

(यह परीक्षण रिपोर्ट 31/10/2023 तक वैध है। / THIS TEST REPORT IS VALID UP TO : 31/10/2023)



NEW HOLLAND, 3037 TX TRACTOR



सत्यमेव जयते

भारत सरकार

कृषि एवं किसान कल्याण मंत्रालय
कृषि, सहकारिता एवं किसान कल्याण विभाग
मशीनीकरण एवं प्रौद्योगिकी प्रभाग

GOVERNMENT OF INDIA

MINISTRY OF AGRICULTURE AND FARMERS WELFARE

(Department of Agriculture, Cooperation & Farmers Welfare, Mechanization & Technology Division)

केन्द्रीय कृषि मशीनरी प्रशिक्षण एवं परीक्षण संस्थान

ट्रैक्टर नगर, बुदनी (म.प्र.) ४६६ ४४५

CENTRAL FARM MACHINERY TRAINING & TESTING INSTITUTE

(An ISO : 9001 - 2015 Certified Institute)

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1	2	3	4
	Engine to PTO speed ratio	3.20:1 (48/15T)	3.73:1 (56/15T) 2.94:1 (Economy)
	Distance behind rear axle,(mm)	200	325
7.	Wheel base, (mm)	1930	1900
8.	Decals sticker	New Holland 3037	New Holland 3037 TX

Subsequent to the examination of the case in the light of Indian Standard IS: 12207- 2019, the following tests were considered to be carried out:-

- (i) Specification checking
- (ii) Nominal speed test
- (iii) PTO performance test (Natural ambient)

2. FUEL AND LUBRICANTS

2.1 Fuel : The High-speed diesel oil supplied by M/s Indian Oil Corporation Limited having density of 0.836 g/cc at 15°C was used.

2.2 Lubricants:

	Particulars	As recommended by the manufacturer	As used during the test
1.	Engine oil & Air cleaner oil	SAE 20W40	As recommended
2.	Transmission, rear differential, rear axle & final drive, brake and hydraulic system	SAE EP-80	Oil originally filled in the tractor was not changed
3.	Steering	SAE-120	
4.	Grease	NLG1-2	NLG1-2

3. ESSENTIAL TESTS

3.1. SPECIFICATIONS

3.1.1	Tractor:	Base Model	Variant Model
	Make	New Holland	New Holland
	Model	3037	3037 TX
	Type	Four wheeled, Rear-wheel driven, General Purpose Agricultural Tractor.	
	Month & Year of manufacture	2/18	1/ 2020
	Chassis number	NHN30370ZJB416095	NHN30370ZLA499062
	Country of Origin	India	India
3.1.2	Engine:		
	Make	Simpson	Simpson
	Model	TIII A S325/NH.2F1.4	TIII A S325/NH.2F1.4
	Serial number	S325J07177	S325K67522
	Type	Four stroke; Liquid cooled, naturally aspirated, direct injection, diesel engine.	
	Engine speed (Manufacturer's recommended production setting),(rpm) :		
	- Maximum speed at no load	2150 to 2200	2150 to 2200
	- Low idle speed	600 to 800	600 to 800
	- Speed at maximum torque	1200 to 1500	1200 to 1500
	Rated speed, (rpm):		
	- For PTO use	2000	2000
	- For drawbar use	2000	2000



6. SUMMARY OF OBSERVATIONS, COMMENTS & RECOMMENDATIONS

On the basis of tests conducted, the performance results have been summarized as evaluative (mandatory) and non – evaluative (not mandatory) parameters applicable for qualifying Minimum Performance Criteria as per clause-4 (table-1) of Indian Standard 12207: 2019 for acceptance of tractor for the purpose of subsidies/NABARD financing are summarized as under:

6.1 Evaluative & Non-Evaluative Parameters:

Sl. No.	Characteristic	Category (Evaluative/Non-Evaluative)	Requirements as per IS: 12207-2019	Values declared by the applicant/ requirement		As observed		Whether variant model meets the requirements (Yes/No)
				Base model	Variant Model	Base model	Variant model	
1	2	3	4	5 (a)	5 (b)	6 (a)	6 (b)	7
6.1.1 PTO Performance:								
a)	- Max. power under 2 h test, (kW) (Natural ambient condition)	Evaluative	Declared value to be achieved with a tolerance of: ±5% for PTO power and or engine power >26 kW. ±10% for PTO power and or engine ≤ 26 kW.	26.0 (D)	26.0 (D)	25.9	26.4	Yes
b)	Power at rated engine speed (kW)	Non-Evaluative	-do-	26.0 (D)	26.0 (D)	25.9	26.4	Yes
c)	Specific fuel consumption corresponding to maximum power, (g/kWh)	Evaluative	+ 10% max.	265 (D)	265 (D)	269	260	Yes
d)	Maximum equivalent crankshaft torque, (Nm)	Non-Evaluative	± 8%	150 (D)	150 (D)	148.8	148.7	Yes
e)	Back-up torque, percent	Evaluative	12 percent	10 (D)	12% (R) 20% (D)	20.3	18.0	Yes
f)	Smoke level	Evaluative	Maximum light absorption coefficient of 3.25 per meter or equivalent BOSCH No. 5.2 or 75 Hartridge value (As per CMVR).	3.25 per meter Maximum (R)	3.25 per meter (R)	0.13	0.20	Yes

Variant)
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6

No change

No change

No change

No change

No change

No change

No change

Comments:

No change

No change

Changed

No change

Changed

No change

No change

Changed

No change

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Changed

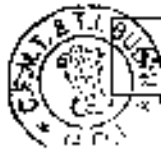
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1	2	3	4	5 (a)	5 (b)	6 (a)	6(b)	7
6.1.2	Safety features :							
a)	Guards against moving and hot parts	Evaluative	Belt drives, pulleys, silencer, hydraulic pipes (As per IS 12239 (Part2)	-	-	Meets the requirement		Yes
b)	Lighting arrangement	Evaluative	As per CMVR	-	-	Meets the requirement		Yes
c)	Seating requirements (Tractors having more than 1150 mm rear track width)	Non Evaluative	Should meet the requirements of IS: 12343 (As amended from time to time)	-	-	Meets the requirement		Yes
d)	Technical requirements for PTO shaft	Evaluative	Should meet the requirements of IS: 4931 (As amended from time to time)	-	-	Meets the requirement		Yes
e)	Dimensions of three point linkage	Non Evaluative	Should meet the requirements of IS: 4168 (Part-1) (As amended from time to time)	-	-	Does not meet the requirement		No
f)	Specifications of linkage drawbar	Evaluative	Should meet the requirements of IS: 12953 (As amended from time to time)	-	-	Meets the requirement		Yes
g)	Swinging drawbar (wherever fitted)	Evaluative	Should meet the requirement of IS: 12362 (Part 3) (As amended from time to time)	-	-	Not Provided		-
h)	1) Maximum travelling speed at rated engine speed in reverse gears, Km/h	Evaluative	Should not exceed 20 Km/h	-	-	11.28 (Meets the requirement)		Yes
	2) Audible warning signal on tractor	Evaluative	As soon as the travelling speed in reverse gear reaches to 20 km/h, an audible warning signal on tractor shall be activated. The safety aspects about the operation of shuttle technology shall be brought in operation and manufacturer/dealer shall ensure the training on this aspect to operator before the delivery of tractor.	Not applicable	-	Not applicable		Not applicable b/c



(b)	7
it	Yes
it	Yes
nt	Yes
ha ent	Yes
ot he nant	No
he ent	Yes
ided	-
feats	Yes
ent)	
able	Not applicable

1	2	3	4	5 (a)	5 (b)	6 (a)	6 (b)	7		
6.1.3	Labelling of tractors (Provision of labelling plate):									
1)	Make	Evaluative	Should conform to the requirements of CMVR along with maximum PTO Power in kW and year of manufacture in numerical form. <table border="1" style="margin-left: 20px;"> <tr> <td>MM</td> <td>YY</td> </tr> </table>	MM	YY	-		New Holland		Yes
MM	YY									
2)	Model	Evaluative		--		3037 TX		Yes		
3)	Year of manufacture	Evaluative		-		01/20		Yes		
4)	Engine number	Evaluative		-		S325K67522		Yes		
5)	Chassis number	Evaluative		--		NHN303702LA499062		Yes		
6)	Declaration of PTO power, (kW)	Evaluative		-		28.0		Yes		
7)	Declaration of Specific fuel consumption (g/hph)	Evaluative	-		191		Yes			
6.1.4	Literature (Submission to test agency):									
(a)	Operator manual	Evaluative	Provided/ Not Provided	Provided	Provided	Provided	Yes			
(b)	Parts Catalogue	Evaluative	Provided/Not Provided	Provided	Provided	Provided	Yes			
(c)	Workshop/Service manual	Evaluative	Provided/Not Provided	Provided	Provided	Provided	Yes			
6.1.5	Filament of Roll Over Protective Structures (ROPS): For tractor having more than 1150 mm rear track width	Evaluative	ROPS should meet the requirement of IS:1182 or OECD code or equivalent International Standard	Not provided	Not provided	Not provided	Not Applicable			
6.1.6	Standard Accessories	Evaluative	Trailer hitch, front tow hook, linkage drawbar should be provided with tractor	--		Provided	Yes			
6.1.7	Accessories (optional)	Non Evaluative	Ballast weight, if fitted, should meet the requirement of CMVR	--		Provided	Yes			



6.2 CATEGORY OF BREAKDOWNS / DEFECTS (As per clause 5.0 of IS:12207-2019):					
Sl. No.	Category of breakdowns	Category [Evaluative / Non Evaluative]	Requirements as per IS: 12207-2019	As observed	Whether meets the Requirements (Yes/No.)
1.	Critical	Evaluative	No critical breakdown	None	Yes
2.	Major	Evaluative	Not more than one and neither of them should be repetitive in nature	None	Yes
3.	Minor	Evaluative	Not more than three and frequency of each should not be more than two.	None	Yes
4.	Total breakdowns	Evaluative	In no case, the total number of breakdowns should exceed four, that is, (1 major + 3 minor) or 4 minor breakdowns.	None	Yes

6.3 Salient Observations:

6.3.1 Laboratory tests:

6.3.1.1 PTO performance:

- i) The maximum PTO power was observed as **26.4 kW** against the declaration of **26.0 kW**, which meets requirement of IS:12207-2019.
- ii) The specific fuel consumption corresponding to maximum power was observed as **260 g/kWh** against the declaration of **265 g/kWh**, which meets requirement of IS:12207-2019.
- iii) The backup torque is **18.0 %** which meets the evaluative requirement of IS: 12207-2019

6.3.1.2 Three point linkage:

The lateral distance from lower hitch point to centre line of tractor does not meet the requirement of IS:1468 (part-1):1997 (Reaffirmed in Oct., 2017). This should be looked into for necessary corrective action.

6.3.1.3 Operator's work place:

Operator's work place meets the requirements of IS: 12239 (Part-1 & Part-2) 1998, except the following:

- i) Provision of spark arresting device in the exhaust system.
- ii) Vertical retainness is not provided on both side of pedals.
- iii) The fuel shut-off knob does not remain in stop position.
- iv) PTO master shield is not been provided.

6.4 Maintenance / Service Problems:

No noticeable maintenance or service problem was observed during the test.

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3):

ether meets the
requirements
(Yes/No.)

Yes

Yes

Yes

Yes



- 6.5 Recommendation with regard to safety on tractor:**
The following requirements, inter alia, may be considered for incorporation on the tractor:
- i) Power take off master shield is not provided.
 - ii) Working clearance around position control lever & mudguard is less than the minimum requirement.
 - iii) Working clearance around draft control lever & Lift 'o' matic button is less than the minimum requirement
 - iv) Working clearance around main gear lever & operator's seat is less than the minimum requirement.
 - v) Working clearance around range selector gear lever & operator's seat is less than the minimum requirement.
- 6.6 Adequacy of Literature supplied with machine:**
The following literatures were supplied with the test tractor for reference during the test
- i) Operator's manual of New Holland 3032 TX, 3037 TX, 3230 TX tractor models.
 - ii) Service Parts catalogue of New Holland 3032 TX, 3037 TX, 3230 TX tractor models.
 - iii) Service Manual of New Holland 3032 TX, 3037 TX, 3230 TX and 3600 TX tractor models.
- 6.7** This tractor model meets the evaluative requirements of IS: 12207-2019.

7. CITIZEN CHARTER

Time frame for Testing & Evaluation as per Citizen Charter	Duration of Test	Whether the Test Report is released within the time frame given in Citizen Charter	Remarks
10 months	3 Months (July, 2020 to September, 2020)	Yes	--None-

TESTING AUTHORITY:


NITESH KUMAR VERMA
AGRICULTURAL ENGINEER


C.V. CHIMOTE
TEST ENGINEER


J.J.R. NARWARE
DIRECTOR

The report compiled by: **Shri Pratyush Satya**, Senior Technical Assistant



T- 1487/2014/2020

NEW HOLLAND, 3037 TX TRACTOR - Commercial (Variant)

THIS TEST REPORT IS VALID UPTO: 31/10/2023

8. Applicant's comments

Para no.	Our reference	Comments received from the applicant
8.1	6.3.1.4 and 6.5	Valuable comments and suggestions are well taken. Under our policy of continuous product improvement these aspects are further being looked into and will take appropriate actions to eliminate these deviations soon wherever necessary.

ANNEXURE-I**TRACTOR RUN HOURS DURING TEST**

A. LABORATORY AND TRACK TESTS		<u>HOURS</u>
1.	Running -in	--
2.	Nominal speed test	1.5
3.	PTO performance test	5.63
B.	Miscellaneous test and other run hours, including idle run transportation, trial and preparation for test.	0.27
Total		7.40