

THIS TEST REPORT IS VALID UP TO 31.08.2031



DOUBLE EAGLE, DE-212 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
ट्रेक्टरनगर, गार्लदिन्ने-515 731, जिला: अनंतपुर (आं. प्र.)
Tractor Nagar, Garladinne-515 731, District: Anantapur (A.P.)
[An ISO 9001:2015 CERTIFIED INSTITUTE]

Machine- 659/1722	DOUBLE EAGLE, DE-212 POWER WEEDER	COMMERCIAL (ICT)
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Manufacturer, (apa) : M/s. Chongqing Machinery & Equipment
IMP. & Exp. Co., LTD. No.62 Xinggang
Road., Changzhou, Jiangsu, **China.**

Applicant : M/s. Eagle Enterprises, 801/ 1-A, Kalapatti
Road, Kalapatti Post, Coimbatore -641048.

DOUBLE EAGLE, DE-212 POWER WEEDER

Report No.: **Machine-659/1722**

Month: **September**

Year: **2024**



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Ministry of Agriculture and Farmers Welfare
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Machine-
659/1722

DOUBLE EAGLE, DE-212 POWER WEEDER
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**COMMERCIAL
(ICT)**

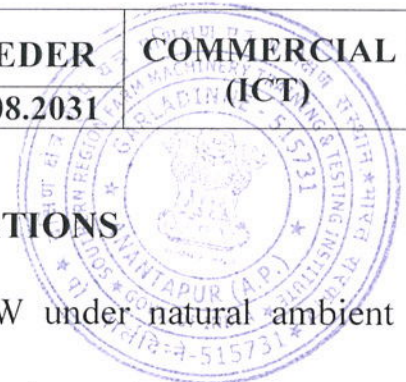
Type of test : COMMERCIAL(ICT)
Period of test : August, 2024 to September, 2024
Test Report No. : **Machine-659/1722**
Month / Year of release : September, 2024

- 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 selected randomly through virtual mode 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 **"DOUBLE EAGLE, DE-212 POWER WEEDER"**. This report is valid up to **31.08.2031**, 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	Force	
	1 kgf	9.80665 N 2.20462 lbf
2	Power	
	1 hp	1.01387 metric hp (Ps) 745.7 W
	1 Ps	735.5 W
	1 kW	1.35962 Ps
3	Pressure	
	1 psi	6.895 kPa
	1 kgf/cm ²	98.067 kPa = 735.56 mm of Hg
	1 bar	100 kPa = 10 N/cm ²
	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 3.80 kW under natural ambient condition against the declared value of 4.0 kW.
- 18.1.2 Specific fuel consumption of engine corresponding to maximum power was recorded as 434 g/kWh respectively against the declared value of 420 g/kWh.
- 18.1.3 Max. Torque was observed as 11.48 Nm against the declared value of 12.0 Nm.
- 18.1.4 Back up torque of engine was observed as 12.19% against declared value of 10%.

18.2 Mechanical vibration:

The amplitude of mechanical vibration on most of the assemblies of the Power Weeder was observed up to the maximum extent of 372 microns, which is higher than the limit specified by the ILO. Therefore, necessary action to dampen the vibration should be taken in to account.

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

18.4 Technical literature:

Instruction manual and parts catalogue of power weeder and engine in a single booklet was 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.

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TESTING AUTHORITY

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

19. APPLICANT COMMENTS

Reference No.	Comments
18.1.2 & 18.1.4	We will inform it to our manufacturer for making necessary possible changes in the machine.
18.2	We will insist strongly to the manufacturer to put some vibration dampeners.
18.3	We will take corrective action to meet the chemical composition as per IS 6690:1981
18.4	Your suggestion is noted, we will modify the labelling plate of machine as per your recommendations
18.5	We will be brought out the literature as per IS 8132:1999 (Reaffirmed 2004).