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

O.E.C.D. No. 858



Agricultural Tractor DEUTZ-FAHR D 6007 (2WD)

Type denomination D 1056-N and D 1056-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: June till September 1982
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: 23rd December 1982 O.E.C.D. No. 858

The tractor is manufactured in 2 variants:

1st: D 1056-N with 4-speed change gear. Maximum design related speed is 25 km/h.

2nd: D 1056-S with 4-speed change gear and additional 5th gear. Maximum design related speed is 30 km/h.

In the rest both 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	=	750,1 mm Hg		

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PRÜFUNGS-ABTEILUNG
DEUTZ-FAHR D 1056-N
D 1056-S

Test No. 82-121

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D 1056-S

Test No. 82-121

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 6007
Type denomination:	D 1056-N and D 1056-S
Type:	Wheel tractor, unit construction, rear wheel driven
Serial No.:	77 13 0001

Engine

Make:	DEUTZ
Model:	F3L 913
Type:	4-stroke Diesel-engine, direct injection, air-cooled
Serial No.:	64 55 476
Cylinders:	3, in-line, bore 102 mm, stroke 125 mm, displacement 3064 cm^3, compression ratio 17; replaceable ribbed cylinder liners
Valves:	Overhead
Fuel system:	PIERBURG fuel feed pump BOSCH in-line injection pump PES 3A 85D 410/3 RS 2642 manufacturer's production setting 56,3 mm^3/stroke at rated speed and full load; start of pump delivery 28° 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 70 l

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Governor: BOSCH centrifugal variable-speed governor
EP/RSV 325-1150 A8B 2102 L
governed range of engine speed 650 to 2415 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, 2460 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 8,5 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	to	+25°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;
BOSCH heating spiral in inlet manifold for starting
aid

Electrical equipment: 12 Volt, negative earth;
BOSCH 3-phase alternator
G 1-14V 33A 27, 462W;
1 lead acid battery, 88 Ah at 20 hours rating

Transmission

Clutch: LAMELLEN- UND KUPPLUNGSBAU GMBH
DT 280/250 G;
dry dual-disc clutch;
travel drive pedal operated, disc 280 mm dia;
p.t.o. drive hand lever operated, disc 250 mm dia

Gear box: DEUTZ-FAHR
TW 50.3-N at tractor type D 1056-N:
Synchromesh speed change gear with 4 speeds, 1st and 2nd speed optionally collar shifted available;
range gear with 2 collar shifted forward ranges (L and H) and 1 sliding gear shifted reverse range (R);
totally 8 forward and 4 reverse speeds;
creeping group optionally available

TW 50.3-S at tractor type D 1056-S:
Gearbox identical with type TW 50.3-N, but with additional 5th speed;
5th speed only usable if H-range is shifted;
totally 9 forward and 4 reverse speeds

Rear axle and final drive: DEUTZ-FAHR
bevel gear drive to intermediate shaft,
cylindrical gear transmission from intermediate shaft to bevel gear differential on rear axle;
differential with pedal operated self disengaging lock

Front axle: Not propelled

Gear lubrication: Oil capacity for complete gearbox including the rear axle 18 l, with creeping group 20 l;
recommended oil:

Gear oil	SAE 90	API-GL 4 or
engine oil	SAE 15W/40	API-CC or API-CD

oil change at least once a year or every 2000 operating hours

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Total ratios and speeds (tyres 16.9 - 30)

Range	Gear	Total ratio engine : driving wheels	Nominal travelling speed *) at rated engine speed km/h
L	1	280,17	2,15
	2	176,21	3,42
	3	120,66	4,99
	4	71,62	8,41
H	1	94,16	6,40
	2	59,22	10,18
	3	40,55	14,86
	4	24,07	25,04
R	1	247,59	2,43
	2	155,72	3,87
	3	106,63	5,65
	4	63,29	9,52
-	5+)	20,14	29,93

*) calculated with the radius index 695 mm

+) only at variant D 1056-S

Power-take-off

Independent p.t.o., driven by 2nd plate of dual disc clutch; at rear of tractor, in tractor's median plane, 648 mm above ground; shaft end 404 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.

598 rev/min at rated engine speed, standard p.t.o. speed 540 rev/min at engine speed 2077 rev/min

1000 rev/min p.t.o.

1077 rev/min at rated engine speed, standard p.t.o. speed 1000 rev/min at engine speed 2136 rev/min

sense of rotation clockwise, viewed from tractor rear

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Power lift	DEUTZ-FAHR K 45.3 DEUTZ TRANSFERMATIC-System hydraulic power lift, unit construction; draft and position control, floating position; top link sensing
Hydraulic system:	Open centre, PLESSEY gear pump TF/Δ 214 directly driven by engine; delivery 42 l/min at rated engine speed; hydraulic oil filter, incorporated in power lift unit, 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 cylinder set to 240+70 bar; DEUTZ-FAHR additional control valve S.D 60, single acting, with oil tap and return pipe 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 14 l capacity optionally available; by oil tap may be taken off 7 l if tractor is standing or travelling and 19 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 rod length adjustable from 610 to 740 mm; lifting range at mean length of lift rods 675 mm : 345 to 885 mm

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Pull attachments

Trailer hitch:	DEUTZ-FAHR AK 56, non automatical; height above ground adjustable to 825 and 883 mm, coupling pin 32 mm dia; distance of hitch hole centre to rear axle centre line 498 mm to p.t.o. shaft end 94 mm; permissible vertical load 1250 kg
Swinging drawbar:	Height above ground 473 mm, measured at the surface of the bar; pin hole 33 mm dia; distance of pin hole centre to rear axle centre line 820 mm, to p.t.o. shaft end 416 mm; pivot point 108 mm before rear axle centre line; laterally swingable about 245 mm to either side; permissible vertical load 750 kg
Holed drawbar:	Short bar, fitted on clevis of lower links; length between the joint balls 830 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 993 mm from p.t.o. shaft end 598 mm; with lift rods adjusted to mean length of 675 mm lifting range from 360 mm to 900 mm above ground; the drawbar may be mechanically-hydraulically fixed in the height of 600 mm above ground; this datas were determined at the surface of these bar
Towing hitch:	Height above ground 595 mm

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Steering

ZAHNRADFABRIK FRIEDRICHSHAFEN AG
7328
mechanical, acting on front axle

Brakes

Parking brake: Mechanical internal-expanding-shoe brake acting on intermediate shaft, operated by hand lever with ratchet;
1 brake drum with 180 mm dia and 30 mm width on the right, outside of gearbox

Service brake: GIRLING
GMPD
pedal operated muscle power brake with mechanical transmission, dry disc brakes acting on the differential half shafts of the rear axle, with servo-effect;
2 lining discs each with 193 mm dia on the left and on the right side, near the wheels

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

Wheels

Steering wheels: At front, 2 pneumatics 7,50 - 16 6 ply, maximum permissible load per tyre 745 kg at 2,25 bar inflation pressure and 30 km/h; track width adjustable from 1390 to 1890 mm in steps of 100 mm by extending telescopic front axle;
rims 5.00 F x 16

Driving wheels: At rear, 2 pneumatics 16,9 R 30 6 ply, radial type tyre casing;
maximum permissible load per tyre 1900 kg at 1,3 bar inflation pressure and 30 km/h; track width adjustable from 1520 to 1920 mm in steps of 100 mm by offset lug type rims;
rims W 15L x 30

Wheel base: 1995 mm

Safety frame

FRITZMEIER model 901, OECD tested;
approval numbers
tractor D 1056-S: CSD 0502/10
tractor D 1056-N: CSD 0502/12
4 post frame made of square tube with longitudinal and transverse bracing, rigidly mounted on tractor

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Seat

GRAMMER
DS 20 D 3H
upholstered seat with back rest;
adjustable suspension with shock absorber;
height of driver's platform above ground
730 mm;
height of unloaded seat in front- and lowermost position 520 mm above platform,
on an inclined plane adjustable in longitudinal direction by 230 mm and simultaneously in the height by 100 mm,
additional independent height adjustment about 120 mm in 8 steps

Number of grease points

14

Dimensions

Total length: 3654 mm without ballast
3974 mm with ballast

Total width: 2056 mm with and without ballast

Total height: 2460 mm to top of exhaust silencer

Ground clearance: 415 mm below bracket of swinging drawbar

Available tyres

tyre size	
front	rear
6.00 - 16 6 ply	9.5 - 36 6 ply 12.4 - 36 6 ply
6.50 - 16 6 ply	12.4 - 38 6 ply 13.6 - 36 6 ply
7.50 - 16 6 ply	14.9 - 28 6 ply 16.9 - 30 6 ply

All tyres at front and at rear may be combined with each other

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Light equipment — Electrical 12 Volt
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	855	868
Side lights	85 x 30	1493	253
Rear lights	85 x 30	1378	263
Reflectors			
1st pair	75 dia	1140	163
2nd pair	75 dia	704	664

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 — 1390 mm at front
1520 mm at rear

Weights — as during drawbar tests

		without driver	with driver
Without ballast:	front	880 kg	890 kg
	rear	1635 kg	1710 kg
	total	2515 kg	2600 kg
Front ballast:	12 weights, total		475 kg
Rear ballast:	4 weights per wheel, total		390 kg
	water in the tyres		535 kg
With ballast:	front	1480 kg	1490 kg
	rear	2435 kg	2510 kg
	total	3915 kg	4000 kg

Fuels and lubricants used in tests

Fuel:	ARAL Diesel-fuel DIN 51601 during all tests specific gravity at 15°C	0,834 kg/l
Engine oil:	SHELL ROTELLA	SAE 20W/20
Transmission oil:	ESSO ESSOLUBE	SAE 90
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: 26th July 1982
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						
40.0	2300	598	11.65	9.72	243	3.44
At standard p.t.o. speed						
38.3	2077	540	10.90	9.09	237	3.52
At the speed recommended for drawbar work						
40.0	2300	598	11.65	9.72	243	3.44
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						
34.5	2332	606	9.88	8.24	239	3.49
(ii) unloaded						
-	2410	627	2.84	2.37	-	-
(iii) 50% of the load defined in (i)						
17.5	2364	615	6.11	5.09	291	2.86
(iv) maximum power						
40.0	2300	598	11.65	9.72	243	3.44
(v) 25% of the load defined in (i)						
8.8	2382	619	4.38	3.65	414	2.01
(vi) 75% of the load defined in (i)						
26.1	2353	612	8.00	6.67	256	3.26

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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						
33.1	2109	548	9.26	7.72	234	3.57
(ii) unloaded						
-	2190	569	2.40	2.00	-	-
(iii) 50% of the load defined in (i)						
16.8	2144	557	5.59	4.66	277	3.01
(iv) maximum power						
38.3	2077	540	10.90	9.09	237	3.52
(v) 25% of the load defined in (i)						
8.3	2158	561	3.96	3.30	398	2.10
(vi) 75% of the load defined in (i)						
25.0	2130	554	7.30	6.09	243	3.43

Standard specific fuel consumption (g/kWh): 239/291/234/277

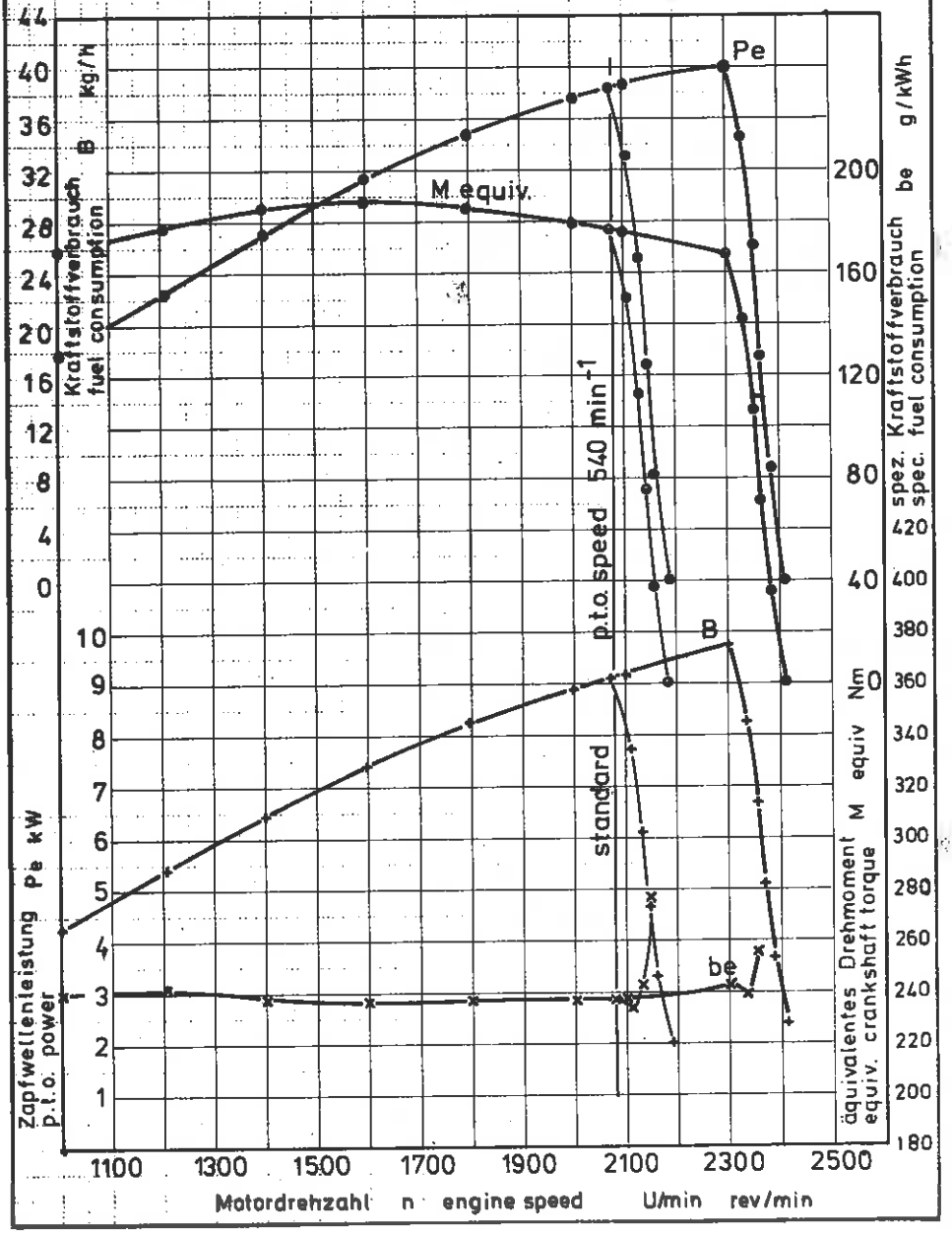
No load maximum engine speed: 2410 rev/min
Equivalent crankshaft torque at maximum power (2 hours): 166 Nm
Maximum equivalent crankshaft torque: 187 Nm at 1598 rev/min of the engine

Mean atmospheric conditions:	temperature	20 °C
	pressure	1003 mbar
	relative humidity	85 %
Maximum temperatures:	cylinder head	123 °C
	engine oil	120 °C
	fuel	25 °C
	engine air intake	21 °C

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Zapfwellenleistung
- 16 -
P.t.o. performance

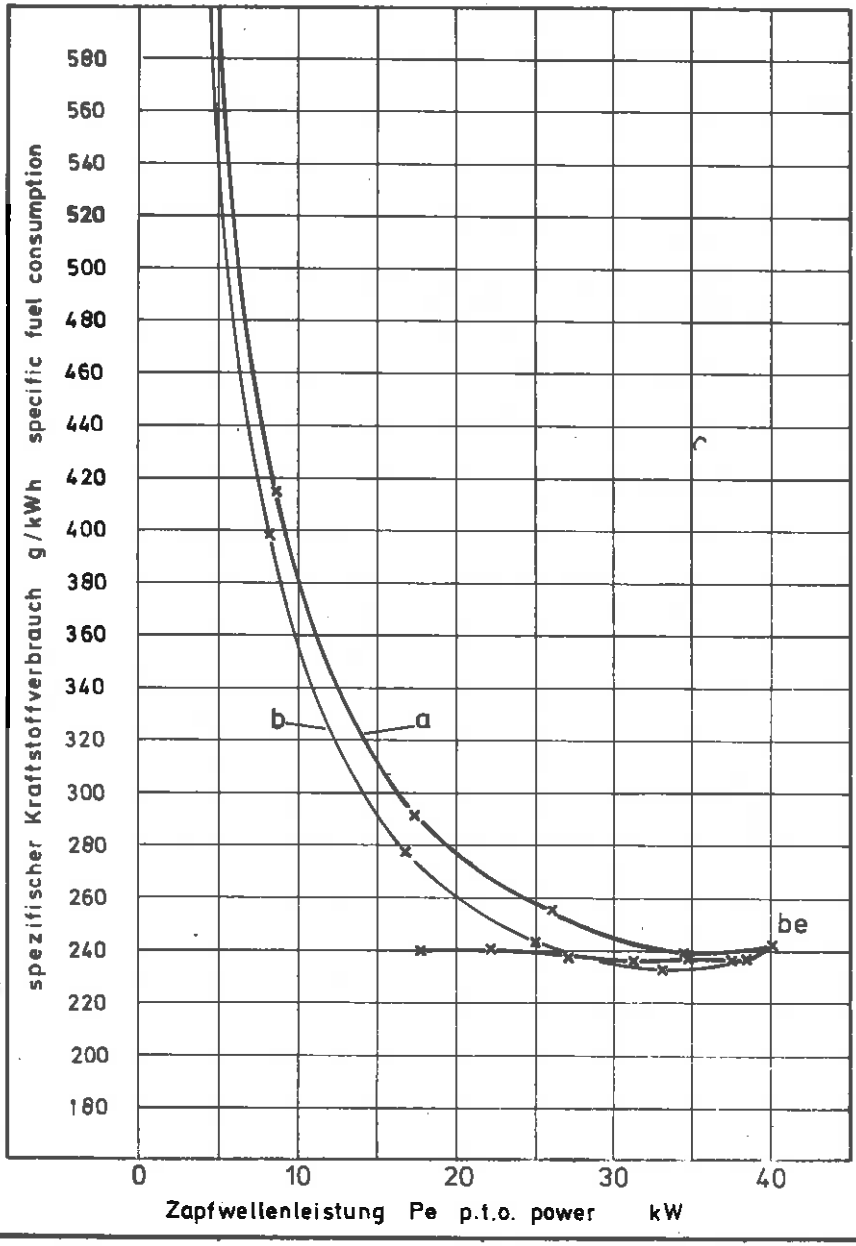
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Zapfwellenleistung
- 17 -
P.t.o. performance

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(2) DRAWBAR PERFORMANCE

Date of tests: 2nd August till 15th September 1982
Type of track: Concrete

Gear no. and range	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 550 mm					
2 L	3,04	21,1	2500	2371	14,9
3 L	4,36	30,2	2490	2334	15,0
1 H	5,71	32,8	2070	2300	11,7
4 L	7,78	32,8	1520	2300	8,5
2 H	9,54	34,2	1290	2304	7,2
3 H	14,27	33,6	847	2299	4,7
(ii) MAXIMUM POWER (ballasted) height of drawbar above ground 640 mm					
1 L	1,89	18,6	3555	2358	15,0
2 L	2,95	29,3	3578	2316	15,0
3 L	4,55	31,2	2470	2302	9,4
1 H	5,95	33,2	2006	2297	7,5
4 L	8,00	32,8	1476	2303	5,3
2 H	9,74	34,1	1259	2300	4,5
3 H	14,42	33,7	841	2303	2,9
(iii) FIVE-HOUR-TEST at 75% of pull at maximum power in 1st H gear					
1 H	6,23	26,1	1505	2355	5,5
(iv) FIVE-HOUR-TEST at pull corresponding to 15% wheel slip in test (ii)					
2 L	2,82	28,0	3578	2311	-

Total oil consumption during ten hours duration of tests (iii) and (iv) 64 g/h

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Tyre size front: 7.50 - 16 6 ply
rear: 16.9 R 30 6 ply

Tread bar height at the beginning of drawbar tests
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 Temperature °C	Relative humidity %	Pressure mbar
tyre inflation pressure 0,8 bar at rear tyres							
331	2,52	25	74	94	20	94	996
312	2,67	25	79	92	21	96	996
297	2,81	29	98	109	21	96	996
295	2,83	26	98	101	21	99	996
287	2,90	29	99	104	24	90	996
292	2,86	30	95	102	25	81	996
tyre inflation pressure 0,8 bar at rear tyres							
367	2,27	31	102	100	25	78	997
312	2,68	31	90	100	25	80	997
309	2,70	29	102	116	25	80	997
297	2,81	27	100	109	25	78	997
299	2,79	26	105	104	23	83	997
286	2,92	30	95	105	25	77	997
289	2,89	30	99	102	25	77	997
284	2,94	28	80	105	25	70	1004
-	-	31	92	130	26	60	1006

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: 7.50 - 16 6 ply
rear: 16.9 R 30 6 ply

Track of wheels front: 1390 mm
rear: 1520 mm

	With brakes		Without brakes	
	left-hand m	right-hand m	left-hand m	right-hand m
Radius of turning space	3,49	3,39	4,15	3,93
Radius of turning circle	3,29	3,19	3,95	3,73

(4) LOCATION OF CENTRE OF GRAVITY

Height above ground	833 mm
Distance forward from rear axle centre	686 mm
Distance from tractor's median plane, to the left	3 mm

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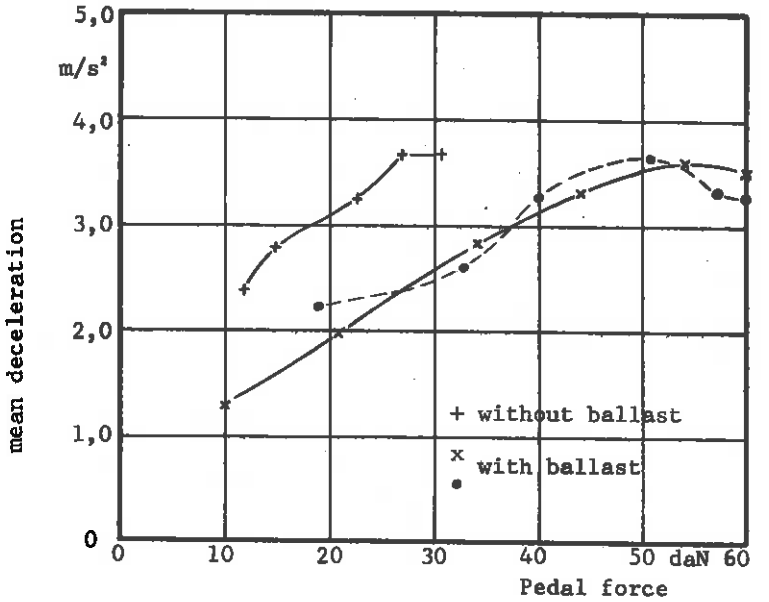
(5) Braking

Date of tests: 3rd August 1982

Tractor masses during tests with driver:	front kg	rear kg	total kg
without ballast	890	1710	2600
with ballast	1550	2450	4000

A) Service brake

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



Speed before application of brakes, without ballast 26,1 km/h
with ballast 25,8 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 2600 kg	
	up	down	up	down
Braking device control force daN	15	16	13	13

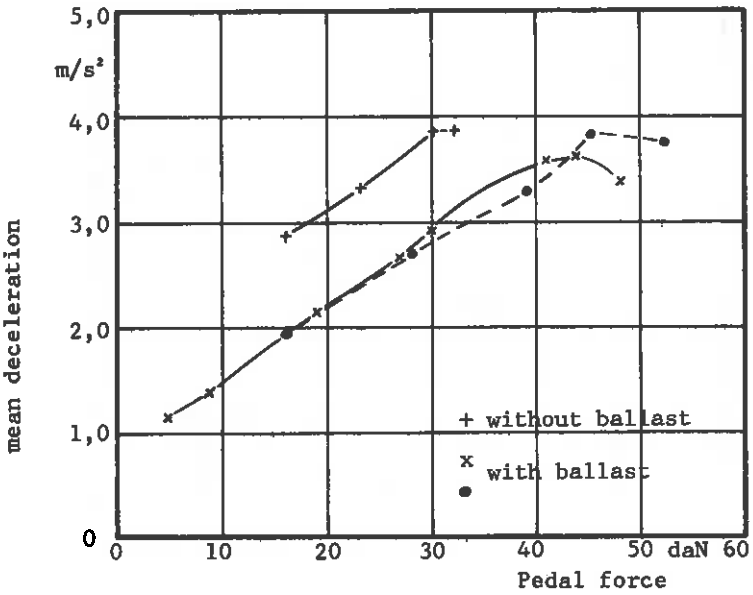
(5) Braking

Date of tests: 3rd August 1982

Tractor masses during tests with driver:	front kg	rear kg	total kg
without ballast	890	1710	2600
with ballast	1490	2510	4000

A) Service brake

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



Speed before application of brakes, without ballast 31,1 km/h
with ballast 30,7 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 2600 kg	
	up	down	up	down
Braking device control force daN	15	16	13	13

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(6) MEASUREMENT OF EXTERNAL NOISE LEVEL

Date of test: 2nd August 1982
Type of track: Concrete
Type of sound level meter: BRÜEL AND KJAER model 2203

Results of test

	D 1056-N	D 1056-S
Gear:	4th H	5th
Travelling speed before acceleration:	19,6 km/h	23,3 km/h
Sound level:	86,5 dB(A)	86,5 dB(A)

(7) NOISE MEASUREMENT AT THE DRIVER'S EAR

Date of tests: 2nd August 1982
Type of track: Concrete
Type of sound level meter: BRÜEL AND KJAER model 2209
Tractor with FRITZMEIER safety frame model 901, without roof

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	2429	2,15	1,90	95,0
2 L	2465	3,42	3,01	95,5
3 L	2473	4,99	4,32	97,0
1 H	2053	6,40	5,71	96,5
4 L x)	1519	8,41	7,75	97,0
4 L x)	light load	8,41	8,92	93,5
2 H	1286	10,18	9,53	97,0
3 H	863	14,86	14,20	96,5
4 H	light load	25,04	26,10	94,0
5 xx)	light load	29,93	31,10	94,0

x) the 4th L gear corresponds to the nominal travelling speed nearest to 7,5 km/h

xx) only at variant D 1056-S

(8) POWER LIFT AND HYDRAULIC PUMP PERFORMANCE

Date of tests: 23rd and 27th September 1982

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	345	540	2415	165	-	-
On the frame	345	651	1791	165	2871	12+)

Temperature of hydraulic fluid at start of test 65 °C

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

Lifting heights relative to horizontal lower links

mm	-226	-200	-185	-100	0	+100	+200	+300	+355	+400	+425
Lifting forces at hitch points											
daN			2591	2635	2591	2525	2459	2415	2415		
Lifting forces at test frame											
daN	2365	2365		2299	2211	2100	1968	1858		1791	1791

Hydraulic Pump Performance

Opening pressure of the relief valve in remote circuit	169 bar
Sustained pressure with relief valve open	183 bar
Pump delivery rate at minimum pressure, the governor control lever being set for max. power	38,2 l/min
Hydraulic power at 90% of relief valve setting	9,9 kW
Corresponding delivery rate	36,1 l/min
Pressure	165 bar
Temperature of hydraulic fluid	65 °C

Tapping point used for test: At rear of tractor

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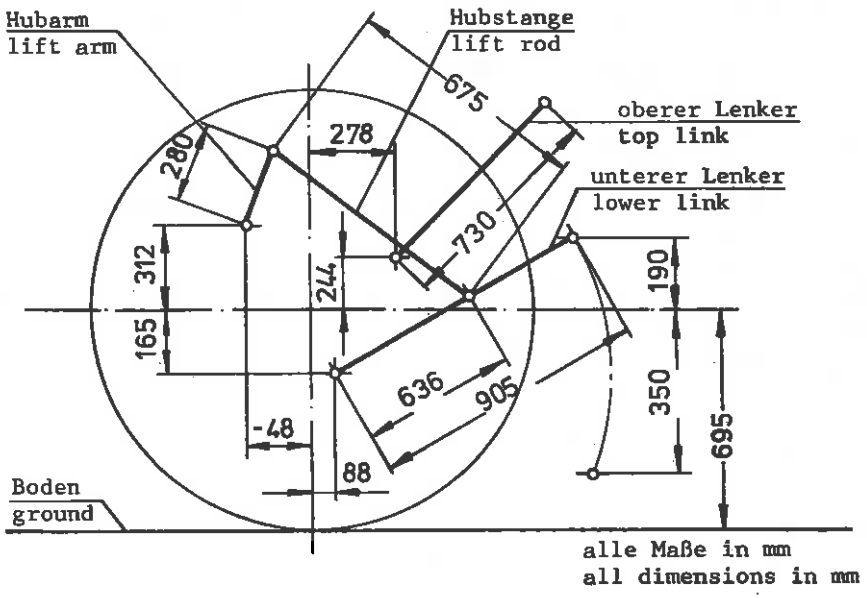
LINKAGE GEOMETRY when connected to the standard frame

Projected length in side view:

Lower links	905 mm
Lift arms	208 mm
Lift rods	675 mm
Top link	730 mm
Distance of lift rod connection point from pivot point of lower link	636 mm

The following dimensions are given relative to the rear wheel centre line, situated 695 mm above ground:

Lower link pivot point	88 mm behind	165 mm below
Top link pivot point	278 mm behind	244 mm above
Lift arm pivot point	48 mm behind	312 mm above
Maximum and minimum height of lower link hitch points	190 mm above	350 mm below
Height of lower link hitch points when locked in transport position	190 mm above or	110 mm below



OPTIONAL TESTS

(9) ENGINE PERFORMANCE

Date of tests: 2nd July 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					
42.4	2300	11.64	9.71	229	3.64
At standard p.t.o. speed (540 rev/min)					
40.4	2077	10.94	9.13	226	3.70
At rated engine speed					
42.4	2300	11.64	9.71	229	3.64
Part loads					
(i) 85% of the torque at maximum power at 2-hour test					
36.6	2338	10.00	8.34	228	3.66
(ii) unloaded					
-	2415	2.55	2.12	-	-
(iii) 50% of the torque defined in (i)					
18.5	2363	6.02	5.02	271	3.08
(iv) maximum power					
42.4	2300	11.64	9.71	229	3.64
(v) 25% of the torque defined in (i)					
9.3	2383	4.17	3.48	373	2.24
(vi) 75% of the torque defined in (i)					
27.6	2349	7.91	6.59	239	3.49

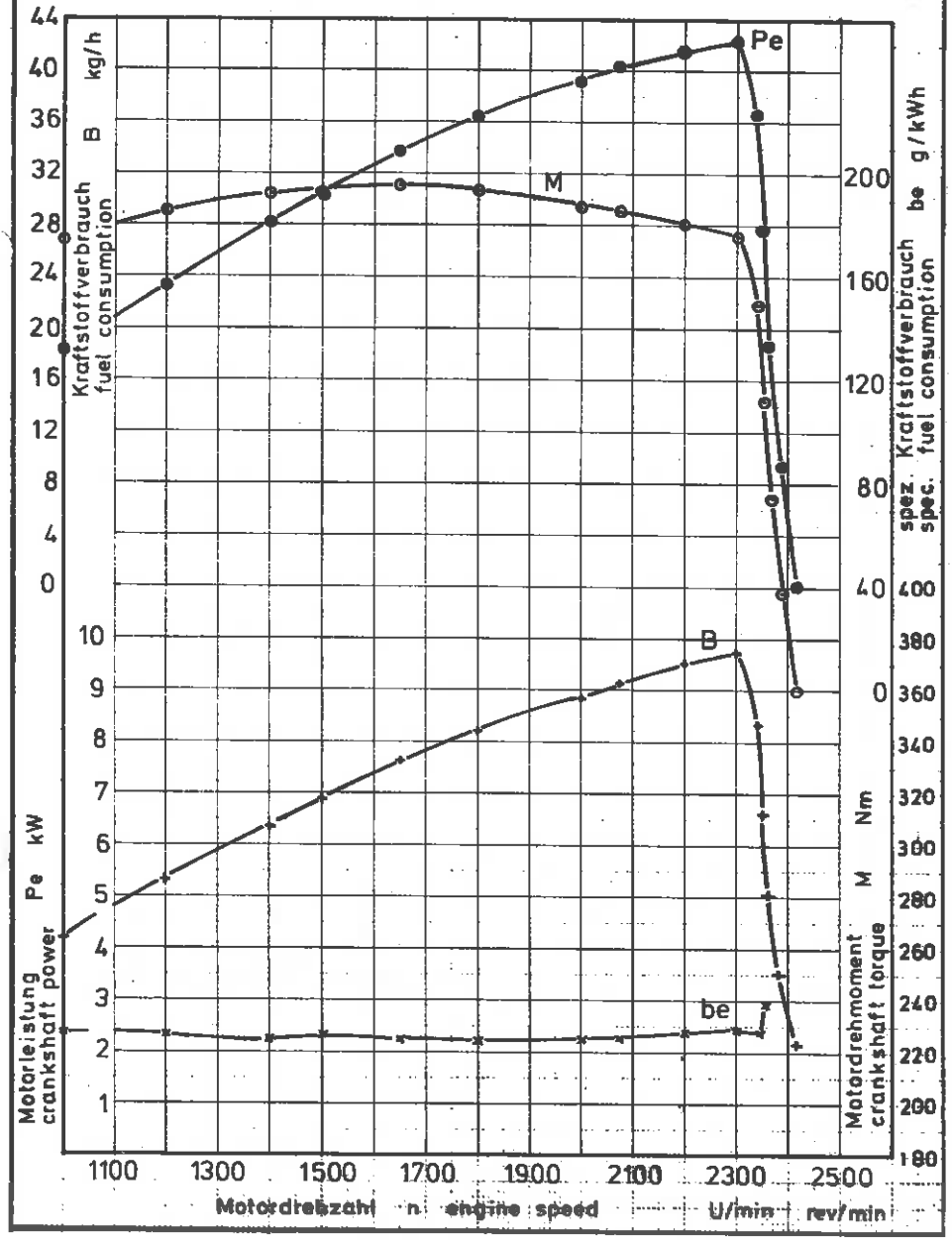
Optimum fuel consumption: 213 g/kWh at 25.3 kW and 1465 rev/min
No load maximum engine speed: 2415 rev/min
Torque at maximum power (2 hours): 176 Nm
Maximum torque: 196 Nm at 1650 rev/min of the engine

Mean atmospheric conditions:	temperature	25 °C
	pressure	1004 mbar
	relative humidity	55 %
Maximum temperatures:	cylinder head	105 °C
	engine oil	109 °C
	fuel	26 °C
	engine air intake	25 °C

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Motorleistung
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Engine performance

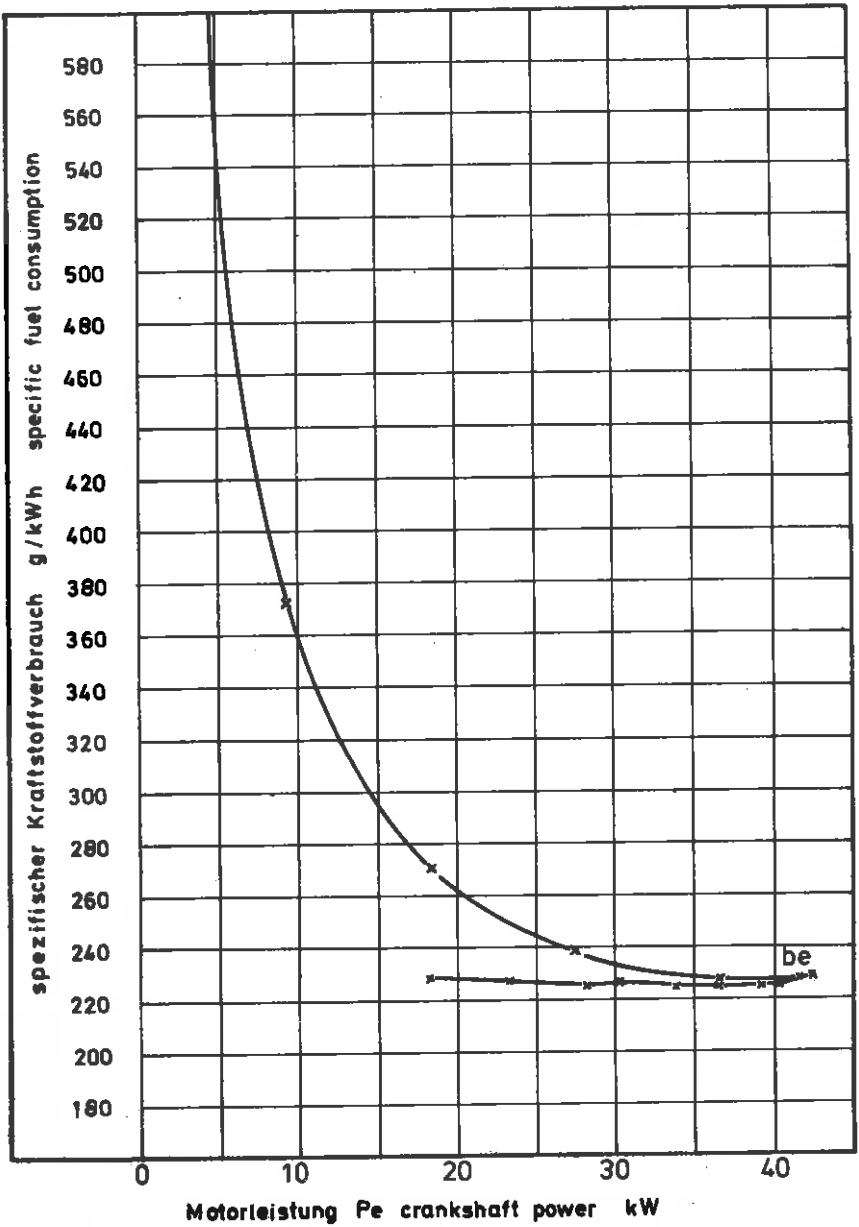
Test Nr. 82-121



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Motorleistung
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Engine performance

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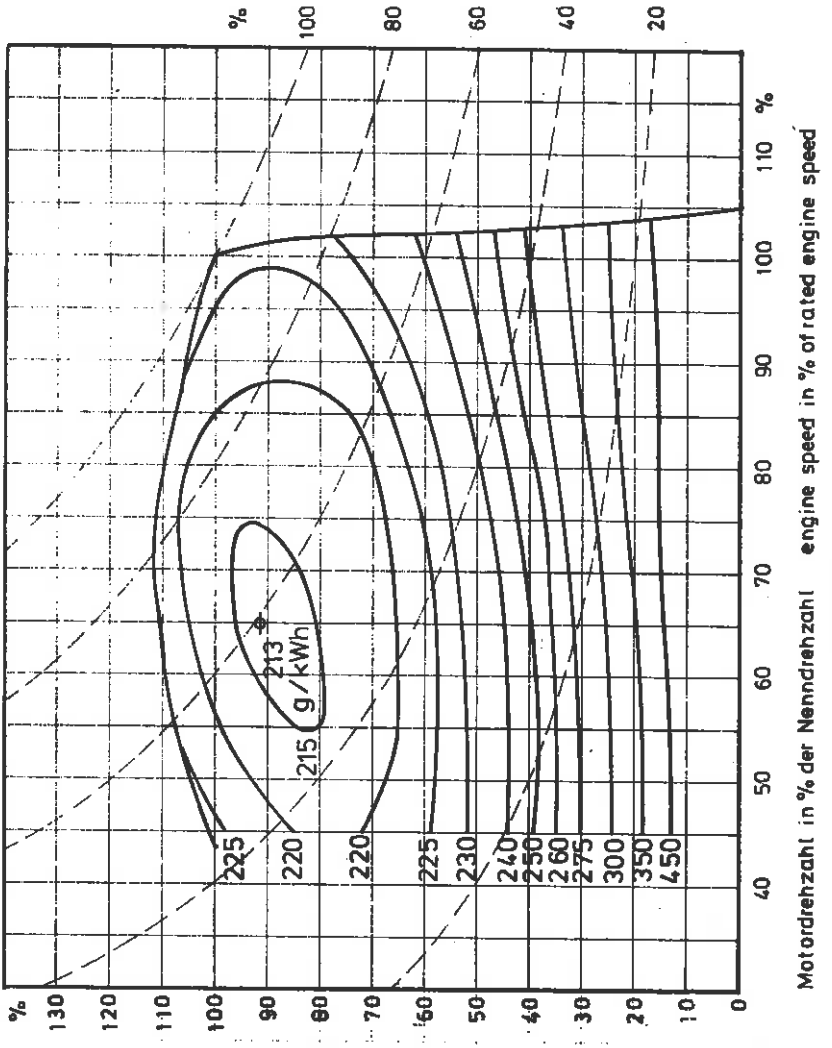
Motorleistung

Engine performance

Test Nr. 82-121

Motorleistung in % der Leistung bei Nenndrehzahl

engine power in % of power at rated engine speed



Belastung in % des Drehmomentes bei Nenndrehzahl

load in % of torque at rated engine speed

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