

व्यावसायिक परीक्षण रिपोर्ट (प्रारंभिक)  
COMMERCIAL TEST REPORT  
(INITIAL)

संख्या /No: Machine-419/1252  
माह:/Month: February, 2021  
Validity: 31.01.2026



**FORTUNEAGRO FAI 105 SHAKTHI 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.)**

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<b>Machine-419/1252</b>	<b>FORTUNEAGRO FAI 105 SHAKTHI POWER WEEDER</b>	<b>COMMERCIAL (ICT)</b>
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Manufacturer : M/s. Fortune Agro Impex,  
Fortune House, #343, 9<sup>th</sup> block,  
Sir M. Visvesvaraya Layout, Kengunte  
1<sup>st</sup> Main Road, Bangalore-560 056,  
Karnataka, India.

Applicant : The Manufacturer

**FORTUNEAGRO FAI 105 SHAKTHI POWER WEEDER**

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## 17. COMMENTS & RECOMMENDATIONS

### 17.1 Engine Performance:

17.1.1 The maximum power and rated power were observed 4.5 kW under natural ambient condition against the declared value of 4.4 kW.

17.1.2 Specific fuel consumption of engine corresponding to maximum power was recorded as 390 g/kWh against the declared value of 330 g/kWh. This should be looked into for corrective action.

17.1.3 Max. Torque was observed as 12.89 Nm against the declared value of 12.0 Nm.

17.1.4 The lubricating oil consumption is on higher side against requirement of 1% of SFC during high ambient condition. This should be looked into for corrective action.

17.1.5 Back up torque of engine was observed as 1.82 %, against the declared value of 10 %. This should be looked into for corrective action.

17.1.6 **During varying speed test of engine at both natural & high ambient conditions after attaining max. torque at 12.89 Nm & 11.95 Nm respectively, while further loading, sudden drop of engine speed and thick black smoke was noticed.**




17.2 Max. Noise level at operator's ear level & by-stander's position was observed as 90 & 79 dB (A) respectively, The noise observed at operator's ear level is more than the limit specified by IS 12239 (Part 3) : 1998. The sound pressure level is directly influencing the operator's health, safety and comfort; and therefore this should be looked into for corrective action.

17.3 The amplitude of mechanical vibration on most of controls/ measuring points of the power reaper exceeds the limit of 100 micron. Therefore necessary action to reduce vibration should be taken.

17.4 The hardness of rotary blades conforms to the requirement of IS 6690:1981 (Reaffirmed 2012).

- 17.5 The chemical composition of rotary blades conforms to the requirement of IS 6690:1981 (Reaffirmed 2012).
- 17.6 The provided labeling plate should be as per the requirement IS.
- 17.7 **Technical literature:**  
User/Operator and service manual & parts catalogue of Power Weeder & engine in separate booklets in English were 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:**

B.N. DIXIT AGRICULTURAL ENGINEER	
P.C. MESHARAM SENIOR AGRICULTURAL ENGINEER	
Dr. P.P. RAO DIRECTOR	

**18. APPLICANTS COMMENTS**

We will inform to the production unit to take care the corrective actions before dispatching the material from the factory to the sales unit.