NEBRASKA TRACTOR TEST 2036
JOHN DEERE 5085M DIESEL
16 SPEED

Chassis Serial numbers 4xxxxx and higher

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—566 rpm)					
70.82 *(52.81)*	2201	4.59 *(17.36)*	0.456 *(0.278)*	15.44 *(3.04)*	Fuel used during active exhaust regeneration - 1.02 gal *(3.86 l)* (see Note 1 p.2)
Standard Power Take-off Speed(540 rpm)					
73.58 *(54.87)*	2100	4.57 *(17.31)*	0.438 *(0.266)*	16.09 *(3.17)*	
Maximum Power (1 hour)					
76.68 *(57.18)*	1952	4.51 *(17.08)*	0.415 *(0.252)*	16.99 *(3.35)*	
VARYING POWER AND FUEL CONSUMPTION					
70.82 *(52.81)*	2201	4.59 *(17.36)*	0.456 *(0.278)*	15.44 *(3.04)*	Air temperature
61.85 *(46.12)*	2261	4.27 *(16.15)*	0.486 *(0.296)*	14.49 *(2.86)*	75°F *(24°C)*
46.75 *(34.86)*	2277	3.61 *(13.66)*	0.544 *(0.331)*	12.95 *(2.55)*	Relative humidity
31.30 *(23.34)*	2297	2.94 *(11.12)*	0.662 *(0.402)*	10.65 *(2.10)*	50%
15.80 *(11.78)*	2300	2.11 *(8.00)*	0.943 *(0.573)*	7.48 *(1.47)*	Barometer
0.65 *(0.48)*	2300	1.61 *(5.15)*	17.438 *(10.607)*	0.40 *(0.08)*	28.73"Hg *(97.29 kPa)*

Maximum torque - 234 lb.-ft. *(283 Nm)* at 1602 rpm
Maximum torque rise - 38.3%
Torque rise at 1762 rpm - 31%
Power increase at 1952 rpm - 8.3%

TRACTOR SOUND LEVEL WITHOUT CAB	Front Wheel Drive Engaged dB(A)	Front Wheel Drive Disengaged dB(A)
At no load in 7th(B3) gear	85.1	85.2
Transport in 16th (D4) gear		87.1
Bystander in 16th (D4) gear		80.3

TIRES AND WEIGHT	Tested without ballast
Rear tires–No., size, ply & psi *(kPa)*	Two 16.9-30;6;12 *(85)*
Front tires–No., size, ply & psi *(kPa)*	Two 11.2-24;6;18 *(125)*
Height of drawbar	17.0 in *(430 mm)*
Static weight with operator– Rear	4850 lb *(2200 kg)*
– Front	3150 lb *(1429 kg)*
– Total	8000 lb *(3629 kg)*

Location of tests: Nebraska Tractor Test Laboratory, University of Nebraska, Lincoln Nebraska 68583-0832
Dates of tests: September 12 - 21, 2012

Manufacturer: John Deere Commercial Products Inc., 700 Horizon South Parkway, Grovetown Ga. USA, 30813

FUEL, OIL and TIME: Fuel No. 2 Diesel **Specific gravity converted to 60°/60°F *(15°/15°C)*** 0.8467 **Fuel weight** 7.050 lbs/gal *(0.845 kg/l)* **Oil SAE** 15W40 **API service classification** CJ-4 **Transmission and hydraulic lubricant** John Deere Hy-Gard fluid **Front axle lubricant** SAE 80W90 API GL-5 **Total time engine was operated** 14.0 hours

ENGINE: Make John Deere Diesel **Type** four cylinder vertical with turbocharger and air to air intercooler **Serial No.** *PE4045R011261* **Crankshaft** lengthwise **Rated engine speed** 2200 **Bore and stroke** 4.19" x 5.00" *(106.5 mm x 127.0 mm)* **Compression ratio** 16.8 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 **Fuel cooler** radiator for return fuel **Exhaust** regenerative particulate filter integrated within a vertical muffler **Cooling medium temperature control** one thermostat and variable speed fan

ENGINE OPERATING PARAMETERS: Fuel rate: 31.7 - 35.0 lb/h *(14.4 - 15.9 kg/h)* **High idle:** 2275 - 2325 rpm **Turbo boost:** nominal 13.8 - 16.8 psi *(95 - 115 kPa)* as measured 14.9 psi *(103 kPa)*

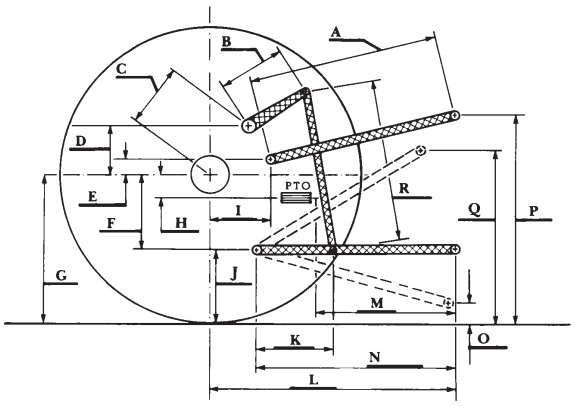
CHASSIS: Type front wheel assist **Serial No.** *1LV5085MACJ433797* **Tread width** rear 59.4" *(1508 mm)* to 71.4" *(1813 mm)* front 52.8" *(1342 mm)* to 77.0" *(1957 mm)* **Wheelbase** 90.6" *(2300 mm)* **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio **Nominal travel speeds mph *(km/h)*** first 1.14 *(1.84)* second 1.46 *(2.35)* third 1.77 *(2.85)* fourth 2.12 *(3.41)* fifth 2.77 *(4.45)* sixth 3.53 *(5.68)* seventh 4.28 *(6.88)* eighth 5.11 *(8.22)* ninth 6.77 *(10.89)* tenth 8.64 *(13.91)* eleventh 10.46 *(16.84)* twelfth 10.48 *(16.86)* thirteenth 12.52 *(20.15)* fourteenth 13.36 *(21.50)* fifteenth 16.19 *(26.06)* sixteenth 19.36 *(31.15)* reverse 1.26 *(2.03)*, 1.61 *(2.59)*, 1.95 *(3.14)*, 2.33 *(3.75)*, 3.04 *(4.90)*, 3.89 *(6.26)*, 4.71 *(7.58)*, 5.63 *(9.06)*, 7.46 *(12.00)*, 9.53 *(15.33)*, 11.53 *(18.55)*, 11.55 *(18.58)*, 13.80 *(22.21)*, 14.72 *(23.69)*, 17.84 *(28.71)*, 21.33 *(34.32)*

HYDRAULIC PERFORMANCE

CATEGORY: II		
Quick Attach: None		
OECD Static test		lift cylinders
Maximum force exerted through whole range:	4858 lbs	*(21.6 kN)* (2 x 56 mm)
	6390 lbs	*(28.4 kN)* (2 x 63 mm)
i) Sustained pressure of the open relief valve:	2894 psi	*(200 bar)*
ii) Pump delivery rate at minimum pressure and rated engine speed:	20.8 GPM	*(78.7 l/min)*
iii) Pump delivery rate at maximum hydraulic power:	19.6 GPM	*(74.2 l/min)*
Delivery pressure:	2451 psi	*(169 bar)*
Power:	28.0 HP	*(20.9 kW)*

HITCH DIMENSIONS AS TESTED—NO LOAD

	inch	*mm*
A	25.2	*640*
B	12.6	*320*
C	17.7	*449*
D	15.0	*380*
E	14.8	*375*
F	8.8	*223*
G	29.3	*745*
H	0.2	*4*
I	15.4	*390*
J	20.5	*522*
K	17.5	*444*
L	41.7	*1060*
M	23.0	*585*
N	33.1	*840*
O	9.1	*230*
P	44.6	*1132*
Q	36.2	*919*
R	27.8	*705*



Clutch wet disc hydraulically actuated by foot pedal **Brakes** wet disc hydraulically actuated by two foot pedals which can be locked together **Steering** hydrostatic **Power take-off** 540 rpm at 2100 engine rpm or 1000 rpm at 2103 engine rpm Economy PTO - 540 rpm at 1645 engine rpm **Unladen tractor mass** 7825 lb *(3549 kg)*

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

NOTE 1: The manufacturer declares that the average time between active regenerations is 100 hours, while operated in Auto Filter Cleaning Mode, at rated speed, full load, under steady state conditions.

NOTE 2: The performance data on this report applies to tractor with chassis serial numbers that end with 4xxxxx and higher.

REMARKS: All test results were determined from observed data obtained in accordance with official OECD, SAE and Nebraska test procedures. For the maximum power tests, the fuel temperature at the injection pump inlet was maintained at 139°F *(59°C)*.

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. **2036,** February 13, 2013.

Roger M. Hoy
Director

M.R. Riley
P.J. Jasa
J.D. Luck
Board of Tractor Test Engineers

Economy mode
540 PTO rpm @1645 engine rpm

Power HP *(kW)*	Crank shaft speed rpm	Gal/hr *(l/h)*	lb/hp.hr *(kg/kW.h)*	Hp.hr/gal *(kW.h/l)*
71.75 *(53.50)*	1645	3.99 *(15.11)*	0.392 *(0.239)*	17.98 *(3.54)*
53.85 *(40.16)*	1639	3.10 *(11.72)*	0.405 *(0.247)*	17.39 *(3.43)*
35.85 *(26.73)*	1641	2.28 *(8.64)*	0.449 *(0.273)*	15.71 *(3.10)*
17.85 *(13.31)*	1640	1.51 *(5.72)*	0.596 *(0.363)*	11.82 *(2.33)*
0.55 *(0.41)*	1646	1.12 *(4.23)*	14.309 *(8.710)*	0.49 *(0.10)*

Normal mode
540 PTO rpm @2100 engine rpm

Power HP *(kW)*	Crank shaft speed rpm	Gal/hr *(l/h)*	lb/hp.hr *(kg/kW.h)*	Hp.hr/gal *(kW.h/l)*
72.40 *(53.99)*	2115	4.45 *(16.83)*	0.433 *(0.264)*	16.28 *(3.21)*
53.60 *(39.97)*	2092	3.55 *(13.44)*	0.467 *(0.284)*	15.09 *(2.97)*
35.70 *(26.62)*	2098	2.82 *(10.66)*	0.556 *(0.338)*	12.68 *(2.50)*
17.75 *(13.24)*	2085	1.97 *(7.47)*	0.783 *(0.477)*	9.00 *(1.77)*
0.50 *(0.37)*	2107	1.35 *(5.12)*	19.060 *(11.602)*	0.37 *(0.07)*

JOHN DEERE 5085M DIESEL

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