2009

Test 1958: John Deere 5065M Diesel

Nebraska Tractor Test Lab
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NEBRASKA TRACTOR TEST 1958
JOHN DEERE 5065M DIESEL
12 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—566 rpm)					
50.97 *(38.01)*	2200	3.49 *(13.20)*	0.481 *(0.293)*	14.62 *(2.88)*	
Standard Power Take-off Speed(540 rpm)					
52.83 *(39.39)*	2100	3.43 *(12.99)*	0.457 *(0.278)*	15.39 *(3.03)*	
Maximum Power (1 hour)					
56.90 *(42.43)*	1750	3.32 *(12.55)*	0.410 *(0.249)*	17.16 *(3.38)*	
VARYING POWER AND FUEL CONSUMPTION					
50.97 *(38.01)*	2200	3.49 *(13.20)*	0.481 *(0.293)*	14.62 *(2.88)*	Air temperature
44.27 *(33.01)*	2247	3.15 *(11.94)*	0.501 *(0.305)*	14.04 *(2.77)*	76°F *(24°C)*
33.53 *(25.00)*	2269	2.51 *(9.51)*	0.527 *(0.321)*	13.34 *(2.63)*	Relative humidity
22.52 *(16.79)*	2286	1.92 *(7.27)*	0.600 *(0.365)*	11.72 *(2.31)*	22%
11.33 *(8.45)*	2300	1.42 *(5.39)*	0.884 *(0.538)*	7.96 *(1.57)*	Barometer
0.72 *(0.53)*	2300	0.89 *(3.37)*	8.749 *(5.322)*	0.80 *(0.16)*	28.87"Hg *(97.77 kPa)*

Maximum torque - 181 lb.-ft. *(246 Nm)* at 1600 rpm
Maximum torque rise - 48.9%
Torque rise at 1750 rpm - 40%
Power increase at 1750 rpm - 11%

TRACTOR SOUND LEVEL WITHOUT CAB	Front Wheel Drive Engaged dB(A)	Front Wheel Drive Disengaged dB(A)
At no load in 5th(B2) gear	91.7	91.7
Transport in 12th (D3) gear		92.7
Bystander in 12th (D3) gear		83.2

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;8;14 *(95)*
Height of drawbar	15.5 in *(395 mm)*
Static weight with operator– Rear	4455 lb *(2021 kg)*
– Front	2570 lb *(1165 kg)*
– Total	7025 lb *(3186 kg)*

Location of tests: Nebraska Tractor Test Laboratory, University of Nebraska, Lincoln Nebraska 68583-0832
Dates of tests: October 8 - 13, 2009

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)*** 0.8450 **Fuel weight** 7.036 lbs/gal *(0.843 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** 12.0 hours

ENGINE: Make John Deere Diesel **Type** five cylinder vertical with turbocharger and air to air intercooler **Serial No.** *PE5030R016511* **Crankshaft** lengthwise **Rated engine speed** 2200 **Bore and stroke** 3.385" x 4.134" *(86.0 mm x 105.0 mm)* **Compression ratio** 18.2 to 1 **Displacement** 186 cu in *(3050 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 **Fuel filter** one paper element **Muffler** underhood **Exhaust** vertical-downward **Cooling medium temperature control** one thermostat

ENGINE OPERATING PARAMETERS: Fuel rate: 24.6 - 27.1 lb/h *(11.2 - 12.3 kg/h)* **High idle:** 2275 - 2325 rpm **Turbo boost:** nominal 17.1 - 18.9 psi *(118 - 130 kPa)* as measured 18.0 psi *(124 kPa)*

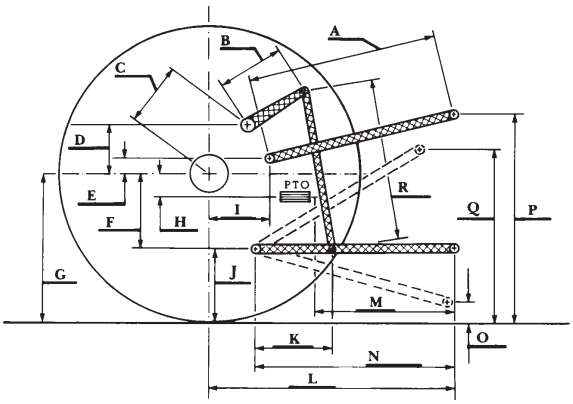
CHASSIS: Type front wheel assist **Serial No.** *LV5065M140005* **Tread width** rear 61.5" *(1563 mm)* to 69.7" *(1770 mm)* front 52.8" *(1342 mm)* to 77.0" *(1957 mm)* **Wheelbase** 85.7" *(2178 mm)* **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio **Nominal travel speeds mph *(km/h)*** first 1.65 *(2.65)* second 2.05 *(3.30)* third 2.85 *(4.59)* fourth 3.81 *(6.13)* fifth 4.74 *(7.63)* sixth 5.99 *(9.64)* seventh 6.61 *(10.63)* eighth 7.45 *(11.99)* ninth 10.20 *(16.41)* tenth 10.38 *(16.71)* eleventh 12.69 *(20.42)* twelfth 17.68 *(28.45)* reverse 1.90 *(3.05)*, 2.62 *(4.21)*, 3.36 *(5.41)*, 4.46 *(7.17)* **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 Economy PTO 540 rpm at 1645 engine rpm **Unladen tractor mass** 6850 lb *(3107 kg)*

HYDRAULIC PERFORMANCE

CATEGORY: II		
Quick Attach: None		
OECD Static test		
Maximum force exerted through whole range:	3951 lbs	*(17.6 kN)* (50 mm cylinders)
	4793 lbs	*(21.3 kN)* (56 mm cylinders)
i) Sustained pressure of the open relief valve:	2871 psi	*(198 bar)*
ii) Pump delivery rate at minimum pressure and rated engine speed:	16.2 GPM	*(61.3 l/min)*
iii) Pump delivery rate at maximum hydraulic power:	14.8 GPM	*(56.0 l/min)*
Delivery pressure:	2807 psi	*(194 bar)*
Power:	24.2 HP	*(18.1 kW)*

HITCH DIMENSIONS AS TESTED—NO LOAD

	inch	*mm*
A	25.6	*650*
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	7.8	*197*
P	47.5	*1207*
Q	33.9	*861*
R	28.1	*715*



REPAIRS AND ADJUSTMENTS: No repairs or adjustments

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 138°F *(59°C)*.

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. **1958,** December 14, 2009.

Roger M. Hoy
Director

M.F. Kocher
V.I. Adamchuk
J.A. Smith
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)*
52.99 *(39.52)*	1649	3.06 *(11.60)*	0.407 *(0.248)*	17.30 *(3.41)*
39.64 *(29.56)*	1643	2.28 *(8.63)*	0.405 *(0.247)*	17.36 *(3.42)*
26.43 *(19.71)*	1645	1.53 *(5.79)*	0.407 *(0.248)*	17.28 *(3.40)*
13.19 *(9.83)*	1642	0.93 *(3.52)*	0.499 *(0.303)*	14.11 *(2.78)*
0.61 *(0.45)*	1642	0.38 *(1.44)*	4.432 *(2.698)*	1.59 *(0.31)*

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)*
53.14 *(39.62)*	2111	3.48 *(13.17)*	0.460 *(0.280)*	15.29 *(3.01)*
39.62 *(29.55)*	2098	2.64 *(9.99)*	0.469 *(0.285)*	15.00 *(2.95)*
26.40 *(19.69)*	2097	1.95 *(7.38)*	0.519 *(0.316)*	13.55 *(2.67)*
13.20 *(9.84)*	2098	1.31 *(4.96)*	0.698 *(0.425)*	10.09 *(1.99)*
0.65 *(0.49)*	2100	0.69 *(2.61)*	7.453 *(4.534)*	0.94 *(0.19)*

JOHN DEERE 5065M DIESEL

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