

**THIS TEST REPORT IS VALID UP TO 31.07.2031**



**STARMATES, PW-02 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]

Machine- 639/1700	STARMATES, PW-02 POWER WEEDER	COMMERCIAL (ICT)
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Manufacturer, (apa) : M/s. Chongqing Dazu District Yili Industry & Co. Ltd., Longshui Town Industry, Dazu District, Chongqing, **China**.

Applicant : M/s. STAR ASSOCIATED TRADERS,  
Star house, No. 52, ABT Road, (Market Road- ABT Road JN), Pollachi-642001, Tamilnadu  
Factory: 55/1D1, Kakkadavu (PO), Kinathukkadavu (TK), Coimbatore District, Tamilnadu.

**STARMATES, PW-02 POWER WEEDER**

Report no.: **Machine-639/1700**

Month: **August**

Year: **2024**

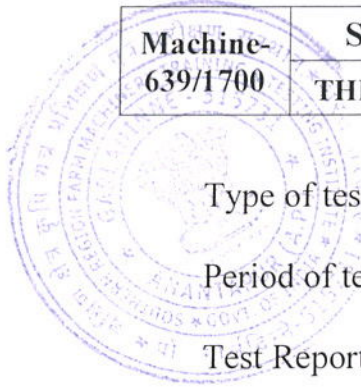


सत्यमेव जयते

**Government of India  
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Machine-639/1700	STARMATES, PW-02 POWER WEEDER	COMMERCIAL (ICT)
	THIS TEST REPORT IS VALID UP TO 31.07.2031	

Type of test : COMMERCIAL (ICT)  
Period of test : June, 2024 to July, 2024  
Test Report No. : Machine-639/1700  
Month / Year of release : August, 2024

- 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 anyway, 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 "STARMATES, PW-02 POWER WEEDER". This report is valid up to 31.07.2031, 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

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## 18. COMMENTS & RECOMMENDATIONS

### 18.1 Engine Performance:

- 18.1.1 The maximum power was observed as 5.21 kW under natural ambient condition against the declared value of 5.2 kW.
- 18.1.2 Specific fuel consumption of engine corresponding to maximum power was recorded as 468 g/kWh against the declared value of 485 g/kWh.
- 18.1.3 Back up torque of engine was observed as 8.49 % against declared value of 10 %.
- 18.1.4 Max. torque was observed as 14.94 Nm against the declared value of 18 Nm.

### 18.2 Mechanical vibration:

The amplitude of mechanical vibration on various assemblies of the Power weeder was observed to the extent of 577 micron, which is on higher side. In view of the above, this should be given top priority for corrective action.

### 18.3 Marking/labeling:

The labeling plate does not reveal all the required information. It is therefore recommended that a suitable labeling plate covering all essential components, inter alia, the following must be provided:

- i) Country of origin
- ii) Address of manufacturer
- iii) Size of machine
- iv) Specific fuel consumption (g/kWh).

### 18.4 Technical literature:




User's manual is not provided during the test. However, the same must be brought out in Hindi & other regional languages as per IS 8132:1999 (Reaffirmed 2004) for the guidance of users.

The following literature should be provided.

- i) Service manual
- ii) Parts catalogue

Machine- 639/1700	STARMATES, PW-02 POWER WEEDER	COMMERCIAL (ICT)
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**TESTING AUTHORITY**

Er. PRAMOD YADAV AGRICULTURAL ENGINEER	
Dr. B.M. NANDEDE DIRECTOR	 

**19. APPLICANT COMMENTS**

Para. No	Comments
18.2	We will take corrective actions to damper the mechanical vibration in future production.
18.3	We will provide all the parameters required to be mentioned in the labeling plate as per IS 10273:1987.
18.4	Owners/operators/service/parts catalogue manual brought out in Hindi and other language as per IS: 8132- 1999 (Reaffirmed 2004) inclusive of fuel saving tips in future products.