

THIS TEST REPORT IS VALID UPTO 31/07/2031



MAA SANTHOSHI, MSE TIGER POWER TGP-PHD-004
POST HOLE DIGGER



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- 629/1689	MAA SANTHOSHI, MSE TIGER POWER TGP- PHD-004 POST HOLE DIGGER	COMMERCIAL (ICT)
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Manufacturer, (apa) : M/s. Xian Far East Import & Export Co.
Ltd., No. 34, South Hancheng Road, Xian,
China.

Name of Applicant : M/s. Maa Santhoshi Engineering,
Near Agarwal Bhawan, Main Road,
Jaipatna (PS), Kalahandi (Dist), Odisha-
766018.

**MAA SANTHOSHI, MSE TIGER POWER-TGP-PHD-004
POST HOLE DIGGER**

Report No.: **Machine-629/1689**

Month: **August**

Year: **2024**



सत्यमेव जयते

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Ministry of Agriculture and Farmers Welfare
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Type of test : COMMERCIAL(ICT)

Name of Machine : Post Hole Digger

Period of test : April, 2024 to August, 2024

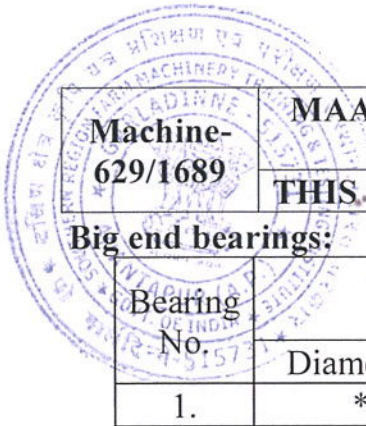
Test Report No. : **Machine-629/1689**

Month / Year : August, 2024

- i) The results reported in this report are observed values and no corrections have been applied for atmospheric and site conditions.
- ii) The test sample was selected randomly through virtual mode.
- iii) The results presented in this report do not, in any way, attribute to the durability of the machine.
- iv) This Test Report should not be reproduced in part or full without prior permission of the Director, Southern Region Farm Machinery Training & Testing Institute, Garladinne, Anantapur (A.P.).
- v) This is a report on Commercial Test of Post hole digger named "MAA SANTHOSHI, MSE TIGER POWER TGP-PHD-004 POST HOLE DIGGER " This report is valid up to 31/07/2031, 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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Big end bearings:

Bearing No.	Clearance, (mm)		Max. permissible clearance limit, (mm)	
	Diametrical	Axial	Diametrical	Axial
1.	**	0.50	-	0.30

** remarks: Measurement of big end bearing is not measurable due to design constraints.

15.2 Transmission system:

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

16. COMMENTS & RECOMMENDATIONS

16.1 Engine Performance:

16.1.1 The maximum power was observed as 1.06 kW under natural ambient condition against the declared value of 2.3 kW.

16.2 Noise measurement:

Max. Noise at operator's ear level was observed as 99 dB (A), which appears to be on higher side. Therefore, suitable corrective action to reduce the noise level should be taken.

16.3 Mechanical vibration:

The equivalent mechanical vibration on engine cover was observed to the maximum extent of 372 micron. Therefore, suitable corrective measure to reduce the vibration in the machine should be taken.

16.4 The augur bit should be removable but it is welded to augur attachment. Whereas, for easy repair and replacement, it should be detachable type.

16.5 A fuel on/off knob may be considered for providing in the fuel system of engine.

16.6 The safety gadgets as mentioned in **Para 4.0**, were provided by the applicant during the test.

16.7 Transmission drive safety provision in the Post hole digger is not provided, whereas it is essential from the safety point of view. Therefore, it must be provided in the future product.

16.8 Labeling Plate:

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 the manufacturer
- ii) Make
- iii) Country of origin
- iv) Engine no.

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16.9 Components/assembly inspection:

The cylinder bore diameter was been measured as 43.53 to 43.54 mm against the maximum permissible wear limit as 50.20 mm vide specification sheet. This discard limit seems to be erroneous and needs necessary corrective action.


16.10 Adequacy of literature supplied with the machine:

A printed manual containing operation, maintenance, troubleshooting instructions and spare parts description in English, is provided by the applicant, which is not sufficient and it needs to be developed as per IS: 8132-1999 and also in other regional languages for the sake of users & technical personnel.

17. APPLICANT'S COMMENTS

As per your recommendation and suggestion the necessary action will be taken and will be in corporate in further production model.

TESTING AUTHORITY

Er. PRAMOD YADAV AGRICULTURAL ENGINEER	
Dr. B.M. NANDEDE DIRECTOR	