Report on test in accordance
with O.E.C.D. STANDARD CODE

O.E.C.D. No. 1004



Agricultural Tractor
DEUTZ-FAHR DX 3.10 (4WD)
Type denomination D 1065/4 A-S

Manufacturer
Klöckner-Humboldt-Deutz AG
D-5000 Köln-Deutz

Deutsche Landwirtschafts-Gesellschaft e. V.
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This bulletin is based on engineering tests in accordance with the O.E.C.D. STANDARD CODE for the Official Testing of Agricultural Tractor Performance. It does not contain an evaluation of the tractor performance on practical work.

Duration of Tests: August 1985 till February 1986
DLG-Testing-Station for Agricultural Machinery, Max-Eyth-Weg 1,
D-6114 Groß-Umstadt

This report has been approved by the O.E.C.D. Coordinating Centre (C.E.M.A.G.R.E.F., France) as being in accordance with the O.E.C.D. STANDARD CODE.

Date of Approval: 9th May 1986 O.E.C.D. No. 1004

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 daN = 10 N	=	1,02 kp	or 1 kp	= 0,981 daN
Powers	1 kW	=	1,36 PS	or 1 PS	= 0,736 kW
Pressures	1 bar	=	1,02 kp/cm²	or 1 kp/cm²	= 0,981 bar
	1000 mbar	=	750,10 mm Hg		

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PRÜFUNGS-ABTEILUNG
DEUTZ-FAHR DX 3.10

Test No. 85-183

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*) All stated dimensions refer to tyre sizes 12.5 - 18 MPT at front and 14.9 R 30 at rear, as well as to track widths 1500 mm at front and 1520 mm at rear

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Test No. 85-183

Tractor manufacturer:	KLÖCKNER-HUMBOLDT-DEUTZ AG D-5000 Köln-Deutz
Submitted for test by:	Manufacturer
Selected by:	Manufacturer with agreement by DLG
Place of running in:	Köln and Groß-Umstadt
Duration of running in:	Engine and tractor appr. 100 hours

SPECIFICATION OF TRACTOR

Tractor

Make:	DEUTZ-FAHR
Trade name:	DX 3.10
Type denomination:	D 1065/4 A-S
Type:	Four-wheel-drive tractor, unit construction
Serial No.:	7728 0001
Start of series:	7728 0001

Engine

Make:	DEUTZ
Model:	F3L 912
Type:	4-stroke Diesel engine, direct injection air cooled
Serial No.:	6972354
Cylinders:	3, in-line, bore 100 mm, stroke 120 mm, displacement 2827 cm^3, compression ratio 17:1, replaceable ribbed cylinder liners
Valves:	Overhead
Fuel system:	PIERBURG fuel supply pump, BOSCH in-line injection pump PES 3A 80D 410/3 RS 1324; serial no. 44557365; manufacturer's production setting 49$\pm$1,5 mm^3/stroke at rated engine speed and full load; injection timing 28$^{\circ}\pm1^{\circ}$ before TDC; BOSCH multihole injection nozzles DLLA 149S 774, injection pressure 175+8 bar; MANN fuel filter WK 7.31 with replaceable cartridge; capacity of fuel tank 83 l

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Governor:	BOSCH centrifugal variable speed governor RSV 325-1075 A 8 C 2163-1L, governed range of engine speed 650 to 2240 1/min, rated engine speed 2150 1/min
Air cleaner:	MANN dry paper element filter with precleaner, replaceable cartridge, pilot lamp; air intake below bonnet
Exhaust silencer:	ROTH multichamber-expansion type silencer, conical, 60 to 125 mm dia, 800 mm long, on the left, above the bonnet, mouth showing upwards; mouth 2520 mm above ground
Lubrication system:	Forced-feed lubrication with gear pump, strainer in sump; MANN oil filter in full flow with by-pass valve and replaceable cartridge; cartridge change every 500 operating hours; oil capacity 9 l; specified oil quality API-CC, oil change period 250 operating hours; specified oil viscosities: below - 5°C SAE 10W from -10°C to +10°C SAE 20W/20 from + 5°C to +30°C SAE 30 over +25°C SAE 40 or over -10°C SAE 15W/40; engine oil cooler inside of cooling baffle
Cooling system:	Air cooling with axial blower with 11 blades, 230 mm dia, driven by V-belt, without temperature control
Starting system:	Electrical BOSCH solenoid pre-engaged-drive-starting motor JF 12V 2,7 kW, BOSCH heating spiral in intake pipe; depressed clutch pedal as safety device
Electrical equipment:	12 Volt, negative earth; BOSCH 3 phase alternator K1 14V 33A, 462 W; 1 lead acid battery 88 Ah at 20 hours rating

Transmission

Clutch:	LUK dry dual disc clutch DT 225/225 G travel drive pedal operated, disc 225 mm dia; p.t.o. drive handlever operated, disc 225 mm dia
Gear box:	DEUTZ-FAHR TW 511-S/I. synchromesh gearbox with 4 speeds; group gear with 2 collar shifted forward ranges (L and H) and 1 sliding gear shifted reverse range (R); synchromesh close stepped gear DUAL-SPLIT with 2 ranges (N and +20%); total 16 forward and 8 reverse speeds, 3 shift levers
Rear axle and final drives:	DEUTZ-FAHR bevel gear driven intermediate shaft, spur gear transmission to bevel gear differential with pedal operated lock on rear axle; lock not self disengaging, with pilot lamp
Front axle and final drives:	SIGE 002, driven by universal joint shaft placed in tractor's median plane; lever operated jaw clutch, not shiftable under load; bevel gear, bevel gear differential without lock, planetary final drives

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Total ratios and speeds

Gear	Close stepped range	Range	Total ratio engine : driving wheel	Nominal travelling speed *) at rated engine speed km/h
1	N	L	233,02	2,31
2			146,55	3,68
3			100,36	5,37
4			63,75	8,45
1	+20 %		190,10	2,84
2			119,56	4,51
3			81,87	6,58
4			52,01	10,36
1	N	H	83,81	6,43
2			52,71	10,23
3			36,10	14,93
4			22,93	23,51
1	+20 %		68,38	7,88
2			43,00	12,53
3			29,45	18,30
4			18,71	28,81
1	N	R	205,92	2,62
2			129,51	4,16
3			88,69	6,08
4			56,34	9,57
1	+20 %		167,99	3,21
2			105,66	5,10
3			72,35	7,45
4			45,96	11,73

*) calculated with the radius index 665 mm

Lubrication:

	Oil quality API-	Oil viscosity SAE	Oil capacity l	Oil change operating hours
Gear box with rear axle	GL 4	90	21,5	2000
	CC or CD	15W/40		
Front axle	GL 5	90	5	1000
Final drives at front			1,0 each	

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Main p.t.o.

Independent, driven by second disc of dual disc clutch;
1 p.t.o. shaft at rear of tractor, 618 mm above ground, in tractor's median plane, shaft end 425 mm behind rear wheel axle;
35 mm dia, 6 splines, ISO 500/DIN 9611, type 1;
sense of rotation clockwise, viewed facing tractor's rear;
2 speeds are preselectable by hand lever

P.t.o.	P.t.o. speed 1/min	Engine speed 1/min	P.t.o. transmission ratio
540	540	2077	3,8462
	559	2150	
1000	1000	2048	2,0476
	1050	2150	

Power lift

DEUTZ-FAHR
K 46.3 DEUTZ-FAHR TRANSFERMATIC;
hydraulic power lift in unit construction;
draft- and position-control both steplessly mixable, floating position;
upper link sensing;
no lowering throttle

Hydraulic system:

Open centre system,
BOSCH gear type pump HY/ZFS 11/16 BL 212/1V, directly driven by engine,
delivery 34,4 l/min at rated engine speed;
DEUTZ-FAHR control valve, with additional remote control at rear right hand mudguard;
relief valve pressure setting 175+8 bar;
single acting cylinder with 90 mm bore and 152 mm stroke,
safety valve set to 240 bar

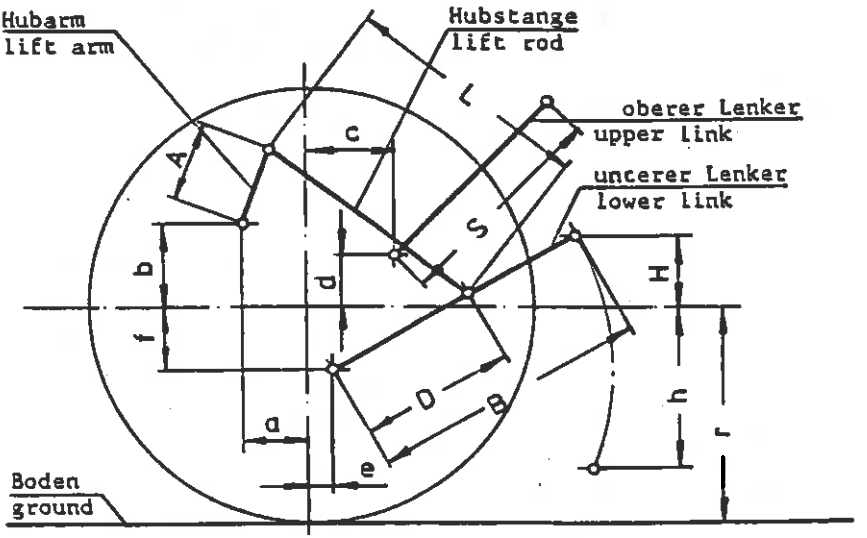
	1 double acting DEUTZ-FAHR additional control valve SD80 with 2 oil tappings at rear of tractor; max. 3 double acting additional valves optionally avialable; 1 separate oil return line at rear of tractor; hydraulic oil tank with 16 l capacity in power lift unit; max. 7 l may be taken off if tractor is working stationary or travelling
Hydraulic oil:*)	Engine oil SAE 15W/40 API-CC or -CD, oil change every 1000 operating hours (API-CC) resp. 2000 hours (API-CD)
Implement linkage:	3-point linkage, category 2 acc. to ISO 730/I or DIN 9674; dimensions: see pages - 10 - and - 11 -

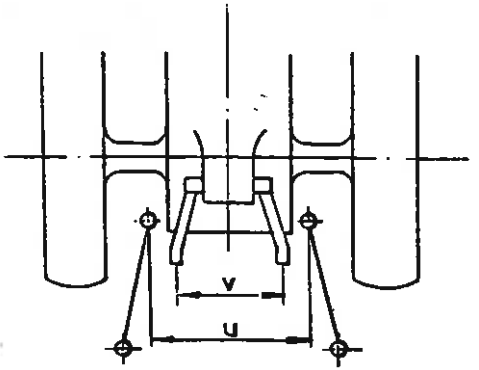
Pull attachment

Trailer hitch:	CRAMER KU 9562, automatical, pin 32 mm dia, hitch point above ground 787 or 844 mm behind rear wheel axle horizontally 496 mm above p.t.o. vertically 169 or 226 mm behind p.t.o. shaft end horizontally 71 mm permissible vertical load 1250 kg
Swinging drawbar:	Optionally available, not fitted
Holed drawbar:	Short bar, length between joint balls 825 mm, thickness 30 mm, width 80 mm, 9 holes 33 mm dia with 80 mm distance each, holes' centres behind p.t.o. shaft end 480 mm (with horizontal lower links) height above ground (measured without load): minimum 50 mm maximum 907 mm
Towing hitch:	at front, 660 mm above ground

*) oil filter and filter changing period
see on page 12 - steering -

Implement linkage:





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Dimensions of rear implement linkage (projected lengths in mm, underlined dimensions are valid for power lift measurements p. 27)

Rear tyres	radius index	(r)	665
Front tyres	static radius	(r')	453
Length of lift arms		(A)	280
Length of lower links		(B)	817
Distance of lift arm pivot points from rear wheel centre	horizontal	(a)	-47
	vertical	(b)	312
Horizontal distance between lower link pivot points		(u)	470
Horizontal distance between lift arm end points		(v)	580
Length of upper link		(S)	620 to 830, <u>631</u>
Distance of upper link pivot point from rear wheel centre	horizontal	(c)	277
	vertical	(d)	<u>240</u>, 290, 340
Distance of lower link pivot point from rear wheel centre	horizontal	(e)	88
	vertical	(f)	165
Distance of lower link pivot points from lift rod pivot points on lower links		(D)	492
Length of lift rods		(L)	560 to 695, <u>610</u>

Height of lower link hitch points relative to rear wheel centre line (situated 665 mm above ground), these data are valid for unloaded power lift:

Length of lift rods	(L)	<u>610</u>	560	695
Linkage distance of lift rods	(D)	492	492	492
Lowest position	(h)	465	373	615
Highest position	(H)	170	242	25
Transport position	(h')	170	85	340

Type of transport lock: Hydraulic-mechanical

Steering

DANFOSS, OSPC 100 OR
hydrostatic;
connected by WABCO flow-control valve to the hydraulic pump of power lift,
controlled oil flow 9 l/min, max. pressure 150 bar;
hydraulic oil cooler in steering-oil circuit, at engine's cooling air baffel;
replaceable oil filter PUROLATOR PER 330, in suction line,
filter change once a year or when pilot lamp lights up;
1 integrated WEBER cylinder (symmetrical design), 260 mm stroke, 65 mm bore and 45 mm piston rod diameter, directly acting on steering levers

Brakes

Service brake: KNOTT
pedal operated muscle power brake with hydraulic transmission, acting on rear axle;
per wheel 1 drum brake, drum 350 mm dia

Parking brake: Mechanical drum brake, acting on rear wheels, actuated by pulling handle with ratchet;
1 brake drum with 180 mm dia and 30 mm width on intermediate shaft, on the right, outside of gearbox

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

Trailer brake: Optionally available

Wheels

Steered wheels:	At front, 2 cross-ply tyres 12.5 - 18 MPT 8 ply PIRELLI, max. permissible load per tyre 2063 kg at 2,5 bar inflation pressure and 30 km/h; track width 1500 mm or by turning the wheels 1650 mm; rims 11 x 18
Driving wheels:	At front and at rear, rear driving wheels: 2 radial-ply tyres 14.9 R 30 6 ply KLEBER, max. permissible load per tyre 1665 kg at 1,5 bar inflation pressure and 30 km/h; track width 1420 mm, adjustable up to 1920 mm in steps of 100 mm each; adjustable gauge bowl wheels; rims W 13 x 30
Wheel base:	2079 mm

Cab

DEUTZ-FAHR
safety cab with integrated
safety frame 82/1,
approval-no. CSD 0853/23;
antivibration mounted by 4 silent blocks
on tractor;
1 door and 2 steps each on the left and right,
steps 435 and 735 mm, driver's platform
985 mm above ground;
windscreen, rear and side windows tiltable;
hot-air heating by engine cooling air,
air outlet jets at cab floor,
and at windscreen

Noise-reduction materials:

floor	rubber mat	5 mm
	foam PUR, foil coated	15 mm
	bitumen foil	5 mm
mudguards	moltoprene foam, imitation leather coated	24 mm
roof	phenolic-resin bonded cotton fleece, molded	4 mm
	polyester texture	1 mm
bulkhead	PU heavy foam on engine's side	10 mm

Seat

GRAMMER DS 85 H/90 A
upholstered seat with back rest and arm rests, adjustable spring, shock absorber;
height of unloaded seat above platform adjustable in 2 steps from 500 to 560 mm;
longitudinal adjustment 150 mm

Number of grease points

23

Overall dimensions

Total length:	3560 mm without ballast 3880 mm with ballast
Total width:	2092 mm with and without ballast
Total height:	2480 mm to top of roof 2520 mm to mouth of exhaust silencer
Ground clearance:	322 mm below front axle differential

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Lighting equipment: Electrical, 12 Volt, as per German legislation

	Dimensions mm	Height above ground of centre mm	Distance from outside edge of tractor to centre mm
Head lights	130 dia	963	846
Side lights	55 x 60	1570	285
Rear lights	30 x 60	1315	350
Reflectors			
1st pair	181 x 41	1240	350
2nd pair	102 x 58	710	603

Running-time meter: Mechanical, combined with tachometer, driven by camshaft of engine; reference engine speed for one really counted hour 1633 1/min

Permissible combinations of tyres

Tyre size	
at front	at rear
8.3 - 24 6 ply	8.3 - 42 6 ply
10.5 - 20 MPT 6 ply	12.4 - 32 6 ply
	14.9 - 28 6 ply
	14.9 - 30 6 ply
12.5 - 18 MPT 6 ply	14.9 - 30 6 ply

TEST CONDITIONS

Track setting: 1500 mm at front
1520 mm at rear

Weights

		Without driver	With driver
Without ballast:	front	1275 kg	1280 kg
	rear	1740 kg	1820 kg
	total	3015 kg	3100 kg
Front ballast:	9 weights, total		360 kg
Rear ballast:	water in the tyres		350 kg
	2 weights per wheel, total		190 kg
With ballast:	front	1710 kg	1715 kg
	rear	2205 kg	2285 kg
	total	3915 kg	4000 kg

Fuels and lubricants used in tests

Fuel:	ARAL Diesel-fuel DIN 51601 density at 15°C	
	at p.t.o. tests	0,835 kg/l
	at drawbar tests	0,832 kg/l
Engine oil:	DEUTZ HDC SAE 15W/40	
Gear oil:	DEUTZ HDC SAE 15W/40 in gearbox including rear axle	
	DEUTZ gear oil API GL5 SAE 90 in front axle including final drives	
Hydraulic oil:	DEUTZ HDC SAE 15W/40 in power lift and steering	
Grease:	Multi-purpose grease	

Repairs and remarks None

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COMPULSORY TESTS

(1) MAIN POWER TAKE-OFF PERFORMANCE (540 1/min)

Date of tests: 8th August 1985
Location of tests: DLG-Testing-Station Groß-Umstadt
Type of dynamometer: SCHENCK hydraulic dynamometer U1-40

Power kW	Speed engine 1/min	Speed p.t.o. 1/min	Fuel consumption hourly 1/h	Fuel consumption hourly kg/h	Fuel consumption specific g/kWh	Specific energy kWh/l
MAXIMUM POWER						
At 2-hour test						
32.8	2150	559	9.62	8.03	245	3.41
At rated engine speed						
32.8	2150	559	9.62	8.03	245	3.41
At standard p.t.o. speed						
32.6	2078	540	9.47	7.91	243	3.44
Part loads, the governor hand lever in the position corresponding to the maximum power at full load (curve a)						
(i) the torque corresponding to maximum power at rated speed						
32.8	2150	559	9.62	8.03	245	3.41
(ii) 85% of the torque obtained in (i)						
28.2	2178	566	8.36	6.98	247	3.38
(iii) 75% of the torque defined in (ii)						
21.4	2201	572	6.79	5.67	265	3.15
(iv) 50% of the torque defined in (ii)						
14.3	2212	575	5.24	4.38	305	2.74
(v) 25% of the torque defined in (ii)						
7.2	2226	579	3.85	3.22	446	1.87
(vi) unloaded						
-	2241	583	2.64	2.20	-	-

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Power kW	Speed engine 1/min	Speed p.t.o. 1/min	Fuel consumption hourly 1/h	Fuel consumption hourly kg/h	Fuel consumption specific g/kWh	Specific energy kWh/l
Part loads, the governor hand lever in the position corresponding to the standard p.t.o. speed at full load (curve b)						
(i) the torque corresponding to maximum power						
32.6	2078	540	9.47	7.91	243	3.44
(ii) 85% of the torque obtained in (i)						
28.2	2119	551	8.21	6.86	243	3.44
(iii) 75% of the torque defined in (ii)						
21.4	2138	556	6.63	5.54	259	3.22
(iv) 50% of the torque defined in (ii)						
14.3	2149	559	5.10	4.26	297	2.81
(v) 25% of the torque defined in (ii)						
7.2	2157	561	3.74	3.12	435	1.92
(vi) unloaded						
-	2165	563	2.47	2.06	-	-

Standard specific fuel consumption (g/kWh): 247/305/243/297

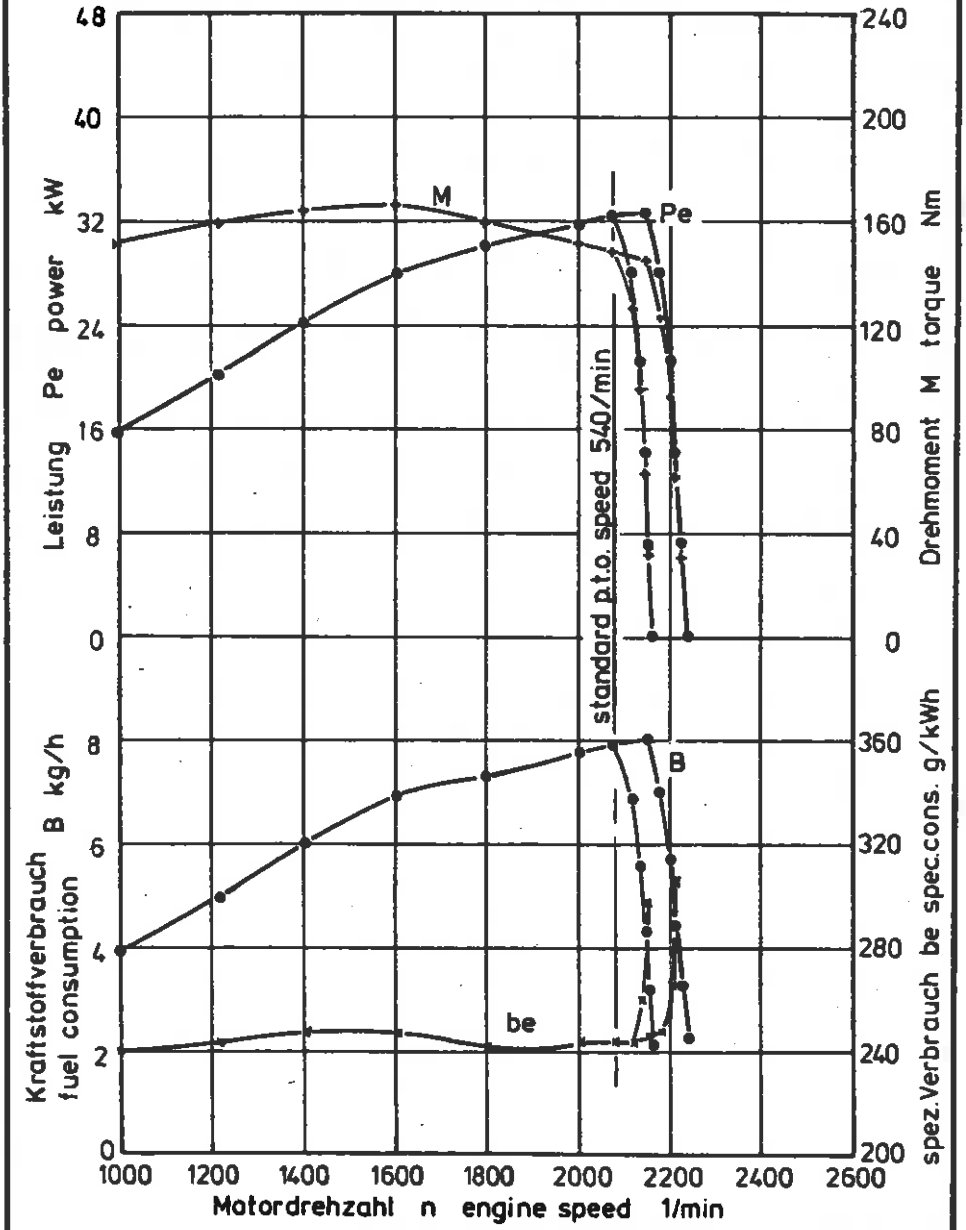
No load maximum engine speed: 2241 1/min
Equivalent flywheel torque at maximum power (2 hours): 146 Nm
Maximum equivalent flywheel torque: 167 Nm at 1602 1/min of the engine

Mean atmospheric conditions:	temperature	23 °C
	pressure	995 mbar
	relative humidity	54 %
Maximum temperatures:	cylinder head	105 °C
	engine oil	105 °C
	fuel	23 °C
	engine air intake	22 °C

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Zapfwellenleistung — P.T.O. Performance



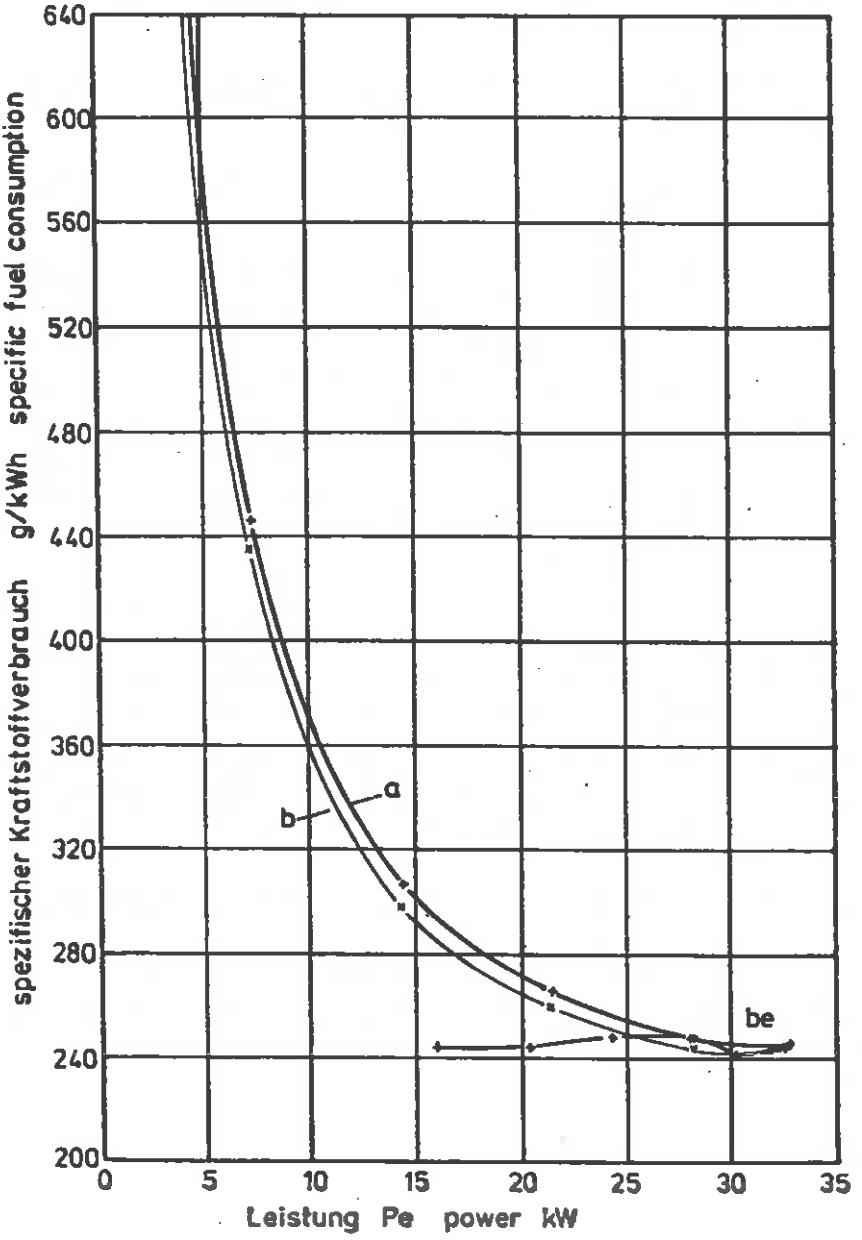
PRÜFUNGS-ABTEILUNG

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Zapfwellenleistung

P.T.O. Performance



PRÜFUNGS-ABTEILUNG
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(2) DRAWBAR PERFORMANCE

Date of tests: 31st January till 18th February 1986
Type of track: Concrete

Gear	Driving speed km/h	Power kW	Drawbar pull daN	Engine speed 1/min	Slip of wheels %
(i) MAXIMUM POWER (unballasted) height of drawbar above ground 470 mm					
1 L N	2,07	17,7	3075	2193	14,9
1 L +20%	2,51	21,5	3080	2178	15,0
2 L N	3,29	26,4	2891	2148	13,4
2 L +20%	4,19	26,9	2308	2151	9,8
3 L N	5,09	26,5	1874	2152	7,8
1 H N	6,17	26,8	1563	2150	6,4
3 L +20%	6,33	27,0	1533	2151	6,3
1 H +20%	7,69	27,0	1262	2152	5,1
4 L N	8,26	26,4	1152	2149	4,6
2 H N	10,12	25,8	917	2154	3,8
(ii) MAXIMUM POWER (ballasted) height of drawbar above ground 465 mm					
1 L N	2,05	22,4	3933	2184	15,0
1 L +20%	2,51	26,6	3810	2154	13,9
2 L N	3,44	27,3	2857	2150	8,9
2 L +20%	4,29	27,7	2325	2148	6,8
3 L N	5,20	27,0	1870	2150	5,5
1 H N	6,27	27,0	1553	2150	4,5
3 L +20%	6,45	26,9	1501	2152	4,2
1 H +20%	7,76	26,6	1234	2146	3,5
(iii) FIVE-HOUR-TEST at 75% of pull at maximum power in 1 H +20% gear					
1 H +20%	7,97	20,5	926	2183	2,5
(iv) FIVE-HOUR-TEST at pull corresponding to 15% wheel slip in test (ii)					
1 L N	2,10	22,9	3933	2180	-

Total oil consumption during ten hours duration of tests (iii) and (iv) 81 g/h

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Tyre size front: 12.5 - 18 MPT 8 ply
rear: 14.9 R 30 6 ply

Tread bar height at the beginning of drawbar tests: 70% at front, 83% at rear of the value when new

Specific fuel consumpt. g/kWh	Specific energy kWh/l	Temperatures Fuel °C	Cylinder-head °C	Engine-oil °C	Atmospheric conditions Temperature °C	Relative humidity %	Pressure mbar
tyre inflation pressure: 1,5 bar at front; 0,8 bar at rear							
336	2,48	32	60	75	2	84	992
312	2,67	35	65	85	3	85	982
308	2,70	30	65	80	4	85	982
300	2,77	32	60	85	2	72	982
304	2,73	30	65	83	3	87	982
302	2,75	30	65	83	3	87	982
300	2,77	30	65	84	3	87	983
298	2,79	30	65	85	4	85	983
306	2,72	30	65	85	4	85	983
312	2,66	30	65	85	4	85	983
tyre inflation pressure: 1,5 bar at front, 0,8 bar at rear							
320	2,60	20	65	84	0	63	992
305	2,73	20	70	84	0	71	992
297	2,80	23	70	84	0	72	992
292	2,84	32	65	83	2	80	992
300	2,77	32	71	83	1	78	992
300	2,78	28	74	85	1	78	991
302	2,76	29	72	84	2	76	991
304	2,73	30	76	85	3	78	991
323	2,58	18	45	65	0	93	984
-	-	10	50	71	0	66	988

Test (iv) was carried out with additional ballast, the figures not quoted are therefore irrelevant

(3) TURNING SPACE AND TURNING CIRCLE

Wheel equipment front: 12.5 - 18 MPT
rear: 14.9 R 30

Track of wheels front: 1500 mm
rear: 1520 mm

Front axle drive disengaged

	With brakes left-hand m	With brakes right-hand m	Without brakes left-hand m	Without brakes right-hand m
Radius of turning space	3,96	3,96	4,46	4,43
Radius of turning circle	3,65	3,64	4,15	4,11

(4) LOCATION OF CENTRE OF GRAVITY

Height above ground	834 mm
Distance forward from rear axle centre	861 mm
Distance from tractor's median plane, to the left	7 mm

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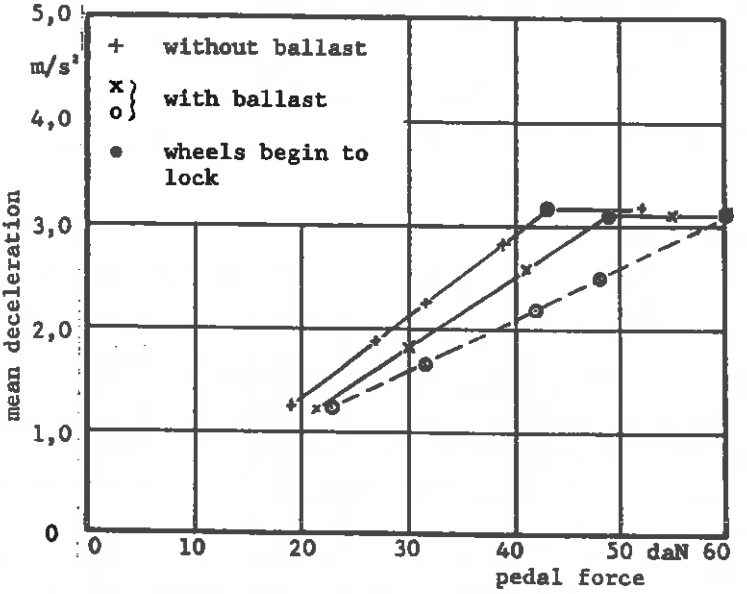
(5) Braking (Front axle drive disengaged)

Date of tests: 4th February 1985

	Tractor mass (with driver) front kg	rear kg	total kg	Speed before application of brakes km/h
Without ballast	1280	1820	3100	29,2
With ballast	1715	2285	4000	29,0

A) Service brake

Type-0-test(cold brakes) ——— , Type-I-(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

B) Parking brake

	Ballasted tractor on 18%-slope		Unballasted tractor on 12%-slope with trailer of 3000 kg	
	up	down	up	down
Braking device control force daN	11	15	14	18

(6) MEASUREMENT OF EXTERNAL NOISE LEVEL

Date of test: 3rd February 1986
Type of track: Concrete
Type of sound level meter: BRÜEL & KJAER model 2209

Results of test

Gear: 4 H +20% *)
Travelling speed before acceleration: 21,9 km/h
Sound level: 85,5 dB(A)

(7) NOISE MEASUREMENT AT THE DRIVER'S EAR

Date of tests: 3rd February 1986
Type of track: Concrete
Type of sound level meter: BRÜEL & KJAER model 2209

with DEUTZ-FAHR safety cab with integrated safety frame 82/1

Results of tests

Gear	Drawbar pull at which the tractor develops the maximum sound level daN	Travelling speed nominal km/h	Travelling speed effective km/h	Sound level dB(A)
1 L N	3010	2,31	2,10	79,5
1 L +20%	3004	2,84	2,53	80,0
2 L N	2930	3,68	3,26	80,0
2 L +20%	2315	4,51	4,17	80,0
3 L N	1880	5,37	5,10	80,5
1 H N	1570	6,43	6,17	80,0
3 L +20%	1521	6,58	6,30	79,5
1 H +20%	+) 1292	7,88	7,66	79,5
1 H +20%	+) light load	7,88	8,39	77,5
4 L N	1144	8,45	8,27	80,5
2 H N	903	10,23	10,06	80,5
4 L +20%	890	10,36	10,22	80,0
2 H +20%	696	12,53	12,41	80,5
3 H N	536	14,93	14,86	80,5
3 H +20%	410	18,30	18,47	80,5
4 H +20%	*) light load	28,81	29,3	80,5

*) Front axle drive disengaged

+) The 1 H +20% gear corresponds to the nominal travelling speed nearest to 7,5 km/h

(8) LIFTING FORCES AND HYDRAULIC POWER

Date of tests: 8th October 1985

Lifting Forces (Linkage dimensions: see pages 10 and 11)

	Height of lower hitch points above ground in down pos. mm	Vertical movement mm	Max. force exerted through full range daN	Corresp. pressure of hydraul. fluid bar	Moment about rear axle daNm	Max. tilt angle of mast over range of lift degrees
At hitch points	200	620	2130	161	-	-
On the frame	200	740	1660	161	2515	12,5

Temperature of hydraulic fluid at start of test 65°C

Lifting heights relative to horizontal lower links

mm	-350	-300	-200	-100	0	+100	+200	+300	+320	+390
Lifting forces at hitch points										
daN		2130	2260	2320	2350	2350	2370	2370	2390	
Lifting forces at test frame										
daN	1950	1970	1990	1970	1920	1860	1750	1680		1660

Hydraulic Power

Sustained pressure with relief valve open 179 bar
Pump delivery rate at minimum pressure 29,1 l/min

	Hydraulic power kW	Flow rate l/min	Pressure bar	Oil temperature °C
at 90% of the actual relief valve setting	7,7	28,7	161	65
maximum	8,0	28,6	168	65

Tapping point used for test: at rear of tractor

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