NEBRASKA TRACTOR TEST 2036
JOHN DEERE 5085M DIESEL
16 SPEED
Chassis Serial numbers 4xxxxxx and higher

Location of tests: Nebraska Tractor Test Laboratory, University of Nebraska, Lincoln, Nebraska 68583-0832
Dates of tests: September 12 - 21, 2012

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) 0.8467 Fuel weight 7.050 lbs/gal (0.845 kg/l) Oil SAE 15W40 API service classification CJ-4 Transmission and hydraulic lubricant John Deere Hy-Gard fluid Front axle lubricant SAE 80W90 API GL-5 Total time engine was operated 14.0 hours

ENGINE: Make John Deere Diesel Type four cylinder vertical with turbocharger and air to air intercooler Serial No. *PE4045R011261* Crankshaft lengthwise Rated engine speed 2200 Bore and stroke 4.19" x 5.00" (106.5 mm x 127.0 mm) Compression ratio 16.8 to 1 Displacement 276 cu in (4525 ml) Starting system 12 volt Lubrication pressure Air cleaner one paper and aspirator Oil filter one full flow cartridge Oil cooler engine coolant heat exchanger for crankcase oil, radiator for hydraulic and transmission oil Fuel filter one paper element Fuel cooler radiator for return fuel Exhaust regenerative particulate filter integrated within a vertical muffler Cooling medium temperature control one thermostat and variable speed fan

ENGINE OPERATING PARAMETERS: Fuel rate: 31.7 - 35.0 lb/h (14.4 - 15.9 kg/h) High idle: 2275 - 2325 rpm Turbo boost: nominal 13.8 - 16.8 psi (95 - 115 kPa) as measured 14.9 psi

CHASSIS: Type front wheel assist Serial No. *1LV5085MAC1453797* Tread width rear 59.4“ (1508 mm) to 71.4“ (1813 mm) front 52.8“ (1342 mm) to 77.0“ (1957 mm) Wheelbase 90.6“ (2300 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)

Chassis and Serial Number
HYDRAULIC PERFORMANCE

CATEGORY: II
Quick Attach: None
OECD Static test

Maximum force exerted through whole range:
- Lift cylinders: 4858 lbs (21.6 kN)
- (2 x 56 mm)
- 6390 lbs (28.4 kN)
- (2 x 63 mm)

i) Sustained pressure of the open relief valve:
- 2894 psi (200 bar)

ii) Pump delivery rate at minimum pressure and rated engine speed:
- 20.8 GPM (78.7 l/min)

iii) Pump delivery rate at maximum hydraulic power:
- 19.6 GPM (74.2 l/min)

Delivery pressure:
- 2451 psi (169 bar)

Power:
- 28.0 HP (20.9 kW)

Clutch: wet disc hydraulically actuated by 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 or 1000 rpm at 2103 engine rpm

Economy PTO - 540 rpm at 1645 engine rpm

Unladen tractor mass: 7825 lb (3549 kg)

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

NOTE 1: The manufacturer declares that the average time between active regenerations is 100 hours, while operated in Auto Filter Cleaning Mode, at rated speed, full load, under steady state conditions.

NOTE 2: The performance data on this report applies to tractor with chassis serial numbers that end with 4xxxxx and higher.

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 139°F (59°C).

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. 2036, February 13, 2013.

Roger M. Hoy
Director

M.R. Riley
P.J. Jasa
J.D. Luck
Board of Tractor Test Engineers
### Economy mode

540 PTO rpm @ 1645 engine rpm

<table>
<thead>
<tr>
<th>Power HP (kW)</th>
<th>Crank shaft rpm</th>
<th>Gal/hr (l/h)</th>
<th>Brhp.hr (kg/kW.h)</th>
<th>Hp.hr/gal (kW.h/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>71.75 (53.50)</td>
<td>1645</td>
<td>3.99 (15.11)</td>
<td>0.392 (0.239)</td>
<td>17.98 (3.34)</td>
</tr>
<tr>
<td>58.85 (40.16)</td>
<td>1639</td>
<td>3.10 (11.72)</td>
<td>0.405 (0.247)</td>
<td>17.39 (3.43)</td>
</tr>
<tr>
<td>35.85 (26.73)</td>
<td>1641</td>
<td>2.28 (8.64)</td>
<td>0.449 (0.273)</td>
<td>15.71 (3.10)</td>
</tr>
<tr>
<td>17.85 (13.31)</td>
<td>1640</td>
<td>1.51 (5.72)</td>
<td>0.596 (0.363)</td>
<td>11.82 (2.33)</td>
</tr>
<tr>
<td>0.55 (0.41)</td>
<td>1646</td>
<td>1.12 (4.23)</td>
<td>14.309 (8.710)</td>
<td>0.49 (0.10)</td>
</tr>
</tbody>
</table>

### Normal mode

540 PTO rpm @ 2100 engine rpm

<table>
<thead>
<tr>
<th>Power HP (kW)</th>
<th>Crank shaft rpm</th>
<th>Gal/hr (l/h)</th>
<th>Brhp.hr (kg/kW.h)</th>
<th>Hp.hr/gal (kW.h/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>72.40 (53.99)</td>
<td>2115</td>
<td>4.45 (16.83)</td>
<td>0.433 (0.264)</td>
<td>16.28 (3.21)</td>
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<tr>
<td>53.60 (39.97)</td>
<td>2092</td>
<td>3.55 (13.44)</td>
<td>0.467 (0.284)</td>
<td>15.09 (2.97)</td>
</tr>
<tr>
<td>35.70 (26.62)</td>
<td>2098</td>
<td>2.82 (10.66)</td>
<td>0.556 (0.338)</td>
<td>12.68 (2.50)</td>
</tr>
<tr>
<td>17.75 (13.24)</td>
<td>2085</td>
<td>1.97 (7.47)</td>
<td>0.783 (0.477)</td>
<td>9.00 (1.77)</td>
</tr>
<tr>
<td>0.50 (0.37)</td>
<td>2107</td>
<td>1.35 (5.12)</td>
<td>19.060 (11.602)</td>
<td>0.37 (0.07)</td>
</tr>
</tbody>
</table>