

व्यावसायिक परीक्षण रिपोर्ट
COMMERCIAL TEST REPORT

संख्या/No. : Imp.77/117
माह /Month : December, 2010



New Swan Rotavator Model : 6 feet (Tractor Operated)



सत्यमेव जयते

भारत सरकार
GOVT OF INDIA

कृषि मन्त्रालय

MINISTRY OF AGRICULTURE

कृषि एवं सहकारिता विभाग

DEPARTMENT OF AGRICULTURE AND COOPERATION

उत्तर पूर्वी क्षेत्र कृषि यंत्र 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 PROCEDURES

- i) IS: 6690-2002: Specification for blades for rotavator for power tillers.
- ii) IS: 4931-2004 – Agricultural tractors-Rear Mounted PTO.
- iii) IS: 4468 – 1997 (Pt-I) Agricultural wheeled Tractors- Rear Mounted three point linkage.
- iv) IS: 11531-2001 Test code for puddler.

4 SPECIFICATIONS**4.1 General:****Manufacturer**

: **M/s New Swan Enterprises**
(Agro Tech Division),
C-213, Phase VIII Focal Point,
Ludhiana (Punjab) 141 010

Name of machine

: Rotavator (Tractor Operated)

Type

: Gear type

Make

: New Swan (apa)

Model

: 6 feet

Serial number

: NSE 007

Year of manufacture

: 2010 (apa)

Type of blade

: Hatchet (L – type)

Working width of implement (mm)

: 1728


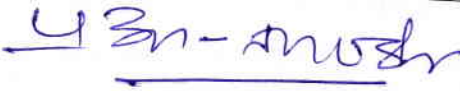
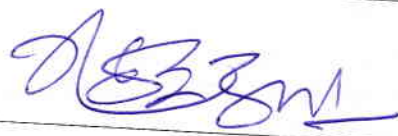
10. DEFECTS, BREAKDOWNS AND REPAIRS

The LHS trailing board hinge of the rotavator was broken after completion of 49.22 hours of field operation. Other than that no major defects or breakdowns were observed during 50.76 hours of field operation.

11. COMMENTS AND RECOMMENDATIONS

- 11.1 The specifications of implement hitch does not conform to the IS: 4468 (Pt-I)-1997. Hence, it is recommended implement should be provided with the hitch conforming to relevant Indian Standard.
- 11.2 The dimensions of splined end pinion shaft and propeller shaft insert dimensions does not conform to IS: 4931-2004. This should be looked into for corrective action.
- 11.3 The grade and change period of oil used in gear boxes of rotavator should be given in the printed literature and suitable sticker should also be pasted on rotavator.
- 11.4 It is recommended that arrangement for changing rotor speed to suit wider range of soil and soil moisture condition be provided.
- 11.5 The labeling plate needs to be provided with implement, to indicate the particulars like make, model, year of manufacture, size and recommended power.
- 11.7 **Adequacy of literature:** Only one leaflet was supplied with the implement during the course of testing. It is therefore recommended that operator's manual, service manual and spare parts catalogue should be provided in English, Hindi and other regional languages as per IS: 8132-2004.
The cover shall be of reasonable durability and shall be of an appropriate size to protect the internal pages and the binding shall be appropriate and durable for the intended usage.

TESTING AUTHORITY

H. L. YADAV AGRICULTURAL ENGINEER	
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 to 11.8	We have gone through very minutely the comments and recommendations advised by the Institute. In this context we may inform you that we will implement the entire recommendations point to point wise.