

प्रारंभिक व्यावसायिक परीक्षण रिपोर्ट  
INITIAL COMMERCIAL TEST REPORT  
THIS TEST REPORT VALID UP TO :

संख्या/No. CSIR/CMERI/FMTTC/2023/022  
माह/Month: September, 2023  
30<sup>th</sup> SEPTEMBER, 2030



**ASPEE BRUSH/ WEED CUTTER  
(MODEL – BC/CG 430B)**



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  
**West Bengal - 713209**  
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Name of the Machine : Brush / Weed Cutter  
 Type of Machine : Engine Operated Brush Cutter  
 Make : ASPEE  
 Model : BC/CG 430B  
 Brand Name : ASPEE  
 Manufactured by : ASPEE Agro Equipment Pvt. Ltd.  
 Off. Chikhli Road, Antalia Village, Taluka – Gandevi,  
 Dist.- Navsari, Taluka – Gandevi, Bilimora  
 Gujarat – 396321  
 Test Conducted at : Farm Machinery Training and Testing Centre  
 CSIR- Central Mechanical Engineering Research Institute,  
 M G Avenue, Durgapur, Pin – 713209, West Bengal.

**THIS TEST REPORT VALID UP TO: 30/09/2030**

[vide DAC&FW OM No. 13-24/2018 – M&T (I&P) dated 19.09.2018]

Report No.: CSIR/CMERI/FMTTC/2023/022

Month: September

Year: 2023



**CSIR - Central Mechanical Engineering Research Institute,  
Durgapur - 713209  
(W.B.), INDIA**

**1. SCOPE OF TEST**

As such there is no specific Indian Standard/test, code available for testing of engine operated Brush Cutter. The test procedure was therefore evolved by the institute in the agreement with the applicant.

The scope of test was to check and assess the followings: -

**1.1 Laboratory test**

- Checking the specification and other data furnished by the applicant.
- Noise level measurement
- Mechanical vibration measurement
- Hardness & chemical analysis of critical components
- Wear analysis of critical components.

**1.2 Field test**

- Rate of work
- Quality of work
- Labor requirement
- Adequacy of power of prime mover
- Ease of operation & adjustments
- Defects, breakdowns & repair

**2. TEST CODE/ PROCEDURE**

The guidelines have been taken from the following.

- IS: 11467:198 : Test code for cereal harvesting machine.
- IS: 6025:1982 : Specification for knife sections for harvesting machines
- ISO: 22867 : Forestry and gardening machine vibration test code for portable hand held machine which internal combustion engine-vibration at handles.
- ISO: 22868 : Forestry and gardening machinery noise test code for portable hand held machine with internal combustion engine-engineering method (Grade 2 accuracy).
- IS: 4905-2015 : Random Sampling and Randomization procedure (First Revision).



**15. TECHNICAL LITRATURE**

The operator, maintenance & parts manual of sprayer was provided during the test which found adequate, however, the manual should be updated as per IS: 8132:1999.

**TESTING AUTHORITY**

Report Prepared by	Sr. Technical Officer, CSIR-CMERI Farm Machinery Testing Centre	<i>[Signature]</i> 27/09/2023
Report Verified by	Scientist, CSIR-CMERI Farm Machinery Testing Centre	<i>[Signature]</i> 27.09.23
Report Approved by	In-Charge, CSIR-CMERI Farm Machinery Testing Centre	<i>[Signature]</i> 27/9/2023
Report Approved for release by	Head, Business Development Unit, CSIR-CMERI, Durgapur	<i>[Signature]</i> 29/9/23

**16. APPLICANT'S COMMENTS**

Para No.	Our Reference	Applicants Comments
16	14.1	Noted the same, we will take necessary corrective action, also we are providing ear plug for operator's safety.
	14.2	Noted the same, we will do needful to reduce mechanical vibration.
	14.3	Noted the same, we will take necessary corrective action,



Annexure -IFIELD PERFORMANCE RESULTS

Attachment used: With triangular (3-T) blade assembly

Place of test : CSIR-CMERI, Durgapur

Usage : Perennial grass cutting

Sl No.	Parameters	Test Trails		
		I	II	III
1	Date of Test	20.06.2023	22.06.2023	23.06.2023
2	Net Test Duration	2.82	3.07	3.84
3	Type of Grass	Perennial Weed	Perennial Weed	Perennial Weed
4	Avg. height of Grass (cm)	585	505	430
5	Avg. No. of grass stem per sq.m	239	312	211
6	Mass of grass per sq.m (kg)	0.92	0.81	0.97
7	Avg. dia of Grass (mm)	1.22	1.1	1.4
8	Mass of grass harvesting (kg/h)	16.1	18.2	19.6
9	Rate of Work (ha/h)	0.067	0.074	0.073
10	Time required for 1 ha (h)	33.53	27.38	23.33
11	Fuel Consumption			
	-l/h	2.63	2.55	2.29
	-l/ha	79.86	68.85	64.75

