

SUMMARY OF OECD TEST 2136—NEBRASKA SUMMARY 442

FENDT 716 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-1103 rpm)					
141.5 (105.5)	2100	8.84 (33.47)	0.433 (0.264)	15.99 (3.15)	
Standard Power Take-off Speed (1000 rpm)					
153.0 (114.1)	1903	8.88 (33.61)	0.402 (0.245)	17.24 (3.40)	
Maximum Power (2 hours)					
153.0 (114.1)	1903	8.88 (33.61)	0.402 (0.245)	17.24 (3.40)	

VARYING POWER AND FUEL CONSUMPTION

141.5 (105.5)	2100	8.84 (33.47)	0.434 (0.264)	15.99 (3.15)	Air temperature
121.9 (90.9)	2123	7.81 (29.56)	0.443 (0.270)	15.63 (3.08)	66°F (19°C)
92.2 (68.7)	2144	6.29 (23.80)	0.473 (0.288)	14.66 (2.89)	Relative humidity
62.1 (46.3)	2167	4.63 (17.51)	0.517 (0.314)	13.41 (2.64)	24%
31.2 (23.3)	2186	3.20 (12.11)	0.710 (0.432)	9.76 (1.92)	Barometer
--	2204	1.86 (7.03)	--	--	29.6" Hg (100.4 kPa)

Maximum Torque - 509 lb.-ft. (690 Nm) at 1404 rpm
 Maximum Torque Rise - 43.7%
 Torque rise at 1700 engine rpm - 31%

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									
125.4 (93.5)	10000 (44.48)	4.70 (7.57)	2101	4.1	0.503 (0.306)	13.76 (2.71)	190 (88)	37 (3)	29.6 (100.3)
75% of Pull at Maximum Power—Low Range									
97.0 (72.3)	7490 (33.31)	4.86 (7.82)	2134	2.8	0.533 (0.324)	12.99 (2.56)	189 (87)	39 (4)	29.6 (100.3)
50% of Pull at Maximum Power—Low Range									
66.3 (49.4)	4980 (22.16)	4.99 (8.03)	2157	1.7	0.593 (0.361)	11.67 (2.30)	183 (84)	37 (3)	29.6 (100.3)
75% of Pull at Reduced Engine Speed—Low Range									
97.0 (72.3)	7490 (33.32)	4.85 (7.81)	1563	2.7	0.446 (0.271)	15.53 (3.06)	189 (87)	37 (3)	29.6 (100.3)
50% of Pull at Reduced Engine Speed—Low Range									
66.2 (49.4)	4980 (22.16)	4.99 (8.03)	1580	1.6	0.480 (0.292)	14.42 (2.84)	183 (84)	39 (4)	29.6 (100.3)

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

Dates of Test: December 2003 to February 2004

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

FUEL and OIL: Fuel No. 2 Diesel Specific gravity converted to 60°/60° F (15°/15°C) 0.832 Fuel weight 6.93 lbs/gal (0.8305 kg/l) Oil SAE 10W40 API service classification CD Transmission lubricant SAE 10W30 Hydraulic lubricant SAE 10W40 Front axle lubricant 85W/90 gear oil, API GL-5

ENGINE: Make Deutz Diesel Type six cylinder vertical with turbocharger and air to air intercooler Serial No. 00000861279 Crankshaft lengthwise Rated engine speed 2100 Bore and stroke 3.858" x 4.961" (98.0 mm x 126.0 mm) Compression ratio 18.0 to 1 Displacement 348 cu in (5702 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. 716/22/0100 Tread width rear 60.0" (1524 mm) to 121.4" (3084 mm) front 60.0" (1524 mm) to 88.0" (2235 mm) Wheel base 106.3" (2700 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 540 rpm at 1931 engine rpm or 1000 rpm at 1903 engine rpm. Unladen tractor mass 14815 lb (6720 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)
110.9 (82.7)	15635 (69.55)	2.66 (4.28)	2117	14.9	Low Range 0.544 (0.331)	12.72 (2.51)	190 (88)	37 (3)	29.6 (100.4)
118.3 (88.2)	14960 (66.54)	2.97 (4.77)	1943	14.9	Low Range 0.524 (0.319)	13.20 (2.60)	190 (88)	37 (3)	29.6 (100.3)
129.5 (96.6)	11740 (52.22)	4.14 (6.66)	1901	5.8	Low Range 0.479 (0.292)	14.44 (2.85)	192 (89)	34 (1)	29.6 (100.3)
130.2 (97.1)	9465 (42.10)	5.16 (8.30)	1901	3.9	Low Range 0.477 (0.290)	14.52 (2.86)	192 (89)	36 (2)	29.6 (100.4)
130.3 (97.2)	8285 (36.85)	5.90 (9.50)	1901	3.2	Low Range 0.476 (0.289)	14.54 (2.86)	192 (89)	34 (1)	29.6 (100.4)
128.9 (96.1)	6935 (30.84)	6.97 (11.22)	1902	2.4	Low Range 0.482 (0.293)	14.37 (2.83)	190 (88)	32 (0)	29.6 (100.4)
127.7 (95.2)	6020 (26.78)	7.95 (12.79)	1902	2.2	Low Range 0.487 (0.296)	14.21 (2.80)	192 (89)	32 (0)	29.6 (100.4)
125.7 (93.7)	5255 (23.37)	8.97 (14.43)	1903	1.8	Low Range 0.495 (0.301)	14.01 (2.76)	192 (89)	32 (0)	29.6 (100.4)
125.8 (93.8)	9500 (42.26)	4.97 (7.99)	1900	3.9	High Range 0.493 (0.300)	14.03 (2.76)	194 (90)	32 (0)	29.6 (100.4)
128.1 (95.5)	8475 (37.71)	5.67 (9.12)	1901	3.3	High Range 0.485 (0.295)	14.26 (2.81)	194 (90)	34 (1)	29.6 (100.4)
130.4 (97.2)	7170 (31.89)	6.82 (10.97)	1902	2.7	High Range 0.478 (0.291)	14.49 (2.86)	192 (89)	32 (0)	29.6 (100.4)
130.3 (97.2)	6120 (27.22)	7.99 (12.86)	1903	2.3	High Range 0.477 (0.290)	14.52 (2.86)	192 (89)	32 (0)	29.6 (100.4)
129.3 (96.4)	5290 (23.54)	9.16 (14.74)	1906	2.0	High Range 0.481 (0.292)	14.39 (2.83)	192 (89)	32 (0)	29.6 (100.4)

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

REMARKS: All test results were determined from observed data obtained in accordance with official OECD test procedures. 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. **2136**, Nebraska Summary 442, September 17, 2004.

Leonard L. Bashford
 Director

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 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 650/65R38;**, 12 (80)
 Two 540/65R28;**, 12 (80)
 17.7 in (450 mm)
 9250 lb (4195 kg)
 5730 lb (2600 kg)
 14980 lb (6795 kg)

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive	
	Engaged dB(A)	Disengaged dB(A)
Maximum Sound level	77.0	74.5
Sound level at 4.6 mph (7.5 km/h) - no load	69.5	70.0
Bystander	--	--

THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: III

Quick Attach: Walterscheid lower links

Maximum force exerted through whole range: 12035 lbs (53.5 kN)

i) Opening pressure of relief valve: NA

	one outlet set	two outlet sets combined
Sustained pressure of the open relief valve:	2945 psi (203 bar)	2945 psi (203 bar)

ii) Pump delivery rate at minimum pressure: 21.1 GPM (79.7 l/min) 29.6 GPM (112.0 l/min)

iii) Pump delivery rate at maximum

hydraulic power:	21.5 GPM (81.5 l/min)	25.6 GPM (97.0 l/min)
Delivery pressure:	2615 psi (180 bar)	2755 psi (190 bar)
Power:	32.8 HP (24.5 kW)	41.1 Hp (30.7 kW)

Observed Maximum Pressure psi. (bar)	2705 (186)
Location:	lift cylinder
Hydraulic oil temperature: °F (°C)	148 (64)
Location:	hydraulic sump
Category:	III
Quick attach:	No

SAE Static Test—System pressure 2385 psi (164 Bar)

Hitch point distance to ground level in. (mm)	8.2(208)	14.4(366)	20.8(528)	27.2(690)	33.8(858)	40.0(1016)
Lift force on frame lb	13761	12600	12618	13086	13104	12384
" " " " " " (kN)	(61.2)	(56.0)	(56.1)	(58.2)	(58.3)	(55.1)

HITCH DIMENSIONS AS TESTED - NO LOAD

	SAE test		OECD test	
	inch	mm	inch	mm
A	29.5	749	29.3	745
B	13.4	340	13.4	340
C	14.0	355	14.0	355
D	12.4	315	12.4	315
E	14.0	355	9.4	240
F	10.0	255	10.0	255
G	33.6	855	33.6	855
H	2.2	55	2.2	55
I	15.0	380	16.1	410
J	23.6	600	23.6	600
K	26.2	665	26.2	665
L	45.1	1145	45.1	1145
M	25.0	635	25.0	635
N	39.4	1000	39.4	1000
O	8.0	203	9.1	230
P	45.6	1158	50.6	1285
Q	37.1	943	38.0	965
R	29.5	749	29.1	740

