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## Test 1791: John Deere 9400T also 9420T 24 Speed

Nebraska Tractor Test Lab

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# NEBRASKA OECD TRACTOR TEST 1791-SUMMARY 353

## JOHN DEERE 9400T DIESEL

### ALSO JOHN DEERE 9420T DIESEL

### 24 SPEED

#### POWER TAKE-OFF PERFORMANCE

Power HP (kW)	Crank shaft speed rpm	Gal/lr (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 1108 rpm)</b>					
299.66 (223.46)	2100	17.66 (66.85)	0.414 (0.252)	16.97 (3.34)	
<b>Standard Power Take-off Speed (PTO speed 1000 rpm)</b>					
331.95 (247.53)	1895	17.91 (67.79)	0.379 (0.231)	18.54 (3.65)	
<b>Maximum Power (2 hours)</b>					
346.53 (258.41)	1750	18.85 (71.34)	0.382 (0.232)	18.39 (3.62)	

#### VARYING POWER AND FUEL CONSUMPTION

299.66 (223.46)	2100	17.66 (66.85)	0.414 (0.252)	16.97 (3.34)	Air temperature
261.86 (195.27)	2158	16.14 (61.09)	0.433 (0.263)	16.23 (3.20)	74°F (23°C)
198.53 (148.05)	2176	13.83 (52.36)	0.490 (0.298)	14.35 (2.83)	Relative humidity
133.40 (99.47)	2196	10.97 (41.53)	0.578 (0.352)	12.16 (2.40)	29%
66.32 (49.45)	2200	7.94 (30.06)	0.841 (0.512)	8.35 (1.65)	Barometer
1.66 (1.24)	2200	5.12 (19.39)	21.714 (13.208)	0.32 (0.06)	29.13" Hg (98.65 kPa)

Maximum Torque - 1153 lb.-ft. (1564 Nm) at 1099 rpm

Maximum Torque Rise - 53.7%

Torque rise at 1701 engine rpm - 42%

#### DRAWBAR PERFORMANCE (Unballasted)

##### 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)
<b>Maximum Power 8th(C1 Lo) Gear</b>									
323.43 (241.18)	27482 (122.25)	4.41 (7.10)	2096	2.79	0.437 (0.266)	16.07 (3.17)	186 (85)	54 (12)	28.98 (98.14)
<b>75% of Pull at Maximum Power 8th(C1 Lo) Gear</b>									
253.54 (189.07)	20621 (91.73)	4.61 (7.42)	2167	1.71	0.487 (0.296)	14.43 (2.84)	186 (86)	61 (16)	28.77 (97.43)
<b>50% of Pull at Maximum Power 8th(C1 Lo) Gear</b>									
171.87 (128.17)	13741 (61.12)	4.69 (7.55)	2189	1.00	0.572 (0.348)	12.28 (2.42)	181 (83)	67 (19)	28.78 (97.46)
<b>75% of Pull at Reduced Engine Speed 10th(B2 Lo) Gear</b>									
254.11 (189.49)	20646 (91.84)	4.62 (7.43)	1859	1.71	0.457 (0.278)	15.39 (3.03)	182 (83)	66 (19)	28.79 (97.49)
<b>50% of Pull at Reduced Engine Speed 10th(B2 Lo) Gear</b>									
171.69 (128.03)	13752 (61.17)	4.68 (7.53)	1871	1.00	0.527 (0.321)	13.33 (2.63)	179 (81)	70 (21)	28.78 (97.46)

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

**Dates of Test:** March 27-April 13, 2001

**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) 0.8439 Fuel weight 7.027 lbs/gal (0.842 kg/l) Oil SAE 15W-40 API service classification CH-4 Transmission and hydraulic lubricant John Deere Hy-Gard fluid Total time engine was operated: 48.5 hours

**ENGINE: Make** John Deere Diesel **Type** six cylinder vertical with turbocharger and air to air aftercooler **Serial No.** \*RG6125H030000\* **Crankshaft** lengthwise **Rated engine speed** 2100 **Bore and stroke** 5.00" x 6.50" (127.0 mm x 165.0 mm) **Compression ratio** 17.0 to 1 **Displacement** 765 cu in (12535 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, separate radiators for hydraulic and transmission oil, radiator for rear axle oil **Fuel filter** one paper element and water separator **Muffler** vertical **Cooling medium temperature control** 2 thermostats and variable speed fan

**ENGINE OPERATING PARAMETERS: Fuel rate:** (360 engine hp) 120.6 - 129.4 lb/h (54.7 - 58.7 kg/h), (400 engine hp) 133.3-142.2 lb/h (60.6-64.5 kg/h), (425 engine hp) 141.3-150.1 lb/h (64.1-68.1 kg/h) **High idle:** 2160 - 2240 rpm **Turbo boost:** nominal 18.9 - 23.2 psi (130 - 160 kPa) as measured 22.5 psi (155 kPa)

**CHASSIS: Type** tracklayer-rubber tracked **Serial No.** \*RW9400T902136\* **Track width** 107.4" (2728 mm) **Length of track on ground** 111.0" (2819 mm) **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio with partial (2) range operator controlled power shift **Nominal travel speeds mph (km/h)** first 1.93 (3.10) second 2.31 (3.72) third 2.47 (3.99) fourth 2.98 (4.79) fifth 3.40 (5.47) sixth 4.08 (6.56) seventh 4.11 (6.61) eighth 4.53 (7.29) ninth 4.93 (7.93) tenth 5.29 (8.51) eleventh 5.43 (8.74) twelfth 5.83 (9.38) thirteenth 6.34 (10.21) fourteenth 6.99 (11.25) fifteenth 7.24 (11.65) sixteenth 7.98 (12.84) seventeenth 8.68 (13.97) eighteenth 9.57 (15.40) nineteenth 9.66 (15.54) twentieth 11.58 (18.63) twenty-first 12.43 (20.00) twenty-second 14.90 (23.98) twenty-third 17.01 (27.37) twenty-fourth 20.39 (32.82) reverse 2.31 (3.72), 2.77 (4.46), 4.93 (7.93), 5.43, (8.74), 5.91 (9.51), 6.51 (10.48)

## DRAWBAR PERFORMANCE

(Unballasted at 2100 rpm)

### 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)	Hp.hr/gal (kW.h/l)	Temp.°F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
3rd(A2 Lo)Gear									
240.04 (179.00)	42017 (186.90)	2.14 (3.45)	2105	14.22	0.522 (0.317)	13.47 (2.65)	177 (81)	52 (11)	28.76 (97.39)
4th(A2 Hi)Gear									
258.55 (192.80)	34810 (154.84)	2.79 (4.48)	2095	6.53	0.485 (0.295)	14.50 (2.86)	180 (82)	56 (13)	28.77 (97.43)
5th(A3 Lo)Gear									
264.47 (197.22)	30444 (135.42)	3.26 (5.24)	2097	4.21	0.474 (0.288)	14.82 (2.92)	179 (82)	57 (14)	28.77 (97.43)
6th(A3 Hi)Gear									
295.32 (220.22)	27941 (124.29)	3.96 (6.38)	2098	2.86	0.455 (0.277)	15.45 (3.04)	184 (84)	55 (13)	28.96 (98.07)
7th(B1 Lo)Gear									
301.82 (225.07)	28306 (125.91)	4.00 (6.43)	2098	2.86	0.446 (0.271)	15.77 (3.11)	184 (84)	55 (13)	28.95 (98.04)
8th(C1 Lo)Gear									
323.43 (241.18)	27482 (122.25)	4.41 (7.10)	2096	2.79	0.437 (0.266)	16.07 (3.17)	186 (85)	54 (12)	28.98 (98.14)
9th(B1 Hi)Gear									
319.73 (238.42)	24764 (110.15)	4.84 (7.79)	2099	1.94	0.443 (0.269)	15.86 (3.13)	186 (86)	52 (11)	28.99 (98.17)
10th(B2 Lo)Gear									
322.91 (240.79)	23196 (103.18)	5.22 (8.40)	2101	1.71	0.439 (0.267)	16.02 (3.16)	185 (85)	51 (11)	29.00 (98.21)
11th(C1 Hi)Gear									
320.55 (239.03)	22443 (99.83)	5.36 (8.62)	2096	1.55	0.444 (0.270)	15.83 (3.12)	184 (84)	50 (10)	29.01 (98.24)
12th(C2 Lo)Gear									
320.07 (238.68)	20786 (92.46)	5.77 (9.29)	2100	1.32	0.441 (0.268)	15.93 (3.14)	186 (85)	49 (9)	29.01 (98.24)
13th(B2 Hi)Gear									
314.28 (234.36)	18757 (83.44)	6.28 (10.11)	2099	1.16	0.450 (0.274)	15.63 (3.08)	185 (85)	49 (9)	29.01 (98.24)
14th(C2 Hi)Gear									
309.55 (230.83)	16759 (74.55)	6.93 (11.15)	2096	1.00	0.461 (0.280)	15.25 (3.00)	186 (86)	55 (13)	28.99 (98.17)
15th(B3 Lo)Gear									
310.14 (231.27)	16200 (72.06)	7.18 (11.55)	2097	1.00	0.461 (0.280)	15.25 (3.00)	186 (86)	55 (13)	28.99 (98.17)
16th(C3 Lo)Gear									
305.73 (227.98)	14479 (64.41)	7.92 (12.74)	2097	0.84	0.466 (0.284)	15.07 (2.97)	187 (86)	55 (13)	28.97 (98.10)
17th(B3 Hi)Gear									
294.81 (219.84)	12804 (56.95)	8.63 (13.90)	2099	0.68	0.484 (0.294)	14.52 (2.86)	187 (86)	55 (13)	28.97 (98.10)

#### TIRES, BALLAST AND WEIGHT

##### Track width

Ballast - Cast iron(front)  
- Cast iron (side)

##### Height of Drawbar

Static Weight with operator

##### With Ballast

36.0 in (915 mm)  
3200 lb (1451 kg)  
3540 lb (1606 kg)  
19.0 in (485 mm)  
49360 lb(22389 kg)

##### Without Ballast

36.0 in (915 mm)  
None  
None  
19.0 in (485 mm)  
42620 lb(19332 kg)

**Clutch** wet multiple disc hydraulically actuated by foot pedal **Brakes** wet multiple disc hydraulically actuated foot pedal **Steering** electro-hydraulic differential steering controlled by steering wheel **Power take-off** 1000 rpm at 1895 engine rpm **Unladen tractor mass** 42445 lb (19253 kg)

**REPAIRS AND ADJUSTMENTS:** No repairs or adjustments.

**NOTE:** The 9400T engine has an electronic control system which provides a vehicle protection system to avoid overloading the drive train. This system provides three different engine power levels. At 2100 rpm the engine produces up to 360 hp when the transmission is in forward gears A1-Lo through A3-Lo or when the tractor is being used for stationary PTO operations. At 2100 rpm the engine produces 400 hp when the transmission is in gears A3-Hi or B1-Lo . At 2100 rpm the engine produces 425 hp in all other applications.

**NOTE 2:** This tractor was tested with 2 different engines. The main PTO and drawbar performance results were with an engine that meets Tier II engine emission levels. The supplemental PTO testing was done on an engine meeting the Tier I emissions levels.

**REMARKS:** All test results were determined from observed data obtained in accordance with official OECD, SAE and Nebraska test procedures. For the maximum power tests the fuel temperature at the injection pump inlet was maintained at 95°F (35°C). The performance figures on this summary were taken from a test conducted under the OECD Code II test code procedure.

**Note:** Report reprinted. Supplemental sales permit for John Deere 9420T, March 2002.

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. **1791**, Nebraska Summary 353, March 7, 2002.

Brent T. Sampson  
Test Engineer

L.L. Bashford  
M.F. Kocher  
G.J. Hoffman  
Board of Tractor Test Engineers

**DRAWBAR PERFORMANCE**  
**(Unballasted at 1800 RPM)**  
**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)	Fuel Consumption Hp.hr/gal (kW.h/l)	Temp. °F(°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
3rd (A2 Lo) Gear									
244.91 (182.63)	42421 (188.70)	2.17 (3.48)	2096	12.83	0.512 (0.312)	13.71 (2.70)	176 (80)	52 (11)	28.76 (97.39)
4th (A2 Hi) Gear									
262.99 (196.11)	37951 (168.81)	2.60 (4.18)	2013	9.20	0.478 (0.291)	14.69 (2.89)	181 (83)	56 (13)	28.76 (97.39)
5th (A3 Lo) Gear									
274.29 (204.54)	35991 (160.09)	2.86 (4.60)	1915	8.38	0.461 (0.280)	15.24 (3.00)	182 (83)	59 (15)	28.77 (97.43)
6th (A3 Hi) Gear									
305.04 (227.47)	34531 (153.60)	3.31 (5.33)	1804	5.53	0.442 (0.269)	15.89 (3.13)	185 (85)	56 (13)	28.96 (98.07)
7th (B1 Lo) Gear									
308.77 (230.25)	34920 (155.33)	3.32 (5.34)	1794	5.82	0.437 (0.266)	16.07 (3.17)	184 (84)	55 (13)	28.95 (98.04)
8th (C1 Lo) Gear									
352.32 (262.72)	36375 (161.80)	3.63 (5.85)	1805	6.95	0.434 (0.264)	16.20 (3.19)	186 (85)	55 (13)	28.99 (98.17)
9th (B1 Hi) Gear									
357.75 (266.78)	33223 (147.78)	4.04 (6.50)	1803	4.73	0.427 (0.260)	16.47 (3.24)	184 (84)	53 (12)	28.99 (98.17)
10th (B2 Lo) Gear									
364.88 (272.09)	31187 (138.72)	4.39 (7.06)	1803	3.84	0.418 (0.254)	16.80 (3.31)	186 (86)	51 (11)	28.99 (98.17)
11th (C1 Hi) Gear									
363.68 (271.20)	30097 (133.88)	4.53 (7.29)	1806	3.32	0.420 (0.255)	16.74 (3.30)	185 (85)	50 (10)	29.01 (98.24)
12th (C2 Lo) Gear									
366.42 (273.24)	28147 (125.20)	4.88 (7.86)	1800	2.63	0.417 (0.254)	16.85 (3.32)	186 (85)	49 (9)	29.01 (98.24)
13th (B2 Hi) Gear									
365.04 (272.21)	25627 (113.99)	5.34 (8.60)	1801	2.17	0.418 (0.254)	16.81 (3.31)	186 (86)	49 (9)	29.01 (98.24)
14th (C2 Hi) Gear									
360.38 (268.74)	22823 (101.52)	5.92 (9.53)	1804	1.71	0.424 (0.258)	16.56 (3.26)	189 (87)	55 (13)	28.99 (98.17)
15th (B3 Lo) Gear									
362.03 (269.97)	22092 (98.27)	6.15 (9.89)	1806	1.63	0.421 (0.256)	16.68 (3.29)	187 (86)	55 (13)	28.98 (98.14)
16th (C3 Lo) Gear									
358.62 (267.42)	19879 (88.43)	6.77 (10.89)	1802	1.47	0.424 (0.258)	16.56 (3.26)	187 (86)	55 (13)	28.97 (98.10)
17th (B3 Hi) Gear									
352.74 (263.04)	17886 (79.56)	7.40 (11.90)	1804	1.16	0.434 (0.264)	16.19 (3.19)	190 (88)	55 (13)	28.97 (98.10)
18th (C3 Hi) Gear									
349.90 (260.92)	16106 (71.64)	8.15 (13.11)	1800	0.92	0.439 (0.267)	16.01 (3.15)	191 (88)	55 (13)	28.96 (98.07)

**TRACTOR SOUND LEVEL WITH CAB**

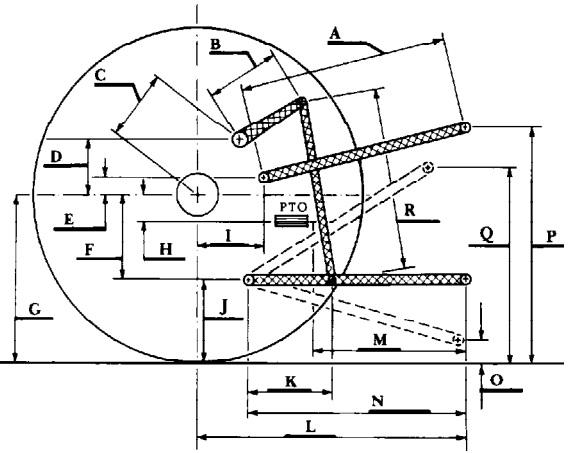
	dB(A)
At no load in 8th (C1 Lo) gear	76.2
Transport speed - no load - 24th (D3 Hi) gear	79.0
Bystander in 24th (D3 Hi) gear	91.2

**DRAWBAR PERFORMANCE**  
**(Ballasted at 1800 RPM)**  
**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. °C cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
1st(A1 Lo)Gear									
228.73 (170.56)	49490 (220.14)	1.73 (2.79)	2154	12.62	0.523 (0.318)	13.43 (2.65)	175 (79)	50 (10)	28.79 (97.49)
2nd(A1 Hi)Gear									
255.56 (190.57)	46983 (208.99)	2.04 (3.28)	2056	10.28	0.490 (0.298)	14.34 (2.82)	180 (82)	51 (10)	28.80 (97.53)
3rd(A2 Lo)Gear									
264.85 (197.50)	44682 (198.76)	2.22 (3.58)	2047	8.56	0.473 (0.288)	14.86 (2.93)	182 (83)	51 (11)	28.81 (97.56)
4th(A2 Hi)Gear									
283.96 (211.75)	43615 (194.01)	2.44 (3.93)	1864	7.81	0.453 (0.275)	15.53 (3.06)	182 (83)	52 (11)	28.82 (97.60)
5th(A3 Lo)Gear									
296.55 (221.13)	40481 (180.07)	2.75 (4.42)	1803	6.20	0.442 (0.269)	15.89 (3.13)	184 (84)	53 (12)	28.83 (97.63)
6th(A3 Hi)Gear									
309.71 (230.95)	34479 (153.37)	3.37 (5.42)	1801	3.87	0.436 (0.265)	16.12 (3.18)	187 (86)	54 (12)	28.84 (97.66)
7th(B1 Lo)Gear									
313.44 (233.73)	34510 (153.51)	3.41 (5.48)	1806	4.02	0.430 (0.262)	16.33 (3.22)	186 (85)	56 (13)	28.85 (97.70)
8th(C1 Lo)Gear									
362.21 (270.10)	36622 (162.90)	3.71 (5.97)	1801	4.98	0.424 (0.258)	16.56 (3.26)	188 (87)	57 (14)	28.85 (97.70)
9th(B1 Hi)Gear									
363.13 (270.79)	33323 (148.23)	4.09 (6.58)	1802	3.72	0.423 (0.257)	16.61 (3.27)	188 (87)	58 (14)	28.86 (97.73)
10th(B2 Lo)Gear									
366.25 (273.11)	31146 (138.54)	4.41 (7.10)	1800	3.19	0.418 (0.254)	16.80 (3.31)	189 (87)	57 (14)	28.86 (97.73)
11th(C1 Hi)Gear									
363.76 (271.26)	29958 (133.26)	4.55 (7.33)	1803	2.81	0.421 (0.256)	16.69 (3.29)	189 (87)	56 (13)	28.86 (97.73)
12th(C2 Lo)Gear									
366.43 (273.24)	28048 (124.76)	4.90 (7.88)	1799	2.28	0.420 (0.255)	16.73 (3.30)	189 (87)	56 (13)	28.86 (97.73)
13th(B2 Hi)Gear									
362.84 (270.57)	25392 (112.95)	5.36 (8.62)	1801	1.89	0.423 (0.257)	16.63 (3.28)	190 (88)	56 (13)	28.86 (97.73)
14th(C2 Hi)Gear									
361.51 (269.58)	22897 (101.85)	5.92 (9.53)	1799	1.58	0.425 (0.258)	16.55 (3.26)	192 (89)	56 (13)	28.86 (97.73)
15th(B3 Lo)Gear									
362.05 (269.98)	22138 (98.47)	6.13 (9.87)	1798	1.42	0.424 (0.258)	16.58 (3.27)	192 (89)	57 (14)	28.87 (97.77)
16th(C3 Lo)Gear									
359.08 (267.77)	19882 (88.44)	6.77 (10.90)	1797	1.18	0.430 (0.262)	16.33 (3.22)	191 (88)	58 (14)	28.87 (97.77)
17th(B3 Hi)Gear									
350.79 (261.58)	17808 (79.21)	7.39 (11.89)	1800	1.11	0.439 (0.267)	16.00 (3.15)	191 (88)	58 (14)	28.87 (97.77)
18th(C3 Hi)Gear									
347.06 (258.80)	15929 (70.86)	8.17 (13.15)	1804	0.95	0.444 (0.270)	15.84 (3.12)	192 (89)	59 (15)	28.87 (97.77)

### THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: III, IV			
Quick Attach: yes	Category III	Category IV	
Maximum Force Exerted Through Whole Range:	13605 lbs (60.5 kN)	14921 lbs (66.4 kN)	
i) Opening pressure of relief valve:	NA		
Sustained pressure at compensator cutoff:	2930 psi (202 bar)		
	<b>Single outlet set</b>	<b>Two outlet sets combined</b>	
ii) Pump delivery rate at minimum pressure and rated engine speed:	32.2 GPM (121.9 l/min)	46.6 GPM (176.4 l/min)	
iii) Pump delivery rate at maximum hydraulic power:	31.1 GPM (117.7 l/min)	43.5 GPM (164.7 l/min)	
Delivery pressure:	2200 psi (152 bar)	2440 psi (168 bar)	
Power:	39.9 Hp (29.8 kW)	61.9 HP (46.2 kW)	



### THREE POINT HITCH PERFORMANCE

Observed Maximum Pressure psi. (bar):	2980 (205)
Location:	lift cylinder
Hydraulic oil temperature: °F (°C):	145 (63)
Location:	hydraulic valve
Category:	III, IV
Quick attach:	yes

### HITCH DIMENSIONS AS TESTED NO LOAD

	Category III		Category IV	
	inch	mm	inch	mm
A	30.8	783	30.0	762
B	18.5	471	18.5	471
C	31.9	810	31.9	810
D	30.4	772	30.4	772
E	11.3	288	11.3	288
F	13.8	350	13.8	350
G	32.9	836	32.9	836
H	0.7	19	0.7	19
I	22.7	577	22.7	577
J	19.1	486	19.1	486
K	29.4	746	29.4	746
L	54.4	1383	54.4	1383
*L'	61.0	1550	61.4	1560
M	24.5	623	24.5	623
N	43.1	1095	43.1	1095
O	8.0	203	9.0	229
P	49.6	1260	49.6	1260
Q	39.5	1003	40.5	1029
R	48.7	1238	47.9	1216

\*L' to Quick Attach ends

Category III (lift cylinders - 2x90 mm)						
SAE Static Test System pressure 2680 psi (185 Bar)						
Hitch point distance to ground level in. (mm)	7.9 (201)	16.0 (407)	24.1 (613)	31.8 (807)	40.0 (1016)	
Lift force on frame lb	14426	14737	14682	14307	13430	
" " " " " " (kN)	(64.2)	(65.6)	(65.3)	(63.6)	(59.7)	
ASAE Static Test System pressure 2860 psi (197 Bar)						
Hitch point distance to ground level in. (mm)	7.9 (201)	16.0 (407)	24.1 (613)	31.8 (807)	40.0 (1016)	
Lift force on frame lb	15373	15703	15643	15248	14312	
" " " " " " (kN)	(68.4)	(69.9)	(69.6)	(67.8)	(63.7)	
Category IV (lift cylinders - 1x90 mm & 1x100 mm)						
SAE Static Test - System pressure 2680 psi (185 Bar)						
Hitch point distance to ground level in. (mm)	9.0 (228)	15.2 (387)	22.3 (566)	29.6 (751)	36.8 (935)	44.0 (1118)
Lift force on frame lb	15954	16238	16328	16020	15372	13856
" " " " " " (kN)	(71.0)	(72.2)	(72.6)	(71.3)	(68.4)	(61.6)
ASAE Static Test System pressure 2860 psi (197 Bar)						
Hitch point distance to ground level in. (mm)	9.0 (228)	15.2 (387)	22.3 (566)	29.6 (751)	36.8 (935)	44.0 (1118)
Lift force on frame lb	17014	17317	17417	17094	16403	14772
" " " " " " (kN)	(75.7)	(77.0)	(77.5)	(76.0)	(73.0)	(65.7)



**JOHN DEERE 9400T DIESEL**

Agricultural Research Division  
 Institute of Agriculture and Natural Resources  
 University of Nebraska Lincoln  
 Darrell Nelson, Dean and Director

# NEBRASKA TRACTOR TEST 1791S

## JOHN DEERE 9400T DIESEL

### 24 SPEED

### (Tier 1 Engine)

#### 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 1108 rpm)</b>					
300.39 (224.00)	2100	17.59 (66.58)	0.411 (0.250)	17.08 (3.36)	
<b>Standard Power Take-off Speed (PTO speed 1000 rpm)</b>					
335.22 (249.98)	1895	18.61 (70.44)	0.390 (0.237)	18.01 (3.55)	
<b>Maximum Power (2 hours)</b>					
350.12 (261.09)	1800	19.06 (72.16)	0.383 (0.233)	18.37 (3.62)	
<b>VARYING POWER AND FUEL CONSUMPTION</b>					
300.39 (224.00)	2100	17.58 (66.58)	0.411 (0.250)	17.08 (3.36)	Air temperature
265.00 (197.61)	2179	16.39 (62.06)	0.435 (0.264)	16.16 (3.18)	77°F (25°C)
200.37 (149.42)	2196	13.32 (50.42)	0.467 (0.284)	15.04 (2.96)	Relative humidity
133.74 (99.73)	2200	10.37 (39.27)	0.545 (0.332)	12.89 (2.54)	48%
66.87 (49.86)	2200	7.64 (28.93)	0.803 (0.488)	8.75 (1.72)	Barometer
1.11 (0.82)	2199	4.82 (18.26)	30.671 (18.657)	0.23 (0.05)	28.68" Hg (97.12 kPa)
Maximum Torque - 1153 lb.-ft. (1563 Nm) at 1102 rpm					
Maximum Torque Rise - 53.5%					
Torque rise at 1701 engine rpm - 42%					

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

**Dates of Test:** April 19 -20, 2001

**Manufacturer:** John Deere Tractor Works, 3500 East Donald St. , P.O. Box 270, Waterloo Ia, USA

**FUEL, OIL and TIME:** Fuel No. 2 Diesel Specific gravity converted to 60°/60°F (15°/15°C) 0.8439 Fuel weight 7.027 lbs/gal (0.842 kg/l) Oil SAE 15W-40 API service classification CH-4 Transmission and hydraulic lubricant John Deere Hy-Gard fluid Total time engine was operated: 17.0 hours

**ENGINE: Make** John Deere Diesel **Type** six cylinder vertical with turbocharger and air to air aftercooler **Serial No.** \*RG6125H013058\* **Crankshaft** lengthwise **Rated engine speed** 2100 **Bore and stroke** 5.00" x 6.50" (127.0 mm x 165.0 mm) **Compression ratio** 16.0 to 1 **Displacement** 765 cu in (12535 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, separate radiators for hydraulic and transmission oil, radiator for rear axle oil **Fuel filter** one paper element and water separator **Muffler** vertical **Cooling medium temperature control** 2 thermostats and variable speed fan

**ENGINE OPERATING PARAMETERS:**  
**Fuel rate:** (360 engine hp) 120.6 - 129.4 lb/h (54.7 - 58.7 kg/h), (400 engine hp) 133.3-142.2 lb/h (60.6-64.5 kg/h), (425 engine hp) 141.3-150.1 lb/h (64.1-68.1 kg/h) **High idle:** 2160 - 2240 rpm **Turbo boost:** nominal 18.9 - 23.2 psi (130 - 160 kPa) as measured 22.5 psi (155 kPa)