NEBRASKA TRACTOR TEST 1757
JOHN DEERE 5510 DIESEL
ALSO JOHN DEERE 5520 DIESEL
9 SPEED

POWER TAKE-OFF PERFORMANCE

<table>
<thead>
<tr>
<th>Power HP (kW)</th>
<th>Crankshaft speed rpm</th>
<th>Gal/hr (l/h)</th>
<th>Bhp/hr (kW/l)</th>
<th>Hp/hr/gal (kW/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>76.24</td>
<td>2400</td>
<td>4.61</td>
<td>0.428</td>
<td>16.54</td>
</tr>
<tr>
<td>82.24</td>
<td>2000</td>
<td>4.39</td>
<td>0.378</td>
<td>18.74</td>
</tr>
</tbody>
</table>

MAXIMUM POWER AND FUEL CONSUMPTION

<table>
<thead>
<tr>
<th>Maximum Power @2 hours (2400 rpm)</th>
<th>Rated Engine Speed—(PTO speed—545 rpm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>76.24 (56.85)</td>
<td>9.61</td>
</tr>
<tr>
<td>82.24 (61.33)</td>
<td>10.16</td>
</tr>
</tbody>
</table>

VARYING POWER AND FUEL CONSUMPTION

<table>
<thead>
<tr>
<th>At no load in 5th (B2) gear</th>
<th>Front Wheel Drive Engaged db(A)</th>
<th>Disengaged db(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bystander in 9th (C3) gear</td>
<td>91.8</td>
<td>91.9</td>
</tr>
</tbody>
</table>

TRACTOR SOUND LEVEL WITHOUT CAB (5510)

<table>
<thead>
<tr>
<th>At no load in 5th (B2) gear</th>
<th>Front Wheel Drive Engaged db(A)</th>
<th>Disengaged db(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bystander in 9th (C3) gear</td>
<td>82.7</td>
<td></td>
</tr>
</tbody>
</table>

TRACTOR SOUND LEVEL WITH CAB (5510)

<table>
<thead>
<tr>
<th>At no load in 5th (B2) gear</th>
<th>Front Wheel Drive Engaged db(A)</th>
<th>Disengaged db(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bystander in 9th (C3) gear</td>
<td>84.2</td>
<td>83.8</td>
</tr>
</tbody>
</table>

TRACTOR SOUND LEVEL WITH CAB (5520)

<table>
<thead>
<tr>
<th>At no load in 7th (B3) gear</th>
<th>Front Wheel Drive Engaged db(A)</th>
<th>Disengaged db(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bystander in 12th (C4) gear</td>
<td>81.6</td>
<td>81.4</td>
</tr>
</tbody>
</table>

FUEL, OIL, AND TIME: Fuel No. 2 Diesel
Specific gravity converted to 60°F (15°C) = 0.8506
Fuel weight = 7.082 lbs/gal (0.849 kg/l)
Oil SAE 10W30 API service classification CE/CF-4
Transmission and hydraulic lubricant
Sae 80W90 API GL-5
Total time engine was operated = 12.0 hours

ENGINE: Make John Deere Diesel Type four cylinder vertical with turbocharger
Serial No. *PE 40457 009039*
Crankshaft lengthwise Rated engine speed = 2400 Bore and stroke = 4.19" x 5.00"
(106.4 mm x 127.0 mm)
Compressor ratio = 17.0 to 1
Displacement = 276 cu in (4517 ml)
Starting system = 12 volt Lubrication
Air cleaner pressure
Coolant heat exchanger
Crankcase oil, radiator
Transmission and hydraulic oil
Fuel filter = one full flow cartridge
Engine coolant heat exchanger
Muffler
Exhaust vertical
Cooling medium
Exhaust vertical
Control one thermostat

ENGINE OPERATING PARAMETERS: Fuel rate: 31.6 - 34.8 lb/h (14.3 - 15.8 kg/h)
High idle: 2550 - 2600 rpm
Turbo boost: nominal 9.4 - 10.9 psi (65 - 75 kPa)
As measured 10.0 psi

CHASSIS: Type front wheel assist
Serial No. *LV5510S-152262*
Tread width = 60.0" (1524 mm) to 72.5" (1841 mm)
Wheelbase = 75.9" (1927 mm)
Hydraulic control system direct engine drive
Transmission selective gear fixed ratio
Nominal travel speeds mph (km/h) = 1.37 (2.20) second 1.98 (3.18) third 2.70 (4.34) fourth 3.23 (5.20)
fifth 4.66 (7.50) sixth 6.36 (10.23) seventh 8.87 (14.27) eighth 12.81 (20.61) ninth 17.46 (28.10)
reverse 2.30 (3.70), 5.43 (8.74), 14.91 (23.99)
Clutch single dry disc operated by foot pedal
Brakes single wet disc hydraulically operated by two foot pedals which can be locked together
Steering hydraulic Power take-off = 540 rpm at 2376 engine rpm
Unladen tractor mass = 6360 lb (2885 kg)
JOHN DEERE 5510 DIESEL
THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: II
Quick Attach: None
Maximum Force Exerted Through Whole Range: 2905 lbs (12.9 kN)

i) Opening pressure of relief valve: NA
Sustained pressure of the open relief valve: 2940 psi (203 bar)

ii) Pump delivery rate at minimum pressure and rated engine speed:
   hydraulic power: 15.3 GPM (57.9 l/min)
   Delivery pressure: 2500 psi (172 bar)
   Power: 22.3 HP (16.6 kW)

THREE POINT HITCH PERFORMANCE

Observed Maximum Pressure psi. (bar)
Hitch point distance to ground level in. (mm)
Lift force on frame lb " " " " " " " " " " (kN)

ASAE Static Test—System pressure 2750 psi (190 Bar)

| Hitch point distance to ground level | 8.0 (203) | 15.0 (381) | 22.0 (559) | 29.0 (737) | 36.0 (914) |
| Lift force on frame lb | 4686 | 4713 | 4625 | 4178 | 3619 |

SAE Static Test—System pressure 2550 psi (176 Bar)

| Hitch point distance to ground level | 8.0 (203) | 15.0 (381) | 22.0 (559) | 29.0 (737) | 36.0 (914) |
| Lift force on frame lb | 4345 | 4370 | 4290 | 3874 | 3356 |

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 was maintained at 131°F (55°C).


We, the undersigned, certify that this is a true and correct report of official Tractor Test No. 1757, December 6, 2001.

Brent T. Sampson
Test Engineer

L.L. Bashford
M.F. Kocher
V.I. Adamchuk
Board of Tractor Test Engineers

HITCH DIMENSIONS AS TESTED - NO LOAD

Agricultural Research Division
Institute of Agriculture and Natural Resources
University of Nebraska–Lincoln
Darrell Nelson, Dean and Director
### JOHN DEERE 5520 DIESEL

#### THREE POINT HITCH PERFORMANCE (OECD Static Test)

**CATEGORY:** II  
Quick Attach: None  
Maximum Force Exerted Through Whole Range: 3213 lbs (14.3 kN)

**THREE POINT HITCH PERFORMANCE**

<table>
<thead>
<tr>
<th>Observed Maximum Pressure psi (bar)</th>
<th>2830 (195)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>remote outlet</td>
</tr>
<tr>
<td>Hydraulic oil temperature: °F (°C)</td>
<td>148 (64)</td>
</tr>
<tr>
<td>Location</td>
<td>pump inlet</td>
</tr>
<tr>
<td>Category</td>
<td>II</td>
</tr>
<tr>
<td>Quick attach</td>
<td>none</td>
</tr>
</tbody>
</table>

**ASAE Static Test—System pressure 2750 psi (190 Bar)**

| Hitch point distance to ground level in. (mm) 8.0 (203) 15.0 (381) 22.0 (559) 29.0 (737) 36.0 (914) | 5140 (22.9) 5288 (23.5) 5130 (22.8) 4655 (20.7) 3924 (17.5) |
| Lift force on frame lb               | (kN)       |

**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) | 4694 (20.9) 4829 (21.5) 4685 (20.8) 4266 (19.0) 3596 (16.0) |
| Lift force on frame lb               | (kN)       |