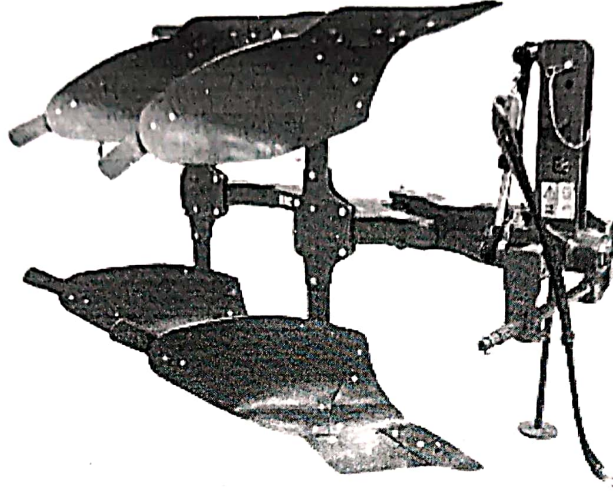


THIS TEST REPORT IS VALID UPTO 30.09.2031



BHUDEV ARCTIC 04 M.B. PLOUGH



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 चारिआलि, जिला - बिश्वनाथ (असम)

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

[AN ISO 9001:2015 CERTIFIED INSTITUTION]

Imp. 325/505	BHUDEV ARCTIC 04 TWO BOTTOM HYDRAULIC REVERSIBLE M.B. PLOUGH (Tractor Mounted)	COMMERCIAL (INITIAL)
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4. SPECIFICATIONS

4.1 General:

Name and address of the manufacturer : M/s. Micro Laser Pvt. Ltd., Plot No-243, Sector No-10, PCNTDA, MIDC, Bhosari, Pimpri-Chinchwad, Maharashtra- 411 026

Test requested by (Applicant) : M/s. Micro Laser Pvt. Ltd., Plot No-243, Sector No-10, PCNTDA, MIDC, Bhosari, Pimpri-Chinchwad, Maharashtra- 411 026

Name of the implement : M.B. Plough

Type : Two Bottom, Hydraulic Reversible, Tractor mounted

Make : BHUDEV

Model : ARCTIC 04

Serial Number of implement : MLPLA0404

Size of implement (mm) : 2 x 280

Year of manufacture : 2024

Country of origin : India

Power Source as recommended (hp) : 40 to 50 hp Tractor

Prime Mover Used:

Tractor : John Deere 5310 4WD

Chassis No./ Engine no. : 1PY5310ECLA049490/PY3029H143675

Max. PTO Power, kW : 36.4



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d) Batch or code number	Not Provided	Does not conform
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7. RUNNING-IN

Running-in was not recommended by the applicant. Hence, running-in was not conducted.

8. FIELD PERFORMANCE TEST

The implement was operated for 25.5 hours for assessing its field performance. Total four trials were carried out and results of the field performance tests have been reported in Annexure and are summarized in ensuing Table. John Deere 5310 4WD tractor was used as prime-mover during field performance test.

Summary of Field Performance Test

Sl. No.	Parameters/Operations	Observations
1.	Gear used	A-2
2.	Type of soil	Light
3.	Av. soil moisture (%)	8.9 to 10.4
4.	Av. bulk density of soil (g/cc)	1.59 to 1.63
5.	Previous treatment	Nil
6.	Engine speed (rpm)	
	- No load	2578 to 2592
	- On load	2477 to 2492
7.	Speed of operation (kmph)	2.79 to 2.90
8.	Wheel slip (%)	10.1 to 14.0
9.	Depth of cut (cm)	25.5 to 26.3
10.	Working width (m)	0.56 to 0.57
11.	Area covered (ha/h)	0.127 to 0.134
12.	Time required for one ha (h)	7.46 to 7.87
13.	Field efficiency (%)	79.37 to 81.46
14.	Fuel consumption	
	-l/h	5.45 to 6.05
	-l/ha	42.91 to 46.12
15.	Implement draft (kgf)	650 to 688
16.	Drawbar Power requirement (kW)	6.72 to 7.33

8.1.1 Rate of work :

- The area covered was recorded as 0.127 to 0.134 ha/h at the average speed of operation from 2.79 to 2.90 kmph.
- The time required to cover one hectare area was recorded as 7.46 to 7.87 h.

8.1.2 Quality of work:

- The depth of cut was recorded as 25.5 to 26.3 cm.
- Average working width was observed as 0.56 to 0.57 m.

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9. EASE OF OPERATION AND ADJUSTMENTS

No noticeable difficulty was observed during the operation and adjustment of Two Bottom Hydraulic Reversible M.B. plough.



10. DEFECTS, BREAKDOWNS AND REPAIRS

No noticeable defect or breakdown was observed during the entire course of test.

11. COMMENTS AND RECOMMENDATIONS

- 11.1 The dimensions of the share and share nose of plough do not conform to IS: 10691-1983 (Reaffirmed 2001). This should be looked into for corrective action for standardisation.
- 11.2 The chemical composition of plough share does not conform to IS: 10691-1983 (Reaffirmed 2001). This is recommended to looked into for corrective action for standardisation.
- 11.3 Shares were not marked with particulars like manufacturer's name or recognized trade mark, size, type and batch or code number as per IS: 10691-1983 (Reaffirmed 2001). This should be looked into for corrective action.
- 11.4 Type and size of the implement should be properly mentioned in the labelling plate of the implement.

TESTING AUTHORITY

(M.R. PATIL)

SENIOR AGRICULTURAL ENGINEER

(P. KAMALABAI)

DIRECTOR

Draft Test Report Compiled By:

Sh. J. Bhon Singh,
Sr. Technical Assistant

Imp.
325/505

BHUDEV ARCTIC 04
TWO BOTTOM HYDRAULIC REVERSIBLE M.B. PLOUGH
(Tractor Mounted)

COMMERCIAL
(INITIAL)

12. APPLICANT'S COMMENTS

Para No.	Our Reference	Applicant's Comments
12.1	11.1	We will take necessary action on it.
12.2	11.2	We will take necessary action on it.
12.3	11.3	We will take necessary action on it.
12.4	11.4	We will take necessary action on it.

