

व्यावसायिक परीक्षण रिपोर्ट
COMMERCIAL TEST REPORT

संख्या/ No.: MOWER-01/2353/2019

माह/Month: September, 2019

THIS TEST REPORT VALID UP TO : 30th SEPTEMBER, 2026



**BCS, ROTEX XT5 DISC MOWER
(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

MOWER-01/2353/2019	BCS, ROTEX XT5 DISC MOWER (TRACTOR MOUNTED) (COMMERCIAL)
--------------------	---

7. FIELD PERFORMANCE TEST

The field tests of the implement was conducted for 28.52 hours to assess the performance of the implement. The performance of implement is reported in **Annexure-I & II**
Observations of field performance test are summarized in the ensuing table:

Summary of Field Performance Test

Sl. No.	Parameters/operations	
I	II	III
1.	Tractor used	Mahindra 555 DI Power +
2.	Gear used	L -3
3.	Type of soil	Sandy loam
4.	Height of stubble before operation(cm)	15.9 to 20.4
5.	Height of stubble After operation(cm)	5.3 to 6.3
6.	Mass of stubble in one m ² area before operation(gm)	449 to 566
7	Mass of stubble in one m ² area after operation(gm)	152 to 221
8	Straw length (cm)	8.8 to 42.6
9	Loose straw mass before operation in one meter m ² area (gm)	480 to 938
10	Straw mass in one m ² area after operation (gm)	702 to 1107
11	Loose straw length before operation (cm)	9.3 to 56.5
12	Average speed of operation (kmph)	6.42 to 7.01
13	Avg. working width (cm)	184 to 200
14	Area covered (ha/h)	0.801 to 1.073
15	Time required for one ha (h)	0.93 to 1.25
16	Field efficiency (%)	66.4 to 77.3
17	Residual load (t/ha)	9.76 to 14.69
18	Fuel consumption	
	l/h	4.63 to 5.43
	l/ha	4.45 to 6.71
19	Average PTO power utilized (kW)	14.32

7.1 Quality of work

- Height of stubble after operation was observed as 5.3 to 6.3 cm
- Mass of stubble in one m² area after operation was observed as 152 to 221 gm
- Straw mass in one m² area after operation was observed as 702 to 1107 gm

7.2 Rate of work

- i) The rate of work was recorded as 0.801 to 1.073 ha/h, and the speed of operation varies from 6.42 to 7.01 kmph.
- ii) The time required to cover one hectare was recorded as 0.93 to 1.25 h.
- iii) Average PTO power utilized by the machine was observed as 14.32 kW
- iv) Residual load was observed as 9.76 to 14.69 t/ha

7.3 Labour requirement

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

7.4 Wear analysis (on mass basis)

Wear of hatchet blades (on mass basis) was measured after 28.52 hrs. of field operation and recorded in ensuing table:

Percentage wears of cutting blades on mass basis:

Sl. No.	Initial mass of blade (g)	Mass of blade after 28.52 hr. of operation (g)	Difference of weight (g)	Percentage of wear (%) after 28.52 hr.	Percentage of wear on hour basis (%)
1.	127	120	7	5.51	0.19
2.	126	120	6	4.76	0.17
3.	127	119	8	6.30	0.22
4.	126	119	7	5.56	0.19
5.	125	116	9	7.20	0.26
6.	124	116	8	6.45	0.23
7.	126	119	7	5.56	0.19
8.	126	119	7	5.56	0.19
9.	124	115	9	7.26	0.25
10.	123	114	9	7.32	0.26

8. EASE OF OPERATION & ADJUSTMENTS

No noticeable difficulty was observed during the operation and adjustment of disc mower.

9. DEFECTS, BREAKDOWN AND REPAIRS

No noticeable defect observed during field test.

10. COMMENTS AND RECOMMENDATIONS

- 10.1** Labeling plate is not provided on machine. Only a sticker is provided with inadequate information.

The labeling plate **MUST** be provided on machine with following information :

MOWER-01/2353/2019	BCS, ROTEX XT5 DISC MOWER (TRACTOR MOUNTED) (COMMERCIAL)
--------------------	---

- Name and address of Manufacturer
- Make
- Model
- Size
- Country of origin
- Year of manufacturer
- Chassis Serial Number.
- Recommended P.T.O speed of prime mover, (rpm)
- Maximum P.T.O power required, kW.

- 10.2** The specifications of implement hitch, does not conform in toto to the IS: 4468 (Part-1)-1997. It should be looked into.
- 10.3** Dimensions of PIC of implement does not conform in toto to IS: 4931-1995 and therefore, it should be looked into for corrective action.
- 10.4** The safety device on propeller shaft is not provided. It **MUST** be provided.
- 10.5** **Technical literature:-**
Instruction book & Parts catalogue provided by applicant with machine during the testing.
However the instruction book should be updated as per IS: 8132-1999.

TESTING AUTHORITY

R. K. NEMA SENIOR AGRICULTURAL ENGINEER	<i>Re</i>
P. K. PANDEY DIRECTOR	<i>Uzn- DUSK</i>

11. APPLICANT'S COMMENTS

Para No	Our reference	Applicant's comments
11.1	10.1	In future supplies we will provide labeling plate as recommended
11.2	102 to 10.7	Corrective actions are being taken and better available solution will be implemented

