

व्यावसायिक परीक्षण रिपोर्ट
COMMERCIAL TEST REPORT (Initial)

संख्या/No. : T-1595/2126/2021
माह/Month : October, 2021

[ONLINE TESTING]

(यह परीक्षण रिपोर्ट 31/10/2024 तक वैध है | / THIS TEST REPORT IS VALID UPTO : 31/10/2024)



INTERNATIONAL TRACTORS LIMITED, SOLIS 4515 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, Cooperation & Farmer's Welfare)
केन्द्रीय कृषि मशीनरी प्रशिक्षण एवं परीक्षण संस्थान
ट्रैक्टर नगर, बुदनी (म.प्र.) 466 445
CENTRAL FARM MACHINERY TRAINING & TESTING INSTITUTE
(An ISO 9001: 2015 Certified Institute)
TRACTOR NAGAR, BUDNI (M.P.) 466 445

E-mail: fmti-mp@nic.in

Web site: fnttibudni.gov.in

Telephone: 07564-234729

T-1595/2126/2021	INTERNATIONAL TRACTORS LIMITED, SOLIS 4515 TRACTOR – Commercial (Initial)
	(THIS TEST REPORT IS VALID UPTO : 31/10/2024)

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

Test requested by : The manufacturer
Selected for test by : Applicant
Place of running-in : At manufacturer's works
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 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 4515
Brand name : None
Variants if any : None
Type : Four wheeled, rear wheel driven, general purpose agricultural tractor.
- Month & Year of manufacture : 01 & 2021
Chassis number : BXSDR1001164S3
Country of origin : India
- 1.2 Engine:**
- Make : INTERNATIONAL TRACTORS LIMITED
Model : 3105ELU
Type : Four stroke, naturally aspirated, liquid cooled, direct injection, diesel engine
- Serial number : 3105ELU14A995038F20
Country of origin : India
- 1.2.1 Engine speed (rpm), (Manufacturer's recommended production setting):**
- Maximum speed at no load : 2050 to 2150
- Low idle speed : 750 to 850
- Speed at maximum torque : 1000 to 1200
- Rated speed, (rpm):**
- For PTO use : 1900
- For drawbar use : 1900
- 1.3 Cylinder & Cylinder Head:**
- Number : Three
Disposition : Vertical, inline
Bore/stroke, (mm) : 105/118

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14.6 Steering system: Observation
 Visual condition of the components of : Normal
 complete steering assembly

14.7 Starter motor & Alternator:
 Presence of soil/oil in housing : **None**
 Condition of bearings and other : Normal
 Components

15. ADJUSTMENTS, DEFECTS, BREAKDOWNS AND REPAIRS

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

16. SUMMARY OF OBSERVATIONS, COMMENTS & RECOMMENDATIONS

16.1 On the basis of tests conducted the performance results have been summarized as evaluative (mandatory) / Non-evaluation (Non-mandatory) parameter applicable for Qualifying Minimum Performance criteria as per Clause-4 (Table-1) of **Indian standard: 12207-2019** for acceptance of the tractor for the purpose of subsidies/NABARD financing are summarized as under:

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
16.1.1	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	33.1 (D)	33.8	Yes
b)	Power at rated engine speed, (kW)	Non Evaluative	-do-	33.1 (D)	33.8	Yes
c)	Specific fuel consumption corresponding to maximum power, (g/kWh)	Evaluative	+10 percent Max.	255 (D)	241	Yes
d)	Maximum equivalent crankshaft torque, (Nm)	Non Evaluative	± 8 percent	200 (D)	196	Yes
e)	Back-up torque, percent	Evaluative	12 percent	12 (D) 12 (R) Minimum	15.4	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)	99	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)	102	Yes
g)	Engine oil consumption, (g/kWh)	Evaluative	Not exceeding 1% of SFC at max. power under High ambient conditions	Maximum 2.49 (R)	0.96	Yes	
h)	Smoke level	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 metre (R)	0.10	Yes	
16.1.2 Drawbar performance :							
a)	Maximum drawbar pull with ballast corresponding to 15 percent wheel slip, (kN)	Non Evaluative	Minimum 70 percent of static mass with ballast	19.20 (D)	24.27	Yes	
				18.95 (R) Minimum			
b)	Max. drawbar pull with standard ballast, as the case may be corresponding to 15 percent wheel slip or 7 percent track slip, (kN)	Evaluative	Minimum 70 percent of static mass of tractor without ballast or with standard ballast, as the case may be	14.7 (D)	17.35	Yes	
				14.48 (R) Minimum			
c)	Maximum drawbar power without 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 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.	26.5 (D)	28.9	Yes	
				27.0 (R) Minimum			
d)	Max. transmission oil temperature (°C)	Evaluative	The declared value should not exceed the maximum value specified by oil company	130 (D)	88	Yes	

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1	2	3	4	5	6	7
16.1.3	Power lift and hydraulic pump performance :					
a)	Maximum lifting capacity throughout the range of lift, (kN):					
	1) At hitch points	Evaluative	[Tolerance of $\pm 10\%$]	16.00 (D)	16.83	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)	13.24	Yes
				7.96 (R) Minimum		
b)	Maximum drop in the height of the point of application of the force after each 5 min. interval for a total duration of 30 min/ mm	Non Evaluative	The observed value should not exceed 50 mm.	50 (D)	15	Yes
16.1.4	Brake performance at 25 kmph :					
a)	Maximum stopping distance at a force, equal to or less than 600 N on brake pedal with unballasted* , (m):					
	1) Cold brake	Evaluative	10	10 (R)	8.10	Yes
	2) Hot brake	Evaluative	10	10 (R)	8.12	Yes
b)	Maximum force exerted on the brake pedal to achieve a deceleration of 2.5 m/s ² . (N)	Evaluative	600	600 (R)	210 to 233	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 (R)	Yes	Yes
* The manufacturer has not recommended ballasting for road test, therefore the brake test was conducted under unballasted condition only.						
16.1.5	Noise measurement :					
a)	Maximum ambient noise emitted by the tractor at bystanders position, dB(A)	Evaluative	88 dB(A) for >1.5 tonne GVW and 85 dB(A) for <1.5 tonne GVW (as per CMVR)	88 (R)	85	Yes
b)	Maximum noise at operator's ear level dB(A)	Evaluative	As per CMVR	96 (R)	95	Yes
16.1.6	Amplitude of mechanical vibrations at :					
	1) Left foot rest	Non Evaluative	100 microns (max)	100 (D)	46	Yes
	2) Right foot rest				38	Yes
	3) Seat (with driver seated)				61	Yes
	4) Steering Wheel				147	No

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1	2	3	4	5	6	7	
16.1.7	Air cleaner oil pull over :						
	Maximum air cleaner oil pull over (%)	Evaluative	0.25 % (max.)	N.A	Dry type air cleaner is fitted	Not applicable	
16.1.8	Haulage requirements :						
a)	Gross mass of the trailers, (tones):						
	1)	Two wheel	Non	--	5.5 (D)	5.5	Yes
	2)	Four wheel	Evaluative	--	6.0 (D)	6.0	Yes
b)	Distance travelled / litre of fuel consumption, (km/l):						
	1)	Two wheel	Non Evaluative	--	4.0 to 7.0 (D)	5.59 to 5.71	Yes
	2)	Four wheel		--	4.0 to 7.0 (D)	5.59 to 5.74	Yes
c)	Fuel consumption (ml/km/tonne):						
	1)	Two wheel	Non Evaluative	--	20 to 60 (D)	31.87 to 32.53	Yes
	2)	Four wheel		--	20 to 60 (D)	29.01 to 29.82	Yes
16.1.9	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 mud and / or water was observed during water proof test	Yes	
	1) Clutch assembly	-do-					
	2) Brake housings	-do-					
	3) Front axle hubs	-do-					
	4) Engine oil	-do-					
	5) Transmission oil	-do-					
16.1.10	Safety features :						
a)	Guards against moving and hot parts	Evaluative	Belt drives, pulley, silencer, hydraulic 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)	--	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)	--	Meet the requirements	Yes	

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1	2	3	4	5	6	7	
e)	Dimension of three point linkage	Non-Evaluative	Should meet the requirements of IS 4468 (part 1) (as amended from time to time)	--	Does not meet the requirements	No	
f)	Specification of linkage drawbars	Evaluative	Should meet the requirements of IS 12953 (as amended from time to time)	--	Meet the requirements	Yes	
g)	Specification of Swinging drawbars	Evaluative	Should meet the requirements of IS 12362 (Part 3)		Not Provided	Not applicable	
h)	1)	Maximum travelling speed at rated engine speed in reverse gears, Kmph	Evaluative	Should not exceed 20 Kmph	-	(11.38 kmph) Meet the requirements	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. 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

16.1.11	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 MM YY Digit 01-12 in box No.1 for MM will represent the months & next two digits in box No.2 for YY will represent the year of manufacturing.	International Tractors Limited	Yes	
2)	Model	Evaluative		Solis 4515	Yes	
3)	Month & Year of manufacture	Evaluative		01 /2021	Yes	
4)	Engine number	Evaluative		3105ELU14A99503 8F20	Yes	
5)	Chassis number	Evaluative		BXSDR1001164S3	Yes	
6)	Declaration of PTO power, kW (hp)	Evaluative		32.4 (43.45)	Yes	
7)	Specific fuel consumption , g/kWh (g/hph)	Evaluative		272 (203)	Yes	

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1	2	3	4	5	6	
16.1.12	Discard limit for :					
(a)	Cylinder bore diameter, (mm)	Evaluative	To be specified by Manufacturer	105.35	105.036 to 105.077	Yes
(b)	Clearance between piston & cylinder liner at skirt, (mm)	Non Evaluative		0.50	0.125 to 0.144	Yes
(c)	Piston diameter at skirt, mm	Non Evaluative		104.10	104.508 to 104.945	Yes
(d)	Ring end gap (mm):					
	- Top comp.ring.	Evaluative	-do-	2.0	0.30 to 0.35	Yes
	- 2 nd comp. ring.		-do-	2.0	0.45 to 0.50	Yes
	- Oil ring.		-do-	2.0	0.30 to 0.35	Yes
(e)	Ring groove clearance (mm):					
	- Top comp. ring.	Evaluative	-do-	--	--Tapped--	--
	- 2 nd comp.ring.	-do-	-do-	0.20	0.077 to 0.086	Yes
	- Oil ring.	-do-	-do-	0.20	0.025 to 0.028	Yes
(f)	Clearance of main bearings, (mm):					
	- Diametrical	Evaluative	-do-	0.40	0.087 to 0.134	Yes
	- Crank shaft end float	Evaluative	-do-	0.70	0.22	Yes
(g)	Clearance of big end bearings, (mm):					
	- Diametrical	Evaluative	-do-	0.30	0.093 to 0.130	Yes
	- Axial	Evaluative	-do-	0.75	0.30	Yes
(h)	Clearance between king pin and bush,(mm)	Non Evaluative	-do-	1.0	0.080 to 0.144	Yes
(i)	Clearance between center pin and bush,(mm)	Non Evaluative	-do-	1.0	0.115 to 0.141	Yes
16.1.13	Literature (Submission to test agency):					
(a)	Operator manual	Evaluative	The printed literature in booklet form should be provided as per IS 8132 & should submit along with the test sample.	As per relevant IS- 8132	Provided	Yes
(b)	Parts Catalogue	Evaluative			Provided	Yes
(c)	Workshop/ Service manual	Evaluative			Provided	Yes

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1	2	3	4	5	6	7
16.1.14	Fitment of Roll Over Protective Structure (ROPS): 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	Standard accessories	Evaluative	Trailer hitch, front tow hook, linkage drawbar should be provided with tractor	Provided	Provided	Yes
16.1.16	Accessories (Optional)	Non Evaluative	Ballast weights if fitted should meet the requirement of CMVR.	Provided	Provided	Provided

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 02 major breakdowns and neither of them is of repetitive nature.	None	Yes
3.	Minor breakdowns	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 5 minor breakdowns.	None	Yes

16.3 Conformity with following IS:

- i) Guide lines for declaration of power and specific fuel consumption and labelling of agricultural tractors (First revision) [IS10273: 1987 (Reaffirmed in January, 2019)] : **Conforms**
- ii) Agricultural tractors - Rear mounted power take-off - Types 1, 2 and 3 (third revision) [IS:4931-1995 (Reaffirmed in 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 October, 2017)] : **Conforms**

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- v) Agricultural tractors - Operator's seat technical requirement : **Does not conform**
[IS 12343 –1998 (First revision) (Reaffirmed in January, 2019)]
- vi) Guide for safety & comfort of operator of agricultural tractors: Part 1 General requirements (first revision): : **Does not conform**
[IS 12239 (PT-1) 1996/ISO 4254-1:1989 (Reaffirmed October, 2017)]
- vii) Tractors and machinery for agriculture and forestry – : **Does not conform**
Technical means for ensuring safety Part 2: Tractors (first revision) (IS 12239 (PT-2) 1999) (Reaffirmed in January, 2019)]
- viii) Guide lines for location and operation of operator controls : **Does not conform**
on agricultural tractors and machinery (first revision) IS: 8133-1983 (Reaffirmed in January, 2019)]
- ix) Tractors and machinery for agriculture and forestry, : **Conforms**
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)]
- x) Agricultural Tractors and Machinery - Lighting device for : **Conforms**
travel on public roads (IS: 14683-1999) (Reaffirmed in January, 2019)]

16.4 Salient Observations:

16.4.1 Laboratory tests:

16.4.1.1 PTO Performance Test:

- i) The maximum PTO power was recorded as **33.8 kW** against the declaration of **33.1 kW**, which meets the evaluative requirement of IS: 12207-2019.
- ii) The specific fuel consumption corresponding to maximum power was recorded as **241 g/kWh** against the declaration of **255 g/kWh**, which meets the evaluative requirement of IS: 12207-2019.
- iii) The backup torque is **15.4 %** and meets the evaluative requirement of IS: 12207-2019.

16.4.1.2 Hydraulic performance test:

The lifting capacity with coupled frame was recorded as **13.24 kN** and the moment about rear axle was computed as **19.53 kN-m**, whereas moment about front axle is computed as **16.93 kN-m**. The moment about rear axle with coupled frame is on higher side as compared to moment about front axle. This should be looked into to avoid front lifting of tractor.

16.4.1.3 Mechanical Vibration:

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

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16.4.1.4 Three point linkage:

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

16.4.1.5 Operator's Seat:

- i) Vertical distance from SIP to clutch pedal.
- ii) Vertical distance from SIP to brake pedal.

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 at production level.

16.4.1.6 Operator's work place:

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

- i) Provision of vertical retainers at both sides of clutch pedal.
- ii) Provision of spark arresting device in the exhaust system.

16.4.1.7 Constructional requirement with regard to safety:

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

- i) PTO master shield has not been provided.
- ii) Working clearance in between draft control lever and RHS fender is less than the requirement.
- iii) Differential lock has not been provided.

16.4.1.8 Location of operator's controls with regard to safety:

Location of operator's controls with regard to safety meets the requirements of IS: 8133-1983 (Reaffirmed in January, 2019), **except** the fuel shut-off knob does not remain in stop position.

16.4.1.9 Engine model :

The engine model has not be embossed or etched or punched on engine. Which is essential things for identification of engine model. This should be looked into for necessary corrective action.

16.4.1.10 PTO master shield:

PTO master shield not provided on tractor as per the requirements of IS: 4931-1995 (Reaffirmed in 2004). This should be looked into for necessary corrective action.

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16.4.1.11 Labelling of tractor:

- i) The maximum power was mentioned as **32.4 kW** on the labeling plate. Whereas, same has been declared as **33.1 kW** vide application. This needs to be looked into for necessary corrective action.
- ii) The specific fuel consumption at maximum power was mentioned as **272 g/kWh** on the labeling plate. Whereas, same has been declared as **255 g/kWh** vide application. This needs to be looked into for necessary corrective action.
- iii) The specific fuel consumption corresponding to maximum power has been specified as **272 g/kWh (203 g/hph)**. By calculation, we find $272 \times 0.73555 = 200 \text{ g/hph}$. This need to be looked in to for necessary correction.

16.5 Field performance test:

16.5.1 Wet land cultivation (Puddling operation):

No ingress of water and/or mud was observed during puddling operation of the tractor. Hence, it meets the requirements of IS: 11082-1984 (Technical requirements of agricultural tractors for wetland operations). The tractor is found suitable for wetland cultivation (Puddling operation).

16.6 Maintenance / Service Problems:

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

16.7 Recommendation with regard to safety on tractor:

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

- i) There should be provision for spark arresting device in exhaust system.
- ii) The fuel shut-off knob should remain in stop position.
- iii) The working clearance between the draft control lever and RHS fender should be as per the minimum requirements of relevant Indian Standard for easy operating the lever.
- iv) The vertical distance of clutch and brake pedal from Seat Index Point. This should be within the limit for easy handling of tractor.
- v) There should be provision of differential lock.
- vi) Master shield on PTO shaft should be provided.

16.7 Adequacy of Literature supplied with machine:

16.7.1 The following literature was supplied with the tractor 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.

16.7.2 The supplied literature was not found adequate as it does not covers the following information. Therefore, it is recommended that relevant literature may be updated by incorporating the following information:




- 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.

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- 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.
- v) Recommendation regarding matching implement (rotavator) in page no. 71 of operator's manual does not match with specifications submitted by applicant.

16.7.3 The literatures should also be brought out in national as well as other regional languages for the guidance of users and service personnel.

TESTING AUTHORITY

C. V. CHIMOTE TEST ENGINEER	
Y.K. RAO SENIOR AGRICULTURAL ENGINEER	
P. K. PANDEY DIRECTOR	

Test Draft Report compiled by: **Pramod Yadav**, Agricultural Engineer.

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17. APPLICANT COMMENT'S

Para No.	Our Reference	Applicant's comments
17.1	16.4.1.9	The engine model is included in engine serial number which is punched on RHS of engine.
17.2	16.4.1.11 (i), (ii) & (iii)	The labeling plate has been updated as per suggestions and implemented on regular production of this tractor model.
17.3	16.7.2 (i) (ii), (iii), (iv) & (v)	The literature will be updated as per suggestions.

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 flange
4.	Type of bottom/blades	Concave	Hatchet
5.	Size of bottom/blades, (mm)	660	280 x 85 x 7
6.	Spacing of bottom/flanges, (mm)	490	245
7.	Lower hitch point span, (mm)	770	800
8.	Mast height, (mm)	375	605
9.	Overall dimensions, (mm):		
	- Length	1470	1100
	- Width	1070	2020
	- Height	1190	1150
10.	Gross mass, (kg)	230	445

ANNEXURE – II

BRIEF SPECIFICATION OF CAGE WHEEL

S. No.	Parameters	Specifications
1.	Type	Full cage wheel
2.	Dia, (mm)	1160
3.	Width, (mm)	850
4.	No. and types of lugs	12, 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 lugs, (mm)	420
7.	Spacing of lugs, (mm)	325
8.	Weight of each cage wheels, (kg)	135

T-1595/2126/2021	INTERNATIONAL TRACTORS LIMITED, SOLIS 4515
	TRACTOR – Commercial (Initial) (THIS TEST REPORT IS VALID UPTO : 31/10/2024)

ANNEXURE – III

TRACTOR RUN HOURS DURING TEST

A.	LABORATORY AND TRACK TESTS:	HOURS
1.	Running-in	--
2.	PTO performance test	10.8
3.	Power lift and hydraulic pump performance test	1.5
4.	Drawbar performance test	18.5
5.	Turning ability	0.5
6.	Location of centre of gravity	0.5
7.	Operator's field of vision	--
8.	Brake test	1.3
9.	Noise measurement	1.8
10.	Mechanical vibration test	1.2
11.	Theoretical speed test	1.0
B.	FIELD TEST:	
1.	Ploughing	11.8
2.	Rotavation	10.4
3.	Puddling (including five hours water proof test)	15.5
C.	HAULAGE TEST:	4.7
D.	Miscellaneous test and other run hours including idle run, transportation, trials and preparation for test	16.0
	TOTAL:	95.5