacturer (apa) : M/s. Kirloskar Oil Engines Ltd. (KOEL),
Uni-KMW, Plot No. E-18, Opp.-M/s. Suktas
India, Star MIDC, Kagal-Hatkanangale
Industrial Area, Kolhapur - 416 202,
Maharashtra, **India**.

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

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Report No. : Machine-365/1186

Month: July

Year: 2020



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Valve, guides and timing gears:	Observation
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Any marked sign of overheating of valves	:	None
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Pitting of seat/faces of valves	:	None
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Any visual damage to the teeth of timing gears	:	None
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Clearance between valve guide and valve stem (mm)	:	
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- Intake valve	:	0.09
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- Exhaust valve	:	0.09
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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 and rated power were observed as 5.9 kW respectively under natural ambient condition against the declared value of 5.9 & 5.7 kW respectively.

17.1.2 Specific fuel consumption of engine corresponding to maximum power was recorded as 289 g/kWh against the declared value of 290 g/kWh.

17.1.3 Max. Torque was observed as 20.39 Nm against the declared value of 22 Nm.

17.1.4 Back up torque of engine was observed as 8.75 %, against the declared value of 11%.



17.2 Max. Noise at operator's ear level was observed as 97 dB (A), which is on higher side as per 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 to the maximum extent of 397 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 conforms to the requirement of IS 6690:1981 (Reaffirmed 2012).
- 17.5 All the constituents of chemical composition except silicon content of rotary blades conforms to the requirement of IS 6690:1981 (reaffirmed 2012). Therefore, this should be looked into for corrective action.
- 17.6 The provided labeling plate should be as per the requirement IS.
- 17.7 **Technical literature:**
Operator manual cum parts catalogue of power weeder and engine in 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 accept the max power is at higher side than the declared value
18.2	17.1.2	We accept the Specific fuel consumption of engine corresponding to maximum power was lesser against the declared value it will be beneficial to farmers.
18.3	17.1.3	We will take corrective action on observed Max torque.
18.4	17.1.4	We will take corrective action on observed Backup torque improvement .
18.5	17.2	We will take corrective actions on Max. Noise at operator's ear level as per the observation.
18.6	17.3	We will take corrective actions on amplitude of mechanical vibration as per the observation.