

व्यावसायिक परीक्षण रिपोर्ट  
COMMERCIAL TEST REPORT

संख्या/ No.: Comb- 283/2924/2022  
माह/Month: October, 2022

**THIS TEST REPORT VALID UP TO : 31<sup>st</sup> October, 2029**



**KAIRA, LC08K, SELF PROPELLED  
COMBINE HARVESTER (TRACK TYPE)**



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**

उत्तरी क्षेत्र कृषि मशीनरी प्रशिक्षण एवं परीक्षण संस्थान

**Northern Region Farm Machinery Training and Testing Institute**

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**18. SUMMARY OF OBSERVATIONS****18.1 Engine Performance Test:**

Brake Power (kW)	Engine speed (rpm)	Fuel consumption			Specific energy, kWh/l
		l/h	kg/h	Specific, kg/ kWh	
<b>i) Maximum power – Two hour test:</b>					
71.7	2424	21.19	17.48	0.244	3.38
<b>ii) Power at rated engine speed: ( 2600 rpm)</b>					
70.5	2600	21.70	17.90	0.254	3.25

**Table2- : ENGINE TEST (HIGH AMBIENT)**

Brake Power (kW)	Engine speed (rpm)	Fuel consumption			Specific energy, kWh/l
		l/h	kg/h	Specific, kg/ kWh	
<b>a) Maximum power-</b>					
70.0	2424	21.16	17.30	0.247	3.31
<b>b) Power at rated engine speed: (2600 rpm)</b>					
68.6	2600	21.16	17.30	0.252	3.24

**18.2 Field Test:****18.2.1 Summary of field tests:**

The results of the field test are summarized below:

Sr. No.	Parameters	Observed Range
		Paddy harvesting
1.	Speed of operation (kmph)	2.18 to 2.59
2.	Area covered (ha/h)	0.286 to 0.374
3.	Fuel consumption:	
	- (l/h)	6.00 to 7.40
	- (l/ha)	16.06 to 23.93
4.	Crop throughput (t/h)	6.48 to 9.06
5.	Grain breakage in main grain outlet (%)	0.60 to 1.03
6.	Header losses (%)	0.61 to 0.86
7.	Total non-collectable losses (%)	0.7 to 1.1
8.	Total collectable losses (%) (unthreshed + broken from main outlet)	1.2 to 1.8
9.	Total processing losses (%)	1.2 to 1.9
10.	Threshing efficiency (%)	98.8 to 99.5
11.	Cleaning efficiency (%)	97.2 to 98.3

**18.3 Conformity to Indian Standard**

- (i) IS: 6025-1982 (Reaffirmed 2014)-Specification for : **Does not conform in toto**  
knife section for harvesting machine.
- (ii) IS: 6024-1983 (Reaffirmed 2014)-Specification for : **Does not conform in toto**  
guards for harvesting machines.
- (iii) IS: 10378-1982 (Reaffirmed 2016)-Specification of : **Does not conform in toto**  
knife back for harvesting machine.

**20. COMMENTS AND RECOMMENDATIONS****20.1 Mechanical vibration**

The amplitude of mechanical vibration of components marked as (\*) in chapter 13 of this test report are observed to be on higher side. This calls for providing suitable remedial measures to dampen the vibration in order to improve the operational comfort and service life of various components & sub-assemblies.

**20.2 Field performance test**

No noticeable defect and breakdown observed during operation of combine harvester.

**20.3 Ease of operation and safety provisions**

No noticeable difficulties observed during operation of combine harvester.



**20.4 Literature supplied with the machine.**

The following literatures were provided by the applicant during the test.

- i) Operators manual
- ii) Spare parts catalogue
- iii) Service manual
- iv) Engine operator manual
- v) Engine service manual
- vi) Engine spare parts catalogue

However, the manual needs to be updated as per IS: 8132-1999

**TESTING AUTHORITY**

Er. SANJAY KUMAR AGRICULTURAL ENGINEER	
Dr. MUKESH JAIN DIRECTOR	 10.10.2022

Draft test report compiled by: Er. Dharmendra Kumar, Technical Assistant

**21. APPLICANT'S COMMENTS**

No specific comments received from the applicant.