

व्यावसायिक परीक्षण रिपोर्ट
COMMERCIAL TEST REPORT

संख्या/ No.: Machine- 46/2980/2023
माह/Month: April, 2023

THIS TEST REPORT VALID UP TO : 30th April, 2028



**NEPTUNE, NBC-99H
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

उत्तरी क्षेत्र कृषि मशीनरी प्रशिक्षण एवं परीक्षण संस्थान

Northern Region Farm Machinery Training and Testing Institute

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[ISO 9001:2015 CERTIFIED]

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12. FIELD TEST

Field tests were conducted for 13.61 hours with triangular blade attachment and 12.16 hours with circular blade attachment. Detailed results of field tests are shown in Annexure-I & II and summarized in the ensuing table. Details about the operator are show in Annexure-III.

Sr. No.	Parameters	Seasonal Grass cutting	
		For nylon rope	For circular blade
1	Field condition	Level	Level
2	Intensity of grass	Medium	Medium
3	Number of grass/weed in 1 sq. m	79 to 190	57 to 111
4	Height of grass/weed, cm	06 to 47	67 to 261
5	Diameter of grass/weed, mm	0.50 to 3.40	3.20 to 12.40
6	Mass of grass cut (kg/h)	11.40 to 16.60	62.60 to 152.14
7	Area covered (Rate of work), ha/h	0.015 to 0.017	0.031 to 0.044
8	Time required for one hectare, h	58.82 to 66.67	22.73 to 32.26
9	Fuel consumption		
	l/h	0.50	0.49 to 0.53
	l/ha	29.41 to 33.33	12.50 to 16.13

12.1 Cutting using nylon rope assembly

12.1.1 Rate of work

- i) Area covered (rate of work) was observed as 0.015 to 0.017 ha/h.
- ii) Time required for one hectare was observed as 58.82 to 66.67 hours.
- iii) Mass of grass cut was observed as 11.40 to 16.60 kg/h.
- iv) No. of grass stem in one m² area was 79 to 190 .

12.1.2 Fuel consumption

Fuel consumption was observed as 0.50 l/h and 29.41 to 33.33 l/ha.

12.2 Cutting using circular blade

12.2.1 Rate of work

- i) Area covered (rate of work) was observed as 0.031 to 0.044 ha/h.
- ii) Time required for one hectare was observed as 22.73 to 32.26 h.
- iii) Numbers of perennial weed in one square meter was 57 to 111
- iv) Mass of perennial weed cut was 62.20 to 152.14 kg/h.

12.2.2 Fuel consumption

Fuel consumption was observed as 0.49 to 0.53 l/h. and 12.50 to 16.13 l/ha.

12.3 Labor requirement

To ensure the cutting work without interruption, two operators are required to work alternatively. Additionally, one more labour is needed to gather the collected bush/weeds.

12.4 Adequacy of power of prime mover

The power of prime mover was found adequate.



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29.	Marking/labeling of 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.	Just a sticker and not proper labeling plate is provided on the machine with following information. Make-Neptune Model-NBC-99H Serial no. BC-1523 Mfg- 2021 Neptune Packaging Pvt. Ltd., 19/1 New Agrawal Nagar, Indore-452001	Partially conform
30.	Literature	Operator manual, Service manual and Parts catalogue should be provided.	Provided	Conforms

17. COMMENTS AND RECOMMENDATIONS

- 17.1** The amplitude of mechanical vibration marked as (*) on the relevant chapter, are on drastically 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. In view of above, this deserved to be given top priority for corrective action.
- 17.2** The chemical composition of blades does not conform, to the requirements of IS: 6025-1982. This needs to be looked into for corrective action.
- 17.3** The on-off provision on fuel supply system is not provided. It **MUST** be looked into.
- 17.4** A suitable labeling plate (not sticker) needs to be provided with "Interlia" following information.
1. Name and address of manufacturer
 2. Name and address of applicant
 3. Country of origin
 4. Make
 5. Model
 6. Year of manufacturer
 7. Serial number
 8. Engine number
 9. Engine hp
 10. Rated rpm
 11. SFC



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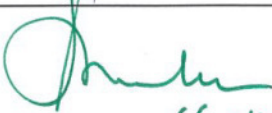
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18. TECHNICAL LITERATURE

The User's Manual was provided by the applicant during the test.
The following literature, therefore, **MUST** be provided as per IS: 8132-1999 for guidance.

- i) Operator's manual
- ii) Service manual
- iii) Parts catalogue

TESTING AUTHORITY

Er. SANJAY KUMAR AGRICULTURAL ENGINEER	
Dr. MUKESH JAIN DIRECTOR	 66.04.2023

19: APPLICANT'S COMMENTS

We have noted the comments and suggestions mentioned in the test reports.
Same will be followed in regular supplies of products.

