

व्यावसायिक परीक्षण रिपोर्ट (प्रथम बैच परीक्षण)

संख्या/No. : T-1663/2194/2022

COMMERCIAL TEST REPORT (First Batch Test) माह/Month : July, 2022

[ONLINE TESTING]

(यह परीक्षण रिपोर्ट 31/07/2027 तक वैध है / THIS TEST REPORT IS VALID UPTO 31/07/2027)



ESCORTS LIMITED, EURO 41 E3  
(BRAND NAME: POWERTRAC) TRACTOR



भारत सरकार

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

GOVERNMENT OF INDIA

MINISTRY OF AGRICULTURE AND FARMERS WELFARE

(DEPARTMENT OF AGRICULTURE & FARMERS WELFARE)

केन्द्रीय कृषि मशीनरी प्रशिक्षण एवं परीक्षण संस्थान

ट्रैक्टर नगर, बुदनी (म.प्र.) 466 445

CENTRAL FARM MACHINERY TRAINING & TESTING INSTITUTE

TRACTOR NAGAR, BUDNI (M.P.) 466 445

(An ISO: 9001 - 2015 Certified Institute)

E-mail: [fmti-mp@nic.in](mailto:fmti-mp@nic.in),  
Telephone: 07564-299003

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

T-1663/2194/2022	ESCORTS LIMITED, EURO 41 E3 (Brand Name: POWERTRAC) TRACTOR -COMMERCIAL (1st Batch Test)
	THIS TEST REPORT IS VALID UPTO:31/07/2027

## 2. FUEL AND LUBRICANTS

**2.1 Fuel** : The High-speed diesel oil supplied by M/s Indian Oil Corporation Limited having density of 0.828 g/cc at 15°C was used.

### 2.2 Lubricants:

S. No.	Particulars	As recommended by the manufacturer	As used during the test
1.	Air cleaner oil	SAE 15W40 (API 4)/ SAE 20W40 (API CD)/ SF-IS:13656-EP-DL-2)	As recommended
2.	Engine	SAE 20W40 (API 4)/ SF-IS:13656-EP-DL-2)	
3.	Gear box, Differential, rear axle, hydraulic & brake system oil	UTTO (Tract ELFSF-3I)	Oil originally filled in the tractor system were not changed
5.	Steering oil reservoir	SAE 90 (API GL-4) IS: 1118-EP, Type -GL-4)	
6.	Grease	Servo grease MP	Servo grease MP

## 3. SPECIFICATIONS

**3.1 Tractor:**  
 Make : ESCORTS LIMITED  
 Model : EURO 41 E3  
 Brand Name : POWERTRAC  
 Type : Rear Wheel Drive, Standard Agricultural Tractor.  
 Month & year of manufacture : 11/21  
 Chassis number : T053577660HK  
 Country of origin : India

**3.2 Engine:**  
 Manufacturer's address : M/s. Escorts Kubota Limited,  
 Plot No. 2 & 3, Sector – 13  
 FARIDABAD – 121 007  
 Haryana  
 Make : ESCORTS LIMITED  
 Model : AE3.249A-3A  
 Type : Four strokes, liquid cooled, direct injection,  
 naturally aspirated, compression ignition,  
 diesel engine.  
 Serial number : E3648981  
 Country of origin : India

### 3.2.1 Engine speed (rpm), (Manufacturer's recommended production settings):

- Maximum speed at no load : 2305 to 2455  
 - Low idle speed : 700 to 800  
 - Speed at maximum torque : 900 to 1100

### Rated speed, (rpm):

- For PTO use : 2200  
 - For drawbar use : 2200

T-1663/2194/2022	<b>ESCORTS LIMITED, EURO 41 E3 (Brand Name: POWERTRAC) TRACTOR -COMMERCIAL (1st Batch Test)</b>
	<b>THIS TEST REPORT IS VALID UPTO:31/07/2027</b>

**16.3 Qualifying performance (comparable limit) for batch model in comparison to ICT model (Vide test report No. T – 1087/1612/2017) (please refer clause 7.6 of IS:12207-2019):**

S. No.	Characteristic	Requirements as per IS: 12207-2019		As observed		Whether meets the requirements (Yes/No)
		Column – 4 of Table-1	Clause 7.6	Previous sample	Present sample	
<b>16.3.1</b>	<b>Drawbar performance:</b>					
a)	Maximum drawbar pull with ballast corresponding to 15 percent wheel slip, (kN)	Minimum 70% of static mass with ballast	The performance shall be within 7.5 of ICT or limit specified under column 3 whichever is higher	22.62	20.43	No
b)	Maximum drawbar pull without ballast corresponding to 15 percent wheel slip, (kN)	Minimum 70% of static mass of tractor without / standard ballast		16.78	15.70	Yes
c)	Maximum drawbar power without ballast, (kW).	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.	The performance shall be within 7.5 of ICT or limit specified under column 3 whichever is higher	27.3	27.3	Yes
d)	Maximum transmission oil temperature, (°C)	The declared value should not exceed the maximum value specified by oil company.		81	88	Yes
<b>16.3.2</b>	<b>Power lift and hydraulic pump performance :</b>					
a)	Maximum lifting capacity throughout the range of lift, (kN):					
	1)	At hitch points	±10 percent	The performance shall be within 7.5 of ICT or limit specified under column 3 whichever is higher	15.03	12.61
2)	With the standard frame	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	7.66		8.16	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 min., (mm)	The observed value should not exceed 50 mm		10	36	Yes

T-1663/2194/2022	<b>ESCORTS LIMITED, EURO 41 E3 (Brand Name: POWERTRAC) TRACTOR -COMMERCIAL (1st Batch Test)</b>
	<b>THIS TEST REPORT IS VALID UPTO:31/07/2027</b>

### 17. SUMMARY OF OBSERVATIONS, COMMENTS & RECOMMENDATIONS

**17.1** On the basis of test conducted the performance results have been summarized as evaluative (mandatory) / Non-evaluative (Non-mandatory) parameters 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:

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
<b>17.1.1</b>	<b>PTO Performance :</b>					
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 $\leq 26$ kW.	30.65	30.4	Yes
b)	Power at rated engine speed, (kW)	Non Evaluative	-do-	30.65	30.4	Yes
c)	Specific fuel consumption corresponding to maximum power, (g/kWh)	Evaluative	+ 10% max.	240	249	Yes
d)	Maximum equivalent crankshaft torque, (Nm)	Non Evaluative	$\pm 8\%$	170.5	173.5	Yes
e)	Back-up torque, percent	Evaluative	12 percent	12.0 (D) 12.0 (R)	31.4	Yes
f)	Maximum operating temperature, ( $^{\circ}$ C)					
	1) Engine oil	Evaluative	The declared value should not exceed the max. value specified by the oil company and the observed value under high ambient condition should not exceed the declaration.	125	104	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	98	Yes
g)	Engine oil consumption, (g/kWh)	Evaluative	Not exceeding 1% of SFC at max. Power under High ambient conditions.	2.47 Maximum (R)	0.340	Yes
h)	Smoke level, $m^{-1}$	Evaluative	Maximum light absorption coefficient of 3.25 per meter or equivalent BOSCH No. 5.2 or 75 Hatridge value ( <b>As per CMVR</b> ).	3.25 Maximum (R)	0.17	Yes

T-1663/2194/2022	<b>ESCORTS LIMITED, EURO 41 E3 (Brand Name: POWERTRAC) TRACTOR -COMMERCIAL (1st Batch Test)</b>
	<b>THIS TEST REPORT IS VALID UPTO:31/07/2027</b>

1	2	3	4	5	6	7	
<b>17.1.2</b>	<b>Drawbar performance :</b>						
<b>a)</b>	Max. drawbar pull with ballast corresponding to 15 percent wheel slip, (kN)	Non Evaluative	Minimum 70% of static mass of tractor with ballast.	18.05 (D) 17.02 Minimum (R)	20.43	Yes	
<b>b)</b>	Max. drawbar pull without ballast corresponding to 15 percent wheel slip, (kN)	Evaluative	Minimum 70% of static mass of tractor without ballast or with standard ballast, as the case may be.	14.21 (D) 13.21 (R) Minimum	15.70	Yes	
<b>c)</b>	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.	24.9 (D) 24.3 (R) Minimum	27.3	Yes	
<b>d)</b>	Maximum transmission oil temperature, (°C)	Evaluative	The declared value should not exceed the maximum value specified by oil company	125 (D)	88	Yes	
<b>17.1.3</b>	<b>Power lift and hydraulic pump performance :</b>						
<b>a)</b>	Maximum lifting capacity throughout the range of lift, (kN):						
	1)	At hitch points	Evaluative	Tolerance of ± 10%	13.7 (D)	12.61	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.	8.80 (D) 7.15 (R) Minimum	8.16	Yes
<b>b)</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	36	Yes

T-1663/2194/2022	<b>ESCORTS LIMITED, EURO 41 E3 (Brand Name: POWERTRAC) TRACTOR -COMMERCIAL (1st Batch Test)</b>
	<b>THIS TEST REPORT IS VALID UPTO:31/07/2027</b>

1	2	3	4	5	6	7
<b>17.1.4</b>	<b>Brake performance at 25 kmph:</b>					
<b>a)</b>	Maximum stopping distance at a force, equal to or less than 600 N on brake pedal with Unballasted tractor, (m):					
	1) Cold brake	Evaluative	10	10 (R)	6.95	Yes
	2) Hot brake	Evaluative	10	10 (R)	7.43	Yes
<b>b)</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	233 to 270	Yes
<b>c)</b>	Whether parking brake is effective at a force of 600 N at foot pedal (s) or 400 N at hand lever	Evaluative	Yes / No	Yes	Yes	Yes
<b>17.1.5</b>	<b>Noise measurement :</b>					
<b>a)</b>	Maximum ambient noise emitted by the tractor, dB(A)	Evaluative	As per CMVR	88 (R)	84	Yes
<b>b)</b>	Maximum noise at operator's ear level, dB(A)	Evaluative	As per CMVR	96 (R)	96	Yes
<b>17.1.6</b>	<b>Amplitude of mechanical vibrations at:</b>					
	1) Left foot rest	Non Evaluative	100 microns (max.)	100(R)	216	<b>No</b>
	2) Right foot rest				155	<b>No</b>
	3) Seat (with driver seated)				161	<b>No</b>
	4) Steering wheel				166	<b>No</b>
<b>17.1.7</b>	<b>Air cleaner:</b>					
	Maximum air cleaner oil pull over, (%)	Evaluative	0.25 (Max.)	0.14		Yes
<b>17.1.8</b>	<b>Haulage requirements :</b>					
<b>a)</b>	Gross mass of the trailers, (tones):					
	Two wheel	Non Evaluative	As specified by the manufacturer	5.0 (D)	5.0	Yes
	Four wheel	Non Evaluative		6.0 (D)	6.0	Yes
<b>b)</b>	<b>Distance travelled / liter of fuel consumption, (km/l):</b>					
	Two wheel	Non Evaluative	As specified by the manufacturer	6.0 to 8.0 (D)	6.67 to 6.89	Yes
	Four wheel	Non Evaluative		7.0 to 9.0 (D)	6.27 to 6.36	<b>No</b>
<b>c)</b>	<b>Fuel consumption, (ml/km/tonne):</b>					
	Two wheel	Non Evaluative	As specified by the manufacturer	29 to 33 (D)	29.0 to 30.0	Yes
	Four wheel	Non Evaluative		29 to 33 (D)	26.2 to 26.6	<b>No</b>

T-1663/2194/2022	<b>ESCORTS LIMITED, EURO 41 E3 (Brand Name: POWERTRAC) TRACTOR -COMMERCIAL (1st Batch Test)</b>
	<b>THIS TEST REPORT IS VALID UPTO:31/07/2027</b>

1	2	3	4	5	6	7	
<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 water and / or mud was reported during Initial commercial testing of this tractor model tested vide test report no. T-1087/1612/2017 released in May, 2017	Yes
	1)	Clutch assembly	-do-				
	2)	Brake housings	-do-				
	3)	Front axle hubs	-do-				
	4)	Engine Oil	-do-				
5)	Transmission Oil	-do-					
<b>17.1.10</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	
<b>e)</b>	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 meet the requirement</b>	<b>No</b>	
<b>f)</b>	Specifications of linkage drawbar	Evaluative	Should meet the requirements of IS: 12953 (As amended from time to time)		Meets the requirement	Yes	
<b>g)</b>	Swinging drawbar (wherever fitted)	Evaluative	Should meet the requirement of IS: 12362 (Part 3) (As amended from time to time)		Not provided	Not applicable	
<b>h)</b>	1)	Maximum travelling speed at rated engine speed in reverse gears, kmph	Evaluative	Should not exceed 20 kmph		10.77 (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 fitted	Not applicable

T-1663/2194/2022	<b>ESCORTS LIMITED, EURO 41 E3 (Brand Name: POWERTRAC) TRACTOR -COMMERCIAL (1st Batch Test)</b>
	<b>THIS TEST REPORT IS VALID UPTO:31/07/2027</b>

1	2	3	4	5	6	7		
17.1.11	<b>Labeling of tractors (Provision of labeling 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-left: 20px;"> <tr> <td>MM</td> <td>YY</td> </tr> </table> Digit 01 – 12 in box No.1 for MM will represent the months and next two digits in box No.2 for YY will represent the year of Manufacturing.	MM	YY	ESCORTS LIMITED	Yes
	MM	YY						
	2)	Model	Evaluative		EURO 41 E3	Yes		
	3)	Month & Year of manufacture	Evaluative		11/21	Yes		
	4)	Engine number	Evaluative		E3648981	Yes		
	5)	Chassis number	Evaluative		T053577660HK	Yes		
6)	Maximum PTO power, (kW)	Evaluative	30.65		Yes			
17.1.12	<b>Discard limit for:</b>							
(a)	Cylinder bore diameter, (mm)	Evaluative	To be specified by the manufacturer and supported by the printed literature	98.30	98.032 to 98.051	Yes		
(b)	Clearance between piston & cylinder liner at skirt, (mm)	Non Evaluative		0.45	0.138 to 0.144	Yes		
(c)	Piston diameter at skirt, (mm)	Non Evaluative		97.656	97.907 to 97.912	Yes		
d)	<b>Ring end gap, (mm):</b>							
	-	Top comp. ring.	Evaluative	To be specified by the manufacturer and supported by the printed literature	2.0	0.40 to 0.50	Yes	
	-	2 <sup>nd</sup> comp. ring.			2.0	0.60	Yes	
	-	Oil ring.			2.0	0.40 to 0.50	Yes	
(e)	<b>Ring groove clearance, (mm):</b>							
-	Top comp. ring.	Evaluative	To be specified by the manufacturer and supported by the printed literature	0.35	Tapered	--		
-	2 <sup>nd</sup> comp. ring.			0.20	0.035 to 0.038	Yes		
-	Oil ring.			0.15	0.045 to 0.052	Yes		
f)	<b>Clearance of main bearings, (mm):</b>							
	-	Diametrical clearance	Evaluative	To be specified by the manufacturer and supported by the printed literature	0.40	0.072 to 0.082	Yes	
	-	Crankshaft end float	Evaluative		0.67	0.22	Yes	



T-1663/2194/2022	<b>ESCORTS LIMITED, EURO 41 E3 (Brand Name: POWERTRAC)</b>					
	<b>TRACTOR -COMMERCIAL (1st Batch Test)</b>					
<b>THIS TEST REPORT IS VALID UPTO:31/07/2027</b>						

1	2	3	4	5	6	7	
(g)	<b>Clearance of big end bearings, (mm):</b>						
	-	Diametrical	Evaluative	-do-	0.40	0.067 to 0.074	Yes
	-	Axial	Evaluative	-do-	0.60	0.25	Yes
(h)	Clearance between king pin and bush, (mm)		Non Evaluative	-do-	0.50	0.149 to 0.154	Yes
(i)	Clearance between centre pin and bush, (mm)		Non Evaluative	-do-	0.50	0.122 to 0.133	Yes

<b>17.1.13 Literature (Submission to test agency)</b>							
(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
<b>17.1.14 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 fitted	Not applicable
17.1.15	Standard Accessories		Evaluative	Trailer hitch, front tow hook, linkage drawbar should be provided with tractor		Provided	Yes
17.1.16	Accessories (optional)		Non Evaluative	Ballast weight, if fitted, should meet the requirement of CMVR		Provided	Yes

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

T-1663/2194/2022	ESCORTS LIMITED, EURO 41 E3 (Brand Name: POWERTRAC) TRACTOR -COMMERCIAL (1st Batch Test)
	THIS TEST REPORT IS VALID UPTO:31/07/2027

### 17.3 Salient Observations:

#### 17.3.1 Laboratory tests:

##### 17.3.1.1 Drawbar Performance Test

- i) Maximum drawbar pull with ballast corresponding to 15 percent wheel slip was observed as 20.43 kN as compare to 22.62 kN during ICT of this model and 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.
- ii) During ten hours drawbar performance tyre creeping was noted as 40 & 25 mm respectively on LHS and RHS tyre. This should be looked into for necessary corrective action

##### 17.3.1.2 Mechanical Vibration:

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

**The above observations were also made in the previous Test Report No. T-1087/1612/2017 and no improvement have been made as regards to its conformity so far.**

##### 17.3.1.3 Specifications of three point linkage:

- i) Lateral distance from lower hitch point to centre line of tractor was observed as 365 against the requirement of 359 mm for Category I.  
**This observation was found not confirmed in Test Report No. T-1087/1612/2017 no improvement has been made as regards to its conformity so far.**

##### 17.3.1.4 Wheel Rims:

**The size of the drive wheel (13.6-28) rims was observed as "W11x28".**

**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 for 13.6-28 tyre size is "W12". An immediate corrective action is required to be taken even in stand point of view with compliance to CMVR, 1989.**

##### 17.3.1.5 Specifications

- i) As per technical specification, the provision and type of transport lock in the hydraulic system is mentioned as "Not provided". However the tractor is fitted with transport lock mechanism.
- ii) Coolant water ratio is mentioned as 97:3 which is not unambiguous.
- iii) The lubrication oil change period for engine, gear box and steering is observed different from the specified period in the operator manual.

**Sl. no. (i), (ii) & (iii) calls for stringent checking of the specifications.**

##### 17.3.2 Haulage performance test:

During haulage test, distance travelled / liter of fuel consumption was observed as 6.27 to 6.36 km/l with four wheel trailer against the declaration of 7.0 to 9.0 km/l. This should be looked into for necessary corrective action.

#### 17.4 Maintenance / Service Problems:

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

T-1663/2194/2022	ESCORTS LIMITED, EURO 41 E3 (Brand Name: POWERTRAC) TRACTOR -COMMERCIAL (1st Batch Test)
	THIS TEST REPORT IS VALID UPTO:31/07/2027

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

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

- i) Longitudinal distance from seat index point to the centre of steering control wheel has been measured as 540 mm against the requirement of 425 to 525 mm.
- ii) Safety switch for safe start of the engine has not been provided.
- iii) Fuel shut-off knob should be remained in "STOP" position without application of sustainable manual effort.
- iv) Vertical retainers at both sides of clutch and brake pedal should be provided as per IS: 12239 (Part-1) – 2018.
- v) Height of first foot step has been measured as 560 mm against the maximum limit of 550 mm.
- vi) Spark arrester should be provided in the exhaust system as per the requirement of IS: 12239 (Part-2)-1999 (Re-affirmed in January, 2019).
- vii) The working clearance between position and draft control lever of hydraulic system was measured as 30 mm & 55 mm between range selection and mud guard against the minimum requirement 70 mm as per IS: 12239 (Part-2)-1999 (Re-affirmed in January, 2019).
- viii) Master shield of PTO shaft has not be provided as per the requirement of IS: 4931-1995.

**The recommendations at serial no. (i), (ii), (iii),(vi) and (vii) were also made in the previous Test Report No. T-1087/1612/2017 (May, 2017) but no improvement have been made in this regard so far. Besides these observations, serial no. (viii) were found conform vide Test Report No. T-1087/1612/2017 and now found not meeting the relevant standard, which calls for necessary corrective action.**

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

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


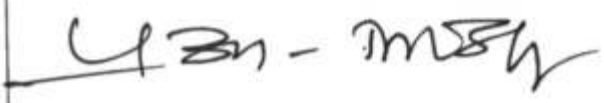
- a) Operator Manual for "Escorts Ltd. EURO 41 E3 (Brand Name: Powertac) & EURO 50 (Brand Name: Powertac)" tractor model.
- b) Parts catalogue for "Escorts Ltd. EURO 41 E3 (Brand Name: Powertac)" & "EURO 50 (Brand Name: Powertac)" tractor model.
- c) Repair manual for "Escorts Ltd. EURO 41 E3 (Brand Name: Powertac)" "EURO 50 (Brand Name: Powertac)" tractor model.

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

- i) Safe hitch height while using trailer.
- ii) Brand name of coolant and coolant to water ratio.
- iii) Specification of recommended matching trailer for haulage operation.

T-1663/2194/2022	ESCORTS LIMITED, EURO 41 E3 (Brand Name: POWERTRAC) TRACTOR -COMMERCIAL (1st Batch Test)
	THIS TEST REPORT IS VALID UPTO:31/07/2027

**TESTING AUTHORITY:**

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

Draft test report is compiled by: **Nitesh Kumar Verma**, Agricultural Engineer.

**18. Applicant's comments**

Para no.	Our reference	Applicant's comments
18.1	17.3.1.4	Comment for the 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.