



DEUTZ - FAHR 3035E TRACTOR

T.E



सत्यमेव जयते

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.) ४६६ ४४५

CENTRAL FARM MACHINERY TRAINING & TESTING INSTITUTE

(An ISO : 9001 - 2008 Certified Institute)

Tractor Nagar, Budni (M.P.) 466 445

E-mail fmti-mp@nic.in

Website : <http://cfmtti.dacnet.nic.in>

Telephone : 07564 - 234729

Fax : 07564 - 234743

Manufacturer	: M/s. SAME DEUTZ-FAHR INDIA (P) LTD. 72M, SIPCOT, Industrial Complex, Ranipet – 632 403 Tamil Nadu
Test requested by (applicant)	: M/s. SAME DEUTZ-FAHR INDIA (P) LTD. 72M, SIPCOT, Industrial Complex, Ranipet – 632 403 Tamil Nadu
Selected for test by	: Applicant
Place of running-in	: At applicant's works
Duration of said running-in (h):	
- Engine	: 04
- Transmission	: 25
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	: DEUTZ - FAHR
Model	: 3035E
Variants, if any	: None
Brand name	: None
Type	: Four wheeled, rear wheel driven, General Purpose, Agricultural Tractor
Year of manufacture	: 2015
Chassis number	: M1TT141RDDA000001
Country of Origin	: INDIA
1.2 Engine:	
Make	: M/s. SIMPSONS & Co. Ltd.
Model	: TIII A S 324-F1.1
Type	: Four stroke, water cooled, direct injection, naturally aspirated, diesel engine.
Serial number	: S 324D80087
Engine speed (Manufacturer's recommended production setting) (rpm) :	
- Maximum speed at no load	: 2160 to 2230
- Low idle speed	: 600 to 800
- Speed at maximum torque	: 1200 to 1600
Rated speed, (rpm):	
- For PTO use	: 2000
- For drawbar use	: 2000
1.3 Cylinder & Cylinder Head:	
Number	: Three
Disposition	: Vertical, inline
Bore/stroke, (mm)	: 88.9 / 127
Capacity as specified by the applicant, (cc)	: 2365
Compression ratio, (apa)	: 18.5±0.3: 1
Type of cylinder head	: Monoblock
Type of cylinder liners	: Dry, replaceable
Type of combustion chamber	: Re-entrant cavity on piston crown
Arrangement of valves	: Overhead, inline

16. SUMMARY OF OBSERVATIONS, COMMENTS & RECOMMENDATIONS

16.1 Evaluative (mandatory) / Non-evaluation (Non-mandatory) parameters applicable for qualifying Minimum Performance criteria as per Clause-4 (Table-1) of IS: 12207-2014 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: 12207-2014	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 Performance :					
a)	Maximum power under 2 h test, (kW) (Natural ambient condition)	Evaluative	Declared value to be achieved with a tolerance of: -5 / +10% for PTO power >26 kW. -7.5/+10% for PTO power ≤ 26 kW or -5 / +10% for Engine power >26 kW. -7.5/+10% for Engine power ≤ 26 kW	24.5 (D)	24.6	Yes
b)	Power at rated engine speed, (kW)	Non Evaluative	-do-	24.5 (D)	24.6	Yes
c)	Specific fuel consumption corresponding to maximum power, (g/kWh)	Non Evaluative	+ 5%	255 (D)	263	Yes
d)	Maximum equivalent crankshaft torque, (Nm)	Non Evaluative	± 8%	130 (D)	139.1	Yes
e)	Back-up torque, percent	Non Evaluative	10 percent, minimum.	10 percent, minimum.	18.5	Yes
f)	Maximum operating temperature (°C):					
	1) Engine oil	Non 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)	119	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.	115 (D)	93	Yes
g)	Engine oil consumption, (g/kWh)	Evaluative	Not exceeding 1% of SFC at maximum power under High ambient conditions.	maximum 2.65 (R)	1.1	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 meter	0.22	Yes

T-1028/1553/2016	DEUTZ-FAHR 3035E TRACTOR - Commercial (Initial)
-------------------------	--

1	2	3	4	5	6	7	
16.1.2	Drawbar performance :						
a)	Maximum drawbar pull with ballast corresponding to 15 percent wheel slip, (kN)	Non Evaluative	Minimum 65% of static mass with ballast	15.7 (D)	19.67	Yes	
				15.9 (R)			
b)	Maximum drawbar pull with unballast corresponding to 15 percent wheel slip, (kN)	Evaluative	Minimum 65% of static mass of tractor without ballast or with standard ballast as the case may be.	10.3 (D)	12.92	Yes	
				10.5 (R)			
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.	19.6 (D)	20.8	Yes	
				19.7 (R)			
d)	Maximum transmission oil temperature (°C)	Non Evaluative	The declared value should not exceed the maximum value specified by oil company	120 (D)	81	Yes	
16.1.3	Power lift and hydraulic pump performance :						
a)	Maximum lifting capacity throughout the range of lift, (kN):						
	1)	At hitch points	Non Evaluative	To be declared by manufacturer [Tolerance of minus 10%]	9.0 (D)	13.68	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 and it should be 16 kg/engine hp where the tractor is not provided with a PTO shaft	5.6 (D)	13.12	Yes
					5.8 (R)		
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 mm	17	Yes
16.1.4	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)	8.68	Yes
	2)	Hot brake	Evaluative	10	10 (R)	8.76	
b)	Maximum force exerted on the brake pedal to achieve a deceleration of 2.5 m/s ² (N).		Evaluative	600	600 (R)	421 to 428	Yes
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	395	Yes

T-1028/1553/2016	DEUTZ-FAHR 3035E TRACTOR - Commercial (Initial)
-------------------------	--

1	2	3	4	5	6	7
16.1.5	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)	92	Yes
16.1.6	Amplitude of mechanical vibrations at :					
	1) Left foot rest	Non Evaluative	100 microns (max)	100 (R)	90	Yes
	2) Right foot rest			100 (R)	130	No
	3) Seat (with driver seated)		-do-	100 (R)	100	Yes
	4) Steering wheel		-do-	100 (R)	120	No
16.1.7	Air cleaner					
	Air cleaner oil pull over (%).	Non Evaluative	0.25% (maximum)	Dry type air cleaner is provided	NA	---
16.1.8	Haulage requirements :					
a)	Gross mass of the trailers, (tones):					
	1) Two wheel	Non Evaluative	--	4.0 (D)	4.0	Yes
	2) Four wheel	Evaluative	--	5.5 (D)	5.5	Yes
b)	Distance travelled / litre of fuel consumption, (km/l):					
	1) Two wheel	Non Evaluative	--	4.0 to 7.5 (D)	5.99 to 6.03	Yes
	2) Four wheel		--	4.0 to 7.5 (D)	5.70 to 5.74	Yes
c)	Fuel consumption (ml/km/tonne):					
	1) Two wheel	Non Evaluative	--	25 to 50 (D)	41.4 to 41.7	Yes
	2) Four wheel		--	25 to 60 (D)	31.7 to 31.8	Yes
16.1.9	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 water and / or mud was observed	Yes
	1) Clutch assembly	-do-				
	2) Brake housings	-do-				
	3) Front axle hubs	-do-				
	4. Engine oil	-do-				
	5. Transmission oil	-do-				

T-1028/1553/2016	DEUTZ-FAHR 3035E TRACTOR - Commercial (Initial)
-------------------------	--

1	2	3	4	5	6	7
16.1.10	Safety features :					
a)	Guards against moving and hot parts	Evaluative	Belt drives, pulley, silencer, hydraulic pipes (As per IS 12239 (part 2))	Meets the requirement		Yes
b)	Lighting arrangement	Evaluative	As per CMVR	Meets the requirement		Yes
c)	Seating requirements	Non Evaluative	Should meet the requirements of IS 12343 (as amended from time to time)	Does not Meet the requirement		No
d)	Technical requirements for PTO shaft	Non Evaluative	Should meet the requirements of IS 4931 (as amended from time to time)	Does not Meet the requirement		No
e)	Dimensions 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 requirement		No
f)	Specifications of linkage drawbar	Non Evaluative	Should meet the requirements of IS 12953 and IS 12362 (part 3) (as amended from time to time)	Meets the requirement		Yes
g)	Specifications of swinging drawbar	Non Evaluative		Not provided		NA

16.1.11 Labeling of tractors (Provision of labeling plate):							
	1)	Make	Evaluative	Should conform to the requirements of CMVR	--	DEUTZ FAHR	Yes
	2)	Model	Evaluative		--	3035E	Yes
	3)	Year of manufacture	Evaluative		--	2015	Yes
	4)	Engine serial number	Evaluative		--	S324D80087	Yes
	5)	Chassis serial number	Evaluative		--	M1TT141RDDA000001	Yes
	6)	Declaration of PTO power, (kW)	Evaluative		--	24.5	Yes

16.1.12 Discard limit for:						
(a)	Cylinder bore diameter, (mm)	Evaluative	To be specified by the manufacturer and supported by printed literature	89.115	88.95 to 88.96	Yes
(b)	Clearance between piston & cylinder liner at skirt, (mm)	Non Evaluative		Piston is discarded when the ring groove clearance exceeds 0.25 with new ring	0.108 to 0.143	Yes
(c)	Ring end gap (mm):					
	- Top comp. ring.	Evaluative	To be specified by the manufacturer and supported by printed literature	1.50	0.25 to 0.30	Yes
	- 2 nd comp. ring.		-do-	1.50	0.35 to 0.40	Yes
	- Oil ring.		-do-	1.80	0.25 to 0.30	Yes
(d)	Ring groove clearance (mm):					
	- Top comp. ring.	Evaluative	-do-	0.25	0.054 to 0.073	Yes
	- 2 nd comp. ring.		-do-	0.25	0.550 to 0.060	Yes
	- Oil ring.		-do-	0.25	0.041 to 0.058	Yes

1	2	3	4	5	6	7
---	---	---	---	---	---	---

T-1028/1553/2016	DEUTZ-FAHR 3035E TRACTOR - Commercial (Initial)
-------------------------	--

(e) Clearance of main bearings (mm):						
	- Diametrical clearance	Evaluative	-do-	0.50	0.086 to 0.128	Yes
	- Crankshaft end float	Evaluative	-do-	0.75	0.22	Yes
(f) Clearance of big end bearings, (mm):						
	- Diametrical	Evaluative	-do-	0.50	0.044 to 0.111	Yes
	- Axial	Evaluative	-do-	0.75	0.35	Yes
(g)	Clearance between king pin and bush, (mm)	Non Evaluative	-do-	0.85	0.21 to 0.32	Yes
(h)	Clearance between center pin and bush, (mm)	Non Evaluative	-do-	0.85	0.20 to 0.31	Yes

16.1.13 Literature (Submission to test agency)						
(a)	Operator manual	Evaluative	Provided/Not Provided	As per relevant IS Code (IS 8132)	Provided	Yes
(b)	Parts Catalogue	Evaluative	Provided/Not Provided	As per relevant IS Code (IS 8132)	Provided	Yes
(c)	Workshop/ Service manual	Evaluative	Provided/Not Provided	As per relevant IS Code (IS 8132)	Provided	Yes

16.1.14 CATEGORY OF BREAKDOWNS / DEFECTS :					
S. No.	Characteristic	Category (Evaluative / Non Evaluative)	Requirements as per IS: 12207-2014	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.	One (Mn-8)	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.	One	Yes

16.2 Optional requirements as per Clause-4 (Table-2) of IS:12207-2014:				
S. No.	Characteristic	Requirements as per IS: 12207-2014	As observed	Whether meets the requirements (Yes/No.)
1	2	3	4	5
1.	Fitment of ROPS	With a provision for fitment of ROPS. If ROPS fitted it should meet the requirement of IS: 11821-1992.	Provided ROPS not fitted	Yes Not applicable
2.	Accessories	Trailer hitch, front tow hook, linkage drawbar may be provided.	Meets the requirements	Yes

16.3 Conformity with following IS:

T-1028/1553/2016	DEUTZ-FAHR 3035E TRACTOR - Commercial (Initial)
-------------------------	--

- i) Guide lines for declaration of power and specific fuel consumption and labeling of agricultural tractors (First revision) [IS 10273:1987 (Reaffirmed in March, 2009)] : Conforms
- ii) Agricultural tractors – Rear mounted power take-off - Types 1, 2 and 3(third revision)[IS: 4931-1995 (Reaffirmed in March, 2009)] : **Does not conform**
- iii) Agricultural wheeled tractors - Rear mounted three-point linkage: Part 1 Categories 1, 2, 3 & 4 (fourth revision) [IS 4468(Part-I):1997/ISO 730-1:1994 (Reaffirmed in March, 2009)] : **Does not conform**
- iv) Drawbar for agricultural tractors – Link type [IS 12953:1990 (Reaffirmed in March, 2007)] : Conforms
- v) Agricultural tractors - Operator’s seat technical requirement [IS 12343 –1998 (First revision) (Reaffirmed in March, 2009)] : **Does not conform**
- 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 in (Reaffirmed in March, 2007))] : **Does not conform**
- vii) Tractors and machinery for agriculture and forestry, powered lawn and garden equipment – Symbols for operator controls and other displays [IS: 6283 (Part-1 & Part-2) –2006 & 2007 (Reaffirmed in March, 2009)]/ ISO 3767-2:1991] : Conforms
- viii) Tractors and machinery for agriculture and forestry – Technical means for ensuring safety Part 2: Tractors (first revision) (IS 12239 (PT-2) 1999) (Reaffirmed in March, 2009)] : **Does not conform**
- ix) Guide lines for location and operation of operator controls on agricultural tractors and machinery (first revision) (IS: 8133 – 1983) (Reaffirmed in March, 2009)] : **Does not conform**
- x) Agricultural Tractor & Machinery Lighting device for travel on public roads (IS: 14683-1999) (Reaffirmed in March, 2009)] : Conforms

16.4 Salient Observations:

16.4.1 Laboratory tests:

16.4.1.1 PTO Performance:

- i) The maximum PTO power was observed as 24.6 kW against the declaration of 24.5 kW which meets the requirement of IS: 12207-2014 with regard to tolerance limit.
- ii) The specific fuel consumption corresponding to maximum power was recorded as **263 g/kWh** against the declaration of **255 g/kWh**, which is within the tolerance limit of IS: 12207-2014.
- iii) The backup torque is **18.5%**.
- iv) During PTO performance test under high ambient condition leakage of oil was observed from tappet cover oil seal. The tappet cover oil seal (Part No. 0.900.2397.6) (Mn-8) was replaced with new one. This should be looked into for necessary corrective action.

16.4.1.2 Drawbar performance:

The creeping of LHS tyre over rim was recorded as 65 mm during 10 hours drawbar performance test. This should be looked into for necessary corrective action.

16.4.1.3 Hydraulic performance:

The moment about rear axle with standard frame was calculated as **18.10 kN-m**. Whereas, the moment about front axle was calculated as **12.28 kN-m**. 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 additional ballast mass may be provided at front axle to avoid the front lifting of the tractor.

16.4.1.4 Mechanical Vibration:

The amplitude of mechanical vibration on various assemblies marked as (*) in Chapter-8 of this test report is on higher side, especially at the right foot rest and steering control wheel. This calls for dampening down of vibrations to improve the operational comfort and service life of components.

16.4.1.5 Three point linkage:

- i) Lateral distance from lower hitch point to centre line of tractor,
- ii) Transport height,
- iii) Power / movement range.

Above i), ii) and iii) parameters does not meet to the requirement of IS 4468 (Part-I): 1997. While the some of the parameters of three point linkages meet to the Cat.I and some of Cat. II of IS 4468 (Part-I): 1997. This should be looked into for necessary corrective action.

16.4.1.6 Specifications of Power Take-off Shaft:

- i) $d\emptyset$,
- ii) $B\emptyset$,
- iii) $A\emptyset$ (optional)

Above i), ii) and iii) parameters Refer Fig.2 (a) of PTO shaft do not meet the requirement of IS: 4931:1995. This should be looked into for compliance.

16.4.1.7 Operator's Seat:

Inclination (degree) of seat towards rear direction, Vertical distance from seat index point to the centre of clutch and brake pedal of operator's seat does not meet the requirements of IS: 12343:1998 (Re-affirmed in March, 2009) and calls for necessary corrective action.

16.4.1.8 Labelling Plate:

The chassis number is punched on RHS of clutch housing and which does not conform to the requirement of AIS: 117- 2011. This should be looked into for necessary corrective action.

16.4.2 Field performance test:**16.4.2.1 Wet land cultivation (Puddling operation):**

No ingress of mud/or water was noticed during puddling operation of the tractor. Hence, It meets the requirements of IS:11082-1984 (Technical requirements of agricultural tractors for wetland operation). The tractor is found suitable for wetland operation (Puddling).

16.5 Maintenance / Service Problems:

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

T-1028/1553/2016

DEUTZ-FAHR 3035E TRACTOR - Commercial (Initial)

**16.6 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) The rear tyres should be fully guarded (as per IS: 12239 (Part II) -1999
- iii) The working clearance around main gear shifting levers should be provided as per the requirement of relevant Indian Standard.
- iv) Vertical distance from seat index point to the centre of clutch and brake pedal of operator's seat should be within the limit of easy handling of tractor.
- v) Coupling to attach trailer brakes should be provided.

16.7 Adequacy of Literature supplied with machine:

16.7.1 The following literature has been supplied with the tractor for reference during the testing.

- i) Operator's manual
- ii) Spare part's catalogue
- iii) Service manual



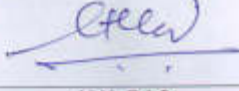
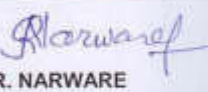
16.7.2 The supplied literature was found adequate, however, The servicing schedule of engine time to time specified on operator's manual and specifications data provided by applicant does not match to each other.

16.7.3 These literatures may also be brought out in national & other regional languages for the guidance of user's and service personnel.

17. 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	10 Months (August, 2015 to May, 2016)	Yes	---

TESTING AUTHORITY:

		
RAJNEESH PATEL AGRICULTURAL ENGINEER	C.V. CHIMOTE TEST ENGINEER	Y.K. RAO SENIOR AGRICULTURAL ENGINEER
 J.J.R. NARWARE DIRECTOR		

T-1028/1553/2016	DEUTZ-FAHR 3035E TRACTOR - Commercial (Initial)
-------------------------	--

18. APPLICANT'S COMMENTS

Para No.	Our Reference	Applicant's comments
18.1	16.4.1.1(iv), 16.4.1.2, 16.4.1.3, 16.4.1.4, 16.4.1.5, 16.4.1.6 & 16.7.2	Would be reviewed.
18.2	16.4.1.7 & 16.6 (i, ii, iii, iv)	Will be taken up for necessary correction.
18.3	16.6 (v)	The coupling to trailer brake will be provided at dealer end as per GSR 492.
18.4	16.7.3	Suggestion is considered

ANNEXURE- I

BRIEF SPECIFICATION OF IMPLEMENTS USED DURING FIELD TEST

S. No.	Parameters	Disc Plough	Rotavator
1	Make	Fieldking	Howard
2	Type	Mounted	Mounted
3	No. of Discs / Blades	Two	30 in 6 flanges
4	Type of Discs / Blades	Plain concave	Hatchet
5	Size of Discs / Blades (mm)	650Φ	215 x 75 x 5
6	Spacing of Discs /Flanges, (mm)	560	250
7	Lower hitch point span, (mm)	860	710
8	Mast height, (mm)	610	465
9	Overall Dimensions (mm):		
	Length	1850	1035
	Width	855	1790
	Height	1200	960
10	Gross Mass, (Kg)	295	295

ANNEXURE-II**BRIEF SPECIFICATION OF FULL CAGE WHEEL**

S. No.	Parameters	Specification
1	Type	Full cage wheel
2	Outer dia. (mm)	1210
3	Width (mm)	900
4	No. & Type of Lugs	24, straight lugs made of MS angle section welded to angle iron frame
5	Size of angle section, (mm)	40 x 40 x 6
6	Length of lug, (mm)	444
7	Spacing of lug, (mm)	290
8	Weight of each cage wheel (kg)	135

ANNEXURE-III**TRACTOR RUN HOURS DURING TEST**

A.	LABORATORY AND TRACK TESTS:	HOURS
1.	Running-in	--
2.	PTO performance test	11.51
3.	Power lift and hydraulic pump performance test	1.49
4.	Drawbar performance test	16.59
5.	Turning ability	0.20
6.	Location of centre of gravity	Nil
7.	Operator's field of vision	0.10
8.	Brake test	2.16
9.	Noise measurement	1.33
10.	Mechanical vibration test	1.00
11.	Theoretical speed test	0.50
B.	FIELD TEST:	
1.	Disc ploughing	10.00
2.	Rotavation	10.00
3.	Wetland cultivation (including water proof)	15.75
C.	HAULAGE TEST:	5.46
D.	Miscellaneous test and other run hours including idle run, transportation, trials and preparation for test	15.29
	TOTAL:	91.38