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

TEST REPORT

REPORT NUMBER:937/2220 TGK.2

OECD APPROVAL NO: 2/2 146
DATE OF APPROVAL :15 JULY 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 TD70D – 2 WD
(12+12 speeds-33 km/h)



CASE IH JX70 – 2 WD
(CASE IH JX 65 for North America)
(12+12 speeds-33 km/h)

Tested Equipment	Applicant
TRACTOR Make : NEWHOLLAND Model : TD70D Type : 2WD	Name: Türk Traktör ve Ziraat Mak. A.Ş. Adress: Güvercin yolu 111-112 06560 Gazi/ANKARA Tel: (0312) 2110190(Pb)

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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 TD 70 D (2WD) and Case IH JX 70 (2WD) 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 New Holland TD 70 D (2WD)

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	: 28 hours
[C]	Location of test	: DAEMTC

1. SPECIFICATIONS OF TRACTOR

1.1 IDENTIFICATION

1.1.1.	Make of the tractor	: NEW HOLLAND
[C]	Model (trade name)	: TD 70 D
[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	: sold as CASE IH JX 65 in North America
[C]	Transmission Type or	: Mechanical, full synchromesh,
[C]	Gears x Ranges	: 12 forward 12 reverse
[C]	Speed version	: 33 km/h
[C]	Manufacturer identification or Technical type number	: D2C2AC

1.2 ENGINE

[C]	Make, Model and Type	:CNH-IVECO, 8035.25 C, water cooled, direct injection, 4 cycles, turbo charged diesel engine
[C]	Serial No.	: *639*911196*

1.2.1 Cylinders

[C]	Number/disposition	: 3, vertical in line
[D]	Bore/stroke	: 104 mm/115 mm
[D]	Capacity	: 2931 cm^3
[D]	Compression rate	: (18±0.5) /1
[D]	Arrangement of valves	: Overhead
[D]	Cylinder liners	: Dry

1.2.2 Supercharging

[C,D]	Make, model and type	:GARRETT, TA 25, (or Mitsubishi, 49377), Turbocharging
[D]	Pressure	: 95 kPa

1.2.3 Fuel system

[C]	Fuel feed system	: With double diaphragm, mechanical
[C]	Make, type and model of fuel filter (s)	: New Holland, replaceable paper element cartridge
[D]	Capacity of fuel tank	: 90 dm^3
[C,D]	Make, model and type of injection pump	: BOSCH, VE 3/12 F 1250 LV 15601, (or BOSCH, L- 977), rotative
[C]	Serial no	: 101135

Manufacturer's production setting of injection pump

[C]	Flow rate*	: 13.50 -14.63 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, KBEL 83S
[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, hydraulic, in corporated in the fuel pump
[C]	Governed range of engine speed	: 708 - 2714 rev/min
[C]	Rated engine speed	: 2500 rev/min

1.2.5 Air cleaner

Pre-cleaner

[C]	Make, model and type	: New Holland, 1930605 06C, paper filter
[C]	Location of air intake	: In front of radiator, under bonnet

Main cleaner

[C]	Make, model and type	: New Holland, 1930825 06C, 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	: 4
[C]	Fan diameter	: 392 mm
[D]	Coolant capacity	: 12 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, 2339402140, solenoid engaged
[D]	Starter motor power rating	: 2.5 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
	Generator	
[C]	Make,model and type	: MAGNETTI MARELLI, RTT 119 AC, alternator
[D]	Power	: 1.0 kW
	Battery of accumulators	
[C]	Number	: 1
[D]	Rating	: 105 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, vertical (or horizantal above engine)

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 : 280 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

Make, model and type : New Holland, telescopic, adjustable U type

[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	329.999	329.012	1.90	1.91
2		214.182	213.542	2.93	2.94
3		157.500	157.029	3.98	3.99
4		109.947	109.618	5.70	5.72
1	II Normal	141.289	140.866	4.44	4.45
2		91.702	91.427	6.84	6.86
3		67.433	67.232	9.29	9.32
4		47.074	46.933	13.31	13.35
1	III Fast	60.014	59.834	10.44	10.48
2		38.951	38.835	16.09	16.14
3		28.643	28.557	21.88	21.95
4		19.995	19.935	31.35	31.44

* Calculated with a tyre dynamic index of 665 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	329.999	-	1.90	-
2		214.182	-	2.93	-
3		157.500	-	3.98	-
4		109.947	-	5.70	-
1	II Normal	141.289	140.866	4.44	4.45
2		91.702	91.427	6.84	6.86
3		67.433	67.232	9.29	9.32
4		47.074	46.933	13.31	13.35
1	III Fast	60.014	-	10.44	-
2		38.951	-	16.09	-
3		28.643	-	21.88	-
4		19.995	-	31.35	-

*Calculated with a tyre dynamic index of 665 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	1822.753	-	0.34	-
2		1183.037	-	0.53	-
3		869.950	-	0.72	-
4		607.292	-	1.03	-
1	II Creeper	780.408	-	0.80	-
2		506.515	-	1.24	-
3		372.468	-	1.68	-
4		260.011	-	2.41	-
1	I Slow	329.999	329.012	1.90	1.91
2		214.182	213.542	2.93	2.94
3		157.500	157.029	3.98	3.99
4		109.947	109.618	5.70	5.72
1	II Normal	141.289	140.866	4.44	4.45
2		91.702	91.427	6.84	6.86
3		67.433	67.232	9.29	9.32
4		47.074	46.933	13.31	13.35
1	III Fast	60.014	59.834	10.44	10.48
2		38.951	38.835	16.09	16.14
3		28.643	28.557	21.88	21.95
4		19.995	19.935	31.35	31.44

*Calculated with a tyre dynamic index of 665 mm (ISO 4251-1:1998)

1.4 POWER TAKE-OFF

1.4.1 Main power take-off

[C] Type : Independant

[C] Method of engagement : Mechanical

[C] Number of shafts : 1

[C] Method of changing power take-off shaft ends and speeds :Hand lever for 540 and 750 min^{-1} changing PTO shafts for 1000 min^{-1}

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	: 660 mm
[C]	Distance from the median plane of the tractor	: 0 mm
[C]	Distance behind rear-wheel axis	: 330 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

[C]	Location	: At rear of tractor
[C]	Diameter of power take-off shaft end	: 34.9 mm
[C]	Number of splines	:6,not in conformity with ISO 500:1991
[C]	Height above ground	: 660 mm
[C]	Distance from the median plane of the tractor	: 0 mm

[C]	Distance behind rear-wheel axis	: 330 mm
[C]	P.T.O speed at rated engine speed	: 787 rev/min
[C]	Engine speed at standard power take-off speed	: 2382 rev/min
[C]	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
[C]	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	: 660 mm
[D]	Distance from the median plane of the tractor	: 0 mm
[D]	Distance behind rear-wheel axis	: 330 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)

		540	750
[C]	Travelling distance for 1 revolution of take-off shaft	: 0.559 m	0.432 m
[C]	Number of power take-off shaft revolutions for one revolution of (rear) driving wheels	:7.475	9.674
[C]	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

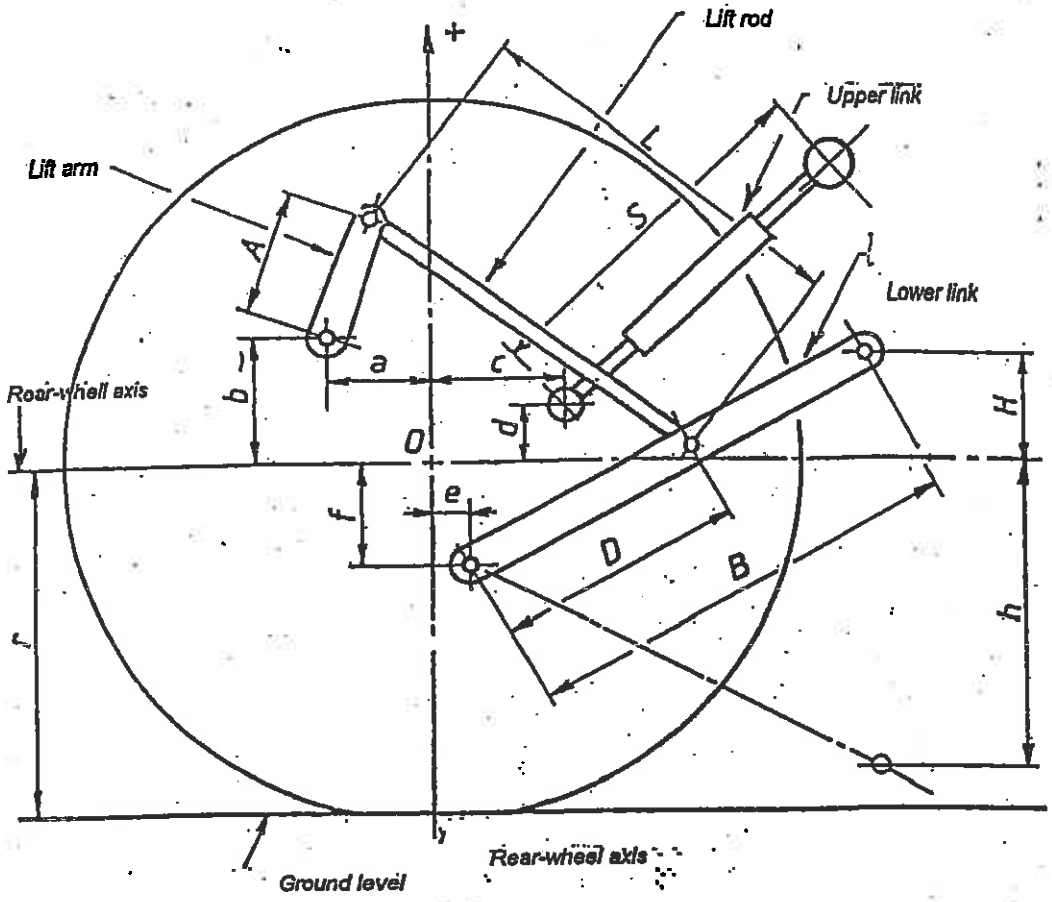
[C]	Make, model and type	: NEW HOLLAND, Lift-O-matic, draft and float controlled
[C]	Type of hydraulic system	: Open center system
[C]	Type and number of cylinders	: 1, single acting
[C]	Type of linkage lock for transport	: Hydraulic
[D]	Relief valve pressure setting	: 19.4-19.9 MPa
[D]	Opening pressure of cylinder safety valve: 23.4-24.5 MPa	
[D]	Lift pump type	: Gear
[D]	Transmission between pump and engine : With gear	
[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, 2, double acting
[C]	Maximum volume of oil available to external cylinders	: None

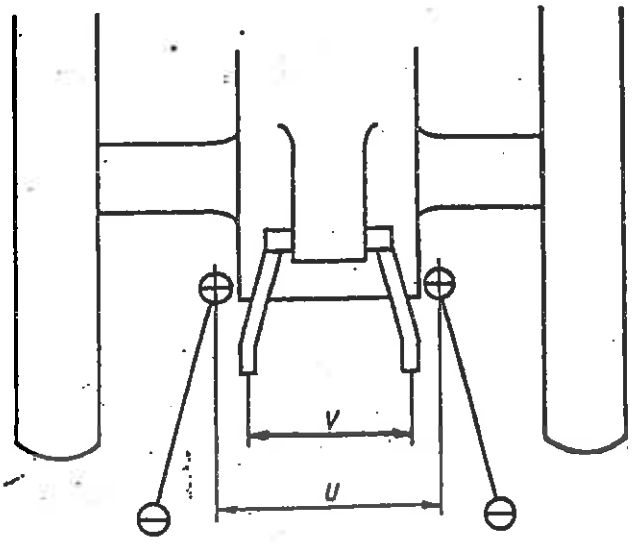
1.6 Three- point linkage

[C]	Category	: I and 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)	255	255
[C] Length of lower links	(B)	920	920
Distance of lift arm pivot point from rear wheel axis			
- [C] Horizontally	(a)	6	6
- [C] Vertically	(b)	295	295
[C] Horizontal distance between the two lower link points	(u)	500	500
[C] Horizontal distance between the two lift arm end points	(v)	495	495
[C] Length of upper link	(S)	from 635 to 980	772
Distance of upper link pivot point from rear wheel axis			
- [C] horizontally	(c)	180/195	195
- [C] vertically	(d)	190/240	190
Distance of lower link pivot point from rear wheel axis			
- [C] horizontally	(e)	75	75
- [C] vertically	(f)	208	208
[C] Distance of lower link pivot points to lift rod pivot points on lower links	(D)	435/510	435
[C] Length of lift rods	(L)	from 455 to 610	570
Height of lower hitch points relative to the rear wheel axis			
- [C] in low position	(h)	from 175 to 530	457
- [C] in high position	(H)	from 205 to 440	256
[C] Height above ground of lower hitch points when locked in transport position (*)	Any height within lift range		
[C] (*)Assuming r = 665 mm tire dynamic radius index of ISO 4251-1:1998			

1.7 SWINGING DRAWBAR

[C]	Type	: Clevis
	Height above ground;	
[C]	Maximum	: 470 mm
[C]	Minimum	: 360 mm
[C]	Type of adjustment	: Reversing
[C]	Distance of hitch point from rear – wheel axis horizontally	: 780 mm
[C]	Distance of hitch point from p.t.o shaft ends	
	Vertically	: 190/300 mm
	Horizontally	: 450 mm
	Lateral adjustment (center of clevis)	
[C]	Right-hand	: 85 mm
[C]	Left-hand	: 85 mm
[C]	Distance of pivot point from rear-wheel axis horizontally	: 144 mm
[C]	Diameter drawbar pin hole	: 29 mm
[D]	Maximum vertical permissible load	: None

1.8 TRAILER HITCH

[C]	Type	: Clevis, adjustable
[C]	Hole diameter	: 29 mm
[C]	Height above ground	: 930 mm
[C]	Distance of hitch point from rear – wheel axis, horizontally	: 430 mm
	Distance of hitch point from PTO shaft end	
[C]	Vertically	: 270 mm
[C]	Horizontally	: 100 mm
[D]	Maximum vertical permissible load	: None

1.9 HOLED DRAWBAR :None

1.10 STEERING

[D] Make, model and type : DANFOSS, OSPC 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 : NEW HOLLAND, 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 service brake

[C] Method of operation : By hand lever operated

1.12 WHEELS

Number

[C] Front : 2/steering

[C] Rear : 2/driving

[C] Wheelbase : 2175 mm

Track width adjustment

		Minumum mm	Maximum Mm	Adjustment method
[D]	Front	1422	1822	Extending of front axle
[D]	Rear	1424	1924	reversing wheels and off-set lug rims

1.13 PROTECTIVE STRUCTURE

[C]	Make, model and type	: NEWHOLLAND,TD-KAB-1 (CNH GK6)
[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	: Cab
[C]	Tiltable / not tiltable	: Not tiltable
	OECD approval	:
[D]	Approval number	: 4/0 770/1
[D]	Date of approval	: 07/05/2004

[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,2001/SM 80X, cloth covered, back rested
[C]	Seat and steering wheel reversible	: No
[C]	Type of suspension	: Mechanical, with spring
[C]	Type of damping	: Amortisor
	Range of adjustment	
[C]	Longitudinally	:150 mm
[C]	Vertically	: 65 mm
[C]	Safety belt	: None

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1.14.2 Optional driver's seat(s)

[D] Make, model and type : PİLOT, T 300 or PİLOT T 300 A, 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 : None

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	1220	140x85	198
[C]	Sidelights	1580	75x70	785
[C]	Rearlights	1580	75x70	680
[C]	Reflectors	1580	75x40	715

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
3618	1824	2324	2537	2435

2.2 GROUND CLEARANCE (unballasted tractor)

Clearance – limiting part :270 mm (bottom point of swinging drawbar)

2.3 TRACTOR MASS (unballasted tractor with cab)

	Without driver kg	with driver kg
Front	934	941
Rear	1792	1860
Total	2726	2801

2.4 TRACK SPECIFICATION: Not applicable

2.5 TYRES AND TRACK WIDTH SPECIFICATIONS

	Front	Rear
Tyres :	LASSA	GOOD YEAR
Dimensions	7.50-16 SL	14.9 –30
Ply rating	6	6
Type	Diagonal	Diagonal
Maximum load (tyre manufacturer's)	7.30 kN	16.32 kN
Maximum load (tractor manufacturer's)	7.30 kN	16.32kN
Inflation pressure (tyre manufacturer's)	280 kPa	140 kPa
Dynamic radius index	376 mm	665 mm
Chosen track width	1422 mm	1424 mm

2.6 FUEL

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

Density at 15 °C : PTO : 0.827 g/cm^3
Drawbar: 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	7.3	200	400
Gear box	46	1600	400
Rear axle *			
Final drive (rear) *			
Hydraulic system *			
Steering	1.8	-	800

* Common with gear box

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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 :28/08 - 05/09/2003, 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						
45.1	2300	565	11.63	14.06	258	3.21
3.1.2. Power at rated engine speed						
44.2	2500	614	11.76	14.23	266	3.11
3.1.3. Standard Power Take-off speed (540 ± 10 rev/min)						
44.6	2200	540	11.39	13.77	255	3.24
3.1.4. PART LOADS						
3.1.4.1.The torque corresponding to maximum power at rated engine speed						
44.2	2500	614	11.76	14.23	266	3.11
3.1.4.2. 85% of torque obtained in 3.1.4.1.						
38.8	2584	634	10.92	13.20	281	2.94
3.1.4.3. 75% of torque defined in 3.1.4.2.						
29.5	2620	643	8.78	10.62	298	2.78
3.1.4.4. 50% of torque defined in 3.1.4.2.						
19.9	2643	649	6.64	8.03	335	2.47
3.1.4.5. 25% of torque defined in 3.1.4.2.						
10.1	2687	660	4.85	5.87	481	1.72
3.1.4.6. No load						
0	2714	666	3.28	3.97	-	-

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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						
44.6	2200	540	11.39	13.77	255	3.24
3.1.5.2. 85% of torque obtained in 3.1.5.1.						
39.8	2308	567	10.13	12.25	255	3.25
3.1.5.3. 75% of torque defined in 3.1.5.2.						
30.6	2364	580	7.99	9.66	262	3.16
3.1.5.4. 50% of torque defined in 3.1.5.2.						
20.7	2405	590	6.10	7.37	294	2.81
3.1.5.5. 25% of torque defined in 3.1.5.2.						
10.6	2468	606	4.25	5.14	400	2.07
3.1.5.6. No load						
0	2501	614	2.75	3.33	-	-

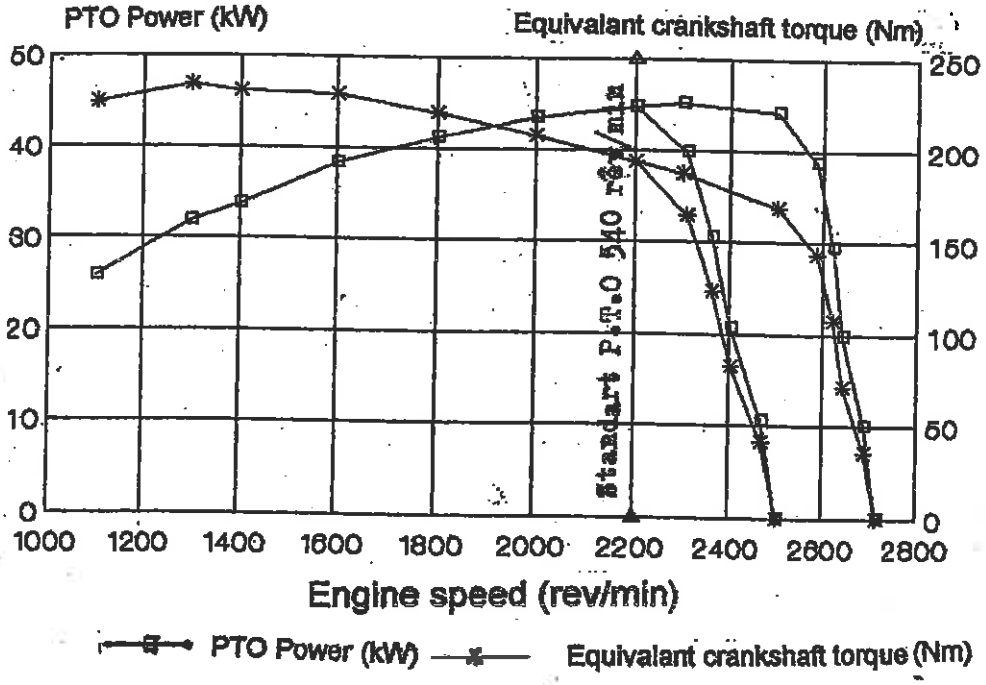
Maximum engine speed at no load : 2714 rev/min
Torque at maximum power(equivalent crank shaft)
At rated engine speed :168.86 Nm
At 2-hour test :187.42 Nm
Maximum torque :233.83 Nm(1300 rev/min engine speed)

Mean atmospheric conditions
Temperature : 23 ^{0}C
Pressure : 91.5 kPa
Relative humidity : 41%

Maximum temperatures (°C)
Cooling water : 78
Engine oil : 110
Fuel : 40
Engine air intake : 29

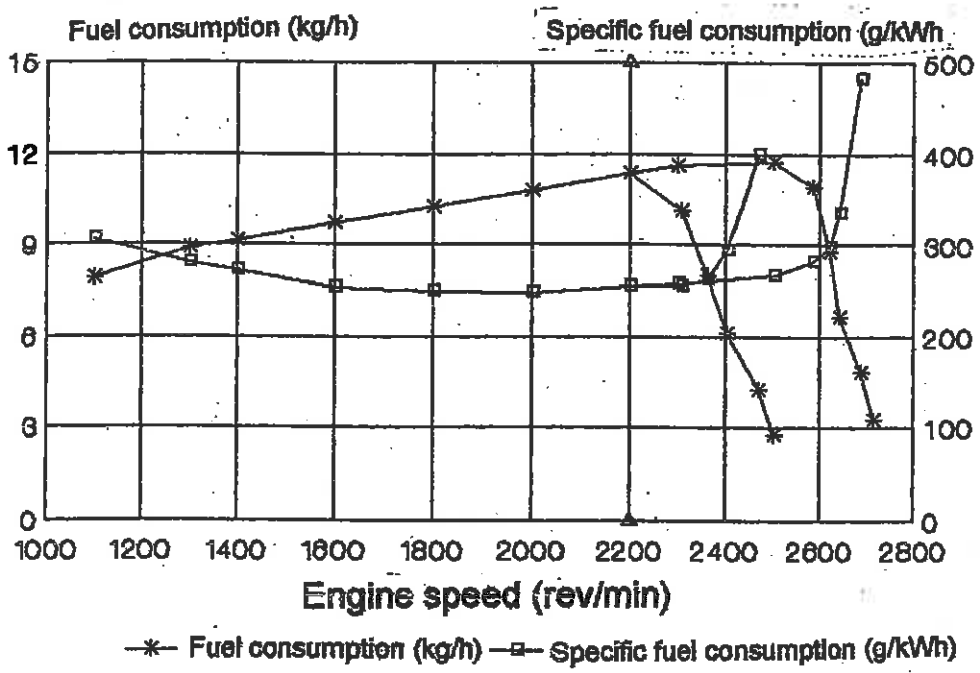
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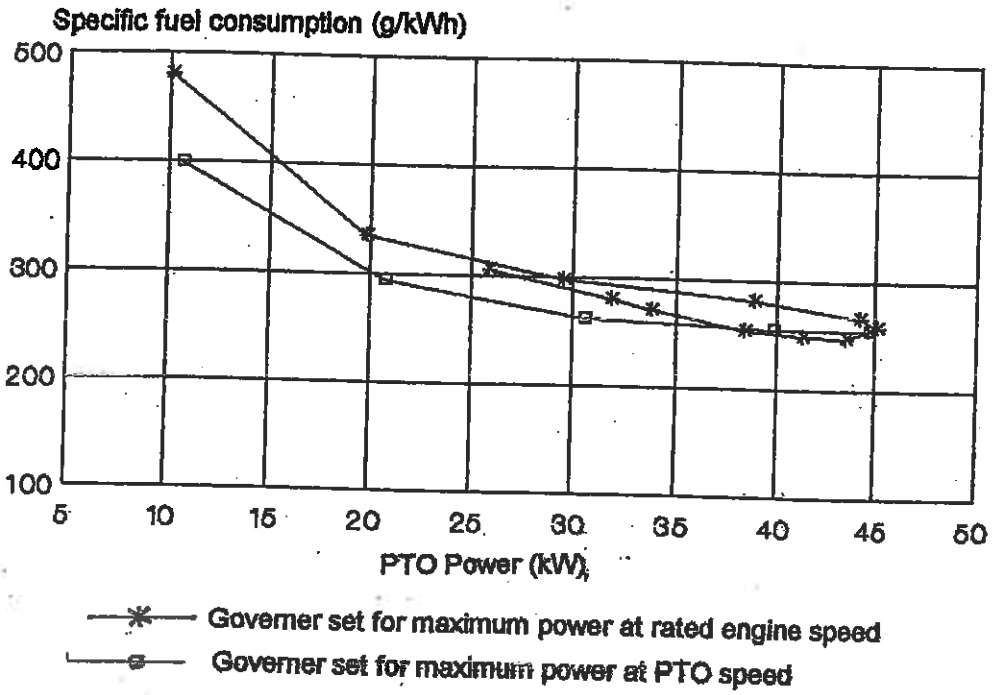
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PTO POWER



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PTO POWER :



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3.2 HYDRAULIC POWER AND LIFTING FORCE

Date of tests : 26/09/2003

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) 20.5	60	70	2673	-	-
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) 18.5	(3) 67		2677	34.4	10.6
3.2.1.2.3 Maximum avaible flow and maximum power from one coupler pair [1]	(2) 18.5	(3) 67		2677	34.4	10.6
3.2.1.2.4 Maksimum flow rate at minimum pressure	(2) 1.0	(3) 60		2712	41.8	-

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	208	208
Vertical movement With lifting force Without lifting force	 mm mm	 679 713	 890 947
Maximum corrected force exerted through full range	kN	25.8	17.2
Corresponding pressure of hydraulic fluid	MPa	18.5	18.5
Moment about rear wheel axis	kNm	25.7	27.6
Maximum tilt angle of mast from vertical	Degrees	-	17°20'

Lifting heights relative to the horizontal lower links											
mm	-320	-249	-200	-100	0	+100	+200	+300	+400	+430	+570
Lifting forces (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) At the hitch point: Corresponding pressure:18.5 MPa											
kN	-	28.1	28.5	28.9	29.1	28.5	28.2	28.2	28.9	25.8	-
At the frame: Corresponding pressure: 18.5 MPa											
kN	22.8	22.9	23.0	23.1	22.4	21.8	20.7	19.8	18.9	18.8	17.2

3.3 DRAWBAR POWER AND FUEL CONSUMPTION (unballasted tractor)

Date of tests : 09-12/03/2004

Type of track : Concrete

Height of drawbar above ground	Tyre inflation pressure	
	Front	Rear
360 mm	280 kPa	140 kPa

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Gear and range	Power	Drawbar pull	Speed	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	Temperature °C	Relative humidity %	Pressure kPa
3.3.1. MAXIMUM POWER IN TESTED GEARS (Unballasted tractor)													
I-1	8.7	17.55	1.79	2702	15.0	777	1.08	14	69	98	10	42	92.5
I-2	13.3	17.45	2.75	2697	15.1	606	1.38	14	69	98	10	42	92.5
I-3	17.9	17.41	3.70	2664	15.0	502	1.67	14	69	98	10	42	92.5
II-1	19.9	17.38	4.13	2664	15.0	485	1.73	14	69	98	10	42	92.5
I-4	24.6	17.45	5.08	2551	14.9	432	1.94	14	69	98	10	42	92.5
II-2	29.1	17.22	6.08	2507	13.6	393	2.13	14	69	98	10	42	92.5
II-3	34.7	15.66	7.97	2345	11.0	332	2.52	14	69	98	10	42	92.5
III-1	36.3	14.81	8.83	2297	10.0	321	2.60	14	69	98	10	42	92.5
II-4	34.5	10.59	11.72	2311	7.0	335	2.50	14	69	98	10	42	92.5
3.3.2.FUEL CONSUMPTION													
3.3.2.1. In selected gear, at maximum power at rated speed													
III-1	33.1	12.00	9.93	2509	8.0	347	2.41	17	72	100	15	28	91.5
3.3.2.1.1. 75 % of pull at maximum power at rated speed													
III-1	25.8	9.00	10.31	2555	6.0	414	2.02	17	72	100	15	28	91.5
3.3.2.1.2. 50 % of pull at maximum power at rated speed													
III-1	18.1	6.00	10.84	2636	4.1	482	1.73	17	72	100	15	28	91.5
3.3.2.1.3. Next higher gear at reduced engine speed; same pull and travelling speed as in 3.3.2.1.1.													
II-4	25.8	9.00	10.31	2006	6.0	347	2.41	17	72	100	15	28	91.5
3.3.2.1.4. Next higher gear at reduced engine speed; same pull and travelling speed as in 3.3.2.1.2.													
II-4	18.3	6.09	10.84	2069	4.2	400	2.09	17	72	100	15	28	91.5
3.3.2.2. in selected gear nearest to 7.5 km/h at rated speed													
II-2	29.1	17.22	6.08	2507	13.6	393	2.13	17	72	100	15	28	91.5
3.3.2.2.1. 75 % of pull at maximum power at rated speed													
II-2	24.2	12.92	6.73	2612	8.2	426	1.97	17	72	100	15	28	91.5
3.3.2.2.2. 50 % of pull at maximum power at rated speed													
II-2	16.9	8.61	7.07	2669	5.6	471	1.78	17	72	100	15	28	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.													
II-3	24.2	12.93	6.74	1922	8.1	332	2.52	17	72	100	15	28	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.													
II-3	16.9	8.62	7.06	1956	5.4	347	2.42	17	72	100	15	28	91.5

4. OPTIONAL TESTS : None

6. REPAIRS : None

7. REMARKS : Atmospheric pressure 91.5 and 92.5 kPa less than 96.6 kPa fixed in the OECD code.

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REPORT NUMBER:937/2220-TGK.2

TEST COMMISSION

Bekir İBAN
Agricultural Engineer

Mahmut CİVCİV
Mechanical Engineer

Kerim EKMEKCİ
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 **28/04/2004**

Dr. Hamdi TAŞBAŞ
Director