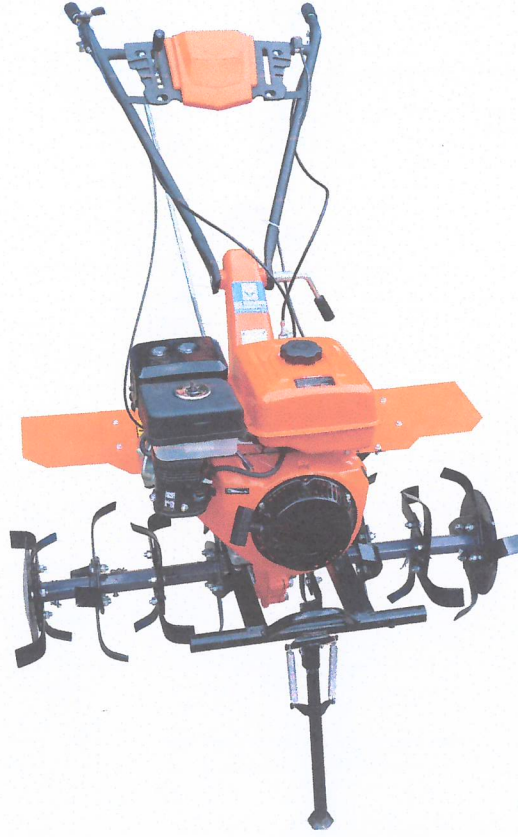


प्रारंभिक व्यावसायिक परीक्षण रिपोर्ट
INITIAL COMMERCIAL TEST REPORT

संख्या/No. CSIR/CMERI/FMTTC/2024/074
माह/Month: December, 2024

THIS TEST REPORT VALID UP TO : 30th NOVEMBER, 2031



**MAA BAGALAMUKHI POWER WEEDER
(MODEL: MBAM-PW-07)**



कृषि मशीनरी प्रशिक्षण और परीक्षण केंद्र
Farm Machinery Training and Testing Centre
सीएसआईआर- केन्द्रीय यांत्रिक अभियांत्रिकी अनुसंधान संस्थान
CSIR - Central Mechanical Engineering Research Institute
महात्मा गांधी एवेन्यू, दुर्गापुर
Mahatma Gandhi Avenue, Durgapur
पश्चिम बंगाल - 713209
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E-mail: fmttc.cmeri@gmail.com

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CSIR/CMERI/FMTTC/2024/074	MAA BAGALAMUKHI AGRO MACHINERIES PVT. LTD. POWER WEEDER (MODEL – MBAM-PW-07) (INITIAL COMMERCIAL TEST)
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4 SPECIFICATIONS

4.1 General

Type of machine	: Self-Propelled, Walk Behind Type
Make	: Maa Bagalamukhi Agro Machineries Pvt. Ltd.
Model	: MBAM-PW-07
Serial No.	: PW – 008
Name and address of manufacturer	: Maa Bagalamukhi Agro Machineries Pvt. Ltd. Khata no. 173, Plot no. 541/1495 SH 19, Gohira, Balasore, Odisha-756058.
Year of manufacture	: 2023
Country of origin	: Not Mentioned

4.2 Details of prime mover

Name and address of manufacturer	: SAI SINO INTERNATIONAL HONG KONG
Type	: Single Cylinder, 4 Stroke, Air Cooled, Spark Ignition Engine
Make	: SAI SINO INTERNATIONAL HONG KONG
Model	: 177F
Sr. No.	: MB6-00017
Country of origin	: China
Year of manufacture	: 2023
Engine speed (Manufacturer's recommended setting), (rpm)	
High idle speed*	: 3800 ± 50
Low idle speed*	: 2200 ± 50
Rated speed, (rpm)*	: 3600
No load engine speed for field operation, (rpm)*	: 3600
Speed at maximum torque, rpm	: 3562
Max Torque Observed (Nm)	: 17.11
Rated Power Observed	: 6.00 kW/ 8.00 hp
Max Power Observed	: 6.01 kW/ 8.05 hp

*As per Details provided by the applicant

Report prepared by

[Signature]

Report verified by

[Signature]

CSIR/CMERI/FMTTC/2024/074	MAA BAGALAMUKHI AGRO MACHINERIES PVT. LTD. POWER WEEDER (MODEL – MBAM-PW-07) (INITIAL COMMERCIAL TEST)
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12 FIELD TEST

The field test under dry land condition was conducted for 20.95 h. The field performance tests were conducted at the rated 3600 rpm. Multiple test trials were conducted in sandy loam soil at the FMTTC, CSIR-CMERI farm, Durgapur. The results of the field test for dry land operation are summarized in Table-5.

Crop parameters

- i) Type of weed : Seasonal Grass
- ii) Height of weed, mm : 8 to 20

Table 5: Summary of field performance test

Sl. No.	Parameter	Range
i	Type of soil	Sandy Loam
ii	Average Soil moisture (%)	12.3 to 19.3
iii	Average Bulk density of soil (g/cc)	1.66 to 1.89
iv	Average Speed of operation (kmph)	1.25 to 2.04
v	Average depth of cut (cm)	10.93 to 11.27
vi	Average Width of cut (m)	1.12 to 1.14
vii	Average Area covered (ha/h)	0.09 to 0.17
viii	Average Time required for one ha (Hr.)	5.99 to 11.42
ix	Average Fuel consumption	
	L/hr.	1.1 to 2.8
	L/ha	8.7 to 22.5
x	Average Weeding efficiency (%)	94.8 to 98.6
xi	Average Field efficiency (%)	66.6 to 84.6

The detailed field performance testing data is given in Annexure I.

13 ADJUSTMENT, DEFECTS, BREAKDOWNS & REPAIRS

No noticeable breakdown occurred during test.

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[Signature]

Report verified by

[Signature]

Farm Machinery Training and Testing Centre, CSIR-Central Mechanical Engineering Research Institute, Durgapur THIS REPORT IS VALID UPTO: 30th November, 2031	20 of 26
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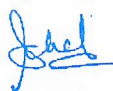
CSIR/CMERI/FMTTC/2024/074	MAA BAGALAMUKHI AGRO MACHINERIES PVT. LTD. POWER WEEDER (MODEL – MBAM-PW-07) (INITIAL COMMERCIAL TEST)
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23.	Depth control mechanism	Must be provided	Provided	Conforms
24.	Provision for transport Wheels	Must be provided	Provided	Conforms
25.	Provision for cover on Exhaust	Must be provided	Provided	Conforms
26.	Direction of exhaust emission away from Operator	Must be provided	Provided	Conforms
27.	Marking/labeling machine	The labeling plate should be riveted on the body of machine having Name and address of manufacturer & Applicant, Country of origin, Make, Model, Year of manufacturer, Serial number, Engine number, Engine HP, rated rpm & SFC.	Provided	Does not Confirm in toto.
28.	Literature	Operator manual, service manual and Parts catalogue should be provided.	Provided	Does not Confirm in toto.

16 COMMENTS & RECOMMENDATION

- 16.1** The amplitude of mechanical vibration marked as (*) under section 7, are on higher side. It is not just directly concerned with operator's health, safety and comfort, but also adversely affects the useful life of the components. It needs to be corrected.
- 16.2** Material of the blade does not confirm as per IS Standard. It needs to be looked into.
- 16.3** The hardness of the blade does not confirm the critical specification requirement. This needs to be considered for corrective actions.
- 16.4** Material of rotor shaft does not confirm the requirement as per IS standards. It needs to be looked into.
- 16.5** Marking/Labeling machine plate partially confirm the critical specification requirement. This needs to be considered for corrective actions.
- 16.6** The parts catalogue is not provided. It needs to be provided as per IS standards.

Report prepared by



Report verified by



Farm Machinery Training and Testing Centre, CSIR-Central Mechanical Engineering Research Institute, Durgapur THIS REPORT IS VALID UPTO: 30th November, 2031	24 of 26
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CSIR/CMERI/FMTTC/2024/074	MAA BAGALAMUKHI AGRO MACHINERIES PVT. LTD. POWER WEEDER (MODEL – MBAM-PW-07) (INITIAL COMMERCIAL TEST)
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17 TECHNICAL LITERATURE

The following literatures are provided by the applicant during the test along with the application form.

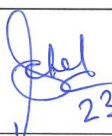
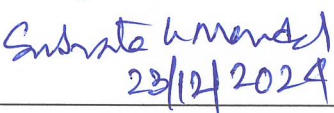
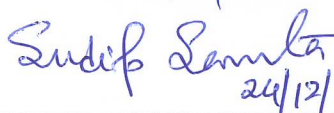
- a) User's or service manual

But the following literatures are not provided by the applicant during the test along with the application form.

- b) Parts' catalogue

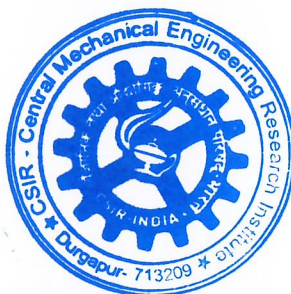
These manuals need to be provided as per IS: 8132-1999.

TESTING AUTHORITY

Report Prepared by	Sr. Technical Officer, CSIR-CMERI Farm Machinery Testing Centre	 23/12/2024
Report Verified & Approved by	In-Charge, CSIR-CMERI Farm Machinery Testing Centre	 23/12/2024
Report Approved for release by	Head, Business Development Unit, CSIR-CMERI, Durgapur	 24/12/24

18 APPLICANT'S COMMENTS

Para No.	Our Reference	Applicant's Comments
18	16.1 to 16.6	Noted, we will take necessary steps with your recommendation in future production.



Farm Machinery Training and Testing Centre, CSIR-Central Mechanical Engineering Research Institute, Durgapur THIS REPORT IS VALID UPTO: 30th November, 2031	25 of 26
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