

NEBRASKA TRACTOR TEST 1865 MASSEY FERGUSON 481 DIESEL 8 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—664 rpm)					
73.61 (54.89)	2200	4.89 (18.50)	0.468 (0.285)	15.06 (2.97)	
Standard Power Take-off Speed - (540 rpm)					
67.07 (50.02)	1790	4.31 (16.32)	0.453 (0.276)	15.56 (3.06)	

VARYING POWER AND FUEL CONSUMPTION

73.61 (54.89)	2200	4.89 (18.50)	0.468 (0.285)	15.06 (2.97)	Air temperature
64.28 (47.93)	2259	4.14 (15.68)	0.454 (0.276)	15.52 (3.06)	83°F (28°C)
49.29 (36.76)	2302	3.46 (13.10)	0.495 (0.301)	14.24 (2.81)	Relative humidity
33.03 (24.63)	2323	2.71 (10.25)	0.578 (0.352)	12.19 (2.40)	56%
16.56 (12.35)	2353	1.94 (7.36)	0.827 (0.503)	8.52 (1.68)	Barometer
1.02 (0.76)	2367	1.33 (5.05)	9.219 (5.608)	0.76 (0.15)	28.89"Hg (97.83 kPa)

Maximum Torque 213 lb.-ft. (289 Nm) at 1101 rpm
 Maximum Torque Rise - 21.4%
 Torque rise at 1788 rpm - 11%

TRACTOR SOUND LEVEL WITHOUT CAB

	dB(A)
At no load in 4th(4L) gear	94.4
Bystander	--

TIRES AND WEIGHT

Rear Tires—No., size, ply & psi (kPa)
Front Tires—No., size, ply & psi (kPa)
Height of Drawbar
Static Weight with operator—Rear
 —Front
 —Total

Tested Without Ballast

Two 16.9-30; 8; 16 (110)
 Two 9.5L-15; 6; 32 (220)
 18.0 in (455 mm)
 3835 lb (1740 kg)
 2340 lb (1061 kg)
 6175 lb (2801 kg)

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

Dates of tests: November 1-3, 2005

Manufacturer: AGCO Corporation, 4205 River Green Parkway, Duluth, Georgia 30096

FUEL, OIL and TIME: Fuel No. 2 Diesel Specific gravity converted to 60°/60° F (15°/15°C) 0.8468 Fuel weight 7.051 lbs/gal (0.845 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 6.0 hours

ENGINE: Make Perkins Diesel **Type** four cylinder vertical **Serial No.** RG37830*B505086M* **Crankshaft** lengthwise **Rated engine speed** 2200 **Bore and stroke** 4.134" x 5.00" (105.0 mm x 127.0 mm) **Compression ratio** 18.2 to 1 **Displacement** 268 cu in (4400 ml) **Starting system** 12 volt **Lubrication** pressure **Air cleaner** two paper elements **Oil filter** one full flow cartridge **Fuel filter** one paper element and water separator **Muffler** vertical **Cooling medium temperature control** one thermostat

ENGINE OPERATING PARAMETERS: Fuel rate: 33.0 - 35.7 lb/h (15.0 - 16.2 kg/h) **High idle:** 2300 - 2400 rpm

CHASSIS: Type Standard **Serial No.** 9365BP07037 **Tread width** rear 61.8" (1570 mm) to 85.2" (2165 mm) front 59.1" (1500 mm) to 83.5" (2120 mm) **Wheelbase** 90.2" (2290 mm) **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio **Nominal travel speeds mph (km/h)** first 1.59 (2.56) second 2.29 (3.68) third 3.38 (5.44) fourth 4.77 (7.68) fifth 6.16 (9.92) sixth 9.32 (15.00) seventh 13.55 (21.80) eighth 19.21 (30.91) reverse 1.80 (2.90), 2.80 (4.50), 3.97 (6.40), 5.67 (9.12) 7.33 (11.80), 10.94 (17.60), 15.91 (25.60), 22.56 (36.30) **Clutch** single dry disc operated by foot pedal **Brakes** multiple wet disc hydraulically operated by two foot pedals which can be locked together **Steering** hydrostatic **Power take-off** 540 rpm at 1789 engine rpm **Unladen tractor mass** 6000 lb (2722 kg)

THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: II

Quick Attach: None

Maximum Force Exerted Through Whole Range: 3391 lbs (15.1 kN)

i) Opening pressure of relief valve: NA

Auxiliary pump

Sustained pressure of the open relief valve: 2584 psi (178 bar)

ii) Pump delivery rate at minimum pressure and rated engine speed: 11.0 GPM (41.6 l/min)

iii) Pump delivery rate at maximum hydraulic power: 11.1 GPM (42.0 l/min)

Delivery pressure: 1832 psi (126 bar)

Power: 11.9 HP (8.8 kW)

THREE POINT HITCH PERFORMANCE

Observed Maximum Pressure psi. (bar)	2750 (190)
Location:	lift cylinder
Hydraulic oil temperature: °F (°C)	144 (62)
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	4007	4147	4227	4102	3947
" " " " " " (kN)	(17.8)	(18.4)	(18.8)	(18.2)	(17.6)

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 remote flow claim of 11.2 GPM (42.4 lpm) with auxiliary pump. The manufacturer's claim of 15.5 GPM (58.6 lpm) with auxiliary and lift pumps combined was not verified. For the maximum power tests, the fuel temperature at the injection pump inlet was maintained at 157°F (69°C).

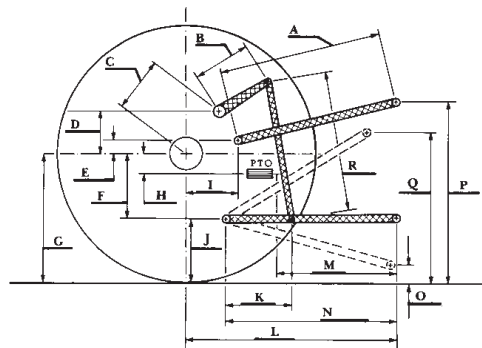
We, the undersigned, certify that this is a true and correct report of official Tractor Test No. **1865**, January 17, 2006.

Leonard L. Bashford
Director

M.F. Kocher
V.I. Adamchuk
J.A. Smith
Board of Tractor Test Engineers

	SAE test		OECD test	
	inch	mm	inch	mm
A	28.5	724	29.7	754
B	10.5	267	10.5	267
C	12.0	304	12.0	304
D	9.1	232	9.1	232
E	8.0	204	8.0	204
F	8.4	212	8.4	212
G	27.4	695	27.4	695
H	3.7	95	3.7	95
I	6.9	175	6.9	175
J	19.0	483	19.0	483
K	19.1	484	19.1	484
L	36.3	922	36.3	922
M	24.5	622	24.5	622
N	37.7	958	37.7	958
O	8.0	203	8.0	203
P	38.0	965	43.0	1093
Q	35.8	909	35.8	909
R	26.0	660	26.0	660

HITCH DIMENSIONS AS TESTED - NO LOAD



MASSEY FERGUSON 481 Diesel

Institute of Agriculture and Natural Resources
University of Nebraska-Lincoln