

SUMMARY OF OECD TEST 2453—NEBRASKA SUMMARY 635

JOHN DEERE 7530 AUTOQUAD PLUS DIESEL

20 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-1077 rpm)					
157.6 (117.5)	2100	9.04 (34.22)	0.400 (0.243)	17.43 (3.43)	
Standard Power Take-off Speed (1000 rpm)					
174.6 (130.2)	1950	9.63 (36.47)	0.385 (0.234)	18.12 (3.57)	
Maximum Power (1 hour)					
175.8 (131.1)	1901	9.64 (36.50)	0.381 (0.232)	18.22 (3.59)	

VARYING POWER AND FUEL CONSUMPTION					
157.6 (117.5)	2100	9.04 (34.22)	0.400 (0.243)	17.43 (3.43)	Air temperature
137.6 (102.6)	2158	8.20 (31.03)	0.415 (0.252)	16.78 (3.31)	66°F (19°C)
104.7 (78.1)	2187	6.88 (26.04)	0.458 (0.278)	15.23 (3.00)	Relative humidity
70.9 (52.9)	2226	5.64 (21.36)	0.554 (0.337)	12.57 (2.48)	50%
35.8 (26.7)	2246	4.42 (16.74)	0.861 (0.523)	8.10 (1.60)	Barometer
--	2248	2.40 (9.10)	--	--	29.6" Hg (100.3 kPa)

Maximum Torque - 559 lb.-ft. (758 Nm) at 1402 rpm
 Maximum Torque rise - 41.9%
 Torque rise at 1700 engine rpm - 36%

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 (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
Maximum Power—7th (B3) Gear									
142.8 (106.5)	10795 (48.01)	4.96 (7.98)	2101	5.0	0.447 (0.272)	15.58 (3.07)	190 (88)	73 (23)	29.4 (99.4)
75% of Pull at Maximum Power—7th (B3) Gear									
112.7 (84.1)	8055 (35.83)	5.25 (8.44)	2182	3.1	0.482 (0.293)	14.47 (2.85)	185 (85)	75 (24)	29.3 (99.3)
50% of Pull at Maximum Power—7th (B3) Gear									
77.2 (57.6)	5340 (23.76)	5.42 (8.72)	2218	1.8	0.559 (0.340)	12.48 (2.46)	178 (81)	75 (24)	29.3 (99.3)
75% of Pull at Reduced Engine Speed—8th (C1) Gear									
113.2 (84.4)	8085 (35.96)	5.25 (8.45)	1973	3.0	0.474 (0.289)	14.70 (2.90)	187 (86)	77 (25)	29.3 (99.3)
50% of Pull at Reduced Engine Speed—8th (C1) Gear									
77.2 (57.6)	5375 (23.90)	5.39 (8.67)	1995	1.9	0.545 (0.332)	12.78 (2.52)	181 (83)	79 (26)	29.3 (99.3)

Location of tests: DLG Test Centre, Technology and Farm inputs, Max-Eyth-Weg 1, D-64823 Gross-Umstadt, Germany

Dates of tests: May - July, 2007

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 (0.835 kg/l) **Oil SAE** 10W-40 **API service classification** CF-4 **Transmission and hydraulic lubricant** John Deere Hy-Gard II fluid **Front axle lubricant** SAE 80W90.

ENGINE: Make John Deere Diesel **Type** Six cylinder vertical with turbocharger and intercooler **Serial No.** L009994 **Crankshaft** lengthwise **Rated engine speed** 2100 **Bore and stroke** 4.19" x 5.00" (106.5 mm x 127.0 mm) **Compression ratio** 16.7 to 1 **Displacement** 414 cu in (6788 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.** 526014 **Tread width** rear 64.1" (1628 mm) to 78.3" (1990 mm) front 71.6" (1818 mm) to 75.3" (1912 mm) **Wheel base** 105.7" (2685 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 1.73 (2.78) second 2.08 (3.35) third 2.49 (4.01) fourth 3.05 (4.91) fifth 3.66 (5.89) sixth 4.41 (7.09) seventh 5.28 (8.49) eighth 5.82 (9.37) ninth 6.46 (10.40) tenth 7.01 (11.28) eleventh 8.39 (13.51) twelfth 10.28 (16.55) thirteenth 10.79 (17.36) fourteenth 12.98 (20.89) fifteenth 15.55 (25.02) sixteenth 18.64 (30.00) seventeenth 19.05 (30.65) eighteenth 22.44 (36.11) nineteenth 26.10 (42.00) twentieth 26.10 (42.00) (electronically limited) reverse 1.80 (2.90), 2.17 (3.49), 2.60 (4.18), 3.18 (5.12), 3.82 (6.15), 4.60 (7.40), 5.51 (8.86), 6.08 (9.78), 6.75 (10.86), 7.32 (11.78), 8.77 (14.11), 10.74 (17.28), 11.26 (18.12), 13.55 (21.81), 10.02 (26.12), 19.46 (31.31), 19.88 (31.99), 23.42 (37.69), 26.01 (42.00), 26.01 (42.00) (electronically limited) **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 1778 engine rpm or 1000 rpm at 1950 engine rpm. **Unladen tractor mass** 15960 lb (7240 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)	Temp.°F(°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)	
6th (B2) Gear									
140.5 (104.8)	15335 (68.21)	3.44 (5.53)	1947	15.0	0.480 (0.292)	14.52 (2.86)	189 (87)	77 (25)	29.3 (99.3)
7th (B3) Gear									
154.4 (115.1)	13140 (58.45)	4.41 (7.09)	1900	7.3	0.443 (0.269)	15.73 (3.10)	192 (89)	75 (24)	29.3 (99.3)
8th (C1) Gear									
154.6 (115.3)	11715 (52.10)	4.95 (7.97)	1892	5.4	0.440 (0.267)	15.85 (3.12)	190 (88)	70 (21)	29.4 (99.4)
9th (B4) Gear									
155.4 (115.9)	10540 (46.88)	5.53 (8.90)	1901	4.5	0.440 (0.268)	15.84 (3.12)	196 (91)	75 (24)	29.4 (99.4)
10th (C2) Gear									
157.0 (117.1)	9745 (43.36)	6.04 (9.72)	1902	3.9	0.430 (0.262)	16.19 (3.19)	194 (90)	72 (22)	29.4 (99.4)
11th (C3) Gear									
158.0 (117.8)	8110 (36.08)	7.31 (11.76)	1901	3.1	0.430 (0.262)	16.19 (3.19)	194 (90)	73 (23)	29.4 (99.4)
12th (C4) Gear									
156.9 (117.0)	6510 (28.96)	9.04 (14.55)	1902	2.4	0.439 (0.267)	15.89 (3.13)	194 (90)	72 (22)	29.4 (99.4)

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 2 test procedure.

We, the undersigned, certify that this is a true summary of data from OECD Report No. **2453**, Nebraska Summary 635, February 15, 2010.

Roger M. Hoy
Director

M.F. Kocher
V.I. Adamchuk
J.A. Smith
Board of Tractor Test Engineers

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive	
	Engaged dB(A)	Disengaged dB(A)
At no load in 6th(B2) Gear	71.2	71.1
Maximum Sound level in 6th (B2) Gear	72.1	72.2
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 710/70R38; **, 12 (80)
Two 600/65R28; **, 12 (80)
21.7 in (550 mm)
10010 lb (4540 kg)
6115 lb (2775 kg)
16125 lb (7315 kg)

This vehicle is equipped with an electronically controlled engine Power management system that monitors and boosts engine power output in certain circumstances. This is achieved by electronically changing the characteristics of the engine power-speed curve. The engine power management function ("boosted" power level) becomes active in the higher transmission gears (16th and above) and for road transport applications. The system is also activated when power transfer through the PTO exceeds a preset level (and forward speed exceeds 0.5 km/h), for mobile PTO driven implement applications. An override system is provided to enable PTO operations at the "boosted" power level while the vehicle is stationary for test purposes. The results of this PTO output test are presented below.

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—1077 rpm)					
178.0 (132.7)	2100	9.89 (37.43)	0.387 (0.235)	18.00 (3.55)	
Standard Power Take-off Speed - (1000 rpm)					
185.7 (138.5)	1950	10.18 (38.54)	0.382 (0.232)	18.24 (3.59)	
Maximum Power (1 hour)					
186.3 (138.9)	1899	10.23 (38.71)	0.383 (0.233)	18.21 (3.59)	

VARYING POWER AND FUEL CONSUMPTION

178.0 (132.7)	2100	9.89 (37.43)	0.387 (0.235)	18.00 (3.55)	Air temperature
156.5 (116.7)	2172	9.17 (34.72)	0.408 (0.248)	17.06 (3.36)	68°F (20°C)
118.7 (88.5)	2195	7.52 (28.48)	0.442 (0.269)	15.77 (3.11)	Relative humidity
80.3 (59.9)	2232	6.16 (23.32)	0.534 (0.325)	13.04 (2.57)	45%
40.5 (30.2)	2247	4.08 (15.44)	0.702 (0.427)	9.93 (1.96)	Barometer
--	2248	2.35 (8.91)	--	--	29.7"Hg (100.5 kPa)
--			--	--	

Maximum Torque 559 lb.-ft. (758 Nm) at 1300 rpm
Maximum Torque rise - 25.5%
Torque rise at 1800 rpm - 22%

HYDRAULIC PERFORMANCE

CATEGORY: III

Quick Attach: none

OECD Static test

Maximum force exerted through whole range: 11049 lbs (49.1 kN)

i) Sustained pressure of the open relief valve: 3135 psi (216 bar)

ii) Pump delivery rate at minimum pressure: 32.7 GPM (123.6 l/min)

iii) Pump delivery rate at maximum

hydraulic power: 29.0 GPM (110.0 l/min)

Delivery pressure: 2700 psi (186 bar)

Power: 45.7 HP (34.1 kW)

HITCH DIMENSIONS AS TESTED—NO LOAD

	inch	mm
A	27.2	692
B	16.1	410
C	24.6	625
D	23.8	605
E	12.8	325
F	10.8	275
G	34.2	870
H	6.9	175
I	19.4	493
J	23.4	595
K	22.4	569
L	45.9	1165
M	23.0	585
N	38.2	970
O	9.0	230
P	50.4	1280
Q	38.0	964
R	37.4	950

