

NEBRASKA OECD TRACTOR TEST 1941-SUMMARY 617

JOHN DEERE 9330 DIESEL

24 SPEED

POWER TAKE-OFF PERFORMANCE

| Power HP (kW) | Crank shaft 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—1108 rpm) | | | | | |
| 332.97 (248.29) | 2098 | 20.04 (75.88) | 0.420 (0.255) | 16.61 (3.27) | |
| Standard Power Take-off Speed—(PTO speed—1000 rpm) | | | | | |
| 375.92 (280.32) | 1895 | 21.90 (82.90) | 0.406 (0.247) | 17.16 (3.38) | |
| Maximum Power (1 hour) | | | | | |
| 385.04 (287.12) | 1800 | 22.38 (84.70) | 0.405 (0.247) | 17.21 (3.39) | |

VARYING POWER AND FUEL CONSUMPTION

| | | | | | |
|--------------------|------|------------------|--------------------|-----------------|-----------------------|
| 332.97 (248.29) | 2098 | 20.04 (75.88) | 0.420 (0.255) | 16.61 (3.27) | Air temperature |
| 286.44 (213.60) | 2124 | 18.13 (68.63) | 0.442 (0.269) | 15.80 (3.11) | 78°F (25°C) |
| 216.28 (161.28) | 2137 | 15.22 (57.62) | 0.491 (0.299) | 14.21 (2.80) | Relative humidity |
| 145.48 (108.48) | 2154 | 11.76 (44.52) | 0.564 (0.343) | 12.37 (2.44) | 59% |
| 73.32 (54.67) | 2171 | 8.44 (31.95) | 0.803 (0.489) | 8.69 (1.71) | Barometer |
| 1.54 (1.15) | 2186 | 6.05 (22.91) | 27.456 (16.701) | 0.25 (0.05) | 28.73" Hg (97.39 kPa) |

Maximum Torque - 1220 lb.-ft. (1654 Nm) at 1349 rpm

Maximum Torque Rise - 46.4%

Torque rise at 1700 engine rpm - 37%

Power increase at 1800 engine rpm - 15.6%

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) |
|--|--------------------------------|------------------------|---------------------------------|-----------|---|-----------------------|--------------------------------------|--------------------|-------------------------------|
| Maximum Power—7th(B1Lo) Gear | | | | | | | | | |
| 302.16 (225.32) | 24641 (109.61) | 4.60 (7.40) | 2101 | 3.3 | 0.450 (0.274) | 15.50 (3.05) | 182 (83) | 65 (18) | 29.10 (98.54) |
| 75% of Pull at Maximum Power—7th(B1Lo) Gear | | | | | | | | | |
| 235.12 (175.33) | 18464 (82.13) | 4.78 (7.69) | 2165 | 2.3 | 0.507 (0.309) | 13.75 (2.71) | 178 (81) | 45 (7) | 29.42 (99.63) |
| 50% of Pull at Maximum Power—7th(B1Lo) Gear | | | | | | | | | |
| 159.84 (119.19) | 12333 (54.86) | 4.86 (7.82) | 2187 | 1.7 | 0.591 (0.359) | 11.81 (2.33) | 178 (81) | 48 (9) | 29.44 (99.70) |
| 75% of Pull at Reduced Engine Speed—12th(C2Lo) Gear | | | | | | | | | |
| 235.71 (175.77) | 18416 (81.92) | 4.80 (7.72) | 1532 | 2.3 | 0.463 (0.282) | 15.06 (2.97) | 178 (81) | 46 (8) | 29.43 (99.66) |
| 50% of Pull at Reduced Engine Speed—12th(C2Lo) Gear | | | | | | | | | |
| 158.99 (118.56) | 12280 (54.62) | 4.86 (7.81) | 1541 | 1.7 | 0.527 (0.321) | 13.23 (2.61) | 177 (81) | 48 (9) | 29.44 (99.70) |

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

Dates of Tests: October 6 - November 5, 2008

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) 0.8380 Fuel weight 6.977 lbs/gal (0.836 kg/l) Oil SAE 15W-40 API service classification CH-4 Transmission, hydraulic and final drive lubricant John Deere Hy-Gard fluid Total time engine was operated: 29.0 hours

ENGINE: Make John Deere Diesel **Type** six cylinder vertical with turbocharger and air to air aftercooler **Serial No.** *RG6135L003244* **Crankshaft** lengthwise **Rated engine speed** 2100 **Bore and stroke** 5.197" x 6.496" (132.0 mm x 165.0 mm) **Compression ratio** 16.0 to 1 **Displacement** 826 cu in (13548 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 oil, radiator for transmission, front and rear axle oil **Fuel filter** two paper cartridges **Fuel cooler** radiator for returned fuel **Muffler** vertical **Cooling medium temperature control** 3 thermostats and variable speed fan

ENGINE OPERATING PARAMETERS: Fuel rate: 130.5 - 141.1 lb/h (59.2 - 64.0 kg/h) **High idle:** 2215 - 2265 rpm (2160 - 2200 rpm with PTO engaged) **Turbo boost:** nominal 20.3 - 23.2 psi (140 - 160 kPa) as measured 21.9 psi (151 kPa)

CHASSIS: Type four wheel drive with duals **Serial No.** *RW9330H003373* **Tread width** rear 63.0" (1600 mm) to 135.8" (3450 mm), front 63.0" (1600 mm) to 135.8" (3450 mm) **Wheelbase** 137.7" (3498 mm) **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio with 2 range operator controlled power shift **Nominal travel speeds mph (km/h)** first 2.21 (3.55) second 2.64 (4.25) third 2.83 (4.56) fourth 3.40 (5.48) fifth 3.88 (6.25) sixth 4.67 (7.51) seventh 4.70 (7.57) eighth 5.18 (8.33) ninth 5.64 (9.08) tenth 6.06 (9.76) eleventh 6.20 (9.97) twelfth 6.67 (10.73) thirteenth 7.27 (11.70) fourteenth 7.98 (12.85) fifteenth 8.28 (13.32) sixteenth 9.14 (14.71) seventeenth 9.95 (16.01) eighteenth 10.91 (17.55) nineteenth 11.01 (17.72) twentieth 13.19 (21.22) twenty-first 14.17 (22.81) twenty-second 16.93 (27.24) twenty-third 19.55 (31.46) twenty-fourth 23.14 (37.24) reverse 2.64 (4.25), 3.17 (5.10), 5.65 (9.09), 6.20 (9.97), 6.75 (10.86), 7.46 (12.01)

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(A2Lo) Gear | | | | | | | | | |
| 263.71 (196.65) | 36769 (163.55) | 2.69 (4.33) | 2155 | 9.4 | 0.491 (0.298) | 14.22 (2.80) | 179 (82) | 47 (8) | 29.10 (98.54) |
| 4th(A2Hi) Gear | | | | | | | | | |
| 290.94 (216.96) | 33511 (149.06) | 3.26 (5.24) | 2101 | 6.8 | 0.468 (0.285) | 14.91 (2.94) | 179 (82) | 47 (8) | 29.09 (98.51) |
| 5th(A3Lo) Gear | | | | | | | | | |
| 297.86 (222.11) | 29869 (132.86) | 3.74 (6.02) | 2102 | 6.1 | 0.457 (0.278) | 15.25 (3.00) | 184 (84) | 67 (19) | 29.10 (98.54) |
| 6th(A3Hi) Gear | | | | | | | | | |
| 296.47 (221.08) | 24419 (108.62) | 4.55 (7.33) | 2099 | 3.3 | 0.459 (0.279) | 15.20 (2.99) | 182 (83) | 66 (19) | 29.10 (98.54) |
| 7th(B1Lo) Gear | | | | | | | | | |
| 302.16 (225.32) | 24641 (109.61) | 4.60 (7.40) | 2101 | 3.3 | 0.450 (0.274) | 15.50 (3.05) | 182 (83) | 65 (18) | 29.10 (98.54) |
| 8th(C1Lo) Gear | | | | | | | | | |
| 301.46 (224.80) | 22242 (98.94) | 5.08 (8.18) | 2098 | 2.8 | 0.451 (0.275) | 15.46 (3.05) | 180 (82) | 64 (18) | 29.10 (98.54) |
| 9th(B1Hi) Gear | | | | | | | | | |
| 302.78 (225.78) | 20393 (90.71) | 5.57 (8.96) | 2100 | 2.6 | 0.449 (0.273) | 15.55 (3.06) | 181 (83) | 63 (17) | 29.10 (98.54) |
| 10th(B2Lo) Gear | | | | | | | | | |
| 303.45 (226.28) | 19056 (84.77) | 5.97 (9.61) | 2100 | 2.5 | 0.448 (0.272) | 15.58 (3.07) | 181 (83) | 62 (17) | 29.10 (98.54) |
| 11th(C1Hi) Gear | | | | | | | | | |
| 297.57 (221.90) | 18134 (80.66) | 6.15 (9.90) | 2098 | 2.3 | 0.459 (0.279) | 15.21 (3.00) | 180 (82) | 61 (16) | 29.10 (98.54) |
| 12th(C2Lo) Gear | | | | | | | | | |
| 298.72 (222.75) | 16923 (75.28) | 6.62 (10.65) | 2099 | 2.1 | 0.457 (0.278) | 15.25 (3.00) | 181 (83) | 67 (19) | 29.10 (98.54) |
| 13th(B2Hi) Gear | | | | | | | | | |
| 291.48 (217.36) | 15189 (67.56) | 7.20 (11.58) | 2099 | 1.9 | 0.471 (0.286) | 14.83 (2.92) | 182 (83) | 66 (19) | 29.10 (98.54) |
| 14th(C2Hi) Gear | | | | | | | | | |
| 287.91 (214.70) | 13582 (60.41) | 7.95 (12.79) | 2100 | 1.8 | 0.475 (0.289) | 14.68 (2.89) | 178 (81) | 49 (9) | 29.06 (98.41) |
| 15th(B3Lo) Gear | | | | | | | | | |
| 285.97 (213.24) | 13034 (57.98) | 8.23 (13.24) | 2103 | 1.7 | 0.479 (0.291) | 14.58 (2.87) | 179 (82) | 49 (9) | 29.06 (98.41) |

TRACTOR SOUND LEVEL WITH CAB

| | dB(A) |
|---|-------|
| At no load in 6th(A3Hi) gear | 73.9 |
| Transport speed - no load - 24th(D3Hi) gear | 75.8 |
| Bystander in 24th(D3Hi) gear | 88.5 |

TIRES, BALLAST 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

Four 620/70R46;***;8(55)

Four 620/70R46;***;11(75)

23.0 in (585 mm)

15240 lb (6913 kg)

22050 lb(10002 kg)

37290 lb(16915 kg)

Clutch wet multiple disc hydraulically actuated by foot pedal **Brakes** wet multiple disc hydraulically actuated foot pedal **Steering** hydrostatic and articulated **Power take-off** 1000 rpm at 1895 engine rpm **Unladen tractor mass** 37115 lb(16835 kg)

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

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 primary fuel filter was maintained at 102°F (39°C). The drawbar pull in 3rd(A2Lo) gear was limited to avoid excessive tractor bouncing. The performance figures on this summary were taken from a test conducted under the OECD Code II test procedure.

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. **1941**, Nebraska Summary 617, January 12, 2009.

Roger M. Hoy
Director

M.F. Kocher
V.I. Adamchuk
J.A. Smith
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) |
|---------------------|--------------------------------|------------------------|---------------------------------|-----------|---|---|-------------------------------------|--------------------|-------------------------------|
| 265.75 (198.17) | 36887 (164.08) | 2.70 (4.35) | 2155 | 9.2 | 0.488 (0.297) | 14.30 (2.82) | 179 (81) | 47 (8) | 29.10 (98.54) |
| 297.65 (221.96) | 35652 (158.59) | 3.13 (5.04) | 2062 | 8.6 | 0.468 (0.285) | 14.90 (2.94) | 179 (82) | 48 (9) | 29.09 (98.51) |
| 319.02 (237.89) | 34388 (152.97) | 3.48 (5.60) | 1979 | 7.5 | 0.452 (0.275) | 15.44 (3.04) | 179 (82) | 48 (9) | 29.08 (98.48) |
| 334.78 (249.64) | 32641 (145.19) | 3.85 (6.19) | 1844 | 6.9 | 0.451 (0.275) | 15.46 (3.05) | 192 (89) | 66 (19) | 29.10 (98.54) |
| 339.48 (253.15) | 32531 (144.71) | 3.91 (6.30) | 1844 | 6.2 | 0.442 (0.269) | 15.77 (3.11) | 187 (86) | 66 (19) | 29.10 (98.54) |
| 344.93 (257.21) | 30217 (134.41) | 4.28 (6.89) | 1801 | 4.6 | 0.440 (0.268) | 15.84 (3.12) | 189 (87) | 65 (18) | 29.10 (98.54) |
| 344.80 (257.12) | 27504 (122.34) | 4.70 (7.57) | 1802 | 4.0 | 0.438 (0.267) | 15.91 (3.13) | 190 (88) | 64 (18) | 29.10 (98.54) |
| 345.32 (257.51) | 25558 (113.69) | 5.07 (8.15) | 1800 | 3.4 | 0.438 (0.267) | 15.91 (3.13) | 189 (87) | 62 (17) | 29.10 (98.54) |
| 343.58 (256.21) | 24666 (109.72) | 5.22 (8.41) | 1801 | 3.1 | 0.440 (0.268) | 15.86 (3.12) | 189 (87) | 62 (17) | 29.10 (98.54) |
| 350.60 (261.44) | 23337 (103.81) | 5.63 (9.07) | 1805 | 3.0 | 0.434 (0.264) | 16.06 (3.16) | 191 (88) | 66 (19) | 29.10 (98.54) |
| 344.36 (256.79) | 21091 (93.82) | 6.12 (9.85) | 1802 | 2.9 | 0.441 (0.268) | 15.81 (3.11) | 194 (90) | 66 (19) | 29.10 (98.54) |
| 336.12 (250.64) | 18630 (82.87) | 6.77 (10.89) | 1801 | 2.7 | 0.451 (0.274) | 15.48 (3.05) | 186 (85) | 49 (9) | 29.07 (98.44) |
| 337.97 (252.02) | 18046 (80.27) | 7.02 (11.30) | 1802 | 2.5 | 0.445 (0.271) | 15.66 (3.09) | 184 (84) | 49 (9) | 29.06 (98.41) |
| 332.29 (247.79) | 16078 (71.52) | 7.75 (12.47) | 1801 | 2.3 | 0.453 (0.276) | 15.40 (3.03) | 183 (84) | 49 (9) | 29.06 (98.41) |
| 326.32 (243.34) | 14523 (64.60) | 8.43 (13.56) | 1800 | 2.0 | 0.464 (0.282) | 15.05 (2.97) | 183 (84) | 49 (9) | 29.05 (98.37) |

HYDRAULIC PERFORMANCE

CATEGORY: III, IVN

Quick Attach: yes

OECD Static test

Maximum force exerted through whole range: 15712 lbs (69.9 kN)(Cat III)
15677 lbs (69.7 kN)(Cat IVN)

i) Sustained pressure at compensator cutoff: 2990 psi (206 bar)
24 speed manual shift transmission
Single outlet set Three outlet sets combined

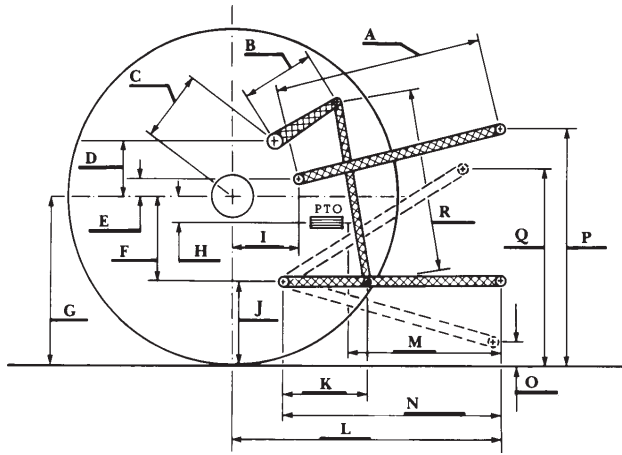
ii) Pump delivery rate at minimum pressure and rated engine speed: 38.5 GPM (145.6 l/min) 46.2 GPM (174.8 l/min)

iii) Pump delivery rate at maximum hydraulic power: 35.9 GPM (135.9 l/min) 44.2 GPM (167.3 l/min)
Delivery pressure: 2234 psi (154 bar) 2606 psi (180 bar)
Power: 46.8 HP (34.9 kW) 67.2 HP (50.1 kW)

18 speed Powershift Transmission
Single outlet set Three outlet sets combined

ii) Pump delivery rate at minimum pressure and rated engine speed: 37.7 GPM (142.6 l/min) 51.1 GPM (193.4 l/min)

iii) Pump delivery rate at maximum hydraulic power: 35.3 GPM (133.7 l/min) 49.4 GPM (187.0 l/min)
Delivery pressure: 2039 psi (141 bar) 2542 psi (175 bar)
Power: 42.0 HP (31.3 kW) 73.2 HP (54.6 kW)



HITCH DIMENSIONS AS TESTED—NO LOAD

| | Category III | | Category IVN | |
|-----|--------------|------|--------------|------|
| | inch | mm | inch | mm |
| A | 30.7 | 780 | 30.9 | 785 |
| B | 18.6 | 472 | 18.6 | 472 |
| C | 26.2 | 666 | 26.2 | 666 |
| D | 24.4 | 620 | 24.4 | 620 |
| E | 11.3 | 288 | 11.3 | 288 |
| F | 13.8 | 350 | 13.8 | 350 |
| G | 36.2 | 920 | 36.2 | 920 |
| H | 4.0 | 101 | 4.0 | 101 |
| I | 22.7 | 577 | 22.7 | 577 |
| J | 22.4 | 570 | 22.4 | 570 |
| K | 28.8 | 731 | 28.3 | 718 |
| L | 55.3 | 1405 | 54.5 | 1385 |
| *L' | 61.3 | 1557 | 61.8 | 1570 |
| M | 31.4 | 797 | 31.9 | 810 |
| N | 44.0 | 1117 | 43.2 | 1097 |
| O | 9.0 | 230 | 9.0 | 230 |
| P | 49.4 | 1255 | 49.4 | 1256 |
| Q | 41.3 | 1050 | 41.5 | 1053 |
| R | 43.7 | 1110 | 43.7 | 1110 |

*L' to Quick Attach ends



JOHN DEERE 9330 DIESEL