

व्यावसायिक परीक्षण रिपोर्ट
COMMERCIAL TEST REPORT

संख्या/ No.: COMB - 310/2999/2023
माह/Month: April, 2023

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



**TRISPAN, 4LZ-5.0Z
SELF PROPELLED COMBINE HARVESTER
(TRACK TYPE)**



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
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/>

15. FIELD TEST

15.1 The combine harvester was operated in field for 50.98 hours (excluding run-in 3.60 h) for paddy harvesting. 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**

The crop parameters recorded during the test for paddy crops is given below:

Crop Parameters

Sl. No.	Parameters		Observations
			Paddy
1.	Plant height, cm	:	103 to 125
2.	Number of tillers/m ²	:	240 to 298
3.	Length of ear head, cm	:	20 to 26
4.	Straw/grain ratio	:	1.9 to 2.3
5.	Moisture, %		
		- Grain :	12.5 to 13.4
		- Straw :	62.7 to 65.9

The summary of losses and efficiencies observed during field performance test with paddy crop is summarised in Table 4 and presented in detail in **Appendix – III**

TABLE-4: SUMMARY OF LOSSES & EFFICIENCIES OBSERVED IN 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 tank (Max) (%)	Forward speed (kmph)	Area covered (ha/h)	Fuel consumption		Grain output (kg/h)	Crop throughput (t/h)
									(l/h)	(l/ha)		
CR-1009 (Sub)	1.10	0.64	1.23	99.0	98.2	0.13	2.97 to 3.05	0.356 to 0.427	7.27 to 8.00	17.92 to 21.27	2351 to 3013	7.60 to 8.75

15.2 Unloading of grains

The time to unload the grain tank ranged from 50 to 73 seconds in paddy operation.

15.3 Time required for daily maintenance

The average labour required for daily maintenance was approximately two-man hours.

15.4 Harvesting of any other crop

Not done, as not recommended.

16. DEFECTS, ADJUSTMENTS, BREAKDOWNS AND REPAIRS

No noticeable defect or breakdown was observed during the test.



COMB-310/2999/2023	TRISPAN, 4LZ-5.0Z SELF PROPELLED COMBINE HARVESTER (TRACK TYPE) (COMMERCIAL)
--------------------	---

	iii)	Knife back should meet the requirement of IS:10378-1982	Non evaluative	The knife back shall be manufactured from Carbon Steel having minimum carbon content of 0.35 % (R)	--	C= 0.25	Does not conform
--	------	---	----------------	--	----	---------	-------------------------

19.2 Acceptance criteria in case of Breakdowns/Defects as per clause 4.2 of IS:15806-2018					
XVII. Break down (critical, major & minor)					
Sr. No.	Category of breakdowns	Category (Evaluative/ Non evaluative)	Requirements as per OM	As observed	Whether meets the requirements (Yes/No)
1.	Critical	Evaluative	No critical breakdown	None	Yes
2.	Major	Evaluative	Not more than two and neither of them should be repetitive in nature	None	Yes
3.	Minor	Evaluative	Not more than five and frequency of each should not be more than two	None	Yes
4.	Total breakdown	Evaluative	In no case total no of (major + minor) breakdowns exceed five	None	Yes

20. COMMENTS AND RECOMMENDATIONS

20.1 Mechanical vibration

The amplitude of mechanical vibration of components marked as (*) in chapter 14 of this test 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.

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 were observed during operation of combine harvester.

20.4 Hardness and chemical composition

Hardness & chemical composition of knife blade and knife guard are not within the limit specified in relevant standards. It should be looked into for corrective action at regular production level.

COMB-310/2999/2023	TRISPAN, 4LZ-5.0Z SELF PROPELLED COMBINE HARVESTER (TRACK TYPE) (COMMERCIAL)
--------------------	--



20.5 Literature supplied with the machine.

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

- i) Operators' manual & service manual
- ii) Spare parts catalogue

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

TESTING AUTHORITY

SANJAY KUMAR AGRICULTURAL ENGINEER	
Dr. MUKESH JAIN DIRECTOR	 13.04.2023

Test report is compiled by: Sh. C. Veeranjanyulu, Senior Technician

21. APPLICANT'S COMMENTS

We have noted your comments and recommendation. We will take corrective action in future products of Trispan harvester, Model: 4LZ-5.0Z.

