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

O.E.C.D. No. **686**



Agricultural Tractor FENDT FARMER 106 ST

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: September 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: 5th September 1980 O.E.C.D. No. 686

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 106 ST

Test No. 78-248

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. 100 hours

SPECIFICATION OF TRACTOR

Tractor

Make:	X. FENDT UND CO
Model:	FARMER 106 ST
Type:	Wheel tractor, unit construction, rear wheel driven
Serial No.:	D 226.4.2. 02668

Engine

Make:	MOTORENWERKE MANNHEIM AG
Model:	D 226-4
Type:	4 stroke Diesel engine with direct injection; watercooled
Serial No.:	226.42.02668
Cylinders:	4 in line, bore 105 mm, stroke 120 mm; displacement 4156 cm^3, compression ratio 18, dry forced-in cylinder liners
Valves:	Overhead
Fuel system:	SOLEX fuel feed pump PE 20136; BOSCH in-line injection pump PES 4A 80D 320 73 RS 1301; manufacturer's production setting 59 mm^3/stroke at 2175 rev/min and full load; injection timing 26° before TDC; BOSCH multihole injection nozzles 821 DLL 150 S 393; injection pressure 180 ± 10 bar; BOSCH fuel filter with replaceable cartridge; capacity of fuel tank 93 l
Governor:	BOSCH centrifugal variable speed type governor EP/RSV 325-1500 A2B 505 DR, governed range of engine speed 650 to 2350 rev/min; rated engine speed 2175 rev/min

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Air cleaner:	MANN dry paper element filter with precleaner incorporated, with replaceable cartridge and maintenance indicator
Exhaust silencer:	Own make multi-chamber-reflection type silencer; 130 mm diameter, 415 mm long; on the left hand side of tractor; mouth showing rearward under 45° to the left; mouth centre 545 mm above ground
Lubrication system:	Forced feed from gear type pump; strainer in sump; MANN full flow filter with by-pass valve and replaceable cartridge; cartridge change at all oil changes; oil capacity 9,5 l; oil changing period 200 hours; recommended oil quality MIL-L-2104 B recommended oil viscosities: winter SAE 10W summer SAE 20W/20 tropics SAE 30
Cooling system:	Water cooling with impeller pump; pressurized system adjusted to 0,3 bar overpressure with by-pass thermostat; fan with 7 blades, 450 mm diameter; water capacity 14 l
Starting system:	Electrical BOSCH screw-push starter motor JD 12V 3kW BERU flame plug in intake pipe
Electrical equipment:	12 Volt, negative earth; BOSCH 3-phase alternator G1-14V 33A 1 lead acid battery 110 Ah at 20 hours rating

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Transmission

Clutch:

1. VOITH GETRIEBE KG
fluid clutch 358 TD;
for travel and p.t.o. drive

2. FICHTEL UND SACHS AG
dry disc type clutch G 250 K,
pedal operated,
for travel drive only;
disc diameter 250 mm

Gear box:

Own make
spur gear reduction gear between
fluid-clutch and disc clutch;
synchromesh speed change gear with
3 forward speeds and 1 reverse speed;
collar shifted fine stepped group gear with
2 groups (FL and FS);
sliding gear shifted group gear with
2 groups (AG and SG);
1 synchronized high speed gear,
independent from both group gears;
totally 13 forward and 4 reverse speeds

Rear axle and final drive:

Portal construction;
bevel gear drive with crown wheel and pinion;
bevel gear type differential with pedal
operated, self disengaging lock;
spur gear final drives in portals

Oil capacity:

Fluid clutch		5,6 l
spur gear reduction gear		5,7 l
speed change gear, group gear and fine stepped transmission		25,8 l
final drives	each	3,0 l

Oil changing period:

Fluid clutch	5000 hours
gears	once a year, at least 1000 hours

Recommended oil qualities:

Fluid clutch	engine oil	SAE 10W MIL-L-2104 A
final drives	hypoid oil	SAE 90 MIL-L-2105 B
other gears	multi purpose transmission oil	SAE 80 MIL-L-2105 A

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Total ratios and speeds

Group	Fine stepped gear	Gear	Total ratio engine : driving wheel	Nominal travelling speed at rated engine speed *) km/h
Forward speeds				
AG	FL	1	435,13	1,36
		2	263,19	2,25
		3	150,02	3,95
	FS	1	341,39	1,74
		2	206,49	2,87
		3	117,70	5,03
SG	FL	1	105,27	5,63
		2	63,67	9,31
		3	36,29	16,33
	FS	1	82,60	7,17
		2	49,96	11,86
		3	28,48	20,81
Independent high speed gear			19,51	30,37
Reverse speeds				
AG	FL	R	252,66	2,35
	FS	R	198,23	2,99
SG	FL	R	61,13	9,69
	FS	R	47,96	12,36

*) calculated with the RADIUS INDEX 745 mm as per WDK 154
3,0% slippage of the fluid clutch is included

Power take off

Main p.t.o.: Live p.t.o., at rear of tractor;
driven by an independent dry multiplate clutch,
operated by hand lever,
height above ground 685 mm,
in median plane of tractor,
356 mm behind rear axle centre line;
35 mm dia, 6 splines DIN 9611 and
ISO 500 type 1

2 speeds are preselectable by hand lever:

540 rev/min p.t.o.

557 rev/min at rated engine speed and full load,
574 rev/min at rated engine speed without load;
standard p.t.o.-speed 540 rev/min at
2114 rev/min engine speed at full load or at
2045 rev/min engine speed without load

1000 rev/min p.t.o.

1023 rev/min at rated engine speed without load,
standard p.t.o.-speed 1000 rev/min at
2126 rev/min engine speed without load

fluid clutch slippage under full load
at rated engine speed: 3,0 %
at standard p.t.o.-speed 540 rev/min: 3,4 %

direction of rotation clockwise, viewed
from tractor rear

Power lift

Hydraulic system:	Own make hydraulic power lift, unit construction, draft control and position control, both steplessly mixable, floating position, top link sensing; 1 single acting main cylinder without over-pressure relief valve, 86 mm bore and 138 mm stroke; 1 external lift assist ram with 45 mm bore and 180 mm stroke
	BOSCH gear type pump with 16 cm^3/rev delivery at rated engine speed, directly driven by engine; with oil filter
	BOSCH control valve, maximum oil pressure 174 bar
	1 double acting BOSCH additional control valve with 2 oil tappings; hydraulically acting linkage lock for transport; hydraulic oil tank with 22 l capacity, maximum 13 l may be taken off through oil tappings when tractor is driving, 18 l when tractor is working stationary
	recommended oil: engine oil SAE 20W/20 MIL-L-2104 C or MIL-L-46152
	oil changing period once a year, at least 1000 hours, filter changing all 100 hours
Implement linkage:	Three point linkage, category II DIN 9674; lift rods length adjustable from 658 to 740 mm;
	lifting range above ground with: short lift rods from 264 to 924 mm long lift rods from 69 to 804 mm

Holed drawbar:	Short bar, fitted on the clevis of lower links, length between the ball joints 880 mm, thickness 25 mm, width 70 mm; centre hole and 4 holes on either side with 80 mm distance each, all holes 33 mm diameter; height above ground adjustable by power lift within the range from 82 to 937 mm, depending on lifting rods length, measured at the surface of the bar; in 450 mm height above ground mechanically-hydraulically lockable at a corresponding lift rod length of 690 mm; distance of holes centre line with lower links in horizontal position to rear axle centre 945 mm to p.t.o. shaft end 589 mm

Pull attachment

Trailer hitch:	Own make height above ground 570, 620, 720, 820, 870, 920 and 970 mm; adjustable by shifting and turning hitch; diameter of clevis hole 33 mm; distance of clevis hole centre to rear axle centre 485 mm; permissible vertical load 1000 kg
Towing hitch:	Height above ground 735 mm
Steering	ZAHNRADFBARIK FRIEDRICHSHAFEN AG GEMMER steering 7430, optionally hydrostatic steering available, acting on front wheels

Brakes

Parking brake:	Band brake; mechanically acting on 2 brake drums with 205 mm diameter on the differential half shafts; operated by hand lever with ratchet
Service brake:	GIRLING BREMSEN GMBH dry double disc type brake, mechanically acting on two brake discs with 165 mm diameter on each differential half shaft; pedal operated
Steering brakes:	Divided pedal of service brake; for normal use locked together

Wheels

Steered wheels:	Two pneumatics at front 7,50-20 6 ply; maximum permissible load on each tyre 875 kg at 2,25 bar inflation pressure and 30 km/h; track width 1500 mm; up to 1735 mm adjustable by extending telescopic half axles;in steps of about 115 mm rims 5,50 F x 20
Driving wheels:	Two pneumatics at rear 16,9 R 34 6 ply; radial type tyre casing; max. permissible load on each tyre 2015 kg at 1,3 bar inflation pressure and 30 km/h; track width 1508 mm, changeable by reversing wheels to 1652 mm; rims DW 14 x 34
Wheel base:	2246 mm

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Safety frame: Own make
OECD tested, approval no. CS 165

Seat: GRAMMER DS 50
upholstered seat with back rest,
back rest adjustable vertically,
adjustable spring with shock absorber;
height of driver's platform above ground 790 mm;
height of unloaded seat above platform 595 to 680 mm, adjustable in 3 steps;
for and aft adjustable 105 mm

Number of grease points: 13

Track setting during tests

front axle	1500 mm
rear axle	1508 mm

Dimensions

Total length:	3822 mm	without ballast
	4057 mm	with ballast
Total width:	2009 mm	without ballast
	2489 mm	with ballast
Total height:	2458 mm	to top of safety frame
Ground clearance:	440 mm	below front axle

Weights — Ready for use, as tested

		without driver	with driver
Without ballast:	front	1065 kg	1075 kg
	rear	1960 kg	2025 kg
	total	3025 kg	3100 kg
Front ballast:	1 baseplate		30 kg
	8 front weights 35 kg each		280 kg
Rear ballast:	8 weights per wheel 64 kg each		1024 kg
	water in the tyres		566 kg
With ballast:	front	1410 kg	1420 kg
	rear	3515 kg	3580 kg
	total	4925 kg	5000 kg

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	140 x 120	1000	818
Side lights	50 x 50	1465	175
Rear lights	65 x 45	1470	270
Reflectors			
1st pair	130 x 40	1405	270
2nd pair	80 ø	670	615

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Permissible total weights and axle loads

for all available wheel equipment

Wheel equipment		Permissible total weight	Permissible axle load	
front	rear	kg	front kg	rear kg
7,50-18 6 ply	13,6-38 6 ply	4940	1620	3320
	16,9-34 6 ply	5000		4030
	18,4-30 6 ply	5000		4200
	9,5-44 6 ply	5000		3890
7,50-20 6 ply	13,6-38 6 ply	5000	1750	3320
	16,9-34 6 ply	5000		4030
	18,4-30 6 ply	5000		4200
	9,5-44 6 ply	5000		3890

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FUELS AND LUBRICANTS USED IN TESTS

Fuel:	ARAL Diesel fuel	DIN 51601
	specific gravity at 15°C	
	at p.t.o. tests	0,827 kg/l
	at drawbar tests	0,826 kg/l
Engine:	MOBIL engine oil	MOTREX 8920 SAE 20W/20
Transmission:		
final drives	MOBIL hypoid transmission	GX 90 SAE 90
other gears	MOBIL multi purpose transmission oil	GX 80 SAE 80
Fluid clutch:	MOBIL engine oil	MOTREX 8910 SAE 10W
Power lift:	MOBIL engine oil	GX 20 SAE 20W/20

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COMPULSORY TESTS

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

Date of tests: 9th October 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						
47.5	2175	557	15.45	12.78	269	3.08
At standard p.t.o. speed						
47.1	2114	540	14.93	12.35	262	3.15
At the speed recommended for drawbar work						
47.5	2175	557	15.45	12.78	269	3.08
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						
41.6	2230	574	13.14	10.87	261	3.17
(ii) unloaded						
-	2352	621	3.70	3.06	-	-
(iii) 50% of the load defined in (i)						
21.7	2300	598	8.05	6.66	307	2.69
(iv) maximum power						
47.5	2175	557	15.45	12.78	269	3.08
(v) 25% of the load defined in (i)						
11.1	2328	610	5.79	4.78	433	1.91
(vi) 75% of the load defined in (i)						
32.0	2270	588	10.42	8.62	270	3.07

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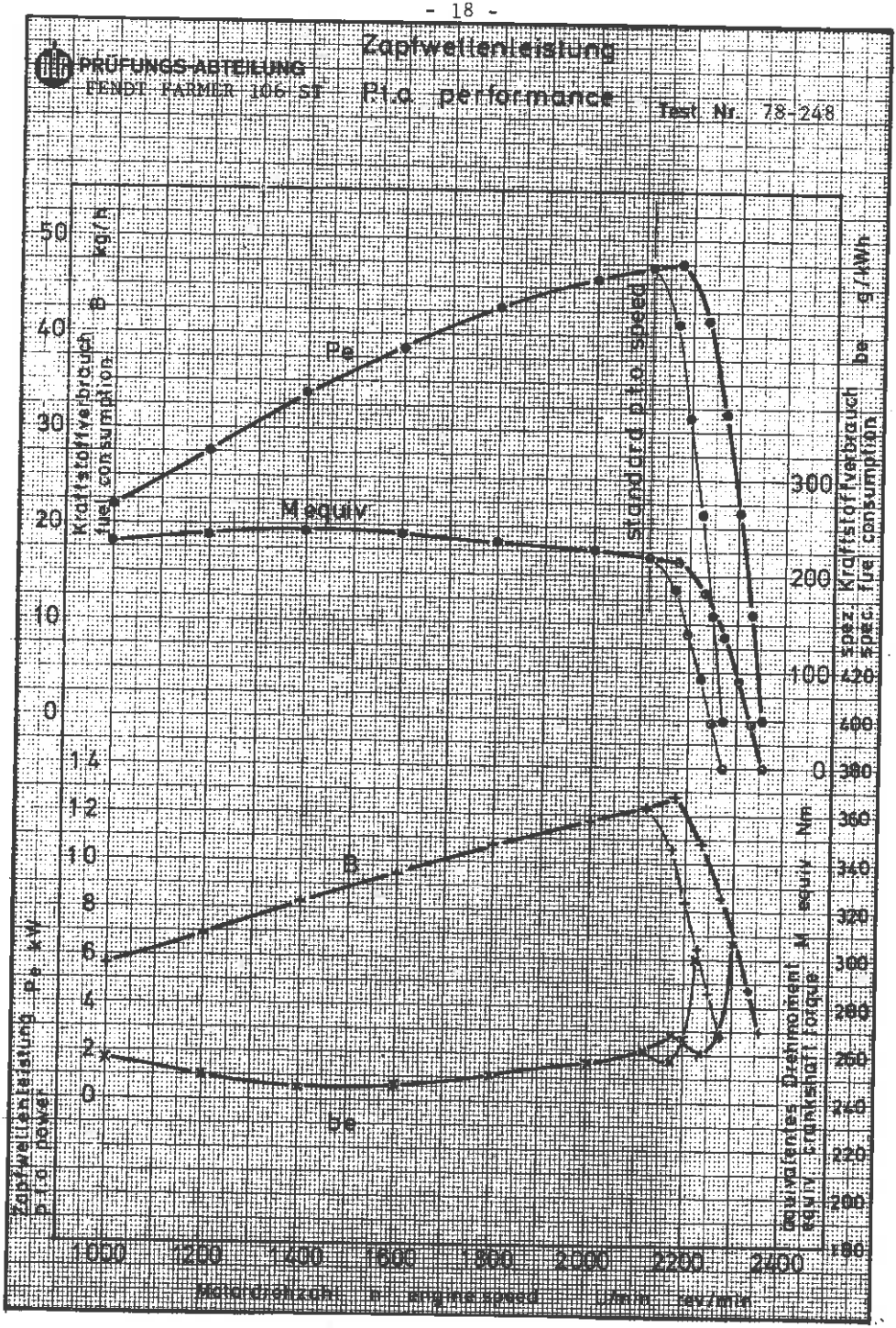
Power kW	Speed engine rev/min	Speed p.t.o. rev/min	Fuel consumption total l/h	Fuel consumption total kg/h	Fuel consumption specific g/kWh	Specific energy kWh/l
Part loads the governor hand lever in the position corresponding to the standard p.t.o. speed at full load						
(i) 85% of the torque at maximum power at standard p.t.o. speed						
41.2	2168	557	12.86	10.64	258	3.21
(ii) unloaded						
-	2271	600	3.46	2.86	-	-
(iii) 50% of the load defined in (i)						
21.5	2222	579	7.82	6.47	301	2.74
(iv) maximum power						
47.1	2114	540	14.93	12.35	262	3.15
(v) 25% of the load defined in (i)						
10.9	2244	588	5.57	4.61	423	1.96
(vi) 75% of the load defined in (i)						
31.5	2194	567	10.19	8.43	267	3.09

Standard specific fuel consumption (g/kWh): 261/307/258/301

No load maximum engine speed: 2352 rev/min
Equivalent crankshaft torque at maximum power (2 hours): 215 Nm
Maximum equivalent crankshaft torque: 245 Nm at 1400 rev/min of the engine

Mean atmospheric conditions:	temperature	25 °C
	pressure	999 mbar
	relative humidity	60 %
Maximum temperatures:	coolant	87 °C
	engine oil	101 °C
	fuel	22 °C
	engine air intake	26 °C

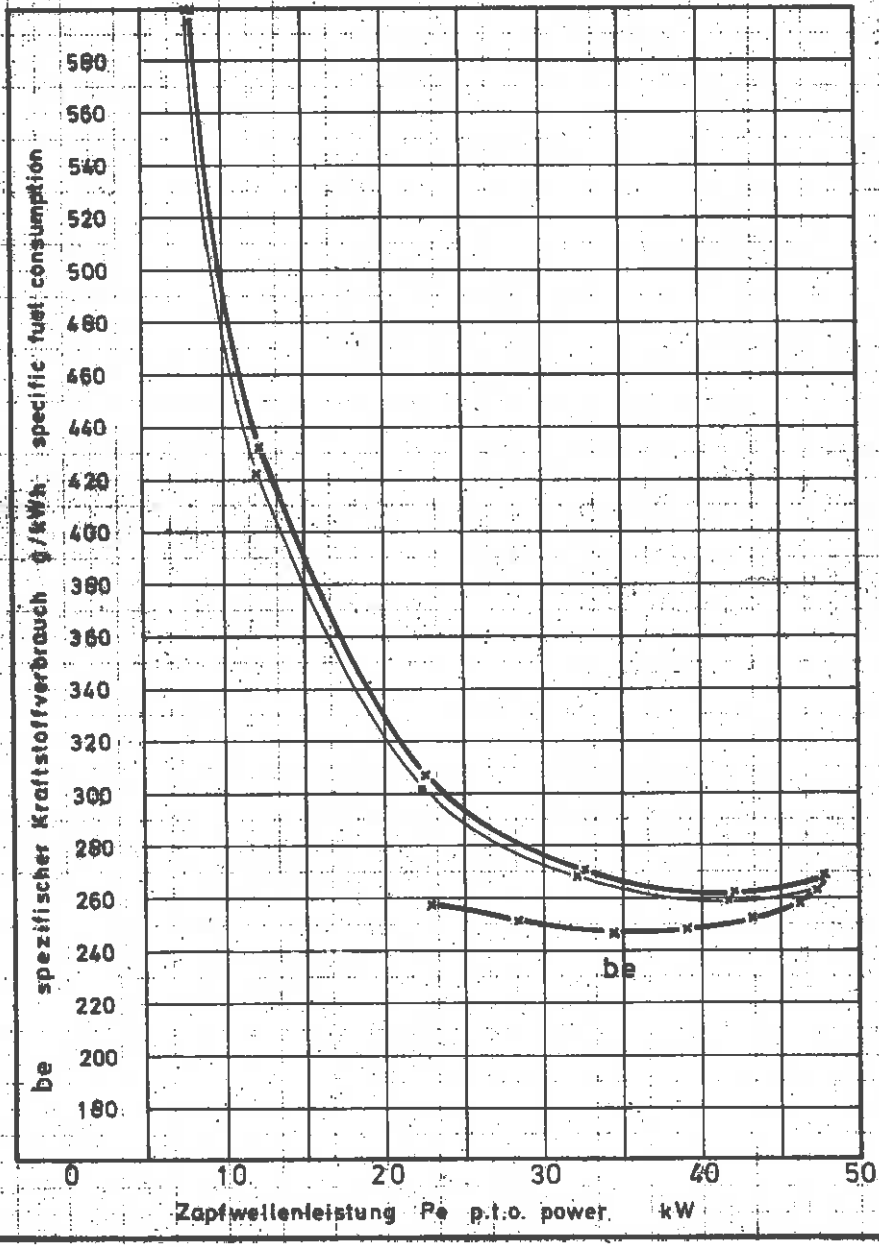
The equivalent crankshaft torques are given relative to the output shaft of the fluid clutch


PRÜFUNGS-ABTEILUNG
FENDT FARMER 106 SF
Zapfwellenleistung
P.t.o. performance
Test Nr. 78-248
Kraftstoffverbrauch
fuel consumption
kg/h
Pe
Mequiv
standard p.t.o. speed
Kraftstoffverbrauch be
spez. spec. fuel consumption
g/kWh
B
be
Zapfwellenleistung Pe kW
p.t.o. power
Aequivalentes Drehmoment Mequiv Nm
equiv. crankshaft torque
Motordrehzahl n engine speed U/min rev/min

PRÜFUNGS-ABTEILUNG
FENDT FARMER 106 ST

Zapfwellenleistung
P.t.o. performance

Test Nr. 78-248



PRÜFUNGS-ABTEILUNG
FENDT FARMER 106 ST

(2) DRAWBAR PERFORMANCE

Date of tests: 15th till 19th 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 AG	1,24	16,1	4650	2319	15,1
1FS AG	1,57	20,3	4666	2301	14,9
2FL AG	2,00	25,9	4651	2275	15,0
2FS AG	2,51	32,5	4660	2250	14,9
3FL AG	3,48	39,2	4052	2172	10,6
3FS AG	4,62	40,4	3150	2175	6,9
1FL SG	5,20	41,4	2864	2173	6,1
1FS SG	6,75	41,1	2193	2176	4,4
2FL SG	8,85	40,7	1657	2177	3,2
(ii) FIVE-HOUR-TEST at 75% of pull at maximum power in 1st FS SG gear					
1FS SG	7,14	32,6	1645	2261	3,2
(iii) FIVE-HOUR-TEST at pull corresponding to 15% wheel slip in test (i)					
2FS AG	2,52	32,7	4666	2250	-
(iv) MAXIMUM POWER without ballast height of drawbar above ground 620 mm					
3FL AG	3,48	29,1	3008	2259	15,0
3FS AG	4,34	36,0	2989	2224	15,0
1FL SG	4,88	39,3	2899	2176	12,6
1FS SG	6,53	40,4	2227	2173	7,8
2FL SG	8,67	41,3	1714	2175	5,6
2FS SG	11,24	41,2	1318	2177	4,2
3FL SG	15,58	40,3	932	2172	2,9

Total oil consumption during ten hours duration of tests (ii) and (iii) 22 g/h

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Tyres size front: 7,50-20 6 ply
rear: 16,9 R 34 6 ply

Tread bar height at the beginning of drawbar tests 95% 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 1,1 bar							
1,99	416	13	84	82	4	76	1007
2,18	378	15	84	82	5	74	1007
2,35	352	16	84	83	5	70	1007
2,45	336	17	84	80	4	62	1007
2,54	326	11	85	86	5	79	1007
2,60	319	11	85	86	6	74	1007
2,68	309	11	85	85	6	72	1007
2,65	312	11	85	84	6	66	1007
2,62	316	11	85	86	6	68	1007
2,60	319	12	85	88	8	66	1006
-	-	16	87	98	14	59	1006
tyre inflation pressure 0,8 bar							
2,36	349	17	84	83	12	72	1002
2,38	347	17	84	80	12	71	1002
2,53	326	17	85	88	12	72	1002
2,62	315	16	85	85	10	69	1001
2,65	312	16	85	87	12	69	1001
2,65	312	16	85	88	11	70	1001
2,61	316	16	85	87	12	71	1001

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

(3) TURNING SPACE AND TURNING CIRCLE

Wheel equipment front: 7,50-20 6 ply
rear: 16,9 R 34 6 ply

Track of wheels front: 1500 mm
rear: 1508 mm

	With brakes		Without brakes	
	left-hand m	right-hand m	left-hand m	right-hand m
Radius of turning space	3,82	3,80	4,41	4,32
Radius of turning circle	3,62	3,57	4,21	4,10

(4) LOCATION OF CENTRE OF GRAVITY

Height above ground	848 mm
Distance forward from rear axle centre	779 mm
Distance from tractor's median plane, to the left	2 mm

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(5) BRAKING PERFORMANCE

A) SERVICE BRAKE

Date of tests: 18th February 1980
Type of track: Concrete
Type of decelerometer: MOTO-METER-Bremsverzögerungs- und Pedalkraftschreiber

Weight of ballasted tractor with driver 5000 kg

Cold brakes

		With ballast	Without ballast
Travelling speed	km/h	25,0	25,0
Deceleration	m/s^2	4,5	4,4
Stopping distance	m	6,2	6,2
Force on pedal	daN	57	31
Force on pedal to achieve a deceleration of 2,5 m/s^2	daN	33	18

Brake fade characteristics (hot tests)

Deceleration	hot/cold	%	93	82
Stopping distance	cold/hot	%	94	82
Force on pedal	cold/hot	%	95	100

B) PARKING BRAKE

Tractor facing up 16% slope
Pull on hand brake 25 daN, tractor does not roll

Tractor facing down 16% slope
Pull on hand brake 24 daN, tractor does not roll

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(6) AMBIENT NOISE EMITTED BY THE TRACTOR

Date of test: 18th February 1980
Type of track: Concrete
Type of sound level meter: BRÜEL AND KJAER model 2209

Results of test

Gear: Independent high speed gear
Travelling speed before acceleration: 24,5 km/h
Sound level: 89,5 dB(A)

(7) NOISE AT THE DRIVER'S EAR LEVEL

Date of tests: 15th February 1980
Type of track: Concrete
Type of sound level meter: BRÜEL AND KJAER model 2209

The tractor was fitted with a safety frame

Results of tests

Gear no. and group	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 AG	2970	1,36	1,19	92,5
1FS AG	2924	1,74	1,54	92,5
2FL AG	2962	2,25	1,99	92,5
2FS AG	2932	2,87	2,51	93,0
3FL AG	2938	3,95	3,44	93,5
3FS AG	2969	5,03	4,32	93,5
1FL SG	2891	5,63	4,86	94,5
1FS SG*)	2248	7,17	6,49	94,0
2FL SG	1713	9,31	8,65	94,5
2FS SG	1321	11,86	11,17	93,5
3FL SG	932	16,33	15,55	94,5
high speed	light load	30,37	32,73	92,0

*) the 1st FS SG gear is the gear with the travelling speed nearest to 7,5 km/h

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(8) POWER LIFT AND HYDRAULIC PUMP PERFORMANCE

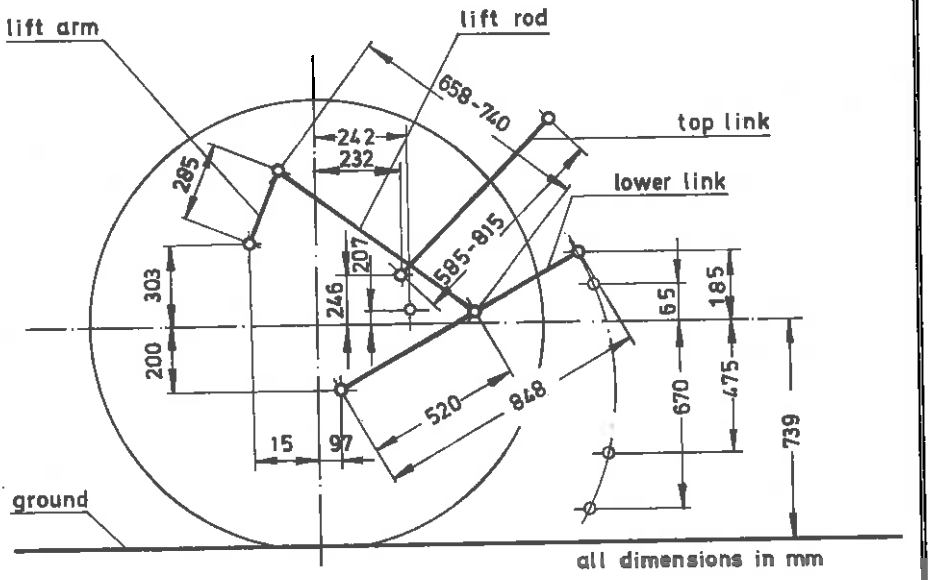
Date of tests: 5th November 1979

HYDRAULIC PUMP

(1)	Opening pressure of relief valve in remote circuit	160 bar
	Sustained pressure by open relief valve	174 bar
(2)	Pump delivery rate at minimum pressure and rated engine speed	37,6 l/min
(3)	Pump delivery rate at max. hydraulic power	37,3 l/min
	corresponding delivery pressure	162 bar
	power	10,1 kW

POWER LIFT

Dimensions of linkage geometry for the table on page 28



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FENDT FARMER 106 ST

LIFTING FORCES

Lifting heights relative to horizontal lower links

mm	-480	-470	-400	-300	-275	-200	-100	0
At hitch points maximum mechanical advantage								
daN					2280	2410	2500	2510
minimum mechanical advantage								
daN		2040	2110	2190		2230	2240	2220

Max. force exerted throughout the whole range 2280 daN

Front of tractor does not lift if front axle is ballasted to its maximum permissible load (1750 kg)

At test frame maximum mechanical advantage								
daN					2310	2370	2380	2340
minimum mechanical advantage								
daN	2200		2180	2160		2120	2080	1990

Max. force exerted throughout the whole range 1960 daN

Force at which front of tractor lifts if front axle is ballasted to its max. permissible load (1750 kg) : 2480 daN

PRÜFUNGS-ABTEILUNG

Test No. 78-248

+100	+200	+265	+280	+300	+385	+400

lift rods 658 mm long

2490	2450			2420	2400	

lift rods 740 mm long

2200	2200	2190				

lift rods 658 mm long, high top link pivot point

2260	2160			2060		1960

lift rods 740 mm long, low top link pivot point

1920	1850		1770			

All values of forces for pressure 162 bar at max. hydraulic power, see page 25; 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	848 mm	848 mm
Lift arms	285 mm	285 mm
Lift rods	658 mm	740 mm
Top link	648 mm	653 mm
Distance of lift rod connection point from pivot point of lower link	520 mm	520 mm
The following dimensions are given relative to rear axle centre line 739 mm above ground		
Lower link pivot point	97 mm behind, 200 mm below	97 mm behind, 200 mm below
Top link pivot point	232 mm behind, 246 mm above	242 mm behind, 207 mm above
Lift arm pivot point	15 mm forward, 303 mm above	15 mm forward, 303 mm above
Maximum and minimum height of lower link hitch points	185 mm above, 475 mm below	65 mm above, 670 mm below
Height of lower link hitch points above ground when locked in highest transport position	924 mm	804 mm

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