

व्यावसायिक परीक्षण रिपोर्ट(प्रारंभिक)

COMMERCIAL TEST REPORT (INITIAL)

संख्या/No: H&TH/SRFMTTI,
ANANTAPUR/2025-26/03/03/1853

माह/Month: APRIL, 2025

THIS REPORT IS VALID UPTO 31.03.2032



LIMAT & CO., SBI 120SELF PROPELLED REAPER



सत्यमेव जयते

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

दक्षिणी क्षेत्र कृषि मशीनरी प्रशिक्षण एवं परीक्षण संस्थान

Southern Region Farm Machinery Training and Testing Institute


ट्रैक्टर नगर, गार्लदिन्ने-515 731, जिला: अनंतपुर (आं. प्र.)

Tractor Nagar, Garladinne-515 731, District: Anantapur (A.P.)

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H&TH/SRFMTTI, ANANTAPUR/2025-26/ 03/03/1853	LIMAT & CO., SBI 120 SELF PROPELLED REAPER THIS TEST REPORT IS VALID UP TO 31.03.2032	
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Manufacturer, (apa) : M/s Limat & Co.,
622/1, Trichy Road, Singanallur,
Coimbatore, Tamil Nadu – 641 005, India.

Applicant : The manufacturer

LIMAT & CO., SBI 120 SELF PROPELLED REAPER

Report No.: H&TH/SRFMTTI, ANANTAPUR/2025-26/03/03/1853

Month: April

Year: 2025



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**Government of India
Ministry of Agriculture and Farmers Welfare
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H&TH/SRFMTTI, ANANTAPUR/2025-26/ 03/03/1853	LIMAT & CO., SBI 120 SELF PROPELLED REAPER	COMMERCIAL (ICT)
	THIS TEST REPORT IS VALID UP TO 31.03.2032	

Type of test : COMMERCIAL (ICT)

Period of test : December, 2024 to February, 2025


Test Report No. : H&TH/SRFMTTI, ANANTAPUR/2025-26/03/03/1853

Month / Year of release : April, 2025

- i) The results reported in this report are observed values and no corrections have been applied for atmospheric and site conditions.
- ii) The test sample was selected randomly through virtual mode by the Institute.
- iii) The results presented in this report do not, in any way, attribute to the durability of the machine.
- iv) This report should not be reproduced in part or full without prior permission of the Director, Southern Region Farm Machinery Training and Testing Institute, Garladinne, Anantapur (A.P.).
- V) This is a report on Commercial Test of Power Reaper named "**LIMAT & CO., SBI 120 SELF PROPELLED REAPER**". This report is valid up to - **31.03.2032, Vide Ministry's O.M. No. 13-22/2020-M&T (I&P) dated 12.12.2023.**

SELECTED CONVERSIONS

Sl. No	Units	Conversion Factor
1	Force	
	1 kgf	9.80665 N
		2.20462 lbf
2	Power	
	1 hp	1.01387 metric hp (Ps)
		745.7 W
	1 Ps	735.5 W
	1 kW	1.35962 Hp
3	Pressure	
	1 psi	6.895 kPa
	1 kgf/cm ²	98.067 kPa = 735.56 mm of Hg
	1 bar	100 kPa = 10 N/cm ²
	1 mm of Hg	1.3332 m-bar

 H&TH/SRFMTTI, ANANTAPUR/2025-26/ 03/03/1853	LIMAT & CO., SBI 120 SELF PROPELLED REAPER THIS TEST REPORT IS VALID UP TO 31.03.2032	COMMERCIAL (ICT)
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18. SUMMARY OF OBSERVATIONS, COMMENTS & RECOMMENDATIONS

18.1 Engine performance:

- 18.1.1 Engine maximum and rated power were observed as 3.09 kW against the declared values of 3.0 kW.
- 18.1.2 Max. Torque was observed as 18.75 Nm against declaration value of 20 Nm
- 18.1.3 Specific fuel consumption of engine corresponding to maximum power was recorded as 460 g/kWh. against the declaration value of 420 g/kWh
- 18.1.4 Back up torque of engine was observed as 14.26 % against declared value of 10%.

18.2 Mechanical vibration:

The amplitude of mechanical vibration on various assemblies of the Power Reaper was observed to the extent of 940 microns, which is on higher side. Therefore, necessary action to reduce the vibration should be taken in future.

- 18.3 The dimension of knife does not conform, in full, to IS: 6025-1982. This should be looked into for necessary corrective action.


18.5 Ease of operation & adjustment:

- 18.5.1 Safety guard **MUST** be provided for drive pulley & belt.
- 18.5.2 The exhaust **MUST** be provided with spark arresting device.
- 18.5.3 Safety notice & hazard warnings labels **MUST** be provided on machine.

18.6 Marking/labeling:

The labeling plate does not reveal all the required information. It is therefore recommended that a suitable labeling plate covering all essential components, inter alia, the following must be provided:

- i) Country of origin

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18.7 Field performance test:

- 18.7.1 i) The speed of harvesting ranged 2.59 to 2.82 kmph for paddy crops respectively.
 ii) The area harvested by the machine was recorded as 0.234 to 0.250 ha/h.
 iii) The average hourly fuel consumption varied from 0.85 to 0.95 l/h for paddy crop respectively.
 iv) The fuel consumption per unit area harvested varied from 3.40 to 4.05 l/ha for paddy crop respectively.

18.7.2 Quality of Work:

- i) The post-harvest loss was observed as 0.02 to 0.03 % for Paddy respectively.
 ii) The stubble height was recorded as 53 to 61 mm for Paddy respectively.
 iii) Machine leaves the harvested crop in windrows.

18.8 Wear of critical components:

The wear rate of cutter bar on mass basis was recorded as 0.04 % per hour.

18.8.1 Chemical analysis:

The chemical composition of cutting (movable) blade and stationary knife are not conforming to the requirement of relevant IS (IS 6025:1982 (Reaffirmed: 1999)). Therefore, this should be taken care for corrective action.

18.9 Provision for safety:

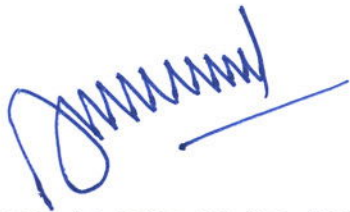



A safety pin at driven sprocket of conveyor chain is provided to take case of overloading of cutter bar.

18.10 Technical literature:

The operator manual cum parts catalogue of reaper and engine in single booklet was supplied with the reaper for reference during the test. The manuals are no adequate. The most of initial setting and discard limit of critical components may be added in manuals and leaflets etc. It is however, recommended that same may be revised and brought out in Hindi & other regional languages as per IS 8132: 1999 (Reaffirmed: 2019) for the sake of user & technical personnel

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TESTING AUTHORITY

 Er. PRAMOD YADAV AGRICULTURAL ENGINEER	 Er. VIJAY KUMAR BADAYA SENIOR AGRICULTURAL ENGINEER
 Dr. B.M. NANDEDE DIRECTOR 	

19. APPLICANT' S COMMENTS

SR No.	Our Ref. No.	COMMENTS
19.1	18.1	We will take necessary corrective action to improve the Engine.
19.2	18.2	Action will be taken to control the vibration within the specified limit by providing suitable anti vibration pads in the engine foundation
19.3	18.3	Will take necessary actions to meet knife dimension to IS: 6025-1982
19.4	18.5	We will take corrective action & provided belt safety guard, exhaust spark arresting device in future product
19.5	18.6	We will maintain labeling plate according to IS standards in future product
19.6	18.8.1	We will maintain chemical composition of cutting blade to meet IS standards in future product.
19.7	18.9	We will provide driven sprocket safety pin in future products.
19.8	18.10	We will provide printed literature in future products as per IS standards