



O.E.C.D. No.: 518

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Report on test in accordance with
O.E.C.D. STANDARD CODE for the Official Testing
of Agricultural Tractors



Agricultural Tractor FENDT Farmer 102 S Turbomatik

Manufactured by: X. FENDT UND CO
Maschinen- und Schlepperfabrik
D-8952 Marktoberdorf

Date of Tests: September till October 1975
DLG-Testing Station for Agricultural Machinery
D-6114 Groß-Umstadt

DEUTSCHE LANDWIRTSCHAFTS-GESELLSCHAFT e.V.
Prüfungsabteilung für Landmaschinen
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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 Tractors. It does not contain an evaluation of the performance of the tractor on practical work.

This report has been approved by the O.E.C.D. Coordinating Center (C.N.E.E.M.A., France) as being in accordance with the O.E.C.D. STANDARD-CODE.

Date of Approval: 28th April, 1976

Serial No.: 518

In this report all performance characteristics are given according to the International System of Units.

The relation with the former used Technical System of Units is given by the following formulas:

Forces:	$1 \text{ N} = 0,102 \text{ kp}$	or $1 \text{ kp} = 9,81 \text{ N}$
Powers:	$1 \text{ kW} = 1,36 \text{ PS}$	or $1 \text{ PS} = 0,736 \text{ kW}$
Pressures:	$1 \text{ bar} = 1,02 \text{ kp/cm}^2$	or $1 \text{ kp/cm}^2 = 0,981 \text{ bar}$
	$1000 \text{ mbar} = 750,1 \text{ mm Hg}$	

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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 102 S TURBOMATIK
Type: Wheeled tractor, unit construction,
rear wheel driven
Serial No.: 138/01/0007

Engine

Make: MWM MOTORENWERKE MANNHEIM AG
Model: D 226-3
Type: 4-stroke DIESEL engine with direct injection;
watercooled

Serial No.: 226.3.04850

Cylinders: 3 in-line; bore 105 mm, stroke 120 mm;
displacement 3116 cm³; compression ratio 17:1;
dry forced-in cylinder liners

Valves: Overhead

Fuel system: SOLEX fuel feed pump PE 20136;
BOSCH in-line injection pump:
PES 3 A 80 D 320/3 RS 1299;
manufacturer's production setting 48,5 mm³/stroke
at 2175 rev/min and full load;
injection timing 28° before TDC;
BOSCH multihole injection nozzles 0.433.270.114;
injection pressure 180 bar;
BOSCH fuel filter with replaceable cartridge;
capacity of fuel tank 73 l

Governor: BOSCH centrifugal variable speed type governor:
EP/RSV 325-1500 A 2 B 505 DR;
governed range of engine speed from
650 to 2280 rev/min;
rated engine speed 2175 rev/min



- Air cleaner:** MANN UND HUMMEL
dry paper element filter with precleaner
incorporated, with replaceable cartridge;
maintenance indicator;
(safety cartridge optional)
- 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;
(optional: silencer make EBERSPÄCHER with
mouth showing upwards is available)
- Lubrication
system:** Forced feed from gear type pump;
strainer in sump;
MANN MICRO-top oil filter in full flow with
by-pass valve and replaceable cartridge;
oil capacity 7,75 l;
oil changing period 100 hours;
recommended oil quality MIL-L-2104 C
or MIL-L-46152
recommended oil viscosities:
winter HD SAE 10W
summer HD SAE 20W/20
tropics HD 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, 410 mm diameter;
water capacity 10 l
- Starting
system:** Electrical;
BOSCH starter motor with 1,84 kW;
BERU flame plug in intake pipe 154 GF
- Electrical
equipment:** 12 Volt, negative earth;
BOSCH three phase alternator;
1 lead acid battery 88 Ah at 20 hours rating



Transmission

Clutch:

1. VOITH GETRIEBE KG
fluid clutch 332 TD;
for travel and p.t.o. drive
2. FICHTEL UND SACHS AG
dry disc type clutch G 250 K;
flexible coated;
for travel drive only;
pedal operated

Gear box:

Own make;
spur gear reduction gearing between
fluid clutch and disc clutch;
synchromesh speed change gear with
3 forward and 1 reverse group;
collar shifted group gear with 2 groups
(field and road group);
speed change gear and group gear are shifted
with the same lever;
fine stepped transmission with collar shifted
slow and fast group arranged before the
speed change gear and group gear;
1 synchronized high speed gear independent
from fine stepped transmission and from
group gear
totally 13 forward and 4 reverse speeds;
optional: the fine stepped transmission may be
fitted with a sliding gear shifted
creep speed group, not fitted on tractor
tested;
with creep speed group engaged the road group
is locked automatically;
optional: the tractor may be fitted with
a reversing gear for all forward speeds;
preselected by hand lever, operated by disc
clutch pedal

Rear axle and
final drive:

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



Oil capacity: Fluid clutch 4,1 l
 spur gear reduction gear 5,7 l
 speed change gear, group gear
 and fine stepped transmission 25,75 l
 final drives in rear wheels each 2,9 l

Oil changing
period: Fluid clutch 5000 hours
 gears 1000 hours

Recommended
oil qualities: Fluid clutch engine oil HD SAE 10W
 final drives Hypoid oil SAE 90 MIL-L-2105 B
 other gears transmission
 oil SAE 80 MIL-L-2105 A

Total ratios and speeds see page 8

Main power take-off

Proportional

engine speed p.t.o.: Live p.t.o. at rear of tractor;
driven through an independent dry multiplate
clutch, operated by hand lever situated
below the steering hand wheel;
height above ground 600 mm, in median plane
of tractor;
29 x 34,9 x 8,7 mm = 1 3/8"; 6 splines;
(DIN 9611 Form 1; BS 1495; ASAE S 203.7);
2 speeds are preselectable by hand lever:

540 rev/min p.t.o.

586 rev/min at rated engine speed;
standard p.t.o.-speed 540 rev/min at
2013 rev/min engine speed

1000 rev/min p.t.o.

1045 rev/min at rated engine speed;
p.t.o.-speed 1000 rev/min at
2083 rev/min engine speed

appr. 3,1% slippage of the fluid clutch is
included in all p.t.o. speeds quoted;
all p.t.o. speeds may be set by aid of
tractormeter;
direction of rotation clockwise, viewed
from tractor rear



Total ratios and speeds

Group	Fine stepped gear	Gear	Total ratio engine : driving wheel	Nominal travelling speed at rated engine speed *)	
				km/h	m/s
Forward speeds					
Field	slow	1	490,04	1,07	0,30
		2	296,40	1,78	0,49
		3	168,95	3,13	0,87
	fast	1	382,44	1,38	0,38
		2	231,31	2,29	0,63
		3	131,85	4,01	1,11
Road	slow	4	118,56	4,45	1,24
		5	71,71	7,36	2,05
		6	40,87	12,92	4,68
	fast	4	92,53	5,70	1,58
		5	55,96	9,43	2,62
		6	31,90	16,56	4,60
Independent high speed gear			21,85	24,16	6,71
Reverse speeds					
Field	slow	1	284,54	1,86	0,52
	fast	1	222,06	2,38	0,66
Road	slow	2	68,84	7,67	2,13
	fast	2	53,72	9,83	2,73

*) Calculated with the index radius 665 mm in accordance with WdK 154

3,1% slippage of the fluid clutch is included



Main p.t.o.

(Continuation)

Ground speed
p.t.o.:

Optional, not fitted on tractor tested;
main p.t.o. may be changed by hand lever to
ground speed p.t.o.;
dimensions, location and direction of
rotation when travelling forward as main p.t.o.;
travelling distance for 1 rev of p.t.o. 0,171 m
25 rev of p.t.o. for 1 rev of the driving wheel

Secondary
power take-off

P.t.o. in the
middle of the
tractor:

Drive as main p.t.o.;
situated between the axles 356 mm before the
rear axle, 60 mm to the right hand side of
tractor's median plane, 540 mm above ground;
p.t.o. stub shaft showing forward;
B 6 x 26 x 30 DIN 5462;
1205 rev/min at rated engine speed;
3,1% slippage of the fluid clutch included;
direction of rotation anticlockwise,
viewed from tractor rear

Front p.t.o.

Optional, not fitted on tractor tested;
attached on the p.t.o. shaft in the middle
of the tractor by aid of an intermediate
gearing;
drive and dimensions as main p.t.o.;
540 mm above ground;
300 mm to the right hand side of tractor's
median plane;
603 rev/min at rated engine speed;
p.t.o. standard speed 540 rev/min at
1952 rev/min engine speed; 3,1% slippage of
the fluid clutch is included;
direction of rotation anticlockwise,
viewed from tractor rear

Belt pulley

Optional not fitted on tractor tested;
pulley drive attached on p.t.o. shaft;
only for use with 540 rev/min p.t.o.;
operated by p.t.o. hand lever;
225 mm diameter, 150 mm width;
1466 rev/min at rated engine speed;
17,3 m/s linear belt speed;
3,1% slippage of the fluid clutch included

Belt pulley

(Continuation)

direction of rotation clockwise and anticlockwise, changeable by turning drive device

Power lift

Hydraulic
system:

Own make;
hydraulic power lift, unit construction;
power control, position control, both stepless
mixable, floating position;
single acting ram;
bore 86 mm, stroke 138 mm;
BOSCH gear type pump with 14 cm³/rev delivery;
(with hydrostatic steering a BOSCH pump with
16 mm³/rev delivery is fitted);
directly driven by engine;
BOSCH control valve;
maximum oil pressure 175 bar;
no overpressure relief valve for ram;
2 oil tappings for double acting or 1 for
single acting additional control valves;
hydraulically acting linkage lock for
transport;
hydraulic oil tank with 15,5 l capacity;
maximal 7,5 l may be taken off for remote
rams through the oil tappings when the tractor
is working driving and 10 l when stationary;
recommended oil quality:
engine oil (HD) SAE 20W/20 MIL-L-2104 C or
MIL-L-46152
oil changing period 1000 hours

Implement
linkage:

Three point linkage, category II (DIN 9674);
dimensions see page 25;
category I is optionally available
lift rods length adjustable from 625 to 700 mm;
lifting range above ground with
short lift rods from 240 to 890 mm
long lift rods from 62 to 780 mm
the ball joints of lower and upper links may
be changed against quick coupler;
not fitted on tractor tested



Holed drawbar: Fitted on the clevis of lower links;
length between the ball joints 830 mm;
thickness of the bar 30 mm;
centre hole and 3 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 77 to 905 mm;
depending on lifting rods length, measured
at the surface of the bar;
in 430 mm height above ground mechanically-
hydraulically lockable with lift rods
625 mm long;
with lower links in horizontal position
distance of holes centre line:
to rear axle centre 980 mm
to p.t.o. shaft end 620 mm

Pull attachment

Trailer hitch: Own make;
height above ground 485, 635, 785 mm
and 535, 735, 835, 885 mm;
adjustable by shifting and turning hitch;
diameter of clevis hole 33 mm;
distance of clevis hole centre to rear
axle centre 593 mm;
permissible vertical load 1000 kg

Towing hitch: Height above ground 710 mm

Steering

Own make in cooperation with
ZAHNRADFABRIK FRIEDRICHSHAFEN AG;
Gemmer steering 7430;
optionally ZF column hydrosteering gear
7409 with flow dividing valve available;
operated by hand wheel;
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: Internal shoe type brake;
without Servo-action;
mechanically acting on 2 brake drums with
180 mm diameter on the differential half
shafts;
pedal operated
- Parking brake and foot brake have the brake
drums in common
- Steering brakes: Divided pedal of foot brake;
for normal use locked together

Wheels

- Steering wheels: Two pneumatics at front 7,50-16 AS 6 ply;
max. permissible load on each tyre 856 kg
at 2,25 bar inflation pressure and 25 km/h;
track width 1250, 1360 and 1500 mm;
changing by telescopic half axles;
rims 5,50 F x 16 B
- Driving wheels: Two pneumatics at rear 14,9-30 AS 6 ply;
max. permissible load on each tyre 1780 kg
at 1,4 bar inflation pressure and 25 km/h;
track width 1360 and 1500 mm;
changeable by reversing wheels;
(track adjustment wheels are optionally
available for track width from 1362 to 1850 mm
by turning wheels and offset lug type rims,
not fitted on tractor tested)
- Wheel base: 2078 mm



Overturning
protection frame

Own make;
steel tube construction;

Weights

Ready for use as tested
with frame

without driver with driver

Without ballast:	front	865 kg	870 kg
	rear	1585 kg	1655 kg
	total	2450 kg	2525 kg
Front ballast:	1 ground plate		33 kg
	4 front weights		132 kg
Rear ballast:	7 weights per wheel		882 kg
	water in the tyres		403 kg
With ballast:	front	1070 kg	1075 kg
	rear	2830 kg	2900 kg
	total	3900 kg	3975 kg

Seat

GRAMMER
DS 50;
upholstered mould seat with back rest;
back rest adjustable up and down;
adjustable spring with shock absorber;
parallelogram suspension;
height of seat platform above ground 700 mm;
height of seat above platform 490 mm,
seat not compressed, seat mould in downmost
position, in longitudinal direction in
medium position;
up and down adjustable in 3 steps in the
range of 60 mm;
fore and aft adjustable 105 mm

Number of grease points 12



Dimensions

Total length: 3670 mm with 3 point linkage without ballast
3780 mm with 3 point linkage with ballast

Total width: 1736 mm at smallest track width
2185 mm at largest track width
without ballast

Total height: 1580 mm to top of steering wheel
2320 mm to top of frame

Ground

clearance: 425 mm in tractor's median plane
below the front axle

Lighting equipment Electrical 12 Volt
in accordance with German legislation

	Dimensions mm	Height above ground of centre mm	Distance from outside edge of tractor to centre mm ***)
Head lights	135 x 120	900	690
Side lights *)	50 x 50	670	165
Rear lights **)	80 x 65	1350	210
Reflectors			
1st pair	125 x 36	1285	210
2nd pair	80 ø	620	480

*) in combination with direction indicator

**) in combination with direction indicator and stop light

***) at smallest track width



Permissible axle loads and total weights
of all available wheel equipments

Wheel equipment **)		Permissible front axle load kg	Permissible rear axle load kg	Permissible total weight kg
front	rear			
5,50-16	9,5-36	850	2280	3110
	11,2-36		2510	3360
	12,4-32		2710	3560
	12,4-36		2880	3730
	13,6-28		2860	3710
	14,9-28		3220	4000
	14,9-30		3330	4000
	7,2-40*)		2420	3270
6,00-16 or 6,50-16	9,5-36	1120	2280	3380
	11,2-36		2510	3330
	12,4-32		2710	3560
	12,4-36		2880	3730
	13,6-28		2860	3710
	14,9-28		3220	4000
	14,9-30		3330	4000
	7,2-40*)		2420	3270
7,5L-15 or 7,50-16	9,5-36	1440	2280	3700
	11,2-36		2510	3950
	12,4-32		2710	4000
	12,4-36		2880	4000
	13,6-28		2860	4000
	14,9-28		3220	4000
	14,9-30		3330	4000
	7,2-40*)		2420	3860

*) no standard tyre, special product of MICHELIN

**) all tyres 6 ply



FUELS AND LUBRICANTS USED IN TESTS

Fuel: ARAL Diesel fuel (DIN 51601)
specific gravity at 15°C
at engine tests 0,841 kg/l
at p.t.o. tests 0,833 kg/l
at drawbar tests 0,831 kg/l

Engine oil: Engine oil HD SAE 20W/20 MIL-L-2104 B

Transmission oil: Speed change gear, group gear,
fine stepped gear and spur gear
reduction gearing
Transmission oil SAE 80 MIL-L-2105 A
Final drives
Hypoid oil SAE 90 MIL-L-2105 B

Fluid clutch: Engine oil HD SAE 10W

Power lift: Hydraulic oil HLP 25



E R R A T A

to O.E.C.D.-Report no. 518

On page 17, MAIN POWER TAKE-OFF PERFORMANCE chapter PART LOADS, the figures for power in tests (iii), (v) and (vi) are wrong. They must read:

test (iii)	13,9 kW
test (v)	7,0 kW
test (vi)	20,6 kW



COMPULSORY TESTS

(1) MAIN POWER TAKE-OFF PERFORMANCE

Date of tests: 14th and 15th October 1975

Type of dynamometer: SCHENCK hydraulic dynamometer U1-40

Maximum power

Power kW	Speed		Fuel consumption			Specific energy kWh/l
	engine rev/min	p.t.o. rev/min	total l/h	kg/h	specific g/kWh	
At maximum power 2-hour test						
31,1	2175	586	9,54	7,95	256	3,26
At standard p.t.o. speed (540 rev/min)						
29,8	2012	540	8,81	7,34	246	3,38
At the speed recommended for drawbar work						
31,1	2175	586	9,54	7,95	256	3,26

Part loads

(i) 85% of the torque at maximum power						
27,1	2221	602	8,24	6,86	253	329
(ii) unloaded						
-	2279	633	2,30	1,92	-	-
(iii) 50% of the load defined in (i)						
30,6	2259	619	5,11	4,26	307	2,72
(iv) maximum power						
31,1	2175	586	9,54	7,95	256	3,26
(v) 25% of the load defined in (i)						
15,3	2270	625	3,71	3,09	441	1,89
(vi) 75% of the load defined in (i)						
45,9	2238	610	6,58	5,48	266	3,13

No load maximum engine speed: 2279 rev/min

Equivalent fly-wheel torque at maximum power: 141 Nm

Maximum equivalent fly-wheel torque: 168 Nm at 1310 rev/min
at the output shaft of the fluid clutch

Mean atmospheric conditions: temperature 15°C
pressure 1000 mbar
relative humidity 90%

Maximum temperatures: coolant 80°C
engine oil 90°C
fuel 17°C

The equivalent fly-wheel torque reported is relative to the
output shaft of the fluid clutch



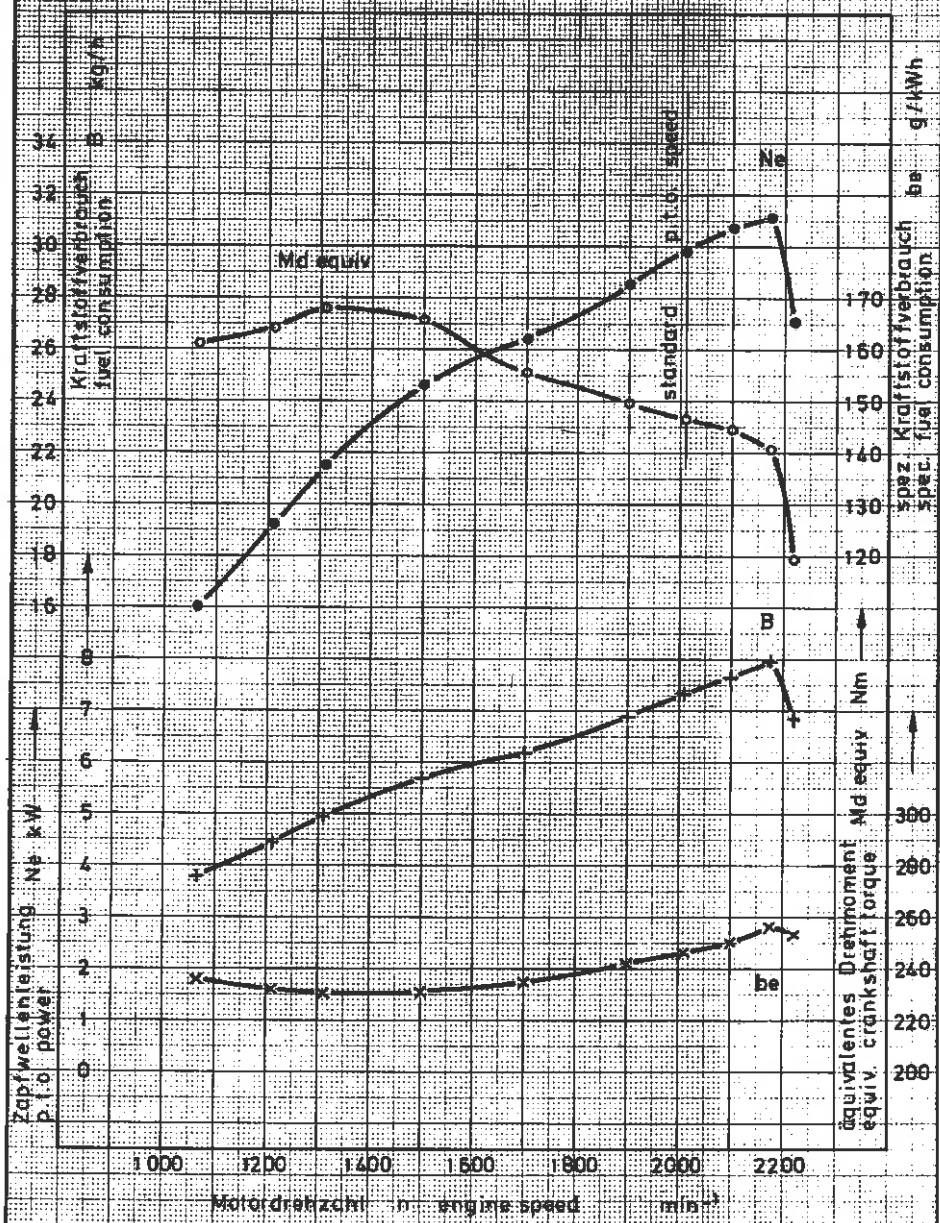
PRÜFUNGS-ABTEILUNG

FENDT FARMER 102 S

Zapfwellenleistung

P.t.o. performance

Test Nr. 75-54



Lufttemperatur:	15 °C	Luftdruck:	1000 mb	Kraftstoff:	0.833 kg/l
temperature		pressure		fuel	



(2) DRAWBAR PERFORMANCE

Date of tests: 21st till 28th October 1975

Type of track: Concrete

Gear No. and Group	Speed km/h	Power kW	Drawbar pull N	Engine speed rev/min	Slip of wheels %	Specific energy kWh/l
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(i) MAXIMUM POWER with ballast
height of drawbar above ground 500 mm

1 slow	0,96	8,8	32980	2241	15,0	1,80
1 fast	1,23	11,3	32990	2237	14,8	2,04
2 slow	1,58	14,1	32880	2232	14,9	2,24
2 fast	2,00	18,3	32970	2222	14,9	2,38
3 slow	2,69	23,6	31620	2178	14,3	2,47
3 fast	3,61	24,6	24530	2174	9,8	2,58
4 slow	4,05	25,6	22790	2174	9,1	2,68
4 fast	5,31	25,6	17380	2174	6,6	2,69
5 slow	6,97	26,0	13410	2174	5,0	2,73
5 fast	9,05	25,4	10090	2175	3,6	2,67

(ii) FIVE-HOUR-TEST
at 75% of pull at maximum power in 4th gear of fast group

4 fast	5,56	20,2	13050	2222	4,9	2,61
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(iii) FIVE-HOUR-TEST
at pull corresponding to 15% wheel slip in test (i)

2 fast	-	-	32990	2221	-	-
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(v) MAXIMUM POWER without ballast
height of drawbar above ground 580 mm

3 fast	3,51	22,2	22770	2213	14,8	2,45
4 slow	3,81	24,0	22710	2173	15,0	2,50
4 fast	5,17	25,5	17790	2173	10,0	2,65
5 slow	6,87	26,1	13670	2172	7,0	2,71
5 fast	8,96	25,8	10370	2175	5,2	2,68
6 slow	12,50	25,7	7410	2176	3,5	2,66

Total oil consumption during ten hours duration of tests
(ii) and (iii): 30 g/h



Tyres make front: VEITH-PIRELLI 7,50-16 AS FRONT 6 ply
and size rear: FULDA-PIONIER 14,9-30 AS 6 ply

Specific fuel consumpt. g/kWh	Temperatures			Atmospheric conditions		
	Fuel °C	Coolant °C	Engine- oil °C	Tempe- rature °C	Relative humidity %	Pressure mbar

tyre inflation pressure 1,4 bar

rolling radius of tyres under static load 660 mm

465	22	85	86	20	87	997
409	22	85	86	20	87	997
374	22	85	84	20	87	998
351	22	85	85	19	88	998
338	21	85	85	19	85	998
323	20	85	87	20	87	998
311	20	85	87	19	88	998
310	20	85	88	17	88	998
306	20	85	88	17	91	998
313	20	85	88	17	91	998

319	20	85	88	17	90	996
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-	20	85	89	18	92	996
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tyre inflation pressure 1,0 bar

rolling radius of tyres under static load 667 mm

340	15	85	85	13	98	1008
333	15	85	84	13	98	1008
313	15	85	85	13	98	1008
306	15	85	84	13	98	1008
310	15	85	80	13	98	1008
313	15	85	85	13	98	1008

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 AS FRONT 6 ply

rear: 14,9-30 AS 6 ply

Track of wheels front: 1500 mm

rear: 1500 mm

	With brakes		Without brakes	
	left-hand m	right-hand m	left-hand m	right-hand m
Radius of turning space	3,58	3,65	4,06	4,13
Radius of turning circle	3,50	3,57	3,98	4,05

(4) LOCATION OF CENTRE OF GRAVITY

Height above ground	825 mm
Distance forward from the vertical plane containing the axis of the rear wheels	716 mm
Distance of the median plane of the tractor	0 mm



(5) BRAKING PERFORMANCE

A) SERVICE BRAKE

Date of tests: 17th October 1975
Type of track: Concrete
Type of decelerometer: MOTO-METER-Bremsverzögerungs-
und Pedalkraftschreiber

Weight of ballasted tractor: 3975 kg with driver

Cold brakes

		With ballast	Without ballast
Travelling speed	km/h	25,0	25,0
Deceleration	m/s ²	5,1	4,5
Stopping distance	m	5,8	6,6
Force on pedal	N	640	460
Force on pedal to achieve a deceleration of 2,5 m/s ²	N	440	295

Brake fade characteristics (hot tests)

Deceleration	hot/cold %	102	100
Stopping distance	cold/hot %	94	100
Force on pedal	cold/hot %	100	78

B) PARKING BRAKE

Tractor facing up slope:
Pull on hand brake 230 N, tractor does not roll

Tractor facing down slope:
Pull on hand brake 230 N, tractor does not roll



(6) AMBIENT NOISE EMITTED BY THE TRACTOR

Date of test: 20th October 1975
Type of track: Concrete
Type of sound level meter: Brüel and Kjaer model 2203

Results of test

Gear: Independent high speed gear
Travelling speed before acceleration: 18,9 km/h
Sound level: 88 dB(A)

(7) NOISE AT THE DRIVER'S EAR LEVEL

Date of tests: 20th October 1975
Type of track: Concrete
Type of sound level meter: Brüel and Kjaer model 2607
Type of frequency analyser: Brüel and Kjaer model 1614
(fitted with octave filter)

The tractor was fitted with an overturning protection frame

Results of tests

Gear	Drawbar pull at which the tractor develops the maximum sound level N	Travelling speed		Sound level dB(A)
		nominal km/h	effective km/h	
1 slow	22740	1,07	0,98	90
1 fast	22730	1,38	1,26	90,5
2 slow	22550	1,78	1,63	90,5
2 fast	22670	2,29	2,07	92
3 slow	22280	3,13	2,83	92
3 fast	22560	4,01	3,53	92,5
4 slow	22510	4,45	3,88	91,5
4 fast	17240	5,70	5,30	92
5 slow*)	12870	7,36	7,03	92
5 fast	10150	9,43	9,09	92
6 slow	7210	12,92	12,63	92
6 fast	4780	16,56	16,55	92
i.h.speed	hight load	24,16	25,20	92

*) The 5th slow gear corresponds to the travelling speed nearest to 7,5 km/h



(8) POWER LIFT AND HYDRAULIC PUMP PERFORMANCE

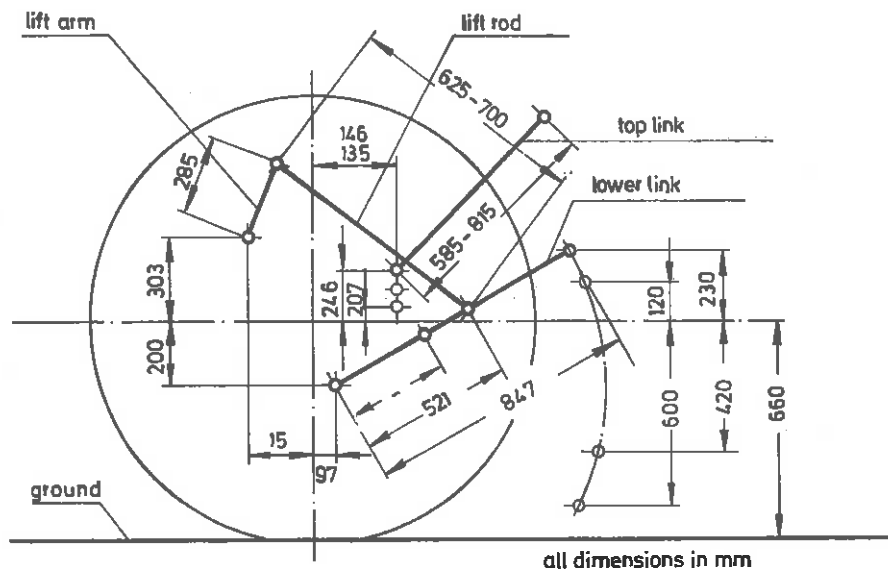
Date of tests: 30th September 1975

HYDRAULIC PUMP

- | | |
|--|------------|
| (1) Opening pressure of relief valve
in remote circuit | 177 bar |
| Sustained pressure by open relief valve | 172 bar |
| (2) Pump delivery rate at minimum pressure
and maximum engine speed | 33,6 l/min |
| (3) Pump delivery rate | 25,9 l/min |
| Delivery pressure | 162 bar |
| Hydraulic power | 7,0 kW |

POWER LIFT

Dimensions of linkage geometry for the table on page 28
(category II)





LIFTING FORCES

Lifting heights relative to horizontal lower links

mm	-417	-400	-300	-225	-220	-200	-100	0
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at hitch points maximum mechanical advantage

N					15350	16280	17250	17810
---	--	--	--	--	-------	-------	-------	-------

minimum mechanical advantage

N		13550	15030			16140	16790	16970
---	--	-------	-------	--	--	-------	-------	-------

Max. force exerted throughout the whole range 15350 N

Front of tractor does not lift with max. allowable front ballast

at test frame maximum mechanical advantage

N				15860		16510	17160	16970
---	--	--	--	-------	--	-------	-------	-------

minimum mechanical advantage

N	13830	14110	15030			15490	15490	15120
---	-------	-------	-------	--	--	-------	-------	-------

Max. force exerted throughout the whole range 14290 N

Force at which front of tractor lifts with maximum allowable front ballast 15740 N



+100	+200	+300	+320	+365	+400	+430	+480
------	------	------	------	------	------	------	------

lift rods 645 mm long

17990	17810	17710			17900	17900	
-------	-------	-------	--	--	-------	-------	--

lift rods 700 mm long

16970	16970	17250	17250				
-------	-------	-------	-------	--	--	--	--

lift rods 645 mm long, high top link pivot point

16420	15860	15220			14480		14290
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lift rods 700 mm long, low top link pivot point

14570	14010	13550		13270			
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All values of forces for pressure at max. hydraulic power
162 bar, see page 25; calculated from measurements at max.
oil pressure 172 bar



<u>LINKAGE GEOMETRY</u> when connected to the standard frame	Maximum mechanical advantage	Minimum mechanical advantage
Projected length in side view: Lower links Lift arms Lift rods Top link Distance of lift rod connection point from pivot point of lower link	847 mm 285 mm 625 mm 695 mm 521 mm	847 mm 285 mm 700 mm 686 mm 521 mm
The following dimensions are given relative to rear axle centre line 660 mm above ground Lower link pivot point Top link pivot point Lift arm pivot point Maximum and minimum height of lower link hitch points Height of lower link hitch points above ground when locked in highest transport position	97 mm behind, 200 mm below 135 mm behind, 246 mm above 15 mm forward, 303 mm above 230 mm above, 420 mm below	97 mm behind, 200 mm below 146 mm behind, 207 mm above 15 mm forward, 303 mm above 120 mm above, 600 mm below 780 mm

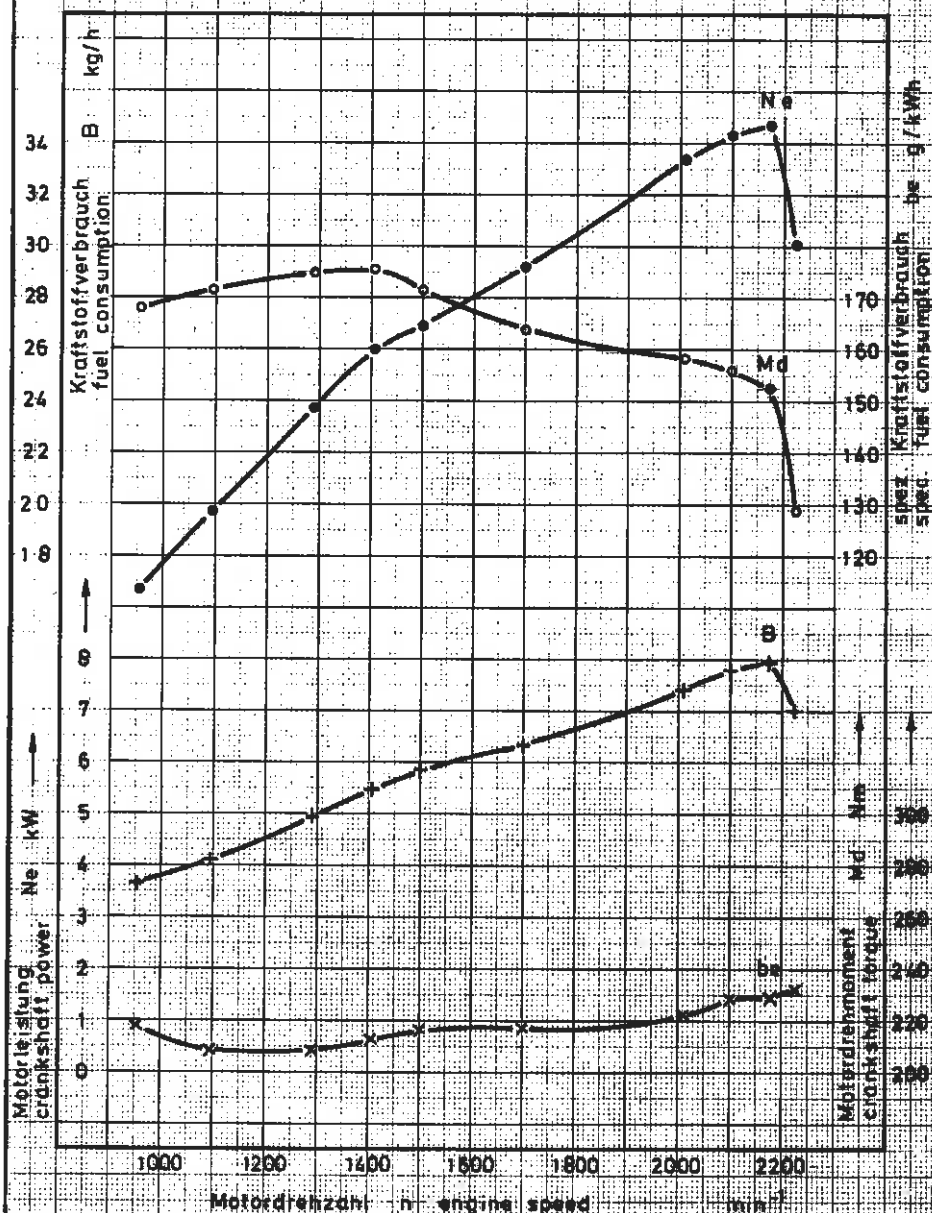
**PRÜFUNGS-ABTEILUNG**

FENDT FARMER 102 S

Motorleistung

Engine performance

Test Nr. 75-54



Lufttemperatur temperature	20 °C	Luftdruck pressure	1008 mb	Kraftstoff fuel	0,84 kg/l
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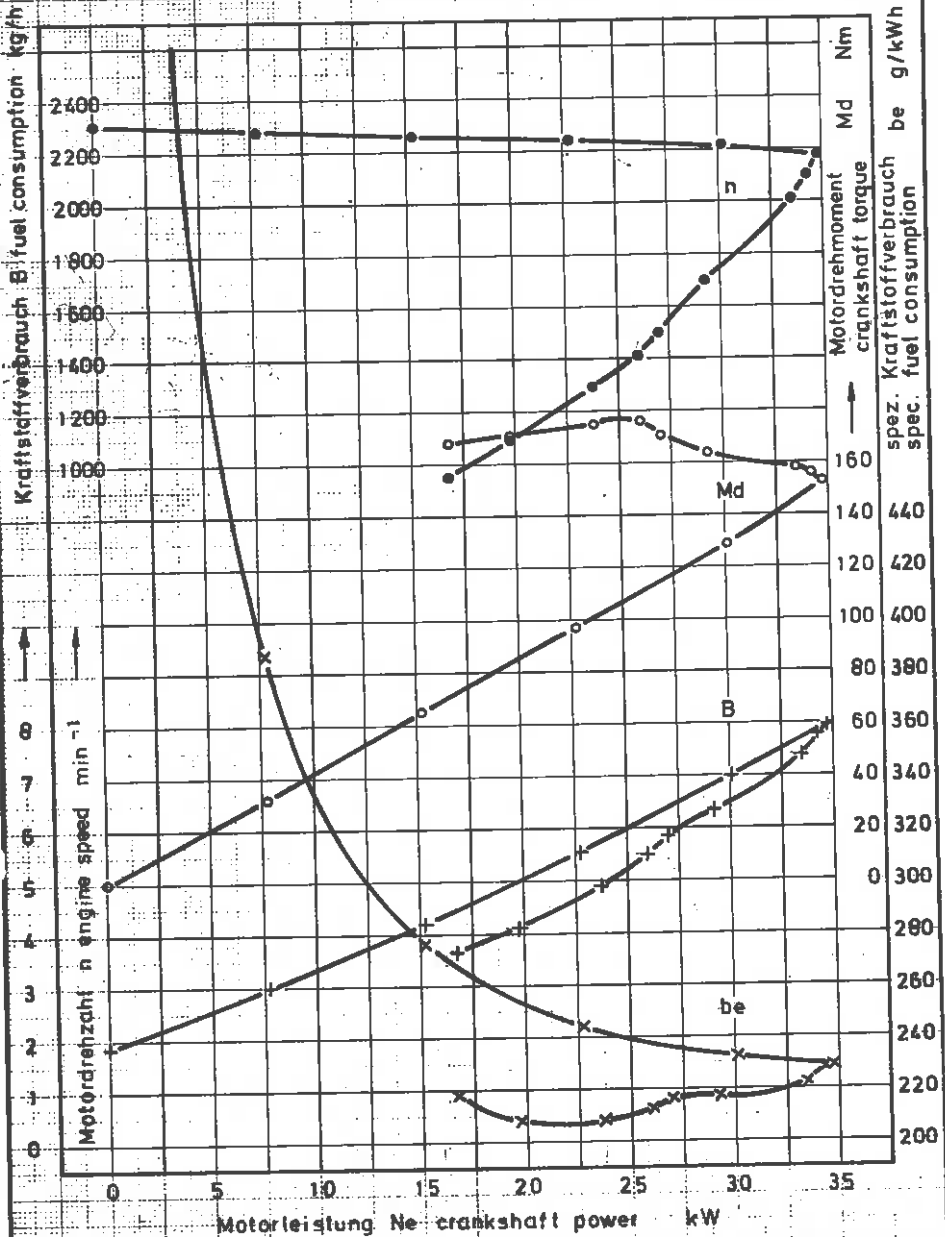


PRÜFUNGS ABTEILUNG

FENDT FARMER 102 S

Motorleistung Engine performance

Test Nr. 75-54



Lufttemperatur: 20 °C Luftdruck: 1098 mb Kraftstoff: 0.841 kg/l
 temperature: pressure: fuel:



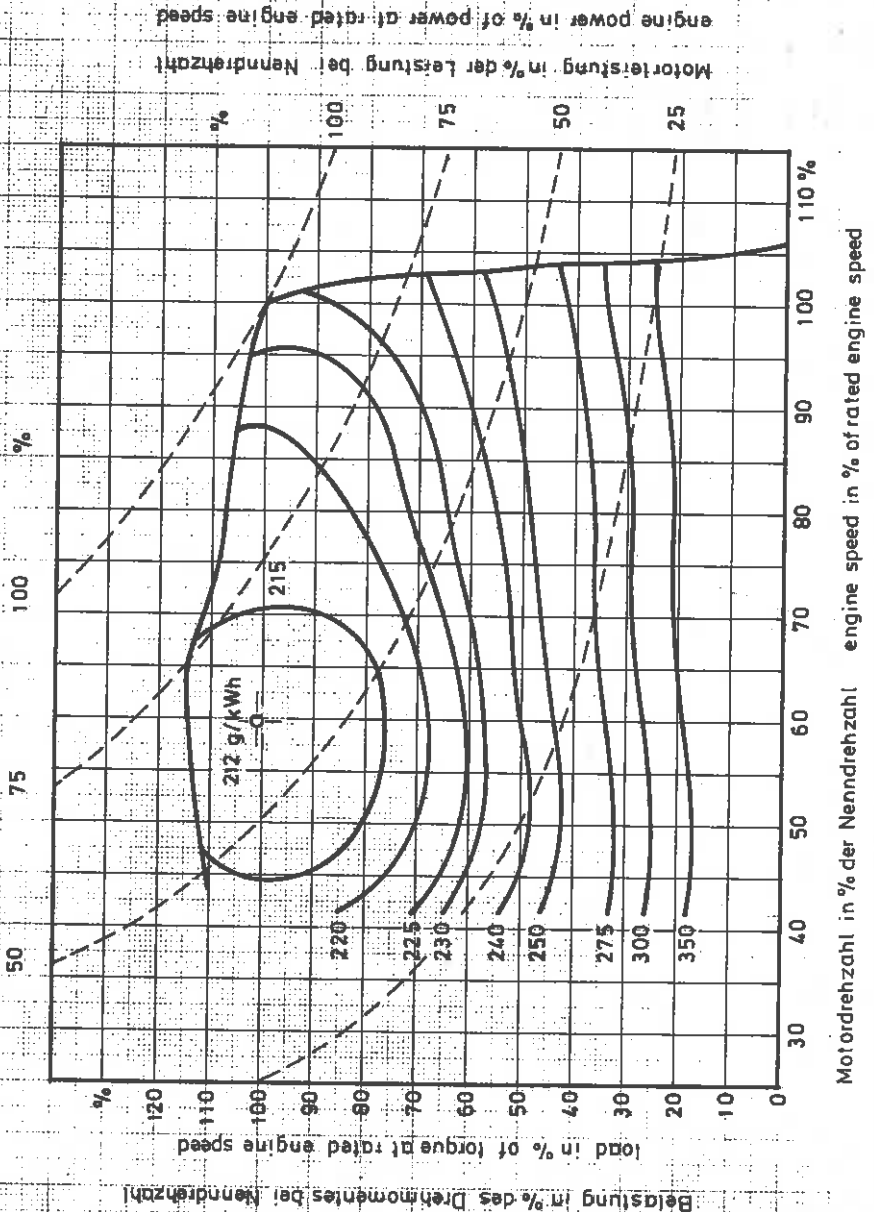
PRÜFUNGS-ABTEILUNG

FENDT FARMER 102 S

Motorleistung

Engine performance

Test Nr. 75-54



Lufttemperatur: 20 °C
temperature

Luftdruck: 1008 mb
pressure

Kraftstoff: 0,841 kg/t
fuel



