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January 2001

Nebraska Summary 388: Fendt 918 Vario Diesel

Nebraska Tractor Test Lab

University of Nebraska-Lincoln, tractortestlab@unl.edu

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SUMMARY OF OECD TEST 2068—NEBRASKA SUMMARY 388

FENDT 918 VARIO DIESEL

POWER TAKE-OFF PERFORMANCE

Power HP (kW)	Crank shaft speed rpm	Gal/hr (l/h)	lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Mean Atmospheric Conditions
MAXIMUM POWER AND FUEL CONSUMPTION					
Rated Engine Speed (PTO speed-1059 rpm)					
167.1 (124.6)	2151	9.20 (34.84)	0.381 (0.232)	18.16 (3.58)	
Standard Power Take-off Speed (1000 rpm)					
176.8 (131.3)	2031	9.44 (35.73)	0.372 (0.226)	18.64 (3.67)	
Maximum Power (2 hours)					
182.9 (136.4)	1902	9.48 (35.90)	0.358 (0.218)	19.29 (3.80)	

VARYING POWER AND FUEL CONSUMPTION

167.1 (124.6)	2151	9.20 (34.84)	0.381 (0.232)	18.16 (3.58)	Air temperature
145.9 (108.8)	2212	8.51 (32.21)	0.403 (0.245)	17.15 (3.38)	68°F (20°C)
110.6 (82.5)	2236	6.83 (25.87)	0.427 (0.260)	16.19 (3.19)	Relative humidity
74.7 (55.7)	2258	5.36 (20.30)	0.497 (0.302)	13.93 (2.74)	33%
37.5 (28.0)	2279	3.86 (14.60)	0.710 (0.432)	9.74 (1.92)	Barometer
--	2305	2.40 (9.09)	--	--	29.5" Hg (99.8 kPa)
Maximum Torque - 533 lb.-ft. (722 Nm) at 1499 rpm					
Maximum Torque Rise - 30.6%					
Torque rise at 1700 engine rpm - 27%					

DRAWBAR PERFORMANCE (Unballasted—Front Drive Engaged) FUEL CONSUMPTION CHARACTERISTICS

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Temp. °F cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
Maximum Power—Low Range									
140.8 (105.0)	10940 (48.66)	4.83 (7.77)	2150	4.1	0.460 (0.280)	15.22 (3.00)	185 (85)	52 (11)	29.4 (99.6)
75% of Pull at Maximum Power—Low Range									
110.8 (82.6)	8210 (36.52)	5.06 (8.15)	2224	3.1	0.494 (0.300)	14.16 (2.79)	183 (84)	54 (12)	29.4 (99.6)
50% of Pull at Maximum Power—Low Range									
75.4 (56.2)	5450 (24.24)	5.19 (8.35)	2248	2.1	0.574 (0.349)	12.18 (2.40)	183 (84)	52 (11)	29.4 (99.6)
75% of Pull at Reduced Engine Speed—Low Range									
111.2 (82.9)	8235 (36.62)	5.06 (8.15)	1861	2.9	0.451 (0.274)	15.50 (3.05)	181 (83)	55 (13)	29.4 (99.6)
50% of Pull at Reduced Engine Speed—Low Range									
75.9 (56.6)	5460 (24.28)	5.21 (8.39)	1890	1.8	0.505 (0.307)	13.86 (2.73)	181 (83)	55 (13)	29.4 (99.6)

Location of Test: DLG Testing Station for Agricultural Machinery Max - Eyth - Weg 1, D-64823, Gros-Umstadt, Germany

Dates of Test: July 2001-April 2002

Manufacturer: AGCO GmbH & Co. D-87616 Marktoberdorf, Germany

FUEL and OIL: Fuel No. 2 Diesel **Specific gravity converted to 60°/60° F (15°/15°C)** 0.831 **Fuel weight** 6.92 lbs/gal (0.829 kg/l) **Oil** SAE 10W40 **API service classification** API CD **Transmission lubricant** SAE 10W/30 **Hydraulic lubricant** SAE 10W/40 **Front axle lubricant** 85W/90 gear oil, API GL-5

ENGINE: Make MAN Diesel **Type** six cylinder vertical with turbocharger and air to air intercooler **Serial No.** 1649866319271 **Crankshaft** lengthwise **Rated engine speed** 2150 **Bore and stroke** 4.252" x 4.921" (108.0 mm x 125.0 mm) **Compression ratio** 17.0 to 1 **Displacement** 419 cu in (6871 ml) **Starting system** 12 volt **Lubrication** pressure **Air cleaner** two paper elements and aspirator **Oil filter** one full flow cartridge **Oil cooler** engine coolant heat exchanger for crankcase oil, radiator for hydraulic and transmission oil **Fuel filter** one paper element **Fuel cooler** radiator for pump return fuel **Muffler** underhood **Exhaust** vertical **Cooling medium temperature control** thermostat and variable speed fan

CHASSIS: **Type** front wheel assist **Serial No.** 926/24/3255 **Tread width** rear 64.0" (1625 mm) to 121.7" (3091 mm) front 63.6" (1615 mm) to 87.6" (2225 mm) **Wheel base** 111.8" (2840 mm) **Hydraulic control system** direct engine drive **Transmission** Fendt Vario. A combination of mechanical and hydrostatic sections allow an infinite speed adjustment within the ranges noted. The transmission has two mechanical ranges. **Nominal travel speeds mph (km/h)** forward: Low range 0-20 (0-32), high range 0-31 (0-50) reverse: Low range 0-12 (0-20), high range 0-25 (0-40) **Clutch** a foot pedal controls the hydrostatic oil flow **Brakes** wet disc hydraulically operated by two foot pedals which can be locked together **Steering** hydrostatic **Power take-off** 1000 rpm at 2031 engine rpm. **Unladen tractor mass** 18860 lb (8555 kg)

DRAWBAR PERFORMANCE **(Unballasted-Front Drive Engaged)** **MAXIMUM POWER AT SELECTED TRAVEL SPEEDS**

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr (kg/kW.h)	Consumption Hp.hr/gal (kW.h/l)	Temp. °F(°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
139.5 (104.0)	19535 (86.90)	2.68 (4.31)	1928	15.0	Low Range 0.478 (0.291)	14.62 (2.88)	185 (85)	54 (12)	29.7 (100.5)
150.2 (112.0)	17095 (76.04)	3.29 (5.30)	1901	8.2	Low Range 0.443 (0.269)	15.79 (3.11)	185 (85)	45 (7)	29.7 (100.5)
153.1 (114.2)	14930 (66.41)	3.85 (6.19)	1899	6.2	Low Range 0.435 (0.264)	16.09 (3.17)	185 (85)	55 (13)	29.7 (100.5)
153.1 (114.2)	12020 (53.46)	4.78 (7.69)	1903	5.0	Low Range 0.435 (0.264)	16.09 (3.17)	185 (85)	55 (13)	29.7 (100.5)
152.6 (113.8)	9705 (43.18)	5.90 (9.49)	1901	3.8	Low Range 0.437 (0.266)	16.01 (3.16)	185 (85)	55 (13)	29.7 (100.5)
151.5 (113.0)	8255 (36.72)	6.88 (11.08)	1900	3.3	Low Range 0.439 (0.267)	15.94 (3.14)	185 (85)	55 (13)	29.7 (100.5)
147.5 (110.0)	6925 (30.80)	7.99 (12.86)	1901	2.7	Low Range 0.450 (0.274)	15.53 (3.06)	185 (85)	54 (12)	29.7 (100.5)
141.7 (105.7)	16265 (72.34)	3.27 (5.26)	2004	7.3	High Range 0.470 (0.286)	14.87 (2.93)	185 (85)	50 (10)	29.6 (100.4)
148.3 (110.6)	14950 (66.49)	3.72 (5.99)	1900	6.1	High Range 0.477 (0.272)	15.63 (3.08)	185 (85)	50 (10)	29.6 (100.4)
153.1 (114.2)	11920 (53.03)	4.82 (7.75)	1901	4.4	High Range 0.447 (0.264)	16.14 (3.18)	185 (85)	50 (10)	29.6 (100.4)
153.5 (114.5)	9680 (43.06)	5.95 (9.57)	1901	3.5	High Range 0.433 (0.263)	16.19 (3.19)	185 (85)	48 (9)	29.6 (100.4)
152.6 (113.8)	8180 (36.38)	7.00 (11.26)	1905	3.1	High Range 0.435 (0.265)	16.08 (3.17)	183 (84)	39 (4)	29.6 (100.4)
149.7 (111.6)	6975 (31.02)	8.05 (12.95)	1903	2.4	High Range 0.443 (0.269)	15.79 (3.11)	183 (84)	45 (7)	29.6 (100.4)
150.6 (112.3)	6265 (27.87)	9.01 (14.51)	1900	2.2	High Range 0.441 (0.268)	15.85 (3.12)	183 (84)	43 (6)	29.6 (100.4)
148.3 (110.6)	5570 (24.77)	9.99 (16.08)	1901	2.0	High Range 0.447 (0.272)	15.63 (3.08)	183 (84)	45 (7)	29.6 (100.4)

REPAIRS AND ADJUSTMENTS: No repairs or adjustments

NOTE: The performance figures on this report are the result of replacing the electronic engine control module of the Fendt 926 with the 918 module.

REMARKS: All test results were determined from observed data obtained in accordance with official OECD test procedures. This tractor did not meet the manufacturer's claims of 40% torque rise, remote hydraulic flow of 30 gpm (112 l/min), 3 point lift at ball ends of 20238 lb (90 kN) nor cab sound level of 72.0 dB(A). The performance results on this summary were taken from OECD tests conducted under the Code II Test Code procedure.

We, the undersigned, certify that this is a true summary of data from OECD Report No. **2068**, Nebraska Summary 388, July 15, 2003.

Leonard L. Bashford
Director

M.F. Kocher
V.I. Adamchuk
W.P. Campbell
Board of Tractor Test Engineers

TIRES AND WEIGHT

Rear Tires—No., size, ply & psi (kPa)
Front Tires—No., size, ply & psi (kPa)
Height of Drawbar
Static Weight with operator—Rear
—Front
—Total

Tested Without Ballast

Two 480/80R46; **, 23 (160)
Two 14.9R38; **, 20 (140)
20.9 in (500 mm)
11475 lb (5205 kg)
7550 lb (3425 kg)
19025 lb (8630 kg)

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive	
	Engaged dB(A)	Disengaged dB(A)
Sound level at 4.6 mph (7.5 km/h) - no load	73.0	73.0
Maximum Sound level	78.0	76.0
Bystander	--	--

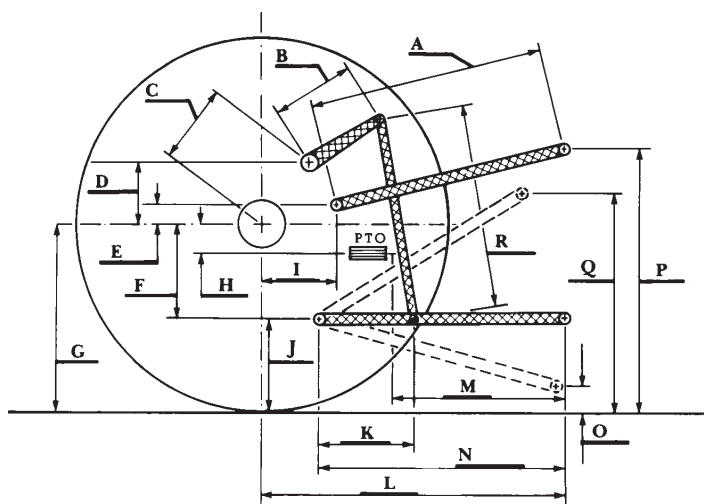
THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: III

Quick Attach: Walterscheid lower links

Maximum Force Exerted Through Whole Range: 16085 lbs (71.55 kN) (on the frame)
15175 lbs (67.50 kN) (at the hitch points)

- i) Opening pressure of relief valve: NA
Sustained pressure of the open relief valve: 2915 psi (201 bar)
- ii) Pump delivery rate at minimum pressure: 29.6 GPM (112.0 l/min)
- iii) Pump delivery rate at maximum
hydraulic power: 28.7 GPM (108.7 l/min)
Delivery pressure: 2540 psi (175 bar)
Power: 42.5 HP (31.7 kW)



HITCH DIMENSIONS AS TESTED—NO LOAD

	inch	mm
A	32.5	825
B	14.2	360
C	19.3	490
D	15.9	405
E	12.4	315
F	11.8	300
G	36.2	920
H	2.0	50
I	17.9	455
J	24.4	620
K	26.4	670
L	50.6	1285
M	27.0	685
N	40.6	1030
O	9.1	230
P	51.4	1305
Q	38.4	975
R	34.8	885