

प्रारंभिक व्यावसायिक परीक्षण रिपोर्ट  
INITIAL COMMERCIAL TEST REPORT

संख्या/No. CSIR/CMERI/FMTTC/2024/069

माह/Month: OCTOBER, 2024

THIS TEST REPORT VALID UP TO

:

30<sup>th</sup> SEPTEMBER, 2031



**SONALIKA INDUSTRIES**

(A Unit of International Cars & Motors Ltd.)

**ROTAVATOR**

**(MODEL: SLCHPMSR-5)**



सत्यमेव जयते  
Government Of India



कृषि मशीनरी प्रशिक्षण और परीक्षण केंद्र

**Farm Machinery Training and Testing Centre**

सीएसआईआर- केन्द्रीय यांत्रिक अभियांत्रिकी अनुसंधान संस्थान

**CSIR - Central Mechanical Engineering Research Institute**

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CSIR/CMERI/FMTTC/2024/069

**SONALIKA INDUSTRIES**  
**(A Unit of International Cars & Motors Ltd.)**  
**ROTAVATOR AND SLCHPMSR-5**  
**(INITIAL COMMERCIAL TEST)**

**Name of Machine** : Rotavator  
**Type** : Tractor Mounted  
**Make** : SONALIKA INDUSTRIES  
(A Unit of International Cars & Motors Ltd.)  
**Model** : SLCHPMSR-5  
SONALIKA INDUSTRIES  
**Name and address of Manufacturer** : (A Unit of International Cars & Motors Ltd.)  
Village Chak Gujran, Jalandhar Road,  
Hoshiarpur -146022 (Punjab) INDIA  
**Name and address of Applicant** : SONALIKA INDUSTRIES  
(A Unit of International Cars & Motors Ltd.)  
Village Chak Gujran, Jalandhar Road,  
Hoshiarpur -146022 (Punjab) INDIA  
**Test Conducted at** : Farm Machinery Training and Testing  
Center, CSIR – Central Mechanical  
Engineering Research Institute, M.G.  
Avenue, Durgapur- 713209, West Bengal,  
INDIA, & CMERI- Centre of Excellence for  
Farm Machinery, Near GNE College, Gill  
Road, Ludhiana - 141006, Punjab, INDIA



**THIS TEST REPORT VALID UP TO : 30<sup>th</sup> SEPTEMBER 2031**  
[vide DAC&FW OM No. 13-22/2020- M&T (I&P) dated 12.12.2023]

Report No.: CSIR/CMERI/FMTTC/2024/069

Month: October

Year: 2024

**CSIR - Central Mechanical Engineering Research Institute,**  
**Durgapur – 713209**  
**(W.B.), INDIA**

Report prepared by

Report verified by

Farm Machinery Training and Testing Centre,  
CSIR-Central Mechanical Engineering Research Institute, Durgapur  
THIS REPORT IS VALID UPTO: 30<sup>th</sup> September 2031

1 of 25

CSIR/CMERI/FMTTC/2024/069	<b>SONALIKA INDUSTRIES</b> <b>(A Unit of International Cars &amp; Motors Ltd.)</b> <b>ROTAVATOR AND SLCHPMSR-5</b> <b>(INITIAL COMMERCIAL TEST)</b>
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#### 4. SPECIFICATION

##### 4.1. General

Type of machine	:	Rotavator
Make	:	SONALIKA INDUSTRIES (A Unit of ICML)
Model	:	SLCHPMSR-5
Serial No.	:	R&D PRT-0008
Name and Address of manufacturer	:	SONALIKA INDUSTRIES (A Unit of International Cars & Motors Ltd.) Village Chak Gujran, Jalandhar Road, Hoshiarpur, Punjab
Year of manufacture	:	2024
Country of origin	:	INDIA
Type of blade	:	L-TYPE
Working width, mm	:	1510
Recommended Prime mover size	:	35-40 HP

##### 4.2. Details of prime mover

Tractor used during test	:	
Make	:	SONALIKA
Model	:	DI-60 (12+12, 2WD)
Engine Sr. No.	:	195244D
Max. PTO power kW	:	38.03 kW (51 hp)
SFC (g/kW – hr)	:	249

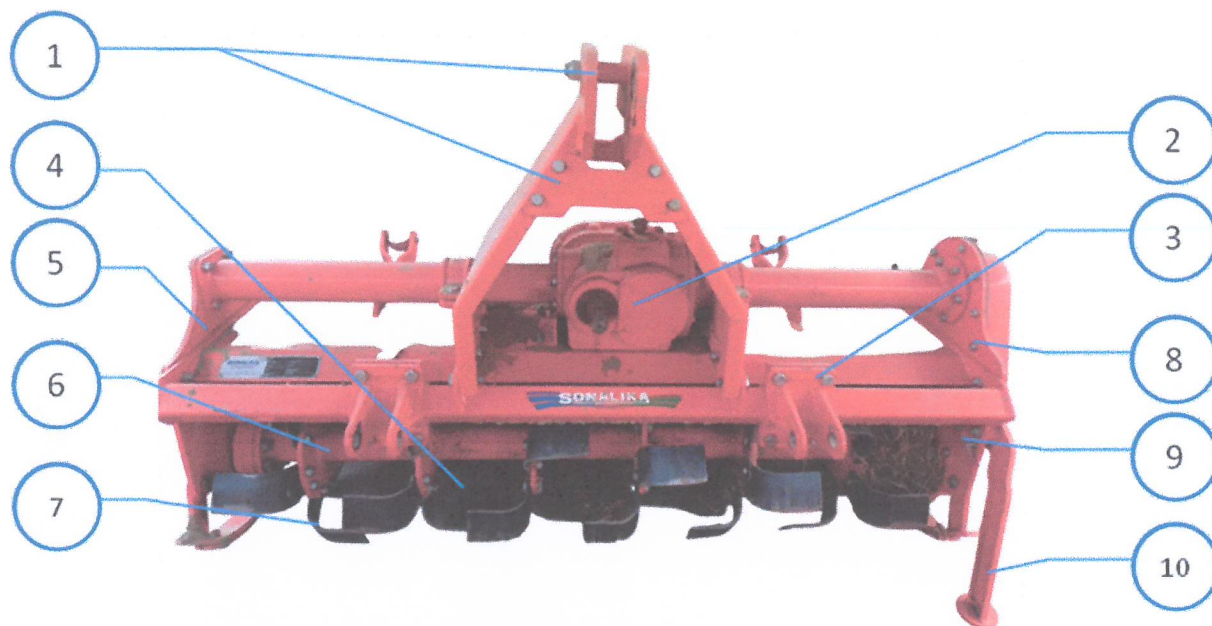
Report prepared by

*J. Chel*

Report verified by

*Surbate kr Mandal*

<b>Farm Machinery Training and Testing Centre,</b> <b>CSIR-Central Mechanical Engineering Research Institute, Durgapur</b> <b>THIS REPORT IS VALID UPTO: 30<sup>th</sup> September 2031</b>	6 of 25
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**Fig. 2 Rotavator**

#### 4.3. Constructional details (Refer Fig. 2)

- |                             |                               |
|-----------------------------|-------------------------------|
| 1. Three point linkage      | 2. Primary reduction gear box |
| 3. Main frame               | 4. Trailing board             |
| 5. Side support             | 6. Rotor shaft                |
| 7. Rotor Blade              | 8. Rotavator stand            |
| 9. Secondary drive gear box | 10. Side disc                 |

##### 4.3.1. Main frame

Type	:	Fabricated from M. S square pipe and M.S plate
Size of Square section (mm)	:	1557 x 60 x 8 (Length x cross section area)
Size of supporting angle (mm)	:	01 Nos. on each side (553 x 100 x 50) (Thickness : 8.00 mm)
Type of mounting of box section	:	Bolt and nut LHS and RHS

##### 4.3.2. Side Plates

Type	:	M.S. Sheet
Thickness of plate (mm)	:	10.25
Material	:	M.S Sheet
Method of fixing	:	Fixed to the main frame with the help of 04 Nos. bolt & nut on LHS & RHS

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*[Signature]*

## 12. CRITICAL TECHNICAL SPECIFICATIONS

(Vide Ministry's communication F. No. 9-1/2019 M&T (I&P) dated 20.08.2019)

Sl. No.	Parameters	Specification	Observation	Remarks
1	Working width (mm)	1200 (Min.)	1510	Conforms
2	Type of blade	C/L/J shape as per demand Hatchet Blade	L shape	Conforms
3	Thickness of blade (mm)	7-8 (Min.)	7	Conforms
4	No. of blades	30 (Min.)	36	Conforms
5	Total number of flanges	5 (Min.)	6	Conforms
6	Number of blades per flange	6 (Max.)	6	Conforms
7	Outer Diameter of rotor shaft, mm	75-90	89.70	Conforms
8	Rotor diameter, including flange and blade mounted on flange, mm	425 (Min.)	480	Conforms
9	Side drive	Gear drive/chain drive (optional)	Gear drive	Conforms
10	Depth control mechanism	Arc shaped skid on both side of rotavator	Provided	Conforms
11	Material of blades	Boron (28MnCrB5)/High Carbon Steel of grade EN42/EN45/EN47	Boron steel	Conforms
12	Hardness of blade material, HRC	38 (Min.)	54	Conforms
13	Safety clutch/device (shear bolt) in PTO drive shaft	Must be provided	Provided	Conforms
14	Rotavator stand	Must be provided	Provided	Conforms
15	Guard over propeller shaft	Must be provided	Provided	Conforms
16	Sheet metal	AS36/IS 2062	IS 2062	Conforms
17	Marking/labeling of machine	The labeling plate should be riveted on the body of machine having Name and address of manufacturer, County of origin, Make, Model, Year of manufacture, Serial number, Type, Size, required size of prime mover (kW)	Provided	Conforms
18	Literature	Operator manual, service manual and parts catalogue should be provided	Parts Catalogue is provided	Conforms

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*[Signature]*

Report verified by  
*[Signature]*

### 13. COMMENTS AND RECOMMENDATIONS

- 13.1.** No ingress of dust and water/mud in primary and secondary reduction box and rotary axle bearing cap was observed.
- 13.2.** Parking stand and safety device are provided
- 13.3.** The implement hitch specifications confirm partially as per IS standard. Corrective action needs to be taken at production end.

### 14. TECHNICAL LITERATURE

The following literatures are provided by the applicant during the test along with the application form.

- a) User's manual book
- b) Parts' catalogue
- c) Service manual

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

### TESTING AUTHORITY

Report Prepared by	Technical Officer CSIR-CMERI Farm Machinery Testing Centre	 25/10/2024
Report Approved by	In-Charge, CSIR-CMERI Farm Machinery Testing Centre	 25.10.2024
Report Approved for release by	Head, Business Development Unit, CSIR-CMERI, Durgapur	 25/10/24



### 15. APPLICANT'S COMMENTS

Para No.	Our Reference	Applicants Comments
15	13.1	Agreed
	13.2	Agreed
	13.3	We will take care of the production end and vendor end.