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2020

## Nebraska Summary 1196: John Deere 6175M FT4

Nebraska Tractor Test Lab

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# SUMMARY OF OECD TEST 3239 - NEBRASKA SUMMARY 1196

## JOHN DEERE 6175M COMMANDQUAD 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)	
<b>MAXIMUM POWER AND FUEL CONSUMPTION</b>						
<b>Rated Engine Speed—(PTO speed—1070 rpm)</b>						
146.7 (109.4)	2100	8.86 (33.52)	0.420 (0.255)	16.56 (3.26)	0.15 (0.57)	Fuel used during the active exhaust regeneration - 1.34 gal (5.07 l) (see Note 1, p.2)
<b>Standard Power Take-off Speed (1000 rpm)</b>						
159.4 (118.9)	1962	9.26 (35.06)	0.404 (0.246)	17.21 (3.39)	0.18 (0.70)	
<b>Maximum Power (1 hour)</b>						
167.2 (124.7)	1700	9.15 (34.63)	0.380 (0.231)	18.27 (3.60)	0.24 (0.90)	

#### VARYING POWER AND FUEL CONSUMPTION

146.7 (109.4)	2100	8.86 (33.52)	0.420 (0.255)	16.56 (3.26)	0.15 (0.57)	Air temperature
128.9 (96.1)	2172	8.22 (31.10)	0.443 (0.270)	15.68 (3.09)	0.13 (0.48)	70°F (21°C)
97.8 (72.9)	2197	6.88 (26.05)	0.489 (0.298)	14.21 (2.80)	0.11 (0.43)	Relative humidity
65.8 (49.1)	2221	5.79 (21.90)	0.612 (0.372)	11.37 (2.24)	0.07 (0.26)	56%
33.3 (24.8)	2252	4.55 (17.24)	0.950 (0.577)	7.32 (1.44)	0.06 (0.22)	Barometer
--	2264	2.93 (11.10)	--	--	0.09 (0.35)	29.3" Hg (99.2 kPa)

Maximum torque - 538 lb.-ft. (730 Nm) at 1400 rpm

Maximum torque rise - 46.6%

Torque rise at 1700 engine rpm - 40%

Power increase at 1700 engine rpm - 14.0%

#### 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 Hp.hr/gal (kW.h/l)	Temp. °F(°C) cool- ing med bulb	Air dry bulb	Barom. inch Hg (kPa)	
<b>Power at Rated Engine Speed—7th (B3) Gear</b>										
134.1 (100.0)	9980 (44.40)	5.04 (8.11)	2099	3.9	0.464 (0.282)	14.52 (2.86)	0.010 (0.006)	183 (84)	81 (27)	29.4 (99.4)
<b>75% of Pull at Rated Engine Speed—7th (B3) Gear</b>										
105.7 (78.8)	7475 (33.24)	5.30 (8.53)	2183	2.7	0.505 (0.307)	13.35 (2.63)	0.008 (0.005)	178 (81)	82 (28)	29.4 (99.4)
<b>50% of Pull at Rated Engine Speed—7th (B3) Gear</b>										
71.9 (53.6)	4980 (22.16)	5.41 (8.70)	2203	1.8	0.601 (0.366)	11.21 (2.21)	0.013 (0.008)	176 (80)	82 (28)	29.4 (99.4)
<b>75% of Pull at Reduced Engine Speed—9th (B4) Gear</b>										
106.1 (79.1)	7475 (33.25)	5.32 (8.56)	1789	2.8	0.453 (0.276)	14.87 (2.93)	0.015 (0.009)	180 (82)	82 (28)	29.4 (99.4)
<b>50% of Pull at Reduced Engine Speed—9th (B4) Gear</b>										
71.2 (53.1)	4980 (22.16)	5.36 (8.63)	1789	2.0	0.519 (0.315)	13.00 (2.56)	0.013 (0.008)	174 (79)	82 (28)	29.4 (99.4)

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

**Dates of tests:** August to September, 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) 0.8337 Fuel weight 6.96 lbs/gal (0.833 kg/l) Diesel Exhaust Fluid (DEF) 32% aqueous urea solution DEF weight 9.071 lbs/gal (1.087 kg/l) Oil SAE 15W-40 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.** \*CD6068U107509\* **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.** \*1L06195MJKX945869\* **Tread width** rear 64.4" (1636 mm) to 80.2" (2036 mm) front 63.3" (1608 mm) to 89.1" (2008 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 1.73 (2.78) second 2.08 (3.35) third 2.49 (4.01) fourth 3.05 (4.91) fifth 3.66 (5.89) sixth 4.41 (7.09) seventh 5.28 (8.49) eighth 5.82 (9.37) ninth 6.46 (10.40) tenth 7.01 (11.28) eleventh 8.39 (13.51) twelfth 10.28 (16.55) thirteenth 10.78 (17.35) fourteenth 12.98 (20.89) fifteenth 15.55 (25.02) sixteenth 18.63 (29.98) seventeenth 19.05 (30.65) eighteenth 22.44 (36.11) 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/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)	
5th (B1) Gear										
135.2 (100.8)	18230 (81.10)	2.78 (4.48)	1887	14.9	0.489 (0.297)	13.88 (2.73)	0.013 (0.008)	188 (87)	81 (27)	29.4 (99.6)
6th (B2) Gear										
142.4 (106.2)	16880 (75.08)	3.16 (5.09)	1701	10.8	0.454 (0.276)	14.93 (2.94)	0.015 (0.009)	190 (88)	81 (27)	29.4 (99.6)
7th (B3) Gear										
149.0 (111.1)	14080 (62.62)	3.97 (6.39)	1701	6.7	0.433 (0.263)	15.68 (3.09)	0.013 (0.008)	188 (87)	77 (25)	29.4 (99.6)
8th (C1) Gear										
149.9 (111.8)	12680 (56.41)	4.43 (7.14)	1700	5.4	0.430 (0.261)	15.78 (3.11)	0.013 (0.008)	187 (86)	77 (25)	29.4 (99.6)
9th (B4) Gear										
151.8 (113.2)	11455 (50.96)	4.96 (7.99)	1702	4.6	0.427 (0.259)	15.90 (3.13)	0.013 (0.008)	187 (86)	79 (26)	29.4 (99.6)
10th (C2) Gear										
150.7 (112.4)	10430 (46.39)	5.42 (8.72)	1701	4.0	0.424 (0.258)	15.99 (3.15)	0.015 (0.009)	190 (88)	79 (26)	29.4 (99.6)
11th (C3) Gear										
152.1 (113.4)	8720 (38.78)	6.54 (10.52)	1700	3.2	0.422 (0.257)	16.09 (3.17)	0.013 (0.008)	190 (88)	79 (26)	29.4 (99.6)
12th (C4) Gear										
151.3 (112.8)	7025 (31.24)	8.08 (13.00)	1702	2.5	0.425 (0.258)	15.96 (3.14)	0.013 (0.008)	189 (87)	77 (25)	29.4 (99.6)
13th (D1) Gear										
150.3 (112.1)	6645 (29.55)	8.48 (13.65)	1703	2.3	0.428 (0.260)	15.85 (3.12)	0.013 (0.008)	187 (86)	79 (26)	29.4 (99.6)

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive	
	Engaged dB(A)	Disengaged dB(A)
At no load in 7th (B3) gear	68.7	68.3
Transport speed - no load - 20th (E4) gear		70.5
Bystander		--

Horizontal distances of drawbar hitch point behind rear wheel axis - 35.2 in (895 mm), 39.2 in (995 mm)  
41.1 in (1045 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 650/65R42;\*\*\*;12(80)  
 Two 600/65R28;\*\*\*;12(80)  
 18.5 in (470 mm)  
 10440 lb (4735 kg)  
 7440 lb (3375 kg)  
 17880 lb (8110 kg)

reverse 1.80 (2.90), 2.17 (3.49), 2.60 (4.18), 3.18 (5.12), 3.82 (6.14), 4.60 (7.40), 5.51 (8.86), 6.08 (9.78), 6.74 (10.85), 7.31 (11.77), 8.76 (14.10), 10.73 (17.27), 11.25 (18.10), 13.55 (21.80), 16.22 (26.11), 19.44 (31.29), 19.87 (31.98), 23.41 (37.68), 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 1967 engine rpm or 1000 rpm at 1962 engine rpm  
**Unladen tractor mass** 17715 lb (8035 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 figures on this report are the result of replacing the electronic engine control module of the John Deere 6195M with the John Deere 6175M module.

**NOTE 3:** 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 30.9% short meeting the manufacturer's 3 point lift claim at ball ends of 19951 lbs (9050 kg) with 90 mm lift cylinders and 30.7% short of the claim of 17747 lbs (8050 kg) with 85 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. **3239**, Nebraska Summary 1196, 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: 12635 lbs (56.2 kN) 14160 lbs (63.0 kN)  
 at hitch points: 13580 lbs (60.4 kN) 15240 lbs (67.8 kN)

i) Sustained pressure at compensator cutoff: 2990 psi (206 bar)  
two outlet sets combined

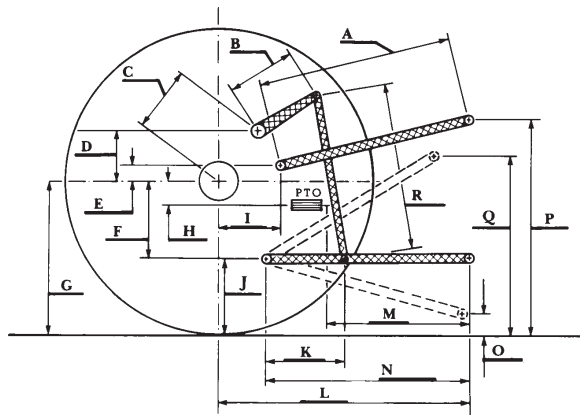
ii) Pump delivery rate at minimum pressure: 30.6 GPM (116.0 l/min)

iii) Pump delivery rate at maximum  
 hydraulic power: 27.3 GPM (103.4 l/min)  
 Delivery pressure: 2885 psi (199 bar)  
 Power: 45.9 HP (34.2 kW)

ii) Pump delivery rate at minimum pressure: 30.6 GPM (115.8 l/min)  
single outlet set

iii) Pump delivery rate at maximum  
 hydraulic power: 28.7 GPM (108.8 l/min)  
 Delivery pressure: 2350 psi (162 bar)  
 Power: 39.3 HP (29.3 kW)

## HITCH DIMENSIONS AS TESTED—NO LOAD



	inch	mm
A	28.9	735
B	16.1	410
C	24.6	624
D	23.8	605
E	9.4	240
F	10.8	275
G	36.4	925
H	4.1	105
I	21.1	535
J	25.6	650
K	25.6	650
L	51.2	1300
M	25.8	655
N	43.3	1100
O	9.1	230
P	52.6	1335
Q	39.8	1010
R	41.3	1050

## RECOMMENDED CITATION FORMAT:

NTTL.(2022). OECD tractor test 3239 for John Deere 6175M CommandQuad Diesel.  
 Lincoln, NE:Nebraska Tractor Test Laboratory. Retrieved from <http://tractortestlab.unl.edu>