

व्यावसायिक परीक्षण रिपोर्ट
COMMERCIAL TEST REPORT

संख्या/ No.: COMB - 309/2998/2023
माह/Month: April, 2023

THIS TEST REPORT VALID UP TO : 30th April, 2030



**MALKIT-897 DELUXE
SELF PROPELLED COMBINE HARVESTER**



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
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14. FIELD TEST

14.1 Combine harvester was operated in field for 25.07 and 27.91 hours for wheat and paddy harvesting respectively. During the test, available varieties of crop were harvested to assess the field performance of combine with regard to quality of work, rate of work, fuel consumption, safety and soundness of construction etc. The crop and atmospheric conditions during field test are given in **Appendix - II & IV** respectively.

The crop parameters recorded during the test for all crops are as under:-

Crop Parameters

Sr. no.	Parameters		Observations	
			Wheat	Paddy
1.	Plant height, cm	:	66 to 91	90 to 135
2.	Number of tillers/m ²	:	263 to 405	199 to 300
3.	Length of ear head, cm	:	5 to 12	15 to 40
4.	Straw/grain ratio	:	0.8 to 2.1	1.2 to 1.9
5.	Moisture, %			
	- Grain	:	10.5 to 11.5	12.9 to 14.1
	- Straw	:	7.0 to 7.8	67.1 to 70.1

The results of field performance test of wheat and paddy crops harvesting are summarised in Table - 5 and presented in detail in **Appendix - II to V**.

Table- 5 : SUMMARY OF LOSSES & EFFICIENCIES OBSERVED DURING FIELD PERFORMANCE TEST.

Crop variety	Collectable losses (%) (Max.)	Non-collectable losses (%) (Max.)	Total processing losses (%) (Max.)	Threshing efficiency (%) (Min.)	Cleaning efficiency (%) (Min.)	Grain breakage in main grain tank (Max.) (%)	Forward speed (kmph)	Area covered (ha/h)	Fuel consumption		Grain out put (kg/h)	Crop through-put (t/h)
									(l/h)	(l/ha)		
1	2	3	4	5	6	7	8	9	10	11	12	13
WHEAT												
WH-1270	2.5	0.6	2.70	98.7	96.8	1.59	2.36 to 2.47	0.532 to 0.656	7.43 to 8.22	11.35 to 13.97	5392 to 8005	5.45 to 8.66
PADDY												
ND-67	2.4	0.4	2.44	98.6	96.5	1.83	1.70 to 1.87	0.495 to 0.524	7.73 to 8.36	14.74 to 16.79	3017 to 4949	7.47 to 10.93



15. DEFECTS, ADJUSTMENTS, BREAKDOWNS AND REPAIRS

No defects and breakdown was observed during the test.

19. COMMENTS AND RECOMMENDATIONS

- 19.1 Mechanical vibration**
The amplitude of mechanical vibration of components marked as (*) in chapter 13 of this report are observed 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.
- 19.2 Field performance test**
No noticeable defect observed during field test.
- 19.3 Hardness and chemical composition**
Hardness & chemical composition of knife guard and knife back is not within the limits specified in the relevant standards. It should be looked into for corrective action at regular production level.
- 19.4** Safety against the accidental start of engine is not provided on combine harvester. It **MUST** be provided.
- 19.5** Individual brake pedals for LHS & RHS brake is not provided. It may be provided.
- 19.6** Height of slow moving vehicle emblem from ground does not meet the requirement of CMVR. It **MUST** be looked into.
- 19.7 Literature supplied with the machine**
The following literature were provided by the applicant
i) Operator's manual of Combine Harvester
ii) Service manual of Combine Harvester
iii) Parts catalogue of Combine Harvester
iv) Operator manual for engine
However, the manual, needs to be updated as per IS: 8132-1999

TESTING AUTHORITY

Er. SANJAY KUMAR AGRICULTURAL ENGINEER	
Dr. MUKESH JAIN DIRECTOR	 12.04.2023

20. APPLICANT'S COMMENTS

We will take care of all these next production level.

