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

O.E.C.D. No. **891**



Agricultural Tractor
DEUTZ-FAHR DX 4.30 (4WD)

Type denomination D 1036 A-N, D 1036 A-S and D 1036 A-T

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: June till September 1983
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: 5th March 1984 O.E.C.D. No. 891

The tractor DX 4.30 has been tested in 3 variants:

1: As model D 1036 A-N with 4 speed change gear, maximum design related speed is 25 km/h.

2: As model D 1036 A-S with 5 speed change gear, maximum design related speed is 30 km/h.

3: As model D 1036 A-T with 6 speed change gear, maximum design related speed is 40 km/h.

In the rest all variants are identical.

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 4.30

Test No. 83-128

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 4.30
Type denomination:	D 1036 A-N, D 1036 A-S and D 1036 A-T
Type:	Four-wheel-drive tractor, unit construction
Serial No.:	7431 0001

Engine

Make:	DEUTZ
Model:	F4L 913
Type:	4-stroke Diesel engine, direct injection, air cooled
Serial No.:	6754135
Cylinders:	4, in-line, bore 102 mm, stroke 125 mm, displacement 4086 cm^3, compression ratio 17:1, replaceable ribbed cylinder liners
Valves:	Overhead
Fuel system:	PIERBURG fuel supply pump, BOSCH in-line injection pump PES 4A 85D 410/3 RS 2610; manufacturer's production setting 55,5 mm^3/stroke at rated engine speed and full load; injection timing $27^{\circ} + 1^{\circ}$ before TDC; BOSCH multihole injection nozzles DLLA 149S 774, injection pressure 175 + 8 bar; MANN fuel filter with replaceable cartridge; capacity of fuel tank 132 l
Governor:	BOSCH centrifugal variable speed governor: EP/RSV 325-1150 A8B 2163 L; governed range of engine speed 650 to 2430 rev/min, rated engine speed 2300 rev/min

Air cleaner: MANN
dry paper element filter with precleaner, replaceable cartridge, electrical maintenance indicator;
air intake below bonnet

Exhaust silencer: ROTH
multichamber-reflexion-expansion type silencer, 170 x 130 mm oval, 948 mm long;
on the left, above the bonnet,
mouth showing upwards;
mouth 2691 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 11 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 driven by V-belt and fluid coupling, blower speed controlled by exhaust gas temperature

Starting system: Electrical
BOSCH solenoid pre-engaged-drive-starting motor JF 12V 2,7 kW;
BOSCH flame plug in intake manifold

Electrical equipment: 12 Volt, negative earth;
BOSCH 3 phase alternator G1 14V 33A, 462 W;
1 lead acid battery 110 Ah at 20 hours rating

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Transmission

Clutch: LAMELLEN- UND KUPPLUNGSBAU GMBH
dry dual disc clutch A2 031;
travel drive pedal operated, disc 310 mm dia;
p.t.o. drive hand lever operated, disc 280 mm dia

Gear box: DEUTZ-FAHR
TW 901
synchromesh gearbox with
4 speeds at type D 1036 A-N,
5 speeds at type D 1036 A-S and
6 speeds at type D 1036 A-T;
synchronized group gear with
3 forward ranges (L, M and H) and
1 reverse range (R);
totally
12 forward and 4 reverse speeds
at type D 1036 A-N,
15 forward and 5 reverse speeds
at type D 1036 A-S,
18 forward and 6 reverse speeds
at type D 1036 A-T;
optionally available collar shifted
creeper group, not fitted on tested tractor

Rear axle and final drives: DEUTZ-FAHR
bevel gear drive,
bevel gear type differential on intermediate shaft; spur gear final drives;
differential lock in the rear axle,
pedal operated, not self disengaging,
with electrical indicator

Front axle and final drives: SIGE
4180 OPTITRAC
driven by universal joint shaft to central bevel gear drive,
multi disc safety clutch,
collar shifted by hand lever;
bevel gear with automatical lock effect;
planetary final drives

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Total ratios and speeds (tyres 18.4 R 34)

Range	Speed	Total ratio engine : driving wheels	Nominal travelling speed *) at rated engine speed km/h
L	1	279,30	2,39
	2	207,59	3,22
	3	164,18	4,07
	4	113,23	5,90
	5 +)	92,26	7,24
	6 ++)	73,05	9,14
M	1	135,08	4,94
	2	100,40	6,65
	3	79,41	8,41
	4	54,76	12,19
	5 +)	44,62	14,96
	6 ++)	35,33	18,90
H	1	66,36	10,06
	2	49,32	13,54
	3	39,01	17,12
	4	26,90	24,82
	5 +)	21,92	30,46
	6 ++)	17,36	38,47
R	1	144,68	4,61
	2	107,53	6,21
	3	85,05	7,85
	4	58,65	11,38
	5 +)	47,79	13,97
	6 ++)	37,84	17,64

*) calculated with the radius index 770 mm
+) not at type D 1036 A-N
++) not at types D 1036 A-N and D 1036 A-S

PRÜFUNGS-ABTEILUNG
DEUTZ-FAHR DX 4.30 Test No. 83-128

Gear lubrication: Oil screen filter in gear housing,
cleaning every 2000 operating hours

oil capacity in gearbox including
rear axle with final drives 44 l
specified engine oil SAE 15W/40
recommended quality API-CC or API-CD;
oil change period 2000 operating hours

oil capacity in front axle bevel gear drive 5 l
in front axle final drives, each 0,6 l
specified gear oil SAE 90, quality API-GL5;
oil change period 1000 operating hours

Power-take-off

Independent p.t.o.
driven by 2nd plate of dual disc clutch,
hand lever operated, at rear of tractor
in median plane,
700 mm above ground,
p.t.o. shaft's end 525 mm behind rear axle;
35 mm dia, 6 splines, ISO 500/DIN 9611, type 1
2 speeds are preselectable by shift rod
at rear of tractor

540 rev/min p.t.o.
613 rev/min at rated engine speed,
standard p.t.o. speed 540 rev/min at
engine speed 2025 rev/min

1000 rev/min p.t.o.
1089 rev/min at rated engine speed,
standard p.t.o. speed 1000 rev/min at
engine speed 2111 rev/min

p.t.o. shaft rotates clockwisely, viewed from
tractor rear

Power lift

DEUTZ-FAHR, K 55.3;
DEUTZ TRANSFERMATIC-system;
hydraulic power lift in unit construction;
draft control, position control and inter-
mixable control, floating position;
top link sensing;
no lowering throttle

Hydraulic system:	Open centre system; BOSCH tandem gear pump HY/ZFFS 11/16 + 11 L, directly driven by engine; delivery 40 l/min at rated engine speed; hydraulic oil filter with electrical maintenance indicator, filter change yearly
	DEUTZ-FAHR control valve; maximum working pressure 175 + 8 bar, single acting cylinder with 90 mm bore and 145 mm stroke, overpressure relief valve in cylinder set to 240 bar; 1 single acting additional ram with 55 mm bore and 200 mm stroke
	1 DEUTZ-FAHR additional control valve SD.80, 2 couplings at rear of tractor; maximum 3 double acting additional control valves available; 1 separate oil return pipe at rear of tractor
	hydraulic oil reservoir with 13 l capacity in power lift unit, additional tank with 25 l capacitiy optionally available; by oil tap may be taken off 6 l if tractor is working stationary or travelling, 30 l may be taken off if additional tank is fitted; hydraulic oil cooler in cooling baffle
Hydraulic oil:	Recommended engine oil SAE 20W/20 API-CC, oil change period 1000 operating hours, or engine oil SAE 20W/20 API-CD, oil change period 2000 operating hours
Implement linkage:	Three point linkage, quick couplers optional, fitted on tested tractor; joint balls category 2 acc. to ISO 730/I; lift rods adjustable from 730 to 850 mm; lifting range with mean lift rods' length of 790 mm: from 298 mm to 880 mm above ground; other dimensions see on page 28

Pull attachment

Trailer hitch:	CRAMER, KU 9602 automatical; height above ground 910 mm, coupling pin 32 mm dia; distance of hitch hole centre to rear axle centre line 585 mm to p.t.o. shaft end 60 mm; permissible vertical load 2000 kg
Swinging drawbar:	Optionally available, not fitted on tested tractor
Holed drawbar:	Short bar, fitted on hitch points of lower links; length between the joint balls 825 mm; thickness of bar 30 mm, width 80 mm; centre hole and 4 holes on either side with 80 mm distance each; all holes 33 mm dia; distance of holes' centre line with lower links in horizontal position from rear axle centre 1085 mm from p.t.o. shaft end 560 mm with lift rods adjusted to mean length of 790 mm lifting range from 313 mm to 895 mm above ground; the drawbar may be mechanically-hydraulically fixed in the height of 582 mm above ground; these data were determined at the surface of this bar
Towing hitch:	At front of tractor, 820 mm above ground
Steering	Hydrostatic, DANFOSS OSPC 100 OR oil circuit in common with power lift, supplied by tandem part of the BOSCH gear pump with 11 cm^3/rev delivery; 1 differential cylinder directly acting on front axle; bore 50 mm dia, stroke 250 mm, piston rod 25 mm dia

Brakes

Parking brake:	Mechanical internal-expanding-shoe brake acting on intermediate shaft, operated by pulling handle with ratchet; 1 brake drum with 180 mm dia and 40 mm width each on the left and right, outside of gearbox
Service brake:	At front TEVES,*) at rear KNOTT pedal operated muscle power brake with hydraulical transmission; at rear internal-expanding-shoe brake, by intermediate shaft acting on rear axle; 1 brake drum with 254 mm dia and 70 mm width, each on the left and right, outside of gearbox, on intermediate shaft at front 1 caliper disc brake on universal joint shaft to front wheel drive
Steering brake:	Divided pedal of foot brake, for normal use locked together
Trailer brake:	Optionally available, dual or combined single-dual-line compressed air brake

*) Front axle brake at 40 km/h version standard, for other versions optional

Wheels

Steering wheels:	At front, 2 radial-ply tyres PIRELLI 13.6 R 24 121 A8; maximum permissible load per tyre 1450 kg at 1,6 bar inflation pressure and 40 km/h; track width adjustable to 1600 mm or by turning the wheels to 1800 mm; rims W 12 x 24
Driving wheels:	At front and at rear; rear wheels: 2 radial-ply tyres CONTINENTAL 18.4 R 34 8 ply; maximum permissible load per tyre 2565 kg at 1,4 bar inflation pressure and 30-40 km/h; track width adjustable from 1600 to 2000 mm in steps of 100 mm each by reversing centres and offset lug rims; rims W 15 L x 34
Wheel base:	2400 mm
Cab	DEUTZ-FAHR, SK 1905-37/4 OECD-tested safety cab, approval no. CSD 0501/27 (D 1036 A-N) CSD 0501/25 (D 1036 A-S) CSD 0501/20 (D 1036 A-T) antivibration mounted by 4 silent blocks on tractor; 1 door and 2 steps each on the left and right hand side, steps 520 mm and 810 mm above ground; driver's platform 1140 mm above ground windscreen and upper rear window tiltable; engine-oil heat exchanger heating-system, 3-step blower for fresh and warm air, incorporated in instrument and steering support; air intake above engine bonnet, air outlet jets at cab floor, at instrument panel and at windscreen; heating by circulating air possible

noise reduction materials:

floor	foam PUR	25 mm
	in PE-foil	0,05 mm
	rubber mat	5 mm
mudguards	imitation leather on moltoprene foam	8 mm
front wall	polyetherurethan cold foam (PU)	15 mm
	in PE-foil	0,05 mm
seat support	rubber mat	4 mm
roof	cotton fleece, phenolic resin bonded	2-6 mm
	needle fleece	2 mm
	foam	30 mm
	needle fleece	3 mm

Seat

GRAMMER, DS 85 H/90 AR;
upholstered seat with back rest and arm rests, adjustable spring with shock absorber; height of unloaded seat above driver's platform adjustable in 2 steps from 470 to 530 mm, back rest inclination adjustable about 10°, longitudinal adjustment 160 mm, seat revolving about vertical axle to the left and right each about 25°

Number of grease points

16

Dimensions

Total length: 4140 mm without ballast
4360 mm with ballast

Total width: 2304 mm with and without ballast

Total height: 2691 mm to mouth of exhaust silencer

Ground clearance: 410 mm below front axle brake

Possible combinations of tyres

tyre size	
at front	at rear
9.5 - 28 6 ply	9.5 - 44 8 ply
12.4 - 24 6 ply	13.6 - 38 6 ply 16.9 - 34 8 ply 18.4 - 34 8 ply
13.6 - 24 8 ply	18.4 - 34 8 ply

Lighting equipment — Electrical 12 V, in accordance with German legislation

	Dimensions mm	Height above ground to centre mm	Distance from outside edge of tractor to centre mm
Head lights	130 dia	1105	995
Side lights	50x50	1656	370
Rear lights	45x60	1690	335
Reflectors			
1st pair	103x58	1285	143
2nd pair	103x58	625	663

Running-time meter — Mechanical, combined with tachometer, driven by camshaft of engine; reference engine speed for one really counted hour 1500 rev/min

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Test No. 83-128

TEST CONDITIONS

Track setting 1600 mm at front
1700 mm at rear

Weights		without driver	with driver
Without ballast:	at front	1470 kg	1475 kg
	at rear	2475 kg	2540 kg
	total	3945 kg	4015 kg
Front ballast:	water in the tyres		280 kg
	11 weights, total		440 kg
Rear ballast:	water in the tyres		675 kg
	3 weights per wheel, total		290 kg
With ballast:	at front	2295 kg	2300 kg
	at rear	3335 kg	3400 kg
	total	5630 kg	5700 kg

Fuels and lubricants used in tests

Fuel:	ARAL Diesel-fuel DIN 51601	
	density at 15°C	
	at engine test and p.t.o. test	0,847 kg/l
	at drawbar test	
	without ballast	0,845 kg/l
	with ballast	0,847 kg/l
Engine oil:	DEUTZ HDC SAE 15 W/40	
Gear oil:	DEUTZ HDC SAE 15 W/40 in gearbox including rear axle	
	DEUTZ gear oil API-GL5 hypoid SAE 90 in front axle including final drives	
Hydraulic oil:	DEUTZ SGHD-B SAE 20 W/20 in power lift and in steering	

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Test No. 83-128

COMPULSORY TESTS

(1) MAIN POWER TAKE-OFF PERFORMANCE (1000 rev/min)

Date of tests: 22nd July 1983
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						
At 2-hour test						
52.2	2300	1089	15.21	12.88	247	3.43
At standard p.t.o. speed						
49.9	2111	1000	14.00	11.86	238	3.56
At rated engine speed						
52.2	2300	1089	15.21	12.88	247	3.43
Part loads, the governor hand lever in the position corresponding to the maximum power at full load (curve a)						
(i) 85% of the torque at maximum power at 2-hour test						
45.2	2341	1109	13.15	11.14	247	3.44
(ii) unloaded						
-	2430	1151	3.50	2.96	-	-
(iii) 50% of the load defined in (i)						
23.0	2382	1128	8.26	7.00	304	2.78
(iv) maximum power						
52.2	2300	1089	15.21	12.88	247	3.43
(v) 25% of the load defined in (i)						
11.6	2403	1138	5.87	4.98	429	1.97
(vi) 75% of the load defined in (i)						
34.3	2363	1120	10.72	9.08	265	3.20

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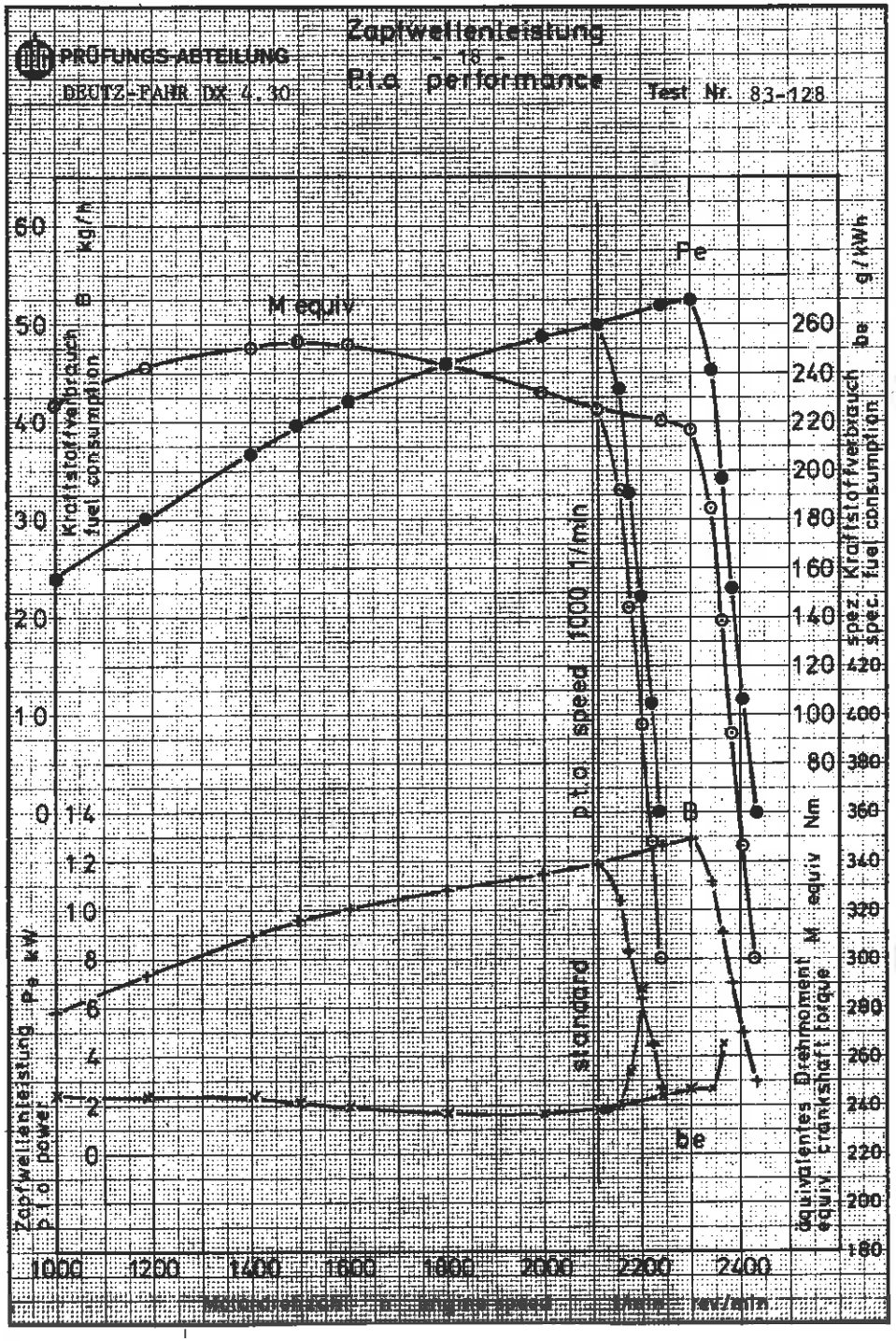
Test No. 83-128

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
Part loads, the governor hand lever in the position corresponding to the standard p.t.o. speed at full load (curve b)						
(i) 85% of the torque at maximum power at standard p.t.o. speed						
43.2	2155	1021	12.26	10.38	240	3.53
(ii) unloaded						
-	2238	1060	3.12	2.64	-	-
(iii) 50% of the load defined in (i)						
22.1	2198	1041	7.48	6.34	287	2.95
(iv) maximum power						
49.9	2111	1000	14.00	11.86	238	3.56
(v) 25% of the load defined in (i)						
11.1	2220	1052	5.23	4.43	398	2.13
(vi) 75% of the load defined in (i)						
32.7	2172	1029	9.80	8.30	254	3.34

Standard specific fuel consumption (g/kWh): 247/304/240/287

No load maximum engine speed: 2430 rev/min
Equivalent crankshaft torque at maximum power (2 hours): 217 Nm
Maximum equivalent crankshaft torque: 253 Nm at 1497 rev/min of the engine

Mean atmospheric conditions:	temperature	23 °C
	pressure	1004 mbar
	relative humidity	55 %
Maximum temperatures:	cylinder head	126 °C
	engine oil	114 °C
	fuel	21 °C
	engine air intake	24 °C


PRÜFUNGS-ABTEILUNG
DEUTZ-FAHR DX 4.30
Zapfwellenleistung
P.t.o. performance
Test Nr. 83-128
Pe
M equiv
B
be
Kraftstoffverbrauch g/kWh
fuel consumption
spez. Kraftstoffverbrauch be
spec. fuel consumption
Zapfwellenleistung Pe kW
P.t.o. power
Drehmoment M equiv Nm
equiv. crankshaft torque
P.t.o. speed 1000 1/min
standard
Motordrehzahl n engine speed
rev/min

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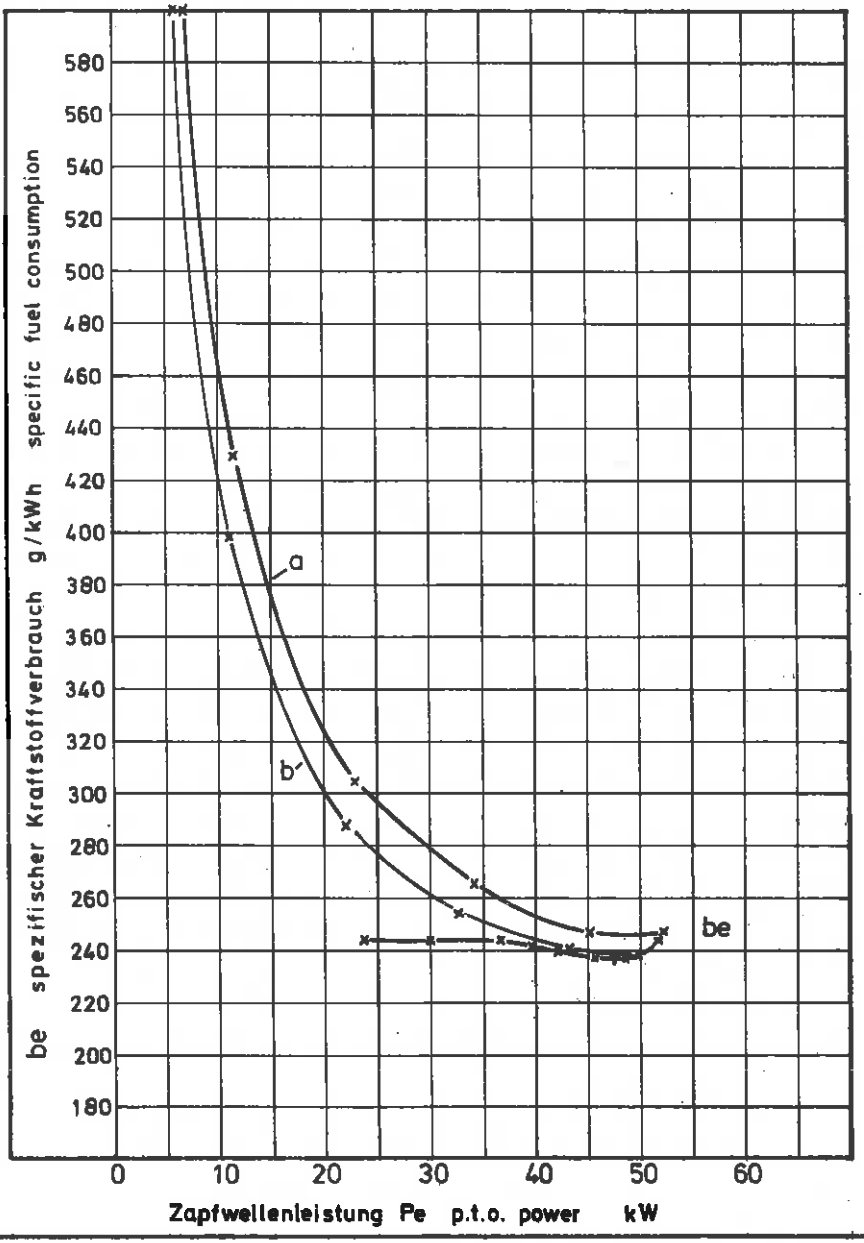
DEUTZ-FAHR DX 4.30

Zapfwellenleistung

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P.t.o. performance

Test Nr. 83-128



PRÜFUNGS-ABTEILUNG
DEUTZ-FAHR DX 4.30

(2) DRAWBAR PERFORMANCE

Date of tests: 26th July till 30th August 1983
type of track: Concrete

Gear no. and group	Driving speed km/h	Power kW	Drawbar pull daN	Engine speed rev/min	Slip of wheels %
(i) MAXIMUM POWER (unballasted) height of drawbar above ground 540 mm					
1 L	2,11	24,5	4175	2357	15,0
2 L	2,81	32,8	4205	2340	14,9
3 L	3,59	41,1	4117	2301	13,0
1 M	4,59	43,0	3374	2297	8,0
4 L	5,59	44,2	2847	2303	6,4
2 M	6,35	43,4	2462	2298	5,3
5 L	6,95	43,1	2235	2301	4,8
3 M	8,14	43,6	1928	2301	3,9
6 L	8,89	42,2	1708	2301	3,7
1 H	9,82	43,8	1604	2300	3,3
4 M	11,93	43,1	1300	2296	2,8
2 H	13,31	41,7	1128	2301	2,4
(ii) MAXIMUM POWER (ballasted) height of drawbar above ground 535 mm					
1 L	2,09	33,5	5774	2339	15,0
2 L	2,93	43,1	5301	2302	10,1
3 L	3,85	44,7	4177	2301	6,3
1 M	4,74	45,5	3453	2296	4,9
4 L	5,72	45,1	2841	2301	3,9
2 M	6,48	44,5	2473	2303	3,3
5 L	7,06	43,6	2222	2297	3,0
3 M	8,26	43,6	1900	2301	2,5
6 L	8,99	42,2	1688	2297	2,2
1 H	9,91	43,2	1568	2303	2,0
4 M	12,07	43,0	1283	2302	1,6
2 H	13,40	40,9	1099	2302	1,4
(iii) FIVE-HOUR-TEST at 75 % of pull at maximum power in 2nd M gear					
2 M	6,64	34,2	1855	2339	2,4
(iv) FIVE-HOUR-TEST at pull corresponding to 15 % wheel slip in test (ii)					
1 L	2,12	34,0	5774	2335	-

Total oil consumption during ten hours duration of tests (iii) and (iv) 106 g/h

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Tyre size front: 13.6 R 24 121 A8 PIRELLI
rear: 18.4 R 34 8 ply CONTINENTAL

Tread bar height at the beginning of drawbar tests: 80 % at front, 79 % at rear of tractor

Specific fuel consump. 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: 0,8 bar at front; 1,0 bar at rear							
350	2,44	29	88	105	27	68	998
325	2,63	35	89	98	25	74	998
313	2,73	29	95	97	26	68	998
299	2,86	29	92	105	26	67	998
289	2,95	29	89	105	26	66	998
294	2,91	31	95	109	28	64	998
296	2,89	31	92	107	28	63	998
295	2,90	31	92	108	28	62	998
302	2,83	31	92	107	29	62	998
292	2,93	31	91	108	29	62	998
297	2,88	31	92	108	30	61	998
306	2,80	31	91	109	29	60	998
tyre inflation pressure: 1,2 bar at front; 1,0 bar at rear							
322	2,64	31	84	92	17	86	1002
300	2,84	38	94	100	17	88	1002
288	2,96	36	76	101	17	87	1002
285	2,99	38	91	99	19	87	1003
284	3,00	37	85	101	19	83	1003
289	2,95	37	82	104	20	79	1003
296	2,87	38	89	103	21	78	1003
295	2,89	39	88	103	23	79	1003
302	2,82	40	89	104	23	70	1003
300	2,84	28	86	102	24	69	1003
299	2,85	30	89	102	24	68	1003
316	2,70	30	90	104	25	69	1003
302	2,82	35	88	113	28	57	995
-	-	28	78	100	18	78	1000

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

(3) TURNING SPACE AND TURNING CIRCLE

Wheel equipment front: 13.6 R 24 121 A8
rear: 18.4 R 34 8 ply

Track of wheels front: 1600 mm
rear: 1700 mm

Front wheel drive disengaged

	With brakes		Without brakes	
	left-hand m	right-hand m	left-hand m	right-hand m
Radius of turning space	4,17	4,14	4,83	4,80
Radius of turning circle	3,88	3,83	4,54	4,49

(4) LOCATION OF CENTRE OF GRAVITY

Height above ground	979 mm
Distance forward from rear axle centre	882 mm
Distance from tractor's median plane, to the left	12 mm

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DEUTZ-FAHR DX 4.30
Type D 1036 A-N

Test No. 83-128

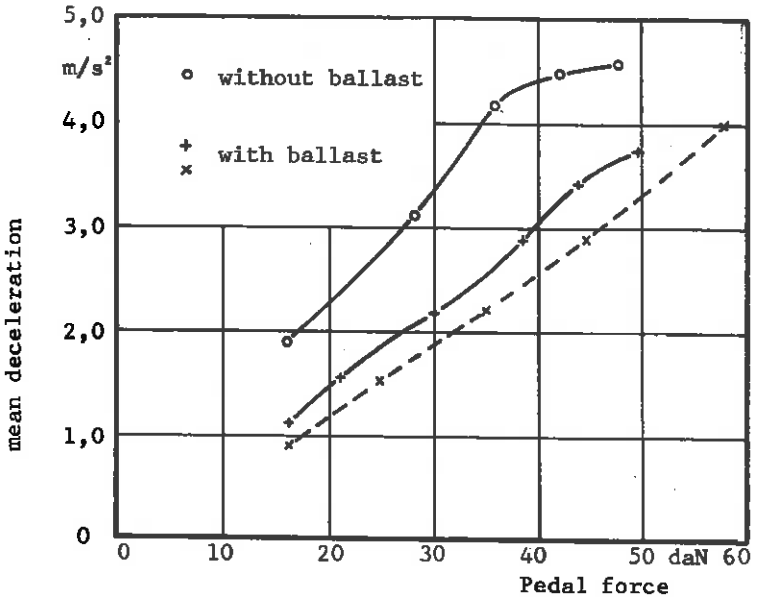
(5) Braking — Front wheel drive disengaged

Date of tests: 1st till 8th August 1983

Tractor masses during tests with driver:	front kg	rear kg	total kg
without ballast	1475	2540	4015
with ballast	2300	3400	5700

A) Service brake

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



Speed before application of brakes, without ballast 25,8 km/h
with ballast 25,6 km/h

The brakes were heated by towing of the tractor for 1 km

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	25	29	22	26

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DEUTZ-FAHR DX 4.30
Type D 1036 A-S

Test No. 83-128

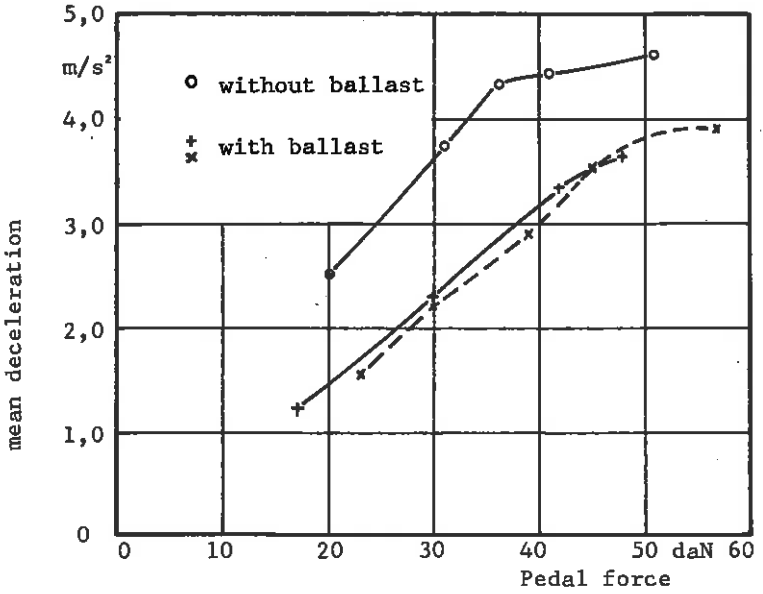
(5) Braking — Front wheel drive disengaged

Date of tests: 1st till 8th August 1983

Tractor masses during tests with driver:	front kg	rear kg	total kg
without ballast	1475	2540	4015
with ballast	2300	3400	5700

A) Service brake

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



Speed before application of brakes, without ballast 31,4 km/h
with ballast 31,2 km/h

The brakes were heated by towing of the tractor for 1 km

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	25	29	22	26

PRÜFUNGS-ABTEILUNG
DEUTZ-FAHR DX 4.30
Type D 1036 A-T

Test No.83-128

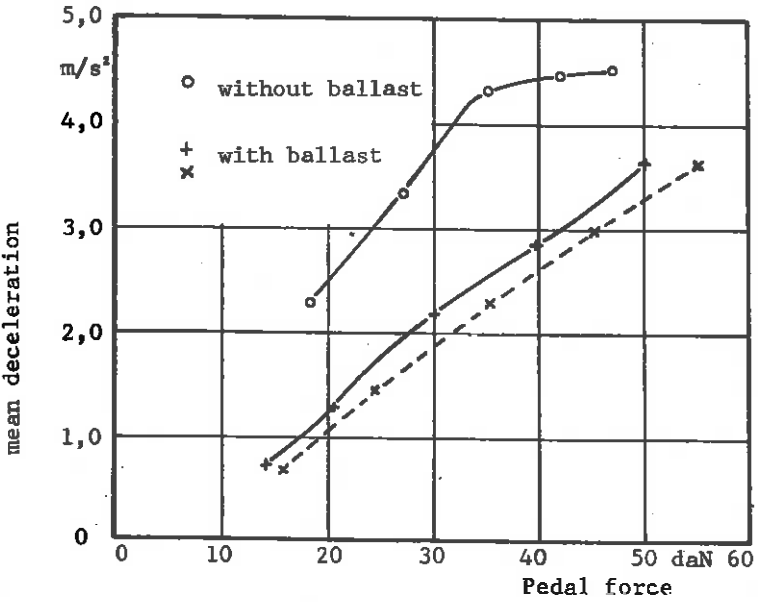
(5) Braking Front wheel drive disengaged

Date of tests: 1st till 8th August 1983

Tractor masses during tests with driver:	front kg	rear kg	total kg
without ballast	1475	2540	4015
with ballast	2300	3400	5700

A) Service brake

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



Speed before application of brakes, without ballast 39,3 km/h
with ballast 37,6 km/h

The brakes were heated by towing of the tractor for 1 km

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	25	29	22	26

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Test No. 83-128

(6) MEASUREMENT OF EXTERNAL NOISE LEVEL

Date of test: 27th July 1983
Type of track: Concrete
Type of sound level meter: BRÜEL AND KJAER model 2209

Results of test	D 1036 A-N	D 1036 A-S	D 1036 A-T
Gear: +)	4th H	5th H	6th H
Travelling speed before acceleration:	19,1 km/h	24,2 km/h	28,9 km/h
Sound level:	86,0 dB(A)	85,0 dB(A)	84,0 dB(A)

(7) NOISE MEASUREMENT AT THE DRIVER'S EAR

Date of tests: 27th July 1983
Type of track: Concrete
Type of sound level meter: BRÜEL AND KJAER model 2209

Tractor with DEUTZ-FAHR safety cab 1905-37/4

Results of tests

Gear no. and range	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	4025	2,39	2,07	82,0
2 L	4055	3,22	2,73	83,0
3 L	3982	4,07	3,69	83,0
1 M	2983	4,94	4,71	84,0
4 L	2717	5,90	5,65	84,0
2 M ++)	2338	6,65	6,45	85,0
2 M	light load	6,65	7,02	82,0
5 L ++)	2169	7,24	7,06	85,0
5 L	light load	7,24	7,64	82,5
3 M	1922	8,41	8,13	84,5
6 L	1632	9,14	8,92	84,5
1 H	1506	10,06	9,92	84,5
4 M	1186	12,19	12,07	84,5
2 H	1004	13,54	13,45	85,0
5 M	934	14,96	14,80	84,5
3 H	793	17,12	16,93	85,0
4 H +)	light load	24,82	25,41	81,5
5 H +)	light load	30,46	32,24	81,5
6 H +)	light load	38,47	38,57	82,0

+) Front wheel drive disengaged
++) At type D 1036 A-N the 2nd M gear, at types D 1036 A-S and D 1036 A-T the 5th L gear correspond to the travelling speed nearest to 7,5 km/h

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Test No. 83-128

(8) POWER LIFT AND HYDRAULIC PUMP PERFORMANCE

Date of tests: 12th and 13th September 1983

Power Lift

	Height of lower hitch point 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	298	582	3050	158	-	-
On the frame	298	700	2210	158	3746	12 +)

Temperature of hydraulic fluid at start of test 65 °C

+) tilting angle of mast from vertical position to uppermost position 9°

Lifting heights relative to horizontal lower links

mm	-323	-300	-275	-200	-100	0	+100	+200	+300	+307	+377
Lifting forces at hitch points											
daN			3050	3150	3240	3260	3250	3210	3220	3210	
Lifting forces at test frame											
daN	2740	2760		2780	2740	2680	2570	2450	2320		2210

Hydraulic Pump Performance

Opening pressure of the relief valve in remote circuit	172 bar
Sustained pressure with relief valve open	182 bar
Pump delivery rate at minimum pressure, the governor control lever being set for max. power	42,1 l/min
Hydraulic power at 90% of relief valve setting	10,8 kW
Corresponding delivery rate	39,4 l/min
Pressure	164 bar
Temperature of hydraulic fluid	65 °C

Tapping point used for test: at rear of tractor

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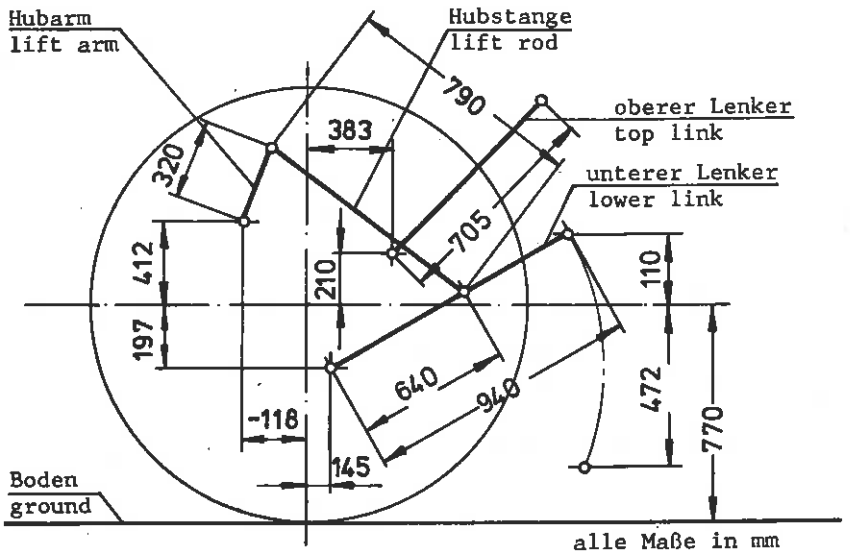
LINKAGE GEOMETRY when connected to the standard frame

Projected length in side view:

Lower links	940 mm
Lift arms	320 mm
Lift rods	790 mm
Top link	705 mm
Distance of lift rod connection point from pivot point of lower link	640 mm

The following dimensions are given relative to the rear wheel centre line, situated 770 mm above ground:

Lower link pivot point	197 mm below,	145 mm behind
Top link pivot point	210 mm above,	383 mm behind
Lift arm pivot point	412 mm above,	118 mm behind
Maximum and minimum height of lower link hitch points	110 mm above,	472 mm below
Height of lower link hitch points when locked in transport position	203 mm elow	



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OPTIONAL TESTS

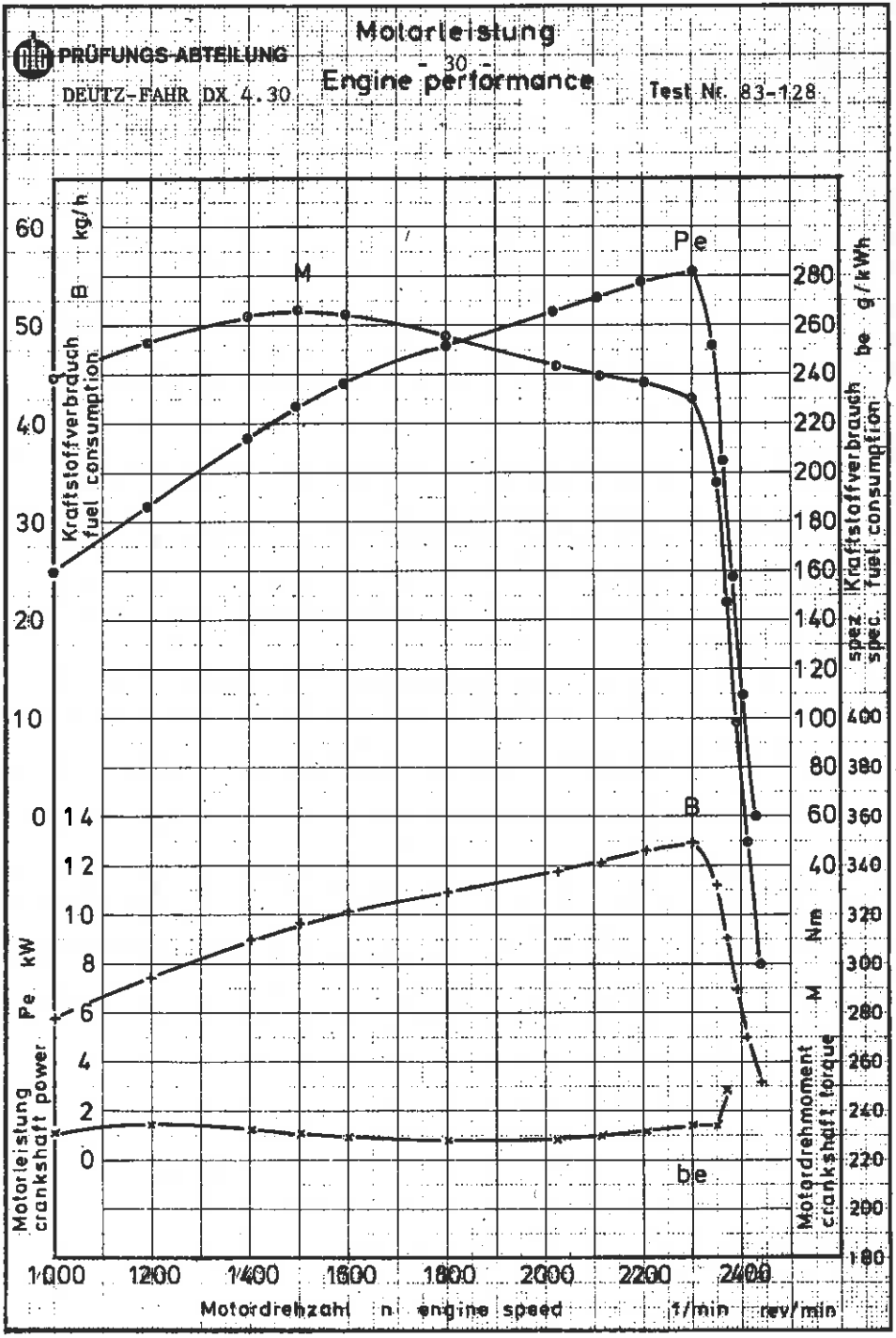
(9) ENGINE PERFORMANCE

Date of tests: 6th July 1983
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					
At 2-hour test					
55.4	2300	15.28	12.94	233	3.63
At standard p.t.o. speed (1000 rev/min)					
52.9	2111	14.30	12.11	229	3.70
At rated engine speed					
55.4	2300	15.28	12.94	233	3.63
Part loads					
(i) 85% of the torque at maximum power at 2-hour test					
48.0	2343	13.22	11.19	233	3.63
(ii) unloaded					
-	2429	3.70	3.13	-	-
(iii) 50% of the torque defined in (i)					
24.4	2383	8.14	6.90	283	3.00
(iv) maximum power					
55.4	2300	15.28	12.94	233	3.63
(v) 25% of the torque defined in (i)					
12.3	2402	5.82	4.93	401	2.11
(vi) 75% of the torque defined in (i)					
36.3	2363	10.62	9.00	248	3.42

Optimum fuel consumption: 219 g/kWh at 34.2 kW and 1495 rev/min
No load maximum engine speed: 2429 rev/min
Torque at maximum power (2 hours): 230 Nm
Maximum torque: 266 Nm at 1503 rev/min of the engine

Mean atmospheric conditions:	temperature	24 °C
	pressure	1001 mbar
	relative humidity	75 %
Maximum temperatures:	cylinder head	106 °C
	engine oil	100 °C
	fuel	24 °C
	engine air intake	25 °C


PRÜFUNGS-ABTEILUNG
DEUTZ-FAHR DX 4.30
Motorleistung
- 30 -
Engine performance
Test Nr. 83-128
B kg/h
Kraftstoffverbrauch
fuel consumption
M
Pe
B
be
Motorleistung
crankshaft power
Pe kW
Motordrehmoment
crankshaft torque
M Nm
spez. Kraftstoffverbrauch
spec. fuel consumption
be g/kWh
Motordrehzahl n engine speed 1/min rev/min
1000
1200
1400
1600
1800
2000
2200
2400

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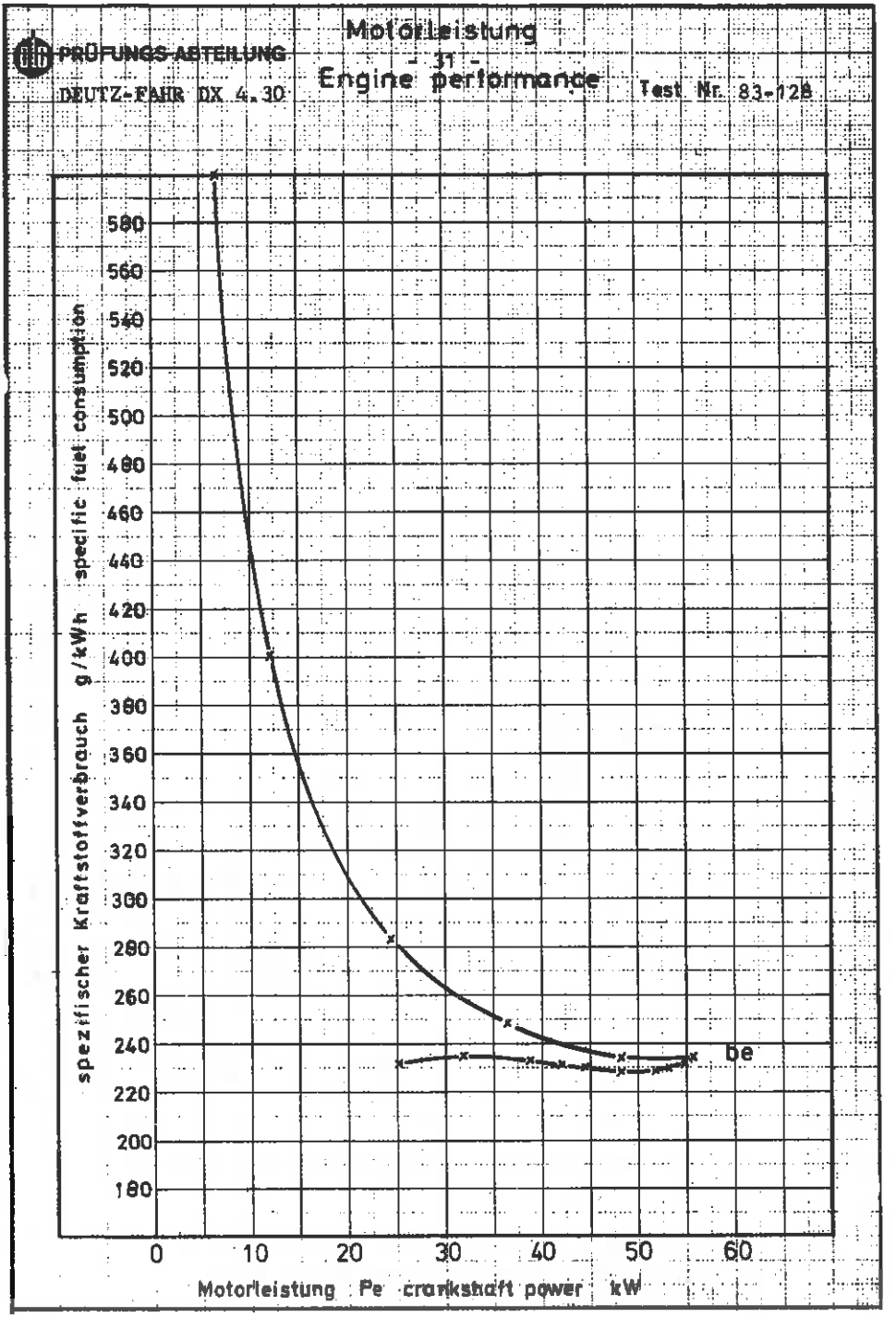
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Motorleistung

- 31 -

Engine performance

Test Nr. 83-128



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Motorleistung

Engine performance

Test Nr. 83-128

Motorleistung in % der Leistung bei Nenndrehzahl

engine power in % of power at rated engine speed

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