January 2005

Nebraska Tractor Test 1850: AGCO GT75A Diesel

Nebraska Tractor Test Lab
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NEBRASKA TRACTOR TEST 1850
AGCO GT75A DIESEL
16 SPEED

POWER TAKE-OFF PERFORMANCE

Power HP *(kW)*	Crank shaft speed rpm	Gal/hr *(l/h)*	lb/hp.hr *(kg/kW.h)*	Hp.hr/gal *(kW.h/l)*	Mean Atmospheric Conditions
MAXIMUM POWER AND FUEL CONSUMPTION					
Rated Engine Speed—(PTO speed—1077 rpm)					
76.31 *(56.90)*	2200	4.87 *(18.44)*	0.448 *(0.273)*	15.67 *(3.09)*	
Standard Power Take-off Speed - (1004 rpm)					
76.81 *(57.28)*	2050	4.73 *(17.89)*	0.432 *(0.263)*	16.25 *(3.20)*	
VARYING POWER AND FUEL CONSUMPTION					
76.31 *(56.90)*	2200	4.87 *(18.44)*	0.448 *(0.273)*	15.67 *(3.09)*	Air temperature
69.16 *(51.57)*	2339	4.65 *(17.62)*	0.473 *(0.288)*	14.86 *(2.93)*	80°F *(27°C)*
52.22 *(38.94)*	2363	3.72 *(14.06)*	0.500 *(0.304)*	14.04 *(2.77)*	Relative humidity
-- --	Unable to run, see note			-- --	54%
-- --	Unable to run, see note			-- --	Barometer
-- --	2412	1.35 *(5.12)*	-- --	-- --	28.82"Hg *(97.60 kPa)*

Maximum Torque 237 lb.-ft. *(321 Nm)* at 1299 rpm
Maximum Torque Rise - 30.0%
Torque rise at 1800 rpm - 18%

TRACTOR SOUND LEVEL WITH CAB	Front wheel drive Engaged dB(A)	Front wheel drive Disengaged dB(A)
At no load in 9th(1HL) gear	77.3	77.3
Bystander		--

TIRES AND WEIGHT	Tested Without Ballast
Rear Tires–No., size, ply & psi *(kPa)*	Two 16.9R30;**;16 *(110)*
Front Tires–No., size, ply & psi *(kPa)*	Two 11.2R24;**;20 *(135)*
Height of Drawbar	17.0 in *(430 mm)*
Static Weight with operator– Rear	3935 lb *(1785 kg)*
– Front	2790 lb *(1265 kg)*
– Total	6725 lb *(3050 kg)*

Location of tests: Nebraska Tractor Test Laboratory, University of Nebraska, Lincoln Nebraska 68583-0832
Dates of Test: May 20-26, 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** CE/CF-4 **Transmission and hydraulic lubricant** AGCO Power Fluid 821 XL fluid **Total time engine was operated** 7.5 hours

ENGINE: Make SAME Deutz-Fahr Diesel **Type** four cylinder vertical with turbocharger **Serial No.** 1000 4WT6E*1650* **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** 244 cu in *(4000 ml)* **Starting system** 12 volt **Lubrication** pressure **Air cleaner** two paper elements **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 thermostat

ENGINE OPERATING PARAMETERS: Fuel rate: 32.6 - 35.2 lb/h *(14.8 - 16.0 kg/h)* **High idle:** 2400 - 2430 rpm **Turbo boost:** nominal 9.7-11.1 psi *(67 - 77 kPa)* as measured 10.4 psi *(71 kPa)*

CHASSIS: Type front wheel assist **Serial No.** GT75A4TN3940043 **Tread width** rear 62.6" *(1590 mm)* to 75.2" *(1910 mm)* front 56.7" *(1440 mm)* to 68.5" *(1740 mm)* **Wheelbase** 86.1" *(2186 mm)* **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio **Nominal travel speeds mph *(km/h)*** first 0.89 *(1.43)* second 1.09 *(1.76)* third 1.40 *(2.25)* fourth 1.74 *(2.80)* fifth 2.22 *(3.57)* sixth 2.75 *(4.42)* seventh 3.51 *(5.65)* eighth 4.35 *(6.99)* ninth 4.85 *(7.81)* tenth 6.03 *(9.70)* eleventh 7.70 *(12.39)* twelfth 9.54 *(15.35)*, thirteenth 12.19 *(19.61)* fourteenth 15.18 *(24.43)*, fifteenth 19.31 *(31.08)* sixteenth 23.97 *(38.58)* reverse 1.04 *(1.68)*, 1.64 *(2.64)*, 2.61 *(4.20)*, 4.13, *(6.65)*, 5.71, *(9.19)*, 9.05 *(14.57)*, 14.36 *(23.10)*, 22.72 *(36.57)* **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** 6550 lb *(2971kg)*

THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: II		
Quick Attach: None		
Maximum Force Exerted Through Whole Range:	3414 lbs	*(15.2 kN)* (at the frame)
	3802 lbs	*(16.9 kN)* (at ball ends)
i) Opening pressure of relief valve:	NA	
Sustained pressure of the open relief valve:	2771 psi	*(191 bar)*
ii) Pump delivery rate at minimum pressure and rated engine speed:	11.7 GPM	*(44.3 l/min)*
iii) Pump delivery rate at maximum hydraulic power:	12.4 GPM	*(46.9 l/min)*
Delivery pressure:	2593 psi	*(179 bar)*
Power:	18.8 HP	*(14.0 kW)*

THREE POINT HITCH PERFORMANCE

Observed Maximum Pressure psi. *(bar)*	2650 *(183)*
Location:	lift cylinder
Hydraulic oil temperature: °F *(°C)*	166 *(74)*
Location:	hydraulic valve
Category:	II
Quick attach:	none

SAE Static Test—System pressure 2385 psi *(164 Bar)*

Hitch point distance to ground level in. *(mm)*	8.0 *(203)*	15.0 *(381)*	22.0 *(559)*	29.0 *(737)*	36.0 *(914)*
Lift force on frame lb	5495	4895	4619	4471	4265
" " " " " " *(kN)*	*(24.4)*	*(21.8)*	*(20.5)*	*(19.9)*	*(19.0)*

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

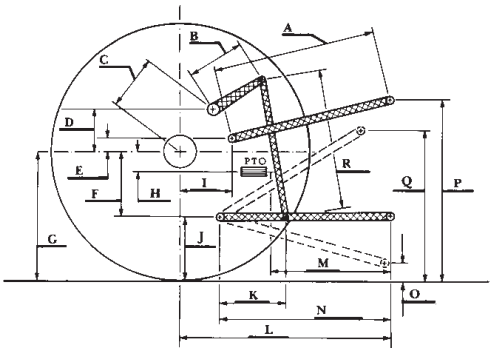
REMARKS: All test results were determined from observed data obtained in accordance with official OECD, SAE and Nebraska test procedures. This tractor did not meet the manufacturer's claim of 14.0 GPM *(53.0 lpm)* hydraulic flow at remote outlets nor lift capacity at ball ends of 6393 lbs *(2900 kg)*. For the maximum power tests, the fuel temperature at the injection pump inlet was maintained at 155°F *(69°C)*.

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. **1850,** July 21, 2005.

Leonard L. Bashford
Director

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

	SAE test		OECD test	
	inch	*mm*	inch	*mm*
A	23.0	*584*	23.6	*600*
B	10.1	*257*	10.1	*257*
C	13.5	*342*	13.5	*342*
D	11.5	*292*	11.5	*292*
E	13.6	*346*	13.6	*346*
F	5.1	*130*	5.1	*130*
G	26.2	*665*	26.2	*665*
H	0.4	*11*	0.4	*11*
I	18.3	*464*	18.3	*464*
J	21.1	*535*	21.1	*535*
K	16.0	*406*	16.0	*406*
L	39.5	*1004*	39.5	*1004*
M	22.2	*563*	22.2	*563*
N	33.3	*845*	33.3	*845*
O	8.0	*203*	8.0	*203*
P	40.1	*1018*	45.1	*1145*
Q	34.3	*870*	34.3	*870*
R	23.8	*603*	23.8	*603*



HITCH DIMENSIONS AS TESTED - NO LOAD

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