

व्यावसायिक परीक्षण रिपोर्ट
COMMERCIAL TEST REPORT (Initial)

संख्या/No. : T-1637/2168/2022
माह/Month : April, 2022

(यह परीक्षण रिपोर्ट 30/04/2025 तक वैध है / THIS TEST REPORT IS VALID UPTO 30/04/2025)
[ONLINE TESTING]



JOHN DEERE, 5405 4WD GEAR PRO TRACTOR



भारत सरकार

कृषि एवं किसान कल्याण मंत्रालय
(कृषि, सहकारिता एवं किसान कल्याण विभाग)

GOVERNMENT OF INDIA
MINISTRY OF AGRICULTURE AND FARMERS WELFARE
(DEPARTMENT OF AGRICULTURE, CO-OPERATION & FARMERS WELFARE)

केन्द्रीय कृषि मशीनरी प्रशिक्षण एवं परीक्षण संस्थान
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The height of PTO shaft from ground level was measured as 695 mm with 16.9-30 tyre size (declared as Standard fitting), and 725 mm with 18.4-30 tyre size(declared as optional tyre size) against the requirement of “450 to 675 mm” as per IS:4931-1995, **therefore does not meet the evaluative requirement of IS:12207-2019.** Yet, the applicant, vide letter No. Nil dated 07.01.2022, had requested the institute to continue the remaining tests on the tractor, which was allowed.

As this tractor model does not meet the evaluative requirement of PTO shaft height, this tractor model shall not be accepted for subsidies/financing as per clause 3.3.1 of IS: 12207-2019.

There is apparently a “Dual Mode Selection Switch” in the tractor. The applicant has christened the different modes as “Standard and Economy Mode (STD/ECO)”. However institute was requested to conduct the PTO test in “Standard and Economy Mode” and all other tests only on so called “Standard Mode”. Therefore this report contains the observation all tests only on the so called “Standard Mode” only. Additional PTO performance test in “Economy Mode” was also conducted as per the request of the applicant.

- Manufacturer** : **M/s. John Deere India Pvt. Ltd.**
Gat No.166 - 167 & 271 - 291,
Off. Pune-Nagar Road, Sanaswadi,
Pune - 412 208
- Location of manufacturing plants (apa) : **i) M/s. John Deere India Pvt. Ltd.**
Gat No.166 - 167 & 271 - 291,
Off. Pune-Nagar Road, Sanaswadi,
Pune - 412 208
ii) M/s. John Deere India Pvt. Ltd.
Survey No.501, Village-Khatamba
Jamgod, Dewas Bhopal Highway,
Dewas (Madhya Pradesh) 455115
- Test requested by (applicant) : The manufacturer
Selected for test by : The testing authority
Place of running-in : At Testing Institute
Duration of said running-in, (h):
- Engine : 12
- Transmission : 12
Method of Selection : The test sample was selected randomly out of five tractors from the production line by the representative of testing authority through online mode.

Details of tractors made available for random selection	
Sr. No.	Chassis serial Number
1	1PY5405EAMA007509
2	1PY5405ECMA007510
3	1PY5405EVMA007511
4	1PY5405EAMA007512
5	1PY5405ELMA007513

1. SPECIFICATIONS

- 1.1 Tractor:**
Make : John Deere
Model : 5405 4WD Gear Pro
Variants, if any :

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S. No.	Variant model (*)	Variant features
1.	5405 GearPro	With rear wheel driven.

***The variant models have not been tested at this Institute yet.**

	Type	:	Four-Wheel Driven (4WD), Standard Agricultural Tractor.
	Month & year of manufacture	:	07/21
	Chassis number	:	1PY5405ECMA007510
	Country of origin	:	India
1.2	Engine:		
	Manufacturer's address	:	M/s. John Deere India Pvt. Ltd. Gat No.166 - 167 & 271 - 291, Off. Pune-Nagar Road, Sanaswadi, Pune - 412 208
	Make	:	John Deere
	Model	:	3029HPY105
	Type	:	Four stroke, common rail direct injection, turbo charged, liquid cooled, diesel engine.
	Serial number	:	PY3029U052495
	Country of origin	:	India
1.2.1	Engine speed (rpm), (Manufacturer's recommended production settings):		
	- Maximum speed at no load	:	2190 to 2210
	- Low idle speed	:	840 to 860
	- Speed at maximum torque	:	1200
	Rated speed, (rpm):		
	- For PTO use	:	2100
	- For drawbar use	:	2100
1.3	Cylinder & Cylinder Head:		
	Number	:	Three
	Disposition	:	Vertical, inline
	Bore/stroke, (mm)	:	106.5 / 110
	Capacity as specified by the applicant, (cc)	:	2940
	Compression ratio	:	16.9 : 1 (\pm 0.4)
	Type of cylinder head	:	Monoblock
	Type of cylinder liners	:	Wet, replaceable
	Type of combustion chamber	:	Re-entrant cavity on piston head
	Arrangement of valves	:	Overhead, inline
	Valve clearance (cold/hot):		Cold Hot
	- Inlet valve, (mm)	:	0.35 \pm 0.25 NA
	- Exhaust valve, (mm)	:	0.50 \pm 0.15 NA
1.4	Fuel System:		
	Type of fuel feed system	:	Gravity and force feed
1.4.1	Fuel tank:		
	Capacity, (l)	:	72.5
	Location	:	Behind operator's seat
	Provision for draining of sediments/ water	:	Provided
	Material of fuel tank	:	PE-LLD (apa)
1.4.2	Water separator	:	Water separation is provided in primary fuel filter.
1.4.3	Fuel feed pump:		
	Make	:	Denso
	Type	:	Vane type

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16. ADJUSTMENTS, DEFECTS, BREAKDOWNS AND REPAIRS

Sl. No.	Adjustments/Defects/Breakdowns and Repairs	Tractor run hours
	-None-	

17. SUMMARY OF OBSERVATIONS, COMMENTS & RECOMMENDATIONS

17.1	On the basis of test results, this tractor viz. JOHN DEERE, 5405 4WD GEAR PRO TRACTOR does not satisfy the Evaluative Requirement of Technical Requirement for PTO Shaft, The summary of the test results are given in the ensuing table.					
Sl. No.	Characteristic	Category (Evaluative / Non Evaluative)	Requirements as per IS: 12207-2019	Values declared by the applicant/ (D) Requirement (R)	As observed	Whether meets the requirements (Yes/No)
1	2	3	4	5	6	7
17.1.1	PTO Performance :					
a)	Maximum power under 2 h test, (kW) (Natural ambient condition)	Evaluative	Declared value to be achieved with a tolerance of: $\pm 5\%$ for PTO power and or engine power >26 kW. $\pm 10\%$ for PTO power and or engine ≤ 26 kW.	41.0 (STD Mode) (D)	41.4	Yes
b)	Power at rated engine speed, (kW)	Non Evaluative	-do-	40.4 (STD Mode) (D)	41.4	Yes
c)	Specific fuel consumption corresponding to maximum power, (g/kWh)	Evaluative	+ 10% max.	255 (STD Mode) (D)	267	Yes
d)	Maximum equivalent crankshaft torque, (Nm)	Non Evaluative	$\pm 8\%$	265 (STD Mode) (D)	266.1	Yes
e)	Back-up torque, percent	Evaluative	12 percent	21 (D) 12 (R) Minimum	41.5	Yes
f)	Maximum operating temperature, ($^{\circ}$ C):					
1)	Engine oil	Evaluative	The declared value should not exceed the max. value specified by the oil company and the observed value under high ambient condition should not exceed the declaration.	135 (D)	116	Yes
2)	Coolant	Evaluative	The declared value should not exceed the boiling temperature of coolant under the pressurized or otherwise and the observed value under high ambient condition should not exceed the declaration.	118 (D)	103	Yes

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1	2	3	4	5	6	7	
g)	Engine oil consumption, (g/kWh)	Evaluative	Not exceeding 1% of SFC at max. Power under High ambient conditions.	2.56 Maximum (R)	0.09	Yes	
h)	Smoke level, m ⁻¹	Evaluative	Maximum light absorption coefficient of 3.25 per meter or equivalent BOSCH No. 5.2 or 75 Hatridge value (As per CMVR).	3.25 per meter Maximum (R)	0.05	Yes	
17.1.2	Drawbar performance :						
a)	Max. drawbar pull with ballasted corresponding to 15 percent wheel slip, (kN)	Non Evaluative	Minimum 70% of static mass of tractor with ballast.	23.60 (D)	27.76	Yes	
				23.41 Minimum (R)			
b)	Max. drawbar pull with standard ballast corresponding to 15 percent wheel slip, (kN)	Evaluative	Minimum 70% of static mass of tractor without ballast or with standard ballast, as the case may be.	17.70 (D)	21.64	Yes	
				17.44 (R) Minimum			
c)	Maximum drawbar power with standard ballast, (kW).	Evaluative	Minimum 80 % of PTO power as referred in SI No. i) a) of PTO performance in case of tractors having total static mass > 1500 kg Minimum 75 % of PTO power as referred in SI No. i) a) of PTO performance in case of light weight tractors having ≤1500 kg total static mass of tractor Minimum 75 % of the engine power as referred in SI No. i) a) of engine performance in case of tractors which do not have a PTO shaft.	32.8 (D)	34.6	Yes	
				33.1 (R) Minimum			
d)	Maximum transmission oil temperature, (°C)	Evaluative	The declared value should not exceed the maximum value specified by oil company	120 (D)	86	Yes	
17.1.3	Power lift and hydraulic pump performance:						
a)	Maximum lifting capacity throughout the range of lift, (kN):						
	1)	At hitch points	Evaluative	Tolerance of ± 10%	18.9 (D)	17.58	Yes
	2)	With the standard frame	Evaluative	The lift capacity should at least be 24 kg/PTO kW and it should be 21.5 kg/engine kW where the tractor is not provided with a PTO shaft.	14.5 (D)	14.36	Yes
9.74 (R) Minimum							
b)	Maximum drop in the height of the point of application of the force after each 5 minutes interval for a total duration of 30 Minutes, (mm)	Non Evaluative	The observed value should not exceed 50 mm	50 (D) Maximum	00	Yes	

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1	2	3	4	5	6	7	
17.1.4	Brake performance at 25 kmph:						
a)	Maximum stopping distance at a force, equal to or less than 600 N on brake pedal with road ballast, (m):						
	1)	Cold brake	Evaluative	10	10 (R)	8.58	Yes
	2)	Hot brake	Evaluative	10	10 (R)	9.28	Yes
b)	Maximum force exerted on the brake pedal to achieve a deceleration of 2.5 m/s ² , (N)		Evaluative	600	600 (R) Maximum	368 to 493	Yes
c)	Whether parking brake is effective at a force of 600 N at foot pedal (s) or 400 N at hand lever		Evaluative	Yes / No	Yes	Yes	Yes
17.1.5	Noise measurement:						
a)	Maximum ambient noise emitted by the tractor, dB(A)		Evaluative	As per CMVR	88 (R)	79	Yes
b)	Maximum noise at operator's ear level, dB(A)		Evaluative	As per CMVR	96 (R)	92	Yes
17.1.6	Amplitude of mechanical vibrations at:						
	1)	Left foot rest	Non Evaluative	100 microns (max.)	100 (R)	88	Yes
	2)	Right foot rest				94	Yes
	3)	Seat (with driver seated)				28	Yes
	4)	Steering wheel				103	No
17.1.7	Air cleaner:						
	Maximum air cleaner oil pull over, (%)		Evaluative	0.25 (Max.)	Dry type air cleaner fitted		Not applicable
17.1.8	Haulage requirements:						
a)	Gross mass of the trailers, (tonne):						
	Two wheel		Non Evaluative	As specified by the manufacturer	5.0 (D)	5.0	Yes
Four wheel		Non Evaluative	7.5 (D)		7.5	Yes	
b)	Distance travelled / liter of fuel consumption, (km/l):						
	Two wheel		Non Evaluative	As specified by the manufacturer	4 to 6 (D)	3.60 to 4.65	Yes
Four wheel		Non Evaluative	4 to 6 (D)		3.35 to 3.46	Yes	
c)	Fuel consumption, (ml/km/tonne):						
	Two wheel		Non Evaluative	As specified by the manufacturer	30 to 40 (D)	53.19 to 55.60	No
Four wheel		Non Evaluative	30 to 40 (D)		38.52 to 39.81	Yes	

1	2	3	4	5	6	7	
17.1.9	Wetland cultivation :						
	Sealing for the following assemblies:		Evaluative	The identified assemblies should essentially meet the requirement of IS: 11082. No water ingress in the identified assembly given in column-2. If tractor does not meet the requirements of wetland cultivation, it may be recommended for dry land operation only.	There should be no ingress of water and/or mud (R)	No ingress of water and/or mud was observed	Yes
	1)	Clutch assembly	-do-				
	2)	Brake housings	-do-				
	3)	Front axle hubs	-do-				
	4)	Engine Oil	-do-				
5)	Transmission Oil	-do-					
17.1.10	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)	Does not meet the requirement		No	
d)	Technical requirements for PTO shaft	Evaluative	Should meet the requirements of IS: 4931 (As amended from time to time)	Does not meet the requirement		No	
e)	Dimensions of three point linkage	Non Evaluative	Should meet the requirements of IS: 4468 (Part-I) (As amended from time to time)	Meets the requirement		Yes	
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		Not applicable	
h)	1)	Maximum travelling speed at rated engine speed in reverse gears, Km/h	Evaluative	Should not exceed 20 Km/h	15.61 @ 1455 engine rpm (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 fitted, however reverse speed will be controlled by controller (ECU) & ground wheel speed sensor.	Not applicable	

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1	2	3	4	5	6	7		
17.1.11	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: 5px auto; width: 60px; height: 20px;"><tr><td style="width: 30px;">MM</td><td>YY</td></tr></table> Digit 01 – 12 in box No.1 for MM will represent the months and next two digits in box No.2 for YY will represent the year of Manufacturing.	MM	YY	John Deere	Yes
	MM	YY						
	2)	Model	Evaluative		5405 4WD Gear Pro	Yes		
	3)	Month & Year of manufacture	Evaluative		07 / 21	Yes		
	4)	Engine number	Evaluative		PY3029U052495	Yes		
	5)	Chassis number	Evaluative		1PY5405ECMA007510	Yes		
6)	Maximum PTO power, (kW)	Evaluative	41.0	Yes				
17.1.12	Discard limit for:							
(a)	Cylinder bore diameter, (mm)	Evaluative	To be specified by the manufacturer and supported by the printed literature	106.77	106.501 to 106.528	Yes		
(b)	Clearance between piston & cylinder liner at skirt, (mm)	Non Evaluative		0.32	0.130 to 0.145	Yes		
(c)	Piston diameter at skirt, (mm)	Non Evaluative		106.28	106.383 to 106.390	Yes		
d)	Ring end gap (mm):							
-	Top comp. ring.	Evaluative	To be specified by the manufacturer and supported by the printed literature	0.50	0.35 to 0.45	Yes		
-	2 nd comp. ring.			1.00	0.65 to 0.75	Yes		
-	Oil ring.			0.70	0.40 to 0.50	Yes		
(e)	Ring groove clearance (mm):							
-	Top comp. ring.	Evaluative	To be specified by the manufacturer and supported by the printed literature	0.200	--Tapped--	--		
-	2 nd comp. ring.			0.100	0.030 to 0.044	Yes		
-	Oil ring.			0.092	0.032 to 0.047	Yes		
(f)	Clearance of main bearings (mm):							
-	Diametrical clearance	Evaluative	To be specified by the manufacturer and supported by the printed literature	0.65	0.080 to 0.112	Yes		
-	Crankshaft end float	Evaluative		0.85	0.20	Yes		

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1	2	3	4	5	6	7
(g)	Clearance of big end bearings, (mm):					
	- Diametrical	Evaluative	-do-	0.65	0.109 to 0.131	Yes
	- Axial	Evaluative	-do-	0.85	0.30 to 0.35	Yes
(h)	Clearance between king pin and bush, (mm)	Non Evaluative	-do-	Tapper roller bearings are provided		Not applicable
(i)	Clearance between centre pin and bush, (mm)	Non Evaluative	-do-	0.80	0.108 to 0.140	Yes
17.1.13	Literature (Submission to test agency)					
(a)	Operator manual	Evaluative	Provided / Not Provided	Provided	Provided	Yes
(b)	Parts Catalogue	Evaluative	Provided / Not Provided	Provided	Provided	Yes
(c)	Workshop/ Service manual	Evaluative	Provided / Not Provided	Provided	Provided	Yes
17.1.14	Fitment 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 fitted	Not applicable
17.1.15	Standard Accessories	Evaluative	Trailer hitch, front tow hook, linkage drawbar should be provided with tractor		Provided	Yes
17.1.16	Accessories (optional)	Non Evaluative	Ballast weight, if fitted, should meet the requirement of CMVR		Provided	Yes

17.2 CATEGORY OF BREAKDOWNS / DEFECTS (As per clause 5.0 of IS:12207-2019):					
Sl. No.	Category of break-downs	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 two and neither of them should be repetitive in nature	None	Yes
3.	Minor	Evaluative	Not more than five 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 five, that is, (2 major + 3 minor) or (1 major + 4 minor) or 5 minor breakdowns.	None	Yes

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17.3 Salient Observations:

17.3.1 Laboratory tests:

17.3.1.1 Hydraulic Performance:

The moment about rear axle with standard frame was calculated as **22.98 kN-m**. Whereas, the moment about front axle was calculated as **21.87 kN-m** under unballasted condition. The moment about rear axle with coupled frame is on higher side as compared to moment about front axle under unballasted condition. This should be looked into for necessary corrective action.

17.3.1.2 Mechanical Vibration:

The amplitude of mechanical vibration on various assemblies marked as (*) in Chapter-8 of this test report is on higher side. This calls for dampening down of vibrations especially on steering wheel to improve the operational comfort and service life of components.

17.3.1.3 Operator's Seat:

- i) Longitudinal distance from seat index point to the centre of differential lock pedal has been measured as 235 mm against the requirement of 355 to 770 mm.
- ii) Vertical distance from seat index point to the centre of clutch & brake pedal has been measured as 350 & 345 mm respectively, against the requirement of 380 to 620 mm.

Above parameters does not meet the requirement of IS: 12343-1998, (Re-affirmed in January, 2019). This should be looked into for necessary corrective action.

17.3.1.4 Operator's work place:

Operator's work place meets the requirements of IS: 12239 (Part-I) 1996 (Reaffirmed Oct., 2017), **except the following:**

- i) Vertical retainer on inner side of clutch pedal has not been provided.
- ii) Spark arrester in the exhaust system has not been provided.

Above parameters does not meet the requirement of IS: 12239 (Part-I) 1996 (Reaffirmed Oct., 2017). This should be looked into for necessary corrective action.

17.4.1.5 Constructional requirement with regard to safety:

Meets the requirements of IS: 12239 (Part-II)-1996 (Re-affirmed in January, 2019), except the following:

The working clearance around position and draft control lever has been measured as 50 mm against the minimum requirement of 70 mm.

Above parameters does not meet the requirement of IS: 12239 (Part-II)-1996 (Re-affirmed in January, 2019). This should be looked into for necessary corrective action.

17.3.1.6 Specifications of Power Take-off Shaft:

With standard fitment rear tyre of size 16.9-30 & optional rear tyre of size 18.4-30, the dimension "h" of PTO shaft has been measured 695 & 720 mm respectively against the requirement of 450 to 675 mm, which does not meet the evaluative requirement of IS:4931-1995 (Type-I).

17.3.1.7 Three Point Linkage:

- i) Diameter of hole for upper and lower hitch point meets the requirements of Cat-II whereas the width of ball has been provided as per Cat-I. This should be looked into for necessary corrective action.
- ii) Some of the parameters conform to Cat. I and some of them conform to Cat. II. Keeping in view the spirit of standardization, necessary improvement may be incorporated.

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17.3.1.8 Haulage Test:

The specific fuel consumption with four wheel trailer was recorded as **53.19 to 55.60 ml/km/tonne**, respectively against the declaration of 30 to 40 ml/km/tonne respectively. This should to be looked into for necessary corrective action.

17.3.1.9 Component/ assembly inspection:

After completion of final wear assessment, the tractor was not able to start due to leakage of oil from turbocharger unit. So, the final capacity of engine, cooling system, transmission system etc. was not possible to measure. This should to be looked into for necessary corrective action.

17.3.10 Rear view mirror:

The exterior rear- view mirror (Class-II) has been provided on RHS. However, the fitted mirror does not having clear view of that part of the road i.e. **FIELD OF VISION** defined as Para no. 5.0 of AIS – 114. This should to be looked into for necessary corrective action as related to safety of operator in both road & field works.

17.4 Maintenance / Service Problems:

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

17.5 Recommendation with regard to safety on tractor:

The following requirements, inter alia, may be considered for incorporation on the tractor:

- i) Longitudinal distance from seat index point to the centre of differential lock pedal has been measured as 235 mm against the requirement of 355 to 770 mm.
- ii) Vertical distance from seat index point to the centre of clutch & brake pedal has been measured as 350 & 345 mm respectively, against the requirement of 380 to 620 mm.
- iii) Vertical retainers at both sides of clutch pedal should be provided.
- iv) Spark arrester should be provided in the exhaust system as per the requirement of IS: 12239 (Part-2)-1999 (Re-affirmed in January, 2019).
- v) The working clearance between position and draft control lever of hydraulic system was measured as 58 mm against the minimum requirement 70 mm as per IS: 12239 (Part-2)-1999 (Re-affirmed in January, 2019).

17.6 Adequacy of Literature supplied with machine:

17.6.1 The following literatures were supplied with the test tractor for reference during the test:-

- a) Operator's Manual of John Deere 5310 GearPro (2WD&4WD), 5405 GearPro (2WD&4WD), 5075E GearPro (2WD&4WD) & 5075E GearPro LiftPro (2WD&4WD) BS4 tractor models.
- b) Parts Catalogue of John Deere 5405 and Its variant tractor models.
- c) Workshop Service / Technical Manual Part-1 & Part-2 of John Deere 5310 GearPro (2WD&4WD), 5405 GearPro (2WD&4WD), 5075E GearPro (2WD&4WD) & 5075E GearPro LiftPro (2WD&4WD) BS4 tractor models.



17.6.2 The operator manual may be brought out for the guidance of users and service personnel as per IS:8132-1999 incorporating, inter alia, the following:

- i) Safe hitch height while using trailer.
- ii) Information and operation on the components / assemblies such as charge air cooler, turbo charger, fuel injection pump (HPP), common rail, diesel oxidation catalyst (DOC), exhaust gas recirculation (EGR), electronic control unit (ECU), details of sensors / actuators etc.

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- iii) Information related to PTO & Drawbar of the tractor such as, maximum engine power, maximum torque, backup torque, specific fuel consumption, maximum drawbar power etc should be included in the technical specification of the tractor for the guidance of the user's.
- iv) "CARE Button" for convenience of the farmers.

TESTING AUTHORITY:

C.V. CHIMOTE TEST ENGINEER	
P. K. PANDEY DIRECTOR	

Draft test report is compiled by: **Pramod Yadav**, Agricultural Engineer.

18. APPLICANT'S COMMENTS

Para No.	Our Reference	Applicant's comments
18.1	17.3.1.1	We will certainly look into your recommendation.
18.2	17.3.1.2, 17.3.1.3, 17.3.1.4, 17.3.1.5, 17.3.1.9 & 17.3.1.10	Your valuable comments and suggestions for improvements are well taken. Under our policy of continuous product improvement these aspect are further being looked into and will try to eliminate these deviation soon wherever necessary.

ANNEXURE-I

BRIEF SPECIFICATION OF MATCHING IMPLEMENTS AS DECLARED BY APPLICANT

S. No.	Parameters	Disc Plough	Rotavator
1	Make	Himco	Maschio
2	Type	Mounted	Mounted
3	No. of Discs / Blades	Three	42 in 8 flanges (5.0 feet)
4	Type of Discs / Blades	Concave	Hatchet
5	Size of Discs / Blades, (mm)	670	275 x 75 x 8
6	Spacing of Discs /Flanges, (mm)	600	200
7	Lower hitch point span, (mm)	800	800
8	Mast height, (mm)	580	600
9	Overall Dimensions, (mm):		
	Length	2230	910
	Width	1140	1630
	Height	1480	1070
10	Gross Mass, (kg)	38	380

T-1637/2168/2022	JOHN DEERE, 5405 4WD GEAR PRO TRACTOR -COMMERCIAL (Initial)
	THIS TEST REPORT IS VALID UPTO: 30/04/2025

ANNEXURE-II

BRIEF SPECIFICATION OF HALF CAGE WHEEL

Sr.No.	Items	Specification
1	Type	Full cage wheel
2	Outer dia. (mm)	1160
3	Width (mm)	850
4	No. & Type of Lugs	24, Straight lugs made of M.S. angle section welded to angle iron frame.
5	Size of angle section, (mm)	50 x 45 x 5
6	Length of lug, (mm)	420
7	Spacing of lug, (mm)	325
8	Weight of each cage wheel, (kg)	135

ANNEXURE- III

BRIEF SPECIFICATION OF MATCHING TRAILERS AS DECLARED BY APPLICANT

S. No.	Parameters	Trailer (T-2)	Trailer (T-4)
1.	Type of trailer	Semi -Trailer	Semi -Trailer
2.	Number of axles	Single	Double
3.	Un laden Weight of Trailer, Kg	1670	2800
4.	Overall dimensions of Trailer, (mm):		
	Overall Width	1870	2140
	Overall Length	4180	5785
	Overall Height	2175	2110
	Wheel Base	Not applicable	2835
	Wheel Track	1600	1740 (Front) & 1765 (Rear)
5.	Brakes of Trailer	Not provided	Not provided

ANNEXURE-IV

TRACTOR RUN HOURS DURING TEST

A.	LABORATORY AND TRACK TESTS:	HOURS
1.	Running-in	47.0
2.	PTO performance test	13.5
3.	Power lift and hydraulic pump performance test	3.5
4.	Drawbar performance test	22.3
5.	Turning ability	0.5
6.	Location of centre of gravity	0.4
7.	Operator's field of vision	--
8.	Brake test	2.5
9.	Noise measurement	2.3
10.	Mechanical vibration test	0.5
11.	Nominal speed test	1.1
B.	FIELD TEST:	
1.	Disc ploughing	10.8
2.	Rotavation	10.8
3.	Puddling (including 5.0 hours water proof test)	15.3
C.	HAULAGE TEST:	5.2
D.	Miscellaneous test and other run hours including idle run, transportation, trials and preparation for test	9.3
	TOTAL:	145.0