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2020

Nebraska Summary 1195: John Deere 6155M FT4

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SUMMARY OF OECD TEST 3216 - NEBRASKA SUMMARY 1195

JOHN DEERE 6155M POWRQUAD-PLUS DIESEL

20 SPEED

Engine Serial numbers 6068U and higher

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.h/l)	Gal/hr (l/h)	
MAXIMUM POWER AND FUEL CONSUMPTION						
Rated Engine Speed—(PTO speed—1050 rpm)						
130.8 (97.6)	2100	8.13 (30.76)	0.429 (0.261)	16.09 (3.17)	0.13 (0.51)	Fuel used during the active exhaust regeneration - 1.07 gal (4.06 l) (see Note 1, p.2)
Standard Power Take-off Speed (1000 rpm)						
144.6 (107.8)	2000	8.61 (32.60)	0.411 (0.250)	16.80 (3.31)	0.15 (0.55)	
Maximum Power (1 hour)						
155.0 (115.6)	1700	8.63 (32.67)	0.385 (0.234)	17.97 (3.54)	0.23 (0.86)	

VARYING POWER AND FUEL CONSUMPTION

130.8 (97.6)	2100	8.13 (30.76)	0.429 (0.261)	16.09 (3.17)	0.13 (0.51)	Air temperature
114.1 (85.1)	2154	7.53 (28.50)	0.456 (0.277)	15.15 (2.98)	0.12 (0.44)	68°F (20°C)
86.4 (64.4)	2175	6.46 (24.48)	0.517 (0.314)	13.37 (2.63)	0.11 (0.40)	Relative humidity
58.2 (43.4)	2197	5.29 (20.01)	0.627 (0.381)	11.01 (2.17)	0.08 (0.30)	59%
29.5 (22.0)	2229	4.12 (15.60)	0.965 (0.587)	7.16 (1.41)	0.06 (0.22)	Barometer
--	2250	3.14 (11.90)	--	--	0.06 (0.21)	29.9" Hg (101.2 kPa)

Maximum torque - 495 lb.-ft. (672 Nm) at 1600 rpm

Maximum torque rise - 51.5%

Torque rise at 1700 engine rpm - 46%

Power increase at 1700 engine rpm - 18.4%

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 (kg/kW.h)	Temp. °F(°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
Power at Rated Engine Speed—7th (B3) Gear									
118.1 (88.1)	9605 (42.72)	4.61 (7.43)	2096	5.4	0.478 (0.291)	14.26 (2.81)	0.015 (0.009)	189 (87)	72 (22) (101.5)
75% of Pull at Rated Engine Speed—7th (B3) Gear									
92.8 (69.2)	7160 (31.85)	4.86 (7.82)	2172	3.9	0.532 (0.324)	12.79 (2.52)	0.012 (0.007)	185 (85)	72 (22) (101.5)
50% of Pull at Rated Engine Speed—7th (B3) Gear									
63.7 (47.5)	4810 (21.40)	4.97 (8.00)	2194	2.7	0.621 (0.378)	10.97 (2.16)	0.013 (0.008)	181 (83)	72 (22) (101.5)
75% of Pull at Reduced Engine Speed—9th (B4) Gear									
93.1 (69.4)	7165 (31.88)	4.87 (7.84)	1778	4.0	0.469 (0.285)	14.53 (2.86)	0.008 (0.005)	180 (82)	70 (21) (101.5)
50% of Pull at Reduced Engine Speed—9th (B4) Gear									
63.3 (47.2)	4805 (21.38)	4.94 (7.95)	1778	2.6	0.537 (0.327)	12.69 (2.50)	0.015 (0.009)	180 (82)	70 (21) (101.5)

Location of tests: DLG TestService, GmbH, Max-Eyth-Weg 1, D-64823 Gross-Umstadt, Germany

Dates of tests: May to June, 2020

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

CONSUMABLE Fluids: Fuel No. 2 Diesel
Specific gravity converted to 60°/60°F (15°/15°C) 0.8294
Fuel weight 6.92 lbs/gal (0.828 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 CK-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 turbocharger, air to air intercooler and D.E.F. (diesel exhaust fluid) exhaust treatment **Serial No.** *CD6068U107182*
Crankshaft lengthwise **Rated engine speed** 2100
Bore and stroke 4.19" x 5.00" (106.5 mm x 127.0 mm)
Compression ratio 16.7 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.** *1L06155MEKK944896* **Tread width** rear 64.1" (1628 mm) to 81.0" (2058 mm) front 64.1" (1628 mm) to 81.0" (2058 mm) **Wheelbase** 108.9" (2765 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 1.59 (2.57) second 1.93 (3.10) third 2.31 (3.71) fourth 2.83 (4.55) fifth 3.39 (5.46) sixth 4.08 (6.57) seventh 4.89 (7.87) eighth 5.39 (8.68) ninth 5.99 (9.64) tenth 6.50 (10.46) eleventh 7.78 (12.52) twelfth 9.53 (15.34) thirteenth 9.99 (16.08) fourteenth 12.03 (19.36) fifteenth 14.40 (23.18) sixteenth 17.65 (28.40) seventeenth 18.23 (29.33) eighteenth 21.95 (35.32) nineteenth 24.86 (40.00) twentieth 24.86 (40.00) (electronically limited)

DRAWBAR PERFORMANCE

UNBALLASTED - FRONT DRIVE ENGAGED - 1700 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/kWh)	Hp.hr/gal (kW.h/l)	D.E.F. Consumption lb/hp.hr (kg/kWh)	Temp. °F(°C) cool-ing med	Air dry bulb	Barom. inch Hg (kPa)
6th (B2) Gear										
126.3 (94.2)	15640 (69.56)	3.03 (4.87)	1827	14.9	0.485 (0.295)	14.11 (2.78)	0.008 (0.005)	181 (83)	66 (19)	30.0 (101.5)
7th (B3) Gear										
132.6 (98.9)	14065 (62.57)	3.54 (5.69)	1699	10.8	0.454 (0.276)	15.08 (2.97)	0.013 (0.008)	183 (84)	68 (20)	30.0 (101.5)
8th (C1) Gear										
134.9 (100.6)	12675 (56.37)	4.00 (6.43)	1701	8.8	0.447 (0.272)	15.32 (3.02)	0.016 (0.010)	185 (85)	68 (20)	30.0 (101.5)
9th (B4) Gear										
136.9 (102.1)	11395 (50.68)	4.51 (7.25)	1701	7.2	0.439 (0.267)	15.58 (3.07)	0.016 (0.010)	185 (85)	68 (20)	30.0 (101.5)
10th (C2) Gear										
138.0 (102.9)	10495 (46.68)	4.94 (7.94)	1699	6.3	0.436 (0.266)	15.68 (3.09)	0.012 (0.007)	185 (85)	68 (20)	30.0 (101.5)
11th (C3) Gear										
140.5 (104.8)	8770 (39.01)	6.01 (9.68)	1699	4.8	0.431 (0.262)	15.89 (3.13)	0.012 (0.007)	183 (84)	70 (21)	30.0 (101.5)
12th (C4) Gear										
138.4 (103.2)	6960 (30.95)	7.46 (12.01)	1707	3.8	0.432 (0.263)	15.79 (3.11)	0.012 (0.007)	185 (85)	70 (21)	30.0 (101.5)
13th (D1) Gear										
138.7 (103.4)	6625 (29.47)	7.85 (12.63)	1704	3.4	0.433 (0.263)	15.80 (3.11)	0.015 (0.009)	182 (83)	68 (20)	30.0 (101.5)
14th (D2) Gear										
138.1 (103.0)	5455 (24.26)	9.49 (15.28)	1703	2.8	0.435 (0.264)	15.74 (3.10)	0.007 (0.004)	180 (82)	68 (20)	30.0 (101.5)

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive	
	Engaged dB(A)	Disengaged dB(A)
At no load in 7th (B3) gear	69.8	69.3
Transport speed-no load - 20th (E4) gear		69.0
Bystander		--

Horizontal distance of drawbar hitch point behind rear wheel axis - 35.4 in (900 mm), 39.4 in (1000 mm), 41.3 in (1050 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 580/70R38;***;12(80)

Two 480/70R28;***;12(80)

17.5 in (445 mm)

9215 lb (4180 kg)

6890 lb (3125 kg)

16105 lb (7305 kg)

reverse 1.67 (2.69), 2.01 (3.23), 2.40 (3.87), 2.95 (4.75), 3.54 (5.69), 4.26 (6.86), 5.10 (8.21), 5.63 (9.06), 6.25 (10.06), 6.77 (10.91), 8.12 (13.07), 9.95 (16.01), 10.43 (16.77), 12.55 (20.20), 15.03 (24.19), 18.42 (29.64), 19.02 (30.61), 22.90 (36.86), 24.86 (40.00), 24.86 (40.00) (electronically limited)
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 1987 engine rpm or 1000 rpm at 2000 engine rpm
Unladen tractor mass 15940 lb (7230 kg)

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

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

NOTE 2: The performance data on this report applies to tractors that have engine serial numbers containing 6068U.

REMARKS: All test results were determined from observed data obtained in accordance with official OECD test procedures. This tractor fell 39.8% short meeting the manufacturer's 3 point lift claim at ball ends of 14991 lbs (6800 kg) with 85 mm lift cylinders and 40.2% short of the claim of 16863 lbs (7650 kg) with 90 mm lift cylinders. 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. **3216**, Nebraska Summary 1195, February 9, 2022.

Roger M. Hoy
Director

P.J. Jasa
J.D. Luck
S. Pitla
Board of Tractor Test Engineers

HYDRAULIC PERFORMANCE

CATEGORY: 3

Quick Attach: No

Lift cylinders:

lift cylinders

Maximum force exerted through whole range:
 on the frame: $2 \times 85 \text{ mm}$ $2 \times 90 \text{ mm}$
 9450 lbs (42.0 kN) 10590 lbs (47.1 kN)
 at hitch points: 10720 lbs (47.7 kN) 12025 lbs (53.5 kN)

i) Sustained pressure at compensator cutoff: 2975 psi (205 bar)

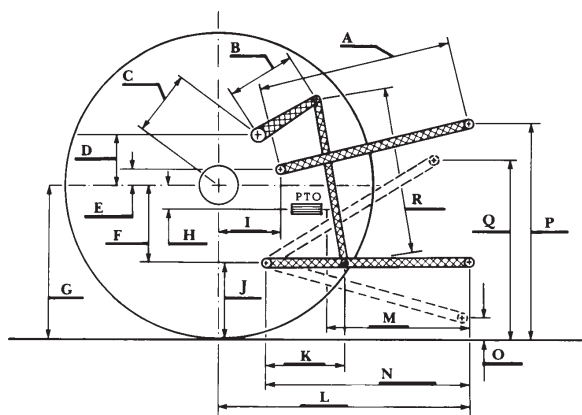
ii) Pump delivery rate at minimum pressure: 31.4 GPM (118.9 l/min)

iii) Pump delivery rate at maximum
 hydraulic power: 28.7 GPM (108.5 l/min)
 Delivery pressure: 2740 psi (190 bar)
 Power: 45.9 HP (34.3 kW)

ii) Pump delivery rate at minimum pressure: 31.1 GPM (117.7 l/min)

iii) Pump delivery rate at maximum
 hydraulic power: 29.0 GPM (109.7 l/min)
 Delivery pressure: 2305 psi (159 bar)
 Power: 39.0 HP (29.1 kW)

HITCH DIMENSIONS AS TESTED—NO LOAD



	inch	mm
A	29.9	760
B	16.5	420
C	24.3	617
D	22.8	580
E	9.8	250
F	9.8	250
G	34.4	875
H	3.1	80
I	18.6	473
J	24.6	625
K	24.8	630
L	48.0	1220
M	25.0	635
N	41.7	1060
O	9.1	230
P	51.5	1310
Q	40.0	1015
R	38.6	980

RECOMMENDED CITATION FORMAT:

NTTL.(2022). OECD tractor test 3216 for John Deere 6155M PowerQuad Plus Diesel.
 Lincoln, NE:Nebraska Tractor Test Laboratory. Retrieved from <http://tractortestlab.unl.edu>