

बगवसायिक परीक्षण रिपोर्ट
COMMERCIAL TEST REPORT

संख्या/ No.: PS-424/2492/2020
माह/Month: August, 2020

THIS TEST REPORT VALID UP TO : 31st August, 2025



**ASPEE LOCOPRO ULV
VEHICLE MOUNTED SPRAYER**



भारत सरकार

Government of India

कृषि एवं किसान कल्याण मंत्रालय

Ministry of Agriculture and Farmers Welfare

कृषि, सहकारिता एवं किसान कल्याण विभाग

Department of Agriculture, Cooperation 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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Governing test:

Sr. No.	Parameter	Observed value
1.	Temporary speed change in percent of rated speed.	6.22
2.	Permanent change in speed in percent of rated speed.	5.42

7. CHECKING OF MATERIAL OF CONSTRUCTION

Sl. No.	Component	Observation
i	Tank	Stainless steel
ii	Lid or cap	Plastic
iii	Frame	Mild steel
v	Compressor Casing	Mild steel
vi	Air pipe	PVC
vii	Air hose pipe	High pressure, Rubber hose
xi	Gasket	Fibre
xiii	Air hose pipe (compressor to atomizer)	High pressure rubber
xiv	Liquid or dust regulating device	Not applicable
xv	Hose clip	Mild steel
xvi	Atomizer assembly	Plastic
xvii	Chemical delivery tube	PVC
xviii	Control panel box.	Stainless steel
xix	V-belt	Rubber
xx.	Pulleys	Cast Iron

8. TEST FOR AIR VELOCITY AND AIR OUTPUT

1. Date of test : 31.07.2020
2. Atmospheric conditions
 - a) Temperature : 34.2 ° c
 - b) relative humidity : 55.1 %
 - c) Pressure : 731.2 mm of Hg
3. Manufacturer's recommendation for this test
 - 3.1 Recommended engine speed for this test, rpm : 3400
 - 3.2 Compressor speed corresponding to 2800 rpm of engine, rpm : 1660
 - 3.3 Air velocity at 100 mm away from Atomizer



S. No.	Engine speed (rpm)	Dia. of out let (mm)	Air velocity of fan (m/s)	Average Air output m ³ /min
1.	3400	10.5	35.6	0.147
2.	3401		34.7	
3.	3400		35.8	
4.	3398		35.6	
Avg.	3400		Avg.= 35.4	

9. TEST FOR DISCHARGE RATE OF SPRAYER

1.	Date of test	:	30.07.2020
2.	Atmospheric conditions		
	a) Temperature	:	35.4 ⁰ C
	b) Relative humidity	:	56.8 %
	c) Pressure	:	730.5 mm of Hg
3.	Condition of Vehicle	:	Engine of Vehicle was kept at stopping condition.
4.	Manufacturer's recommendation for this test		
4.1	Recommended engine speed for this test, rpm	:	3400
4.2	Compressor speed corresponding to 3400 rpm of engine, rpm	:	1660

Level of water in tank	Test No.	Engine speed (rpm)	Discharge rate ml/min	Average discharge rate ml/min	Variation in discharge w.r.t declared setting i.e 400 ml/min (%)
Full	1.	3406	350	362.5	9.4
	2.	3400	360		
	3.	3402	370		
	4.	3397	370		

10. DETERMINATION OF VARIATION IN DISCHARGE OF SPRAYER DUE TO TANK FILLING

1. Date of test : 30.07.2020
2. Atmospheric conditions
 - a) Temperature : 34.0 ° c
 - b) relative humidity : 59.2 %
 - c) Pressure : 732.9 mm of Hg
3. Condition of Vehicle : Engine of the vehicle was kept at stopping condition.
4. Manufacturer's recommendation for this test
 - 4.1 Recommended engine speed for this test, rpm : 3400
 - 4.2 Compressor speed corresponding to 3400 rpm of engine, rpm : 1660



Level of water in tank	Test No.	Engine speed (rpm)	Discharge rate ml/min	Average discharge rate ml/min	Variation in discharge w.r.t that on full tank (%)	Full tank discharge ml/min
One-forth 12.5 lit.	1	3401	Nil	Nil	Nil	362.5
	2	3397				
	3	3400				
	4	3402				
One-half 25.0 lit	1	3400	360	355.0	2.07	
	2	3404	350			
	3	3400	360			
	4	3396	350			
Three-forth 37.5 lit	1	3399	350	360.0	0.69	
	2	3400	360			
	3	3401	360			
	4	3400	370			

11. SPRAY THROW TEST

1. Date of test : 30.07.2020
2. Manufacturer's recommendation for this test
- 2.1 Recommended engine speed for : 3400
this test, rpm
- 2.2 Blower speed corresponding to : 1660
3400 rpm of engine, rpm
- 2.3 Condition of vehicle : Engine of the vehicle was kept at stopping condition

Position of atomizer and inclination w.r.t horizontal in deg.	Wind velocity (m/s)	Av. Height of spray from ground level, (m)	Swath of Spray, (m)	Height of center of atomizer from ground level, (m)
Upward (47°)	0.7 to 1.4	5.885	5.900	3.335

12. ENDURANCE TEST OF SPRAYER

1. Date of test : 26.07.2020 to 29.07.2020
2. Manufacturer's recommendation for this test
- 2.1 Recommended engine speed for : 3400
this test, rpm
- 2.2 Blower speed corresponding to : 1660
3400rpm of engine, rpm




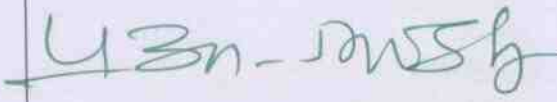
15 TECHNICAL LITERATURE:

The following literature provided during the test.

- Instructional Manual of sprayer
- Engine test report.
- Owner's manual of engine.

However the same need to be updated as per IS:8132-1999 including relevant information such as operating parameters, safety during etc.

TESTING AUTHORITY

MAAN SINGH SENIOR TECHNICAL ASSISTANT	
P. K. PANDEY DIRECTOR	

16.

APPLICANT'S COMMENTS

Para No	Our reference	Applicants comment's
16.1	14.1	We have noted and will consider to incorporate in our regular production
16.2	14.2	We will ask the supplier of GX 200 engine to provided us oil filter in the system, for future supplies.
16.3	14.3	We have noted and will provide space for vehicle no. to be mentioned on the label.
16.4	14.4	It looks like there may have been some typing to printing error. We will mention 3600 rpm in regular production.

