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

O.E.C.D. No. **883**



Agricultural Tractor DEUTZ-FAHR D 7807 C (4WD)

Type denomination D 1017 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: November 1982 till February 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: 13th April 1983 O.E.C.D. No. 883

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 D 1017 A-S

Test No. 82-126

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PRÜFUNGS-ABTEILUNG
DEUTZ-FAHR D 1017 A-S

Test No. 82-126

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:	D 7807 C
Type denomination:	D 1017 A-S
Type:	Wheel tractor, unit construction, four wheel driven
Serial No.:	77 59 0045

Engine

Make:	KLÖCKNER-HUMBOLDT-DEUTZ AG
Model:	F4L 913
Type:	4-stroke Diesel-engine, direct injection, air-cooled
Serial No.:	6537213
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 feed pump, BOSCH in-line injection pump: PES 4A 85D 410/3 RS 2610 manufacturer's production setting 57,5 $\pm$ 1 mm^3/ stroke, at rated speed and full load; injection timing $27^{\circ} + 1^{\circ}$ before TDC; BOSCH multihole injection nozzles DLLA 149 S 774, injection pressure 175 + 8 bar; MANN fuel filter with replaceable cartridge; capacity of fuel tank 90 l

Governor: BOSCH centrifugal variable speed governor
EP/RSV 325-1150 A8B V 2102 L
governed range of engine speed 650 to 2435 rev/min,
rated engine speed 2300 rev/min

Air cleaner: DEUTZ-SICCOPUR
dry paper element filter with precleaner,
replaceable cartridge, electrical maintenance indicator

Exhaust silencer: ROTH
multi chamber, expansion type silencer,
60 to 125 mm dia, 800 mm long,
on the left hand side above bonnet;
mouth showing upwards, 2515 mm above ground

Lubrication system: Forced feed with gear pump,
strainer in sump;
MANN oil filter in full flow with by-pass valve,
filter replaceable
change period 200 operating hours;
oil capacity 9,5 l;
recommended oil qualities and oil change periods:

API-CC change every 250 operating hours
API-CD change every 500 operating hours

specified oil viscosities:

below	- 5°C			SAE 10W
over	- 10°C	to	+10°C	SAE 20W/20
over	- 10°C			SAE 15W/40
over	+ 5°C	to	+30°C	SAE 30
over	+ 25°C			SAE 40

oil cooler inside of engine cooling-air baffle

Cooling system: Air-cooling,
V-belt driven axial blower

Starting system: Electrical
BOSCH solenoid pre engaged-drive starter motor
JF 12V 2,7 kW;
BERU flame glow plug in inlet manifold for starting aid

Electrical equipment: 12 Volt, negative earth;
BOSCH 3-phase alternator G1 - 14 V 33A 27, 462W;
1 lead acid battery, 110 Ah at 20 hours rating

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Transmission

Clutch: FICHTEL & SACHS, DUT 295 H 250/295
dry dual disc clutch;
travel drive pedal operated, disc 295 mm dia;
p.t.o. drive hand lever operated, disc 250 mm dia

Gear box: DEUTZ-FAHR, TW 56.21-S
synchromesh speed change gear with 4 speeds,
collar shifted range gear with 3 forward
ranges (L,M and H) and 1 reverse range (R);
totally 12 forward and 4 reverse speeds;

Rear axle and final drives: DEUTZ-FAHR
bevel gear drive to intermediate shaft;
bevel gear differential with pedal operated
selfdisengaging lock on intermediate shaft;
cylindrical gear transmissions from intermediate
shaft to rear axle half shafts

Front axle and final drives: SIGE, SLG 4172
driven by laterally situated propeller shaft,
switchable by hand lever operated claw clutch;
overload protection by wet multi-plate clutch;

bevel gear drive and bevel gear differential;
planetery final drives

Lubrication: No gear oil filter
oil capacities

gear box, rear axle included	38 l
front axle	6 l
front axle final drives, each	0,5 l

recommended oils

gear oil	SAE 90	API-GL4 or
engine oil	SAE 15W/40*)	API-CC or API-CD

oil changes
gear box, rear axle included after 2000 operating hours, at least every 2 years
front axle with final drives after 1000 operating hours, at least yearly

*) for gear box with rear axle only

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Total ratios and speeds (tyres 16.9 - 34)

Group	Gear	Total ratio engine : driving wheels	Nominal travelling speed *) at rated engine speed km/h
L	1	298,57	2,16
	2	192,50	3,36
	3	137,88	4,68
	4	93,78	6,89
M	1	124,62	5,18
	2	80,35	8,04
	3	57,55	11,22
	4	39,14	16,50
H	1	68,24	9,47
	2	44,00	14,68
	3	31,52	20,50
	4	21,44	30,14
R	1	92,89	6,95
	2	59,89	10,79
	3	42,90	15,06
	4	29,18	22,14

*) calculated with the radius index 745 mm

Power-take-off

Independent p.t.o.
driven by the second disc of the dual disc clutch;
at rear of tractor in tractor's median plane,
693 mm above ground,
420 mm behind rear axle centre line,
35 mm dia, 6 splines ISO 500/DIN 9611 type 1

2 speeds are preselectable by hand lever:

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.

1062 rev/min at rated engine speed,
standard p.t.o. speed 1000 rev/min at engine speed 2167 rev/min

sense of rotation clockwisely, viewed from tractor rear

Power lift	DEUTZ-FAHR K 46.1 DEUTZ-TRANSFERMATIC-System hydraulic power lift, unit construction, draft and position control infinitely mixable, floating position; top link sensing
Hydraulic system:	Open centre, BOSCH tandem gear pump HY/ZFFS 11/16+11L directly driven by engine; delivery 39,7 l/min at rated engine speed, hydraulic oil filter, filter change period 500 operating hours DEUTZ-FAHR control valve, maximum working pressure 175 + 8 bar, 1 single acting ram with 90 mm bore and 152 mm stroke, overpressure relief valve in ram set to 240 + 70 bar; 1 single acting additional ram with 45 mm bore and 200 mm stroke; 3 DEUTZ-FAHR additional control valves SD.80, double acting, with couplings at rear of tractor; maximum 3 single or double acting additional control valves available; hydraulic oil reservoir with 14 l capacity in power lift unit;additional tank with 13 l capacity optionally available,attached to tested tractor; by oil tap may be taken off 7 l if tractor is standing or travelling and 20 l if additional tank is attached
Hydraulic oil:	Recommended engine oil SAE 20W/20 API-CC or API-CD oil change at least once a year or every 1000 operating hours
Implement linkage:	Three point linkage, joint balls category 2 according to ISO 730/I; lift rods adjustable from 620 mm to 780 mm length; lifting range at mean length 700 mm of lift rods 422 mm to 940 mm; length of top link adjustable from 590 to 850 mm; length of lower links 940 mm

Pull attachments

Trailer hitch: CRAMER, KU 756
automatical;
height above ground adjustable to 860 and 924 mm, coupling pin 32 mm dia;
distance of hitch hole centre
to rear axle centre line 526 mm
to p.t.o. shaft end 106 mm;
permissible vertical load 1250 kg

Swinging drawbar: Height above ground 488 mm, measured at the surface of the bar;
pin hole 33 mm dia;
pivot point of drawbar 328 mm before rear axle centre line,
drawbar fixable in 3 positions in pivot point;
distance of pin hole centre

to rear axle centre line	mm	826	877 or	928
to p.t.o. shaft end	mm	406	457 or	508
permissible vertical load	kg	1400	1350 or	1300
swinging range to either side	mm	268	279 or	290

Holed drawbar: Short bar, fitted on clevis of lower links;
length between the joint balls 820 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
to rear axle centre line 975 mm
to p.t.o. shaft end 555 mm;

with lift rods adjusted to mean length of 700 mm, lifting range from 437 to 955 mm,
drawbar mechanically hydraulically fixable in the height of 660 mm above ground

Towing hitch: Height above ground 765 mm

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 acting by linkage lever and steering track rod on front wheels

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: KNOTT, internal-expanding-shoe brake;
pedal operated muscle power brake with hydraulical transmission, 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

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

Wheels

Steering wheels: At front, 2 cross-ply tyres 12.4 - 24 6 ply
maximum permissible load per tyre 1200 kg at 1,7 bar inflation pressure and 30 km/h travelling speed;
track width adjustable to 1500 mm or by turning wheels to 1800 mm;
rims W 10 x 24

Driving wheels: At front and at rear;
rear wheels:
2 radial-ply tyres 16.9 R 34 6 ply
maximum permissible load per tyre 2015 kg at 1,3 bar inflation pressure and 30 km/h travelling speed;
track width adjustable from 1520 to 2020 mm in steps of 100 mm each by offset lug type rims;
rims W 15L x 34

Wheel base: 2429 mm

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Cab

SEKURA
model D 81 - SEK 461
O.E.C.D.-tested safety cab, approval no. CSD 0339/1;
antivibration mounted by 4 silent blocks on tractor;

1 door and 2 steps on the left;
side windows on the left and right hand side,
windscreen and rear window tiltable;

hot air heating, in circuit with engine cooling system;
fresh air ventilator incorporated in steering support,
air intake above engine bonnet, before windscreen;
air outlet jet for cab floor and inside room,
defroster jets for windscreen;

driver's platform 1030 mm above ground;

noise reduction materials:

floor	moulded rubber mat	8 mm
	cellular foam plastic	5 mm
roof	foam plastic with perforated imitation leather	40 mm
mudguards	foam plastic, with perforated imitation leather	20 mm
seat support	moulded rubber mat	8 mm
rear wall	moulded rubber mat	6 mm
front wall	foam plastic covered with plastic foil (attached to outside of wall)	30 mm

Seat

GRAMMER
DS 85 H/3
upholstered seat with back rest,
adjustable spring with shock absorber;
height of unloaded seat above driver's platform
adjustable in 2 steps from 450 to 510 mm;
longitudinal adjustment range 160 mm

Number of grease points 24

Dimensions

Total length:	4027 mm without ballast 4425 mm with ballast
Total width:	2102 mm without ballast 2152 mm with ballast
Total height:	2577 mm to top of cab roof
Ground clearance:	360 mm below main switch casing of front wheel drive

Possible combinations of tyres

tyre size	
front	rear
9.5 - 28 6 ply 9.5 - 24 8 ply 11.2 - 24 8 ply 12.4 - 24 6 ply	9.5 - 44 8 ply 16.9 - 30 6 ply 12.4 - 38 6 ply 13.6 - 36 6 ply 16.9 - 34 6 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	1031	895
Side lights	17 x 20	1590	180
Rear lights	60 x 40	1473	325
Reflectors			
1st pair	75 dia	700	697
2nd pair	103 x 58	1359	327

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

TEST CONDITIONS

Track setting: 1500 mm at front
1620 mm at rear

Weights

		without driver	with driver
Without ballast:	front	1430 kg	1445 kg
	rear:	2330 kg	2395 kg
	total	3760 kg	3840 kg.
Front ballast:	10 weights, total		390 kg
	2 weights per wheel, total		180 kg
Rear ballast:	6 weights per wheel, total		590 kg
With ballast:	front	2085 kg	2100 kg
	rear	2835 kg	2900 kg
	total	4920 kg	5000 kg

Fuels and lubricants used in tests

Fuel: ARAL Diesel-fuel DIN 51601
density at 15°C
at engine test 0,827 kg/l
at p.t.o. test
540 rev/min 0,831 kg/l
1000 rev/min 0,827 kg/l
at drawbar test 0,831 kg /l

Engine oil: SHELL ROTELLA SAE 20W/20

Transmission oil: ESSOLUBE SAE 90
in gearbox and in rear and front axle

Hydraulic oil: SHELL ROTELLA SAE 20W/20

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COMPULSORY TESTS

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

Date of tests: 28 th January 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 1/h	Fuel consumption hourly kg/h	Fuel consumption specific g/kWh	Specific energy kWh/l
Maximum power						
At 2-hour test						
51.0	2300	613	15.27	12.69	249	3.34
At standard p.t.o. speed						
48.7	2025	540	14.10	11.72	241	3.45
At the speed recommended for drawbar work						
51.0	2300	613	15.27	12.69	249	3.34
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						
44.3	2352	627	13.32	11.07	250	3.33
(ii) unloaded						
-	2435	649	4.25	3.53	-	-
(iii) 50% of the load defined in (i)						
22.5	2391	638	8.42	6.99	310	2.68
(iv) maximum power						
51.0	2300	613	15.27	12.69	249	3.34
(v) 25% of the load defined in (i)						
11.4	2412	643	6.22	5.17	455	1.83
(vi) 75% of the load defined in (i)						
33.5	2371	632	10.79	8.97	267	3.11

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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
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						
42.5	2083	556	12.28	10.20	240	3.46
(ii) unloaded						
-	2168	578	3.52	2.92	-	-
(iii) 50% of the load defined in (i)						
21.7	2128	567	7.49	6.22	286	2.90
(iv) maximum power						
48.7	2025	540	14.10	11.72	241	3.45
(v) 25% of the load defined in (i)						
10.9	2144	572	5.39	4.48	410	2.03
(vi) 75% of the load defined in (i)						
32.3	2109	563	9.81	8.15	252	3.29

Standard specific fuel consumption (g/kWh): 250/310/240/286

No load maximum engine speed: 2435 rev/min
Equivalent crankshaft torque at maximum power (2 hours): 212 Nm
Maximum equivalent crankshaft torque: 246 Nm at 1596 rev/min of the engine

Mean atmospheric conditions:	temperature	17 °C
	pressure	1005 mbar
	relative humidity	55 %
Maximum temperatures:	cylinder head	111 °C
	engine oil	115 °C
	fuel	16 °C
	engine air intake	18 °C

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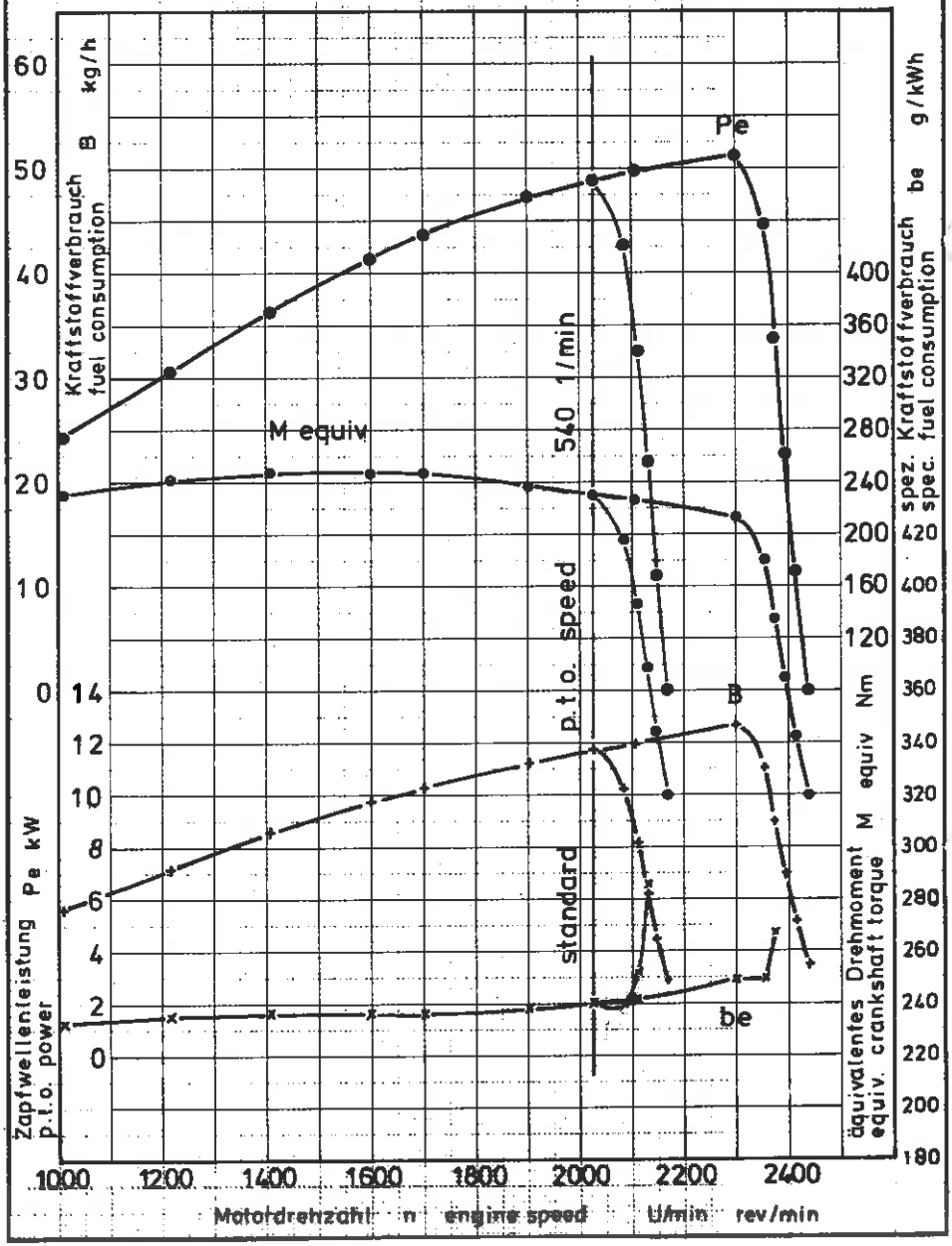
Zapfwellenleistung

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P.t.o. performance

Test Nr. 82-126

540 1/min



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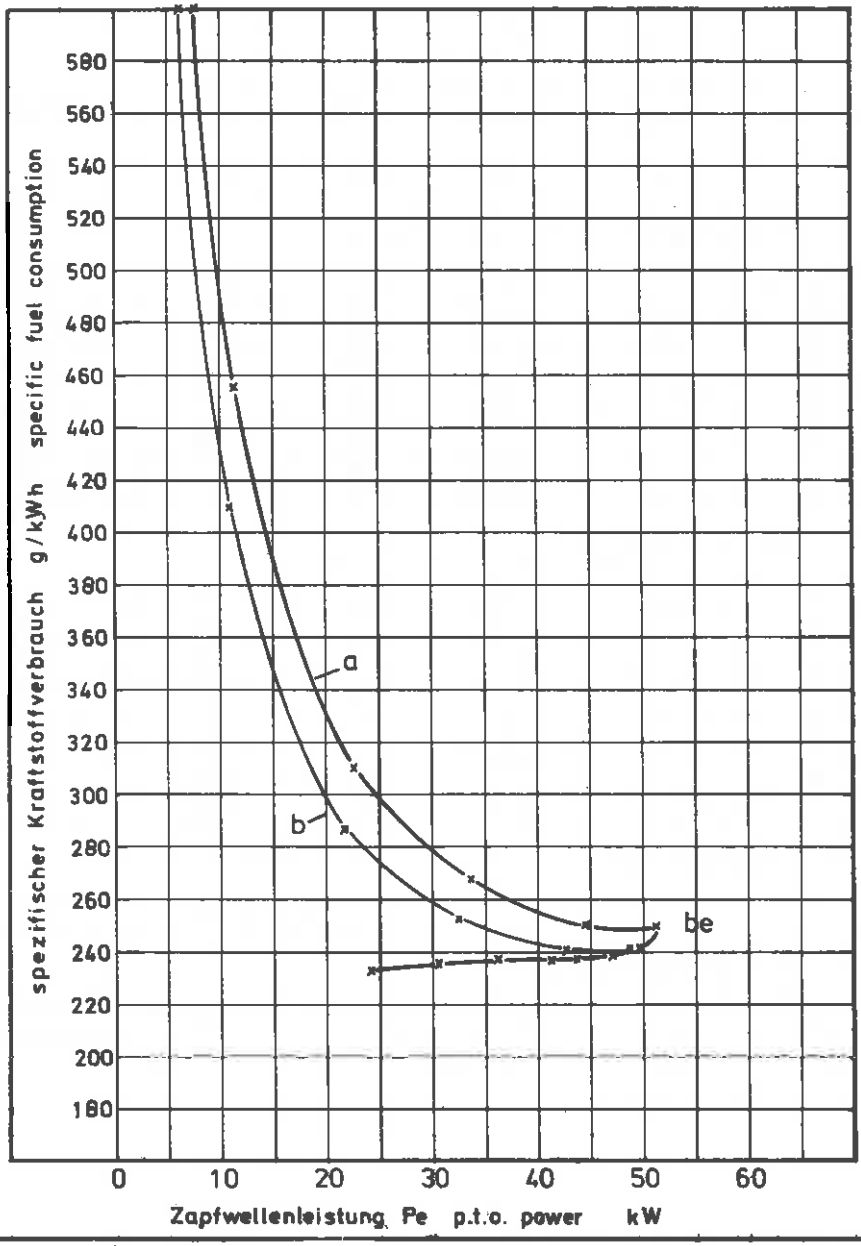
Zapfwellenleistung

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Pt.o. performance

Test Nr. 82-126

540 1/min



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(2) DRAWBAR PERFORMANCE

Date of tests: 2nd till 18th February 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 460 mm					
1 L	1,94	21,6	4008	2388	15,0
2 L	2,97	33,1	4018	2364	15,0
3 L	4,25	42,2	3576	2298	10,3
1 M	4,83	43,2	3219	2299	8,5
4 L	6,58	42,6	2331	2300	5,5
2 M	7,75	43,5	2021	2300	4,5
1 H	9,19	43,3	1696	2300	3,8
3 M	10,98	42,4	1390	2300	3,0
2 H	14,39	40,7	1018	2299	2,2
(ii) MAXIMUM POWER (ballasted) height of drawbar above ground 440 mm					
1 L	1,93	28,2	5253	2371	15,0
2 L	3,04	41,2	4883	2304	10,5
3 L	4,47	43,1	3474	2298	5,5
1 M	4,98	42,9	3103	2299	5,0
4 L	6,69	42,9	2309	2301	3,7
2 M	7,87	42,6	1947	2300	3,2
1 H	9,29	42,8	1658	2299	2,6
3 M	11,07	41,8	1358	2300	2,2
2 H	14,54	40,0	990	2299	1,5
(iii) FIVE-HOUR-TEST at 75% of pull at maximum power in 2nd M gear					
2 M	8,17	33,1	1460	2369	2,4
(iv) FIVE-HOUR-TEST at pull corresponding to 15% wheel slip in test (ii)					
1 L	1,95	28,5	5253	2379	-

Total oil consumption during ten hours duration of tests (iii) and (iv) 23 g/h

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Tyre size front: 12.4 - 24 6 ply
rear: 16.9 R 34 6 ply

Tread bar height at the beginning of drawbar tests:
at front 76% and at rear 94% 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 Tempe-rature °C	Relative humidity %	Pressure mbar
tyre inflation pressure at front and at rear 0,8 bar							
377	2,20	28	63	85	4	78	994
333	2,50	30	62	90	3	83	994
303	2,75	26	74	100	3	85	994
296	2,81	28	76	100	4	75	998
299	2,78	30	70	100	12	75	980
294	2,83	28	73	100	4	75	998
296	2,81	28	75	100	5	74	998
302	2,75	28	78	100	6	77	998
315	2,64	28	75	100	5	74	998
tyre inflation pressure at front 1,4 bar and at rear 0,8 bar							
348	2,39	35	68	100	3	48	1010
311	2,67	34	70	96	3	45	1010
297	2,80	27	70	97	-5	65	1010
298	2,79	26	66	96	-5	65	1010
299	2,78	25	66	96	-5	55	1010
301	2,76	27	70	98	-5	65	1010
297	2,80	27	70	98	-5	65	1010
306	2,71	28	68	92	2	50	1010
320	2,60	28	74	95	2	50	1010
315	2,64	28	55	90	2	60	1010
-	-	23	50	88	2	67	1008

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

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(3) TURNING SPACE AND TURNING CIRCLE

Wheel equipment front: 12.4 - 24 6 ply
rear: 16.9 R 34 6 ply

Track of wheels front: 1500 mm
rear: 1620 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	5,14	5,32	6,09	6,27
Radius of turning circle	4,90	5,08	5,85	6,03

(4) LOCATION OF CENTRE OF GRAVITY

Height above ground	932 mm
Distance forward from rear axle centre	912 mm
Distance from tractor's median plane, to the left	2 mm

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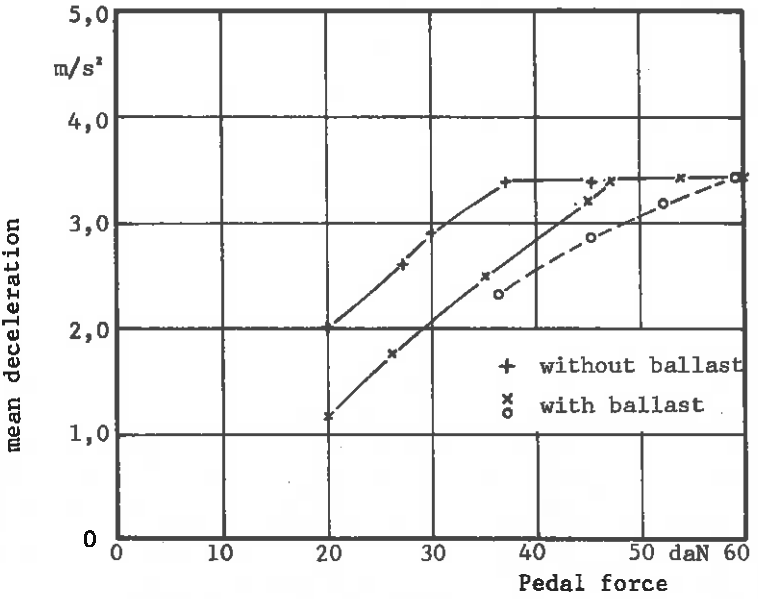
(5) Braking (Front wheel drive disengaged)

Date of tests: 10th and 14th February 1983

Tractor masses during tests with driver:	front kg	rear kg	total kg
without ballast	1445	2395	3840
with ballast	2100	2900	5000

A) Service brake

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



Speed before application of brakes, without ballast 30,7 km/h
with ballast 30,5 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	28	24	26	20

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(6) MEASUREMENT OF EXTERNAL NOISE LEVEL

Date of test: 9th February 1983
Type of track: Concrete
Type of sound level meter: BRÜEL AND KJAER model 2209

Results of test

Gear: 4th H
Travelling speed before acceleration: 23,0 km/h
Sound level: 89,5 dB(A)

(7) NOISE MEASUREMENT AT THE DRIVER'S EAR

Date of tests: 9th February 1983
Type of track: Concrete
Type of sound level meter: BRÜEL AND KJAER model 2209

Tractor with SEKURA safety cab

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	4000	2,16	1,93	84,0
2 L	3975	3,36	2,86	85,5
3 L	3550	4,68	4,26	84,5
1 M	3176	5,18	4,86	84,0
4 L	2399	6,89	6,55	84,0
2 M *)	1894	8,04	7,95	84,0
2 M *)	light load	8,04	8,61	83,0
1 H	1554	9,47	9,44	84,0
3 M	1300	11,22	11,19	85,0
2 H	950	14,68	14,53	84,0
4 M	797	16,50	13,74	86,0
4 H **)	light load	30,14	30,70	84,0

*) the 2nd M gear corresponds to the nominal travelling speed nearest to 7,5 km/h

**) front wheel drive disengaged

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(8) POWER LIFT AND HYDRAULIC PUMP PERFORMANCE

Date of tests: 19th till 24th January 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	422	518	3350	158	-	-
On the frame	422	640	2270	158	3598	13

Temperature of hydraulic fluid at start of test 65 °C

Lifting heights relative to horizontal lower links

mm	-175	-143	-100	0	+100	+200	+300	+375	+400	+465
Lifting forces at hitch points										
daN		3400	3425	3450	3450	3400	3350	3350		
Lifting forces at test frame										
daN	3080		3005	2930	2800	2625	2470		2320	2270

Hydraulic Pump Performance

Opening pressure of the relief valve in remote circuit	167 bar
Sustained pressure with relief valve open	183 bar
Pump delivery rate at minimum pressure, the governor control lever being set for max. power	42,0 l/min
Hydraulic power at 90% of relief valve setting	10,3 kW
Corresponding delivery rate	37,4 l/min
Pressure	165 bar
Temperature of hydraulic fluid	65 °C

Tapping point used for test: At rear of tractor

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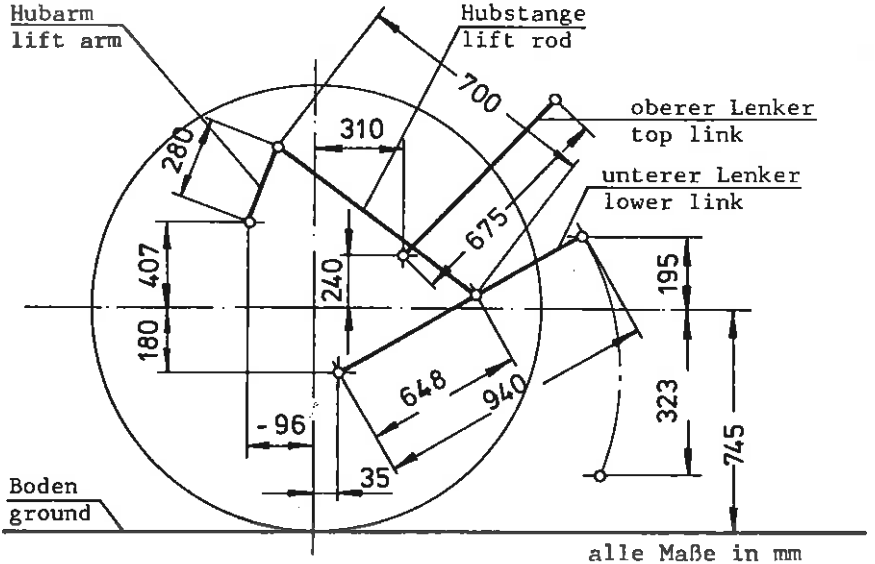
LINKAGE GEOMETRY when connected to the standard frame

Projected length in side view:

Lower links	940 mm
Lift arms	280 mm
Lift rods	700 mm
Top link	675 mm
Distance of lift rod connection point from pivot point of lower link	648 mm

The following dimensions are given relative to the rear wheel centre line, situated 745 mm above ground:

Lower link pivot point	180 mm below,	35 mm behind
Top link pivot point	240 mm above,	310 mm behind
Lift arm pivot point	407 mm above,	96 mm behind
Maximum and minimum height of lower link hitch points	195 mm above	323 mm below
Height of lower link hitch points when locked in transport position	100 mm below	



alle Maße in mm
all dimensions in mm

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OPTIONAL TESTS

(9) ENGINE PERFORMANCE

Date of tests: 16th and 17th December 1982
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					
55.2	2300	15.55	12.86	233	3.55
At standard p.t.o. speed (1000 rev/min)					
54.0	2167	14.99	12.40	230	3.60
At rated engine speed					
55.2	2300	15.55	12.86	233	3.55
Part loads					
(i) 85% of the torque at maximum power at 2-hour test					
47.8	2343	13.44	11.11	232	3.56
(ii) unloaded					
-	2434	3.70	3.06	-	-
(iii) 50% of the torque defined in (i)					
24.4	2389	8.27	6.84	281	2.95
(iv) maximum power					
55.2	2300	15.55	12.86	233	3.55
(v) 25% of the torque defined in (i)					
12.3	2408	5.88	4.86	396	2.09
(vi) 75% of the torque defined in (i)					
36.2	2367	10.73	8.88	245	3.38

Optimum fuel consumption: 215 g/kWh at 26.1 kW and 1265 rev/min
No load maximum engine speed: 2434 rev/min
Torque at maximum power (2 hours): 229 Nm
Maximum torque: 262 Nm at 1600 rev/min of the engine

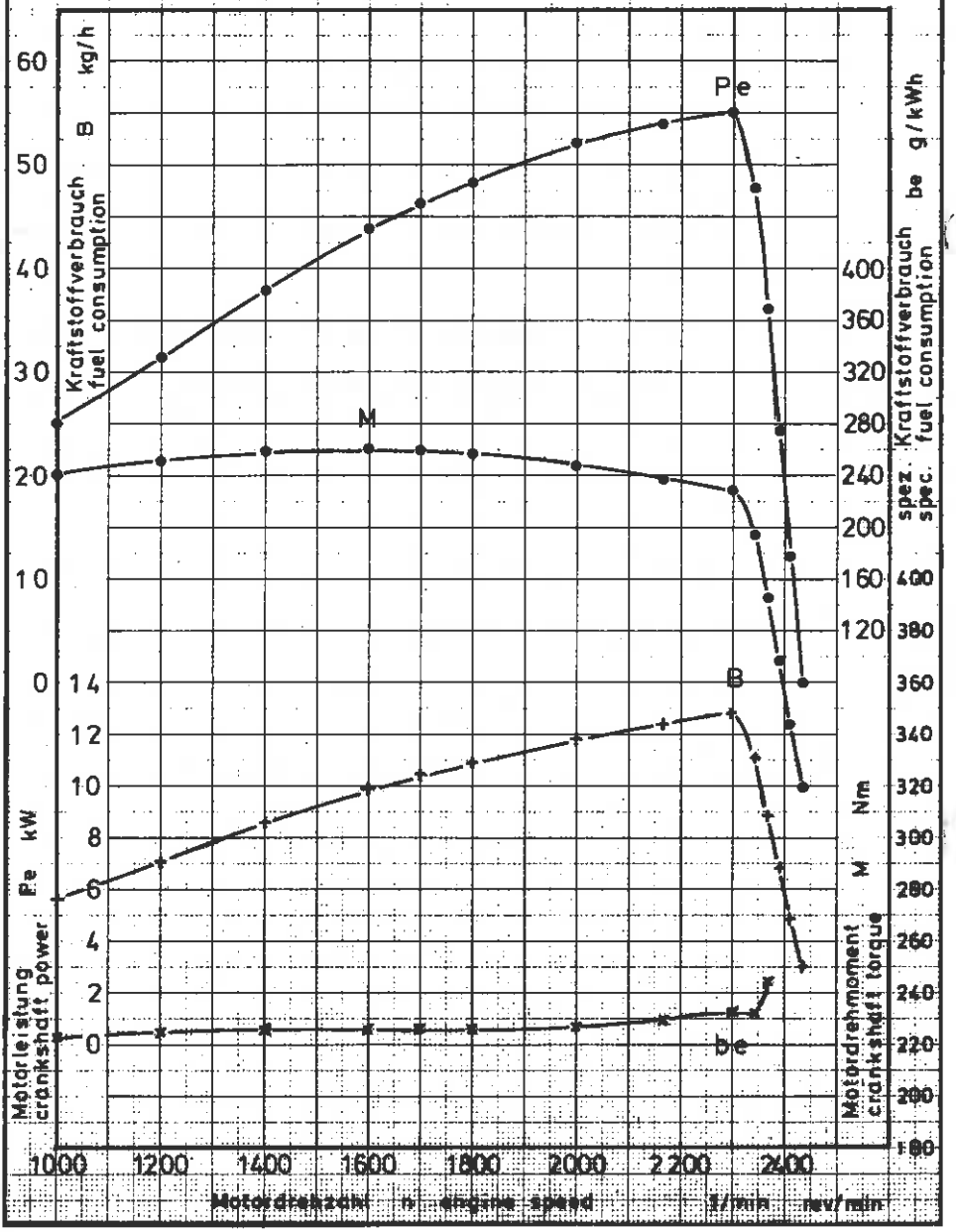
Mean atmospheric conditions:	temperature	17 °C
	pressure	981 mbar
	relative humidity	70 %
Maximum temperatures:	cylinder head	108 °C
	engine oil	105 °C
	fuel	19 °C
	engine air intake	18 °C

PRÜFUNGS-ABTEILUNG

Motorleistung
-26-
Engine performance

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Test Nr. 82-126

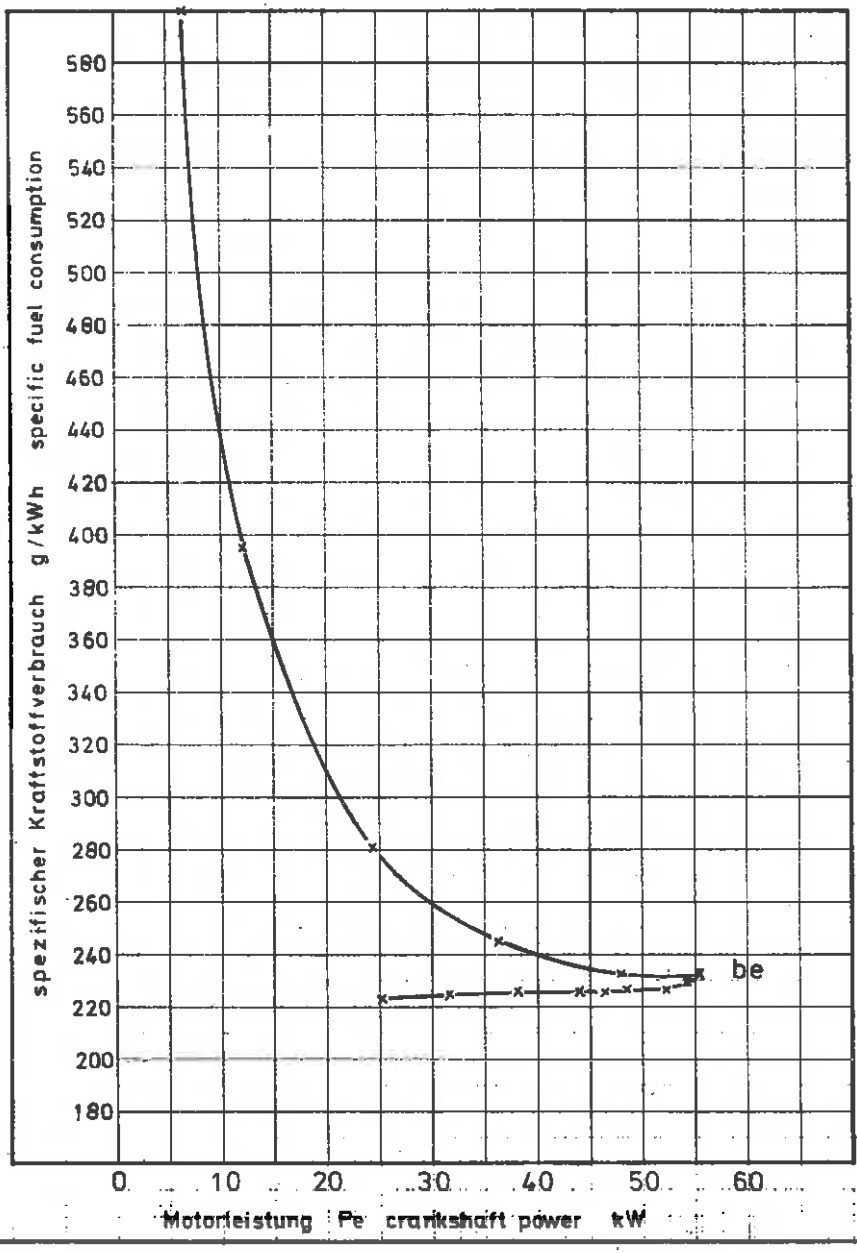


PRÜFUNGS-ABTEILUNG

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Motorleistung
-27-
Engine performance

Test Nr. 82-126



PRÜFUNGS-ABTEILUNG

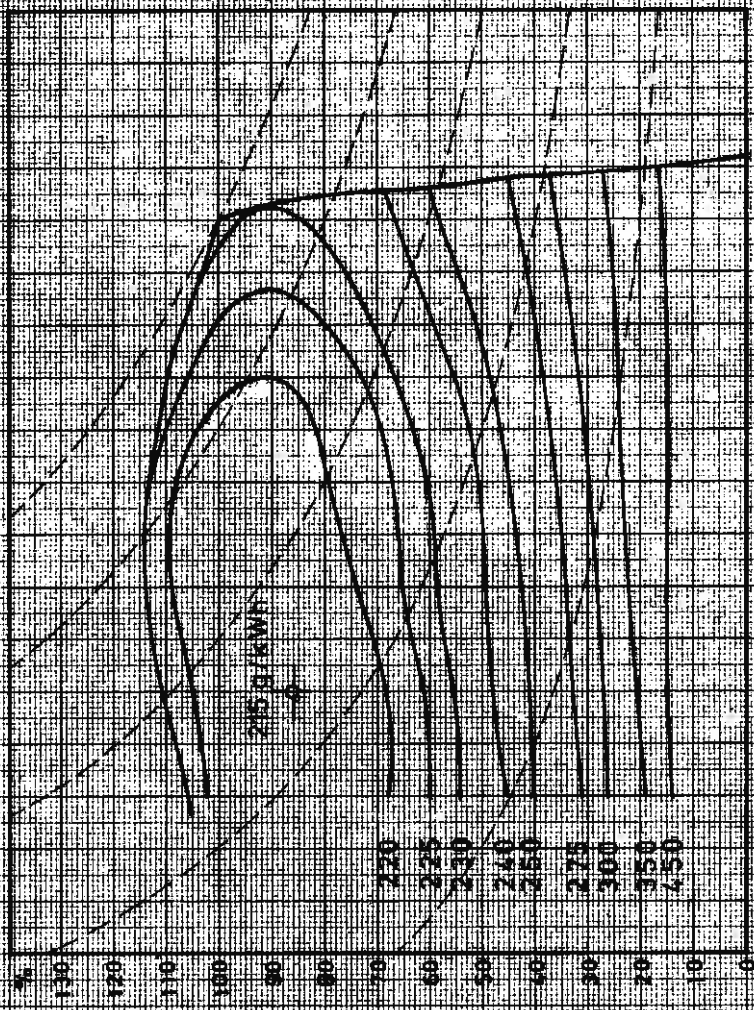
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Motorleistung
Engine performance

Test Nr. 82-126

Motorleistung in % der Leistung bei Nenndrehzahl

Engine power in % of power at rated engine speed



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OPTIONAL TESTS

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

Date of tests: 4th January 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						
51.4	2300	1062	15.41	12.74	248	3.33
At standard p.t.o. speed						
50.4	2167	1000	14.81	12.24	243	3.40
At the speed recommended for drawbar work						
51.4	2300	1062	15.41	12.74	248	3.33
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						
44.6	2349	1084	13.45	11.12	250	3.31
(ii) unloaded						
-	2432	1122	4.27	3.53	-	-
(iii) 50% of the load defined in (i)						
22.7	2391	1103	8.53	7.05	311	2.66
(iv) maximum power						
51.4	2300	1062	15.41	12.74	248	3.33
(v) 25% of the load defined in (i)						
11.4	2411	1113	6.29	5.20	455	1.82
(vi) 75% of the load defined in (i)						
33.8	2372	1095	10.85	8.97	266	3.11

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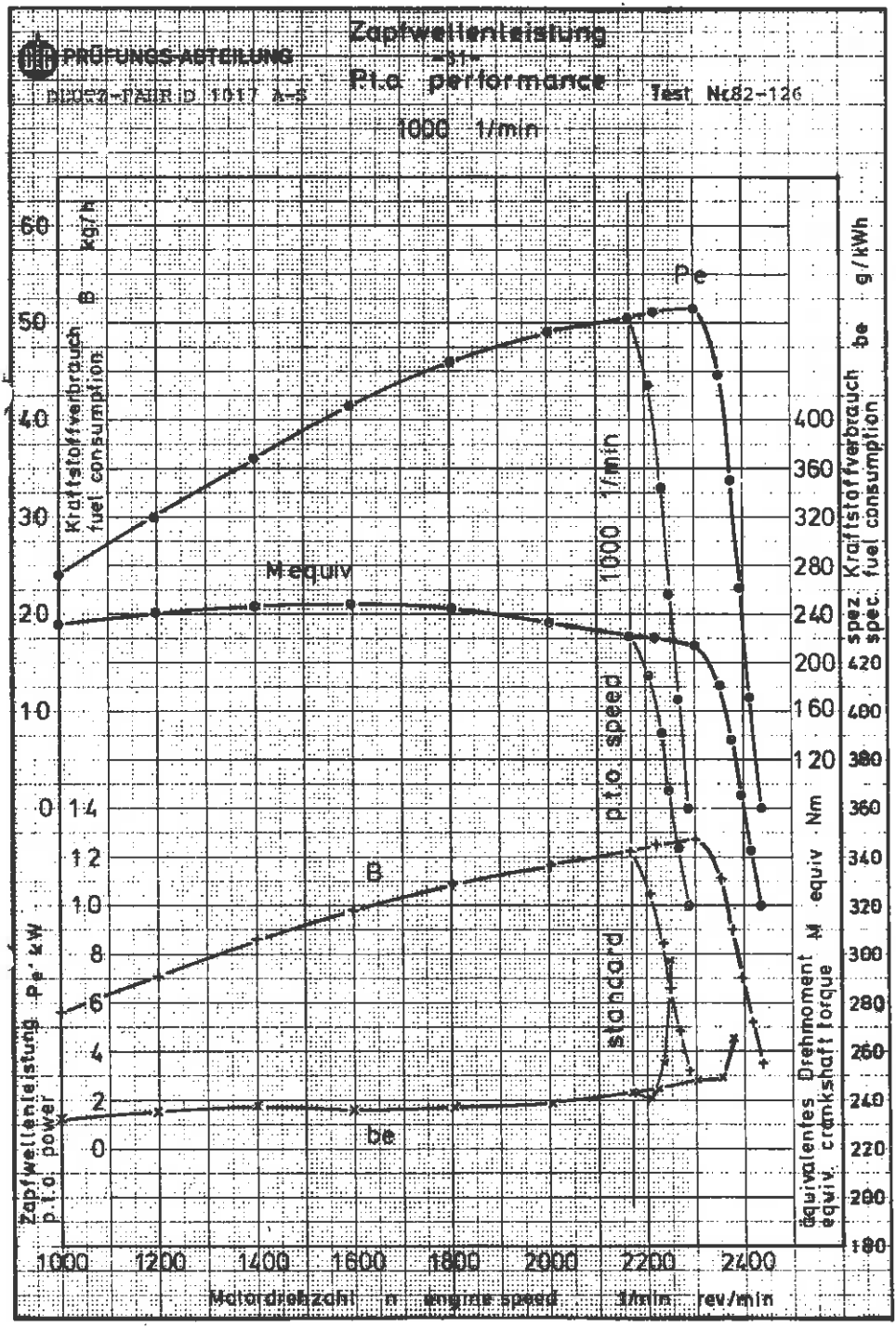
Test No. 82-126

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						
43.6	2205	1018	12.70	10.50	241	3.43
(ii) unloaded						
-	2285	1055	3.91	3.23	-	-
(iii) 50% of the load defined in (i)						
22.2	2243	1035	7.97	6.59	298	2.78
(iv) maximum power						
50.4	2167	1000	14.81	12.24	243	3.40
(v) 25% of the load defined in (i)						
11.2	2263	1045	5.87	4.86	433	1.91
(vi) 75% of the load defined in (i)						
33.1	2230	1029	10.22	8.45	255	3.24

Standard specific fuel consumption (g/kWh): 250/311/241/298

No load maximum engine speed: 2432 rev/min
Equivalent crankshaft torque at maximum power (2 hours): 213 Nm
Maximum equivalent crankshaft torque: 248 Nm at 1595 rev/min of the engine

Mean atmospheric conditions:	temperature	17 °C
	pressure	998 mbar
	relative humidity	63 %
Maximum temperatures:	cylinder head	106 °C
	engine oil	110 °C
	fuel	17 °C
	engine air intake	17 °C


PRÜFUNGS-ABTEILUNG
Zapfwellenleistung
P.t.o. performance
Test Nr.82-126
1000 1/min
Kraftstoffverbrauch B kg/h
fuel consumption
Pe
Mequiv
B
be
p.t.o. speed 1000 1/min
standard
Zapfwellenleistung Pe kW
p.t.o. power
äquivalentes Drehmoment M equiv Nm
equiv. crankshaft torque
spez. Kraftstoffverbrauch be g/kWh
spec. fuel consumption
Motordrehzahl n engine speed 1/min rev/min

PRÜFUNGS-ABTEILUNG

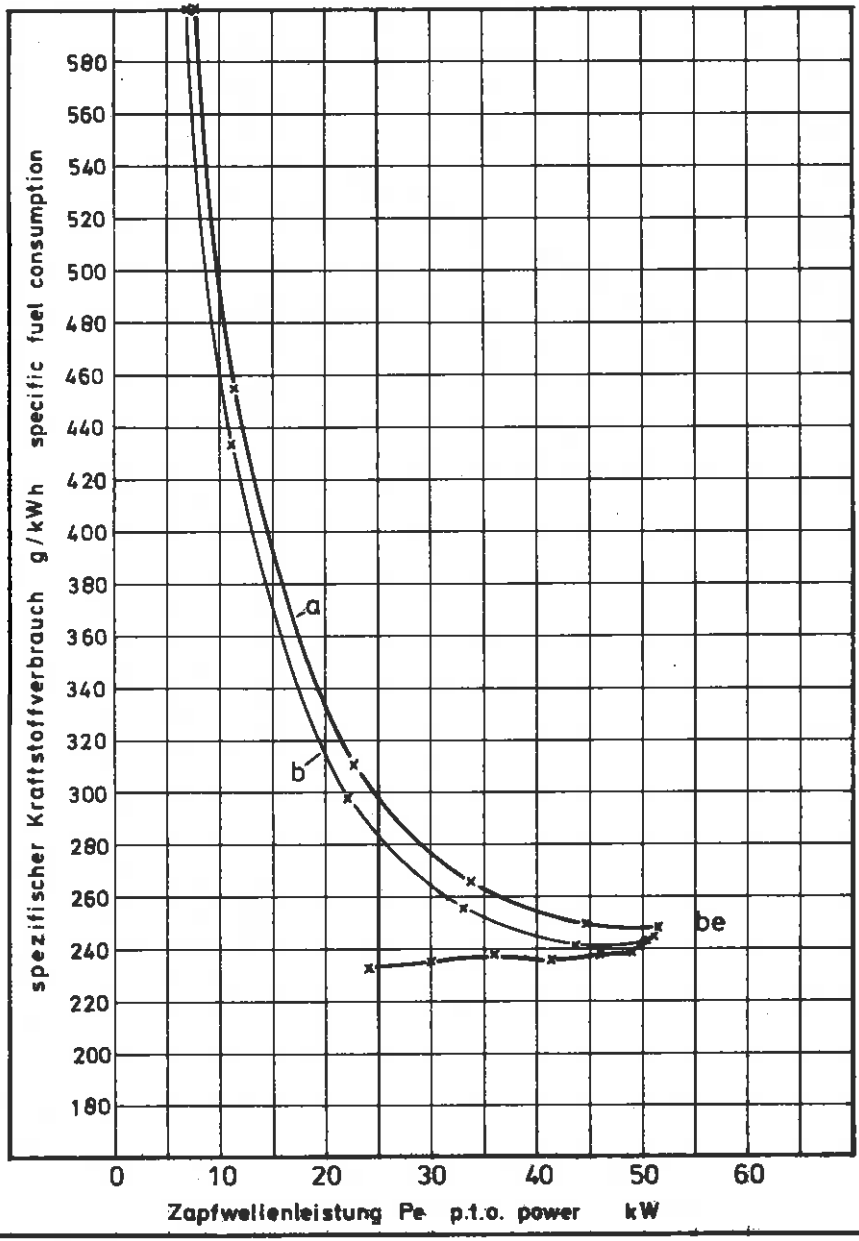
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Zapfwellenleistung

P.t.o. performance

Test Nr. 82-126

1000 1/min



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