NEBRASKA TRACTOR TEST 1870
JOHN DEERE 5103 DIESEL
9 SPEED
Chassis S/N PY5103U001808 to PY5103U013641

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

Dates of tests: March 9 - 30, 2006

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) 0.8395 Fuel weight 6.990 lbs/gal (0.838 kg/l)

Oil SAE 15W40 API service classification CG-4 Transmission and hydraulic lubricant John Deere Hy-Gard Fluid Total time engine was operated 8.0 hours

ENGINE: Make John Deere Diesel Type three cylinder vertical with turbocharger Serial No. *PY3029T106597* Crankshaft lengthwise Rated engine speed 2400 Bore and stroke 4.19” x 4.33” (106.4 mm x 110.0 mm) Compression ratio 17.8 to 1 Displacement 179 cu in (2934 ml) Starting system 12 volt Lubrication one paper element and one polyester felt element Muffler underhood Exhaust vertical Cooling medium temperature control one thermostat

ENGINE OPERATING PARAMETERS: Fuel rate: 20.0 - 21.0 lb/h (9.1 - 9.5 kg/h) High idle: 2575 - 2650 rpm Turbo boost: nominal 8.7 - 11.6 psi (60 - 80 kPa) as measured 10.0 psi (69 kPa)

CHASSIS: Type standard Serial No. *PY5103U009123* Tread width rear 55.7” to 71.5” (1415 mm to 1815 mm) front 56.3” to 80.7” (1430 mm to 2050 mm) Wheelbase 80.3” (2040 mm) Hydraulic control system direct engine drive Transmission selective gear fixed ratio Nominal travel speeds mph (km/h) first 2.62 (4.20) second 1.85 (2.94) third 2.75 (4.42) fourth 3.55 (5.71) fifth 5.11 (8.23) sixth 7.69 (12.37) seventh 8.20 (13.20) eighth 11.83 (19.03) ninth 17.77 (28.60) reverse 2.13 (3.42), 5.95 (9.58), 13.77 (22.17) Clutch single dry disc operated by foot pedal Brakes single wet disc mechanically operated by two foot pedals which can be locked together Steering hydrostatic Power take-off 540 rpm at 2376 engine rpm Unladen tractor mass 4715 lb (2139 kg)
THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: II
Quick Attach: None
Maximum force exerted through whole range: 3591 lbs (16.0 kN)
i) Opening pressure of relief valve: NA
Sustained pressure of the open relief valve: 2785 psi (192 bar)
ii) Pump delivery rate at minimum pressure and rated engine speed:
hydraulic power: 12.4 GPM (46.9 l/min)
Delivery pressure: 2471 psi (170 bar)
Power: 17.6 HP (13.1 kW)

THREE POINT HITCH PERFORMANCE
Observed maximum pressure psi. (bar)
Location: remote outlet
Hydraulic oil temperature: °F (°C)
Location: hydraulic sump
Category: II
Quick attach: none

SAE Static Test—System pressure 2480 psi (171 Bar)
Hitch point distance to ground level in. (mm) 8.0 (203) 15.0 (381) 22.0 (559) 29.0 (737) 36.0 (914)

* * * * * (kN)
(29.5) (24.4) (22.5) (21.1) (17.7)

HITCH DIMENSIONS AS TESTED - NO LOAD

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 122°F (50°C).

Note: The performance figures on this report apply to chassis serial numbers PY5103U001808 through PY5103U013641.

Report reissued: The manufacturer's advertised power claim changed from 42 PTO hp to 38 PTO hp effective after chassis S/N PY5103U013641.

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. 1870, August 31, 2007.

Roger M. Hoy
Director

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V.I. Adamchuk
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Board of Tractor Test Engineers

Institute of Agriculture and Natural Resources
University of Nebraska–Lincoln

John Deere 5103 Diesel