



JAGATJIT JR -530 ROTAVATOR (Tractor Operated)



सत्यमेव जयते

भारत सरकार

GOVERNMENT OF INDIA

कृषि मन्त्रालय

MINISTRY OF AGRICULTURE

(कृषि एवं सहकारिता विभाग)

(DEPARTMENT OF AGRICULTURE AND COOPERATION)

उत्तर पूर्वी क्षेत्र कृषि यन्त्र प्रशिक्षण एवं परीक्षण संस्थान

NORTH EASTERN REGION FARM MACHINERY TRAINING & TESTING INSTITUTE

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1 SCOPE OF TEST

The scope of test was to check and assess the following: -

1.1 LABORATORY TEST:

- Checking of specifications
- Hardness of soil engaging parts (Rotavator blades)
- Chemical analysis of critical components (Rotavator blades)
- Wear analysis of critical components

1.2 FIELD TEST:

- Rate of work.
- Quality of work
- Ease of operation, maintenance and adjustments
- Labour requirement
- Defects, Breakdowns & Repairs

2 METHOD OF SELECTION

The implement was directly submitted for test by the applicant at this Institute.

3 TEST PROCEDURE

- (i) IS : 6690-2007 : Specification for blades for rotavator for power tillers.
- (ii) IS : 4931-2007 – Agricultural tractors-Rear Mounted PTO.
- (iii) IS : 4468 (pt-1) – 2007 Agricultural wheeled Tractors- Rear Mounted three point linkage.
- (iv) IS : 11531-2006 Test code for puddler.

4 SPECIFICATIONS

4.1 General:

Name of Manufacturer/ applicant and Address	:	M/s Saron Mechanical works, Mansa road, Cheema Mandi, Dist:-Sangrur (Punjab) -148 029
Name of machine	:	Rotavator (Tractor Operated)
Type	:	Gear Type
Make	:	Jagatjit
Model	:	JR-530
Serial number	:	00325
Year of manufacture	:	2008
Type of blade	:	Hatchet (L –shaped)
Working width of implement (mm)	:	1450
Power source as recommended	:	45 hp tractor and above
Prime Mover Used during test		
Tractor	:	Mahindra -575 John Deere 5310
Max. PTO power, kW (Ps)	:	31.2 (42.4) 37.4 (50.8)
		-As per test Report -As per test Report
		No.T-291/650 No.T-391/803
		released by CFMT&TI, Budni (MP) released by CFMT&TI, Budni (MP)



testing.

10 DEFECTS, BREAKDOWNS AND REPAIRS

No any breakdowns were observed during 50.45 hours of testing.

11 COMMENTS AND RECOMMENDATIONS

- 11.1 The propeller shaft insert dimension does not conform to IS: 4931 – 2007. This should be incorporated at production level
- 11.2 Chemical composition of rotavator blades is not conforming to Indian Standard. Rotavator blades having chemical composition as per Indian Standard be used in manufacturing of implements.
- 11.3 The specifications of implement hitch conforms to the IS: 4468 (Pt-I)-2007, except lower hitch point span. It is recommended that the same should be provided conforming to the relevant Indian Standards. The specifications of implement should be either Cat.-I or Cat.-II or both simultaneously.
- 11.4 It is recommended to have provision of change in rotor speed to suit wider range of soil and soil moisture condition.
- 11.5 The rotavator stand should be provided with implement.
- 11.6 It is recommended that type of lubricant used in gearboxes should be recommended with its servicing period, viscosity and reservoir capacity.
- 11.7 It is recommended that the drain plug on secondary gear box should be provided for easy removing of oil.
- 11.8 Model of implement, year of manufacture, batch or code number, size and recommended power is not marked on the implement. Hence particulars like make, model, power requirement should be stamped, engraved or embossed on metallic plate rigidly attached or riveted on a non-wearing part of the implement.
- 11.9 **Adequacy of literature:**
No any literature supplied with the implement during testing. Hence, leaflet, operator's service manual and spare parts catalogue should be provided containing performance, special features, drawing and dimensions of the implement in English, Hindi and other regional languages for operator's use as per IS: 8132-2004 & IS: 3600-1996. Separate literatures according to model should provide with safety note warnings, accessories and attachments, maintenance instruction and instruction for storage, handling transport, installation, etc.

TESTING AUTHORITY

PRADIP C. MESHRAM ASSISTANT ENGINEER (TESTING)	
M.K. VISWAKARMA DIRECTOR	



12. APPLICANT'S COMMENTS

We have gone through all the comments and recommendations given by you in report of rotavator. We assure you to incorporate all the changes like dimensional changes as per standards and other changes like provision of drain plug on gear box, marking of gear oil no used, rotavator stand, marking of model no., year, size and provision of operator's service manual and year, size and provision of operator's service manual and spare part list.

We assure you to incorporate all the changes in production. We are very thankful to you for your assistance and guidelines.