

गोपनीय परीक्षण रिपोर्ट

CONFIDENTIAL TEST REPORT

संख्या/No: Machine-686/1772

माह/Month: December, 2024



**ISEKI & CO. LTD., ISEKI AGRISTAR PZ60D
SELF PROPELLED RIDE ON 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

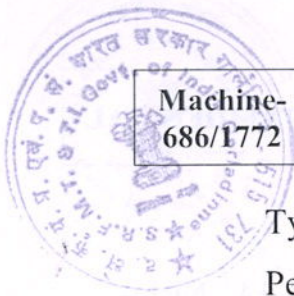
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Machine-
686/1772

ISEKI & CO. LTD., ISEKI AGRISTAR PZ60D SELF
PROPELLED RIDE ON RICE TRANSPLANTER

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Type of test : CONFIDENTIAL
Period of test : August, 2024 to November, 2024
Test Report No. : **Machine-686/1772**
Month / Year of release : December, 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 directly submitted by applicant.
- 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 Confidential Test of rice transplanter named “**ISEKI & CO. LTD., ISEKI AGRISTAR PZ60D SELF PROPELLED RIDE ON RICE TRANSPLANTER**”.

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

**17. SUMMARY OF OBSERVATIONS, COMMENTS AND
RECOMMENDATIONS****17.1 Engine performance test:**

- (i) The maximum power of the engine at 2600 rpm was observed as 14.66 kW against the declared value of 16.2 kW.
- (ii) The rated power of the engine at 2600 rpm was observed as 14.66 kW against the declared value of 15.5 kW.
- (iii) The backup torque was observed as 13.4 % in natural ambient condition
- (iv) Specific fuel consumption corresponding to max. power & rated power were observed as 270 g/kWh & 271 g/kWh respectively against the declared value of 262 g/kWh.

17.2 Field Test:

The transplanter was operated in varying field conditions for a total period of 26.0 hours for transplanting MUT-1010 variety of paddy seedlings. The results are summarized as under:

- ❖ Av. forward speed of operation was observed as 4.18 to 4.38 kmph.
- ❖ Av. Area covered was recorded as 0.517 to 0.554 ha/h.
- ❖ Av. Depth of transplanting was recorded as 4.4 to 4.8 cm.
- ❖ The spacing between rows was recorded as 30 cm.
- ❖ Av. number of plants per hill was recorded as 7.6 to 9.3.
- ❖ Av. Spacing between hills was recorded as 15.8 to 16.0 cm.
- ❖ Av. Total number of hills in 5 m row length was recorded as 32.
- ❖ The av. number of hills per sq. m. was recorded as 28.
- ❖ The av. percentage of missed hills was recorded as Nil to 0.71.
- ❖ The av. percentage of floating seedlings was recorded as Nil to 0.71.
- ❖ The av. percentage of buried seedlings was recorded as Nil to 0.71.
- ❖ Av. percentage of damaged seedling was recorded as Nil to 0.71.
- ❖ The total percentage of transplanting faults was recorded as 0.71 to 1.42.



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- ❖ The consumption of nursery trays was recorded as 216 to 235 numbers per hectare.
- ❖ The hourly fuel consumption was recorded as 2.80 to 3.15 l/h and fuel required for planting of one hectare area was recorded as 5.40 to 5.70.

17.2.1 The quality of work was observed as smooth during entire transplanting operation. The overall performance of the machine was found satisfactory.

17.3 Components/assembly inspection

17.3.1 The transplanter and engine were dismantled 41.67 hours of operation, respectively and wear of critical components were observed within the limits.

17.3.2 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.

17.4 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 5.16** of this test report.

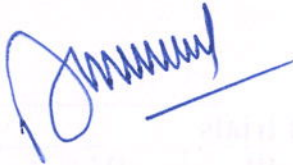
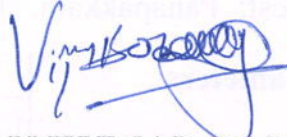

17.5 The notations for all controls, Instrument panel, labeling plate and safety provisions are written on the machine in English language. This should be looked into for sake of Indian farmers/users.

17.6 Technical literature:

Operator's manual, technical 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.

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TESTING AUTHORITY

 Er. PRAMOD YADAV AGRICULTURAL ENGINEER	 Er. VIJAY KUMAR BADAYA SENIOR AGRICULTURAL ENGINEER
 Dr. B.M. NANDEDE DIRECTOR	



18. APPLICANT COMMENTS

Sl. No.	Para No.	Comments
1	17.6	Will be considered and take appropriate corrective actions.