

THIS TEST REPORT IS VALID UP TO 31.12.2031



SOUTHERN AGRO ENGINE PVT LTD, VVBC52 BRUSH CUTTER



भारत सरकार

Government of India

कृषि एवं किसान कल्याण मंत्रालय

Ministry of Agriculture and Farmers Welfare

कृषि एवं किसान कल्याण विभाग

Department of Agriculture and Farmers Welfare

दक्षिणी क्षेत्र कृषि मशीनरी प्रशिक्षण एवं परीक्षण संस्थान

Southern Region Farm Machinery Training and Testing Institute

ट्रैक्टर नगर, गार्लदिन्ने-515 731, जिला: अनंतपुर (आं. प्र.)

Tractor Nagar, Garladinne-515 731, District: Anantapur (A.P.)

[An ISO 9001:2015 CERTIFIED INSTITUTE]

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Machine-696/1791	SOUTHERN AGRO ENGINE PVT LTD, VVBC52 BRUSH CUTTER	COMMERCIAL (ICT)
	THIS REPORT IS VALID UP TO 31.12.2031	

Manufacturer, (apa) : M/s Southern Agro Engine Private Limited,
#119, Bangalore High road, Pappanchatram,
Thiruvallur, Chennai – 600 123, Tamil Nadu.

Name of Applicant : The manufacturer

SOUTHERN AGRO ENGINE PVT LTD, VVBC52 BRUSH CUTTER

Report No.: Machine-696/1791

Month: **January**

Year: **2025**

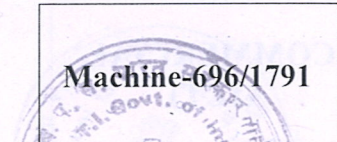


सत्यमेव जयते

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Type of test : COMMERCIAL (ICT)

Period of test : October, 2024 to December, 2024

Test Report No. : Machine-696/1791

Month / Year of release : January, 2025

- i) The results reported in this report are observed values and no corrections have been applied for atmospheric and site conditions.
- ii) The data given in this report pertain to the particular machine randomly selected by testing authority through virtual mode.
- iii) The results presented in this report do not in any way attribute to the durability of the machine.
- iv) This Test Report should not be reproduced in part or full without prior permission of the Director, Southern Region Farm Machinery Training & Testing Institute, Garladinne, Anantapur (A.P.).
- v) This is a report on Commercial Test of Brush Cutter named **"SOUTHERN AGRO ENGINE PVT LTD, VVBC52 BRUSH CUTTER"**. This report is valid up to 31.12.2031, Vide Ministry's O.M. No. 13-22/2020-M&T (I&P) dated 12.12.2023.

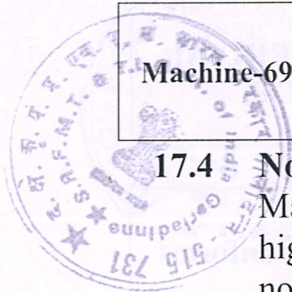
SELECTED CONVERSIONS

S. No.	Units	Conversion Factor
1	Force	
	1 kgf	9.80665 N
		2.20462 lbf
2	Power	
	1 hp	1.01387 metric hp (Ps)
		745.7 W
	1 Ps	735.5 W
	1 Kw	1.35962 Ps
3	Pressure	
	1 psi	6.895 kPa
	1 kgf/cm ²	98.067 kPa = 735.56 mm of Hg
	1 bar	100 kPa = 10 N/cm ²
	1 mm of Hg	1.3332 m-bar

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1	2	3	4	5	
24	Provision for grass deflector at the rear of the cutting mechanism	Must be provided	Provided	Conforms	
25	Provision for pad with shoulder belt to dampen the vibration	Must be provided	Provided	Conforms	
26	Provision for cover on exhaust	Must be provided	Provided	Conforms	
27	Direction of exhaust emission away from operator	Must be provided	Provided	Conforms	
28	Provision for safety kit (helmet, ear plug, mask, hand gloves, safety glass, protective cloth, safety shoes)	Must be provided	Provided	Conforms	
29	Marking/labelling of machine	The labeling plate should be riveted on the body of the 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	Address of manufacturer & country of origin, engine number, engine HP are not provided.	Does not conform	
30	Literature	Operator manual, service manual and parts catalogue should be provided	Provided	Conforms	

17. COMMENTS & RECOMMENDATIONS

- 17.1 The maximum power was observed as 1.46 kW under natural ambient condition against the declared value of 1.46 kW.
- 17.2 The safety provisions, as mentioned at **Para 5.14**, have been provided by the applicant for safety aspect of operators.
- 17.3 A fuel on/off knob may be considered for providing in the fuel system of engine.



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17.4 Noise measurement:

Max. Noise at operator's ear level was observed as 98 dB (A), which is on higher side, therefore suitable corrective action should be taken to reduce the noise level.

17.5 Mechanical Vibration:

The equivalent mechanical vibration on engine cover was observed to the extent of 205 micron. This should be looked into for dampening the vibration.

17.6 Hardness & Chemical Analysis:

The Hardness & Chemical Analysis of Triangular blade and circular disc are not as per requirement of the relevant code IS 6690:1981 (Reaffirmed 2012) & therefore it should be looked into for the corrective action.

17.7 Marking /labeling:

The labeling plate does not reveal all the required information. It is therefore recommended that a suitable labeling plate covering all essential components, interlaid, the following must be provided:

- i) Address of manufacturer
- ii) Country of origin
- iii) Engine number
- iv) Engine HP

17.8 Adequacy of literature supplied with the machine:

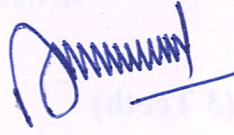
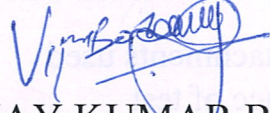
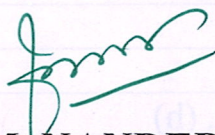
The Operator's manual cum parts catalogue of brush cutter and engine in English was supplied with the brush cutter for reference during the test. It is however, recommended that same may be revised and brought out as per IS: 8132- 1999 (Reaffirmed 2004) for the sake of user & technical personnel.

18. Applicant's Comments

Reference	Comments
17.4	We will improve in future product.
17.5	To overcome this vibration problem, we will provide vibration damper to arrest the vibration.
17.6	We will improve in future product as per requirement of IS 6690: 1981.
17.7	We will provide the all parameters in future product.
17.8	We will provide the operators manual of user and technical personnel in booklet form as per IS 8132:1999.

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TESTING AUTHORITY

 Er. PRAMOD YADAV AGRICULTURAL ENGINEER	 Er. VIJAY KUMAR BADAYA SENIOR AGRICULTURAL ENGINEER
 Dr. B.M. NANDEDE DIRECTOR	



ANNEXURE-I

FIELD PERFORMANCE RESULTS

Attachments used : Nylon rope
Place of test : Institute
Usage : For cutting the grass

Sl.No.	Parameters	No. of tests	
		I	II
1	Date of test	09.10.2024	10.10.2024
2	Net test duration, (h)	6.00	3.50
3	Intensity of grass	Dense	
4	Av. height of grass, (cm)	74	69
5	Av. no. of grass per m ²	365	378
6	Av. mass of grass per m ² , (kg)	0.565	0.545
7	Area harvested, (ha/h)	0.052	0.047
8	Av. time required for one ha, (h)	19.23	21.27
9	Av. mass of grass harvested, (kg/h)	49.82	50.27
10	Av. fuel consumption:		
	- l/h	0.95	0.09
	- l/ha	18.26	19.15