Report on test in accordance with OECD STANDARD CODE

OECD No. **1183**



Agricultural Tractor JOHN DEERE 1950 (2WD)

Manufacturer

John Deere Werke Mannheim
D-6800 Mannheim

Deutsche Landwirtschafts-Gesellschaft e.V.
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This is a report on a tractor test in accordance with OECD STANDARD CODE for the Official Testing of Agricultural Tractor Performance (C(87)53(Final), Code I).

It does not contain an evaluation of the tractor on practical work.

Duration of tests: August 1988 till January 1989

DLG-Testing Station for Agricultural Machinery, Max-Eyth-Weg 1,
D-6114 Groß-Umstadt

This report has been approved by the OECD Co-Ordinating Centre (CEMAGREF, France) as being in accordance with the OECD STANDARD CODE.

Date of approval: 18th April 1989

OECD No. 1183

In this report all performance characteristics are given corresponding to the International System of Units.

The reference to the former used Technical System of Units is given by the following relations:

Forces	1 kN	=	1000 N	=	102 kp
Powers			1 kW	=	1,36 PS
Pressures	1 MPa	=	10 bar	=	10,2 kp/cm²
	100 kPa	=	1000 mbar	=	750,10 mm Hg

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PRÜFUNGS-ABTEILUNG
JOHN DEERE 1950

Test No. 88-126

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Tractor manufacturer:	John Deere Werke Mannheim D-6800 Mannheim
Location of tractor assembly:	D-6800 Mannheim
Submitted for test by:	Manufacturer
Selected by:	Manufacturer with agreement by DLG
Place of running-in:	Mannheim and Groß-Umstadt
Duration of running-in:	Engine appr. 50 hours tractor appr. 20 hours

SPECIFICATION OF TRACTOR

Tractor

Make:	JOHN DEERE
Trade denomination:	1950
Type:	Wheel tractor, unit construction, rear wheel driven
Serial No.:	635901
Start of series:	600001

Engine

Make:	JOHN DEERE
Model:	3.179 TL 001
Type:	Watercooled 4-stroke Diesel engine with direct injection, supercharged
Serial No.:	CD 3.179 T 774131
Cylinders:	3, vertical in line, bore 106,5 mm, stroke 110 mm, displacement 2940 cm³; compression ratio 17,8:1; wet cylinder liners, replaceable
Valves:	Overhead
Fuel system:	SOFABEX fuel supply pump; LUCAS-CAV distributor pump RE 31137/ R3439 F040, serial no. 33501 BFG, with injection timing device; manufacturer's production setting 61±2 mm³ per stroke at rated engine speed and full load; injection timing 13° before TDC static, additionally 7° dynamic; STANADYNE multihole injection nozzles 26992, injection pressure 24,5+0,5 MPa; CAV fuel filter with replaceable two-stage paper element; fuel tank with 72 dm³ capacity

Governor:	LUCAS-CAV centrifugal variable speed governor, governed range of engine speed 800 to 2460 rev/min, rated engine speed 2300 rev/min
Supercharger:	GARRETT, model 466874-1, exhaust driven supercharger max. charge-air pressure 68,0 kPa
Air cleaner:	No precleaner; DONALDSON dry paper element filter with main cartridge and safety cartridge; maintenance indicator lamp; air intake below bonnet
Lubrication system:	Forced-feed lubrication with gear pump, Purolator oil filter T 19044 in full flow, replaceable; engine oil-cooling water heat exchanger between oil filter and filter socket
Cooling system:	Water cooling with impeller pump, overpressure relief valve set to 60±10 kPa, cooling circuit with thermostat and by-pass; V-belt driven EATON-viscous drive fan, model 180 E, 420 mm dia, 9 blades; water capacity 13 dm³
Starting system:	Electrical; BOSCH solenoid pre-engaged- drive starting motor 2,7 kW; BERU heating spiral in intake pipe; range gear shift lever in neutral position as safety device
Exhaust silencer:	EBERSPÄCHER, AL 59301 multi-chamber absorption-expansion type, 131x320 mm oval, 205 mm long, below bonnet; vertical pipe, mouth showing upwards to the rear, 2780 mm above ground

Electrical equipment:	12 Volt, negative earth, BOSCH 3-phase alternator K1-14V 85A, 1190 W; 2 lead acid batteries, 55 Ah each at 20 hours rating

Transmission

Clutch	F & S 251861924001 dry single-plate, for travel drive, 280 mm dia, machanically actuated by pedal
Gear box:	JOHN DEERE, model TSST; synchromesh speed change gear with 4 speeds; collar shifted range gear with 2 forward ranges (I and II) and 1 reverse range (R); total 8 forward and 4 reverse speeds; 2 shift levers
Rear axle with final drives:	JOHN DEERE, bevel gear, bevel gear differential with hand lever or pedal operated lock, selfdisengaging; planetary final drives
Front axle:	JOHN DEERE, not propelled
Lubrication:	Gear box, rear axle, rear final drives and hydraulic system have oil in common; transmission with pressure lubrication, internal-gear pump within gear box, 2 oil filters; oil radiator in front of water radiator

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Total ratios and speeds

Range	Gear	Total ratio engine : driving wheel	Nominal travelling speed *) at rated engine speed km/h
I	1	253,22	2,38
	2	168,81	3,57
	3	109,57	5,50
	4	75,83	7,95
II	1	69,33	8,69
	2	46,22	13,04
	3	30,00	20,09
	4	20,76	29,02
R	1	159,54	3,78
	2	106,36	5,67
	3	69,03	8,73
	4	47,78	12,61

*) calculated with the radius index 695 mm

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Main p.t.o.

Independent,
driven by wet multi-plate clutch with 133 mm dia, hydraulically operated by lever and control valve, hydraulically operating p.t.o. brake;
1 p.t.o. shaft at rear of tractor, 610 mm above ground, 25 mm to the left of tractor's median plane;
direction of rotation clockwise, viewed facing tractor's rear;
p.t.o. 422 mm behind rear wheel centre line,
35 mm dia, 6 splines,
ISO 500 -1979 type 1

P.t.o. type	P.t.o. speed rev/min	Engine speed rev/min	Ratio engine : P.t.o.	Power restriction kW
540	540 599	2075 2300	3,8421	-

Power lift

JOHN DEERE
hydraulic power lift, unit construction;
draft- and position-control, both mixable in steps, floating position;
lowering throttle; lower link sensing

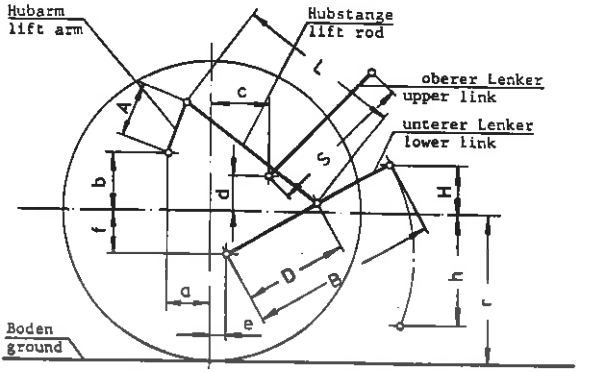
Hydraulic system:

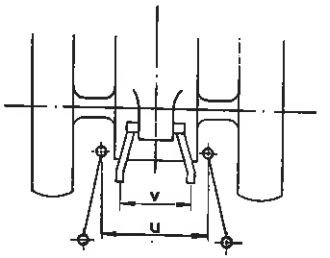
Closed centre system;
JOHN DEERE RP 2023 COE 0100
variable-capacity radial-piston pump, directly driven by front end of engine crankshaft, feeds power lift and steering system, max. delivery 48 l/min at rated engine speed;
the transmission oil pump (see page 6) feeds the radial-piston pump and provides hydraulic pressure for actuating the p.t.o. clutch

JOHN DEERE control valve,
relief valve pressure setting 19,7+0,3 MPa;
single acting cylinder with 126 mm stroke and 92 mm bore;
safety valve set to 23,0 MPa,
remote control at rear

1 double acting JOHN DEERE additional control valve with 2 couplings at tractor's rear;
up to 10 dm³ oil may be taken off working travelling and 14 dm³ stationary

Implement linkage: 3-point linkage, cat. 2 acc. to ISO 730/I-1977,
cat. 1 is possible by turning the lower links;
WALTERSCHEID quick couplers optionally available





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Dimensions of rear implement linkage (projected lengths in mm, underlined dimensions are valid for power lift measurements p.21)

Rear tyres Front tyres	radius index static radius	(r) (r')	695 376
Length of lift arms		(A)	254
Length of lower links		(B)	858
Distance of lift arm pivot points from rear wheel centre	horizontal vertical	(a) (b)	-7 277
Horizontal distance between lower link pivot points		(u)	395
Horizontal distance between lift arm end points		(v)	495
Length of upper link		(S)	540 to 780, 672
Distance of upper link pivot point from rear wheel centre	horizontal vertical	(c) (d)	301 163 and 193
Distance of lower link pivot point from rear wheel centre	horizontal vertical	(e) (f)	115 200
Distance of lower link pivot points from lift rod pivot points on lower links		(D)	465
Length of lift rods		(L)	566 to 684, 652

Height of lower link hitch points relative to rear wheels' centre line (situated 695 mm above ground), these data are valid for unloaded power lift:

Length of lift rods	(L)	652	566	684
Linkage distance of lift rods	(D)	465		
Lowest position	(h)	495	300	570
Highest position	(H)	140	280	75
Transport position	(H')	140	280	75

Type of transport lock: Lowering throttle

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Pull attachments

Trailer hitch:	JOHN DEERE, AL 18335, non automatical,		
	hole diameter	33	mm
	hitch point		
	above ground	785	mm
	behind rear wheel axis		
	horizontal	447	mm
	distance from p.t.o. shaft end		
	vertical, above	175	mm
	horizontal	25	mm
	maximum permissible vertical load	12,0	kN
Holed drawbar:	Short bar,		
	length between joint balls	825	mm
	thickness 25 mm, width 80 mm,		
	9 holes 33 mm dia with 80 mm distance each,		
	height above ground minimum	125	mm
	maximum	975	mm
	holes centre line behind p.t.o. shaft end (lower links in horizontal position)	551	mm
Swinging drawbar:	Shiftable, height above ground	450	mm
	pivot point before rear wheel centre line	51	mm
	hitch point behind rear wheel centre line	630, 778 or 819	mm
	behind p.t.o. shaft	208, 356 or 397	mm
	swingable to both sides about max.	240	mm
	hitch hole diameter	33	mm
	max. permissible vertical load (fully retracted)	8,0	kN
Towing hitch:	At front		
	795 mm above ground		

Steering

JOHN DEERE, model POWER STEERING,
mechanical, hydraulically assisted;
acting by push rod and elbow lever on
divided track rod;
connected by sequence valve to the
hydraulic system of the tractor;
max. working pressure 19,7±0,3 MPa

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Brakes

Service brake: JOHN DEERE
pedal operated muscle power brake with hydraulic transmission, using oil from gear box, acting on rear wheels;
oil-immersed disc brake with 1 ring-piston on each differential half shaft, self readjusting;
disc diameter 304 mm

Parking brake: Mechanical wet V-band brake, acting on bevel wheel of differential, drum diameter 238 mm, width 20 mm, operated by lever with ratchet

Steering brake: Divided pedal of service brake, for normal use locked together

Trailer braking take-off: None

Wheels

Steered wheels: At front, 2 pneumatics 7.50 - 16, rims 5.50 Fx16

Driving wheels: At rear, 2 pneumatics 16.9 R 30, rims W15Lx30

Wheelbase: 2150 mm

Track widths: At front: 1260 to 2060 mm, in steps of 50 mm each, variable by extending telescopic half axles and turning the wheels;

at rear: 1500 to 1800 mm, in steps of 100 mm each by adjustable gauge bowl wheels

Permissible tyre combinations:

Tyre sizes	
at front	at rear
6.00 - 16 or 6.50 - 16	14.9 - 28
6.00 - 16	16.9 - 28 14.9 - 30
6.50 - 16	16.9 - 30 12.4 - 36
7.50 - 16	13.6 - 36 13.6 - 38
27/9.5 - 15	18.4 - 16.1 21.5L - 16.1

Protective structure

JOHN DEERE safety-cab MC1,
OECD-approved, approval-no. CSD 01037/10-a(C)
antivibration mounted by 4 silent blocks on tractor;
2 doors with 2 steps each;
steps 525 and 875 mm, driver's platform 935 mm above ground;
windscreen, rear and side windows and roof hatch tiltable;
combined heating/ventilation system with 2-step-blower and cooling water heat exchanger incorporated in instruments panel, air intake below windscreen;
air filter; air outlet jets near the floor and at the instruments panel, defroster nozzles;
additional ventilation system with 2-step blower incorporated in the roof; air intake above windscreen; air filter; air outlet jets for head room;

Noise-reduction materials:

roof:	foam, foil coated	50 mm
	antinoise mat	4 mm
floor, rear part:		
	foam, coated with imitation leather	12 mm
	antinoise mat	4 mm
front part:		
	rubber mat	6 mm
	with foam	10 mm
	antinoise mat	4 mm
mudguards:		
	foam, coated with imitation leather	12 mm
gear box:		
	sheet metal and foam	50 mm
steering support and instruments panel:		
	ABS-plastics	3-4 mm
	foam, coated with imitation leather	12 mm
ventilation system:		
	foam, coated with initation leather	5 mm
bulkhead:		
	damping material	8 mm

Seat

GRAMMER, DS 44/1H-4G,
upholstered seat with back rest, adjustable spring, hydraulic shock absorber;
height of unloaded seat above platform adjustable steplessly from 520 to 580 mm, longitudinal adjustment 150 mm

Running-time meter — Electronic, counts real operating hours when engine is running

Lighting — Electrical, 12 Volt as per German legislation

	Size mm	Height above ground of centre mm	Distance from outside edge of lights to median plane of tractor mm
Head lights	130 dia	1105	345
Side lights	70x20	1370	725
Rear lights	30x60	1475	760
Reflectors			
1st pair	145x35	1420	818
2nd pair	80 dia	630	445

TEST CONDITIONS

Overall dimensions

Length: 3560 mm without ballast
3980 mm with ballast

Width: 2035 mm with and without ballast

Height: 2495 mm to top of safety cab
2780 mm to top of exhaust pipe's mouth

Ground clearance: 375 mm below bracket of swinging drawbar

Tractor mass

		Without driver kg	With driver kg
Without ballast:	at front	1060	1065
	at rear	1910	1995
	total	2970	3060
With ballast:	at front	1475	1480
	at rear	2645	2730
	total	4120	4210

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Ballast

Front:	8 weights, total	390 kg
Rear:	3 weights per wheel, total	231 kg
	water in the tyres	529 kg

Tyres and track widths specifications

	Front	Rear
Tyres:	CONTINENTAL	CONTINENTAL
dimensions	7.50 - 16	16.9 R 30
type	cross-ply	radial
ply rating/load index	6/-	6/-
maximum load	745 kg (30 km/h)	1900 kg (40 km/h)
inflation pressure	275 kPa	130 kPa
radius index	376 mm (static)	695 mm
Chosen track width:	1410 mm	1600 mm
Technically permissible axle load:	1490 kg	3200 kg
Technically permissible total weight:	4200 kg	

Oils and lubrication

Capacity and change interval:

	Capacity dm³	Oil change h	Filter change h
Engine	6	200	200
Gear box with rear axle, rear final drives, hydraulic steering and braking system	44	1000	500 (2 filters)

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Specifications:

	Recommended	Used during test
Engine oil:		
type	engine oil	FUCHS TITAN UNIVERSAL
viscosity		
winter	SAE 10W, 10W/30, 15W/30	
summer	SAE 30, 15W/40, 20W/40	SAE 15W/40
tropics	SAE 40	
classification	API-CD MIL-L2104 C or D	API-CD
Transmission oil:		
Gear box with rear axle, final drives, hydraulic, steering and braking system		
type	special oil	FUCHS RENOGEAR
viscosity	SAE 75	SAE 75
classification	JD specif. J20A	J20A

Grease: Multi purpose grease
number of lubrication points 17

Fuel

type: ARAL Diesel-fuel in conformity with DIN 51601
density: at 15°C at engine test 0,819 g/cm³
at p.t.o. test 0,838 g/cm³
at drawbar tests 0,836 g/cm³

REPAIRS None

REMARKS The tractor is fitted with a viscous-drive fan. The fan speed depends on the air temperature behind the water radiator and therefore on the ambient air temperature also. As the engine power is influenced by the fan speed, all power tests had been made at similar ambient air temperatures, as far as possible

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COMPULSORY TESTS

1. MAIN POWER TAKE OFF PERFORMANCE (540 rev/min)

Date of tests: 4th November 1988
Location of tests: DLG-Testing Station Groß-Umstadt
Type of dynamometer: SCHENCK hydraulic dynamometer U1-40

Power kW	Speed Engine rev/min	Speed P.t.o. rev/min	Fuel consumption hourly l/h	Fuel consumption hourly kg/h	Fuel consumption specific g/kWh	Specific energy kWh/l
Maximum power						
1.1 At 2-hour test						
46,2	2200	573	13,04	10,92	236	3,55
1.2 At rated speed						
43,9	2300	599	12,50	10,48	239	3,51
1.3 At standard p.t.o. speed						
46,1	2075	540	13,18	11,04	240	3,50
1.4 Part loads, the governor hand lever in the position corresponding to maximum power at full load (curve a)						
1.4.1 the torque corresponding to maximum power at rated speed						
43,9	2300	599	12,50	10,48	239	3,51
1.4.2 85% of the torque obtained in 1.4.1						
37,7	2323	605	11,02	9,23	245	3,42
1.4.3 75% of the torque defined in 1.4.2						
28,6	2351	612	8,96	7,51	263	3,19
1.4.4 50% of the torque defined in 1.4.2						
19,2	2371	617	7,08	5,93	309	2,72
1.4.5 25% of the torque defined in 1.4.2						
9,7	2397	624	5,22	4,37	450	1,86
1.4.6 unloaded						
-	2431	633	3,44	2,88	-	-

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Power kW	Speed Engine rev/min	Speed P.t.o. rev/min	Fuel consumption hourly l/h	Fuel consumption hourly kg/h	Fuel consumption specific g/kWh	Specific energy kWh/l
1.5 Part loads, the governor hand lever in the position corresponding to the standard p.t.o. speed at full load (curve b)						
1.5.1 the torque corresponding to maximum power						
46,1	2075	540	13,18	11,04	240	3,50
1.5.2 85% of the torque obtained in 1.5.1						
39,5	2091	544	11,29	9,46	240	3,50
1.5.3 75% of the torque defined in 1.5.2						
30,0	2122	552	8,93	7,48	249	3,37
1.5.4 50% of the torque defined in 1.5.2						
20,3	2151	560	6,81	5,70	281	2,98
1.5.5 25% of the torque defined in 1.5.2						
10,3	2184	569	4,81	4,03	391	2,14
1.5.6 unloaded						
-	2233	581	2,96	2,48	-	-

No load maximum engine speed: 2431 rev/m
Equivalent flywheel torque at rated engine speed: 182 Nm
Equivalent flywheel torque at 2-hour test: 201 Nm
Maximum equivalent flywheel torque: 229 Nm at 1600 rev/min of the engine

Mean atmospheric conditions

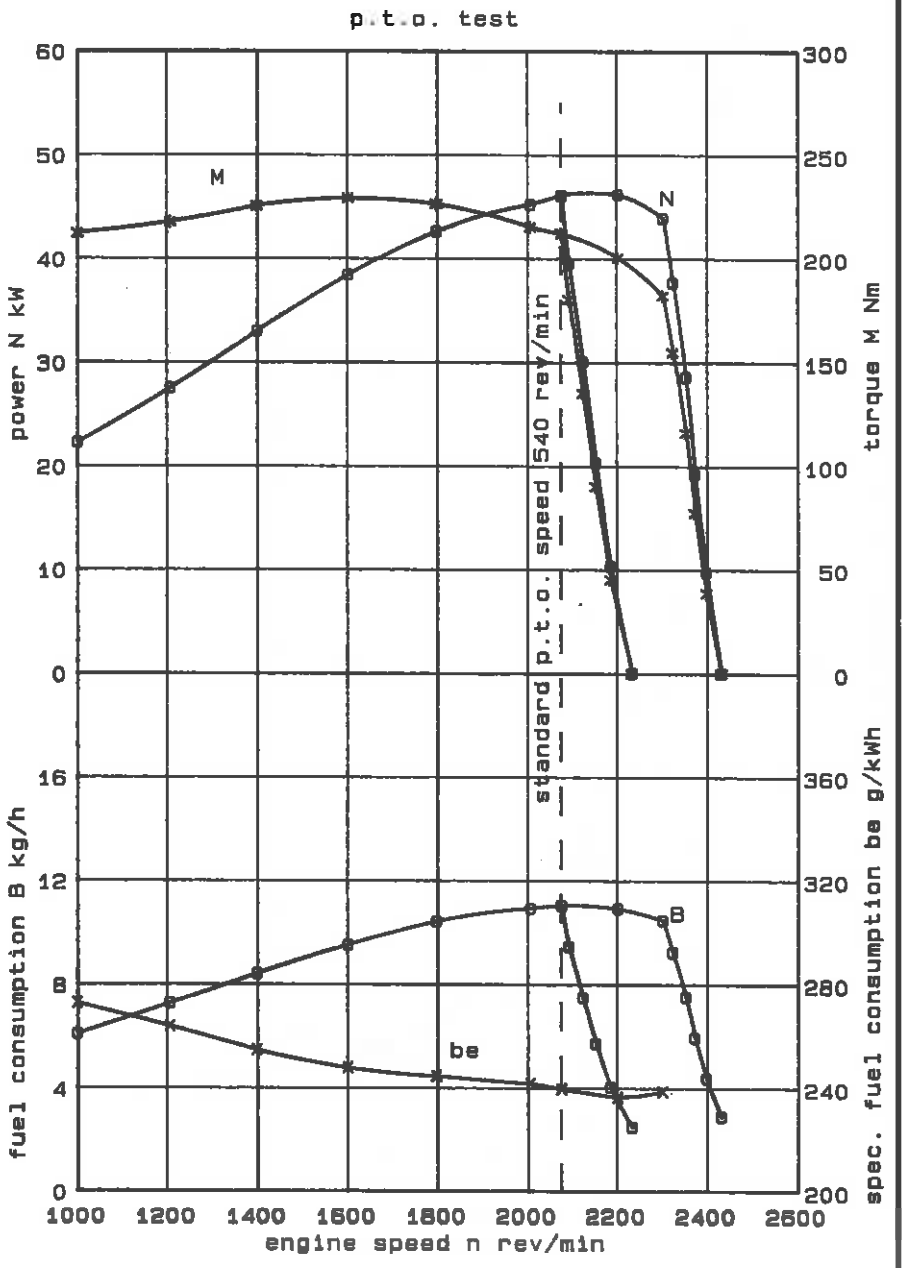
temperature	20 °C
pressure	100 kPa
rel. humidity	60 %

Maximum temperatures

coolant	94 °C
oil	120 °C
fuel	23 °C
air intake	20 °C

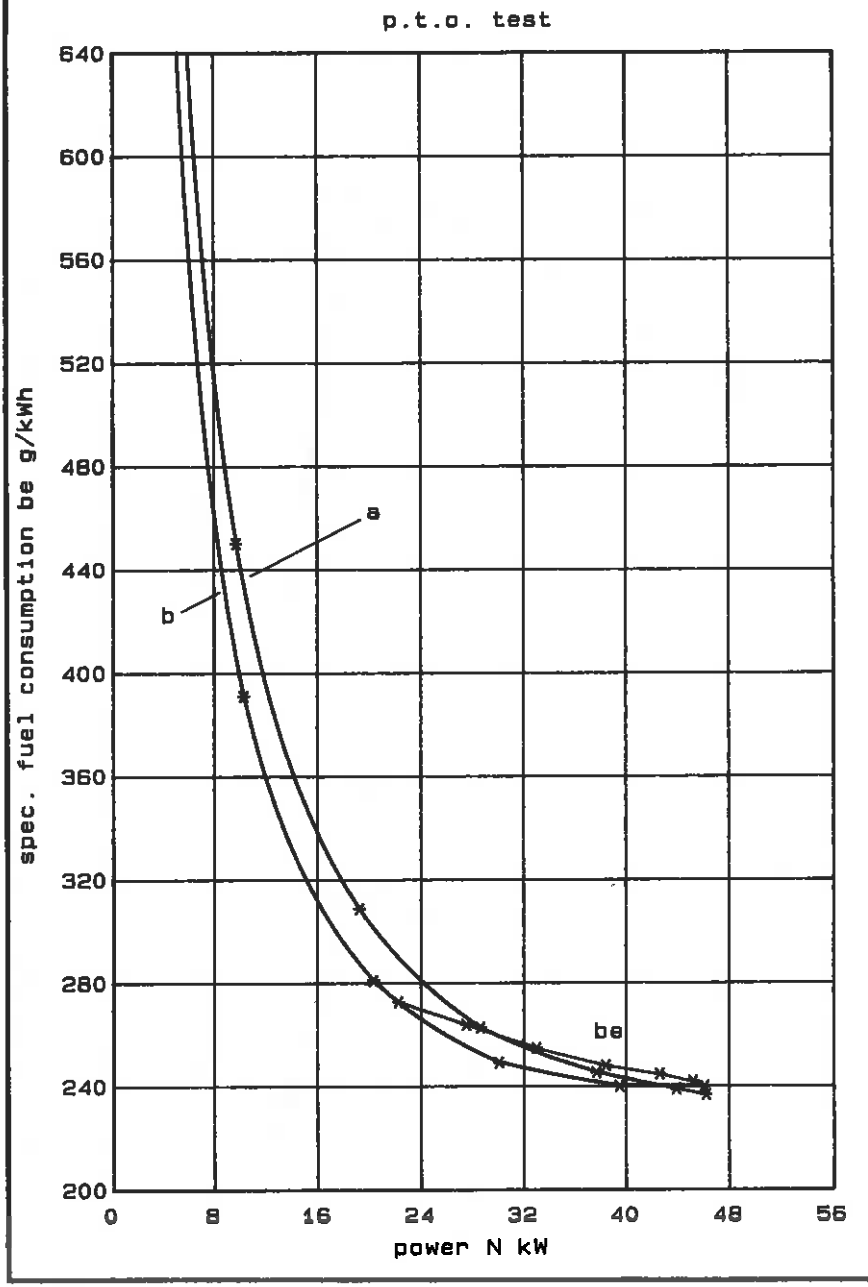
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2 HYDRAULIC POWER AND LIFTING FORCE

Date of tests: 1st and 8th December 1988

2.1 Hydraulic power test

Sustained pressure with relief valve open 19,4 MPa
Pump delivery rate at minimum pressure 50,2 l/min

	Hydraulic power kW	Flow rate l/min	Pressure MPa	Oil temperature °C
At 90% of the actual relief valve setting	9,0	30,9	17,5	65
At max. power	12,6	46,1	16,4	65

Tapping point used for test: At rear of tractor

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 without load	635 mm	787 mm
Vertical movement with load	605 mm	745 mm
Max. corrected force exerted through full range	15,1 kN	13,5 kN
Corresponding pressure	16,4 MPa	16,4 MPa
Moment about rear axle	-	21,4 kNm
Max. tilt angle of mast from vertical	-	10,4°

Lifting heights relative to horizontal lower links

mm	-355	-300	-295	-200	-100	0	+100	+200	+300	+310	+390

Lifting forces at hitch points, corrected to 16,4 MPa

kN			15,1	17,8	19,7	21,3	22,3	23,1	23,8	23,8	

Lifting forces at standard frame, corrected to 16,4 MPa

kN	13,5	14,5		16,2	17,3	17,7	17,5	17,4	17,1		16,6

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3 DRAWBAR PERFORMANCE

Date of tests: 12th till 20th January 1989
Type of track: Concrete

Gear	Driving speed km/h	Power kW	Drawbar pull kN	Engine speed rev/min	Slip of wheels %
3.1 Maximum power in tested gears (unballasted tractor) height of drawbar above ground 610 mm					
2 I	3,06	24,6	28,91	2355	14,9
3 I	4,37	35,4	29,17	2198	15,1
4 I	6,96	38,8	20,08	2202	6,3
1 II	7,68	39,8	18,67	2202	5,6
2 II	11,80	38,9	11,87	2202	3,1
3.2 Maximum power in tested gears (ballasted tractor) height of drawbar above ground 650 mm					
1 I	2,06	21,8	38,14	2371	15,1
2 I	3,03	32,2	38,28	2332	15,1
3 I	4,80	39,8	29,87	2202	7,5
4 I	7,18	40,4	20,24	2202	4,0
1 II	7,82	41,2	18,97	2198	3,7
2 II	11,95	40,2	12,10	2198	2,1
3.3.1 Five-hour-test at 75% of pull at maximum power in 4 I gear					
4 I	7,74	32,7	15,19	2344	2,8
3.3.2 Five-hour-test at pull corresponding to 15% wheel slip in test 3.2					
2 I	3,21	34,2	38,30	2328	-

Total oil consumption during ten hours duration of tests 3.3.1 and 3.3.2 : 17 g/h

Tyre size front: 7.50 - 16
rear: 16.9 R 30

Specific fuel consumption g/kWh	Specific energy kWh/l	Temperatures Fuel °C	Coolant °C	Engine-oil °C	Atmospheric conditions Tempe-rature °C	Relative humidity %	Pressure kPa
tyre inflation pressure: 175 kPa at front, 80 kPa at rear							
339	2,47	30	87	90	8	73	100,2
308	2,72	30	85	92	9	81	100,2
281	2,98	31	90	95	8	84	100,2
273	3,06	32	90	95	8	84	100,2
280	2,99	30	87	94	7	72	100,5
tyre inflation pressure: 275 kPa at front, 90 kPa at rear							
344	2,43	25	84	84	5	69	101,8
309	2,70	25	89	91	5	84	101,8
275	3,03	26	89	95	5	89	101,8
270	3,09	30	88	94	4	92	101,8
265	3,16	32	88	93	4	94	101,8
272	3,07	33	87	92	4	95	101,8
284	2,94	25	87	94	3	92	101,8
-	-	26	83	90	-1	95	101,8

Test 3.3.2 was carried out with additional ballast of 350 kg, the figures not quoted are therefore irrelevant

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4 TURNING AREA AND TURNING CIRCLE

Wheel equipment front: 7.50 - 16
rear: 16.9 R 30

Track of wheels front: 1410 mm
rear: 1600 mm

	With brakes		Without brakes	
	left-hand m	right-hand m	left-hand m	right-hand m
Radius of turning area	3,29	3,24	3,82	3,60
Radius of turning circle	3,13	3,08	3,66	3,44

5 LOCATION OF CENTRE OF GRAVITY

Height above ground	902 mm
Distance forward from rear axle centre	752 mm
Distance from tractor's median plane, to the right	1 mm

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JOHN DEERE 1950

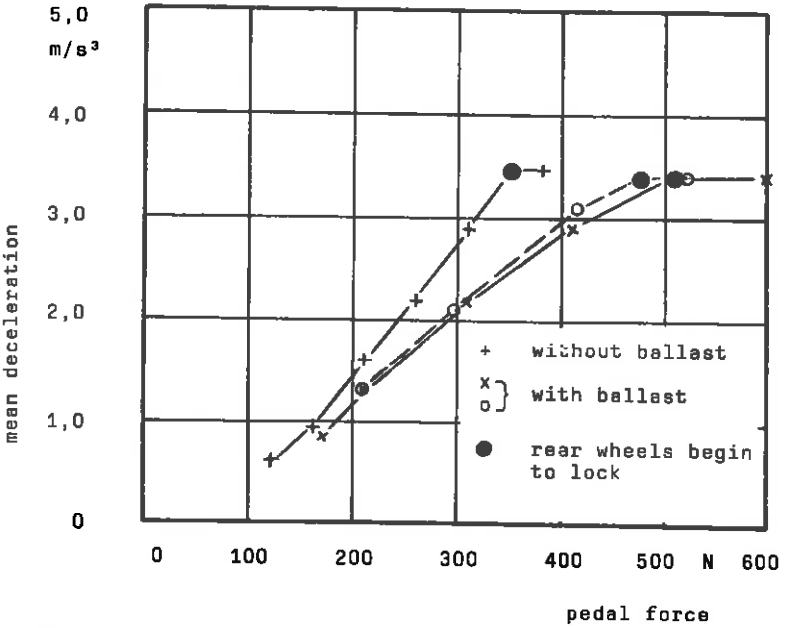
Test No. 88-126

6 BRAKING

Date of tests: 16th and 17th January 1989

	Tractor mass (with driver) front kg	rear kg	total kg	Speed before application of brakes km/h
Without ballast	1065	1995	3060	30,0
With ballast	1480	2730	4210	29,8

6.1 Cold service braking device test
6.2 Fade test



No significant deviation of tractor from original course and no abnormal vibrations

Brakes-heating: Actuating of brake for 1 km with pedal force corresponding to 1 m/s²

6.3 Parking braking device test

		Ballasted tractor on 18% - slope up	down
Braking device control force	N	170	150

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7 MEASUREMENTS OF EXTERNAL NOISE LEVEL

Date of test:	16th January 1989
Type of track:	Concrete
Type of sound level meter:	BRÜEL & KJAER model 2233

Results of test

Gear:	4 II
Travelling speed before acceleration:	22,5 km/h
Sound level:	85,5 dB(A)

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OPTIONAL TEST

8. ENGINE PERFORMANCE

Date of tests: 12th September 1988
Location of tests: DLG-Testing-Station Groß-Umstadt
Type of dynamometer: SCHENCK eddy-current-dynamometer W 150

	Power kW	Engine speed rev/min	Fuel consumption hourly l/h	Fuel consumption hourly kg/h	Fuel consumption specific g/kWh	Specific energy kWh/l
Maximum power						
8.1 At 2-hour test	50,6	2200	13,42	10,99	217	3,77
8.2 At rated engine speed	48,2	2300	12,89	10,55	219	3,74
8.3 At standard p.t.o. speed (540 rev/min)	50,6	2075	13,58	11,12	220	3,73
8.4 Part loads						
8.4.1 the torque corresponding to maximum power at rated speed	48,2	2300	12,89	10,55	219	3,74
8.4.2 85% of the torque obtained in 8.4.1	41,6	2336	11,31	9,26	222	3,68
8.4.3 75% of the torque obtained in 8.4.2	31,6	2364	9,04	7,41	235	3,49
8.4.4 50% of the torque obtained in 8.4.2	21,3	2388	6,92	5,67	266	3,07
8.4.5 25% of the torque obtained in 8.4.2	10,8	2413	4,83	3,96	368	2,23
8.4.6 unloaded	-	2453	2,92	2,39	-	-

Optimum fuel consumption: 215 g/kWh at 32,5 kW and 1725 rev/min
No load maximum engine speed: 2453 rev/min
Torque at rated engine speed: 200 Nm
Torque at maximum power: 220 Nm
Maximum torque: 251 Nm at 1603 rev/min of the engine

Mean atmospheric conditions

temperature	22 °C
pressure	100 kPa
relative humidity	55 %

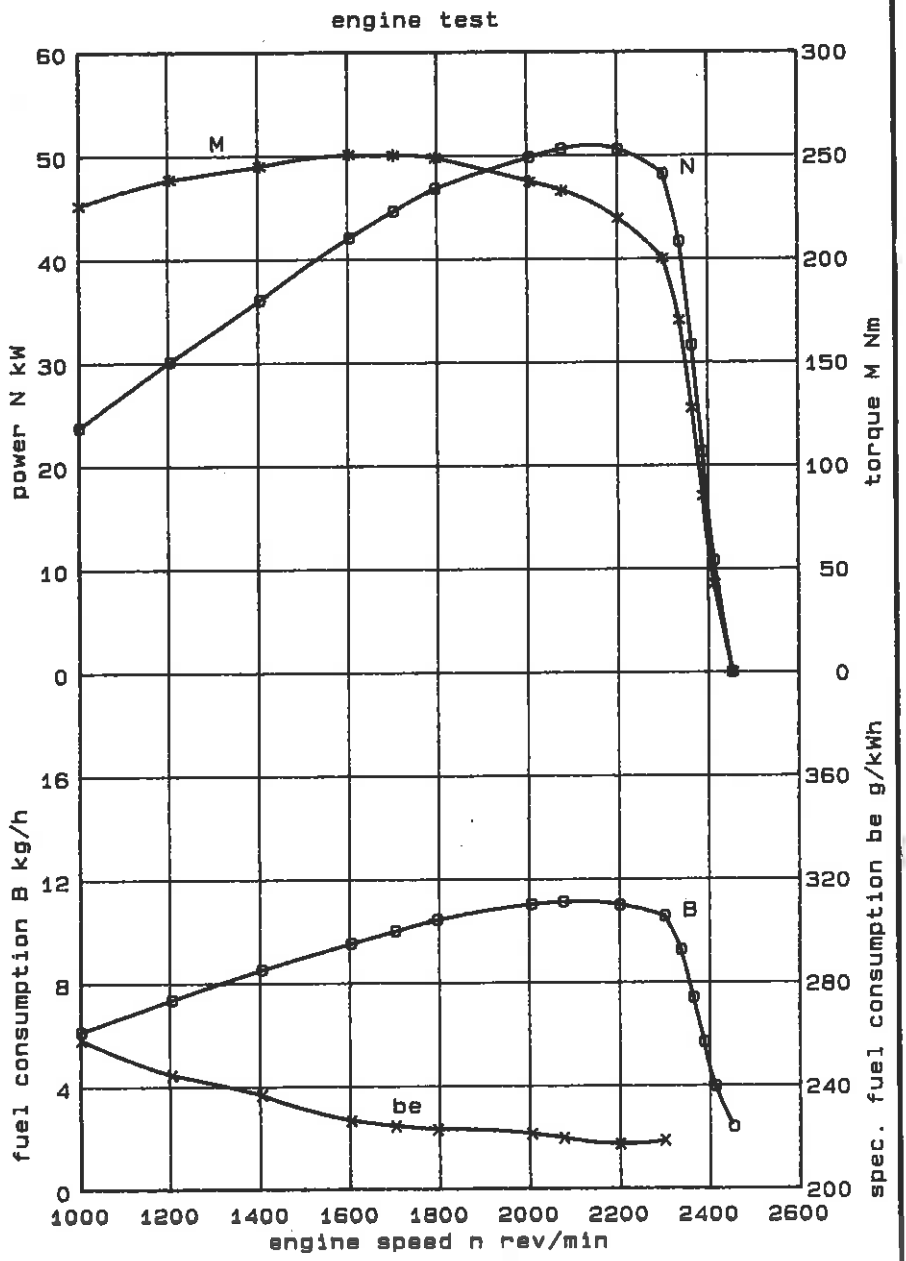
Maximum temperatures

coolant	94 °C
oil	116 °C
fuel	25 °C
engine air intake	24 °C

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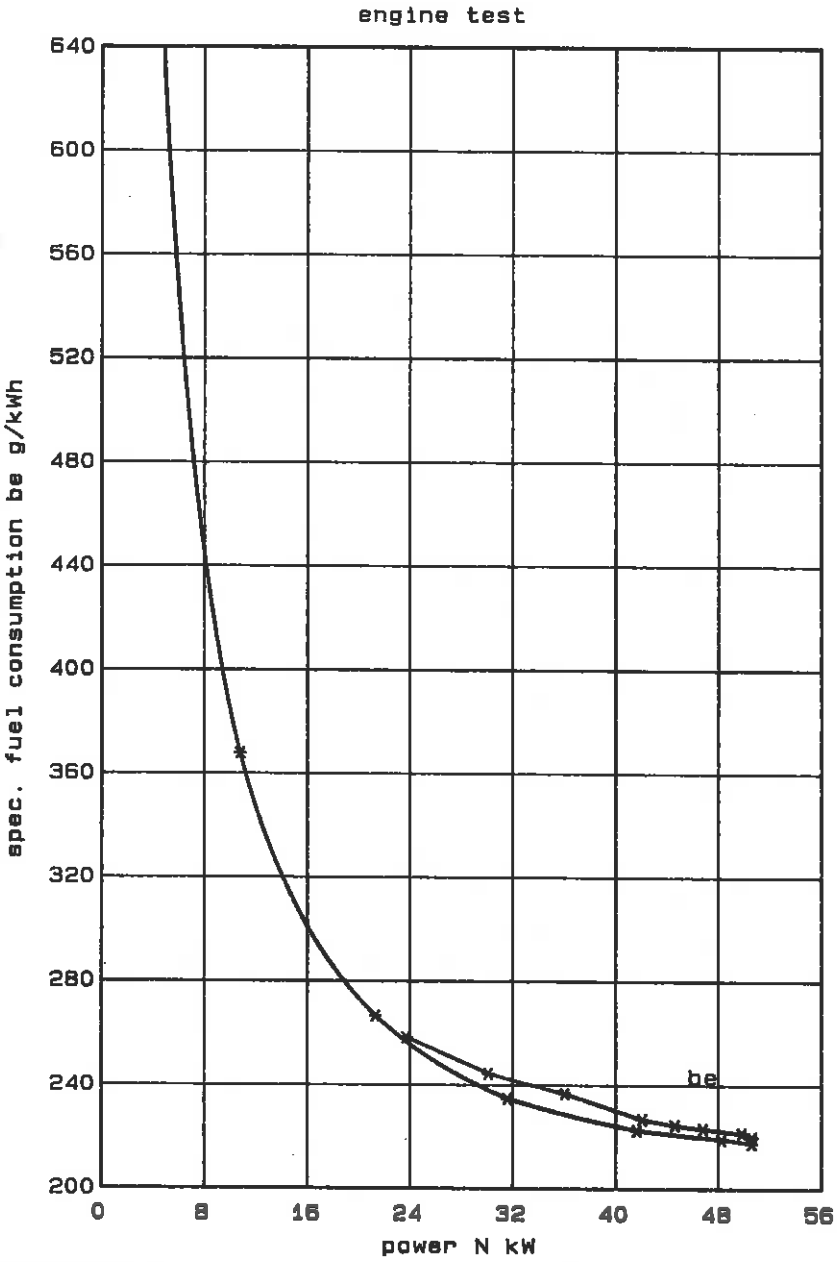
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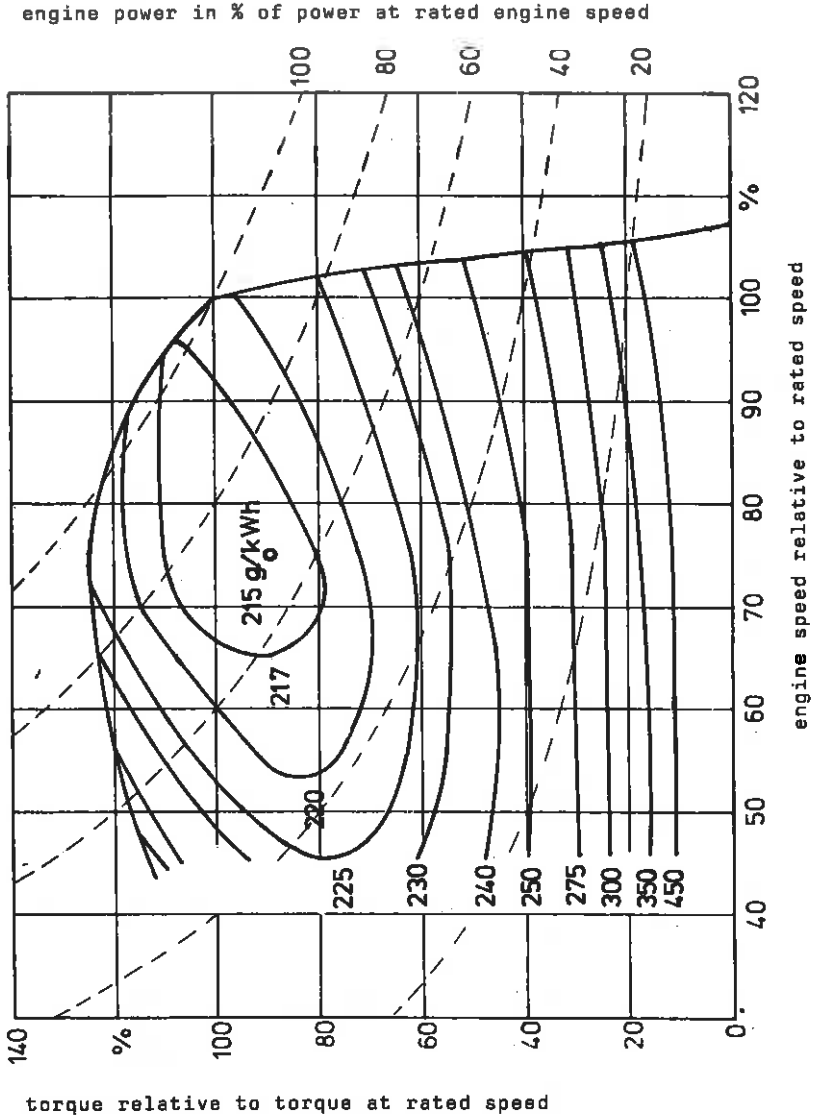
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APPENDIX

(Under the responsibility of DLG-Testing-Station)

Results of noise tests in the protective structure, (according to Code V), carried out on a similar tractor

Tractor model: JOHN DEERE 1950 (2WD) with Hi-Lo-Power-Shift group with safety cab MC 1

Testing station: BLT-Wieselburg, Austrie

Date: August 1987

OECD No.: CSD 01037/10-a(C)

Gear	Drawbar pull kN	Travelling speed km/h	Sound level dB(A)
1 II Lo *)	17,674	6,6	83,0
1 II Lo *)	light load	7,5	80,5
4 II Hi	light load	30,0	83,0

*) The 1 II Lo gear corresponds to the nominal travelling speed nearest to 7,5 km/h

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