

व्यावसायिक परीक्षण रिपोर्ट प्रारंभिक  
COMMERCIAL TEST REPORT (Initial)

संख्या/No. : T- 1601/2132/2021  
माह/Month : November, 2021

[ONLINE TESTING]

(यह परीक्षण रिपोर्ट 30/11/2024 तक वैध है | / THIS TEST REPORT IS VALID UPTO: 30/11/2024)



## INTERNATIONAL TRACTORS LIMITED, SOLIS 4215 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 AND FARMERS WELFARE)

केन्द्रीय कृषि मशीनरी प्रशिक्षण एवं परीक्षण संस्थान

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**Manufacturer** : **M/s. International Tractors Limited**  
Vill. Chak Gujran, P.O. Piplanwala,  
Jalandhar Road, Hoshiarpur-146 022  
(Punjab). India

**Test requested by (applicant)** : The manufacturer  
Selected for test by : The applicant  
Place of running-in : At manufacturer's work place  
Duration of said running-in, (h):  
- Engine : 20  
- Transmission : 20

**Method of Selection** : Due to Covid-19 pandemic, It was not possible to conduct the random selection. Nor it was possible for applicant to facilitate the random selection. As a last resort applicant requested to allow the direct submission of test sample which was allowed.

## 1. SPECIFICATIONS

- 1.1 Tractor:**  
 Make : International Tractors Limited  
 Model : SOLIS 4215  
 Brand Name : None  
 Variants, if any : None  
 Type : Four wheeled, rear wheel driven, general purpose, agricultural tractor.  
 Month & Year of manufacture : 01 / 21  
 Chassis number : BXRDR1006777S3  
 Country of origin : India
- 1.2 Engine:**  
 Make : International Tractors Limited  
 Model : 3102FLU  
 Type : Four stroke, naturally aspirated, liquid cooled, direct injection, diesel engine.  
 Serial number : 3102FLU14A998579F19
- 1.2.1 Engine speed (Manufacturer's recommended production setting), (rpm):**  
 - Maximum speed at no load : 1900 to 2000  
 - Low idle speed : 750 to 850  
 - Speed at maximum torque : 1000 to 1200  
**Rated speed, (rpm):**  
 - For PTO use : 1800  
 - For drawbar use : 1800
- 1.3 Cylinder & Cylinder Head:**  
 Number : Three  
 Disposition : Vertical, inline  
 Bore/stroke, (mm) : 102 / 118

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**14.7 Starter motor & Alternator:**

Presence of soil/oil in housing : None  
Condition of bearings and other components : Normal

**15. ADJUSTMENTS, DEFECTS, BREAKDOWNS AND REPAIRS**

S. No.	Adjustment / Defect / Breakdown and Repairs	Category of breakdown	Tractor run hours
1	During the preparation of field test (dry land operations) hand accelerator wire (Part number 10045825AE) was found in broken condition. Therefore, it was replaced with new one of same specification.	None	63.8

**16. SUMMARY OF OBSERVATIONS, COMMENTS & RECOMMENDATIONS**

**16.1** On the basis of tests conducted the performance results have been summarized as evaluative (mandatory) and non-evaluation (not-mandatory) parameter applicable for qualifying Minimum Performance Criteria as per Clause-4 (Table-1) of **IS: 12207-2019** for acceptance of the tractor for the purpose of subsidies/NABARD financing are summarized as under:-

S. 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
<b>16.1.1</b>	<b>PTO Performance :</b>					
a)	Max. power under 2 h test, (kW) (Natural ambient condition)	Evaluative	Declared value to be achieved with a tolerance of: $\pm 5\%$ for PTO power or engine power $>26$ kW, $\pm 10\%$ for PTO power or Engine power $\leq 26$ kW.	29.5 (D)	28.8	Yes
b)	Power at rated engine speed, (kW)	Non Evaluative	-do-	29.5 (D)	28.8	Yes
c)	Specific fuel consumption corresponding to maximum power, (g/kWh)	Evaluative	$+ 10\%$ Max.	245 (D)	244	Yes
d)	Maximum equivalent crankshaft torque, (Nm)	Non Evaluative	$\pm 8\%$	197 (D)	185	Yes
e)	Back-up torque, percent	Evaluative	12 percent, min.	12 % (R)	21	Yes

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1	2	3	4	5	6	7	
f)	Maximum operating temperature(°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.	132 (D)	103	Yes
	2)	Coolant (liquid)	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)	100	Yes
g)	Engine oil consumption, (g/kWh)		Evaluative	Not exceeding 1% of SFC at max. power under High ambient conditions	2.45 (Maximum) (R)	0.28	Yes
h)	Smoke level, (m <sup>-1</sup> )		Evaluative	Maximum light absorption coefficient of 3.25 per metre or equivalent BOSCH No. 5.2 or 75 Hatridge value (As per CMVR)	3.25 (Maximum) (R)	0.09	Yes
<b>16.1.2</b>	<b>Drawbar performance:</b>						
a)	Maximum drawbar pull with ballast corresponding to 15 percent wheel slip, (kN)	Non Evaluative	Minimum 70% of static mass with ballast	18.05 (D)	21.78	Yes	
				18.12 (Minimum)(R)			
b)	Maximum drawbar pull without ballast or with standard ballast corresponding to 15 percent wheel slip, (kN)	Evaluative	Minimum 70% of static mass of tractor without / standard ballast	14.21 (D)	16.50	Yes	
				14.28 (Minimum)(R)			

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1	2	3	4	5	6	7
c)	Maximum drawbar power without ballast, or with standard ballast as the case may be, 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	23.6 (D) 23.0 (Minimum) (R)	24.6	Yes
			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.			
d)	Maximum transmission oil temperature (°C)	Evaluative	The declared value should not exceed the maximum value specified by oil company	130 (D)	78	Yes
<b>16.1.3</b>	<b>Power lift and hydraulic pump performance :</b>					
a)	Maximum lifting capacity throughout the range of lift, (kN):					
1)	At hitch points	Evaluative	±10 percent	16.00 (D)	16.76	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	12.00 (D) 6.78 (Minimum) (R)	13.09	Yes

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1	2	3	4	5	6	7
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 minute, (mm)	Non Evaluative	The observed value should not exceed 50 mm	50 (D)  50 (Maximum) (R)	40	Yes
<b>16.1.4</b>	<b>Brake performance at 25 kmph:</b>					
a)	Maximum stopping distance at a force, equal to or less than 600 N on brake pedal with unballast, (m):					
	1) Cold brake	Evaluative	10	10 (R)	7.21	Yes
	2) Hot brake	Evaluative	10	10 (R)	7.97	Yes
b)	Maximum force exerted on the brake pedal to achieve a deceleration of 2.5 m/s <sup>2</sup> (N)	Evaluative	600	600 (R)	322 to 336	Yes
c)	Whether parking brake is effective at a force of 600 N at foot pedal(s) or 400 N at hand lever, N	Evaluative	Yes / No	Yes (R)	Yes	Yes
<b>16.1.5</b>	<b>Noise measurement :</b>					
a)	Maximum ambient noise emitted by the tractor dB(A)	Evaluative	As per CMVR	88 (R) (Maximum)	82	Yes
b)	Maximum noise at operator's ear level dB(A)	Evaluative	As per CMVR	96 (R) (Maximum)	95	Yes
<b>16.1.6</b>	<b>Amplitude of mechanical vibrations at :</b>					
	1) Left foot rest	Non Evaluative	100 microns (max)	100(R) (Maximum)	154	<b>No</b>
	2) Right foot rest		-do-		149	<b>No</b>
	3) Seat (with driver seated)		-do-		159	<b>No</b>
	4) Steering wheel		do-		44	Yes
<b>16.1.7</b>	<b>Air cleaner oil pull over:</b>					
	Maximum air cleaner oil pull over	Evaluative	0.25 % (Maximum)	0.25 % (Max)(R)	Dry air cleaner is provided	Not applicable

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1	2	3	4	5	6	7
<b>16.1.8</b>	<b>Haulage requirements:</b>					
<b>a)</b>	<b>Gross mass of the trailers, (tonnes):</b>					
1)	Two wheel	Non	--	5.5 (D)	5.5	Yes
2)	Four wheel	Evaluative	--	6.0 (D)	6.0	Yes
<b>b)</b>	Distance travelled / litre of fuel consumption, (km/l):					
1)	Two wheel	Non	--	2 to 8 (D)	5.95 to 5.99	Yes
2)	Four wheel	Evaluative	--	2 to 8 (D)	5.83 to 5.91	Yes
<b>c)</b>	Fuel consumption (ml/km/tonne):					
1)	Two wheel	Non	--	20 to 70 (D)	30.33 to 30.55	Yes
2)	Four wheel	Evaluative	--	20 to 70 (D)	28.21 to 28.61	Yes
<b>16.1.9</b>	<b>Wetland cultivation :</b>					
	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-				
<b>16.1.10</b>	<b>Safety features :</b>					
a)	Guards against moving and hot parts	Evaluative	Belt drives, pulleys, silencer, hydraulics pipes(as per IS-12239 Part 2)	Meet the requirements		Yes
b)	Lighting arrangement	Evaluative	As per CMVR	Meet the requirements		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)	<b>Does not meets the requirements</b>		<b>No</b>
d)	Technical requirements for PTO shaft	Evaluative	Should meet the requirements of IS: 4931 (As amended from time to time)	Meet the requirements		Yes

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1	2	3	4	5	6	7		
e)	Dimensions of three point linkage	Non Evaluative	Should meet the requirements of IS: 4468 (Part-I) (As amended from time to time)	<b>Does not meets the requirements</b>		<b>No</b>		
f)	Specifications of linkage drawbar	Evaluative	Should meet the requirements of IS 12953 (As amended from time to time)	Meet the requirements		Yes		
g)	Specifications of Swinging drawbar (wherever fitted)	Evaluative	Should meet the requirements 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, kmph	Evaluative	Should not exceed 20 kmph	11.00 kmph (Meet the requirement)		Yes		
	2) Audible warning signal on tractor.	Evaluative	As soon as the travelling speed in reverse gear reaches to 20 kmph, an audible warning signal on tractor shall be activated.	Not fitted		Not applicable		
<b>16.1.11</b>	<b>Labelling of tractors (Provision of labelling plate):</b>							
	1) Make	Evaluative	Should conform to the requirements of CMVR along with maximum declared value of PTO power in kW and for month & year of manufacture in numerical <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>MM</td><td>YY</td></tr></table> Digit 01-12 in box No.1 for MM will represent the month and next two digit in the box No.2 for YY will represent the year of manufacturing	MM	YY	International Tractors Limited		Yes
MM	YY							
	2) Model	Evaluative		Solis 4215		Yes		
	3) Month & Year of manufacture	Evaluative		01 / 21		Yes		
	4) Engine number	Evaluative		3102FLU14A998579F19		Yes		
	5) Chassis number	Evaluative		BXRDR1006777S3		Yes		
	6) Declaration of PTO power, kW	Evaluative	29.5		Yes			



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1	2	3	4	5	6	7
<b>16.1.12</b>	<b>Discard limit for:</b>					
(a)	Cylinder bore diameter, (mm)	Evaluative	To be specified by Manufacturer	102.4 (D)	102.052 to 102.087	Yes
(b)	Clearance between piston & cylinder liner at skirt, (mm)	Non Evaluative		0.500 (D)	0.160 to 0.187	Yes
(c)	Piston diameter at skirt, (mm)	Non Evaluative		101.7 (D)	101.898 to 101.915	Yes
(d)	<b>Ring end gap (mm):</b>					
	- Top comp. ring.	Evaluative	-do-	2.00 (D)	0.55 to 0.65	Yes
	- 2 <sup>nd</sup> comp. ring.		-do-	2.00 (D)	0.95	Yes
	- Oil ring.		-do-	2.00 (D)	0.60 to 0.65	Yes
(e)	<b>Ring groove clearance (mm):</b>					
	- Top comp. ring.	Evaluative	-do-	--Tapered--		Not applicable
	- 2 <sup>nd</sup> comp. ring.		-do-	0.20 (D)	0.071 to 0.082	Yes
	- Oil ring.		-do-	0.20 (D)	0.032 to 0.041	Yes
(f)	Diametrical clearance of main bearings (mm):	Evaluative	-do-	0.40 (D)	0.084 to 0.145	Yes
(g)	<b>Clearance of big end bearings, (mm):</b>					
	- Diametrical	Evaluative	-do-	0.50 (D)	0.098 to 0.117	Yes
	- Axial	Evaluative	-do-	1.00 (D)	0.30 to 0.35	Yes
(h)	Crankshaft end float, mm	Evaluative	-do-	0.70 (D)	0.25	Yes
(j)	Clearance between king pin and bush, (mm)	Non Evaluative	-do-	1.00 (D)	0.09 to 0.17	Yes
(k)	Clearance between center pin and bush, (mm)	Non Evaluative	-do-	1.00 (D)	0.15 to 0.24	Yes
<b>16.1.13</b>	<b>Literature (Submission to test agency)</b>					
(a)	Operator manual	Evaluative	Provided / Not Provided	Provided		Yes
(b)	Parts Catalogue	Evaluative	Provided / Not Provided	Provided		Yes
(c)	Workshop/ Service manual	Evaluative	Provided / Not Provided	Provided		Yes

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1	2	3	4	5	6	7
16.1.14	<b>Fitment of Roll Over Protective Structure (ROPS):</b> for tractors having more than 1150 mm rear track width	Evaluative	ROPS should meet the requirement of IS:11821 or OECD code or equivalent International Standard	Not Provided	Not Fitted	Not Applicable
16.1.15	<b>Standard accessories</b>	Evaluative	Trailer hitch, front tow hook, linkage drawbar should be provided with tractor	Provided	Provided	Yes
16.1.16	<b>Accessories (Optional)</b>	Non Evaluative	Ballast weights if fitted should meet the requirement of CMVR.	Provided	Provided	Yes

16.2 CATEGORY OF BREAKDOWNS / DEFECTS (As per clause 5.0 of IS:12207-2019):					
S. No.	Category of Breakdown	Category (Evaluative / Non Evaluative)	Requirements as per IS: 12207-2019	As observed	Whether meets the requirement (Yes/No)
1.	Critical breakdown	Evaluative	There is no 'critical breakdown' during the course of testing	None	Yes
2.	Major breakdowns	Evaluative	There are not more than 2 major breakdowns and neither of them is of repetitive nature	None	Yes
3.	Minor breakdowns	Evaluative	There are not more than 5 minor defects during the test and the frequency of each is 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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- 16.3 Conformity with following IS:**
- i) Guide lines for declaration of power and specific fuel consumption and labelling of agricultural tractors [IS10273: 1987 (Reaffirmed in January, 2019)] : Conforms
  - ii) Agricultural tractors - Rear mounted power take-off - Types 1, 2 and 3 [IS:4931-1995 (Reaffirmed January, 2019)] : Conforms
  - iii) Agricultural wheeled tractors - Rear mounted three-point linkage: Part 1 Categories 1, 2, 3 & 4 (fourth revision) [IS 4468(Part-I):1997/ISO 730-1:1994 (Reaffirmed in Oct.,2017)] : **Does not conform**
  - iv) Drawbar for agricultural tractors – Link type [IS 12953:1990 (Reaffirmed in Oct., 2017)] : Conforms
  - v) Agricultural tractors - Operator's seat technical requirement [IS 12343 – 1998 (Reaffirmed in January, 2019)] : **Does not conform**
  - vi) Guide for safety & comfort of operator of agricultural tractors: Part 1 General requirements: [IS 12239 (PT-1) 2018 /ISO 4254-1:1989] : **Does not conform**
  - vii) Tractors and machinery for agriculture and forestry – Technical means for ensuring safety Part 2: Tractors (IS 12239 (PT-2) 1999) (Reaffirmed in January, 2019)] : Conforms
  - viii) Guide lines for location and operation of operator controls on agricultural tractors and machinery (IS: 8133-1983 (Reaffirmed in January, 2019)] : Conforms
  - ix) Tractors and machinery for agriculture and forestry, powered lawn and garden equipment - Symbols for operator controls and other displays Part 2 Symbols for agricultural tractors and machinery [IS:6283 (Part-1)- 2006 and IS: 6283 (Part-2)-2007 (Reaffirmed in January, 2019)] : Conforms
  - x) Agricultural Tractors and Machinery - Lighting device for travel on public roads (IS: 14683-1999) (Reaffirmed in January, 2019)] : Conforms

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**16.4 Salient Observations:**

**16.4.1 Laboratory tests:**

**16.4.1.1 PTO Performance Test:**

- i) The maximum PTO power was recorded as **28.8 kW** against the declaration of **29.5 kW**, which meets the requirement of IS: 12207-2019 with regard to tolerance limit.
- ii) The specific fuel consumption corresponding to maximum power was recorded as **244 g/kWh** against the declaration of **245 g/kWh**, which is within the tolerance limit of IS: 12207-2019.
- iii) The maximum equivalent crankshaft torque was recorded as **197.0 N-m** against the declaration **184.7 N-m**, which meets the requirement of IS: 12207-2019 with regard to tolerance limit.
- iv) The backup torque is **21.0 %** and meets the evaluative requirement of IS: 12207-2019.

**16.4.1.2 Drawbar performance test:**

During ten hours drawbar performance test, creeping of LHS & RHS rear tyre over the rims was recorded as **20 mm & 60 mm** respectively. This should be looked into for necessary corrective action.

**16.4.1.3 Mechanical Vibration:**

The amplitude of mechanical vibration on various assemblies / components marked as (\*) in **Chapter – 8** of this test report is on higher side. This calls for dampening down of vibrations especially on left & right foot rest, and steering control wheel to improve the operational comfort and service life of components.

**16.4.1.4 Three point linkage:**

- i) The dimensions of lateral distance from lower hitch point to centre line of tractor does not meet the requirement of IS:4468- 1997 (Part-I) (Reaffirmed in October, 2017). This should be looked into for necessary corrective action at production level.
- ii) Some of the parameters of three point linkage conform to Cat. I and some of them conform to Cat.II. Keeping in view the spirit of standardization, necessary improvement may be incorporated.

**16.5 Maintenance / Service Problems:**

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

**16.6 Recommendation with regard to safety on tractor:**




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

- i) Vertical distance from Seat Index Point to centre of clutch and brake pedal has been recorded as 300 and 325 mm respectively. These shall be provided as per IS:12343-1998, (Re-affirmed in January, 2019).
- ii) Vertical retainess at both side in clutch pedal shall be provided as per IS:12239 (Part-1)-2018.
- iii) Working clearance around the draft control lever and mudguard shall be provided as per IS:12239 (Part-2)-1999 (Re-affirmed in January, 2019).
- iv) Spark arrester has not been provided in exhaust system, hence it should be provided as per the requirement of IS: 12239 (Part-1)-1996 (Re-affirmed in October, 2017).
- v) Master shield around the PTO shaft has not been provided hence. It should fulfill the requirement of IS: 4931-1995 (Re-affirmed in 2014).

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- 16.7 Adequacy of Literature supplied with machine:**  
Following literatures of tractor models was supplied with the test sample for reference during the test.
- i) Operator's manual for Solis 4215, Solis 4515 & Solis 5015 tractor models.
  - ii) Spare parts catalogue for Solis 4215, Solis 4515 & Solis 5015 tractor models.
  - iii) Service manual for Solis 4215, Solis 4515 & Solis 5015 tractor models.
- 16.7.1** The supplied literature was found adequate, **except the following:** -
- i) Information related to PTO, Drawbar and hydraulic performance of the tractor such as, maximum engine power, rated engine power, maximum torque, backup torque, specific fuel consumption, maximum drawbar power & pull, hydraulic pump discharge rate, hydraulic power & lifting capacities etc should be included in the technical specification of the tractor for the guidance of the user's.
  - ii) The service schedule of engine lubricating oil & transmission system provided in operator's manual does not match with technical specification submitted by applicant.
  - iii) The engine to PTO speed ratio of the tractor not specified in operator's manual.
  - iv) Fuel saving tips should be included in the operator's manual.
- 16.7.2** However, these literatures should be brought out in other vernacular languages of India for guidance of users.

**TESTING AUTHORITY:**

<b>C.V. CHIMOTE TEST ENGINEER</b>	
<b>Y. K. RAO SENIOR AGRICULTURAL ENGINEER</b>	
<b>P. K. PANDEY DIRECTOR</b>	

Test Report is compiled by: C. S. Raghuwanshi, Agricultural Engineer.

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### 17. APPLICANT'S COMMENTS

Para no.	Our reference	Applicant comments
17.1	16.7.1 (i), (ii), (iii) & (iv)	We will update the operator & service manual.

### ANNEXURE – I

#### BRIEF SPECIFICATION OF IMPLEMENTS USED DURING FIELD TEST

S.No.	I t e m	Disc Plough	Rotavator
1.	Make	Farm king	Field King
2.	Type	Mounted	Mounted
3.	No. of bottom/blades	Two	42 (in 7 flanges)
4.	Type of bottom/blades	Plain concave	Hatchet shape
5.	Size of bottom/blades, (mm)	655	280 x 85 x 7
6.	Spacing of bottom/flanges, (mm)	495	245
7.	Lower hitch point span, (mm)	760	800
8.	Mast height, (mm)	480	605
9.	<b>Overall dimensions, (mm):</b>		
	- Length	1480	1100
	- Width	1060	2020
	- Height	1180	1150
10.	Gross mass, (kg)	200	445

### Annexure - II

#### BRIEF SPECIFICATION OF FULL CAGE WHEEL

S. No.	Items	Specifications
1.	Type	Full cage wheel
2.	Diameter, (mm)	1210
3.	Width, (mm)	900
4.	No. and types of lugs	24, straight lugs made up of MS-angle section welded to angle iron frame.
5.	Size of angle section, (mm)	40 x 40 x 6
6.	Length of lugs, (mm)	444
7.	Spacing of lugs, (mm)	290
8.	Weight of each cage wheels (kg)	120

T-1601/2132/2021	<b>INTERNATIONAL TRACTORS LIMITED, SOLIS 4215 TRACTOR – Commercial (Initial)</b>
	<b>THIS TEST REPORT IS VALID UPTO: 30/11/2024</b>

**ANNEXURE - III**

**TRACTOR RUN HOURS DURING TEST**

<b>A.</b>	<b>LABORATORY AND TRACK TESTS:</b>	<b>HOURS</b>
1.	Running-in	40.0
2.	PTO performance test	11.8
3.	Drawbar performance test	14.4
4.	Power lift and hydraulic pump performance test	1.5
5.	Turning ability	1.0
6.	Location of centre of gravity	0.5
7.	Operator's field of vision	0.5
8.	Brake test	1.0
9.	Noise measurement	1.5
10.	Mechanical vibration test	1.0
11.	Theoretical speed test	0.9
<b>B.</b>	<b>FIELD TEST:</b>	
1.	M. B. ploughing	11.1
2.	Rotavation	11.1
3.	Wet land cultivation (puddling and water proof test)	15.5
<b>C.</b>	<b>HAULAGE TEST:</b>	5.2
D.	Miscellaneous test and other run hours including idle run, transportation, trials and preparation for test	5.4
<b>Total:</b>		<b>122.4</b>