

व्यावसायिक परीक्षण रिपोर्ट
COMMERCIAL TEST REPORT

संख्या/ No.: IMP- 1060/2947/2022

माह/ Month: December, 2022

THIS TEST REPORT VALID UP TO : 31st December, 2029



**UNIVERSAL, BEUMDH-14 (LIFT MODEL)
OFFSET DISC HARROW 7×7 TRACTOR OPERATED
(MOUNTED TYPE)**



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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Table 2

Constituents	As per IS: 9442-1980	Composition as observed (% of weight)	Remarks
		Plain disc	
Carbon (C)	0.70 to 0.80	0.71	Conforms
Silicon (Si)	0.10 to 0.40	0.26	Conforms
Manganese (Mn)	0.60 to 1.00	1.00	Conforms
Sulphur (S)	0.05 (max)	0.013	Conforms
Phosphorous (P)	0.05 (max)	0.017	Conforms

5. RUNNING-IN

The harrow was running-in for 1.0 hour before field performance test.

6. FIELD PERFORMANCE TEST

The field tests was conducted for 28.26 hours in different soil moisture conditions to assess the performance of the implement with Swaraj 744.

The no load engine speed of tractor was adjusted to 1700 rpm and observations are summarized in Table-3.

SUMMARY OF FIELD PERFORMANCE TEST

Table 3

Sr. No.	Parameters	Range	
i)	Prime mover	Swaraj 744	
ii)	Gear used	H-1	
iii)	Type of soil	Sandy loam	
iv)	Bulk density of soil (g/cc)	1.21 to 1.35	
v)	Soil moisture (%)	12.0 to 13.4	
vi)	Speed of operation (kmph)	7.12 to 7.82	
vii)	Wheel slippage (%)	4.29 to 5.25	
viii)	Depth of cut (cm)	10.06 to 10.36	
ix)	Width of cut (cm)	146 to 149	
x)	Area covered (ha/h)	0.813 to 0.926	
xi)	Time required for one ha (h)	1.08 to 1.23	
xii)	Field efficiency (%)	77.45 to 84.51	
xiii)	Fuel consumption		
		l/h	3.56 to 4.50
		l/ha	3.84 to 5.45
xiv)	Implement draft (kgf)	574.2	

16	Hardness of HRC	38 (Min.) 48 (Boron steel)	42 to 43	Conforms
17	Marking/labeling of machine	The labeling plate should be riveted on the body of machine having Name and Address of manufacture, Country of origin, Make, Model, Year of manufacture, Serial number, Type, Size, required size of prime mover (kW), Weight (kg)	Name and Address of manufacture, Serial number, Model, Year of manufacture	Partially Conforms
18	Literature	Operator manual, Service manual and parts catalogue should be provided.	Provided	Conforms


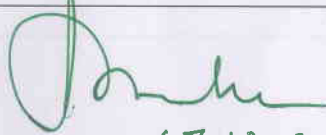
10. SUMMARY OF OBSERVATIONS, COMMENTS & RECOMMENDATION

10.1 The specification of plain spool partially conform, to the requirements of IS: 7230-1974. This should be looked into for corrective action.

10.2 The labeling plate should be provided with following information.

- i) Make
- ii) Model
- iii) Serial number
- iv) Year of manufacture
- v) Size of implement
- vi) Required size of prime mover (kW)
- vii) Name and address of manufacturer
- viii) Country of origin
- ix) Weight (kg)

TESTING AUTHORITY

Dr. SANJAY KUMAR AGRICULTURAL ENGINEER	
Dr. MUKESH JAIN DIRECTOR	 07.12.2022

11. APPLICANT'S COMMENTS

We will improve all the required parameters at our production level.