

व्यावसायिक परीक्षण रिपोर्ट (प्रारंभिक)

COMMERCIAL TEST REPORT(INITIAL)

संख्या/No:ICE/SRFMTTI,

ANANTAPUR/2025-26/02/02/1857

माह/Month:April, 2025

THIS TEST REPORT IS VALID UPTO 31.03.2032



**KIRLOSKAR OIL ENGINES LTD., MIN T9D POWER WEEDER**



भारत सरकार

Government of India

कृषि एवं किसान कल्याण मंत्रालय

Ministry of Agriculture and Farmers Welfare

कृषि एवं किसान कल्याण विभाग

Department of Agriculture 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](mailto:fmti-sr@nic.in)

|  |  |                     |
|--|--|---------------------|
| ICE/SRFMTTI,<br>ANANTAPUR/2025-26/<br>02/02/1857 | KIRLOSKAR OIL ENGINES LTD.,<br>MIN T9D POWER WEEDER<br>THIS TEST REPORT IS VALID UP TO<br>31.03.2032 | COMMERCIAL<br>(ICT) |
|--|--|---------------------|

Manufacturer, (apa)

: M/s. Champ Energy Ventures Pvt. Ltd,  
Plot No. 7, Gate No. 399/1/2/3/B,  
Village Bhare, Tal. Mulshi, Distt. Pune  
412115, Maharashtra, India.

Applicant

: M/s. Kirloskar Oil Engines Limited,  
Laxmanrao Kirloskar Road, Khadki,  
Pune-411003, Maharashtra, India.

### KIRLOSKAR OIL ENGINES LTD., MIN T9D POWER WEEDER

Report no.: ICE/SRFMTTI, ANANTAPUR/2025-26/02/02/1857

Month: April

Year: 2025



सत्यमेव जयते

**Government of India**  
**Ministry of Agriculture and Farmers Welfare**  
**Department of Agriculture and Farmers Welfare**  
**Southern Region Farm Machinery Training and Testing Institute**  
**Tractor Nagar, Garladinne-515 731, District: Anantapur (A.P.)**  
**[An ISO 9001:2015 CERTIFIED INSTITUTE]**

Website: <http://srfmtti.dacnet.nic.in/>

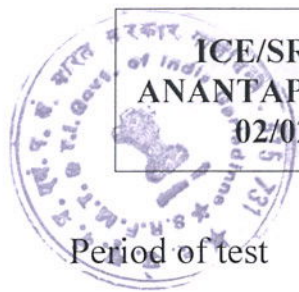
E-mail: [fmti-sr@nic.in](mailto:fmti-sr@nic.in)

Type of test

: COMMERCIAL (ICT)

**SOUTHERN REGION FARM MACHINERY TRAINING &  
TESTING INSTITUTE, ANANTAPUR (A.P.)**

Page 2 of 32



ICE/SRFMTTI,  
ANANTAPUR/2025-26/  
02/02/1857

KIRLOSKAR OIL ENGINES LTD.,  
MIN T9D POWER WEEDER  
THIS TEST REPORT IS VALID UP TO  
31.03.2032

COMMERCIAL  
(ICT)

Period of test

: March, 2025 to April, 2025

Test Report No.

: ICE/SRFMTTI, ANANTAPUR/2025-26/02/02/1857

Month / Year of release

: April, 2025

- i) The results reported in this report are observed values and no corrections have been applied for atmospheric and site conditions.
- ii) The data given in this report pertain to the particular machine randomly selected by testing authority.
- iii) The results presented in this report do not, in any way, attribute to the durability of the machine.
- iv) This Test Report should not be reproduced in part or full without prior permission of the Director, Southern Region Farm Machinery Training & Testing Institute, Garladinne, Anantapur (A.P.).
- v) This is a report on Commercial Test of Power Weeder named **"KIRLOSKAR OIL ENGINES LTD., MIN T9D POWER WEEDER"**. This report is valid up to **31.03.2032**, Vide Ministry's O.M. No. 13-22/2020-M&T (I&P) dated 12.12.2023.

#### SELECTED CONVERSIONS

| S. No. | Units                 | Conversion Factor              |
|--------|-----------------------|--------------------------------|
| 1      | <b>Force</b>          |                                |
|        | 1 kgf                 | 9.80665 N                      |
|        |                       | 2.20462 lbf                    |
| 2      | <b>Power</b>          |                                |
|        | 1 hp                  | 1.01387 metric hp (Ps)         |
|        |                       | 745.7 W                        |
|        | 1 Ps                  | 735.5 W                        |
|        | 1 kW                  | 1.35962 Ps                     |
| 3      | <b>Pressure</b>       |                                |
|        | 1 psi                 | 6.895 kPa                      |
|        | 1 kgf/cm <sup>2</sup> | 98.067 kPa = 735.56 mm of Hg   |
|        | 1 bar                 | 100 kPa = 10 N/cm <sup>2</sup> |
|        | 1 mm of Hg            | 1.3332 m-bar                   |

|  |  |                     |
|--|--|---------------------|
| ICE/SRFMTTI,<br>ANANTAPUR/2025-26/<br>02/02/1857 | KIRLOSKAR OIL ENGINES LTD.,<br>MIN T9D POWER WEEDER<br>THIS TEST REPORT IS VALID UP TO<br>31.03.2032 | COMMERCIAL<br>(ICT) |
|--|--|---------------------|

## 18. COMMENTS & RECOMMENDATIONS

### 18.1 Engine Performance:

- 18.1.1 The maximum and rated power was observed as 6.18 kW under natural ambient condition against the declared value of 6.18 kW.
- 18.1.2 Specific fuel consumption of engine corresponding to maximum power was recorded as 299 g/kWh against the declared value of 300 g/kWh.
- 18.1.3 Back up torque of engine was observed as 9.93% against declared value of 10%.
- 18.1.4 Max. torque was observed as 18.04 Nm against the declared value of 18.0 Nm.

### 18.2 Mechanical vibration:

The amplitude of mechanical vibration on various assemblies of the Power weeder was observed to the extent of 331 micron, which is on higher side. In view of the above, this should be given top priority for corrective action.

### 18.3 Chemical analysis:

The Chemical composition of rotor blades does not conform to the requirement of IS 6690:1981 (Reaffirmed 2022). This should be looked into for corrective action.

### 18.4 Hardness of Blade

The hardness of rotor blades does not conform to the requirement of as per IS6690:1981 (Reaffirmed 2012). This should be looked into for corrective action.

### 18.5 Technical literature:

User's manual, Service Manual and parts catalogue provided in booklet form for reference during the test. It is recommended that same must be revised brought out in Hindi & other regional languages as per IS 8132:1999 (Reaffirmed 2004) for the sake of user & technical personnel in booklet form.

