January 2005

Nebraska Tractor Test 1849: AGCO GT55A Diesel

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NEBRASKA TRACTOR TEST 1849
AGCO GT55A DIESEL
16 SPEED

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

Dates of Test: May 17-26, 2005

Manufacturer: SAME Deutz-Fahr Italia S.p.A. Viale F. Cassini, 15, 24047 Treviglio (BG) Italy

FUEL, OIL and TIME: Fuel No. 2 Diesel Specific gravity converted to 60°/60° F (15°/15°C) 0.8437 Fuel weight 7.025 lbs/gal (0.842 kg/l) Oil SAE 15W40 API service classification CF-4 Transmission and hydraulic lubricant AGCO Power Fluid 821 XL fluid Total time engine was operated 13.0 hours

ENGINE: Make SAME Deutz-Fahr Diesel Type three cylinder vertical with turbocharger Serial No. 1000.3WT3E*1262* Crankshaft lengthwise Rated engine speed 2200 Bore and stroke 4.134" x 4.547" (105.0 mm x 115.5 mm) Compression ratio 16.0 to 1 Displacement 183 cu in (3000 ml) Starting system 12 volt Lubrication Air cleaner one paper 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 horizontal Cooling medium temperature control one thermostat

ENGINE OPERATING PARAMETERS: Fuel rate: 26.9 - 28.8 lb/h (12.2 - 13.1 kg/h) High idle: 2400 - 2430 rpm Turbo boost: nominal 10.2 - 11.3 psi (70 - 78 kPa) as measured 10.7 psi (74 kPa)

CHASSIS: Type front wheel assist Serial No. GT55A4TN4120009 Tread width rear 55.1" (1400 mm) to 75.0" (1904 mm) front 57.5" (1460 mm) to 69.1" (1754 mm) Wheelbase 80.9" (2056 mm) Hydraulic control system direct engine drive Transmission selective gear fixed ratio Nominal travel speeds mph (km/h) first 0.83 (1.34) second 1.04 (1.67) third 1.32 (2.12) fourth 1.64 (2.64) fifth 2.10 (3.38) sixth 2.60 (4.18) seventh 3.32 (5.34) eighth 4.11 (6.61) ninth 4.59 (7.39) tenth 5.70 (9.17) eleventh 7.28 (11.72) twelfth 9.02 (14.52) thirteenth 11.52 (18.54) fourteenth 13.36 (21.41) fifteenth 18.26 (29.39) sixteenth 22.65 (36.45) reverse 0.98 (1.58) 1.55 (2.49) 2.47 (3.98) 3.90, (6.28) 5.40, (8.69) 8.56 (13.78) 13.57 (21.84) 21.48 (34.57) 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 1967 engine rpm or 1000 rpm at 2043 engine rpm Unladen tractor mass 6225 lb (2824 kg)

### POWER TAKE-OFF PERFORMANCE

<table>
<thead>
<tr>
<th>Power (hp)</th>
<th>Crankshaft speed rpm</th>
<th>Gal/hr</th>
<th>lb/hr</th>
<th>HP/hr/gal</th>
<th>Mean Atmospheric Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>58.89 (43.92)</td>
<td>2200</td>
<td>15.22</td>
<td>0.292</td>
<td>2.89</td>
<td></td>
</tr>
<tr>
<td>57.80 (43.10)</td>
<td>2043</td>
<td>14.57</td>
<td>0.285</td>
<td>2.96</td>
<td></td>
</tr>
</tbody>
</table>

### MAXIMUM POWER AND FUEL CONSUMPTION

- **Rated Engine Speed**—(PTO speed—1077 rpm)
  - 58.89 (43.92) 2200 4.02 0.480 14.65
  - 52.76 (39.34) 2312 3.80 0.506 13.88
  - 39.93 (29.27) 2347 3.03 0.533 13.17
  - **---** 2579 1.15 --- ---

- **Standard Power Take-off Speed**—(1000 rpm)
  - 58.89 (43.92) 2200 4.02 0.480 14.65
  - 52.76 (39.34) 2312 3.80 0.506 13.88
  - 39.93 (29.27) 2347 3.03 0.533 13.17
  - **---** 2579 1.15 --- ---

### VARYING POWER AND FUEL CONSUMPTION

- Air temperature 77°F (25°C)
- Relative humidity 52%
- Barometer 28.47"Hg (96.41 kPa)

### TRACTOR SOUND LEVEL WITH CAB

- At no load in 9th (1HL) gear 78.7 dB(A)
- Bystander 78.7 dB(A)

### TIRES AND WEIGHT

- Tested Without Ballast
  - Two 420/70R30;**;16 (110)
  - Two 360/70R20;***;20 (135)
- Static Weight with operator—Rear
  - Front 6400 lb (2903 kg)

### FRONT WHEEL DRIVE

- Engaged 78.7 dB(A)
- Disengaged 78.7 dB(A)
THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: II
Quick Attach: None
Maximum Force Exerted Through Whole Range: 3414 lbs (15.2 kN) (at frame)
                                                  3892 lbs (16.9 kN) (at link ends)

i) Opening pressure of relief valve:
   Sustained pressure of the open relief valve:
   Pressure at minimum pressure:
   Pressure at maximum hydraulic power:

   Delivery pressure:
   Power:

THREE POINT HITCH PERFORMANCE

<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>23.0</td>
</tr>
<tr>
<td>B</td>
<td>10.1</td>
</tr>
<tr>
<td>C</td>
<td>13.5</td>
</tr>
<tr>
<td>D</td>
<td>11.5</td>
</tr>
<tr>
<td>E</td>
<td>13.6</td>
</tr>
<tr>
<td>F</td>
<td>5.1</td>
</tr>
<tr>
<td>G</td>
<td>26.2</td>
</tr>
<tr>
<td>H</td>
<td>0.4</td>
</tr>
<tr>
<td>I</td>
<td>18.3</td>
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<tr>
<td>J</td>
<td>21.1</td>
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<tr>
<td>K</td>
<td>16.0</td>
</tr>
<tr>
<td>L</td>
<td>39.5</td>
</tr>
<tr>
<td>M</td>
<td>22.2</td>
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<tr>
<td>N</td>
<td>33.3</td>
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<tr>
<td>O</td>
<td>8.0</td>
</tr>
<tr>
<td>P</td>
<td>40.1</td>
</tr>
<tr>
<td>Q</td>
<td>34.3</td>
</tr>
<tr>
<td>R</td>
<td>23.8</td>
</tr>
</tbody>
</table>

NOTE: This tractor has an electronic control that disengages the PTO when the PTO speed exceeds 1165 rpm.

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 claims of 14.0 GPM (53.0 lpm) hydraulic flow at remote outlets nor lift capacity at ball ends of 6393 lbs (2900 kg). The engine high idle was not adjusted within the manufacturers specified range. For the maximum power tests, the fuel temperature at the injection pump inlet was maintained at 134°F (56°C).

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. 1849, July 21, 2005.

Leonard L. Bashford
Director

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

HITCH DIMENSIONS AS TESTED - NO LOAD

AGCO GT 55A Diesel

Institute of Agriculture and Natural Resources
University of Nebraska–Lincoln