

व्यावसायिक परीक्षण रिपोर्ट
COMMERCIAL TEST REPORT

संख्या/ No.: IMP-1062/3000/2023
माह/Month: April, 2023

THIS TEST REPORT VALID UP TO : 30th April, 2028



**TRANS-MECH SYSTEMS, TMS-4000
INFIELDER (FIRST BATCH)**



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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[ISO 9001:2015 CERTIFIED]

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Elapsed time, Min.		Cumulative drop in height of unloading box, mm
05	:	03
10	:	05
15	:	06
20	:	09
25	:	12
30	:	14
Leakage of hydraulic fluid from any part of hydraulic system	:	None
Working of hydraulic system	:	Satisfactory

11. FIELD TEST

- 11.1** The Infelder was operated in field for 27.05 hours (excluding running-in of 1.0 h) during collection of sugarcane billets from the sugarcane harvester and unloading of sugarcane billets. During the test, the billets of sugarcane (265 variety) were collected in trailer and the performance with field performance with regard to quality of work, rate of work, fuel consumption, safety and soundness of construction etc. were assessed. The crop and atmospheric conditions during field test with sugarcane crops are given in **Annexure – II**. The crop parameters recorded during the test for sugarcane crops are as under:-

1. Furrow dimensions, m
 - Length : 75.00 to 85.00
 - Height : 0.12 to 0.13
 - Row spacing : 1.17 to 1.23
2. Dimensions of billets, cm
 - Length : 180.20 to 191.60
 - Diameter : 28.90 to 30.30
3. Atmosphere condition
 - Ambient temp., °C : 26.10 to 29.50
 - Relative humidity, % : 50.00 to 53.00
 - Pressure, kPa : 96.70

11.2 Rate of work and fuel consumption:

- a. During the field test, the speed of operation varied from 2.61 to 2.73 kmph.
- b. The average fuel consumption varied from 2.08 to 2.49 l/h.
- c. The fuel consumption per ton of crop collected varied from 0.081 to 0.102 l/t.
- d. Average box filling time was observed as 0.16 to 0.17 hr, whereas average unloading time was recorded as 49.00 to 51.33 Sec.
- e. Average sugarcane billets carrying capacity of infelder varied from 4.12 to 4.20 ton.



12. EASE OF OPERATION AND SAFETY PROVISION:

- i) The controls provided around the operator are within easy reach, but not labeled with symbols as per Indian standard. Therefore it is recommended that the symbols as per the requirement of IS: 6283-1998 may be provided.
- ii) No inconvenience to the operator was observed during field test of infielder.
- iii) Overall performance in field was satisfactory.

13. LABELLING OF INFIELDER:

The labeling plate is provided with information about the make, model, serial number, prime mover, year of manufacture and address of the manufacturer.

14. TIME REQUIRED FOR DAILY MAINTENANCE

The average labour required for daily maintenance was approximately one man hour.

15. DEFECTS, ADJUSTMENTS, BREAKDOWNS AND REPAIRS

No noticeable defects and break down was observed during the test.

16. SUMMARY OF OBSERVATIONS, COMMENTS AND RECOMMENDATIONS

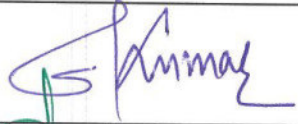
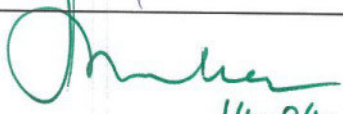
- 16.1 Track width adjustment of trailer axle wheel is not provided and its wheels run on ridge, and the compaction in ridge was observed in the field. It may be provided to adjust track width to run the infielder in furrow.
- 16.2 Slow moving vehicle emblem was not provided on the machine. It should be provided at rear side of the machine.
- 16.3 Hydraulic pump capacity and relief valve opening pressure has been changed in First Batch (Present Model) with respect to base model.
- 16.4 The machine is designed to use for collection of sugarcane billets from harvester and deliver it to transport vehicle. It is not for general use on road for transportation.
- 16.5 Make of hydraulic distributor is changed in Batch (Present model).



IMP-1062/3000/2023	TRANS-MECH SYSTEMS, TMS-4000 INFIELDER (FIRST BATCH)
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Manufacturer	:	M/s Trans-Mech Systems, Plot No. C-13 & C-14, M.I.D.C, Baramati, Pune-413133 (Maharashtra) INDIA	M/s Trans-Mech Systems, Plot No. C-13 & C-14, M.I.D.C, Baramati, Pune-413133 (Maharashtra) INDIA	Not change
Model	:	TMS-4000	TMS-40C0	Not change
Chassis. no.	:	1122J15	INF3235K23	Changed
Capacity, kg	:	--	4 Tone	--
Total weight, kg	:	--	5620	--
Required, hp	:	--	50 and above	--
Year of manufacture	:	--	2023	--

TESTING AUTHORITY

Er. SANJAY KUMAR AGRICULTURAL ENGINEER	
Dr. MUKESH JAIN DIRECTOR	 14.04.2023

Test report is compiled by Er. V.S. Shinde, Senior Technical Assistant

19. APPLICANT'S COMMENTS

No specific comments was received from the applicant.

