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व्यावसायिक परीक्षण रिपोर्ट
COMMERCIAL TEST REPORT

संख्या/No. : Imp. 74/114
माह /Month : October, 2010



FARM KING FKRT-12530 ROTAVTOR (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

विश्वनाथ चारिआलि, जिला-शोणितपुर (असम)

BISWANATH CHARIALI :: SONITPUR:: ASSAM, PIN - 784 176

Website: www.dacnet.nic.in/NERFMTTI

Ph. No. 03715-222094

Fax No: 03715-222374

E-mail : fmti-ner@nic.in

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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: 6690-2007: Specification for blades for rotavator for power tillers.
- ii) IS: 4931-2004 – Agricultural tractors-Rear Mounted PTO.
- iii) IS: 4468 – 2007 (pt-I) Agricultural wheeled Tractors- Rear Mounted three point linkage.
- iv) IS: 11531-2006 Test code for puddler.

4 SPECIFICATIONS**4.1 General:**

Manufacturer	:	Shri Kanhaiyalal Ramratan Krishi Yantra Laghu Udyog, N.H.11, Jaipur-Sikar Road, Bus Stand Rampura Dabri, Jaipur- 303 704
Name of machine	:	Rotavator (Tractor operated)
Type	:	Gear type
Make	:	Farm king
Model	:	FKRT-12530
Serial number	:	N.A.
Year of manufacture	:	2010
Type of blade	:	Hatchet (L-type)
Working width of implement (mm)	:	1260
Power source as recommended	:	40 HP and above

Prime Mover Used during test :

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11. COMMENTS AND RECOMMENDATIONS

- 11.1 The dimension of splined end pinion shaft does not conform to IS: 4931-2004. This should be provided according to relevant IS.
- 11.2 The specifications of implement hitch does not conform to the IS: 4468 (Pt-I)-2007. Hence, it is recommended that it should be provided with implement according to conformity with relevance to Indian Standard.
- 11.3 The viscosity of oil used in gear boxes of rotavator should be given in literature and suitable such sticker should also be pasted on rotavator.
- 11.4 The marking/ labeling plate is provided with implement. All details of particulars are not provided. Hence, particulars like size and recommended power should be stamped, engrossed or embossed on labeling plate.
- 11.5 Drain plug on secondary gear box should be provided for easy removing of oil.
- 11.6 Oil leakage from rotor fixing bolt to secondary gear box was observed. It should be looked into and necessary steps to change the fixing arrangement of rotor may be changed to prevent oil leakage.
- 11.7 Presence of mud was observed in the secondary reduction gear box. Hence proper sealing should be provided.
- 11.8 Hardness and chemical composition of rotor blades do not conform to IS. So necessary steps should be taken at production level.
- 11.9 Propeller shaft insert dimension does not conform to IS. Hence it is recommended to provide it as per IS.
- 11.10 **Adequacy of literature:** Operator's service manual cum spare parts catalogue is provided in English languages which is adequate in information. Separate literatures according to model should be provide with safety note warnings, accessories and attachments, maintenance instruction and instruction for storage, handling transport, installation, etc.
The literature should be provided in Hindi and other regional languages for operator's use as per IS: 8132-2004 & IS: 3600-1996.

TESTING AUTHORITY

H.L.YADAV AGRICULTURAL ENGINEER	
M.K.VISHWAKARMA DIRECTOR	

**NORTH EASTERN REGION FARM MACHINERY TRAINING & TESTING INSTITUTE,
PO : BISWANATH CHARIALI ,DISTRICT: SONITPUR (ASSAM) -784 176**

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12. APPLICANT'S COMMENTS

Para No.	Our Reference	Applicant's comments
12.1	11.1	Regarding power input shaft we have now changed our drawing and will follow the ISI specifications in our regular production.
12.2	11.9	Regarding propeller shaft insert, we modified our drawing as per IS.
12.3	11.2	Regarding dimension of hitch pyramid, we modified as per IS.
12.4	11.8	The material composition and hardness of rotor blades will be modified as per IS: 6690-2002.
12.5	11.5	Regarding drain plug on secondary reduction gear box, we are now using with suitable size.
12.6	11.7	Regarding sealing, mud/dust covers are being used now.
12.7	11.10	Suitable literatures are provided.