STÁTNÍ ZKUŠEBNA ZEMĚDĚLSKÝCH,
POTRAVINÁŘSKÝCH
A LESNICKÝCH STROJŮ

163 04 PRAHA 6, ŘEPY

Report on test in accordance with the O. E. C. D. STANDARD CODES
for the Official Testing of Agricultural Tractors

CODE II

Restricted Code

Date of approval: 27th May 1994

O.E.C.D. No. 1517/1



Agricultural Tractor
JOHN DEERE 2700 (4WD) 40 km/h version

Manufactured by:
ZETOR a.s.
632 00 Brno, CZ

Report No. 11329
Date of test: November 1993 - April 1994

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Tractor manufacturer's name and address:	ZETOR a.s., 632 00 Brno, Czech Republic
Location of tractor assembly:	Brno, Czech Republic
Submitted for test by:	JOHN DEERE PRODUCT ENGINEERING CENTER, P.O.Box 8000, Waterloo,
Selected for test by:	The manufacturer
Place of running-in:	Brno, Czech Republic
Duration of running-in:	60 hours
Location of test:	SZZPLS Praha 6 - Řepy, Czech Republic

I. SPECIFICATIONS OF TRACTOR

TRACTOR

Make:	JOHN DEERE
Model:	2700 40 km/h version
Type:	Wheeled, unit construction, all wheels drive
Number of driving wheels:	4
Serial No.:	001 095
1st Serial No.:	001 001

ENGINE

Make:	ZETOR
Model:	1201
Type:	4-stroke diesel engine, direct injection, water cooled, turbocharged
Serial No.:	000 222

Cylinders

Number/disposition:	4, in-line, vertical
Bore/stroke:	105 mm/120 mm
Capacity:	4156 cm^3
Compression ratio:	17:1

Arrangement of valves:	Overhead
Cylinder liners:	Wet, replaceable
Supercharging	
Make, model and type:	ČZ, K 27 3060 G 611, exhaust driven
Pressure:	175±5 kPa
Intercooler:	None
Fuel system	
Fuel feed system:	Lift pump piston-type, integral with fuel injection pump
Make, model and type of fuel filters:	AUTOBRZDY, 443 741 111 001, one-stage with paper cartridge
Capacity of fuel tank:	105 dm^3
Make, model and type of injection pump:	MOTORPAL, 4M 3163, in-line
Serial No.:	Ly 0019
Manufacturer's production setting of injection pump:	
Flow rate (rated engine speed and full load):	17.04+0.48 dm^3/h
Timing:	$23^{o}+1^{o}$ before TDC
Make, model and type of injection:	MOTORPAL, DOP 150 S 428-4104, 4 hole
Injection pressure:	22.0-0.8 MPa
Governor	
Make, model and type:	MOTORPAL, RV 3M 350/1100 3307, centrifugal, variable speed with overpressure corrector
Governed range of engine speed:	700-2460 rev/min
Rated engine speed:	2200 rev/min
Air cleaner	
Make, model and type:	SANDRIK, 91 050, dry with paper element, integrated cyclon type pre-cleaner
Location of air intake:	Under bonnet forward of radiator
Maintenance indicator:	Warning light on instrument panel

Lubrication system	
Type of feed pump:	Gear
Type of filter:	Full flow with replaceable paper element
Number:	1
Oil cooler:	Heat exchanger with engine coolant
Cooling system	
Type of coolant:	Water and anti-freeze
Type of pump:	Centrifugal, belt driven
Specification of fan:	Axial, belt driven
Number of blades:	8
Fan diameter:	480 mm
Coolant capacity:	19 dm^3
Type of temperature control:	Thermostat
Superpressure system:	40±10 kPa
Starting system	
Make, model and type:	MAGNETON, 443 115 144 763, electrical, solenoid engaged
Starter motor power rating:	3.5 kW
Cold starting aid:	Intake air heating-up
Safety device:	Gear selector lever to be in neutral position
Electrical system	
Voltage:	12 V, negative earth
Generator:	
Make, model and type:	MAGNETON, 443 113 516 653, alternator, belt driven
Power:	770 W
Battery:	
Number:	1
Rating:	125 Ah at 20 hours
Exhaust system	
Make, model and type:	ZETOR, 10.014.010, exhaust pipe
Location:	Left-hand side of engine, vertical

TRANSMISSION TO WHEELS

Clutch

Make, model and type:	ZETOR, 78.021.000, dry for transmission only
Number of plates:	1
Diameter of plates:	325 mm
Method of operation:	Hydraulically by pedal

Gear box

Make, model and type:	ZETOR, 10.121.000, mechanical
Arrangement:	Synchromesh gear box with 4 forward and 1 reverse speeds, group gear box with two speed ranges (L and H) and two-speed hydraulically actuated torque multiplier (M1 and M2)
Number of gears:	16 forward and 4 reverse
Available options:	None
Oil cooler:	None

Rear axle and final drives

Make, model and type:	ZETOR, 78.154.000, crown wheel and bevel pinion differential and planetary final drives
Differential lock:	
Type:	Mechanical
Method of engagement:	Pneumatically by pedal
Method of disengagement:	Self-disengaging

Front axle and final drives

Make, model and type:	ZTS, UR III, crown wheel and bevel pinion differential and planetary final drives
Differential lock:	
Type:	Mechanical
Method of engagement:	Automatic
Method of disengagement:	Automatic

Total ratios and travelling speeds

Gear	Group	Number of engine revolutions for one revolution of the driving wheels	Nominal travelling speed at rated engine speed of 2200 rev/min km/h (*)
1	LM1	335.442	1.97
2		226.999	2.90
3		144.232	4.57
4		100.203	6.58
1	LM2	258.329	2.55
2		174.815	3.77
3		111.075	5.94
4		77.168	8.54
1	HM1	86.011	7.67
2		58.205	11.33
3		36.983	17.83
4		25.693	25.66
1	HM2	66.238	9.95
2		44.824	14.71
3		28.481	23.15
4		19.787	33.32
R	LM1	190.386	3.46
	LM2	146.619	4.50
	HM1	48.817	13.51
	HM2	37.595	17.54

L: Low range, H: High range, M1: Torque multiplier engaged in position 1 (turtle), M2: Torque multiplier engaged in position 2 (rabbit)

(*) Calculated with a tyre dynamic radius index of 795 mm (ISO 4251/1-1988).

Number of revolutions of front wheels for one revolution of rear-wheels: 1.4887

POWER TAKE-OFF

Main power take-off

Type: Independent

Method of engagement: Hydraulic clutch operated by hand lever, independent of main drive clutch, wet multiplate

Number of shafts: 1

Method of changing power take-off speeds: Manually by shaft turning

Power take-off proportional to engine speed

Location: At rear of tractor

P.T.O.	Diameter of power take-off shaft end mm	Number of splines	In conformity with ISO 500/1991
540	34.9	6	Yes
1000	34.9	21	Yes

Height above ground: 676 mm

Distance from the median plane of tractor: 0 mm

Distance behind rear-wheel axis: 480 mm

P.T.O.	P.T.O. speed rev/min	Engine speed rev/min	Ratio of rotation speeds (engine/P.T.O.)	Power restriction kW
540	540	1913	3.5431	38.0
	621	2200		
1000	1000	1950	1.9500	None
	1128	2200		

Direction of rotation (viewed facing driving end): Clockwise

Power take-off proportional to ground speed

P.T.O. and range		Travelling distance for one revolution of P.T.O. shaft m	Number of P.T.O. shaft revolutions for one revol. of (rear) driving wheels
540	L	0.223	22.3531
	H	0.872	5.7316
1000	L	0.123	40.6147
	H	0.480	10.4140

L: Low range, H: High range

Direction of rotation with forward gear engaged (viewed facing driving end): Clockwise

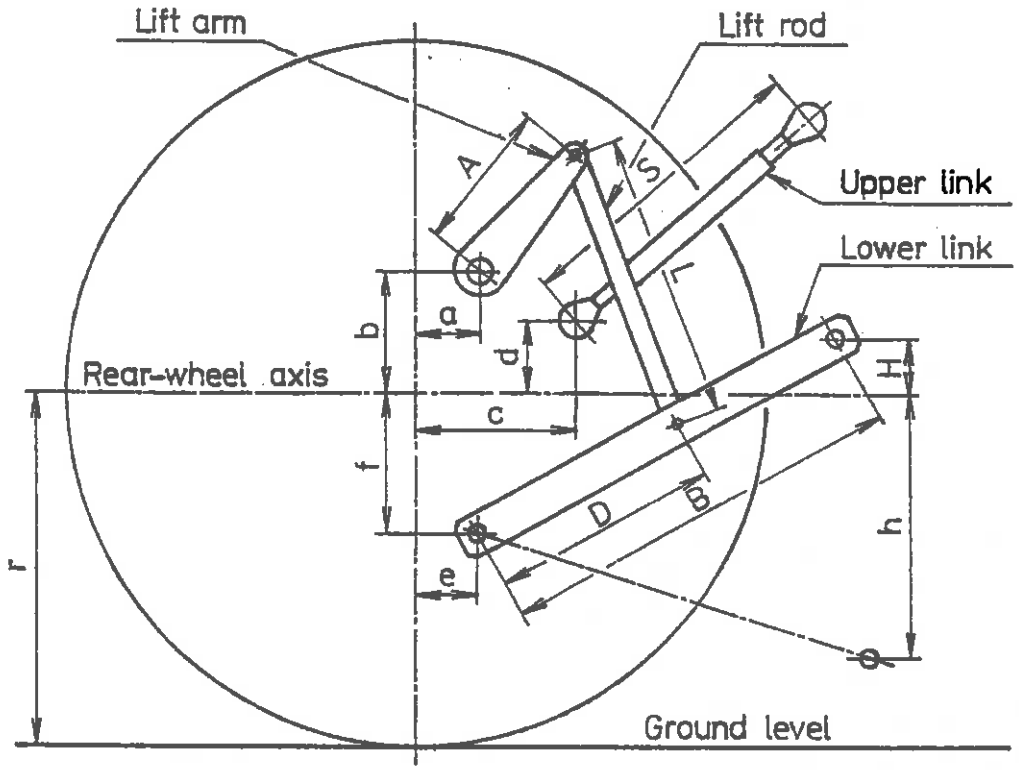
POWER LIFT

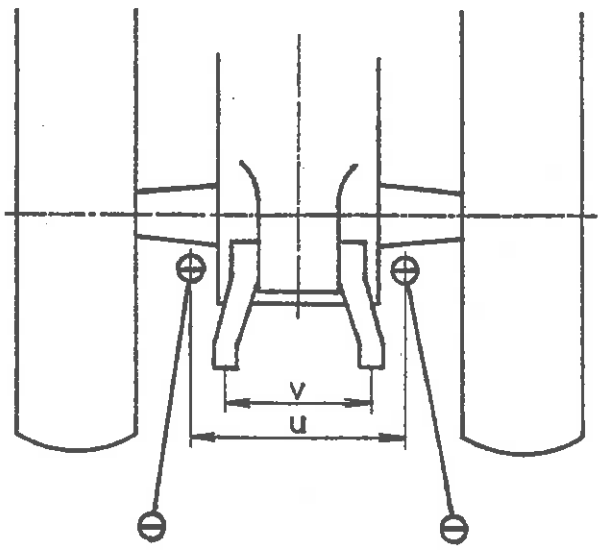
Make, model and type:	ZETOR, 10.940.403, hydraulic with mechanical position, draft or mixed control, top link sensing
Type of hydraulic system:	Open centre
Type and number of cylinders:	1 integral single-acting and 1 external single-acting
Type of linkage lock for transport:	Hydraulic
Relief valve pressure setting:	16.0+2.0 MPa
Opening pressure of cylinder safety valve:	21.0+2.0 MPa
Lift pump type:	Gear
Transmission between pump and engine:	Gear driven from gear box
Type and number of filters:	1 magnetic, 1 screen and 1 full flow filter with replaceable paper cartridge in delivery side of pump of gear box
Site of oil reservoir:	Transmission housing

Type, number and location of tapping points:	4 pressure and 1 return, quick release at rear of tractor and 2 pressure and 1 return, quick release at right front corner of cab
Maximum volume of oil available to external cylinders:	10 dm^3

Three-point linkage

Category:	2, in conformity with ISO 730/1-1990
Category adapter:	None





Linkage geometry dimensions:

		Dimension or range mm	Settings used in test mm
Length of lift arms	(A)	330	330
Length of lower links	(B)	910	910
Distance of lift arm pivot point from :horizontally	(a)	150	150
rear-wheel axis :vertically	(b)	275	275
Horizontal distance between the 2 lower link points	(u)	510	510
Horizontal distance between the 2 lift arm end points	(v)	590	590
Length of upper link	(S)	618 to 870	680
Distance of upper link pivot point from :horizontally	(c)	360	360
rear-wheel axis :vertically	(d)	116, 156, 196, 231	196
Distance of lower link pivot point from :horizontally	(e)	144	144
rear-wheel axis :vertically	(f)	249	249
Distance of lower link pivot points to lift rod pivot points on lower links	(D)	460, 510	460
Length of lift rods	(L)	555 to 685	610
Height of lower hitch points relative to the rear-wheel axis:			
- in low position	(h)	438 to 809	595
- in high position	(H)	-87 to 222	175
Height above ground of lower hitch points when locked in transport position (*)		Any height withing lift range	

(*) Assuming the tyre dynamic radius index r=795 mm of ISO 4251/1-1988

SWINGING DRAWBAR

Type: Clevis

Height above ground:
Maximun: 586 mm
Minimum: 391 mm

Type of adjustment:	Inverting drawbar and clevis
Distance of hitch point from rear-wheel axis, horizontally:	869, 877 and 880 mm
Distance of hitch point from power take-off shaft end:	
Vertically:	90, 175, 200 and 285 mm
Horizontally:	389, 397 and 400 mm
Lateral adjustment:	
Right-hand:	80 and 160 mm
Left-hand:	80 and 160 mm
Distance of pivot point from rear-wheel axis, horizontally:	280 mm to front
Diameter drawbar pin hole:	32 mm
Maximum vertical permissible load:	8 kN

TRAILER HITCH — No fitted

HOLED DRAWBAR

Number of holes:	7
Distance between holes:	80 mm
Hole diameter:	32 mm
Thickness/width of the drawbar:	2x20 mm/90 mm
Height above ground:	
Maximum:	970 mm
Minimum:	200 mm
Horizontal distance to power take-off shaft end:	574 mm

FRONT TOWING HITCH

Height above ground:	832 mm
Diameter of pin hole:	28 mm

STEERING

Make, model and type:	HYDRAULIK NORD, LAGB 160-1, hydrostatic
Method of operation:	Independent hydraulic circuit for steering

Pump:	Gear, driven from engine
Ram:	Double-acting cylinder on the front axle
Working pressure:	10.0 MPa

BRAKES

Servis brake

On the rear axle:

Make, model and type:	ZETOR, 78.227.000, wet disc, multiplate, 5 discs each side
Method of operation:	Hydraulically by pedals, coupled or independent

On the front axle:

Make, model and type:	ZETOR, 78.225.000, dry disc on the drive shaft to the front axle
Method of operation:	Hydraulically by coupled pedals
Trailer braking take-off:	No fitted

Parking brake

Type:	Common with service brake on the rear axle
Method of operation:	Mechanically by hand lever with ratchet

WHEELS

Number:	
Front:	2, steering and driving
Rear:	2, driving
Wheelbase:	2369 mm

Track width adjustment:

	Minimum mm	Maximum mm	Adjustment method
Front	1560	1830	By changing wheel discs to either side of wheel centre
Rear	1505	1805	Reversing wheels and off-set lug rims

PROTECTIVE STRUCTURE

Make, model and type:	ZETOR, BK 7520, cab with integrated safety frame
Manufacturer's name and address:	ZETOR a.s., 623 00 Brno, Czech Republic
Protective device:	Cab, not tiltable
O.E.C.D. approval number:	CSD 1339/5

DRIVER'S SEAT

Make, model and type:	MARS, Zetor 5911 - 5400, upholstered seat
Type of suspension:	Parallelogram linkage adjustable for driver's weight
Type of damping:	Hydraulic
Range of adjustment:	
Longitudinal:	150 mm
Vertical:	60 mm

MISCELLANEOUS

Additional seat:	
Location:	Left-hand side of driver
Number of places:	1

LIGHTING

	Height above ground of centre mm	Size mm	Distance from outside edge of lights to median plane of tractor mm
Headlights	1035	120x120	200
Sidelights	1710	60x65	720
Rearlights	1795	120x40	770
Reflectors	Not fitted		

II. TEST CONDITIONS

Overall dimensions

Length mm	Width		Height at top of	
	minimum mm	maximum mm	protective structure mm	exhaust silencer mm
4190	2020	2250	2670	2790

Ground clearence (unballasted tractor): 364 mm

Clearance-limiting part: Swinging drawbar in lowest position

Tractor mass (with cab)

	Without driver kg	With driver kg
Front	1595	1615
Rear	2315	2370
Total	3910	3985

Tyre and track width specifications

	Front	Rear
Tyres:		
Make	BARUM	MICHELIN
Dimensions	12.4-24	16.9-38
Ply rating	8	8
Type	diagonal	diagonal
Maximum load (tyre manufacturer's)	11.32 kN	20.16 kN
Maximum load (tractor manufacturer's)	11.25 kN	17.00 kN
Inflation pressure (tyre manufac.)	230 kPa	170 kPa
Dynamic radius index	540 mm	795 mm
Chosen track width:	1645 mm	1505 mm

Oils and lubrication

Capacity and change interval:

	Capacity dm^3	Oil change h	Filter change h
Engine	10.0	200	200
Gear box	40.0	1800	200
Front axle	3.1	1800	-
Rear axle	Common with gear box		
Final drive (front)	2x1.0	1800	-
Final drive (rear)	Common with gear box		
Hydraulic system	Common with gear box		
Steering	4.5	2400	2400

Specifications:

	Recommended	Used during test
Engine oil: Type Viscosity Classification	 SAE 20W/40 14.0 cSt at 100 °C API SE/CD+	As recommended
Transmission oils: Type Viscosity Classification	 SAE 80W 7.5 cSt at 100 °C API GL-4	As recommended
Steering oil: Type Viscosity Classification	 OH-HM 32 28.8 cSt at 40 °C ISO 6743 HM 32	As recommended

Hydraulic fluid: Same as transmission

Grease:

Number of lubrication points: 19

Fuel

Type: Diesel fuel, in conformity with national standard ČSN 65 6506

Density at 15 °C: 0.843 g/cm^3 for P.T.O. tests
0.841 g/cm^3 for drawbar tests

III. TEST RESULTS

COMPULSORY TESTS RESULTS

1. MAIN POWER TAKE-OFF

Date and location of tests: 16th November 1993, SZZPLS Praha
Type of dynamometer: FROUDE AG 400, eddy-current

Power	Speed		Fuel consumption			Specific energy
	Engine	P.T.O.	Hourly		Specific	
kW	rev/min		kg/h	l/h	g/kWh	kWh/l
1.1 MAXIMUM POWER - TWO-HOUR TEST						
57.8	2049	1051	14.41	17.09	249	3.38
1.2 POWER AT RATED ENGINE SPEED						
56.7	2200	1128	14.58	17.30	257	3.28
1.3 STANDARD POWER TAKE-OFF SPEED 1000 rev/min						
57.0	1950	1000	14.03	16.64	246	3.43
1.4 PART LOADS 1.4.1 the torque corresponding to maximum power at rated engine speed						
56.7	2200	1128	14.58	17.30	257	3.28
1.4.2 85 % of torque obtained in 1.4.1						
49.8	2274	1166	13.43	15.93	270	3.13
1.4.3 75 % of torque defined in 1.4.2						
37.9	2307	1183	11.31	13.42	298	2.82
1.4.4 50 % of torque defined in 1.4.2						
25.5	2328	1194	9.09	10.78	356	2.37
1.4.5 25 % of torque defined in 1.4.2						
12.8	2336	1198	6.86	8.14	536	1.57
1.4.6 unloaded						
-	2363	1212	4.81	5.71	-	-

Power	Speed		Fuel consumption			Specific energy
	Engine	P.T.O.	Hourly		Specific	
kW	rev/min		kg/h	l/h	g/kWh	kWh/l
1.5 PART LOADS AT STANDARD POWER TAKE-OFF SPEED 1000 rev/min						
1.5.1 the torque corresponding to maximum power						
57.0	1950	1000	14.03	16.64	246	3.43
1.5.2 85 % of torque obtained in 1.5.1						
52.8	2126	1090	13.47	15.98	255	3.30
1.5.3 75 % of torque defined in 1.5.2						
40.2	2159	1107	11.13	13.20	277	3.05
1.5.4 50 % of torque defined in 1.5.2						
27.4	2204	1130	8.89	10.55	324	2.60
1.5.5 25 % of torque defined in 1.5.2						
13.8	2217	1137	6.54	7.76	474	1.78
1.5.6 unloaded						
-	2231	1144	4.24	5.03	-	-

No load maximum engine speed: 2363 rev/min

Torque (equivalent crankshaft) at maximum power at rated engine speed: 246.1 Nm

Torque (equivalent crankshaft) at maximum power: 269.4 Nm

Maximum torque (equivalent crankshaft): 321.5 Nm
(engine speed: 1500 rev/min)

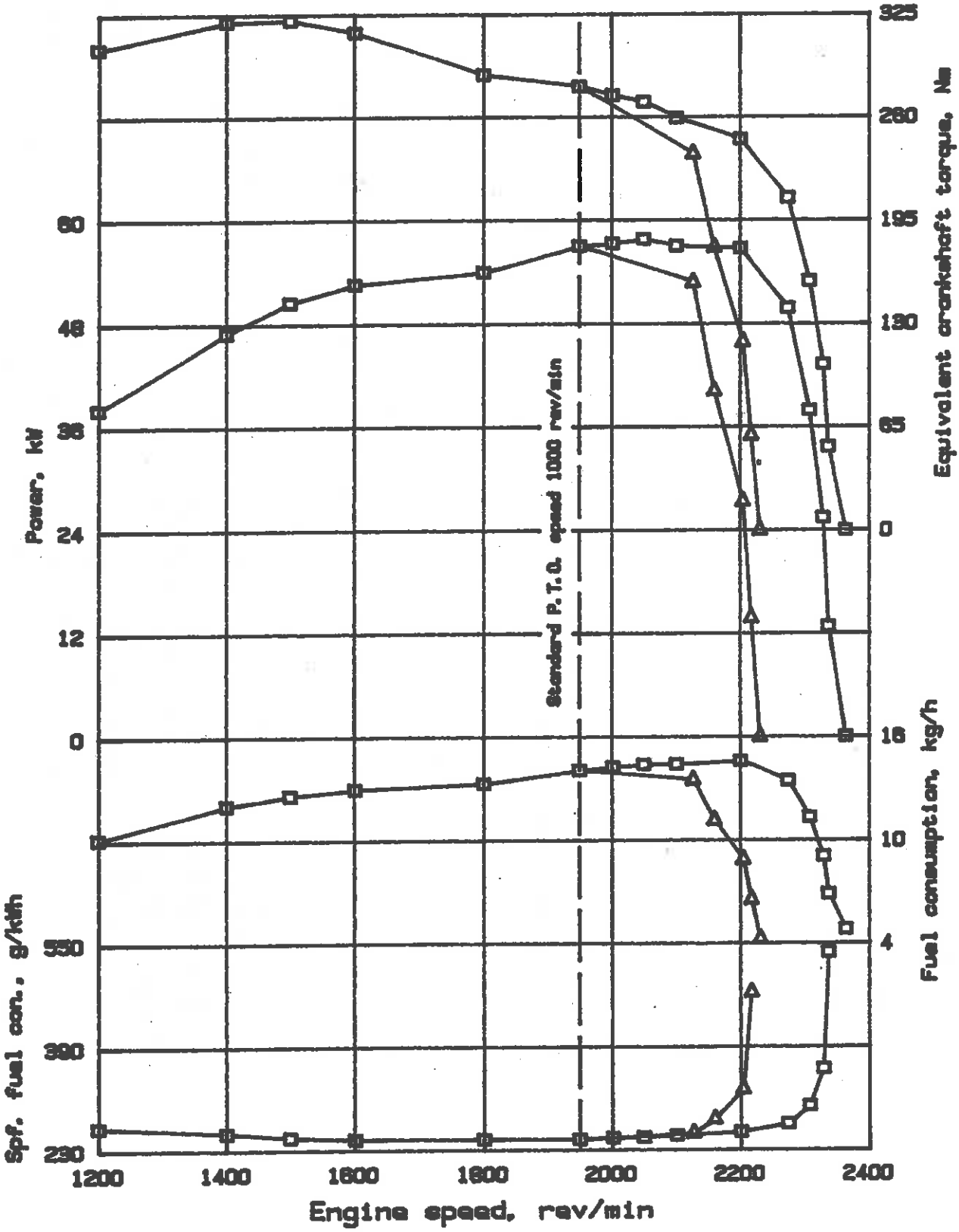
Mean atmospheric conditions:

Temperature: 18 °C
Pressure: 97.0 kPa
Relative humidity: 40 %

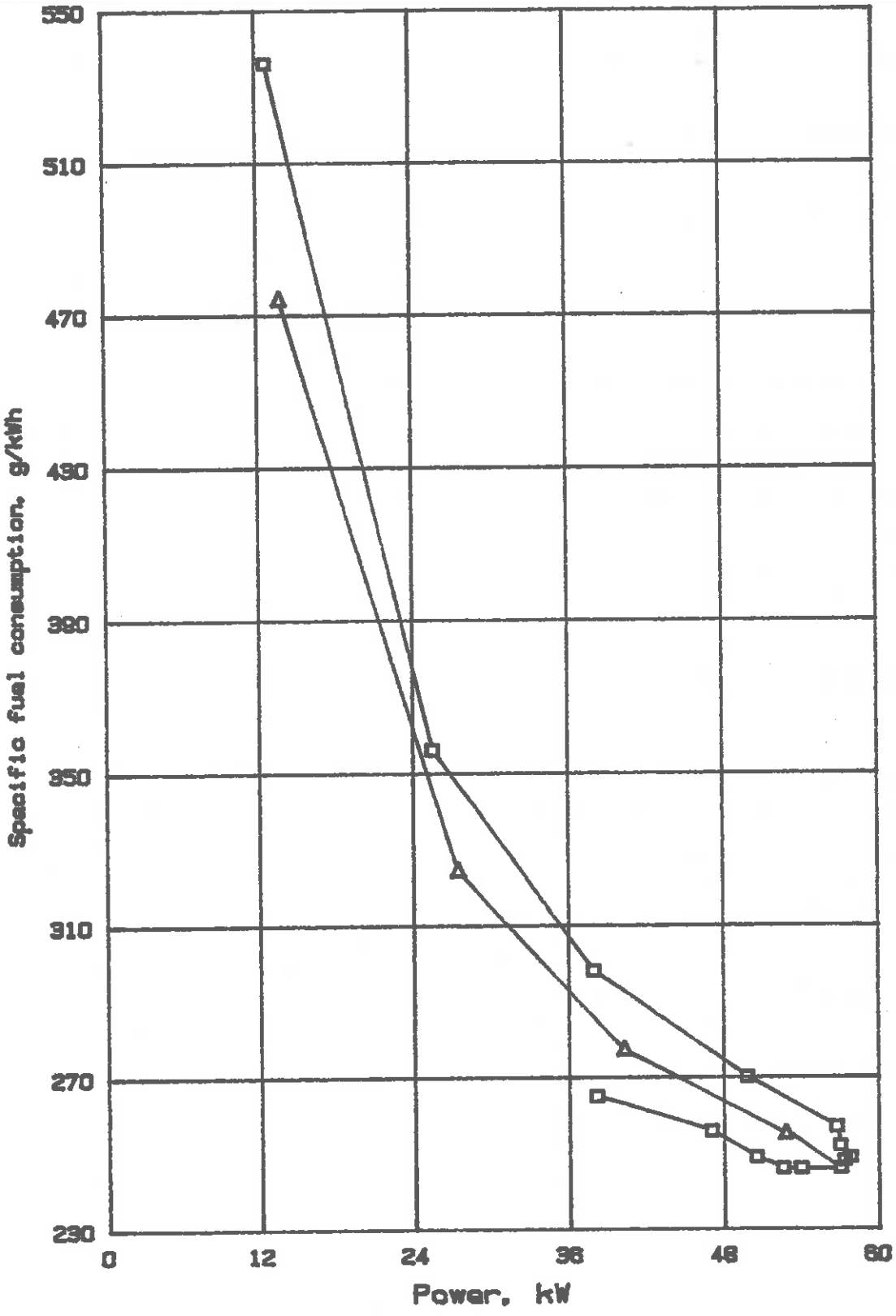
Maximum temperatures:

Coolant: 77 °C
Engine oil: 103 °C
Fuel: 36 °C
Engine air intake: 26 °C

POWER TAKE-OFF TEST



POWER TAKE-OFF TEST



2. HYDRAULIC POWER AND LIFTING FORCE

Date of tests: 10th March 1994

2.1 HYDRAULIC POWER TEST

Sustained pressure with relief valve open: 17.5 MPa

Pump delivery rate at minimum pressure: 45.0 l/min

	Flow rate l/min	Pressure MPa	Power kW
At 90 % of the actual relief valve pressure setting	34.0	15.8	9.0
At maximum hydraulic power	40.0	14.5	9.7

Tapping point used for test: External tapping

Temperature of hydraulic fluid: 65 °C

Opening and closing pressure of the unloading valve: Not applicable

2.2 POWER LIFT TEST

	At the hitch point	On the frame
Height of lower hitch points above ground in down position	200 mm	200 mm
Vertical movement	735 mm	895 mm
Maximum corrected force exerted through full range	40.1 kN	34.2 kN
Corresponding pressure of hydraulic fluid	15.8 MPa	15.8 MPa
Moment about rear-wheel axis	42.3 kNm	56.9 kNm
Maximum tilt angle of mast from vertical	-	13 degrees

Lifting heights relative to the horizontal plane including the lower link pivot points												
mm	-391	-346	-300	-200	-100	0	+100	+200	+300	+389	+400	+504
Lifting forces at the hitch points, corrected to 15.8 MPa												
kN	-	40.1	41.4	44.1	45.9	47.0	47.8	48.5	49.5	51.2	-	-
Lifting forces at the test frame, corrected to 15.8 MPa												
kN	37.0	-	38.5	39.0	39.1	38.7	38.7	37.4	36.4	-	35.2	34.2

3. DRAWBAR POWER AND FUEL CONSUMPTION (UNBALLASTED TRACTOR)

Date of tests: 14th April 1994

Type of track: Bituminous-concrete surface

Height of drawbar above ground	Tyre inflation pressure	
	Front	Rear
391 mm	170 kPa	120 kPa

Gear and group	Power	Drawbar pull	Speed	Engine speed	Slip of wheels	Specific fuel consumption
	kW	kN	km/h	rev/min	%	g/kWh
3.1 MAXIMUM POWER IN TESTED GEARS						
2 LM2	31.0	32.2	3.47	2297	15.0	370
3 LM1	37.1	32.3	4.13	2252	15.1	349
3 LM2	44.9	32.2	5.02	2116	15.0	322
4 LM1	47.8	30.8	5.59	2045	11.8	303
1 HM1	48.3	25.7	6.76	2045	8.4	301
4 LM2	49.7	23.4	7.65	2052	7.1	295
1 HM2	50.2	20.0	9.04	2048	6.1	294
2 HM1	49.3	17.1	10.38	2046	4.6	297
2 HM2	48.9	12.9	13.66	2052	3.8	300
3 HM1	48.3	10.4	16.72	2055	2.8	298
3.2 FUEL CONSUMPTION						
3.2.1 in selected gear, at maximum power at rated speed						
1 HM2	48.3	17.8	9.77	2200	4.9	308
3.2.1.1 75 % of pull at maximum power at rated speed						
1 HM2	37.5	13.4	10.07	2237	3.9	324
3.2.1.2 50 % of pull at maximum power at rated speed						
1 HM2	25.6	8.9	10.36	2268	2.2	380
3.2.1.3 next higher gear at reduced engine speed; same pull						
2 HM1	37.5	13.4	10.07	1956	3.9	293
3.2.1.4 next higher gear at reduced engine speed; same pull						
2 HM1	26.1	9.1	10.33	1981	2.3	330
3.2.2 in selected gear nearest to 7.5 km/h at rated speed						
4 LM2	47.6	20.7	8.27	2198	6.2	310
3.2.2.1 75 % of pull at maximum power at rated speed						
4 LM2	37.8	15.5	8.77	2281	4.4	333
3.2.2.2 50 % of pull at maximum power at rated speed						
4 LM2	26.2	10.4	9.07	2324	2.8	396
3.2.2.3 next higher gear at reduced engine speed; same pull						
1 HM2	37.7	15.5	8.76	1952	4.4	290
3.2.2.4 next higher gear at reduced engine speed; same pull						
1 HM2	26.1	10.4	9.02	1981	2.8	329

Specific energy	Temperature			Atmospheric conditions		
	Fuel	Coolant	Engine oil	Tempera-ture	Relative humidity	Pressure
kWh/l	°C	°C	°C	°C	%	kPa
2.27	19	77	90	6	74	97.9
2.41	20	80	91	6	73	97.9
2.61	24	77	94	6	72	97.9
2.77	23	80	94	6	74	97.9
2.79	13	79	88	5	83	97.8
2.85	17	77	93	5	82	97.8
2.86	17	76	92	4	81	97.8
2.83	19	80	93	4	80	97.8
2.81	20	80	94	4	80	97.8
2.82	22	79	93	5	79	97.8
2.73	16	77	92	4	81	97.8
2.59	18	77	89	6	77	97.9
2.22	19	78	91	6	77	97.9
and travelling speed as in 3.2.1.1						
2.87	21	76	92	5	76	97.9
and travelling speed as in 3.2.1.2						
2.55	19	77	91	5	76	97.9
2.72	15	79	93	5	82	97.8
2.53	19	77	92	6	78	97.8
2.12	19	77	92	6	78	97.8
and travelling speed as in 3.2.2.1						
2.90	21	78	92	6	77	97.8
and travelling speed as in 3.2.2.2						
2.56	20	78	92	6	77	97.8

OPTIONAL TEST RESULTS

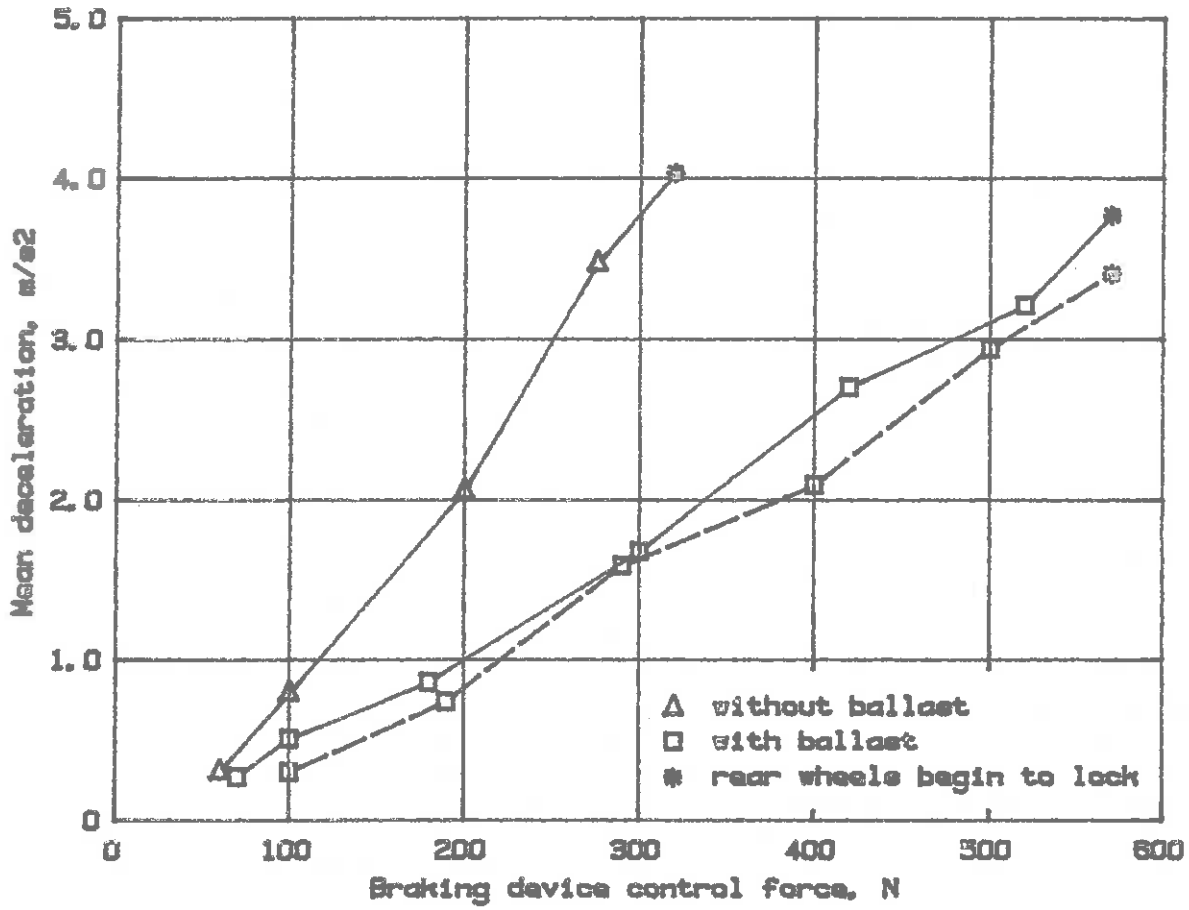
4. BRAKING

Date of tests: 21st and 23rd March 1994

	Tractor mass (with driver)			Speed before application of brakes
	Front kg	Rear kg	Total kg	km/h
Ballasted	2250	3400	5650	34.5
Unballasted	1615	2370	3985	34.7

4.1 COLD SERVICE BRAKING DEVICE TEST (————————)

4.2 FADE TEST (- - - - - -)



Maximum deviation of tractor from its original course:	Not significant
Abnormal vibration:	None
Brake heating method:	Driven with brakes applied for 1 km at 80 % of maximum speed with a pedal force corresponding to a deceleration of 1 m/s^2

4.3 PARKING BRAKING DEVICE TEST

	Ballasted tractor on 18 % slope	
	Uphill	Downhill
Braking device control force	225 N	230 N

5. MEASUREMENT OF EXTERNAL NOISE LEVEL

Date of tests:	8th April 1994
Make and model of sound level meter:	BRÜEL & KJAER, 2231
Type of track:	Bituminous-concrete surface
Gear number:	4 HM2
Travelling speed before acceleration:	26.0 km/h
Sound level:	87.5 dB(A)

6. REPAIRS

None

7. REMARKS

None

The JOHN DEERE 2700 (4WD) 40 km/h version and ZETOR 8540 (4WD) 40 km/h version tractors being mechanically similar, the tests have not been repeated and approval number is valid for the both tractor models.
All tests were carried out on the ZETOR 8540 (4WD) 40 km/h version.

SUPPLEMENTARY TEST

8. MEASUREMENT OF EXTERNAL NOISE LEVEL

Exhaust system

Make, model and type:	ZETOR, 10.014.040, expansion and absorption muffler
Location:	Left-hand side of engine, vertical

Test

Date of tests:	8th April 1994
Make and model of sound level meter:	BRÜEL & KJAER, 2231
Type of track:	Bituminous-concrete surface
Gear number:	4 HM2
Travelling speed before acceleration:	26.0 km/h
Sound level:	84.0 dB(A)

Test carried out by: Dipl. Ing. Peter Pernis

Head of the Tractor Department
Dipl. Ing. Peter Pernis

Director
Dipl. Ing. Vladimír Hanzlík