

# SUMMARY OF OECD TEST 3022 - NEBRASKA SUMMARY 1114

## JOHN DEERE 6195M AUTOQUAD-PLUS DIESEL

### 20 SPEED

#### POWER TAKE-OFF PERFORMANCE

| Power<br>HP<br>(kW)                             | Crank<br>shaft<br>speed<br>rpm | Diesel<br>Consumption |                       | D.E.F.<br>Consumption |                 | Mean Atmospheric<br>Conditions  |
|---|--------------------------------|-----------------------|-----------------------|-----------------------|-----------------|---|
|   |                                | Gal/hr<br>(l/h)       | lb/hp.hr<br>(kg/kW.h) | Hp.hr/gal<br>(kW/h)   | Gal/hr<br>(l/h) |   |
| <b>MAXIMUM POWER AND FUEL CONSUMPTION</b>       |                                |                       |                       |                       |                 |   |
| <b>Rated Engine Speed—(PTO speed—1077 rpm)</b>  |                                |                       |                       |                       |                 |   |
| 161.1<br>(120.1)                                | 2100                           | 9.49<br>(35.91)       | 0.411<br>(0.250)      | 16.98<br>(3.35)       | 0.22<br>(0.83)  | Fuel used during the active exhaust regeneration - 1.14 gal(4.30 l) (see Note 1, p.2) |
| <b>Standard Power Take-off Speed (1000 rpm)</b> |                                |                       |                       |                       |                 |   |
| 179.7<br>(134.0)                                | 1950                           | 10.09<br>(38.20)      | 0.392<br>(0.239)      | 17.81<br>(3.51)       | 0.22<br>(0.83)  |   |
| <b>Maximum Power (1 hour)</b>                   |                                |                       |                       |                       |                 |   |
| 181.0<br>(135.0)                                | 1700                           | 9.87<br>(37.34)       | 0.381<br>(0.232)      | 18.34<br>(3.61)       | 0.21<br>(0.78)  |   |

#### VARYING POWER AND FUEL CONSUMPTION

|                  |      |                 |                  |                 |                |                     |
|------------------|------|-----------------|------------------|-----------------|----------------|---------------------|
| 161.1<br>(120.1) | 2100 | 9.49<br>(35.91) | 0.411<br>(0.250) | 16.98<br>(3.35) | 0.22<br>(0.83) | Air temperature     |
| 140.2<br>(104.6) | 2151 | 8.56<br>(32.40) | 0.427<br>(0.259) | 16.39<br>(3.23) | 0.20<br>(0.75) | 68°F(20°C)          |
| 106.5<br>(79.4)  | 2178 | 7.19<br>(27.20) | 0.471<br>(0.287) | 14.82<br>(2.92) | 0.14<br>(0.54) | Relative humidity   |
| 72.2<br>(53.8)   | 2215 | 5.84<br>(22.10) | 0.565<br>(0.344) | 12.36<br>(2.44) | 0.11<br>(0.40) | 51%                 |
| 36.6<br>(27.3)   | 2243 | 4.33<br>(16.40) | 0.827<br>(0.503) | 8.45<br>(1.67)  | 0.07<br>(0.25) | Barometer           |
| --               | 2250 | 2.75<br>(10.40) | --               | --              | 0.07<br>(0.27) | 30.1" Hg(101.9 kPa) |

Maximum torque - 591 lb.-ft. (801 Nm) at 1400 rpm  
 Maximum torque rise - 46.7%  
 Torque rise at 1700 engine rpm - 38%  
 Power increase at 1700 engine rpm - 12.4%

#### DRAWBAR PERFORMANCE UNBALLASTED - FRONT DRIVE ENGAGED FUEL CONSUMPTION CHARACTERISTICS

| Power<br>Hp<br>(kW)                                      | Drawbar<br>pull<br>lbs<br>(kN) | Speed<br>mph<br>(km/h) | Crank-<br>shaft<br>speed<br>rpm | Slip<br>% | Fuel Consumption<br>lb/hp.hr<br>(kg/kW.h) | D.E.F.<br>Consumption<br>lb/hp.hr<br>(kg/kW.h) | Temp. °F(°C)<br>cool-<br>ing<br>med | Air<br>dry<br>bulb | Barom.<br>inch<br>Hg<br>(kPa) |                 |
|--|--------------------------------|------------------------|---------------------------------|-----------|---|--|-------------------------------------|--------------------|-------------------------------|-----------------|
| <b>Power at Rated Engine Speed—7th (B3) Gear</b>         |                                |                        |                                 |           |   |  |                                     |                    |                               |                 |
| 148.5<br>(110.7)   | 12120<br>(53.92)               | 4.59<br>(7.39)         | 2100                            | 5.8       | 0.455<br>(0.276)                          | 15.38<br>(3.03)                                | 0.015<br>(0.009)                    | 181<br>(83)        | 57<br>(14)                    | 29.9<br>(101.4) |
| <b>75% of Pull at Rated Engine Speed—7th (B3) Gear</b>   |                                |                        |                                 |           |   |  |                                     |                    |                               |                 |
| 117.5<br>(87.6)  | 9060<br>(40.29)                | 4.86<br>(7.83)         | 2189                            | 4.3       | 0.488<br>(0.297)                          | 14.31<br>(2.82)                                | 0.015<br>(0.009)                    | 169<br>(76)        | 57<br>(14)                    | 29.9<br>(101.4) |
| <b>50% of Pull at Rated Engine Speed—7th (B3) Gear</b>   |                                |                        |                                 |           |   |  |                                     |                    |                               |                 |
| 79.8<br>(59.5)   | 6005<br>(26.71)                | 4.98<br>(8.02)         | 2213                            | 3.0       | 0.573<br>(0.349)                          | 12.18<br>(2.40)                                | 0.012<br>(0.007)                    | 162<br>(72)        | 57<br>(14)                    | 29.9<br>(101.4) |
| <b>75% of Pull at Reduced Engine Speed—8th (C1) Gear</b> |                                |                        |                                 |           |   |  |                                     |                    |                               |                 |
| 117.9<br>(87.9)  | 9070<br>(40.34)                | 4.87<br>(7.84)         | 1984                            | 4.1       | 0.465<br>(0.283)                          | 15.02<br>(2.96)                                | 0.008<br>(0.005)                    | 165<br>(74)        | 57<br>(14)                    | 29.9<br>(101.4) |
| <b>50% of Pull at Reduced Engine Speed—8th (C1) Gear</b> |                                |                        |                                 |           |   |  |                                     |                    |                               |                 |
| 79.8<br>(59.5)   | 5990<br>(26.64)                | 5.00<br>(8.04)         | 2008                            | 3.0       | 0.540<br>(0.328)                          | 12.94<br>(2.55)                                | 0.015<br>(0.009)                    | 160<br>(71)        | 57<br>(14)                    | 29.9<br>(101.4) |

**Location of tests:** DLG e.V. Test Centre, Technology and Farm inputs, Max-Eyth-Weg 1, D-64823 Gross-Umstadt, Germany

**Dates of tests:** October to November 2016

**Manufacturer:** John Deere GmbH & Co., KG Mannheim Germany

**CONSUMABLE Fluids:** Fuel No. 2 Diesel Specific gravity converted to 60°/60°F (15°/15°C) 0.8384 Fuel weight 6.99 lbs/gal (0.837 kg/l) Diesel Exhaust Fluid (DEF) 32% aqueous urea solution DEF weight 9.071 lbs/gal (1.087 kg/l) Oil SAE 10W-30 API service classification CJ-4 Transmission and hydraulic lubricant John Deere Hy-Gard fluid Front axle lubricant John Deere Hy-Gard fluid

**ENGINE:** Make John Deere Diesel Type six cylinder vertical with two turbochargers, air to air intercooler and D.E.F. (diesel exhaust fluid) exhaust treatment Serial No. \*CD6068U020821\* Crankshaft lengthwise Rated engine speed 2100 Bore and stroke 4.19 x 5.00" (106.5 mm x 127.0 mm) Compression ratio 17.0 to 1 Displacement 414 cu in (6788 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 prestrainer Fuel cooler radiator for pump return fuel Exhaust DOC (diesel oxidation catalyst)/DPF (diesel particulate filter) System and SCR (selective catalyst reduction) with a vertical muffler Cooling medium temperature control thermostat and variable speed fan

**CHASSIS:** Type front wheel assist Serial No. \*1L06195MCGG864680\* Tread width rear 68.4" (1736 mm) to 108.8" (2764 mm) front 63.3" (1608 mm) to 88.3" (2244 mm) Wheelbase 110.2" (2800 mm) Hydraulic control system direct engine drive Transmission selective gear fixed ratio with partial (4) range operator controlled power shift Nominal travel speeds mph (km/h) first 1.58 (2.55) second 1.91 (3.07) third 2.28 (3.67) fourth 2.80 (4.50) fifth 3.36 (5.40) sixth 4.04 (6.50) seventh 4.83 (7.78) eighth 5.34 (8.59) ninth 5.92 (9.53) tenth 6.43 (10.34) eleventh 7.70 (12.39) twelfth 9.43 (15.17) thirteenth 9.88 (15.90) fourteenth 11.90 (19.15) fifteenth 14.25 (22.93) sixteenth 14.64 (23.56) seventeenth 17.45 (28.09) eighteenth 17.63 (28.37) nineteenth 21.11 (33.97) twentieth 25.86 (41.62) reverse 1.65 (2.66), 1.99 (3.20), 2.38 (3.83), 2.91 (4.69), 3.50 (5.63), 4.21 (6.78), 5.05 (8.12), 5.57 (8.96), 6.18 (9.95), 6.70 (10.79), 8.03 (12.92), 9.84 (15.83), 10.31 (16.59), 12.42 (19.98), 14.87 (23.93), 15.27 (24.58), 18.21 (29.31), 18.39 (29.60), 22.03 (35.45), 26.99 (43.43)

## DRAWBAR PERFORMANCE

### UNBALLASTED - FRONT DRIVE ENGAGED - 1700 ENGINE RPM MAXIMUM POWER IN SELECTED GEARS

| Power<br>Hp<br>(kW) | Drawbar<br>pull<br>lbs<br>(kN) | Speed<br>mph<br>(km/h) | Crank-<br>shaft<br>speed<br>rpm | Slip<br>% | Fuel Consumption      |                       | D.E.F.<br>Consumption | Temp. °F(°C)        |                    | Barom.<br>inch<br>Hg<br>(kPa) |
|---------------------|--------------------------------|------------------------|---------------------------------|-----------|-----------------------|-----------------------|-----------------------|---------------------|--------------------|-------------------------------|
|                     |                                |                        |                                 |           | lb/hp.hr<br>(kg/kW.h) | Hp.hr/gal<br>(kW.h/l) | lb/hp.hr<br>(kg/kW.h) | cool-<br>ing<br>med | Air<br>dry<br>bulb |                               |
| 6th (B2) Gear       |                                |                        |                                 |           |                       |                       |                       |                     |                    |                               |
| 146.4<br>(109.2)    | 16955<br>(75.46)               | 3.24<br>(5.21)         | 1968                            | 15.0      | 0.485<br>(0.295)      | 14.29<br>(2.82)       | 0.016<br>(0.010)      | 183<br>(84)         | 63<br>(17)         | 30.0<br>(101.5)               |
| 7th (B3) Gear       |                                |                        |                                 |           |                       |                       |                       |                     |                    |                               |
| 152.2<br>(113.5)    | 16630<br>(74.12)               | 3.43<br>(5.51)         | 1707                            | 13.0      | 0.455<br>(0.277)      | 15.23<br>(3.00)       | 0.015<br>(0.009)      | 181<br>(83)         | 61<br>(16)         | 30.0<br>(101.5)               |
| 8th (C1) Gear       |                                |                        |                                 |           |                       |                       |                       |                     |                    |                               |
| 158.0<br>(117.8)    | 14870<br>(66.15)               | 3.98<br>(6.41)         | 1699                            | 8.2       | 0.437<br>(0.266)      | 15.84<br>(3.12)       | 0.013<br>(0.008)      | 187<br>(86)         | 66<br>(19)         | 30.0<br>(101.5)               |
| 9th (B4) Gear       |                                |                        |                                 |           |                       |                       |                       |                     |                    |                               |
| 161.2<br>(120.2)    | 13455<br>(59.85)               | 4.49<br>(7.23)         | 1701                            | 7.0       | 0.430<br>(0.262)      | 16.12<br>(3.18)       | 0.012<br>(0.007)      | 185<br>(85)         | 61<br>(16)         | 30.0<br>(101.5)               |
| 10th (C2) Gear      |                                |                        |                                 |           |                       |                       |                       |                     |                    |                               |
| 161.2<br>(120.2)    | 12265<br>(54.55)               | 4.93<br>(7.93)         | 1701                            | 5.9       | 0.429<br>(0.261)      | 16.14<br>(3.18)       | 0.015<br>(0.009)      | 187<br>(86)         | 66<br>(19)         | 30.0<br>(101.5)               |
| 11th (C3) Gear      |                                |                        |                                 |           |                       |                       |                       |                     |                    |                               |
| 163.2<br>(121.7)    | 10230<br>(45.50)               | 5.98<br>(9.63)         | 1699                            | 4.5       | 0.425<br>(0.259)      | 16.29<br>(3.21)       | 0.010<br>(0.006)      | 185<br>(85)         | 66<br>(19)         | 29.9<br>(101.4)               |
| 12th (C4) Gear      |                                |                        |                                 |           |                       |                       |                       |                     |                    |                               |
| 162.9<br>(121.5)    | 8205<br>(36.49)                | 7.45<br>(11.99)        | 1710                            | 3.6       | 0.427<br>(0.259)      | 16.24<br>(3.20)       | 0.015<br>(0.009)      | 185<br>(85)         | 66<br>(19)         | 30.0<br>(101.5)               |
| 13th (D1) Gear      |                                |                        |                                 |           |                       |                       |                       |                     |                    |                               |
| 161.5<br>(120.4)    | 7780<br>(34.61)                | 7.78<br>(12.52)        | 1703                            | 3.3       | 0.430<br>(0.261)      | 16.12<br>(3.17)       | 0.015<br>(0.009)      | 183<br>(84)         | 66<br>(19)         | 29.9<br>(101.4)               |
| 14th (D2) Gear      |                                |                        |                                 |           |                       |                       |                       |                     |                    |                               |
| 159.6<br>(119.0)    | 6350<br>(28.25)                | 9.42<br>(15.16)        | 1703                            | 2.8       | 0.433<br>(0.263)      | 16.00<br>(3.15)       | 0.015<br>(0.009)      | 183<br>(84)         | 64<br>(18)         | 29.9<br>(101.4)               |

**Clutch** wet multiple disc hydraulically actuated by foot pedal **Brakes** wet multiple disc hydraulically operated by two foot pedals that can be locked together **Steering** hydrostatic **Power take-off** 540 rpm at 1950 engine rpm or 1000 rpm at 1950 engine rpm **Unladen tractor mass** 16790 lb (7615 kg)

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

**NOTE 1:** The manufacturer declares that the average time between active regenerations is 50 hours.

**REMARKS:** All test results were determined from observed data obtained in accordance with official OECD test procedures. This tractor fell 0.7% short of meeting the manufacturer's remote hydraulic flow claim of 30.1 GPM (114 l/min). The performance figures on this summary were taken from a test conducted under the OECD Code 2 test procedure.

We, the undersigned, certify that this is a true summary of data from OECD Report No. **3022**, Nebraska Summary 1114, October 17, 2017.

Roger M. Hoy  
Director

M.F. Kocher  
S.K. Pital  
P.J. Jasa  
Board of Tractor Test Engineers

| TRACTOR SOUND LEVEL WITH CAB               | Front Wheel Drive |                     |
|--|-------------------|---------------------|
|  | Engaged<br>dB(A)  | Disengaged<br>dB(A) |
| At no load in 7th (B3) gear                | 70.5              | 70.3                |
| Transport speed - no load - 20th (E4) gear |                   | 70.6                |
| Bystander                                  |                   | --                  |

Horizontal distance of drawbar hitch point behind rear wheel axis - 35.4 in (900 mm), 38.6 in (980 mm), 40.6 in (1030 mm)

#### 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 620/70R42;\*\*\*;12(80)  
Two 480/70R30;\*\*\*;12(80)  
18.5 in (470 mm)  
10635 lb (4825 kg)  
6315 lb (2865 kg)  
16950 lb (7690 kg)

## HYDRAULIC PERFORMANCE

CATEGORY: 3

Quick Attach: No

Lift cylinders:

2 x 85 mm

Maximum force exerted through whole range: 11240 lbs (50.0 kN)

i) Sustained pressure at compensator cutoff: 2960 psi (204 bar)

**three outlet sets combined**

ii) Pump delivery rate at minimum pressure: 29.9 GPM (113.0 l/min)

iii) Pump delivery rate at maximum

hydraulic power: 26.7 GPM (101.2 l/min)

Delivery pressure: 2740 psi (189 bar)

Power: 42.8 HP (31.9 kW)

**single outlet set**

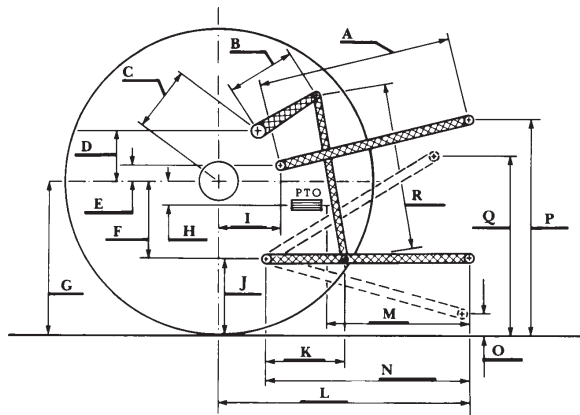
ii) Pump delivery rate at minimum pressure: 29.7 GPM (112.4 l/min)

iii) Pump delivery rate at maximum

hydraulic power: 27.5 GPM (104.2 l/min)

Delivery pressure: 2450 psi (169 bar)

Power: 39.3 HP (29.3 kW)



HITCH DIMENSIONS AS TESTED—NO LOAD

|   | inch | mm   |
|---|------|------|
| A | 29.7 | 755  |
| B | 16.1 | 410  |
| C | 24.6 | 624  |
| D | 23.8 | 605  |
| E | 7.4  | 189  |
| F | 10.8 | 275  |
| G | 36.4 | 925  |
| H | 6.5  | 165  |
| I | 21.8 | 555  |
| J | 25.6 | 650  |
| K | 25.6 | 649  |
| L | 50.3 | 1277 |
| M | 25.1 | 637  |
| N | 42.6 | 1082 |
| O | 9.1  | 231  |
| P | 52.6 | 1335 |
| Q | 40.1 | 1019 |
| R | 42.5 | 1080 |

NTTL.(2017) OECD tractor test 3022 for John Deere 6195M AutoQuad Plus Diesel.  
Lincoln, NE:Nebraska Tractor Test Laboratory. Retrieved from <http://tractortestlab.unl.edu>