SUMMARY OF OECD TEST 3059 - NEBRASKA SUMMARY 1109
JOHN DEERE 6120M POWRQUAD-PLUS DIESEL
24 SPEED

POWER TAKE-OFF PERFORMANCE

Power HP *(kW)*	Crank shaft speed rpm	Diesel Consumption Gal/hr *(l/h)*	lb/hp.hr *(kg/kW.h)*	D.E.F. Consumption Hp.hr/gal *(kW.h/l)*	D.E.F. Consumption Gal/hr *(l/h)*	Mean Atmospheric Conditions
MAXIMUM POWER AND FUEL CONSUMPTION						
Rated Engine Speed—(PTO speed—1070 rpm)						
98.2 *(73.2)*	2100	6.21 *(23.49)*	0.442 *(0.269)*	15.82 *(3.12)*	0.13 *(0.50)*	Fuel used during active exhaust regeneration -1.1 gal *(4.2 l)* (see Note 1, p.2)
Standard Power Take-off Speed (1000 rpm)						
103.0 *(76.8)*	1962	6.16 *(23.30)*	0.418 *(0.254)*	16.73 *(3.30)*	0.17 *(0.63)*	
Maximum Power (1 hour)						
105.2 *(78.4)*	1800	6.03 *(22.82)*	0.400 *(0.244)*	17.44 *(3.44)*	0.16 *(0.61)*	
VARYING POWER AND FUEL CONSUMPTION						
98.2 *(73.2)*	2100	6.21 *(23.49)*	0.442 *(0.269)*	15.82 *(3.12)*	0.13 *(0.50)*	Air temperature
85.4 *(63.7)*	2151	5.73 *(21.70)*	0.470 *(0.286)*	14.90 *(2.93)*	0.11 *(0.40)*	68°F *(20°C)*
64.8 *(48.3)*	2175	5.02 *(19.00)*	0.543 *(0.330)*	12.90 *(2.54)*	0.08 *(0.30)*	Relative humidity
43.9 *(32.7)*	2208	4.15 *(15.70)*	0.663 *(0.403)*	10.57 *(2.08)*	0.07 *(0.25)*	34%
22.2 *(16.5)*	2230	3.25 *(12.30)*	1.024 *(0.623)*	6.83 *(1.35)*	0.05 *(0.18)*	Barometer
-- --	2251	2.17 *(8.20)*	-- --	-- --	0.05 *(0.18)*	29.8" Hg *(101.1 kPa)*

Maximum torque - 343 lb.-ft. *(465 Nm)* at 1200 rpm
Maximum torque rise - 39.7%
Torque rise at 1700 engine rpm - 29%
Power increase at 1800 engine rpm - 7.1%

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)*	Fuel Consumption 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)*
Power at Rated Engine Speed—11th (C3) Gear										
91.5 *(68.2)*	6520 *(29.01)*	5.26 *(8.46)*	2103	2.6	0.478 *(0.290)*	14.52 *(2.86)*	0.013 *(0.008)*	176 *(80)*	64 *(18)*	29.6 *(100.3)*
75% of Pull at Rated Engine Speed—11th (C3) Gear										
71.6 *(53.4)*	4880 *(21.70)*	5.50 *(8.86)*	2187	2.0	0.556 *(0.338)*	12.49 *(2.46)*	0.012 *(0.007)*	178 *(81)*	68 *(20)*	29.6 *(100.4)*
50% of Pull at Rated Engine Speed—11th (C3) Gear										
48.4 *(36.1)*	3245 *(14.43)*	5.59 *(9.01)*	2204	1.1	0.683 *(0.415)*	10.15 *(2.00)*	0.018 *(0.011)*	174 *(79)*	68 *(20)*	29.6 *(100.3)*
75% of Pull at Reduced Engine Speed—13th (C4) Gear										
71.2 *(53.1)*	4865 *(21.64)*	5.49 *(8.83)*	1773	1.7	0.468 *(0.285)*	14.82 *(2.92)*	0.016 *(0.010)*	176 *(80)*	70 *(21)*	29.6 *(100.3)*
50% of Pull at Reduced Engine Speed—13th (C4) Gear										
48.3 *(36.0)*	3250 *(14.46)*	5.57 *(8.96)*	1794	1.1	0.557 *(0.338)*	12.49 *(2.46)*	0.008 *(0.005)*	176 *(80)*	68 *(20)*	29.6 *(100.3)*

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)*
					7th (B3) Gear					
85.8	12855	2.50	1867	14.8	0.503	13.86	0.013	181	61	29.6
(64.0)	*(57.19)*	*(4.03)*			*(0.306)*	*(2.73)*	*(0.008)*	*(83)*	*(16)*	*(100.4)*
					8th (C1) Gear					
90.3	11620	2.91	1798	8.9	0.467	14.92	0.015	180	59	29.6
(67.3)	*(51.69)*	*(4.69)*			*(0.284)*	*(2.94)*	*(0.009)*	*(82)*	*(15)*	*(100.4)*
					9th(B4) Gear					
93.6	10835	3.24	1802	6.7	0.455	15.33	0.015	176	61	29.6
(69.8)	*(48.20)*	*(5.22)*			*(0.277)*	*(3.02)*	*(0.009)*	*(80)*	*(16)*	*(100.4)*
					10th (C2) Gear					
94.7	9650	3.68	1800	4.6	0.447	15.57	0.015	180	59	29.7
(70.6)	*(42.93)*	*(5.92)*			*(0.272)*	*(3.07)*	*(0.009)*	*(82)*	*(15)*	*(100.5)*
					11th(C3) Gear					
95.9	8055	4.46	1800	3.4	0.441	15.84	0.015	180	59	29.7
(71.5)	*(35.83)*	*(7.18)*			*(0.268)*	*(3.12)*	*(0.009)*	*(82)*	*(15)*	*(100.5)*
					12th(D1) Gear					
95.5	6975	5.13	1802	2.4	0.442	15.79	0.013	178	55	29.6
(71.2)	*(31.03)*	*(8.26)*			*(0.269)*	*(3.11)*	*(0.008)*	*(81)*	*(13)*	*(100.4)*
					13th (C4) Gear					
95.6	6485	5.53	1801	2.2	0.441	15.84	0.012	176	55	29.6
(71.3)	*(28.86)*	*(8.90)*			*(0.268)*	*(3.12)*	*(0.007)*	*(80)*	*(13)*	*(100.4)*
					14th(D2) Gear					
95.6	5760	6.23	1804	1.9	0.442	15.79	0.012	176	55	29.6
(71.3)	*(25.62)*	*(10.03)*			*(0.269)*	*(3.11)*	*(0.007)*	*(80)*	*(13)*	*(100.4)*
					15th(D3) Gear					
94.7	4765	7.45	1800	1.6	0.445	15.68	0.013	180	55	29.6
(70.6)	*(21.20)*	*(11.99)*			*(0.271)*	*(3.09)*	*(0.008)*	*(82)*	*(13)*	*(100.4)*
					16th (E1) Gear					
94.3	4180	8.46	1805	1.4	0.450	15.48	0.016	176	57	29.6
(70.3)	*(18.60)*	*(13.61)*			*(0.274)*	*(3.05)*	*(0.010)*	*(80)*	*(14)*	*(100.4)*
					17th(D4) Gear					
92.1	3770	9.16	1801	1.2	0.458	15.23	0.016	180	57	29.6
(68.7)	*(16.77)*	*(14.75)*			*(0.279)*	*(3.00)*	*(0.010)*	*(82)*	*(14)*	*(100.4)*
					18th(E2) Gear					
92.1	3380	10.22	1806	1.0	0.460	15.18	0.018	180	57	29.6
(68.7)	*(15.04)*	*(16.44)*			*(0.280)*	*(2.99)*	*(0.011)*	*(82)*	*(14)*	*(100.4)*

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive Engaged dB(A)	Disengaged dB(A)
At no load in 10th (C2) gear	66.7	67.2
Transport speed - no load - 24th (F4) gear		70.0
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	Tested Without Ballast
Rear Tires - No., size, ply & psi(*kPa*)	Two 480/70R38;***;12(*80*)
Front Tires - No., size, ply & psi(*kPa*)	Two 420/70R24;***;12(*80*)
Height of Drawbar	17.7 in (*450 mm*)
Static Weight with operator - Rear	7850 lb (*3560 kg*)
- Front	4825 lb (*2190 kg*)
- Total	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)*

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 6110M with the John Deere 6120M module.

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

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.

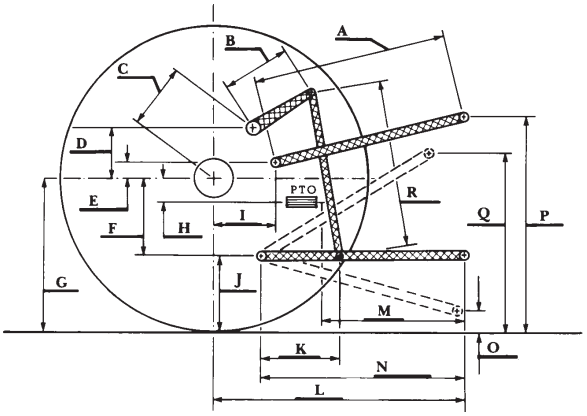
We, the undersigned, certify that this is a true summary of data from OECD Report No. **3059,** Nebraska Summary 1109, October 17, 2017.

Roger M. Hoy
Director

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

HYDRAULIC PERFORMANCE with 45 cc 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)*	
	single outlet set	
ii) Pump delivery rate at minimum pressure:	30.8 GPM *(116.6 l/min)*	
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 3059 for John Deere 6120M PowerQuad Plus Diesel. Lincoln, NE:Nebraska Tractor Test Laboratory. Retrieved from http://tractortestlab.unl.edu