

प्रारंभिक व्यावसायिक परीक्षण रिपोर्ट

INITIAL COMMERCIAL TEST REPORT

संख्या/No. CSIR/CMERI/FMTTC/2022/004

माह/Month: May, 2022

THIS TEST REPORT VALID UP TO : 31ST May, 2027



**ASPEE G270
POWER WEEDER**



कृषि मशीनरी प्रशिक्षण और परीक्षण केंद्र

Farm Machinery Training and Testing Centre

सीएसआईआर- केन्द्रीय यांत्रिक अभियांत्रिकी अनुसंधान संस्थान

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4. SPECIFICATIONS

4.1 General

Type of machine	: Power weeder with Petrol Engine, Walk Behind Type
Make	: ASPEE
Model	: G270
Serial No.	: MDY105FQ21080050
Name and address of manufacturer	: Snowball Group Co. Limited Room 2105, Trend Center, 29-31 Cheung Lee Street, Chai Wan, Hongkong, China
Year of manufacture	: 2021
Country of origin	: P.R. of China

4.2 Details of prime mover

Name and address of manufacturer	: Chongqing Meidoing Machinery Co. Ltd. No. 2 Factory, Panlong Printing Center, No. 3, Juyuan Rd., Shuangfu St., Jiangjin Dist., Chongqing, China
Type	: Air Cooled; 4-Stroke; OHV, Single Cylinder, Petrol Engine, Horizontal Shaft.
Make	: KIBAO
Model	: KB270
Sr. No.	: GC-210809730
Country of origin	: P.R. of China
Month & Year of manufacture	: July 2021
Engine speed (Manufacturer's recommended setting), (rpm)	: 3600
High idle speed	: 3600
Low idle speed	: 1850
Rated speed, (rpm)	: 3600
No load engine speed for field operation, (rpm)*	: 3300
Speed at maximum torque, rpm*	: 2550
Max Torque (Nm)*	: 15
Rated Power (kW)*	: 5.0
Max Power (kW)*	: 6.6 /8.97 hp
Fuel Tank Capacity, (L)	: 4.5

*As per specification sheet provided by applicant

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Sl. No.	Parameter		Range
I	Type of soil	:	Sandy loam
ii	Average Soil moisture, %	:	11.6 to 14.3
iii	Average Bulk density of soil, g/cc	:	1.56 to 1.71
iv	Average Speed of operation, kmph	:	1.8 to 2.9
v	Average depth of cut, cm	:	6.7 to 7.8
vi	Average Width of cut, m	:	1.08 to 1.10
vii	Average Area covered, ha/h	:	0.15 to 0.22
viii	Average Time required for one ha	:	4.5 to 6.8
ix	Average Fuel consumption		
		l/h :	1.4 to 2.1
		l/ha :	7.3 to 10.7
x	Average Weeding efficiency, %	:	75.0 to 85.5
xi	Average Field efficiency, %	:	65.3 to 76.0

The detailed field performance testing data is given in Annexure I.

13. ADJUSTMENT, DEFECTS, BREAKDOWNS & REPAIRS

No noticeable breakdown occurred during test.

14. COMPONENTS/ ASSEMBLY INSPECTION AND ASSESSMENT OF WEAR

14.1 Engine

The Engine and other assemblies were dismantled after 30.55 hours of operation

14.1.1 Cylinder

Cylinder bore dia. (mm)						
Top position		Middle position		Bottom Position		Max. permissible wear limit
Thrust	Non-thrust	Thrust	Non-thrust	Thrust	Non-thrust	
76.83	76.83	76.830	76.830	76.830	76.830	77.025

14.1.2 Piston

16. COMMENTS & RECOMMENDATION

16.1 Mechanical vibration

The amplitude of mechanical vibration marked as (*) under section 9, are on 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. It needs to be corrected.

16.2 The hardness of blades does not conform to the requirements of IS: 6690-1981 as mentioned in section 10. Corrective action needs to be taken for this.

16.3 Chemical composition of blades does not conform to the requirements of IS: 6690-1981 as mentioned in section 10. Corrective action needs to be taken for this.

16.4 Material of blade does not conform the requirement. This need to be looked into for corrective action.

16.5 Marking/labeling Marking/labeling machine plate partially does not confirm the critical specification requirement. This need to be consider for corrective actions.

17. 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

Dr. ANJALI CHATTERJEE Chief Scientist	<i>Anjali</i> 20/05/2022
Dr. SUBRATA KUMAR MANDAL Senior Principal Scientist	<i>Subrata Kumar Mandal</i> 20/5/2022
Md. IMRAN SHEKH Senior Scientist	<i>Imran</i>

18. APPLICANT'S COMMENTS

Para No.	Our Reference	Applicant's Comments
18	16.1, 16.2, 16.3, 16.4, 16.5	Noted the same and will take necessary corrective action

