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**COMMERCIAL TEST REPORT (Initial)**

L k [ ; k / No. : **T-1681/2212/2022**  
ekg / Month : **October, 2022**

(यह परीक्षण रिपोर्ट 31/10/2027 तक वैध है / THIS TEST REPORT IS VALID UPTO 31/10/2027)

**[ONLINE TESTING]**



**INTERNATIONAL TRACTORS LIMITED, GT 30  
TRACTOR**



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**GOVERNMENT OF INDIA**

**MINISTRY OF AGRICULTURE AND FARMERS WELFARE**  
(DEPARTMENT OF AGRICULTURE & FARMERS WELFARE)

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**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](mailto:fmti-mp@nic.in)

Web site: <http://www.fmttibudni.gov.in>

Telephone: 07564-299003

T-1681/2212/2022	INTERNATIONAL TRACTORS LIMITED, GT 30 TRACTOR COMMERCIAL (Initial)
	THIS TEST REPORT IS VALID UPTO: 31/10/2027

During components and assembly inspection the piston ring end gap of 2<sup>nd</sup> compression rings and oil rings of engine was measured as “2.70 mm to 4.25 mm” and “1.40 mm to 1.70 mm”, respectively against the discard limit of 1.5 mm declared by the applicant and **does not meet the Evaluative requirement of IS: 12207 – 2019**. Also the diametrical clearance of main bearings was measured as “0.087 mm to 0.136 mm against the discard of 0.1 mm declared by the applicant and **does not meet the Evaluative requirement of IS: 12207 – 2019**.

**As this tractor model does not meet the Evaluative requirement of piston ring end gap and diametrical clearance of main bearings, this tractor model shall not be accepted for subsidies/financing as per clause 3.3.1 of IS: 12207 – 2019.**

**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 : Testing Authority  
Place of running-in : At testing institute  
Duration of said running-in, (h):  
- Engine : 20  
- Transmission : 20

**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.  
**Tractors chassis serial number made available for random selection**  
i) DWPSR1111561G26D  
ii) DWPSR1114790G26D  
iii) DWPSR1114791G26D  
iv) DWPSR1114792G26D  
v) **DWPSR1114793G26D**

## 1. SPECIFICATIONS

**1.1 Tractor:**  
Make : International Tractors Limited  
Model : GT 30  
Brand name : None  
Variant, if any : None  
Type : Four-wheel driven (4WD), Standard Agricultural Tractor.  
Year of manufacture : 09/2021  
Chassis number : DWPSR1114793G26D  
Country of origin : India

**1.2 Engine:**  
Manufacturer address : M/s. Mitsubishi Heavy Industries-VST Diesel Engines Pvt. Ltd.,  
Plot No. 305, Hebbal Industrial Area, Matagalli,  
MYSORE – 570 016  
Make : M/s. Mitsubishi Heavy Industries-VST Diesel Engines Pvt. Ltd.

T-1681/2212/2022	INTERNATIONAL TRACTORS LIMITED, GT 30 TRACTOR COMMERCIAL (Initial)
	THIS TEST REPORT IS VALID UPTO: 31/10/2027

Model : MVS3L2 – T3CC9  
Type : Four stroke, naturally aspirated, liquid cooled, indirect injection, diesel engine.  
Serial number : A56356 (as per the information sticker pasted on valve cover of the engine)/ A56356J1 (as punched on fuel injection pump installation part on right side of cylinder block)  
Year of manufacture : 2021  
Country of origin : India

**1.2.1 Engine speed (rpm), (Manufacturer's recommended production settings):**

- Maximum speed at no load : 3170 to 3230  
- Low idle speed : 970 to 1030  
- Speed at maximum torque : 1400 to 2200

**Rated speed, (rpm):**

- For PTO use : 3000  
- For drawbar use : 3000

**1.3 Cylinder & Cylinder Head:**

Number : Three  
Disposition : Vertical, in-line  
Bore/stroke, (mm) : 78 / 92  
Capacity as specified by the applicant, (cc) : 1318  
Compression ratio : 22±0.5 : 1  
Type of cylinder head : Monoblock  
Type of cylinder liners : Dry, non- replaceable  
Type of combustion chamber : Swirl chamber, indirect injection  
Arrangement of valves : Overhead, Inline

**Valve clearance (cold):**

- Inlet valve, (mm) : 0.25  
- Exhaust valve, (mm) : 0.25

**1.4 Fuel System:**

Type of fuel feed system : Gravity and force feed

**1.4.1 Fuel tank:**

Capacity, (l) : 26.8  
Location : Above clutch housing  
Provision for draining of sediments/ water : Not provided  
Material of fuel tank : Plastic

**1.4.2 Water separator:**

**Not provided**

**1.4.3 Fuel feed pump:**

Make : Pricol, India  
Type : Electrical  
Model/Group combination No. : Not available  
Provision of sediment bowl : Not provided  
Method of drive : Electrically operated

**1.4.4 Fuel filters:**

Make : Sonalika  
Model/Group combination No. : 703008219A 1356  
Number : One

T-1681/2212/2022	<b>INTERNATIONAL TRACTORS LIMITED, GT 30 TRACTOR COMMERCIAL (Initial)</b>
	<b>THIS TEST REPORT IS VALID UPTO: 31/10/2027</b>

1	2	3
6.	<p>During the drawbar performance test, oil leakage was noticed from front differential housing of tractor. Applicant vide letter No. Nil, dated 20.07.2022 requested to dismantle the front axle propeller shaft to check the leakage. On inspection it was found that leakage was due to damaged oil seal provided at propeller shaft of front differential unit.</p> <p>Upon this applicant vide letter No. Nil, dated 27.07.2022 requested to replace damaged 'Cassette seal TCEN000056, size: 32 x 56 x 12 mm (part No. 10055079AB)' as per parts catalogue, which was different from the oil seal removed from front differential unit of tractor, i.e. 'Cassette seal TCWN000056, size: 35 x 56 x 12 mm (part No. 10055079AB)'. Upon this applicant vide letter No. Ni, dated 01.08.2022 stated that it was typographical error in parts catalogue and submitted new parts catalogue, operator manual and service manual vide letter No. Nil, dated 05.08.2022. Applicant vide letter No. Nil, dated 18.08.2022 requested to replace the damaged oil seal with new one of same specifications and part number, which was allowed. 'Cassette seal TCWN000056, size: 35 x 56 x 12 mm (part No. 10055079AB)', quantity 01 No. was replaced with new one of same specifications. This defect was categorized as Minor defect (Mn13) as per Annexure C of IS: 12207 – 2019.</p>	116.31

## 17. SUMMARY OF OBSERVATIONS, COMMENTS & RECOMMENDATIONS

**17.1** *On the basis of test result, this tractor viz. INTERNATIONAL TRACTORS LIMITED, GT – 30 TRACTOR does not satisfy the Evaluative Requirement of piston ring end gap and diametrical clearance of main bearings.* The summary of the test results are given in the ensuing table.

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 require- ments (Yes/No)
1	2	3	4	5	6	7
<b>17.1.1</b>	<b>PTO Performance:</b>					
<b>a)</b>	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 $\leq 26$ kW.	18.5 (D)	17.3	Yes
<b>b)</b>	Power at rated engine speed, (kW)	Non-Evaluative	-do-	18.5 (D)	17.09	Yes
<b>c)</b>	Specific fuel consumption corresponding to maximum power, (g/kWh)	Evaluative	+ 10% max.	360 (D)	330	Yes
<b>d)</b>	Maximum equivalent crankshaft torque, (Nm)	Non-Evaluative	$\pm 8\%$	73 (D)	69.3	Yes
<b>e)</b>	Back-up torque, percent	Evaluative	12 percent	12% (D) 12 % (R) Minimum	27.4	Yes

T-1681/2212/2022	<b>INTERNATIONAL TRACTORS LIMITED, GT 30 TRACTOR COMMERCIAL (Initial)</b>
	<b>THIS TEST REPORT IS VALID UPTO: 31/10/2027</b>

1	2	3	4	5	6	7	
f)	Maximum operating temperature, ( $^{\circ}\text{C}$ )						
	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)	96	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.	122 (D)	98	Yes
g)	Engine oil consumption, (g/kWh)	Evaluative	Not exceeding 1% of SFC at max. power under High ambient conditions.	3.30 Maximum (R)	1.09	Yes	
h)	Smoke level, $\text{m}^{-1}$	Evaluative	Maximum light absorption coefficient of 3.25 per meter or equivalent BOSCH No. 5.2 or 75 Hatridge value ( <b>As per CMVR</b> ).	3.25 Maximum (R)	0.43	Yes	
<b>17.1.2</b>	<b>Drawbar performance:</b>						
a)	Max. drawbar pull with ballasted corresponding to 15 percent wheel slip, (kN)	Non-Evaluative	Minimum 70% of static mass of tractor with ballast.	Ballasting for drawbar test was not recommended	NA	--	
b)	Max. drawbar pull without ballasted 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.	6.80 (D) 6.80 (R) Minimum	9.36	Yes	
c)	Maximum drawbar power without 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 $\leq 1500$ 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.	13.88 (D) 13.0 (R) Minimum	13.2	Yes	
d)	For tractors fitted with air conditioned /heated cabin: Maximum drawbar power without ballast, or with standard ballast as the case may be, kW	Evaluative	Minimum 70 % of PTO power as referred in SI No. i) a) of PTO performance in case of tractors having total static mass > 1500 kg	Nil	Not applicable	Not applicable	

T-1681/2212/2022	<b>INTERNATIONAL TRACTORS LIMITED, GT 30 TRACTOR COMMERCIAL (Initial)</b>
	<b>THIS TEST REPORT IS VALID UPTO: 31/10/2027</b>

1	2	3	4	5	6	7
e)	Maximum transmission oil temperature (°C)	Evaluative	The declared value should not exceed the maximum value specified by oil company	130 (D)	88	Yes
<b>17.1.3</b>	<b>Power lift and hydraulic pump performance:</b>					
a)	Maximum lifting capacity throughout the range of lift, (kN):					
1)	At hitch points	Evaluative	Tolerance of ± 10%	6.37 (D)	6.46	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.	4.33 (D) 4.07 (R) Minimum	4.25	Yes
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	0	Yes
<b>17.1.4</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 without ballast, (m):					
1)	Cold brake	Evaluative	10	10 (R)	6.20	Yes
2)	Hot brake	Evaluative	10	10 (R)	6.40	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) Maximum	308 to 348	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	Yes	Yes
<b>17.1.5</b>	<b>Noise measurement:</b>					
a)	Maximum ambient noise emitted by the tractor dB(A)	Evaluative	As per CMVR	85 (R)	82	Yes
b)	Maximum noise at operator's ear level dB(A)	Evaluative	As per CMVR	96 (R)	91	Yes
<b>17.1.6</b>	<b>Amplitude of mechanical vibrations at:</b>					
1)	Left foot rest	Non-Evaluative	100 microns (max)	100(R)	177	<b>No</b>
2)	Right foot rest				237	<b>No</b>
3)	Seat (with driver seated)				157	<b>No</b>
4)	Steering wheel				195	<b>No</b>

T-1681/2212/2022	<b>INTERNATIONAL TRACTORS LIMITED, GT 30 TRACTOR COMMERCIAL (Initial)</b>
	<b>THIS TEST REPORT IS VALID UPTO: 31/10/2027</b>

1	2	3	4	5	6	7
<b>17.1.7</b>	<b>Air cleaner Oil Pull-Over:</b>					
	Maximum air cleaner oil pull over, (%)	Evaluative	0.25% (Maximum)	Dry type air cleaner fitted		Not applicable
<b>17.1.8</b>	<b>Haulage requirements:</b>					
<b>a)</b>	Gross mass of the trailers, (ton):					
	Two wheels	Non-Evaluative	As specified by the manufacturer	3.0 (D)	3.0	Yes
	Four wheels	Non-Evaluative	Not recommended	NA	NA	--
<b>b)</b>	Distance travelled / liter of fuel consumption, (km/l):					
	Two wheels	Non-Evaluative	As specified by the manufacturer	2.00 to 8.00 (D)	5.01 to 5.11	Yes
	Four wheels	Non-Evaluative	Not recommended	NA	NA	--
<b>c)</b>	Fuel consumption (ml/km/tonne):					
	Two wheels	Non-Evaluative	As specified by the manufacturer	30.00 to 90.00 (D)	65.28 to 6649	Yes
	Four wheels	Non-Evaluative	Not recommended	NA	NA	--
<b>17.1.9</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 mud and / or water 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>17.1.1</b>	<b>Safety features:</b>					
<b>a)</b>	Guards against moving and hot parts	Evaluative	Belt drives, pulleys, silencer, hydraulic pipes (As per IS 12239 (Part2))		Meets the requirement	Yes
<b>b)</b>	Lighting arrangement	Evaluative	As per CMVR		Meets the requirement	Yes
<b>c)</b>	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 meet the requirement</b>	<b>No</b>
<b>d)</b>	Technical requirements for PTO shaft	Evaluative	Should meet the requirements of IS: 4931 (As amended from time to time)		Meets the requirement	Yes

T-1681/2212/2022	<b>INTERNATIONAL TRACTORS LIMITED, GT 30 TRACTOR COMMERCIAL (Initial)</b>
	<b>THIS TEST REPORT IS VALID UPTO: 31/10/2027</b>

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)		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	--		
h)	1) Maximum travelling speed at rated engine speed in reverse gears, kmph	Evaluative	Should not exceed 20 Kmph		(9.27 kmph) Meets 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. 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	--		
<b>17.1.11 Labelling of tractors (Provision of labelling plate):</b>								
	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; border-collapse: collapse;"> <tr> <td style="padding: 2px 10px;">MM</td> <td style="padding: 2px 10px;">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	INTERNATIONAL TRACTORS LIMITED		Yes
MM	YY							
	2) Model	Evaluative		GT – 30		Yes		
	3) Month & Year of manufacture	Evaluative		09	2021	Yes		
	4) Engine number	Evaluative		A56356J1		Yes		
	5) Chassis number	Evaluative		DWPSR1114793G26D		Yes		
	6) Maximum PTO power, kW (hp)	Evaluative		18.5 (24.8)		Yes		
	7) Specific fuel consumption g/kWh (g/hph)	Evaluative	360 (268)		Yes			
<b>17.1.12 Discard limit for:</b>								
a)	Cylinder bore diameter, (mm)	Evaluative	To be specified by the manufacturer and supported by the printed literature	78.2 (D)	78.042 to 78.128	Yes		
b)	Clearance between piston & cylinder liner at skirt, (mm)	Non-Evaluative		0.30 (D)	0.204 to 0.272	Yes		
c)	Piston diameter at the skirt, (mm)	Non-Evaluative		77.80	77.852 to 77.916	Yes		
<b>d) Ring end gap (mm):</b>								
d)	- Top comp. ring	Evaluative	-do-	1.5 (D)	0.85 to 0.95	Yes		
	- 2 <sup>nd</sup> comp. ring		-do-	1.5 (D)	2.70 to 4.25	No		
	- Oil ring		-do-	1.5 (D)	1.40 to 1.70	No		



T-1681/2212/2022	<b>INTERNATIONAL TRACTORS LIMITED, GT 30 TRACTOR COMMERCIAL (Initial)</b>
	<b>THIS TEST REPORT IS VALID UPTO: 31/10/2027</b>

1	2	3	4	5	6	7	
<b>e)</b>	<b>Ring groove clearance (mm):</b>						
	-	Top comp. ring	Evaluative	-do-	0.30 (D)	Tapered ring	--
	-	2 <sup>nd</sup> comp. ring		-do-	0.30 (D)	0.143 to 0.156	Yes
	-	Oil ring		-do-	0.20 (D)	0.049 to 0.051	Yes
<b>f)</b>	<b>Clearance of main bearings (mm):</b>						
	-	Diametrical clearance	Evaluative	-do-	0.10 (D)	0.087 to 0.136	<b>No</b>
-	Crankshaft end float	Evaluative	0.50 (D)		0.09	Yes	
<b>g)</b>	<b>Clearance of big end bearings, (mm):</b>						
	-	Diametrical	Evaluative	-do-	0.150 (D)	0.074 to 0.107	Yes
	-	Axial	Evaluative	-do-	0.50 (D)	0.15 to 0.20	Yes
<b>h)</b>	Clearance between king pin and bush, (mm)		Non Evaluative	-do-	NA	Not applicable	--
<b>i)</b>	Clearance between centre pin and bush, (mm)		Non Evaluative	-do-	0.2 (D)	0.120 to 0.192	Yes
<b>17.1.13</b>	<b>Literature (Submission to test agency)</b>						
<b>a)</b>	Operator manual	Evaluative	Literature should meet the requirement of Indian Standard: 8132	Provided/ Not Provided	Provided	Yes	
<b>b)</b>	Parts Catalogue	Evaluative		Provided/ Not Provided	Provided	Yes	
<b>c)</b>	Workshop/ Service manual	Evaluative		Provided/ Not Provided	Provided	Yes	
<b>17.1.14</b>	<b>Fitment of Roll Over Protective Structures (ROPS):</b>						
	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 Applicable	Not fitted	--	
<b>17.1.15</b>	Standard Accessories	Evaluative	Trailer hitch, front tow hook, linkage drawbar should be provided with tractor	Provided	Provided	Yes	
<b>17.1.16</b>	Accessories (optional)	Non Evaluative	Ballast weight, if fitted, should meet the requirement of CMVR	Not Applicable	Not fitted	--	

T-1681/2212/2022	<b>INTERNATIONAL TRACTORS LIMITED, GT 30 TRACTOR COMMERCIAL (Initial)</b>
	<b>THIS TEST REPORT IS VALID UPTO: 31/10/2027</b>

<b>17.2 CATEGORY OF BREAKDOWNS / DEFECTS (As per clause 5.0 of IS:12207-2019):</b>					
<b>S. No.</b>	<b>Category of breakdowns</b>	<b>Category (Evaluative/ Non-Evaluative)</b>	<b>Requirements as per IS: 12207-2019</b>	<b>As observed</b>	<b>Whether meets the Requirements (Yes/No.)</b>
1.	Critical	Evaluative	There is no 'critical breakdown' during the course of testing	None	Yes
2.	Major	Evaluative	There are not more than 2 major breakdowns and neither of them is of repetitive nature	None	Yes
3.	Minor	Evaluative	Not more than 5 and frequency of each should not be more than two.	<b>One (Mn13)</b>	Yes
4.	Total breakdowns	Evaluative	In no case, the total number of breakdowns should exceed four, that is, (2 major + 3 minor) or 5 minor breakdowns.	<b>One</b>	Yes

**17.3 Salient Observations:**

**17.3.1 Laboratory tests:**

**17.3.1.1 Mechanical vibration:**

The amplitude of mechanical vibration on various assemblies marked as (\*) in Chapter-9 of this test report are on higher side, especially at LHS and RHS foot rest, steering control wheel and operators seat and does not meet the non-evaluative requirements of IS: 12207 - 2019. This calls for dampening down of vibrations to improve operational comfort and service life of components.

**17.3.1.2 Steered wheel rims:**

- i) The sizes of Steered Wheel Rims were found to be "4Jx12".
- ii) As per Rule 95 A (2) of CMVR, 1989 read in conjunction with IS: 13154- 2015 provides for "The Agricultural Tractor manufacturer shall select ONLY THAT RIM SIZE AS RECOMMENDED BY THE TYRE MANUFACTURER." In this case, the rim size RECOMMENDED by IS: 13154-2015, by ITTAC manual is "5JA". An immediate corrective action is required to be taken even in stand point of view with compliance to CMVR, 1989.

**17.3.1.3 Operator seat:** Meet the requirements of IS: 12343- 2021, except the following:-

- i) Length of seat is 195 mm against the requirement of 260±50 mm.
- ii) Width of seat is 410 mm against the requirement of 450 mm minimum.
- iii) The provision for adjustment of driver's mass is 50 to 120 kg against the requirement of 40 to 100 kg.
- iv) Longitudinal distance of centre of differential lock pedal from seat index point

T-1681/2212/2022	<b>INTERNATIONAL TRACTORS LIMITED, GT 30 TRACTOR COMMERCIAL (Initial)</b>
	<b>THIS TEST REPORT IS VALID UPTO: 31/10/2027</b>

(SIP) is 210 mm, against the requirement of 410 to 720 mm.

v) Longitudinal distance of centre of steering control wheel from seat index point (SIP) is 550 mm, against the requirement of 425 to 525 mm.

vi) Vertical distance of centre of steering control wheel from seat index point (SIP) is 180 mm, against the requirement of 265 to 385 mm.

This should be looked into for necessary corrective action.

**17.3.1.4 Location of operation of controls:** Controls and displays are identifiable with symbols as per IS: 6283 (Part-1 & 2)-2006 & 2007, **except the following:**

i) In engine revolution gauge, only amber colour zone has been provided.

This should be looked into for necessary corrective action.

**17.3.2 Haulage Test:**

i) The distance covered per litre of fuel consumption has been declared as 2.00 to 8.00 km/l The range is too wide to be plausible and therefore conveys little sense. It may be looked into for necessary corrective action

ii) The fuel consumption (ml/km/tonne) has been declared as 30.00 to 90.00 ml/km/tonne. The range is too wide to be plausible and therefore conveys little sense. It may be looked into for necessary corrective action

**17.3.3 Components and Assembly Inspection:**

i) Piston ring end gap of second compression rings and oil rings of engine was measured as **2.70 to 4.25 mm** and **1.40 to 1.70 mm**, respectively against the discard limit of 1.5 mm, which does not meet the evaluative requirements of IS: 12207 - 2019.

ii) Diametrical clearance of main bearings **0.087 to 0.136 mm** against the discard limit of 0.1 mm, which does not meet the evaluative requirements of IS: 12207 - 2019.

**17.3.4 Operator's Manual:**

i) Specifications of recommended matching implements and trailer are given on page No. 69 of Operator's Manual. However, the specifications of matching implements and trailer are not same as submitted by the applicant during test.

ii) The applicant has declared the coolant water ratio as 30 : 70 vide specification sheet, however the same is not matching with information given on page No. 52 of Operator's Manual.

The above points should be corrected in the Operator's Manual.

**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) Spark arrester should be provided in the exhaust system as per the requirement of IS: 12239 (Part-1)-2018.

ii) Hand holds should be provided for easy mounting and dismounting of the operator as per IS: 12239 (Part-I)-2018

iii) Vertical retainer should be provided on inner side of clutch pedal as per IS-12239 (Part-I) 2018.

T-1681/2212/2022	INTERNATIONAL TRACTORS LIMITED, GT 30 TRACTOR COMMERCIAL (Initial)
	THIS TEST REPORT IS VALID UPTO: 31/10/2027

- iv) Master shield on Power Take-Off shaft should be provided as per IS-12239 (Part-II) – 1999 (Reaffirmed in January 2019)
- v) Working clearance between position control lever and draft control lever is 35 mm as against the minimum requirement of 70 mm as per IS-12239 (Part-II) – 1999 (Reaffirmed in January 2019).
- vi) The hand control of single function engine stop, differential lock and PTO engaging lever should have colour codes as per IS: 8133 – 2021.
- vii) The hand accelerator lever when moved away from the operator (i.e. forward) should increase the engine speed, as per IS: 8133-2021.

**17.6 Adequacy of Literature supplied with machine:**

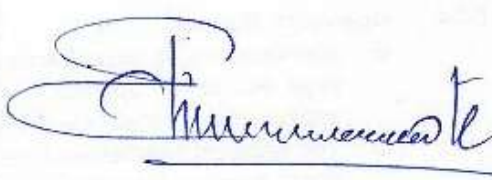
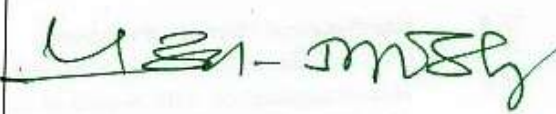
**17.6.1** The following literature was supplied with the test sample for reference during the test.

- a) Operator's manual of tractor models DI-26 GARDENTRAC S1/GT 26 GT-22/GT-22 S1, GT-28, GT-30 2.
- b) Parts catalogue of tractor models DI-26 GARDENTRAC S1/GT 26 GT-22/GT-22 S1, GT-28, GT-30 2.
- c) Service Manual of tractor models DI-26 GARDENTRAC S1/GT 26 GT-22/GT-22 S1, GT-28, GT-30 2.

**17.6.2** The operator's manual may be brought out for the guidance of users and service personnel as per IS: 8132-1999 (Reaffirmed in 2019) incorporating, inter alia, the following:

- i) Safe hitch height of the trailer.
- ii) Preparation and maintenance of tractor for wet land operation.

**TESTING AUTHORITY:**

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

Draft test report compiled by: C. K. Tijare, Agricultural Engineer.

**18. APPLICANT'S COMMENTS**

Para no.	Our reference	Comments
--	--	We do not have any comments to offer.

T-1681/2212/2022	INTERNATIONAL TRACTORS LIMITED, GT 30 TRACTOR COMMERCIAL (Initial)
	THIS TEST REPORT IS VALID UPTO: 31/10/2027

**ANNEXURE- I**

**BRIEF SPECIFICATION OF MATCHING IMPLEMENTS AS DECLARED BY APPLICANT**

S. No.	Parameters	M. B. Plough	Rotavator (Dryland)	Rotavator (Wetland)
1	Make	VST Shakti	Sonalika	Sonalika
2	Type	Mounted	Mounted	Mounted
3	No. of Bottom/ Blades	Two	30 in 6 flanges	20 in 4 flanges
4	Type of Bottom / Blades	General purpose	L-shape	Hatchet
5	Size of Bottom / Blades, (mm)	170	150 x 110 x 8.0	160 x 50 x 5.0
6	Spacing of Bottoms /Flanges, (mm)	200	225	180
7	Lower hitch point span, (mm)	490	560	435
8	Mast height, (mm)	400	360	400
9	Overall Dimensions, (mm):			
	Length	1260	970	730
	Width	670	1435	1025
	Height	915	780	720
10	Gross Mass, (kg)	145	340	120

**ANNEXURE-II**

**BRIEF SPECIFICATION OF MATCHING CAGE WHEEL AS DECLARED BY APPLICANT**

S. No.	Items	Specifications
1	Type	Half cage wheel
2	Diameter, (mm)	770
3	Width, (mm)	220
4	No. and types of lugs	9, straight lugs made up of MS-angle section welded to angle iron frame.
5	Size of angle section, (mm)	40 x 40 x 5.0
6	Length of lugs, (mm)	210
7	Spacing of lugs, (mm)	235
8	Weight of each cage wheels (kg)	35

**ANNEXURE- III**

**BRIEF SPECIFICATION OF TRAILER DECLARED AS MATCHING TRAILER BY APPLICANT**

S.No.	Item	Trailer
1	Type of trailer	Semi - Trailer
2	Number of axles	Single
3	Unladen weight of trailer, kg	450
4	<b>Overall dimensions of trailer, (mm):</b>	
	Overall length	3140
	Overall width	1720
	Overall height	1010
	Wheel base	Not applicable
	Wheel track	1520
5	<b>Dimension of fitted platform, (mm):</b>	
	Length	2000
	Width	1010
	Height from ground	540
6	Brakes of Trailer	Not provided

T-1681/2212/2022	INTERNATIONAL TRACTORS LIMITED, GT 30 TRACTOR COMMERCIAL (Initial)
	THIS TEST REPORT IS VALID UPTO: 31/10/2027

**ANNEXURE- IV**

**TRACTOR RUN HOURS DURING TEST**

<b>A.</b>	<b>LABORATORY AND TRACK TESTS</b>	<b>HOURS</b>
1.	Running-in	40.2
2.	PTO performance test	13.7
3.	Drawbar performance test	21.0
4.	Power lift and hydraulic pump performance test	1.5
5.	Brake test	1.0
6.	Noise measurement	1.8
7.	Mechanical vibration test	1.0
8.	Turning ability test	0.7
9.	Location of centre of gravity	0.1
10.	Operators field of vision	0.0
11.	Nominal speed test	2.5
<b>B.</b>	<b>FIELD TEST</b>	
1.	M. B. Plough	10.9
2.	Rotavation	11.8
3.	Puddling (including 5.0 hours water proof test)	15.3
<b>C.</b>	<b>HAULAGE TEST</b>	7.9
<b>D.</b>	Miscellaneous test and other run hours including idle run, transportation, trials and preparation for test	10.4
<b>TOTAL:</b>		<b>139.8</b>