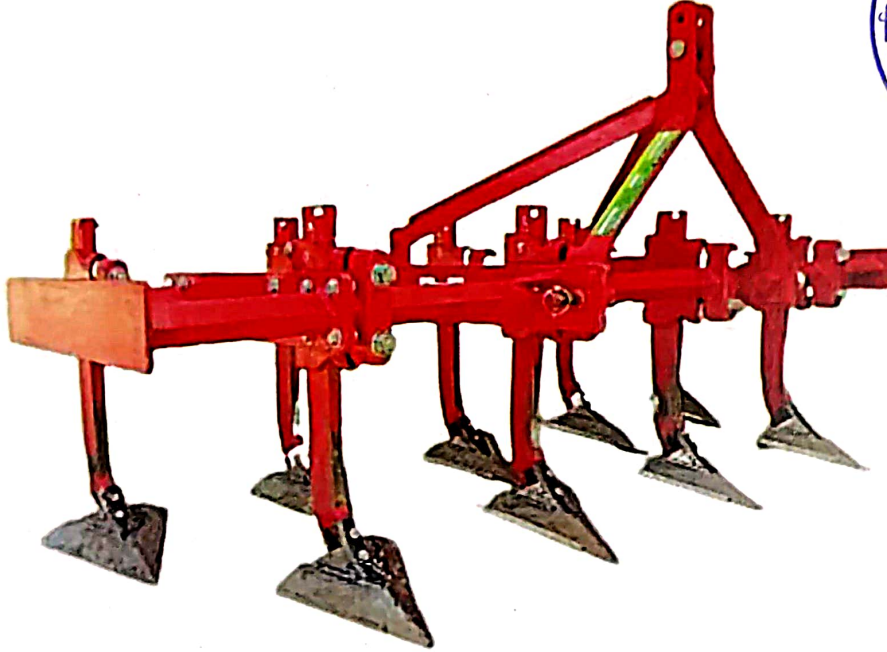




THIS TEST REPORT IS VALID UPTO 31.08.2031



VISHWAKARMA, VECT, CULTIVATOR



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

उत्तर पूर्वी क्षेत्र कृषि यंत्र प्रशिक्षण एवं परीक्षण संस्थान

NORTH EASTERN REGION FARM MACHINERY TRAINING & TESTING INSTITUTE

बिश्वनाथ चारिआली, जिला - बिश्वनाथ (असम)

BISWANATH CHARIALI, DIST- BISWANATH, ASSAM, PIN - 784 176

[AN ISO 9001:2015 CERTIFIED INSTITUTION]

Imp. 323/502	VISHWAKARMA VECT 9-TYNE RIGID TYPE CULTIVATOR (Tractor Mounted)	COMMERCIAL (Initial)
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#### 4. SPECIFICATIONS

##### 4.1 General:

Name and Address of the manufacturer	: M/s Vishwakarma Engineering, Vagra, Dist.-Bharuch, Gujarat- 392 140
Name & Address of Applicant	: M/s Vishwakarma Engineering, Vagra, Dist.-Bharuch, Gujarat- 392 140
Make	: VISHWAKARMA
Model	: VECT
Type	: 9 Tyne, Rigid tyne type, Tractor Mounted
Serial Number of implement	: 24GVECT04
Year of manufacture	: 2024
Size of implement (mm)	: 9 × 260
Working width of implement (mm)	: 2340
Country of origin	: India
Power Source as recommended, hp	: 35 hp and above
<b>Prime Mover Used:</b>	
Tractor	: Kubota MU4501
Chassis No./ Engine no.	: BLQ4754/KBTM30TNHNTH53229
Max. PTO Power, kW	: 30.7



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### Summary of Field Performance Test

Sl. No.	Parameters/operations	Observations
1.	Gear used	L-2
2.	Type of soil	Light
3.	Soil moisture (%)	8.1 to 10.2
4.	Bulk density of soil (g/cc)	1.56 to 1.61
5.	Engine speed (rpm)	
	- No load	2691 to 2708
	- On load	2590 to 2611
6.	Speed of operation (kmph)	3.97 to 4.09
7.	Wheel slip (%)	7.9 to 9.3
8.	Depth of cut (cm)	14.37 to 14.60
9.	Working width (cm)	226.0 to 243.4
10.	Area covered (ha/h)	0.773 to 0.817
11.	Time required for one ha (h)	1.22 to 1.31
12.	Field efficiency (%)	79.30 to 88.42
13.	Fuel consumption	
	-l/h	5.48 to 5.72
	-l/ha	6.83 to 7.50
14.	Av. Implement draft (kgf)	429 to 496
15.	Drawbar Power requirement (kW)	4.80 to 5.44

#### 7.1 Rate of work:

- The rate of work was recorded as 0.773 to 0.817 ha/h and the speed of operation varied from 3.97 to 4.09 kmph.
- The time required to cover one hectare was recorded as 1.22 to 1.31 h.

#### 7.2 Quality of work:

- The depth of cut was recorded as 14.37 to 14.60 cm.
- Average working width was observed as 226.0 to 243.4 cm.
- Field efficiency was observed as 79.30 to 88.42 %.

#### 7.3 Power requirement:

The Av. draft of implement was recorded from 429 to 496 kgf and Drawbar power requirement was calculated as 4.80 to 5.44 kW.

#### 7.4 Labour requirement:

One skilled operator was needed to operate the tractor with the implement.

#### 7.5 Adequacy of power of prime mover as used during test:



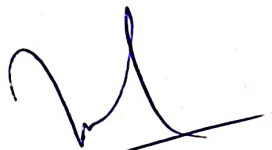


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### 10. COMMENTS AND RECOMMENDATIONS

- 10.1 The specifications of implement hitch do not conform with IS: 4468-1997 (Part-1) (Reaffirmed Feb., 2012). Hence, it is recommended to look into at production level for standardization.
- 10.2 The specifications of the sweep and tyne does not conform to IS: 3342-1998(Reaffirmed Mar., 2009) and IS: 7565 (Part I)-1975 (Reaffirmed Mar., 2009), respectively. This should be looked into for corrective action at future production level.
- 10.3 Chemical composition and hardness of sweep does not conform to relevant Indian Standards. This needs to be looked into for corrective action.
- 10.4 **Adequacy of Literature:**  
Operator's manual and service manual covered in English was submitted along with the implement. However, it is recommended to bring out the same covered in Hindi and other vernacular languages as per IS: 8132-1999.

### TESTING AUTHORITY



(M.R. PATIL)

AGRICULTURAL ENGINEER




(P. KAMALABAI)

DIRECTOR

### 11. APPLICANT'S COMMENTS

Para No.	Our Reference	Applicant's Comments
11.1	10.1 to 10.4	We will take the necessary action, according to the comments and recommendations in the test report, to improve future production.