T.C
TARIM VE KÖYİŞLERİ BAKANLIĞI
TARIM ALET VE MAKİNALARI
TEST MERKEZİ MÜDÜRLÜĞÜ

TEST REPORT

REPORT NUMBER:1379/2251 TGK.5

OECD APPROVAL NO: 2/2 191
DATE OF APPROVAL : 09 NOVEMBER 2004

Report on test in accordance with the OECD Standard Code 2 for the Official Testing of Agricultural Tractors Performance

CODE 2
(Restricted code)



NEW HOLLAND TD95D – 2 WD
(12+12 speeds-30 km/h)



CASE IH JX95 – 2 WD
(12+12 speeds-30 km/h)

Tested Equipment
TRACTOR
Make : CASE IH
Model : JX95
Type : 2 WD

Applicant
Name :Türk Traktör ve Ziraat Mak.A.Ş.
Adress: Güvercin yolu 111-112 06560 Gazi/ANKARA
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APRIL - 2004
ANKARA

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This is a report on a tractor tested in accordance with OECD standard code for the official Testing of Agricultural Tractor Performance, it doesn't contain an evaluation of the tractor on field activities.

UNITS

Forces	1 kN	= 1000 N	= 102 kp
Powers	1 kW	= 1.36 HP	
Pressures	1 MPa	= 10 bar	= 10.2 kp/cm^2
	100 kPa	= 1000 mbar	= 750.1 mmHg

New Holland TD95D (2 WD) and Case IH JX95 (2 WD) tractors have same specification but they have different colour, bonnet, rim colour, grill, headlights, grill support and model (trade name).
All tests were carried out on Case IH JX95.

Note:
[C] data declared by the manufacturer and controlled by the station
[D] data declared by the manufacturer

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[C]	Tractor Manufacturer's name and address	:TÜRK TRAKTÖR ve ZIRAAT MAKINALARI A.Ş. Güvercin yolu 111-112 Gazi/ANKARA Tel:+90 312 211 01 90
[D]	Location of tractor assembly	:TÜRK TRAKTÖR ve ZIRAAT MAKINALARI A.Ş.
[D]	Submitted for test by	:TÜRK TRAKTÖR ve ZIRAAT MAKINALARI A.Ş.
[C]	Selected for test by	: TÜRK TRAKTÖR ve ZIRAAT MAKINALARI A.Ş. with agreement of the Testing Station
[C]	Place of running – in	:DAEMTC (The Directorate of Agricultural Equipment and Machinery Testing Centre)
[C]	Duration of running-in	:30 hours
[C]	Location of test	:DAEMTC, Ankara

1. SPECIFICATIONS OF TRACTOR

1.1 IDENTIFICATION

1.1.1.	Make of the tractor	: CASE IH
[C]	Model (trade name)	: JX95
[C]	Type	: 2 WD
1.1.2.	Serial No	
[D]	First Serial No or Prototype	: Prototype
[C]	Serial No	: Prototype
1.1.3.	Other Specifications;	
[D]	Model(s) for other countries	: -
[C]	Transmission Type or Gears x Ranges	: Mechanical, full synchromesh, 12 forward ,12 reverse
[C]	Speed version	: 30 km/h
[C]	Manufacturer identification or Technical type number	: J0S2AA (for Case IH JX95 D5S2AA (for New Holland TD95D)

1.2 ENGINE

[C]	Make, Model and Type	:IVECO 8045.25 L, water cooled, direct injection, 4 cycles, turbo charged diesel engine
[C]	Serial No.	: *639-928621*

1.2.1 Cylinders

[C]	Number/disposition	: 4, vertical in line
[D]	Bore/stroke	: 104 mm/115 mm
[D]	Capacity	: 3908 cm^3
[D]	Compression rate	: (18±0.5):1
[D]	Arrangement of valves	: Overhead
[D]	Cylinder liners	: Dry

1.2.2 Supercharging

[C]	Make, model and type	: TDO 4 H
[D]	Pressure	: 105 kPa

1.2.3 Fuel system

[C]	Fuel feed system	: With double diaphragm, mechanical
[C]	Make, type and model of fuel filter(s)	: CASE IH, replaceable paper element cartridge
[D]	Capacity of fuel tank	: 90 dm^3
[C,D]	Make, model and type of injection pump	: BOSCH, VE 4/12 F 1250 LV 15605, (optional BOSCH, L 952), rotative
[C]	Serial no	: 00101224

Manufacturer's production setting of injection pump

[C]	Flow rate*	: (17.85 –19.20) dm^3/h at rated engine speed and full load
[D]	Timing	: 0°± 0.5° before T.D.C
[D]	Make,type and model of injectors	: BOSCH, DLLA 132 S
[D]	Injection pressure	: (26.0 ±1.2) MPa

*not any setting by the manufacturer because of atmospheric pressure

1.2.4 Governor

[C]	Make, model and type	: BOSCH, mechanical, in corporated in the fuel pump
[C]	Governed range of engine speed	: (700 – 2802) rev/min
[C]	Rated engine speed	: 2500 rev/min

1.2.5 Air cleaner

Pre-cleaner

[C]	Make, model and type	: CNH, 1930589, paper filter
[C]	Location of air intake	: In front of radiator, under bonnet

Main cleaner

[C]	Make, model and type	: CNH, 1930590, paper filter
[C]	Maintenance indicator	: Warning light on the instrument

1.2.6 Lubrication system

[D]	Type of feed pump	: Gear type
[D]	Type of filter(s)	: One is metal mesh strainer, the other is replaceable paper cartridge
[C]	Number of filters	: 2

1.2.7 Cooling system

[C]	Type of coolant	: Water
[D]	Type of pump	: Centrifugal, belt driven
	Specification of fan	
[C]	Number of fan blades	: 6
[C]	Fan diameter	: 447 mm
[D]	Coolant capacity	: 16 dm^3
[C]	Type of temperature control	: Thermostat and thermometer indicating temperature level on dashboard
[D]	Superpressure system	: 150 kPa

1.2.8 Starting system

[C]	Make, model and type	: BOSCH, 2339402143, solenoid engaged
[D]	Starter motor power rating	: 3.5 kW
[C]	Cold starting aid	: Flame glow plug and additional fuel system in injection pump
[C]	Safety device	: Clutch safety switch

1.2.9 Electrical system

[C]	Voltage	: 12 V (or 14 V)
	Generator	
[C]	Make,model and type	: MAGNETTI MARELLI, RTT 119 AC, (or DENSO, 63321424) alternator
[D]	Power	: 1.0 kW
	Battery of accumulators	
[C]	Number	: 1
[D]	Rating	: 120 Ah at 20 h

1.2.10 Exhaust system

[C,D] Make, model and type : BİLEN, 5094825, (or ALCOM 5172688) under the bonnet, vertical exhaust pipe with expansion chamber

[C] Location : On left hand side of engine, horizontal, (or on left hand side of engine ,vertical)

1.3 TRANSMISSION

1.3.1 Clutch (travel and power take-off)

[D] Make, model and type : NEW HOLLAND, LUK, dual clutch, dry

[D] Number of plates : 2

[D] Diameter of plates : 304.8 mm

[C] Method of operation : Mechanical, pedal operated for main clutch and hand lever for PTO clutch

1.3.2 Gear box

[D] Make, model and type : NEW HOLLAND, mechanical, full synchromesh

Description :

		Forward	Reverse
[C]	Number of gears	4	4
[C]	Number of ranges/groups	3/-	3/-
[C]	Total of arrangements	12	12

Available options :

[D] 12x4

[D] 20x12 with creeper

1.3.3 Rear axle and final drives

[D] Make, model and type : NEW HOLLAND, with reducter

Differantial lock

[D] Type : Mechanical

[C] Method of engagement : Pedal operated

[C] Method of disengagement : Self disengaged

1.3.4 Front axle

[D] Make, model and type : NEW HOLLAND, telescopic, U-type adjustable

[C] 1.3.5 Total ratios & travelling speed (tested tractor)

Gear no	Group or range	Number of engine revolutions for one revolution of the driving wheels		Nominal travelling speed (*) at rated engine speed of 2500 rev/min km/h	
		Forward	Reverse	Forward	Reverse
1	I Slow	402.150	400.947	1.81	1.81
2		276.693	275.865	2.62	2.63
3		191.935	191.361	3.78	3.79
4		133.986	133.585	5.42	5.43
1	II Normal	172.180	171.665	4.22	4.23
2		118.466	118.111	6.13	6.14
3		82.177	81.931	8.83	8.86
4		57.366	57.194	12.65	12.68
1	III Fast	73.135	72.916	9.92	9.95
2		50.319	50.169	14.42	14.46
3		34.905	34.801	20.79	20.85
4		24.367	24.294	29.78	29.86

* Calculated with a tyre dynamic index of 770 mm (ISO 4251/1 - 1998)

[D] 1.3.6 Total ratios & travelling speed (Optional)

Gear no	Group or range	Number of engine revolutions for one revolution of the driving wheels		Nominal travelling speed (*) at rated engine speed of 2500 rev/min km/h	
		Forward	Reverse	Forward	Reverse
1	I Slow	402.150	-	1.81	-
2		276.693	-	2.62	-
3		191.935	-	3.78	-
4		133.986	-	5.42	-
1	II Normal	172.180	171.665	4.22	4.23
2		118.466	118.111	6.13	6.14
3		82.177	81.931	8.83	8.86
4		57.366	57.194	12.65	12.68
1	III Fast	73.135	-	9.92	-
2		50.319	-	14.42	-
3		34.905	-	20.79	-
4		24.367	-	29.78	-

*Calculated with a tyre dynamic index of 770 mm (ISO 4251/1 - 1998)

[D] **1.3.7 Total ratios & travelling speed (Optional)**

Gear no	Group or range	Number of engine revolutions for one revolution of the driving wheels		Nominal travelling speed (*) at rated engine speed of 2500 rev/min km/h	
		Forward	Reverse	Forward	Reverse
1	I Creeper	2221.276	-	0.33	-
2		1528.314	-	0.48	-
3		1060.155	-	0.69	-
4		740.070	-	0.98	-
1	II Creeper	951.035	-	0.76	-
2		654.345	-	1.11	-
3		453.903	-	1.60	-
4		316.859	-	2.29	-
1	I Slow	402.150	400.947	1.81	1.81
2		276.693	275.865	2.62	2.63
3		191.935	191.361	3.78	3.79
4		133.986	133.585	5.42	5.43
1	II Normal	172.180	171.665	4.22	4.23
2		118.466	118.111	6.13	6.14
3		82.177	81.931	8.83	8.86
4		57.366	57.194	12.65	12.68
1	III Fast	73.135	72.916	9.92	9.95
2		50.319	50.169	14.42	14.46
3		34.905	34.801	20.79	20.85
4		24.367	24.294	29.78	29.86

*Calculated with a tyre dynamic index of 770 mm (ISO 4251/1 - 1998)

1.4 POWER TAKE-OFF

1.4.1 Main power take-off

[C] Type : Independent

[C] Method of engagement : Mechanical, by hand lever

[C] Number of shafts : 1

[D] Method of changing power take-off shaft ends and speeds : Hand lever and changing PTO shafts

1.4.1.1 Power take-off proportional to engine speed

540 rev/min

[C]	Location	: At rear of tractor
[C]	Diameter of power take-off shaft end	: 34.9 mm
[C]	Number of splines	: 6, in conformity with ISO 500:1991
[C]	Height above ground	: 770 mm
[C]	Distance from the median plane of the tractor	: 0 mm
[C]	Distance behind rear-wheel axis	: 310 mm
[C]	P.T.O speed at rated engine speed	: 614 rev/min
[C]	Engine speed at standard power take-off speed	: 2200 rev/min
[C]	Ratio of rotation speeds (engine speed/p.t.o speed)	: 4.074/1
[D]	Power restriction and maximum torque	: None
[D]	Maximum torque transmissible	: None
[C]	Direction of rotation (viewed from behind tractor)	: Clockwise

750 rev/min (not fitted on tested tractor)

[D]	Location	: At rear of tractor
[D]	Diameter of power take-off shaft end	: 34.9 mm
[D]	Number of splines	:6,not in conformity with ISO 500:1991
[D]	Height above ground	: 770 mm
[D]	Distance from the median plane of the tractor	: 0 mm

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[D]	Distance behind rear-wheel axis	: 310 mm
[D]	P.T.O speed at rated engine speed	: 787 rev/min
[D]	Engine speed at standard power take-off speed	: 2382 rev/min
[D]	Ratio of rotation speeds (engine speed/p.t.o speed)	: 3.176/1
[D]	Power restriction and maximum torque	: None
[D]	Maximum torque transmissible	: None
[D]	Direction of rotation (viewed from behind tractor)	: Clockwise

1000 rev/min (not fitted on tested tractor)

[D]	Location	: At rear of tractor
[D]	Diameter of power take-off shaft end	: 34.9 mm
[D]	Number of splines	:6, not in conformity with ISO 500:1991
[D]	Height above ground	: 770 mm
[D]	Distance from the median plane of the tractor	: 0 mm
[D]	Distance behind rear-wheel axis	: 310 mm
[D]	P.T.O speed at rated engine speed	: 1050 rev/min
[D]	Engine speed at standard power take-off speed	: 2381 rev/min
[D]	Ratio of rotation speeds (engine speed/p.t.o speed)	: 2.381/1
[D]	Power restriction and maximum torque	: None
[D]	Maximum torque transmissible	: None
[D]	Direction of rotation (viewed from behind tractor)	: Clockwise

1.4.1.2 Power take-off proportional to ground speed (rear) (not fitted on tested tractor)

		540	750	1000
[D]	Travelling distance for 1 revolution of take-off shaft	: 0.543 m	0.424 m	0.318 m
[D]	Number of power take-off shaft revolutions for one revolution of (rear) driving wheels	: 8.9	11.4	15.2
[D]	Direction of ratation with forward gear engaged (viewed from behind tractor)	: Clockwise		

1.4.2 Optional Power take-off : None

1.5 HYDRAULIC POWER LIFT

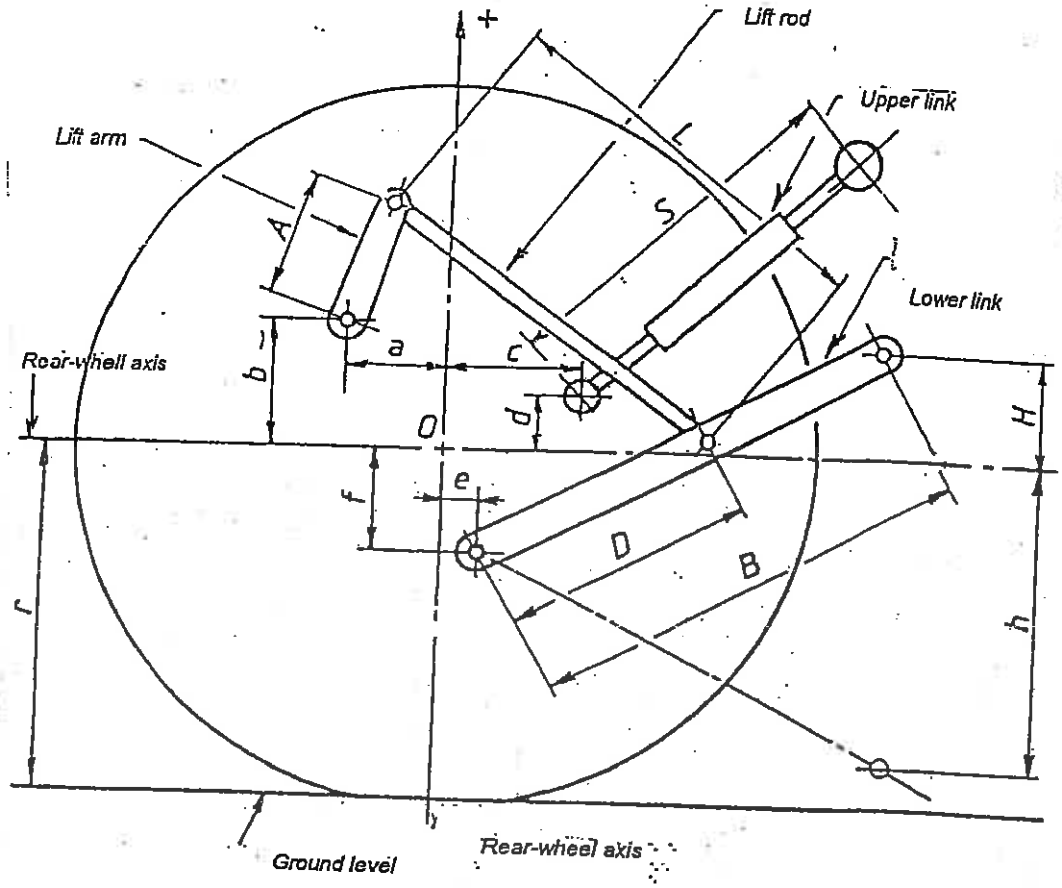
[C]	Make, model and type	: NEW HOLLAND, Lift-O-matic, draft and float controlled
[C]	Type of hydraulic system	: Open center system
[C]	Type and number of cylinders	: 1, single acting
[C]	Type of linkage lock for transport	: Hydraulic
[D]	Relief valve pressure setting	: (19.4-19.9) MPa
[D]	Opening pressure of cylinder safety valve: (23.4-24.5) MPa	
[D]	Lift pump type	: Gear
[D]	Transmission between pump and engine	: Mechanical
[C]	Type and number of filters	: 1, replaceable cartridge element
[C]	Site of oil reservoir	: Gear box and rear axle
[C]	Type, number and location of tapping points	: At rear of tractor, 4, double acting
[C]	Maximum volume of oil available to external cylinders	: None

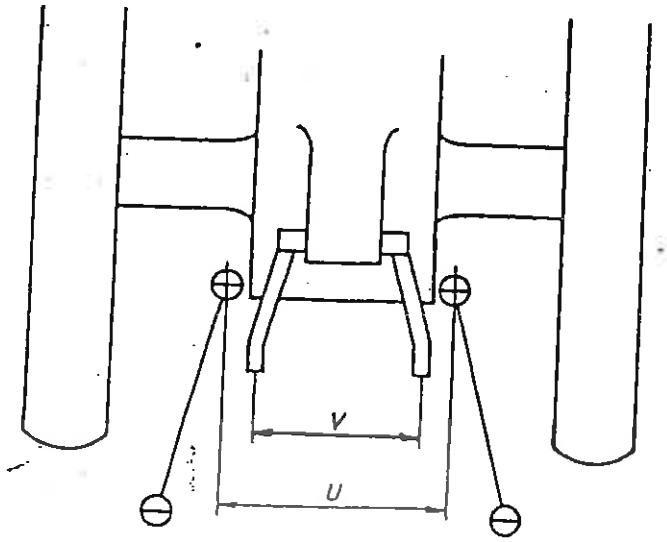
1.6 Three- point linkage

[C]	Category	: II, ISO 730 -1:1994 + Corrigendum 1:1995
[C]	Category adapter	: None

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linkage geometry





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TABLE 2.1. Dimensions of linkage geometry (when connected to the standard frame)

		Dimension or range (mm)	Settings used in test (mm)
[C] Length of lift arms	(A)	260	260
[C] Length of lower links	(B)	965	965
Distance of lift arm pivot point from rear wheel axis			
- [C] Horizontally	(a)	-25	-25
- [C] Vertically	(b)	295	295
[C] Horizontal distance between the two lower link points	(u)	450	450
[C] Horizontal distance between the two lift arm end points	(v)	495	495
[C] Length of upper link	(S)	from 590 to 955	820
Distance of upper link pivot point from rear wheel axis			
- [C] horizontally	(c)	175/160	175
- [C] vertically	(d)	190/240	190
Distance of lower link pivot point from rear wheel axis			
- [C] horizontally	(e)	52	52
- [C] vertically	(f)	200	200
[C] Distance of lower link pivot points to lift rod pivot points on lower links	(D)	460/535	460
[C] Length of lift rods	(L)	from 515 to 675	630
Height of lower hitch points relative to the rear wheel axis			
- [C] in low position	(h)	from 258 to 685	560
- [C] in high position	(H)	from 110 to 390	210
[C] Height above ground of lower hitch points when locked in transport position (*)		Any height within lift range	

[C] (*)Assuming r = 770 mm tire dynamic radius index of ISO 4251/1-1998

1.7 SWINGING DRAWBAR

[C]	Type	: Clevis
	Height above ground;	
[C]	Maximum	: 555 mm
[C]	Minimum	: 450 mm
[C]	Type of adjustment	: Reversing
[C]	Distance of hitch point from rear – wheel axis horizontally	: 735 mm
[C]	Distance of hitch point from p.t.o shaft ends	
	Vertically	: 215/320 mm
	Horizontally	: 425 mm
	Lateral adjustment (center of clevis)	
[C]	Right-hand	: 100 mm
[C]	Left-hand	: 100 mm
[C]	Distance of pivot point from rear-wheel axis horizontally	: 115 mm
[C]	Diameter of drawbar pin hole	: 29 mm
[D]	Maximum vertical permissible load	: None

1.8 TRAILER HITCH

[C]	Type	: Coupling
[C]	Hole diameter	: 29 mm
[C]	Height above ground	: 1000 mm
[C]	Distance of hitch point from rear – wheel axis, horizontally	: 520 mm
	Distance of hitch point from PTO shaft end	
[C]	Vertically	: 230 mm
[C]	Horizontally	: 210 mm
[D]	Maximum vertical permissible load	: None

1.9 HOLED DRAWBAR : None

1.10 STEERING

[D] Make, model and type : Ognibene, STA ON 100, hydrostatic

Method of operation

[D] Pump(s) : Gear pump

[D] Ram(s) : 1, Double acting, actuated on front axle

[D] Working pressure : 10.0 MPa

1.11 BRAKES

1.11.1 Service brake

[D] Make, model and type : NEWHOLLAND, mechanical, oil immersed disc

[C] Method of operation : Mechanical, pedal operated

[C] Trailer braking take-off : None

1.11.2 Parking brake

[C] Type : Mechanical, common with servise brake

[C] Method of operation : By hand lever operated

1.12. WHEELS

Number

[C] Front : 2/steering

[C] Rear : 2/driving

[C] Wheelbase : 2375 mm

Track width adjustment

		Minumum mm	Maximum Mm	Adjustment method
[D]	Front	1445	1845	extending of front axle
[D]	Rear	1520	1720	reversing wheels and off-set lug rims

1.13 PROTECTIVE STRUCTURE

[C]	Make, model and type	: NEW HOLLAND, TD-KÇ-2 (CNH GR6)
[C]	Manufacturer's name and address	: Türk Traktör Ziraat Mak. A.Ş. Güvercin yolu No:111-112 Gazi/ANKARA
	Protective device	
[C]	Cab / frame / roll guard / other	: Roll-bar
[C]	Tiltable / not tiltable	: Tiltable
	OECD approval	
[C]	Approval number	: 4/0 761/1
[C]	Date of approval	: 10/05/2004

[D] Nos. of minor modification of certificates, if any: None

1.14 SEAT

1.14.1 Driver's seat

[C]	Make, model and type	: PILOT, T 300 A, vinylex covered, back rested
[C]	Seat and steering wheel reversible	: No
[C]	Type of suspension	: Mechanical, with spring
[C]	Type of damping	: Hydraulic, with amortisor
	Range of adjustment	
[C]	Longitudinally	:150 mm
[C]	Vertically	: 65 mm
[C]	Safety belt	: No

1.14.2. Optional driver's seat(s)

1.14.2.1

[D]	Make, model and type	: PİLOT, T 300, vinylex covered, back rested
[D]	Type of suspension	: Mechanical, with spring
[D]	Type of damping	: Hydraulic with amortisor
	Range of adjustment	
[D]	Longitudinally	:150 mm
[D]	Vertically	: 65 mm

1.14.2.2

[D]	Make, model and type	:PİLOT,2001SM 80X, vinylex covered, back rested
[D]	Type of suspension	: Mechanical, with spring
[D]	Type of damping	: Hydraulic, with amortisor
	Range of adjustment	
[D]	Longitudinally	:150 mm
[D]	Vertically	: 65 mm

1.14.3 Passenger seat : No

1.15 LIGHTING

		Height above ground of center mm	Size mm	Distance from outside edge of lights to median plane of tractor mm
[C]	Headlights	1115	170x100	196
[C]	Sidelights	1690	75x70	765
[C]	Rearlights	1690	75x70	655
[C]	Reflectors I	1690	75x35	690
[C]	Reflectors II	693	105x55	605

2. TEST CONDITIONS

2.1 OVERALL DIMENSIONS (unballasted tractor)

Length mm	Width		Height at top of	
	minimum mm	maximum mm	Protective structure mm	exhaust pipe mm
3798	2055	2255	2685	-

2.2 GROUND CLEARANCE (unballasted tractor)

Clearance – limiting part :385 mm (bottom point of drawbar pin)

2.3 TRACTOR MASS (with roll-bar)

	Unballasted	
	Without driver kg	with driver kg
Front	995	1012
Rear	2085	2143
Total	3080	3155

2.4 TRACK SPECIFICATION: Not applicable

2.5 TYRES AND TRACK WIDTH SPECIFICATIONS

	Front	Rear
Tyres :	GOOD YEAR	GOOD YEAR
Dimensions	7.50-18	18.4R34
Ply rating	8	A8 144
Type	Diagonal	Radial
Maximum load (tyre manufacturer's)	9.31 kN	27.45 kN
Maximum load (tractor manufacturer's)	9.31 kN	27.45 kN
Inflation pressure (tyre manufacturer's)	370 kPa	160 kPa
Dynamic radius index	405 mm	770 mm
Chosen track width	1445 mm	1520 mm

2.6 FUEL

Type : Diesel oil, in conformity with national standard, TS 3082

Density at 15 °C : 0.837 g/cm^3

2.7 OILS AND LUBRICATION

2.7.1 Capacity and change interval

	Capacity dm^3	Oil change h	Filter Change h
Engine	11.7	200	400
Gear box*	46	1600	400
Final drive (rear) *			
Hydraulic system *			
Steering	1.8	-	800

* Common with gear box

2.7.2 Specifications

	Recommended	Used during test
Engine oil Type Viscocity Classification	BP TERRAC DIESEL 20W/50 DM/12	Same
Hydraulic Fluid Type Viscocity Classification	BP TERRAC TRACTAN 8 Fluid 8 DT/14	Same
Transmission oils Type Viscocity Classification	BP TERRAC TRACTAN 8 Fluid 8 DT/14	Same
Steering Type Viscocity Classification	BP TERRAC TRACTAN 8 Fluid 8 DT/14	Same

2.7.3 Grease : MOBILUX EP2
Number of lubrication points : 9

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3. COMPULSORY TEST RESULTS

3.1 MAIN POWER TAKE-OFF

Date and location of tests : 05-08/04/2004, D.A.E.M.T.C

Type of dynamometer bench : AEG, Electrical

Power	Speed		Fuel consumption			Specific energy
	Engine	PTO	Hourly		Specific	
kW	rev/min		kg/h	l/h	g/kWh	kWh/ l
3.1.1. MAXIMUM POWER- TWO HOUR TEST						
62.0	2600	638	15.37	18.36	248	3.38
3.1.2. Power at rated engine speed						
61.5	2500	614	14.99	17.91	244	3.43
3.1.3. Standard Power Take-off speed (540 ± 10 rev/min)						
60.6	2200	540	14.16	16.92	234	3.58
3.1.4. PART LOADS						
3.1.4.1.The torque corresponding to maximum power at rated engine speed						
61.5	2500	614	14.99	17.91	244	3.43
3.1.4.2. 85% of torque obtained in 3.1.4.1.						
55.5	2658	652	14.10	16.84	254	3.30
3.1.4.3. 75% of torque defined in 3.1.4.2.						
42.3	2702	663	11.98	14.31	283	2.96
3.1.4.4. 50% of torque defined in 3.1.4.2.						
28.5	2728	670	9.11	10.89	320	2.62
3.1.4.5. 25% of torque defined in 3.1.4.2.						
14.4	2754	676	6.75	8.06	469	1.79
3.1.4.6. No load						
0	2802	688	4.66	5.57	-	-

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Power	Speed		Fuel consumption			Specific energy
	Engine	PTO	Hourly		Specific	
kW	rev/min		kg/h	l/h	g/kWh	kWh/ l
3.1.5.PART LOADS AT STANDARD POWER TAKE-OFF SPEED (540 ±10 rev/min) 3.1.5.1. The torque corresponding to maximum power						
60.6	2200	540	14.16	16.92	234	3.58
3.1.5.2. 85% of torque obtained in 3.1.5.1.						
55.6	2374	583	13.42	16.03	241	3.47
3.1.5.3. 75% of torque defined in 3.1.5.2.						
42.8	2434	598	11.05	13.20	258	3.24
3.1.5.4. 50% of torque defined in 3.1.5.2.						
29.1	2481	609	8.62	10.30	297	2.82
3.1.5.5. 25% of torque defined in 3.1.5.2.						
14.8	2528	621	5.99	7.16	405	2.07
3.1.5.6. No load						
0	2576	632	3.89	4.65	-	-

Maximum engine speed at no load : 2802 rev/min

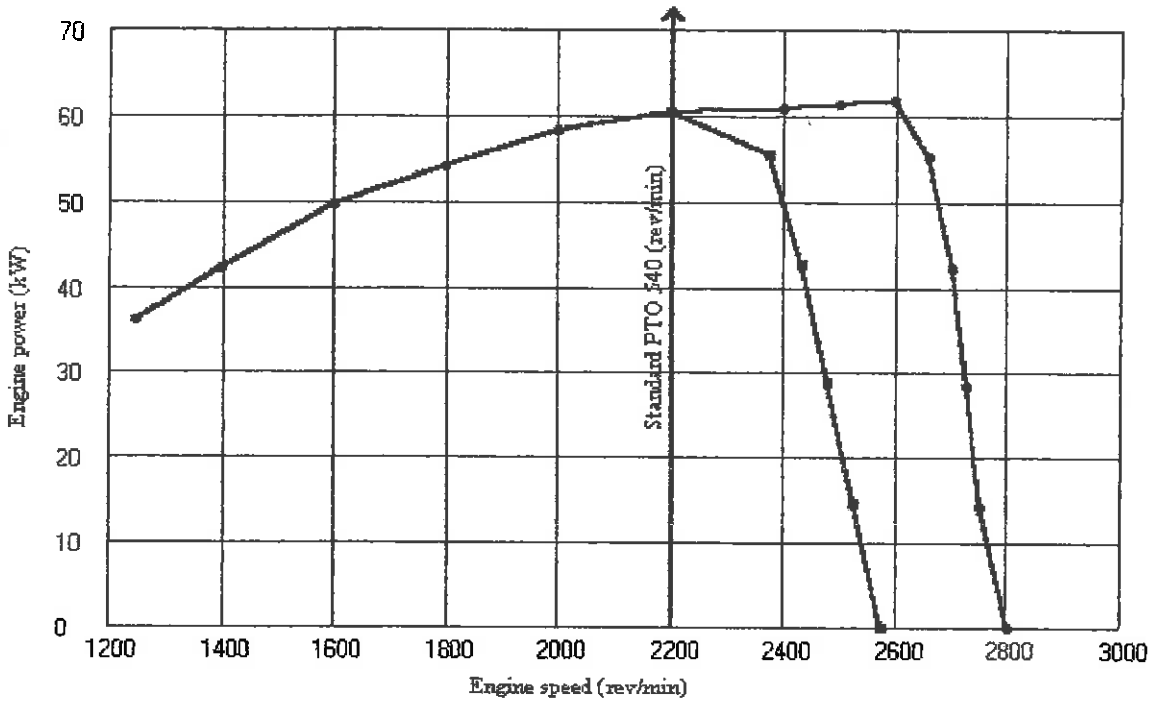
Torque at maximum power(equivalent crankshaft)
- At rated engine speed :234.89 Nm
- At 2-hour test :227.96 Nm

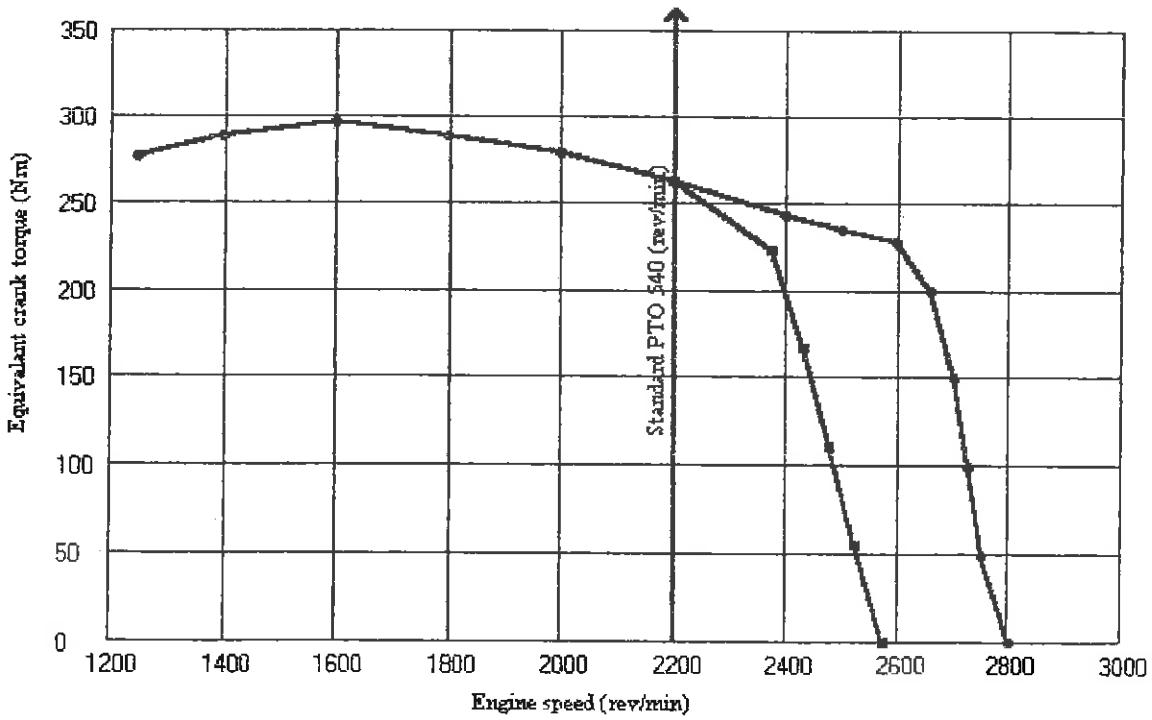
Maximum torque :297.08 Nm (1600 rev/min engine speed)

Mean atmospheric conditions
- Temperature : 27 ^{0}C
- Pressure : 91.6 kPa
- Relative humidity : 30%

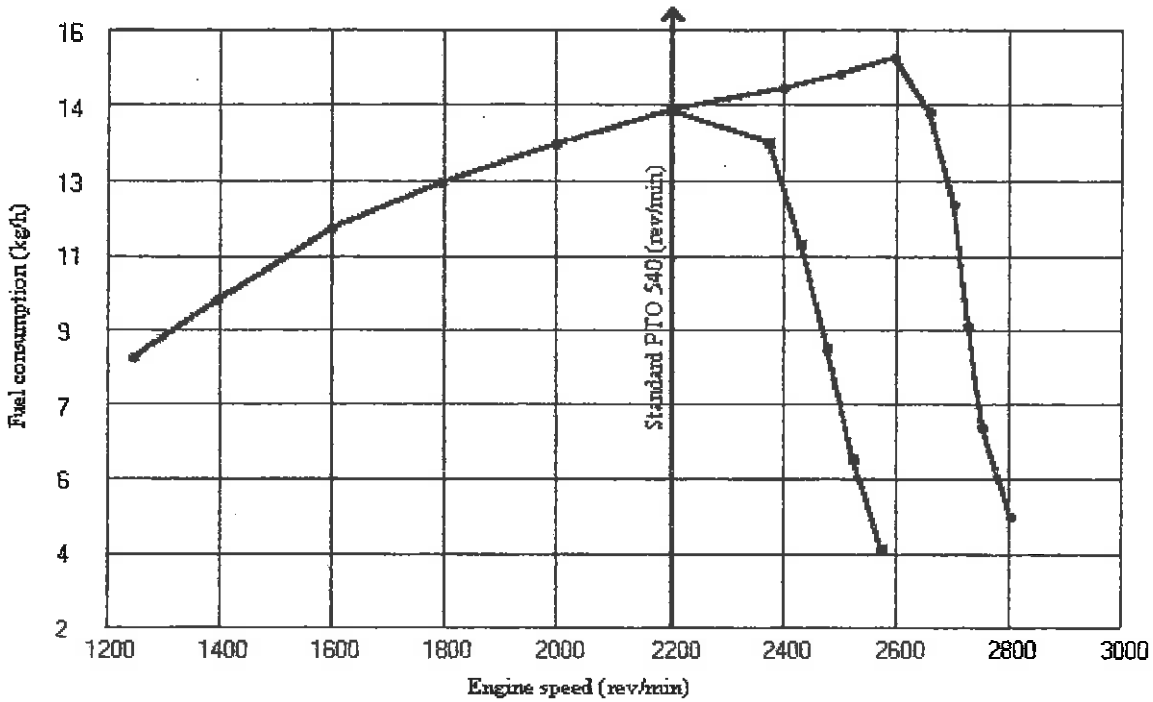
Maximum temperatures (°C)
- Cooling water : 73
- Engine oil : 111
- Fuel : 44
- Engine air intake : 35

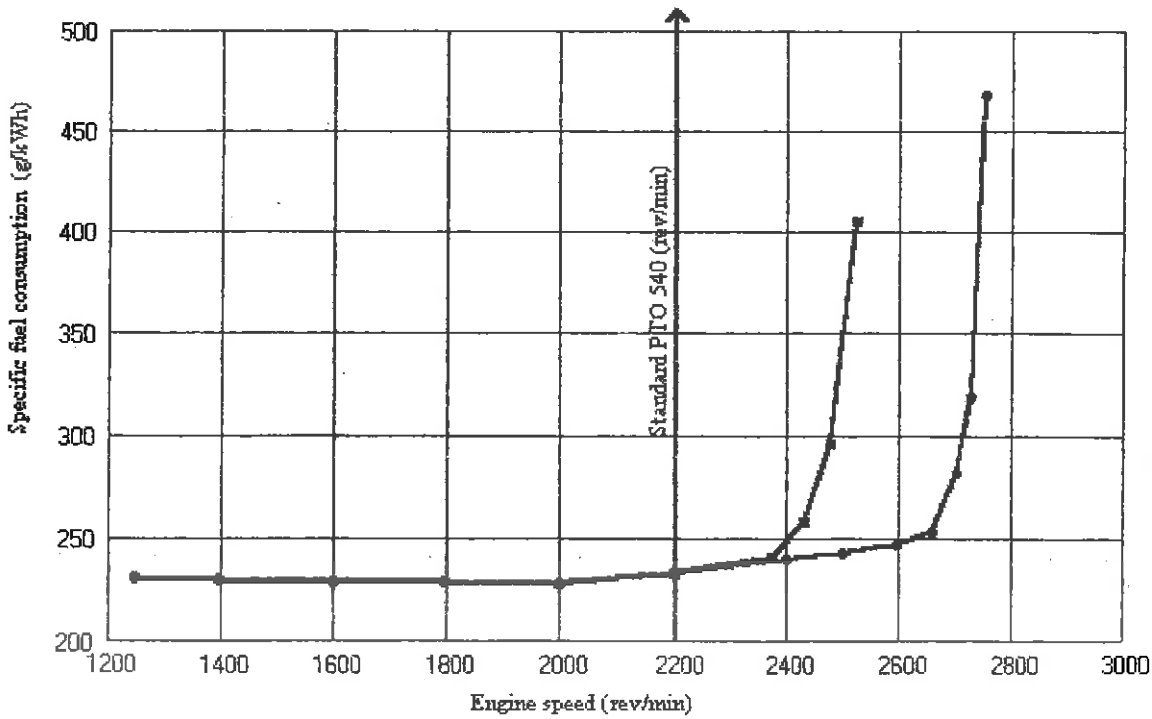
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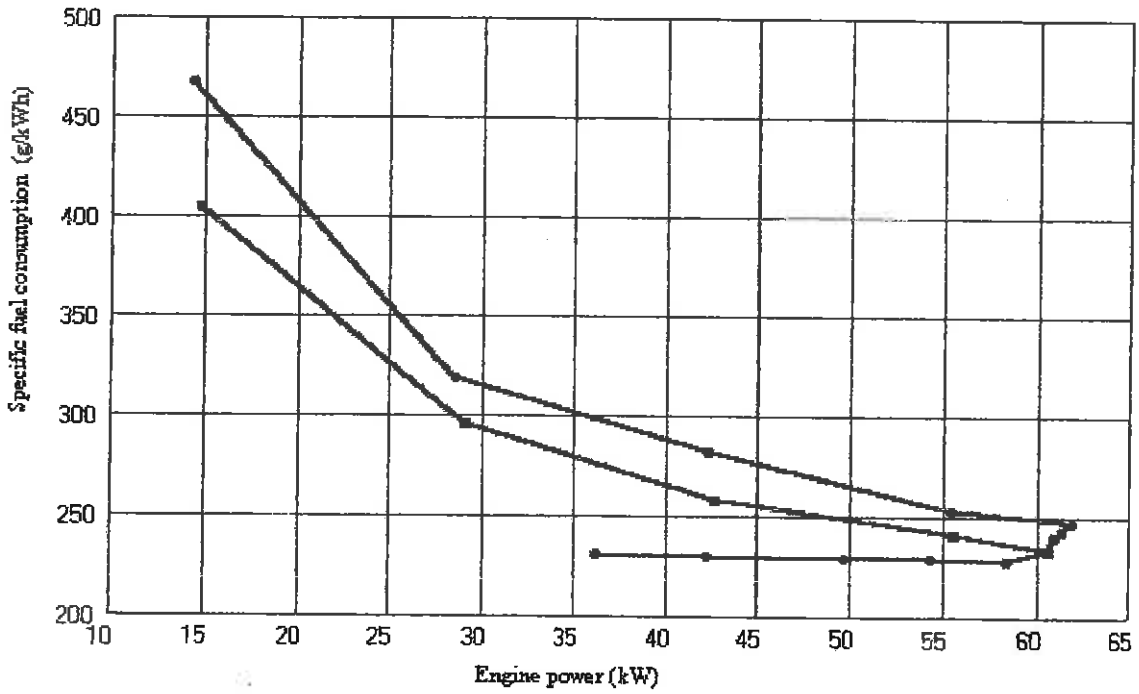


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3.2 HYDRAULIC POWER AND LIFTING FORCE

Date of tests :29/04/2004 and 04/05/2004

3.2.1 Hydraulic power test

3.2.1.1 Hydrolic fluid data

Hydrolic fluid type : TERRAC TRACTAN 8
Viscosity index, ISO 3448 + Cor. 1:1993 : 95
Viscosity at 65 °C : Not declared

3.2.1.2 Compulsory Reporting (Test results) *

	Pressure(4)	Reservoir oil Temperature°C (65 °C target)		Engine speed	Flow rate	Power
	MPa	Min	Max	rev/min	L/min	kW
Rated Engine Speed (Manufacturer Specification)	-	-	-	2500	-	-
3.2.1.2.1 Maximum (sustained) pressure with relief valve open as measured at the coupler Pump stalled: No	(2) 19.8	60	70	2772	-	-
	19.5	60	70	2827	-	-
3.2.1.2.2 Flow rate corresponding to a hydraulic pressure equivalent to 90% of the actual relief valve pressure setting and corresponding hydraulic power	(2) 17.8	(3) 68		2778	22.4	6.7
	17.5	69		2783	22.1	6.5
3.2.1.2.3 Maximum avaible flow and maximum power from one coupler pair (1)	(2) 13.0	(3) 62		2791	54.7	11.9
	13.0	67		2791	53.7	11.6
3.2.1.2.4 Maksimum flow rate at minimum pressure	(2) 2.0	(3) 60		2827	57.4	-
	2.0	60		2827	58.4	-
Number of pair of coupler used	1					
	2					

Note1:Calculated maximum power is based on only the coupler outlet pressure (pressure near coupler where oil is exiting from tractor) and does take not into account the return coupler pressure.
Note 2:Record pressure as measured at the outlet coupler (pressure near coupler where oil is exiting from tractor).
Note 3:Average test temperature.
Note 4: See ISO 789-10:1996 for the specific location of the pressure measurements and other referenced terms.

3.2.2 Power lift test

Linkage settings for test: see 13-14 pages

		At the hitch point	On the frame
Height of lower hitch point above ground in down position	mm	210	210
Vertical movement With lifting force Without lifting force	 mm mm	 735 770	 915 975
Maximum corrected force exerted through full range	kN	22.2	14.8
Corresponding pressure of hydraulic fluid	MPa	17.8	17.8
Moment about rear wheel axis	kNm	22.57	24.07
Maximum tilt angle of mast from vertical	Degrees	-	$11^0\ 40^l$

Lifting heights relative to the horizontal lower links											
mm	-440	-360	-300	-200	-100	0	+100	+200	+300	+375	+475
Lifting forces at the hitch point: Corresponding pressure:17.8 MPa											
kN*	-	23.3	23.7	24.6	24.5	24.2	23.8	23.6	23.4	22.2	-
Lifting forces at the frame: Corresponding pressure: 17.8 MPa											
kN*	22.4	20.4	20.7	20.4	20.0	19.5	18.9	18.2	17.6	17.0	14.8

*The values of force measured shall be corrected to correspond to a hydraulic pressure equivalent to 90 % of the actual relief valve pressure setting of the hydraulic lift system.

3.3 DRAWBAR POWER AND FUEL CONSUMPTION (unballasted tractor)

Date of tests : 28-30/04/2004

Type of track : Concrete

Height of drawbar above ground	Tyre inflation pressure	
	Front	Rear
450 mm	370 kPa	160 kPa

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Gear and range	Po-wer	Draw-bar pull	Spe-ed	Engine speed	Slip of wheel	Specific fuel consump.	Specific energy	Temperature			Atmospheric conditions		
no	kW	kN	km/h	rev/min	%	g/ kWh	kWh / l	Fuel °C	Coolant °C	Engine Oil ° C	Tempe rature °C	Relative humidity %	Pres sure kPa
3.3.1. MAXIMUM POWER IN TESTED GEARS (Unballasted tractor)													
I-1	10.7	22.42	1.72	2755	15.1	746	1.12	27	78	102	14	59	91.5
I-2	15.7	22.68	2.50	2751	15.0	598	1.40	27	78	102	14	59	91.5
I-3	23.8	24.10	3.56	2716	15.0	460	1.82	27	78	102	14	59	91.5
II-1	25.5	23.38	3.92	2684	14.9	458	1.83	30	79	103	15	59	91.5
I-4	32.2	23.35	4.97	2644	14.9	409	2.04	30	79	103	15	59	91.5
II-2	35.9	23.22	5.57	2623	14.9	388	2.16	30	79	103	15	59	91.5
II-3	47.3	21.34	7.98	2501	11.4	329	2.55	31	80	104	15	59	91.5
III-1	49.4	19.61	9.06	2500	10.4	324	2.58	31	80	104	16	59	91.5
II-4	50.6	15.55	11.72	2502	9.2	314	2.67	31	80	104	16	59	91.5
III-2	53.0	14.20	13.44	2500	8.5	300	2.79	31	80	104	16	59	91.5
III-3	This gear couldn't be tested because of safety reason.												
3.3.2.FUEL CONSUMPTION													
3.3.2.1. In selected gear, at maximum power at rated speed													
III-2	53.0	14.20	13.44	2500	8.5	300	2.79	35	74	99	19	39	91.2
3.3.2.1.1. 75 % of pull at maximum power at rated speed													
III-2	43.5	10.65	14.69	2642	5.4	341	2.45	35	74	99	19	39	91.2
3.3.2.1.2. 50 % of pull at maximum power at rated speed													
III-2	30.2	7.10	15.32	2696	3.3	428	1.96	35	74	99	19	39	91.2
3.3.2.1.3. Next higher gear at reduced engine speed; same pull and travelling speed as in 3.3.2.1.1.													
III-3	This gear couldn't be tested.												
3.3.2.1.4. Next higher gear at reduced engine speed; same pull and travelling speed as in 3.3.2.1.2.													
III-3	This gear couldn't be tested.												
3.3.2.2. in selected gear nearest to 7.5 km/h at rated speed													
II-3	47.3	21.34	7.98	2501	11.4	329	2.55	34	75	105	17	40	91.5
3.3.2.2.1. 75 % of pull at maximum power at rated speed													
II-3	39.2	16.01	8.82	2663	8.0	371	2.26	34	75	105	17	40	91.5
3.3.2.2.2. 50 % of pull at maximum power at rated speed													
II-3	27.5	10.67	9.27	2703	4.7	420	2.00	35	75	105	18	40	91.5
3.3.2.2.3. Next higher gear at reduced engine speed; same pull and travelling speed as in 3.3.2.2.1.													
III-1	39.3	16.01	8.84	2372	7.9	322	2.60	35	75	105	18	40	91.5
3.3.2.2.4. Next higher gear at reduced engine speed; same pull and travelling speed as in 3.3.2.2.2.													
III-1	27.5	10.67	9.27	2403	4.6	380	2.20	35	75	105	18	40	91.5

4.OPTIONAL TESTS : None

5. REPAIRS : None

6. REMARKS : Atmospheric pressure 91.2 kPa, 91.5 kPa and 91.6 kPa less than 96.6 kPa fixed in the OECD code

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Agricultural Engineer

Duran DOGANGUZEL
Agricultural Engineer

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Departmant Chief

Hüseyin YAŞAR
Chairman of Test Commission

This test report has been prepared and undersigned as 29 pages

Aşır NADAR
Assistant Director

Signatures that belong to members of test commission above have been approved **28/05/2004**

Dr. Hamdi TAŞBAŞ
Director