January 1999

Test 1762: AGCO Allis 8765 Diesel (Cummins Engine)

Nebraska Tractor Test Laboratory Submitted by Larsen Museum

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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/gal (kg/hl)</th>
<th>Hr/hr/gal (kW/l)</th>
<th>Mean Atmospheric Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>85.40</td>
<td>2200</td>
<td>5.56</td>
<td>0.461</td>
<td>15.36</td>
<td>(3.03)</td>
</tr>
<tr>
<td>87.86</td>
<td>2000</td>
<td>5.36</td>
<td>0.452</td>
<td>16.39</td>
<td>(2.92)</td>
</tr>
</tbody>
</table>

MAXIMUM POWER AND FUEL CONSUMPTION

<table>
<thead>
<tr>
<th>Power HP (kW)</th>
<th>Rated Engine Speed (PTO speed 1100 rpm)</th>
<th>Maximum Power (2 hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>85.40</td>
<td>2200</td>
<td>5.24</td>
</tr>
<tr>
<td>87.86</td>
<td>2000</td>
<td>5.24</td>
</tr>
</tbody>
</table>

VARYING POWER AND FUEL CONSUMPTION

<table>
<thead>
<tr>
<th>Power HP (kW)</th>
<th>Rated Engine Speed (PTO speed 1100 rpm)</th>
<th>Mean Atmospheric Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>85.40</td>
<td>2200</td>
<td>Air temperature</td>
</tr>
<tr>
<td>87.86</td>
<td>2000</td>
<td>Relative humidity</td>
</tr>
<tr>
<td>88.01</td>
<td>1900</td>
<td>Barometer</td>
</tr>
</tbody>
</table>

TRACTOR SOUND LEVEL WITH CAB dB(A)

At no load in 6th(2M) gear: 80.1 dB(A)
Restander: –

TIRES AND WEIGHT

REAR TIRES: No., size, ply & psi (kPa)
- Two 16.9R38:**;16 (110)
- Two 11.00-16; 8; 32;220)

FRONT TIRES: No., size, ply & psi (kPa)
- Two 16.00-16; 8; 32;220)
- 16.0 in (405 mm)

HEIGHT OF DRAWBAR
- Rear: 3205 lbs (1454 kg)
- Front: 3205 lbs (1454 kg)
- Total: 8615 lbs (3908 kg)

Engine Make: Cummins Diesel Type: four cylinder vertical with turbocharger Serial No. 21319320 Crankshaft lengthwise Rated speed 2200 Bore and stroke 4.016" x 4.72" (102.0 mm x 120.0 mm) Compression ratio 17.4 to 1 Displacement 239 cu in (3920 ml) Starting system 12 volt Lubrication pressure Oil cleaner one paper element and one polyester felt element Oil filter one full flow cartridge Engine coolant heat exchanger for crankcase oil, radiator for transmission and hydraulic oil Fuel filter one paper element and water separator Muffler underhood Exhaust vertical Cooling medium temperature control one thermostat

ENGINE OPERATING PARAMETERS: Fuel rate: 37.0 - 41.0 lb/h (16.8 - 18.6 kg/h) High idle: 2350 - 2450 rpm Turbo boost: nominal 23.2 - 24.9 psi (160 - 172 kPa) as measured 24.0 psi (165 kPa)

CHASSIS: Type standard Serial No. G26067 Tread width rear 60.0" (1525 mm) to 88.0" (2235 mm) front 54.0" (1372 mm) to 78.0" (1981 mm) Wheelbase 92.4" (2348 mm) Hydraulic control system direct engine drive Drive Selection pressure Gear fixed ratio 1st 3.77 (2.21) second 1.79 (2.88) third 2.59 (3.84) fourth 3.11 (5.00) fifth 3.94 (6.34) sixth 5.14 (8.27) seventh 6.75 (10.86) eighth 8.78 (14.13) ninth 10.57 (17.01) tenth 13.86 (22.30) eleventh 18.16 (29.22) twelfth 23.77 (38.26) reverse 1.55 (2.50) 2.03 (3.27) 2.68 (4.32) 3.52 (5.67) 4.42 (7.11) 5.79 (9.32) 7.59 (12.21) 9.97 (16.05) 11.94 (19.22) 15.65 (25.18) 20.54 (33.06) 26.88 (43.25) Clutch multiple wet 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 1902 engine rpm or 1000 rpm at 2000 engine rpm Unladen tractor mass 8450 lb (3833 kg)

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

Dates of Test: September 14-23, 1999

Manufacturer: AGCO Corporation, Duluth, Georgia 30096

Fuel, Oil and Time: Fuel No. 2 Diesel
Specific gravity converted to 60°/60°C 0.8512 Fuel weight 7.087 lbs/gal (0.849 kg/l) Oil SAE 10W-30 API service classification CE/CF-4 Transmission and hydraulic lubricant AGCO Power Fluid 821 XL Fluid Total time engine was operated 13.0 hours

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THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: II
Quick Attach: None                    High lift Option

i) Opening pressure of relief valve:
   - Sustained pressure: 3070 psi (212 bar)
   - Rating: 3060 psi (211 bar)

ii) Pump delivery rate at minimum pressure
    and rated engine speed:
    - Maximum: 10.8 GPM (40.9 l/min)
    - Maximum: 18.4 GPM (69.7 l/min)

iii) Pump delivery rate at maximum
     hydraulic power:
     - Minimum: 8.7 GPM (32.9 l/min)
     - Maximum: 16.2 GPM (61.3 l/min)

Power: 14.0 HP (10.4 kW)

Sustained pressure of the open relief valve:

THREE POINT HITCH PERFORMANCE

Observed Maximum Pressure psi (bar):

Location: lift cylinder
Hydraulic oil temperature: °F (°C)

Location: hydraulic sump
Category: II
Quick attach: none

SAE Static Test - System pressure 2990 psi (206 Bar)

High lift Option

SAE Static Test - System pressure 2990 psi (206 Bar)

Hitch point distance to ground level in. (mm)

Lift force on frame lbf (kN):

HITCH DIMENSIONS AS TESTED - NO LOAD

Agricultural Research Division
Institute of Agriculture and Natural Resources
University of Nebraska–Lincoln
Darrell Nelson, Dean and Director

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 153 °F (67 °C).

Report reissued: Supplemental sales permits for AGCO Allis 8765 Diesel (Cummins engine) and AGCO LT85 Diesel, October 2001.

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. 1762, November 6, 2001.

Leonard L. Bashford
M.F. Kocher
V.I. Adamchuk
G.J. Hoffman
Board of Tractor Test Engineers

White 6510 Diesel