STÁTNÍ ZKUŠEBNA ZEMĚDĚLSKÝCH,
POTRAVINÁŘSKÝCH
A LESNICKÝCH STROJŮ

163 04 PRAHA 6 - ŘEPY

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

CODE 2

Restricted Code

Date of approval: 7th November 1995

OECD No. 1579



Agricultural Tractor

ZETOR 7520 (2WD) 30 km/h version

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

Report No. 11972
Date of test: June-July 1995

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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:	The manufacturer
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

1. SPECIFICATIONS OF TRACTOR

1.1 IDENTIFICATION

Make:	ZETOR
Model:	7520 30 km/h version
Type:	Wheeled, unit construction, rear wheels drive
Number of driving wheels:	2
Serial No.:	001 001
1st Serial No.:	001 001

1.2 ENGINE

Make:	ZETOR
Model:	7801
Type:	4-stroke diesel engine, direct injection, water cooled, naturally aspirated
Serial No.:	000 119

1.2.1 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
1.2.2 Supercharging	None
1.2.3 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 3153, in-line
Serial No.:	Lw 0023
Manufacturer's production setting of injection pump:	
Flow rate (rated engine speed and full load):	14.57+0.47 dm^3/h
Timing:	23°+1° before TDC
Make, model and type of injection:	MOTORPAL, DOP 150 S 428-4104, 4 hole
Injection pressure:	22.0-0.8 MPa
1.2.4 Governor	
Make, model and type:	MOTORPAL, RV 3M 350/1100 3308, centrifugal, variable speed
Governed range of engine speed:	from 700 to 2460 rev/min
Rated engine speed:	2200 rev/min
1.2.5 Air cleaner	
Pre-cleaner:	
Make, model and type:	SANDRIK, PC 250, cyclon type
Location of air intake:	Above bonnet forward of radiator
Main cleaner:	
Make, model and type:	SANDRIK, 9430.11, oil bath
Maintenance indicator:	None
1.2.6 Lubrication system	
Type of feed pump:	Gear
Type of filter:	Full flow with replaceable paper cartridge

Number:	1
Oil cooler:	None

1.2.7 Cooling system

Type of coolant:	Water and anti-freeze
Type of pump:	Centrifugal, belt driven
Specification of fan:	Axial, belt driven
Number of blades:	4
Fan diameter:	460 mm
Coolant capacity:	19 dm^3
Type of temperature control:	Thermostat
Superpressure system:	40±10 kPa

1.2.8 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

1.2.9 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 of accumulators):	1
Rating:	150 Ah at 20 hours

1.2.10 Exhaust system

Make, model and type:	ZETOR, 78.014.020, expansion and absorption muffler with additional muffler
Location:	Left-hand side of engine, vertical

1.3 TRANSMISSION

1.3.1 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

1.3.2 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

1.3.3 Rear axle and final drives

Make, model and type:	ZETOR, 78.153.000, 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

1.3.4 Front axle

Make, model and type:	ZETOR, 78.200.000, telescopic with adjustable track

1.3.5 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	372.443	1.71
2		252.038	2.53
3		160.141	3.99
4		111.256	5.74
1	LM2	286.824	2.23
2		194.098	3.29
3		123.327	5.18
4		85.680	7.45
1	HM1	95.498	6.69
2		64.625	9.88
3		41.062	15.55
4		28.527	22.39
1	HM2	73.545	8.68
2		49.769	12.83
3		31.622	20.20
4		21.969	29.07
R	LM1	211.387	3.02
	LM2	162.792	3.92
	HM1	54.202	11.78
	HM2	41.742	15.30

(*) Calculated with a tyre dynamic radius index of 770 mm (ISO 4251/1-1992)

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

1.4 POWER TAKE-OFF

1.4.1 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

1.4.1.1 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: 651 mm

Distance from the median plane of the 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 speed/ p.t.o. speed)	Power restriction and maximum torque kW/Nm
540	540	1913	3.5431	38.0/672.0
	621	2200		
1000	1000	1950	1.9500	None/None
	1128	2200		

Direction of rotation (viewed from behind tractor): Clockwise

1.4.1.2 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	0.195	24.8187
	H	0.760	6.3638
1000	L	0.107	45.0947
	H	0.418	11.5628

L: Low range, H: High range

Direction of rotation with forward gear engaged (viewed from behind tractor): Clockwise

1.4.2 Optional power take-off None

1.5 POWER LIFT

Make, model and type: ZETOR, 78.940.402, 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

Type of linkage lock for transport: Hydraulic

Relief valve pressure setting (tolerance): 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

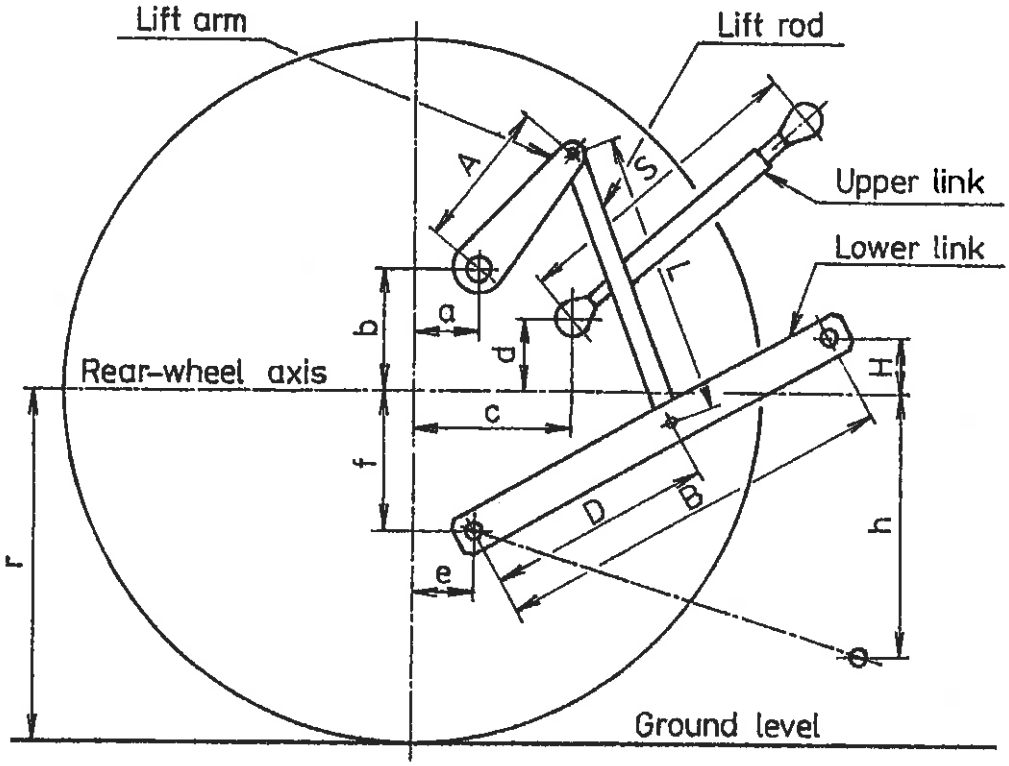
Site of oil reservoir: Transmission housing

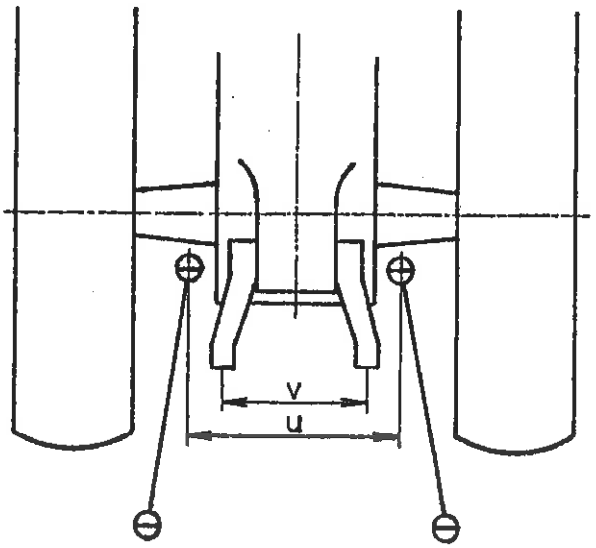
Type, number and location of tapping points:	2 pressure and 1 return, quick release at rear of tractor
Maximum volume of oil available to external cylinders:	10 dm^3

1.6 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	510
Length of lift rods	(L)	555 to 685	625
Height of lower hitch points relative to the rear-wheel axis:			
- in low position	(h)	438 to 809	570
- in high position	(H)	-87 to 222	150
Height above ground of lower hitch points when locked in transport position (*)		Any height withing lift range	

(*) Assuming the tyre dynamic radius index r=770 mm of ISO 4251/1-1992

1.7 SWINGING DRAWBAR

Type: Clevis

Height above ground:
Maximun: 561 mm
Minimum: 366 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 centre of clevis):	
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

1.8 TRAILER HITCH

Type:	Clevis
Hole diameter:	32 mm
Height above ground:	666, 766, and 866 mm
Distance of hitch point from rear-wheel axis, horizontally:	828 mm
Distance of hitch point from power take-off shaft end:	
Vertically:	15, 115, and 215 mm
Horizontally:	348 mm
Maximum vertical permissible load:	10 kN

1.9 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:	920 mm
Minimum:	200 mm
Horizontal distance to power take-off shaft end (rear):	574 mm

1.10 FRONT TOWING HITCH

Height above ground:	812 mm
Diameter of pin hole:	28 mm

1.11 STEERING

Make, model and type:	ORSTA, 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

1.12 BRAKES

1.12.1 Service 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:	None
Trailer braking take-off:	Air brake operated by tractor pedals

1.12.2 Parking brake

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

1.13 WHEELS

Number:	
Front:	2, steering
Rear:	2, driving
Wheelbase:	2375 mm

Track width adjustment:

	Minimum mm	Maximum mm	Adjustment method
Front	1405	1780	By extending of front axle
Rear	1505	1805	Reversing wheels and off-set lug rims

1.14 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/frame/rollguard/other:	Cab
Tiltable/not tiltable:	Not tiltable
OECD approval number:	CSD 1339/10
Date of approval:	27th January 1994
Modification certificate if any:	None

1.15 SEAT

1.15.1 Driver's seat

Make, model and type:	GRAMMER, DS 85H/3A, upholstered seat with back rest
Type of suspension:	Parallelogram linkage adjustable for driver's weight
Type of damping:	Hydraulic
Range of adjustment:	
Longitudinal:	150 mm
Vertical:	60 mm

1.15.2 Optional driver's seat

Make, model and type:	MARS, Zetor 5911-5400 or GRAMMER, DS 85H/90A or GRAMMER, LS 95H1/90AR, upholstered seat with back rest

Type of suspension: Parallelogram linkage adjustable for driver's weight

Type of damping: Hydraulic

Range of adjustment:

Longitudinal: 150 mm

Vertical: 60 mm

1.15.3 Passenger seat

Location: Left-hand side of driver

Number of places: 1

1.16 LIGHTING

	Height above ground of centre mm	Size mm	Distance from outside edge of lights to median plane of tractor mm
Headlights	1025	120x120	200
Sidelights	1675	60x65	720
Rearlights	1770	120x40	770
Reflectors	Not fitted		

2. TEST CONDITIONS

2.1 OVERALL DIMENSIONS (unballasted tractor)

Length mm	Width		Height at top of	
	minimum mm	maximum mm	protective structure mm	exhaust silencer mm
4380	1995	2295	2670	2780

2.2 GROUND CLEARANCE (unballasted tractor): 292 mm

Clearance-limiting part: Swinging drawbar in lowest position

2.3 TRACTOR MASS (unballasted tractor with cab)

	Without driver kg	With driver kg
Front	1285	1305
Rear	2190	2245
Total	3475	3550

2.4 TYRES AND TRACK WIDTH SPECIFICATIONS

	Front	Rear
Tyres:		
Make	BARUM	BARUM
Dimensions	7.50-20	18.4-34
Ply rating	6	8
Type	diagonal	diagonal
Maximum load (tyre manufacturer's)	8.75 kN	25.65 kN
Maximum load (tractor manufacturer's)	9.25 kN	20.00 kN
Inflation pressure (tyre manufac.)	275 kPa	140 kPa
Dynamic radius index	430 mm	770 mm
Chosen track width:	1480 mm	1505 mm

2.5 OILS AND LUBRICATION

2.5.1 Capacity and change interval

	Capacity dm^3	Oil change h	Filter change h
Engine	10.0	200	200
Gear box	40.0	1800	200
Rear axle Final drive (rear) Hydraulic system	Common with gear box		
Steering	4.5	2400	2400
Air cleaner	1.8	200	-

2.5.2 Specifications

	Recommended	Used during test
Engine oil: Type Viscosity Classification	 SAE 15W/50 16.5 cSt at 100 °C API SD/CB	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

Air cleaner filling: Same as engine

2.5.3 Grease

Number of lubrication points: 13

2.6 FUEL

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

Density at 15 °C: 0.841 g/cm^3 for p.t.o. tests
0.837 g/cm^3 for drawbar tests

3. COMPULSORY TEST RESULTS

3.1 MAIN POWER TAKE-OFF

Date and location of tests: 24th August 1994, 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
3.1.1 MAXIMUM POWER - TWO-HOUR TEST						
46.5	2200	1128	12.41	14.76	267	3.15
3.1.2 POWER AT RATED ENGINE SPEED						
46.5	2200	1128	12.41	14.76	267	3.15
3.1.3 STANDARD POWER TAKE-OFF SPEED 1000±25 rev/min						
43.4	1950	1000	11.29	13.42	260	3.23
3.1.4 PART LOADS 3.1.4.1 the torque corresponding to maximum power at rated engine speed						
46.5	2200	1128	12.41	14.76	267	3.15
3.1.4.2 85 % of torque obtained in 3.1.4.1						
42.2	2350	1205	11.77	14.00	279	3.01
3.1.4.3 75 % of torque defined in 3.1.4.2						
32.1	2379	1220	9.70	11.53	302	2.78
3.1.4.4 50 % of torque defined in 3.1.4.2						
21.6	2408	1235	7.72	9.18	357	2.35
3.1.4.5 25 % of torque defined in 3.1.4.2						
11.0	2441	1252	5.90	7.02	536	1.57
3.1.4.6 unloaded						
-	2457	1260	4.21	5.01	-	-

Power	Speed		Fuel consumption			Specific energy
	Engine	P.T.O.	Hourly		Specific	
kW	rev/min		kg/h	l/h	g/kWh	kWh/l
3.1.5 PART LOADS AT STANDARD POWER TAKE-OFF SPEED 1000 rev/min						
3.1.5.1 the torque corresponding to maximum power						
43.4	1950	1000	11.29	13.42	260	3.23
3.1.5.2 85 % of torque obtained in 3.1.5.1						
39.5	2087	1070	10.42	12.39	264	3.19
3.1.5.3 75 % of torque defined in 3.1.5.2						
30.2	2129	1092	8.52	10.13	282	2.98
3.1.5.4 50 % of torque defined in 3.1.5.2						
20.4	2153	1104	6.78	8.06	332	2.53
3.1.5.5 25 % of torque defined in 3.1.5.2						
10.3	2184	1120	5.07	6.03	492	1.71
3.1.5.6 unloaded						
-	2207	1132	3.47	4.13	-	-

No load maximum engine speed: 2457 rev/min

Torque (equivalent crankshaft) at maximum power: 201.8 Nm

at rated engine speed: 201.8 Nm

at standard power take-off speed: 212.5 Nm

Maximum torque (equivalent crankshaft): 237.6 Nm
(engine speed: 1451 rev/min)

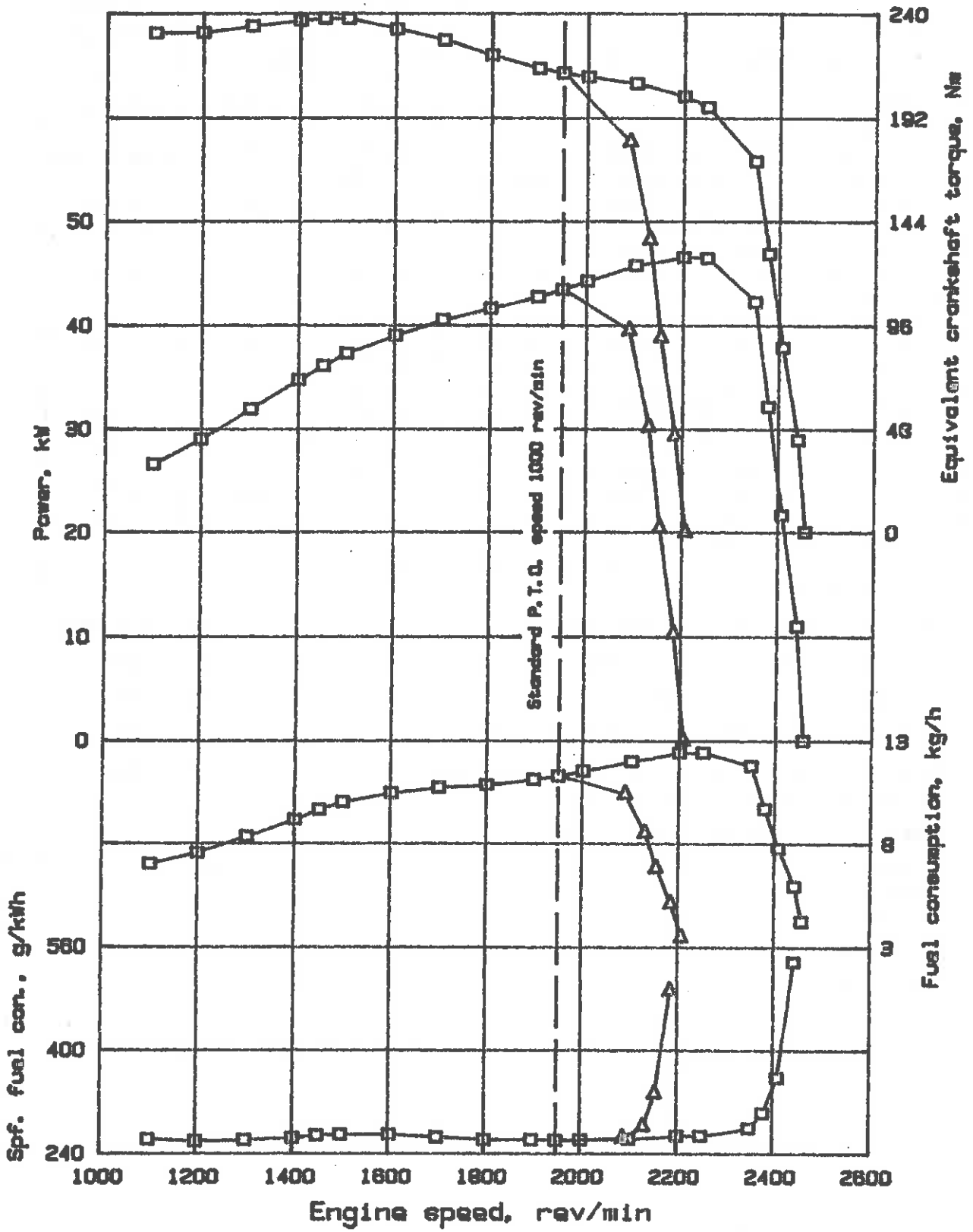
Mean atmospheric conditions:

Temperature: 20 °C
Pressure: 97.4 kPa
Relative humidity: 79 %

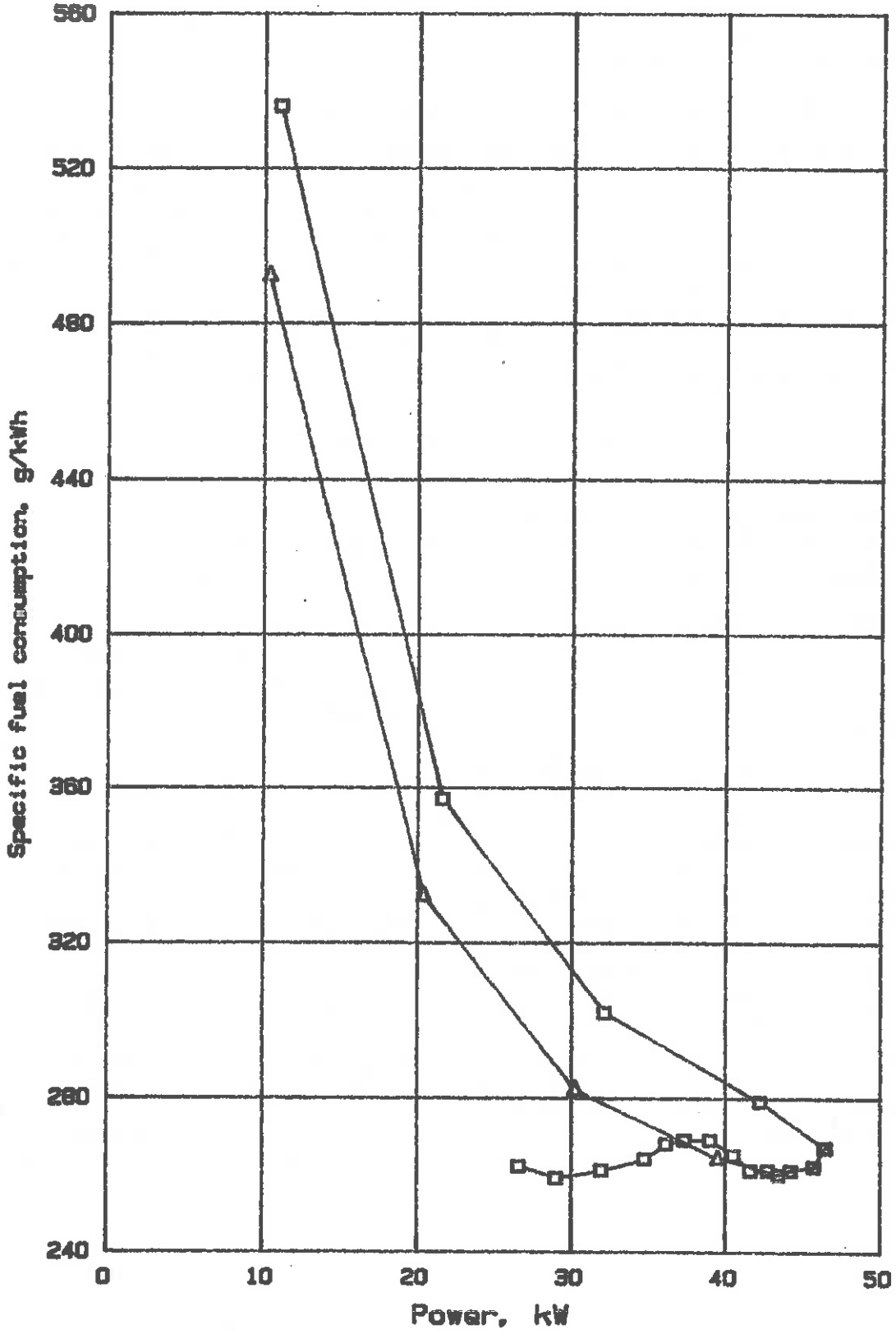
Maximum temperatures:

Coolant: 80 °C
Engine oil: 121 °C
Fuel: 43 °C
Engine air intake: 32 °C

POWER TAKE-OFF TEST



POWER TAKE-OFF TEST



3.2 HYDRAULIC POWER AND LIFTING FORCE

Date of tests: 11th October 1994

3.2.1 Hydraulic power test

Sustained pressure with relief valve open: 18.8 MPa

Pump delivery rate at minimum pressure: 55.0 l/min

	Flow rate l/min	Pressure MPa	Power kW
At 90 % of the actual relief valve pressure setting	43.0	16.9	12.1
At maximum hydraulic power	51.0	16.0	13.6

Tapping point used for test: External tapping

Temperature of hydraulic fluid: 60 °C

Opening and closing pressure of the unloading valve: Not applicable

3.2.2 Power lift test

Linkage setting for test - see page 12

	At the hitch point	On the frame
Height of lower hitch points above ground in down position	200 mm	200 mm
Vertical movement	690 mm	805 mm
Maximum corrected force exerted through full range	34.6 kN	30.0 kN
Corresponding pressure of hydraulic fluid	16.9 MPa	16.9 MPa
Moment about rear-wheel axis	36.5 kNm	49.9 kNm
Maximum tilt angle of mast from vertical	-	12 degrees

Lifting heights relative to the horizontal plane including the lower link pivot points												
mm	-356	-321	-300	-200	-100	0	+100	+200	+300	+369	+400	+449
Lifting forces at the hitch points, corrected to 16.9 MPa												
kN	-	34.6	35.4	39.3	41.0	42.0	42.8	43.5	44.2	35.2	-	-
Lifting forces at the test frame, corrected to 16.9 MPa												
kN	32.6	-	33.9	35.1	35.3	35.0	33.9	32.9	32.0	-	30.7	30.0

3.3 DRAWBAR PERFORMANCE (unballasted tractor)

Date of tests: 13th and 14th July 1995

Type of track: Bituminous-concrete surface

Height of drawbar above ground	Tyre inflation pressure	
	Front	Rear
366 mm	210 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
3.3.1 MAXIMUM POWER IN TESTED GEARS						
3 LM2	30.6	22.7	4.86	2333	14.9	356
4 LM1	33.8	22.6	5.38	2324	14.8	343
1 HM1	37.7	22.5	6.03	2195	13.2	321
4 LM2	38.4	20.0	6.91	2196	10.7	314
1 HM2	39.7	17.2	8.31	2201	8.1	302
2 HM1	40.0	15.0	9.60	2198	6.6	303
2 HM2	40.5	11.4	12.78	2204	4.5	298
3 HM1	40.1	9.2	15.70	2210	3.5	307
3 HM2	39.1	6.9	20.42	2200	2.8	310
3.3.2 FUEL CONSUMPTION						
3.3.2.1 in selected gear, at maximum power at rated speed						
2 HM2	40.5	11.4	12.78	2204	4.5	298
3.3.2.1.1 75 % of pull at maximum power at rated speed						
2 HM2	32.6	8.5	13.81	2351	3.2	322
3.3.2.1.2 50 % of pull at maximum power at rated speed						
2 HM2	22.4	5.7	14.16	2383	2.1	371
3.3.2.1.3 next higher gear at reduced engine speed; same pull						
3 HM1	32.6	8.5	13.81	1936	3.2	285
3.3.2.1.4 next higher gear at reduced engine speed; same pull						
3 HM1	22.5	5.7	14.20	1970	2.1	318
3.3.2.2 in selected gear nearest to 7.5 km/h at rated speed						
4 LM2	38.4	20.0	6.91	2196	10.7	314
3.3.2.2.1 75 % of pull at maximum power at rated speed						
4 LM2	32.3	15.0	7.74	2354	6.6	332
3.3.2.2.2 50 % of pull at maximum power at rated speed						
4 LM2	22.4	10.0	8.06	2383	4.1	374
3.3.2.2.3 next higher gear at reduced engine speed; same pull						
1 HM2	32.3	15.0	7.74	2015	6.6	294
3.3.2.2.4 next higher gear at reduced engine speed; same pull						
1 HM2	22.4	10.0	8.08	2049	4.1	326

Specific energy	Temperature			Atmospheric conditions		
	Fuel	Coolant	Engine oil	Tempera-ture	Relative humidity	Pressure
kWh/l	°C	°C	°C	°C	%	kPa
2.35	56	80	111	26	66	97.1
2.44	56	80	110	27	59	97.1
2.60	60	82	115	28	58	97.1
2.67	57	81	112	27	59	97.1
2.77	59	83	117	28	59	97.1
2.76	56	82	109	26	64	97.0
2.81	58	82	109	28	63	97.0
2.73	57	83	111	27	59	97.0
2.70	59	83	114	28	58	97.0
2.81	58	82	109	28	63	97.0
2.60	63	83	117	29	58	97.0
2.26	64	83	119	29	58	97.0
and travelling speed as in 3.3.2.1.1						
2.93	60	82	114	30	56	97.0
and travelling speed as in 3.3.2.1.2						
2.64	58	82	111	30	56	97.0
2.67	57	81	112	27	59	97.1
2.52	60	80	112	28	59	97.0
2.24	61	81	114	28	59	97.0
and travelling speed as in 3.3.2.2.1						
2.85	58	81	113	29	58	97.0
and travelling speed as in 3.3.2.2.2						
2.57	59	81	112	29	58	97.0

4. OPTIONAL TEST RESULTS

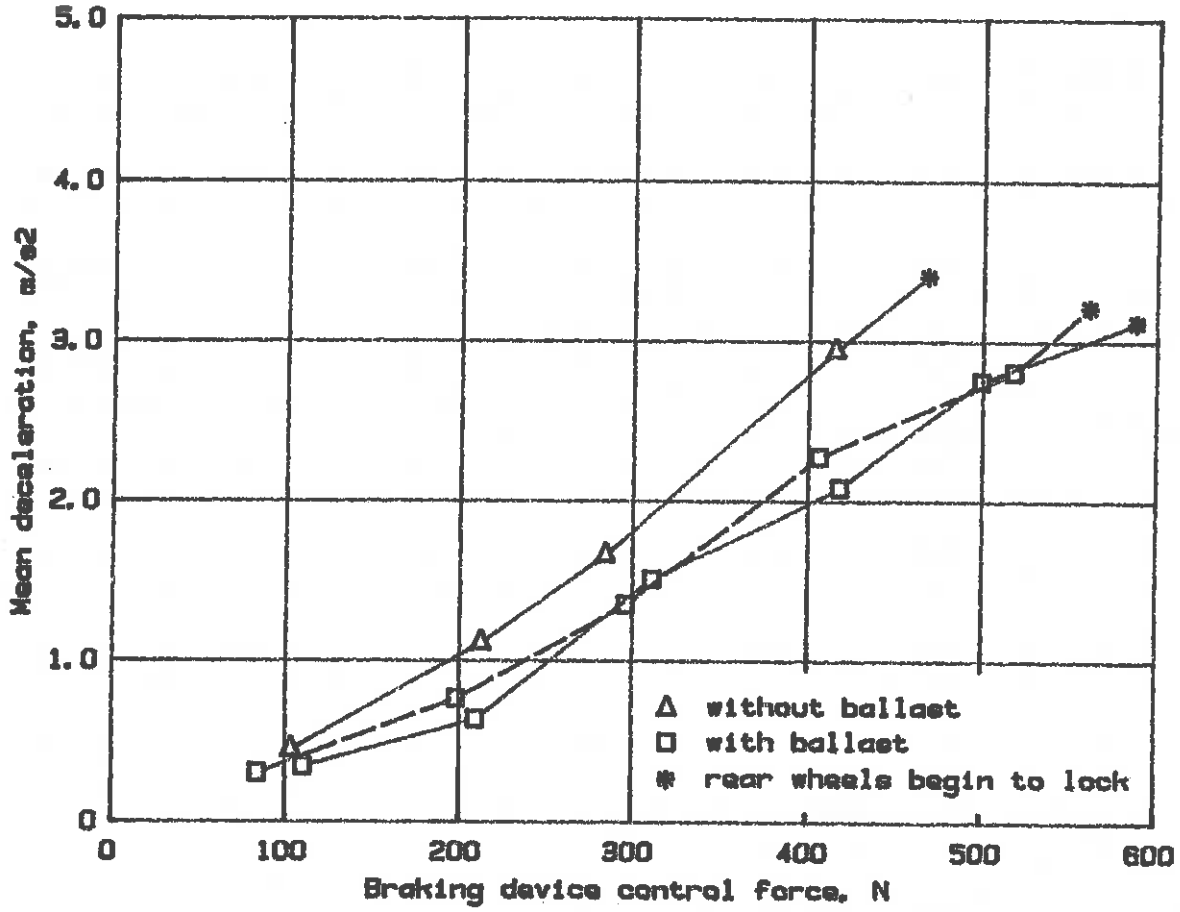
4.1 BRAKING

Date of tests: 14th and 15th June 1995

	Tractor mass (with driver)			Speed before application of brakes
	Front kg	Rear kg	Total kg	km/h
Ballasted	1850	4000	5850	31.7
Unballasted	1305	2245	3550	32.2

4.1.1 Cold service braking device test (————————)

4.1.2 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

4.1.3 Parking braking device test

	Ballasted tractor on 18 % slope	
	Uphill	Downhill
Braking device control force	260 N	250 N

4.2 MEASUREMENT OF EXTERNAL NOISE LEVEL

Date of tests:	27th June 1995
Make and model of sound level meter:	BRÜEL & KJAER, 2231
Type of track:	Bituminous-concrete surface
Gear number:	4 HM2
Travelling speed before acceleration:	24.2 km/h
Sound level:	86.5 dB(A)

5. REPAIRS

None

6. REMARKS

None

Test carried out by: Dipl. Ing. Peter Pernis

Head of the Tractor Laboratory
Dipl. Ing. Peter Pernis

Director
Dipl. Ing. Vladimír Hanzlík