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

O.E.C.D. No. 678



Agricultural Tractor FENDT FARMER 204 P

Manufacturer
X. Fendt & Co., Maschinen- und Schlepperfabrik, D-8952 Marktoberdorf

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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: July 1979 till February 1980

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.N.E.E.M.A., France) as being in accordance with the O.E.C.D STANDARD CODE.

Date of Approval: 22nd July 1980 O.E.C.D. No. 678

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
FENDT FARMER 204 P

Test No. 79-16

Tractor manufacturer:	X. FENDT UND CO. D-8952 Marktoberdorf
Submitted for test by:	Manufacturer
Selected by:	Manufacturer with agreement by DLG
Place of running-in:	Marktoberdorf and Groß-Umstadt
Duration of running-in:	Engine and tractor appr. 80 hours

SPECIFICATION OF TRACTOR

Tractor

Make:	X. FENDT UND CO.
Model:	FARMER 204 P
Type:	wheel tractor, unit construction, rear wheel driven
Serial No.:	166/03/0004

Engine

Make:	KLÖCKNER-HUMBOLDT-DEUTZ AG
Model:	F4L 912
Type:	4-stroke Diesel-engine with direct injection, air cooled
Serial No.:	593 00 48
Cylinders:	4 in line, bore 100 mm, stroke 120 mm, displacement 3770 cm^3, compression ratio 17; replaceable ribbed cylinders
Valves:	Overhead
Fuel system:	PIERBURG fuel feed pump PE 15509; BOSCH in line injection pump: PES 4A 80D 410/3 RS 1183; manufacturer's production setting 52 mm^3/stroke at rated engine speed; injection timing 28° before TDC; BOSCH multihole injection nozzles DLLA 149 S 774, injection pressure 175 bar; BOSCH fuel filter with replaceable cartridge; capacity of fuel tank 64 l
Governor:	BOSCH centrifugal variable speed type governor: EP/RSV 325-1150 A8B 657 DL; governed range of engine speed 700 to 2310 rev/min; rated engine speed 2150 rev/min

Air cleaner:	MANN dry paper element filter with precleaner, replaceable cartridge, maintenance indicator
Exhaust silencer:	Own make multi-chamber-reflection-type silencer, 130 mm dia, 415 mm long, on the left hand side of tractor, mouth showing rearward under 45° to the left; EBERSPÄCHER silencer with mouth showing upward optionally available
Lubrication system:	Forced feed from gear type pump; strainer in sump; MANN oilfilter in full flow with by-pass valve and replaceable cartridge; oil capacity 9,3 l; cartridge and oil change interval 200 hours; recommended oil quality: MIL-L-46152 or MIL-L-2104C; recommended oil viscosities: below -5°C SAE 10W -10°C to +10°C SAE 20W/20 above +5°C SAE 30
Cooling system:	Air cooling with axial blower, V-belt driven
Starting system:	Electrical BOSCH screw-push starter motor: 0 001 359 073 3 kW; flame plug in intake pipe
Electrical equipment:	12 Volt, negative earth BOSCH 3-phase alternator 14V 33A; 1 lead acid battery 88 Ah at 20 hours rating

Transmission

Clutch:	FICHTEL UND SACHS AG dry dual disc clutch DUT 280 L-295/280; gearbox drive pedal oparated, 295 mm dia, p.t.o. drive hand lever operated, 280 mm dia

Gear box:	Own make synchronized speed change gear with 3 forward speeds and 1 reverse speed; sliding gear shifted group gear with 2 groups A and S; collar shifted fine stepped group gear with 2 groups FL and FS; 1 high speed gear independent from 1st group gear, synchronized; totally 14 forward and 4 reverse speeds
Rear axle and final drives:	Bevel gear drive with crown wheel and pinion; bevel gear type differential with lock, pedal operated, self disengaging; spur gear final drives
Oil capacity:	Gear box and rear axle drive 28 l final drives each 3 l
Recommended oils:	Gearbox and rear axle drive: multipurpose transmission oil SAE 80 MIL-L-2105 final drives: hypoid transmission oil SAE 90 MIL-L-2105B
Oil changing interval:	1000 hours or once a year

Total ratios and speeds see page 7

Power take-off

Independent p.t.o.
driven through the hand lever operated disc of the dual disc clutch;
at rear of tractor, in tractor's median plane, 598 mm above ground, 356 mm behind rear axle centre line;
35 mm dia, 6 splines DIN 9611 or ISO 500 type 1;
2 speeds are preselectable:

540 rev/min	p.t.o.
567 rev/min	at rated engine speed
540 rev/min	at 2044 rev/min engine speed

1000 rev/min	p.t.o.
1011 rev/min	at rated engine speed
1000 rev/min	at 2126 rev/min engine speed

PRÜFUNGS-ABTEILUNG
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Total ratios and speeds

Group	Fine stepped group	Gear	Total ratio engine : driving wheel	Nominal travelling speed *) at rated engine speed km/h
Forward speeds				
A	FL	1	437,79	1,18
		2	264,79	1,96
		3	150,93	3,44
	FS	1	357,37	1,45
		2	216,15	2,40
		3	123,21	4,21
S	FL	1	105,92	4,90
		2	64,06	8,10
		3	36,52	14,21
	FS	1	86,48	6,00
		2	52,29	9,92
		3	29,81	17,40
A or S	FL	high speed	19,77	26,24
	FS		16,14	32,15
Reverse speeds				
A	FL	R	254,20	2,04
	FS	R	207,51	2,50
S	FL	R	61,50	8,43
	FS	R	50,20	10,33

*) calculated with the Radius Index 640 mm as per WdK 154

P.T.O.:	P.t.o. speeds may be set by aid of tractormeter; direction of rotation clockwise, viewed from tractor rear
Power lift	Own make hydraulic power lift in unit construction with separate oil tank; BOSCH tandem gear pump, directly driven by engine, delivery 14 cm³/rev; BOSCH control valve for lifting, lowering, draft control and position control, both steplessly mixable; top link sensing; 1 single acting cylinder with 86 mm bore and 138 mm stroke, without overpressure relief valve; with lowering throttle; up to 7 single or double acting additional control valves with oil tappings available; hydraulic oil tank with 12 l capacity, 7,5 l may be taken off if tractor is working driving and 10 l if tractor is working stationary; recommended oil: engine oil SAE 20W/20 MIL-L-46152 or MIL-L-2104 C; oil changing interval 1000 hours
Implement linkage:	Three-point linkage category II ; lift rods adjustable from 539 to 625 mm; lifting range above ground with short lift rods from 286 to 924 mm long lift rods from 89 to 795 mm

Holed bar: Short bar, fitted on clevis of lower links;
length between the joint balls 686 mm;
thickness 30 mm, width 80 mm;
centre hole and 3 holes in 80 mm distance each on either side;
all holes 33 mm dia;
height above ground adjustable by power lift in the range from 104 to 939 mm, measured at the surface of the bar;
distance of holes centre line with lower links in horizontal position:

from rear axle centre	878 mm
from p.t.o. shaft end	522 mm

Pull attachment

Trailer hitch: Own make
height above ground adjustable by turning and shifting in 11 steps
from 430 to 900 mm;
hitch hole 33 mm dia;
distance of hitch hole centre to rear axle centre 473 mm;
permissible vertical load 1000 kg

Towing hitch: 625 mm above ground, at the front of tractor

Steering: Own make and
ZAHNRADFABRIK FRIEDRICHSHAFEN
hydrostatic steering with oil supply by the power lift system;
BOSCH tandem gear pump with
8 cm^3/rev delivery,
drectly driven by engine;
1 double acting ram with 45 mm bore and 132 mm stroke,
directly acting on front axle

Brakes

Parking brake:	Band brake, acting on 2 brake drums with 205 mm dia on the differential half shafts, operated by hand lever with ratchet
Service brake:	Own make internal-expanding-shoe brake, mechanically acting on 2 brake drums with 180 mm dia on the differential half shafts; pedal operated
Steering brake:	Divided pedal of service brake, for normal use locked together

Wheels

Steered wheels:	2 pneumatics in front 7,50-16 6 ply; maximum permissible load on each tyre 745 kg at 2,25 bar inflation pressure and 30 km/h; track width adjustable from 1120 to 1480 mm in steps of 120 mm each by extending telescopic half axles; rims 5,50F x 16
Driving wheels:	2 pneumatics at rear 14,9 R 28 6 ply, radial type tyre casing; maximum permissible load on each tyre 1610 kg at 1,4 bar inflation pressure and 30 km/h; track width 1356 or 1496 mm, adjustable by turning wheels; offset lug type rims optionally available; *) rims W12 x 28
Wheel base:	2165 mm

Number of grease points 20

*) when using lug type rims, track widths are adjustable by turning wheels and offset lug type rims from 1142 mm to 1542 mm

Overturning protection frame: Own make
2-poster, tiltable

Seat: GRAMMER
DS 44/7
upholstered seat with back rest;
adjustable spring with shock absorber;
height of driver's platform above ground 645 mm;
height of unloaded seat above platform adjustable from 530 to 555 mm with simultaneous for and aft adjustment of 150 mm

Lighting equipment: Electrical 12 Volt
as per German legislation

	Dimensions mm	Height above ground to centre mm	Distance from outside edge of tractor to centre mm
Head lights	135 x 115	800	703
Side lights	90 x 30	1233	325
Rear lights	90 x 30	1233	325
Reflectors			
1st pair	90 x 40	1188	325
2nd pair	70 ø	515	475

Dimensions

Total length:	3620 mm	without ballast
	3710 mm	with ballast
Total width:	1720 mm	without ballast
	2330 mm	with ballast
Total height:	2260 mm	to top of overturning protection frame
Ground clearance:	370 mm	below engine

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Track setting during tests

front axle 1240 mm
rear axle 1356 mm

Weights — Ready for use as tested

		without driver	with driver
Without ballast:	front	845 kg	860 kg
	rear	1490 kg	1565 kg
	total	2335 kg	2425 kg
Front ballast:	6 front weights	35 kg each	210 kg
Rear ballast:	8 weights per wheel	64 kg each	1024 kg
	water in the tyres		356 kg
With ballast:	front	1080 kg	1095 kg
	rear	2845 kg	2920 kg
	total	3925 kg	4015 kg

Permissible total weights and axle loads for all available wheel equipment (all tyres 6 ply)

Wheel equipment front	Wheel equipment rear	Permissible axle load front kg	Permissible axle load rear kg	Permissible total weight kg
7,50-16 or 7,5L-15	14,9-28	1350	3000	4000
	9,5-36		2260	3610
	13,6-28		2860	4000
	12,4-32		2710	4000
7,50-16	12,4-28	1490	2550	4000
7,5L-15	14,9-24	1440	3000	4000
	12,4-28		2550	3990

FUELS AND LUBRICANTS USED IN TESTS

Fuel:	ARAL Diesel fuel DIN 51601	
	specific gravity at 15°C	
	at engine tests	0,831 kg/l
	at p.t.o. tests	0,840 kg/l
	at drawbar tests	0,824 kg/l
Engine:	MOBIL engine oil MOTREX 8920 SAE 20W/20	
Transmission:	MOBIL multipurpose transmission oil GX 80 SAE 80	
Final drives:	MOBIL hypoid transmission oil GX 90 SAE 90	
Hydraulic system and steering:	MOBIL engine oil MOTREX 8920 SAE 20W/20	

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COMPULSORY TESTS

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

Date of tests: 16th and 17th July 1979
Type of dynamometer: SCHENCK hydraulic dynamometer U1-40

Power kW	Speed engine rev/min	Speed p.t.o. rev/min	Fuel consumption total l/h	Fuel consumption total kg/h	Fuel consumption specific g/kWh	Specific energy kWh/l
Maximum power						
At 2-hour test						
46.3	2150	567	13.40	11.25	243	3.46
At standard p.t.o. speed						
45.6	2044	540	13.08	10.99	241	3.49
At the speed recommended for drawbar work						
46.3	2150	567	13.40	11.25	243	3.46
Part loads, the governor hand lever in the position corresponding to the maximum power at full load						
(i) 85% of the torque at maximum power at 2-hour test						
40.1	2190	578	11.47	9.64	240	3.50
(ii) unloaded						
-	2314	611	3.14	2.64	-	-
(iii) 50% of the load defined in (i)						
20.7	2264	598	7.19	6.04	291	2.89
(iv) maximum power						
46.3	2150	567	13.40	11.25	243	3.46
(v) 25% of the load defined in (i)						
10.5	2285	603	5.12	4.30	411	2.05
(vi) 75% of the load defined in (i)						
30.7	2236	590	9.29	7.80	254	3.31

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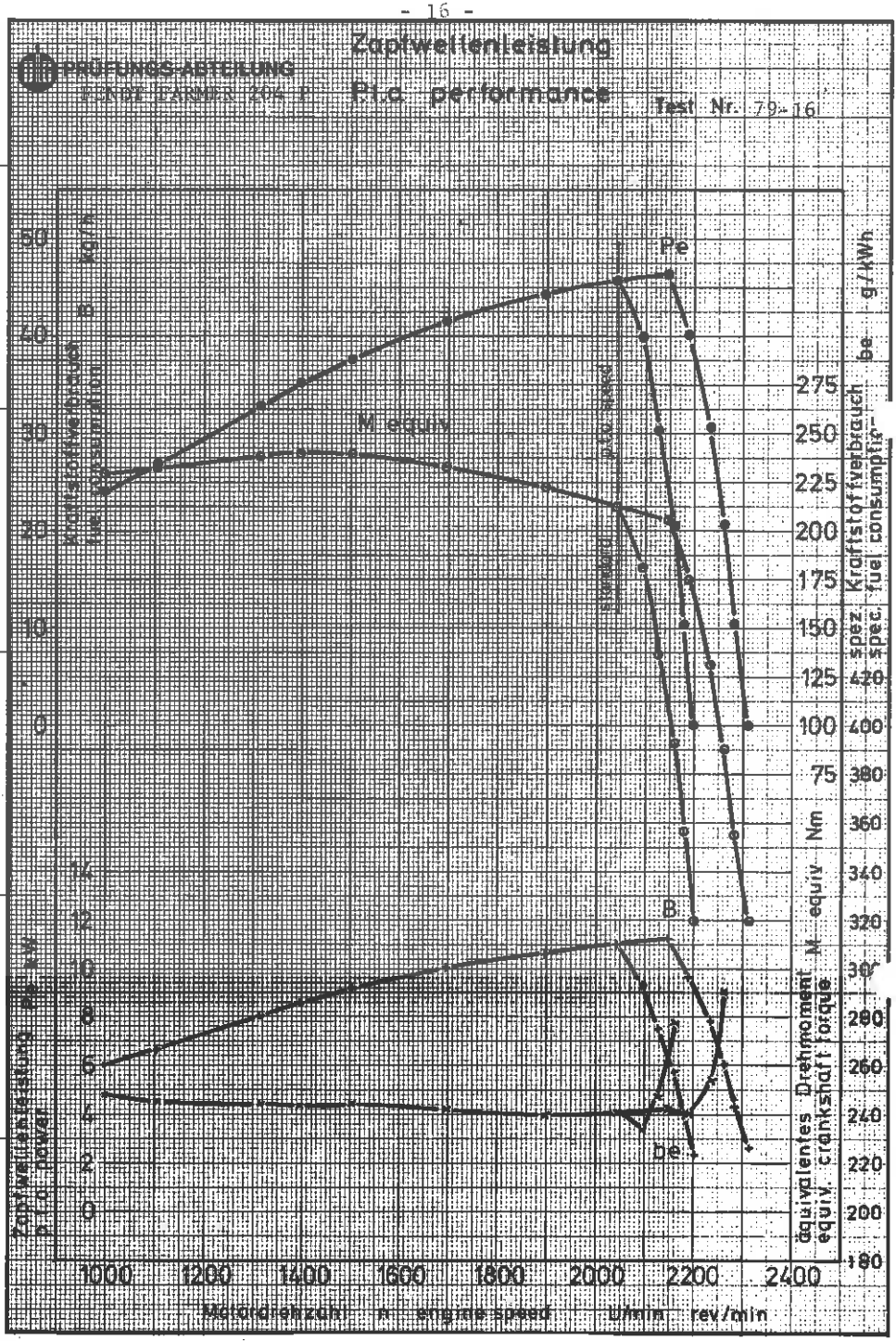
Test No. 79-16

Power kW	Speed engine rev/min	Speed p.t.o. rev/min	Fuel consumption total l/h	Fuel consumption total 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						
(i) 85% of the torque at maximum power at standard p.t.o. speed						
39.8	2097	553	11.07	9.30	234	3.60
(ii) unloaded						
-	2203	582	2.78	2.34	-	-
(iii) 50% of the load defined in (i)						
20.5	2162	571	6.78	5.70	278	3.03
(iv) maximum power						
45.6	2044	540	13.08	10.99	241	3.49
(v) 25% of the load defined in (i)						
10.4	2181	576	4.79	4.03	388	2.16
(vi) 75% of the load defined in (i)						
30.3	2129	562	8.94	7.51	248	3.39

Standard specific fuel consumption (g/kWh): 240/291/234/278

No load maximum engine speed: 2314 rev/min
Equivalent crankshaft torque at maximum power (2 hours): 206 Nm
Maximum equivalent crankshaft torque: 240 Nm at 1397 rev/min of the engine

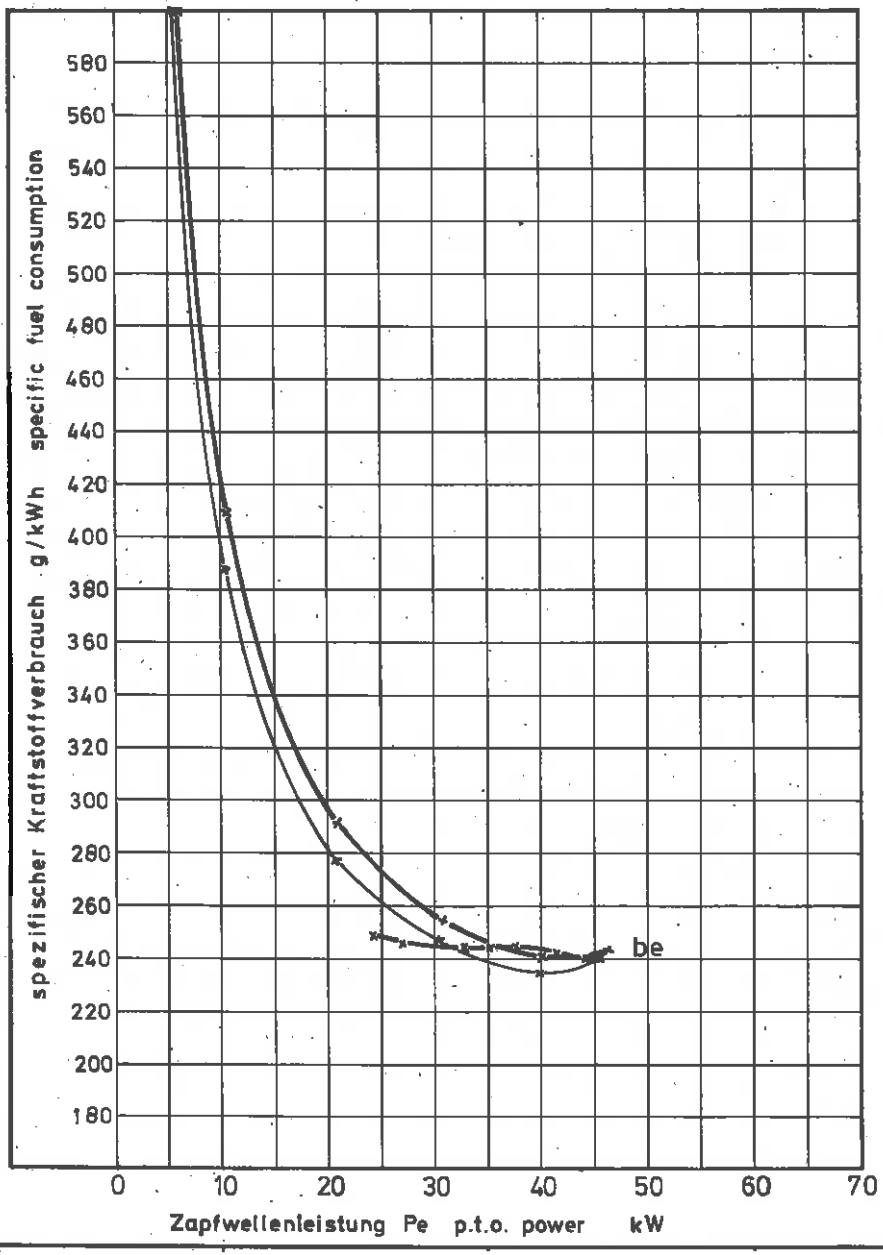
Mean atmospheric conditions:	temperature	25 °C
	pressure	1002 mbar
	relative humidity	71 %
Maximum temperatures:	coolant	-
	engine oil	105 °C
	fuel	26 °C
	engine air intake	27 °C


Zapfwellenleistung
PRÜFUNGS-ABTEILUNG
P.t.o. performance
Test Nr. 79-16
Pe
M equiv
B
be
Zapfwellenleistung P.t.o. power
Pe kW
Nutzmomentenbeiwert Useful torque coefficient
kg/h
Kraftstoffverbrauch fuel consumption
spez. spec.
be g/kWh
äquivalentes Drehmoment M equiv. equiv. crankshaft torque
Nm
Motordrehzahl n engine speed
U/min rev/min
1000
1200
1400
1600
1800
2000
2200
2400

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Zapfwellenleistung
P.t.o. performance

Test Nr. 79-16



PRÜFUNGS-ABTEILUNG
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(2) DRAWBAR PERFORMANCE

Date of tests: 11th to 15th February 1980
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 with ballast height of drawbar above ground 520 mm					
1FL A	1,05	10,3	3518	2267	15,0
1FS A	1,29	12,5	3497	2267	15,0
2FL A	1,73	16,8	3492	2260	15,0
2FS A	2,11	20,5	3501	2246	15,0
3FL A	2,95	28,8	3511	2199	14,9
3FS A	3,56	34,6	3499	2178	15,1
1FL S	4,20	37,4	3201	2150	12,8
1FS S	5,35	39,2	2637	2154	9,7
2FL S	7,42	40,5	1964	2152	6,7
2FS S	9,24	40,1	1562	2151	5,0
3FL S	13,47	37,9	1013	2152	3,1
(ii) FIVE-HOUR-TEST at 75% of pull at maximum power in 2nd FL S gear					
2FL S	7,73	31,6	1473	2194	4,7
(iii) FIVE-HOUR-TEST at pull corresponding to 15% wheel slip in test (i)					
3FS A	3,39	33,1	3518	2166	-
(iv) MAXIMUM POWER without ballast height of drawbar above ground 620 mm					
1FL S	4,22	26,9	2297	2218	15,1
1FS S	5,13	32,3	2266	2197	15,0
2FL S	7,07	38,8	1975	2149	11,4
2FS S	8,95	39,7	1596	2154	8,5
3FL S	13,21	40,0	1090	2150	5,5
3FS S	16,38	38,9	855	2154	4,3

Total oil consumption during ten hours duration of tests (ii) and (iii) 69 g/h

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Tyres size front: 7,50-16 6 ply
rear: 14,9 R 28 6 ply

Tread bar height at the beginning of drawbar tests 94% of the value when new

Specific energy kWh/l	Specific fuel consumpt. g/kWh	Temperatures Fuel °C	Coolant °C	Engine-oil °C	Atmospheric conditions Temperature °C	Relative humidity %	Pressure mbar
tyre inflation pressure 1,2 bar							
1,64	502	13	-	70	6	93	1005
1,85	447	13	-	73	6	92	1005
2,18	377	15	-	69	5	92	1005
2,37	347	16	-	70	5	88	1005
2,60	316	17	-	71	6	81	1005
2,68	308	13	-	74	6	92	1005
2,73	302	13	-	83	7	88	1005
2,88	287	13	-	83	7	91	1005
2,94	281	12	-	81	7	89	1005
2,92	282	12	-	81	7	91	1005
2,80	295	12	-	82	7	87	1005
2,90	284	14	-	83	10	80	1005
-	-	16	-	90	11	72	1004
tyre inflation pressure 0,8 bar							
2,59	318	15	-	81	9	87	1007
2,69	306	15	-	81	9	90	1007
2,81	293	15	-	85	10	87	1007
2,88	286	15	-	86	9	88	1007
2,91	284	14	-	85	10	89	1007
2,82	292	14	-	85	10	88	1007

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

(3) TURNING SPACE AND TURNING CIRCLE

Wheel equipment front: 7,50-16 6 ply
rear: 14,9 R 28 6 ply

Track of wheels front: 1240 mm
rear: 1356 mm

	With brakes		Without brakes	
	left-hand m	right-hand m	left-hand m	right-hand m
Radius of turning space	3,28	3,46	3,69	3,96
Radius of turning circle	3,10	3,27	3,51	3,77

(4) LOCATION OF CENTRE OF GRAVITY

Height above ground	730 mm
Distance forward from rear axle centre	769 mm
Distance from tractor's median plane, to the right	3 mm

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(5) BRAKING PERFORMANCE

A) SERVICE BRAKE

Date of tests: 12th February 1980
Type of track: Concrete
Type of decelerometer: MOTO-METER-Bremsverzögerungs- und Pedalkraftschreiber

Weight of ballasted tractor with driver 4015 kg

Cold brakes

		With ballast	Without ballast
Travelling speed	km/h	25,0	25,0
Deceleration	m/s^2	4,5	4,3
Stopping distance	m	6,0	6,2
Force on pedal	daN	38	20
Force on pedal to achieve a deceleration of 2,5 m/s^2	daN	9	7

Brake fade characteristics (hot tests)

Deceleration	hot/cold	%	100	100
Stopping distance	cold/hot	%	100	100
Force on pedal	cold/hot	%	131	125

B) PARKING BRAKE

Tractor facing up 16% slope
Pull on hand brake 31 daN, tractor does not roll

Tractor facing down 16% slope
Pull on hand brake 28 daN, tractor does not roll

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(6) AMBIENT NOISE EMITTED BY THE TRACTOR

Date of test: 11th February 1980
Type of track: Concrete
Type of sound level meter: BRÜEL AND KJAER model 2209

Results of test

Gear: high speed FS
Travelling speed before acceleration: 25,3 km/h
Sound level: 88,5 dB(A)

(7) NOISE AT THE DRIVER'S EAR LEVEL

Date of tests: 11th February 1980
Type of track: Concrete
Type of sound level meter: BRÜEL AND KJAER model 2209

The tractor wath fitted with overturning protection frame

Results of tests

Gear	Drawbar pull at which the tractor develops the maximum sound level daN	Travelling speed nominal km/h	Travelling speed effective km/h	Sound level dB(A)
1FL A	2263	1,18	1,03	94,0
1FS A	2259	1,45	1,23	93,5
2FL A	2250	1,96	1,68	94,0
2FS A	2262	2,40	2,08	94,0
3FL A	2292	3,44	2,86	94,0
3FS A	2240	4,21	3,64	95,0
1FL S	2261	4,90	4,07	94,5
1FS S	2251	6,00	4,98	95,0
2FL S *)	1989	8,10	7,04	94,0
2FS S	1598	9,92	8,92	94,5
3FL S	1083	14,21	13,26	94,5
3FS S	854	17,40	16,36	94,5
high speed FS	light load	32,15	33,7	94,0

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

PRÜFUNGS-ABTEILUNG
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(8) POWER LIFT AND HYDRAULIC PUMP PERFORMANCE

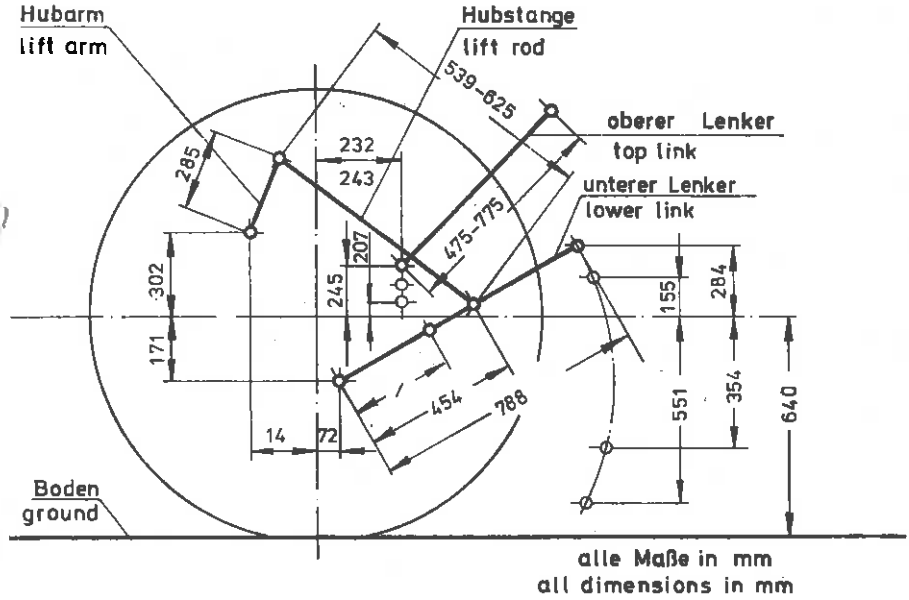
Date of tests: 12th November 1979

HYDRAULIC PUMP

(1)	Opening pressure of relief valve in remote circuit	164 bar
	Sustained pressure by open relief valve	174 bar
(2)	Pump delivery rate at minimum pressure and rated engine speed	32,7 l/min
(3)	Pump delivery rate at max. hydraulic power	32,0 l/min
	corresponding delivery pressure	164 bar
	power	8,7 kW

POWER LIFT

Dimensions of linkage geometry for the table on page 26



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LIFTING FORCES

Lifting heights relative to horizontal lower links

mm	-384	-380	-300	-207	-200	-183	-100	0

at hitch points maximum mechanical advantage

daN						1470	1620	1730

minimum mechanical advantage

daN		1330	1460		1540		1610	1640

Max. force exerted throughout the whole range 1470 daN

Front of tractor does not lift

at test frame maximum mechanical advantage

daN	1410		1520		1540		1540	1500

minimum mechanical advantage

daN				1340	1350		1450	1500

Max. force exerted throughout the whole range 1310 daN

Front of tractor does not lift, if front axle is ballasted to its max. permissible load (1490 kg)

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+100	+200	+300	+326	+376	+400	+455	+500	+600
lift rods 539 mm long								
1780	1790	1770			1820	1840		
lift rods 625 mm long								
1610	1650	1690	1700					

lift rods 625 mm long, upper top link pivot point

1440	1400	1360		1310				

lift rods 539 mm long, lower top link pivot point

1480	1430	1340			1290		1190	1140

All values of forces for pressure 164 bar at max. hydraulic power, see page 23; calculated from measurements at max. oil pressure 174 bar

LINKAGE GEOMETRY when connected to the standard frame	Maximum mechanical advantage	Minimum mechanical advantage
Projected length in side view:		
Lower links	788 mm	788 mm
Lift arms	285 mm	285 mm
Lift rods	625 mm	539 mm
Top link	636 mm	630 mm
Distance of lift rod connection point from pivot point of lower link	454 mm	454 mm
The following dimensions are given relative to rear axle centre line 640 mm above ground		
Lower link pivot point	72 mm forward, 171 mm below	72 mm forward, 171 mm below
Top link pivot point	322 mm behind, 245 mm above	243 mm behind, 207 mm above
Lift arm pivot point	14 mm forward, 302 mm above	14 mm forward, 302 mm above
Maximum and minimum height of lower link hitch points	155 mm above, 551 mm below	284 mm above, 354 mm below
Height of lower link hitch points above ground when locked in highest transport position	795 mm	924 mm

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OPTIONAL TESTS

(9) ENGINE PERFORMANCE

Date of tests: 3rd and 4th July 1979
Type of dynamometer: SCHENCK eddy-current dynamometer W 150

Power kW	Engine speed rev/min	Fuel consumption total l/h	Fuel consumption total kg/h	Fuel consumption specific g/kWh	Specific energy kWh/l
Maximum power					
At 2-hour test					
49.2	2150	13.59	11.29	230	3.62
At standard p.t.o. speed (540 rev/min)					
48.3	2045	13.40	11.14	230	3.61
At the speed recommended for drawbar work					
49.2	2150	13.59	11.29	230	3.62
Part loads					
(i) 85% of the torque at maximum power at 2-hour test					
42.5	2188	11.81	9.81	231	3.60
(ii) unloaded					
-	2308	2.88	2.39	-	-
(iii) 50% of the load defined in (i)					
21.9	2256	7.11	5.91	269	3.08
(iv) maximum power					
49.2	2150	13.59	11.29	230	3.62
(v) 25% of the load defined in (i)					
11.1	2282	4.94	4.10	370	2.25
(vi) 75% of the load defined in (i)					
32.5	2226	9.32	7.74	238	3.48

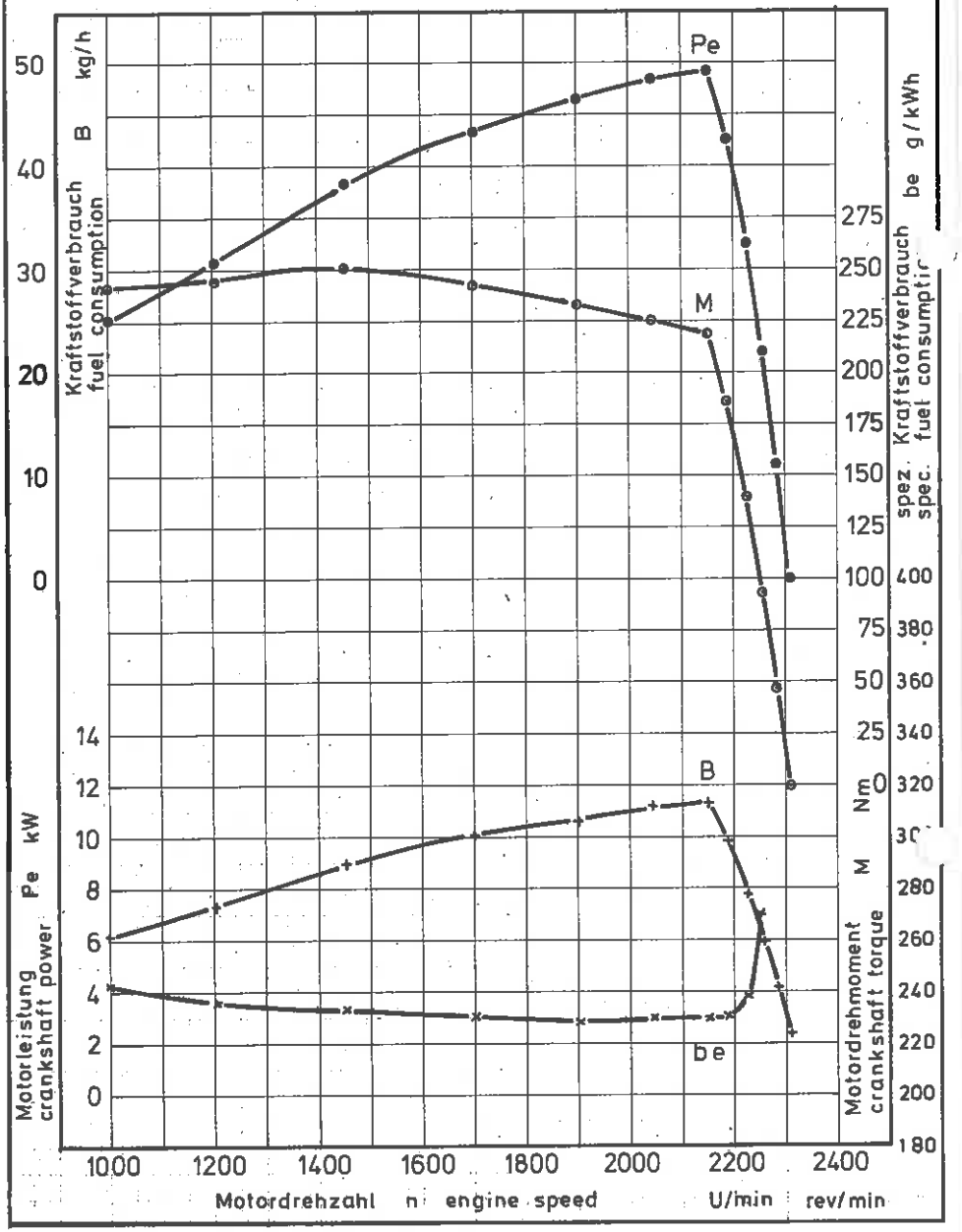
Optimum fuel consumption: 219 g/kWh at 23,4 kW and 1181 rev/min
No load maximum engine speed: 2308 rev/min
Torque at maximum power (2 hours): 218 Nm
Maximum torque: 251 Nm at 1451 rev/min of the engine

Mean atmospheric conditions:	temperature	25 °C
	pressure	1005 mbar
	relative humidity	63 %
Maximum temperatures:	coolant	-
	engine oil	97 °C
	fuel	26 °C
	engine air intake	27 °C

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Motorleistung
Engine performance

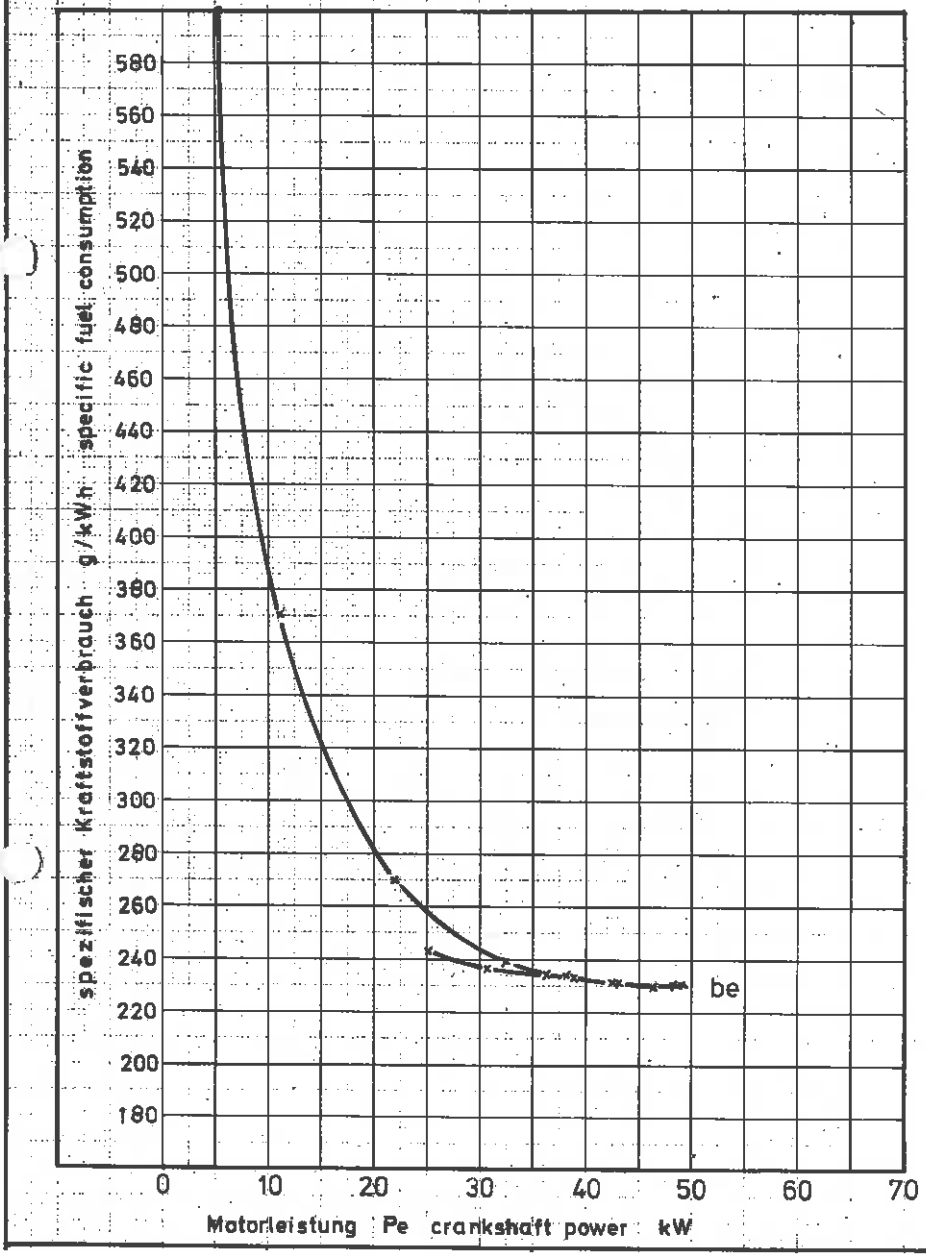
Test Nr. 79-16



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Motorleistung
Engine performance

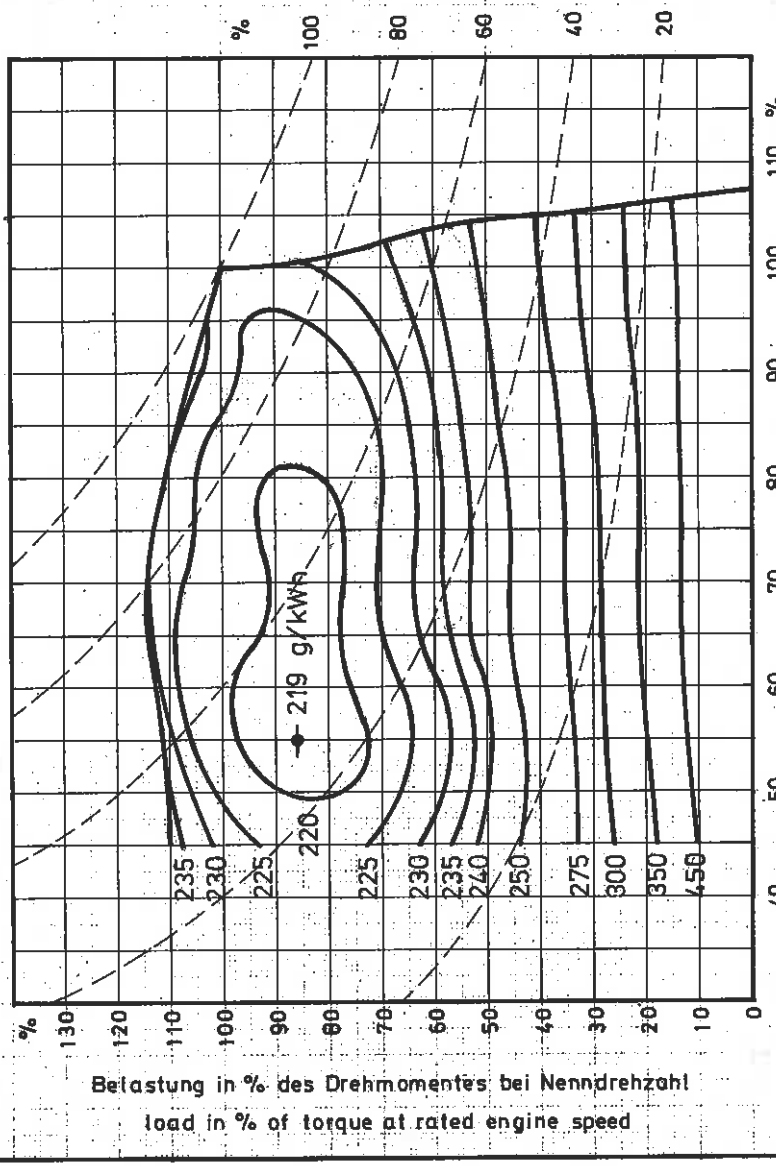
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Motorleistung
Engine performance

Test Nr. 79-16



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