

व्यावसायिक परीक्षण रिपोर्ट में परिवर्तित
CONVERTED TO COMMERCIAL TEST REPORT

(यह परीक्षण रिपोर्ट 31/10/2024 तक वैध है। / THIS TEST REPORT IS VALID UPTO : 31/10/2024)



TAFE, MF 5118 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, Cooperation & Farmer's Welfare)
केन्द्रीय कृषि मशीनरी प्रशिक्षण एवं परीक्षण संस्थान
ट्रैक्टर नगर, बुदनी (म.प्र.) 466 445
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

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

Telephone: 07564-234729, 234743

T- 1597/2128/2021	TAFE, MF 5118 TRACTOR – Commercial (Confidential) CONVERTED TO COMMERCIAL TEST REPORT
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Initially the applicant had submitted the application of “TAFE, MF 5118” tractor for confidential test vide letter no. Nil dated 04.01.2020. After releasing the draft test report, applicant had submitted a letter No. Nil dated 28.10.2021 for conversion of nature of test from confidential test to commercial test. The request of the applicant has been examined and accepted for conversion of nature of test as per relevant commercial test procedures. Hence, this confidential test report is released under commercial test.

Manufacturer	: M/s. Tractor and Farm Equipment Limited , Post Box No. 3302, (New 77), 35 Mahatma Gandhi Road, Nungambakkam, Chennai - 600 034 (Tamil Nadu)
Location of other manufacturing plants (apa)	: M/s. Tractor and Farm Equipment Limited , Kalladipatti Plant, 10/205, Kalladipatti (P.O.), Pin code- 624201, Dindigul district, (Tamil Nadu) : M/s. Tractor and Farm Equipment Limited , Doddaballapur plant, Plot No. 1, Kiadb Industrial Estate, Doddaballapur, Bangalore – 561203
Test requested by (applicant)	: The manufacturer
Selected for test by	: The Testing Authority
Place of running-in	: At manufacturer work place
Duration of said running-in, (h):	
- Engine	: 12
- Transmission	: 24
Method of Selection	: The tractor was submitted directly by the applicant for test. Hence method of selection is not known.

1. SPECIFICATIONS

1.1 Tractor:	
Make	: TAFE
Model	: MF 5118
Brand name	: None
Type	: Four wheeled, rear wheel driven, unit construction, general purpose, agricultural tractor
Month & Year of manufacture	: 10 & 2019
Chassis number	: MEA06C15KK9067424
Country of origin	: India
1.2 Engine:	
Make	: Eicher engines
Model	: 182M15
Type	: Four stroke, naturally aspirated, air cooled, direct injection, diesel engine
Serial number	: S28625611459
Year of manufacture	: Not Available
1.2.1 Engine speed (rpm), (Manufacturer’s recommended production settings):	
- Maximum speed at no load	: 2700 to 2800
- Low idle speed	: 900 to 1100
- Speed at maximum torque	: 1600 to 2000
Rated speed, (rpm):	
- For PTO use	: 2500
- For drawbar use	: 2500

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16. ADJUSTMENTS, DEFECTS, BREAKDOWNS AND REPAIRS

Sl. No.	Adjustments / Defects / Breakdowns and Repairs	Tractor run hours
---Nil---		

17. SUMMARY OF OBSERVATIONS, COMMENTS & RECOMMENDATIONS

17.1 On the basis of tests 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:

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
17.1.1	PTO Performance :					
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 ≤ 26 kW	8.8(D)	8.4	Yes
b)	Power at rated engine speed, (kW)	Non Evaluative	-do-	8.8 (D)	8.4	Yes
c)	Specific fuel consumption corresponding to maximum power, (g/kWh)	Evaluative	+10 percent Max.	295 (D)	276	Yes
d)	Maximum equivalent crankshaft torque, (Nm)	Non Evaluative	± 8 percent	40.0 (D)	39.8	Yes
e)	Back-up torque, percent	Evaluative	12 percent	12 (D) 12 (R)	17.8	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.	155 (D)	132	Yes
	2) Cylinder liner (air cooled engine)	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.	240 (D)	183	Yes
g)	Engine oil consumption, (g/kWh)	Evaluative	Not exceeding 1% of SFC at max. power under High ambient conditions	2.78 (R)	1.17	Yes
h)	Smoke level	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 metre (R)	0.08	Yes

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1	2	3	4	5	6	7	
17.1.2	Drawbar performance :						
a)	Maximum drawbar pull with ballast corresponding to 15 percent wheel slip, (kN)	Non Evaluative	Minimum 70 percent of static mass with ballast	Ballasting not recommended by the manufacturer	Not applicable	Not applicable	
b)	Max. drawbar pull with standard ballast, as the case may be corresponding to 15 percent wheel slip or 7 percent track slip, (kN)	Evaluative	Minimum 70 percent of static mass of tractor without ballast or with standard ballast, as the case may be	5.60 (D) 6.63 (R) Minimum	6.79	Yes	
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.	6.7 (D) 6.3 (R) Minimum	7.2	Yes	
d)	Max. transmission oil temperature (°C)	Evaluative	The declared value should not exceed the maximum value specified by oil company	130 (D)	59	Yes	
17.1.3	Power lift and hydraulic pump performance :						
a)	Maximum lifting capacity throughout the range of lift, (kN):						
	1)	At hitch points	Evaluative	[Tolerance of ± 10%]	5.80 (D)	6.22	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.	3.00(D) 1.98 (R) Minimum	4.57	Yes
b)	Maximum drop in the height of the point of application of the force after each 5 min. interval for a total duration of 30 min/ mm	Non Evaluative	The observed value should not exceed 50 mm.	50 (D)	65	No	
17.1.4	Brake performance at 18.51 kmph:						
a)	Maximum stopping distance at a force, equal to or less than 600 N on brake pedal with unballasted* , (m):						
	1)	Cold brake	Evaluative	10	10 (R)	5.2	Yes
	2)	Hot brake	Evaluative	10	10 (R)	5.4	Yes
b)	Maximum force exerted on the brake pedal to achieve a deceleration of 2.5 m/s ² . (N)	Evaluative	600	600 (R)	95 to 105	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	Evaluative	Yes / No	Yes (R)	Yes	Yes
* The manufacturer has not recommended ballasting for road test, therefore the brake test was conducted under unballasted condition only.						
17.1.5	Noise measurement :					
a)	Maximum ambient noise emitted by the tractor at bystanders position, dB(A)	Evaluative	88 dB(A) for >1.5 tonne GVW and 85 dB(A) for <1.5 tonne GVW (as per CMVR)	85 (R)	81	Yes
b)	Maximum noise at operator's ear level dB(A)	Evaluative	As per CMVR	96 (R)	93	Yes
17.1.6	Amplitude of mechanical vibrations at :					
	1) Left foot rest	Non Evaluative	100 microns (max)	100 (D)	172	No
	2) Right foot rest				137	No
	3) Seat (with driver seated)				72	Yes
	4) Steering Wheel				168	No
17.1.7	Air cleaner oil pull over :					
	Maximum air cleaner oil pull over (%)	Evaluative	0.25 % (max.)	0.25	0.23	Yes
17.1.8	Haulage requirements :					
a)	Gross mass of the trailers, (tones):					
	- Two wheel	Non Evaluative	--	1.5 (D)	1.5	Yes
b)	Distance travelled / litre of fuel consumption, (km/l):					
	- Two wheel	Non Evaluative	--	9.0 to 11.0 (D)	12.16 to 12.93	No
c)	Fuel consumption (ml/km/tonne):					
	- Two wheel	Non Evaluative	--	54 to 60 (D)	51.58 to 54.80	No
17.1.9	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	The manufacturer has recommended that the tractor is not suitable for wetland cultivation (puddling operation).	The manufacturer has recommended that this tractor is not suitable for wetland cultivation. Hence, this test was not conducted.	---
	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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1	2	3	4	5	6	7
17.1.10	Safety features:					
a)	Guards against moving and hot parts	Evaluative	Belt drives, pulley, silencer, hydraulic 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)	--	Not applicable	Not applicable
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)	Dimension of three point linkage	Non-Evaluative	Should meet the requirements of IS 4468 (part 1) (as amended from time to time)	--	Does not meet the requirements	No
f)	Specification of linkage drawbars	Evaluative	Should meet the requirements of IS 12953 (as amended from time to time)	--	Meet the requirements	Yes
g)	Specification of Swinging drawbars	Evaluative	Should meet the requirements of IS 12362 (Part 3)		Not Provided	Not applicable
h)	1) Maximum travelling speed at rated engine speed in reverse gears, Kmph	Evaluative	Should not exceed 20 Kmph	-	(7.83 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 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	Not applicable

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1	2	3	4	5	6	7
17.1.11	Labelling of tractors (Provision of labelling plate):					
	1) Make	Evaluative	Should conform to the requirements of CMVR along-with maximum PTO power in kW and year of manufacture in numerical form MM YY Digit 01-12 in box No.1 for MM will represent the months & next two digits in box No.2 for YY will represent the year of manufacturing.	TAFE	Yes	
	2) Model	Evaluative		MF 5118	Yes	
	3) Month & Year of manufacture	Evaluative		10/19	Yes	
	4) Engine number	Evaluative		528625611459	Yes	
	5) Chassis number	Evaluative		MEA06C15KK9067424	Yes	
	6) Declaration of PTO power,kW	Evaluative		8.8	Yes	
	7) Specific fuel consumption ,g/kWh	Evaluative		295	Yes	
17.1.12	Discard limit for:					
(a)	Cylinder bore diameter, (mm)	Evaluative	To be specified by Manufacturer	100.200	100.005 to 100.009	Yes
(b)	Clearance between piston & cylinder liner at skirt, (mm)	Non Evaluative		0.339	0.141	Yes
(c)	Piston diameter at skirt, mm	Non Evaluative		99.660	99.868	Yes
(d)	Ring end gap (mm):					
	- Top comp. ring.	Evaluative	-do-	1.5	0.35	Yes
	- 2 nd comp. ring.		-do-	1.5	1.00	Yes
	- Oil ring.		-do-	2.0	0.40	Yes
(e)	Ring groove clearance (mm):					
	- Top comp. ring.	Evaluative	-do-	--	Tapped	--
	- 2 nd comp. ring.	-do-	-do-	0.200	0.066	Yes
	- Oil ring.	-do-	-do-	0.150	0.052	Yes
(f)	Clearance of main bearings, (mm):					
	- Diametrical	Evaluative	-do-	0.400	0.117 to 0.131	Yes
	- Crank shaft end float	Evaluative	-do-	0.90	0.390	Yes
(g)	Clearance of big end bearings, (mm):					
	- Diametrical	Evaluative	-do-	0.400	0.098	Yes
	- Axial	Evaluative	-do-	1.00	0.30	Yes
(h)	Clearance between king pin and bush,(mm)	Non Evaluative	-do-	0.30	0.05 to 0.06	Yes
(i)	Clearance between center pin and bush,(mm)	Non Evaluative	-do-	0.50	0.06 to 0.07	Yes

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1	2	3	4	5	6	7
17.1.13	Literature (Submission to test agency):					
(a)	Operator manual	Evaluative	The printed literature in booklet form should be provided as per IS 8132 & should submit along with the test sample	As per relevant IS- 8132	Provided	Yes*
(b)	Parts Catalogue	Evaluative			Provided	Yes
(c)	Workshop/ Service manual	Evaluative			Provided	Yes
17.1.14	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	Not applicable
17.1.15	Standard accessories	Evaluative	Trailer hitch, front tow hook, linkage drawbar should be provided with tractor	Provided	Provided	Yes
17.1.16	Accessories (Optional)	Non Evaluative	Ballast weights if fitted should meet the requirement of CMVR.	Provided	Provided	Yes
17.2	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 02 major breakdowns and neither of them is of repetitive nature.	None	Yes	
3.	Minor breakdowns	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 5 minor breakdowns.	None	Yes	

* The manufacturer had not submitted the technical literature at the time of release of draft report. The same was submitted on vide letter No. Nil dated 27.10.2021.

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17.3 Conformity with following IS:

- | | | | |
|-------|--|---|---|
| i) | Guide lines for declaration of power and specific fuel consumption and labelling of agricultural tractors (First revision) [IS10273: 1987 (Reaffirmed 2014)] | : | Conforms |
| ii) | Agricultural tractors - Rear mounted power take-off - Types 1, 2 and 3 (third revision) [IS:4931-1995 (Reaffirmed 2014)] | : | Conforms |
| iii) | Agricultural wheeled tractors - Three-point linkage: Part 2 Category 1N (Narrow Hitch) [IS 4468 (Part-2):1993/ ISO 730-2:1979 (Reaffirmed 2014)] | : | Does not conform |
| iv) | Drawbar for agricultural tractors – Link type [IS 12953:1990 (Reaffirmed October, 2017)] | : | Conforms |
| v) | Agricultural tractors - Operator’s seat technical requirement [IS 12343 –1998 (First revision) (Reaffirmed 2014)] | : | Not applicable as the rear track width is less than 1150 mm |
| vi) | Guide for safety & comfort of operator of agricultural tractors: Part 1 General requirements (first revision): [IS 12239 (PT-1) 1996/ISO 4254-1:1989 (Reaffirmed October, 2017)] | : | Does not conform |
| vii) | Tractors and machinery for agriculture and forestry – Technical means for ensuring safety Part 2: Tractors (first revision) (IS 12239 (PT-2) 1999) (Reaffirmed 2014)] | : | Does not conform |
| viii) | Guide lines for location and operation of operator controls on agricultural tractors and machinery (first revision) IS: 8133-1983 (Reaffirmed 2014)] | : | Does not conform |
| ix) | Tractors and machinery for agriculture and forestry, powered lawn and garden equipment - Symbols for operator controls and other displays Part 2 Symbols for agricultural tractors and machinery [IS:6283 (Part-1)- 2006 and IS: 6283 (Part-2)-2007 (Reaffirmed 2014)] | : | Conforms |
| x) | Agricultural Tractors and Machinery - Lighting device for travel on public roads (IS: 14683-1999) (Reaffirmed 2014)] | : | Conforms |

17.4 Salient Observations:

17.4.1 Laboratory tests:

17.4.1.1 PTO performance:

- i) The maximum PTO power was recorded as **8.4 kW** against the declaration of **8.8 kW**, which meets the evaluative requirement of IS: 12207-2019 with regard to tolerance limit.
- ii) The specific fuel consumption corresponding to maximum power was measured as **276 g/kWh** against the declaration of **295 g/kWh**, which meets the evaluative requirement of IS: 12207-2019 with regard to tolerance limit.
- iii) The maximum equivalent crankshaft torque was recorded as **39.8 Nm** against the declaration of **40 Nm**, which is within the permissible limit as specified in IS: 12207-2019.
- iv) The backup torque was observed **17.8 %**, which meets the evaluative requirement of IS: 12207-2019 with regard to tolerance.

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17.4.1.2 Hydraulic performance test:

- i) The moment about rear axle with standard frame was calculated as **5.94 kN-m**. Whereas, the moment about front axle was calculated as **5.15 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 maximum drop in the height during load maintenance test was observed 65 mm against requirement of maximum 50 mm. This should be looked into for necessary corrective action.

17.4.1.3 Mechanical Vibration:

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

17.4.1.4 Three point linkage:

Lateral movement of lower hitch point does not meet the requirement and some of the parameters conform to Cat. I and some of them conform to Cat.IN. Keeping in view the spirit of standardization, necessary improvement may be incorporated.

17.4.1.5 Operator's Seat:

Meets the minimum requirements of IS: 12343-1998 (Re-affirmed in 2014), except the provision for adjustment of driver's mass.

17.4.1.6 Operator's work place:

Operator's work place meets the requirements of IS: 12239 (Part-I) 1996 (Reaffirmed Oct., 2017), **except the following:**

- i) Provision of hand holds for easy mounting & dismounting of the operator's.
- ii) Provision of vertical retainers at inner sides of clutch & brake pedal.
- iii) Provision of spark arresting device in the exhaust system.

17.4.1.7 Constructional requirement with regard to safety:

Meets the requirements of IS: 12239 (Part-II)-1996 (Re-affirmed in October, 2017), except the following:

- i) Minimum Cautionary notice as per clause 11.2 of above referred standard has not been provided.
- ii) Differential lock has been not provided.

17.4.1.8 PTO master shield:

The dimension "m", "n" & "p", of Power Take-Off master shield does not meet the requirements of IS: 4931-1995 (Reaffirmed 2014). This should be looked into for necessary corrective action.

17.4.1.9 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 2014), except the following:

- i) Provision of safety against accidental start of engine is not provided.
- ii) The fuel shut-off knob does not remain in stop position.

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17.4.2 Field performance test:

17.4.2.1 Haulage performance:

- i) The specific fuel consumption (ml/km/ton) in case of two wheel trailer was recorded as **51.58 to 54.80** ml/km/ton, against the declaration of **54 to 60** ml/km/ton. The observed value was on lower side and does not meet the non - evaluative requirement of IS: 12207-2019 with regard to tolerance. This should be looked into for necessary corrective action.
- ii) The distance travel per litre of fuel consumption in case of two wheel trailer was observed as **12.16 to 12.93** km/l against the declaration of **9 to 11** km/l. The observed value was on higher side and does not meet the non - evaluative requirement of IS: 12207-2019 with regard to tolerance. This should be looked into for necessary corrective action.

17.4.2.2 Wetland cultivation (Puddling operation):

The manufacturer has recommended that this tractor is not suitable for wetland cultivation (puddling operation). Hence, the wetland cultivation (puddling operation) test was not conducted. Therefore, the declaration of the fact that the tractor is not suitable for Wetland cultivation (Puddling operation) should be mention clearly and boldly in all the literature relevant to this tractor model.

17.5 Maintenance / Service Problems:

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

17.6 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) Vertical retainers at both sides of clutch pedals should be provided as per relevant standard.
- iii) Differential lock may be provided.
- iv) There should be provision of safety switch against accidental start of engine.
- v) Provision of Power Take-Off master shield as per the requirement of relevant standard.
- vi) Hand holds should be provided for easy mounting and dismounting from the tractor.
- vii) The fuel shut-off knob does not remain in “STOP” position.

17.7 Adequacy of Literature supplied with machine:

17.7.1 The following literature was supplied with the tractor for reference during the testing.

- i) Operator Instruction Manual of “TAFE, MF 5118” Tractor model.
- ii) Service manual of “TAFE, MF 5118” Tractor model.
- iii) Parts Catalogue of “TAFE, MF 5118” Tractor model.




17.7.2 Operator Instruction Book :-

The operator instruction book submitted by the applicant does not contain any specifications of TAFE, MF 5118 tractor and its engine. The operator instruction book, therefore, does not meet the **evaluative requirement of IS: 12207-2019**. However, the applicant has submitted this manual vide letter No. Nil dated 27.10.2021

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- 17.7.3** The printed literature supplied with the test sample is in English. However, these literatures should be brought out in other vernacular languages of India for guidance of users.

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.

18. APPLICANT COMMENT'S

Para No.	Our Reference	Applicant's comments
18.1	14.4.1.2, 17.4.1.3, 17.4.1.4, 17.4.1.5, 17.4.1.6 (i),(ii),(iii), 17.4.1.7(i),(ii), 17.4.1.9 (i),(ii), 17.4.2 (i),(ii), 17.6 (i),(ii),(iii), (iv),(v),(vi), (vii), 17.7.2 & 17.7.3	We will study and take appropriate corrective actions.

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ANNEXURE- I

BRIEF SPECIFICATION OF IMPLEMENTS USED DURING FIELD TEST

S.No	Item	Mould Board Plough	Rotavator
1.	Make	Mahindra	Mahindra
2.	Type	Mounted	Mounted
3.	No. of bottoms/blades	Two	16, in 4 flange
4.	Type of bottoms/blades	General purpose	Hatchet shape
5.	Size of bottoms/blades, (mm)	255	220 x 60 x 7
6.	Spacing of bottoms/flanges, (mm)	170	190
7.	Lower hitch point span, (mm)	480	515
8.	Mast height, (mm)	375	365
9.	Overall dimensions, (mm):		
	- Length	1035	745
	- Width	760	1010
	- Height	840	790
10.	Gross mass, (kg)	95	165

ANNEXURE- II

TRACTOR RUN HOURS DURING TEST

A.	LABORATORY AND TRACK TESTS:	HOURS
1.	Running-in	36.0
2.	PTO performance test	13.2
3.	Power lift and hydraulic pump performance test	2.6
4.	Drawbar performance test	16.8
5.	Turning ability	0.1
6.	Location of centre of gravity	0.1
7.	Operator's field of vision	--
8.	Brake test	1.0
9.	Noise measurement	1.2
10.	Air cleaner oil-pull over test	3.5
11.	Mechanical vibration test	1.0
12.	Theoretical speed test	0.9
B.	FIELD TEST:	
1.	Mould board plough	16.7
2.	Rotavation	21.8
C.	HAULAGE TEST:	7.2
D.	Miscellaneous test and other run hours including idle run, transportation, trials and preparation for test	10.3
	TOTAL:	132.4