

(यह परीक्षण रिपोर्ट 30/06/2025 तक वैध है। / THIS TEST REPORT IS VALID UP TO : 30/06/2025)



MAHINDRA, 575 DI POWER + TRACTOR
(Brand Name : Bhoomiputra)



सत्यमेव जयते

भारत सरकार

कृषि एवं किसान कल्याण मंत्रालय
कृषि, सहकारिता एवं किसान कल्याण विभाग
मशीनीकरण एवं प्रौद्योगिकी प्रभाग

GOVERNMENT OF INDIA

MINISTRY OF AGRICULTURE AND FARMERS WELFARE

(Department of Agriculture, Cooperation & Farmers Welfare, Mechanization & Technology Division)

केन्द्रीय कृषि मशीनरी प्रशिक्षण एवं परीक्षण संस्थान
ट्रैक्टर नगर, बुदनी (म.प्र.) ४६६ ४४५

CENTRAL FARM MACHINERY TRAINING & TESTING INSTITUTE

(An ISO : 9001 - 2015 Certified Institute)

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T- 1450/1977/2020	MAHINDRA, 575 DI POWER + (Brand Name : Bhoomiputra) TRACTOR - Commercial (1st Batch) Test
	(THIS TEST REPORT IS VALID UPTO 30/06/2025)

1. SPECIFICATIONS

- 1.1 Tractor:**
- | | |
|---------------------|---|
| Make | : Mahindra |
| Model | : 575 DI Power+ |
| Brand name | : Bhoomiputra |
| Variant, if any | : None |
| Type | : Four wheeled, Rear wheel drive, Unit construction, General purpose, Agricultural tractor. |
| Year of manufacture | : AK (i.e. April, 2019) |
| Chassis number | : MBNAAALEGKZA00303 |
| Country of origin | : India |
- 1.2 Engine:**
- | | |
|---------------------|--|
| Make | : Mahindra |
| Model | : MDI 2500 3AS |
| Type | : Four stroke, naturally aspirated, water cooled, direct injection, diesel engine. |
| Serial number | : ZKA3MAA2190 |
| Year of manufacture | : NA |
- 1.2.1 Engine speed (rpm), (Manufacturer's recommended production settings):**
- | | |
|----------------------------|----------------|
| - Maximum speed at no load | : 2250 to 2350 |
| - Low idle speed | : 750 to 850 |
| - Speed at maximum torque | : 1200 to 1400 |
- Rated speed, (rpm):**
- | | |
|-------------------|--------|
| - For PTO use | : 2100 |
| - For drawbar use | : 2100 |
- 1.3 Cylinder & Cylinder Head:**
- | | |
|--|--|
| Number | : Four |
| Disposition | : Vertical, Inline |
| Bore/stroke, (mm) | : 88.9/110 (apa) |
| Capacity as specified by the applicant, (cc) | : 2730 |
| Compression ratio | : 20.2 : 1 |
| Type of cylinder head | : Monoblock |
| Type of cylinder liners | : Wet, replaceable |
| Type of combustion chamber | : Re-entrant bowl cavity on piston top |
| Arrangement of valves | : Overhead, inline |
- Valve clearance (cold/hot):**
- | | |
|-----------------------|-------------|
| - Inlet valve, (mm) | : 0.40/0.30 |
| - Exhaust valve, (mm) | : 0.50/0.40 |
- 1.4 Fuel System:**
- | | |
|--------------------------|--------------------------|
| Type of fuel feed system | : Gravity and force feed |
|--------------------------|--------------------------|

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15. SUMMARY OF OBSERVATIONS, COMMENTS & RECOMMENDATIONS

15.1 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
15.1.1	PTO Performance :					
a)	Max. power under 2 h test, (kW) (Natural ambient condition)	Evaluative	Declared value to be achieved with a tolerance of: $\pm 5\%$ for PTO power or engine power >26 kW, $\pm 10\%$ for PTO power or Engine power ≤ 26 kW.	29.8 (D)	28.9	Yes
b)	Power at rated engine speed, (kW)	Non Evaluative	-do-	29.8 (D)	28.9	Yes
c)	Specific fuel consumption corresponding to maximum power, (g/kWh)	Evaluative	+ 10% Max.	255 (D)	261	Yes
d)	Maximum equivalent crankshaft torque, (Nm)	Non Evaluative	$\pm 8\%$	177.6 (D)	158.9	No
e)	Back-up torque, percent	Evaluative	12 percent, min.	18 (D) 12 (R)	21.0	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.	130 (D)	114	Yes
	2) Coolant (liquid)	Evaluative	The declared value should not exceed the boiling temperature of coolant under the pressurized or otherwise and the observed value under high ambient condition should not exceed the declaration.	112 (D)	97	Yes
g)	Engine oil consumption,(g/kWh)	Evaluative	Not exceeding 1% of SFC at max. power under High ambient conditions	2.64 (R) Maximum	0.41	Yes
h)	Smoke level, (m^{-1})	Evaluative	Maximum light absorption coefficient of 3.25 per meter or equivalent BOSCH No. 5.2 or 75 Hat ridge value (As per CMVR)	3.25 (R)	0.59	Yes

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1	2	3	4	5	6	7	
15.1.2	Drawbar performance:						
a)	Maximum drawbar pull with ballast corresponding to 15 percent wheel slip, (kN)	Non Evaluative	Minimum 70% of static mass with ballast	15.30 (D)	21.04	Yes	
				16.50 (R) Minimum			
b)	Maximum drawbar pull with standard ballast corresponding to 15 percent wheel slip, (kN)	Evaluative	Minimum 70% of static mass of tractor without/ standard ballast	13.10 (D)	15.76	Yes	
				13.05 (R) Minimum			
c)	Maximum drawbar power with standard ballast as the case may be, kW	Evaluative	Minimum 80 % of PTO power as referred in SI No. i) a) of PTO performance in case of tractors having total static mass > 1500 kg 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.	23.9 (D)	26.4	Yes	
				23.1 (R) Minimum			
d)	Maximum transmission oil temperature (°C)	Evaluative	The declared value should not exceed the maximum value specified by oil company.	110 (D)	80	Yes	
15.1.3	Power lift and hydraulic pump performance :						
a)	Maximum lifting capacity throughout the range of lift, (kN):						
	1)	At hitch points	Evaluative	±10 percent	14.6 (D)	16.02	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	10.2 (D) 6.80 Minimum (R)	13.75	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	The observed value should not exceed 50 mm	50 (D)	30	Yes	
				50 (R) Maximum			
15.1.4	Brake performance at 25 kmph:						
a)	Maximum stopping distance at a force equal to or less than 600 N on brake pedal with road ballast, (m):						
	1)	Cold brake	Evaluative	10	10 (R)	7.93	Yes
	2)	Hot brake	Evaluative	10	10 (R)	7.95	Yes
b)	Maximum force exerted on the brake pedal to achieve a deceleration of 2.5 m/s ² (N)	Evaluative	600	600 (R)	266 to 271	Yes	

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1	2	3	4	5	6	7
c)	Whether parking brake is effective at a force of 600 N at foot pedal(s) or 400 N at hand lever, N	Evaluative	Yes / No	Yes (R)	185 to 220	Yes
15.1.5	Noise measurement :					
a)	Maximum ambient noise emitted by the tractor dB(A)	Evaluative	As per CMVR	88 (R)	81	Yes
b)	Maximum noise at operator's ear level dB(A)	Evaluative	As per CMVR	96 (R)	93	Yes
15.1.6	Amplitude of mechanical vibrations at :					
	1) Left foot rest	Non Evaluative	100 microns (max)	100 (R)	148	No
	2) Right foot rest		-do-		182	No
	3) Seat (with driver seated)		-do-		176	No
	4) Steering wheel		do-		43	Yes
15.1.7	Air cleaner oil pull over :					
	Maximum air cleaner oil pull over	Evaluative	0.25 % (max.)	0.25 % (max.)	0.23	Yes
15.1.8	Haulage requirements :					
a)	Gross mass of the trailers, (tonne):					
	1) Two wheel	Non Evaluative	As specified by the manufacturer	5.0 (D)	5.0	Yes
	2) Four wheel	Evaluative		7.0 (D)	7.0	Yes
b)	Distance travelled / litre of fuel consumption, (km/l):					
	1) Two wheel	Non Evaluative	As specified by the manufacturer	5 to 6 (D)	5.77 to 5.91	Yes
	2) Four wheel	Evaluative		5 to 6 (D)	5.41 to 5.44	Yes
c)	Fuel consumption (ml/km/tonne):					
	1) Two wheel	Non Evaluative	As specified by the manufacturer	25 to 30 (D)	33.85 to 34.67	No
	2) Four wheel			25 to 30 (D)	26.25 to 26.42	Yes
15.1.9	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 ICT vide test report no T-943/1461/2014 (October 2014)	Yes
	1) Clutch assembly	-do-				
	2) Brake housings	-do-				
	3) Front axle hubs	-do-				
	4) Engine Oil	-do-				
	5) Transmission Oil	-do-				

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15.1.10 Safety features :							
a)	Guards against moving and hot parts	Evaluative	Belt drives, pulleys, silencer, hydraulics pipes(as per IS-12239 Part 2)	Meet the requirements	Yes		
b)	Lighting arrangement	Evaluative	As per CMVR	Meet the requirements	Yes		
c)	Seating requirements (Tractors having more than 1150 mm rear track width)	Non Evaluative	Should meet the requirements of IS: 12343 (As amended from time to time)	Does not meet the requirements	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		
e)	Dimensions of three point linkage	Non Evaluative	Should meet the requirements of IS: 4468 (Part-I) (As amended from time to time)	Meet the requirements	Yes		
f)	Specifications of linkage drawbar	Evaluative	Should meet the requirements of IS 12953 (As amended from time to time)	Meet the requirements	Yes		
g)	Specifications of Swinging drawbar (wherever fitted)	Evaluative	Should meet the requirements of IS 12362 (Part 3) (As amended from time to time)	Not provided	Not applicable		
h)	1) Maximum travelling speed at rated engine speed in reverse gears, kmph	Evaluative	Should not exceed 20 Kmph	(11.29 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 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		
15.1.11 Labelling of tractors (Provision of labelling plate):							
	1) Make	Evaluative	Should conform to the requirements of CMVR along-with declared value of PTO in kW and year of manufacture in numerical <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>MM</td><td>YY</td></tr></table> Digit 01-12 in box No.1 for MM will represent the month and next two digit in the box No.2 for YY will represent the year of manufacturing	MM	YY	Mahindra	Yes
	MM	YY					
	2) Model	Evaluative		575 DI Power +	Yes		
	3) Month & Year of manufacture	Evaluative		AK	No		
	4) Engine number	Evaluative		ZKA3MAA2190	Yes		
	5) Chassis number	Evaluative		MBNAAALEGKZA00303	Yes		
	6) Declaration of PTO power, kW	Evaluative		29.8	Yes		
7) Specific fuel consumption (g/kWh)	Evaluative	255	Yes				

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1	2	3	4	5	6	7
15.1.12	Discard limit for:					
(a)	Cylinder bore diameter, (mm)	Evaluative	To be specified by Manufacturer	89.13	88.91 to 88.93	Yes
(b)	Clearance between piston & cylinder liner at skirt, (mm)	Non Evaluative		0.20	0.10 to 0.11	Yes
(c)	Piston diameter at skirt, mm	Non Evaluative		88.15	88.82 to 88.83	Yes
(d)	Ring end gap (mm):					
	- Top comp. ring.	Evaluative	-do-	2.5	0.30 to 0.40	Yes
	- 2 nd comp. ring.		-do-	2.5	0.60 to 0.65	Yes
	- Oil ring.		-do-	2.0	0.50 to 0.55	Yes
(e)	Ring groove clearance (mm):					
	- Top comp. ring.	Evaluative	-do-	0.30	Tapered ring	--
	- 2 nd comp. ring.	-do-	-do-	0.30	0.062 to 0.071	Yes
	- Oil ring.	-do-	-do-	0.20	0.048 to 0.051	Yes
(f)	Clearance of main end bearings, (mm):					
	- Diametrical	Evaluative	-do-	0.20	0.068 to 0.102	Yes
	- Crank shaft end float	Evaluative	-do-	0.60	0.15	Yes
(g)	Clearance of big end bearings, (mm):					
	- Diametrical	Evaluative	-do-	0.20	0.073 to 0.106	Yes
	- Axial	Evaluative	-do-	0.75	0.30 to 0.35	Yes
(h)	Clearance between king pin and bush,(mm)	Non Evaluative	-do-	0.30	0.098 to 0.228	Yes
(i)	Clearance between center pin and bush,(mm)	Non Evaluative	-do-	0.30	0.245 to 0.299	Yes
15.1.13	Literature (Submission to test agency):					
(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
14.1.14	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	Provided	Not fitted	Not applicable
14.1.15	Standard accessories	Evaluative	Trailer hitch, front tow hook, linkage drawbar should be provided with tractor	Provided	Provided	Yes
14.1.16	Accessories (Optional)	Non Evaluative	Ballast weights if fitted should meet the requirement of CMVR.	Provided	Provided	Yes

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15.2 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 1 major breakdowns and neither of them is of repetitive nature	01(Mj-8)	Yes
3.	Minor breakdowns	Evaluative	There are not more than 3 minor defects during the test and the frequency of each is not be more than two.	02 (Mn-repetitive)	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	03 (Mj-8 & 2 Mn)	Yes

15.3 Salient Observations:

15.3.1 Laboratory tests:

15.3.1.1 PTO Performance Test:

- i) The maximum PTO power was recorded as **30.5 kW** and **28.9 kW** in case of previous and present tested samples respectively against the declaration of **29.8 kW**.
- ii) The specific fuel consumption corresponding to maximum power was recorded as **243 g/kWh** and **261 g/kWh** in case of previous and present tested samples respectively against the declaration of **255 g/kWh**.
- iii) The maximum equivalent crankshaft torque was recorded as **158.9 Nm** against the declaration of **177.6 Nm**, which is not within the permissible limit as specified in IS: 12207-2019. This should be looked into for necessary corrective action.
- iv) The backup torque was observed **21 %**, which meets the requirement of IS: 12207-2019 with regard to tolerance.
- v) The maximum PTO power drop of **5.2 %** was observed during natural to high ambient conditions. This should be looked into for necessary corrective action.

15.3.1.2 Drawbar performance test:

- i) During ten hours drawbar performance test, creeping of LHS & RHS rear tyre over the rims was recorded as **25 & 30 mm** respectively. This should be looked into for necessary corrective action.

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15.3.1.3 Hydraulic performance test:

- i) The moment about rear axle with standard frame was calculated as **19.54 kN-m**. Whereas, the moment about front axle was calculated as **14.42 kN-m** under standard ballasted condition. The moment about rear axle is on higher side as compared to the moment about front axle. It is, therefore, recommended that the lifting capacity of the hydraulic system may be reduced suitably or standard ballast recommendation may be reviewed to avoid the front lifting of the tractor.
- ii) The lifting capacity at hitch point was recorded as **16.03 kN** which is **86.0 %** of total mass of standard ballasted tractor, should be examined for safe operation.
- iii) During lift load maintenance test, leakage of hydraulic oil was observed from the high pressure pipe line (Pipe pressure-1, Part no. 007204837B1) due to crack of pipe. To rectify the problem, breezing of high pressure pipe line was done. This breakdown has been categorized as major breakdown (**Mj-21**) as per IS: 12207-2019 but as the component was not changed accordingly it is categorized as Minor breakdown (**Mn**).
- iv) Again during the lift load maintenance test, leakage of hydraulic was observed from the same place of high pressure pipe line (Pipe pressure-1, Part no. 007204837B1). To rectify the problem, repairing through welding of high pressure pipe line was done. This breakdown has been categorized as major breakdown (**Mj-21**) as per IS: 12207-2019 but as the component was not changed accordingly it is categorized as Minor breakdown (**Mn**).

The above breakdowns/defects have been considered as premature and this indicates that, the components used are of very poor quality. It is therefore recommended that, the quality of components should be improved and stringent quality control measures should be introduced at production level.

15.3.1.4 Brake performance:

- i) After only **2.55** hours operation of tractor at this Institute, during brake performance test, the abnormal sound was heard from transmission system of the tractor. On inspection, the following parts were found damaged.

S. No.	Name of Parts	Parts Number	Quantity
1.	Clutch cover dia. 280 mm	006502173R93	01
2.	Clutch plate assembly	006510225B91	01
3.	Clutch release sleeve	006508557B1	01
4.	Release bearing	006501782R91	01
5.	Drive shaft oil seal	005558356R91	01
6.	Clutch cover bolt	001099323R1	01

To rectify the breakdown, the above mention parts were replaced with new one of same specifications. This breakdown has been categorized as major breakdown (**Mj-08**) as per IS: 12207-2019.

The above breakdowns occurred only after 2.55 hours of operation and have been considered as premature and this indicates that, the components used are of very poor quality. It is therefore recommended that, the quality of components should be improved and stringent quality control measures should be introduced at production level.

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- ii) The maximum stopping distance at 25 kmph speed of tractor was recorded as **6.67 meters** and **7.93 meters** in case of previous and present tested samples respectively. The brake performance of the present sample is found deteriorated and calls for improvement keeping in view the safety aspects.

15.3.1.5 Mechanical Vibration:

The amplitude of mechanical vibration on various assemblies marked as (*) in **Chapter - 9** of this test report is on higher side. This calls for dampening down of vibrations especially on LHS foot rest and steering control wheel to improve the operational comfort and service life of components.

14.3.1.6 Haulage Test:

- i) The specific fuel consumption (ml/km/ton) in two wheel trailer was recorded as **33.85 to 34.67** ml/km/ton, against the declaration of **25 to 30** ml/km/ton, which does not meet the requirement of IS: 12207-2019 with regard to tolerance. This should be looked into for necessary corrective action.

15.3.1.7 Three point linkage:

Some of the parameters conform to Cat. I and some of them conform to Cat. II. Keeping in view the spirit of standardization, necessary improvement may be incorporated.

14.3.1.8 PTO master shield:

The parameter of PTO master shield “k”, “m” & “n” does not meet the requirement of IS: 4931-1995. This should be looked into for necessary corrective action.

15.3.1.9 Operator’s seat:

- i) The longitudinal distance from Seat Index Point to centre of differential lock pedal does not meet the requirement of IS: 12343-1998. This should be looked into for necessary corrective action.
- ii) The longitudinal distance from Seat Index Point to centre of steering control wheel does not meet the requirement of IS: 12343-1998. This should be looked into for necessary corrective action.

15.3.1.10 Labelling plate:

The month & year of manufacture embossed on the labelling plate as ‘AK’ and does not meet the evaluative requirement as per IS: 12207-2019. As per IS: 12207-2019, it should be in numerical form on the labeling plate. This should be looked into for necessary corrective action.

15.3.1.11 Component and Assembly Inspection:

The backlash between crown wheel and bevel pinion was observed 0.34 mm against the discard limit of 0.30 mm. The observed backlash is more than the declaration. In this context, comment was also given in the base report, but the manufacturer paid no attention to it. This should be looked into for necessary corrective action.

15.3.1.12 Field performance:

15.3.1.12.1 Wetland operation:

No ingress of mud and / or water was observed during initial commercial test, tested vide test no.T-943/1461/2014, (October).

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15.4 Maintenance / Service Problems:

No noticeable maintenance or service problems were observed during the test.

15.5 Recommendation with regard to safety on tractor:

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

- i) Provision of spark arrester in the exhaust system.
- ii) The working clearance between the draft control lever and position control lever should be provided as per the requirement of relevant Indian Standard.
- iii) Fuel shut-off knob should remain in "STOP" position
- iv) Width of foot step should be as per relevant standard.
- v) Hand holds for easy mounting and dismounting of operator.
- vi) Vertical retainness at both sides of pedals should be provided as per relevant standard.

15.6 Variation in performance as compared to previously tested tractors:

- i) The occurrence of premature and repetitive breakdowns indicates that, the overall quality and performance of the present sample is found deteriorated & calls for improvement in quality of components used and introduction of stringent quality control measures at production level.
- ii) The maximum PTO power was recorded as **30.0 kW & 28.9 kW** against the declaration of **29.4 kW & 29.8 kW**, in case of "**Mahindra 575 DI MKM**" (Tested vide test report No. T-1148/1674/2018, April, 2018) & "**Mahindra 575 DI Power+**" tractor models respectively. **This tractor model is named as "power +" whereas the same was not reflected in the overall performance.**

15.7 Adequacy of Literature supplied with machine:

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

- a) Operator's manual of Mahindra 575 DI Power + Tractor model
- b) Service manual of Mahindra 575 DI Power + Tractor model
- c) Parts Catalogue of Mahindra 575 DI Power + Tractor model



16. CITIZEN CHARTER

Time frame for Testing & Evaluation as per Citizen Charter	Duration of Test	Whether the Test Report is released within the time frame given in Citizen Charter	Remarks
10 Months	11 Months (July, 2019 to May, 2020)	No	Delay due to occurrence of breakdown in transmission and hydraulic systems of the test sample.

TESTING AUTHORITY:


SHWETABH SINGH
 AGRICULTURAL ENGINEER


C.V. CHIMOTE
 TEST ENGINEER


J.J.R. NARWARE
 DIRECTOR

The report compiled by: **Shri Vithato Keyho**, Senior Technical Assistant

17. APPLICANT'S COMMENTS

Para No.	Our Reference	Applicant's comments
17.1	15.3.1.3	Hydraulic high pressure pipe (part no. 007204837B1) used is a seamless pipe which is high quality and we do not have any field failure as observed. However, we suspect some localized material defect which might have caused this failure. To improve further consistency in the quality of the hydraulic pressure pipe, we have improve pipe pressure testing at supplier end by increasing pressure and pressure holding time during regular testing w.e.f. 10.02.2020. Also, pressure pipe cleanliness level (Millipore value) is being ensured.
17.2	15.3.1.4	On test sample, it was observed that one of the full thread bolt (part no. 00109324R1) fitted wrongly in place of shank type bolt (part no. 001099323R1) during clutch assembly at our plant which could be due to human error. However, to overcome such type of assembly errors in future, immediately the corrective action had been implemented in our assembly ine w.e.f. 30.09.2019, by arranging separate storage bins at certain distance which were beside each other with proper identification tags for each type of bolts on clutch assembly area. Further, adequate training has been given to assembly line workmen and stage operator to ensure adherence to assembly process.
17.3	15.5 (I, ii, iii, iv, v & vi)	Observation will be studied, and necessary action will be incorporated.

T- 1450/1977/2020	MAHINDRA, 575 DI POWER + (Brand Name : Bhoomiputra) TRACTOR - Commercial (1 st Batch) Test
	(THIS TEST REPORT IS VALID UPTO 30/06/2025)

ANNEXURE- I

TRACTOR RUN HOURS DURING TEST

A.	LABORATORY AND TRACK TESTS	HOURS
1.	Running-in	--
2.	PTO performance test	10.9
3.	Drawbar performance test	15.8
4.	Power lift and hydraulic pump performance test	0.8
5.	Brake test	1.8
6.	Noise measurement	1.5
7.	Mechanical vibration test	1.0
8.	Nominal speed test	0.7
9.	Air Cleaner Oil Pull-Over Test	2.5
B.	HAULAGE TEST	5.3
C.	Miscellaneous test and other run hours including idle run, transportation, trials and preparation for test	1.3
TOTAL:		47.3