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# Test 1874: John Deere 8430 IVT

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# NEBRASKA OECD TRACTOR TEST 1874–SUMMARY 528
# JOHN DEERE 8430 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—1050 rpm)** | | | | | |
| 253.01 *(188.67)* | 2100 | 14.11 *(53.41)* | 0.390 *(0.237)* | 17.93 *(3.53)* | |
| **Standard Power Take-off Speed(1000 rpm)** | | | | | |
| 272.59 *(203.27)* | 2001 | 14.79 *(56.00)* | 0.379 *(0.231)* | 18.44 *(3.63)* | |
| **Maximum Power (1 hour)** | | | | | |
| 283.18 *(211.17)* | 1800 | 15.04 *(56.94)* | 0.371 *(0.226)* | 18.82 *(3.71)* | |
| **VARYING POWER AND FUEL CONSUMPTION** | | | | | |
| 253.01 *(188.62)* | 2100 | 14.11 *(53.41)* | 0.390 *(0.237)* | 17.93 *(3.53)* | Air temperature |
| 220.39 *(164.34)* | 2154 | 12.78 *(48.36)* | 0.405 *(0.246)* | 17.25 *(3.40)* | 75°F *(24°C)* |
| 165.89 *(123.71)* | 2164 | 10.43 *(39.48)* | 0.439 *(0.267)* | 15.91 *(3.13)* | Relative humidity |
| 111.24 *(82.95)* | 2174 | 8.07 *(30.54)* | 0.507 *(0.308)* | 13.79 *(2.72)* | 15% |
| 55.57 *(41.44)* | 2183 | 6.07 *(22.96)* | 0.763 *(0.464)* | 9.16 *(1.80)* | Barometer |
| 1.56 *(1.17)* | 2191 | 4.15 *(15.70)* | 18.546 *(11.281)* | 0.38 *(0.07)* | 29.02" Hg *(98.27 kPa)* |

Maximum Torque - 914 lb.-ft. *(1239 Nm)* at 1450 rpm
Maximum Torque Rise - 44.4%
Torque rise at 1701 engine rpm - 39%

## 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—4.7 mph *(7.5 km/h)*** | | | | | | | | | |
| 211.26 *(157.54)* | 18371 *(81.72)* | 4.31 *(6.94)* | 2101 | 3.97 | 0.450 *(0.274)* | 15.54 *(3.06)* | 190 *(88)* | 55 *(13)* | 28.96 *(98.07)* |
| **75% of Pull at Maximum Power—4.7 mph *(7.5 km/h)*** | | | | | | | | | |
| 164.40 *(122.59)* | 13732 *(61.08)* | 4.49 *(7.23)* | 2158 | 2.70 | 0.489 *(0.297)* | 14.29 *(2.82)* | 201 *(94)* | 71 *(22)* | 28.74 *(97.33)* |
| **50% of Pull at Maximum Power—4.7 mph *(7.5 km/h)*** | | | | | | | | | |
| 111.10 *(82.85)* | 9145 *(40.68)* | 4.56 *(7.33)* | 2167 | 1.65 | 0.555 *(0.338)* | 12.60 *(2.48)* | 189 *(87)* | 71 *(22)* | 28.74 *(97.33)* |
| **75% of Pull at Reduced Engine Speed—Auto mode** | | | | | | | | | |
| 163.86 *(122.19)* | 13741 *(61.12)* | 4.47 *(7.20)* | 1695 | 2.72 | 0.454 *(0.276)* | 15.39 *(3.03)* | 202 *(94)* | 71 *(22)* | 28.74 *(97.33)* |
| **50% of Pull at Reduced Engine Speed—Auto mode** | | | | | | | | | |
| 111.26 *(82.97)* | 9230 *(41.06)* | 4.52 *(7.27)* | 1400 | 1.64 | 0.457 *(0.278)* | 15.30 *(3.01)* | 197 *(92)* | 71 *(22)* | 28.74 *(97.33)* |

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

**Dates of tests:** March 16 - April 5, 2006

**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)*** 0.8395 **Fuel weight** 6.990 lbs/gal *(0.838 kg/l)* **Oil SAE** 15W-40 **API service classification** CH-4 **Transmission and hydraulic lubricant** John Deere Hy-Gard fluid **Front axle lubricant** John Deere Hy-Gard fluid **Total time engine was operated:** 33.5 hours

**ENGINE: Make** John Deere Diesel **Type** six cylinder vertical with turbocharger and air to air aftercooler **Serial No.***RG6090L001331* **Crankshaft** lengthwise **Rated engine speed** 2100 **Bore and stroke** 4.661" x 5.354" *(118.4 mm x 136.0 mm)* **Compression ratio** 16.3 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 inlet fuel **Muffler** vertical **Cooling medium temperature control** 2 thermostats and variable speed fan

**ENGINE OPERATING PARAMETERS: Fuel rate:** 94.8 - 104.7 lb/h *(43.0 - 47.5 kg/h)* **High idle:** 2175 - 2225 rpm **Turbo boost:** nominal 26.8 - 31.2 psi *(185 - 215 kPa)* as measured 28.8 psi *(198 kPa)*

**CHASSIS: Type** front wheel assist with duals **Serial No.***RW8430D001412* **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 - 0-25.0 mph, *(0-40 km/h)* reverse - 0-12.5 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** 25490 lb *(11562 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)* | Hp.hr/gal *(kW.h/l)* | Temp.°F *(°C)* cool-ing med | Air dry bulb | Barom. inch Hg *(kPa)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 3.2 mph *(5.2 km/h)* | | | | | |
| 184.89 *(137.88)* | 24704 *(109.89)* | 2.81 *(4.52)* | 2114 | 11.62 | 0.507 *(0.308)* | 13.79 *(2.72)* | 184 *(84)* | 48 *(9)* | 28.64 *(96.99)* |
| | | | | 3.7 mph *(6.0 km/h)* | | | | | |
| 200.29 *(149.35)* | 22301 *(99.20)* | 3.37 *(5.42)* | 2099 | 7.44 | 0.480 *(0.292)* | 14.58 *(2.87)* | 194 *(90)* | 50 *(10)* | 28.68 *(97.12)* |
| | | | | 4.3 mph *(7.0 km/h)* | | | | | |
| 208.07 *(155.16)* | 19291 *(85.81)* | 4.04 *(6.51)* | 2103 | 4.89 | 0.462 *(0.281)* | 15.12 *(2.98)* | 197 *(92)* | 52 *(11)* | 28.71 *(97.22)* |
| | | | | 4.7 mph *(7.5 km/h)* | | | | | |
| 211.26 *(157.54)* | 18371 *(81.72)* | 4.31 *(6.94)* | 2101 | 3.97 | 0.450 *(0.274)* | 15.54 *(3.06)* | 190 *(88)* | 55 *(13)* | 28.96 *(98.07)* |
| | | | | 5.0 mph *(8.0 km/h)* | | | | | |
| 213.02 *(158.85)* | 17014 *(75.68)* | 4.70 *(7.56)* | 2101 | 3.28 | 0.443 *(0.269)* | 15.79 *(3.11)* | 187 *(86)* | 53 *(12)* | 28.98 *(98.14)* |
| | | | | 5.6 mph *(9.0 km/h)* | | | | | |
| 211.96 *(158.06)* | 14975 *(66.61)* | 5.31 *(8.54)* | 2102 | 2.84 | 0.450 *(0.274)* | 15.54 *(3.06)* | 194 *(90)* | 54 *(12)* | 28.97 *(98.10)* |
| | | | | 6.2 mph *(10.0 km/h)* | | | | | |
| 213.18 *(158.97)* | 13496 *(60.03)* | 5.92 *(9.53)* | 2099 | 2.32 | 0.443 *(0.270)* | 15.76 *(3.11)* | 187 *(86)* | 43 *(6)* | 29.02 *(98.27)* |
| | | | | 6.8 mph *(11.0 km/h)* | | | | | |
| 210.83 *(157.22)* | 12117 *(53.90)* | 6.52 *(10.50)* | 2098 | 2.06 | 0.451 *(0.275)* | 15.48 *(3.05)* | 190 *(88)* | 44 *(7)* | 29.03 *(98.31)* |
| | | | | 7.5 mph *(12.0 km/h)* | | | | | |
| 209.85 *(156.48)* | 11035 *(49.09)* | 7.13 *(11.48)* | 2097 | 1.88 | 0.444 *(0.270)* | 15.75 *(3.10)* | 194 *(90)* | 44 *(7)* | 29.03 *(98.31)* |
| | | | | 8.1 mph *(13.0 km/h)* | | | | | |
| 208.93 *(155.80)* | 10111 *(44.97)* | 7.75 *(12.47)* | 2101 | 1.66 | 0.451 *(0.274)* | 15.50 *(3.05)* | 195 *(90)* | 45 *(7)* | 29.04 *(98.34)* |
| | | | | 8.7 mph *(14.0 km/h)* | | | | | |
| 207.73 *(154.91)* | 9328 *(41.49)* | 8.35 *(13.44)* | 2099 | 1.56 | 0.459 *(0.279)* | 15.24 *(3.00)* | 198 *(92)* | 49 *(9)* | 29.02 *(98.27)* |

| TRACTOR SOUND LEVEL WITH CAB | Front Wheel Drive Engaged dB(A) | Front Wheel Drive Disengaged dB(A) |
|---|---|---|
| At no load at 4.6 mph *(7.5 km/h)* | 72.0 | 71.8 |
| Transport speed - no load | | 76.5 |
| Bystander | | 86.8 |

| TIRES, BALLAST AND WEIGHT | With Ballast | Without Ballast |
|---|---|---|
| **Rear Tires** - No., size, ply & psi(*kPa*) | Six 480/80R46;***;9(*60*) | Four 480/80R46;***;9(*60*) |
| **Ballast** - Triples (total) | 2120 lb *(962 kg)* | None |
| - Cast Iron (total) | 4440 lb *(2014 kg)* | None |
| **Front Tires** - No., size, ply & psi(*kPa*) | Four 420/90R30;**;13(*90*) | Two 420/90R30;**;23(*160*) |
| **Ballast** - Duals (total) | 1300 lb *(589 kg)* | None |
| - Cast Iron (total) | 385 lb *(175 kg)* | None |
| **Height of Drawbar** | 17.5 in *(445 mm)* | 18.0 in *(455 mm)* |
| **Static Weight with operator** - Rear | 21140 lb *(9589 kg)* | 14820 lb *(6722 kg)* |
| - Front | 12770 lb *(5792 kg)* | 10845 lb *(4919 kg)* |
| - Total | 33910 lb(*15381 kg*) | 25665 lb(*11641 kg*) |

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

**NOTE:** Manual mode was selected by placing the AutoPowr(IVT) selector in the OFF position. Auto mode was selected by placing the Autopowr (IVT) selector in position 3.

**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 115°F*(46°C)*. This tractor had a power bulge of 11.9% which did not meet the manufacturer's claim of 13% power bulge. The performance figures on this summary were taken from a test conducted under the OECD Code II test code procedure.

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. **1874**, Nebraska Summary 528, August 7, 2006.

Leonard L. Bashford
Director

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

# 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)* | Hp.hr/gal *(kW.h/l)* | Temp.°F*(°C)* cool-ing med | Air dry bulb | Barom. inch Hg *(kPa)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 3.2 mph *(5.2 km/h)* | | | | | |
| 184.49 *(137.57)* | 24684 *(109.80)* | 2.80 *(4.51)* | 2112 | 11.69 | 0.511 *(0.311)* | 13.68 *(2.69)* | 185 *(85)* | 49 *(9)* | 28.66 *(97.05)* |
| | | | | 3.7 mph *(6.0 km/h)* | | | | | |
| 200.40 *(149.44)* | 23040 *(102.49)* | 3.26 *(5.25)* | 2073 | 9.20 | 0.489 *(0.298)* | 14.29 *(2.81)* | 198 *(92)* | 52 *(11)* | 28.70 *(97.19)* |
| | | | | 4.3 mph *(7.0 km/h)* | | | | | |
| 222.07 *(165.59)* | 22466 *(99.93)* | 3.71 *(5.97)* | 1986 | 7.66 | 0.462 *(0.281)* | 15.13 *(2.98)* | 205 *(96)* | 53 *(12)* | 28.73 *(97.29)* |
| | | | | 4.7 mph *(7.5 km/h)* | | | | | |
| 228.38 *(170.31)* | 22172 *(98.63)* | 3.86 *(6.22)* | 1950 | 7.26 | 0.451 *(0.274)* | 15.49 *(3.05)* | 202 *(95)* | 53 *(12)* | 28.74 *(97.33)* |
| | | | | 5.0 mph *(8.0 km/h)* | | | | | |
| 234.19 *(174.64)* | 21114 *(93.92)* | 4.16 *(6.69)* | 1912 | 5.83 | 0.445 *(0.271)* | 15.71 *(3.10)* | 205 *(96)* | 53 *(12)* | 28.98 *(98.14)* |
| | | | | 5.6 mph *(9.0 km/h)* | | | | | |
| 240.37 *(179.24)* | 20319 *(90.38)* | 4.44 *(7.14)* | 1800 | 5.44 | 0.439 *(0.267)* | 15.94 *(3.14)* | 205 *(96)* | 54 *(12)* | 28.97 *(98.10)* |
| | | | | 6.2 mph *(10.0 km/h)* | | | | | |
| 243.75 *(181.77)* | 18203 *(80.97)* | 5.02 *(8.08)* | 1805 | 3.69 | 0.430 *(0.261)* | 16.26 *(3.20)* | 205 *(96)* | 43 *(6)* | 29.02 *(98.27)* |
| | | | | 6.8 mph *(11.0 km/h)* | | | | | |
| 245.45 *(183.03)* | 16622 *(73.94)* | 5.54 *(8.91)* | 1800 | 3.16 | 0.423 *(0.257)* | 16.51 *(3.25)* | 203 *(95)* | 44 *(7)* | 29.03 *(98.31)* |
| | | | | 7.5 mph *(12.0 km/h)* | | | | | |
| 246.28 *(183.65)* | 15240 *(67.79)* | 6.06 *(9.75)* | 1799 | 2.79 | 0.424 *(0.258)* | 16.49 *(3.25)* | 206 *(96)* | 45 *(7)* | 29.03 *(98.31)* |
| | | | | 8.1 mph *(13.0 km/h)* | | | | | |
| 245.66 *(183.19)* | 14002 *(62.28)* | 6.58 *(10.59)* | 1798 | 2.45 | 0.422 *(0.256)* | 16.58 *(3.27)* | 204 *(96)* | 46 *(8)* | 29.04 *(98.34)* |
| | | | | 8.7 mph *(14.0 km/h)* | | | | | |
| 245.69 *(183.21)* | 12959 *(57.65)* | 7.11 *(11.44)* | 1799 | 2.21 | 0.422 *(0.257)* | 16.56 *(3.26)* | 202 *(94)* | 51 *(11)* | 29.00 *(98.21)* |
| | | | | 9.3 mph *(15.0 km/h)* | | | | | |
| 245.35 *(182.96)* | 12049 *(53.60)* | 7.64 *(12.29)* | 1799 | 2.05 | 0.427 *(0.259)* | 16.39 *(3.23)* | 201 *(94)* | 52 *(11)* | 28.99 *(98.17)* |
| | | | | 9.9 mph *(16.0 km/h)* | | | | | |
| 244.12 *(182.04)* | 11223 *(49.92)* | 8.16 *(13.13)* | 1799 | 1.82 | 0.427 *(0.260)* | 16.35 *(3.22)* | 201 *(94)* | 53 *(12)* | 28.98 *(98.14)* |

# DRAWBAR PERFORMANCE

## UNBALLASTED - FRONT DRIVE ENGAGED - AUTO MODE

### MAXIMUM POWER AT SELECTED SPEED SETTINGS

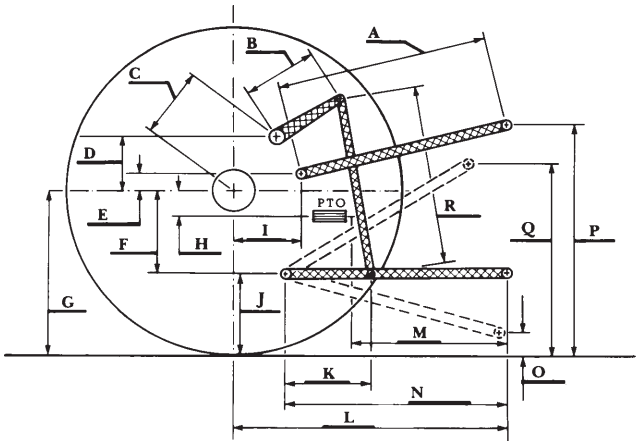
| Power Hp *(kW)* | Drawbar pull lbs *(kN)* | Speed mph *(km/h)* | Crank-shaft speed rpm | Slip % | Fuel Consumption lb/hp.hr *(kg/kW.h)* | Hp.hr/gal *(kW.h/l)* | Temp.°F *(°C)* cool-ing med | Air dry bulb | Barom. inch Hg *(kPa)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 3.2 mph *(5.2 km/h)* | | | | | |
| 181.72 *(135.51)* | 24364 *(108.38)* | 2.80 *(4.50)* | 1880 | 13.03 | 0.500 *(0.304)* | 13.98 *(2.75)* | 196 *(91)* | 49 *(9)* | 28.67 *(97.09)* |
| | | | | 3.7 mph *(6.0 km/h)* | | | | | |
| 197.53 *(147.30)* | 22277 *(99.09)* | 3.33 *(5.35)* | 1920 | 7.67 | 0.469 *(0.285)* | 14.92 *(2.94)* | 203 *(95)* | 51 *(11)* | 28.69 *(97.16)* |
| | | | | 4.3 mph *(7.0 km/h)* | | | | | |
| 206.31 *(153.84)* | 19250 *(85.63)* | 4.02 *(6.47)* | 1916 | 4.91 | 0.446 *(0.271)* | 15.68 *(3.09)* | 203 *(95)* | 53 *(12)* | 28.72 *(97.26)* |
| | | | | 4.7 mph *(7.5 km/h)* | | | | | |
| 211.12 *(157.43)* | 18385 *(81.78)* | 4.31 *(6.93)* | 1976 | 4.05 | 0.441 *(0.268)* | 15.87 *(3.13)* | 203 *(95)* | 55 *(13)* | 28.96 *(98.07)* |
| | | | | 5.0 mph *(8.0 km/h)* | | | | | |
| 212.33 *(158.33)* | 17044 *(75.81)* | 4.67 *(7.52)* | 1988 | 3.57 | 0.442 *(0.269)* | 15.82 *(3.12)* | 201 *(94)* | 53 *(12)* | 28.98 *(98.14)* |
| | | | | 5.6 mph *(9.0 km/h)* | | | | | |
| 212.79 *(158.68)* | 15007 *(66.75)* | 5.32 *(8.56)* | 1974 | 2.88 | 0.435 *(0.265)* | 16.05 *(3.16)* | 201 *(94)* | 54 *(12)* | 28.96 *(98.07)* |
| | | | | 6.2 mph *(10.0 km/h)* | | | | | |
| 213.08 *(158.89)* | 13468 *(59.91)* | 5.93 *(9.55)* | 1983 | 2.40 | 0.433 *(0.263)* | 16.16 *(3.18)* | 198 *(92)* | 43 *(6)* | 29.02 *(98.27)* |
| | | | | 6.8 mph *(11.0 km/h)* | | | | | |
| 212.43 *(158.41)* | 12131 *(53.96)* | 6.57 *(10.57)* | 1994 | 2.12 | 0.442 *(0.269)* | 15.80 *(3.11)* | 200 *(93)* | 44 *(7)* | 29.03 *(98.31)* |
| | | | | 7.5 mph *(12.0 km/h)* | | | | | |
| 211.44 *(157.67)* | 11043 *(49.12)* | 7.18 *(11.56)* | 1995 | 1.89 | 0.436 *(0.265)* | 16.03 *(3.16)* | 200 *(93)* | 45 *(7)* | 29.03 *(98.31)* |
| | | | | 8.1 mph *(13.0 km/h)* | | | | | |
| 210.31 *(156.83)* | 10109 *(44.97)* | 7.80 *(12.56)* | 1986 | 1.67 | 0.447 *(0.272)* | 15.64 *(3.08)* | 200 *(93)* | 46 *(8)* | 29.04 *(98.34)* |
| | | | | 8.7 mph *(14.0 km/h)* | | | | | |
| 208.67 *(155.61)* | 9302 *(41.38)* | 8.41 *(13.54)* | 1994 | 1.47 | 0.445 *(0.271)* | 15.70 *(3.09)* | 204 *(96)* | 50 *(10)* | 29.01 *(98.24)* |

# 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 | Temp.°F*(°C)* Air dry bulb | Barom. inch Hg *(kPa)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 2.2 mph *(3.6 km/h)* | | | | | |
| 178.48 *(133.09)* | 34671 *(154.23)* | 1.93 *(3.11)* | 2123 | 12.48 | 0.524 *(0.319)* | 13.33 *(2.63)* | 195 *(91)* | 54 *(12)* | 28.68 *(97.12)* |
| | | | | 2.8 mph *(4.5 km/h)* | | | | | |
| 212.01 *(158.09)* | 32283 *(143.60)* | 2.46 *(3.96)* | 2043 | 7.16 | 0.471 *(0.286)* | 14.86 *(2.93)* | 204 *(95)* | 56 *(13)* | 28.67 *(97.09)* |
| | | | | 3.2 mph *(5.2 km/h)* | | | | | |
| 227.50 *(169.65)* | 31181 *(138.70)* | 2.74 *(4.40)* | 1950 | 6.24 | 0.453 *(0.276)* | 15.43 *(3.04)* | 202 *(95)* | 60 *(16)* | 28.66 *(97.05)* |
| | | | | 3.7 mph *(6.0 km/h)* | | | | | |
| 236.84 *(176.61)* | 30313 *(134.84)* | 2.93 *(4.72)* | 1801 | 5.98 | 0.446 *(0.271)* | 15.66 *(3.09)* | 202 *(94)* | 62 *(17)* | 28.65 *(97.02)* |
| | | | | 4.3 mph *(7.0 km/h)* | | | | | |
| 242.94 *(181.16)* | 26144 *(116.29)* | 3.48 *(5.61)* | 1800 | 4.46 | 0.432 *(0.263)* | 16.19 *(3.19)* | 201 *(94)* | 63 *(17)* | 28.64 *(96.99)* |
| | | | | 4.7 mph *(7.5 km/h)* | | | | | |
| 245.01 *(182.70)* | 24836 *(110.48)* | 3.70 *(5.95)* | 1800 | 3.96 | 0.429 *(0.261)* | 16.29 *(3.21)* | 201 *(94)* | 64 *(18)* | 28.64 *(96.99)* |
| | | | | 5.0 mph *(8.0 km/h)* | | | | | |
| 246.77 *(184.02)* | 23024 *(102.42)* | 4.02 *(6.47)* | 1801 | 3.51 | 0.428 *(0.260)* | 16.35 *(3.22)* | 201 *(94)* | 65 *(18)* | 28.64 *(96.99)* |
| | | | | 5.6 mph *(9.0 km/h)* | | | | | |
| 247.69 *(184.70)* | 20420 *(90.83)* | 4.55 *(7.32)* | 1802 | 2.95 | 0.427 *(0.260)* | 16.37 *(3.23)* | 201 *(94)* | 66 *(19)* | 28.63 *(96.95)* |
| | | | | 6.2 mph *(10.0 km/h)* | | | | | |
| 247.62 *(184.65)* | 18316 *(81.47)* | 5.07 *(8.16)* | 1800 | 2.58 | 0.425 *(0.259)* | 16.44 *(3.24)* | 201 *(94)* | 67 *(19)* | 28.63 *(96.95)* |
| | | | | 6.8 mph *(11.0 km/h)* | | | | | |
| 247.25 *(184.38)* | 16579 *(73.75)* | 5.59 *(9.00)* | 1801 | 2.32 | 0.428 *(0.261)* | 16.32 *(3.22)* | 202 *(95)* | 68 *(20)* | 28.63 *(96.95)* |
| | | | | 7.5 mph *(12.0 km/h)* | | | | | |
| 245.48 *(183.05)* | 15059 *(66.98)* | 6.11 *(9.84)* | 1801 | 2.09 | 0.425 *(0.258)* | 16.45 *(3.24)* | 201 *(94)* | 69 *(21)* | 28.62 *(96.92)* |
| | | | | 8.1 mph *(13.0 km/h)* | | | | | |
| 244.05 *(181.99)* | 13813 *(61.45)* | 6.63 *(10.66)* | 1799 | 1.94 | 0.431 *(0.262)* | 16.23 *(3.20)* | 201 *(94)* | 70 *(21)* | 28.62 *(96.92)* |
| | | | | 8.7 mph *(14.0 km/h)* | | | | | |
| 241.36 *(179.98)* | 12627 *(56.17)* | 7.17 *(11.54)* | 1805 | 1.77 | 0.438 *(0.266)* | 15.98 *(3.15)* | 201 *(94)* | 71 *(22)* | 28.62 *(96.92)* |
| | | | | 9.3 mph *(15.0 km/h)* | | | | | |
| 241.26 *(179.91)* | 11782 *(52.41)* | 7.68 *(12.36)* | 1802 | 1.65 | 0.441 *(0.268)* | 15.84 *(3.12)* | 201 *(94)* | 72 *(22)* | 28.61 *(96.88)* |
| | | | | 9.9 mph *(16.0 km/h)* | | | | | |
| 241.06 *(179.76)* | 11057 *(49.18)* | 8.18 *(13.16)* | 1796 | 1.52 | 0.439 *(0.267)* | 15.91 *(3.13)* | 201 *(94)* | 73 *(23)* | 28.60 *(96.85)* |

## THREE POINT HITCH PERFORMANCE (OECD Static Test)

| CATEGORY: | III | IVN |
|---|---|---|
| Quick Attach: Yes | | |
| Lift cylinders: | 1x112 mm&1x100 mm | 2x112 mm |
| Maximum force exerted through whole range: | 17719 lbs *(78.8 kN)* | 18326 lbs *(81.5 kN)* |
| | 63 cc pump | 85 cc pump |
| i) Sustained pressure at compensator cutoff: | 2980 psi *(205 bar)* | 2990 psi *(206 bar)* |
| | **two outlet sets combined** | **three outlet sets combined** |
| ii) Pump delivery rate at minimum pressure and rated engine speed: | 46.6 GPM *(176.3 l/min)* | 61.9 GPM *(234.3 l/min)* |
| iii) Pump delivery rate at maximum hydraulic power: | 47.0 GPM *(177.8 l/min)* | 62.0 GPM *(234.7 l/min)* |
| Delivery pressure: | 2479 psi *(171 bar)* | 2444 psi *(169 bar)* |
| Power: | 67.9 HP *(50.7 kW)* | 88.4 HP *(65.9 kW)* |
| | **single outlet set** | |
| ii) Pump delivery rate at minimum pressure and rated engine speed: | 42.1 GPM *(159.3 l/min)* | 38.3 GPM *(145.0 l/min)* |
| iii) Pump delivery rate at maximum hydraulic power: | 38.9 GPM *(147.2 l/min)* | 33.6 GPM *(127.2 l/min)* |
| Delivery pressure: | 2155 psi *(149 bar)* | 2084 psi *(144 bar)* |
| Power: | 48.9 HP *(36.5 kW)* | 40.9 HP *(30.5 kW)* |




### HITCH DIMENSIONS AS TESTED—NO LOAD

| | Category III | | Category IVN | |
|---|---|---|---|---|
| | inch | *mm* | inch | *mm* |
| A | 29.3 | *744* | 27.1 | *689* |
| B | 20.5 | *520* | 20.5 | *520* |
| C | 20.9 | *532* | 20.9 | *532* |
| D | 18.9 | *480* | 18.9 | *480* |
| E | 7.3 | *185* | 12.0 | *304* |
| F | 14.4 | *365* | 14.4 | *365* |
| G | 35.6 | *905* | 37.0 | *940* |
| H | 7.9 | *200* | 7.9 | *200* |
| I | 20.7 | *525* | 21.9 | *555* |
| J | 21.2 | *540* | 22.6 | *575* |
| K | 21.2 | *540* | 23.2 | *590* |
| L | 53.4 | *1357* | 56.6 | *1438* |
| *L' | 57.6 | *1462* | 62.5 | *1588* |
| M | 26.5 | *674* | 29.7 | *755* |
| N | 42.6 | *1081* | 45.7 | *1162* |
| O | 9.0 | *230* | 9.0 | *230* |
| P | 45.2 | *1149* | 49.7 | *1262* |
| Q | 39.4 | *1001* | 40.7 | *1035* |
| R | 42.8 | *1087* | 43.5 | *1106* |

*L' to quick attach ends

**JOHN DEERE 8430 IVT DIESEL**

**Institute of Agriculture and Natural Resources**
**University of Nebraska–Lincoln**