

SUMMARY OF OECD TEST 2038—NEBRASKA SUMMARY 392

JOHN DEERE 7320 DIESEL

24 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-1042 rpm)					
109.8 (81.9)	2300	6.67 (25.24)	0.421 (0.256)	16.47 (3.24)	
Standard Power Take-off Speed (1000 rpm)					
115.3 (86.0)	2208	6.68 (25.29)	0.403 (0.245)	17.25 (3.40)	
Maximum Power (2 hours)					
117.1 (87.3)	2001	6.51 (24.64)	0.386 (0.235)	17.97 (3.54)	

VARYING POWER AND FUEL CONSUMPTION

109.8 (81.9)	2300	6.67 (25.24)	0.421 (0.255)	16.45 (3.24)	Air temperature
95.7 (71.4)	2371	6.04 (22.85)	0.438 (0.266)	15.86 (3.12)	79°F (26°C)
72.4 (54.0)	2393	5.07 (19.21)	0.487 (0.296)	14.26 (2.81)	Relative humidity
48.7 (36.3)	2418	4.10 (15.53)	0.585 (0.356)	11.88 (2.34)	40%
24.7 (18.4)	2440	3.21 (12.15)	0.905 (0.550)	7.67 (1.51)	Barometer
--	2463	2.19 (8.30)	--	--	29.4" Hg (99.7 kPa)

Maximum Torque - 353 lb.-ft. (479 Nm) at 1501 rpm
 Maximum Torque Rise - 40.9%
 Torque rise at 1800 engine rpm - 32%

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—10th (C2) Gear									
93.3 (69.6)	7710 (34.30)	4.54 (7.31)	2299	4.5	0.497 (0.302)	14.08 (2.77)	183 (84)	81 (27)	29.5 (99.8)
75% of Pull at Maximum Power—10th (C2) Gear									
73.6 (54.9)	5785 (25.73)	4.77 (7.68)	2382	3.2	0.546 (0.332)	12.80 (2.52)	180 (82)	81 (27)	29.5 (99.8)
50% of Pull at Maximum Power—10th (C2) Gear									
50.2 (37.4)	3865 (17.19)	4.87 (7.84)	2407	2.2	0.638 (0.388)	10.96 (2.16)	176 (80)	81 (27)	29.5 (99.8)
75% of Pull at Reduced Engine Speed—11th (C3) Gear									
73.1 (54.5)	5785 (25.74)	4.74 (7.62)	1977	3.5	0.483 (0.294)	14.47 (2.85)	181 (83)	81 (27)	29.5 (99.8)
50% of Pull at Reduced Engine Speed—11th (C3) Gear									
50.0 (37.3)	3860 (17.18)	4.85 (7.81)	2002	2.3	0.547 (0.333)	12.79 (2.52)	174 (79)	81 (27)	29.5 (99.8)

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

Dates of Test: May - July, 2002

Manufacturer: Deere & Company, Moline, Illinois, USA

FUEL and OIL: Fuel No. 2 Diesel Specific gravity converted to 60°/60° F (15°/15°C) 0.834 Fuel weight 6.94 lbs/gal (0.832 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 six cylinder vertical with turbocharger and intercooler Serial No. 665003 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 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. 321768 Tread width rear 71.5" (1815 mm) front 71.9" (1827 mm) Wheel base 104.3" (2650 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 0.99 (1.59) second 1.19 (1.91) third 1.42 (2.29) fourth 1.74 (2.80) fifth 2.40 (3.87) sixth 2.90 (4.66) seventh 3.47 (5.58) eighth 3.92 (6.31) ninth 4.25 (6.84) tenth 4.72 (7.60) eleventh 5.65 (9.10) twelfth 6.44 (10.36) thirteenth 6.93 (11.15) fourteenth 7.75 (12.48) fifteenth 9.28 (14.94) sixteenth 10.46 (16.84) seventeenth 11.37 (18.30) eighteenth 12.60 (20.27) nineteenth 14.12 (22.73) twentieth 15.08 (24.27) twenty-first 17.01 (27.37) twenty-second 18.47 (29.73) twenty-third 20.37 (32.78) twenty-fourth 24.94 (40.15) reverse 1.03 (1.66), 1.24 (1.99), 1.49 (2.39), 1.82 (2.93), 2.51 (4.04), 3.03 (4.87), 3.62 (5.83), 4.09 (6.59), 4.44 (7.14), 4.93 (7.94), 5.90 (9.50), 6.72 (10.82), 7.23 (11.64), 8.09 (13.02), 9.69 (15.60), 10.92 (17.58), 11.87 (19.10), 13.15 (21.17), 14.75 (23.73), 15.75 (25.35), 17.75 (28.57), 19.28 (31.03), 21.25 (34.20), 26.02 (41.88) 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 13005 lb (5900 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)
7th (B3) Gear									
90.7 (67.6)	13130 (58.40)	2.59 (4.17)	2006	15.0	0.501 (0.305)	13.96 (2.75)	183 (84)	81 (27)	29.5 (99.8)
8th (C1) Gear									
94.5 (70.5)	11530 (51.28)	3.07 (4.95)	1997	10.4	0.483 (0.294)	14.49 (2.86)	185 (85)	81 (27)	29.5 (99.8)
9th (B4) Gear									
97.1 (72.4)	10520 (46.80)	3.46 (5.57)	1995	6.9	0.470 (0.286)	14.87 (2.93)	180 (82)	81 (27)	29.5 (99.8)
10th (C2) Gear									
98.9 (73.8)	9510 (42.31)	3.90 (6.28)	2001	6.0	0.461 (0.281)	15.15 (2.99)	183 (84)	77 (25)	29.4 (99.5)
11th (C3) Gear									
99.1 (73.9)	7845 (34.90)	4.74 (7.63)	2000	4.3	0.458 (0.279)	15.27 (3.01)	181 (83)	70 (21)	29.4 (99.5)
12th (D1) Gear									
98.9 (73.8)	6835 (30.41)	5.43 (8.73)	2002	3.7	0.461 (0.280)	15.18 (2.99)	183 (84)	75 (24)	29.4 (99.5)
13th (C4) Gear									
98.2 (73.2)	6270 (27.89)	5.87 (9.45)	2003	3.3	0.461 (0.280)	15.18 (2.99)	180 (82)	73 (23)	29.4 (99.5)
14th (D2) Gear									
98.6 (73.5)	5615 (24.98)	6.58 (10.59)	1999	3.0	0.462 (0.281)	15.13 (2.98)	183 (84)	79 (26)	29.4 (99.5)
15th (D3) Gear									
97.6 (72.8)	4645 (20.66)	7.88 (12.69)	1992	2.6	0.467 (0.284)	14.97 (2.95)	183 (84)	75 (24)	29.4 (99.5)
16th (E1) Gear									
95.5 (71.2)	4005 (17.82)	8.94 (14.38)	1995	2.4	0.478 (0.291)	14.64 (2.89)	183 (84)	77 (25)	29.4 (99.5)
17th (D4) Gear									
95.3 (71.1)	3670 (16.33)	9.74 (15.67)	1996	2.0	0.476 (0.290)	14.70 (2.90)	183 (84)	79 (26)	29.4 (99.5)

REPAIRS AND ADJUSTMENTS: No repairs or adjustments

NOTE: The PTO, Drawbar and sound level data presented here are the results of tests conducted on the John Deere 6620 Autoquad Diesel.

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. **2038**, Nebraska Summary 392, July 1, 2003.

Leonard L. Bashford
 Director

M. F. Kocher
 V.I. Adamchuk
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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)
 21.5 in (545 mm)
 7825 lb (3550 kg)
 5345 lb (2425 kg)
 13170 lb (5975 kg)

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive	
	Engaged dB(A)	Disengaged dB(A)
At no load in 10th(C2) Gear	70.0	69.0
Maximum Sound level in 5th(B1) gear	71.0	71.5
Bystander	--	--

The following results are from the tests conducted on the John Deere 7220 PowrQuad Diesel

THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: II
 Quick Attach: None lift cylinders
 Maximum Force Exerted Through Whole Range: 5606 lbs (24.9 kN) (2x 75 mm)

CATEGORY: IIIN
 Quick Attach: None
 Maximum Force Exerted Through Whole Range: 8855 lbs (39.4 kN) (2x 90 mm)

Sustained pressure at compensator cutoff: 2935 psi (202 bar)

ii) Pump delivery rate at minimum pressure and rated engine speed:	1 outlet set 30.1 GPM(113.9 l/min)	2 outlet sets combined 30.3 GPM(114.7 l/min)
iii) Pump delivery rate at maximum hydraulic power:	28.1 GPM(106.4 l/min)	28.4 GPM(107.5 l/min)
Delivery pressure:	2403 psi (166 bar)	2707 psi (187 bar)
Power:	39.4 Hp (29.4 kW)	44.9 HP (33.4 kW)

THREE POINT HITCH PERFORMANCE-SAE TEST

Observed Maximum Pressure psi. (bar)	2935 (202)
Location:	lift cylinders
Hydraulic oil temperature: °F (°C)	140 (60)
Location:	hydraulic sump
Category:	II, IIIN
Quick attach:	No

Category II—75 mm cylinders - System pressure 2545 psi (175 Bar)

Hitch point distance to ground level in. (mm)	8.1 (206)	15.0 (381)	22.0 (559)	29.0 (737)	36.0 (914)
Lift force on frame lb	7290	7902	8060	7808	6939
" " " " " " (kN)	(32.4)	(35.1)	(35.9)	(34.7)	(30.9)

Category IIIN—90 mm cylinders - System pressure 2545 psi (175 Bar)

Hitch point distance to ground level in. (mm)	8.1 (206)	16.0 (406)	24.0 (610)	32.1 (815)	38.0 (965)
Lift force on frame lb	13312	12990	13045	12635	11571
" " " " " " (kN)	(59.2)	(57.8)	(58.0)	(56.2)	(51.5)

HITCH DIMENSIONS AS TESTED—NO LOAD Category II

	SAE TEST		OECD TEST	
	inch	mm	inch	mm
A	24.2	615	25.5	648
B	12.0	305	12.0	305
C	19.9	505	19.9	505
D	18.7	475	18.7	475
E	7.1	180	7.1	180
F	8.8	224	8.8	224
G	32.3	820	32.3	820
H	2.0	50	2.0	50
I	17.8	452	17.8	452
J	23.5	596	23.5	596
K	19.8	503	19.8	503
L	42.5	1080	42.5	1080
M	21.7	550	21.7	550
N	37.2	945	37.2	945
O	8.0	203	8.0	203
P	42.4	1078	47.5	1206
Q	33.4	848	33.4	848
R	31.3	795	31.3	795

