व्यावसायिक परीक्षण रिपोर्ट (प्रथम बैच) संख्या/No. : T- 1652/2183/2022

COMMERCIAL TEST REPORT (1st Batch) माह/Month : June, 2022

[ONLINE TESTING]

(यह परीक्षण रिपोर्ट 30/06/2027 तक वैध है/THIS TEST REPORT IS VALID UPTO 30/06/2027)



ESCORTS LIMITED, 26 (BRAND NAME: FARMTRAC) 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

ट्रैक्टर नगर, बुदनी (म.प्र.)-466 445

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ESCORTS LIMITED, 26 (BRAND NAME: FARMTRAC) TRACTOR- Commercial (1st Batch)

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3. SPECIFICATIONS

3.1 Tractor:

Make : Escorts Limited

Model : 26

Type : Four Wheel Drive, Standard

Agricultural Tractor.

Month & Year of manufacture : 11/21

Chassis number : T052573596HK

Country of Origin : India

3.2 Engine:

Manufacturer's address : M/s. Mitsubishi Heavy Industries – VST

Diesel Engines Pvt. Ltd. Plot No. 305, Hebbal Industries Area Metagalli,

Mysore - 570016

Make : Mitsubishi Heavy Industries – VST.

Diesel Engines Pvt. Ltd.

Model : MVS3L2-T3CC2

Type : Four stroke, naturally aspirated, liquid

cooled, indirect injection, diesel engine.

Serial number : A58778

Engine speed (Manufacturer's recommended production setting, (rpm) :

Maximum speed at no load,(rpm)
Low idle speed, (rpm)
Speed at maximum torque, (rpm)
2870 to 2930
970 to 1030
1400 to 2000

Rated speed, (rpm):

- For PTO use : 2700 - For drawbar use : 2700

3.3 Cylinder & Cylinder Head:

Number : Three

Disposition : Vertical, inline Bore/stroke, (mm) : 78/92 (apa)

Capacity as specified by the applicant, : 1318

(cc)

Compression ratio, (apa) : $22 \pm 5 : 1$ Type of cylinder head : Monoblock

Type of cylinder liner : Dry, non replaceable

Type of combustion chamber : Swirl, pre-combustion chamber on

cylinder head

Arrangement of valves : Overhead, Inline

Valve clearance (cold):

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

3.4 Fuel System:

Type of fuel system : Gravity and force feed

3.4.1 Fuel tank:

Capacity, (I) : 23.0

Location : Above clutch housing

Provision for draining of sediments /water : Not provided

Material of fuel tank : Plastic

3.4.2 Water separator : Not provided

3.4.3 Fuel feed pump:

Make : Pricol (apa)

Type : Diaphragm Electrical Model/Group combination No. : 30N60-006000 (apa) Provision of sediment bowl : Not Provided Method of drive : Electrically operated

ESCORTS LIMITED, 26 (BRAND NAME: FARMTRAC) TRACTOR- Commercial (1st Batch)

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Previous Sample

15.4.1.2 Hydraulic Performance Test:

i) The moment about rear axle at standard frame was calculated 8.87 kN-m where as, the moment about front axle was calculated 6.67 kN-m under standard ballast condition. The moment about rear axle is on higher side as compared to the moment about front axle.

Present Sample

The moment about rear axle at standard frame was calculated 6.72 kN-m where as, the moment about front axle was calculated 6.59 kN-m under standard ballast condition. The moment about rear axle is on higher side as compared to the moment about front axle.

15.5 Adequacy of literature:

Following literatures has been supplied with the tractor for reference during the test.

- a) Operator's manual
- **b)** Parts catalogue
- c) Repair manual

- a) Operator's manual
- b) Parts catalogue
- c) Service manual

16. SUMMARY OF OBSERVATIONS, COMMENTS & RECOMMENDATIONS

On the basis of tests conducted the performance results have been summarized as evaluative (mandatory) and non-evaluative (not-mandatory) 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
16.1.1	PTO Performano	e:				
a)	Maximum power under 2 h test, (kW) (Natural ambient condition)	Evaluative	Declared value to be achieved with a tolerance of: ± 5% for PTO power or engine power >26 kW, ± 10% for PTO power or Engine power ≤ 26 kW.	14.55 (D)	14.4	Yes
b)	Power at rated engine speed, (kW)	Non Evaluative	-do-	14.55 (D)	14.4	Yes
c)	Specific fuel consumption corresponding to maximum power, (g/kWh)	Evaluative	+ 10% max.	325 (D)	326	Yes
d)	Maximum equivalent crankshaft torque, (Nm)	Non Evaluative	± 8%	65.0 (D)	58.1	No
e)	Back-up torque, percent	Evaluative	12 %, min.	12 %, (R) minimum	14.1	Yes
f)	Maximum operatir	ig temperature				
	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.	130 (D)	98	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.	110 (D)	90	Yes

1	2	3	4	5	6	7
g)	Engine oil consumption,	Evaluative	Not exceeding 1% of SFC at max. power under High ambient conditions	3.25 (D) 3.30 (R)	1.4	Yes
	(g/kWh)			maximum		
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 max.	0.18	Yes
16.1.2	Drawbar perform	ance:				
a)	Max. drawbar pull with ballast corresponding to 15 percent wheel slip, (kN)	Non Evaluative	Minimum 70% of static mass with ballast	Not applicable	Not applicable	
b)	Maximum drawbar pull with std. ballast corresponding to 15 percent wheel slip, (kN)	Evaluative	Minimum 70% of static mass of tractor without ballast	6.80 (D) 6.69 (R) minimum	8.62	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 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.	10.91 (D) 10.8 (R) minimum	12.4	Yes
d)	Max. transmission oil temperature, (°C)	Evaluative	The declared value should not exceed the maximum value specified by oil company	125 (D)	100	Yes
16.1.3	Power lift and hy	draulic pump r				
a)			out the range of lift, (kN)	:		
	At hitch points	Evaluative	±10%	9.00 (D)	9.56	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	3.71 (D) 3.39 (R) minimum	5.25	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 minute, (mm)	Non Evaluative	Observed value should not exceed 50 mm.	50 (D) 50 (R) maximum	- 05	Yes
16.1.4	Brake performance		orce, equal to or less th	an 600 N on h	aka nadal witi	n road
a)	ballast, (m):	i distalle at a l	orce, equal to or less th	an ooo n on bi	ane peudi Will	TIUdu
	1) Cold brake	Evaluative	10	10	7.10	Yes
	2) Hot brake	Evaluative	10	10	7.30	Yes
b)	Maximum force exerted on the brake pedal to achieve a deceleration of 2.5 m/s ² (N)	Evaluative	600	600 maximum	400 to 450	Yes

1	2	3	4	5	6	7
c)	Whether parking brake		•			•
,	is effective at a force	Evaluative	Yes / No	Yes (R)	Yes	Yes
	of 600 N at foot			, ,		
	pedal(s) or 400 N at					
40.4 -	hand lever, N					
16.1.5	Noise measurement:	<u> </u>	88 dB (A) for >1 5 tonns		T	
a)	Maximum ambient	Evoluctive	88 dB (A) for >1.5 tonne GVW and 85 db (A) for	85	70	Voc
	noise emitted by the tractor, dB(A)	Evaluative	<1.5 tonne GVW (as per	maximum	78	Yes
b)	Maximum noise at		CMVR)			
Σ,	operator's ear level,	Evaluative	96 (as per CMVR)	96	92	Yes
	dB(A)	Evaluative so (as per simirity		maximum		
16.1.6	Amplitude of mechanic	cal vibrations	s at:			
	Left foot rest				155	No
	2) Right foot rest	Non		100	91	Yes
	3) Seat (with driver	Evaluative	100 microns (max.)	(max.)	144	No
	seated)	Lvaldative		(1110.)		
40 1 =	4) Steering Wheel				122	No
16.1.7	Air Cleaner:	T	<u> </u>		N1-4	
	Max. oil pull over, (%)	Evaluativa	0.2E0/ (max.)	Dry type air	Not	
		Evaluative	0.25% (max.)	cleaner is fitted	applic- able	
16.1.8	Haulage requirements	<u> </u>	L	ntod	สมเช	
a)	Gross mass of the traile					
,	Two wheel	Non	As specified by the	0.0 (5)	0.0	
		Evaluative	manufacturer	2.0 (D)	2.0	Yes
b)	Distance travelled / litr		sumption, (km/l):			
	Two wheel	Non	As specified by the	4.0 to 5.0	6.67 to	No
		Evaluative	manufacturer	(D)	6.78	
c)	Fuel consumption (cc/kr	n/tonne):				
	Two wheel	Non	As specified by the	85.0 to 90.0	73.74 to	No
		Evaluative	manufacturer	(D)	74.95	
16.1.9	Wetland cultivation:					
	Sealing for the	Evaluative	The identified			
	following assemblies:		assemblies should		The	
	Clutch assembly	-do-	essentially meet the requirement of IS:	There should	manaufact- urer has	
	Brake housings	-do-	11082. No water ingress	be no ingress of	recomme-	
	3) Front axle hubs	-do-	in the identified assembly given in	water and/or mud	nded that the tractor	
	4) Engine oil	-do-	column-2.	IIIuu	is not	
	5) Transmission oil	-do-	If tractor does not meet		suitable for	
			the requirements of wetland cultivation, it		wet land cultivation	
			may be recommended		Januvallon	
			for dry land operation			
16.1.10	Safety features:		only.			
a)	Guards against	Evaluative	Belt drives, pulley, sile	ncer.	Meets the	
u <i>u j</i>	- Sudius audilist I	Lvaluative	hydraulic pipes (As p		require-	Yes
,				1	-	
,	moving and hot parts		12239 part 2)		ment	
b)		Evaluative	12239 part 2) As per CMVR		Meets the	Yes
b)	moving and hot parts	Evaluative			Meets the require-	Yes
-	moving and hot parts Lighting arrangement		As per CMVR		Meets the require- ment	Yes
b)	moving and hot parts Lighting arrangement Seating requirement	Non-	As per CMVR Should meet	the	Meets the require- ment Not	Yes
-	moving and hot parts Lighting arrangement Seating requirement (Tractors having more		As per CMVR	the 2343	Meets the require- ment Not applicable (Tractors rear	Yes
-	moving and hot parts Lighting arrangement Seating requirement	Non-	As per CMVR Should meet requirements of IS 1	the 2343	Meets the require- ment Not applicable	Yes

requirements for PTO shaft e) Dimension of three point linkage f) Specification of linkage advantage of the point linkage and point linkage f) Specification of linkage are specified to the point linkage and	1		2	3	4		5	6	7
e) Dimension of three point linkage	d)			Evaluative					Yes
Point linkage Evaluative Fraction of the continue of the					amended from tim	ie to time)		ment	
Specifications of Swinging drawbar (wherever fitted)	е)	poin	t linkage	Evaluative	requirements of IS 1) (as amended f	S 4468 (part		meet the require-	No
Swinging drawbar (wherever fitted) h) 1) Maximum travelling speed at rated engine speed in reverse gears, (kmph) 2) Audible warning signal on tractor Evaluative an audible warning signal on tractor selection of labelling plate): 16.1.11 Labelling of tractors (Provision of labelling plate): 1) Make Evaluative 2) Model Evaluative 3 Month & Year of manufacture 4) Engine number 6 Evaluative 3) Month & Year of manufacture 6) Declaration of maximum PTO power, (kW) 7) Specific fuel consumption (g/kWh) 16.1.12 Discard limit for: (a) Cylinder bore diameter, (mm) (b) Clearance between piston & cylinder liner at skirt, (mm) (c) Piston diameter at skirt, (mm) (d) Ring end gap (mm): - Top comp. ring - 2 ^{mo}	f)				requirements of IS IS 12362 (par	S 12953 and rt 3) (as		require- ment	Yes
speed in reverse gears, (kmph) 2) Audible warning signal on tractor Separation Signal on tractor S		Swin (whe	iging drawbar erever fitted)		requirements of (Part 3) (As am time to time)	IS 12362 ended from		fitted	
Signal on tractor Speed in reverse gear reaches to 20 kmph, an audible warning signal on tractor shall be activated. Not applicable	h)	spee spee gear	ed at rated engine ed in reverse s, (kmph)			·		(meets the require- ment)	Yes
1) Make Evaluative Eval				Evaluative	speed in rev reaches to 20 audible warning tractor shall be ac	erse gear kmph, an signal on			
2 Model Evaluative 3 Month & Year of manufacture 4 Engine number Evaluative 5 Chassis number Evaluative 6 Declaration of maximum PTO power, (kW) 7 Specific fuel consumption (g/kWh) 16.1.12 Discard limit for: (a) Cylinder bore diameter, (mm) (b) Clearance between piston & cylinder liner at skirt, (mm) Evaluative Clearance Cylinding Comp. ring -2 po comp.	16.1.11	Labe	elling of tractors (Provision of I			•		
3 Month & Year of manufacture Evaluative of manufacture Evaluative of manufacture Evaluative Eval		1)	Make	Evaluative			Escorts	Limited	Yes
Solution Color C			Model	Evaluative					Yes
A		3)		Evaluative	kW and year of m	nanufacture			Yes
5 Chassis number Evaluative 6 Declaration of maximum PTO power, (kW) 7 Specific fuel consumption (g/kWh) 7 S									Yes
maximum PTO power, (kW)						x No.1 for			Yes
To be specified To be spec		6)	maximum PTO	Evaluative	and next two digi	t in the box	14.	.55	Yes
(a) Cylinder diameter, (mm) bore diameter, (mm) Evaluative diameter, (mm) To be specified by the manufacturer 78.200 78.027 to 78.056 Yes (b) Clearance between piston & cylinder liner at skirt, (mm) Non Evaluative 0.300 0.097 to 0.103 Yes (c) Piston diameter at skirt, (mm) Non Evaluative 77.8 77.953 to 77.957 Yes (d) Ring end gap (mm): - do- 1.50 0.35 to 0.40 Yes - Top comp. ring - 2nd comp. ring - Oil ring Evaluative - do- 1.50 0.40 to 0.45 Yes (e) Ring groove clearance (mm): - do- 0.300 Tapered ring do- 0.300 - Tapered ring do- 0.300 - Tapered ring do- 0.300 - O.71 to 0.076 Yes (f) Clearance of main bearings (mm): - do- 0.200 0.047 to 0.050 Yes (f) Clearance of main bearings (mm): - do- 0.100 0.017 to 0.052 Yes - Crankshaft end Evaluative - do- 0.50 0.15 Yes			Specific fuel consumption (g/kWh)	Evaluative			32	25	Yes
diameter, (mm)							r	1	
piston & cylinder liner at skirt, (mm)	. ,	diam	eter, (mm)						Yes
Skirt, (mm) Evaluative	(b)	pisto	n & cylinder liner			0.300	0.097 to	o 0.103	Yes
- Top comp. ring - 2 nd comp. ring - Oil ring (e) Ring groove clearance (mm): - Top comp. ring - do-						77.8	77.953 to	o 77.957	Yes
- 2 nd comp. ring	(d)	Ring	end gap (mm):						
Column		- To	op comp. ring						Yes
(e) Ring groove clearance (mm): - do- 0.300 Tapered ring - 2 nd comp. ring Evaluative -do- 0.300 0.071 to 0.076 Yes - Oil ring -do- 0.200 0.047 to 0.050 Yes (f) Clearance of main bearings (mm): - Diametrical clearance Evaluative -do- 0.100 0.017 to 0.052 Yes - Crankshaft end Evaluative -do- 0.50 0.15 Yes				Evaluative					Yes
- Top comp. ring - 2 nd comp. ring - Oil ring - Oil ring (f) Clearance of main bearings (mm): - Diametrical clearance - Crankshaft end Evaluative - do-				L	-do-	1.50	0.40 to	0 0.45	Yes
- 2 nd comp. ring Evaluative -do- 0.300 0.071 to 0.076 Yes - Oil ring -do- 0.200 0.047 to 0.050 Yes (f) Clearance of main bearings (mm): -do- 0.100 0.017 to 0.052 Yes - Diametrical clearance Evaluative -do- 0.50 0.15 Yes	(e)			e (mm):			-		
Clearance of main bearings (mm): Diametrical clearance Crankshaft end Evaluative -do- -do- 0.200 0.047 to 0.050 Yes		- I (op comp. ring	Fuelus#:					 Va-
(f) Clearance of main bearings (mm): - Diametrical clearance - Crankshaft end Evaluative do-				⊏valuative					
- Diametrical clearance Evaluative -do- 0.100 0.017 to 0.052 Yes 0.50 0.15 Yes	/ £ \			ringe (mm):	-do-	0.200	U.U4/ to	บ บ.บ5ป	res
- Crankshaft end Evaluative do 0.50 0.15 Yes	(1)	- Di	iametrical	<u> </u>	-do-	0.100	0.017 to	o 0.052	Yes
lloat		- C		Evaluative	-do-	0.50	0.	15	Yes

1	2	3	4	5	6	7
(g)	Clearance of big end	bearings, (mm):				
	- Diametrical	Evaluative	-do-	0.15	0.013 to 0.071	Yes
	- Axial	Evaluative	-do-	0.50	0.15 to 0.20	Yes
(h)	Clearance between king pin and bush, (mm)	Non Evaluative	-do-	Not applicable	Not applicable	
(i)	Clearance between centre pin and bush, (mm)	Non Evaluative	-do-	0.60	0.14 to 0.30	Yes
16.1.13	Literature (Submissio)			
(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
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	
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	Yes

16.2	CATEGORY OF BR	EAKDOWNS / DEF	ECTS:		
S. No.	Category of breakdowns	Category (Evaluative / Non Evaluative)	Requirements as per IS: 12207- 2019	As observed	Whether meets the require- ments (Yes/No.)
1.	Critical	Evaluative	There is no 'critical breakdown' during the course of testing	None	Yes
2.	Major	Evaluative	There are not more than 1 major breakdowns and neither of them is of repetitive nature	None	Yes
3.	Minor	Evaluative	There are not more than 3 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 four that is, (1 major + 3 minor) or 4 minor breakdowns	None	Yes

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16.3 Salient Observations:

16.3.1 Laboratory tests:

16.3.1.1 PTO Performance:

The maximum equivalent crankshaft torque was recorded as 58.1 Nm against the declaration of 65.0 Nm, which does not meet the requirement of IS: 12207- 2019 with regard to tolerance limit. This should look into for necessary corrective action.

16.3.1.2 Drawbar performance:

The maximum transmission oil temperature was recorded 100 °C during drawbar test, whereas during Initial Commercial Test it was recorded 88 °C, which does not meet the requirement of clause 7.6 of IS: 12207- 2019 with regard to tolerance limit. This should look into for necessary corrective action.

16.3.1.3 Hydraulic Performance:

i) During hydraulic lifting capacity at hitch point, maximum corrected force exerted through full range was recorded 10.0 kN against the declaration of 9.0 kN, which does not meet the evaluative requirement of IS: 12207-2019.

Upon this, the applicant has requested vide letter no. 28/2021-22/68_03 dated 25.03.2022 to carry out the following work on tractor, to rectify the defect, which was allowed.

- a) Cleaning of hydraulic oil lines.
- b) Cleaning of hydraulic oil suction strainer.

This should be looked into for necessary improvement.

ii) The maximum corrected force exerted through full rage at standard frame was recorded 5.25 kN, whereas during Initial Commercial Test it was recorded it was recorded 6.90 kN, which does not meet the requirement of clause 7.6 of IS: 12207- 2019 with regard to tolerance limit. This should look into for necessary corrective action.

16.3.1.4 Mechanical Vibration:

The amplitude of mechanical vibration on various assemblies marked as (*) in Chapter – 10 of this test report is on higher side. This calls for dampening down of vibrations especially on left foot rests, steering wheel and operator's seat to improve the operational comfort and service life of components.

The above observations were also made in the previous test report No. T-1195/1722/2018 (November, 2018) and no improvement have been made as regards to its conformity so far.

16.3.1.5 Haulage test:

- Distance travelled per litre of fuel consumption was recorded as 6.67 to 6.78 against the declaration of 4.0 to 5.0. This should be looked into for necessary corrective action.
- ii) The fuel consumption in ml/km/tonne recorded as 73.74 to 74.95 against the declaration of 85.0 to 90.0. This should be looked into for necessary corrective action.

16.3.1.6 Three point linkage:

- i) The lateral of lower hitch point lower hitch was measured 40 mm against the minimum requirement of 50 mm, which does not meet the requirement of IS: 4468 -1997 (Part-2). This should be looked into for necessary corrective action.
- ii) Distance from end of power take-off to centre of lower hitch point (lower links in horizontal position) was measured 410 mm against the required range of 300 to 375 mm. which does not meet the requirement of IS: 4468 -1997 (Part-2). This should be looked into for necessary corrective action.

The above observations were also made in the previous test report No. T-1195/1722/2018 (November, 2018) and no improvement have been made as regards to its conformity so far.

16.3.1.7 Wheel Rims:

i) The size of the steered wheel rims was found to be "5J".

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ii) 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 ITTAC manual is "5JA". An immediate corrective action is required to be taken even in stand point of view with compliance to CMVR,1989.

16.3.1.8 Component and Assembly Inspection:

The type of cylinder liner was of Dry & non replaceable. However, in the specification sheet submitted by the applicant it was declared Wet & replaceable. It must be looked into for necessary corrective action.

16.4 Recommendation with regard to safety on tractor:

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

- Provision for spark arresting device in exhaust system as per the requirement of IS: 12239 (Part-1)-2018.
- ii) Vertical retainers as per the requirement of IS: 12239 (Part-1)-2018.
- iii) The Working clearance between the position control and draft control was measured 40 mm against the minimum requirement of 70 mm. This should be provided as per IS: 12239 (Part-2) 1999 (Reaffirmed in January, 2019).
- iv) PTO master shield should be provided on tractor as per IS: 4931-1995 (Reaffirmed in January, 2019).

The above observations were also made in the previous test report No. T-1195/1722/2018 (November, 2018) and no improvement have been made as regards to its conformity so far.

16.5 Maintenance / Service Problems:

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

16.6 Adequacy of Literature supplied with machine:

- **16.6.1** The following literature was supplied with test sample for reference during the test.
 - a) Operator's manual for Escorts Limited, 26 (Brand name: Farmtrac) & 30 (Brand name: Farmtrac) tractor model.
 - b) Repair manual for Escorts Limited, 26 (Brand name: Farmtrac) & 30 (Brand name: Farmtrac) tractor model.
 - c) Parts catalogue for Escorts Limited, 26 (Brand name: Farmtrac) & 30 (Brand name: Farmtrac) tractor model.
- 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) Declaration that "the tractor is not suitable for wet land operation".
 - ii) Safe hitch height while using trailer.
 - iii) Inflation pressure and load carrying capacity of steered wheels & drive wheels tyre.
 - iv) Brand name of coolant and it's ratio.
 - v) Recommended gross mass of trailer for haulage operation.
 - vi) Specification of recommended matching trailer for haulage operation.

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THIS TEST REPORT IS VALID UPTO: 30/06/2027

TESTING AUTHORITY:



Draft Test Report is compiled by: Vithato Keyho, Senior Technical Assistant

17. Applicant's comments

Para no.	Our reference	Applicant's comments
17.1	16.3.1.7	Your comment for fitment of recommended rim size according to IS: 13154-2015/ITTAC manual is well taken. We will try to take necessary actions in our design to eliminate this gap.
17.2	16.3.1.8	Your valuable comment for correction is well taken. We will avoid such discrepancies in future, to match the specifications of machine submitted with it's specification application.
17.3	16.6.2	We will try to eliminate such discrepancies in future.

ANNEXURE-I

BRIEF SPECIFICATION OF TRAILER DECLARED AS MATCHING TRAILER BY APPLICANT

S. No.	Item	Trailer
1.	Make	Ram Agritech
2.	Model	MINI
3.	Type of trailer	Semi- trailer
4.	Number of axles	Single
5.	Un laden Weight of Trailer, kg	560
6.	Fully laden Weight of Trailer, (kg)	2000
7.	Overall dimensions of Trailer, (m	m):
	Overall Width	1610
	Overall Length	3300
	Overall Height	1140
	Wheel Base	Not applicable
	Wheel Track	1230
8.	Dimension of fitted Platform, (mn	n):
	Length	2520
	Width	1610
	Height from ground	530
9.	Brakes of Trailer	Not Provided

ESCORTS LIMITED, 26 (BRAND NAME: FARMTRAC) TRACTOR- Commercial (1st Batch) THIS TEST REPORT IS VALID UPTO: 30/06/2027

ANNEXURE - II

TRACTOR RUN HOURS DURING TEST

A.	LABORATORY AND TRACK TESTS:	HOURS
1.	Running-in	50.0
2.	PTO performance test	12.4
3.	Power lift and hydraulic pump performance test	2.0
4.	Drawbar performance test	13.7
5.	Brake test	1.3
6.	Noise measurement	1.8
7.	Mechanical vibration test	0.8
8.	Nominal speed test	1.6
B.	HAULAGE TEST:	7.3
C.	Miscellaneous test and other run hours including idle	6.9
	run, transportation, trials and preparation for test	
	TOTAL:	97.8