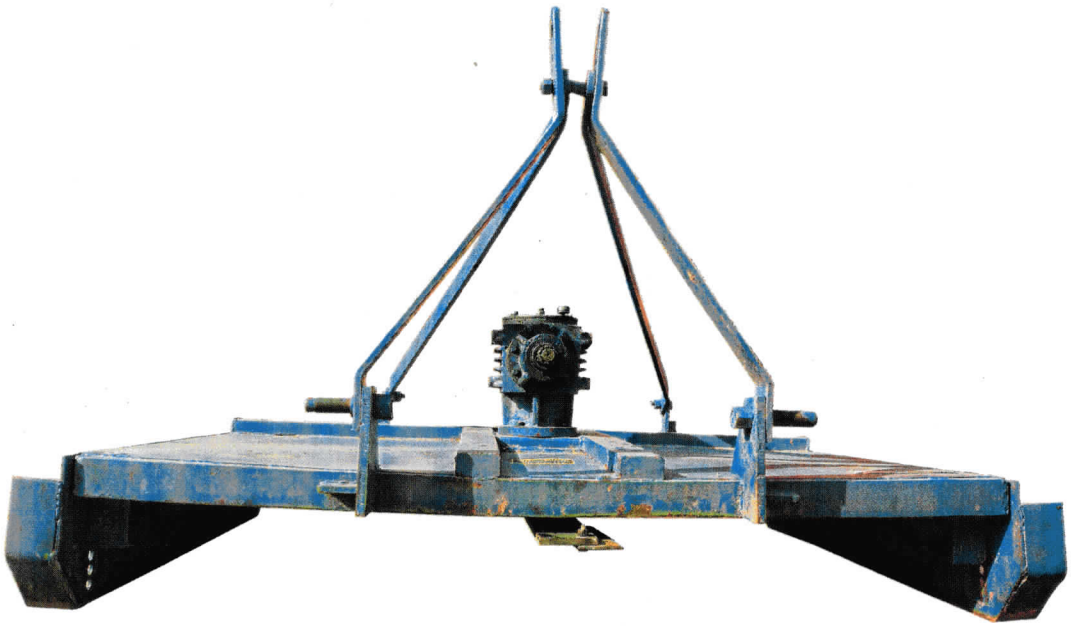
व्यावसायिक परीक्षण रिपोर्ट
COMMERCIAL TEST REPORT

संख्या/ **No.: IMP-1033/2621/2020**
माह/**Month : December, 2020**

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



SONALIKA, SLRS-1.8, ROTARY SLASHER (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
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[ISO 9001:2015 CERTIFIED]

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WORKMANSHIP AND FINISH OF BLADE :-			
7.2.1	The blade shall be ground on its non beveled side	Satisfactory	Conforms
7.2.2	The blades shall be free from flaws, seams, scratches, cracks, pits and other defects. All fins, burrs and sharp edges, other than the cutting edge shall be removed. The cutting edge shall be sharpened ready for use	Satisfactory	Conforms
7.2.3	The finished blade shall be given a coat of any suitable mineral jelly or any other corrosion preventives.	Coat of preventive material is given	Conforms

8. MARKING AND PACKING OF BLADE:-			
10.1	**Each blade shall be marked with the following particulars :-**		
	(a) Manufacturers name and/ or recognized trade mark	**Not marked**	**Does not conform**
	(b) Size code	**Not marked**	**Does not conform**
	(c) Thickness, and	**Not marked**	**Does not conform**
	(d) Batch code number	**Not marked**	**Does not conform**

9. FIELD PERFORMANCE TEST

The field tests was conducted for 22.36 hours for harvesting of paddy stubble to assess the performance of the implement with Farmtrac 60 FT Tractor.

The no load engine speed of tractor was speed adjusted to 1862 rpm and observations are summarized in Table-2 & Table-3.

Table -2

SUMMARY OF CROP PARAMETERS

S.No	Parameters	Range
1	Variety of crop of paddy stubble	PR 27 P31 and PR-28 P67
2	Period between harvesting and slashing	2 to 6 days
3	Moisture content of stubble (Wb) (%)	27.2 to 34.9
4	Avg. height of stubble (before operation), mm	280.0 to 362.0
5	Number of tillers per hill sq/m	148.4 to 209.4

9.1 The Slasher was operated under dry field conditions the results are reported in Table-3.

SUMMARY OF CROP PARAMETERS

Table-3

S.No	Parameters	Range
1	Tractor used	Farmtrac 60 FT
2	Gear used	L-3
3	Engine speed (rpm) No load On load	 1862 NR
4	Avg. Forward speed (kmph)	5.32 to 5.46
5	Avg. Width of cut (m)	1.33 to 1.40
6	Avg. Stubble height (mm) Before operation After operation	 280.0 to 362.0 71.0 to 76.0
7	Avg. Mass Of Stubble (g/m^2) Before operation After operation	 590.0 to 925.0 30.6 to 121.4
8	Avg. area covered (ha/h)	0.588 to 0.621
9	Avg. time required for one ha (h)	1.61 to 1.70
10	Avg. loose straw length before operation (mm)	270.0 to 559.5
11	Avg. straw length after operation (mm)	224.0 to 298.5
12	Avg. fuel consumption :- -l/h -l/ha	 3.24 to 4.29 5.49 to 6.90
13	Avg. field efficiency , %	77 to 87

9.1.1 Rate of work

i) The average speed of Rotary Slasher was recorded as 5.32 to 5.45 kmph

ii) The average area slashing by the machine was recorded as 0.588 to 0.621 ha/h area time required to cover one hectare was recorded as 1.61 to 1.70 h.

9.1.2 Quality of work

i) The average stubble height after operation was recorded as 71 to 76 mm.

ii) The average mass of stubble after operation was recorded as 30 to 121 g/m^2.

9.1.3 Labour requirement

Two skilled labours are required for operating the machine continuously.

9.2 WEAR OF BLADES

S.No.	Initial Mass (g)	Final Mass (g)	Percentage of Wear	
			After 23.11 h	Per hour
i)	1393.9	1378.7	1.09	0.05
ii)	1271.3	1256.6	1.16	0.05

The hourly percentage wear of blades on mass basis was recorded as 0.05 %.

10. EASE OF OPERATION & ADJUSTMENTS

Rotary Slasher 10 Nos of chain in rear middle portion of machine were hitting the rotary blade while in operation.

11. DEFECTS, BREAKDOWN AND REPAIRS

No noticeable defect occurred in the Rotary Slasher during the test.

12. CRITICAL TECHNICAL SPECIFICATION

Deferred till 31.03.2021 vide Ministry O.M. No 13-13/2020 M&T, (I&P) dated 22.12.2020

13. SUMMARY OF OBSERVATIONS, COMMENTS AND RECOMMENDATION

13.1 The dimension of three point linkage of implement does not conform, in toto, to the requirement of IS: 4468 (Part-1)-1997 and therefore, It may be looked into for corrective action.

13.2 The Dimension of PTO yoke bore does not conform in toto, to the requirement of IS: 4931-1995 and therefore, it may be looked in to for corrective action.

13.3 Provision against overload on PTO drive shaft is not provided. It **MUST** be provided.

13.4 The guard over propeller shaft is not provided. It **MUST** be provided.

13.5 The grade of grease is not specified. It **MUST** be specified.

13.6 The chemical composition of blades does not conform in toto, to the requirement of IS:1511-1979. This needs to be locked in to for corrective action.

13.7 The Rotary Slasher 10 Nos. of Chain in rear middle portion of machine were hitting the rotary blade while in operation. It **MUST** be looked into for corrective action.

13.8 The marking and packing of blade does not conform fully, as per the requirement of IS: 1511-1979 and therefore, It may be looked into corrective action.

13.9 Technical literature:-

One booklet entitled "Owner's manual" was provided for reference during test. The same, however, needs to be updated as per IS-8132-1999

TESTING AUTHORITY

SANJAY KUMAR AGRICULTURAL ENGINEER	
P. K. PANDEY **DIRECTOR**	

Draft test report compiled by Sh. Deny Hasnu, Senior Technician

14. APPLICANT'S COMMENTS

Para No.	Our Reference	Applicant's comments
14.1	13.1,13.5,13.7, 13.8 & 13.9	We will take care the same in our regular production end.
14.2	13.2,13.3,13.4 &13.6	We will take care the same in our regular production/vendor end.