

व्यावसायिक परीक्षण रिपोर्ट  
COMMERCIAL TEST REPORT

संख्या/ No.: Power weed-160/2928/2022  
माह/Month: October, 2022

**THIS TEST REPORT VALID UP TO : 31<sup>st</sup> October, 2027**



**V.P. ELECTRIC, VP05C MURUGAN  
POWER WEEDER**



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**

The field test under dry land condition was conducted for 26.92 hours. The field performance tests was conducted at the rated 2000 rpm with flat blade attachment for 26.92 hours. In all, 5 tests trials were conducted in sandy loam soil at the NRFMTTI farm, Hisar. The results of the field test for dry land operation is summarized in Table-7

**Crop parameters**

- i) Type of weed - Seasonal weed  
ii) Height of weed, cm - 5 to 11.6

**Table 5: SUMMARY OF FIELD PERFORMANCE TEST**

Sr. No.	Parameter		Flat blade weeder
i)	Type of soil	:	Sandy loam
ii)	Soil moisture, %	:	10.2 to 14.1
iii)	Bulk density of soil, g/cc	:	1.22 to 1.35
iv)	Speed of operation, kmph	:	3.05 to 3.43
v)	Depth of cut, cm	:	4.50 to 6.03
vi)	Width of cut, m	:	0.94 to 0.95
vii)	Area covered, ha/h	:	0.232 to 0.266
viii)	Time required for one ha	:	3.76 to 4.31
ix)	Fuel consumption		
		l/h	: 0.35 to 0.50
		l/ha	: 1.32 to 2.09
x)	Weeding efficiency, %	:	83.63 to 88.65
xi)	Field efficiency, %	:	76.07 to 85.53

**13. ADJUSTMENT, DEFECTS, BREAKDOWNS & REPAIR**

No noticeable breakdown occurred during test.

**14. COMPONENTS/ASSEMBLY INSPECTION AND ASSESSMENT OF WEAR****14.1 Engine :**

The Engine and other assemblies were dismantled after 26.92 hours of operation.

**14.1.1 Cylinder :**

Cylinder bore dia. (mm)						Max. permissible wear limit
Top Position		Middle position		Bottom Position		
Thrust	Non-thrust	Thrust	Non-thrust	Thrust	Non-thrust	
80.06	80.06	80.04	80.04	80.04	80.03	80.50

**16. COMMENTS & RECOMMENDATIONS****16.1 Mechanical vibration**

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 affect the useful life of the components. In view of above, this deserve to be given top priority for corrective action.

**16.2** The chemical composition of flat blade does not conform, to the requirements of IS: 9813-2002. This needs to be looked into for corrective action.

**16.3** The hardness of flat blade does not conform, to the requirements of IS: 9813-2002. This needs to be looked into for corrective action.

**16.4** The make and model name of governor is not specified. It should be specified.

**16.5** The spark arresting device is not provided. It should be provided.

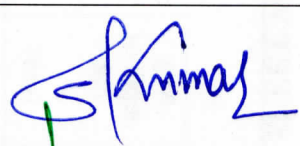
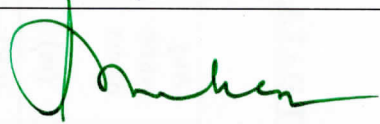
**17. TECHNICAL LITERATURE**

The following literatures are provided by the applicant during the test.

- a) Operator manual
- b) Parts catalogue
- c) Service manual

However, the manuals need to be updated as per IS: 8132-1999.

**TESTING AUTHORITY**

SANJAY KUMAR AGRICULTURAL ENGINEER	
Dr. MUKESH JAIN DIRECTOR	 17.10.2022

Test report is compiled by Sh. Deny Hasnu, Sr. Technician

**18. APPLICANT'S COMMENTS**

No specific comments received from the applicant.