व्यावसायिक परीक्षण रिपोर्ट (प्रारंभिक)
COMMERCIAL TEST REPORT
(Initial)

संख्या/No.: RME/NERFMTTI, Chariali/
01/01/560
माह / Month: January 2026

THIS TEST REPORT IS VALID UPTO 31.01.2033

KISANKRAFT, KK-STB-050, STUBBLE SHAVER

सत्यमेव जयते

भारत सरकार
GOVERNMENT OF INDIA
कृषि एवं किसान कल्याण मंत्रालय
MINISTRY OF AGRICULTURE AND FARMERS WELFARE
कृषि एवं किसान कल्याण विभाग
DEPARTMENT OF AGRICULTURE AND FARMERS WELFARE
उत्तर पूर्वी क्षेत्र कृषि यंत्र प्रशिक्षण एवं परीक्षण संस्थान
NORTH EASTERN REGION FARM MACHINERY TRAINING & TESTING INSTITUTE
बिश्वनाथ चारिआलि, जिला - बिश्वनाथ(असम)
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[AN ISO 9001:2015 CERTIFIED INSTITUTION]

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4.1 General:

Make	:	KisanKraft
Model	:	KK-STB-050
Name and address of manufacturer	:	Weima Agricultural Machinery Co. Ltd. Area B, Luohuang Industry Zone, Jiangjin District, Chongqing, China
Name and address of applicant	:	KisanKraft Limited, NO. 4, 1st Main, 7-A cross, Maruthi Layout, Dasarahalli, HAF Post, Hebbal, Bangaluru-560 024 (Karnataka)
Name of machine	:	Stubble Shaver
Type of machine	:	Self propelled, Walk behind
Working size of machine (mm)	:	645
Year of manufacture	:	2023
Serial no. of machine	:	KK240627WM0126

4.2 Details of prime mover:

Make (apa)	:	KisanKraft
Model (apa)	:	180F
Type	:	Four stroke, single cylinder, air cooled, spark ignition engine
Year of manufacture	:	2023
Serial number	:	KK240618WM0080
Country of origin	:	**CHINA**
Recommended high idle speed (rpm)	:	3900 ±60
Recommended low idle speed (rpm)	:	1380-2200
Recommended rated speed (rpm)	:	3600
Rated power observed (kW)	:	**5.96**
Rated power declared (apa) (kW)	:	6.00

SUMMARY OF FIELD PERFOMANCE TEST			
Sr. No.	Parameters		Observations
1	Type of field	:	Combine harvested paddy field
2	Forward speed of operation (kmph)	:	1.46 to 1.75
3	Av. stubble height before operation (mm)	:	257 to 359
4	Av. stubble height after operation (mm)	:	31 to 53
5	Av. straw cut length (mm)	:	88 to 136
6	Av. width of cut (m)	:	0.59 to 0.63
7	Area covered (ha/h)	:	0.076 to 0.096
8	Time required for one ha (h)	:	10.35 to 13.11
9	Field efficiency (%)	:	82.4 to 89.0
10	Av. stubble mass per m^2(before operation) (g)	:	896 to 964
11	Av. stubble mass per m^2(after operation) (g)	:	113 to 151
12	Shaver efficiency (%)	:	84.1 to 87.4
13	Fuel consumption		
	l/h	:	1.30 to 1.50
	l/ha	:	14.55 to 19.67

13.1 Rate of work

- Rate of work was recorded as 0.076 to 0.096 ha/h and the forward speed of operation varied from 1.46 to 1.75 kmph.
- Time required to cover one hectare was recorded as 10.35 to 13.11 h.

13.2 Quality of work:

- Av. straw cut length was recorded as 88 to 136 mm.
- Working width was observed as 0.59 to 0.63 m.
- Field efficiency was found as 82.4 to 89.0 %.
- Shaver efficiency was recorded as 84.1 to 87.4 %.

13.3 Adequacy of power of prime mover:

The power of prime mover was found adequate.

13.4 Wear Analysis of rotor blades:

Sr. No.	Initial mass (g)	Final mass (g)	Loss of mass (g)	Percentage wear of rotor blades	
				After 25.50 hr	Per hour
1	195.0	190.67	4.33	2.22	0.08
2	195.0	190.50	4.50	2.31	0.09
3	195.1	190.00	5.10	2.61	0.10
4	195.0	188.39	6.61	3.39	0.13
5	195.0	190.03	4.97	2.55	0.10
6	195.0	191.28	3.72	1.91	0.07

The hourly rate of wear of blade on mass basis after field operations was recorded as 0.07 to0.13 %.

14. EASE OF OPERATION AND ADJUSTMENTS

No difficulties were observed in operation and adjustment of the machine during the field test.

15. DEFECTS, BREAKDOWNS AND REPAIRS

No defect or breakdown was observed during entire course of test.

16. COMPONENTS / ASSEMBLY INSPECTION AND ASSESSMENT OF WEAR

16.1 Engine:
The Engine and other assemblies were dismantled after 40.2 hours of operation.

16.1.1 Cylinder:

Cylinder	Cylinder bore dia (mm)						Max. Permissible wear limit (mm)
	Top position		Middle positon		Bottom position		
	Thrust side	Non Th rust side	Thrust side	Non Thrust side	Thrust side	Non Thrust side	
1	80.02	80.02	80.02	80.01	80.01	80.01	80.25

16.1.2 Piston:

Piston dia., mm				Max. Permissible wear limit at skirt (mm)	Clearance between piston & cylinder liner at the skirt of the piston, mm	
Top (above top compression ring)		At skirt				
Thrust side	Non-thrust side	Thrust side	Non-thrust side		As observed	Max. permissible limit, (mm
79.57	79.58	79.96	NR	79.35	0.05	0.42

*Not recorded due to piston design constraints.

16.1.3 Ring side clearance:

Piston Rings	Ring Side clearance (mm)	Max. Permissible wear limit (mm)
1st Compression ring	0.02	0.40
2nd compression ring	0.02	0.40
Oil ring	NR	0.40

*Not recorded due to ring design constraints.

RME/NERFMTTI, B. Chariali/01/01/560	KISANKRAFT, KK-STB-050 STUBBLE SHAVER	COMMERCIAL (INITIAL)

16.1.4 Ring end gap clearance:

Ring No.	Ring End gap (mm)			Max. Permissible wear limit (mm)
	At top	At middle	At bottom	
1st Compression ring	0.20	0.20	0.20	1.00
2nd compression ring	0.40	0.40	0.40	1.00
Oil ring	NA	NA	NA	1.00

16.1.5 Big end bearing:

Bearing no.	Dia of bearing (mm)	Dia of Crank pin (mm)	Clearance (mm)		Max. Permmissible wear limit (mm)	
			Diametrical	Axial	Diametrical	Axial
1	33.04	32.96	0.08	NA	0.20	0.90

16.1.6 Main bearing: Two Nos. of ball bearing 6206 were used.

Bearing No.	Diametrical clearance (mm)	Crankshaft end float (mm)	Max. permissible clearance limit(mm)	
			Diametrical clearance	Crankshaft end float
1.	Ball bearing	0.30	0.20	0.30
2.	Ball bearing			

16.1.7 Valve guide clearance:

Valve guide diameter (mm)		Valve stem diameter (mm)		Valve guide clearance (mm)		Max. Permissible wear limit (mm)	
Inlet	Exhaust	Inlet	Exhaust	Inlet	Exhaust	Inlet	Exhaust
6.57	6.57	6.56	6.56	0.01	0.01	0.15	0.15

Valve, guide and timing gear:-

Any marked sign of overheating of valves	:	None
Pitting of seat/faces of valves	:	None
Any visual damage of teeth of timing gears	:	None
Condition of ignition coil & magneto	:	Normal

16.2 Clutch: No noticeable defects were observed.

16.3 Transmission gears: No noticeable defects were observed.

16.4 Rotary unit: The rotary unit was dismantled and all the components were found in normal condition.

17. CRITICAL TECHNICAL SPECIFICATIONS
(Vide Ministry's letter No. 13-9/2019-(M&T) (I&P)-Part dated 26.04.2019)

Not Applicable

18. COMMENTS AND RECOMMENDATIONS

18.1 Name and address of manufacturer and year of manufacture were not provided on the labeling plate of the machine. This should be looked into for corrective action.

18.2 The engine was not marked with manufacturer name or trade-mark, rated power and rated speed which does not fulfill the requirement of IS 7347-1974 (Amended 2021). This may be looked into.

18.3 The hardness of rotary blades does not conform to the requirement of IS: 6025-2024. This may be looked into for corrective action.

18.4 The amplitude of mechanical vibration marked as (*) is on drastically higher side and is directly concerned with operator's health, safety and comfort. Besides, it is also adversely affecting the useful life of machine components. In view of above, this deserves to be given top priority for corrective action.

18.5 Noise at operator's ear level was observed on higher side against danger limit of 90 dB(A) as specified by the International Labour Organization (ILO) for continuous exposure of 8 hours per day. This calls for reduction in noise level to improve the operator's comfort and safety.

18.6 Adequacy of Literature:

The following literature in English language was provided for reference during testing:

- Operator's/ Service manual
- Parts catalogue

It is recommended to bring out the manual in Hindi and other vernacular languages as per IS: 8132-2023.

RME/NERFMTTI, B. Chariali/01/01/560	KISANKRAFT, KK-STB-050 STUBBLE SHAVER	COMMERCIAL (INITIAL)

TESTING AUTHORITY

(M.R. PATIL)
SENIOR AGRICULTURAL ENGINEER

(P. KAMALABAI)
DIRECTOR

Draft test report compiled by - **Sh. Rahul, Senior Technical Assistant**

19. APPLICANT'S COMMENTS

Sr. No.	Clause No.	Applicant's Comments
19.1	18.1	We will take corrective action against the same.
19.2	18.2	We will take corrective action against the same.
19.3	18.3	We will take corrective action against the same.
19.4	18.4	We will take corrective action against the same.
19.5	18.5	We will take corrective action against the same.
19.6	18.6	We will take corrective action against the same.

ANNEXURE

FIELD PERFORMANCE RESULTS

Place of Test: Village- Sadarpur, Dist. - Karnal, Haryana

Sr. No.	Parameters	I	II	III	IV
1	Date of test	23.10.2025	24.10.2025	25.10.2025	26.10.2025
2	Net test duration (h)	5.50	7.83	7.50	4.67
3	Field length (m)	56.5	48.5	62.7	65.2
4	Type of field	Combine harvested paddy field			
5	No. of hills per m^2	12	18	18	17
6	No. of tillers per hill	17	15	12	13
7	Av. forward speed (kmph)	1.46	1.72	1.73	1.75
8	Av. stubble height before operation (mm)	341	359	346	257
9	Av. stubble height after operation (mm)	53	31	46	50
10	Av. straw cut length(mm)	113	88	136	92
11	Av. width of cut (m)	0.59	0.60	0.63	0.62
12	Area covered (ha/h)	0.076	0.088	0.096	0.089
13	Time required for one ha (h)	13.11	11.33	10.35	11.20
14	Field efficiency (%)	88.6	85.5	89.0	82.4
15	Av. stubble mass per m^2(before operation) (g)	950	964	896	880
16	Av. stubble mass per m^2(after operation) (g)	151	124	113	120
17	Shaver efficiency (%)	84.1	87.1	87.4	86.4
18	Fuel Consumption				
	l/h	1.50	1.40	1.50	1.30
	l/ha	19.67	15.86	15.53	14.55