2009

Test 1959: John Deere 5075M Diesel

Nebraska Tractor Test Lab
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NEBRASKA TRACTOR TEST 1959
JOHN DEERE 5075M DIESEL
16 SPEED

Location of tests: Nebraska Tractor Test Laboratory, University of Nebraska, Lincoln Nebraska 68583-0832

Dates of tests: September 22 - October 6, 2009

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

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)					
60.12 *(44.83)*	2201	4.21 *(15.95)*	0.493 *(0.300)*	14.27 *(2.81)*	
Standard Power Take-off Speed(540 rpm)					
60.63 *(45.21)*	2099	4.11 *(15.57)*	0.477 *(0.290)*	14.74 *(2.90)*	
Maximum Power (1 hour)					
65.58 *(48.90)*	1701	3.94 *(14.91)*	0.423 *(0.257)*	16.65 *(3.28)*	
VARYING POWER AND FUEL CONSUMPTION					
60.12 *(44.83)*	2201	4.21 *(15.95)*	0.493 *(0.300)*	14.27 *(2.81)*	Air temperature
52.18 *(38.91)*	2247	3.76 *(14.23)*	0.507 *(0.308)*	13.88 *(2.73)*	74°F *(23°C)*
39.55 *(29.49)*	2268	3.01 *(11.41)*	0.536 *(0.326)*	13.13 *(2.59)*	Relative humidity
26.58 *(19.82)*	2288	2.27 *(8.60)*	0.601 *(0.366)*	11.70 *(2.31)*	43%
13.41 *(10.00)*	2299	1.61 *(6.09)*	0.844 *(0.513)*	8.34 *(1.64)*	Barometer
0.68 *(0.51)*	2300	1.01 *(3.83)*	10.440 *(6.351)*	0.67 *(0.13)*	28.85"Hg *(97.70 kPa)*

Maximum torque - 209 lb.-ft. *(284 Nm)* at 1549 rpm
Maximum torque rise - 45.7%
Torque rise at 1750 rpm - 36%
Power increase at 1700 rpm - 9%

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive Engaged dB(A)	Front Wheel Drive Disengaged dB(A)
At no load in 7th(B3) gear	80.6	80.5
Transport in 16th (D4) gear		80.8
Bystander in 16th (D4) gear		83.9

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;16 *(110)*
Height of drawbar	16.0 in *(405 mm)*
Static weight with operator– Rear	5005 lb *(2270 kg)*
– Front	2785 lb *(1263 kg)*
– Total	7790 lb *(3533 kg)*

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** CI-4 **Transmission and hydraulic lubricant** John Deere Hy-Gard fluid **Front axle lubricant** SAE 80W90 API GL-5 **Total time engine was operated** 11.5 hours

ENGINE: Make John Deere Diesel **Type** five cylinder vertical with turbocharger and air to air intercooler **Serial No.** *PE5030R014086* **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 **Cooling medium temperature control** one thermostat

ENGINE OPERATING PARAMETERS: Fuel rate: 28.2 - 31.0 lb/h *(12.8 - 14.1 kg/h)* **High idle:** 2275 - 2325 rpm **Turbo boost:** nominal 21.0 - 23.2 psi *(145 - 160 kPa)* as measured 22.0 psi *(152 kPa)*

CHASSIS: Type front wheel assist **Serial No.** *LV5075M150059* **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 1.14 *(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)* **Clutch** wet disc hydraulically actuatedby 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 **Unladen tractor mass** 7615 lb *(3454 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:	2893 psi	*(199 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:	2767 psi	*(191 bar)*
Power:	23.9 HP	*(17.8 kW)*

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 132°F *(56°C)*.

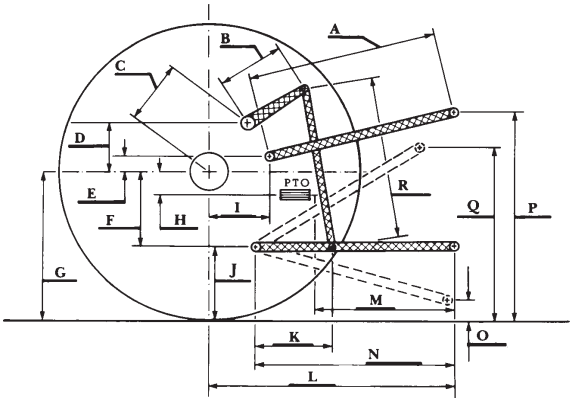
We, the undersigned, certify that this is a true and correct report of official Tractor Test No. **1959,** December 18, 2009.

Roger M. Hoy
Director

M.F. Kocher
V.I. Adamchuk
J.A. Smith
Board of Tractor Test Engineers

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*



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