

व्यावसायिक परीक्षण रिपोर्ट (द्वितीय बैच)
COMMERCIAL TEST REPORT
(SECOND BATCH)

संख्या/No: Machine-539/1580
माह/Month: January, 2024

THIS TEST REPORT IS VALID UPTO 31/12/2032



**YANMAR, AP4 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

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

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

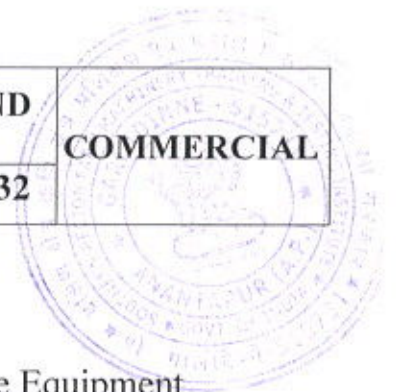
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Machine- 539/1580	YANMAR AP4 SELF PROPELLED WALK BEHIND RICE TRANSPLANTER (SECOND BATCH)	COMMERCIAL
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Manufacturer : M/s. Yanmar Agriculture Equipment
Co. Ltd., No. 8, Huangshan Road, New
District, Wuxi, Jiangsu, **China**-214 028.

Applicant : M/s. Yanmar Coromandel Agri
Solutions Pvt. Ltd., Head Office: No. 19,
Kaiser Tower, Ist Floor, Kadhar Nawaz
Khan Road, Nungambakkam,
Chennai – 600 006, Tamil Nadu, India.

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WALK BEHIND RICE TRANSPLANTER**

Report No. : Machine-539/1580

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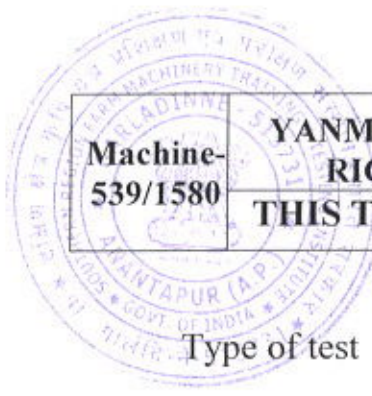
सत्यमेव जयते

**Government of India
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Type of test : COMMERCIAL
(SECOND BATCH TEST)

Period of test : 03.10.2023 to 12.12.2023

Test Report No. : Machine-539/1580

Month / Year of release : January, 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 for test by the testing authority at applicant's site.
- 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 "YANMAR, AP4 Self Propelled Walk Behind Rice Transplanter". This report is valid up to 30/12/2032 Vide Ministry's order no. 13-24/2018-M&T (I&P) dated 19.09.2018.

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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17. COMPARISON WITH SPECIFICATION AND PERFORMANCE CHARACTERISTICS OF PREVIOUS SAMPLE (Test Report No. Machine-281/1015, May, 2019 of SRFMTTI, Garladinne) and PRESENT SAMPLE



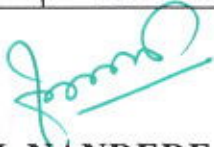
SI No.	Parameter	Previous Sample	Present Sample
1	2	3	4
17.1	Specification:		
17.1.1	Rice transplanter :		
	Make	: YANMAR	YANMAR
	Model	: AP4	AP4
17.1.2	Engine:		
	Make	: Yamaha	Yamaha
	Model	: MZ 175	MZ 175
	Bore/stroke, (mm)	: 66/50	66/50
	Specified cubic capacity, (cc)	: 171	171
	Rated engine speed, (rpm)	: 2700	2700
17.1.3	Fuel system:		
	Make & model of fuel filters	: Screen disc provided in fuel line hole	Screen disc provided in fuel line hole
	Make & model of Carburetor	: Mikuni Corp & 7CNBZC1691C	Mikuni Corp & 7CNB2Z2131D
	Make & model of spark plug	: NGK & BPR 2ES	NGK & BPR 2ES
	Make & model of governor	: Yamaha	Yamaha
17.1.4	Cooling system:		
	Type	: Forced air cooled	Forced air cooled
17.1.5	Lubrication system:		
	Oil sump capacity, (l)	: 0.60	0.60
17.1.6	Transmission:		
17.1.6.1	Clutch:		
	Type of clutch plate	: 'V' belt and pulley, HP 4-SA30	'V' belt and pulley, HP 4-SA30
	Pulley size, (drive x driven), (mm)	: Ø 50 x Ø 137	Ø 50 x Ø 137
17.1.6.2	Main gear box:		
	No. of speeds:	:	
	-Forward	: 02	02
	-Reverse	: 01	01

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1	2	3	4
	Range of speeds, (kmph):		
	-Forward:		
	- Transplanting-P	: 2.49	2.38
	- Transporting-T	5.06	4.84
	-Reverse-R	: 1.19	1.14
17.1.7	Planting clutch :		
	Type	: Dog clutch	Dog clutch
	Location	: Inside the main gearbox	Inside the main gearbox
17.1.8	Plating arm drive :		
	Type	: Bevel and pinion, takes drive from main gearbox	Bevel and pinion, takes drive from main gearbox
	Method of lubrication	: Grease	Grease
17.1.9	Steering :		
	Type	: Dog clutch	Dog clutch
17.1.10	Wheel equipment's:		
	Type	: Rubber molded steel wheel	Rubber molded steel wheel
	Diameter of wheel, (mm)	: 665	665
	Track width, (mm)	: 610	610
17.1.11	Planting mechanism :		
	No. & type of arms	: Four, crank	Four, crank
	Hill to hill spacing, (cm)	: Adjustable in four positions (12, 15, 17 and 22)	Adjustable in four positions (12, 15, 17 and 22)
17.1.12	Planting fingers :		
	Type	: Fork	Fork
	Numbers	: Four	Four
17.1.13	Float:		
	Type	: PVC molded	PVC molded
	Number	: three	three
17.1.14	Hydraulic system :		
	Hydraulic pump:		
	Type	: Gear	Gear
	Number	: One	One

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1	2	3	4
17.1.15	Seedling carrier :		
	Type	: Open rack, detachable	Open rack, detachable
	Carrying capacity	: Four trays	Four trays
17.1.16	Overall dimensions, (mm):		
	-Length	: 2200	2200
	-Width :		
	- With side marker	: 2430	2430
	- Without side marker	: 1555	1560
	-Height :		
	- Lifted position	: 1348	1350
	- Down position	: 1080	980
	-Ground clearance (After lifting the float)	: 400	400
17.1.17	Mass, (kg) (With all reservoirs filled)	: 157	155
17.2	Performance characteristics:		
17.2.1	Engine performance:		
	-Maximum power, (kW)	: 2.6	2.58
	-Specific fuel consumption corresponding to maximum power, (g/kWh)	: 343	387
	-Maximum equivalent crankshaft torque, (Nm)	: 9.6	9.6
	-Back-up torque, (%)	: 5.5	5.14
	Maximum temperature, (°C)		
	-Engine oil	: 89	118
	-Blower outlet	: 45	43
	-Exhaust gas	: 468	420
	-Air intake	: 45	43
	Lube oil consumption, (g/kWh)	: 1.29	0.95
17.2.2	Noise measurement:		
	Maximum noise at by- standard's position, dB(A)	: 71	70
	Maximum noise at operator's ear level, dB(A)	: 82	82

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1	2	3	4
17.2.3	Mechanical vibration:		
	Maximum amplitude of vibration at, (micron):		
	- Steering handle	: 168	187
	-Steering clutch	: 187	242
	-Gear shifting lever	: 130	199
	-Main clutch lever	: 96	193
	-Accelerator lever	: 218	255
	-Planting arm shaft	: 682	301
17.3	Maintenance/service problems:	: No such defects were noticed	No such defects were noticed
17.4	Adequacy of literature:	: Operation manual, technical & maintenance manual and parts catalogue in English in separated booklets	Operation manual, technical & maintenance manual and parts catalogue in English in separated booklets

TESTING AUTHORITY

 Er. PRAMOD YADAV AGRICULTURAL ENGINEER	 Er. D.C.MOULI AGRICULTURAL ENGINEER
 Dr. B.M. NANDEDE DIRECTOR	

18. Applicant comments

Para No.	Our reference	Applicant comments
18.1	16.5	Will take suitable corrective action
18.2	16.6	Will take suitable corrective action

