

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



**SHIVA AGRO, SAE PW-101 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- 633/1694	SHIVA AGRO, SAE PW-101 POWER WEEDER	COMMERCIAL (ICT)
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Manufacturer, (apa) : M/s. Hangzhou joins imp & Exp Co., LTD,  
Room 809, No-1451, Binxing, Changhe street,  
Binjiang, District Hangzhou ,310052 Zhejiang  
province, **China**.

Applicant : M/s. Shiva Irrigation System  
SY No 121/7, Mudigere, Kasara Hobli Taluk,  
Tumkur-572216.

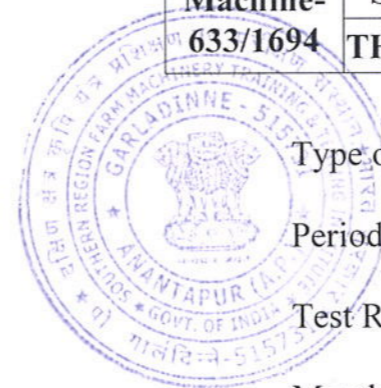


**SHIVA AGRO, SAE PW-101 POWER WEEDER**

Report no.: **Machine-633/1694**      Month: **August**      Year: **2024**



सत्यमेव जयते



Machine-633/1694	SHIVA AGRO, SAE PW-101 POWER WEEDER	COMMERCIAL (ICT)
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Type of test : COMMERCIAL (ICT)  
Period of test : July, 2024 to August, 2024.  
Test Report No. : **Machine-633/1694**  
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 "SHIVA AGRO, SAE PW-101 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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1	2	3	4	5
21	Provision for easy start of engine	Must be provided	Not provided	<b>Does not Conform</b>
22	Provision for shield/cover to prevent flying of mud and stone from rotor	Must be provided	Provided	Conforms
23	Depth control mechanism	Must be provided	Provided	Conforms
24	Provision for transport wheels	Must be provided	Provided	Conforms
25	Provision for cover on exhaust	Must be provided	Provided	Conforms
26	Direction of exhaust emission away from operator	Must be provided	Provided	Conforms
27	Marking/labeling of machine	The labeling plate should be riveted on the body of the machine having name and address of manufacturer & applicant, country of origin, make, model, year of manufacturer, serial number, engine number, engine HP, rated rpm & SFC	<b>Name of the machine, Address of the manufacturer, Country of origin, engine HP are not provided</b>	<b>Does not conform</b>
28	Literature	Operator manual, service manual and parts catalogue should be provided	Provided	Conforms

### 18. COMMENTS & RECOMMENDATIONS

#### 18.1 Engine Performance:

- 18.1.1 The maximum power was observed as 3.26 kW under natural ambient condition against the declared value of 3.7 kW.
- 18.1.2 Specific fuel consumption of engine corresponding to maximum power was recorded as 560 g/kWh against the declared value of 345 g/kWh.
- 18.1.3 Back up torque of engine was observed as 15.78 % against declared value of 12 %.
- 18.1.4 Max. torque was observed as 10.27 Nm against the declared value of 12.73 Nm.

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**18.2 Mechanical vibration:**

The amplitude of mechanical vibration on various assemblies of the Power weeder was observed to the extent of 501 micron, which is on higher side. In view of the above, this should be given top priority for corrective action.

**18.3 Hardness & chemical:**




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

**18.4 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) Name of the machine
- ii) Address of the manufacturer
- iii) Country of origin
- iv) Engine hp

**TESTING AUTHORITY**

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

**19. APPLICANT COMMENTS**

Para. No	Comments
18.2	We will work on to reduce the vibration of the machine.
18.3	We will inform to supplier to work on blade to improve the hardness as per requirement of IS 6690:1981 (Reaffirmed 2022)
18.4	We will provide the Operator's manual cum parts catalogue of weeder as per IS: 8132- 1999 (Reaffirmed 2004) in future products.