

व्यावसायिक परीक्षण रिपोर्ट

संख्या/ No.: IMP-1044/2763/2021

COMMERCIAL TEST REPORT (FIRST BATCH)

माह/Month: December, 2021

THIS TEST REPORT VALID UP TO : 31st December, 2026



**NEW HOLLAND, RKG129, GYRO RAKE
TRACTOR MOUNTED**



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

उत्तरी क्षेत्र कृषि मशीनरी प्रशिक्षण एवं परीक्षण संस्थान

Northern Region Farm Machinery Training and Testing Institute

ट्रैक्टर नगर, सिरसा रोड, हिसार, (हरियाणा) - 125 001

Tractor Nagar, Sirsa Road, HISAR (Haryana)-125 001

Website: <http://nrfmtti.gov.in/>

E-mail: fmti-nr@nic.in

Tele./FAX: 01662-276984

Page 1 of 23

IMP-1044/2763/2021	NEW HOLLAND, RKG129, GYRO RAKE TRACTOR MOUNTED (COMMERCIAL) (FIRST BATCH)
--------------------	--

LUBRICATING POINTS:-

Table-1 Lubricating and greasing points		
Sr. No.	Description (Daily or alternate day)	Numbers
1	Three point linkage pivot	01
2	Gear Box	01
3	Screw	01
4	Power take off shaft (PTO shaft)	01
5	Bearing	01
6	Axle tandem	02
7	Cardan shaft	03
8	Arm linkage pins (No Grease nipple provided)	04
9	Bush	01
	Total	15
	Grease cups (Daily or alternate day)	-
1	Grease cups of wheel bearings	04
	Total	04
1	Oiling points (Daily or alternate day)	Not provided

SAFETY DECALS AND NOTICE ON MACHINE : The following signs and symbols provided on the machine
 (i) Warning signs
 (ii) Danger signs
 (iii) Indication signs

Marking / Labelling of implement

The labelling plate is riveted on the machine having following information.

CNH Industrial (India) Private Limited			
Make/Brand	New Holland	NEW HOLLAND AGRICULTURE	
Model	RKG129		
Serial Number	299777	Manufacturing Year	2021
Country of origin	Italy	Size of Machine	3500 mm
Tractor HP	35 hp or more	Manufactured at	Sitrex Spa, Trestina Italy

6. RUNING-IN

The RKG129 Gyro Rake was run-in for 0.50 hours in loose straw of Paddy prior to start of the test as per the recommendation of the applicant.

7. FIELD TEST:

The RKG129 Gyro Rake driven by New Holland 3600-2 AR PLUS+ tractor at engine throttle setting corresponding PTO speed of 540±10 rpm was tested in the field for 21.00 hrs for collecting of loose straw after Paddy harvesting by combine harvester. During test, field performance of RKG129 Gyro Rake was assessed with regard to quality of work, rate of work, fuel consumption, safety and soundness of construction etc. The atmospheric condition and performance parameter as observed during field tests are also given in **Annexure-I** and summarized in **Table-2**.

Table-2: Summary of field performance test.

Sr. No.	Observations	Range of observations
1.	Speed of operation, kmph	8.21 to 8.41
2.	Width of working, m	2.52 to 2.73
3.	Overlap percent, %	1.80 to 9.35
4.	Rate of work, ha/h	1.749 to 1.826
5.	Fuel consumption	
	l/h	3.33 to 4.04
	l/ha	1.83 to 2.31
	l/t	0.15 to 0.22
6.	Field efficiency, %	80.39 to 86.17
7.	Hay charge transported	
	t/h	15.358 to 26.647
	t/l	4.612 to 6.596
8.	Straw collecting efficiency, %	95.26 to 97.62
9.	Avg. PTO power consumption, kW	0.86

RATE OF WORK AND FUEL CONSUMPTION:

During test, the speed of operation varied from 8.21 to 8.41 kmph for Paddy straw collection in windrows. The output (area covered) varied from 1.749 to 1.826 ha/h. & the average hourly fuel consumption varied from 3.33 to 4.04 l/h, the fuel consumption per unit area from 1.83 to 2.31 l/ha.

Quality of work:

- (i) The field efficiency ranged from 80.39 to 86.17 %.
- (ii) Hay collection in windrows ranged from 15.358 to 26.647 t/h
- (iii) The straw collecting efficiency ranged from 95.26 to 97.62 %.

8. ADJUSTMENTS, DEFECTS, BREAKDOWN AND REPAIR

No breakdown occurred during 21.00 hrs of machine operation.

9. CRITICAL TECHNICAL SPECIFICATIONS

(Vide Ministry's communication No 13-9/2019 M & T (I&P) dated 26.04.2019)

Sl. No.	Parameters	Specifications	Observe value
1	Type	Tractor operated Wheel rake/Rotary rake/ Side delivery rake	Rotary Rake
2	Working width, m	1.0 (min.)	Min. - 2.4 Max. - 3.3
3	Hitching system	Three point linkage / draw bar hook	Three point linkage
4	Swathing mechanism	Rake Wheel/ Tyne arm	Tyne arm
5	Dia. of tines (mm)	6 Min.	9

IMP-1044/2763/2021	NEW HOLLAND, RKG129, GYRO RAKE TRACTOR MOUNTED (COMMERCIAL) (FIRST BATCH)
--------------------	--

6	Marking/ labelling	The labelling plate should be riveted on the body of machine having name & address of manufacturer, serial number, size, required size of prime mover <i>kW/hp</i>	Conforms
7	Literature	Operator manual, service manual & parts catalogue should be provided	Provided

10. COMMENTS AND RECOMMENDATIONS

- 10.1** The Dimension of three point linkage of implement does not conform, in toto, to the requirements of IS: 4468(Part-1)-1997 and therefore, it may be looked into for corrective action.
- 10.2** The Dimensions of PIC of implement does not conform, in toto, to the requirements of IS: 4931-1995 and therefore, it may be looked into for corrective action.
- 10.3** The Dimensions of PIC yoke bore of implement does not conform, in toto, to the requirements of IS: 4931-1995 and therefore, it may be looked into for corrective action.
- 10.4** The grade of grease is not specified in operator's manual & service manual. It must be specified.

11. TECHNICAL LITERATURE

One booklet entitled "Operator's manual, Service manual and part catalogue" was provided with the machine for reference during test. The same, however needs to be updated as per IS: 8132-1999.

12. COMPARISON WITH SPECIFICATION AND PERFORMANCE CHARACTERISTICS OF PREVIOUS SAMPLE (Test Report No. Imp-708/1708, February 2015, of NRFMT&TI, Hisar and PRESENT SAMPLE)

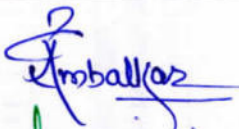
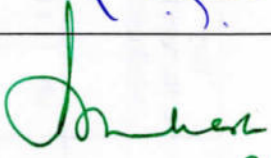
12.1	General	Previous sample tested vide test report no. IMP-708/1708, February, 2015	Present sample
	Make	: New Holland	New Holland
	Model	: RKG-129	RKG129
	Model No.	: SR/350-9	--
	Brand/ trade name if any	: Gyro Rake	New Holland
	Type of the machine	: Tractor driven rotary, Agricultural rake,	Tractor driven rotary, Agricultural rake
	Serial no./Product Identification No.	: 247452	299777
	Year of Manufacturer	: 2013	2021
	Manufacturer	: M/s CNH International SA, Riva Paradiso 14-6902 Paradiso, Lugano, Switzerland	M/s. Sitrex Spa, Trestina, Italy for CNH Industrial (India) Private Limited
	Country of origin	: Italy	Italy



IMP-1044/2763/2021	NEW HOLLAND, RKG129, GYRO RAKE TRACTOR MOUNTED (COMMERCIAL) (FIRST BATCH)
--------------------	--

12.7	Parking stand		
Type	:	M.S. box section having 3 holes dia. 10 mm at distance of 40 mm	M.S. box section having 3 holes dia. 10 mm at distance of 40 mm
Number	:	1	1
Location	:	Front, RHS of machine	Front, LHS of machine
Size, mm	:	775, 40×40	775, 40×40

TESTING AUTHORITY

G.R. AMBALKAR AGRICULTURAL ENGINEER	
Dr. MUKESH JAIN DIRECTOR	 24.12.2021

Draft test report compiled by Deny Hasnu, Sr. Technician

13. APPLICANT'S COMMENTS

Para No.	Our Reference	Applicant's Comment
13.1	10.1	We will do necessary improvement in the three point linkage of implement to comply all the requirement of IS:4468 (Part-1)-1997 in future and provide in regular production level.
13.2	10.2	We will do necessary improvement in the PIC of implement to comply all the requirement of IS:4931-1995 in the future and provide it in regular production level.
13.3	10.3	We will do necessary improvement in the PIC Yoke bore of implement to comply all the requirements of IS:4931-1995 in future and provide it in regular production level.
13.4	11	We will provide the literature as per the IS:8132-1999.

