

प्रारंभिक व्यावसायिक परीक्षण रिपोर्ट

संख्या/No. CSIR/CMERI/FMTTC/2024/031

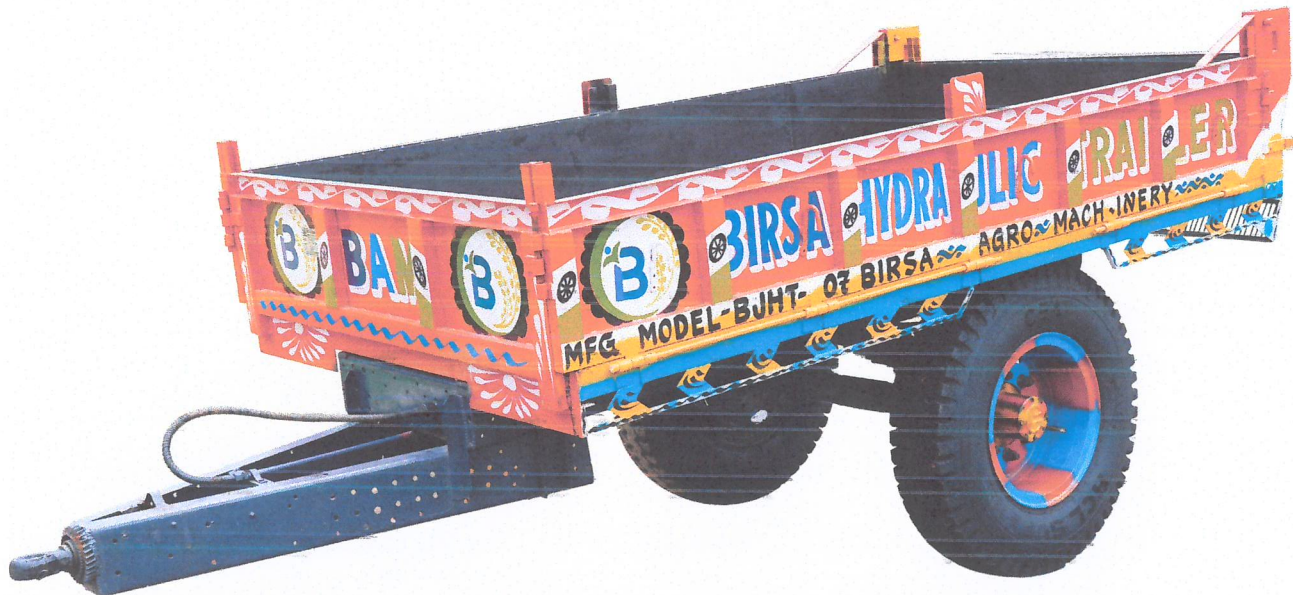
INITIAL COMMERCIAL TEST REPORT

माह/Month: June, 2024

THIS TEST REPORT VALID UP TO

:

31ST MAY, 2031



**BIRSA AGRO MACHINERY
HYDRAULIC TRAILER (BJHT-07)**



Government Of India



कृषि मशीनरी प्रशिक्षण और परीक्षण केंद्र
Farm Machinery Training and Testing Centre
सीएसआईआर- केन्द्रीय यांत्रिक अभियांत्रिकी अनुसंधान संस्थान
CSIR - Central Mechanical Engineering Research Institute

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4. SPECIFICATION

4.1 General

Name of manufacturer	: BIRSA AGRO MACHINERY
Name of applicant	: BIRSA AGRO MACHINERY
Name of Machine	: Birsa Hydraulic Trailer
Type	: Hydraulic, Tipping
Make	: BIRSA AGRO MACHINERY
Model	: BJHT – 07
Serial No.	: 0025
Year of manufacture	: 2024
Recommended tractor power (hp)	: 39 & above
Unload mass (ton)	: 1.16
Load recommended (ton)	: 5
Gross mass (ton)	: 6.2
Height of hitch from ground level, (mm)	: 590
Inner size of platform, (L × W × H), (mm)	: 3160×1760×435
Inner volume of platform, (mm ³)	: 2.44 × 10 ⁹



Fig. 1 Schematic view of hydraulic tractor trailer

- | | |
|-----------------------|--------------------------|
| 1. Side door | 5. Wheel axle |
| 2. Hydraulic oil pipe | 6. Transportation wheels |
| 3. Hitch | 7. Hub assembly |
| 4. Trailer chassis | |

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6. HAULAGE PERFORMANCE TEST

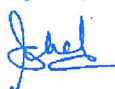
Type of trailer	:	Single axle, Two wheel
Date of test	:	26.06.2024
Type of track	:	Tar macadam, level
Mass of trailer (tons)	:	1.16
Gross mass of trailer (tons)	:	4.94
Height of hitch above ground level (mm)	:	495
Gear used during test	:	H-4
Average travel speed (km/h)	:	25.70 to 29.98
Average fuel consumption:	:	
	(in L/h)	5.8 to 6.2
	(mL/km/ton)	47.23 to 52.61
Average distance travel per liter of fuel consumption (km)	:	4.28 to 4.78
General observations:		
Maneuverability of tractor-trailer combination	:	Satisfactory

7. LOAD MAINTANANCE TEST

(Trailer bucket in fully raised position)

Date of test	:	18.06.2024
Operating conditions	:	Trailer parked on level ground
Hydraulic oil temperature before start of test (°C)	:	35
Initial height from ground level (mm)	:	3298
Elapsed time (min.)		Cumulative drop in height of unloading box (mm)
5		5
10		3
15		4
20		3
25		4
30		3
Leakage of hydraulic fluid from any parts of hydraulic system		None
Working of hydraulic system		Satisfactory

Report prepared by



Report verified by

Subrata Kr Mandal

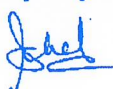
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11. COMMENTS AND RECOMMENDATIONS

- 11.1) The lightening arrangements of trailer is not provided as per IS 8213:2000. This should be looked into for corrective actions.
- 11.2) Dimensional requirements of axle (semitrailer) does not conform in full. It should Conform as per IS 8213:2000.
- 11.3) The specification of trailer does not conform in full, to the IS 8213:2000. This should be looked into the corrective action.
- 11.4) The dimension of ring does not meet, in full the requirements of IS 11270:1985 (Reaffirmed 2019). This should be taken care or corrective action.

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Report prepared by



Report verified by

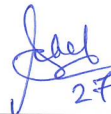
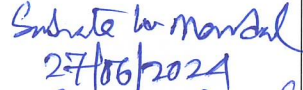
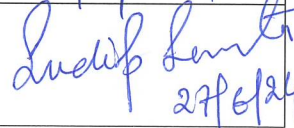


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12. TECHNICAL LITERATURE

The operator, maintenance & parts manual of sprayer was not provided, it must be provided conforming to as per IS: 8132:1999.

TESTING AUTHORITY

Report Prepared by	Sr. Technical Officer, CSIR-CMERI Farm Machinery Testing Centre	 27/06/2024
Report Approved by	In-Charge, CSIR-CMERI Farm Machinery Testing Centre	 27/06/2024
Report Approved for release by	Head, Business Development Unit, CSIR-CMERI, Durgapur	 27/06/24

13. APPLICANT'S COMMENTS

Para No.	Our Reference	Applicants Comment
13	11.1 to 11.4	Noted, corrective actions will be taken against the given comments & Recommendations from 11.1 to 11.4



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