NEBRASKA TRACTOR TEST 1780A
AGCO ALLIS 8785 DIESEL
32 SPEED

Location of Test: Nebraska Tractor Test Laboratory, University of Nebraska, Lincoln Nebraska 68583-0832
Dates of Test: June 6-7, 2000

Manufacturer: AGCO Corporation, Duluth Georgia 30096

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 1100 rpm)			
112.34 *(83.77)*	2200	7.08 *(26.80)*	0.445 *(0.271)*	15.87 *(3.13)*	
		Maximum Power (2 hours)			
117.11 *(87.33)*	2000	6.86 *(25.96)*	0.414 *(0.252)*	17.07 *(3.36)*	
		Standard Power Take-off Speed(1000 rpm)			
117.11 *(87.33)*	2000	6.86 *(25.96)*	0.414 *(0.252)*	17.07 *(3.36)*	
VARYING POWER AND FUEL CONSUMPTION					
112.34 *(83.77)*	2200	7.08 *(26.80)*	0.445 *(0.271)*	15.87 *(3.13)*	Air temperature
98.55 *(73.49)*	2275	6.62 *(25.07)*	0.475 *(0.289)*	14.88 *(2.93)*	76°F *(25°C)*
75.00 *(55.93)*	2300	5.48 *(20.73)*	0.516 *(0.314)*	13.70 *(2.70)*	Relative humidity
50.33 *(37.53)*	2324	4.37 *(16.55)*	0.614 *(0.373)*	11.51 *(2.27)*	51%
25.66 *(19.15)*	2345	3.35 *(12.69)*	0.924 *(0.562)*	7.65 *(1.51)*	Barometer
1.69 *(1.26)*	2362	2.25 *(8.52)*	9.428 *(5.736)*	0.75 *(0.15)*	29.16"Hg *(98.75 kPa)*

Maximum Torque 388 lb.-ft. *(526 Nm)* at 1150 rpm
Maximum Torque Rise - 44.6%
Torque rise at 1799 rpm - 24%

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive Disengaged dB(A)	Front Wheel Drive Engaged dB(A)
At no load in 14th(3LD) gear	79.0	79.8
Bystander	--	--

FUEL, OIL and TIME: Fuel No. 2 Diesel **Specific gravity converted to 60°/60° F *(15°/15°C)*** 0.8487 **Fuel weight** 7.067 lbs/gal *(0.847 kg/l)* **Oil SAE** 15W40 **API service classification** CE/CF-4 **Transmission and hydraulic lubricant** AGCO Power Fluid 821 XL fluid **Front axle lubricant** AGCO gear lube 715 **Total time engine was operated** 8.0 hours

ENGINE: Make SiSu Diesel **Type** six cylinder vertical with turbocharger **Serial No.** G12472 **Crankshaft** lengthwise **Rated engine speed** 2200 **Bore and stroke** 4.252" x 4.724" *(108.0 mm x 120.0 mm)* **Compression ratio** 16.5 to 1 **Displacement** 402 cu in *(6600 ml)* **Starting system** 12 volt **Lubrication** pressure **Air cleaner** one paper element and one polyester felt element and aspirator **Oil filter** one full flow cartridge **Oil cooler** radiator for hydraulic and transmission oil, 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 and variable speed fan

ENGINE OPERATING PARAMETERS: Fuel rate: 48.4 - 53.4 lb/h *(22.0 - 24.2 kg/h)* **High idle:** 2300 - 2400 rpm **Turbo boost:** nominal 11.0-13.0 psi *(76 - 90 kPa)* as measured 11.8 *(81 kPa)*

CHASSIS: Type front wheel assist **Serial No.** *F286021* **Tread width** rear 60.0" *(1524 mm)* to 118.1" *(3000 mm)* front 61.7" *(1567 mm)* to 80.8" *(2053 mm)* **Wheelbase** 112.6" *(2860 mm)* **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio with partial (4) range operator controlled powershifting **Nominal travel speeds mph *(km/h)*** first 1.27 *(2.04)* second 1.49 *(2.40)* third 1.76 *(2.83)* fourth 2.06 *(3.31)* fifth 2.16 *(3.47)* sixth 2.53 *(4.07)* seventh 2.84 *(4.57)* eighth 2.98 *(4.80)* ninth 3.32 *(5.35)* tenth 3.49 *(5.62)* eleventh 3.85 *(6.19)* twelfth 3.93 *(6.32)* thirteenth 4.50*(7.24)* fourteenth 4.59*(7.39)* fifteenth 4.76*(7.66)* sixteenth 5.31*(8.55)* seventeenth 5.58 *(8.98)* eighteenth 6.22 *(10.01)* nineteenth 6.58 *(10.59)* twentieth 7.71 *(12.40)* twenty-first 8.09 *(13.02)* twenty-second 9.48 *(15.25)* twenty-third 10.66 *(17.15)* twenty-fourth 11.18 *(17.99)* twenty-fifth 12.47*(20.06)* twenty-sixth 13.09*(21.06)* twenty-seventh 14.42*(23.20)* twenty-eighth 14.72 *(23.69)* twenty-ninth 16.87 *(27.15)* thirtieth 17.23 *(27.73)* thirty-first 19.92*(32.05)* thirty-second 23.31 *(37.52)*

TIRES AND WEIGHT

		Tested Without Ballast
Rear Tires No., size, ply & psi *(kPa)*		Two 18.4R38; ***;16 *(110)*
Front Tires No., size, ply & psi *(kPa)*		Two 14.9R28; ***;24 *(165)*
Height of Drawbar		18.0 in *(405 mm)*
Static Weight with operator	Rear	8120 lb *(3683 kg)*
	Front	4505 lb *(2044 kg)*
	Total	12625 lb *(5727 kg)*

THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: II		
Quick Attach: None		
Maximum Force Exerted Through Whole Range:	9414 lbs	*(41.9kN)*
i) Opening pressure of relief valve:	NA	
Sustained pressure of the open relief valve:	2840 psi	*(196 bar)*
ii) Pump delivery rate at minimum pressure and rated engine speed:	28.8 GPM	*(109.0 l/min)*
iii) Pump delivery rate at maximum hydraulic power:	24.2 GPM	*(91.6 l/min)*
Delivery pressure:	2680 psi	*(185 bar)*
Power:	37.8 HP	*(28.2 kW)*

THREE POINT HITCH PERFORMANCE

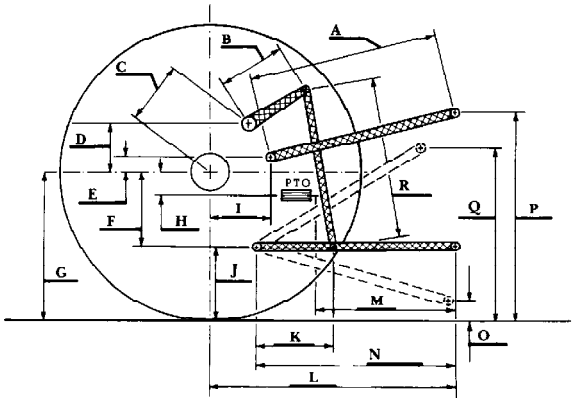
Observed Maximum Pressure psi.*(bar)*	2850*(196)*
Location:	lift cylinder
Hydraulic oil temperature: °F*(°C)*	149*(65)*
Location:	hydraulic sump
Category:	II
Quick attach:	none

SAE Static Test System pressure 2558 psi *(176 Bar)*

Hitch point distance to ground level in.*(mm)*	7.9*(201)*	14.9*(378)*	21.9*(556)*	28.9*(734)*	35.9*(912)*
Lift force on frame lb	13338	12708	12222	11412	10431
" " " " " " *(kN)*	*(59.3)*	*(56.5)*	*(54.4)*	*(52.3)*	*(46.4)*

HITCH DIMENSIONS AS TESTED - NO LOAD

	inch	*mm*
A	26.9	*683*
B	11.6	*295*
C	13.9	*354*
D	13.0	*330*
E	7.9	*200*
F	10.2	*260*
G	32.3	*820*
H	1.7	*43*
I	15.0	*382*
J	22.1	*560*
K	21.7	*550*
L	40.9	*1040*
M	23.2	*590*
N	37.0	*940*
O	7.9	*200*
P	46.1	*1170*
Q	36.1	*918*
R	28.3	*719*



reverse 1.16 *(1.86)*, 1.35 *(2.18)*, 1.60 *(2.57)*, 1.87 *(3.01)*, 1.96 *(3.16)*, 2.30 *(3.70)*, 2.58 *(4.16)*, 2.72 *(4.37)*, 3.03 *(4.87)*, 3.18 *(5.12)*, 3.50 *(5.64)*, 3.57 *(5.75)*, 4.10 *(6.60)*, 4.18 *(6.73)*, 4.34 *(6.98)*, 4.84 *(7.79)*, 5.08 *(8.17)*, 5.66 *(9.11)*, 6.00 *(9.65)*, 7.02 *(11.29)*, 7.37 *(11.86)*, 8.63 *(13.89)*, 9.70 *(15.61)*, 10.18 *(16.39)*, 11.36 *(18.28)*, 11.92 *(19.18)*,13.13 *(21.13)*,13.40 *(21.57)*,15.37 *(24.73)*, 15.69 *(25.25)*, 18.14*(29.19)*,21.23*(34.17)* **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 1980 engine rpm or 1000 rpm at 2000 engine rpm **Unladen tractor mass** 12450 lb *(5647 kg)*

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 144°F *(62°C)*.

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. **1780A**, June 28, 2000.

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