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

O.E.C.D. No. 867



Agricultural Tractor
DEUTZ-FAHR D 6507 (2WD)

Type denomination D 1057-N and D 1057-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
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. 867

The tractor is manufactured in 2 variants:

1st: D 1057-N with 4-speed change gear.
Maximum design related speed is 25 km/h.

2nd: D 1057-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	=	750,10 mm Hg		

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PRÜFUNGS-ABTEILUNG
DEUTZ-FAHR D 1057-N
D 1057-S

Test No. 82-190

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PRÜFUNGS-ABTEILUNG

DEUTZ-FAHR D 1057-N
D 1057-S

Test No. 82-190

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 6507
Type denomination:	D 1057-N and D 1057-S
Type:	Wheel tractor, unit construction, rear wheel driven
Serial No.:	77 16 0001

Engine

Make:	KLÖCKNER-HUMBOLDT-DEUTZ AG
Model:	F4L 912
Type:	4-stroke Diesel-engine, direct injection, air-cooled
Serial No.:	6609472
Cylinders:	4, in-line, bore 100 mm, stroke 120 mm, displacement 3770 cm^3, compression ratio 17; replaceable ribbed cylinder liners
Valves:	Overhead
Fuel system:	PIERBURG fuel feed pump PE 15 252; BOSCH in-line injection pump: PES 4A 80D 410/3 RS 1300 manufacturer's production setting 50,5±1 mm^3/ stroke, at rated speed and full load; injection timing 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

Governor: BOSCH centrifugal variable speed governor
EP/RSV 325-1150 A8B 715DL
governed range of engine speed 650 to 2250 rev/min,
rated engine speed 2130 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, 2538 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 flame glow plug 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, 110 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 50.4-N at tractor type D 1057-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 50.4-S at tractor type D 1057-S: Gearbox identical with type TW 50.4-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-GL4 or engine oil SAE 15W/40 API-CC or API-CD oil change every 2000 operating hours, at least every 2 years

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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	231,55	2,41
	2	145,63	3,83
	3	99,72	5,60
	4	63,35	8,81
H	1	83,29	6,70
	2	52,38	10,65
	3	35,87	15,56
	4	22,79	24,49
R	1	204,62	2,73
	2	128,69	4,34
	3	88,13	6,33
	4	55,98	9,97
-	5+)	19,11	29,20

*) calculated with the radius index 695 mm

+) only at variant D 1057-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;
35 mm dia, 6 splines, ISO 500 / DIN 9611 type 1

2 speeds are preselectable by hand lever:

540 rev/min p.t.o.
609 rev/min at rated engine speed, standard p.t.o. speed 540 rev/min at engine speed 1890 rev/min

1000 rev/min p.t.o.
1136 rev/min at rated engine speed, standard p.t.o. speed 1000 rev/min at engine speed 1875 rev/min

direction 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, BOSCH gear pump HY/ZFS 11/19 L (212/1) directly driven by engine; delivery 43,3 l/min at rated engine speed; hydraulic oil filter incorporated in power lift unit, 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 12 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 API-CC every 1000 operating hours, at least once a year API-CD every 2000 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 : 335 to 870 mm

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Pull attachments

Trailer hitch:	DEUTZ-FAHR AK 56, non automatical; height above ground adjustable to 800 and 857 mm; coupling pin 32 mm dia; distance of hitch hole centre to rear axle centre line 498 mm, to p.t.o. shaft end 95 mm; permissible vertical load 1250 kg
Swinging drawbar:	Height above ground 461 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 417 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 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 from horizontal position from rear axle centre 993 mm from p.t.o. shaft end 590 mm; with lift rods adjusted to mean length of 675 mm lifting range from 350 mm to 885 mm above ground; the drawbar may be mechanically hydraulically fixed in the height of 580 mm above ground; this datas were determined at the surface of these bar
Towing hitch:	Height above ground 690 mm
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 - 18 6 ply, maximum permissible load per tyre 810 kg at 2,25 bar inflation pressure and 30 km/h; track width adjustable from 1386 to to 1886 mm in steps of 100 mm by extending telescopic front axle; rims 5.00 F x 16
Driving wheels:	At rear, 2 pneumtaics 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:	2125 mm
Safety frame	FRITZMEIER model 901, OECD tested; approval numbers tractor D 1057-S: CSD 0502/2 tractor D 1057-N: CSD 0502/4 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
755 mm;
height of unloaded seat in front- and lowermost position 550 mm above platform
on an inclined plane adjustable in longitudinal direction by 220 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:

3761 mm without ballast
4081 mm with ballast

Total width:

With rear mudguards widened by rubber covers (attached to tested tractor)
2056 mm with and without ballast

without additional rubber covers at rear mudguards
1965 mm with and without ballast

Total height:

2454 mm to top of safety frame

Ground clearance:

390 mm below bracket of swinging drawbar

Available tyres

tyre size	
front	rear
7.50 - 16 6 ply 7.50 - 18 6 ply	9.5 - 36 6 ply 12.4 - 36 6 ply 12.4 - 38 6 ply 13.6 - 36 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	948	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 — 1486 mm at front
1520 mm at rear

Weights

		without driver	with driver
Without ballast:	front	950 kg	955 kg
	rear	1695 kg	1765 kg
	total	2645 kg	2720 kg
Front ballast:	12 weights, total		480 kg
Rear ballast:	3 weights per wheel, total		290 kg
	water in the tyres		510 kg
With ballast:	front	1545 kg	1550 kg
	rear	2380 kg	2450 kg
	total	3925 kg	4000 kg

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Fuels and lubricants used in tests

Fuel:	ARAL Diesel-fuel DIN 51601	
	specific gravity at 15°C	
	at engine test and at p.t.o. test	0,835 kg/l
	at drawbar test	0,838 kg/l
Engine oil:	SHELL ROTELLA	SAE 20W/20
Gear 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: 15th and 16th November 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						
43.9	2130	609	12.36	10.32	235	3.55
At standard p.t.o. speed						
41.7	1890	540	11.53	9.63	231	3.62
At the speed recommended for drawbar work						
43.9	2130	609	12.36	10.32	235	3.55
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						
38.0	2169	620	10.76	8.98	237	3.53
(ii) unloaded						
-	2255	644	3.01	2.51	-	-
(iii) 50% of the load defined in (i)						
19.4	2215	633	6.61	5.52	285	2.93
(iv) maximum power						
43.9	2130	609	12.36	10.32	235	3.55
(v) 25% of the load defined in (i)						
9.8	2236	639	4.77	3.98	408	2.05
(vi) 75% of the load defined in (i)						
28.8	2196	627	8.64	7.21	250	3.34

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D 1057-S

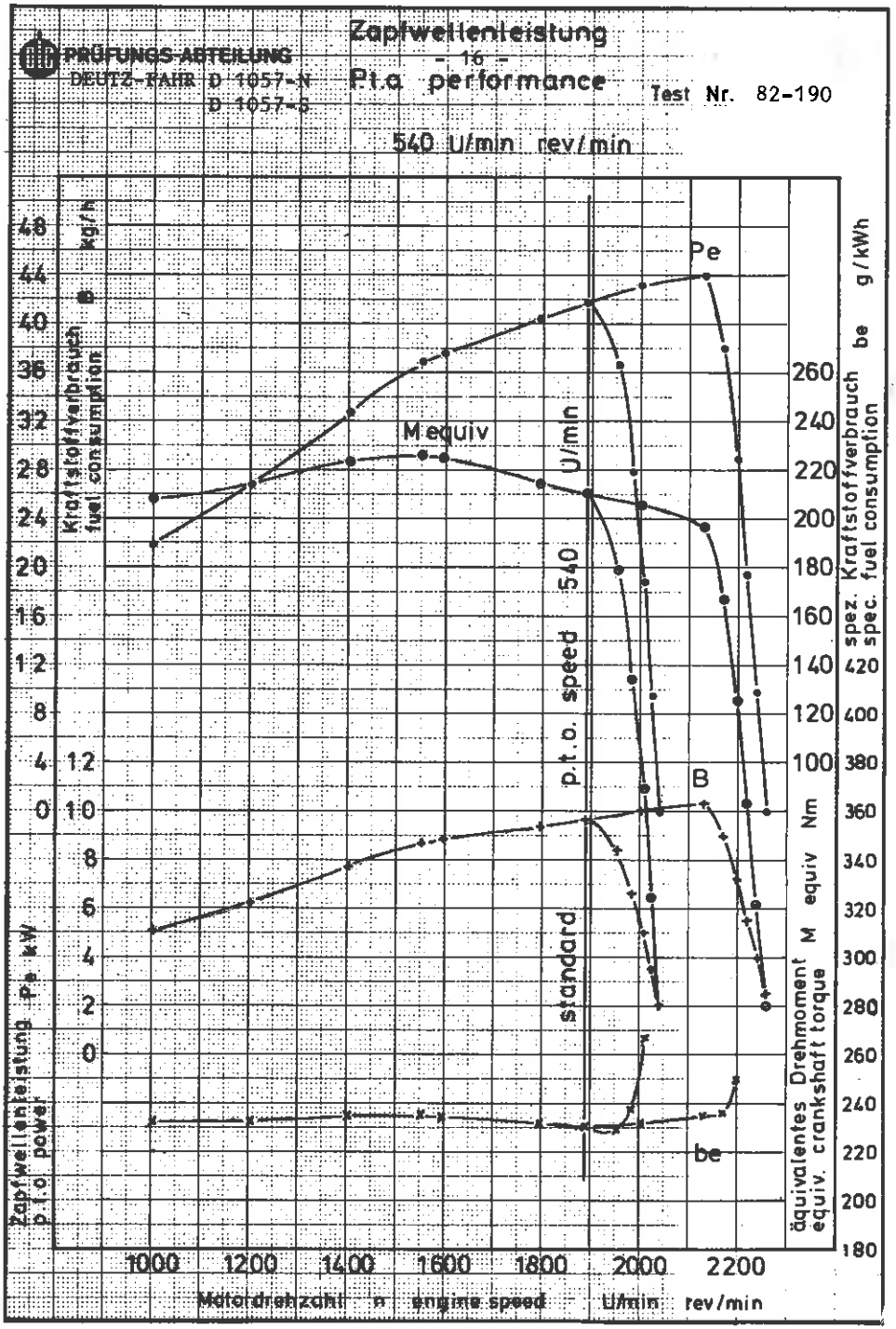
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Power kW	Speed engine rev/min	Speed p.t.o. rev/min	Fuel consumption hourly l/h	Fuel consumption hourly kg/h	Fuel consumption specific g/kWh	Specific energy kWh/l
Part loads, the governor hand lever in the position corresponding to the standard p.t.o. speed at full load (curve b)						
(i) 85% of the torque at maximum power at standard p.t.o. speed						
36.7	1954	558	10.08	8.42	230	3.64
(ii) unloaded						
-	2040	583	2.49	2.08	-	-
(iii) 50% of the load defined in (i)						
18.8	2008	574	6.03	5.03	267	3.12
(iv) maximum power						
41.7	1890	540	11.53	9.63	231	3.62
(v) 25% of the load defined in (i)						
9.5	2023	578	4.21	3.52	371	2.25
(vi) 75% of the load defined in (i)						
27.9	1982	566	7.95	6.64	238	3.51

Standard specific fuel consumption (g/kWh): 237/285/230/267

No load maximum engine speed: 2255 rev/min
Equivalent crankshaft torque at maximum power (2 hours): 197 Nm
Maximum equivalent crankshaft torque: 226 Nm at 1553 rev/min of the engine

Mean atmospheric conditions:	temperature	16 °C
	pressure	991 mbar
	relative humidity	56 %
Maximum temperatures:	cylinder head	101 °C
	engine oil	109 °C
	fuel	16 °C
	engine air intake	17 °C

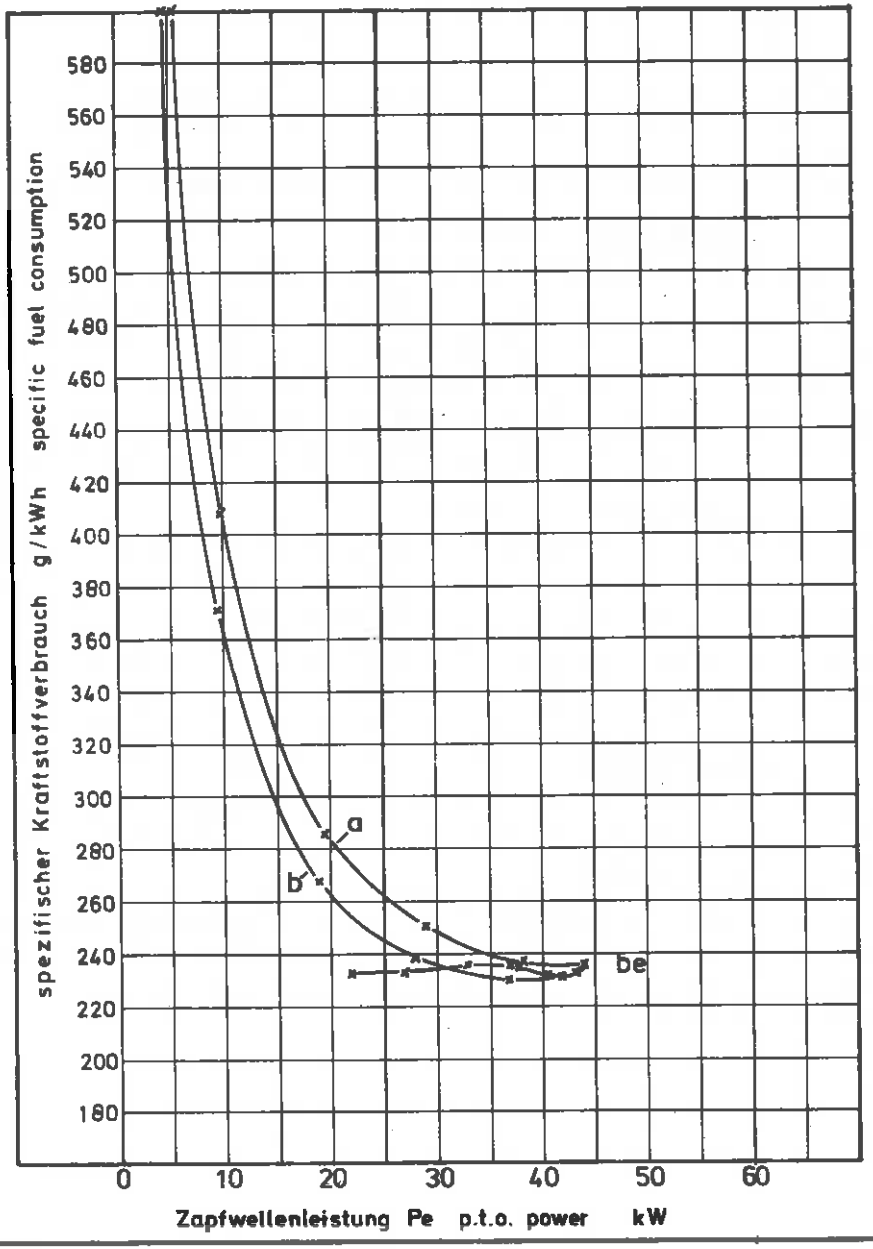

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DEUTZ-FAHR D 1057-N
D 1057-S
Zapfwellenleistung
- 16 -
P.t.o. performance
Test Nr. 82-190
540 U/min rev/min
Pe
M equiv
B
be
standard
p.t.o. speed 540 U/min
Zapfwellenleistung Pe kW
p.t.o. power
Kraftstoffverbrauch B kg/h
fuel consumption
äquivalentes Drehmoment M equiv Nm
equiv. crankshaft torque
spez. Kraftstoffverbrauch be g/kWh
spec. fuel consumption
Motordrehzahl n engine speed U/min rev/min
1000
1200
1400
1600
1800
2000
2200

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Zapfwellenleistung
- 17 -
P.t.o. performance

Test Nr. 82-190

540 U/min rev/min



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(2) DRAWBAR PERFORMANCE

Date of tests: 22nd till 30th November 1982
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 600 mm					
1 L	2,14	15,5	2610	2222	15,0
2 L	3,40	24,5	2594	2220	15,0
3 L	4,81	33,8	2528	2128	13,9
1 H	6,01	36,2	2169	2130	10,1
4 L	8,18	36,7	1613	2133	7,1
2 H	10,03	37,6	1348	2131	5,5
3 H	14,76	36,2	882	2132	3,3
(ii) MAXIMUM POWER (ballasted) height of drawbar above ground 700 mm					
1 L	2,11	21,5	3671	2193	15,0
2 L	3,31	32,4	3526	2134	13,4
3 L	5,13	36,2	2538	2128	7,7
1 H	6,22	37,4	2167	2126	6,3
4 L	8,34	36,5	1575	2128	4,5
2 H	10,17	36,6	1297	2128	3,6
(iii) FIVE-HOUR-TEST at 75% of pull at maximum power in 1st H-gear					
1 H	6,50	29,3	1625	2183	4,7
(iv) FIVE-HOUR-TEST at pull corresponding to 15% wheel slip in test (ii)					
1 L	2,12	21,6	3671	2188	-

Total oil consumption during ten hours duration of tests (iii) and (iv) 96 g/h

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Tyre size front: 7.50 - 18 6 ply
rear: 16.9 R 30 6 ply

Tread bar height at the beginning of drawbar tests

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 at rear 0,8 bar							
383	2,19	15	50	79	10	80	1001
316	2,65	14	65	80	9	82	1001
304	2,76	15	65	81	10	81	1001
283	2,96	15	67	81	10	79	1002
280	3,00	17	59	86	11	79	1002
274	3,06	16	63	85	11	88	1002
284	2,95	16	65	86	11	82	1002
tyre inflation pressure at rear 0,8 bar							
331	2,53	16	55	80	13	71	993
315	2,66	16	57	81	13	74	993
283	2,96	16	52	82	13	75	993
274	3,06	17	57	84	13	74	993
285	2,94	16	58	82	11	75	993
284	2,95	15	57	83	10	74	993
279	3,00	11	50	86	3	96	1013
-	-	12	68	90	6	92	1008

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

(3) TURNING SPACE AND TURNING CIRCLE

Wheel equipment front: 7.50 - 18 6 ply
rear: 16.9 R 30 6 ply

Track of wheels front: 1486 mm
rear: 1520 mm

	With brakes		Without brakes	
	left-hand m	right-hand m	left-hand m	right-hand m
Radius of turning space	3,58	3,47	4,08	3,91
Radius of turning circle	3,39	3,29	3,89	3,73

(4) LOCATION OF CENTRE OF GRAVITY

Height above ground	843 mm
Distance forward from rear axle centre	746 mm
Distance from tractor's median plane, to the left	3 mm

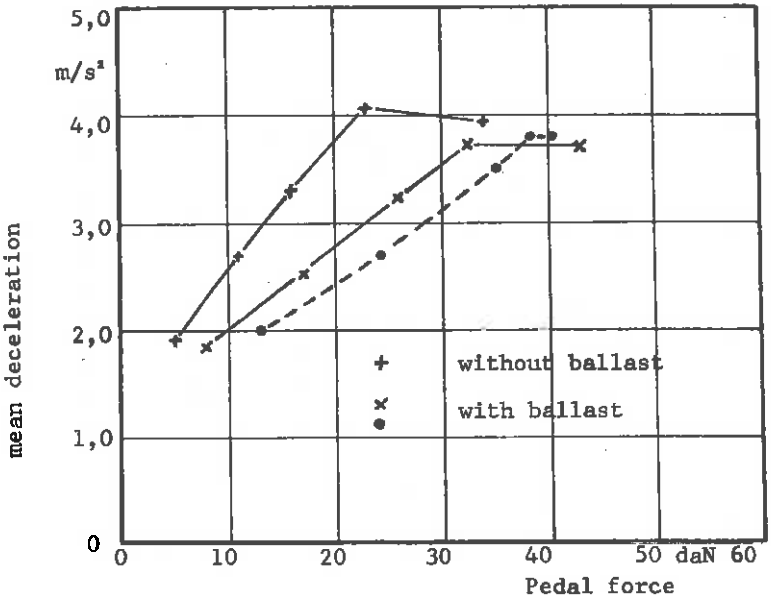
(5) Braking

Date of tests: 23rd and 24th November 1982

Tractor masses during tests with driver:	front kg	rear kg	total kg
without ballast	955	1765	2720
with ballast	1550	2450	4000

A) Service brake

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



Speed before application of brakes, without ballast 25,7 km/h
with ballast 25,4 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 2720 kg	
	up	down	up	down
Braking device control force daN	18	23	17	21

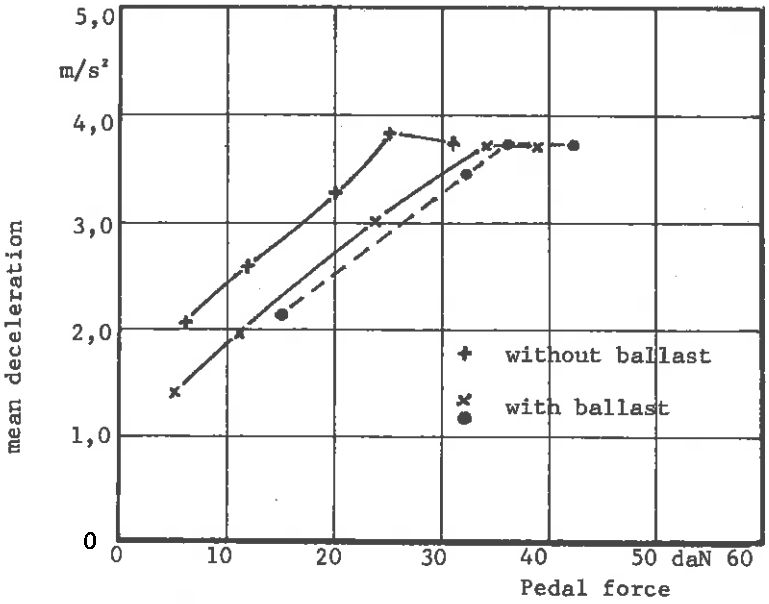
(5) Braking

Date of tests: 23rd and 24th November 1982

Tractor masses during tests with driver:	front kg	rear kg	total kg
without ballast	955	1765	2720
with ballast	1550	2450	4000

A) Service brake

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



Speed before application of brakes, without ballast 30,8 km/h
with ballast 30,4 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 2720 kg	
	up	down	up	down
Braking device control force daN	18	23	17	21

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(6) MEASUREMENT OF EXTERNAL NOISE LEVEL

Date of test: 23rd November 1982
Type of track: Concrete
Type of sound level meter: BRÜEL AND KJAER model 2209

Results of test	D 1057-N	D 1057-S
Gear:	4th H	5th
Travelling speed before acceleration:	19,3 km/h	23,1 km/h
Sound level:	87,0 dB(A)	87,0 dB(A)

(7) NOISE MEASUREMENT AT THE DRIVER'S EAR

Date of tests: 23rd November 1982
Type of track: Concrete
Type of sound level meter: BRÜEL AND KJAER model 2209
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	2601	2,41	2,12	94,5
2 L	2599	3,83	3,36	95,0
3 L	2491	5,60	4,82	97,0
1 H +)	2147	6,70	6,02	94,5
1 H +)	light load	6,70	7,17	91,0
4 L	1615	8,81	8,16	94,0
2 H	1338	10,65	10,00	94,0
3 H	888	15,56	14,73	95,0
4 H	light load	24,49	25,72	92,0
5 *)	light load	29,20	30,80	92,5

+) The 1st H-gear corresponds to the travelling speed nearest to 7,5 km/h

*) Only at variant D 1057-S

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(8) POWER LIFT AND HYDRAULIC PUMP PERFORMANCE

Date of tests: 18th November 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	335	535	2362	161	-	-
On the frame	335	646	1752	161	2808	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	-236	-200	-195	-100	0	+100	+200	+300	+340	+400	+410
Lifting forces at hitch points											
daN			2535	2578	2535	2470	2405	2362	2362		
Lifting forces at test frame											
daN	2314	2314		2249	2162	2055	1925	1817		1752	1752

Hydraulic Pump Performance

Opening pressure of the relief valve in remote circuit	153 bar
Sustained pressure with relief valve open	179 bar
Pump delivery rate at minimum pressure, the governor control lever being set for max. power	39,8 l/min
Hydraulic power at 90% of relief valve setting	8,5 kW
Corresponding delivery rate	31,8 l/min
Pressure	161 bar
Temperature of hydraulic fluid	65 °C

Tapping point used for test: at rear of tractor

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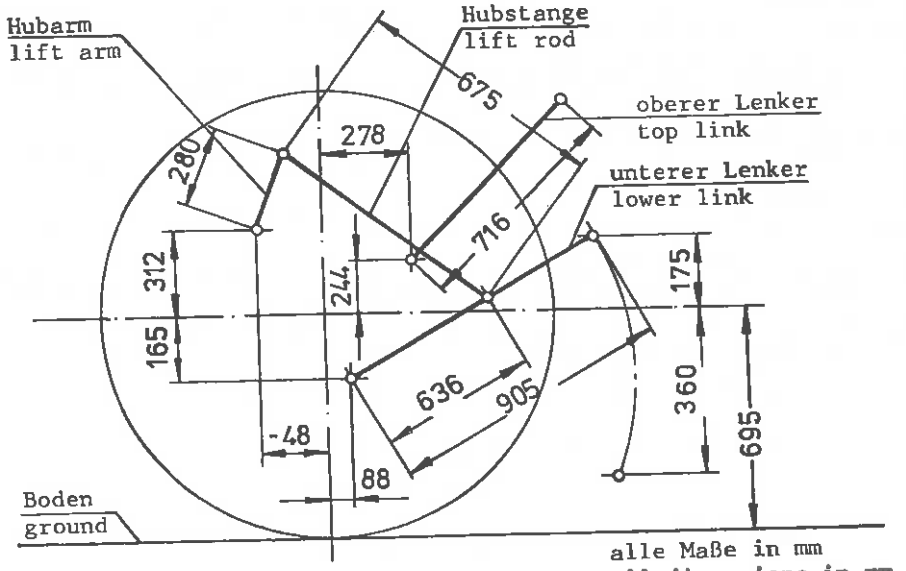
LINKAGE GEOMETRY when connected to the standard frame

Projected length in side view:

Lower links	905 mm
Lift arms	280 mm
Lift rods	675 mm
Top link	716 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	175 mm above,	360 mm below
Height of lower link hitch points when locked in transport position	175 mm above or	130 mm below



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OPTIONAL TESTS

(9) ENGINE PERFORMANCE

Date of tests: 10th and 11th November 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					
46.6	2130	12.40	10.35	222	3.76
At standard p.t.o. speed (540 rev/min)					
43.8	1890	11.59	9.68	221	3.78
At rated engine speed					
46.6	2130	12.40	10.35	222	3.76
Part loads					
(i) 85% of the torque at maximum power at 2-hour test					
40.3	2166	10.77	8.99	223	3.75
(ii) unloaded					
-	2252	2.74	2.29	-	-
(iii) 50% of the torque defined in (i)					
20.7	2216	6.49	5.42	262	3.19
(iv) maximum power					
46.6	2130	12.40	10.35	222	3.76
(v) 25% of the torque defined in (i)					
10.3	2233	4.52	3.77	366	2.28
(vi) 75% of the torque defined in (i)					
30.6	2193	8.54	7.13	233	3.59

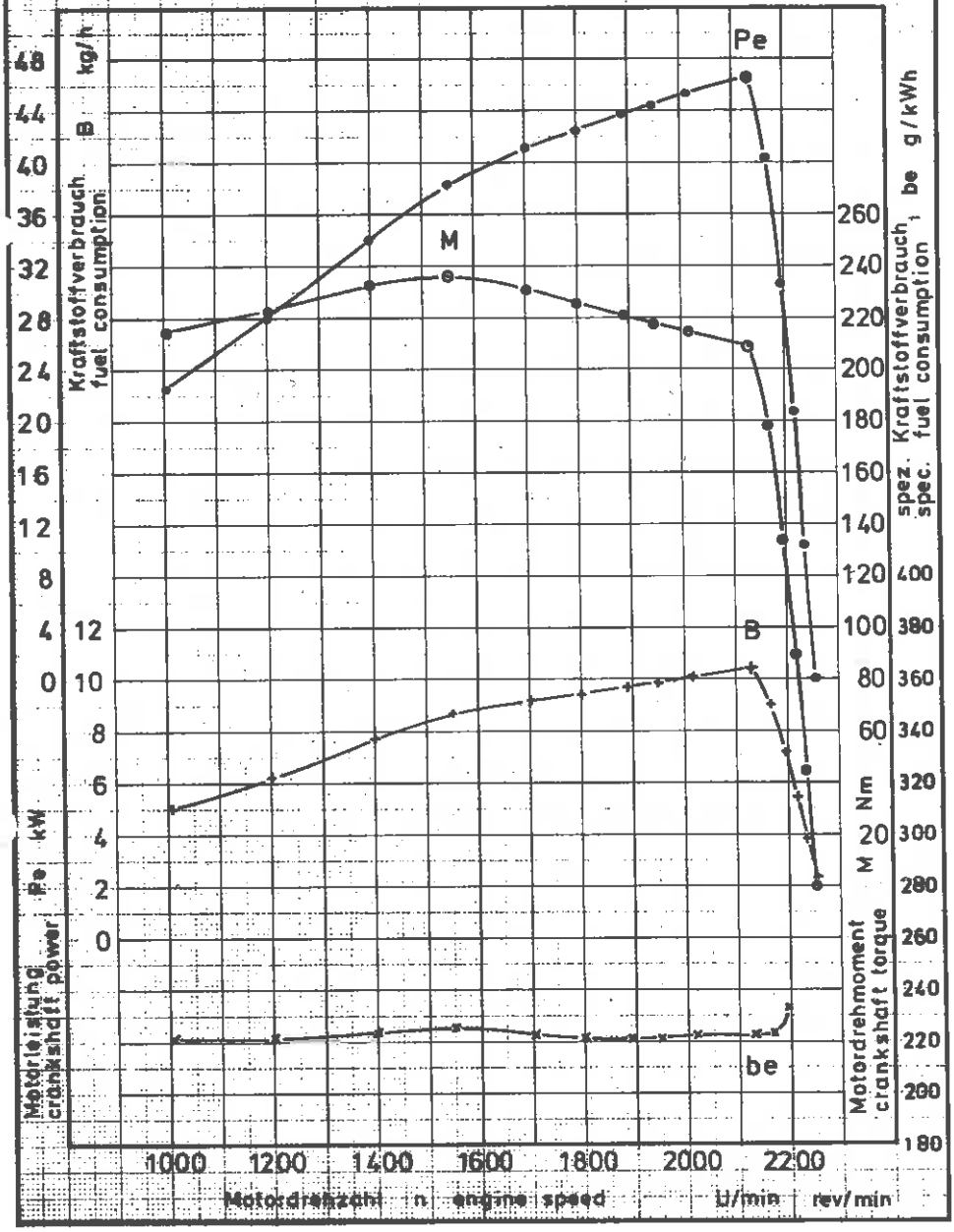
Optimum fuel consumption: 213 g/kWh at 27,3 kW and 1385 rev/min
No load maximum engine speed: 2252 rev/min
Torque at maximum power (2 hours): 209 Nm
Maximum torque: 236 Nm at 1550 rev/min of the engine

Mean atmospheric conditions:	temperature	18 °C
	pressure	1003 mbar
	relative humidity	65 %
Maximum temperatures:	cylinder head	80 °C
	engine oil	100 °C
	fuel	19 °C
	engine air intake	19 °C

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Motorleistung
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Engine performance

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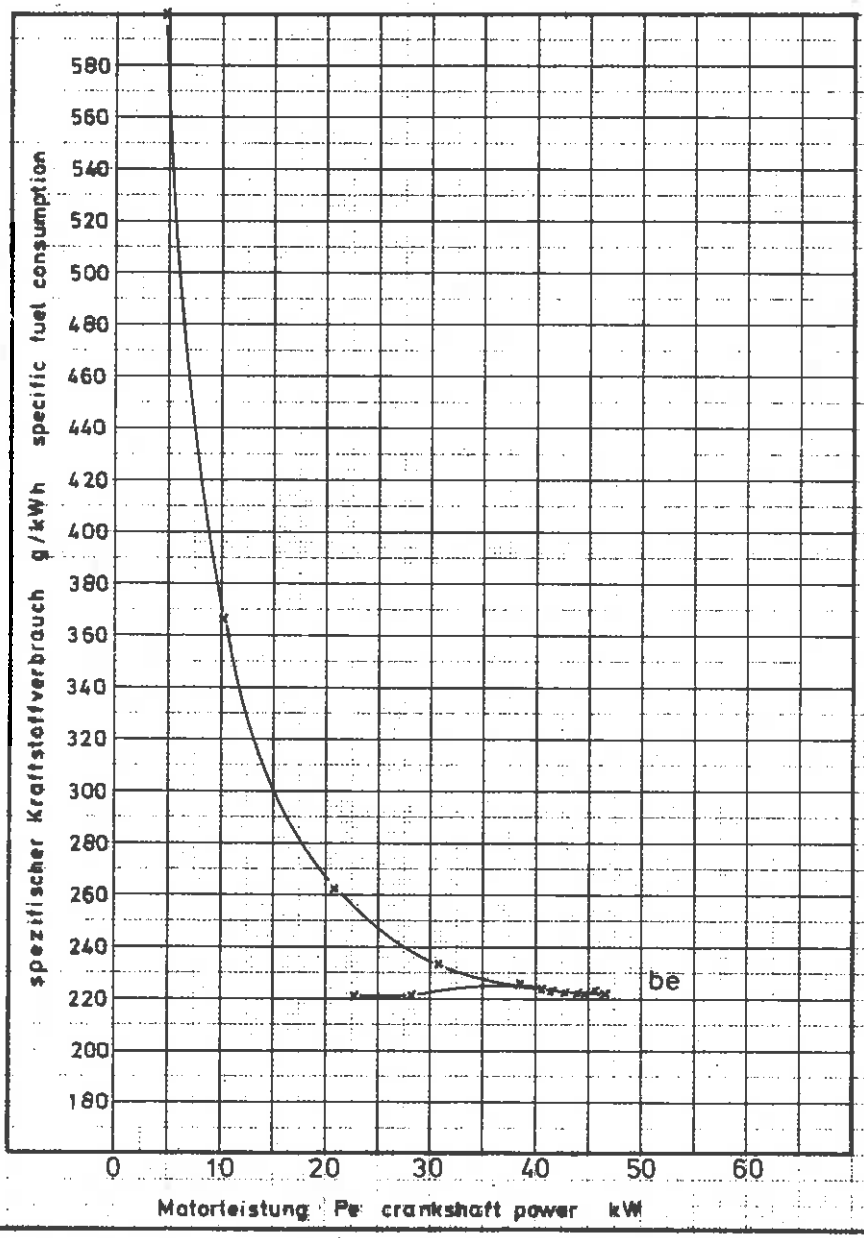
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Motorleistung

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Engine performance

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Motorleistung

Engine performance

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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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