

प्रारंभिक व्यावसायिक परीक्षण रिपोर्ट
INITIAL COMMERCIAL TEST REPORT

संख्या/No. CSIR/CMERI/FMTTC/2024/063

माह/Month: October, 2024

THIS TEST REPORT VALID UP TO

: 30th SEPTEMBER 2031



FORTUNE AGRO WEED SLASHING BRUSH CUTTER

(MODEL: FAI-900 DYNAMIC)



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/2024/063	FORTUNE AGRO IMPEX WEED SLASHING BRUSH CUTTER (MODEL NO.- FAI 900 DYNAMIC) (INITIAL COMMERCIAL TEST)
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Name of the Machine : Fortune Weed Slashing Brush Cutter
Type of Machine : Self-Propelled Shoulder Type Brush Cutter
Make : Fortune Agro
Model : FAI-900 DYNAMIC
Name and address of Manufacturer : Fortune Agro Impex
'Fortune House', No 343, 9th Block, Sir M. Visvesvaraya
Layout, Kengunte First Main Road, (Mallathahalli Lake
Road), Bangalore-560056
Name and address of Applicant : Fortune Agro Impex
'Fortune House', No 343, 9th Block, Sir M. Visvesvaraya
Layout, Kengunte First Main Road, (Mallathahalli Lake
Road), Bangalore-560056
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/2024/063 Month: October Year: 2024

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

Report prepared by

Subrata Kr Mandal

Report verified by

Subrata Kr Mandal

5. SPECIFICATIONS

5.1 General

Name of the Machine	: Fortune Weed Slashing Brush Cutter
Type of Machine	: Self- Propelled Shoulder Type Brush Cutter
Make	: Fortune Agro
Model	: FAI-900 DYNAMIC
Name and address of Manufacturer	: Fortune Agro Impex 'Fortune House', No 343, 9 th Block, Sir M. Visvesvaraya Layout, Kengunte First Main Road, (Mallathahalli Lake Road), Bangalore-560056
Name and address of Applicant	: Fortune Agro Impex 'Fortune House', No 343, 9 th Block, Sir M. Visvesvaraya Layout, Kengunte First Main Road, (Mallathahalli Lake Road), Bangalore-560056
Country of origin	: India
Serial no	: BC 4009/KA/2732/373/2024/BC 4009
Year of manufacturer	: 2024
Recommended use	: All kind of Weed / Brushes Paddy Harvesting

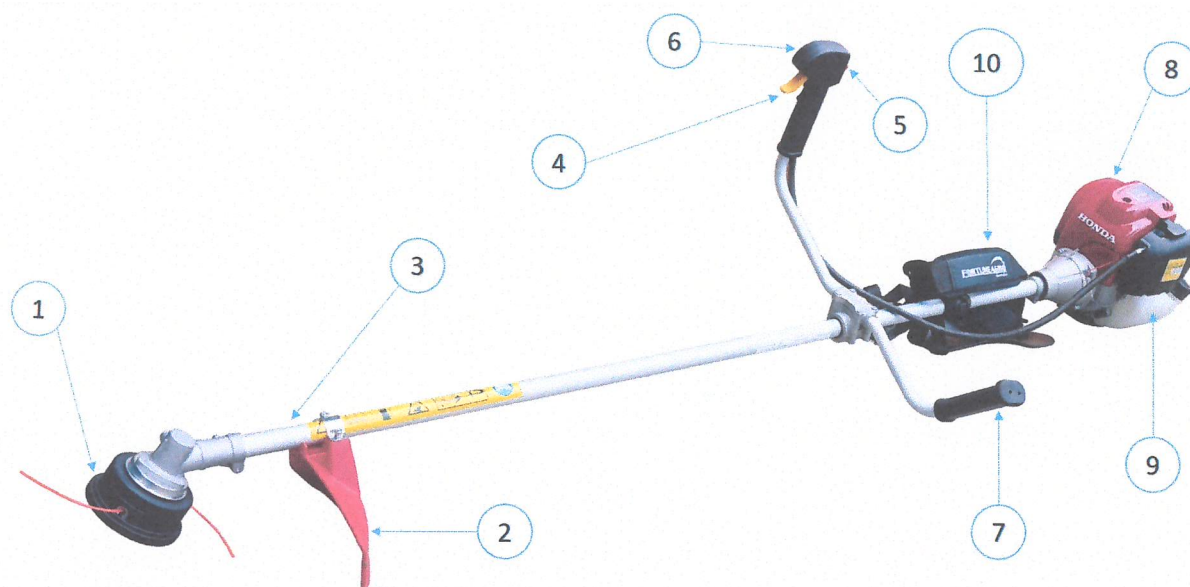


Fig. 2: Schematic View of Brush Cutter / Weed Slasher

- | | | |
|--------------------------------------|---------------------------|---------------|
| 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 prepared by

Subrata

Report verified by

Subrata kr Mandal

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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	10.53	7565	450	7115	94.05	8.9
Straight blade	10.67	404.82	354.65	50.17	12.39	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.

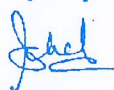
14. DEFECTS, BREAKDOWN AND REPAIR

No breakdown occurred during 22.20 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.

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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	<i>[Signature]</i> 21/10/2024
Report Verified & Approved by	In-Charge, CSIR-CMERI Farm Machinery Testing Centre	<i>[Signature]</i> 21.10.2024
Report Approved for release by	Head, Business Development Unit, CSIR-CMERI, Durgapur	<i>[Signature]</i> 21/10/24



17. APPLICANT'S COMMENTS

Para No.	Our Reference	Applicants Comments
17	15.1 to 15.3	With reference to Noise level and Mechanical vibration we will take care in next production to rectify these problems even in case of cutting Blade also