

प्रारंभिक व्यावसायिक परीक्षण रिपोर्ट
INITIAL COMMERCIAL TEST REPORT
THIS TEST REPORT VALID UP TO

संख्या/No. CSIR/CMERI/FMTTC/2023/024
माह/Month: October, 2023
: 30th September, 2028



**SS GOLD POWER WEEDER
(MODEL – SSG005P)**



कृषि मशीनरी प्रशिक्षण और परीक्षण केंद्र
Farm Machinery Training and Testing Centre
सीएसआईआर- केन्द्रीय यांत्रिक अभियांत्रिकी अनुसंधान संस्थान
CSIR - Central Mechanical Engineering Research Institute
महात्मा गांधी एवेन्यू, दुर्गापुर
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Name of Machine	: Petrol Engine Operated Power Weeder
Type	: Self – propelled, Walk Behind
Make	: SS GOLD
Model	: SSG005P
Name and address of Manufacturer	: Chongqing Sensi Wugu Agricultural Machinery Import & Export Co. Ltd. No.8, Longfei Road, Dongcheng Streer, Tongliang Town, Chongqing, China
Name and address of Applicant	: Supreme Sales Agency 33/1, Netaji Subhas Road, Room No.-323 3 rd Floor, Marshal House, Kolkata West Bengal – 700001.
Test Conducted at	: Farm Machinery Training and Testing Centre CSIR - Central Mechanical Engineering Research Institute, M G Avenue, Durgapur, Pin – 713209, West Bengal.

THIS TEST REPORT IS VALID UP TO: 30th September, 2028
[vide DAC&FW OM No. 13-24/2018- M&T (I&P) dated 19.09.2018]



Report No.: CSIR/CMERI/FMTTC/2023/024

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

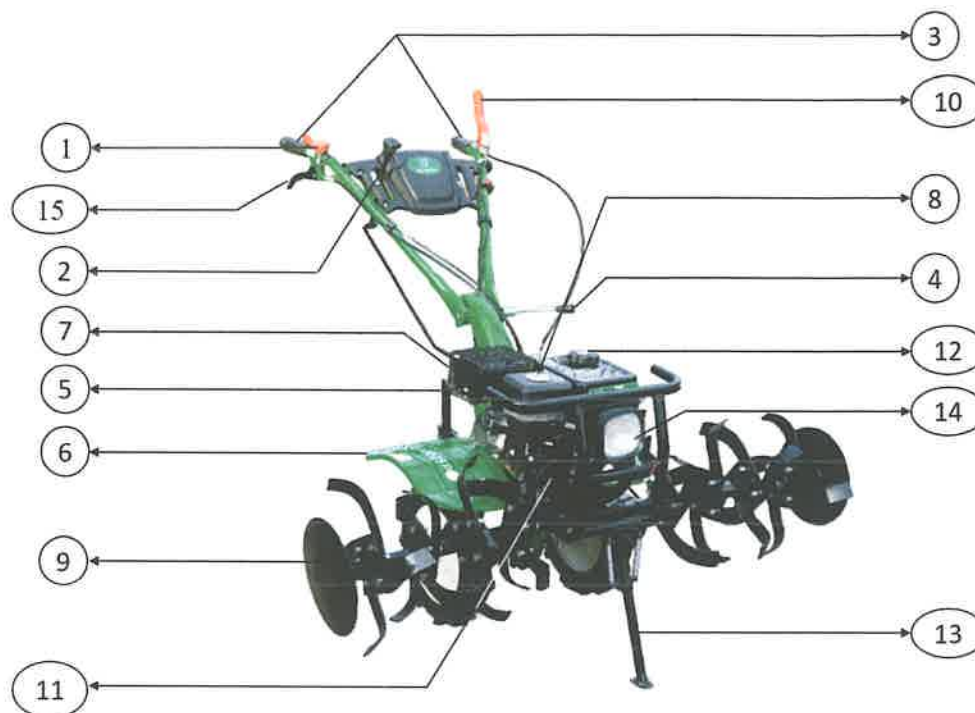


Fig.1: Component details of Power Weeder, SSG005P

Key Words:

1	Accelerator lever	2	Gear shifting lever (Main & Reverse)
3	Steering handle bar	4	Handle height adjustment lever
5	Depth control mechanism	6	Rotor cover
7	Exhaust system	8	Air cleaner
9	Rotor	10	Clutch lever
11	Recoil starter	12	Fuel Tank
13	Stand	14	Headlamp
15	Reverse Clutch Lever		

4.8 Lubrication system

Type	: Splash
Make and type of filter	: N. A
Number of filters	: One
Oil capacity (L)	: 0.80
Recommended grade of lubricant oil	: SAE 20W40
Oil change period	: First after 25 hrs. & subsequently after every 50hrs. of operation
Maximum permissible lubricating oil temperature (°C)	: 150°

4.9 Cooling system

Type	: Air Cooled
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6 ENGINE PERFORMANCE TEST

The engine testing of the power weeder is not done in the FMTTC, CMERI, Durgapur. However, applicant has submitted a copy of the engine test report of **170F, Sr. No.- SSGOLD005PG2210150072** with a test report No. - **20230045 dated - 03/05/2023** issued by NSIC - Technical services centre, Rajkot, A unit of the National Small Industries Corporation Ltd. (A Government of India enterprise). The experts from the test results of engine rating test and fuel consumption test from above mentioned report are given below without any correction.

Model	: SSG005P	Rating	: 7HP / 5.2 kW
RPM	: 3600	Governor Class	: CLASS - 2
Specific Fuel Consumption	: 374 gm/kwh	Lubricating oil consumption	: 0.08 l/hr
Number of Cylinder	: One	Type of Cooling	: Air Cooled

ULR NO. TC754423100000045P
IS CODE NO. - IS 7347:1974



CSIR/CMERI/FMTTC/2023/024	SS GOLD POWER WEEDER - SSG005P (INITIAL COMMERCIAL TEST)
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A. Engine rating and Fuel consumption test:

Sl. No	Time in hours & minutes after starting	Barometer Reading (kPa)	Air Temperature		Relative Humidity (d) %	Observed Speed (rpm)	Brake Load (N/m.)	Power (kW)	Fuel consumption		
			Dry bulb (°K)	Engine Intake (°K)					Time for 41 gm. (s)	g/h	S.F.C (g/Kw-h)
1	10.00	99.2	303	307	47	3600	13.32	5.20	79	1868	370.3
2	11.00	99.2	304	308	43	3600	13.31	5.20	79	1868	370.5
3	12.00	99.2	305	309	44	3600	13.23	5.20	80	1845	367.8
4	13.00	99.2	304	308	54	3600	13.19	5.20	80	1845	368.8
5	14.00	99.2	303	307	59	3600	13.23	5.20	80	1845	367.8
6	15.00	99.1	302	306	64	3600	13.24	5.20	79	1868	372.2
7	16.00	99.1	302	306	71	3600	13.17	5.20	80	1845	369.3
8	16.30	99.1	302	306	71	3600	13.17	5.20	80	1845	369.3
9	17.00	99.1	301	305	77	3584	14.57	5.72	71	2079	377.9
10	17.10	99.1	301	305	70	3638	10.24	4.07	99	1491	380.1
11	17.20	99.1	301	305	70	3656	6.83	2.73	133	1110	422.1
12	17.30	99.1	301	305	70	3674	3.41	1.37	190	777	588.8
13	17.40	99.1	301	305	70	3708	0.00	0.00	286	516	-

B. Governing Test:

Sl. No.	Parameter	Observed value
1	Momentary speed change in percentage of rated speed from Full Load to No Load	: 5.69
2	Permanent speed change in percentage of rated speed from Full Load to No Load	: 3.00



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) Service manual

The Part's catalogue is not provided by the applicant during the test along with the application form.

These manuals need to be updated as per IS: 8132-1999.

**TESTING AUTHORITY**

Report Prepared by	Sr. Technical Officer, CSIR-CMERI Farm Machinery Testing Centre	<i>[Signature]</i> 10/10/2023
Report Verified by	Scientist, CSIR-CMERI Farm Machinery Testing Centre	<i>[Signature]</i> 10/10/23
Report Approved by	In-Charge, CSIR-CMERI Farm Machinery Testing Centre	<i>[Signature]</i> 10/10/2023
Report Approved for release by	Head, Business Development Unit, CSIR-CMERI, Durgapur	<i>[Signature]</i> 11/10/23

18 APPLICANT'S COMMENTS

Para No.	Our Reference	Applicant's Comments
18	16.1 - 16.4	We will be looking into improving future production.
	16.5	We will provide marking/labeling machine plates as per Indian standard.
	16.6 - 16.7	We will provide the parts catalogue and user/service manual according to your suggestion.



ANNEXURE - I

Place: CSIR-CMERI, Durgapur, West Bengal

FIELD DATA SHEET OF ROTARY POWER WEEDER

SL No	Date	Duration of Test (h)	Gear	Speed of Operation (kmph)	Average Width of cut (m)	Average Depth of cut (cm)	Type of Soil	Average Soil Moisture (%)	Bulk Density (g/cc)	Fuel consumption		Area covered ha/h	Time Required for one hectare h/ha	Field Efficiency (%)	Weeding Efficiency (%)
										(l/hr)	(l/ha)				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	23/08/23	2.45	1	1.49	1.087	8.30	Sandy Loam	14.7	1.84	0.980	8.00	0.122	8.17	81.6	97.4
2		2.13	2	2.05	1.080	8.13	Sandy Loam	15.3	1.85	0.891	5.07	0.176	5.69	84.9	94.0
3	24/08/23	2.83	1	1.38	1.080	8.47	Sandy Loam	14.5	1.89	0.953	8.18	0.116	8.59	83.3	93.6
4		3.25	2	2.16	1.060	8.17	Sandy Loam	14.6	1.85	0.554	3.43	0.162	6.19	74.0	97.7
5	25/08/23	3.17	1	1.27	1.067	8.53	Sandy Loam	13.9	1.82	0.916	8.41	0.109	9.18	85.2	97.7
6		2.98	2	2.23	1.063	8.13	Sandy Loam	13.7	1.79	0.704	4.12	0.171	5.85	75.7	100.0
7	04/09/23	2.97	1	1.36	1.060	7.90	Sandy Loam	15.0	1.78	0.910	7.71	0.118	8.48	85.8	98.4
8		3.33	2	2.19	1.063	7.97	Sandy Loam	15.5	1.85	0.720	4.21	0.171	5.85	77.3	93.2
9	11/09/23	2.82	1	1.31	1.057	7.90	Sandy Loam	14.0	1.87	0.923	8.67	0.107	9.39	80.7	91.1
10		2.33	2	2.17	1.077	8.27	Sandy Loam	14.8	1.66	0.686	4.10	0.167	5.98	76.1	98.7

