

THIS TEST REPORT VALID UP TO : 31st JANUARY, 2027



SOHI-7 ROTAVATOR (TRACTOR MOUNTED)



भारत सरकार

Government of India

कृषि एवं किसान कल्याण मंत्रालय

Ministry of Agriculture and Farmers Welfare

कृषि, सहकारिता एवं किसान कल्याण विभाग

Department of Agriculture, Cooperation and Farmers Welfare

उत्तरी क्षेत्र कृषि मशीनरी प्रशिक्षण एवं परीक्षण संस्थान

Northern Region Farm Machinery Training and Testing Institute

ट्रेक्टर नगर, सिरसा रोड, हिसार, (हरियाणा) - 125 001

Tractor Nagar, Sirsa Road, HISAR (Haryana)-125 001

[ISO 9001:2015 CERTIFIED]

Website: <http://nrfmtti.gov.in/>

E-mail: fmti-nr@nic.in

Tele./FAX: 01662-276984

ROTAVATOR- 255/2434/2020	SOHI-7 ROTAVATOR (TRACTOR MOUNTED) (COMMERCIAL)
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4.11 Lubricants:

Sl. No.	Particulars	As recommended by the manufacturer	As used during test
1	Primary Gear box	EP-140	Oil originally filled in the rotavator was not changed
2	Secondary Gear box	EP-140	
3	Rotor Hub	Not specified	Servo M.P grease
4	Propeller Shaft	Not specified	Servo M.P grease

5. RUNNING – IN

Rotavator was run in for 0.67 hour before field performance test.

6. LABORATORY TEST

6.1 Hardness: - The surface hardness of blade was recorded as under: -

Description	As per IS: 6690:1981 (HRC)	Hardness as observed (HRC)	Remarks
Edge portion	53 to 59	46.4 to 48.4	Does not conform
On shank portion	37 to 45	46.4 to 48.4	Does not conform

6.2 Chemical composition

The chemical composition of blades is tabulated as under:-

Constituents	As per IS: 6690-1981		Composition as observed (% of weight)	Remarks
	Carbon Steel	Silicon Manganese steel		
Carbon (C)	0.70 -0.85	0.50-0.60	0.2226	Does not conform
Silicon (Si)	0.10 -0.40	1.50-2.00	0.5016	Does not conform
Manganese (Mn)	0.50 -1.0	0.50-1.00	0.5575	Conforms
Sulphur (S)	0.05(max)	0.05(max)	0.1057	Does not conform
Phosphorous (P)	0.05(max)	0.05(max)	0.0585	Does not conform

7. FIELD PERFORMANCE TEST

The field tests of the rotavator comprising of wet land and dry land operation were conducted for 10.51 and 25.74 hours respectively to assess the performance of the rotavator. The performance of rotavator is reported in **Annexure-I & III** for wet land and dry land operations respectively.

Observations of field performance test are summarized in the ensuing table:


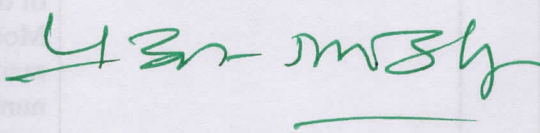


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12. COMMENTS AND RECOMMENDATIONS

- 12.1 The marking/labeling of machine does not meet the requirement of critical technical specification. It **MUST** be looked into.
- 12.2 Material of blades is not specified. This is critical parameter and therefore it must be specified.
- 12.3 The sheet metal is not specified. This is critical parameter and therefore it must be specified.
- 12.4 The observed required size of prime mover 40-50 HP as per labeling plate against the recommended power source 50-55 HP as per applicant. It **MUST** be looked into.
- 12.5 The specifications of rotavator hitch, does not conform in toto to the 4468 (Part-1)-1997. Hence, it is recommended that rotavator should be provided with the hitch conforming to relevant Indian Standards.
- 12.6 Dimensions of PIC of implement do not conform in toto to IS: 4931-1995 and therefore, it should be looked in to for corrective action.
- 12.7 The chemical composition of blades does not conform to as per IS: 6690-1981. This needs to be looked into for corrective action at production level.
- 12.8 The grade of grease is not specified by the applicant. It **MUST** be specified
- 12.9 **Technical literature :-**
The operator cum service manual with parts catalogue provided during the rotavator test. However, operator manual of rotavator provided needs to be updated as per IS:8132-1999,

TESTING AUTHORITY

MAAN SINGH SENIOR TECHNICAL ASSISTANT	
P. K. PANDEY DIRECTOR	

Test report compiled by C.Veeranjaneyulu, Senior Technician.

13. APPLICANT'S COMMENTS

No comments received from the applicant.

