

THIS TEST REPORT VALID UP TO : 31st December, 2027



**BABRIK-110DI
RIDE ON SELF PROPELLED MULTI PURPOSE
TOOL BAR (SANEDO)**



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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15. RUNNING-IN

The Ride On Self Propelled Tool Bar was run-in for 0.50 hour before field performance test. All the fasteners were checked and tightened thereafter

16. FIELD TEST

The field performance test under dry land condition was conducted with T-5 cultivator attachment for 11.58 hours at no load engine speed 3000 rpm and with flat blade attachment for 14.25 hours at no load engine speed of 3000 rpm. In all, 5 tests trials were conducted in black soil at the Moviya Gondal, Rajkot. The results of the field test for dry land operation is summarized in Table-8

Table 9: SUMMARY OF FIELD PERFORMANCE TEST

Sr. No.	Parameter		Cultivator	Flat blade
i)	Type of soil	:	Black	Black
ii)	Soil moisture, %	:	4.44 to 4.84	4.80 to 5.30
iii)	Bulk density of soil, g/cc	:	1.22 to 1.25	1.20 to 1.23
iv)	Speed of operation, kmph	:	4.44 to 4.57	4.49 to 4.60
v)	Depth of cut, cm	:	5.43 to 5.63	5.27 to 5.43
vi)	Width of cut, m	:	0.80 to 0.82	0.87 to 0.88
vii)	Area covered, ha/h	:	0.263 to 0.296	0.295 to 0.316
viii)	Time required for one ha	:	3.38 to 3.80	3.16 to 3.39
ix)	Fuel consumption			
		l/h :	1.00 to 1.10	0.95 to 1.02
		l/ha :	3.72 to 4.08	3.16 to 3.46
x)	Field efficiency, %	:	70.89 to 82.22	74.68 to 79.00

16.1 Field operation

16.1.1 Rate of work

- Time required to cover 1 ha 3.38 to 3.80 h/ha for cultivator and 3.16 to 3.39 h/ha for flat blade.
- The average area covered was recorded as 0.263 to 0.296 ha/h for cultivator and 0.295 to 0.316 ha/h for flat blade.

16.1.2 Quality of work

- The average depth of cut was recorded as 5.43 to 5.63 cm for cultivator and 5.27 to 5.43 cm for flat blade.
- The hourly fuel consumption was recorded as 1.00 to 1.10 l/h for cultivator and 0.95 to 1.02 l/h for flat blade and fuel required on 1 ha was recorded 3.72 to 4.08 l/ha for cultivator and 3.16 to 3.46 l/ha for flat blade.

17. ADJUSTMENT, DEFECTS, BREAKDOWNS & REPAIR

No noticeable breakdown occurred during test was observed.

19. COMMENTS & RECOMMENDATIONS**19.1 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.

19.2 The chemical composition of blades does not conform, to the requirements of IS: 6690-1981. This needs to be looked into for corrective action.

19.3 The hardness of blades does not conform, to the requirements of IS: 6690-1981. This needs to be looked into for corrective action.

19.4 Spark arresting device is not provided. It **MUST** be provided.

19.4 Valve guides and valve springs stiffness discard limit not specified. It **MUST** be specified.

19.5 Valve guides clearance discard limit not specified. It **MUST** be specified.

19.6 The width between outer faces of yoke does not meet the requirement of relevant Indian Standards. It should be looked into.

19.7 Field Test

19.7.1 Ride on self propelled multi-purpose tool bar was operated in varying field condition.

- The average depth of cut was recorded as 5.43 to 5.63 cm for cultivator and 5.27 to 5.43 cm for flat blade.
- The hourly fuel consumption was recorded as 1.00 to 1.10 l/h for cultivator and 0.95 to 1.02 l/h for flat blade and fuel required on 1 ha was recorded 3.72 to 4.08 l/ha for cultivator and 3.16 to 3.46 l/ha for flat blade.
- Time required to cover 1 ha 3.38 to 3.80 h/ha for cultivator and 3.16 to 3.39 h/ha for flat blade.
- The average area covered was recorded as 0.263 to 0.296 ha/h for cultivator and 0.295 to 0.316 ha/h for flat blade.

19.8 Overall the performance was found to be satisfactory.

MTB -08/2958/2022

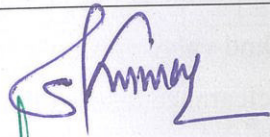
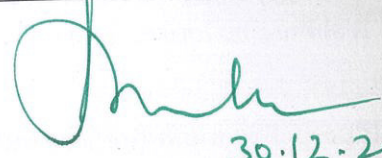
**BABRIK-110DI
RIDE ON SELF PROPELLED MULTI PURPOSE
TOOL BAR (SANEDO) (COMMERCIAL)**

20. TECHNICAL LITERATURE

No literatures were provided by the applicant during the test. Following manuals should be provided as per IS 8132:1999

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

TESTING AUTHORITY

Er. SANJAY KUMAR AGRICULTURAL ENGINEER	
Dr. MUKESH JAIN DIRECTOR	 30.12.2022

The test report is compiled by Sh. Sunil Kumar Patil, Senior Technical Assistant

21. APPLICANT'S COMMENTS

Para No.	Our Reference	Applicant's Comments
21.1	19.1	Design improvements will be taken up for further reduction in vibration.
21.2	19.2	Spark arresting device is provided as an optional fitment.
21.3	19.3	We informed to engine manufacturer's respective department for discard limit.
21.4	19.4	We informed to engine manufacturer's respective department for discard limit.
21.5	19.6	Land work, can be considered suitable as per average requirement and as per requirement is introduced as special purpose machine.