

THIS TEST REPORT IS VALID UP TO 31.05.2031



**GEORGE MAIJO, MAIJO AP 40 SELF PROPELLED
WALK BEHIND RICE TRANSPLANTER**



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

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Machine- 600/1657	GEORGE MAIJO, MAIJO AP 40 SELF PROPELLED WALK BEHIND RICE TRANSPLANTER
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Manufacturer, (apa) : M/s. Jiangsu Tongyang Machinery Co.
Ltd, 889-Jianbao, Jianhu, Jiangsu-
224700 **China.**

Applicant : M/s. George Maijo Industries Pvt. Ltd.,
2B, Apex Plaza, #5, Nungambakkam
High Road, Chennai – 600034.

**GEORGE MAIJO, MAIJO AP 40 SELF PROPELLED WALK
BEHIND RICE TRANSPLANTER**

Report No.: **Machine-600/1657**

Month: **June**

Year: **2024**



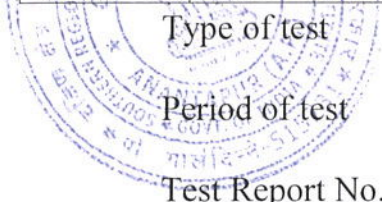
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Machine- 600/1657	GEORGE MAIJO, MAIJO AP 40 SELF PROPELLED WALK BEHIND RICE TRANSPLANTER	COMMERCIAL (ICT)
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Type of test : COMMERCIAL (ICT)
 Period of test : 08.06.2024 to 20.06.2024
 Test Report No. : **Machine-600/1657**
 Month / Year : 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 any way attribute to the durability of the machine.
- iv) This report should not be reproduced in part or full without prior permission of the Director, Southern Region Farm Machinery Training and Testing Institute, Garladinne, Anantapur (A.P.).
- v) This is a report on Commercial Test of Rice Transplanter named “**GEORGE MAIJO, MAIJO AP40 SELF PROPELLED WALK BEHIND RICE TRANSPLANTER**”. 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

Sl. 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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16. SUMMARY OF OBSERVATIONS, COMMENTS AND RECOMMENDATIONS

16.1 Engine Performance:

- 16.1.1 The maximum power was observed as 3.06 KW under natural ambient condition against the declared value of 2.70 kW.
- 16.1.2 Specific fuel consumption of engine corresponding to maximum power recorded as 446 g/kWh against the declared value of 395.8 g/kWh.
- 16.1.3 Max. torque was observed as 9.84 Nm against the declared value of 10.8 Nm.
- 16.1.4 Back up torque of engine was observed as 7.66%.

16.2 Mechanical vibration:

The amplitude of mechanical vibration on various assemblies of the transplanter was observed to the extent of 608 micron, which is on higher side. In view of the above, this should be given top priority for corrective action.

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

16.4 Field Test:




The transplanter was operated in varying field conditions for a total period of 26.0 hours for transplanting ADT-53 variety of paddy seedlings. The results are summarized as under:

- Av. forward speed of operation was observed as 2.78 to 2.92 kmph.
- Av. area covered was recorded as 0.30 to 0.250 ha/h.
- Av. depth of transplanting was recorded as 4.6 to 5.3 cm.
- The spacing between rows was recorded as 30 cm.
- Av. number of plants per hill was recorded as 8.4 to 10.6.
- Av. spacing between hills was recorded as 17.7 to 17.9 cm.
- Av. total number of hills in 5 m row length was recorded as 27.8 to 28.2.
- Av. number of hills per sq. m. was recorded as 30.
- Av. percentage of missed hills was recorded as 1.0 to 1.65.
- Av. percentage of floating seedlings was recorded as Nil to 1.65.
- Av. percentage of buried seedlings was recorded as Nil to 1.0.

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- Av. percentages of damaged seedling were recorded as Nil to 1.0.
 - The total percentage of transplanting faults was recorded as 2.0 to 3.3.
 - The consumption of nursery trays was recorded as 226 to 240 numbers per hectare.
 - The hourly fuel consumption was recorded as 0.88 to 1.00 and fuel required for planting of one hectare area was recorded as 3.83 to 4.00.
- 16.4.1** The quality of work was observed as smooth during entire transplanting operation. The overall performance of the machine was found satisfactory.
- 16.5 Components/assembly inspection:**
- 16.5.1** The transplanter and engine were dismantled after **39.67** hours of operation and wear of critical components were observed within the limits.
- 16.5.2** The main gear box, planting box, planting arm drive mechanism and bearings were dismantled after completion of field operation and found in satisfactory working condition.
- 16.6 Safety provisions:**
The machine is provided with various safety provisions while working in the field or moving on the road as mentioned in the **clause 5.10** of this test report.
- 16.7 Technical literature:**
Operator's manual, service manual and parts catalogue of Rice Transplanter and engine in separate booklet were supplied with the Rice Transplanter for reference during the test. It is however, recommended that same may be revised in Hindi and other regional languages as per IS 8132: 1999 (Reaffirmed 2004) for the sake of user & technical personnel.

TESTING AUTHORITY

 Er. PRAMOD YADAV AGRICULTURAL ENGINEER	 Er. P. KAMALABAI SENIOR AGRICULTURAL ENGINEER
 Dr. B.M. NANDEDE DIRECTOR	

