

प्रारंभिक व्यावसायिक परीक्षण रिपोर्ट
INITIAL COMMERCIAL TEST REPORT

संख्या/No. CSIR/CMERI/FMTTC/2024/066

माह/Month: October, 2024

THIS TEST REPORT VALID UP TO

:

30th SEPTEMBER 2031



ICS WEED SLASHING BRUSH CUTTER
(MODEL – ICS YCM-430)



सत्यमेव जयते

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
महात्मा गांधी एवेन्यू, दुर्गापुर
Mahatma Gandhi Avenue, Durgapur
पश्चिम बंगाल - 713209
West Bengal - 713209
Website: <https://cmeri.res.in>

E-mail: fmttc.cmeri@gmail.com

Telephone: 9434592007 / 7001361295

Fax: +91-343-2546745

CSIR/CMERI/FMTTC/2024/066

ICS MERCHANDISE PVT. LTD.
WEED SLASHING BRUSH CUTTER
(MODEL NO.- ICS YCM-430)
(INITIAL COMMERCIAL TEST)

Name of the Machine : Weed Slashing Brush Cutter
Type of Machine : Self-Propelled Shoulder Type Brush Cutter
Make : ICS
Model : ICS YCM-430
Name and address of Manufacturer : ICS MERCHANDISE PVT. LTD.
#3679, Sir. M.V. Layout, 6th Block,
Near OXFORD Pu & Degree college
Bengaluru-560060, India
Name and address of Applicant : ICS MERCHANDISE PVT. LTD.
#3679, Sir. M.V. Layout, 6th Block,
Near OXFORD Pu & Degree college
Bengaluru-560060, India
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: 30TH September 2031
[vide DAC&FW OM No. 13-22/2020- M&T (I&P) dated 12.12.2023]



Report No.: CSIR/CMERI/FMTTC/2024/066 Month: October Year: 2024

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

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 September 2031

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5. SPECIFICATIONS

5.1 General

Name of the Machine	: Weed Slashing Brush Cutter
Type of Machine	: Self -Propelled Shoulder Type Brush Cutter
Make	: ICS
Model	: ICS YCM-430
Name and address of Manufacturer	: ICS MERCHANDISE PVT. LTD. #3679, Sir. M.V. Layout, 6th Block, Near OXFORD Pu & Degree college Bengaluru-560060, India
Name and address of Applicant	: ICS MERCHANDISE PVT. LTD. #3679, Sir. M.V. Layout, 6th Block, Near OXFORD Pu & Degree college Bengaluru-560060, India
Country of origin	: India
Serial no	: BC 4007/KA/2778/373/2024/BC 4007
Year of manufacturer	: 2024
Recommended use	: All kind of Weeds, Brushes, Paddy Harvesting

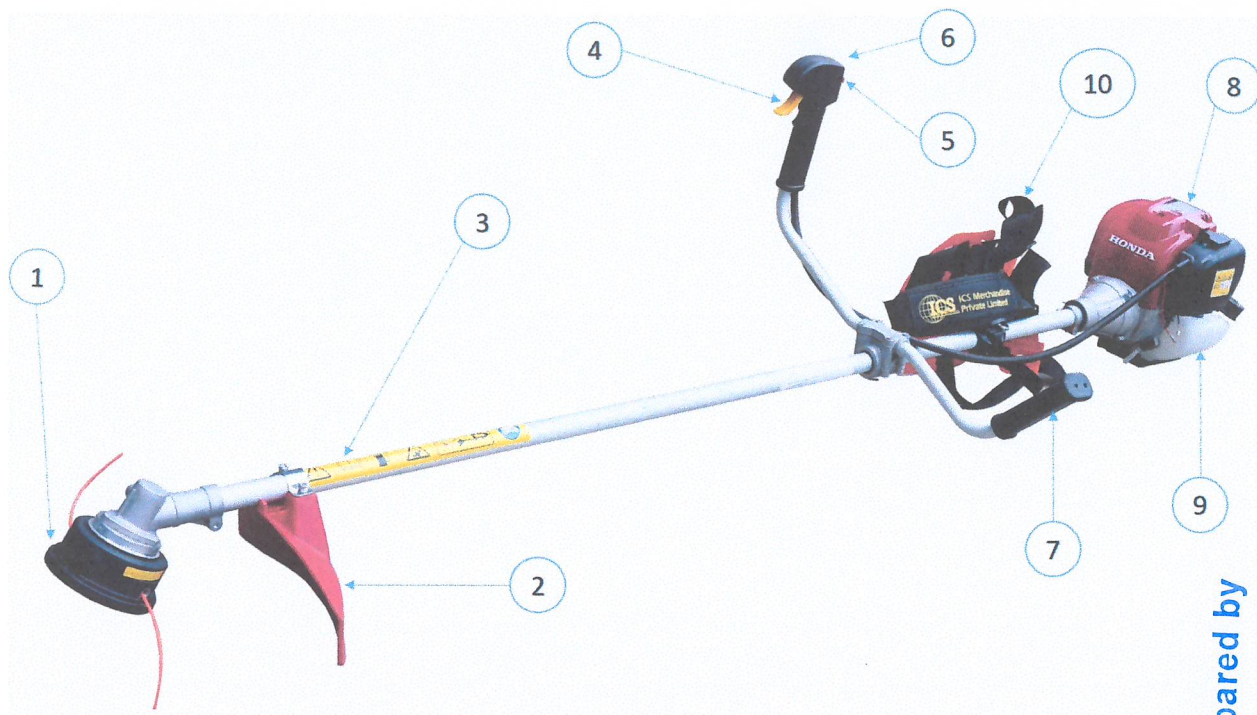


FIG. 2: SCHEMATIC VIEW OF BRUSH CUTTER / WEED SLASHER

- | | | |
|--------------------------------------|---------------------------|---------------|
| 1. Nylon rope | 2. Grass deflector | 3. Frame pipe |
| 4. Throttle cum clutch lever | 5. Engine stopping switch | 6. RHS handle |
| 7. LHS Handle | 8. Engine | 9. Fuel tank |
| 10. Hook for attaching shoulder belt | | |

Report verified by
Subrata Kumar Mandal

Report prepared by

[Signature]

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12.5 Wear analysis of critical components

Components	Duration of operation (h)	Initial length/mass (gm/mm)	Length Mass after operation (gm/mm)	Loss of length /mass (gm/mm)	Percentage wear (%)	Percentage wear on hour basis (%)
Nylon rope	10.50	7990	625	7365	92.18	8.8
Straight blade	11.82	515.63	442.85	72.78	14.11	1.2

13. EASE OF OPERATION, ADJUSTMENT AND SAFETY

No problem was observed during the test except, the fatigue was observed during the operation of the machine due to excessive mechanical vibration and noise.

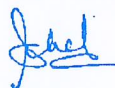
14. DEFECTS, BREAKDOWN AND REPAIR

No breakdown occurred during 23.32 hours of operation.

15. COMMENTS AND RECOMMENDATIONS

- 15.1 The noise level at the OEL lever is higher, which needs to be reduced to improve the operator's comfort and safety.
- 15.2 The mechanical vibration is on the higher side. It is not just directly affect the operator's health, safety, and comfort, but also adversely affect the useful life of the components. Corrective action needs to be taken to reduce the vibration level.
- 15.3 The chemical composition of cutter blade material partially meet the requirement as per IS:1511-79 (RA 2012). It needs to be updated.

Report prepared by



Report verified by

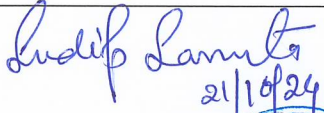


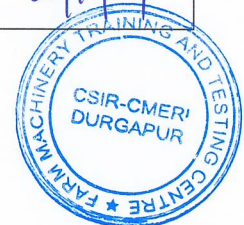
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16. TECHNICAL LITRATURE

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, with the inclusion of safety instructions regarding handling poisonous agrochemical and first aid.

TESTING AUTHORITY

Report Prepared by	Sr. Technical Officer, CSIR-CMERI Farm Machinery Testing Centre	 21/10/2024
Report Verified & Approved by	In-Charge, CSIR-CMERI Farm Machinery Testing Centre	 21.10.2024
Report Approved for release by	Head, Business Development Unit, CSIR-CMERI, Durgapur	 21/10/24



17. APPLICANT'S COMMENTS

Para No.	Our Reference	Applicants Comments
17	15.1 to 15.3	Regarding Noise level and Mechanical vibration we will take steps to decrease as per your guidelines. In the case of cutting blade also we will follow your suggestion mentioned in the draft.