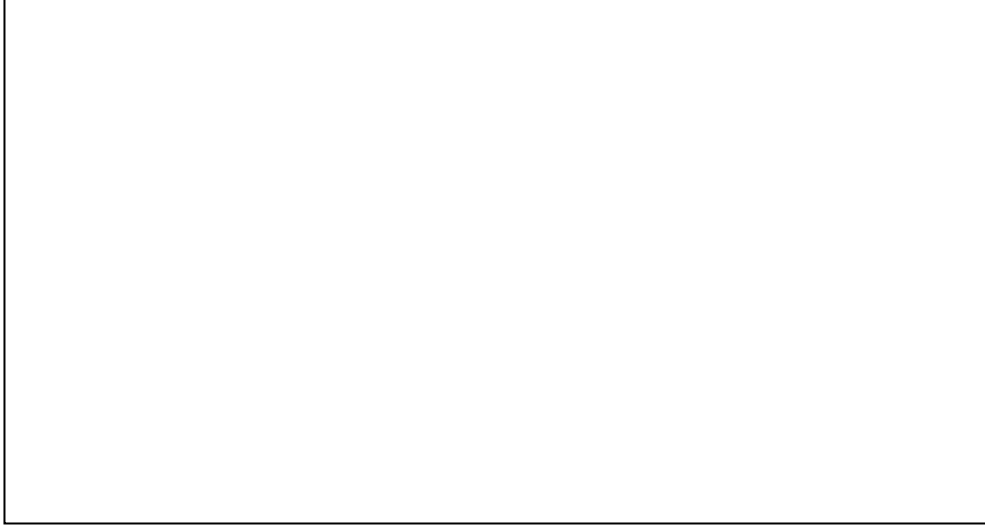


(यह परीक्षण रिपोर्ट 30/06/2026 तक वैध है। / THIS TEST REPORT IS VALID UPTO:30/06/2026)



**MAHINDRA, B 275 DI TU MKM TRACTOR  
(BRAND NAME : SARPANCH)**



भारत सरकार  
कृषि एवं किसान कल्याण मंत्रालय  
(कृषि, सहकारिता एवं किसान कल्याण विभाग)  
GOVERNMENT OF INDIA  
MINISTRY OF AGRICULTURE AND FARMERS WELFARE  
(Department of Agriculture, Cooperation & Farmer's Welfare)  
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## 2. FUEL AND LUBRICANTS

**2.1 Fuel** : The High-speed diesel oil supplied by M/s Indian Oil Corporation Limited having density of 0.836 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 and Engine oil	SAE 15W40 Maximile	As recommended
2.	Gearbox, differential, rear axle, rear final drive, brake and hydraulic system	TRACT ELF MM	Oil originally filled in the tractor systems were not changed
3.	Steering system	SAE 140	
4.	Grease	MP3 Lithium base	MP Grease

## 3. ESSENTIAL TESTS

### 3.1 SPECIFICATIONS

#### 3.1.1 Tractor:

Make : Mahindra  
 Model : B 275 DI TU MKM  
 Brand name : Sarpanch  
 Type : Four wheeled, Rear-wheels driven, Unit construction, General purpose, Agricultural Tractor.  
 Month & Year of manufacture : 11 / 20  
 Chassis number : MBNADAEGBLNH00002  
 Country of origin : India

#### 3.1.2 Engine:

Make : Mahindra  
 Model : MDI 1895B 3A  
 Type : Four stroke, naturally aspirated, liquid cooled, direct injection, diesel engine.  
 Serial number : NLH2EAE0003  
 Year of manufacture : Not Available  
 Country of origin : India

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

- Maximum speed at no load : 2275 to 2375  
 - Low idle speed : 750 to 850  
 - Speed at maximum torque : 1300 to 1500

#### Rated speed, (rpm):

- For PTO use : 2100  
 - For drawbar use : 2100

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## 7. SUMMARY OF OBSERVATIONS, COMMENTS & RECOMMENDATIONS

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

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
<b>7.1.1</b>	<b>PTO Performance :</b>					
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 $\leq 26$ kW.	25.0 (D)	24.2	Yes
b)	Power at rated engine speed, (kW)	Non Evaluative	-do-	25.0 (D)	24.2	Yes
c)	Specific fuel consumption corresponding to maximum power, (g/kWh)	Evaluative	+ 10% Max.	238 (D)	253	Yes
d)	<b>Maximum operating temperature, (<math>^{\circ}</math>C) 2hr maximum power test under natural ambient condition</b>					
	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)	85	Yes
<b>7.1.2</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 with road ballast, (m):					
	1) Cold brake	Evaluative	10	10 (R)	8.28	Yes
	2) Hot brake	Evaluative	10	10 (R)	8.48	Yes
b)	Maximum force exerted on the brake pedal to achieve a deceleration of $2.5 \text{ m/s}^2$ , (N)	Evaluative	600	600 (R)	306 to 336	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 (R)	Yes	Yes

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1	2	3	4	5	6	7
<b>7.1.3 Safety features :</b>						
a)	Guards against moving and hot parts	Evaluative	Belt drives, pullies, 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)	<b>Does not meet the requirements</b>	<b>No</b>	
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)	<b>Does not meet the requirements</b>	<b>No</b>	
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)	<b>Not provided</b>	<b>Not applicable</b>	
h)	1) Maximum travelling speed at rated engine speed in reverse gears, kmph	Evaluative	Should not exceed 20 kmph	14.02 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.	<b>Not fitted</b>	<b>Not applicable</b>	
<b>7.1.4 Labelling of tractors (Provision of labelling plate):</b>						
	1) Make	Evaluative	Should conform to the requirements of CMVR along with maximum declared value of PTO power in kW and for month & year of manufacture in numerical MM YY 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	Mahindra	Yes	
	2) Model	Evaluative		B 275 DI TU MKM	Yes	
	3) Month & Year of manufacture	Evaluative		11 / 20	Yes	
	4) Engine number	Evaluative		NLH2EAE0003	Yes	
	5) Chassis number	Evaluative		MM YY MBNADAEGBL NH00002	Yes	
	6) Declaration of PTO power, kW (hp)	Evaluative		25.0 (33.5)	Yes	
	7) Specific fuel consumption, g/kWh (g/hph)	Evaluative		238 (177.5)	Yes	

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1	2	3	4	5	6	7
<b>7.1.5</b>	<b>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>7.1.6</b>	<b>Fitment of Roll Over Protective Structure (ROPS):</b> 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	<b>Not Fitted</b>	<b>Not Applicable</b>
<b>7.1.7</b>	<b>Standard accessories</b>	Evaluative	Trailer hitch, front tow hook, linkage drawbar should be provided with tractor	Provided	Provided	Yes
<b>7.1.8</b>	<b>Accessories (Optional)</b>	Non Evaluative	Ballast weights if fitted should meet the requirement of CMVR.	Provided	Provided	Yes
<b>7.2</b>	<b>CATEGORY OF BREAKDOWNS / DEFECTS (As per clause 5.0 of IS:12207-2019):</b>					
<b>S. No.</b>	<b>Category of Breakdown</b>	<b>Category (Evaluative / Non Evaluative)</b>	<b>Requirements as per IS: 12207-2019</b>	<b>As observed</b>	<b>Whether meets the requirement (Yes/No.)</b>	
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 01 major breakdowns and neither of them is of repetitive nature.	None	Yes	
3.	Minor breakdowns	Evaluative	There are not more than 03 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, (01 major + 03 minor) or 04 minor breakdowns.	None	Yes	

### 7.3 Salient Observations:

#### 7.3.1 Laboratory tests:

##### 7.3.1.1 PTO Performance:

- i) The maximum PTO power was recorded as **24.2 kW** against the declaration of **25.0 kW**, which meets the evaluative requirement of IS: 12207-2019.

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- ii) The specific fuel consumption corresponding to maximum power was recorded as **253 g/kWh** against the declaration of **238 g/kWh**, which meets the evaluative requirement of IS: 12207-2019.

**7.3.1.2 Operator's seat:**

The Longitudinal distance from centre of differential lock pedal to Seat Index Point, Vertical distance from Seat Index Point to centre of clutch pedal & Longitudinal distance from Seat Index Point to the center of steering control wheel does not meet the requirement of the IS: 12343 -1998 (Reaffirmed in January, 2019). This should be looked into for necessary corrective action.

**7.3.1.3 Three point linkage:**

- i) Lateral movement of lower hitch point is not within the requirement as per relevant Indian standard. This should be looked into for necessary corrective action.
- ii) Some of the parameters conform to Cat. I and some of them conform to Cat. II. Keeping in view the spirit of standardization, necessary improvements may be incorporated.

**7.3.1.4 Operator's work place:**

Operator's work place meets the requirements of IS:12239 (Part-1) -2018), **except the following:**

- i) Provision of vertical retainness at both sides of clutch pedal.
- ii) Provision of spark arresting device in the exhaust system.
- iii) Width of foot step is less than the minimum requirement.

**7.3.1.5 Constructional requirement with regard to safety:**

Constructional requirement with regard to safety meets the requirements of IS: 12239 (Part-2)-1999 (Reaffirmed in January, 2019), except the working clearance around the position control & draft control lever is less than the minimum requirement.

**7.3.1.6 PTO master shield:**

PTO master shield not provided on tractor as per the requirements of IS: 4931-1995 (Reaffirmed in January, 2019). This should be looked into for necessary corrective action.

**7.3.1.7 Location of operator's controls with regard to safety:**

Location of operator's controls with regard to safety meets the requirements of IS: 8133-1983 (Reaffirmed in January, 2019), **except the following:**

- i) The fuel shut-off knob does not remain in stop position without the application of sustain manual effort.

**7.3.1.8 Labelling of tractor:**

The specific fuel consumption corresponding to maximum power has been specified as **238, g/kWh (177 g/hph)**. By calculation, we find  $238 \times 0.73555 = 175.1$  g/hph. This need to be looked in to for necessary correction.

**7.4 Maintenance / Service Problems:**

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

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

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

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- i) Longitudinal distance from centre of differential lock pedal to Seat Index Point does not meet the requirement. It should be provided as per IS: 12343-1998, (Reaffirmed in January, 2019).
- ii) Vertical distance from Seat Index Point to centre of clutch pedal. It should be provided as per IS: 12343-1998, (Reaffirmed in January, 2019).
- iii) Longitudinal distance from Seat Index Point to the center of steering control wheel. It should be provided as per IS: 12343-1998, (Reaffirmed in January, 2019).
- iv) Provision of spark arrester in the exhaust system.
- v) Master shield around the PTO shaft has not been provided. It should be provided as per IS: 4931-1995 (Reaffirmed in January, 2019).
- vi) The working clearance between position and draft control lever of hydraulic system is less than the minimum requirement. It should be provided as per IS: 12239 (Part-2)-1999 (Reaffirmed in January, 2019).
- vii) Vertical retainers at both sides of clutch pedal should be provided as per relevant standard.
- viii) The fuel shut off knob does not remain in 'STOP' position. It should automatically remain in stop position without the application of sustains manual effort.
- ix) Width of foot step should be provided as per relevant standard.

#### 7.6 Adequacy of Literature:


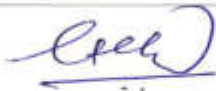

7.6.1 Following literature of following tractor models were supplied with the test sample for reference during the test.

- a) Service Manual for Mahindra B 275 DI TU MKM (SP) & 415 DI tractor models.
- b) Parts Catalogue for Mahindra B 275 DI TU MKM (SP) & 415 DI tractor models.
- c) Operator's manual for Mahindra B 275 DI TU MKM (SP) & 415 DI tractor models.

7.6.2 The literature should be brought out in national as well as other regional languages of India for guidance of users.

The results of the tests carried out on variant model "Mahindra B 275 DI TU MKM (Brand Name: Sarpanch)" tractor have been compared with those on base model "Mahindra B 275 DI TU MKM (Brand Name: Bhoomiputra)" tractor tested vide test report No. T-1150/1676/2018 (April, 2018) and found within the limit, as specified in IS: 12207-2019.

#### TESTING AUTHORITY:

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

Draft test report is compiled by: Shwetabh Singh, Agricultural Engineer.

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### 8. APPLICANT COMMENT'S

Para No.	Our Reference	Applicant's comments
8.1	7.3.1.8	The conversion factor i.e. 1kW = 0.7457 hp is used on Vahan Portal & the same will be printed on RTO RC book of customer. We follow the same.
8.2	7.6.2	Product literature is available in all regional languages of india.

### ANNEXURE – I

### TRACTOR RUN HOURS DURING TEST

A.	LABORATORY AND TRACK TESTS	HOURS
1.	Running-in	45.0
2.	PTO performance test	4.2
3.	Nominal speed test	0.9
4.	Brake Performance Test	1.8
B.	Miscellaneous test and other run hours including idle run, transportation, trials and preparation for test	0.3
TOTAL:		52.2