

# SUMMARY OF OECD TEST 1821—NEBRASKA SUMMARY 287

## JOHN DEERE 6210 POWRQUAD 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
<b>MAXIMUM POWER AND FUEL CONSUMPTION</b>					
<b>Rated Engine Speed (PTO speed-1042 rpm)</b>					
74.7 (55.7)	2300	4.81 (18.19)	0.449 (0.273)	15.54 (3.06)	
<b>Standard Power Take-off Speed (1000 rpm)</b>					
76.0 (56.7)	2208	4.75 (17.98)	0.436 (0.265)	15.99 (3.15)	
<b>Maximum Power (2 hours)</b>					
78.6 (58.6)	1900	4.51 (17.08)	0.400 (0.243)	17.44 (3.43)	

#### VARYING POWER AND FUEL CONSUMPTION

74.7 (55.7)	2300	4.81 (18.19)	0.449 (0.273)	15.54 (3.06)	Air temperature
66.2 (49.4)	2397	4.59 (17.39)	0.484 (0.295)	14.41 (2.84)	77°F (25°C)
50.0 (37.3)	2419	3.90 (14.76)	0.544 (0.331)	12.83 (2.53)	Relative humidity
33.8 (25.2)	2442	3.30 (12.49)	0.681 (0.414)	10.25 (2.02)	33%
17.0 (12.7)	2457	2.53 (9.57)	1.039 (0.632)	6.72 (1.32)	Barometer
--	2473	1.84 (6.97)	--	--	29.5" Hg (99.8 kPa)

Maximum Torque - 249 lb.-ft. (338 Nm) at 1399 rpm  
 Maximum Torque Rise - 46.3%  
 Torque rise at 1800 engine rpm - 34%

#### 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)
<b>Maximum Power 7th (3B) Gear</b>									
61.8 (46.1)	5745 (25.56)	4.03 (6.49)	2302	4.1	0.541 (0.329)	12.94 (2.55)	189 (87)	68 (20)	29.9 (101.2)
<b>75% of Pull at Maximum Power 7th (3B) Gear</b>									
49.1 (36.6)	4310 (19.17)	4.27 (6.87)	2409	3.0	0.616 (0.375)	11.36 (2.24)	185 (85)	70 (21)	29.9 (101.2)
<b>50% of Pull at Maximum Power 7th (3B) Gear</b>									
33.4 (24.9)	2870 (12.77)	4.36 (7.01)	2434	2.0	0.746 (0.454)	9.38 (1.85)	181 (83)	70 (21)	29.9 (101.2)
<b>75% of Pull at Reduced Engine Speed 8th (1C) Gear</b>									
48.4 (36.1)	4310 (19.16)	4.21 (6.78)	2101	2.9	0.559 (0.340)	12.54 (2.47)	183 (84)	72 (22)	29.9 (101.2)
<b>50% of Pull at Reduced Engine Speed 8th (1C) Gear</b>									
33.4 (24.9)	2870 (12.76)	4.36 (7.03)	2157	2.0	0.663 (0.403)	10.55 (2.08)	181 (83)	73 (23)	29.9 (101.2)

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

**Dates of Test:** June - October, 1998

**Manufacturer:** Deere & Company, Moline, Illinois, USA

**FUEL and OIL:** Fuel No. 2 Diesel **Specific gravity converted to 60°/60° F (15°/15°C)** 0.838 **Fuel weight** 6.97 lbs/gal (0.836 kg/l) **Oil SAE** 0W-40 **API service classification** CF-4 **Transmission and hydraulic lubricant** John Deere Hy-Gard J 20 C fluid **Front axle lubricant** John Deere J 20 C fluid.

**ENGINE:** Make John Deere Diesel **Type** four cylinder vertical with turbocharger **Serial No.** 527709 **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.** 220132 **Tread width** rear 63.6" (1616 mm) to 75.3" (1912 mm) front 59.8" (1520 mm) to 79.1" (2010 mm) **Wheel base** 94.5" (2400 mm) **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio with partial (4) range operator controlled powershift **Nominal travel speeds mph (km/h)** first 1.44 (2.31) second 1.72 (2.78) third 2.07 (3.33) fourth 2.54 (4.08) fifth 2.88 (4.64) sixth 3.47 (5.59) seventh 4.16 (6.69) eighth 4.70 (7.56) ninth 5.09 (8.19) tenth 5.65 (9.09) eleventh 6.78 (10.91) twelfth 8.30 (13.36) thirteenth 10.10 (16.26) fourteenth 12.17 (19.59) fifteenth 14.57 (23.45) sixteenth 17.85 (28.73) reverse 1.70 (2.74), 2.05 (3.30), 2.45 (3.95), 3.01 (4.84), 3.42 (5.50), 4.12 (6.63), 4.93 (7.93), 5.57 (8.97), 6.04 (9.72), 6.72 (10.81), 8.03 (12.93), 9.85 (15.85), 11.98 (19.28), 14.43 (23.23), 17.28 (27.81), 21.17 (34.07) **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** 9610 lb (4360 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 cool- ing med	Temp. °C Air dry bulb	Barom. inch Hg (kPa)
5th (1B) Gear									
60.1 (44.8)	10695 (47.58)	2.11 (3.39)	1954	15.0	0.537 (0.327)	13.04 (2.57)	185 (85)	75 (24)	29.4 (99.7)
6th (2B) Gear									
62.1 (46.3)	8665 (38.54)	2.69 (4.32)	1900	7.5	0.503 (0.306)	13.91 (2.74)	189 (87)	75 (24)	29.7 (100.6)
7th (3B) Gear									
62.6 (46.7)	7170 (31.89)	3.27 (5.27)	1900	5.7	0.502 (0.306)	13.93 (2.75)	185 (85)	75 (24)	29.7 (100.6)
8th (1C) Gear									
62.1 (46.3)	6225 (27.70)	3.74 (6.02)	1900	4.6	0.508 (0.309)	13.78 (2.72)	187 (86)	73 (23)	29.7 (100.6)
9th (4B) Gear									
61.6 (45.9)	5650 (25.13)	4.09 (6.57)	1903	4.0	0.510 (0.310)	13.73 (2.70)	187 (86)	73 (23)	29.7 (100.6)
10th (2C) Gear									
62.1 (46.3)	5100 (22.68)	4.57 (7.35)	1905	3.6	0.508 (0.309)	13.79 (2.72)	185 (85)	75 (24)	29.7 (100.6)
11th (3C) Gear									
60.1 (44.9)	4115 (18.31)	5.48 (8.82)	1899	3.0	0.520 (0.317)	13.44 (2.65)	190 (88)	75 (24)	29.7 (100.6)
12th (4C) Gear									
59.7 (44.5)	3305 (14.70)	6.77 (10.90)	1901	2.3	0.526 (0.320)	13.30 (2.62)	187 (86)	73 (23)	29.7 (100.6)

**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 manufacturers claim of 47.2% torque rise, 5.5% power bulge, nor 3 point lift capacity of 4745 lb (2152 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. **1821**, Nebraska Summary 287, August 12, 1999.

Leonard L. Bashford  
 Director

M.F. Kocher  
 R. D. Grisso  
 G.J. Hoffman  
 Board of Tractor Test Engineers

<b>TRACTOR SOUND LEVEL WITH CAB</b>	<b>Front Wheel Drive</b>	
	<b>Engaged dB(A)</b>	<b>Disengaged dB(A)</b>
Sound level in 8th(1C) gear	73.0	72.5
Maximum Sound Level	75.0	74.0
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 18.4R34; \*\*, 12 (80)  
 Two 13.6-24; 8; 12 (80)  
 16.9 in (430 mm)  
 6130 lb (2780 kg)  
 3650 lb (1655 kg)  
 9780 lb (4435 kg)

## THREE POINT HITCH PERFORMANCE (OECD Static Test)

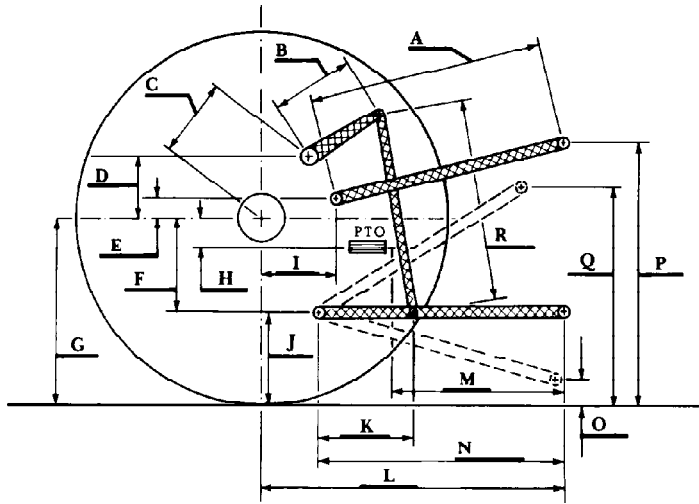
CATEGORY: II

Quick Attach: none

Maximum Force Exerted Through Whole Range: 3995 lbs (17.78 kN) (at the frame)  
 4605 lbs (20.48 kN) (at the hitch points)

- i) Opening pressure of relief valve: NA
- Sustained pressure of the open relief valve: 2845 psi (196 bar)
- ii) Pump delivery rate at minimum pressure: 30.1 GPM (113.9 l/min)
- iii) Pump delivery rate at maximum
  - hydraulic power: 28.1 GPM (106.4 l/min)
  - Delivery pressure: 2030 psi (140 bar)
  - Power: 33.3 HP (24.8 kW)

### HITCH DIMENSIONS AS TESTED NO LOAD



	inch	mm
A	25.8	655
B	12.0	305
C	19.9	505
D	18.7	475
E	7.4	188
F	8.9	225
G	30.3	770
H	2.8	70
I	18.1	460
J	21.4	545
K	19.8	503
L	42.5	1080
M	21.7	550
N	37.2	945
O	7.9	200
P	45.5	1155
Q	33.7	855
R	31.3	795