

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Nebraska Tractor Tests

Tractor Test and Power Museum, The Lester F.
Larsen

January 2004

Nebraska Summary 481: John Deere 6215 Diesel 16-Speed

Tractor Museum

University of Nebraska-Lincoln, TractorMuseumArchives@unl.edu

Follow this and additional works at: <https://digitalcommons.unl.edu/tractormuseumlit>



Part of the [Applied Mechanics Commons](#)

Museum, Tractor, "Nebraska Summary 481: John Deere 6215 Diesel 16-Speed" (2004). *Nebraska Tractor Tests*. 2150.

<https://digitalcommons.unl.edu/tractormuseumlit/2150>

This Article is brought to you for free and open access by the Tractor Test and Power Museum, The Lester F. Larsen at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Nebraska Tractor Tests by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

SUMMARY OF OECD TEST 2237—NEBRASKA SUMMARY 481

JOHN DEERE 6215 DIESEL

16 SPEED

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-1041 rpm)					
74.6 (55.6)	2298	5.06 (19.15)	0.473 (0.288)	14.73 (2.90)	
Standard Power Take-off Speed (1000 rpm)					
75.9 (56.6)	2208	4.97 (18.82)	0.456 (0.278)	15.28 (3.01)	
Maximum Power (2 hours)					
80.3 (59.9)	2002	5.04 (19.09)	0.437 (0.266)	15.94 (3.14)	

VARYING POWER AND FUEL CONSUMPTION

74.6 (55.6)	2298	5.06 (19.15)	0.473 (0.288)	14.73 (2.90)	Air temperature
64.8 (48.3)	2360	4.74 (17.94)	0.510 (0.310)	13.67 (2.69)	66°F (19°C)
49.3 (36.8)	2391	4.11 (15.57)	0.581 (0.354)	11.99 (2.36)	Relative humidity
33.2 (24.7)	2413	3.39 (12.83)	0.712 (0.433)	9.79 (1.93)	37%
17.0 (12.7)	2444	2.63 (9.96)	1.079 (0.656)	6.46 (1.27)	Barometer
--	2460	2.03 (7.68)	--	--	29.5" Hg (100.0 kPa)

Maximum Torque - 245 lb.-ft. (332 Nm) at 1296 rpm
 Maximum Torque Rise - 43.7%
 Torque rise at 1800 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 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)
Maximum Power—9th (C2) Gear									
62.2 (46.4)	4995 (22.23)	4.67 (7.51)	2302	5.8	0.565 (0.343)	12.39 (2.44)	138 (59)	43 (6)	29.8 (100.8)
75% of Pull at Maximum Power—9th (C2) Gear									
48.9 (36.5)	3745 (16.67)	4.90 (7.88)	2373	4.0	0.632 (0.385)	11.06 (2.18)	135 (57)	43 (6)	29.8 (100.8)
50% of Pull at Maximum Power—9th (C2) Gear									
33.5 (25.0)	2500 (11.12)	5.03 (8.09)	2404	2.3	0.765 (0.466)	9.14 (1.80)	129 (54)	43 (6)	29.8 (100.8)
75% of Pull at Reduced Engine Speed—10th (B4) Gear									
48.7 (36.3)	3750 (16.67)	4.87 (7.84)	2198	3.6	0.590 (0.359)	11.84 (2.33)	131 (55)	46 (8)	29.8 (100.8)
50% of Pull at Reduced Engine Speed—10th (B4) Gear									
33.4 (24.9)	2500 (11.12)	5.01 (8.06)	2221	2.2	0.709 (0.431)	9.87 (1.94)	131 (55)	46 (8)	29.8 (100.8)

Location of Test: DLG Testing Center Technology and Farm inputs, Max - Eyth - Weg 1, D-64823 Gros-Umstadt, Germany

Dates of Test: December 2004 to January 2005

Manufacturer: Deere & Company, Moline, Illinois, USA

FUEL and OIL: Fuel No. 2 Diesel **Specific gravity converted to 60°/60°F (15°/15°C)** 0.837 **Fuel weight** 6.97 lbs/gal (0.8354 kg/l) **Oil SAE 15W-40 API service classification** CF-4 **Transmission and hydraulic lubricant** John Deere Hy-Gard fluid **Front axle lubricant** SAE 80W90.

ENGINE: Make John Deere Diesel **Type** four cylinder vertical with turbocharger and intercooler **Serial No.** 867812 **Crankshaft** lengthwise **Rated engine speed** 2300 **Bore and stroke** 4.19" x 5.00" (106.5 mm x 127.0 mm) **Compression ratio** 16.9 to 1 **Displacement** 276 cu in (4525 ml) **Starting system** 12 volt **Lubrication** pressure **Air cleaner** two paper elements **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 **Muffler** underhood **Exhaust** vertical **Cooling medium temperature control** thermostat and variable speed fan

CHASSIS: **Type** front wheel assist **Serial No.** 424002 **Tread width** rear 63.5" (1612 mm) to 75.3" (1912 mm) front 59.7" (1516 mm) to 79.4" (2016 mm) **Wheel base** 94.5" (2400 mm) **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio **Nominal travel speeds mph (km/h)** first 1.14 (1.84) second 1.49 (2.39) third 2.06 (3.32) fourth 2.29 (3.69) fifth 2.63 (4.23) sixth 2.98 (4.79) seventh 3.77 (6.07) eighth 4.14 (6.66) ninth 4.90 (7.88) tenth 5.27 (8.48) eleventh 6.80 (10.95) twelfth 7.77 (12.50) thirteenth 8.67 (13.95) fourteenth 10.09 (16.24) fifteenth 14.01 (22.55) sixteenth 17.85 (28.73) reverse 1.19 (1.92), 1.55 (2.50), 2.16 (3.47), 2.39 (3.85), 2.75 (4.42), 3.11 (5.00), 3.94 (6.34), 4.32 (6.95), 5.11 (8.23), 5.51 (8.86), 7.10 (11.43), 8.11 (13.05), 9.05 (14.56), 10.53 (16.95), 14.62 (23.53), 18.64 (29.99) **Clutch** multiple wet disc hydraulically operated by foot pedal **Brakes** wet disc hydraulically operated by two foot pedals which can be locked together **Steering** hydrostatic **Power take-off** 540 rpm at 2143 engine rpm or 1000 rpm at 2208 engine rpm. **Unladen tractor mass** 9350 lb (4240 kg)

DRAWBAR PERFORMANCE
(Unballasted-Front Drive Engaged)
MAXIMUM POWER IN SELECTED GEARS

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)
6th (B2) Gear									
61.6 (45.9)	9480 (42.16)	2.44 (3.92)	2195	15.1	0.574 (0.349)	12.18 (2.40)	124 (51)	36 (2)	29.8 (100.9)
7th (C1) Gear									
65.0 (48.5)	8365 (37.22)	2.91 (4.69)	2002	12.1	0.536 (0.326)	13.05 (2.57)	135 (57)	37 (3)	29.8 (100.9)
8th (B3) Gear									
65.4 (48.8)	7525 (33.48)	3.26 (5.24)	2000	10.2	0.532 (0.324)	13.15 (2.59)	133 (56)	34 (1)	29.8 (100.9)
9th (C2) Gear									
67.2 (50.1)	6360 (28.29)	3.96 (6.37)	2001	8.0	0.517 (0.314)	13.53 (2.66)	135 (57)	36 (2)	29.8 (100.9)
10th (B4) Gear									
67.5 (50.3)	5885 (26.17)	4.30 (6.92)	2000	7.0	0.514 (0.313)	13.60 (2.68)	131 (55)	34 (1)	29.8 (100.9)
11th (C3) Gear									
67.7 (50.5)	4470 (19.88)	5.68 (9.15)	2001	4.9	0.513 (0.312)	13.62 (2.68)	135 (57)	36 (2)	29.8 (100.9)
12th (D1) Gear									
68.3 (50.9)	3905 (17.37)	6.56 (10.55)	2004	4.1	0.512 (0.311)	13.65 (2.69)	135 (57)	36 (2)	29.8 (100.9)
13th (C4) Gear									
67.9 (50.6)	3460 (15.39)	7.36 (11.85)	2003	3.5	0.512 (0.312)	13.64 (2.69)	133 (56)	36 (2)	29.8 (100.9)
14th (D2) Gear									
66.8 (49.8)	2905 (12.92)	8.63 (13.89)	2004	2.8	0.519 (0.316)	13.45 (2.65)	135 (57)	36 (2)	29.8 (100.9)

REPAIRS AND ADJUSTMENTS: No repairs or adjustments

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 3 point lift claim of 5028 lbs (2280 kg). 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. **2237** Nebraska Summary 481, July 21, 2005.

Leonard L. Bashford
 Director

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

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive	
	Engaged dB(A)	Disengaged dB(A)
At no load in 9th(C2) Gear	70.5	72.0
Bystander	--	--

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 18.4-34; 8; 12 (80)
 Two 13.6-24; 8; 12 (80)
 18.7 in (475 mm)
 5930 lb (2690 kg)
 3580 lb (1625 kg)
 9510 lb (4315 kg)

THREE POINT HITCH PERFORMANCE (OECD Static Test)

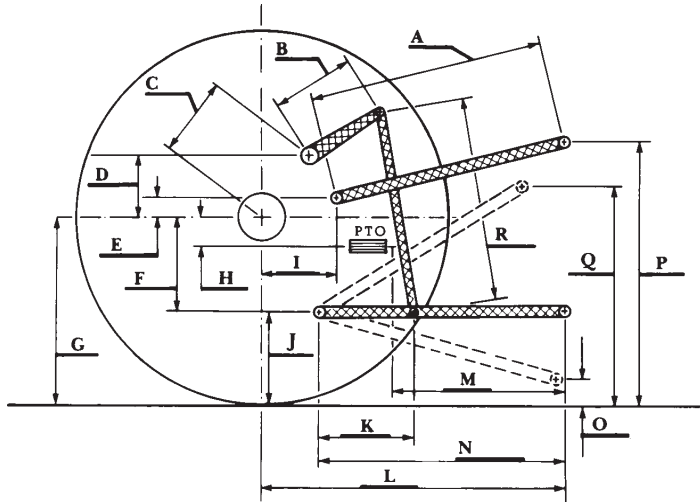
CATEGORY: II

Quick Attach: none

Maximum Force Exerted Through Whole Range: 4200 lbs (18.70 kN)

i) Opening pressure of relief valve:	NA	
Sustained pressure of the open relief valve:	3000 psi (207 bar)	
ii) Pump delivery rate at minimum pressure:	one outlet set	two outlet sets combined
iii) Pump delivery rate at maximum		
hydraulic power:	15.4 GPM (58.5 l/min)	15.2 GPM (57.4 l/min)
Delivery pressure:	2585 psi (178 bar)	2640 psi (182 bar)
Power:	23.3 HP (17.4 kW)	23.4 HP (17.4 kW)

HITCH DIMENSIONS AS TESTED—NO LOAD



	inch	mm
A	26.0	660
B	12.0	305
C	20.0	508
D	18.7	475
E	7.3	185
F	8.9	225
G	30.3	770
H	2.8	70
I	18.1	460
J	21.4	545
K	19.9	505
L	42.5	1080
M	21.7	550
N	37.2	945
O	7.9	200
P	45.4	1155
Q	34.3	872
R	30.9	785