NEBRASKA TRACTOR TEST 1867
JOHN DEERE 5325 DIESEL
9 SPEED

Location of tests: Nebraska Tractor Test Laboratory, University of Nebraska, Lincoln Nebraska 68583-0832
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)
0.8468
Fuel weight
7.051 lbs/gal (0.845 kg/l)
Oil
SAE 10W30
API service classification CF/CH-4
Transmission and hydraulic lubricant
John Deere Hy-Gard Fluid
Front axle lubricant
SAE 80W90 API GL-5
Total time engine was operated
9.0 hours

ENGINE:
Make
John Deere Diesel
Type
cylinders: 5
Serial No.
*PE5030T027148*
Crankshaft
lengthwise
Rated engine speed
2400 rpm
Bore and stroke
3.385" x 4.134" (86.0 mm x 105.0 mm)
Compression ratio
20.5 to 1
Displacement
186 cu in (3050 ml)
Starting system
12 volt
Lubrication
pressure
Air cleaner
one paper element and one polyester felt element
Oil filter
one full flow cartridge
Oil cooler
crush case oil
Fuel filter
one paper element and sediment bowl
Muffler
underhood
Exhaust
vertical
Cooling
medium temperature control
one thermostat

ENGINE OPERATING PARAMETERS:
Fuel rate:
25.7 - 28.5 lb/h (11.7 - 12.9 kg/h)
High idle:
2575 - 2675 rpm
Turbo boost:
nominal 14.5 - 17.4 psi (100 - 120 kPa)
as measured 16.3 psi (112 kPa)

CHASSIS:
Type front wheel assist
Serial No.
*LV5325T132001*
Tread width
rear 54.8" (1417 mm) to 71.7" (1820 mm)
front 52.8" (1340 mm) to 75.0" (1904 mm)
Wheelbase
85.7" (2178 mm)
Hydraulic control system
direct engine drive
Transmission
selective gear fixed ratio
Nominal travel speeds mph (km/h)
fourth 2.89 (4.65)
meguct 4.35 (6.99)
reverse 2.24 (3.60), 5.65 (9.09), 14.39 (23.16)

TIRES AND WEIGHT:
Rear Tires—No., size, ply & psi (kPa)
Front Tires—No., size, ply & psi (kPa)
Height of Drawbar
Static Weight with operator— Rear
= Front
= Total
Tested Without Ballast
Two 16.9-30:6;12 (85)
Two 11.2-24:8;14 (95)
17.0 in (435 mm)
4180 lb (1896 kg)
2755 lb (1250 kg)
6935 lb (3146 kg)

POWER TAKE-OFF PERFORMANCE

<table>
<thead>
<tr>
<th>Power HP (kW)</th>
<th>Crankshaft speed rpm</th>
<th>Gal/hr (l/h)</th>
<th>lb/hr (kg/h)</th>
<th>Hp/hr/gal (kW/l)</th>
<th>Mean Atmospheric Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>56.16 (41.88)</td>
<td>2400</td>
<td>3.96</td>
<td>0.497</td>
<td>14.18</td>
<td>56.16</td>
</tr>
<tr>
<td>57.27 (42.70)</td>
<td>2100</td>
<td>3.64</td>
<td>0.448</td>
<td>15.72</td>
<td>57.27</td>
</tr>
</tbody>
</table>

MAXIMUM POWER AND FUEL CONSUMPTION

<table>
<thead>
<tr>
<th>Rated Engine Speed—(PTO speed—538 rpm)</th>
<th>Power Crank HP shaft (kW)</th>
<th>Gal/hr (l/h)</th>
<th>lb/hr (kg/h)</th>
<th>Hp/hr/gal (kW/l)</th>
<th>Mean Atmospheric Conditions</th>
</tr>
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<tr>
<td>56.16 (41.88)</td>
<td>2400</td>
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<td>0.497</td>
<td>14.18</td>
<td>56.16</td>
</tr>
</tbody>
</table>

VARYING POWER AND FUEL CONSUMPTION

<table>
<thead>
<tr>
<th>Power</th>
<th>Crankshaft speed rpm</th>
<th>Gal/hr (l/h)</th>
<th>lb/hr (kg/h)</th>
<th>Hp/hr/gal (kW/l)</th>
<th>Mean Atmospheric Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>56.16</td>
<td>2400</td>
<td>3.96</td>
<td>0.497</td>
<td>14.18</td>
<td>56.16</td>
</tr>
<tr>
<td>50.02</td>
<td>2523</td>
<td>3.74</td>
<td>0.528</td>
<td>13.36</td>
<td>50.02</td>
</tr>
<tr>
<td>38.07</td>
<td>2543</td>
<td>3.09</td>
<td>0.573</td>
<td>12.31</td>
<td>38.07</td>
</tr>
<tr>
<td>25.50</td>
<td>2570</td>
<td>2.47</td>
<td>0.682</td>
<td>10.35</td>
<td>25.50 (41%)</td>
</tr>
<tr>
<td>13.02</td>
<td>2596</td>
<td>1.86</td>
<td>1.006</td>
<td>7.01</td>
<td>13.02</td>
</tr>
<tr>
<td>0.81</td>
<td>2630</td>
<td>1.38</td>
<td>11.930</td>
<td>0.59</td>
<td>0.81 (29.21&quot;Hg (98.92 kPa))</td>
</tr>
</tbody>
</table>

Maximum Torque 180 lb.-ft. (245 Nm) at 1446 rpm
Maximum Torque Rise -46.8%
Torque rise at 1901 rpm - 26%

TRACTOR SOUND LEVEL WITH CAB

<table>
<thead>
<tr>
<th>Speed Level</th>
<th>Front Wheel Drive Engaged dB(A)</th>
<th>Disengaged dB(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>At no load in 5th (B2) gear</td>
<td>78.8</td>
<td>78.7</td>
</tr>
<tr>
<td>Transport in 8th(C3) gear</td>
<td>77.0</td>
<td></td>
</tr>
<tr>
<td>Bystander in 9th(C3) gear</td>
<td>81.0</td>
<td></td>
</tr>
</tbody>
</table>

TIES AND WEIGHT

Tested Without Ballast
Two 16.9-30:6;12 (85)
Two 11.2-24:8;14 (95)
17.0 in (435 mm)
4180 lb (1896 kg)
2755 lb (1250 kg)
6935 lb (3146 kg)

Engine cooling heat exchanger for crankcase oil
Fuel filter one paper element and sediment bowl
Muffler underhood
Exhaust vertical
Cooling medium temperature control
one thermostat

ENGINE OPERATING PARAMETERS: Fuel rate: 25.7 - 28.5 lb/h (11.7 - 12.9 kg/h) High idle: 2575 - 2675 rpm Turbo boost: nominal 4.35 (6.99) psi (100 - 120 kPa) as measured 16.3 psi (112 kPa)

HYDRAULIC control system direct engine drive
Transmission
selective gear fixed ratio
Nominal travel speeds mph (km/h)
first 1.35 (2.18)
second 1.96 (3.16)
third 2.89 (4.65)
fourth 3.43 (5.52)
fifth 4.96 (7.98)
sixth 7.30 (11.74)
seventh 8.74 (14.06)
eighth 12.63 (20.32)
ninth 18.59 (29.92)
reverse 2.24 (3.60), 5.65 (9.09), 14.39 (23.16)

Clutch single dry disc operated by foot pedal
Brakes single wet disc hydraulically operated by two foot pedals which can be locked together
Steering hydrostatic
Power take-off 540 rpm at 2410 engine rpm or 540 rpm at 1716 engine rpm
Unladen tractor mass 6760 lb (3066 kg)
THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: II
Quick Attach: None
Maximum force exerted through whole range: 3213 lbs (14.3 kN)
i) Opening pressure of relief valve: NA
Sustained pressure of the open relief valve: 2906 psi (200 bar)
ii) Pump delivery rate at minimum pressure and rated engine speed:
14.1 GPM (53.4 l/min)
iii) Pump delivery rate at maximum hydraulic power:
12.2 GPM (46.2 l/min)
Delivery pressure: 2736 psi (189 bar)
Power: 19.5 HP (14.5 kW)

THREE POINT HITCH PERFORMANCE

Observed maximum pressure psi (bar) 2830 (195)
Location: remote outlet
Hydraulic oil temperature: °F (°C) 148 (64)
Location: pump inlet
Category: II
Quick attach: none

SAE Static Test—System pressure 2520 psi (174 Bar)
Hitch point distance to ground level in. (mm) 8.0 (203) 15.0 (381) 22.0 (559) 29.0 (737) 36.0 (914)
Lift force on frame lb (kN) 4694 (20.9) 4829 (21.5) 4685 (20.8) 4266 (19.0) 3596 (16.0)

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 135°F (57°C).

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. 1867, March 17, 2006.

Leonard L. Bashford
Director

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

HITCH DIMENSIONS AS TESTED - NO LOAD

<table>
<thead>
<tr>
<th>SAE Test</th>
<th>OECD Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>inch</td>
<td>mm</td>
</tr>
<tr>
<td>A</td>
<td>25.2</td>
</tr>
<tr>
<td>B</td>
<td>11.0</td>
</tr>
<tr>
<td>C</td>
<td>14.0</td>
</tr>
<tr>
<td>D</td>
<td>12.2</td>
</tr>
<tr>
<td>E</td>
<td>11.2</td>
</tr>
<tr>
<td>F</td>
<td>6.5</td>
</tr>
<tr>
<td>G</td>
<td>27.4</td>
</tr>
<tr>
<td>H</td>
<td>0.2</td>
</tr>
<tr>
<td>I</td>
<td>15.1</td>
</tr>
<tr>
<td>J</td>
<td>20.9</td>
</tr>
<tr>
<td>K</td>
<td>16.7</td>
</tr>
<tr>
<td>L</td>
<td>39.2</td>
</tr>
<tr>
<td>M</td>
<td>22.4</td>
</tr>
<tr>
<td>N</td>
<td>32.9</td>
</tr>
<tr>
<td>O</td>
<td>8.0</td>
</tr>
<tr>
<td>P</td>
<td>40.9</td>
</tr>
<tr>
<td>Q</td>
<td>34.0</td>
</tr>
<tr>
<td>R</td>
<td>20.8</td>
</tr>
</tbody>
</table>
### Shiftable PTO Performance

**Economy mode**

540 PTO rpm @ 1716 engine rpm

<table>
<thead>
<tr>
<th>Power HP (kW)</th>
<th>Crankshaft speed rpm</th>
<th>Gal/hr (l/h)</th>
<th>Bhp.hr (kg.h/h)</th>
<th>Hp.hr/gal (kW.h/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>53.78 (40.10)</td>
<td>1711</td>
<td>3.21 (12.13)</td>
<td>0.420 (0.256)</td>
<td>16.78 (3.31)</td>
</tr>
<tr>
<td>40.71 (30.36)</td>
<td>1718</td>
<td>2.50 (9.45)</td>
<td>0.432 (0.263)</td>
<td>16.31 (3.21)</td>
</tr>
<tr>
<td>26.96 (20.11)</td>
<td>1717</td>
<td>1.73 (6.55)</td>
<td>0.452 (0.275)</td>
<td>15.58 (3.07)</td>
</tr>
<tr>
<td>13.62 (10.16)</td>
<td>1715</td>
<td>1.21 (4.56)</td>
<td>0.624 (0.380)</td>
<td>11.30 (2.23)</td>
</tr>
<tr>
<td>0.69 (0.52)</td>
<td>1714</td>
<td>0.64 (2.42)</td>
<td>6.496 (3.951)</td>
<td>1.09 (0.21)</td>
</tr>
</tbody>
</table>

**Normal mode**

540 PTO rpm @ 2410 engine rpm

<table>
<thead>
<tr>
<th>Power HP (kW)</th>
<th>Crankshaft speed rpm</th>
<th>Gal/hr (l/h)</th>
<th>Bhp.hr (kg.h/h)</th>
<th>Hp.hr/gal (kW.h/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>53.98 (40.25)</td>
<td>2410</td>
<td>3.82 (14.44)</td>
<td>0.498 (0.303)</td>
<td>14.15 (2.79)</td>
</tr>
<tr>
<td>40.61 (30.28)</td>
<td>2411</td>
<td>3.08 (11.65)</td>
<td>0.534 (0.325)</td>
<td>13.20 (2.60)</td>
</tr>
<tr>
<td>26.99 (20.13)</td>
<td>2411</td>
<td>2.34 (8.86)</td>
<td>0.611 (0.372)</td>
<td>11.53 (2.27)</td>
</tr>
<tr>
<td>13.57 (10.12)</td>
<td>2403</td>
<td>1.74 (6.60)</td>
<td>0.906 (0.551)</td>
<td>7.78 (1.53)</td>
</tr>
<tr>
<td>0.75 (0.56)</td>
<td>2413</td>
<td>1.19 (4.51)</td>
<td>11.269 (6.855)</td>
<td>0.63 (0.12)</td>
</tr>
</tbody>
</table>