January 2004

Test 1840: AGCO LT75 Diesel

Nebraska Tractor Test Laboratory Submitted by Larsen Museum

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NEBRASKA TRACTOR TEST 1840
AGCO LT75 DIESEL
16 SPEED

POWER TAKE-OFF PERFORMANCE

<table>
<thead>
<tr>
<th>Power HP</th>
<th>Crankshaft speed rpm</th>
<th>Rated Engine Speed—PTO speed—1101 rpm</th>
<th>Standard Power Take-off Speed—1001 rpm</th>
<th>Maximum Power (2 hours)</th>
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<tr>
<td>77.27</td>
<td>2201</td>
<td>(57.62)</td>
<td>(55.58)</td>
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<td>2367</td>
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Maximum Torque 240 lb.-ft. at 1650 rpm
Maximum Torque Rise -30.3%
Torque rise at 1805 rpm - 24%

VARYING POWER AND FUEL CONSUMPTION

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Maximum Torque 240 lb.-ft. at 1650 rpm
Maximum Torque Rise -30.3%
Torque rise at 1805 rpm - 24%

TRACTOR SOUND LEVEL WITH CAB

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Unladen tractor mass</th>
<th>Power Fluid 821 XL fluid</th>
<th>Engine coolant heat exchanger for crankcase oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>At no load in 7th(LC) gear</td>
<td>96.00 lb (435 kg)</td>
<td>70.45°F, 87°F</td>
<td>104.0 mm (4.10 in)</td>
</tr>
<tr>
<td>Bestandar</td>
<td>79.5 dB(A)</td>
<td>9600 lb (4354 kg)</td>
<td>104.0 mm (4.10 in)</td>
</tr>
</tbody>
</table>

ENGINE OPERATING PARAMETERS: Fuel rate: 35.4 - 39.1 lb/h (16.1 - 17.7 kg/h) High idle: 2350 - 2450 rpm Turbo boost: nominal 12.1 - 14.7 psi (83 - 101 kPa) as measured 12.8 psi (88 kPa)

CHASSIS: Type front wheel assist Serial No. N120003 Tread width rear 56.1" (1420 mm) to 83.9" (2130 mm) front 54.0" (1320 mm) to 78.0" (1980 mm) Wheelbase 100.5" (2553 mm) Hydraulic control system direct engine drive Transmission selective gear fixed ratio with partial (2) range operators controlled power shift

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

Dates of Test: October 18-22, 2004

Manufacturer: AGCO Corporation, Duluth Georgia 30096

FUEL, OIL and TIME: Fuel No. 2 Diesel Specific gravity converted to 60°F/60°F SAE 15W40 API service classification CE/CF-4 Transmission and hydraulic lubricant AGCO Power Fluid 821 XL fluid Total time engine was operated 10.5 hours

ENGINE: Make Cummins Diesel Type four cylinder vertical with turbocharger Serial No. 21598115 Crankshaft lengthwise Rated engine speed 2200 Bore and stroke 4.094" x 5.197" (104.0 mm x 132.0 mm) Compression ratio 17.5 to 1 Displacement 274 cu in (4485 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 engine coolant heat exchanger for crankcase oil Fuel filter one paper element and water separator Muffler underhood Exhaust vertical Cooling medium temperature control one thermostaat

Hydraulic control system direct engine drive Transmission selective gear fixed ratio with partial (2) range operators controlled power shift Nominal travel speeds mph (km/h) first 1.57 (2.52) second 1.98 (3.19) third 2.37 (3.81) fourth 3.00 (4.82) fifth 3.50 (5.64) sixth 4.44 (7.14) seventh 4.75 (7.65) eighth 6.20 (9.97) ninth 6.63 (10.68) tenth 7.83 (12.60) eleventh 9.37 (15.08) twelfth 11.30 (18.18) thirteenth 13.15 (21.17) fourteenth 16.63 (26.76) fifteenth 17.80 (28.65) sixteenth 22.50 (36.21) reverse 1.57 (2.52) 1.98 (3.19) 2.37 (3.81) 3.00 (4.82) 3.50 (5.64) 4.44 (7.14) 4.75 (7.65) 6.20 (9.97) 6.63 (10.68) 7.83 (12.60) 9.37 (15.08) 11.30 (18.18) 13.15 (21.17) 16.63 (26.76) 17.80 (28.65) 22.50 (36.21) Clutch multiple wet disc electro-hydraulically 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 9600 lb (4354 kg)
THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: II
Quick Attach: None
High lift option

Maximum Force Exerted Through Whole Range: 7817 lbs (34.8 kN) 9189 lbs (40.9 kN)

i) Opening pressure of relief valve: NA
ii) Pump delivery rate at minimum pressure and rated engine speed: 15.0 GPM (56.8 l/min) 24.9 GPM (94.3 l/min)
iii) Pump delivery rate at maximum hydraulic power: 15.1 GPM (57.2 l/min) 25.6 GPM (96.9 l/min)

Sustained pressure of the open relief valve: 2926 psi (202 bar) 3079 psi (212 bar)

Power: 21.3 HP (15.9 kW) 33.0 HP (24.6 kW)

THREE POINT HITCH PERFORMANCE

Observed Maximum Pressure psi. (bar)
Location: lift cylinder
Hydraulic oil temperature: °F (°C)
Location: hydraulic valve
Category: II
Quick attach: none

SAE Static Test—System pressure 2490 psi (172 Bar)
Hitch point distance to ground level in. (mm) 15.0 (381) 22.0 (559) 29.0 (737) 36.0 (914)
Lift force on frame lb (kN)

SAE test
OECD test
ing
inch mm
A 24.8 629 24.8 629
B 11.6 295 11.6 295
C 13.9 353 13.9 353
D 13.0 330 13.0 330
E 7.9 200 7.9 200
F 10.9 260 10.2 260
G 30.3 770 30.3 770
H 1.4 35 1.4 35
I 16.2 413 16.2 413
J 20.1 510 20.1 510
K 24.2 615 24.2 615
L 41.2 1046 41.2 1046
M 23.5 596 23.5 596
N 37.2 946 37.2 946
O 8.9 203 8.9 203
P 40.2 1020 44.1 1120
Q 33.5 850 33.5 850
R 29.0 737 29.0 737

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. This tractor did not meet the manufacturer’s claim of 26.4 GPM (100 lpm)combined hydraulic flow at remote outlets. For the maximum power tests, the fuel temperature at the injection pump was maintained at 149°F (65°C).

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. 1840, February 4, 2005.

Leonard L. Bashford
Director

M.F. Kocher
V.I. Adamchuk
W.P. Campbell
Board of Tractor Test Engineers

Institute of Agriculture and Natural Resources
University of Nebraska–Lincoln