



THIS TEST REPORT IS VALID UPTO 31/03/2027



**MASCHIO GASPARDO ROTARY TILLER, MODEL: VIRAT PLUS 205
CENTRALLY MOUNTED, GEAR DRVE, MULTI SPEED**



भारत सरकार
GOVT OF INDIA

कृषि एवं किसान कल्याण मन्त्रालय

MINISTRY OF AGRICULTURE & FARMERS WELFARE

कृषि, सहकारिता एवं किसान कल्याण विभाग

DEPARTMENT OF AGRICULTURE, COOPERATION & FARMERS WELFARE

उत्तर पूर्वी क्षेत्र कृषि यंत्र प्रशिक्षण एवं परीक्षण संस्थान

NORTH EASTERN REGION FARM MACHINERY TRAINING & TESTING INSTITUTE

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[AN ISO 9001:2015 CERTIFIED INSTITUTION]

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(Repeat Test Was Conducted Due To Critical Breakdown)

1.SCOPE OF TEST**The scope of test was to check and assess the following:****1.1 Laboratory Test:**

- a) Checking of specifications
- b) Hardness of soil engaging parts, blades of Rotary tiller (Rotavator).
- c) Chemical analysis of critical components, blades of Rotary tiller (Rotavator).
- d) Wear analysis of critical components, blades of Rotary tiller (Rotavator).

1.2 Field Test :

- a) Rate of work
- b) Quality of work
- c) Ease of operation and adjustments
- d) Labour requirement
- e) Defects, Breakdowns & Repairs

2. METHOD OF SELECTION

The implement was directly submitted for test by the applicant at this Institute. Hence, the method of selection is not known.

3. TEST PROCEDURE

IS: 17045 : 2018 : Rotary Tiller (Rotavator) – Tractor Driven – Test Procedure, and Recommendation on Selected Performance Characteristics

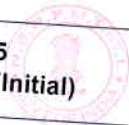
4. SPECIFICATIONS**4.1 General:**

Name and address of the manufacturer	: M/s. Maschio Gaspardo India Pvt. Ltd. Plot No.F27, MIDC, Ranjangaon, Village:Karegaon Tal: Shirur, Dist:Pune-412220
Name & Address of Applicant	: M/s. Maschio Gaspardo India Pvt. Ltd. Plot No.F27, MIDC, Ranjangaon, Village:Karegaon Tal: Shirur, Dist:Pune-412220
Name of machine	: Rotary Tiller (Rotavator)
Type	: Multi speed, Gear Drive, Centrally mounted
Make	: Maschio Gaspardo
Model	: VIRAT PLUS 205
Year of manufacture	: 2018
Serial Number	: JII5V5269
Size (Rotor Dia. X Working width), cm	: 46.0 Φ x 195.5
Country of origin	: India
Recommended power source, hp	: 50-60
Power source used during the test	: New Holland 7500 (For details, Refer Annexure-IV)

1	2	3	4	5	6	7
v	Country of origin	Evaluative	Should be provided on rotary tiller (Rotavator)	--	India	Yes
vi	Year of manufacture			--	2018	Yes
vii	Chassis Serial Number			--	JII5V5269	Yes
viii	Recommended PTO speed of Prime mover(rpm)			--	Not provided	Yes
ix	Maximum PTO power requirement, kW			--	50-60 HP	Yes
8	Category of breakdowns/ defects					
	Category of breakdowns	Category Evaluative/ Non Evaluative	Requirements	As Observed	Whether meets the requirements (Yes/ No)	
i	Critical breakdowns	Evaluative	Gear teeth of drive gear in primary gear box was broken after 20.92 hours of dry land operation.	Yes	No	
ii	Major breakdown	Evaluative	Not more than one and neither of them should be repetitive in nature.	None	Yes	
iii	Minor breakdowns	Evaluative	Not more than three and frequency of each should not be more than two.	None	Yes	
iv	Total breakdowns	Evaluative	In no case, the total no of breakdown should exceed four, i.e. (1 major + 3 minor) or 4 minor breakdowns	None	Yes	

11. COMMENTS AND RECOMMENDATIONS

- 11.1** Dimensions of Three Point linkage & PIC of implement does not conform to IS: 4931-1995 and it should be looked into for corrective action.
- 11.2** Chemical composition of rotor blades does not conform to IS: 6690-2002. The percentage of carbon and manganese content in composition of rotary tiller blade material was recorded as 0.253 and 1.204, respectively. The carbon content was on lower side and manganese content was on higher side when compared with the relevant Indian Standard. Moreover, the hardness of Edge portion of rotor blades does not conform to relevant Indian Standard. It is therefore, recommended that the material of rotary tiller blade should be improved and shall be provided as per requirement of Indian Standard.
- 11.3** **Gear teeth of drive gear in primary gear box was broken after 20.92 hours of dry land operation. This comes under critical breakdown and should be looked into for improvement.**
- 11.4** In dry land operation average depth of cut was recorded as 8.32 cm which does not meet the requirement of Indian Standard.
- 11.5** Labeling plate on the machine should be provided as per IS: 17045:2018.

**11.6 Technical literature:**

Operator cum Service Manual & Parts Catalogue was provided along with the machine during the course of testing. It is further recommended to bring out these manuals in Hindi and other vernacular languages as per IS: 8132-1999

TESTING AUTHORITY

(M.R. PATIL)
AGRICULTURAL ENGINEER

(J.P. MANDAL)
SENIOR AGRICULTURAL ENGINEER

(K.K. NAGLE)
DIRECTOR

Draft test report compiled by - **Shri Khagendra Bora, STA**

12. APPLICANT'S COMMENTS

No comments were received from the Applicant.