

SUMMARY OF OECD TEST 3058 - NEBRASKA SUMMARY 1108

JOHN DEERE 6110M POWRQUAD-PLUS DIESEL

24 SPEED

POWER TAKE-OFF PERFORMANCE

| Power HP (kW) | Crank shaft speed rpm | Diesel Consumption | | D.E.F. Consumption | | Mean Atmospheric Conditions |
|---|--------------------------------|-----------------------|-----------------------|-----------------------|-----------------|---|
| | | Gal/hr (l/h) | lb/hp.hr (kg/kW.h) | Hp.hr/gal (kW.l/l) | Gal/hr (l/h) | |
| MAXIMUM POWER AND FUEL CONSUMPTION | | | | | | |
| Rated Engine Speed—(PTO speed—1070 rpm) | | | | | | |
| 88.8 (66.2) | 2100 | 5.83 (22.06) | 0.459 (0.279) | 15.23 (3.00) | 0.11 (0.43) | Fuel used during the active exhaust regeneration - 1.1 gal (4.2 l) (see Note 1, p.2) |
| Standard Power Take-off Speed (1000 rpm) | | | | | | |
| 94.9 (70.7) | 1962 | 5.79 (21.89) | 0.427 (0.259) | 16.40 (3.23) | 0.13 (0.51) | |
| Maximum Power (1 hour) | | | | | | |
| 95.3 (71.1) | 1800 | 5.58 (21.14) | 0.410 (0.249) | 17.06 (3.36) | 0.15 (0.56) | |

VARYING POWER AND FUEL CONSUMPTION

| | | | | | | |
|----------------|------|-----------------|------------------|-----------------|----------------|----------------------|
| 88.8 (66.2) | 2100 | 5.83 (22.06) | 0.459 (0.279) | 15.23 (3.00) | 0.11 (0.43) | Air temperature |
| 77.5 (57.8) | 2155 | 5.39 (20.40) | 0.487 (0.296) | 14.37 (2.83) | 0.09 (0.33) | 68°F (20°C) |
| 58.7 (43.8) | 2176 | 4.76 (18.00) | 0.567 (0.345) | 12.33 (2.43) | 0.08 (0.29) | Relative humidity |
| 39.8 (29.7) | 2211 | 3.96 (15.00) | 0.696 (0.424) | 10.04 (1.98) | 0.06 (0.22) | 42% |
| 20.1 (15.0) | 2232 | 3.12 (11.80) | 1.086 (0.661) | 6.44 (1.27) | 0.05 (0.17) | Barometer |
| -- | 2251 | 2.17 (8.20) | -- | -- | 0.05 (0.17) | 29.7" Hg (100.6 kPa) |

Maximum torque - 310 lb.-ft. (420 Nm) at 1200 rpm
 Maximum torque rise - 39.5%
 Torque rise at 1700 engine rpm - 31%
 Power increase at 1800 engine rpm - 7.4%

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) | D.E.F. Consumption lb/hp.hr (kW.l/l) | Temp. °F(°C) | Barom. inches Hg (kPa) |
|---|--------------------------------|------------------------|---------------------------------|-----------|---|---|------------------|--|
| Power at Rated Engine Speed—11th (C3) Gear | | | | | | | | |
| 81.9 (61.1) | 5835 (25.95) | 5.27 (8.48) | 2103 | 2.6 | 0.505 (0.307) | 13.71 (2.70) | 0.015 (0.009) | 183 (84) 72 (22) 29.7 (100.5) |
| 75% of Pull at Rated Engine Speed—11th (C3) Gear | | | | | | | | |
| 64.4 (48.0) | 4355 (19.38) | 5.54 (8.91) | 2193 | 1.7 | 0.584 (0.355) | 11.83 (2.33) | 0.013 (0.008) | 178 (81) 73 (23) 29.7 (100.5) |
| 50% of Pull at Rated Engine Speed—11th (C3) Gear | | | | | | | | |
| 43.2 (32.2) | 2890 (12.85) | 5.60 (9.01) | 2207 | 1.3 | 0.724 (0.441) | 9.54 (1.88) | 0.016 (0.010) | 174 (79) 72 (22) 29.6 (100.4) |
| 75% of Pull at Reduced Engine Speed—13th (C4) Gear | | | | | | | | |
| 63.4 (47.3) | 4335 (19.28) | 5.49 (8.83) | 1774 | 1.7 | 0.483 (0.293) | 14.31 (2.82) | 0.016 (0.010) | 176 (80) 68 (20) 29.6 (100.4) |
| 50% of Pull at Reduced Engine Speed—13th (C4) Gear | | | | | | | | |
| 42.8 (31.9) | 2870 (12.77) | 5.59 (9.00) | 1795 | 1.0 | 0.589 (0.358) | 11.72 (2.31) | 0.015 (0.009) | 174 (79) 70 (21) 29.6 (100.4) |

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

Dates of tests: March to April 2017

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 four cylinder vertical with two turbochargers, air to air intercooler and D.E.F. (diesel exhaust fluid) exhaust treatment Serial No. *CD4045U029280* Crankshaft lengthwise Rated engine speed 2100 Bore and stroke 4.19 x 5.00" (106.5 mm x 127.0 mm) Compression ratio 17.2 to 1 Displacement 276 cu in (4525 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. *1L06110MPHG873912* Tread width rear 63.5 (1612 mm) to 75.4" (1916 mm) front 55.9" (1420 mm) to 83.5" (2120 mm) Wheelbase 101.6" (2580 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 0.93 (1.50) second 1.12 (1.81) third 1.35 (2.17) fourth 1.65 (2.65) fifth 2.28 (3.67) sixth 2.74 (4.42) seventh 3.29 (5.29) eighth 3.72 (5.98) ninth 4.03 (6.48) tenth 4.47 (7.20) eleventh 5.36 (8.62) twelfth 6.09 (9.81) thirteenth 6.56 (10.56) fourteenth 7.34 (11.81) fifteenth 8.79 (14.15) sixteenth 9.90 (15.94) seventeenth 10.77 (17.33) eighteenth 11.93 (19.20) nineteenth 13.37 (21.52) twentieth 14.29 (22.99) twenty-first 16.11 (25.92) twenty-second 17.50 (28.16) twenty-third 19.29 (31.04) twenty-fourth 23.63 (38.02)

DRAWBAR PERFORMANCE

UNBALLASTED - FRONT DRIVE ENGAGED - 1800 ENGINE 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) | D.E.F. Consumption lb/hp.hr (kg/kW.h) | Temp. °F(°C) cool- ing med | Air dry bulb | Barom. inch Hg (kPa) |
|---------------------|--------------------------------|------------------------|---------------------------------|-----------|---|-----------------------|--|-------------------------------------|--------------------|-------------------------------|
| 6th (B2) Gear | | | | | | | | | | |
| 75.1 (56.0) | 12495 (55.58) | 2.26 (3.63) | 2014 | 15.0 | 0.550 (0.334) | 12.67 (2.49) | 0.015 (0.009) | 181 (83) | 72 (22) | 29.7 (100.5) |
| 7th (B3) Gear | | | | | | | | | | |
| 81.3 (60.6) | 12205 (54.28) | 2.50 (4.02) | 1801 | 12.2 | 0.487 (0.296) | 14.29 (2.81) | 0.016 (0.010) | 181 (83) | 61 (16) | 29.7 (100.6) |
| 8th (C1) Gear | | | | | | | | | | |
| 86.4 (64.4) | 10805 (48.07) | 3.00 (4.82) | 1800 | 6.8 | 0.460 (0.280) | 15.13 (2.98) | 0.013 (0.008) | 178 (81) | 61 (16) | 29.7 (100.6) |
| 9th (B4) Gear | | | | | | | | | | |
| 87.2 (65.0) | 9970 (44.35) | 3.28 (5.27) | 1800 | 5.9 | 0.458 (0.278) | 15.23 (3.00) | 0.015 (0.009) | 178 (81) | 61 (16) | 29.7 (100.6) |
| 10th (C2) Gear | | | | | | | | | | |
| 88.2 (65.8) | 8945 (39.78) | 3.70 (5.95) | 1801 | 4.3 | 0.451 (0.274) | 15.43 (3.04) | 0.013 (0.008) | 172 (78) | 61 (16) | 29.7 (100.6) |
| 11th (C3) Gear | | | | | | | | | | |
| 89.4 (66.7) | 7475 (33.24) | 4.49 (7.22) | 1801 | 3.2 | 0.445 (0.271) | 15.71 (3.10) | 0.015 (0.009) | 180 (82) | 57 (14) | 29.7 (100.6) |
| 12th (D1) Gear | | | | | | | | | | |
| 88.6 (66.1) | 6470 (28.78) | 5.14 (8.27) | 1801 | 2.6 | 0.449 (0.273) | 15.58 (3.07) | 0.015 (0.009) | 178 (81) | 57 (14) | 29.7 (100.6) |
| 13th (C4) Gear | | | | | | | | | | |
| 88.4 (66.0) | 5985 (26.63) | 5.54 (8.92) | 1802 | 2.3 | 0.450 (0.274) | 15.51 (3.06) | 0.013 (0.008) | 180 (82) | 57 (14) | 29.7 (100.6) |
| 14th (D2) Gear | | | | | | | | | | |
| 88.2 (65.8) | 5305 (23.60) | 6.24 (10.04) | 1803 | 1.8 | 0.450 (0.274) | 15.51 (3.06) | 0.013 (0.008) | 178 (81) | 59 (15) | 29.7 (100.6) |
| 15th (D3) Gear | | | | | | | | | | |
| 88.0 (65.6) | 4405 (19.59) | 7.49 (12.05) | 1803 | 1.4 | 0.451 (0.275) | 15.46 (3.05) | 0.013 (0.008) | 178 (81) | 59 (15) | 29.7 (100.6) |
| 16th (E1) Gear | | | | | | | | | | |
| 86.1 (64.2) | 3810 (16.96) | 8.47 (13.63) | 1798 | 1.0 | 0.462 (0.281) | 15.08 (2.97) | 0.015 (0.009) | 178 (81) | 57 (14) | 29.7 (100.6) |
| 17th (D4) Gear | | | | | | | | | | |
| 85.3 (63.6) | 3445 (15.32) | 9.29 (14.94) | 1809 | 0.8 | 0.466 (0.283) | 14.95 (2.95) | 0.015 (0.009) | 178 (81) | 57 (14) | 29.7 (100.6) |
| 18th (E2) Gear | | | | | | | | | | |
| 85.2 (63.5) | 3105 (13.80) | 10.29 (16.56) | 1805 | 0.5 | 0.469 (0.285) | 14.87 (2.93) | 0.013 (0.008) | 180 (82) | 57 (14) | 29.7 (100.6) |

| TRACTOR SOUND LEVEL WITH CAB | Front Wheel Drive | |
|--|-------------------|---------------------|
| | Engaged dB(A) | Disengaged dB(A) |
| At no load in 10th (C2) gear | 66.5 | 66.5 |
| Transport speed - no load - 24th (F4) gear | | 70.5 |
| Bystander | | -- |

Horizontal distance of drawbar hitch point behind rear wheel axis - 33.5 in (850 mm), 37.4 in (950 mm), 39.4 in (1000 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 480/70R38;***;12(80)
 Two 420/70R24;***;12(80)
 17.7 in (450 mm)
 7850 lb (3560 kg)
 4825 lb (2190 kg)
 12675 lb (5750 kg)

reverse 0.98 (1.57), 1.17 (1.89), 1.40 (2.26), 1.72 (2.77), 2.38 (3.83), 2.86 (4.61), 3.43 (5.52), 3.88 (6.24), 4.20 (6.76), 4.67 (7.51), 5.59 (9.00), 6.36 (10.24), 6.84 (11.02), 7.66 (12.33), 9.17 (14.76), 10.34 (16.64), 11.24 (18.09), 12.45 (20.03), 13.96 (22.46), 14.91 (23.99), 16.80 (27.04), 18.26 (29.39), 20.13 (32.39), 24.47 (39.68) **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 1967 engine rpm or 1000 rpm at 1962 engine rpm **Unladen tractor mass** 12500 lb (5670 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. The manufacturer's remote hydraulic flow claim of 21.1 GPM (80 l/min) with 35 cc pump was not verified. 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. **3058**, Nebraska Summary 1108, October 17, 2017.

Roger M. Hoy
 Director

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

HYDRAULIC PERFORMANCE WITH 45cc pump

CATEGORY: 3N

Quick Attach: No

Lift cylinders:

2 x 65 mm 2 x 75 mm

Maximum force exerted through whole range: 5845 lbs (26.0 kN) 7780 lbs (34.6 kN)

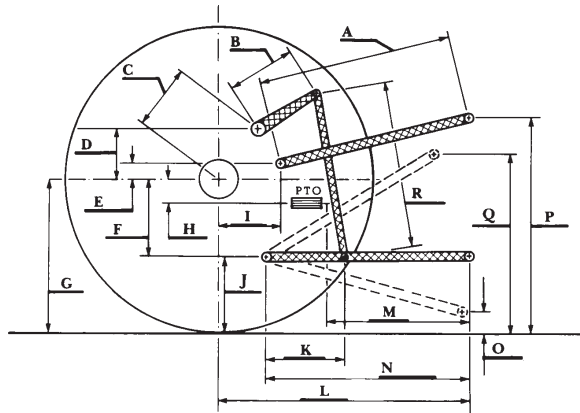
i) Sustained pressure at compensator cutoff: 2960 psi (204 bar)
two outlet sets combined
 ii) Pump delivery rate at minimum pressure: 31.2 GPM (118.3 l/min)

iii) Pump delivery rate at maximum
 hydraulic power: 29.4 GPM (111.4 l/min)
 Delivery pressure: 2610 psi (180 bar)
 Power: 44.8 HP (33.4 kW)

ii) Pump delivery rate at minimum pressure: 30.8 GPM (116.6 l/min)
single outlet set

iii) Pump delivery rate at maximum
 hydraulic power: 29.2 GPM (110.6 l/min)
 Delivery pressure: 2365 psi (163 bar)
 Power: 40.3 HP (30.1 kW)

HITCH DIMENSIONS AS TESTED—NO LOAD



| | inch | mm |
|---|------|------|
| A | 28.0 | 710 |
| B | 15.4 | 390 |
| C | 21.7 | 552 |
| D | 20.7 | 525 |
| E | 9.8 | 250 |
| F | 8.8 | 224 |
| G | 31.5 | 800 |
| H | 1.6 | 40 |
| I | 17.3 | 439 |
| J | 22.7 | 576 |
| K | 22.2 | 565 |
| L | 45.3 | 1150 |
| M | 21.7 | 550 |
| N | 40.0 | 1015 |
| O | 9.1 | 230 |
| P | 44.3 | 1124 |
| Q | 39.9 | 1013 |
| R | 34.1 | 865 |

NTTL.(2017) OECD tractor test 3058 for John Deere 6110M PowerQuad Plus Diesel.
 Lincoln, NE: Nebraska Tractor Test Laboratory. Retrieved from <http://tractortestlab.unl.edu>