NEBRASKA TRACTOR TEST 1872
JOHN DEERE 5303 DIESEL
9 SPEED

Location of tests: Nebraska Tractor Test Laboratory, University of Nebraska, Lincoln, Nebraska 68583-0832
Dates of tests: March 15 - 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
9.0 hours

ENGINE: Make
John Deere Diesel
Type
three cylinder vertical with turbocharger
Serial No. *PY3029T105719*
Crankshaft
lengthwise
Rated engine speed
2150 rpm
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

Air cleaner
one paper element and one polyester felt element
Oil filter
one full flow cartridge
Fuel filter
one paper element

Muffler
underhood
Exhaust
vertical
Cooling medium temperature control
one thermostat

ENGINE OPERATING PARAMETERS: Fuel rate: 23.5 - 25.9 lb/h (10.7 - 11.7 kg/h) High idle: 2575 - 2650 rpm Turbo boost: nominal 10.9 - 13.8 psi (75 - 95 kPa) as measured 12.6 psi (87 kPa)

CHASSIS: Type standard Serial No. *PY3029T105719* Tread width rear 55.7” (1415 mm) to 71.5” (1815 mm) front 56.3” (1430 mm) to 80.7” (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 1.39 (2.23) second 2.01 (3.23) third 3.02 (4.85) fourth 3.89 (6.26) fifth 5.62 (9.05) sixth 8.46 (13.62) seventh 9.01 (14.50) eighth 13.03 (20.98) ninth 19.62 (31.57) reverse 2.33 (3.75), 6.55 (10.54), 15.13 (24.35) 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 2976 engine rpm Unladen tractor mass 4900 lb (2223 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: 2796 psi (193 bar)
ii) Pump delivery rate at minimum pressure and rated engine speed:
   12.4 GPM (46.9 l/min)
iii) Pump delivery rate at maximum hydraulic power:
   11.4 GPM (43.2 l/min)
Delivery pressure: 2444 psi (169 bar)
Power: 16.3 HP (12.1 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

Sustained pressure of the open relief valve: 2796 psi (193 bar)
Power: 16.3 HP (12.1 kW)

SAE Static Test—System pressure 2480 psi (171 Bar)
Hitch point distance to ground level in. (mm)
Lift force on frame lb (kN)

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<th>SAE Test</th>
<th>OECD Test</th>
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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 125°F (52°C).

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. 1872, May 22, 2006.

Leonard L. Bashford
Director
M.F. Kocher
V.I. Adamchuk
J.A. Smith
Board of Tractor Test Engineers