

**THIS TEST REPORT IS VALID UPTO31.05.2031**



**INAV AGROMECH PVT LTD, e-ZebU-3W-1200-MK-II  
RIDE ON SELF PROPELLED TOOL BAR**



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 9001:2015CERTIFIEDINSTITUTE]**

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

Machine- 577/1632	INAV AGRO MECH PVT LTD, e-ZebU-3W-1200-MK- II RIDE ON SELF PROPELLED TOOL BAR	COMMERCIAL (ICT)
	THIS TEST REPORT IS VALID UP TO 31.05.2031	

Manufacturer, (apa) : M/S. Inav Agro Mech Pvt. Ltd.,  
3-149/6-F1, Venkateshwara Nilayam,  
Mallikarjuna Nagar, Peerzadiguda, Beside  
Ravindra Bharthi School, Medchal Malkajgiri,  
Telangala-500092, India.

Applicant : The Manufacturer.

**INAV AGRO MECH PVT LTD, e-ZebU-3W-1200-MK-II  
RIDE ON SELF PROPELLED TOOL BAR**

Report no.: Machine-577/1632

Month: June

Year: 2024



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]**

Telephone: 08551-286441

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

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

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

Page 2 of 30

Machine-577/1632	INAV AGRO MECH PVT LTD, e-ZebU-3W-1200-MK-II RIDE ON SELF PROPELLED TOOL BAR	COMMERCIAL (ICT)
	THIS TEST REPORT IS VALID UP TO 31.05.2031	

Type of test : COMMERCIAL (ICT)  
 Period of test : April, 2024 to May, 2024  
 Test Report No. : Machine-577/1632  
 Month / Year of release : June, 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 Tool Bar named "INAV AGRO MECH PVT LTD, e-ZebU-3W-1200-MK-II RIDE ON SELF PROPELLED TOOL BAR". This report is valid up to 31.05.2031, 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

Machine- 577/1632	INAV AGRO MECH PVT LTD, e-ZebU-3W-1200-MK- II RIDE ON SELF PROPELLED TOOL BAR	COMMERCIAL (ICT)
	THIS TEST REPORT IS VALID UP TO 31.05.2031	

## 16. COMPONENTS / ASSEMBLY INSPECTION

### 16.1 Wear Analysis of Flail Mower blades:

Sl.No.	Initial mass, (g)	Final mass, (g)	Loss of, (g)	Percentage of wear	
				After 12.75 h	Per hour
1	397.6	391.6	6.00	1.50	0.117
2	403.1	395.0	8.10	2.00	0.156
3	393.5	387.9	5.60	1.42	0.111
4	399.0	392.5	6.50	1.62	0.127
5	396.5	389.1	7.40	1.86	0.145
6	402.7	398.3	4.40	1.09	0.085
7	397.0	393.3	3.70	0.93	0.072
8	401.9	396.4	5.50	1.36	0.106

### 16.2 Wear Analysis of Cultivator shovel:

Sl.No.	Initial mass, (g)	Final mass, (g)	Loss of, (g)	Percentage of wear	
				After 13.00 h	Per hour
1	1215.0	1209.2	5.80	0.477	0.036
2	1204.5	1199.7	4.80	0.398	0.030
3	1213.6	1208.4	5.20	0.428	0.032

### 16.3 Transmission gears:

All the gears of the transmission system were found in normal working condition.

### 16.4 Rotary drive unit:

The rotary drive unit was dismantled and all the components were found in normal working condition.

## 17. COMMENTS & RECOMMENDATIONS

### 17.1 Mechanical vibration:

The amplitude of mechanical vibration on various assemblies of the weeder was observed to the extent of 321 micron, which is on higher side. In view of the above, this should be given top priority for corrective action.

17.2 The chemical composition of Flail Mower blades and Cultivator shovel does not conform, to the requirements of IS: 6690-1981. This needs to be looked into for corrective action.

Machine- 577/1632	INAV AGRO MECH PVT LTD, e-ZebU-3W-1200-MK- II RIDE ON SELF PROPELLED TOOL BAR	COMMERCIAL (ICT)
	THIS TEST REPORT IS VALID UP TO 31.05.2031	




17.3 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) Address of manufacturer
- ii) Country of origin
- iii) Make

17.4 **Technical literature:**

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

**TESTING AUTHORITY**

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

**18. APPLICANT'S COMMENTS**

Sl. No.	Para No.	Applicants Comments
1	17.1	Care will be taken and appropriate dampeners will be introduced to reduce mechanical vibration on sub-assemblies of the weeder on priority.
2	17.2	Our vendors will be strictly instructed to maintain the Chemical Composition of blades and adhere to the requirements of IS: 6690-1981.
3	17.3	New labeling plate will be incorporated with required information.
4	17.4	Technical literature will be revised as per IS 8132:1999 (Reaffirmed 2004).

SOUTHERN REGION FARM MACHINERY TRAINING & TESTING INSTITUTE, ANANTAPUR, (A.P.)	Page 29 of 30
---	---------------