

THIS TEST REPORT IS VALID UPTO 30.06.2031



SILVER, PADDY TRANSPLANT PRO 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

ट्रैक्टर नगर, गार्लदिन्ने-515 731, जिला: अनंतपुर (आं. प्र.)

Tractor Nagar, Garladinne-515 731, District: Anantapur (A.P.)

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

Machine- 622/1679	SILVER, PADDY TRANSPLANT PRO RICE TRANSPLANTER	COMMERCIAL (ICT)
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Manufacturer, (apa) : M/s. Shenzwan Shenzhen Wishope
Technology Co., Ltd. 2005 Hengda Century
Plaza Heping Avenue, Wuhan, Hubei, China

Applicant : SILVER CONSUMER ELECTRICALS
PRIVATE LIMITED.
Survey No.: 36-47, Village: Haripar
(Taravada) Taluka; Lodhika, District: Rajkot-
360035.

SILVER, PADDY TRANSPLANT PRO RICE TRANSPLANTER

Report No.: **Machine-622/1679**

Month: **July**

Year: **2024**



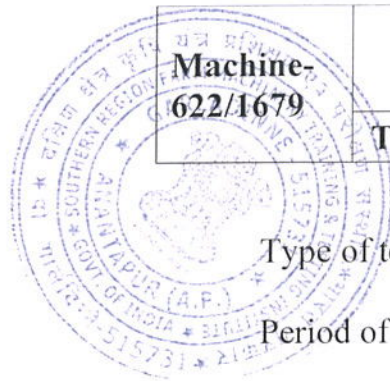
सत्यमेव जयते

Government of India
Ministry of Agriculture and Farmers Welfare
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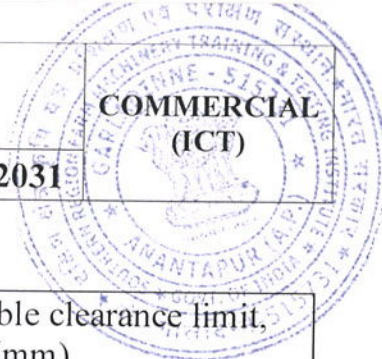
Machine-622/1679	SILVER, PADDY TRANSPLANT PRO RICE TRANSPLANTER	COMMERCIAL (ICT)
THIS TEST REPORT IS VALID UPTO 30.06.2031		

Type of test : Commercial (ICT)
Period of test : May, 2024 to July, 2024
Test Report No. : **Machine-622/1679**
Month / Year of release : July, 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 “**SILVER, PADDY TRANSPLANT PRO RICE TRANSPLANTER**”. This report is valid up to **30.06.2031**, 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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Main and big end bearings:

Main bearings:

Bearing No.	Diametrical clearance (mm)	Crankshaft end float (mm)	Max. permissible clearance limit, (mm)	
			Diametrical clearance	Crankshaft end float
1.	Ball bearing	--	NA	Not Specified
2.	Ball bearing			

Big end bearings:

Bearing No.	Clearance (mm)		Max. permissible clearance limit, (mm)	
	Diametrical	Axial	Diametrical	Axial
1.	0.09	0.35	0.45	0.80

Valves, guides and timing gears:

Observation

Any marked sign of overheating of valves : None
Pitting of seat/faces of valves : None
Any visual damage to the teeth of timing gears : None
Clearance between valve guide and valve stem (mm):
- Intake valve : 0.07
- Exhaust valve : 0.08

15.2 Transmission gears:

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

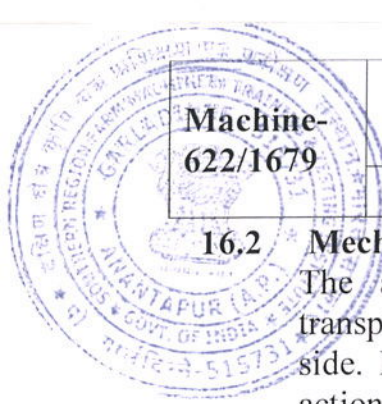
15.3 Rotary drive unit:

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

16. SUMMARY OF OBSERVATIONS, COMMENTS AND RECOMMENDATIONS

16.1 Engine Performance:

- 16.1.1 The maximum power was observed as 3.03 kW under natural ambient condition against the declared value of 3.00 kW.
- 16.1.2 Specific fuel consumption of engine corresponding to maximum power recorded as 413 g/kWh against the declared value of 490 g/kWh.
- 16.1.3 Max. torque was observed as 9.34 Nm against the declared value of 8.00 Nm.
- 16.1.4 Back up torque of engine was observed as 10.14 %.



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16.2 Mechanical vibration:

The amplitude of mechanical vibration on various assemblies of the transplanter was observed to the extent of 1262 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 KALACHAMPA variety of paddy seedlings. The results are summarized as under:

- Av. Forward speed of operation was observed as 2.81 to 2.84 kmph.
- Av. Area covered was recorded as 0.357 to 0.368 ha/h.
- Av. Depth of transplanting was recorded as 5.0 to 5.40 cm.
- The spacing between rows was recorded as 30 cm.
- Av. number of plants per hill was recorded as 11 to 12.0.
- Av. spacing between hills was recorded as 14cm.
- Av. Total number of hills in 5 m row length was recorded as 37.
- Av. number of hills per sq. m. was recorded as 32.
- Av. percentage of missed hills was recorded as 0.62 to 1.25.
- Av. percentage of floating seedlings was recorded as Nil to 0.62.
- Av. percentage of buried seedlings was recorded as 0.62 to 1.25.
- Av. percentages of damaged seedling were recorded as Nil to 0.62.
- The total percentage of transplanting faults was recorded as 2.48 to 3.08.
- The consumption of nursery trays was recorded as 242 to 284 numbers per hectare.
- The hourly fuel consumption was recorded as 1.05 to 1.10 and fuel required for planting of one hectare area was recorded as 2.85 to 3.08.

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 39.33 hours of operation and wear of critical components were observed within the limits.

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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	
Dr. B.M. NANDEDE DIRECTOR	 

17. APPLICANT COMMENTS

Sl.no.	Para no.	COMMENTS
1	16.2	We will take adequate measures to minimize the vibrations from the engine to other parts of the rice transplanter during the regular production of machines.
2	16.3	Necessary corrections will be made to the labeling plate as per the recommendation.
3	16.7	We will introduce manuals in vernacular languages as per the recommendation.