

व्यावसायिक परीक्षण रिपोर्ट (प्रारंभिक)

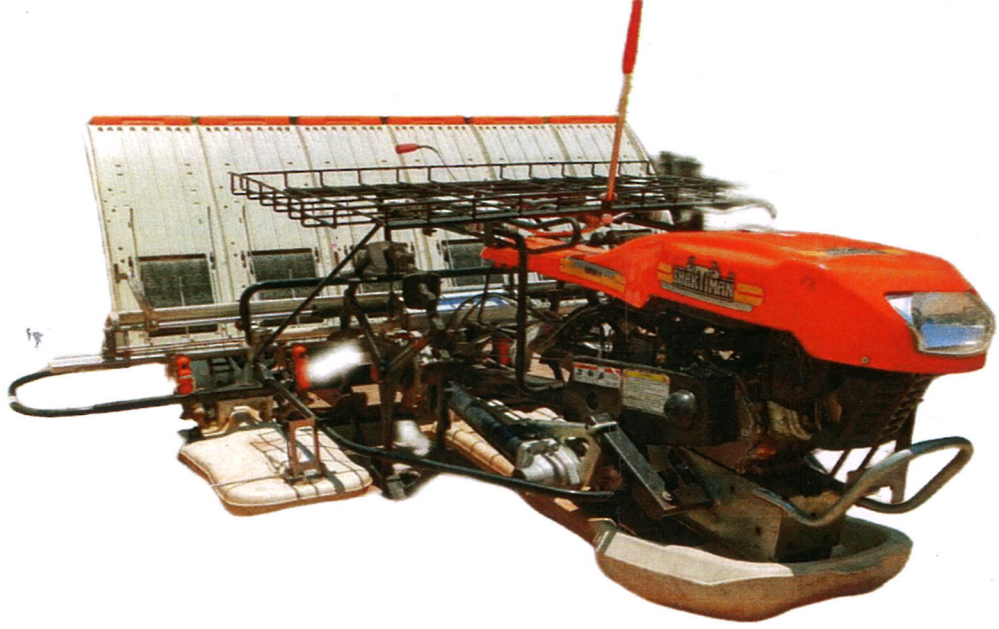
COMMERCIAL TEST REPORT
(INITIAL)

THIS TEST REPORT IS VALID UPTO 30/04/2028

संख्या No: Machine-492/1501

माह/रू/मं: May, 2023

Validity: 30.04.2028



**PADDY TRANSPLANTER
SHAKTIMAN PADDY SAMRAT 637
WALK BEHIND**



सत्यमेव जयते

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, गार्लादिन्ने '515731 जिला :अनंतपुर (आं.प्र)

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Machine- 492/1501	PADDY TRANSPLANTER SHAKTIMAN PADDY SAMRAT 637 WALK BEHIND	COMMERCIAL (ICT)
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Manufacturer : M/s Tirth Agro Technology Private Limited.
Applicant : M/s Tirth Agro Technology Private Limited, SHAKTIMAN, Survey No.108/1, Plot No.B, NH-27, Nr. Bharudi Toll Plaza, Bhunava(Village), Taluka: Gondal, Dist.:Rajkot, State: Gujarat- INDIA, Pin-360311

**SHAKTIMAN PADDY SAMRAT 637
WALK BEHIND TYPE PADDY TRANSPLANTER**

Report No.: Machine-492/1501

Month: May

Year: 2023



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Valve, guides and timing gears:-

Any marked sign of overheating of valves : None
Pitting of seat/faces of valves : Normal
Any visual damage to the teeth : None
Of timing gears
Clearance between valve guides
And valve stem (mm) : -

	Clearance	Discard Limit
- Intake Valve	: 0.05	0.25
- Exhaust Valve	: 0.06	

13.2.1 Transmission Gears:

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

13.2.2 Rotary Drive Unit:

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

14. SUMMARY OF OBSERVATIONS, COMMENTS AND RECOMMENDATIONS

14.1 Engine Performance Test

- (i) The maximum rated power of the engine at 3600 rpm was observed as 3.80 kW against the declared value of 4 kW.
- (ii) The backup torque is 13.88 % against the declared value of 20.3%.
- (iii) Specific fuel consumption corresponding to max. Power was observed as 436 g/kWh against the declared value of 397 g/kWh.
- (iv) Maximum crankshaft torque was observed as 11.48 Nm against the declaration value of 8.3 Nm.

14.2 Field Test

The transplanter was operated in varying field conditions for a total period of 29.50 hours for transplanting MPR-606, RNR51 and ADT-37 variety of paddy seedlings. The results are summarized as under:-

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- ❖ Av. Forward speed of operation was observed as 1.88 to 2.01 kmph.
- ❖ Av. area covered was recorded as 0.187 to 0.261 ha/h.
- ❖ Av. depth of transplanting was recorded as 3.40 to 3.50 cm.
- ❖ The spacing between rows was recorded as 30 cm.
- ❖ Av. number of plants per hill was recorded as 6 to 11.
- ❖ Av. spacing between hills was recorded as 14 to 21 cm.
- ❖ Av. total number of hills in 5 m row length was recorded as 24 to 36.
- ❖ The average number of hills per sq. m. was recorded as 19 to 28.
- ❖ The average percentage of missed hills was recorded as 1.05 to 2.0.
- ❖ The average percentage of floating seedlings was recorded as 1.05.
- ❖ The average percentage of buried seedlings was recorded as 1.0 to 2.0.
- ❖ Av. Percentage of damaged seedling were recorded as Nil.
- ❖ The total percentage of transplanting faults was recorded as 2.84 to 4.0
- The consumption of nursery trays was recorded as 192 to 225 numbers per hectare.
- The hourly fuel consumption was recorded as 0.8 to 0.815 l/h and fuel required for planting of one hectare area was recorded as 3.12 to 4.27.

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

14.3 Components/assembly inspection

14.3.1 The engine was dismantled after 40.17 hours of operation and wear of Critical components were observed within the limits.

14.3.2 The main gear box, planting box and planting arm drive mechanism were dismantled after 40.17 hours of operation and found in Satisfactory working condition.

14.4 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 4.11** of this test report.

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14.5 Technical literature:

Operator's manual, technical manual and parts catalogue of paddy Transplanter and engine in separate booklet were supplied with the paddy Transplanter for reference during the test. It is however, recommended that same may be brought in Hindi and other regional languages as per IS 8132 : 1999 (Reaffirmed 2004) for the sake of user & technical personnel.

TESTING AUTHORITY

D.C. MOULI AGRICULTURAL ENGINEER	
P. KAMALABAI SENIOR AGRICULTURAL ENGINEER /DIRECTOR(I/C)	

15. APPLICANT COMMENTS

SR No.	Our Ref. No.	Applicants comments
1	15.1	We will take corrective action on this observation
2	16.5	We will take corrective action on this observation and provide Operator & Service Manual in other regional languages as per IS 8132:1999 (Reaffirmed 2004)

