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COMMERCIAL TEST REPORT

संख्या/No. : Imp: 70/110

माह /Month : June, 2010



PARAS P.R.V. 1.25 ROTAVATOR (Tractor Operated)



सत्यमेव जयते

भारत सरकार

GOVERNMENT OF INDIA

कृषि मन्त्रालय

MINISTRY OF AGRICULTURE

(कृषि एवं सहकारिता विभाग)

(DEPARTMENT OF AGRICULTURE AND CO-OPERATION)

उत्तर पूर्वी क्षेत्र कृषि यन्त्र प्रशिक्षण एवं परीक्षण संस्थान

NORTH EASTERN REGION FARM MACHINERY TRAINING AND TESTING INSTITUTE

विश्वनाथ चारिआलि, शोणितपुर, असम

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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 PROCEDURES

- i) IS: 6690-1981: Specification for Blades for rotavator for power tillers. (Reaffirmed in 2007)
- ii) IS: 4931-1995 – Agricultural tractors-Rear Mounted PTO. (Reaffirmed in 2009)
- iii) IS: 4468 – 1997 (Pt-1) Agricultural wheeled Tractors- Rear Mounted three point linkage. (Reaffirmed in 2007)
- iv) IS: 11531-1985 Test code for puddler. (Reaffirmed in 2006)

4 SPECIFICATIONS

4.1 General:

Manufacturer

M/s Bothara Foundry and Machine Works,
35 to 40, Industrial Estate,
Nagar Pune Road,
Ahmednagar (M.S.) -414 005

Name of machine

: Rotavator (Tractor Operated)

Type

: Gear type

Make

: Paras

Model

: P.R.V. 1.25

Serial number

: R-46

Year of manufacture

: June, 2009 (apa)

Type of blade

: Hatchet

Working width of implement (mm)

: 1420

Power source as recommended

: 45 hp and above (apa)



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11. COMMENTS AND RECOMMENDATIONS

- 11.1 The specifications of implement hitch does not conform to the IS: 4468 (Pt-1)-1997. Hence, it is recommended that it should be provided with conformity to relevant Indian Standard.
- 11.2 The dimensions of splined end pinion shaft and propeller shaft insert dimensions does not conform to IS: 4931-1995. This should be looked into.
- 11.3 The viscosity of oil used in gear boxes of rotavator should be given in literature and suitable sticker should also be pasted on rotavator. It is also recommended that type of lubricant used in gear boxes should be recommended with its servicing period.
- 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 dipstick on Primary reduction gearbox is not provided. Hence, dipstick should be provided with oil level mark for minimum and maximum level during mass production.
- 11.6 The marking or labeling plate is not provided with implement. Hence, particulars like make, model, year of manufacture, size and recommended power should be stamped, engrossed or embossed on metallic plate rigidly attached or riveted on a non-wearing part of the implement.
- 11.7 The model name of implement is not marked on rotavator. Hence it is recommended that the model of implement on rotavator should be provided essentially for easy and right selection according to requirement of the farmer.
- 11.8 Adequacy of literature:
No literature was supplied with the implement during testing. Hence operator's manual, service manual and spare parts catalogue should be provided containing performance characteristics, special features, drawing and dimensions of the implement in English, Hindi and other regional languages for operator's use as per IS: 8132-1999. Separate literatures according to model should be provided with safety note, warnings, accessories and attachments, maintenance instruction and instruction for storage, handling transport, installation, etc. The cover should be of reasonable durability and should be of an appropriate size to protect the internal pages and the binding should be appropriate and durable for the intended usage.

TESTING AUTHORITY

PRADIP C. MESHAM ASSISTANT ENGINEER (TESTING)	
P. K. PANDEY SENIOR TEST ENGINEER	
M.K.VISHWAKARMA DIRECTOR	

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12. APPLICANT'S COMMENTS

Para No.	Our Reference	Applicant's comments
12.1	11.1	We have now modified the rotavator hitch.
12.2	11.2	We have now modified splined end pinion shaft and propeller shaft.
12.3	11.3	We are now giving viscosity of oil in literature and also sticker is also pasted on rotavator.
12.4	11.5	We are now providing dipstick with level mark for minimum and maximum level of oil.
12.5	11.6 and 11.7	We are now provided labeling plate with all particulars at visible and on non wearing part
12.6	11.8	We are supplying printed literature in English all over. We will print all information in one booklet in vernacular languages for guidance to users.