



KAVI HT-171 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

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Machine-322/1095	KAVI HT-171 D POWER WEEDER	COMMERCIAL (ICT)
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Manufacturer : M/s. Chongqing Wanggeng Machinery Co.
Ltd., Silong Village, Huilongba Town,
Shapingba District, Chongqing City, **China**

Applicant : M/s. Kavi Agro Agency,
164, Kumaran Road, Sangiliyandapuram
Main Road, Trichy-620001, Tamil Nadu,
India

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Report No. : Machine-322/1095 Month: November

Year: 2019



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17. COMMENTS & RECOMMENDATIONS

17.1 Engine Performance:

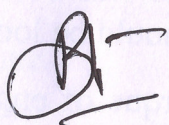
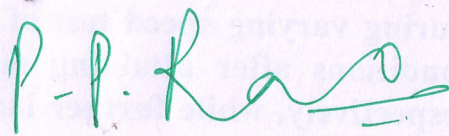
- 17.1.1 The maximum power and rated power were observed as 3.7 kW under natural ambient condition against the declared value of 4.0 kW.
- 17.1.2 Specific fuel consumption of engine corresponding to maximum power was recorded as 262 g/kWh against the declared value of 300 g/kWh.
- 17.1.3 Max. Torque was observed as 11.9 Nm against the declared value of 18 Nm. This should be looked into for corrective action.
- 17.1.4 Back up torque of engine was observed as 4.39 %, 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 11.90 Nm & 10.74 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 94 dB (A), which is higher as per ILO. Therefore corrective action to reduce the noise should also be taken.
- 17.3 The amplitude of mechanical vibration on most of the assemblies of the Power Weeder was observed to the maximum extent of 460 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 looked into for corrective action.
- 17.5 Chemical composition of rotor blades does not conform to the requirement of IS 6690:1981 (reaffirmed 2012). This should be looked into for corrective action.
- 17.6 Labeling plate provided should be as per the requirement of IS.

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17.7 Technical literature:

The Operation manual cum parts catalogue of power weeder and engine were 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	17.1.3	The suggestion is noted and we will tell to our principal manufacturer to improve it.
18.2	17.1.4	The suggestion is noted and we will tell to our principal manufacturer to improve it.
18.3	17.1.5	The suggestion is noted and we will tell to our principal manufacturer to improve it.
18.4	17.2	We will take corrective action to reduce the noise level of the machine
18.5	17.3	We will take corrective action to reduce the mechanical vibration of the machine
18.6	17.4	We will make all possible necessary changes in blade material to confirm the hardness of blades.
18.7	17.5	We will make all possible necessary changes in blade material to confirm the chemical composition of blades.
18.8	17.6	we will provide the labeling plate as per your recommendations
18.9	17.7	We will make all possible necessary changes in literature as per your recommendation.