

NEBRASKA OECD TRACTOR TEST 1991—SUMMARY 759

JOHN DEERE 8360R DIESEL INFINITELY VARIABLE TRANSMISSION

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—1049 rpm)					
321.84 (240.00)	2100	17.65 (66.81)	0.387 (0.235)	18.24 (3.59)	
Standard Power Take-off Speed(1001 rpm)					
346.28 (258.22)	2000	18.71 (70.84)	0.381 (0.232)	18.50 (3.65)	
Maximum Power (1 hour)					
355.36 (265.00)	1800	19.21 (72.72)	0.382 (0.232)	18.50 (3.64)	

VARYING POWER AND FUEL CONSUMPTION

321.84 (240.00)	2100	17.65 (66.81)	0.387 (0.235)	18.24 (3.59)	Air temperature
281.20 (209.69)	2155	15.68 (59.35)	0.393 (0.239)	17.93 (3.53)	73°F (23°C)
211.77 (157.92)	2165	12.48 (47.23)	0.416 (0.253)	16.97 (3.34)	Relative humidity
142.03 (105.92)	2175	9.42 (35.67)	0.468 (0.285)	15.08 (2.97)	22%
71.24 (53.12)	2186	6.43 (24.35)	0.637 (0.388)	11.08 (2.18)	Barometer
3.76 (2.81)	2196	4.33 (16.38)	8.116 (4.937)	0.87 (0.17)	29.06" Hg (98.41 kPa)

Maximum Torque - 1139 lb.-ft. (1544 Nm) at 1600 rpm

Maximum Torque Rise - 41.2%

Torque rise at 1700 engine rpm - 35%

Power increase at 1800 rpm - 10.5%

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 dry med	Air dry bulb	Barom. inch Hg (kPa)
Maximum Power—5.6 mph (9.0 km/h)									
279.15 (208.16)	20226 (89.97)	5.18 (8.33)	2101	5.4	0.445 (0.271)	15.86 (3.12)	213 (100)	50 (10)	28.92 (97.93)
75% of Pull at Maximum Power—5.6 mph (9.0 km/h)									
218.86 (163.20)	15170 (67.48)	5.41 (8.71)	2159	3.8	0.462 (0.281)	15.27 (3.01)	191 (88)	53 (12)	28.76 (97.39)
50% of Pull at Maximum Power—5.6 mph (9.0 km/h)									
148.68 (110.87)	10112 (44.98)	5.52 (8.88)	2170	2.5	0.521 (0.317)	13.55 (2.67)	209 (98)	53 (12)	28.75 (97.36)
75% of Pull at Reduced Engine Speed—Auto mode									
219.19 (163.45)	15266 (67.91)	5.39 (8.67)	1785	3.8	0.435 (0.264)	16.23 (3.20)	200 (93)	53 (12)	28.75 (97.36)
50% of Pull at Reduced Engine Speed—Auto mode									
148.63 (110.83)	10223 (45.47)	5.45 (8.77)	1440	2.5	0.445 (0.271)	15.86 (3.12)	187 (86)	54 (12)	28.75 (97.36)

Location of tests: Nebraska Tractor Test Laboratory,
University of Nebraska, Lincoln, Nebraska 68583-0832

Dates of tests: April 20 - May 5, 2011

Manufacturer: John Deere Tractor Works, 3500
East Donald St., P.O. Box 270, Waterloo Ia,
50704-0270

FUEL, OIL and TIME: Fuel No. 2 Diesel
Specific gravity converted to 60°/60°F (15°/15°C)
0.8476 **Fuel weight** 7.057 lbs/gal (0.846 kg/l)
Oil SAE 15W-40 API service classification CI-4
Transmission and hydraulic lubricant John Deere
Hy-Gard fluid **Front axle lubricant** John Deere
Hy-Gard fluid **Total time engine was operated:**
29.5 hours

ENGINE: Make John Deere Diesel **Type** six
cylinder vertical with two turbochargers and air to
air aftercooler **Serial No.***RG6090R000668*
Crankshaft lengthwise **Rated engine speed** 2100
Bore and stroke 4.661" x 5.354" (118.4 mm x 136.0
mm) **Compression ratio** 16.0 to 1 **Displacement**
548 cu in (8984 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 and
water separator **Fuel cooler** radiator for pump
return fuel **Exhaust** regenerative particulate filter
integrated within a vertical muffler **Cooling medium**
temperature control 2 thermostats and variable
speed fan

ENGINE OPERATING PARAMETERS: Fuel
rate: 119.7 - 129.6 lb/h (54.3 - 58.8 kg/h) **High idle:**
2175 - 2225 rpm **Turbo boost:** nominal 33.4 - 36.3
psi (230 - 250 kPa) as measured 35.0 psi (240 kPa)

CHASSIS: Type front wheel assist with duals
Serial No.*1RW8360RPBD041126* **Tread width**
rear 60.0" (1524 mm) to 128.9" (3270 mm) front
64.0" (1625 mm) to 87.6" (2225 mm) **Wheelbase**
118.9" (3020 mm) **Hydraulic control system** direct
engine drive **Transmission** Infinitely variable with
four mechanical ranges and automatic shifting
between ranges. **Nominal travel speeds mph (km/**
h) forward - 0 - 26.1 mph, (0 - 42 km/h) reverse - 0
- 12.4 mph (0-20 km/h) **Clutch** a foot pedal controls
the hydrostatic oil flow **Brakes** wet multiple disc
hydraulically operated by two foot pedals that can
be locked together **Steering** hydrostatic **Power**
take-off 1000 rpm at 2000 engine rpm **Unladen**
tractor mass 28045 lb (12721 kg)

DRAWBAR PERFORMANCE
UNBALLASTED - FRONT DRIVE ENGAGED - 2100 RPM
MAXIMUM POWER AT SELECTED SPEED SETTINGS

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	Temp. °F (°C) Air dry bulb	Barom. inch Hg (kPa)	
241.00 (179.71)	27396 (121.86)	3.30 (5.30)	2151	11.6	0.495 (0.301)	14.24 (2.81)	200 (93)	48 (9)	28.56 (96.72)
261.79 (195.21)	26538 (118.04)	3.70 (5.95)	2102	10.5	0.481 (0.291)	14.69 (2.89)	208 (98)	49 (9)	28.62 (96.92)
274.30 (204.54)	24000 (106.76)	4.29 (6.90)	2101	7.3	0.459 (0.279)	15.38 (3.03)	213 (100)	50 (10)	28.37 (96.07)
279.55 (208.46)	22452 (99.87)	4.67 (7.52)	2100	6.3	0.447 (0.272)	15.79 (3.11)	213 (100)	51 (10)	28.35 (96.01)
279.15 (208.16)	20226 (89.97)	5.18 (8.33)	2101	5.4	0.445 (0.271)	15.86 (3.12)	213 (100)	50 (10)	28.92 (97.93)
278.16 (207.42)	17973 (79.95)	5.81 (9.34)	2100	4.5	0.449 (0.273)	15.73 (3.10)	212 (100)	48 (9)	28.94 (98.00)
277.33 (206.80)	16216 (72.13)	6.41 (10.32)	2101	4.1	0.453 (0.276)	15.58 (3.07)	213 (101)	50 (10)	28.93 (97.97)
276.60 (206.26)	14762 (65.66)	7.03 (11.31)	2099	3.6	0.453 (0.275)	15.59 (3.07)	213 (100)	52 (11)	28.86 (97.73)
273.22 (203.74)	13437 (59.77)	7.63 (12.27)	2101	3.4	0.456 (0.278)	15.46 (3.05)	215 (101)	52 (11)	28.84 (97.66)
272.24 (203.01)	12374 (55.04)	8.25 (13.28)	2101	3.1	0.458 (0.279)	15.40 (3.03)	214 (101)	52 (11)	28.81 (97.56)

REPAIRS AND ADJUSTMENTS: The load sense differential pressure was adjusted prior to the hydraulic flow tests.

NOTE 1: During testing the engine was operated for 29.5 hours. During this period, the tractor experienced one active exhaust filter cleaning while operated in Auto Filter Cleaning Mode. This occurred after 23.2 hours of operation.

NOTE 2: The manufacturer declared that the active exhaust filter cleanings consume an average of 0.04 gal/hr (0.15 l/hr) across total tractor use. Fuel consumed during the active exhaust filter cleanings will normally be less than 1% of the total fuel consumed. The manufacturer declared that no active exhaust filter cleanings occurred during 12 hours of continuous operation of the tractor in the Auto Filter Cleaning Mode at 30% loading and the engine speed at which the maximum torque occurs.

NOTE 3: Auto mode was selected by engaging the Full Auto icon on the control panel screen.

REMARKS: All test results were determined from observed data obtained in accordance with official OECD, SAE and Nebraska test procedures. This tractor did not meet the manufacturer's claims of 44% torque rise nor 12% power bulge. For the maximum power tests the fuel temperature at the injection pump inlet was maintained at 102°F(39°C). The performance figures on this summary were taken from a test conducted under the OECD Code 2 test code procedure.

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. **1991**, Nebraska Summary 759, May 18, 2011.

Roger M. Hoy
 Director

M.F. Kocher
 D.R. Keshwani
 P.J. Jasa
 Board of Tractor Test Engineers

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive	
	Engaged dB(A)	Disengaged dB(A)
At no load at 4.6 mph (7.5 km/h) engine speed - 2200 rpm	71.0	70.9
At no load at 4.6 mph (7.5 km/h) engine speed - 1200 rpm	64.4	64.0
Transport speed - no load - manual mode		71.7
Transport speed - no load - Full Auto mode		70.6
Bystander		83.1

TIRES, BALLAST AND WEIGHT	With Ballast	Without Ballast
Rear Tires - No., size, ply & psi(kPa)	Six 480/80R50;***;12(85)	Four 480/80R50;***;12(85)
Ballast - Triples (total)	2370 lb (1075 kg)	None
- Cast Iron (total)	5340 lb (2422 kg)	None
Front Tires - No., size, ply & psi(kPa)	Four 420/85R34;***;19(130)	Two 420/85R34;***;26(180)
Ballast - Duals (total)	1600 lb (726 kg)	None
- Cast Iron (total)	2500 lb (1134 kg)	None
Height of Drawbar	20.5 in (520 mm)	21.0 in (535 mm)
Static Weight with operator - Rear	22575 lb (10240 kg)	16260 lb (7375 kg)
- Front	17455 lb (7917 kg)	11960 lb (5425 kg)
- Total	40030 lb (18157 kg)	28220 lb (12800 kg)

DRAWBAR PERFORMANCE
UNBALLASTED - FRONT DRIVE ENGAGED - 1800 RPM
MAXIMUM POWER AT SELECTED SPEED SETTINGS

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr (kg/kW.h)	Fuel Consumption Hp.hr/gal (kW.h/l)	Temp. °F(°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
3.7 mph (6.0 km/h)									
240.42 (179.28)	27348 (121.65)	3.30 (5.30)	2150	11.6	0.499 (0.303)	14.15 (2.79)	198 (92)	48 (9)	28.56 (96.72)
4.2 mph (6.8 km/h)									
261.78 (195.21)	26506 (117.90)	3.71 (5.96)	2103	10.4	0.477 (0.290)	14.78 (2.91)	209 (98)	49 (9)	28.58 (96.78)
4.7 mph (7.6 km/h)									
280.38 (209.08)	25793 (114.73)	4.08 (6.56)	2044	9.3	0.463 (0.282)	15.24 (3.00)	213 (101)	51 (11)	28.37 (96.07)
5.1 mph (8.2 km/h)									
292.37 (218.02)	24760 (110.14)	4.43 (7.13)	2023	7.7	0.452 (0.275)	15.62 (3.08)	214 (101)	51 (11)	28.35 (96.01)
5.6 mph (9.0 km/h)									
297.54 (221.87)	23810 (105.91)	4.69 (7.54)	1939	7.2	0.448 (0.273)	15.75 (3.10)	213 (101)	50 (10)	28.91 (97.90)
6.2 mph (10.0 km/h)									
300.20 (223.86)	23162 (103.03)	4.87 (7.83)	1800	6.7	0.452 (0.275)	15.61 (3.07)	212 (100)	48 (9)	28.94 (98.00)
6.8 mph (11.0 km/h)									
303.47 (226.29)	21084 (93.79)	5.40 (8.69)	1799	5.8	0.446 (0.271)	15.83 (3.12)	213 (100)	51 (10)	28.91 (97.90)
7.5 mph (12.0 km/h)									
305.99 (228.17)	19343 (86.04)	5.93 (9.54)	1800	5.0	0.442 (0.269)	15.96 (3.14)	212 (100)	52 (11)	28.86 (97.73)
8.1 mph (13.0 km/h)									
304.74 (227.24)	17686 (78.67)	6.47 (10.40)	1800	4.5	0.447 (0.272)	15.80 (3.11)	214 (101)	52 (11)	28.83 (97.63)
8.7 mph (14.0 km/h)									
304.81 (227.30)	16313 (72.56)	7.01 (11.27)	1802	4.1	0.444 (0.270)	15.89 (3.13)	214 (101)	52 (11)	28.80 (97.53)
9.3 mph (15.0 km/h)									
303.50 (226.32)	15139 (67.34)	7.52 (12.09)	1801	3.8	0.446 (0.271)	15.84 (3.12)	214 (101)	52 (11)	28.80 (97.53)
9.9 mph (16.0 km/h)									
301.00 (224.46)	14037 (62.44)	8.05 (12.95)	1800	3.6	0.451 (0.274)	15.64 (3.08)	214 (101)	53 (11)	28.79 (97.49)

DRAWBAR PERFORMANCE
UNBALLASTED - FRONT DRIVE ENGAGED - AUTO MODE
MAXIMUM POWER AT SELECTED SPEED SETTINGS

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption		Temp. °F (°C)		Barom. inch Hg (kPa)
					lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	cool- ing med	Air dry bulb	
3.7 mph (6.0 km/h)									
238.83 (178.09)	27144 (120.74)	3.30 (5.31)	1877	11.7	0.473 (0.288)	14.93 (2.94)	208 (98)	48 (9)	28.55 (96.68)
4.2 mph (6.8 km/h)									
265.75 (198.17)	26330 (117.12)	3.79 (6.09)	1998	10.6	0.465 (0.283)	15.19 (2.99)	210 (99)	49 (10)	28.61 (96.88)
4.7 mph (7.6 km/h)									
290.87 (216.90)	25912 (115.26)	4.21 (6.78)	1967	9.5	0.457 (0.278)	15.44 (3.04)	213 (101)	51 (10)	28.37 (96.07)
5.1 mph (8.2 km/h)									
298.62 (222.68)	24739 (110.04)	4.53 (7.28)	1942	7.8	0.450 (0.274)	15.68 (3.09)	214 (101)	51 (11)	28.36 (96.04)
5.6 mph (9.0 km/h)									
295.93 (220.68)	23822 (105.96)	4.66 (7.50)	1942	7.4	0.451 (0.275)	15.64 (3.08)	214 (101)	49 (10)	28.91 (97.90)
6.2 mph (10.0 km/h)									
296.41 (221.03)	23130 (102.89)	4.81 (7.73)	1942	6.8	0.451 (0.274)	15.65 (3.08)	214 (101)	49 (9)	28.92 (97.93)
6.8 mph (11.0 km/h)									
300.34 (223.96)	21117 (93.93)	5.34 (8.59)	1942	5.8	0.443 (0.270)	15.91 (3.13)	214 (101)	51 (10)	28.91 (97.90)
7.5 mph (12.0 km/h)									
302.54 (225.60)	19362 (86.13)	5.86 (9.43)	1942	5.1	0.442 (0.269)	15.97 (3.15)	214 (101)	52 (11)	28.84 (97.66)
8.1 mph (13.0 km/h)									
301.24 (224.63)	17705 (78.75)	6.38 (10.27)	1941	4.6	0.443 (0.270)	15.92 (3.14)	215 (101)	52 (11)	28.82 (97.60)
8.7 mph (14.0 km/h)									
300.89 (224.37)	16373 (72.83)	6.89 (11.09)	1941	4.1	0.442 (0.269)	15.96 (3.14)	214 (101)	52 (11)	28.79 (97.49)
9.3 mph (15.0 km/h)									
298.62 (222.68)	15121 (67.26)	7.41 (11.92)	1940	3.8	0.446 (0.271)	15.84 (3.12)	214 (101)	52 (11)	28.79 (97.49)
9.9 mph (16.0 km/h)									
297.20 (221.62)	13831 (61.52)	8.06 (12.96)	1941	3.4	0.450 (0.274)	15.68 (3.09)	214 (101)	53 (12)	28.78 (97.46)

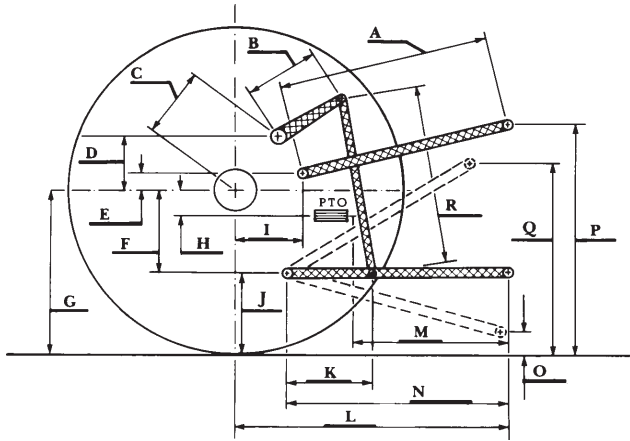
DRAWBAR PERFORMANCE
BALLASTED- FRONT DRIVE ENGAGED - 1800 RPM
MAXIMUM POWER AT SELECTED SPEED SETTINGS

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr (kg/kW.h)	Fuel Consumption Hp.hr/gal (kW.h/l)	Temp. °F(°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
236.80 (176.58)	39429 (175.39)	2.26 (3.63)	2126	13.0	2.6mph(4.2km/h) 0.518 (0.315)	13.63 (2.68)	211 (99)	52 (11)	28.72 (97.26)
270.21 (201.49)	38050 (169.25)	2.66 (4.28)	2034	9.8	3.1mph(5.0km/h) 0.485 (0.295)	14.54 (2.86)	214 (101)	54 (12)	28.72 (97.26)
287.64 (214.49)	36013 (160.19)	3.00 (4.82)	1935	7.8	3.6mph(5.8km/h) 0.468 (0.285)	15.08 (2.97)	215 (102)	55 (13)	28.72 (97.26)
297.47 (221.82)	33682 (149.82)	3.31 (5.33)	1801	6.6	4.2mph(6.8km/h) 0.459 (0.279)	15.36 (3.03)	215 (101)	57 (14)	28.72 (97.26)
301.78 (225.03)	30177 (134.23)	3.75 (6.03)	1800	5.4	4.7mph(7.6km/h) 0.451 (0.275)	15.63 (3.08)	215 (102)	58 (14)	28.72 (97.26)
305.58 (227.87)	28152 (125.23)	4.07 (6.55)	1801	4.8	5.1mph(8.2km/h) 0.447 (0.272)	15.79 (3.11)	215 (102)	59 (15)	28.72 (97.26)
305.52 (227.82)	25492 (113.39)	4.50 (7.23)	1801	4.2	5.6mph(9.0km/h) 0.447 (0.272)	15.78 (3.11)	216 (102)	61 (16)	28.73 (97.29)
305.67 (227.93)	22825 (101.53)	5.02 (8.08)	1800	3.8	6.2mph(10.0km/h) 0.446 (0.271)	15.81 (3.12)	216 (102)	62 (17)	28.73 (97.29)
304.06 (226.74)	20570 (91.50)	5.55 (8.92)	1801	3.4	6.8mph(11.0km/h) 0.446 (0.271)	15.82 (3.12)	216 (102)	62 (17)	28.74 (97.33)
302.93 (225.89)	18721 (83.28)	6.07 (9.76)	1801	3.0	7.5mph(12.0km/h) 0.447 (0.272)	15.80 (3.11)	216 (102)	63 (17)	28.74 (97.33)
300.76 (224.27)	17092 (76.03)	6.60 (10.62)	1803	2.8	8.1mph(13.0km/h) 0.455 (0.277)	15.51 (3.06)	216 (102)	64 (18)	28.74 (97.33)
298.84 (222.84)	15759 (70.10)	7.12 (11.45)	1798	2.5	8.7mph(14.0km/h) 0.456 (0.278)	15.46 (3.05)	216 (102)	64 (18)	28.74 (97.33)
297.49 (221.84)	14599 (64.94)	7.64 (12.30)	1800	2.3	9.3mph(15.0km/h) 0.457 (0.278)	15.44 (3.04)	217 (103)	64 (18)	28.74 (97.33)
295.31 (220.21)	13575 (60.38)	8.16 (13.13)	1802	2.2	9.9mph(16.0km/h) 0.463 (0.281)	15.25 (3.00)	217 (103)	65 (18)	28.73 (97.30)

HYDRAULIC PERFORMANCE

CATEGORY:	IVN
Quick Attach: Yes	
OECD Static test	
Lift cylinders:	2x112 mm
Maximum force exerted through whole range:	18326 lbs (81.5 kN)
<hr/>	
i) Sustained pressure at compensator cutoff:	2952 psi (203 bar) three outlet sets combined
ii) Pump delivery rate at minimum pressure and rated engine speed:	64.2 GPM (242.8 l/min)
iii) Pump delivery rate at maximum hydraulic power:	64.2 GPM (243.0 l/min)
Delivery pressure:	2487 psi (171 bar)
Power:	93.2 HP (69.5 kW) single outlet set
ii) Pump delivery rate at minimum pressure and rated engine speed:	37.2 GPM (140.8 l/min)
iii) Pump delivery rate at maximum hydraulic power:	36.9 GPM (139.6 l/min)
Delivery pressure:	2223 psi (153 bar)
Power:	47.8 HP (35.7 kW)

HITCH DIMENSIONS AS TESTED—NO LOAD



	inch	mm
A	27.1	689
B	20.5	520
C	20.9	532
D	18.9	480
E	12.0	304
F	14.4	365
G	37.0	940
H	7.9	200
I	21.9	555
J	22.6	575
K	28.9	733
L	56.6	1438
*L'	62.5	1588
M	29.7	755
N	45.7	1162
O	9.0	230
P	49.7	1262
Q	40.7	1035
R	43.5	1106

*L' to Quick Attach ends



JOHN DEERE 8360R DIESEL