

SUMMARY OF OECD TEST 2807—NEBRASKA SUMMARY 928

JOHN DEERE 6105R AUTOQUAD-PLUS DIESEL

24 SPEED

POWER TAKE-OFF PERFORMANCE

Power HP (kW)	Crank shaft speed rpm	Gal/hr (l/h)	lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Mean Atmospheric Conditions
MAXIMUM POWER AND FUEL CONSUMPTION					
Rated Engine Speed—(PTO speed—1071 rpm)					
90.1 (67.2)	2100	5.84 (22.11)	0.452 (0.275)	15.43 (3.04)	
Standard Power Take-off Speed (1000 rpm)					
100.5 (75.0)	1961	6.19 (23.44)	0.430 (0.262)	16.23 (3.20)	
Maximum Power (1 hour)					
105.3 (78.5)	1700	6.21 (23.50)	0.412 (0.251)	16.94 (3.34)	

VARYING POWER AND FUEL CONSUMPTION

90.1 (67.2)	2100	5.84 (22.11)	0.452 (0.275)	15.43 (3.04)	Air temperature
78.6 (58.6)	2156	5.38 (20.36)	0.478 (0.291)	14.61 (2.88)	70°F (21°C)
59.7 (44.5)	2183	4.56 (17.27)	0.534 (0.325)	13.09 (2.58)	Relative humidity
40.5 (30.2)	2222	3.70 (14.00)	0.636 (0.387)	10.96 (2.16)	97%
20.4 (15.2)	2240	2.83 (10.73)	0.967 (0.588)	7.22 (1.42)	Barometer
--	2250	2.09 (7.90)	--	--	30.0" Hg (101.7 kPa)

Maximum Torque - 340.8 lb.-ft. (462.1 Nm) at 1500 rpm
 Maximum Torque rise - 51.0%
 Torque rise at 1700 engine rpm - 44.1%
 Power increase at 1700 rpm - 16.8%

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)	Hp.hr/gal (kW.h/l)	Temp. °F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
Maximum Power—8th (C1) Gear									
78.7 (58.7)	6645 (29.55)	4.44 (7.15)	2102	2.9	0.509 (0.309)	13.72 (2.70)	172 (78)	52 (11)	30.0 (101.5)
75% of Pull at Maximum Power—8th (C1) Gear									
61.2 (45.6)	4895 (21.78)	4.69 (7.54)	2195	2.0	0.556 (0.338)	12.54 (2.47)	172 (78)	54 (12)	30.0 (101.5)
50% of Pull at Maximum Power—8th (C1) Gear									
41.6 (31.0)	3265 (14.52)	4.78 (7.69)	2214	1.0	0.672 (0.409)	10.38 (2.04)	171 (77)	54 (12)	30.0 (101.5)
75% of Pull at Reduced Engine Speed—10th (C2) Gear									
61.2 (45.6)	4900 (21.79)	4.68 (7.54)	1820	2.1	0.509 (0.309)	13.72 (2.70)	167 (75)	54 (12)	30.0 (101.5)
50% of Pull at Reduced Engine Speed—10th (C2) Gear									
41.8 (31.2)	3275 (14.58)	4.78 (7.69)	1842	1.1	0.581 (0.353)	12.00 (2.36)	163 (73)	54 (12)	30.0 (101.5)

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

Dates of tests: November - December, 2013

Manufacturer: John Deere Werke Mannheim, John-Deere-Straße 90, Mannheim Germany

FUEL, OIL and Time: Fuel No. 2 Diesel Specific gravity converted to 60°/60°F (15°/15°C) 0.838 Fuel weight 6.97 lbs/gal (0.836 kg/l) Oil SAE 10W-30 API service classification CJ-4 Transmission and hydraulic lubricant John Deere Hy-Gard II fluid Front axle lubricant John Deere Hy-Gard II fluid

ENGINE: Make John Deere Diesel **Type** four cylinder vertical with turbocharger and air to air intercooler **Serial No.** *CD4045R015836* **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 **Oil filter** one full flow cartridge **Oil cooler** engine coolant heat exchanger for crankcase oil, engine coolant heat exchanger for hydraulic and transmission oil **Fuel filter** one paper element and one paper cartridge with water separator **Fuel cooler** radiator for pump return fuel **Exhaust** regenerative particulate filter integrated within an underhood muffler with vertical outlet **Cooling medium temperature control** two thermostats and variable speed fan

CHASSIS: Type front wheel assist **Serial No.** *1L06105RADK753587* **Tread width** rear 63.5" (1612 mm) to 75.4" (1916 mm) front 63.6" (1616 mm) to 75.7" (1924 mm) **Wheel base** 101.6" (2580 mm) **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio with partial (4) range operator controlled powershift **Nominal travel speeds mph (km/h)** first 1.14 (1.84) second 1.38 (2.22) third 1.65 (2.66) fourth 2.03 (3.26) fifth 2.80 (4.50) sixth 3.37 (5.42) seventh 4.03 (6.49) eighth 4.56 (7.34) ninth 4.94 (7.95) tenth 5.49 (8.83) eleventh 6.57 (10.58) twelfth 7.48 (12.04) thirteenth 8.05 (12.96) fourteenth 9.00 (14.49) fifteenth 10.79 (17.36) sixteenth 12.15 (19.56) seventeenth 13.22 (21.27) eighteenth 14.63 (23.55) nineteenth 17.44 (28.07) twentieth 17.53 (28.21) twenty-first 21.00 (33.79) twenty-second 21.48 (34.56) twenty-third 25.15 (40.48) twenty-fourth 26.10 (42.00) 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)	Crankshaft speed rpm	Slip %	Fuel Consumption lb/hp.hr (kg/kW.h)	Temp. °F(°C) cooling med	Barom. inch Hg (kPa)		
6th (B2) Gear									
82.2 (61.3)	12710 (56.53)	2.42 (3.90)	1775	15.1	0.523 (0.318)	13.35 (2.63)	162 (72)	48 (9)	30.0 (101.7)
7th (B3) Gear									
90.1 (67.2)	11315 (50.32)	2.99 (4.81)	1701	8.8	0.472 (0.287)	14.77 (2.91)	160 (71)	48 (9)	30.0 (101.7)
8th (C1) Gear									
92.1 (68.7)	9870 (43.90)	3.50 (5.63)	1700	5.5	0.463 (0.282)	15.08 (2.97)	165 (74)	48 (9)	30.0 (101.7)
9th (B4) Gear									
92.8 (69.2)	9100 (40.47)	3.83 (6.16)	1699	4.5	0.462 (0.281)	15.09 (2.97)	163 (73)	46 (8)	30.0 (101.7)
10th (C2) Gear									
93.3 (69.6)	8155 (36.27)	4.29 (6.90)	1701	3.9	0.457 (0.278)	15.28 (3.01)	165 (74)	45 (7)	30.0 (101.7)
11th (C3) Gear									
95.3 (71.0)	6890 (30.64)	5.19 (8.35)	1699	2.9	0.446 (0.271)	15.63 (3.08)	163 (73)	43 (6)	30.0 (101.6)
12th (D1) Gear									
93.8 (69.9)	5915 (26.31)	5.95 (9.57)	1702	2.2	0.455 (0.277)	15.33 (3.02)	165 (74)	43 (6)	30.0 (101.6)
13th (C4) Gear									
93.9 (70.0)	5485 (24.41)	6.42 (10.33)	1702	2.1	0.454 (0.276)	15.35 (3.02)	163 (73)	43 (6)	30.0 (101.6)
14th (D2) Gear									
92.5 (69.0)	4805 (21.38)	7.22 (11.61)	1706	1.9	0.461 (0.281)	15.13 (2.98)	165 (74)	43 (6)	30.0 (101.6)
15th (D3) Gear									
93.3 (69.6)	4055 (18.05)	8.63 (13.88)	1698	1.5	0.461 (0.281)	15.13 (2.98)	167 (75)	43 (6)	30.0 (101.7)
16th (E1) Gear									
94.7 (70.6)	3630 (16.15)	9.78 (15.74)	1705	1.4	0.465 (0.283)	15.01 (2.96)	165 (74)	43 (6)	30.0 (101.6)

reverse 1.19 (1.92), 1.44 (2.32), 1.72 (2.77), 2.11 (3.40), 2.91 (4.69), 3.51 (5.65), 4.21 (6.77), 4.75 (7.65), 5.15 (8.29), 5.72 (9.22), 6.86 (11.04), 7.80 (12.56), 8.40 (13.52), 9.40 (15.12), 11.25 (18.11), 12.68 (20.41), 13.79 (22.19), 15.27 (24.58), 18.20 (29.29), 18.29 (29.44), 21.91 (35.26), 22.41 (36.06), 26.10 (42.00), 26.10 (42.00) electronically limited
Clutch multiple wet disc hydraulically operated by foot pedal
Brakes wet disc hydraulically operated by two foot pedals which 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 13030 lb (5910 kg)

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

NOTE. The manufacturer declares that the average time between active regenerations is 100 hours, while operated in Auto Filter Cleaning Mode, at rated speed, full PTO load, under steady state conditions.

REMARKS: All test results were determined from observed data obtained in accordance with official OECD test procedures. The performance figures on this summary were taken from a test conducted under the OECD Code 2 test code procedure.

We, the undersigned, certify that this is a true summary of data from OECD Report No. **2807**, Nebraska Summary 928, April 4, 2014.

Roger M. Hoy
 Director

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 Board of Tractor Test Engineers

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive	
	Engaged dB(A)	Disengaged dB(A)
At no load in 9th(B4) Gear	68.4	68.2
Transport in 24th(F4) gear		73.3
Bystander		--

TIRES AND WEIGHT

Rear Tires —No., size, ply & psi (kPa)	Tested Without Ballast Two 460/85R38;**, 12 (80)
Front Tires —No., size, ply & psi (kPa)	Two 380/85R24;**, 12 (80)
Height of Drawbar	19.7 in (500 mm)
Static Weight with operator —Rear	8260 lb (3750 kg)
—Front	4925 lb (2235 kg)
—Total	13195 lb (5985 kg)

This vehicle is equipped with an electronically controlled engine power management system (Intelligent Power Management, IPM) that monitors and boosts engine power output in certain circumstances. This is achieved by electronically changing the characteristics of the engine power-speed curve. IPM becomes active when ground speed exceeds 15 km/h (9.3 mph). This power boost persists until the ground speed drops below 10 km/h (6.2 mph). The system is also activated when using PTO driven implements. An override system is provided to enable PTO operations at the "boosted" power level while the vehicle is stationary for test purposes. The results of this PTO output test are presented below.

POWER TAKE-OFF PERFORMANCE

Power HP (kW)	Crank shaft rpm	Gal/hr (l/h)	lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Mean Atmospheric Conditions
MAXIMUM POWER AND FUEL CONSUMPTION					
Rated Engine Speed—(PTO speed—1071 rpm)					
110.0 (82.0)	2100	6.81 (25.79)	0.433 (0.264)	16.14 (3.18)	
Standard Power Take-off Speed (1000 rpm)					
116.3 (86.7)	1961	6.98 (26.43)	0.420 (0.255)	16.65 (3.28)	
Maximum Power (1 hour)					
118.3 (88.2)	1800	6.98 (26.42)	0.413 (0.251)	16.95 (3.34)	

VARYING POWER AND FUEL CONSUMPTION

110.0 (82.0)	2100	6.81 (25.79)	0.433 (0.264)	16.14 (3.18)	Air temperature
96.0 (71.6)	2157	6.20 (23.47)	0.452 (0.275)	15.48 (3.05)	70°F (21°C)
73.0 (54.4)	2187	5.17 (19.58)	0.496 (0.301)	14.11 (2.78)	Relative humidity
49.3 (36.8)	2219	4.07 (15.41)	0.575 (0.350)	12.12 (2.39)	81%
24.9 (18.6)	2243	3.02 (11.42)	0.846 (0.515)	8.26 (1.63)	Barometer
--	2250	2.14 (8.10)	--	--	30.4" Hg (102.8 kPa)
--			--	--	

Maximum Torque - 362.8 lb.-ft. (491.9 Nm) at 1600 rpm

Maximum Torque rise - 31.9%

Torque rise at 1700 engine rpm - 28%

Power increase at 1800 rpm - 17.6%

HYDRAULIC PERFORMANCE

CATEGORY: I/IN

Quick Attach: none

OECD Static test

Maximum force exerted through whole range: 4900 lbs (21.8 kN) (60 mm cylinders)
6540 lbs (29.1 kN) (70 mm cylinders)

Two outlet sets combined

45 cc pump

- i) Sustained pressure of the open relief valve: 2975 psi (205 bar)
- ii) Pump delivery rate at minimum pressure: 33.0 GPM (125.0 l/min)
- iii) Pump delivery rate at maximum
 - hydraulic power: 30.4 GPM (115.1 l/min)
 - Delivery pressure: 2670 psi (184 bar)
 - Power: 47.3 HP (35.2 kW)

single outlet set

- ii) Pump delivery rate at minimum pressure: 32.8 GPM (124.1 l/min)
- iii) Pump delivery rate at maximum
 - hydraulic power: 30.5 GPM (115.3 l/min)
 - Delivery pressure: 2280 psi (157 bar)
 - Power: 40.6 HP (30.2 kW)

HITCH DIMENSIONS AS TESTED—NO LOAD

	inch	mm
A	28.1	715
B	15.4	390
C	21.7	552
D	20.7	525
E	12.6	320
F	8.8	224
G	32.5	825
H	2.6	65
I	16.8	427
J	23.7	601
K	22.2	564
L	45.3	1150
M	24.0	610
N	40.0	1015
O	9.1	230
P	50.6	1286
Q	39.8	1012
R	35.0	890

