

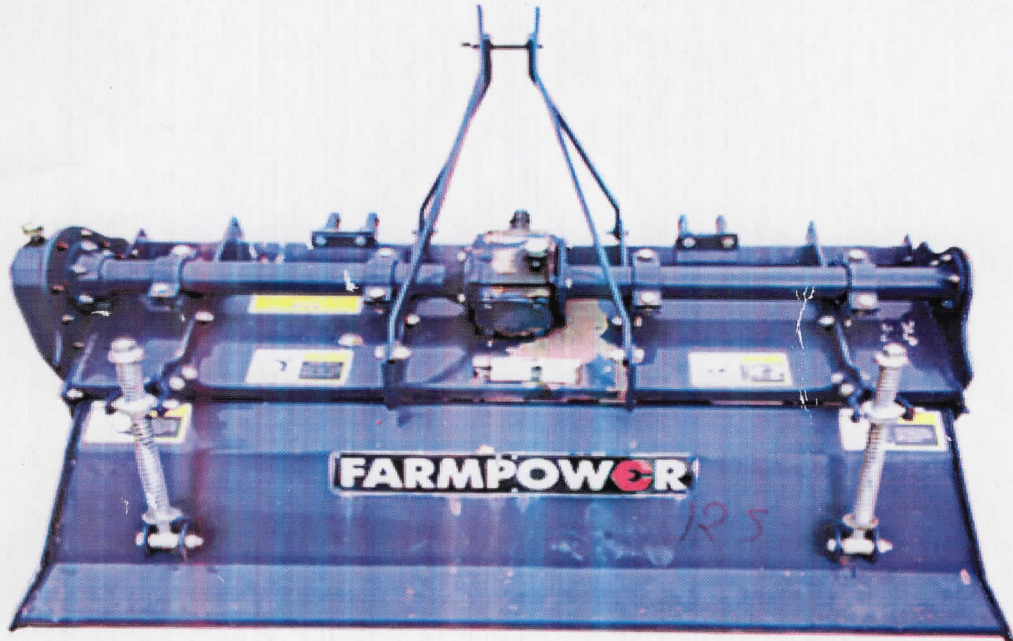
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व्यावसायिक परीक्षण रिपोर्ट
COMMERCIAL TEST REPORT

संख्या/ No.: IMP-1006/2342/2019

माह/Month : August, 2019

THIS TEST REPORT VALID UP TO : 31st August, 2026



**ESCORTS, FPCSSG-125 FARMPower, 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

ट्रैक्टर 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

7. FIELD PERFORMANCE TEST

The field tests of the implement for dry land operation was conducted for 38.0 hours to assess the performance of the implement. The performance of implement is reported in **Annexure-I**

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

Summary of Field Performance Test

Sl. No.	Parameters/operations	Dry land operation
I	II	III
1.	Tractor used	Escorts-26 (Brand – FARMTRAC)
2.	Gear used	L-2
3.	Type of soil (Refer IS:7926-1975)	Sandy loam
4.	Average soil moisture (%)	6.70 to 14.2
5.	Bulk density of soil (g/cc)	1.66 to 1.90
6.	Average speed of operation (kmph)	1.86 to 1.92
7.	Avg. wheel slip (%)	2.03 to 3.77
8.	Average depth of cut (cm)	9.0 to 10.1
9.	Avg. working width (cm)	128 to 142
10.	Area covered (ha/h)	0.200 to 0.231
11.	Time required for one ha (h)	4.33 to 5.00
12.	Field efficiency (%)	82.3 to 90.9
13.	Fuel consumption	
	l/h	2.26 to 3.41
	l/ha	10.61 to 16.65
14.	Average PTO power utilized (kW)	NR

7.1 Dry land operation**7.1.1 Rate of work**

- i) The rate of work was recorded as 0.200 to 0.231 ha/h, and the speed of operation varied from 1.86 to 1.92 kmph.
- ii) The time required to cover one hectare was recorded as 4.33 to 5.00 h.

7.1.2 Quality of work

- i) The depth of operation was recorded as 9.0 to 10.1 cm.
- ii) Average working width was observed as 128 to 142 cm.
- iii) Field efficiency was observed as 82.3 to 90.9 %.

7.2 Labour requirement

In all, two skilled operators are needed to ensure continuous operation of machine for day long period.

7.3 Wear analysis (on mass basis)

Wear of hatchet blades (on mass basis) was measured and recorded in ensuing table:

12.	Hardness of blade material, HRC	38 (Min.)	47.4 to 50.2	Conforms
13.	Safety clutch/device (shear bolt) in PTO drive shaft	Must be provided	Provided	Conforms
14.	Rotavator stand	Must be provided	Provided	Conforms
15.	Guard over propeller shaft	Must be provided	Not provided	Does not conform
16.	Sheet metal	AS36/IS 2062	--	--
17.	Marking/labeling of machine	The labeling plate should be riveted on the body of machine having Name and address of manufacturer, County of origin, Make, Model, Year of manufacture, Serial number, Type, Size, required size of prime mover (kW)	Provided	Conforms
18.	Literature	Operator manual, service manual and parts catalogue should be provided	Provided	Conforms

11. COMMENTS AND RECOMMENDATIONS

- 11.1** The specifications of implement hitch, does not conform in toto to the 4468 (Part-1)1997. Hence, it is recommended that implement should be provided with the hitch conforming to relevant Indian Standards.
- 11.2** 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.
- 11.3** 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.
- 11.4** Safety guard on P.T.O. drive shaft is not provided. It **MUST** be looked into.
- 11.5** The working width of rotavator does not conform to the requirement of Critical Technical Specifications. It **MUST** be looked into.
- 11.6** The number of blade does not meet the requirement of Critical Technical Specifications. It **MUST** be looked into.
- 11.7** The outer diameter of rotor shaft does not meet the requirement of Critical Technical Specifications. It **MUST** be looked into.
- 11.8** The rotor diameter with blade does not meet the requirement of Critical Technical Specifications. It **MUST** be looked into.

11.9 Technical literature:-

Operator cum service manual with parts catalogue was supplied with rotavator during testing.

The operator manual should be updated as per IS 8132-1999

TESTING AUTHORITY

R. K. NEMA SENIOR AGRICULTURAL ENGINEER	<i>Reu</i>
P. K. PANDEY DIRECTOR	<i>Y3n - msh</i>

12. APPLICANT'S COMMENTS

Para No	Our reference	Applicant's comments
12.1	11.1	We will take care.
12.2	11.2	We will take care to achieve standard dimensions.
12.3	11.4	Will take care in future supplies.
12.4	11.9	We will take care.
12.5	P-2-SI.No.-5/P-19 SI.No.-10(15)	Will take care in future supplies.

